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PART 1

LECTURE NOTES

CHILD AND ADOLESCENT DEVELOPMENT

A. The Child and Adolescent Learner

**Childhood-** Childhood is defines as the time for a boy or girl from birth until he or she is an adult. It is more circumscribed period of time from infancy to the onset of puberty.

The Convention of the Rights if the Child defines a child as” every human being below the age of 18 years unless under the law applicable to the child, majority is attained earlier”.

**Adolescence-** According to Stuart Judge, a noted educator and psychologist, adolescence is the period of transition from childhood to adulthood. Although sometimes described as beginning in parallel with fertility or puberty and ending with maturity and independence, adolescence has a very variable and imprecise duration

The onset of adolescence cannot be pointed in physiological term, although it is influenced by the same sex hormones and refers to the same general period as physical sexual development. It represents a complex and sometimes disturbing psychological transition, accompanying the requirement for the accepted social behavior of the particular adult and culture.

B. Physical and Motor Development.

- A. Physical and Motor development
- B. Infants need to learn how to move and to use their bodies to perform various tasks, a process better known as motor development. Initially, babies’ movements are simply the uncontrolled, reflexive movements they are born with, over time, they learn to move their body parts voluntarily to perform both gross (large) and fine (small) motor skills. In general, babies begin developing motor skills form head to tail (cephalocaudal), the center of the body outward( proximodistal). They learn to control their head and neck before they learn to maneuver their arms; they learn to maneuver their arms before they learn to manipulate their fingers. Babies learn to move their torso before the learn how to move their arms and legs.
- C. The sucking reflex allows babies to drink milk and nourish themselves in the days of life.
- D. Another permanent and life-supporting reflex is heard turning in the first days of life.
- E. Another permanent life-supporting reflex is head turning. This reflex allows a baby to turn his head if something (a blanket, pillow, or stuffed animal) is blocking his airflow.
- F. Another reflex that also babies survive is the rooting reflex. When babies root, they may nuzzle their face and mouth into the caregiver’s chest or shoulder.
- G. The rest of the flexes have less survival value but are still notable. For the first 3 to 4 months, babies have an amazing grasping ability and reflex. They will grasp anything place in their palm and hold it with amazing strength for their size. Some infants in the first weeks of life can support their entire body weight through that grasp.
- H. While this reflex may not have any survival function in modern times, it does help babies bond with caregivers and family in the first weeks of life. Similarly, for the first two months, babies will ‘step” with their legs if they are held vertically with their feet touching a surface. Even though this reflex disappears months before babies begin walking purposely, experts believes stepping helps infants learn how their legs works can be used.
- I. **The Moro** response is another reflex that is present during the first 6 months of life, but doesn’t seem to have a purpose in modern life. A baby with arch her back, flail out, and then curl up if she feels as although she is being dropped.
- J. **The final reflex is Tonic Neck.** During the first 4 months, when babies lie awake on their backs with their heads facing to one side, they will extend the arm on the side of their body that they’re facing and reflex the other arm at an angle, in a position that resembles a fencing pose. This reflex may help prepare them for voluntary reaching later in their environment.
- K. **Between ages 2 and 3 years,** young children stop “toddling”, or using the awkward, wide-legged robort-like stance that is the hallmark of new walkers. As they develop a smoother gait, they also develop the ability to run, and hop. Children of this age can participate in throwing and catching games with larger balls. They can also push themselves around with their feet while sitting on a riding toy.
- L. **Children who are 3 to 4 years old** can climb up stairs using a method of bringing both feet together on each step before proceeding to the next step (in contrast, adult place one foot on each step in sequence); However, young children may still need some “back up” assistant to prevent falls in case they become unsteady in this new skill. Children of this age will also be stumped when it’s time to go back down the stairs; they tend to turn around and scoot down the stairs backwards. 3 to 4 years old can jump and hop higher as higher as their leg muscles grow stronger. Many can even hop on one foot for shorts period of time.

M. **By ages 4 to 5**, children can go up and down the stairs alone in the adult fashion (i.e. taking one step at a time); Their running continues to smooth out and increase in speed. Children of this age can also skip and add spin to their throws. They also have more control when riding their tricycles (or bicycles), and can be drive them faster.

- ❖ **During ages 5 to 6**, young children continue to refine easier skills. They're running even faster and can start to ride bicycles with training wheels for added stability. In addition, they can step sideways. Children of this age begin mastering new forms of physical play such as the jungle gym, and begin to use the see-saw, slide, and swing on their own. They often start jumping rope, skating, hitting balls with bats, and so on. Many children of this age enjoy learning to play organized sports as soccer, basketball, t-bale or swimming. In addition, 5 to 6 years old often like to participate in physical extracurricular activities such as karate, gymnastics, or dance. Children continue to refine and improve their gross motor skills through age 7 and beyond.

## N. Brain Development

- ❖ The brain's ability to change from experience is known as Plasticity. The human brain is especially plastic early in life, which is why the "nurture" part of the equation is so important  
Throughout life the brain continues to be plastic-this is the mechanism of learning-but plasticity declines in adulthood.  
As a child's brain develops, it goes through several critical periods, a developmental phase in which the brain requires certain environmental input or it will not develop normally.

### Early Milestones in Brain Growth

- ❖ **4 months**: the infant's brain responds to every sound produced in all the languages of the world.
- ❖ **8 to 9 months**: Babies can form specific memories from their experiences, such as how to push a ball to make it roll.
- ❖ **10 months**: Babies can now distinguish and even produce the sounds of their own language (such as "da-da") no longer pay attention to the sounds of language that are foreign.
- ❖ **12 months**: Babies whose parents say, for example "Look at the doggie" will go to the appropriate picture of a dog in a picture book more often than those babies who are talked to normal, flatter voices.
- ❖ **12 to 18 months**: Babies can keep in memory something that has been hidden and find it again, even if it has completely covered up. They can also hold memory sequences of simple activities, such as winding up a jack-in-the-box until the figure pops up.
- ❖ **24 months**: Preschool children now clear picture in mind of people who are dear to them, and they get upset when separated from these people (even their peers)
- ❖ **30 months**: Preschool children can hold in mind a whole sequence of spatial maps and know where things are in their environment.
- ❖ **36 months**: A preschool child can now show two different emotions in his mind at the same time, such as being sad that he spilled ice cream on his clothes but glad that he's at birthday party.

## O. Factors Affecting Development

**Maternal Nutrition**- the nutritional status of the women during adolescent pregnancy and lactation has a direct impact on the child's health and development.

**Child Nutrition**- the Child's state of nutritional balance is crucial in his early developmental age.

**Early Sensory Stimulation**- Toys, soothing sounds and other sensorial stimulation contribute to the child's development.

## P. Exceptional Development

**Physical Disabilities**- Persons with physical disabilities may experience functional, visual, orthopedic, motor, or hearing impairments, which may impact upon their ability to walk, play and learn. Physical disabilities are also often defined and categorized by some degree of limitation in the use of upper or lower extremities and maintaining posture and positioning.

**Attention Deficit Disorder (ADD) and Attention Deficit Hyperactive Disorder (ADHD)**-Attention-Deficit Hyperactivity Disorder (ADHD) and Hyperkinetic Disorder (as officially known in U.K., though ADHD is more commonly used) is generally considered to be a developmental disorder, largely neurological in nature, affecting about 5% of the world's population. The disorder typically presents itself during childhood, and is characterized by a present pattern of inattention and/or hyperactivity, as well as forgetfulness, poor impulse control or impulsivity and distractibility. ADHD is currently considered to be a persistent and chronic condition for which no medical cure is available. ADHD is most commonly diagnosed in children and, over the past decade.

## Q. Linguistic and Literary Development

### A. Natural History and Language Development

Language development is a process that starts early in human life, when a person begins to acquire language by learning it as it is spoken and by mimicry. Children's language development moves from simplicity to complexity. Infants start without language. Yet by four months of age, babies can read lips and discriminate speech sounds.

- ❖ Usually, language starts off as recall of simple words without associated meaning, but as children age, words acquire meaning, and connections between words are formed, in time, sentences start to form as words are joined together to create logical meaning. As a person gets older, new meaning and new associations are created and vocabulary increases as more words are learned.
- ❖ Infants use their bodies, vocal cries and other preverbal vocalizations to communicate their wants, needs and dispositions. Even though most children begin to vocalize and eventually verbalize at various ages and at different rates, they learn their first language without conscious instruction from parents or caretakers. It is seemingly effortless task that grows increasingly difficult with age. Of course, before any learning can begin, the child must be biologically and socially mature enough.

**Biological Preconditions**- Linguists do not all agree on what biological factors contribute to language development, however most do agree that our ability to acquire such a complicated system is specific to the human species. Furthermore, our ability to learn language may have been developed through the evolutionary process and that the foundation for language may be passed down genetically.

**Second Preconditions**- it is crucial that children are allowed to socially interact with other people who can vocalize and respond to questions. For language acquisition to develop successfully, children must be in an environment that allows them to communicate socially in that language.

There are a few different theories as to why and how children develop language. The most popular explanation is that language is acquired through imitation. However, this proves to be more of a folk tale than anything. Two most accepted theories in language development are psychological and functional. Psychological explanations focus on the mental processes involved in childhood language learning. Functional explanations look at the social process involved in learning the first language.

## B. Bilingual Language Development

- ❖ There are two major patterns in bilingual language acquisition; simultaneous Bilingualism and Sequential bilingualism. In simultaneous bilingualism, the child acquires two languages at the same time before the age of 3 years. These children may mix words or parts of words from both languages in the first stage. Stage 2 occurs at 4 years and older when distinction between the two languages takes place, and the child uses each language separately. Sequential bilingualism also occurs before the child is 3 years old, but the child can draw in on the knowledge and experience of first language while acquiring the second language.
- ❖ Detecting delays in the speech and language of multilingual children presents a challenge. The authors state that “the key is to obtain information about the child’s entire language system, not just the primary or secondary language”.
- ❖ The following “red flags” may indicate that the child who is simultaneously acquiring two languages is experiencing problems with language development.
  - ✓ No sounds by 2-6 months
  - ✓ Less than one new word per week for 6-15 month-old children.
  - ✓ Less than 20 words (in the two languages combined) by 20 months; and
  - ✓ No use of word combinations and a very limited vocabulary by age 2-3 years
  - ✓ Red flags for abnormal language development in the sequential acquisition of two languages include.
  - ✓ Lack of normal milestones in the first language
  - ✓ Prolonged phase of not talking
  - ✓ Difficulty of retrieving words

## Factors Affecting Language Development

1. Inadequate stimulation (talking and playing with the child)
2. Delayed general development (global developmental delay), physical development (motor skills), cognitive development etc.
3. Specific difficulty with language learning. Not very interested in language, prefers other modalities e.g. physical activities
4. Poor control and/or coordination of the speech muscles; lips, tongue etc.
5. Medical problems
6. Inadequate awareness of communication, lacks “communication intent”
7. Reduced hearing e.g. ear infection, fluid in ear, impacted earwax etc.
8. Changes in child’s environment e.g. moving
9. Exposure to too many languages for the child
10. Inadequate opportunity for speech e.g. the child everyone talks for, the “babied” child has a more dominant sibling etc.
11. Emotional factors e.g. behavioral problems, anxiety, pressure to perform etc.
12. Short attention span.
13. Family history of speech and language delays or difficulties

## C. Exceptional Development

**Aphasia-** Aphasia (or aphemia) is a loss of the ability to produce and/or comprehend language due to injury to brain areas specialized for these functions. It is not a result of deficits in sensory, intellect, or psychiatric functioning. Depending on the area and extent of the damage, someone suffering from aphasia may be able to speak but not write, or vice versa, or display any of a wide variety of other deficiencies in language comprehension and production, such as being able to sing but not to speak.

**Dyslexia-** Dyslexia is a specific learning disability that manifests primarily as a difficulty with written language, particularly with reading and spelling. Dyslexia is the result of neurological differences but is not intellectual disability. Most people with dyslexia have average or above average intelligence.

Evidence suggests that dyslexia results from differences in how the brain processes written and/or verbal language. It is separate and distinct from reading difficulties resulting from other causes, such as deficiencies in intelligence, a non-neurological deficiency with vision or hearing, or from poor or inadequate reading instruction.

## D. Cognitive Development

### A. Theories of Cognitive Development

**Jean Piaget-Swiss psychologist** (1896-1980). His theory provided many central concepts in the field of developmental psychology and concerned the growth of the intelligence, which for Piaget, meant the ability to more accurately represent the world and perform logical operations on representations of the concepts grounded in the world. The theory concerns the emergence and acquisitions of the schemata-schemes, of one perceives the world-in “developmental stages”, time when children are acquiring new ways of mentally representing information.

### 1. Sensorimotor period (years 0-2)

Infants are born with a set of congenital reflexes, according to Piaget, in addition to explore their world. Their initial schemas are formed through differentiation of the congenital reflexes:

- ❖ **The first sub-stage**, known as the reflex schema stage, occurs from birth to six weeks and is associated primarily with the developmental reflexes. Three primary reflexes are described by Piaget: sucking of objects in the mouth following moving or interesting objects with the eyes, and closing of the hand when an object makes contact with the palm (palmar grasp). Over this first six weeks of life, these reflexes begin to become voluntary actions; for example, the palmar reflex becomes intentional grasping.
- ❖ **The second sub-stage**, primary circular reaction phase, occurs from six weeks to four months and is associated primarily with the development of habits. Primary circular reactions or repeating of an action involving only one’s body begins. An example of this type of reaction would involve something like an infant repeating the motion of passing their hands before their face. The schema developed during this stage informs the infant about the relationships among his body parts (e.g. in passing the hand in front of his eyes he develops a motor schema for moving his arm so that the hand becomes visible).
- ❖ **The third sub-stage**, the secondary circular reactions phase, occurs from four to nine months and is associated primarily with the development of coordination between vision and apprehension. Three new abilities occur at this stage: intentional grasping for a desired object, secondary circular reactions, and differentiations between ends and means. At this stage, infants will intentionally grasp the air in the direction of a desired object, often to the amusement of friends, family, younger and older siblings, grandparents, etc. Secondary circular reactions, or the repetition of an action involving an external object begin; for example, moving a switch to turn on a light repeatedly. The differentiation between means also occurs. This is perhaps one of the most important stages of a child’s growth as it signifies the dawn for logic. However, babies still only have a very early rudimentary grasp of this and most of their discoveries have an “accidental” quality to them in that the initial performance of what will soon become a secondary circular reaction occurs by chance; but the operant conditioning causes the initial “accidental” behavior (which was followed by an “interesting pattern of stimulation”) to be repeated.

And the ability to repeat the act is the result of primary circular reactions established in the previous stage. For example, when the infant's hand accidentally makes contact with an object in his field of vision is based on the primary circular reaction bringing his hand into his field of vision. Thus, the child learns (at the level of schemata) that "if he can see it then he can also touch it" and this results in a schemata which is the knowledge that the external environment is populated with solid objects.

- ❖ **The fourth sub-stage**, called the coordination of secondary circular reactions stage, which occurs from nine to twelve months, is when Piaget thought that object permanence developed. In addition, the stage is called the coordination of secondary circular reactions stage, and is primarily with the development of logic and the coordination between means and ends, this is extremely important marks the beginning of goal orientation or intentionally, the deliberate planning of steps to meet an objective.
- ❖ **The fifth sub-stage**, tertiary circular reactions phase, occurs from twelve to eighteen months and is associated primarily with the discovery of new means to meet goals. Piaget describes the child at this juncture as the "young scientist", conducting pseudo-experiments to discover new methods of meeting challenges.
- ❖ **The six sub-stage**, considered "beginning of symbolic representation", is associated primarily with the beginnings of insight, or true creativity. In this stage the trial- and error application of schemata, which was observable during the previous stage, occurs internally (at the level of schemata rather than of motor responses), resulting in the sudden appearance of new effective behaviors (without any observable trial-and-error). This is also the time when symbols (words and images) begin to stand for other objects. This marks the passage into the preoperational stage.

## 2. Preoperational period (years 2-7)

The Preoperational stage is the second of four stages of cognitive development. By observing sequence of play, Piaget was able to demonstrate that towards the end of the second year a qualitatively new kind of psychological functioning occurs (Pre) Operatory Thought in Piagetian theory is any procedure for mentally acting on objects. The hallmark of the preoperational stage is sparse and logically inadequate mental operations.

According to Piaget, the Pre Operational stage of development follows the Sensorimotor stage and occurs between 2-7 years of age. It includes the following processes.

1. **Symbolic functioning**- characterized by the use of mental symbols, words, or pictures, which the child uses to represent something which is not physically present
2. **Centration**-characterized by a child focusing or attending to only one aspect of a stimulus or situation. For example, in pouring a quantity of liquid from a narrow beaker into a shallow dish, a preschool child might judge the quantity of liquid to have decreased, because it is "lower" - that is, the child attends to the height of the water, but not the compensating increase in the diameter of the container.
3. **Intuitive thought**- occurs when the child is able to believe in something without knowing why she or he believes it.
4. **Egocentrism**- a version of centration, this denotes a tendency of a child to only think for her or his own point of view. Also, the inability of a child to take the point of view of others. Example, if a child is in trouble, he or she might cover her eyes thinking if I cannot see myself my mom cannot either.
5. **Inability to Conserve**-though Piaget's conservation experiments (conservation of mass, volume and number after the original form has been changed. For example, a child in this phase will believe that a string which has up in "o-o-o-o" pattern will have a larger number of beads than a string which has a oooo: pattern, because the latter pattern has less space between Os; or that a tall, thin 8-ounce cup has more liquid in it than a wide, short 8-ounce cup.
6. **Animism**- The child believes that inanimate objects have "lifelike" qualities and are capable of action. Example, a child plays with a doll and treats it like a real person. In a way this is like using their imagination.

## 3. Concrete operational period (years 7-11)

The Concrete operational stage is the third of four stages of cognitive development in Piaget's theory. This stage, which follows the Preoperational stage, occurs between the ages 7 and 11 years and is characterized by the appropriate use of logic. Important processes during this stage are:

- a. **Seriation**- the ability to arrange objects in an order according to size, shape, or any other characteristic. For example, if given different-colored objects they may make a color gradient.
- b. **Classification**-the ability to name and identify sets of objects according to appearance, size or other characteristic, including the idea that one set of objects can include another, a child is no longer subject to the illogical limitations of animism (the belief that all objects are alive and therefore have feelings)
- c. **Decentering**- where the child takes into account multiple aspects of a problem to solve it. For example, the child will no longer perceive an exceptionally wide but short cup to contain less than a normally-wide, taller cup.
- d. **Reversibility**- where the child understands that numbers or objects can be changed, then returned to their original state. For this reason, a child will be able to rapidly determine that if 4 + 4 equals 8, 8/4 will equal 4, the original quantity
- e. **Conservation**- understanding that quantity, length or number of items is unrelated to the arrangement or appearance of the object or items. For instance, when a child is presented with two equally-sized, full cups they will be able to discern that if water is transferred to a pitcher it will conserve the quantity and be equal to the other filled up.
- f. **Elimination of Egocentrism**- the ability to view things from another's perspective (even if they think incorrectly). For instance, show a child a comic in whom Jane puts a doll under the box leaves the room, and then Sarah moves the doll to a drawer, and Jane comes back. A child in the concrete operation stage will stay that Jane will still think it's under the box even though the child knows it is in the drawer

#### 4. Formal operation period (years 11-adulthood)

The formal operational period is the fourth and final of the periods of cognitive development in the Piaget's theory. This stage, which follows the Concrete Operational stage, commences at around 11 years of age (puberty) and continues into adulthood. It is characterized by acquisition of the ability to think abstractly, reason logically and draw conclusions from the information available. During this stage the young adult is able to understand such things as love's shades of gray, logical proofs, and values,

Lev Vygotsky-Psychologist, was born in 1896 in Orsha, Belarus (then a part of the Russian Empire). Vygotsky was tutored privately by Solomon Asch and graduated from Moscow State University in 1917. Later, he attended the Institute of Psychology in Moscow (1924-34), where he worked extensively on ideas about cognitive development, particularly the relationship between language and thinking. His writings emphasized the roles of historical, cultural, and social factors in cognition and argued that language was the most important symbolic tool provided by society.

Perhaps Vygotsky's most important contribution concerns the inter-relationship of language development and thought. This concept, explored in Vygotsky's book "Thinking and Speaking", establishes the explicit and profound connection between speech (both silent inner speech and oral language), and the development of mental concepts and cognitive awareness. It should be noted that Vygotsky described inner speech as being qualitatively different than normal (external) speech. For Vygotsky, social interaction is important for learning, e.i. children learn adults and other children

### Information Processing Theory

#### There are three primary stages in IP Theory:

- ❖ **Encoding**- information is sensed, perceived, and attended.
- ❖ **Storage**- the information is stored for either a brief or extended period of time depending upon the processes following encoding
- ❖ **Retrieval**- The information is found at the appropriate time, and reactivated for use on a current task, the true test of effective memory.

The initial appeal of information processing theories was the idea that cognitive processes could be described in a stage-like model. The stages to processing follow a path along which information is taken into the memory system, and reactivated when necessary. Most theories of information processing center around three main stages in the memory process.

#### Sensory Register

The first step in the IP model, hold ALL sensory information for a VERY BRIEF time period.

- ❖ Capacity: we hold an enormous amount, more than we can ever perceive.
- ❖ Duration: Extremely brief- in order of 1 to 3 seconds

#### The Role of Attention

- ❖ To move information into consciousness, we need to attend to it. That is, we only have the ability to perceive and remember later those things that pass through the attention gate.

#### Short Term Memory (working Memory)

- ❖ Capacity: What you can say about in 2 seconds. Often said to be  $7 \pm 2$  items.
- ❖ Duration: Around 18 seconds or less
- ❖ To reduce the loss of information in 18 seconds, you need to rehearse
- ❖ There are two types of rehearsal- Maintenance and Elaborative

#### Long Term Memory

The final storing house of memorial information, the long term memory store holds information until needed again.

- ❖ Capacity: unlimited?
- ❖ Duration: indefinite?

#### Executive Control Processes

- ❖ Also known as executive processor, or Metacognitive skills
- ❖ Guide the flow of information through the system, helps the learner make informed
- ❖ Example processes-attention, rehearsals, organization, Sometimes call METACOGNITIVE SKILLS

#### Forgetting

The ability to access information when needed

- ❖ There are two main ways in which forgetting likely occurs:
- ❖ Decay-Information is not attended to, and eventually fades away. Very prevalent in Working memory.
- ❖ Interference-New or old information blocks' access to the information in question.

#### Methods for Increasing the Probability of Remembering

- ❖ Organization- info that is organized efficiently should be recalled
- ❖ Deep processing- This is focusing upon meaning.
- ❖ Elaboration- Connecting new info with old, to gain meaning.
- ❖ Generation- Things we produce are easier to remember than things we hear.
- ❖ Context-Remembering the situation helps recover information
- ❖ Personalization- making the information relevant to the individual
- ❖ Memory Methods
- ❖ Memorization (note the same as learning)
- ❖ Serial Position Effect (recency and primacy) you will remember the beginning and end of list most readily

- ❖ Part Learning- Break up the list to increase memorization
- ❖ Distributed Practice- Break up learning sessions, rather than cramming all the info in at once ( Massed Practice)
- ❖ Mnemonics Aids
- ❖ Loci Method- Familiar place, associate list with items in place (i.e. living room)
- ❖ Peg-type- Standard list is a cue to the target list.
- ❖ Acronym – SCUBA
- ❖ Chain Mnemonics- EGBDF
- ❖ Key word Method- Association of new word/ concept with well know word/concept that sounds similar.

## Theories of Intelligence

### 1. Psychometric Theories

Psychometric theories have sought to understand the structure of intelligence; the from it takes, its categories, and its composition. Underlying psychometric intelligence theory is a psychological model according to which intelligence is a combination of abilities that can be measured by mental testing. These tests often include analogies , classification / identification, and series completion. Each test score is equally weighted according to the evidence of underlying ability in each category

British psychologist Charles E. Spearman published the first psychometric theory 1904. His theory noted that people who excelled on one mental ability test often did well on the others, and people who did poorly on one of them tended to do poorly with others. Using this concept, Spearman devised a technique of statistical analyzing that examined patterns of individual scores. This analysis helped him discover what he believed to be the two sources of these individual differences: the “general factor” which is our general intellectual ability, and a test-specific factor.

American psychologist L.L. Thurstone disregarded with Spearman’s theory and his isolation of the “general factor” of intelligence. Thurstone believed that the “general factor “ resulted from Spearman’s method of analysis, and that if analysis were more thorough, seven factors would emerge. These seven factors were collectively called the “primary mental abilities” and included verbal comprehension, verbal comprehension, verbal fluency, numbers, spatial visualization, inductive reasoning, memory, memory and perceptual speed.

Most psychologists agree that a broader subdivision of abilities than Spearman’s classification is necessary, but only some agree with hierarchical subdivision. It quickly became apparent to many psychologists that there were problems that could not be addressed by psychometric theories. The number of abilities could not be positively identified, and the differences between them could not be clearly defined due to the limitations of testing and analysis. However ,the most significant problem extended beyond the number of abilities: what happens in someone’s mind when they are using the ability in question? Psychometric theories had no means of addressing this issue, and cognitive theories began to fill this gap.

### 2. Cognitive Theories

During the era of psychometric theories, people’s test scores dominated the study of intelligence. In 1957, American psychologist Lee Cronbach criticized how some psychologists study individual differences and other study commonalities in human behavior, but the two methods never meet. Cronbach voiced the need for two methods to be united, which led to the development of cognitive theories of intelligence.

Without understanding the processes underlying intelligence, we cannot come to accurate conclusions when analyzing test scores or assessing someone’s performance. Cognitive analysis helps the interpretation of the test scores by determining to what degree the score reflects reasoning ability and the degree to which it is a result of not understanding the questions or vocabulary. Psychometric theories did not differentiate between these two factors, which have a significant effect on the determination of intelligence. Many people are excellent reasoners but have modest vocabularies, and vice versa.

Underlying the cognitive approach to intelligence is the assumption that intelligence is comprised of a set of mental representations of information, and a set of processes that operate the mental representations. It is assumed that a more intelligent person represents information better, and operates more quickly on these representations than does a less intelligent person.

Several different cognitive theories of intelligence have emerged over the years. One was introduced by Earl Hunt, Nancy Frost, and Clifford Lunneborg, who in 1973 showed one way on which psychometric and cognitive modeling could be combined. Instead of using conventional psychometric tests, they used tasks that allowed them to study the basis of cognition-perception, learning and memory. Individual differences in the tasks became apparent, which they related to differing patterns of performing and operating manual representations.

Several years later, Robert Sternberg suggested an alternative approach to studying cognitive process. He argued, based on evidence he had gathered, that there was only a weak relationship between basic cognitive tasks and psychometric test scores because the tasks being used were too simple. Although simple tasks involve cognitive processes, they are peripheral rather than central.

Although opposing cognitive theories exist, they are all based on the serial processing of information, which means that cognitive processes are executed one after another in a series.

The assumption is that we process chunks of information one at a time, trying to combine the processes into an overall problem-solving strategy. Other psychologists have challenged this idea, arguing that cognitive processing is parallel, meaning that we process large amounts of information simultaneously. However, it has proved difficult to distinguish between serial and parallel models of information processing.

Despite evidence and support of cognitive intelligence theories, a major problem remains regarding the nature of intelligence. Cognitive theories do not take into account that the description of intelligence may differ from one cultural group to another. Even within mainstream cultures, it is well known that conventional tests do not reliably predict performance. Therefore in addition to cognition, the context in which the cognition operates also needs to be accounted for.

## Exceptional Development ( Cognitive Development)

**Giftedness-** For many years, psychometricians and psychologists, following the footsteps of Lewis Terman in 1916, equated giftedness with high IQ. This “legacy” survives to the present day, in that giftedness and high IQ continue to be equated in some conceptions of giftedness. Since that early time, however, other researchers (e.g, Cattell, Guilford, and Thurstone) have argued that intellect cannot be expressed in such a unitary manner, and have suggested more multifaceted approaches to intelligence.

Research conducted in the 1980s has provided data which support notions of multiple components to intelligence. This is particularly evident in the examination of “giftedness” by Sternberg and Davidson in their edited *Conceptions of Giftedness*. The many different conceptions of giftedness presented, although distinct, are interrelated in several ways. Most of the investigators define giftedness in terms of multiple qualities, not all of which are intellectual, IQ scores are often viewed as inadequate measures of giftedness. Motivation, high self concept, and creativity are the key qualities in many of these broadened conceptions of giftedness.

***Mental Retardation-*** is a term for a pattern of persistently slow learning of basic motor and language skills (“milestones”) during childhood, and a significantly below-normal global intellectual capacity as an adult. One common criterion for diagnosis of mental retardation is tested intelligence quotient (IQ ) of 70 or below and deficits in adaptive functioning.

People with mental retardation may be described as having developmental disabilities, global development delay or learning qualities.

***Autism-*** is a brain development disorder characterized by impairments in social interaction and communication, and restricted and repetitive behavior, all exhibited before a child is three years old. These characteristics distinguish autism from milder spectrum disorder (ASD).

Autism affects many parts of the brain, how this occurs is poorly understood. Parents usually notice signs in the first year or two of their child’s life, Early intervention may help children gain self-care and social skills, although few of these interventions are supported by scientific studies. There is no cure, with severe autism, independent living is unlikely; with milder autism, there are some success stories for adults, and an autistic culture has developed, with some seeking a cure and others believing that autism is a condition rather than a disorder.

***Asperger’s Syndrome-*** (also Asperger’s Syndrome, Asperger’s disorder, Asperger’s AS, or AD ) is one of several autism spectrum disorders (ASD) characterized by difficulties in social interaction and by restricted and stereotyped interests and activities. AS is distinguished from other ASDs in having no general delay in language or cognitive development, There is no single treatment for AS, and the effectiveness of particular interventions is supported by only limited data. Intervention is aimed at improving symptoms and function. The mainstay of treatment is behavioral therapy, focusing on specific deficits to address poor communication skills, obsessive or repetitive routines, and clumsiness. Most individuals with AS can learn to cope with their differences, but may continue to need moral support encouragement to maintain an independent life. Adults with AS have reached the highest levels of achievement in fields such as mathematics, physics and computer science, Researchers and people with AS have contributed to a shift in attitudes away from the notion that AS is a difference rather than a disability.

***Down Syndrome*** \_ Down syndrome or Trisomy 21 ( usually Down’s Syndrome in British English) is a specific disorder caused by the presence of all or part of an extra 21<sup>st</sup> chromosome. It is named after John Langdon Down, the British doctor who described it in 1866. The condition is characterized by a combination of major and minor differences in structure. Often Down syndrome is associated with some impairment of cognitive ability and physical growth as well as facial appearance. Down syndrome can be identified during pregnancy or at birth. Individuals with Down syndrome can have a lower than average cognitive ability, often ranging from mild to moderate learning disabilities. Developmental disabilities often manifest as tendency toward concrete thinking or naivete. A small number have severe to profound mental disability. The incidence of Down syndrome is estimated at 1 per 800 to 1,000 births.

Social and Emotional Development

Theories of Socio-Emotional Development

**Erik Homburger Erikson** (1902-1994) was a German developmental psychologist and psychoanalyst known for his theory on social development of human beings, and for coining the phrase identity crisis.

- ❖ Each of Erikson’s stages of psychosocial development are marked by a conflict, for which successful resolution will result in a favorable outcome, for example, trust vs. mistrust, and by an important event that the conflict resolves itself around, for example, meaning of one’s life.
- ❖ Favorable outcomes of each stage are sometimes known as “ virtues”, a term used, in the context of Erikson’s work, as it is applied to medicines, meaning “potencies” For example, the virtue that would emerge from successful resolution. Oddly, and certainly counter-intuitively, Erikson’s research reveals with breath-taking clarity how each individual must learn how to hold both extremes of each specific life-stage challenge in tension with one another not rejecting one end of the tension or the other.
- ❖ Only when both extremes in a life-stage challenge are understood and accepted as both required and useful, can the optimal virtue for that stage surface. Thus, “trust” and “mistrust” must both be understood and accepted, in order for realistic “hope” to emerge as a viable solution at the first stage. Similarly, “integrity” and “despair” must both be understood and embraced, in order for actionable wisdom to emerge as a viable solution at the last stage.

The Erikson life-stage virtues, in order of the stages in which they may be acquired are:

Hope- basic Trust vs. Mistrust

Will- Autonomy vs, Shame and Doubt

Purpose- Initiative vs. Guilt

Competence- Industry vs. Inferiority

Fidelity-Identity vs. Role Confusion

Love- (in intimate relationships, work and family ) Intimacy vs, Isolation

Caring- Generativity vs, Stagnation

Wisdom- Integrity vs. Despair

Albert Bandura ( Social Cognitive Theory)

- ❖ Bandura bases his theory on the acquisition of complex behaviors on a triangular diagram illustrating the interactive effect of various factors. These three factors are behavior (B), the environment (E), and the internal events that influence perceptions and actions. (P). the relationship between these three factors is known as reciprocal determinism.
- ❖ Bandura identified three types of reinforcers of behavior. These were direct reinforcement, vicarious reinforcement and self reinforcement. Direct reinforcement would be directly experienced by the learner. Vicarious reinforcement would be observed to be consequences of the behavior of the model. Self reinforcement would be feelings of satisfaction or displeasure for behavior gauged by personal performance standards.
- ❖ Bandura describes three types of modeling stimuli, which are live models, symbolic models, and verbal descriptions or instructions. Of these three, in American society, the greatest range of exposure is in the form of symbolic models through mass media.

- ❖ In Bandura's later work he introduces two other aspects to his Social Learning Theory. These are his work on the self regulatory system and self efficacy. In the area of self regulatory system/ self evaluative behaviors he said that this system is based upon cognitive subprocesses that:
  - Perceive
  - Evaluate
  - Regulate behavior

Social Cognitive Theory- Utilized both in Psychology and Communications posits that portions of an individual's knowledge acquisition can be directly related to observing others within the context of social interactions, experiences, and outside media influences

An important point in the social cognitive theory is that the learner's behavior is guided by cognitive processes rather than formed or shaped by reinforced practice. Four component parts are responsible for the learning and performance acquisition. These are:

1. Attentional processes
  - ❖ Observer characteristics
    - perceptual/cognitive capacities
    - arousal level
    - past performance
  - ❖ Event characteristics
    - relevance
    - affective valence
    - complexity
    - functional value
    - model's characteristics
    - Intrinsic rewards
2. Retentional processes
  - ❖ Observer characteristics
    - cognitive skills
  - ❖ Event characteristics
    - cognitive organization
    - cognitive rehearsal
3. Motor reproduction process
  - ❖ Observer characteristics
    - physical capabilities
    - subskill mastery
  - ❖ Event characteristics
    - selection & organization of responses
    - feedback
4. Motivational processes
  - ❖ Observer characteristics
    - incentive preference
    - social bias
    - internal standards
  - ❖ Event characteristics
    - external reinforcement
    - self- reinforcement
    - vicarious reinforcement

**Emotional Intelligence-** (EI), often measured as an Emotional Intelligence Quotient (EQ), describes an ability, capacity, or skill to perceive, assess, and manage the emotions of one's self, of others, and of groups. As relatively new area of psychological research, the definition of EI is constantly changing.

The Emotional Competencies (Goleman) model

The EI model introduced by Daniel Goleman focuses in EI as wide array of competencies and skills that drive managerial performance, measured by multi-rater assessment and self-assessment ( Bradberry and Greaves, 2005). In working with Emotional Intelligence (1998) Goleman explored the function of EI on the job, and claimed EI to be the largest single predictor of success in the workplace, with more recent confirmation of these findings on a worldwide sample seen in Bradberry and Greaves, "The Emotional Intelligence Quick Book" (200%)

Goleman's model outlines four main EI constructs:

Self-awareness- the ability to read one's emotions and recognize their impact while using gut feelings to guide decisions.

Self- management-involves controlling one's emotions and impulses and adapting to changing circumstances.

Social awareness- the ability to sense, understand, and react to other's emotions while comprehending social networks.

Relationships management- the ability to inspire, influence, and develop others while managing conflict.

Goleman includes a set of emotional competencies within each construct of EI. Emotional competencies are not innate talents, but rather learned capabilities that must be worked on and developed to achieve outstanding performance. Goleman posits that individuals are born with a general emotional intelligence that determines their potential for learning emotional competencies.

Moral Developmental Theory.

Kohlberg's stages of moral development are places of moral adequacy conceived by Lawrence Kohlberg to explain the development of moral reasoning. Created while studying psychology at the University of Chicago, the theory was inspired by the work of Jean Piaget and a fascination with children's reactions to moral dilemmas. He wrote his doctoral dissertation at the university in 1958, outlining what are now known as his stages of moral development.



#### Level 1 (Pre-Conventional)

1. Obedience and punishment orientation
2. Self-interest orientation  
(What's in it for me)

#### Level 2 (Conventional)

3. Interpersonal accord and conformity  
(The good boy/good girl attitude)
4. Authority and social-order maintaining orientation  
(Law and order morality)

#### Level 3 ( Post- Conventional)

5. Social contract orientation
6. Universal ethical principles  
(Principled conscience)

Carol Gilligan- her fame rests primarily on in a Different Voice: Psychological Theory and Women's Development (1982) in which she criticized Kohlberg's research on the moral development of used children. Which at the time showed that girls on average reached a lower level of moral development than boys did. Giligan pointed out that the participants in Kohlberg's basic study were largely male, and that the scoring method Kohlberg used tended to a favor a principled way of reasoning that was more common to boys, over a moral argumentation concentrating on relations, which would be more amenable to girls. Kohlberg saw reason to revise his scoring method as a result of Gilligan's critique, after which boys and girls scored evenly.

Her work formed the basis for what has become known as the ethics of care, a theory of ethics that contrasts ethics of care to so-called ethics of justice.

#### Factors Affecting Development

The following are some major factors affecting the social and emotional development of children and adolescents:

- ❖ Media
- ❖ Parenting
- ❖ Role Models
- ❖ Peer groups

#### Exceptional Development in the Area of Social Development

Leadership- the ability of an individual to influence, motivate and enable others to contribute toward the effectiveness and success of the organizations of which they are members.

Juvenile Delinquency- Juvenile delinquency may refer to either violent or non-violent crime committed by persons who are (usually) under the age of eighteen and are still considered to be a minor. There is much debate about whether or not such a child should be held criminally responsible for his or her own actions. There are many different inside influences that are believed to affect the way a child acts both negatively and positively, some of which are as follows:

- ❖ Abandonment
- ❖ Social institutions
- ❖ Peer pressure

Affective and Moods Disorders- The mood or affective disorders are mental disorders that primarily affect mood and interfere with the activities of daily living. Usually it includes major depressive disorder (MDD) and bipolar disorder (also called Manic Depressive Psychosis).

### FACILITATING HUMAN LEARNING

#### Understanding Learning and Knowledge Acquisition

Definition of learning- is the acquisition and development of memories and behaviors, including skills, knowledge, understanding, values and wisdom. It is the goal of education, and the product of experience. It is therefore a relatively permanent change in behavior.

#### Other Definitions:

1. A process inferred from relatively stable changes in behavior that result through practice of interaction with and adaptation to the environment (Goodwin and Klausmeier)
2. The development of new associations as a result of experience (Good and Grophey).
3. The modification of an organism's behavior as a result of maturation and environmental experience.

#### Theories of Learning

- A. Edward Thorndike's Connectionism/Associationism Theory:

Human activity is based on association between stimulus and response.

- a. Law of effect
- b. Law of exercise
- c. Law of readiness

- B. Classical conditioning (Ivan Pavlov):

It is based on ADHESIVE principle which means that a response is attached to a stimulus through the stimulus occurring just prior to the response so that the recurrence of the stimulus will evoke or cause the response. (ex. Dog's salivation experiment)

- C. Operant Conditioning (BF Skinner)  
Organism has to do something in order to get reward that is, it must operate on its environment.
- ❖ Reinforcement: is any behavioral consequence that strengthens behavior. It increases the likelihood of the recurrent of a particular type of response.
  - ❖ Types of reinforcement:
    - Positive Reinforcement: These reinforcers increase frequency.
    - Negative Reinforcement: Strengthens behavior by their removal.
    - Primary Reinforcement: food, water, sleep
    - Secondary Reinforcement: money, grades, starts, tokens etc.

D. Social Learning Theory ( Albert Bandura) –plus emphasis on OBSERVATIONAL LEARNING.

E. Wolfgang Kohler’s Insight Theory- Gaining insight is a gradual processes of exploring analyzing and restructuring perceptions until a solution is arrived at.

F. Gestalt Theoru (Kohlerm Wertheimer and Koffka)- The primary focus of this theory is on PERCEPTION and how people assign meanings to visual stimuli,”The whole is more than the sum of all its parts”.

G. Kurt Lewin’s Topological and Vector Theory (Field Theory)- the behavior of an individual at a given moment is the result of existing forces operating simultaneously in his life space. (Internal and External forces).

H. Jerome Bruner’s Theory- Also known as Instrumental Conceptualism. Learning involves 3 simultaneously processes: acquisition transformation and evaluation.

I. Information processing Theory- The theory describes the psychological events in terms of transformations of information form input to output. It stresses the value of perception, attention and memory in the learning process.

Type of Learning:

- a. Cognitive Learning- is concerned with the development of ideas and concepts.
- b. Affective Learning- Involves assimilation of values, emotional reactions and acquisition of attitudes
- c. Psychomotor Learning- understanding the external world through the senses and muscles.

Cognitive and Meta-cognitive factors in Learning

Analogical Process and Transfer of Learning

The Theory of Transfer of Learning was introduced by Thorndike and Woodworth (1901). They explored how individuals would transfer learning in one context to another context that shared similar characteristics. Their theory implied that transfer of learning depends on the learning task and the transfer task being identical, also known as “identical elements. There is a close relationships between transfer of learning and problem solving a problem in a new situation.

Type	Characteristics
Near	Overlap between situations, original and transfer contexts as similar
Far	Little overlap between situations, original and transfer settings are dissimilar
Positive	What is learned in one context enhances learning in different setting
Negative	Knowledge if a previous topic essential to acquire new knowledge
Vertical	Knowledge of previous topic is not essential to acquire new knowledge
Horizontal	Knowledge of a previous topic is not essential but helpful to learn a new topic
Literal	Intact knowledge transfers to new task
Figural	Use some aspect of general knowledge to think or learn about a problem
Low Road	Transfer of well-established skills in almost automatic fashion
High Road	Transfer involves abstraction so conscious formulations of connections between contexts
High Road/Forward	Abstracting situations from learning context to a
Reaching	Potential transfer context
High Road/Backward	Abstracting in the transfer context features of a
Reaching	Previous situation where new skills and knowledge were learned

Metacognition- refers to thinking about cognition ( memory, perception, calculation, association, etc.) itself or to think/reason about one’s own thinking.

- ❖ Metacognition involves two types of knowledge: 1) explicit, conscious, factual knowledge, and 2) implicit/unconsciousness knowledge.
- ❖ The efforts of metacognition are aimed at developing learner autonomy, independence and self-regulated learners.

Motivational Factors in Learning

Reward and Reinforcement

A reward is that which follows an occurrence of a specific behavior with the intention of acknowledging the behavior in a positive way. A reward often has the intent of encouraging the behavior to happen again.

There are two kinds of rewards, extrinsic and intrinsic rewards are external to, or outside of, the individual; for example, praise or money. Intrinsic rewards are internal to or within, the individual; for example, satisfaction or accomplishment.

Some authors distinguish between two forms of intrinsic motivation: on based on enjoyment, the other on obligation. In this context, obligation refers to motivation bases on what an individual thinks ought to be done. For, instance, a feeling of responsibility for a mission may lead to helping others beyond what is easily observable, rewarded, or fun.

A reinforce is different from reward, in that reinforcement is intended to create a measured increase in the rate of a desirable behavior following the addition of something to the environment.

Intrinsic and Extrinsic Motivation

Intrinsic motivation is evident when people engage in an activity for its own sake, without some obvious external incentive present. A hobby is a typical example.

Intrinsic motivation has been intensely studied by educational psychologists since the 1970s, and numerous studies have found it to be associated with high educational achievement and enjoyment by the students.

There us currently no”grand unified theory” to explain the origin or elements of intrinsic motivation. Most explanations combine elements of Bernard Weiner’s attribution theory, Bandura’s work on self-efficacy and other studies relating to locus of control and goal orientation. Thus it is thought that students are more like to experience intrinsic motivation if they:

Attribute their educational results to internal factors that they can control (eg. The amount of effort they put in, not fixed ability).

Believe they can be effective agents in reaching desired goals (eg. The results are not determined by dumb luck).

Are motivated towards deep mastery of a topic, instead of just rote-learning performance to get good grades.

In knowledge-sharing communities and organizations, people often cite altruistic reasons for their participation, including contributing to a common good, a moral obligation to the group, mentoship or giving back”. This model if intrinsic motivation has emerged from three decades of research by hundreds of educationalists and still evolving.

In work environments, money is typically viewed as an important goal ( having food, clothes etc) may well be more powerful than the direct motivation provided by an enjoyable workplace.

Learning styles vs. learning strategies.

Issues regarding learning style are somewhat related, i.e students that willing and able to think in more abstract terms and/or to critically examine what they do may show better performance.

A learning style refers to the relationship between individuals and their ways of learning whereas learning strategies refer to attitudes and behavior that is oriented towards goals . As an example, one could compare/oppose.

Learning style	Learning strategy
Self-assessment	Self-assessment
Field-dependent	Field- independent
Cognitive level	Plus meta-cognitive level
Learner preference	Learner competence

Socio-cultural Dimensions of Learning

Theories of Situated Learning

Situated learning has antecedents in the work of Gibson (theory of affordances) and Vygotsky ( social learning). In addition, the theory of Schoenfield on mathematical problem solving embodies some of the critical elements of situated learning framework. Situated learning is a general theory of knowledge acquisition. It has been applied in the context of technology-based learning activities for schools that focus in problem-solving skills.

Principles of Situated Learning:

1. Knowledge needs to be presented in an authentic context, i.e, setting and applications that would normally involve that knowledge
2. Learning requires social interaction and collaboration.

## Individual Differences in Learning

### Multiple Intelligences

The theory of multiple intelligence was developed in 1983 by Dr, Howard Gardner, professor of education at Harvard University. It suggests that the traditional notion of intelligences to account for a broader range of human potential in children and adults.

### Learning Preferences

Visual/Verbal

Visual/Nonverbal

Tactile/Kinesthetic

Auditory Verbal

### Characterizing Students with Special Learning Needs

An exceptional child is one that is different in some way from the "normal" or "average" child. The term "exceptional child" includes those with special problems related to physical disabilities, sensory impairments, emotional disturbances, learning disabilities and mental retardation. Most exceptional children require a lot of understanding and patience as well as special education and related services if they are to reach their full potential development.

## SOCIOLOGICAL DIMENSIONS OF EDUCATION

Sociologists offer different theoretical perspectives that are anchored on the concept that school is an open system to explain the relationship between the school and the society. The diverse sociological explanations enable educators to understand how the school, as a social institution of society, interacts with social environment as they perform their important role in their unique way either as agents of cultural and social transmission or as agents of social transformation.

### The Nature of Education

Sociology provides educators as special perspective in studying the school and society. Schools, by their nature are social organizations. Because of the nature of education, the study of school systems becomes the concern of sociologists. Sociologists study the social issues and concerns in education which impact on socialization.

### The Role of Schools

Dr. Adelaida Bago, in her book *Social Dimensions in the Philippine Education*, stresses there are two possible purposes or roles of schools:

1. There are those who believe that one role of the school is to educate citizens to fit into society
2. There are those who believe that the role of the school is to educate citizens to change the society

### The Specific purposes of the school are the following:

- a. Cognitive Purposes- teaching the basic cognitive skills such as reading, writing and speaking.
- b. Political Purposes- inculcation of patriotism or loyalty to the existing political order.
- c. Social Purposes- concerns with the socialization of citizens into their various roles in society.
- d. Economic Purposes- involves training and preparation of citizens for the world of work.

### School as Open System

Schools are open systems that draw their inputs and send back their outputs to the environment. An open system, like a living organism, has a homeostatic nature. Homeostasis is the property of open system to regulate its internal environment to maintain stable constant condition. This is done through internal regulation mechanisms of inter-related and interaction parts that counteract any departure from the normal or usual.

## THEORETICAL PERSPECTIVE

To provide logical explanations for why things happen the way they do in group situations, sociologists make use of theoretical perspective. These theories also become the basis for analyzing curriculum, instruction and structure in the school organization. The functionalist and Conflict Theories focus macro-level sociological analysis, while the interaction theory focuses on the micro level analysis.

1. The Functionalist Theory- (other known as equilibrium theory). The key terms in of society. Social equilibrium is achieved through the process of socialization of members into the basic values norms of particular group so that consensus is reached. The different parts or members of the society are interdependent grouped and organized to form a system.
  - a. Talcot Parsons- conceptualized society as a collection of systems within systems (McLeland, 2000)
  - b. Emile Durkheim- believed that education plays a significant roles in creating, moral unity, which is an imperative in social cohesion and harmony, Durkheim defined education and the concerns of sociology as follows: " Education is the influence exercised by adult generations on those that are not yet ready for social life, its object is to arouse and to develop in the child a certain number of physical, intellectual and moral states which are demanded of him by both the political society as a whole and special milieu for which he is specifically destined..
2. Conflict Theory- assumes a tension in society and its part due to competing interest of individuals and groups. Adherents of the theory argue that what holds society together is economic, political, cultural, military power and not shared values alone. The social order is based on the stability of dominant groups to impose their will on others who are powerless. The Conflict theory is based on four interlocking concepts: competition, structural inequality, revolution and war.
  - a. Karl Marx- the founder of the conflict school of thought believed that because the class system separates the employers from workers and workers from the benefits of their own labor, class struggle is inevitable. According to him inevitably the workers would overthrow the capitalists and establish a new society where the proletariat could freely avail of the benefits of their labor.
  - b. Max Weber- the father of bureaucratic thought was convinced that although power relations between dominant and powerless group shape society, class differences alone could not fully explain the complex way human beings form hierarchies and belief systems and make them work. Weber examined status cultures as well as class positions. According to him, the main activity of schools is to teach particular "status cultures" both in and outside the classroom

3. Interaction Theories- the focus of the interaction theory is the communication and the relationship that exists among and between groups in education- peers, teachers, students, teacher-principal and teacher- parents. The concern is to study the social-psychological questions that impact on normative attitudes, values, aspirations and self –concepts of particular groups that in return impact on the teaching- learning process.
  - a. Labeling Theory- this theory is related to expectations. For instance, in general the expectations of significant others on the learners, determine to a large extent in the behavior of students. To this extent, the processes by which students are labeled either as gifted or learning disabled, fast or slow learner, smart or dumb, affect the quality as well as the extent and speed of learning.
  - b. Exchange Theory- is based on the concept of reciprocity or “katugunan”. Reciprocal interactions bind individuals ( teachers, students, parents, administrators) with obligations. The consequences of interaction are rewards and benefits.

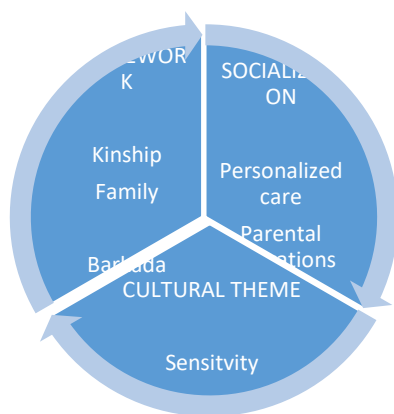
### Interaction in Philippine Setting

Jocano (1998) proposed a social framework that could be used as basis for understanding the relationships and interaction between and among groups in the Philippine education setting. The Framework shows the interlocking and interfacing of relationships of kinship and family, socialization practices and cultural themes that impact on the school system.

- ✓ Culture- is the complex whole which includes the customs, beliefs, more, folkways of a certain group of people.
- ✓ Education is transferring of culture
- ✓ Sub-Culture- specialized from culture practiced by a small group of people which shows uniqueness compared to other groups.
- ✓ Norm- what is considered” normal” is basically based on the number of people practicing a certain behavior.

### Kinds of Groups

- ✓ Primary group
- ✓ Secondary group
- ✓ In group
- ✓ Out group
- ✓ Reference group
- ✓ Peer group
- ✓ Circle
- ✓ Gang



### Types of Groups

- ✓ *Integrated group*- the members have common action in shared meanings and values
- ✓ *Crowed*- members act together on the basis of a shared emotion and feelings, as in religious revival meetings, revolutionary mob or a panic.
- ✓ *Audience or mass*- members act together on the basis of a common attitudes without interaction among members; like people at film showing.
- ✓ *Public*-this refers a number of people in some form of community come to a common agreement who have common interest but do not necessarily come to a common agreement.

### Social Institutions

#### Social Institution Defined:

According to Anthony Giddens, Social Institutions are” enduring features of social life”. It is a complex of positions, norms and social relations performing a social role. Social institutions includes government, families, and other groups of people with recognizable social interaction and norms of conduct.

#### Characteristics:

1. Social Purpose-institution satisfy social needs
2. Permanence-institution are relatively permanent
3. Enforcing rules and regulations- institution governs behavior
4. Promotes values- institution exerts social pressure regarding right conduct

### Major Social Institutions

1. **Family** – is a group of people affiliated by consanguinity, affinity and co-residence. It is the smallest social institution. One of the primary function of the family is to produce and reproduce persons both biologically and socially (in cases of adoption).
  - a. **Conjugal Family**-includes the husband, wife, and children who are not of age yet.
  - b. **Consanguinity Family**- consist of a parent and his or her children, and other people.
  - c. **Matrilocal Family**- consists of a mother and her children
2. **Education**  
Transmission of knowledge is the primary purpose of education. As a social institution school has the following purpose.
  1. Intellectual-schools teach basic knowledge and skills commonly known as the 3 Rs and eventually developing their HOTS (higher order thinking skills)
  2. Political-schools develop allegiance to the country and promotes patriotism
  3. Social-schools develop person’s ability to interact with fellow human being
  4. Economic-schools prepare the person to achieve suitable occupational endeavors.
3. **Religion**

According to Stark religion is the “socially defined patterns of beliefs concerning the ultimate meaning of life; it assumes the existence of the supernatural”

**Characteristics:**

1. Belief in the higher being (deity)
2. Doctrine of salvation
3. A code of conduct
4. Religious rituals

**4. Government**

A government is an institution entrusted with making and enforcing the rules of a society as well as with regulating relations with other societies. In order to be considered a government, a ruling body must be recognized as such by the people it purpose to govern.

**Types of Government**

- a. Democracy
- b. Monarchy
- c. Authoritarianism
- d. Totalitarianism

**Social Problems-** growing groups and countries experience various societal problem brought about by various factors.

- ✓ Juvenile delinquency
- ✓ Crime
- ✓ Alcoholism
- ✓ Suicide
- ✓ Drug addiction
- ✓ Racial prejudice
- ✓ Industrial conflict
- ✓ Poverty
- ✓ Graft and corruption

**Social Control-** refers to the ways in which members of a society influence one another so as to maintain social order.

- Informal Social Control
  - Mores and folkways
  - Expectations not written down but perceived and made known to him
  - Pressure to conform
  - Internalizing the values and attitudes of family
  - Helping the child to understand and norms of the bigger group
  - Desire for acceptance of the bigger group
- Formal Social Control
  - Passage of law
  - Formal mechanism to maintain control over the behavior of its members
  - Tendency to level an individual who is out of line and gossip
  - Curbing anti-social attitudes by disallowing privacy or ascribing undesirable status to deviants.

**Social process-** sociologist have noted that social change occurs in patterns and these patterns are called social process, this is also used to interpret social behavior.

**Classification of Social Process**

**Competition-** an impersonal attempt to gain scare and valued resources of wealth, land etc.

**Conflict-** involves the use of deliberate power

**Accommodation-**is the conscious adjustment and compromise among conflicting groups to live without conflict

**Assimilation-**is the learning and acceptance by one group of the beliefs and values of another groups so that they gradually become virtually indistinguishable.

**Characteristics of Culture**

1. Culture is Learned
2. Pakikipagkapwatao
3. Family orientation
4. Joy and humor
5. Flexibility, adaptability, creativity
6. Hardwork and industry
7. Faith and religiosity
8. Ability to survive

**Weakness of the Filipino Character**

1. Extreme personalism
2. Extreme family centeredness
3. Lack of discipline
4. Passivity and lack of initiative
5. Colonial mentality
6. Kanya-kanya syndrome
7. Lack of self-analysis and self-reflection

**PILLARS OF LEARNING**

- The Four Pillars of Education all started with the report entitled” Learning the Treasure within” of the International Commission of Education for the Twenty-first –Century chaired by Jacques Delors in 1996. It was published by the UNESCO.
- The report itself provides new insights into education for the 21<sup>st</sup> century. It stresses that each individual must be equipped to seize learning opportunities throughout life broaden one’s knowledge, skills and attitudes, and adapt to a changing complex and interdependent world.

LEARNING TO KNOW

- ✓ Implies learning how to learn by developing one’s concentration, memory skills and ability to think; acquiring the instrument of understanding.
- ✓ To learn to know, students need to develop learn-to-learn-skills. Such skills are learning to read with comprehension, listening, observing, asking question, data gathering, note taking and accessing, processing, selecting and using information
- ✓ The role of the teacher is as facilitator, catalyst, monitor and evaluator of learning.

LEARNING TO DO

- ✓ Represents the skillful, creative and discerning application of knowledge
- ✓ One must learn how to think creatively, critically and holistically, and how to deeply understand the information that is presented.
- ✓ To perform a job or work, the learning to do must be fulfilled. This entails the acquisition of competence that enables people to deal with a variety of situations, and to work in teams.

LEARNING TO LIVE TOGETHER

- ✓ Vital in building a genuine and lasting culture of peace in the world.
- ✓ Can be achieved by developing in understanding of others and their history, traditions and spiritual values, and appreciation of interdependence.
- ✓ A wide range of skills is necessary for the pillar of education; self-control, handling emotions, communication, interpretation of behaviors, critical thinking, relationship building and cooperation, negotiation, mediation and refusal, problem solving and decision making.
- ✓ Teachers should help the students realize the value of being able to live together, in their gradually enlarging world: home, school, community, city, town, province, country, and the world as a global village.

LEARNING TO BE

- ✓ Dominant theme of Edgar Faure is report” Learning to Be: The World of Education Today and Tomorrow”, published UNESCO
- ✓ If refers to the role of education in developing all the dimensions of the complete person: to achieve the physical, intellectual, emotional and ethical integration of the individual into a complete man. Pertains to the overall development of the human person as individual and a member of the society

GENDER and DEVELOPMENT

In many countries where women still face discrimination, let us promote gender equality and development between boys and girls in primary school. It is the 3<sup>rd</sup> UN Millennium Goal which aims to eliminate gender disparity in primary and secondary education, preferably by 2005, and all levels of education no later than 2015. Let us step up to empower women in access to education, work and involvement in decision making.”

Gender and development or GAD is an approach on socially constructed basis of the difference between men and women and emphasized the need to challenge the existing gender roles and relations.

Sex vs Gender

SEX	GENDER
<ul style="list-style-type: none"><li>• Categorized as male or female</li><li>• Biological</li><li>• Fixed at birth</li><li>• Does not change across time and space</li><li>• Equally</li></ul>	<ul style="list-style-type: none"><li>• Masculinity and femininity</li><li>• Socially, culturally and historically determined</li><li>• Learned through socialization</li><li>• Varies over time and space</li><li>• Unequally valued (masculinity as the norm)</li></ul>

Socialization- is a process by which social norms, roles and expectations are learned and internalize.

Gender Socialization- is a process by which norms, roles and expectation in relation to gender are learned by men and women.

Gender Stereotype-a form of prejudice, bias or limitation given to roles and expectations of male and females.

Channel of Socialization

1. Family
  - A. Manipulation
  - B. Canalization
  - C. Verbal Application
  - D. Activity Exposure
2. Church
3. Mass media
4. School
  - A. Instructional Language
  - B. Classroom Management
  - C. Instructional Materials

Cultural Dimensions of Learning

MULTICULTURAL EDUCATION

- A field of study and an emerging discipline whose major aim is to create equal opportunities from diverse racial, ethnic, social class and cultural groups.
- The primary goal of multicultural education is to transform the school so that male and female students, exceptional students, and students from diverse cultural social-class, racial, and ethnic groups experience an equal opportunity to learn.

## TEACHING IN MULTI CULTURAL CLASSES

- Multicultural education embodies a perspective rather than a curriculum. Teachers must consider children's cultural identities and be aware of their own biases
- Teachers and parents need to acknowledge the fact that we are inevitably influenced by the stereotypes and one-sided view of society that exists in our schools and the media. Hence, we must recognize those biases and change the attitude they represent by accepting all children as we receive them.
- OPPRESSION- (racism or biased attitudes) a problem in multi cultural classes vs OPPENESS-developing as much effort to changing to learn about other's culture, nurturing diversity by making multicultural education a process of action.

## LEGAL DIMENSIONS OF THE PHILIPPINE EDUCATION

The educational system in terms of curriculum, instruction, structure and organization at any given period of history is defined by organic laws, acts, and policies crafted by legal and educational experts as well as national policy makers. These statutes provide direction and guidance to those involved in the educational system.

## NATIONAL COMMISSIONS

1. Monroe Survey (1925)- The work of the commission because the basis for reforms in administrative organization and supervision, basic and higher education, teacher education and training, language instruction, private education, finance and education of non-Christians. ( martin, 1980)
2. Swanson Survey (1959)- Two important recommendations of the Commission were the restoration of grade 7 and the provision of higher financing for schools. (Martin, 1980)
3. PCSPE(1989)- Presidential Commission to Survey Philippine Education-recommendations of the commission include:
  1. Mismatch between educational priorities and national development priorities.
  2. Lack of systemic planning and evaluation in education became the basis for major reforms.
4. EDCOM (1991) -Congressional Commission on Education-some of the radical changes that came about as a result of the EDCOM report were: the creation of the independent Commission on Higher Education (CHED), the professionalization of teachers through the creation of the Licensure Examination for Teachers (LET), the clear definition of career service paths for teachers and administrators, the creation of the Technical Education and Skills Development Authority( TESDA).
5. PCER (1999)- Presidential Commission on Educational Reform- the recommendations of the commission became the basis for the formulation of a package of policy and projects known as the Higher Education Development Project ( HEDP)

## SPECIFIC DECREES, ACTS &LAWS (Legalizing Philippine Education)

1. PROVISIONAL CONSTITUTION OF BIAK NA BATO  
Article XV- The Secretary of Interior was to take charge among other duties, with the advancement of the public instruction.
  - a. Elimination of the friar control over all or most aspects of education
  - b. Secularization of a universal system of primary education
  - c. Greater supervision and control higher education by the state
  - d. Implementation of a more modern and progressive educational system patterned after western models
2. THE MALOLOS CONSTITUTION (1899 Constitution)  
Article 23 not only contain instruction regarding the public schools; it also specifies the manner by which private schools may be established in order to provide more access to education to a greater number of Filipinos. All primary education was offered free and compulsory in all schools in the country as explicitly stated in the constitution.  
"Any Filipino may establish and maintain institutions of learning, in accordance with the laws authorizing them, Public Education shall be free and obligatory in all schools of the nation"
3. THE 1935 CONSTITUTION  
Article XIV- provides "All schools shall aim to develop moral character, personal discipline, civic conscience, and vocational efficiency, and to teach the duties of citizenship"  
Article XIV, Sec 5; "All educational institution shall be under the supervision of a subject to regulation by the state. The government shall establish and maintain a complete and adequate system of public education, and shall provide at least free public primary instruction and citizenship training to adult citizens.  
The Japanese occupied the City of Manila in 1942. Subsequently, the Japanese dissolved the National Government and replaced it with Central Administrative Organization of the Japanese Army. The Japanese created the Department of Education, Health and Public Welfare with Claro M. Recto as commissioner. The Bureau of Private Education supervised private schools and colleges. The six basic principles of Japanese education basic principles of Japanese education in the Philippines include the following as enumerated by Bago.
  - a. To make people understand the position of the Philippines as member of the EAST-ASIA Co Prosperity Sphere.
  - b. To eradicate the old idea of the reliance upon the western nations especially upon the United States and Great Britain, and to posters a new Filipino culture based on the self-consciousness of the people as Orientals
  - c. To endeavor to evaluate the morals of the people, giving up the over emphasis on materialism
  - d. To strive for the diffusion of the Japanese language in the Philippines and to terminate the use of English in due course.
  - e. To put importance to the diffusion of elementary education and to the promotion of vocational education.
  - f. To inspire the people with the spirit to love labor.
4. THE 1973 CONSTITUTION  
The 1973 constitution provided specific provisions on education in several sections that demonstrates the important role assigned to education in creating the New Society. Section 8 of Article XV provides that: "All educational institutions shall, be under the supervision of an subject to regulation by the state. The state shall establish and maintain a complete, adequate, and integrated system of education relevant to the goals of the national development".  
Other education-related provisions are found in section 9 and 11.
5. THE FREEDOM CONSTITUTION OF 1986  
Article XV, Section 8 contained the specific provisions on education. Thus the educational system during the interim period was basically the same as the one operating under the Martial Law.
6. THE 1987 CONSTITUTION  
Section 17 of the Constitution states:" The state shall give priority to education, science and technology, arts, culture, and sports to foster patriotism and nationalism, accelerate social progress, and promote total human liberation and development"  
This general principle was defined in sections 1-5 of article IV on Education, Science and Technology, Arts, Culture and Sports Education.



7. THE ROYAL EDUCATIONAL DECREE OF 1863

In an attempt to correct the existing deficiencies in education, the Royal Educational decree of 1863 was promulgated. The main objective of the decree was to establish a system of elementary schools for the country and to provide training for teachers in order to “broaden as much as possible the teaching of the Holy Catholic Faith, of the language of the fatherland, and of the elementary knowledge of life.”

8. EDUCATIONAL ACT OF 1901

In 1901, a few years after the establishment of the American Rule in the country, the Philippines Commission passed the first comprehensive school law for the Philippines.

The main objective of the Educational Act of 1901, which is also known as Philippine Commission Act no.74 and considered as the “ Organic school law of the Philippines” was to establish a highly centralized educational system in the country.

9. EDUCATIONAL ACT OF 1940

The educational act of 1940 during the Commonwealth period ushered a new era in educational history. The primary aim of the act was “to meet the increasing demand for public elementary instruction at the same time comply with the constitutional mandate on public education.

10. EDUCATIONAL ACT OF 1982

The act provides for the establishment and maintenance of an integrated system of education (both formal and non-formal) relevant to the goals of national development. In recognition of the right of every individual to have equal access to relevant quality education. The act defines the structure of the formal education consisting of elementary , secondary and tertiary levels as well as delineates the objectives of each category.

11. THE PHILIPPINES BILINGUAL POLICY (BEP)

The policy provided an operational definition of Bilingual Education in the Philippines, which is the separate use of Filipino and English as the media of instruction in specific subject area. ( as reiterations of DECS order No. 25 of 1974- Implementing Guidelines for the policy on Bilingual Education

12. FREE PUBLIC SECONDARY ACT OF 1988

The act established and provided for a free public secondary education to all qualified citizens.

13. THE HIGHER EDUCATION ACT OF 1994

The act created the Commission on Higher Education (CHED) which is independent and separate from DECS.

14. TECHNICAL EDUCATION AND SKILLS DEVELOPMENT ACT OF 1994

This Act (R.A. No. 7796) which is also known as the TESDA Act of 1994, created the Technical Education and Skills Development Authority, providing for its powers, structure and for other purposes. The general aim of the Act is to provide “relevant, accessible, high quality and efficient technical education and skills development in support of the development of high quality Filipino middle-level manpower responsive to and in accordance with Philippine development goals and priorities”.

15. HIGHER EDUCATION MODERNIZATION ACT OF 1997

Otherwise known as R.A. 8292. This act provides among others for the uniform composition and powers of the governing boards of state universities and colleges, with the chairman of CHED as the chair of the governing boards of all SUCs.

16. AN ACT TO LENGTHEN THE SCHOOL CALENDAR

Under this act, the school year shall start on the first Monday of June but not later than the last day of August. In the implementation of this act, the Secretary of Education shall determine the end of the regular school year, taking into consideration the Christmas and summer vacations, and the particular circumstances of each region.

17. GOVERNANCE OF THE BASIC EDUCATION ACT OF 2001

This act contains provision that are also found in the educational act of 1982 regarding the organizational structure of the educational bureaucracy. The important provision of this act is the remaining of the department of education, culture and sports to the department of education

## PSYCHOLOGICAL DIMENSIONS OF EDUCATION

Learning is not a function of the mind alone but of the total person which is the overarching principle of holistic education, that is, to provide learning opportunities for the development of the physical, intellectual, psychomotor, character and social development of human beings.

### Definition of Holistic Education

The concept of holistic education, based on a spiritual/philosophical orientation’s encapsulated in the Primer for 2002 Basic Education Curriculum:

“The Department of Education envisions every learner to be functionally literate, equipped with life skills, appreciative of the arts and sports, and imbued with the desirable values of a person who is makabayan (patriotic), makatao (mindful of humanity), makakalikasan ( respectful of nature) and maka-diyo (godly).

### Purpose of Holistic Education

The purpose of holistic education is to prepare students to meet the challenges of living as well as schooling. To ensure holistic education, it is important for young people to learn a variety of human concerns which include knowing and understanding about the following: (Holistic Education, 2003)

1. Themselves
2. Healthy relationships with others
3. Social development
4. Resilience
5. Beauty, truth and transcendental experience

Cognitive Development

Cognition represents the manner by which a human being acquires, stores, processes and uses information about the internal and external environment.

	Age	
Trust vs Mistrust Stage	0-11 year	HOPE
Autonomy vs Shame and Doubt	2-3 years	WILL POWER
Initiative vs Guilt	4-5 years	PURPOSE
Industry vs Inferiority	6 age of puberty	COMPETENCY
Industry vs Identity Diffusion	13-20 age of adolescence	FIDELITY
Intimacy vs Isolation	Over 20, young adult	LOVE
Generativity vs Self- Absorption	Adulthood	CARE
Integrity vs Despair	Mature adulthood	WISDOM

Three famous cognitive psychologists:

1. Jean Piaget- considered the development of the intellect according in four sequential stages that form a continuum of mental processes which increasingly become more sophisticated as the individual grows and develops.
2. Jerome Bruner- like Piaget. Bruner considered intellectual development as taking place in stages, from the simple to the complex. According to Bruner, human beings represent in their minds the world around them based on the cognitive level they are in at a particular point in time, however, unlike Piaget, Bruner did not consider cognitive levels as age-bound.
3. Lev Vygotsky- on the other hand, he focused on the important role of language and social interaction in cognitive development. To Vygotsky, it is necessary to understand the interrelations between thought and language, in order to understand intellectual development.

Social Emotional Development

Social emotional development, like cognitive development is the product of interaction between the biological and environmental factors. The social dimension refers to the interaction with others, while the emotional refers to feelings about oneself.

Eric Erikson is known for “identity crisis”. He formulated a theory of social-emotional development based on his extensive experience in psychotherapy and dealings with children and adolescents from all social class levels. He proposed that socialization consists of “the eight stages of man” each stage involves a “psycho- social crisis”.

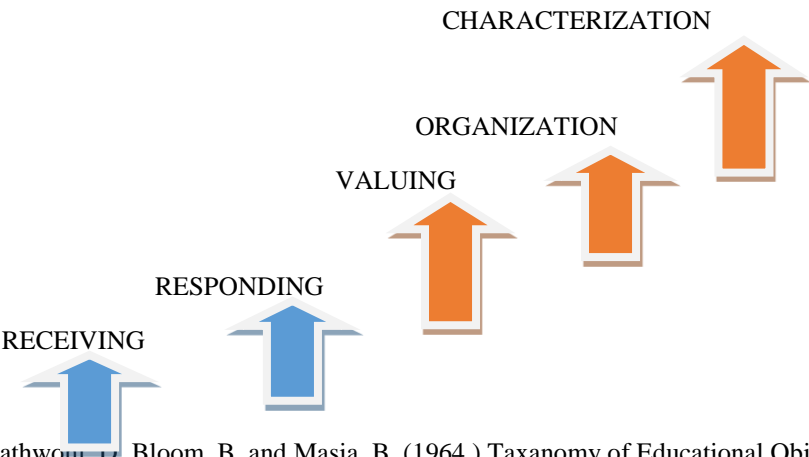
Kohlberg’s Theory of Moral Development

Lawrence Kohlberg, proposed six stages of moral development. The first three of which share many features with the stages in the Piagetian model. He believes that moral development takes place through a series of six under three levels of development:

1. Pre-Conventional Level
  - a. Stage 1-Obedience and Punishment Orientation
  - b. Stage 2- Self-interest Orientation ( individualism, instrumentation and exchange)
2. Conventional Level
  - c. Stage 3- Good boy/Good Girl Orientation (interpersonal accord and conformity)
  - d. Stage 4- Law and Order Orientation (authority and social-order maintaining)
3. Post-Conventional Level
  - e. Stage 5- Social Contract Orientations
  - f. Stage 6- Principled Conscience Orientations

Taxonomy of the Affective Domain

Krathwohl, Bloom and Masia ( 1956) developed a taxonomy of objectives in the affective domain. Affective phenomena run through from simple behaviors to increasing more complex ones that require organization and characterization or internalization



(adapted from Krathwohl, D. Bloom, B, and Masia, B. (1964 ) Taxanomy of Educational Objectives)

## Taxonomy of the Psychomotor Domain

Holistic education not only involves the development of the cognitive and affective domains. It also involves the development of the psychomotor domains which pertain to physical movement, perceptual abilities and non-verbal communication. Harrow ,A.J. developed a taxonomy of objectives for psychomotor with six categories:

1. Reflex Movements- this includes segmental reflexes.
2. Fundamental Movements- this include walking, running, jumping..etc.
3. Perceptual Abilities-.this include kinesthetic, visual, auditory, tactile and coordination.
4. Physical Abilities- involve endurance, strength, flexibility, agility, and dexterity.
5. Skilled Movements- these are the movements necessary in games, sports, dances and the arts.
6. Non-Discursive Communications- these relate to expressive movements through posture, gestures, facial expressions and creative movement.

## HISTORICAL DIMENSION OF EDUCATION

Education is as old as life itself. No one can present an accurate account concerning the origin of education. There are 2 opposing school of thoughts when it comes to origin of education.

1. Evolutionist – education started form primitive people
2. Creationist- education started from Adam and Eve

Modern day education owes much of it system to the institutions established by the ancient civilizations of China, India, Israel, Egypt, Greece and Rome

### Chinese Education

- Chinese are descendants from the rivers banks of Huang Ho and Yangtze River.
- Aimed at selecting and training people for public services.
- Emphasis on modeling a person's character and moral values.
- Believed that government has responsibility to provide education
- Centered on the mastery of Chinese language and classical literature particularly the work of Confucius ( the first teacher in China).
- Analects- the most revered Chinese classical literature which contains the sayings of Confucius.

### Egyptian Education

- Egyptians were polytheist people (worshippers of many gods)
- Pharaohs were considered their god and king
- Priest and scribes were teachers of noble class
- Parents were teachers of lower class or fellahin
- Education was highly practical and empirical
- They devised a system of picture writing called hieroglyphics.
- Provide the modern world with the basic foundation of education, art, music, literature, mathematics, engineering, architecture, astronomy, geography, geology, medicine etc.

### Greek Education

- Ancient Greece was divided into several Poleis (small city-states)
- Greeks were mixture of Germanic and Aryan stock ( strong race)
- Sparta and Athens were two or more popular poleis
- Constant struggle between Sparta and Athens resulted in Peloponnesian War which lasted for 27 years.

### Spartan Education

- Sparta was the largest polis
- Purely military city-state
- Mothers functioned as state nurses
- At age 7 boys were turned over to Paidonomus- a military commander who cared for boys until age 18
- Boys stayed with the paidonomoud until
- At 18 boys prepare for the military training
- At 20 get assigned for actual war
- At 30 they are compelled to marry
- Girl's education was limited to the instructions given by their mothers
- Because of their system, there was no famous Spartan

### Athenian Education

- Men sana en coporesano'(sound mind sound body) . This is the ultimate aim of Athenian education
- Democratic form of living, democracy is the lasting legacy of Athens to the world
- Athens preserved the family
- All schools were private
- Boys were separated from girls
- Form-0-7 yr old, boys stayed at home received training form Paidogogus ( an educated slave)
- Palaestra- a public gymnasium where boys had their physical training under a Paedotribe
- Pentathlon (running, jumping, discus, javelin and wrestling)
- Kitharistes- music teacher, teaches poetry like Iliad and Odyssey
- Grammarians-Writing teacher
- At 18 if Athenian boy finished his training he will be called an Ephebos ( novice citizen), after
- The Sophist ( New Class of Teachers)  
Sophist were well traveled men who were mostly non-citizen of Athens, they offered new perspective in learning through declamation and oration, grammar, rhetoric, critical and reflective thinking.

Protagoras- Chief of the Sophist

### The 3 Great Educational Theorists

1. Socrates-he postulated” know thyself” and accepted the fundamental principles of Protagoras that man is the measure of all things
2. Plato –wrote the “Republic”, he advocated a government which he termed Aristocratic Socialism (philosophical king, warrior and artisan)
3. Aristotle- father of modern sciences

### Greek Universities

1. Rhetorical Schools ( founded by Sophists)
2. Philosophical Schools
  - a. Academy- founded by Plato
  - b. Lyceum- founded by Aristotle
  - c. School of Stoics- by Zeno
  - d. Epicurean-by Epicurus
3. Combined Rhetorical and Philosophical School
  - a. University of Athens-most teachers were Sophist supported by Athenian Government but disappeared when Constantine declared Christianity as official religion
4. School Outside Greece- University of Alexandria (Egypt) Built in honor of Alexander the Great  
Famous Alumni- Euclid (geometry), Eratosthenes ( Geography and Astronomy), Archimedes ( Physics)

### Roman Education

Pragmatic education-strived to find practical application of the knowledge they acquired and activities they pursued.

- a. Early Roman Education (home based education)
- b. Hellenized Roman education- started when Rome’s contact with Greek civilization then finally conquering Greece.

### Stages of Roman Education:

1. Elementary (7-10)= Literator
2. Secondary (10-16)=Gramaticus
3. Higher Education (16 up)=Rhetorical

### Medieval Education

- Medieval education started when the roman empire fell around 400 AD
- Christianity was declared as the official religion of the state by Constantine the Great, therefore Catholics grew in number and power
- Hierarchy of Church in Middle ages:
  1. Pope-leader of the church and held office in Rome
  2. Cardinal
  3. Archbishop
  4. Bishop
  5. Priest/Clergy

### Movements During Middle Ages

1. Monasticism-advocated by St. Benedict. They were called”monks” and stayed in monasteries which serve as repositories of classical literature.
2. Scholasticism-“Education as an intellectual discipline.  
Anselm- Father of Scholasticism  
Abelard- One of the famous schoolmen  
St. Thomas Aquinas= wrote “Summa Theologiae” (official doctrine of Catholic Church)

### Early School During Middle Ages

- Catechumenal School- “catechumens” are new converts, they held their classes in small churches
- Catechetical School- for in-depth training in religion
- Episcopal/Cathedral School-organized by bishop to train clergy

### The Medieval University

- The most important contribution of the middle ages
- The first universities focused on teaching medicine
- University of Naples (the first organized university)

### Composition of Medieval University

1. Studium Generale ( entire studentry)
2. Nation (students and teachers who came from same place of origin)
3. Councilor (leader of Nation)
4. Facultas (teachers who teaches the same subjects)
5. Dean (leader of Facultas)
6. Rector (chosen by councilors and facultas)

### Degree Offered by Medieval University

- At 13 to 14, a boy may enter a university and study Liberal Arts
- At 21 teach younger boys
- At 25 write thesis
- If the students pass the thesis defense he will receive Licentia Docendi

- Renaissance Period (the peak of Arts and Sciences)- Renaissance is considered the start of modern period
  - Reformation Period- Martin Luther nailed his 95 theses containing the abuses of the church to the door post of his church.
  - Counter Reformation= to win back protestants, the pope assigned 3 congregations to head counter-reformation.
1. Brothers of Christian School (founded by St. La Salle)
  2. Society of Jesus (founded by St. Francis of Loyola)
  3. Jansenites (founded by St. Cyrene)

#### Notable Names in Education

- Socrates-“know thy self”
- Plato-wrote the “Republic”
- Aristotle-Father of Modern Sciences
- Cicero-Wrote the “Oratore”
- Quintillian-Wrote” Institution Oratoria” he was a famous Grammaticus
- Anselm-father of scholasticism
- Abelard- spearheaded Conceptualism
- St. Thomas Aquinas- “wrote” Summa Theologiae”
- Erasmus- suggested that education be in accordance with the needs of society, he was a humanist who advocated the importance of studying the character of the child
- Ascham- wrote the “Schoolmaster” condemning brutal punishment in English schools during his time.
- John Amos Comenius- father of modern education, he wrote the first picture book”Orbis Sensualium Pictus”
- Mulcaster-said that” Education should be in accordance with nature”
- John Locke-“tabula rasa’ (blank sheet)
- John Jacques Rousseau-wrote”Emile” (Education should be in accordance with the nature of the child)
- Pestalozzi- defined education as natural ,symmetrical and harmonious development of the faculties of the child
- Herbart- conceived education as aimed towards the development of morality and virtue. He is famous for the Herbartian Method in psychology
- Froebel-father of kindergarden
- John Dewey- “Education is not preparation for life, it is life”
- St.John Baptiste de la Salle- patron saint of teachers
- Maria Montessori-advocated the child- centered education and prepared environment

#### ORIENTAL PHILOSOPHY

##### CONFUCIANISM

- Had its beginning in the teachings of Confucius but the following sages took the lead in building its formulation. Mencius and Hsun-Tzu.
- Confucius is the Latinized name for Kung-Fu-Tzu-Fu-Tzu. tzu which means master, is a polite suffix added to the names of most of the philosophers during the Chou Dynasty.
- Confucius was the founder of the Ju School which was known in the west as the Confucian School.
- The Ju or Confucian School emphasized matters concerning human-heartedness and righteousness and the six liberal arts commonly translated as Liu Yi or the Six Classics namely:
  - Yi Ching or the Book of Changes
  - Shi-Ching or the Book of Odes
  - Shu-Ching or the Book of History
  - Li-chi or the Rituals and Rites
  - Chu’unCh’iu or the Book of Spring and Autumn Annals
- The primary goal of Confucius was not just to make his” disciples” to be well versed of the Classics but to be”rounded men”, useful to the state and the society. Thus, he taught them various branches of knowledge (ancient cultural history, interpretations based on his moral concepts) based on the different Classics.
- Confucius’philosophy is HUMANISTIC. It occupies mainly with HUMAN RELATIONS and VIRTUE. This, his concept of the Yi (Righteousness) and Jen (human heartedness).
- Confucianist’s great virtue were: benevolence, righteousness, propriety, wisdom, sincerity and harmony.
- Confucious’ Ideas
  - His Ethics is based upon the nature of man and society’
  - For him MAN is essentially a social being; he is the main component of a society (made by the individuals who compose it and the interaction they have each other)
  - A MORAL man is the cooperating member of the society.
  - The measure of the man’s life is not ”how long” but “how good”.
  - All men desire happiness and in order to achieve it everyone’s goal must be to make each other happy.
  - The secret of his mark in history is based on the great emphasis on the Supremacy of HUMAN VALUES.WISDOM is to KNOW men; VIRTUE is to LOVE men”.
  - A government is GOOD when it makes its people happy
  - The government should bring about welfare and happiness of the whole people.
  - A good government must be administered by the most capable men of the country- those who have the CHARACTER and KNOWLEDGE.
  - Character and knowledge were produced by PROPER EDUCATION

##### CONFUCIANISM: DOCTRINE OF JEN

- Jen or benevolence is the central thesis of his whole system- his ethic, politics and his life ideal-flowed from this; this is the PERFECT and SUPREME VIRTUE.
- The Jen stresses correct procedure for human relations-proper way for men to meet each other leading to positive efforts for the good of others.
- A man of Jen is man of all around virtue
- Jen is the Confucian ideal of:
  - ✓ Cultivating human relations
  - ✓ Developing human faculties
  - ✓ Sublimating one’s personality
  - ✓ Upholding human rights
- To achieve Jen one must practice the Chung and the Shu (the Principle of Reciprocity).
  - ✓ Chung- means faithfulness; a state of the mind when one is completely honest with himself
  - ✓ Shu- means altruism; it is regard for the others; a state of mind when one has complete understanding and sympathy with the outside world, the opposite of selfishness.

## CONFUCIANISM DOCTRINE OF YI

- Literally, Yi means righteousness
- The concept of Yi is the one that upholds man's conduct
- It is the highest principle embodied in the activities of mankind
- CONFUCIANISM
- Spirit of Confucianism
- Confucianism is not a Religion but a Philosophy and a system of Ethics. Confucianism emphasizes human relationships- how to live in harmony with others. Man's personality reflects itself in his actions and behavior in the five relationships:
  - a. Governmental (King and Subject)
  - b. Parental (Father and Son)
  - c. Conjugal ( Husband and Wife)
  - d. Fraternal ( Elder Brother and Younger Brother)
  - e. Friendship ( Friend and Friend)

### On Ethics

- ✓ Confucianism upholds (5) constant virtues:
  1. Human heartedness (jen)
  2. Righteousness (yi)
  3. Propriety (li)
  4. Wisdom (chin)
  5. Sincerity (hsin)
- Chinese Ethical Principles or Doctrine of Social Norms
- ✓ This is the most significant contribution of Confucianism in the Chinese civilization.
- ✓ It stresses that every man is encouraged to practice filial piety and fraternal love. This action when extended to a larger social group would mean regulation of the family and also the good government of the state. This could translate to PEACE in the world.
- Doctrine of the Social Status or the Rectification of Names
  - Refers to the idea of the position of man among men; that every man must be in his proper place and with his proper responsibilities and duties.
  - Every name contains certain implications which constitute the essence of that class of things to which the name applies.

## MENCIUS

- Mencius represents the IDEALISTIC Wing of Confucianism.
- He is famous for his theory on The Original Goodness of Human Nature
  - Human nature is neither good or bad
  - Human nature can either be good or bad
  - The nature of some men is good while the other is bad
  - Human nature is good
- For him, the proof of the original goodness of human nature is COMMISERATION. This feeling where man cannot bear to see the suffering of others.
- Four (4) Elements that make man, MAN
  1. The Feeling of Commiseration- the beginning of human heartedness (jen)
  2. The Feeling of Shame and Dislike- the beginning of righteousness (yi)
  3. The Feeling of Modesty and Yielding- the beginning of propriety (li)

### Mencius' Political Philosophy

- Man is a political animal
- Man can fully develop these relationships only within state and society
- Concerned on having GOOD Government- depends on the good example of the ruler.
- Curriculum emphasizes on social reforms as the aim of education. It focuses on student experience and taking social actions on real problems.
- Method of teaching includes the problem oriented type (students are encouraged to critically examine cultural heritage), group discussions, inquiry, dialogues, interactions and community-based learning
- The classroom will serve as a laboratory in experiencing school practices- bringing the world into the classroom.

## TEACHING PROFESSION

### THE TEACHER AND SOCIETY

#### Philosophical Background

Teachers are heirs to a rich philosophical heritage. Passed on to us are a number of philosophies of various thinkers who believed before us. These thinkers reflected on life in this planet. They occupied themselves by searching for answers to questions about human existence.

#### Five Philosophies of Education

Essentialism: Main proponent- William Bagley

Progressivism: "Education is preparation for life" Main proponent- John Dewey

Perennialism: Main proponent- Robert Hutchins

Existentialism: Existence precedes essence" Main proponent- Jean Paul Sartre

Behaviorism: Main proponent- John Watson

Introduction

Man by nature is curious. He wants to know the “whatness, whyness, and howness” of the things around him. It is in the exploring of things that he finds fulfillment for the numerous complexities that confront him. The eagerness to look for more answers or find solution to manifold problems that beset him leads him to the undending journey of seeking for truth. Truly, this manifests the true desire of man which is to know. It affirms not only his essence, his rationality. It is also a fulfillment of his purpose to keep the truth and pass it from one generation to another so as to preserve humanity.

Ideas flow from the human mind eternally. It is in the ideas that the truth lies. Undending as the ideas are, the more the need for a man to harness and cultivate it to perfection. Ideas that are not nourished and protected will not just prevent man in possessing the truth but it will also deprive him a taste of his rationality. Hence, ideas must and should be at all times shine in luster of naturalness, profound by simplicity and contain true and real meaning.

The truth in the ideas must be preserved in as much as man wants to preserve the gift of knowledge and wisdom that it brings. And delicate as it is, it should be protected from all forms of deterioration and artificialities. Presented it maybe in various ways, the real meaning must be conveyed at all times.

It is Philosophizing that the ideas can be best presented and conveyed. This can be best enhanced through proper education. Since then philosophy and education complement and work hand-in-hand in the acquisition of knowledge and the preservation of Truth. True enough, one can say then that Philosophy is knowledge and Education is the most essential tool of philosophy in the search for wisdom and truth.

Man and Philosophy

The ultimate aim of man is to possess for the Truth. The process ends not in the search but in the possession of the truth. It is in his capacity to think, to rationalize that the responsibility of philosophizing is realized. It is but proper then to have a closer look on the man and a glimpse of what philosophy is, so that we can fully understand the meaning of our search for the truth and the desire to possess it.

Definition of Man

The quest for the truth is the ultimate goal of man. There is no way but up, the goal is to achieve it. Thus, man is defined vertically as Rational Animal.

Innate in man is the desire to be with his fellow beings. It is in his relationship with others that fulfillment of another dimension of his rationality is achieved. Time and time, it has been proven that man cannot live by himself alone. The need to share himself with others-share his innermost thoughts, feelings, experiences and unravel the kind of person he is-is a must fully realize the aspect of being political animal. Hence, the aim to develop a relationship not only with him spreads to other beings. Here he develops friendship, camaraderie, companionship with other fellow beings. He grows and finds fulfillment with them. This, man is defined horizontally as a SOCIAL or POLITICAL ANIMAL.

Being rational and social or political animal are not enough to realize the value of man. Another aspect must also be present, functionality. Man is created for a certain reason or purpose. He has a role to perform in order to preserve him and all other beings. He is the steward of the world. In this regard, man should work. Hence man is defined as a Working Animal.

Relationship of Philosophy and Education

While philosophy establishes the fundamental principles (concepts, theories, learning). It is Education that carries out these principle. Furthermore, it is Philosophy that provides the goal or aims while Education is the instrument in realizing these goals.

Philosophy and Education complement each other. Both of them spouse theory and practice. The absence of one of the one will make a man insufficient and aimless.

Philosophy of Education

Naturalism

- ❖ Rooted from Ancient Philosopher such as Thales, Anaximander, Anaximenes
- ❖ Denies everything that has supernatural significance-dogmas/revelations-for all can only be found through nature
- ❖ Preserves the natural goodness of man
- ❖ Truth can only be found nature
- ❖ Advocates: J.J. Russeau, John Lock, Montaigne
- ❖ On Education
  - ✓ Naturalism stands for democratic and universal way-everyone must be educated in the same manner.
  - ✓ Education is in accordance to human development and growth
  - ✓ Emphasis is given more on the physical development- informal exercise-and hygiene of the person rather of the 3R’s
  - ✓ Aims to unfold the child’s potential not to prepare him for a definite vocation or social position-but to prepare him to adapt to the changing times and needs. Consequently, ones conduct is governed by impulse, instinct and experience.
  - ✓ It puts the child at the center of educational process and prepares him to experience life as it is.

Idealism

- ❖ Ideas are the only true reality, the ultimate truths for matter is nothing but just a mere representation of ideas.
- ❖ Emphasis is given on knowledge obtained by speculation and reasoning for its central tenet is that ideas are the only thing worth knowing for.
- ❖ Focus is on conscious reasoning of the mind in order to attain truth. This includes the activities pertinent to the human mind such as introspection and intuition and the use of logic.
- ❖ Advocates: Socrates, Plato

- ❖ On Education.
  - ✓ Its aim is to discover the full potentials in child and cultivates it in order to prepare him for a better position in the society and for him to serve the society better.
  - ✓ Emphasis is given on subjects-philosophy, literature, religion and history that will develop and enhance the mind of a child
  - ✓ Methods used in teaching include lecture, discussion and the Socratic dialogue.
  - ✓ Character development is through emulation of examples and heroes.

## Realism

- ❖ Concerns with the actualities of life, what is real.
- ❖ Ultimate reality is the world of physical objects. Hence, reality is independent of the human mind.
  - Objective existence of the world and beings in it
  - Knowability of these objects as they are in themselves
- ❖ Advocates: Aristotle, St. Thomas and Jonathan Herbart
- ❖ On Education:
  - The most effective way to find about reality is to study it through organized, separate and systematically arranged matter- emphasis is on subject matter concerning Science and Mathematics
  - Methods used in teaching include recitation, experimentation and demonstration
  - Character development is through training in the rules of conduct

## Existentialism

- ❖ Rooted from the dehumanization of man by technology and reaction to the traditional Philosophy of Kant and Hegel
- ❖ Defining feature is “ existence precede essence”
  - Man conceives and makes of himself
- ❖ Known as the Philosophy of Subjectivity
  - Proclaims man’s freedom in the accomplishment of his destiny
- ❖ Conceives philosophy as something that is human life and the choice that each person has to make.
- ❖ Advocates: Soren Kierkegaard, Jean Paul Sarte
- ❖ On Education:
  - Subject matter is a personal choice
  - Learning is based on the willingness of the student to choose and give meaning to the subject
  - Emphasis is given on the students rather than on curriculum content
  - Students should not be treated as objects measured or standardized
  - Methods are geared on giving opportunities for the students for self actualization and self direction.
  - Character development is through the personality of every individual in making a decision.

## Essentialism

- ❖ Rooted in idealism and realism and arose in response to progressive education
- ❖ Defining feature is ”essence precedes existence”
- ❖ Refers to the traditional or back to basic approach in education
- ❖ Concerns with the fundamental of education skill and knowledge without which a person can’t either be efficient individually or socially
- ❖ Advocates: William Bagley, James Koerner, H.G. Rickover, Paul Copperman
- ❖ On Education:
  - schooling is practical for this will prepare students to become competent and valuable members of the society.
  - Focuses on the “basics”-reading, writing, speaking and the ability to compute (arithmetic)
 Subjects that are given emphasis include geography, grammar, reading, history, mathematics, art and hygiene  
 -Stresses the values of hard work, perseverance, discipline, and respect to authorities to students.  
 -Students should be taught to think logically and systematically-grasping not just the parts but the whole (entirely)  
 -Methods of teaching centers on giving regular assignments, drills, recitation, frequent testing and evaluations.

## Pragmatism

- ❖ What is experienced and observed is true. Hence, what is useful is true.
- ❖ Synonymous to functionality and practicality
- ❖ Focuses more on praxis’
- ❖ Thought must produce actions (realization) rather than continue lying inside the mind and leading into uncertainty
- ❖ Advocates: Charles Sanders Peicer, John Dewey
- ❖ On Education:
  - Involves students to work in groups
  - Methods of teaching include experimentation, project making and problem solving
  - Stresses on the application of what have learned rather than the transfer of the organized body of knowledge

## Perennialism

- ❖ The word itself means” eternal”, ageless, everlasting, unchanged’
- ❖ Influenced by the philosophy of realism
- ❖ Truth is universal and does not depend on circumstances of place, time and person.
- ❖ To learn means to acquire understanding of great works of civilizations
- ❖ Advocates: Robert Hutchins, Mortimer Adler
- ❖ On Education:
  - Some ideas in the past are still taught because they are significant
  - Curriculum should contain cognitive subjects that cultivate rationally, morality, aesthetic and religious principles. This includes history, language, mathematics, logic, literature, humanities and science.
  - Curriculum must be based on recurrent themes of human life for it views education as recurring process based on eternal truths
  - The teacher must have the mastery of the subject matter and authority in exercising it.
  - Aims for education of the rational person- to develop man’s power of thought
  - The central aim of this philosophy



## Humanism

- ❖ Rooted in the economic and political changes during the Renaissance period
- ❖ Has three main lines of growth:
  - intellectual (includes Education)
  - Aesthetic
  - Scientific
- ❖ Divisions:
  1. Individualistic Humanism
    - Making the most out of one's life
    - Living life to the fullest
    - Stresses on individual freedom, culture and development
  2. Social Humanism
    - Aims for social rather than individual happiness
    - Includes social reforms and improvement of social relationships
- ❖ Advocates: Da Vinci, Erasmus, Pestalozzi
- ❖ On Education:
  - Education is a process and should not be taken abruptly. The unfolding of human character proceeds with the unfolding of nature
  - The learner should be in control of his destiny
  - Concern is more on methods which include theme writing rather than of oral discussions, drills and exercises, playing.
  - Asserts the importance of playing in the curriculum
  - Emphasizes motivations and the use of praise and rewards
  - Curriculum includes subjects concerning literary appreciation, physical education, social training in manners and development

## Progressivism

- ❖ Contrasted the traditional view of essentialism and perennialism
- ❖ Emphasizes change and growth
- ❖ Stresses that man is a social animal who learns well through active interplay with others
- ❖ Learning is based on the questions of one's experience of the world. Hence, it is the learner himself who thinks, solves and gives meaning through his individual experience.
- ❖ Proponent: John Dewey
- ❖ On Education:
  - Focuses on the child as a whole rather than of the content or the teacher
  - Curriculum content comes from the questions and interests of the students
  - Emphasis is given on the validation of ideas by students through active experimentation
  - Methods of teaching include discussions, interaction (teacher with students) and group dynamics
  - Opposes the extreme reliance on bookish method of instruction, learning through memorization, the use of fear and punishment and the four (4) walled philosophy of education

## Nationalism

- ❖ Rapid rise was in the 18<sup>th</sup> century
- ❖ Center of ideology is the concept of national sovereignty
- ❖ Aims for the preservation and glorification of the State
- ❖ Emphasis is on the development of loyalty, patriotism, national feeling and responsible citizenship
- ❖ Advocates: Jonathan Herbart, Johan Heinrich Pestalozzi
- ❖ On Education:
  - The most important development was the creation of common language
  - Stresses on the teaching of the principles of democracy and duties of citizenship
  - Stimulates the development of the state which includes the control and support of public school system
  - Curriculum includes the teaching of grammar, geography and history
  - Method of teaching gives emphasis on the content regarding on nature studies, physical exercises and play activities.

## Constructivism

- A philosophy of learning which asserts that reality does exist outside of human conceptions. It is the individual that constructs reality by reflecting on his own experience and gives meaning to it.
- Learning is the process of adjusting one's mental modes to accommodate new experience

## Reconstructivism

- A philosophy that aims to awaken the consciousness of individual about the social issues, concerns and problems that confront him. This should involve him to look for solutions and engage in addressing these social concerns and issues
- Primary goal is to achieve the elusive Social Change.
- Advocates: Theodore Brameld, George Counts, Paulo Freire
- On Education:
  - Schools should originate policies and progress that will bring social reforms and others
  - Teachers should be an instrument to encourage and lead students in programs of social reforms
  - Curriculum emphasizes on social reforms as the aim of education. It focuses on student experience and taking social actions on real problems.
  - Methods of teachings include the problem-oriented type (students are encouraged to critically examine cultural heritage), group discussions, inquiry, dialogues, interactions and community-based learning.
  - The classroom will serve as a laboratory in experimenting school practices bringing the world into the classroom.

## Behaviorism

- Rooted in the work of Russian experimental psychologist Ivan Pavlov and American psychologist John Watson in the early 1900's
- Asserts that human beings are shaped entirely by their external environment
- The only reality is the physical world
- Man by nature is neither good nor bad but a product of his environment. Hence, an autonomous acting man is but an illusion since it negates the faculty of free will
- Advocates: John Watson, B.F. Skinner

## **Other's ISM's**

### Utilitarianism

- Actions are geared toward the greatest total amount of happiness that one can achieved

### Rationalism

- Source of knowledge is the mind, independent of the senses

### Empiricism

- Source of knowledge is the sense-based experience

### Experimentalism

- Form empiricism and asserts that they only reliable form of knowledge is gained through scientific experiments

### Hedonism

- Pleasure is the only good thing to the person
- Used as a justification in evaluating action by giving emphasis on 'how much' pleasure can be achieved and how little pain that the action entails

### Epicurianism

- Considers as a form of ancient hedonism, it identifies pleasure with tranquility and reduction of desire
- Epicurus claimed that the highest pleasure consists of a simple and moderate life.

### Moral Principles of Teachers

Morality refers to the quality of human acts by which we call them right or wrong, good or evil

- “Do good and avoid evil” ( Fundamental Moral Principle)
- “Do not do unto others what you do not like others do to you” (Kung-fu.tzu)
- Act in such a way that your rule can be the principle of all ( Immanuel Kant)
- Eight Fold Path (Buddists)
- Koran and Five Pillars ( Muslims)
- Ten commandments and Beautitudes ( Christian)

As teachers, we are expected to be a person of good moral character as exemplified by being human, loving, virtues; and mature.

### Teachers values Formation

Values are taught and caught.

Values have cognitive, affective and behavioral dimensions

Value formation includes formation in the cognitive, affective and behavioral aspects

Value formation is training of the intellect and will

### Max Scheler's Hierarchy of Values

#### Pleasure Values

#### Vital Values

#### Spiritual Values

#### Values of the Holy

## **CHARACTERISTICS OF PROFESSIONAL TEACHER**

Teaching is a part of life of a committed teacher. To be an effective teacher, you do not only posses knowledge of educational theories. You also possess a willingness to assume your multifaceted roles.

### 3 BASIC SKILLS

1. FUNCTIONAL SKILL  
This involves the skill of a teacher in planning, organizing, controlling, communicating, motivating, developing and managing.
2. ADAPTIVE SKILLS  
Skills like creativity, dependability, resourcefulness, persuasiveness, discipline, memory, perceptiveness and other personal skills related to self-management

### 3. PROFESSIONAL SKILLS

This refers to skills a kin to work content. It includes the teacher's knowledge of the subject matter to be taught, as well as his understanding of philosophical, psychological, legal, social, historical dimensions of education

a. The professional teacher possesses an in-depth understanding of the principles governing human behavior.

b. The professional teacher exhibits attitudes that foster learning and authentic human relationship.

b.1 attitude towards him/himself

b.2 attitude towards others

b.3 attitude towards peers, superiors, and parents

b.4 attitude towards the subject matter

c. The professional teacher possesses mastery of the subject matter

d. The professional teacher must possess the competency to facilitate learning through appropriate teaching skills

e. The professional teacher must be able to translate knowledge into practical/reality

## ROLES, DUTIES AND RESPONSIBILITIES OF AN ELEMENTARY SCHOOL TEACHER AND A SECONDARY SCHOOL TEACHER AS STATED IN THE QUALIFICATION STANDARDS

### OVERVIEW:

A novice teacher is confronted with various apprehensions. One worries how to efficiently handle the routines of classroom. To become an effective and competent teacher entails a tedious works. One must be aware of the different roles, duties, and responsibilities a teacher must assume. These are:

- a. Teaches subjects
- b. Enrolls pupils/students
- c. Prepares effective lesson plans
- d. Prepares visual aids and other devices for instruction
- e. Sees to it that pupils/students in his/her advisory class provided with necessary textbooks when available.
- f. Implements rules and regulations
- g. Conducts guidance services for his/her advisory class
- h. Evaluates pupils/students progress and provides various experiences for their continuous development
- i. Supervises curricular and co-curricular projects and activities of the pupils/ students
- j. Checks/records the attendance of the pupils/students
- k. Keeps up-to-date anecdotal records of pupils/students
- l. Keeps school records and prepares required reports
- m. Keeps parents informed on pupils/student's progress
- n. Attends and participates in in-service trainings and faculty meetings
- o. Executed the administration of school policies designed for the welfare of the pupils/student's
- p. Maintains membership in professional organizations
- q. Works with other school personnel, parents, and the community
- r. Participates in the socio-economic development projects in the community
- s. Coordinates and cooperates with other teachers in school projects or activities
- t. Safeguard school facilities and equipment
- u. Does other related works

## THE TEACHER AS A PROFESSION

### OVERVIEW

The teacher as a person cannot be detached from a teacher as a professional. Other than the skills of an effective teacher, the teacher as an individual person must possess certain psychologically/personal characteristics, such as:

- A. Personality Characteristics
  - a.1 achievement/Intelligence
  - a.2 directness
  - a.3 flexibility
  - a.4 emotional stability
  - a.5 self- motivation and drive
  - a.6 dominance and self confidence
  - a.7 attractiveness and pleasantness
  - a.8 refinement

- B. Attitude
  - b.1 Motivation to teach
  - b.2 empathy toward learners
  - b.3 commitment
  - b.4 objectiveness
  - b.5 buoyancy
  - b.6 resourcefulness
  - b.7 cooperativeness
  - b.8 reliability and dependability

- C. Experience
  - c.1 years of teaching
  - c.2 experience in subjects taught
  - c.3 experience with particular grade/year level

- D. Aptitude/achievement
  - d.1 scores in ability test
  - d.2 college grade/point average
  - d.4 student teaching evaluations

TEACHING COMPETENCIES

NATIONAL COMPETENCY-BASED TEACHER STANDARDS (NCBTS)

- ❖ A unified framework for teacher development
- ❖ An integrated theoretical framework that defines the different dimensions of effective teaching
- ❖ Effective teaching means being able to help all types of students learn the different learning goals in the curriculum.
- ❖ It is based on the core values of Filipino teachers and on effective teaching and learning
- ❖ It is based on the seven domains, which one representing the desired features of the teaching and learning process.

THE TEACHER, SCHOOL AND COMMUNITY RELATIONS

OVERVIEW:

Schools and community are linked together to provide support to parents who are charged with the primordial responsibility to educate their children. Schools will not succeed without the participation of parents. (NCBTD-Based In-Service Teacher Training Modules. The members of the community, in addition to the parents and the school, include the local government units, the non-government agencies civic organizations and all the residents

PARENTAL INVLOVEMENT

The influence of parental involvement on a student’s academic success should not be underestimated. While brain power, work ethic, and even genetics all play important roles in student achievement, the determining factor comes down to what kind of support system she has at home.

School and Community Relations

The school and the community are the mainsprings of effective and powerful forces that can create a wholesome climate for mutual gains and betterment

- ❖ PTCA
- ❖ Public safety, beautification and cleanliness
- ❖ Instructional centers in the community

Linkages and Networking with Organizations

The school can enjoy linkages and networking activities with international, national and local organizations in the community for mutual benefits and assistance needed

- ❖ International (Pi Lambda Theta, Innotech, World Council for Curriculum Instruction)
- ❖ National and local (cross enrollment, joint researches)
- ❖ Net working (consortia, BIOTA, MATHED, MTAP, SUCTEA, NOPTI, FAAP, PACU-COA, PAASCU, AACUP NOTED etc)

CLASSROOM MANAGEMENT

Organizational Plan

Structured Classroom: The learning activities in a structured classroom are well-planned ahead of time, and the procedures follow accepted rules and regulations established by the school.

Flexible Classroom: In a flexible classroom, there is allowance for free movement, time allotment and even in decisions regarding modes of undertaking the learning activities.

- Individualized approach
- Grouping

Scheduling

Good time management is the key to a smooth flow of planned activities

Teachers must be able to plan thoroughly for their daily lessons and for additional activities such as:

- ❖ Parent –teacher conference after class
- ❖ Working with other teachers during occasional school events
- ❖ Preparing new teaching devices
- ❖ Advanced request for supplies and materials for the week’s lessons and for learning centers
- ❖ Supervising students along the corridors and school grounds or while eating in the canteen

Filler or Emergency Activities

If you will be able to finish the lesson ahead of time, be ready with “fillers” or activities which are connected with the lesson

Tips for maintaining good time management

1. Schedule all activities with corresponding time allotment ahead of time
2. Provide enough time for everything you expected to happen
3. Avoid rushing since you know have carefully allotted required time for every activity
4. Be flexible with assignment
5. Set the example by showing that you are time-conscious

Record keeping

- ❖ Daily attendance
- ❖ Students Progress

Physical Environment

- ❖ Maintaining cleanliness
- ❖ Using proper ventilation
- ❖ Avoiding unnecessary noise
- ❖ Bulletin boards and displays
- ❖ Seating arrangements

Discipline

Causes of discipline problems

- ❖ Overcrowded students in class
- ❖ Poor lighting facilities
- ❖ Inadequate ventilation
- ❖ Disorderly cabinets
- ❖ Inappropriate seating arrangement
- ❖ Near sources of noise

Prevention

- ❖ Cooperative learning, team learning, peer tutoring
- ❖ Switch form one technique to another as needed arises
- ❖ Patience, compassion, caring attitude, respect for others
- ❖ Warm, respectable relationship with students
- ❖ Unpretentious gestures
- ❖ Proper facial expression
- ❖ Kind words or praises
- ❖ Avoiding unusual closeness/favoritism and biased treatment

Common ways of establishing discipline/classroom control

1. Discipline is students responsibility
2. Discipline is the teacher’s way of establishing a desirable student-oriented environment for learning
3. Discipline is coupled with effective teaching strategies and techniques
4. Discipline is achieved through the effects of group dynamics on behavior

Tips to make the teacher a good disciplinarian

1. Be prepared to face a class with multi-behavior tendencies
2. Know your students well
3. Show your sincere concern for their welfare
4. Commendable behavior is reciprocal
5. Be calm, poised and tactful
6. Be firm at all times
7. Be enthusiastic
8. Practice good sense of humor
9. Speak with good voice, volume and pitch
10. Be humble

Common ways of dealing with discipline problems

Acceptable:

- ❖ Using verbal reinforces that encourage good behavior
- ❖ Using nonverbal gestures to dissuade them from mischief
- ❖ Dialogues could help discover problems and agree on mutually beneficial solution time out
- ❖ Awarding merits for good behavior
- ❖ A private, one-on-one brief conference
- ❖ Allowing students the freedom to express themselves

Unacceptable

- ❖ Scolding
- ❖ Harsh words
- ❖ Nagging
- ❖ Long sermons
- ❖ Keeping students in” detention area”
- ❖ Denying a student some privilege
- ❖ Using ridicule or sarcasm
- ❖ Assigning of additional homework
- ❖ Subtracting points from grades due to misbehavior

Establishing Routine

Routine is a regular procedure or a normal practice that is to be followed. It is a schedule of activities that is mostly time-spaced and is attuned to the lesson objectives. It contributes to a smooth flow of activities this lessening the unnecessary disruptions. These include:

- ❖ Keeping tables and chairs in order before leaving
- ❖ Returning barrowed tools and materials after use
- ❖ Cleaning chalk board to be ready for the next topic
- ❖ Transferring from one room to another on time
- ❖ Order in waiting for ones turn in borrowing books
- ❖ Cleaning stains or drops after the lesson

THE GLOBAL TEACHER

DEFINITION OF GLOBAL EDUCATION

Study of Nations and People, that it is “an effort to help individuals to see the world as a single and global system and to see themselves as participants of that system.” Similarly, James Becker Says in his article, Goals of Global Education, that the overall goal of his aspect is to,”incorporate into the educational curriculum and the educational experience of each student a knowledge and empathy of cultures of the nation and the world... (and to) draw into existing courses of study the illustrations and references to political, social and cultural themes. Students will be encourage to take a global perspective, seeing the world as a whole.” With this in mind, teaching with the adoption of the ideology of global education, children learn to perceive themselves as a participant of a large global culture. Children learn of various cultures and cultural perspective which makes them better able to relate and function in a one-world environment under teachers who are intellectually, professionally And humanly prepares.

UNESCO defines global education as “a goal to become aware of the educational conditions or lack of it, and aim to educate all people to certain world standards. It may also be defined a”curriculum that is international in scope

Educational Systems of Selected Countries

Australia

Similar to Canada and England

Primary (6 years)

High school (junior high 7-10, senior 11-12)

College/university (3 to 6 years)

School year starts on March and ends in November

China

6 years of primary education

3 years of junior middle school, 3 year of senior middle school

Six year of university

Japan  
Kindergarten (1 year)  
Elementary (6 years)  
Lower secondary (3years)  
Upper secondary (3 years)  
University (around 4 years)  
Compulsory education for children 6 to 15 years

United Kingdom  
Compulsory education for children 5- 6 years old  
Foundation stage (for age 3-5 years old) not mandatory  
Key stage one (for age 5-7 years old) grade 1 to 2  
Key stage two ( for age 7-11 years old) grade 3 to 6  
Key stage three (for 11-14 years old) grade 7 to 9  
Key stage four (for age 14-16 years old) grade 10 to 11  
Post 16 education (not mandatory) 2-3 years  
University usually 3 years (B.A. or B.Sc) 4 years (honours degree)

USA  
Pre-primary (kinder, nursery, preschool, day care)  
Grades 1-4 (6 to 10 years old)  
Grade 5- (11 years old)  
Grade 6- (12 years old)  
Grade 7- (13 years old)  
Grade 8 to 12-(14 to 18 years old)  
Compulsory education form 6 years old to 18 years old

Multicultural Education  
Multicultural education enables teachers and educators to give value to the difference in prior knowledge, experiences of learners from diverse background and familiarity with student’s histories of diverse cultures

Teacher Exchange Program  
Visiting International Faculty Program (VIF)  
Fullbright Teacher Exchange Program  
Inter-African Teacher Exchanges  
Canadian Educators Exchange  
Global Teachers Millennium Awards

21<sup>st</sup> CENTURY LEARNING GOALS  
In order to address the challenges of the paradigm shift in the educational sector, the 21<sup>st</sup> Century Learning Goals have been set as bases of various curricular worldwide

- 1. 21<sup>st</sup> Century Content  
Among the emerging content areas are global awareness on finance, economy, business, entrepreneurial literacy, civic literacy and health awareness
- 2. Learning and thinking skills  
These are critical thinking and problem-solving skills, about communication, creativity, and innovation, collaboration , contextual learning, information and media literacy.
- 3. ICT Literacy  
This entails the use of technology in the context of learning, so that students know how to learn.
- 4. Life Skills  
These include leaderships, ethics, accountability, personal responsibility, and self direction
- 5. 21<sup>st</sup> Century Assessment  
These are authentic assessment procedures to measure learning outcomes

21<sup>st</sup> CENTURY DIGITAL FLUENCY

For developing basic digital skills, there is a need for new literacies to replace the 3 Rs.

- 1. Solution Fluency  
Capacity to define, design, and apply solution and also assess the process and the result
- 2. Information Fluency  
The ability to access and retrieve digital information (text, sounds, or video) while and accuracy students are aware of context
- 3. Collaboration Fluency  
Teamwork with peers through an exciting experience of partnership in learning
- 4. Media Fluency  
Capacity to analytical evaluation of messages from sources like the internet and other media such as news papers, magazines, televisions, etc.
- 5. Creativity Fluency  
Proficiency in art design, story-telling, or packaging messages with the use of artistic elements such as font, color, lay –out, etc.
- 6. Digital ethics  
This refers to the responsibility and accountability of using the digital world, such as citing sources.

TEACHER AS A PROFESSIONAL

Professionalization of teaching: A Historical Perspective

History of Philippine Educational System  
1987 Constitution

- ❖ The State shall protect and promote the right of all citizens to quality education at all levels and shall take opportunities steps to make such education accessible to all.
- ❖ The State shall enhance the right of teachers to professional advancement
- ❖ The State shall establish, maintain and support complete adequate and integrated system of education relevant to the needs of the people

RA 7722 (Higher Education Act of 1994)

- ❖ The State shall ensure and protect academic freedom
- ❖ CHED is tasked by the state to identify ‘ centers of excellence’ in program areas needed for the development of world class scholarship, nation building and development.

RA 9155 ( Government of Basic Education Act of 2001)

- ❖ An act instituting a framework of governance for basic education, establishing authority and accountability, renaming the Department of Education Culture and Sports as the Department of Education

RA 7796 TESDA Act of 1994

EO 356 ( Renaming the Bureau of Non Formal Education to Bureau of Alternative Learning System)

Learning System

- ❖ One of the functions of the Bureau of Alternative Learning System is to address the learning needs of the marginalized group of the population including the deprived, depressed and underserved citizen

Batas Pambasa 232 ( Education Act of 1982)

- ❖ Students have the right receive primarily through competent instruction, relevant quality education in line with national goals and conducive to their full development as person with the human dignity
- ❖ Teachers shall be deemed persons in authority when in the discharge of lawful duties and responsibilities and shall therefore be accorded with due respect and protection.

The UNESCO ( United Nations Scientific and Cultural Organization)

- ❖ Learning to know
- ❖ Learning to do
- ❖ Learning to live together
- ❖ Learning to be

EFA (Education For All 2015)

- ❖ Institutionalize early childhood care and development
- ❖ Provide universal quality primary education
- ❖ Eradicate illiteracy
- ❖ Launch continuing education programs for adults and out-of-school youth

UN Millennium Development Goals 2015 (MGDs)

- ❖ Reducing by half the number of people, who live in extreme poverty
- ❖ Reducing death in mothers and children below five
- ❖ Making primary education accessible to all
- ❖ Reducing gender disparities
- ❖ Providing access to reproductive health services
- ❖ Pursuing national strategies for sustainable development
- ❖ Reserving environment resources losses
- ❖ Developing a global partnership for development

Child Friendly School System (CFSS)

- ❖ Initiated by the Philippine Government and UNICEF
- ❖ Characteristics of CFSS
  - Gender sensitive and not discriminating
  - Child centered
  - Promotes good health
  - Has the best interest of children in mind
  - Works closely with children’s families

Magna Carta for Public School Teachers (RA 4680)

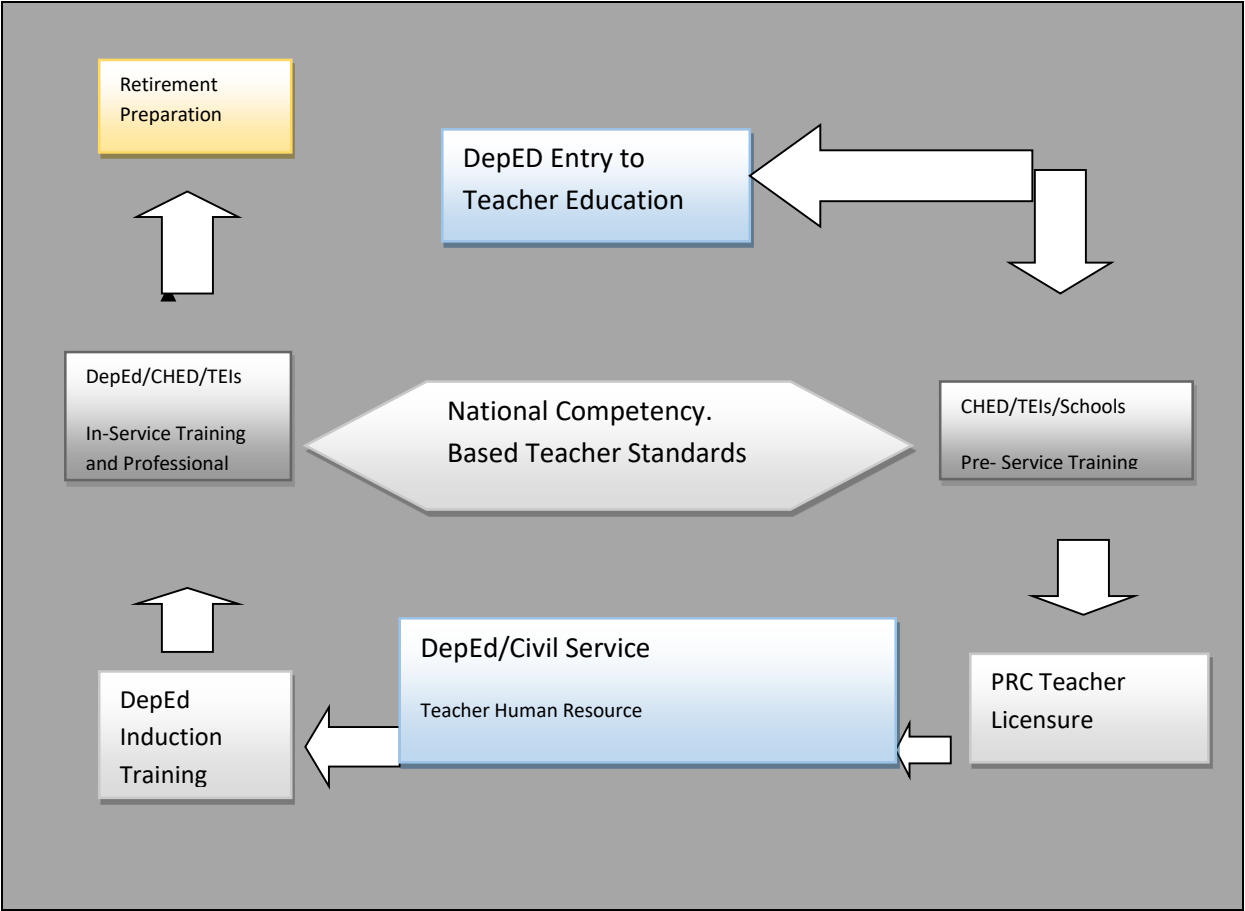
- ❖ Stability of employment
- ❖ Teachers shall enjoy academic freedom, particularly with regard to teaching and classroom, methods.
- ❖ Teachers salary at the very least will keep pace with the rise in the cost of living by payment of cost of living index
- ❖ Compulsory medical examination for free

Presidential Decree 1006 ( Decree Professionalizing Teaching)

- ❖ Enacted during the time of President Marcos
- ❖ Teachers will undergo professional test jointly given by Civil Service Commission and Department of Education and Culture
- ❖ RA7836 ( Philippine Teachers Professionalization Act of 1994)
- ❖ RA 9293 ( An Act Amending some sections of and Development Program (RA7836)
- ❖ Code of Ethics for Professional Teachers

## PROFESSIONAL DEVELOPMENT GUIDE FOR TEACHERS TEACHER EDUCATION AND DEVELOPMENT PROGRAM (TEDP)

DepEd has implemented the Teacher Education Development program (TEDM) that seeks to conceptualize the continuing career path of a teacher, starting upon entry until retirement. The TEDM is anchored from a set of competencies embodied in the National Competency Based- Teacher Standards (NCBTS).



TEDP

COMPETENCY-BASED PERFORMANCE APPRAISAL SYSTEM FOR TEACHERS (CB-PAST)

Drawing from the Vision and Mission of the Department of Education, CB-PAST is a comprehensive appraisal system which addresses one of the mandates of the Department as embodied in the RA9155 (CB-PAST Primer , 2009). There a pressing call for teacher’s accountability that has never been as serious before. In response to relevant and quality education for the 21<sup>st</sup> Century, the Filipino teachers today need to have continuous personal and professional development that driven by individual teacher performance, as NCBTS, a professional development. This specifically stated in Domain of the NCBTS, a professional development that is driven by the individual teacher performance, as evidenced from the information resulting for various tools of the Competency-Based Performance Appraisal System for Teachers (CB-PAST).

PRINCIPLES AND STRATEGIES OF TEACHING

“If your plan is for one year... plant rice; if your plan is for ten years...plant a tree; but if you plan is for eternity... EDUCATE children.”

A. BASIC CONCEPTS

- ❖ Strategy of Teaching- Refers to the science of developing a plan to attain goal and to guard against undesirable results. It means the art of using psychological plan in order to increase the probabilities and favorable consequences of success and to lessen yhe chances of failure.
- ❖ Method of Teaching- refers to the series of related and progressive acts performed by a teacher and the students to attain the specific objectives of the lesson. It is a plan involving sequence of steps to achieve a given goal or objective.
- ❖ Technique of teaching-refers to the personalized style of carrying out a particular step of a given method. It is a skill employed by the teacher in carrying out the procedures or act of teaching.
- ❖ Device-is a teaching aid or tool to facilitate instruction, like pictures, flash cards, etc.

The Teacher As a Corporate Professional

Polished Look

- ❖ Dress suited for a professional
- ❖ Tasteful accessories (jewelry, bags, shoes, etc)
- ❖ Tasteful make –up for female
- ❖ Personal hygiene

Polished Demeanor

- ❖ Professional walking
- ❖ The professional ‘Sit’
- ❖ The professional “handshake”

Polished Language

- ❖ Voice
- ❖ Gesture

Classification of Teaching Methods

- ❖ Traditional: old-fashion way of teaching
- ❖ Time-tested: methods that stood the test of time and are still being used at present
- ❖ Progressive: these are newer and more improved methods of teaching
  - It makes use of the principles of learning
  - It utilizes the principles of “learning by doing
  - It provides for growth and development
  - it liberates the learners
  - it stimulates thinking and reasoning



## Variables That Affect Teaching Method

- ❖ Objectives
- ❖ Nature of students
- ❖ Nature of subject matter
- ❖ The teacher
- ❖ Technology
- ❖ School environment
- ❖ Teacher's knowledge of group dynamics

## B. MANAGEMENT OF INSTRUCTION

### Lesson Planning

#### Learning Objectives: Their importance and Construction

What is a Learning Objective?

A learning objective is a statement of what students will be able to do when they have completed instruction. A learning objective has three major components:

1. A description of what the student will be able to do;
2. The conditions under which the student will perform the task; and
3. The criteria for evaluating student performance

What is the difference between a goal and a Learning Objective?

A Goal is a statement of the intended general outcome of an instructional unit or program. A goal statement describes a more global learning outcome. A learning objective is a statement of one of several specific performances, the achievement of which contributes to the attainment of the goal. A single GOAL may have specific subordinate learning objectives. For example

GOAL: The goal of Learning Assessment course is to enable the students to make reliable and accurate assessment of learning.

Learning Objective#1: Given a learning objective of the student will be able to develop an appropriate multiple-choice question to measure student achievement of the objective.

Learning Objective#2: Given a printout from an item analysis of multiple choice exam the student will be able to state the accuracy of the test scores

Learning Objective#3: Given the discrimination and difficulty indices of an item the student will be able to determine if the item contributes to the reliability of the exam.

Why Are Learning Objectives Important?

1. Selection of the content
2. Development of an instructional strategy
3. Development and selection of instructional materials
4. Construction of tests and other instruments for assessing and then evaluating student learning outcomes

How Do You Write A Learning Objective?

1. Focus on student performance, not teacher performance
2. Focus on product, not process
3. Focus on terminal behavior, not subject matter
4. Include only general learning outcome in each objective.

A learning objective is a statement describing a competency of performance capability to be acquired by the learner. There are three characteristics essential to insuring clear statements of objectives.

Behavior- First, an objective must describe the competency to be learned in performance terms. The choice of a verb is all-important here. Such frequently used terms as know, understand, grasp, and appreciate do not meet his requirement. If the verb used in stating an objective identifies an observable student behavior, then the basis for a clear statement is established. In addition, the type or level of learning must be identified.

Criterion- Second, an objective should make clear how well a learner must perform to be judge adequate. This can be done with a statement indicating a degree of accuracy, a quantity or proportion of correct responses or the like.

Conditions- Third, an objective should describe the conditions under which the learner will be expected tperform in the evaluation situation. The tools , references, or other aids thus will be provided or denied should be made clear. Sometimes , one or even two of these elements will be easily implied by a simple statement. In other times, however, it may be necessary to clearly specify in detail each element of the objective. The following is an example of a completed learning objective.

OBJECTIVE: "Given a set of data the student will be able to compute the standard deviation".

Condition- Given an set of data

Behavior- the student will be able to compute the standard deviation

Criterion – ( implied)- the number computed will be correct

Checklist for Writing a Specific Instructional Objective

1. Begin each statement of a specific learning outcome with a verb that specifies definite , observable behavior.
2. Make sure that each statement meets all three of the criteria for a good learning objective?
3. Be sure to include complex objectives ( appreciation, problem-solving, etc) when they are appropriate

Guides or aids to writing learning objectives:

Educators and psychologist concerned with learning theory have given considerable through the various types of learning that takes place in schools. Probably the most comprehensive and widely known analysis of objectives in the Taxonomy of Educational Objectives by Benjamin Bloom and others.

Taxonomy provides a consistent means of developing the single most powerful tool in instruction and assessment of students learning outcomes-the learning performance objective. The Taxonomy distinguishes among three major categories of objectives termed the COGNITIVE DOMAIN, the PSYCHOMOTOR DOMAIN, and the AFFECTIVE DOMAIN.

It is generally the Cognitive Learning Domain that is of primary concern in higher education. If we assume that faculty is more concerned with process and problem-solving activities, the categories of Taxonomy are most valuable in suggesting various kinds of behavior to use as objectives. The following list of process-oriented behaviors, which are related to the six categories of the Taxonomy, should serve as a useful guide to the faculty in preparing objectives.

TABLES OF PROCESS ORIENTED LEARNER BEHAVIORS

Domains of Learning

Learning is a psychological process. Thus, the assessment of learning, of necessity, requires the assessment of various psychological processes. In developing assessment tools (tests), it is important that we first have an understanding of these psychological processes and how to go about measuring them. Although there are many psychological models for the process of learning, for this workbook we have chosen the taxonomy of Behavioral objectives as useful tool. In Bloom’s taxonomy, there are three fundamental learning domains: Cognitive, Psychomotor, and Affective.

Affective learning of beliefs, attitudes, and values

Psychomotor learning of physical movements, such as a ballet steps, how to pitch a curve ball, how to drill out a cavity in a molar, etc.

Cognitive learning of information and the processes of dealing with that information. There are six levels of Cognitve Learning as specified by Bloom:

- 1. Basic Knowledge
- 2. Comprehension
- 3. Application
- 4. Analysis
- 5. Synthesis
- 6. Evaluation

Generally, it can be said that the first category, Knowledge, is information-oriented as it stresses the ability to recall existing knowledge. The other five categories can be termed” Process oriented” because the entall more sophisticated learner behaviors and competencies that require increasing degrees of understanding. The following are brief definitions of these six levels with a suggestion as to how to assesses this level of learning:

KNOWLEDGE Recall, identity, recognize, acquire, distinguish
COMPREHENSION Translate, extrapolate, convert, interpret, abstract transform
APPLICATION Apply, sequence, carry out, solve, prepare, operate, generalize, plan, repair, explain
ANALYSIS Analyze, estimate, compare, observe, detect, classify, discover, discriminate, identify, explore, distinguish, catalog, determine, outside
SYNTHESIS Write, plan, integrate, formulate, propose, specify, produce, organize, theorize, design, build, systematize
EVALUATION Evaluate, verify, assess, test, judge, rank, measure, appraise, select, check

Basic Knowledge: To recall and memorize- assessed by direct questions. The object is to test students ability to recall facts, to identify and repeat the information provided.

Comprehension: To translate form one form to another-assessed by having students

- 1) Restate material in their own words, 2)reorder or extrapolate ideas, predict or estimate. Assessment must provide evidence that the students have some understanding or comprehension of what they are saying.

Application: To apply or use information in a new situation- assessed by presenting students with a unique situation (i.e. one not identical to that used during instruction) and have them apply their knowledge to solve the problem or execute the proper procedure.

Analysis: To examine a concept and break it down into parts- assessed by presenting student with a unique situation of the same type but not identical to that used during instruction, and have them analyze the situation and describe the appropriate procedure or solution to the problem.

Synthesis: To put information together in a unique or novel way to solve a problem- assessed by presenting students with a unique situation NOT of the same type used during instruction, and have them solve a problems by selecting and using appropriate information

Levels of Affective Objectives

Krathwohl’s affective domain taxonomy is perhaps the best known of any of the affective taxonomies, the taxonomy is ordered according to the principle of internalization, which is to process whereby a person’s affect toward an object passes from a general awareness level to a point where the affect is “internalized” and consistently guides or controls the person’s behavior

Receiving is being aware or sensitive to the existence of certain ideas, material, or phenomena and being willing to tolerate them. Examples include: to differentiate to accept to listen ( for), to respond to.

Responding is committed in some small measure to the ideas, materials, or phenomena involved by actively responding to them. Examples are: to comply with, to follow, to commend, to volunteer, to spend leisure time in, to acclaim.

Valuing is willing to be perceived by others as valuing certain ideas, materials, or phenomenas. Examples include: to increase measured proficiency in, to relinquish, to subsidize, to support, to debate.

Organization is to relate the value to those already held and bring it into a harmonious and internally consistent philosophy. Examples are: to discuss, to theorize, to formulate to balance, to examine.

Characterization by value or value set is to act consistently in accordance with the values he or she has internalized. Examples include: to revise, to require, to be rated high in the value, to avoid, to resist, to manage, to resolve.

Levels of Pyschomotor Objectives

Level	Definition	Example
1. Observing	Active mental attending of a physical event	The learner observes more experienced person in his/her performance of the skill, asked to observe sequences and relationships and to pay particular attention to the finished product. Direct observation may be supplemented by reading or watching a video. Thus, the learner may read about the topic and then watch a performance
2. Imitating	Attempted copying of physical behavior	The learner begins to acquire the rudiments of the skill. The learner follows directions and sequences under close supervision. The total act is not important, nor is the timing or coordination emphasized. The learner is conscious of deliberate effort to imitate the model
3. Practicing	Trying a specific physical activity over and over	The entire sequence is performed repeatedly. All aspects of the act are performed in sequence. Consciousness effort fades as the performance becomes more or less habitual. Timing and coordination are emphasized. Here, the person has acquired the skill but is not as expert
4. Adapting	Fine tuning. Making minor adjustments in the physical activity in order to perfect it.	Perfection of the skill, Minor adjustments are made that influence the total performance. Coaching often very valuable here . This is now a good player becomes a better player

The psychomotor domain refers to the use of basic motor skills, coordination, and physical movement. Bloom’ s search group did not develop in-depth categories of this domain, claiming lack of experience in teaching these skills. However, Simpson (1972) developed seven psychomotor categories to support the original domain. These physical behaviors are learned through repetitive practice. A learner’s ability to perform these skills is based on precision, speed, distance and technique.

Direct Instruction/ Lecture

Advantages

- ❖ Teacher-controlled
- ❖ Many objectives can be mastered in s short amount of time
- ❖ Lends to valid evaluations

Disadvantages

- ❖ Teacher-controlled
- ❖ Student involvement is limited to the teacher
- ❖ Depends in part to rote learning ( repetition form memory, often without meaning)

When to use?

- ❖ When the objectives indicate effectiveness
- ❖ When the teacher determines that it is the best to use of time & effort

Six steps in Direct Instruction

1. Review previously learned material
  - A short review before/ with the new lesson’s interest approach
  - Check & grade previous homework
  - Put problems on the board ( can be part of bell-work)
  - Re-teach if necessary

2. State objectives for the lesson
  - Students should know what is to be taught
    - Stated clearly
    - Written on the board
    - Handed out
  - Follow the objective
  - Use them to develop evaluations
3. Present new material
  - Your teaching depends on your analysis and preparation
  - Organize content
  - From general to specific
  - From lower level objectives to higher
  - From previous information to new material

Lectures

  - Be aware of attention spans
  - Be aware of the number of major points made
  - Be repetitious
  - Review and summarize
  - Demonstrations
    - Learning Activity, experiment, demonstration
    - WOW em!
    - Allow students to practice immediately

#### 4. Guided practice with corrective feedback

- Guided and independent practice
- Teacher controls & monitors guided
- Teacher evaluates & corrects independent
- Questions should be prepared in advance

#### 5. Assign independent practice with corrective feedback

- Homework
- A formative step, not a summative step
- Worksheets

#### 6. Review periodically with corrective feedback if necessary

- ❖ Check homework promptly
- ❖ Base new instruction on results
- ❖ Re-teach if necessary

### Other Teaching Techniques

#### Brainstorming

Situations for use:

- ❖ Generate ideas ( quantity is more important than quality)
- ❖ Students have some level of experience

Planning Required:

- ❖ Formulate the question
- ❖ Plan for recording ideas

#### Brainstorming Steps

- ❖ Pose question to class
- ❖ Generate ideas with group
- ❖ Accept all ideas ( do not criticize)
- ❖ Go back to summarize discard “ unacceptable” or unworkable ideas
- ❖ Determine the best solutions

#### Supervised Study

- ❖ Common technique used in problem solving instruction, but certainly not the only technique appropriate for problem solving instruction
- ❖ Also a major technique used in competency-based education programs.
- ❖ Often misused technique. A really bad form of this technique is: read the chapter’s the textbook and answer the questions at the end of the chapter.
- ❖ Classified as an individualized instruction technique

#### Situations Appropriate for Use

- ❖ Discovery or inquiry learning is desired
- ❖ Access to good reference materials ( textbooks, extension publications, web resources, industry publications, etc.)
- ❖ Students may need to “look up” information
- ❖ Alternate answers may be acceptable
- ❖ Many structured lab activities are actually a form of supervised study

Strengths:

- ❖ Provides skills in learning that are useful throughout student's lives. For they need to know how to locate and analyze information
- ❖ Recall is enhanced when students have to "look up" information, rather than being lectured to.
- ❖ Students have to decide what information is important and related to the question posed
- ❖ Opportunity for the students to develop writing and analytical skills.

Weakness:

- ❖ Easy for students to get off-task
- ❖ Students may interpret questions differently and locate incorrect information ( practicing error)
- ❖ Unmotivated students will do the absolute minimum
- ❖ Students tend to copy information from sources rather analyze and synthesize information
- ❖ Requires more time than lecture
- ❖ Relies on students being able to read and comprehend information at the appropriate level.

Procedure in Conducting Supervised Study:

- ❖ Teacher develops a list of a study questions for students to answer
- ❖ Resources and reference materials are located or suggested to students as possible sources of answers
- ❖ Students are given time in class to find answers to questions and to record the answers in their notes
- ❖ Due to time constraints, however, teachers may want to assign different questions to specific students, so that every student is not looking for the same information.
- ❖ Summary consist of discussing the correct answers to the questions with the entire class
- ❖ Teachers must be careful to emphasize that incorrect answers must be corrected

Role of the Teacher:

- ❖ Develop a list of study questions that focuses on the objectives of the lesson
- ❖ Develop the anticipated answers to the questions-it is important that the teacher has a firm idea of what are correct or incorrect answers
- ❖ Establish a time frame for completing the activity. Students need to a feel a sense of urgency, so don't give them more time than you think they will need.
- ❖ Supervise during this activity. **THIS IS NOT A TIME GRADE PAPER, MAKE PHONE CALLS, PLAN FOR THE NEXT LESSON, OR LOCATE THE ANSWERS TO THE QUESTIONS IN THIS LESSEON!**
- ❖ Assist students in locating information, but do not find it for them
- ❖ Keep students on task and eliminate distractions
- ❖ Plan for reporting of answers

Small group Discussion

Also called:

- ❖ Buzz groups
- ❖ Huddle Groups
- ❖ Philips 66
  - 6 people per group
  - 6 ideas to be generated
  - 6 minutes

Advantages:

- ❖ Increased participation
- ❖ Good for generating ideas
- ❖ Cooperative activity ( students learn from each other)

Planning Required

- ❖ Clearly from question or topic
- ❖ Develop a plan for grouping the students
- ❖ Plan for reporting
- ❖ Summarize the activity (what they should have learned)

Conducting Small group Discussion

- ❖ Write question or topic on the board or handout
- ❖ Give specific instructions on how the group will operate
- ❖ Establish time limits
- ❖ Circulate among the groups to help keep them on task (Not as a participant)
- ❖ Give warning near end of time allocated
- ❖ Reports: Rotate among the groups for answers

Games

Situation for Use:

- ❖ Motivates students
- ❖ Reviews
- ❖ Check for understanding

Strengths:

- ❖ Active learning technique
- ❖ Appeals to competitive students
- ❖ High interest level

## Planning Requires

- ❖ Game must be developed by teacher
- ❖ Rules must be established. Try to anticipate all potential situations that may occur. You do not want the effectiveness of the activity to be destroyed by arguments over rules.
- ❖ Develop a plan for determining teams
- ❖ Develop plan for keeping score
- ❖ Determine rewards- make them appropriate (usually very minor in nature)

Types: games may take a variety of forms, but most often are modeled after.

- ❖ TV game shows
- ❖ Sports
- ❖ Home board games

## Field Trips and Resource Persons

Situation Use:

- ❖ First hand experiences are needed
- ❖ Need expertise

Planning Needed:

- ❖ Objectives
- ❖ Trial run/visit
- ❖ Special considerations (safety, grouping, etc.)
- ❖ Summarize ( don't give up responsibility!). it is critical to know what the students have learned from the activity.

Tips:

- ❖ Provide advance organizers (e.g. report forms, fact sheets)
- ❖ "plant" questions among students
- ❖ Assign students to begin the questions

With-it-ness- the teacher knows that what is going on in the classroom at all times. Seemingly, the teacher has eyes in the back of his/her head. This is not only when the teacher is in a small group setting, but when he/she is presenting a topic or students are working as individuals. It can be as simple as looking around the room frequently or making sure your back is never turned to the class. It is not necessary to know what the teacher knows is going on- it is what the students believe she knows.

## Other Helpful Tip on Student Control

The Hawthorne Effect is a phenomenon in industrial psychology first observed in the 1920s. It refers to improvements in productivity or quality resulting from the mere fact that workers were being studied or observed.

Pygmalion Effect (or Rosenthal effect) refers to situations in which students performed better than other students simply because they were expected to do so.

Placebo Effect is the phenomenon that a patient's symptoms can be alleviated by an otherwise ineffective treatment, apparently because the individual expects or believes that it will work.

The John Henry Effect has also been identified: an experiment may spur competition between groups, precisely because they are conscious of being part of an experiment. The term "halo effect" describes what happens when a scientific observation is influenced by the observer's perceptions of the individual procedure, or service that is under observation. The observer's prejudices, recollections of previous observations, and knowledge about prior observations or findings can all affect objectivity and must be guarded against.

Jacob Kounin's Theory all of this came about from an incident that happened while he was teaching a class in Mental Hygiene. A student in the back of the class was reading newspaper, and the newspaper being opened fully in front of the student so that he couldn't see the teacher. Kounin asked the student to put the paper away and pay attention. Once the student complied, Kounin realized that other students who were engaging in non appropriate behaviors (whispering, passing notes) stopped and began to pay attention to the lecture. This gave him interest in understanding classroom discipline on not only the student being disciplined, but also the other students in the classroom. This is the effect that became known as the "Ripple Effect".

## Effective Instructional Technique

### The Art of Questioning

Teachers ask questions over a hundred questions in a class session to encourage student thinking. Let's examine some aspects of the Art of questioning, including: types of questions wait time, and questioning and creativity

## Categories of Questions

There are many systems that teachers use to classify questions. Upon close observation, in the most systems, questions are typically classified into two categories. Various terms are used to describe these two categories ( Figure 1). The binary approach is useful because two categories are more manageable for a beginning teacher to learn to implement the typical approach of using systems with six categories:

Figure 1 categories of Questions

Category 1	Category 2
Factual	Higher cognitive
Closed	Open
Convergent	Divergent
Lower level	Higher level
Low order	High over
Low inquiry	High inquiry

Low inquiry questions. These questions focus on previously learned knowledge in order to answer questions posed by the teacher, who requires the students to perform ONE of the following taks:

1. Elicit the meaning of a term
2. Represent something by a word or a phrase
3. Supply an example of something
4. Make statements of issues, steps in a procedure, rules, conclusions, ideas and beliefs that have previously been made
5. Supply a summary or a review of what was previously said or provided
6. Provide a specific, predictable answer to a question

High inquiry questions. These questions focus on previously learned knowledge in order to answer questions posed by the teacher, who requires the students to perform ONE of the following tasks:

1. Perform an abstract operation, usually of a mathematical nature, such as multiplying, substituting, or simplifying
2. Rate some entity as to its value, dependability, importance, or sufficiency with a defense of the rating
3. Find similarities or differences in the qualities of two or more entities utilizing criteria defined by the student
4. Make a prediction that is the result of some stated condition, state, operation, object or substance
5. Make inferences to account for the occurrence of something (how or why it occurred). Low inquiry questions tend to reinforce “correct” answers, or focus on specific acceptable answers, whereas high inquiry questions stimulate a broader range or responses, and tend to stimulate high levels of thinking. There is evidence to support the use of both types of question

Low inquiry questions will help sharpen students ability to recall experiences and events of science teaching. Low inquiry questions are useful if you are interests in having students focus on the details of the content of a chapter in their textbook, or laboratory experiment.

High inquiry questions encourage range of responses from the students and tend to stimulate divergent thinking. Figure 2 summarizes the differences between low and high inquiry questions.

Figure 2. Difference Between Low and High Inquiry Questions

Type	Student responses	Response	Examples
<b>Low inquiry</b> (convergent)	-Recall, memorize  -Describe in own words  -Summarize  -Classify on basis of known criteria  -Give an example of something	<b>closed</b>	How many..  Define...  In your own words..state similarities and differences..  What is the evidence..?  What is an example..?
<b>High inquiry</b> (divergent)	-Create unique or original design, report, inference, prediction  -Judge scientific credibility  -Give an opinion or state an attitude	<b>Open</b>	Design an experiment..  What do you predict...?  What do you think about...?  Design a plan that would solve?  What evidence can you cite to support..?

Wait Time. Knowledge of the types of questions, and their predicted effect on student thinking is important to know. However, researchers have found that there are other factors associated with questioning that can enhance critical and creative thinking. One of the purposes of the questioning us to enhance and increase verbal behavior of students.

CURRICULUM DEVELOPMENT

1. CONCEPTS, NATURE , AND PURPOSES

The term”curriculum” conveys many things to people. To some, it denotes a specific course, while to others it means the entire educational environment. It is a dynamic as the change that occurs in the society. Hence , curriculum encompasses more than a simple definition. It is a key element in the educational process; it’s scope is extremely broad, and it touches virtually everyone who is involved with teaching and learning. In a broader sense, it refers to the total learning experience of individuals not only in school, but in society as well.

Education renewal or reforms in the Philippines can be traced from different recommendations of several educational initiatives, like the Philippine Commission to survey Philippine Education (PCSPE-1969), Survey of the Outcomes of Elementary Education (SOUTELE-1976), the Philippine Commission of Educational Reform (PCER) that focused on curricular reforms and National Competency-Based standards for Teachers (NCBTS), which became the anchor of reforms in education from the basic to higher education.

What is Curriculum?

- ❖ From the Latin word curriculum (“course”), derived from currere “ run or”move quickly)
- ❖ A “course for tracing”

In educational usage, the “course of the race” stands for “course of study”

1. The Traditional Points of View

- ❖ In early years of the 20<sup>th</sup> century, “Curriculum was a”body of subject or subject matter prepared by the teacher for the student to learn.” It was synonymous to the”course of study” and “syllabus”
- ❖ Robert M. Hutchins- curriculum for basic education should emphasize 3Rs, and college education should be grounded on liberal education
- ❖ Joseph Schwab-“ Discipline” is the sole source of curriculum. Thus, the education system curriculum is divided into chunk of knowledge called subject areas in basic education, such as math science, English etc..., and college, discipline may include humanities, sciences, languages, etc.

2. Progressive Points of View of Curriculum

- ❖ To a progressivist, “a listing of school subjects, syllabi, course of study, and list of course or specific discipline do not make a curriculum,”. This can only be called curriculum if the written materials are actualized by the learner.
- ❖ John Dewey-Curriculum is based in Dewey’s definition of experience and education. He believes that reflective thinking is a means that unifies curricular elements.
- ❖ Caswell and Campbell viewed curriculum as “all experiences children have under the guidance of teachers”.
- ❖ Marsh and Willis view curriculum as “all the experiences in the classroom which are planned and enacted by the teacher, and also learned by the students.”

Major Foundations of Curriculum

The commonly accepted foundations of curriculum include the following:

1. Philosophical
2. Historical
3. Pyschological
4. Social

Philosophical Foundations of Curriculum

Philosophy provides educators, teachers and curriculum makers with a framework for planning, implementing, and evaluating curricula in schools. It helps in answering what schools are for, what subjects are important, how students should learn and what materials and methods should be used. In decision-making, philosophy provides the starting point and will be used for the succeeding decision – making process.

Four Educational Philosophies that Relates to Curriculum

1. PERENNIALISM

Aim of Education- to educate the rational person; to cultivate the intellect.  
Role of Education- Teachers help students think with reason based in the Socratic methods of oral exposition or recitation and explicit or deliberate teaching of traditional values.  
Focus in the curriculum- Classical subjects, literary analysis. Curriculum is constant.  
Curriculum trends- use of great books and return to liberal arts.

2. ESSENTIALISM

Aim of Education- To promote the intellectual growth of the individual and educate a competent person  
Role of Education- The teacher is the sole authority in his/her subject area or field of specialization.  
Focus in the curriculum- Essential skills of the 3 Rs and essential subjects of English, science, history, math and foreign language  
Curriculum Trends- Excellence in Education, back to basics, and cultural literacy

3. PROGRESSIVISM

Aim of Education- To promote democratic and social living  
Role of Education- Knowledge leads to growth and development of lifelong learners who actively learn by doing.  
Focus in the curriculum-Subjects are interdisciplinary, integrative, and interactive. Curriculum is focused on students interest, human problems and affairs.  
Curriculum Trends- School reforms, relevant and contextualized curriculum, and humanistic education

4. RECONSTRUCTIVISM

Aim of Education- To improve and reconstruct society, since education is for change  
Role of Education- Teachers act as agents of change and reform in various educational projects, including research.  
Focus in the Curriculum- Present and Future trends and issues of national and international interest.  
Curriculum Trends- Equality of educational opportunities in education, and access to global education.



## Historical Foundations of Curriculum

Philippine education was greatly influenced by the American educational system. The following curriculum theories laid down their views on what curriculum is.

1. Franklin Bobbit (1876-1956) presented curriculum as a science that emphasizes the student's needs. Curriculum prepares students for adult life. To Bobbit, objectives with corresponding activities should be grouped and sequenced. This can only be done if instructional activities and tasks are clarified.
2. Werrett Characters (1875-1952)- Like Bobbit, to Charters, curriculum is a science, it gives emphasis on students' needs. The listing of objectives and matching of these with corresponding activities ensure that the content or subject matter is related to the objective. The subject matter and the objectives are planned by the teacher.
3. William Kilpatrick (1871-1965)- Curricula are purposeful activities which are child-centered. The purpose of the curriculum is child development. The project method was introduced by Kilpatrick, whose model allowed the teacher and student to plan the activities. The curriculum develops social relationships and small group instruction.
4. Harold Rugg (1886-1960)- Rugg, the curriculum should develop the whole child. It is child-centered. With the statement of objectives and related learning activities, curriculum should produce outcomes. Rugg emphasized social studies, and that teachers plan the curriculum in advance.
5. Hollis Caswell (1901-1989)- He saw curriculum as organized around social functions or themes, organized knowledge and learner's interest. Caswell believes that curriculum is a set of experiences.
6. Ralph Tyler (1902-1994)- as one of the authorities on curriculum, Tyler believes that curriculum is a science and an extension of the school's philosophy. It is based on student's needs and interest. To Tyler, curriculum is always related to instruction. Subject matter is organized in terms of knowledge, skills and values. The Process emphasizes problem-solving. The curriculum aims to educate generalists and not specialists.

Historical development shows different changes in the purposes, principles and content of the curriculum. The different changes are influenced by educational philosophy, psychology and pedagogical theories. This implies that curriculum is ever-changing, putting in knowledge and content from many disciplines.

## Psychological foundations of Education

Psychology provides a basis for the teaching and learning process. It unifies elements of the learning process and some of the questions which can be addressed by psychological foundations of education. How should curriculum be organized to enhance learning? What is the optimum level of the students' preparation in learning various contents of the curriculum?

Three groups of learning theories like behaviorism or association theories; cognitive-information processing theories are considered to address the 4 above questions.

### 1. BEHAVIORIST PSYCHOLOGY

Behaviorism dominated 20<sup>th</sup>-century psychology. It includes, among others, the following:

- ❖ Connectionism-Edward Thorndike, which influenced both Ralph Tyler and Hilda Taba who considered to be two of the well-known curricularists.
- ❖ Classical conditioning-Ivan Pavlov
- ❖ Operant Conditioning-B.F. Skinner
- ❖ Modeling and Observation Theory- Albert Bandura
- ❖ Hierarchical Learning/sets of behavior and five learning outcomes- Robert Gagne
  1. Intellectual skills or "knowing how" categorize and use symbols, forming concepts and problem-solving.
  2. Information or "knowing what" knowledge about facts, dates and names
  3. Cognitive strategies or learning skills
  4. Motor skills; and
  5. Attitudes, feelings and emotions learned through experiences

The listed learning outcomes overlap with the domains in the taxonomy of educational objectives, which are cognitive, affective and psychomotor.

To the behaviorist, learning should be organized so that students can experience success in the process of mastering the subject matter. The method introduced in a step by step manner with proper sequencing of tasks, which is viewed by other educational psychologists as simplistic and mechanical.

### 2. COGNITIVE PSYCHOLOGY

How do learners store information? How do they retrieve and generate conclusions? These are some of the basic questions asked by cognitive psychologists.

Advocates of cognitive psychology:

- ❖ Cognitive Development Stages- Jean Piaget
- ❖ Social Constructivism- Lev Vygotsky
- ❖ Multiple intelligences- Howard Gardner
- ❖ Learning Styles- Felder and Silverman
- ❖ Emotional Intelligence- Daniel Goleman

To the Cognitive theorist, learning constitutes a logical method for organizing and interpreting learning. Learning is rooted in the tradition of subject matter and is similar to the cognitive development theory. Teachers use a lot of problem-solving and thinking skills in teaching and learning, intuitive thinking, discovery learning. These are exemplified by practices like reflective thinking, creative thinking, discovery learning and many others.

### 3. HUMANISTIC PSYCHOLOGY

Humanist psychologists are concerned with how learners can develop their human potentials. Traditional psychologists do not recognize humanistic psychology as a school of psychology, however, observes view humanistic psychology as the third force learning theory after behaviorism and cognitive development.

- ❖ Learning can be explained in terms of the wholeness of the problem and where the environment is changing and the learner is continuously recognizing his or her perceptions-Gestalt Theory.
- ❖ Theory of human needs for self-actualizing persons- Abraham Maslow
- ❖ Non-directive lives= Carl Rogers

Among the humanistic psychologists, curriculum is concerned with the process, not the products; personal needs, not subject matter, psychological meanings and environmental situations.

In summary, psychology has a great influence on the curriculum. Learners not machines, and mind is not a computer. Humans are biological beings affected by their biology and cultures. The psychological foundations will curriculum makers in nurturing a more advanced, more comprehensive and complete human learning.

#### 4. SOCIAL FOUNDATIONS OF EDUCATION

Schools exist within social context. Societal culture affects and shapes schools and their curricula. The way school buildings are structured and the way classrooms and students are organized reflect the cultural views and values of the society. In considering the social foundations of the curriculum, we must recognize that schools are only one of the many institutions that educate society. However, schools are formal institutions that address more complex and interrelated societies and the world.

Society ever dynamic, is a source of very fast changes which are difficult to cope with and to adjust to. Thus, schools are made to help understand these changes. However, some observations point out to the fact that schools are conservative institutions that lag behind they are supposed to be agents of change. Thus order for schools to be relevant, school curricula should address diversity, explosion of knowledge, school reforms and education for all.

The relationship of curriculum and society is mutual and encompassing. Hence, to be relevant, the curricula should reflect and preserve the culture of society and its aspirations. At the same time, society should also imbibe the changes brought about by the formal institutions called schools.

What are the Characteristics of Good Curriculum

1. The curriculum is continuously evolving. It must be a product of a long and tedious process of evaluation and change. It has evolved from one period to another to the present.
2. The curriculum is based on the needs of the people. A curricular program must begin with those that concern the people themselves. It reflects the needs of the individuals and the society as a whole. The curriculum is a proper shape in order to meet the challenges of times and education more responsive to the clientele it serves.
3. The curriculum is democratically conceived. A good curriculum is developed through the efforts of a group of individuals from different sectors in society who are knowledgeable about the interest, needs and resources of the learner and the society as a whole. The Curriculum is a product of many minds and energies.
4. The curriculum is the result of a long-term effort. It takes a long period of time to go through the planning, management, evaluation and development of a good curriculum.
5. The curriculum is a complex of details. A good curriculum provides the proper instructional equipment and meeting places that are often most conducive to learning. It includes the teacher student-student relationship, guidance and counseling program, health services, schools and community projects, library and laboratories, and other school related work experiences.
6. The curriculum provides for the logical sequence of subject matter. It is a fact that learning is developmental. Thus, classes and activities should be planned to achieve an orderly development of subject matter and step-by step progress of the learner. There is a smooth transition and continuing achievement of learners from one subject matter, classroom, grade, or school to another. A good curriculum provides continuity of experiences.
7. The curriculum complements and cooperates with other programs of the community. The curriculum is responsive to the needs of the community. The school offers assistance in the improvement and realization of on-going programs of the community. There is cooperative effort between the school and the community towards greater productivity.
8. The curriculum has educational quality. Quality education comes through the situation of the individual's intellectual and creative capacities for social welfare and development. The curriculum helps the learner to become the best that can possibly be. The curriculum support system is secured to augment existing sources for is efficient and effective implementation.
9. The curriculum has effective flexibility. A good curriculum must be ready to incorporate changes whenever necessary. The curriculum is open to revision and development to meet the demands of globalization and the digital age.

The relationship of curriculum and society is mutual and encompassing. Hence, to be relevant, the curricula should reflect and preserve the culture of the society and its aspirations. At the same time, society should also imbibe the changes brought about by the formal institution called schools.

#### Types of Curriculum Operating Schools

Allen Glatthorn, as cited by Bilbao describes seven (7) types of curriculum operating in the schools.

1. Recommended Curriculum- proposed by scholars and professional organizations
  - ❖ The curriculum may come from a national agency like the Department of Education (DepEd), Commission on Higher Education (CHED), Department of Science and Technology (DOST) or any professional organization who has stake in education for example like the PAFTE.
2. Written Curriculum-appear in school, district, division, or country documents
  - ❖ This includes documents, course of study or syllabi handed down to the schools, districts, divisions, departments, or colleges for implementation. Most of the written curricula are made by the curriculum experts with the participation of teachers. These were pilot-tested or tried out in sample schools or population. An example is the Basic Education Curriculum (BEC). Another example is the written lesson plan, made up of objectives and planned activities of the teachers.
3. Taught Curriculum- what teachers implement or deliver in the classrooms or schools
  - ❖ The different planned activities which are put into action in the classroom compose the taught curriculum. These are varied activities that are implemented in order to arrive at the objectives or purposes of the written curriculum. These are used by the learners with the guidance of teachers. Taught curriculum varies according to the learning styles of students and the teaching styles of teachers
4. Supported Curriculum- resources like textbooks, computers, audio-visual materials which support and help in the implementation of the curriculum.
  - ❖ In order to have a successful teaching, other than the teacher, there must be materials which should support or help in the implementation of a written curriculum. These refer to the material resources, such as textbooks, computers, audio-visual materials. Laboratory equipment, play ground, zoos, and other facilities. Support curriculum should enable the learner to achieve real and lifelong learning
5. Assessed Curriculum- that which is tested and evaluated.
  - ❖ This refers to a tested or evaluated curriculum. At the end of the teaching episodes, series of evaluation is done by the teachers to determine the extent of learning or to tell if the students are progressing. This refers to the assessed curriculum. Assessment tool like pencil-and-paper tests; authentic instruments like portfolio are being utilized.
6. Learned Curriculum- what students actually learn and what is measured.
  - ❖ Refers to the learning outcomes achieved by the students. Learning outcomes are indicated by the results of the tests and changes in behavior, which can either be cognitive, affective, or psychomotor.
7. Hidden Curriculum- the unintended curriculum
  - ❖ This unintended curriculum which is not deliberately planned but may modify behavior or influence learning outcomes. There are lots of hidden curricula that transpire in the schools. Peer influence, school environment, physical condition, teacher-learner interaction, mood of the teachers and many other factors to make up.

## Elements /Components of the Curriculum

1. Aims, goals and objectives ( What is to be done?)
2. Subject matter/Content (What subject matter is to be included?)
3. Learning Experiences (What instructional strategies, resources and activities will be employed?)
4. Evaluation Approaches (What methods and instruments will be used to asses the results of the curriculum?)

### Component 1- Curriculum Aims, Goals and Objectives

The Philippine Educational system is divided into three educational levels namely the primary, secondary, and tertiary (with the trifocalization the educational system was divided into Basic Education (primary and secondary); Technical-Vocational Education (Post-secondary education) and Higher Education ( tertiary education)

Based on the 1987 Philippine Constitution, all schools shall aim to:

1. Inculcate patriotism and nationalism
2. Foster love of humanity
3. Promote respect for human rights
4. Appreciate the role of national heroes in the historical development of the country.
5. Teach the rights and duties of citizenship;
6. Strengthen ethical and spiritual values
7. Develop moral character and personal discipline
8. Encourage critical and creative thinking; and
9. Broaden scientific and technological knowledge and promote vocational efficiency

### Aims of Elementary Education ( Education Act of 1982)

Through their curricula, elementary education should aim to:

1. Provide knowledge and develop skills, attitudes, values essential to personal development and necessary for living in and contributing to a developing and changing society;
2. Provide learning experiences which increase the child's awareness of and responsiveness to the changes in the society;
3. Promote and intensify knowledge, identification with and love for the nation and the people to which he belongs; and
4. Promote work experiences which develop orientation to the world of work and prepare the learner to engage in honest and gainful work.

### Aims of Secondary Education

1. Continue to promote the objectives of elementary education; and
2. Discover and enhance the different aptitudes and interests of students in order to equip them with skills for productive endeavor and or to prepare them for tertiary schooling

### Aims of Tertiary Education

1. Provide general education programs which will promote national identity, cultural consciousness, moral integrity and spiritual vigor
2. Train the nation's manpower in the skills required for national development
3. Develop the professions that will provide leadership for the nation; and
4. Advance knowledge through research and apply new knowledge for improving the quality of human life and respond effectively to changing society.

Based on the mandate of the Constitution, each school therefore should be guided by its vision, mission and goals and its curricula should also revolved around these.

The school's vision is a clear concept of what the institution would like to become in the future. It provides the focal point and unifying element according to which the school staff, faculty and students perform individually or collectively. It is the guiding post around which all educational efforts, including curricula, should be directed. The school's vision can be very ambitious, but that is a characteristic of a vision

The school's vision and mission are further translated into goals which are broad statements of intents to be accomplished. Data for the source of a school goals may include the learners, the society and the fund of knowledge.

In a curriculum, these goals are made simple and specific for the attainment of each learner. These are called educational objectives, Benjamin Bloom and Robert Mager defined educational objectives in two ways:

1. Explicit formulation of the ways in which students are expected to be changed by the educational process, and
2. Intent communicated by statement describing a proposed change in learners. In other words, objectives direct the change in behavior, which is the ultimate aim of learning. They provide the bases for the selection of learning content and learning experiences. They also set the criteria against which learning outcomes will be evaluated.

### Three big domains of objectives ( Benjamin Bloom)

- (1) Cognitive; (2) affective; and (3) Psychomotor
1. Knowledge- recall, remembering of prior learned materials in terms of facts, concepts, theories and principles. It is the lowest cognitive level.
2. Comprehension-ability to grasp the meaning of material. It indicates the lowest form of understanding.
3. application-the ability to use learned material in new and concrete situation.
4. Analysis-ability to break down material into component parts so that its organizational structure may be understood.
5. Synthesis-ability to put parts together to form a new whole
6. Evaluation- Ability to pass judgment on something based on given criteria.

### Affective Domain( Krathwohl,1964)- domain of valuing, attitude and appreciation

1. Receiving- students willingness to pay attention to particular event, stimuli or classroom activities
2. Responding- active participation on the part of the students
3. Valuing-concerned with the worth or value a student attaches to a particular phenomenon, object or behavior
4. Organization-concerned with bringing together different values and building a value system
5. Characterization of value or value complex-developing a lifestyle based on a value system

## Psychomotor Domain (Simpson, 1972)

1. Perception-use of sense organs to guide motor activities
2. Set-refers to the readiness to take a particular type of action
3. Guided Response- concerned with early stages in learning complex skills imitation and trial and error are some of the ways of doing.
4. Mechanism-responses become habitual. Performance skills are executed with ease and confidence
5. Complex over responses-skillful performance and with complex movement patterns
6. Adaptation-well developed skills is now very easy to
7. Origination-refers to creating new movements and patterns to fit the situation, showing creativity.

## Components 2- Curriculum Content or Subject matter

All curricula have content, regardless of their design or models. To the subject centered view, content or subject matter is another term for knowledge. It is compendium of facts, concepts generalization, principles and theories. To the learner-centered view, the content relates knowledge to the individuals personal and social world and how he/she defines reality. According to Jerome Bruner, "knowledge is a model we construct to give meaning and structure to regularities in experience"

### Criteria in the selection of subject matter content or knowledge for the curriculum (Bilbao, 2009)

1. Self-sufficiency- According to Scheffler (1970), the prime guiding principle for content selection is helping learners to attain maximum self-sufficiency in learning, but in the most economical manner. Economy means less teaching effort and educational resources, less learner's effort, but more results and effective learning outcomes.
2. Significance- when content or subject matter will contribute to basic ideas, concepts principles, and generalization to achieve the overall aim of the curriculum, the it is significant. It also significant if it will develop learning abilities, skills, processes and attitude. Subject matter is significant if it will develop the cognitive, affective, and psychomotor skills of the learners. It can also be significant if the cultural aspect will be considered.
3. Validity- The authenticity of the subject matter selected is its validity . With information explosion, oftentimes , knowledge selected for school content may become obsolete. Thus, subject matter should be checked or verified at regular intervals, to determine if the content that was originally valid continues to be so.
4. Interest- For a learner –centered curriculum, this is the key criterion. A learner will value the content if it is meaningful to him or her. Students' interests should be considered and adjusted taking into consideration maturity, prior experiences, educational and social value of their interest among others.
5. Utility-Usefulness of the content or subject matter may be relative to the learner who is going to use it. Usefulness may either be for the present or the future questions like "will I use it in my future job?, :will it add meaning to my life or develop my human potential?" or " will the subject matter be useful in solving my current problems?" are considered.
6. Learnability-Subject matter in the curriculum should be within the range of the experiences of the learners. This is clearly suggested by the psychological foundations of a curriculum . There are ways of presenting subject matter or content which can easily be learned. Optimal placement and appropriate organization and sequencing of contents are the two ways by which these can be done.
7. Feasibility- can the subject matter or content be learned within the time allowed, resources available, expertise of the teacher, and the nature of the learners? Content selection should be considered within the context of the existing reality in schools, in society and government.

## Component 3- Curriculum Experiences

The core or the heart of the curriculum includes the different instructional strategies and methods that realize the goals and use the content in order to produce an outcome teaching strategies convert the written curriculum into instruction. Both the teacher and learner take actions to facilitate learning.

Whatever methods the teacher utilizes to implement the curriculum, there will be some guide for the selection and use, such as:

1. Teaching methods are means to achieve the end. They are used to translate the objectives into action.
2. There is no single best teaching method. Its effectiveness will depend on the learning objectives, the learners , and skill of the teacher.
3. Teaching methods should stimulate the learners desire to develop in the cognitive, affective, psychomotor, social and spiritual domains.
4. In the choice of the teaching methods, the learning styles of the students should be considered.
5. Every method should lead to the development of the three domains: cognitive, affective and psychomotor
6. Flexibility should be a consideration in the use of the teaching methods

## Components 4- Curriculum Evaluation

All curricula, to be effective, must have the element of evaluation ( Worthen & Sanders, 1987), Curriculum evaluation refers to the formal determination of the quality, effectiveness or value of the program process, and product of the curriculum. Evaluation is meeting the goals and matching them with the intended outcomes

### The CIPP Models by Stufflebeam

CIPP- Context-Input-Process- Product. The Process is continuous and very important to curriculum managers, like principals, supervisors, department heads, deans and even teachers.

- ❖ Context- refers to the environment of the curriculum, the real situation where the curriculum is operating. Context evaluation refers to situation analysis.
- ❖ Input-refers to the elements of the curriculum, which include the goals, instructional strategies, the learners, the teachers, the contents and all the materials needed
- ❖ Process-refers to the ways and means of how the curriculum has been implemented. This component of the CIPP looks into the entire operation of the curriculum.
- ❖ Product-indicates if the curriculum accomplishes its goals. It will determine to what extent the curriculum objectives have been achieved.

Within the evaluation process, smaller and more specific activities are needed to determine the effectiveness of the curriculum. It includes assessment and measurement of learning outcomes, the ultimate product of a curriculum. Methods include diagnostic; placement; formative or summative assessments or non-reference or criterion referenced measurement.

The components of a curriculum are distinct but are interrelated to one another as shown in the following figure.

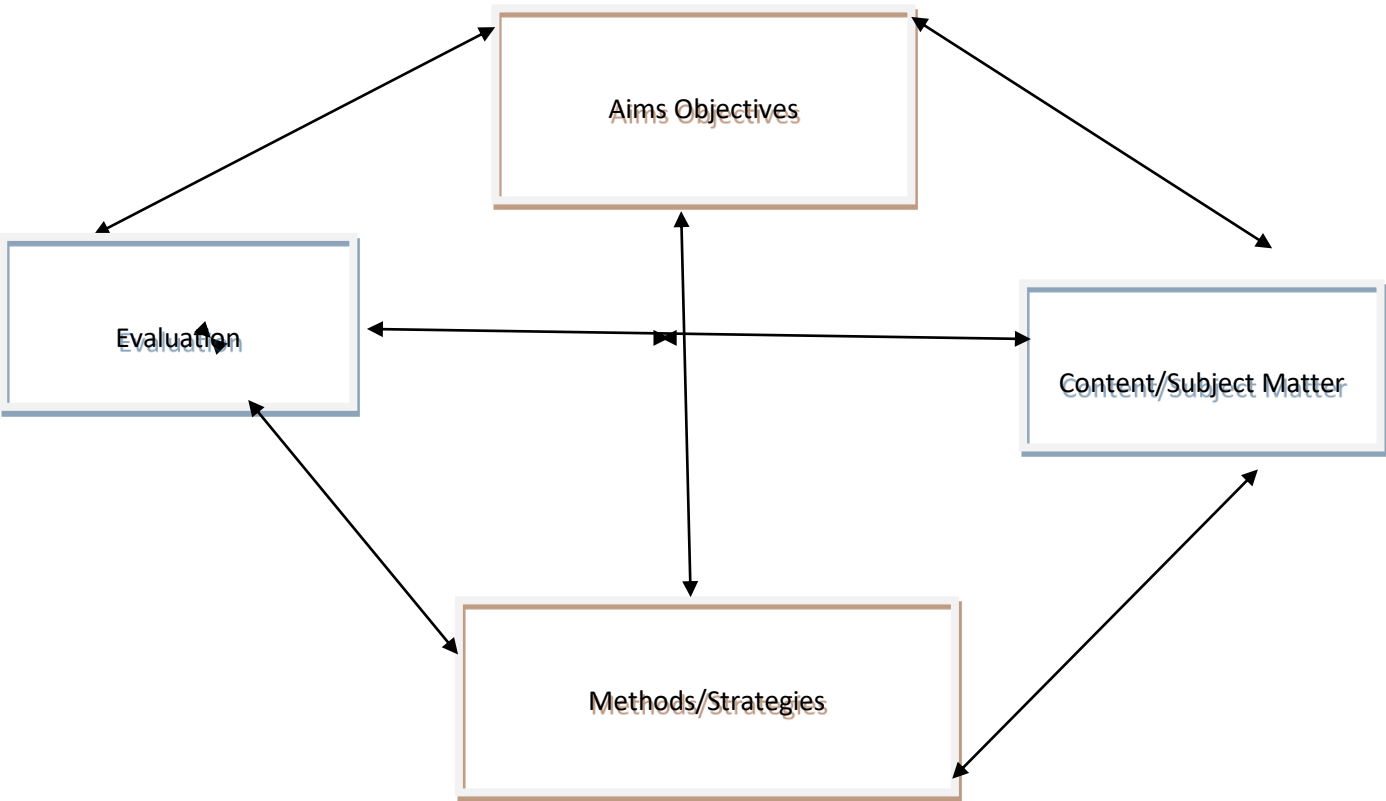


Figure 1. Interrelationship of the components of a curriculum

II.-CRAFTING/DEVELOPING THE CURRICULUM

Points of View on Curriculum Development

Development connotes changes which are systematic. A change for the better means any alteration, modification or improvement of existing condition. To produce positive changes, development should be purposeful, planned and progressive. This is how curriculum evolves,

Some authors define curriculum as the total effort of the school to bring about desired outcomes in the school and out-of-school situations. It is also defined as a sequence of potential experiences set up in school for the purpose of disciplining children and youth in group ways of thinking and acting

Howel and Evans (1995) define curriculum as standard set of learning outcomes or task that educators usually call goals and objectives, while other writers define curriculum as” the what of teaching”, or listing of subjects to be taught in school.

Curriculum is a document which describes as structured series of learning objectives and outcomes for a given subject matter/ area. It includes a specification of what should be learned, how it should be taught, and the plan for implementing/ assessing the learning.

Curriculum Development , therefore, may be defines as the process of selecting, organizing, executing and evaluating the learning experiences on the basis of the nature of the society or community. It is a continuous process for the possibilities of improving the teaching-learning situation. Its goal is a positive change; process and transformation in the lives of the learners based on the schools mission and goals.

Models of Curriculum Development

Ralph Tyler Model ( also known as Tyler’s Rationale)\he posited forum fundamental questions or principles in examining any curriculum:

- 1. What educational purposes should schools seek to attain?
- 2. What educational experiences can be provided that is likely to attain these purposes?
- 3. How can these educational experiences can be effectively organized?
- 4. How can we determine whether these purposes are being attained or not?

Tyler’s Model shows that in the curriculum development the following considerations should be made”

- 1. Purpose of the school
- 2. Educational experiences related to the purpose
- 3. Organization of the experiences
- 4. Evaluation of the experiences/ outcomes

Hilda Taba Model- She improved on Tyler’s Rationale by making a linear model. She believes that teachers who teach or implement the curriculum should participate in developing it. Her advocacy was called the “grassroots approach”

Presented seven major steps her model, where teachers could have a major input.

1. Diagnosis of learners needs and expectations of the larger society
2. Formulation of learning objectives
3. Selection of the learning content
4. Organization of the learning content
5. Selection of the learning experiences
6. Organization of learning activities
7. Determination of what to evaluate and the means of doing it.

Thus, looking at the curriculum models, the three interacting process in curriculum development are: (1) planning; (2) implementing; and (3) evaluating.

#### The Francis Hunkin's Decision-Making Model

What sets this model apart is its recommended first stage of curricular decision-making. The first stage requires that participants to engage in deliberation regarding the nature curriculum and also its educational and social political value.

This approach addresses the concerns of reconceptualists, of putting stress on the understanding the nature and power of curriculum

The Model has seven major stages:

1. Curriculum conceptualization and legitimization
2. Diagnosis
3. Content selection
4. Experience selection
5. Implementation
6. Evaluation
7. Maintenance

#### Curriculum Design Models

1. Subject-Centered Design model- focuses on the content of the curriculum. Corresponds mostly to the textbook written for the specific subject. In this design, schools divided the school hours across different subjects.
  - ❖ Subject Design- this is the oldest and so far the most familiar for teachers, parents and other layman. It is easy to deliver, has complementary books, written, and available support instructional materials. The drawback is that learning is so compartmentalized. It stresses the content so much that it forgets about student's natural tendencies, interests and experiences.
  - ❖ Discipline Design. Related to the subject design, but focuses on academic discipline. It is often used in college.
  - ❖ Correlation Design- This comes from a core, correlated curriculum designs that links separate subjects designs in order to reduce fragmentation. Subjects related to one another, but each subject maintains identity.
  - ❖ Broad Field design/interdisciplinary- it is variation of the subject-centered design. This design was made to prevent the compartmentalization of subjects and integrate the contents that are related to each other. It sometimes called a holistic curriculum because it draws around themes and integration.
2. Learner-Centered Design- Among the progressive educational psychologists, the learner is the center of the educative process. The emphasis is very strong in the elementary level. However, more concern has been placed on the secondary and even the tertiary level. In high school, the subject or content has become the focus and in the college level, the discipline is the center. Both levels, however still recognize the importance of the learner in the curriculum.
  - ❖ Child-centered Design- attributed to the influence of John Dewey, Rousseau, Pestalozzi, and Froebel. The curriculum is anchored on the needs and interest of the child. The is not considered as a passive individual, but as on, who engages with his/her environment. One learns by doing. Learners actively create and construct meaning and understanding as viewed by the constructivists. Learners interact with the teachers and environment. Thus, there is a collaborative effort on both sides of the plan lessons, select content, and do activities together. Learning is the product of the child's interaction with the environment.
  - ❖ Experienced-Centered Design- This is similar to child-centered design. Although the child remains to be the focus, experience-centered design believes that the interests and needs of the learners cannot be pre-planned. Instead, experiences of the learners become the starting point of the curriculum. Thus, the school environment is left open and free. Learners are made to choose from various activities that the teacher provides. The learners are empowered to shape their own learning from different opportunities given by the teacher. The emergence of multiple intelligence blends well with experience-centered design curriculum.
  - ❖ Humanistic Design- The key personalities in this curriculum design were Abraham Maslow and Carl Rogers. Maslow's theory of self-actualization explains that a person who achieves this level is accepting of self, others and nature; is simple, spontaneous and natural; is open to different experiences; possesses empathy and sympathy to wards the less fortunate, among many others, Carl Rogers, on the other hand, believed that a person can enhance self-directed learning by improving self-understanding and basic attitudes to guide behavior. In the humanistic curriculum design, the development of self is the ultimate objective of learning. It stresses the development of positive self-concept and interpersonal skills.
3. Problem-Centered Design- Generally, this design draws on social problems, needs, interests, and abilities of the learners. Various problems are given emphases. In this curriculum, content cuts across subject boundaries and must be based on the needs, concerns and abilities of the students.
  - ❖ Life-Situation Design- The contents are organized in ways that allow the students to clarify view problem areas. It uses the past and the present experiences of learners as a means to analyze the basic areas of living.
  - ❖ Core Design- It centers on general education, and the problems are based on common human activities. The central focus of the core design includes common needs, problems, and concerns of the learners.

#### Principles in organizing or putting together learning content

##### Dimensions of Principles of Curriculum design

- ❖ SCOPE- Tyler and Omstein (2004) define scopes as all the content, topics, learning experiences and organizing threads comprising the educational plan. It refers to the coverage of the curriculum. It is the depth and breadth of the curriculum. It includes time, diversity and maturity of the learners.
- ❖ BALANCE- Curriculum content should be fairly distributed in depth and breadth of the particular learning area of discipline. This will ensure that the level or are will not be overcrowded or less crowded.

- ❖ **ARCTICULATION**- When each subject matter is smoothly connected to the next, glaring gaps and wasteful overlaps in the subject matter will be avoided. Teamwork among the teachers will enhance articulation of contents in the curriculum.
- ❖ **SEQUENCE**- It is the logical arrangement of the subject matter. It refers to the deepening and broadening of the contest as it is taken up in the higher levels.
- ❖ **INTEGRATION**- the horizontal connections are needed in subject areas that are similar, so that learning will be related to one another. This will help the learner get a holistic or unified view of reality outlook in life.
- ❖ **CONTINUITY**- The content repetition, review and reinforcement of learning is what is referred to as continuity. Learning requires a continuing application of new knowledge, skills, and attitudes or values, so that these will be used in daily living.

Curriculum Approaches

- ❖ **Behavioral Approach**- Anchored on the behaviorist principles, where approach to curriculum is usually based on a blue print. In the blueprint, goals and objectives are specified, and contents and activities are also arranged to match with the learning objectives. The learning outcomes are evaluated in terms of goals and objectives set at the beginning. This approach begins with educational plans that start with the setting of goals or objectives. These are the important ingredients in curriculum implementation for evaluating the learning outcomes as a change of behavior. The change of behavior indicates the measure of accomplishment.
- ❖ **Managerial Approach**- The principal is the curriculum leader and at the same time instructional leader, who is supposed to be the general manager. The general manager sets the policies and priorities and establishes the direction of change and innovation, and plans and organizes curriculum and instruction. School administrators are less concerned about the content than about organization and implementation. They are less concerned about subject matter, methods and materials than improving the curriculum. Curriculum managers look at curriculum changes and innovations as they administer the resources and restructure the schools
- ❖ **System Approach**- This was influenced by systems theory, where the parts of the total school district or school are determined in terms of how they relate to each other. The organizational chart of the school represents s systems approach. It shows the line-staff relationships of personal and how decisions are made. The following are equal importance: (1) Administration, (2)counseling, (3) curriculum, (4) instruction, (5) evaluation.
- ❖ **Humanistic Approach**- This approach is rooted in the progressive philosophy and child-centered movement. It considers the formal or planned curriculum and the formal or hidden curriculum. It considers the whole child and believes that in a curriculum, the total development of the individual is the prime consideration. The learner is at the center of the curriculum.

Approaches to Curriculum Design

The Six (6) Features of a Curriculum

1. Who teachers- The Teacher
2. Who do Teachers Teach- The Learners
3. What do the Teachers Teach- Knowledge Skills and Values
4. How to the Teachers Teach- Strategies and Methods
5. How much of the Teaching was Learned- Performance
6. With whom do we Teach- Community Partners

III. IMPLEMENTING THE CURRICULUM

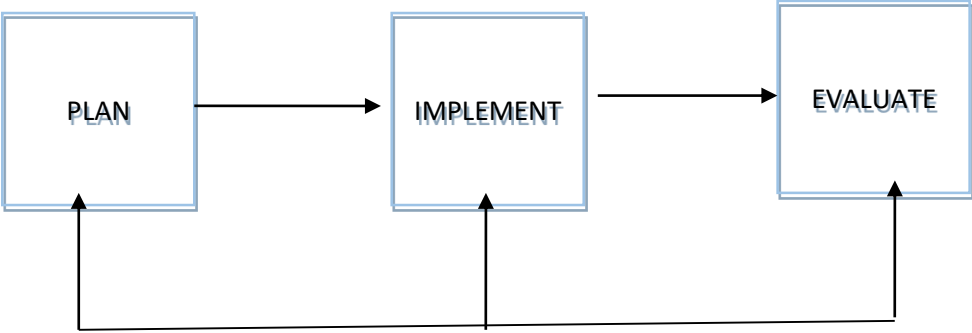
Teaching- Learning Process and Curriculum Development

In Curriculum development, the teaching and learning are actions necessary to accomplish a goal in education. What is the role of teaching in curriculum development?

So, what is learning in the curriculum development?

Teaching as process in Curriculum

The process of teaching replicates the process of curriculum development. The implementation phase of curriculum development is the actual teaching and experiencing of curriculum, as shown in Figure 2



Feedback and Reflections

Figure 2: The teaching Process

- ❖ **Planning Phase**- includes decisions about: (a) the needs of the learners; (b) the achievable goals and objectives to meet the needs; (c) the selection of the content to be taught; (d) the motivation to carry out the goals; (e) the strategies most fit to carry out the goals; and (f) the evaluation process to measure learning outcomes
- ❖ **Implementation Phase**- requires the teacher to implement what has been planned.
- ❖ **Evaluation Phase**- a match of the objectives with learning outcomes will be determined.
- ❖ **Process of Feedback and Reflection**- to give information as to whether the three phases were appropriately done and elicited good results.

## Roles of Stakeholders in Curriculum Implementation

Stakeholders are individuals or institution that are interested in the school curriculum. Their interest varies in degree and complexity. They get involved in many different ways in the implementation because the curriculum affects them directly or indirectly.

- ❖ Learners at the Center of the Curriculum- These learners are the very reason why curriculum is developed.
- ❖ Teachers as Curriculum Developers and Implementers- Planning and writing the curriculum are the primary roles of the teacher. The teachers writes a curriculum regularly through a lesson plan, a unit plan or a yearly plan. He prepares the activities for the students to do . the teacher addresses the goals, needs, and interest of the learners by creating experiences from where the students can learn. He/She designs, enriches, and modifies the curriculum to suit the learners' characteristics." No technology can ever replace a teacher, it will only support the multifaceted role of the teacher."
- ❖ Curriculum Managers and Administrators- They are people who are responsible in the formulation of the school's vision, philosophy, mission and objectives. They provide necessary leadership in evaluating teaching personnel and school programs. The principle of command responsibility and institutional leadership rests on the shoulders of the school administrators.
- ❖ Parents as Supporters to the curriculum- Parents are the best supporters of the school, especially because they are the ones paying for their child's education. Hence, they want to get the best of his/her investment in education. This has an implication to what kind if curriculum is being offered in the school.
- ❖ Community Members as Curriculum Resources- Community members and materials in the existing local community can very well substitute for what are needed to implement the curriculum. Respected community members may be included in school boards; some can become resource speakers, etc.
- ❖ Other Stakeholders in Curriculum Implementation-Professional organizations like those of teachers, lawyers, medical doctors, engineers and many others are asked by curriculum specialists to contribute in curriculum review because they have a voice in licensure examinations, curriculum enhancement and many more. Often, they have a better view of the industry where the graduates of the curriculum go.

### The role of Technology in Implementing the Curriculum

Technological changes in education make it's impact on the delivery of more effective, efficient and humanizing teaching-and-learning. Increase in the use of information and communication technology or ICT is an explosive trend that made it influence education, Educational technology has the following roles in delivering the school curriculum's instructional program.

- ❖ Upgrading the quality of teaching-and-learning in schools
- ❖ Increasing the capability if the teacher to effectively inculcate learning, and for students to gain mastery of lessons and courses.
- ❖ Broadening the delivery of education outside schools through non-traditional approaches to formal and informal learning such as open universities and lifelong learning to adult learners.
- ❖ Revolutionizing the use of technology to boost educational paradigm shifts that give importance to student- centered and holistic learning.

### Pilot Testing, Monitoring and Evaluating the Implementation of the Curriculum

- ❖ Pilot testing- this is a process where empirical data are gathered to support whether the material or the curriculum is useful, relevant, reliable and valid
- ❖ Monitoring- is a periodic assessment and adjustment during the try out period. It determines how the curriculum is working so that the monitoring report becomes the basis of decision on what aspects have to be retained, improved or modified.
- ❖ Curriculum Evaluation- as part of total educational evaluation refers to a systematic process of judging the value, effectiveness and adequacy of a curriculum. It is a process, product and setting which will lead to informed decisions.

There are two ways of curriculum evaluation

- (1) School-Based Evaluation (SBE)- an approach to curriculum evaluation which places the content, design, operation, and maintenance of evaluation procedure in the hands of school personnel.
- (2) Accreditation-this is a voluntary process of submitting a curricular program to an external accrediting body foe review in any level of education: basic, tertiary or graduate school, to ensure that standards are met. Accreditation studies the statement of the educational intentions of school and affirms the standard of excellence.

## IV. ASSESSING/EVALUATING THE CURRICULUM

Curriculum assessment is the process of collecting information for use in evaluation

Curriculum assessment may achieve the following purposes:

1. Highlight curriculum expectations;
2. Gather information about what students know and can do,
3. Motivate and encourage teachers to meet the identifies needs of students
4. Provide evidence to tell how well the students have learned ; and
5. Obtain feedback that helps teachers, students and parents make good decisions to guide instruction

Intended Curriculum- refers to a set of objectives identified set at the beginning of any curricular plan. It establishes the goal, the specific purposes, and the immediate objectives to be accomplished. The intended curriculum specifies what the curriculum maker wants to do.

Implemented Curriculum- refers to the various learning activities or experiences of the students in order to achieve the intended curricular outcomes.

Achieved curriculum- refers to the curriculum outcomes based on the first two types of curriculum, the intended and implemented. The achieved curriculum is considered the product. It can be the learning outcomes, or a material product itself, like a book, modules or instructional material.

What is evaluation?

Evaluation is the process of determining the value of something or the extent to which goals are being achieved. It is a process of making decisions or reaching a conclusion. It involves decision making about student performance based on information obtained from assessment process. Assessment id the process of collecting information by reviewing the products of student works, interviewing, observing or testing.



Evaluation is the process of using information that is collected through assessment. The ultimate purpose of any evaluation process that takes place in schools is to improve student learning.

It entails a reasoning process that is based on inference. Inference, which is the process of arriving at a logical conclusion from a body of evidence. Inference usually refers to the process of developing a conclusion on the basis of some phenomenon that is not experienced or observed directly by the person drawing inference.

Evaluation is a thoughtful process, used to understand things. Evaluation has been defined in a variety of ways, all of which have at their core the idea of comparison. When we evaluate, we make comparison between things, not the differences, summarize our findings and draw conclusion about results.

Evaluation is the judgment made about the assessments of students' learning based on established criteria. It involves a process of integrating information from various sources and using this information to make inferences and judgments about how well the students have achieved curriculum expectations. Evaluation involves placing a value on and determining the worth of students' assessment. Evaluation is usually made so that progress can be communicated to students and parents.

Evaluation provides information

- ❖ Directly to the learner for guidance
- ❖ Directly to the teacher for orientation of the next instruction activities; and
- ❖ Directly to external agencies for their assessment of schools functioning in the light of national purpose.

What is Curriculum Evaluation

Curriculum Evaluation is the process of obtaining information for judging the worth of an educational program, product, procedure, educational objectives or the potential utility of alternative approaches designed to attain specified objectives,

Curriculum evaluation focuses on determining whether the curriculum as recorded in the master plan has been carried out in the classroom. In evaluating a curriculum, the following key questions are usually asked:

1. Are the objectives being addressed?
2. Are the contents presented in the recommended sequence?
3. Are the students being involved in the suggested instructional experiences?
4. Are the students reaching the contents?

Suggested Plan of Action for Curriculum Evaluation

1. Focus in one particular component of the curriculum. Will it be the subject area, the grade level, the course or the degree program? Specify the objectives of evaluation.
2. Collect or gather the information is made up of data needed regarding the object of evaluation
3. Organize the information. This step will require coding, organizing, strong and retrieving data for interpretation
4. Analyze information. An appropriate way of analyzing will be utilized
5. Report information. The result of evaluation should be reported to specific audiences
6. Reporting can be done formally in conferences with stakeholders, or informal through roundtable discussion and conversation.
7. Recycle the information for continuous feedback, modification and adjustments to be made.

## V. CURRICULUM INNOVATION

Innovations are inevitable as man continues to seek for development. With the demand brought about by the fast-changing society. It is most likely that innovations will occur. In curriculum, changes and modifications are being introduced to keep pace with the changing world. With emerging theories of learning, instructional delivery and management, learning and teaching styles, modes of living and other societal changes in science and technology led educators to introduce innovations.

Local and National Curricular Innovations

1. The 2002 Basic Education Curriculum  
The Vision, Mission, and Rationale of the Curriculum

The Department of Education envisions every learner to be functionally literate equipped with life skills, appreciative of arts and sports and imbued with the desirable values of a person who is *makabayan*, *makatao*, *makakalikasan* at *maka-Diyos*.

This vision is in line with DepEds' mission to provide quality basic education that is equitably accessible to all and lays the foundation for lifelong learning and service for the common good.

The BEC was developed through a dynamic process. It started with the review of the existing basic education curriculum in 1997, which looked into consideration world-wide trends and Philippine realities.

Integrative Teaching as Mode of Instructional Delivery

Integrative teaching works best in the BEC because the curriculum is treated in a holistic manner. The process is interactive, collaborative and innovative.

- ❖ Thematic Teaching- requires organization of themes around ideas. The theme provides focus and helps learners to see the meaningful connections across subject areas. It links ideas to actions and learning to life.
- ❖ Content-Based Instruction (CBI)- it is the integration of content learning with language teaching. The language curriculum centered on the academic needs and interests of the learners. Thus, it crosses the barriers between language and subject matter content. This approach aims at developing the learner's language skills.
- ❖ Focusing inquiry- it is an interdisciplinary approach that uses questions to organize learning. Learners become creators rather than recipients of knowledge. Contents and concepts are given less importance than the process of conducting an investigation and communicating what was learned to others. Instructional process is built around inquiry, where teachers guide the students to discover answers to questions. Using what learners already know as a starting point, they generate questions about things they do not know yet. The design a method of investigation and gather information on their own.
- ❖ Generic Competency Model- the learners are enrolled in three to four linked or related courses or subject areas. In *Makabayan*, for instance, competencies subject and can be clustered into personal development, social competencies and work and special skills, the subject specialist teaches his/her subject and activities will draw on processes and skills important to each discipline.

## 2. Third Elementary Education Program

Begun in 1996 and concluded in 2005 it was funded by the WB and JBIC, in response to the Social Reform Agenda of the government. It is focused only on the elementary level with the goal to improve learning achievement; improve completion rates and access to quality elementary education.

Advocacies:

In- service Training for Teachers (INSET); school improvement and innovation Facility;(SIIF) Student Assessment;(SA), Educational Management Information System (E-MS); Procurement and Monitoring Evaluation ; Principal Empowerment

## 3. Secondary Education Development and Improvement Program (SEDIP)

It is a curriculum innovation that dovetailed the TEEP. It started in 2000 and ended in 2006. Its purpose is to improve equitable access to secondary education in poverty affected areas.

Curriculum Reforms revolved around;

(a)Improving Teaching and Learning; (b) Improving Access to Secondary Education; (c) Facilitating Decentralized Secondary Education Management.

## 4. The New Teacher Education Curriculum for BEED and BSED

Implemented by CMO 30,s 2004

- ❖ There are two streams in Basic Education; BEED- structured to meet the need of professional teachers for elementary and special education program; and the BSED-need of professional teachers in the high school in the Philippines
- ❖ The Curriculum is aligned to the National Competency-Based Teachers Standards (NCBTS)
- ❖ It is made up of three components- (1) General Education (2) Professional Education (3) Specialization or content courses.

## 5.The Ladderized Curriculum for Bachelor of Technical Teacher Education (BTTE)

- ❖ The BTTE prepares teachers in technical-vocational education and training (TVET) and higher education institutions that are equipped not only with strong theoretical understanding of teaching and technology but also with exposure to industry
- ❖ The course is composed of four components;
  1. General education- consistent with CMO 59
  2. Professional Studies component
  3. Specialization component, and
  4. Instructional Technology component

## 6.Understanding the Design (ubD)-Based Curriculum

- ❖ UbD is a framework for improving student achievement and was designed by internally recognized educators Grant Wiggins and Jay Mctighe, published bu ASCD
- ❖ The emphasis on” Backward Design”.
- ❖ It is a tool utilized for educational planning focused on teaching for understanding
- ❖ It works within the” standard-driven curriculum” to help teachers clarify learning goals, device revealing assessment of students understanding and craft effective and engaging learning activities.

### Understanding by Design (UbD)-Based Curriculum

Begun as early as 2007 and was formally implemented in the Philippines thru the 2010 Secondary Education Curriculum.

### 3 Stages of ‘Backward Design’

Stage 1- indentifying Results/Desired Outcomes ( Content/Performance Standards, Essential Understanding, Objectives- KSA, Essential Questions)

Stage 2- Defining Acceptable Evidence/Assessment ( Product/ Performance, Assessment Criteria/Tools) Six Facets of Understanding ( Explain, Interpret. Apply Perspective, Empathy, Self-knowledge

Stage 3- Learning Plan/Instruction (WHERTO

W-where us the unit going? What is expected? Where are the students coming from?

H- Hooks all students and holds their interest

E- Equipped students, help them experience the key idea an explore the issue

R- Rethink

E- Evaluate

T- Tailors

O- Organize

## 7.K-12 Basic Education Curriculum

Republic Act 1053 (may 15, 2013)

The Enhanced Basic Education Act of 2013’

- ❖ The overall Goal of the K to 12 Curriculum  
Kindergarten +(6) six years primary education +(4) four years of junior highschool +(2) two years senior high school

Salient Features of the K-12 Curriculum

- ❖ Strengthening Early Childhood Education ( Universal Kindergarten)
- ❖ Making the Curriculum Relevant to the Learners ( Contextualization and Enhancement)
- ❖ Ensuring integrated and Seamless Learning ( spiral Progression)
- ❖ Building Proficiency Through Language ( Mother Tongue-Based Multilingual Education)
- ❖ Gearing Up for the Future ( Senior High School)
- ❖ Nurturing the Historically Developed ( College and Livelihood Readiness, 21<sup>st</sup> Century Skills)

## The 21<sup>st</sup> Century Trends in Philippine Education

### Relevance and Responsiveness

#### Benefit from Industry-University Collaboration

- ❖ For Students- ensure workplace orientation and opportunity to apply their skills, knowledge and proper work attitudes; opportunities for enhance employability
- ❖ For Industry- prospective workers are developed according to the companies specifications
- ❖ For the University- reduced need for sophisticated equipment and facilities; responsiveness to industry needs and better employment for graduates.

### Efficiency and Effectiveness

#### Pres. Aquino's 10 Ways to Fix Philippine Education

1. 12-Year Basic Education Cycle- expand the basic education cycle from a short of 10 year cycle to a globally comparable 12 years before 2016.
2. Universal Pre-Schooling for All- All public school children ( and all public schools) will have pre-schooling as their introduction to formal schooling by 2016.
3. Madaris Education as a Sub-system within the Education System- Madaris education with subjects in Arabic Language and Islamic Values education will be integrated in the public school curriculum as additional subject with the view to keeping the Muslim Filipino children in school.
4. Technical Vocational Education as an Alternative Stream in Senior High School-Provide education alternative to better prepare students for the world of work. Re –introducing technical vocational education in the public high schools to better link and match schooling ti local industry needs and employment.
5. “every Child a Reader” by Grade 1- by the end of SY 2015-2016, every child passing pre-school must be a reader by Grade 1. Library infrastructures with appropriate reading materials will be built in schools, and elementary teachers shall be trained how to teach reading.
6. Science and Math Proficiency- Rebuild the science and math infrastructure in schools to produce more scientists, engineers, technicians, technologist and teachers in the universities so that this country can be more globally competitive in industry and manufacturing.
7. Assistance to private schools as essential Partners in Basic Education- Expand the Government Assistance to Students and Teachers in Private Education to a target of 1 million HS students through education service contra ting and do away with wasteful education voucher system
8. Medium of Instruction Rationalized- Support UNESCO's tried and tested formula on mother tongue instruction. Use mother tongue as medium of instruction from pre- school to Grade III
9. Quality Textbooks-Produce books according to these criteria; quality, better quality and more quality
10. Covenant with Local Government to build more schools- the support of the LGU's is necessary to build more classrooms with smaller population, so that teachers and students, and parents can form a real learning community.

### Access and Equity in Education

#### Legal Bases on the Access Equity of Education in the Philippines

- ❖ The 1987 Philippine Constitution ( Section 1, Article IV). The state protect and promote the right of all citizens to quality education at all levels and shall take appropriate steps to make such education accessible to all'.
- ❖ RA 9155 9Governance of Basic Education Act of 2001)- Remaining DECS to DepEd and reiterating the constitutional mandate. Establish free compulsory public education at the elementary and high school level of education
- ❖ RA 6655 ( The Free Secondary Education Act)- providing free four years of secondary schooling for those ages 12 to 15 in the public schools

#### Alternative Modes of Learning/Acquiring Qualification

- ❖ Ladderized Education Program (LEP)
- ❖ Expanded Tertiary Education Equivalency and Accreditation Program ( ETEEAP)
- ❖ Ladderized Model Curricula
- ❖ Distance Education Learning
- ❖ Distance Education Learning

### Accreditation : Enhancing the Quality of Education

Accreditation – is a concept of self-regulation which focuses on self-study and evaluation and on the continuing improvement of educational quality. It is both a process ( form of peer review) and a result ( a form of certification granted by recognized and authorized accrediting agency)

- ❖ Program accreditation- accreditation of academic course
- ❖ Institutional accreditation- accreditation of the school, college, university or institution as a whole

### The 21<sup>st</sup> Century Teaching Skills

- ❖ Learning and Innovation Skills- recognized as the skills that separate students who are prepared for increasingly complex life and work environments in the 21<sup>st</sup> century have; focus on creativity, critical thinking, communication and collaboration
  - ❖ Creativity and Innovation- Think creativity, Work Creatively with others, implement innovations
  - ❖ Critical Thinking and Problem Solving-reason Effectively, Use Systems, Thinking, Make Judgment and Decisions, Solve Problems
  - ❖ Communication and Collaboration- Communicate Clearly, Collaborate with others.
- B. Information, Media and Technology Skills- 1) access to an abundance of information; 2) rapid changes in technology tools; and 3) the ability to collaborate and make individual contributions on an unprecedented scale. To be effective in the 21<sup>st</sup> century, citizens and workers must be able to exhibit a range of functional and critical thinking skills related to information, media and technology.
  - ❖ Information Literacy-Access and Evaluate information, use and Manage information\
  - ❖ Media Literacy- analyze Media, Create media Products,
  - ❖ ICT Literacy- Apply Technology Effectively

- C. Life and Career Skills- Today's life and work environments require far more than thinking skills and content knowledge. The ability to navigate the complex life and work environments in the globally competitive information age requires students to pay rigorous attention to developing adequate life and career skills.
- ❖ Flexibility and Adaptability- Adapt to Change , Be Flexible
  - ❖ Initiative and Self- Direction- Manage Goals and Time, Work Independently, Be self directed Learners.
  - ❖ Social and Cross Cultural Skills- Interact Effectively with others, Work Effectively in Diverse Teams
  - ❖ Productivity and Accountability- Manage Projects, Products Results
  - ❖ Leadership and Responsibility- Guide and Lead Others, Be Responsible to Others

#### Brain- Based Learning (BBL)

- ❖ It is an approach to teaching based on research in neuroscience
- ❖ It suggests that the brain learns naturally
- ❖ This technique allows teachers to connect learning to students real life experiences
- ❖ This kind of learning encompasses education concepts like
  - ✓ Mastery learning
  - ✓ Problem-based learning
  - ✓ Cooperative education
  - ✓ Multiple intelligence
  - ✓ Learning styles
  - ✓ Experimental learning

#### Emerging Interactive Teaching Elements from BBL

- ❖ Orchestrated Immersion- Learning environment are created to provide authentic learning experiences. Ex. In the elementary level, teachers can use the school's miniforest to identify trees, animals and other plants and find out how they live together.
- ❖ Relaxed Alertness- in BBL, efforts are made to eliminate fear while maintaining a highly challenging environment. Ex. Teachers may play classical music when appropriate to set a relaxed tone in the classroom. Bright lights are dimmed. Scented candles are lit to calm the senses. All learners are accepted regardless of their various learning styles, capabilities and liabilities. This will provide a relaxed and accepting environment. Children are motivated to bring the best of them and bring out their potential

#### Outcome-Based Education (OBE)

OBE is an approach to education in which decisions about the curriculum are driven by the exit learning outcomes that the students should display at the end of the course.

In OBE, Product defines Process. It can be summed up as "results-oriented thinking"

#### Learning Outcome-Oriented Teaching and Learning?

#### The Bologna Process

- ❖ Quality assurance in the higher education
- ❖ A unifies educational system (mobility, transparency, and mutual recognition of qualifications)
- ❖ Revise curricula; integrate student-centeredness and learning outcomes orientation
- ❖ Pedagogical issue became central, along with the alignment of teaching and assessment methods in accordance with learning outcomes

#### Experiential Learning Courses (ELC)

- ❖ This is anchored on the NCBTS in CMO, 30, 2004
- ❖ This feature of the new teacher education curriculum provides students with rich practical learning experiences which are drawn out from the actual environment.
- ❖ Field study courses enable the students to observe, verify and reflect on various events which relate to the concepts, methods and strategies previously learned
- ❖ These courses provide opportunities to capture other experiences which can be further verified, confirmed and reflected on in relation to their becoming a teacher

#### Field Study Course Experiential Learning

- ❖ (FS1) Learner's Development an Environment
- ❖ (FS 2) Experiencing the Teaching-Learning Process
- ❖ (FS3) Technology in the Learning Environment
- ❖ (FS4) Understanding Curriculum Development
- ❖ (FS5) Learning Assessment Strategies
- ❖ (FS6) On Becoming a Teacher

Practice Teaching (Student Teaching)- this is the apex of all the ELCs. It is the total immersion of the prospective teacher in the real-life of becoming a teacher

- It is an integrated theoretical framework that defines the different dimensions of effective teaching.

NCBTS define good teaching through the following:

- ✓ Domains-distinctive spheres of the learning process, and also a well defined arena for demonstrating positive teacher practices
- ✓ Strands- specific dimensions of positive teacher practices under the broad conceptual domain
- ✓ Indicators- concrete, observable, and measurable teacher behaviors, actions, habits, routines, and practices know to create, facilitate and support enhanced student learning.

#### The & domains of the NCBTS Framework

- ❖ Social Regard for Learning
- ❖ The Learning Environment
- ❖ Diversity of Learners
- ❖ Curriculum
- ❖ Planning , Assessing and Reporting
- ❖ Personal Growth & Professional Development

This Framework will allow teachers to self-assess their own performance against the Competency Standards in order to identify area of strength, as well as areas that need to be developed further in order for them more effectively as facilitators of learning.

Domain 1. Social Regard for Learning (SRFL)

This domain focuses on the ideal that teachers serve as positive and powerful role models of the value in the pursuit of different types of social interactions with students exemplify this ideal.

Domain 2. Learning Environment (LE)

This domain focuses on importance of providing a social, psychological and physical environment within which all students, regardless of their individual differences in learning, can engage in the different learning activities and work towards attaining high standards of learning.

Domain 3. Diversity of Learners (DOL)

The DOL domain emphasizes the ideal that teachers can facilitate the learning process even with diverse learners, by recognizing and respecting individual differences and by using knowledge about their differences to design diverse sets of learning activities, to ensure that all learners can attain the desired learning goals

Domain 4. Curriculum (Curr)

The curriculum domain refers to all elements of the teaching-learning process that work in the convergence to help students achieve their curricular goals and objectives, and to attain high standards of learning defines in the curriculum. These elements include teacher’s knowledge of the subject matter and the learning process.

Domain 5. Planning, Assessing & Reporting (PAR)

This domain refers to the alignment of assessment and planning activities. In particular, the PAR focuses on the (1) use of assessment data to plan and revise teaching-learning plans; (2) integration of assessment procedures in the plan and implementation of teaching-learning activities; and (3) reporting of thelearners actual achievement and behavior

Domain 6. Community Linkages (CL)

The CL domain refers to the ideal that classroom activities are meaningfully linked to the experiences and aspirations of the learners in their homes and communities. This, this domain focuses on teachers’ efforts directed at strengthening the links between schools and communities to help in the attainment of the curricular goals.

Domain 7 Personal Growth & Professional Development (PGD)

The PGD domain emphasizes that ideal that teachers value having a high personal regards for the teaching profession, concern for professional development, and continuous improvement as teachers.

DepEd order No. 40 s. 2012

(DepEd Child Protection Policy)

- ❖ “Policy Guidelines on Protecting Children in School from Abuse, Violence, Exploitation, Discrimination, Bullying and other Forms of Abuse”
- ❖ Purpose of the Policy- DepEd shall promulgate a zero-tolerance policy for any act of child abuse, exploitation, violence, discrimination, bullying and other forms of abuse”

Some Legal Bases of the CPP

Philippine Constitution: Article XV Sec. 3(b)-...the state shall defend the right of children to assistance, including proper care and nutrition, and special protection all forms of neglect, abuse, cruelty exploitation and other conditions prejudicial to their development

PD No. 63 Art 59 (1974)- Child and Youth Welfare Code- Prohibiting any mental and physical violence against children

RA7610- Special Protection of Children Against Abuse, Exploitation and Discrimination

**EDUCATIONAL TECHNOLOGY**

EDUCATIONAL TECHNOLOGY

- ❖ Basic Concepts of Educational Technology

Definitions:

Technology

- ❖ Technology came from Greek word” techne”, which means craft or art. The term Educational Technology refers to the art of craft of responding to our educational needs. Another word “technique”, with the same origin, also may be used when considering the field educational technology, So, Educational Technology may be extended to include the techniques of the educator.
- ❖ Technology is not just machines. It is a planned systematic method of working to achieve planned outcomes-a process, not a product,
- ❖ Technology refers to “all the ways people use their inventions and discoveries to satisfy their needs and desires” ( The world Book encyclopedia). Hence, Educational Technology refers to how people use their inventions and discoveries to satisfy their educational needs and desires. i.e. learning.

## Educational Technology

- ❖ Educational Technology is a “ complex, integrated process involving people, procedures, ideas, devices, and organizations to those problems involved in all aspects of human learning, “(AECT, 1977, as cited in Corpus & Lucido, 2008)
- ❖ Educational Technology “consist of the designs and environments that engage learners... and reliable technique or method for engaging learning such as cognitive learning such as cognitive learning strategies and critical thinking skills”
- ❖ Educational Technology is “a field study which is concerned with the practice of using educational methods and resources for the ultimate goal for facilitating the learning process.
- ❖ Educational Technology, sometimes termed as “Ed Tech”, is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources.
- ❖ Educational Technology includes, but is not limited to, software, hardware, as well as internet applications, such as wikis and blogs, and activities.
- ❖ The term Educational Technology is often associated with, and encompasses, instructional theory and learning theory.
- ❖ Educational Technology implies the use of all educational resources... men and materials, methods and techniques, means and media in an integrated and systematic manner for optimizing learning.
- ❖ According to modern educationists, learning not teaching is the crucial task of the entire educational processes and emphasis of teachers is regarded as a system which facilitates learning and makes learning effective as well as efficient. It is efficient in the sense that the learning with the use of Educational Technology becomes easy and interesting, durable and comprehensive.

### Educational Technology in a Broader Perception:

#### Educational Technology

- ❖ In its global sense, it includes the entire process of setting of goals, the continuous reforms of curriculum, the tryout of new methods and materials, the evaluation of the system as an integrated whole and resetting of goals in the basis of the findings if evaluation and innovation.
- ❖ It is the component of curriculum reform concerned with the method where curriculum reform is concerned with the content.
- ❖ It is the application of scientific knowledge about learning and the conditions of learning to improve the effectiveness and efficiency of teaching and training.

From the foregoing definitions of educational technology, it can be said that it is a very broad term. It is the application of scientific findings in the method, process or procedure of working in the field of education in order to effect learning. It embraces curriculum and instructional design, learning environment, and theories of teaching-learning. It is the use of all human inventions for teachers their mission to teach in order that students learn.

### Technology in Education versus Technology of Education

#### Technology in Education

- ❖ Technology in Education is concerned with the equipment, preparation of ad hoc messages and integration with traditional teacher-centered activities.
- ❖ Technology Education is the most simply and comfortably defines as an array of tools that may prove helpful in advancing student learning and may be measured in how and why individuals behave.
- ❖ Technology in Education is the” application of technology to any of the processes involved in operating the institutions which house the educational enterprise. It includes the application of technology to food, health, finance, scheduling, grade, reporting and other processes which support education within institutions

#### Technology of Education

- ❖ Technology of Education deals with the active use of mass media and computer science for the individual pupils learning process under the teacher’s supervision. This is more scientific, more psychological and more pedagogical than technology in education.

Technology in Education will be useful if it is properly planned and organized on psychological principles. Henri Dieuzeide (1970) has rightly observed,” The Transition from technology in education to the technology of education involves a thorough appraisal of existing educational system, of its objectives and of the means used to attain them, before any decision is reached to employ these new techniques for specific teaching purposes. The Teacher-turned technologist can then gradually assume the functions of an educational engineer, whose job is to increase the output of the entire scholastic machine.

### Other Terms Associated with Educational Technology:

Instructional Technology- is a part of educational technology. It refers to those aspects of educational technology that are concerned with instruction as contrasted to designs and operations of educational institutions. Instructional technology is a systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives.

Instructional Technology is “ the theory and practice of design, development, utilization, ,management and evaluation of processes and resources for learning” according to AECT Definition and Terminology Committee.

Technology Integration- means using learning technologies to introduce, reinforce, supplement and extend skills

Educational Media- are channels or avenues or instruments of communication like books, magazines,newspapers, radio, television, internet, and other hardware.

IN SUMMARY, Corpuz and Lucido (2008) clarify that Educational Technology is a broad term which is oftentimes given a narrow meaning , to mean just hardware. However according to him:

- ❖ It refers to the use of all human inventions and discoveries to satisfy educational needs and desired, like LEARNING.
- ❖ Inventions and discoveries can be devices, tools, equipment, activities, procedures and processes.
- ❖ Included among human inventions are the various educational media.
- ❖ Educational technology is more than instructional technology in the same way that education is more than instruction.
- ❖ Technology integration is a part of instructional technology which, in turn is part of education technology, and
- ❖ Technology education is different for Technology in Education. The latter refers to the application of technology in the operational education while the former refers to the application of technology in the educative process that takes place in such education institutions.

## Evolution of Educational Technology

Educational Technology can be back to the emergence of very early tools, like paintings on cave walls. Usually, however, its history starts with the introduction of educational films (1900s) or Sidney Pressey's mechanical teaching machines in the 1920s.

- ❖ Use of the new technology during US WWII training of soldiers through training films and other mediated materials. Today, presentation-based technology, based on the idea that people can learn through aural and visual perception, exist in many forms, such as streaming audio and video, or Power Point presentation with voice over.

The 1950s led to two major, still popular designs:

- ❖ Programmed Instruction ( by Skinner): focusing on the formulation of behavioral objective, breaking instructional content into small units, and rewarding correct responses early and often.
- ❖ Bloom advocated a mastery approach to learning based in his taxonomy of intellectual behaviors. He endorsed instructional techniques that varied both instruction and time according to learner requirements. Models based on these designs were usually referred to as computer-based training (CBT), computer-aided instruction or computer assisted instruction (CAI) in the 1970s through the 1990s. in a more simplified form, the correspond to today's "e-contents" that often form the core of "e-learning" set ups, sometimes also referred to as web-based training (WBT) or e-instruction. The course designer divides learning contents into smaller chunks of text augmented with graphics and multimedia presentation. Frequent multiple-choice questions with immediate feedback are added for self assessment and guidance.

The 1980s and 1990s

- ❖ Computer- based learning (CBL). Frequently on constructivist learning theories, these environment focus on both abstract and domain specific problem solving. Preferred technologies include macro-worlds ( computer environments where learner could explore and build), simulations (computer environments where learner can play with parameters of dynamic systems), and hypertext.
- ❖ In the mid-1980s, digitalized communication and networking in education started and became popular by the mid-90s, in particular through the World-Wide Web (WWW), e-mail and forums.
- ❖ There is a difference between two major forms of line learning. The earlier type, based on either Computer Based Training (CBT) or Computer Based Learning (CBL) focused in the interaction between the student or and computer drills, plus tutorial on the one hand or micro-worlds and simulations on the other. Both can be delivered today over the WWW.
- ❖ Today, the prevailing paradigm in the regular school system is Computer-Mediated Communication (CMC), where the primary form of interaction is between students and instructors, mediated by the computer. CBT/CBL usually means individualized (self-study) learning, while CMC involves teacher/tutor facilitation and requires scenarization of flexible learning activities. In addition, modern ICT provides education with tools for sustaining communities and associated knowledge management tasks. It also provides tools for students and curriculum management.
- ❖ In addition to classroom enhancement, learning technologies also play a major role in full-time distance teaching. While most quality offers still rely on papers videos and occasional CBT/CBL materials, there is increased use of e-tutoring through forums, instant messaging, video-conferencing, etc.
- ❖ Courses addressed to smaller groups frequently use blended or hybrid designs that mix presence courses ( usually) in the beginning and at the end of a modules) with distance activities and use various pedagogical styles (e.g. drill and practice, exercise, projects, etc)

The 2000s

- ❖ The emergence of multiple mobile and global technologies gave a new principle to situated learning theories favoring learning-in-context scenarios. Some literature uses the concept of integrated learning to describe blended learning scenarios that integrate both school and authentic settings.

## Perspective that Defines Educational Technology

1. Educational Technology as media and audiovisual communications
  - ❖ The perspective grew out of the audiovisual (AV) movement in the 1930s, when higher education instructors proposed that media such as slides and films delivered information in more concrete, and therefore more effective, ways than lectures and books did.
  - ❖ This movement produced audiovisual communications or the "branch of educational theory and practice concerned primarily with the design and use of messages that control the learning process"
  - ❖ The view of education technology as media to deliver information continues to dominate areas of education and the communications industry, as late as 1986, the National Task Force in Educational Technology equated educational technology with media, treating computers simply as another medium
2. Educational Technology as Instructional Systems and Instructional Designs
  - ❖ This view originated from post World War II military and industrial trainers who were faced with the problem of preparing a large number of personnel quickly. Based on efficiency studies and learning theories from educational psychology, they advocated using more planned systematic approaches to developing uniform effective materials and training procedures.
  - ❖ Their view was based on the belief that both human (teacher) and non human (media) resources can be part of an efficient system for addressing any instructional need. Therefore, they equated "educational technology" with education problem solutions"
  - ❖ As these training personnel began to work with both university research and development projects and K-12 school, they also influenced practices in both of these areas. Behaviorist theories initially dominated and cognitive theories later gained performance
  - ❖ In the 1990s, popular learning theories criticized systems approaches as being too rigid to foster some kinds of learning- particularly high-order ones. Thus, the current view of educational technology as instructional system is continually evolving.
3. Educational Technology as vocational training
  - ❖ Also known as Technology Education, this perspective originated from industry trainers and vocational educators in the 1980s.
  - ❖ They believed (1) that an important function of school learning is to prepare students for the world of work in which they will use technology and (2) that vocational training can be a practical means of teaching all content areas, such as math, science and language.
  - ❖ This view brought about a major paradigm shift in vocational training in K-12 schools away from industrial arts curricula centered on woodworking/metals and graphics/ printing shops toward technology education courses taught in labs equipped with high-technology stations, such as desktop publishing, computer-assisted designs (CAD) and robotic systems.

4. Educational Technology as computer systems (a.k.a educational computing instructional computing)
  - ❖ This view began in the 1950s with the advent of computers, and gained momentum when they began to be used instructionally in the 1960s
  - ❖ As computers began to transform business and industry practices, both trainers and teachers began to see that computers also had the potentials to aid instruction. From the time computers came into classrooms in the 1960s until about 1990, this perspective was known as educational computing and encompassed both instructional and administrative support applications.
  - ❖ At first, programmers and systems analysis created all applications. But by the 1970s, many of the same educators involved with media, AV communications, and instructional systems were also researching and developing computer applications
  - ❖ By the 1990s, educators began computing became known as educational technology

#### Benefits Derived from Educational Technology

Educational Technology is intended to improve, education for the 21<sup>st</sup>-century learner. Situations today are considered “Digital Natives” who were born and raised in a digital environment and inherently think differently because of this exposure to technology. Here are some of the claimed benefits of incorporating technology into classroom

1. Easy –to-access course materials
  - ❖ Instructors can post their course material or important information on a course website, which means students can study at a time and location they prefer and can obtain the study material very quickly.
2. Student Motivation
  - ❖ According to James Kulik, who studies the effectiveness of computers used for instruction, “students usually learn more in less time when receiving computer-based instruction and they like classes more and develop more positive attitudes toward computers in computer-based classes”
  - ❖ Teachers must be aware of their students’ motivation in order to successfully implement technology into the classroom. Students are more motivated to learn when are interested in the subject matter, which can be enhanced by using technologies in the classroom and targeting the needs for screens and digital materials that they have been stimulated by outside of the classroom.
3. More opportunities for extended learning
  - ❖ According to student completed in 2010, 70.3% of American family households have access to the internet. According to the Canadian Radio Television and Tele communications Commission. 79% of homes have access to Internet. This allows the students to access course material at home and engage with numerous online resources available to them.
  - ❖ Student can use their computers and Internet to conduct research, participate in social media, e-mail, and play educational games and stream videos
4. Wide participation
  - ❖ Learning materials can be used for long-distance learning and are accessible to a wider audience.
5. Improved student writing
  - ❖ It is convenient for students to edit their written work on word processors. Which can, in turn, improve the quality of their writing.
  - ❖ According to some studies, the students are better at critiquing and editing written work that is exchanged over a computer network with students they know.
6. Differential Instruction
  - ❖ Educational technology provides the means to focus on active student’s participation and to present differentiated questioning strategies
  - ❖ It broadens individualized instruction and promotes the development of personalized learning plans in some computer programs available to teachers.
  - ❖ Students are encouraged to use multimedia components and incorporate the knowledge they gained in creative ways. This allows some students to individually progress from using low-ordered skills gained from drill and practice activities, to higher level thinking through applying concepts creatively and creating simulations.
  - ❖ The ability to make educational technology individualized may aid in targeting and accommodating different learning styles and levels.

Overall, the use of internet in education has had a positive impact on students, educators, as well as the educational system as a whole. Effective technologies use many evidence-based strategies. (e.g. adaptive content, frequent testing, immediate feedback, etc), as do effective teachers. It is important for teachers to embrace technology in order to gain these benefits so they can address the needs of their digital natives.

The internet itself has unlocked a world of opportunity for students. Information and ideas that were previously out of reach are not click away. Students of all ages can connect, share, and learn on a global scale.

Using technology in the classroom can allow teachers to effectively organize and present lessons. Multimedia presentations can make the material more meaningful and engaging.

“Technology’s impact on schools has been significant, advancing how students learn how teachers teach and how efficiently and effectively educational services can be delivered,” said Carolyn April, director, industry analysis, Comp TIA,” With emerging technologies such as tablets and notebooks, interactive whiteboards and wireless solutions gaining ground in the classroom, the reliance on IT by education market will only grow in the years ahead.

#### ❖ Learning Theories that Shaped Educational Technology

##### Theoretical/Philosophical Framework of Educational Technology

There are three (3) main theoretical schools or philosophical frameworks of educational technology literature. These are Behaviorism, Cognitivism, Constructivism.

**Behaviorism**- this framework was developed in the early 20<sup>th</sup> Century with the animal learning experiments of Ivan Pavlov, Edward Thorndike, Edward C. Tolman, Clark Hull, B.F Skinner, etc.

**Cognitivism**-learning theory has undergone a great deal of change since 1960’s and 1970s. Cognitive theories look beyond behavior to explain Brain-based Learning. Cognitivists consider how human memory works to promote learning

**Constructivism**- this is a learning theory of educational philosophy whose primary belief is that “learners construct their own meaning from new information, as they interact with reality or others with different perspectives.”



Constructivist learning environments require to use their prior knowledge and experiences to formulate new, related, and/or adaptive concepts in learning. The role of the teachers in this framework is to become facilitator providing guidance so that learners can construct their own knowledge

Dales Cone of Experience and the Three-Tiered Model of Learning by Bruner

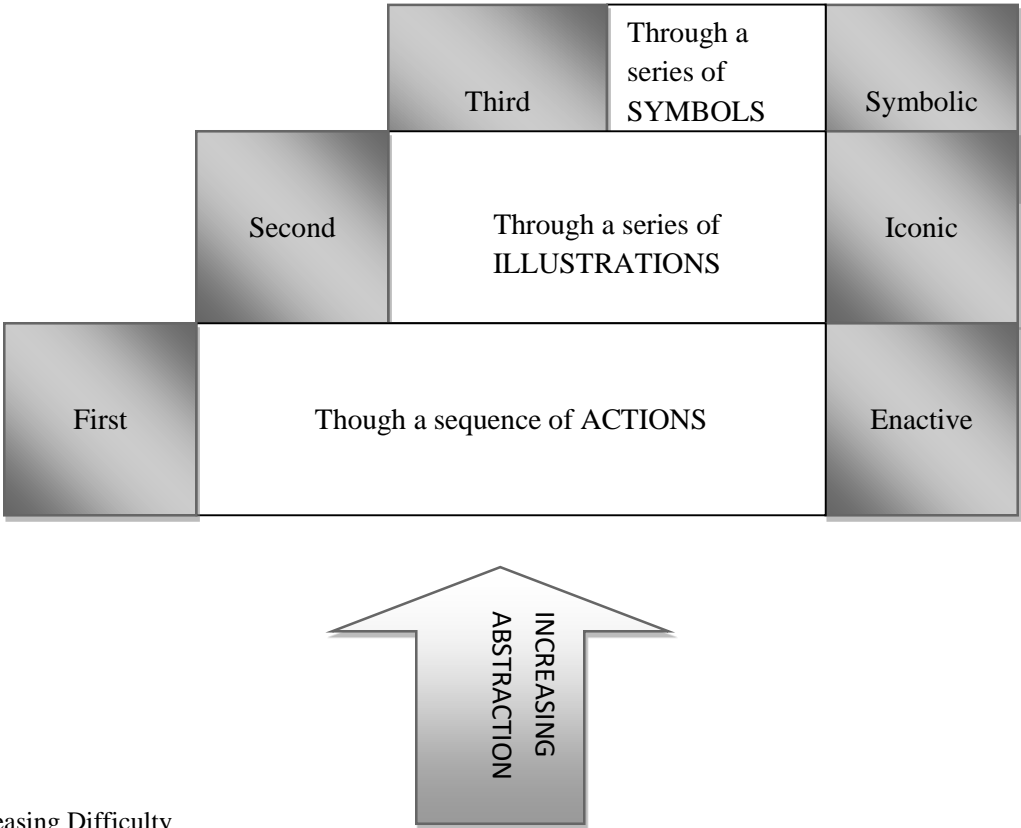
Dale’s cone of Experience is a model that incorporates several theories related to instructional design and learning process. During the 1960s, Edgar Dale theorized that learners retain more information by what they ‘do’ as opposed to what is “heard,” read”, or” observed.”his research led to the development of the Cone of Experience. Today, this”learning-by-doing” has become known as “experiential learning” or action learning.

The implications of the Core of Experience in the teaching-learning process

- 1. Do not use only one medium of communication in isolation. Rather, use many instructional materials to help the students conceptualize their experience
- 2. Avoid teaching directly at the symbolic level of thought without adequate foundation of the concrete. Student’s concepts will lack deep roots in direct experience. According to Dale (1969), these rootless experiences will not have generative power to produce additional concepts and will not enable the learner to deal with the new situations that he faces.
- 3. When teaching, don’t get stuck in concrete. Strive to bring your students to the symbolic or abstract level to develop their higher-order thinking skills

The Three- Tiered Model of Learning by Bruner

Harvard psychologist, Jerome S. Bruner presents a three –tiered model of learning. Where he points out that every area of knowledge can be presented and learned in three distinct steps.



Hence Increasing Difficulty  
SYMBOLIC  
ICONIC  
ENACTIVE

It is highly recommended that a learner process from the ENACTIVE to the ICONIC, AND ONLY after to the SYMBOLIC, The mind is often shocked into immediate abstraction at the highest level without the benefit of gradual unfolding.

Source: Philip T. Torres, LEARNING EXCELLENCE, a Master Course in Learning How to Learn, 2009.

Roles of Educational Technology in Learning

Educational Technology plays various roles

- ❖ From the traditional point of view, it serves as presenter of knowledge just like teachers. It also serves as productivity tool. With the internet, technology has facilitated communication among people.
- ❖ From the constructivist perspective, educational technology is a meaningful learning tool by serving a learning partner. It engages learners in” active, constructive, intentional, authentic, and cooperative learning’

The following are the roles of technology in learning according to the constructivist perspective.

- ❖ Technology as tool to support knowledge construction
  - ✓ For representing learners ideas, understandings and beliefs
  - ✓ For producing organized, multimedia knowledge bases by learners
- ❖ Technology as information vehicles for exploring knowledge to support learning by-constructing.
  - ✓ For accessing needed information
  - ✓ For comparing perspectives, belief and world views

- ❖ Technology as context support learning-by-doing:
  - ✓ For preparing and simulating meaningful real-world problems, situations and contexts
  - ✓ For representing beliefs, perspectives, arguments, and stories of others
  - ✓ For defining a safe, controllable problem space for student thinking
- ❖ Technology as social medium to support learning by conversing:
  - ✓ For collaborating with others
  - ✓ For discussing, arguing, and building consensus among members of the community
  - ✓ For supporting discourse among knowledge-building communities
- ❖ Technology as intellectual partner to support learning by reflecting:
  - ✓ For helping learners to articulate and represent what they know
  - ✓ For reflecting on what they have learned and how they came to know it
  - ✓ For supporting learners internal negotiations and meaning making
  - ✓ For constructing personal representations of meaning
  - ✓ For supporting mindful thinking

### Challenges of Technology in Education

The developments in the internet, the world-wide web in particular, and developments in multimedia technology, are resulting in new approaches to designing and developing teaching and learning in higher education. Here are some characteristics of such development as described by Bates

- ❖ Increase flexibility and access to learning, resulting in new markets being reached, and in particular, the lifelong learner market.
- ❖ The use of multimedia to develop psycho-motor and intellectual skills development, including problem solving and decision making.
- ❖ The use of internet technologies to develop knowledge management and collaborative learning skills; and
- ❖ The use of internet to develop global, multi-cultural courses and problems.

### Why use technology?

Almost all people from different sectors of society offer a number of different reasons to justify the use of technology for teaching and learning. Following are four (4) of the most frequent reasons given for using technology;

- ❖ To improve access to education and training
- ❖ To improve the quality of learning
- ❖ To reduce the cost of education; and
- ❖ To improve the cost-effectiveness of education

New technologies are fundamentally changing the nature of knowledge. However, we still need to maintain the balance between teaching and learning done through face –to-face contact, and technology base learning.

Many skills cannot or should not be taught solely through technology, although the range of knowledge and skills that can be taught effectively in this way is probably is much greater than most teachers will credit.

There is a need to be selective and sophisticated in our decisions as to how we want to use technologies to learn and teach.

### ❖ Technology Integration in Teaching and Learning

Integrating technology with teaching means the use of learning technologies to introduce, reinforce, supplement and extend skills. There is no integrative process if for example the teacher makes students play computer games to give them a rest period during classes. Neither is there integration, if the teacher merely teaches students computer skills. Following are external manifestations of technology integration into instruction;

- ❖ There's a change in the way classes are traditionally conducted
- ❖ The quality of instruction is improved in such a way that it could not have been achieved without educational technology.
- ❖ There is planning by the teacher on the process of determining how and when technology fits into teaching-learning process.
- ❖ The teacher sets instructional strategies to address specific instructional issues/problems
- ❖ The use of technology provides the opening of opportunities to respond to these instructional issues/problems
- ❖ In sum, technology occupies a position ( in a simple or complex way) in the instructional process.

### Levels of Integration

- ❖ Simple/Basic Integration- there is no substantial change in the teaching-learning process from previous method. While technology helps, it does not play a pivotal role.  
Example: A teacher wants to show photos in her social studies class, but the pictures are small. She decides to use the computer, scan the photos for computer projection to the class. ( A presentation software package)  
Result: Good class presentation followed by discussion
- ❖ Middle Level Integration- there is purposeful use of technology to support key learning areas.  
Example1: A teacher uses computer-based Trigonometry software, projected in the class using a projector to supplement his teacher-centered class presentation  
Result: an interactive class using software

Example2: A teacher ask her students to find information on H-fever in the internet. Students are to create an information leaflet giving a family health tips on H-Fever.

Result: Creative skills are employed by students

- ❖ High-level Integration- in these examples, technology is the central instructional tool.  
Example 1: to provide information on the ASEAN Region, the teacher assigned a newsletter computer production by the group  
Result: increased social skills through group work; planning, creatively, computer skills

Example2: The Rizal School has a partner school in the U.S.A a joint science project allows, the Philippine and U.S, schools to exchange information on indigenous herbal plants in both countries. Video conferencing is held involving students of both schools.

Result: A more sophisticated technology-supported project demonstrating global communication and socially relevant research.

### A New Learning Environment through Application of Educational Technology

“...effective teacher best interact with students in innovative learning activities, while integrating technology to the teaching-learning process

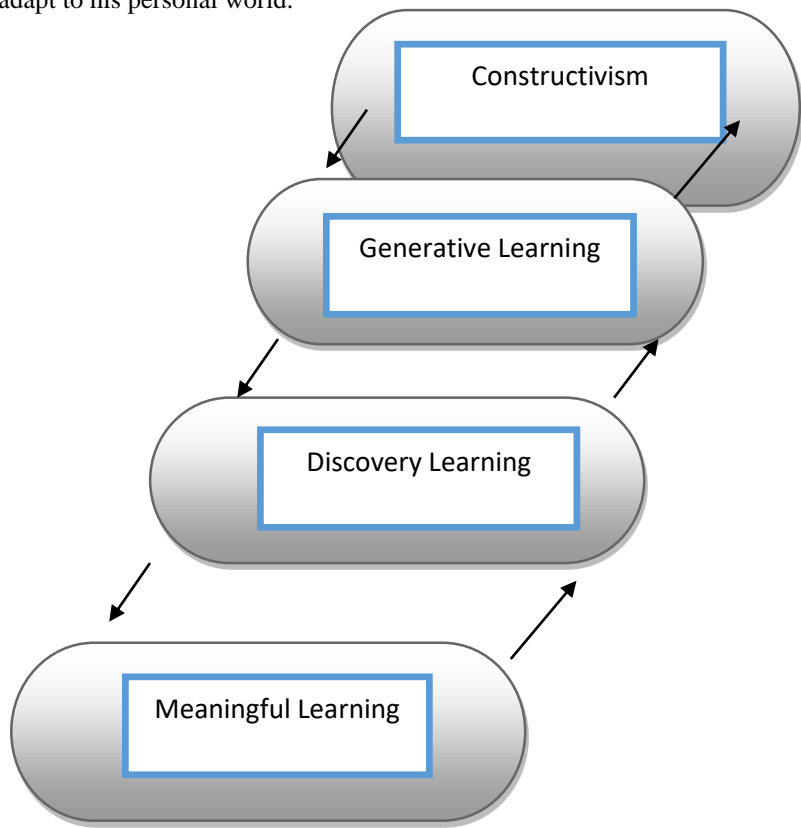
❖ Conceptual Models of Learning

Meaningful Learning- gives focus to new experiences that are related to what the learner already knows. Students already have some knowledge that is relevant to the new learning. Students are willing to perform class work to find connections between what they already know and what they can learn.

Discovery Learning- Students perform tasks to uncover what is to be learned. New ideas and new decisions are generated in the learning process, regardless of the need to move on and depart from organized set of activities.

Generative Learning-learners are active, attend to learning events, generate meaning form those experiences and draw inferences, thereby creating a personal model or explanation to the new experiences in the context of existing knowledge.

Constructivism-the learner builds a personal understanding through appropriate learning activities and a good learning environment. Learning consists of what a person can actively assemble for himself and not what he can receive passively. The role of learning is to help the individual live/ adapt to his personal world.

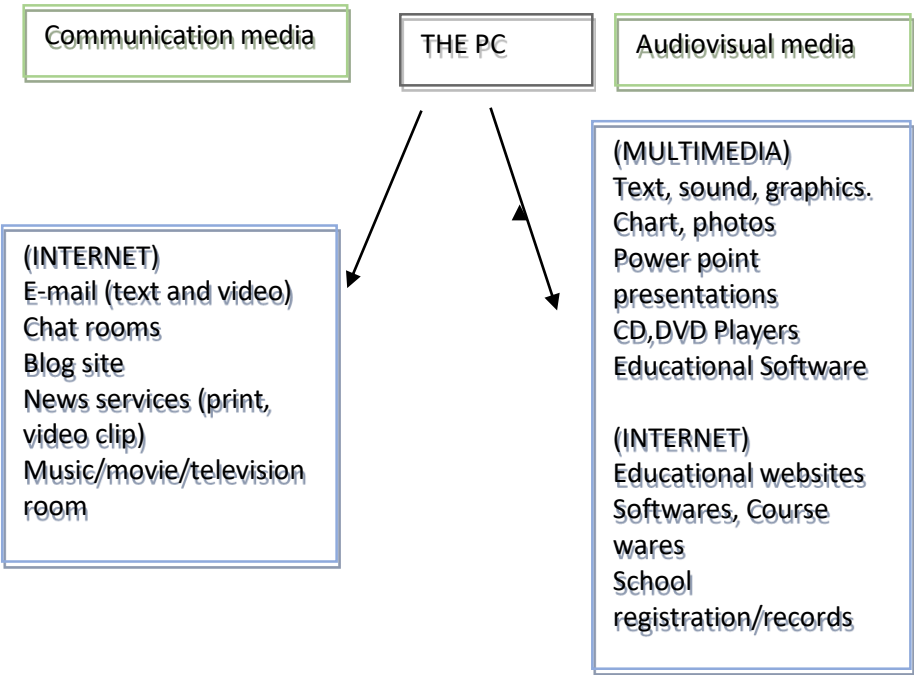


Through the integration of educational technology in the teaching-learning process, learners have this four learning domains:

Learners:

- ❖ Are active ,purposeful learners
- ❖ Set personal goals and strategies to achieve these goals
- ❖ Make their learning experiences meaningful and relevant to their lives
- ❖ Seek to build an understanding of their personal words so they can work/live productively
- ❖ Build on what they already know in order to interpret and respond to new experiences.

Computers as Information and Communication Technology in Education



## The Computer as Tutor

The computer is a tutor in this new age of learning. It does not replace the teacher, although it assumes certain roles previously assigned to teachers, who now has to take the new roles of facilitator and guide. Computers will become an integral component of the future classroom and not a mere machine that can deliver routine drills and exercises.

### Examples of Computer-assisted instructions (CAI)

- ❖ Simulation programs
- ❖ Instructional games
- ❖ Problem solving software
- ❖ Multimedia encyclopedia and electronic books

### Understanding Multimedia and Hypermedia

Multimedia- an audiovisual package that includes more than one instructional media (means knowing), such as text, graphics, audio animation, and video clip. According to Moore. It simple means “multiple media or combination of media combined in a product whose purpose is to communicate information.

Hypermedia- is multimedia packaged as an educational computer software, where information is presented and student activities are integrated in a virtual learning environment.

### Characteristics of Hypermedia applications

- ❖ Learner controlled-this means the learner makes his/her own decisions on the, flow or events of instruction. The learner has control on such aspects as sequence, pace, content, media, feedback, etc. that he/she may encounter in the hypermedia learning program.
- ❖ Learner was a wide range of navigations routes- for the most part, the learner controls the sequence and pace of his path depending on his ability and motivation. He has the option to repeat and change speed, it desired. Of course, at the start, the learner may choose the learning activities he prefers. Meanwhile, the teacher has the prerogative to determine suitable learning objectives.

### Technology in the Classroom

There are various types of technologies that can be or currently used in traditional classrooms. Among these are:

- ❖ Computer in the classroom  
Having a computer in the classroom is an asset to any teacher. With a computer in the classroom, teachers are able to demonstrate a new lesson, present new material, illustrate how to use new programs, and show ne websites.
- ❖ Class website  
An easy way to display a student’s work to create a web page designed for the class. Once a web page is designed, teachers can post homework assignments, student work, famous quotes, trivia, games, and so much more. In today’s society, children should know how to use the computer to navigate their way through a website, so why not gave them one where they can be published author.
- ❖ Class blogs and wikis  
These are variety of Web 2.0 tools that are currently being implemented the classroom . Blogs allow for students to maintain a running dialogue. They work as tool for maintaining a journal of thoughts, ideas, and assignments as well as encourage student comment and reflection. Wikis are more group-focused to allow multiple members of the group to edit a single document and create a truly collaborative and carefully edited finished product.
- ❖ Wireless classroom microphones  
Noisy classrooms are daily occurrences. With the help of microphones students are able to hear their teachers more clearly. Children learn better when they hear the teacher clearly. The benefit for teachers is that they no longer lose their voices at the end of the day
- ❖ Mobile devices  
Mobile devices such as clickers or smartphones can be used to enhance the experience in the classroom by providing the possibility for professors to get feedback
- ❖ Interactive whiteboards  
An interactive whiteboard that provides touch control of computer application enhances the experience in the classroom by showing anything that can be on a computer screen. This is not only aids in visual learning, but it is interactive, so the student can draw, write or manipulate images on the interactive whiteboard.
- ❖ Digital video-on-demand  
Replacement of hard copy videos (DVD,VHS, etc) with digital video accessed from central server (e.g. SAFARI Montage). Digital video eliminates the need for in-classroom hardware (player) and allows teachers and students to access video clips immediately but not utilizing the public internet.
- ❖ Online media  
Streamed video websites can be used to enhance a classroom lesson (e.g. United streaming, teacher tube, etc)
- ❖ Online study tools  
These are tools that motivate studying by making studying more fun and individualized for the student
- ❖ Digital games  
The field of educational games and serious games has been growing significantly over the last few years. The digital games are being provided as tools for the classroom and have a lot positive effects, including higher motivation for the students. There are many other tools being used. These may include: digital cameras, video cameras, interactive whiteboard tools, documents cameras, or LCD projectors
- ❖ Podcasts  
Podcasting is relatively new invention that allows anybody to publish files to the internet where individuals can subscribe and receive new files from people by subscription. The primary benefit to pod casting for educators is quite simple. It enables teachers to reach a student in a way that is both “cool” and a part of their lives. For technology that only requires a computer, microphone and internet connection, pod casting has the capacity of advancing a students education beyond the classroom. When students listen to the pod cast of the students as well as their won, they can quickly demonstrate their capacities to identify and define”quality”. This can be a great tool for learning and developing literacy inside and outside the classroom. Pod casting can help sharpen students vocabulary, writing, editing, public speaking, and presentation skills. Students also learn skills that will be valuable in the working world, such as communication, time management, and problem-solving.

The most traditional but very effective technology in the classroom

According to Horace Mann, a noted American Educator, "indeed, in no country have I ever seen a good school without a blackboard, or a successful teacher who did not use it frequently"

Reality will tell us that the technology divide is evident in current educational situations. Introduction of the terms like multimedia, hypermedia, etc. may not apply to many schools, especially in the remote areas where electricity has not even been provided for one reason or another, coupled with teachers who have no enough knowledge and or training in utilizing or operating even a computer.

A chalkboard is available classroom equipment and the overhead projector (OHP) which has become quite popular in schools. Like other state-of-the-art instructional tools, the teacher has to learn from proper techniques using chalkboards and OHPs to maximize its use and make it an effective and efficient instructional equipment.

### Teaching and Learning with Visual Symbols

As implied in Edgar Dale's Cone of Experience a teacher should not use only one medium of communication in isolation, but rather use many instructional materials to help the students conceptualize his experience. Thus, the use of visual symbols in teaching and learning is important. It may be laborious on the part of the teacher, but the use of technology in preparing such materials may help. These visual symbols include drawings, cartoons, strip drawings, diagrams, charts, graphs, maps, etc,

**Drawing** – A drawing may not be the real thing, but it's better to have a concrete visual aid than nothing. To avoid confusion, it is good that the drawing correctly represents the real thing.

**Cartoons** – A first cartoon tells its story metaphorically. The perfect cartoon needs no caption. The less the artist depends on words, the more effective the symbolism, for the symbolism conveys the message.

**Strip drawings**- these are commonly called comics or comic strips. According to Dale the more accurate term is "strip drawings." Make use of strips that are educational and at the same time entertaining.

**Diagrams**- it is any line drawing that shows arrangements and relations as a part of the whole, relative values, origins and development, chronological functions, distribution, etc.

Types of diagrams:

- ❖ **Affinity Diagrams**- use to cluster complex, apparently unrelated data into natural and meaningful groups.
- ❖ **Tree Diagram**- use to chart out, in increasing detail, the various tasks that must be accomplished to complete a project or achieve a specific objective.
- ❖ **Fishbone Diagram**- it is called "cause-and-effect diagram. It is a structured form of brainstorming that graphically shows the relationship of possible causes and sub-causes directly related to and identifies effect/ problem. It is commonly used to analyze work-related problems.

### Charts

It is a diagrammatic representation of relationships among individuals with organization it includes the following:

- ❖ **Time chart**- is a tabular time chart that represents data in ordinal sequence.
- ❖ **Tree or stream chart**- depicts development, growth and change by beginning with a single course (the trunk) which spreads out into many branches; or by beginning with the many tributaries which then converge into a single channel.
- ❖ **Flow chart**- is a visual way of charting or showing a process from beginning to end. It is a means of analyzing a process. By outlining every step in a process, you can begin to find inefficiencies or problems.
- ❖ **Organizational chart**- shows how one part of the organization relates to the other parts
- ❖ **Comparison and contrast chart**- used to show similarities and differences between two things, (people, places, events, ideas, etc)
- ❖ **Pareto chart**- is a type of bar chart, prioritized in descending order of magnitude or importance from left to right. It shows at a glance which factors are occurring most.
- ❖ **Gantt chart**- it is an activity time chart

**Graphs**- there are several types of graphs

- ❖ **Circle or Pie graph**- recommended for showing a part of a whole.
- ❖ **Bar graph**- used in comparing the magnitude of similar items at different entities or seeing relative sizes of the parts of a whole
- ❖ **Pictorial graph**- makes use of picture symbols
- ❖ **Graphic organizer**

**Maps**- it is a representation of the surface of the earth or some part of it

**Kinds of Maps**

- ❖ **Physical map**- combines in a single projection data like altitude, temperature, rainfall, precipitation, vegetation and soil.
- ❖ **Relief map**- has three dimensional representations and shows contours of the physical data of the earth or part of the earth.
- ❖ **Commercial or economic map**- also called product or industrial map since it shows land areas in relation to the economy.
- ❖ **Political map**- give detailed information about country, provinces, cities and towns, roads and highways. Oceans, rivers and lakes are the main features of most political maps.

### Project-based Learning Multi-media

Corpus and Lucido (2008) explain that project-based multimedia learning does not only involve use of multimedia for learning. According to them, students end up with a multimedia product to show what they learned.

- ❖ They are not only learners of academic content, but they are at the same time authors of multimedia product at the end of the learning process.
- ❖ The goals and objectives of a project are based in the core curriculum laid down in the curricular standards and are made crystal clear to students at the beginning of the project
- ❖ The students work collaboratively over an extended time frame.
- ❖ As they work, they employ like skills, including decision-making
- ❖ Their learning task ends up with a multimedia presentation through their multimedia product

IV. Basic Terms in Information and Communication Technology (ICT)

Terms	Meanings
Avatar	<ul style="list-style-type: none"><li>❖ Graphic representation if a person in cyberspace</li><li>❖ A 3-D image that a person can choose to represent himself in virtual reality</li></ul>
Bmp-(bitmap)	The BMP format is commonly used raster graphic format for saving image files
Bookmark	To mark an internet location so one can remember it
BPS (bits per second)	The speed at which data are transmitted across communication lines between computers
Bug	An error in a computer program
Browser	A software package that allows one to look at information on the internet in graphic rather than just text format
CAI (Computer Assisted Instruction)	Software designed to help teach information
CAT ( Computer Assisted Testing)	Using a computer to administer and score assessment measures
Chat Room	A location on the internet set up to allow people to converse in a real-time by typing the message or by allowing their avatars to meet and talk to each other
Chip	A piece of silicon inside a computer on which electronic circuits have been placed
Debug	Review a computer program and remove the errors bug
E-mail Address	Senses of symbols or letters that an act as an address for a site on the internet
FTP (File Transfer Protocol)	A way of transferring (on the internet) from one computer to another
GPS (Global Positioning System	An instrument that uses a satellite to pinpoint exact location
GUI ( Graphic User Interface)	Software that displays option to user in graphic format consisting of menus and icons
HTML ( Hypertext Markup Language)	The primary programming language used to develop web pages
Internet Explorer	Popular browser software used to access the internet
IP( Internet Protocol)	Agreed-upon way of doing and sending date across the internet
ISP ( Internet Service Provider)	An institution, company that provides access to the internet
JPEG ( Joint Photographic Experts Group)	A file format for storing and sending graphic images on a network
LCD (Liquid Crystal Display or Diode)	Devices consisting of light sensitive material encased between two clear pieces of glass or plastic designed to be place on overhead projector
MPEG( Motion Picture Experts Group)	A file format for storing and sending video sequences on a network
PDA( Personal Digital Assistant)	Handled computer that can function as cellphone, fax machine and personal organizer
PDF( Portable Document Format	A file format invented by Adobe systems to save documents in smaller file size and retains the original look of the original layout, fonts and other graphic elements
RAM( Random Access Memory)	Type of internal computer that is erased when the power is turned off
Videoconferencing	An online meeting between two or more participants at different sites
Search Engine	Internet software that helps people locate internet sites and information related to a given topic
Server Software	A server is a system that responds to request across a computer network to provide, or help to provide, a network service
Skype	A face-to-face communication that is made possible through a computer
Snail mail	Regular postal Service nail as opposed to email
Spam	Unsolicited email or other messages

ASSESSMENT OF LEARNING

**Assessment** –refers to the process of gathering, describing or quantifying information about the student performance. It includes paper and pencil test, extended responses (example essays) and performance assessment are usually referred to as”authentic assessment” task (example presentation of research work)

**Measurement**-is a process of obtaining a numerical description of the degree to which an individual possesses a particular characteristic. Measurements answers the questions”how much?

**Evaluation**- it refers to the process of examining the performance of student. It also determines whether or not the student has met the lesson instructional objectives.

**Test** –is an instrument or systematic procedures designed to measure the quality, ability, skill or knowledge of students by giving a set of question in a uniform manner. Since test is a form of assessment, tests also answer the question”how does individual student perform?

**Testing**-is a method used to measure the level of achievement or performance of the learners. It also refers to the administration, scoring and interpretation of an instrument (procedure) designed to elicit information about performance in a simple of a particular area of behavior.

Types of Measurement

There are two ways of interpreting the student performance in relation to classroom instruction. These are the Norm-reference tests and Criterion-referenced tests.

Norm-reference test is a test designed to measure the performance of a student compared with other students. Each individual is compared with other examinees and assigned a score-usually expressed as percentile, a grade equivalent score or a stanine. The achievement of student is reported for broad skill areas, although some norm referenced tests do report student achievement for individual.

The purpose is to rank each student with respect to the achievement of others in broad areas of knowledge and to discriminate high and low achievers.

Criterion- referenced test is a test designed to measure the performance of students with respect to some particular criterion or standard. Each individual is compared with a pre determined set of standard for acceptable achievement. The performance of the other examinees are irrelevant. A student’s score is usually expressed as a percentage and student achievement is reported for individual skills,

The purpose is to determine whether each student has achieved specific skills or concepts. And to find out how mush students know before instruction begins and after it has finished.

Other terms less often used for criterion-referenced are objective referenced, domain referenced, content referenced and universe referenced.

According to Robert L. Linn and Norma E. gronlund (1995) pointed out the common characteristics and differences of Norm-Referenced Tests and Criterion-Referenced Tests

Common Characteristics of Norm-Referenced Test and Criterion-Referenced Tests

- 1. Both require specification of the achievement domain to be measured
- 2. Both require a relevant and representative sample of test items
- 3. Both use the same types of test items
- 4. Both used the same rules for item writing (except for item difficulty)
- 5. Both are judge with the same qualities of goodness (validity and reliability)
- 6. Both are useful in educational assessment

Differences between Norm-Referenced Tests and Criterion Referenced Tests

Norm –Referenced Tests	Criterion-Referenced Tests
1. Typically covers a large domain of learning tasks, with just few items measuring each specific task.	1.Typically focuses on a delimited domain of learning tasks, with a relative large number of items measuring each specific task.
2. Emphasizes discrimination among individuals in terms of relative of level of learning.	2.Emphasizes among individuals can and cannot perform.
3. Favors items of large difficulty and typically omits very easy and very hard items	3.Matches item difficulty to learning tasks, without altering item difficulty or omitting easy or hard times
4. Interpretation requires clearly defined group	4.Interpretation requires a clearly defined and delimited achievement domain

TYPES OF ASSESSMENT

There are four type of assessment in terms of their functional role in relation to classroom instruction. These are the placement assessment, diagnostic assessment, formative assessment and summative assessment.

- A. Placement Assessment is concerned with the entry performance of student, the purpose of placement evaluation is to determine the prerequisite skills, degree of mastery of the course objectives and the best mode of learning.
- B. Diagnostic Assessment is a type of assessment given before instruction. It aims to identify the strengths and weaknesses of the students regarding the topics to be discussed. The purpose of diagnostic assessment:
  - 1. To determine the level of competence of the students
  - 2. To identify the students who have already knowledge about the lesson;
  - 3. To determine the causes of learning problems and formulate a plane for remedial action.

- C. Formative Assessment is a type of assessment used to monitor the learning progress of the students during or after instruction. Purpose of formative assessment:
  - 1. To provide feed back immediately to both student and teacher regarding the success and failure of learning.
  - 2. To identify the learning errors that is need of correction
  - 3. To provide information to the teacher for modifying instruction and used for improving learning and instruction
- D. Summative Assessment is a type of assessment usually given at the end of a course or unit. Purpose of summative assessment:
  - 1. To determine the extent to which the instructional objectives have been met;
  - 2. To certify student mastery of the intended outcome and used for assigning grades;
  - 3. To provide information for judging appropriateness of the instructional objectives
  - 4. To determine the effectiveness of instruction

## MODE OF ASSESSMENT

- A. Traditional Assessment
  - 1. Assessment in which students typically select an answer or recall information to complete the assessment. Test may be standardized or teacher made test, these tests may be multiple-choice, fill-in-the-blanks, true-false, matching type.
  - 2. Indirect measures of assessment since the test items are designed to represent competence by extracting knowledge and skills from their real life context.
  - 3. Items on standardized instrument tends to test only the domain of knowledge and skill to avoid ambiguity to the test takers.
  - 4. One-time measures to rely on a single correct answer to each item. There is a limited potential for traditional test to measure higher order thinking skills.
- B. Performance assessment
  - 1. Assessment in which students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills
  - 2. Direct measures of students performance because task are design to incorporate contexts, problems, and solutions strategies that students would use in real life.
  - 3. Designed ill-structured challenges since the goal is to help students prepare for the complex ambiguities in life.
  - 4. Focus on processes and rationales. There is no single correct answer, instead students are led to craft polished, thorough and justifiable responses, performances and products.
  - 5. Involve long-range projects, exhibits, and performances are linked to the curriculum
  - 6. Teacher is an important collaborator in creating tasks, as well as in developing guidelines for scoring and interpretation
- C. Portfolio Assessment
  - 1. Portfolio is a collection of student's work specifically to tell a particular story about the student.
  - 2. A portfolio is not a pie of student work that accumulates over a semester or year
  - 3. A portfolio contains a purposefully selected subset of student work
  - 4. It measures the growth and development of students.

## The Key to Effective Testing

Objectives; The specific statements of the aim of the instruction; it should express what the students should be able to do or know as a result of taking the course; the objectives should indicate the cognitive level, affective level and psychomotor level of expected performance.

Instruction: It consist all the elements of the curriculum designed to teach the subject, including the lesson plans, study guide, and reading and homework assignment; the instruction should corresponds directly to the objectives

Assessment: The process of gathering , describing or quantifying information about the performance of the learner; testing components of the subject; the weight given to different subject matter areas on the test should match with objectives as well as the emphasis given to each subject area during instruction.

Evaluation: Examining the performance of students and comparing and judging its quality. Determining whether or not the learner has met the objectives of the lesson and the extent of understanding.

## INSTRUCTIONAL OBJECTIVES

Instructional objectives play a very important role in the instructional process and the evaluation process. It serves as guides for teaching and learning, communicate the intent of the instruction to others and it provide a guidelines for assessing the learning of the students. Instructional objectives also known as behavioral objectives or learning objectives are statement which clearly describe an anticipated learning outcome.

Characteristics of well-written and useful instructional objectives

- 1. Describe a learning outcome
- 2. Be student oriented-focus on the learner not on the teacher
- 3. Be observable or describe an observable product
- 4. Be sequentially appropriate
- 5. Be attainable within a reasonable amount of time
- 6. Be developmental appropriate

Factors to Consider when Constructing Good Test Items

- A. **VALIDITY** is the degree to which the test measures what is intended to measure. It is the usefulness of the test for a given purpose. A valid test us always reliable.
- B. **RELIABILITY** refers to the consistency of score obtained by the same person when retested using the same instrument or one that is parallel to it.
- C. **ADMINISTRABILITY** the test should be administered uniformly to all students so that the scores obtained will not vary due to factors other than differences of the students knowledge and skills. There should be a clear provision for instruction for the students, proctors and even the who will check the test or the scorer
- D. **SCORABILITY** the test should be easy to score, directions for scoring is clear, provide the answer sheet and the answer key
- E. **APPROPRIATENESS** the test item that the teacher construct must assess the exact performances called for in the learning objectives. The test item should require the same performance of the student as specified in the learning objectives.



- F. **ADEQUACY** the test should contain a wide sampling of items to determine the educational outcomes or abilities so that resulting scores are representative of the total performance in the areas measured.
- G. **FAIRNESS** the test should not be biased to the examinees, it should not be offensive to any examinees subgroups. A test can only be good if it is also fair to all test takers.
- H. **OBJECTIVITY** represents the agreement of two or more raters or a test administrators concerning the score of a student. If the two raters who assess the same student on the same test cannot agree in score, the test lacks objectivity and the score of neither judge is valid, thus, lack of objectivity reduces test validity in the same way that lack of reliability influences validity.

TABLE OF SPECIFICATIONS

Table of specification is a device for describing test items in terms of the content and the process dimensions. That is, what a student is expected to know and what he or she is expected to do with that knowledge. It is described by combination of content and process in the table of specification.

Sample of One way table of specification in Linear Function

Content	Number of Class Sessions	Number of Items	Test Item Distribution
1. Definition of linear function	2	4	1-4
2. Slope of a line	2	4	5-8
3. Graph of linear function	2	4	9-12
4. Equation of linear function	2	4	13-16
5. Standard Forms of a line	3	6	17-22
6. Parallel and perpendicular lines	4	8	23-30
7. Application of linear functions	5	10	31-40
TOTAL	20	40	40

**Number of items= Number of class sessions x desired total number of items**

Total number of class sessions

Example :

Number of items for the topic” definition of linear function”

Number of class session= 2

Desired number of items= 40

Total number of class sessions=20

Number of items= Number of class sessions x desired total number of items  
Total number of class sessions

**=2x40**  
**20**

**Number of items= 4**

Sample of two way table of specification in Linear Function

content	Class hours	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Total
1.Definition of linear function	2	1	1	1			1	4
2.Slope of a line	2			1	1	1	1	
3.Graph of linear function	2	1			1	1	1	4
4.Equation of linear function	2	1	1		1		1	4
5.Standard Forms of a line	3	1	1	1	1	1	1	6
6.Parallel and perpendicular line	4		1	2	1		2	8
7.Application of linear functions	5	1	1	3	1	3		10
TOTAL	20	4	6	8	8	7	7	40

ITEM ANALYSIS

Item analysis refers to the process of examining the student’s responses to each item in the test. According to Abubakar S. Asaad and William M. Hailaya (Measurement and Evaluation Concepts & Principles) Rexr Bookstore (2004 Edition), there are two characteristics of an item. These are desirable and undesirable characteristics. An item that has desirable characteristics can be retained for subsequent use and that with undesirable characteristics is either be revised or rejected.

These criteria in determining the desirability and undesirability of an item.

- a. Difficulty if an item
- b. Discriminating power of an item
- c. Measures of attractiveness

Difficulty index refers to the proportion of the number of students in the upper and lower groups who answered an item correctly. In a classroom achievement test, the desired indices of difficulty not lower than 0.20 nor higher than 0.80. the average index difficulty form 0.30 or 0.40 to maximum of 0.60.

DF=  $\frac{PUG + PLG}{2}$

PUG = proportion of the upper group who got an item right  
PLG = proportion of the lower group who get an item right

Level of Difficulty of an Item

Index Range	Difficulty Level
<b>0.00-0.20</b>	Very difficult
<b>0.21-0.40</b>	Difficult
<b>0.41-0.60</b>	Moderately Difficult
<b>0.61-0.80</b>	Easy
<b>0.81-1.00</b>	Very Easy

Index of Discrimination

Discrimination Index is the differences between the proportion of high performing students who got the item and the proportion of low performing students who got an item right. The high and low performing students usually defined as the upper 27% of the students based on the total examination score and the lower 27% of the students based on total examination score. Discrimination are classified into positive Discrimination if the proportion of students who got an item right in the upper performing group is greater than the students in the upper performing group. And Zero Discrimination if the proportion of the students who got an item right in the upper performing group and low performing group are equal.

Discrimination Index	Item Evaluation
<b>0.40 and up</b>	Very good item
<b>0.30-0.39</b>	Reasonably good item but possibly subject to improvement
<b>0.20-0.29</b>	Marginal, usually needing and being subject to improvement
<b>Below 0.19</b>	Poor Item, to be rejected or improved by version

Maximum Discrimination is the sum of the proportion of the upper and lower groups who answered the item correctly. Possible maximum discrimination will occur if the half or less of the sum of the upper and lower groups answered an item correctly.

Discriminating Efficiency is the index of discrimination divided by the maximum discrimination.

PUG = proportion of the upper group who got an item right

PLG= proportion of the lower group who got an item right

Di = discrimination index

DM – Maximum discrimination

DE = Discriminating Efficiency

Formula:

Di = PUG – PLG

DE =  $\frac{Di}{DM}$

DM= PUG + PLG

Example: Eighty students took an examination in Algebra, 6 students in the upper group got the correct answer and 4 students in the lower group got the correct answer for item number 6. Find the Discriminating efficiency

Given:

Number of students took the exam = 80

27% of 80 = 21.6 or 22, which means that there are 22 students in the upper performing group and 22 students in the lower performing group.

$$\text{PUG} = 6/22 = 27\%$$

$$\text{PLG} = 4/22 = 18\%$$

$$\text{Di} = \text{PUG} - \text{PLG}$$

$$= 27\% - 18\%$$

$$\text{Di} = 9\%$$

$$\text{DM} = \text{PUG} + \text{PLG}$$

$$= 27\% + 18\%$$

$$\text{DM} = 45\%$$

$$\text{DE} = \text{Di}/\text{DM}$$

$$= .09/.45$$

$$\text{DE} = 0.20 \text{ or } 20\%$$

This can be interpreted as on the average, the item is discriminating at 20% of the potential of an item of its difficulty.

#### Measures of Attractiveness

To measure the attractiveness of the incorrect option (distracters) in multiple-choice tests, we count the number of students who selected the incorrect option in both upper and lower groups. The incorrect option is said to be an effective distracter if there are more students in the lower group who chose that incorrect option than those students in the upper group.

#### Steps of Item Analysis

1. Rank the scores of the students from highest score to lowest score.
2. Select 27% of the papers within the upper performing group and 27% of the papers within the lower performing group.
3. Set aside the 46% of papers because they will not be used for item analysis.
4. Tabulate the number of students in the upper group and lower group who selected each alternative.
5. Compute the difficulty of each item
6. Compute the discriminating powers of each item
7. Evaluate the effectiveness of the distracters

#### VALIDITY OF A TEST

Validity refers to the appropriateness of score-based inferences; or decisions made based on the students' test results. The extent to which a test measures what is supposed to measure.

#### Important Things to Remember About Validity

1. Validity refers to the decisions we make, and not to the test itself or to the measurement
2. Like reliability, validity is not an all-or-nothing concept; it is never totally absent or absolutely perfect.
3. A validity estimate, called a validity coefficient, refers to a specific type of validity. It ranges between 0 to 1.
4. Validity can never be finally determined; it is specific to each administration of the test

#### TYPES OF VALIDITY

1. Content Validity- a type of validation that refers to the relationship between a test and the instructional objectives, establishes content so that the test measures what it is supposed to measure. Things to remember about validity:
  - a. The evidence of the content validity of your test is found in the Table of Specification.
  - b. This is the most important type of validity to you, as a classroom teacher.
  - c. There is no coefficient for content validity. It is determined judgmentally, not empirically.
2. Criterion-related Validity- a type of validation that refers to the extent to which scores from a test relate to theoretically similar measures. It is a measure of how accurately a student's current test score can be used to estimate a score on a criterion measure, like performance in courses, classes or another measurement instrument. Example, classroom reading grades should indicate similar levels of performance as Standardized Reading Test scores.
  - a. Construct Validity- a type of validation that refers to a measure of the extent to which a test measures a hypothetical and unobservable variable or quality such as intelligence, math achievement, performance anxiety, etc. It is established through intensive study of the test or measurement instrument.
  - b. Predictive Validity- a type of validation that refers to a measure of the extent to which a person's current test results can be used to estimate accurately what that person's performance or other criterion, such as test scores, will be at a later time.
3. Concurrent Validity- a type of validation that requires the correlation of the predictor or concurrent measure with the criterion measure. Using this, we can determine whether a test is useful to us as a predictor or as a substitute (concurrent) measure. The higher the validity coefficient, the better the validity evidence of the test. In establishing the concurrent validity evidence, no time interval is involved between the administration of the new test and the criterion or established test.

## Factors Affecting the Validity of a Test Item

1. The test itself
2. The administration and scoring of a test
3. Personal factors influencing how students response to the test
4. Validity is always specific to a particular group

## Ways to Reduce the Validity of the Test Item

1. Poorly constructed test items
2. Unclear directions
3. Ambiguous items
4. Reading vocabulary too difficult
5. Complicated syntax
6. Inadequate time limit
7. Inappropriate level of difficulty
8. Unintended clues
9. Improper arrangement of items

## Test Design to Improve validity

1. What is the purpose of the test?
2. How well do the instructional objectives selected for the test represent the instructional goals.
3. Which test item format will best measure achievement of each objective?
4. How many test item will be required to measure the performance adequately on each objective?
5. When and how will the test be administered?
6. How many test items will required to measure the performance adequately on each objective?
7. When and how will the test be administered?

## Reliability of a Test

Reliability refers to the consistency of measurement; that is, how consistent test results of other assessment results from one measurement to another. We can say that a test is reliable when it can be used to predict practically the same scores when test administered twice to the same group of students and with a reliability index of 0.50 or above. The reliability of a test can be determined by means of Pearson Product Correlation Coefficient, Spearman-Brown Formula and Kuder-Richardson Formula.

## Factors Affecting the Reliability of a Test

1. Length of the test
2. Moderate item difficulty
3. Objective scoring
4. Heterogeneity of the student group
5. Limited time

## Four Methods of Establishing Reliability

1. Test-retest Method. A type of reliability determined by administering the same test twice to the same group of students with any time interval between tests. The result of the test scores are correlated using the Pearson Product Correlation Coefficient and this correlation coefficient provides a measure of stability. This indicates how stable the test result over a period of time.
2. Equivalent –Form Method. A type of reliability determined by administering two different but equivalent forms of the test ( also called parallel or alternate forms) to the same group of students in close succession. The equivalent forms are constructed to the same set of specifications that is similar in content, type of item and difficulty. The result of the test score are correlated using the Pearson Product Correlation Coefficient and this correlation coefficient provides a measure of the degree to which generalization about the performance of students from one assessment to another assessment is justified. It measures the equivalence of the tests.
3. Split –Half method- administer test once. Score two equivalent halves of the test. To split the test into halves that are equivalent, the usual procedure is to score the even-numbered and the odd-numbered separately. This provides a measure of internal consistency. It indicates the degree to which consistent results are obtained from two halves of the test
4. Kuder- Richardson Formula. Administer the test score one. Score total test and apply the Kuder-Richardson Formula. The Kuder-Richardson formula is applicable only in situation where students responses are scored dichotomously and therefore is most useful with traditional test items that are scored as right or wrong. KR-20 estimates of reliability that provide information about the degree to which the items are of equal difficulty. ( A statistical procedure used to estimate coefficient alpha, or a correlation coefficient is given)

## Descriptive Statistics of Test Scores

Statistics play a very important role in describing the test scores of students. Teachers should have a background on the statistical techniques in order for them to analyze and describe the result of measurement obtained in their own classroom; understand the statistics uses in the test and research reports; interpret the types of scores used in testing.

Descriptive Statistics- is concerned with collecting, describing, and analyzing a set of data without drawing conclusions or inferences about a large group of data in terms of tables, graphs, or single number (example average score of the class in a particular test)

Inferential Statistics- is concerned with the analysis of a subset of data leading to prediction or inferences about the entire set of data or population

We shall discuss different statistical techniques used in describing and analyzing test results.

1. Measures of Central Tendency (Averages)
2. Measures of Variability ( Spread of Scores)
3. Measures of Relationship (Correlation)
4. Skewness

Measures of Central Tendency it is a single value that is used to identify the center of the data, it is taught as the typical value in a set of scores. It tends to lie within the center if it is arranged from lowest to highest or vice versa. There are three measures of central tendency commonly used; the mean, median and mode.

The Mean

The Mean is the common measures of center and it also know as the arithmetic average.

Sample Mean =  $\frac{\sum x}{n}$

$\sum$ = sum of the scores

X= individual scores

n = number of scores

Steps in solving the mean value using raw scores

- 1. Get the sum of all the scores in the distribution
- 2. Identify the number of scores (n)
- 3. Substitute to the given formula and solve the mean value

Example: Find the mean of the scores of students in algebra quiz

(x) scores in algebra

45  
35  
48  
60  
44  
39  
47  
55  
58  
54  
 $\sum x = 485$   
n= 10

Mean =  $\frac{\sum x}{n}$   
**= 485 ÷ 10**  
**Mean = 48.5**

Properties of Mean

- 1. Easy to compute
- 2. It may be an actual observation in the data set
- 3. It can be subjected to numerous mathematical computation
- 4. Most widely used
- 5. Each data affected by the extremes values
- 6. It is easily affected by the extremes values
- 7. Applied to interval level data

The Median

The median is a point that divides the scores in a distribution into two equal parts when the scores are arranged according to magnitude, that is from lowest score to highest score or highest score to lowest score. If the number of score is an odd number, the value of the median is the middle score. When the number of scores is even number, the median values is the average of the two middle scores.

Example: 1. Find the median of the scores of 10 students in algebra quiz.

(x) scores of students in algebra

45  
35  
38  
60  
44  
39  
47  
55  
58  
54

First, arrange the scores from lowest to highest and find the average of two middle most scores since the number of cases in an even.

35  
39  
44  
45  
47  
48  
54  
55  
58  
60

Mean =  $\frac{47 + 48}{2}$   
**= 47.5 is the median score**

50% of the scores in the distribution fall below 47.5

Example 2. Find the median of the scores of 9 students in algebra quiz

(x) scores of students in algebra  
35  
39  
44  
45  
47  
48  
54  
55  
58

The median value is the 5<sup>th</sup> score which is 47. Which means that 50% of the scores fall below 47.

Properties of Median

- 1. It is not affected by extremes values
- 2. It is applied to ordinal level of data
- 3. The middle most score in the distribution
- 4. Most appropriate when there are extremes scores

The Mode

The mode refers to the score or scores that occurred most in the distribution. There are classification of mode: a) unimodal is a distribution that consist of only one mode. B) bimodal is a distribution of scores that consist of two modes, c) multimodal is a score distribution that consist of more than two modes.

Properties of Mode

- 1. It is the score/s occurred most frequently
- 2. Nominal average
- 3. It can be used for qualitative and quantitative data
- 4. Not affected by extreme values
- 5. It may not exist

Example 1. Find the mode of the scores of students in algebra quiz: 34,36,45,65,34,45,55,61,34,46

Mode= 34 , because it appeared three times. The distribution is called unimodal.

Example 2. Find the mode of the scores of students in algebra quiz: 34,36,45,61,34,45,55,61,34,45

Mode = 34 and 45, because both appeared three times. The distribution is called bimodal

Measures of Variability

Measures of Variability is a single value that is used to describe the spread out of the scores in distribution, that is above or below the measures of central tendency. There are three commonly used measures variability, the range, quartile deviation and standard deviation

The Range

Range is the difference between highest and lowest score in the data set.

R=HS-LS

Properties of Range

- 1. Simplest and crudest measure
- 2. A rough measure of variation
- 3. The smaller the value, the closer the score to each other or the higher the value, the more scattered the scores are.
- 4. The value easily fluctuate, meaning if there is a changes in either the highest score or lowest score the value of range easily changes.

Example: scores of 10 students in Mathematics and Science. Find the range and what subject has a greater variability?

Mathematics	Science
35	35
33	40
45	25
55	47
62	55
34	35
54	45
36	57
47	39
40	52

Mathematics	Science
HS = 62	<b>HS =57</b>
LS= 33	<b>LS= 25</b>
R = HS-LS	<b>R= HS-LS</b>
R= 62-33	<b>R= 57-25</b>
R= 29	<b>R= 32</b>

Based form the computed value of the range, the scores in Science has greater variability. Meaning, scores in Science are more scattered than in the scores in Mathematics

#### The Quartile Deviation

Quartile Deviation is the half of the differences the third quartile (Q3) and the first quartile (Q1). It is based on the middle 50% of the range, instead the range of the entire set

Of distribution. In symbol  $QD = \frac{Q3-Q1}{2}$

QD= quartile deviation

Q3= third quartile value

Q1= first quartile value

Example : In a score of 50 students, the Q3 = 50.25 and Q1 = 25.45, Find the QD

$$QD = \frac{Q3-Q1}{2}$$

$$= \frac{50.25 - 25.4}{2}$$

QD= 12.4

The value of QD =12.4 which indicates the distance we need to go above or below the median to include approximately the middle 50% of the scores.

#### The standard deviation

The standard deviation is the most important and useful measures of variation, it is the square root of the variance. It is an average of the degree to which each set of scores in the distribution deviates from the mean value. It is more stable measures of variation because it involves all the scores in a distribution rather than range and quartile deviation.

$$SD = \sqrt{\frac{\sum (x - \text{mean})^2}{n-1}}$$

where ,x = individual score

n= number of score in a distribution

Example: 1. Find the standard deviation of scores of 10 students in algebra quiz. Using the given data below.

x	(x-mean) <sup>2</sup>
45	12.25
35	182.25
48	0.25
60	132.25
44	20.5
39	90.25
47	2.25
55	42.25
58	90.25
54	30.25
$\sum x = 485$ N= 10 Mean = $\frac{\sum x}{N}$ = $\frac{485}{10}$	$\sum (x - \text{mean})^2 = 602.25$

<p><b>Mean= 48.5</b></p> <p><b>SD= <math>\sqrt{\frac{\sum(x-\text{mean})^2}{n-1}}</math></b></p> <p><b>SD= <math>\sqrt{\frac{602.5}{10-1}}</math></b></p> <p><b>SD= <math>\sqrt{66.944444}</math></b></p> <p><b>SD= 8.18</b>, this means that on the average the amount that deviates from the mean value= 48.5 is 8.18</p>	
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Example 2: Find the standard deviation of the score of 10 students below. In what subject has greater variability

Mathematics	Science
35	35
33	40
45	25
55	47
62	55
34	35
54	45
36	57
47	39
40	52

Solve for the standard deviation of the scores in mathematics

Mathematics (x)	(x-mean)2
35	82.81
33	123.21
45	0.81
55	118.81
62	320.41
34	102.01
54	98.01
36	65.61
47	8.41
40	16.81
$\sum x = 441$	$\sum (x-\text{mean})^2 = 936.9$
Mean = 44.1	$\sum (x-\text{mean})^2= 918$

SD=  $\sqrt{\frac{\sum(x-\text{mean})^2}{n-1}}$

=  $\sqrt{\frac{936.9}{10-1}}$   
 =√104.1

SD = 10.20 for the mathematics subject

Solve for the standard deviation of the score in science



Science (x)	(x-mean)2
36	64
40	9
25	324
47	16
55	144
35	64
45	4
57	196
39	16
52	81
Σx= 430	Σ(x-mean)2= 918

Mean = $\frac{430}{10}$   
Mean= 43

SD=  $\sqrt{\frac{\Sigma(x-mean)2}{n-1}}$   
=  $\sqrt{\frac{918}{10-1}}$   
=  $\sqrt{102}$

SD= 10.10 for science subject

The standard deviation for mathematics subject is 10.20 and the standard deviation foe science subject is 10.10, which means that mathematics scores has a greater variability than science scores. In other words, the scores in mathematics are more scattered than in science.

### Interpretation of Standard Deviation

When the value of standard deviation is large, on the average, the scores will be far form the mean. On the other hand. If the value of standard deviation is small, on the average, the score will be close form the mean.

### Coefficient of Variation

Coefficient of variation is a measure of relative variation expressed as percentage of the arithmetic mean. It is used to compare the variability of two or more sets of data even when the observations are expressed in different units of measurement. Coefficient of variation can be solve using the formula.

CV =  $\frac{SD}{Mean}$ x 100%

The lower the value of coefficient of variation, the more the overall data approximate to the mean or more the homogeneous the performance of the group

Group	Mean	Standard deviation
A	87	8.5
B	90	10.25

CV Group A=  $\frac{\text{standard deviation}}{\text{Mean}}$  x 100%  
=  $\frac{8.5}{87}$  x 100%  
CV Group A=9.77%

CV GroupB=  $\frac{\text{standard deviation}}{\text{Mean}}$  x 100%  
=  $\frac{10.25}{90}$  x 100%  
CV Group B=11.39%

The CV of Group A is 9.77% and CB of Group B is 11/39%, which means that group A has homogenous performance.

Percentile Rank

The Percentile rank of a score is the percentage of the scores in the frequency distribution which are lower. This means that the percentage of the examinees in the norm group who scored below the score of interest. Percentile rank are commonly used to clarify the interpretation of scores on standardized tests.

Z- SCORE

Z- score (also known as standard score) measures how many standard deviations an observations is above or below the mean. A positive z-score measures the number of standard deviation a score is above the mean, and a negative z-negative z-score gives the number of standard deviation a score is below the mean.

The z-score can be computed using the formula

$$Z = \frac{x - \mu}{\sigma}$$
 for population

$$Z = \frac{x - \text{mean}}{SD}$$
 for sample

Where

X= is a raw score

σ= is the standard deviation of the population

μ= is the mean of the population

SD= is the standard deviation of the sample

EXAMPLE:

James Mark’s examination results in the three subjects are as follows:

Subject	Mean	Standard deviation	James Mark’s Grade
Math Analysis	88	10	95
Natural Science	85	5	80
Labor Management	92	7.5	94

EXAMPLE:A study showed the performance of two Groups A and B in a certain test given by a researcher. Group A obtained a mean score of 87 points with standard deviation of 8.5 points, Group B obtained a mean score of 90 points with standard deviation of 10.25 points. Which of the two group has a more homogeneous performance?

In what subject did James Mark performed best? Very Poor?

Z math analysis =  $\frac{95 - 88}{10}$

Z math analysis = 0.70

Z natural science=  $\frac{80 - 85}{5}$

Z natural Science= -1

Z labor management =  $\frac{94 - 92}{7.5}$

Z labor management = 0.27

James Mark had a grade in Math Analysis that was 0.70 standard deviation above the mean of the Math Analysis grade, while in Natural Science he was -1.0 standard deviation below the mean of Natural Science grade. He also had a grade in Labor Management that was 0.27 standard deviation above the mean of the Labor Management grades. Comparing the z scores, James Mark performed best in Mathematics Analysis while he performed very poor in Natural Science in relation to the group performance.

T-score

T-score can be obtained by multiplying the z-score by 10 and adding the product to 50. In symbol, T-score = 10z +50

Using the same exercise, compute the T-score of James Mark in Math Analysis, Natural Science and Labor Management

T- score (math analysis) = 10 (.7) +50

= 57

T- score (natural science) = 10(-1)+50

= 40

T-score (labor management) = 10(0.27) +50

=52.7

Since the highest T-score us in math analysis = 57, we can conclude that James Mark performed best in Math analysis than in natural science and labor management.

Stanine

Stanine also known as standard nine, is a simple type of normalized standard score that illustrate the process of normalization. Stanines are single digit scores ranging form 1 to 9.

The distribution of new scores is divided into nine parts

Percent in Stanines	4%	7%	12%	17%	20%	17%	12%	7%	4%
Stanines	1	2	3	4	5	6	7	8	9

Skewness

Describes the degree of departures of the distribution of the data from symmetry.

The degree of skewness is measured by the coefficient of lsewness, denoted as SK and computed as,

SK=  $\frac{3(\text{mean-media})}{SD}$

Normal curve is a symmetrical bell shaped curve, the end tails are continuous and asymptotic. The mean, median and mode are equal. The scores are normally distributed if the computed value of SK=0

Areas Under the Normal Curve

Positively skewed when the curve is skewed to the right, it has a long tail extending off to the right but a short tail to the left. It increases the presence of a small proportion of relatively large extreme value SK>0

When the computed value of SK is positive most of the scores of students are very low, meaning to say that they performed poor in the said examination

Negatively skewed when a distribution is skewed to the left. It has a long tail extending off to the left but a short tail to the right. It indicates the presence of a high proportion of relatively large extreme values SK<0.

When the computed value of SK is negative most of the students got a very high score, meaning to say that they performed very well in the said examination

Rubrics

Rubrics is a scoring scale and instructional tool to assess the performance of student using a task-specific set of criteria. It contains two essential parts: the criteria for the task and levels of performance for each criterion. It provides teachers an effective means of students-centered feedback and evaluation of the work of students. It also enables teachers to provide a detailed and informative evaluations of their performance.

Rubrics is very important most especially if you are measuring the performance of students against a set of standard or pre-determined set of criteria. Through the use of scoring rubrics or rubrics the teachers can determine the strengthens and weaknesses of the students, hence it enables the students to develop their skills.

Steps in developing a Rubrics

1. Identify your standards, objectives and goals for your students. Standard is a statement of what the students should be able to know or be able to perform. It should indicate that your students should be able to know or be able to perform. It should indicate that your students should met these standards. Know also the goals for instruction, what are the learning outcomes.
2. Identify the characteristics of a good performance on the task, the criteria, when the students perform or present their work, it should indicate that they performed well in the task given to them; hence they met that particular standards.
3. Identify the levels of performance for each criterion. There is no guidelines with regards to the number of levels of performance, it vary according to the task and needs. It can have as few as two levels of performance or as many as the teacher can develop. In this case, the rater can sufficiently discriminate the performance of the students in each criteria. Through this levels of performance, the teacher or the rater can provide more detailed feedback about the performance of the students. It is easier also for the teacher and students to identify the areas needed for improvement.

Types of Rubrics

1. Holistic Rubrics  
In holistic rubrics does not list a separate levels of performance for each criterion. Rather , holistic, rubrics assigns a level of performance along with a multiple criteria as a whole, in other words you put all the component together.  
Advantage: quick scoring, provide overview of students achievement.  
Disadvantage: does not provide detailed information about the student performance in specific areas of the content and skills. May be difficult to provide one overall score.
2. Analytic Rubrics  
In analytic rubrics the teacher or the rater identify and assess components of a finished product. Breaks down the final product into component parts and each part is scored independently. The total score is the sum of all the rating for all the parts that are to be assessed or evaluated. In analytic scoring, it is very important for the rater to treat each part as separate to avoid bias toward the whole product.  
Advantage: more detailed feedback, scoring more consistent across students and graders.  
Disadvantage: time consuming to score.

Example of Holistic Rubric

3-Excellent Researcher <ul style="list-style-type: none"><li>• Included 10-12 sources</li><li>• No apparent historical inaccuracies</li><li>• Can easily tell which sources information was drawn from</li><li>• All relevant information is included</li></ul>
2- Good Researcher <ul style="list-style-type: none"><li>• Included 5-9 sources</li><li>• Few historical inaccuracies</li></ul>

<ul style="list-style-type: none"><li>• Can tell with difficulty where information came from</li><li>• Bibliography contains most relevant information</li></ul>
1-Poor Researcher <ul style="list-style-type: none"><li>• Included 1-4 sources</li><li>• Lots of historical inaccuracies</li><li>• Cannot tell from which source information came from</li><li>• Bibliography contains very little information</li></ul>

Example of Analytic Rubric

Criteria	Limited 1	Acceptable 2	Proficient 1
Made good observations	Observations are absent or vague	Most observations are clear and detailed	All observations are clear and detailed
Made good predictions	Predictions are absent or irrelevant	Most predictions are reasonable	All predictions are reasonable
Appropriate conclusion	Conclusion is absent or inconsistent with observation	Conclusion is consistent with most observations	Conclusion is consistent with observations

Advantages of Using Rubrics

When assessing the performance of the students using performance based assessment it is very important to use scoring rubrics. The advantages of using rubrics in assessing student’s performance are:

1. Rubrics allow assessment to become more objective and consistent
2. Rubrics clarify the criteria in specific terms
3. Rubrics clearly show the student how work will be evaluated and what is expected
4. Rubrics promote student awareness of the criteria to use in assessing peer performance
5. Rubrics provide useful feedbacks regarding the effectiveness of the instruction: and
6. Rubrics provide benchmarks against which to measure and document progress

PERFORMANCE BASED ASSESSMENT

Performance based assessment is a direct and systematic observation of actual performances of the students based from a pre-determined performance criteria as cited by (Gabuyo, 2011). It is an alternative form of assessing the performance of the students that represent a set of strategies for the application of knowledge, skills and work habits through the performance of tasks that are meaningful and engaging to students”

Framework of Assessment Approaches

Selection Type	Supply Type	Product	Performance
True-false	Completion	Essay, story or poem	Oral presentation of report
Multiple-choice	Label a diagram	Writing portfolio	Musical, dance or dramatic performance
Matching type	Short answer	Research report	Typing test
	Concept man	Portfolio exhibit, Art exhibit	Diving
		Writing journal	Laboratory demonstration
			Cooperation in group works

Forms of Performance Based Assessment

1. Extended response task
  - a. Activities for single assessment may be multiple and varied
  - b. Activities may be extended over a period of time
  - c. Products from different students may be different in focus
2. Restricted-response tasks
  - a. Intended performances more narrowly defined than extended-response tasks.
  - b. Questions may begin like a multiple-choice or short answer stem, but then ask for explanation, or justification.
  - c. May have introductory material like an interpretative exercise, but then asks for an explanation of the answer, not just the answer itself
3. Portfolio is a purposeful collection of student work that exhibits the student’s efforts, progress and achievements in one or more areas.

Uses of Performance Based Assessment

1. Assessing the cognitive complex outcomes such as analysis, synthesis and evaluation
2. Assessing non-writing performances and products
3. Must carefully specify the learning outcomes and construct activity or task that actually called forth.

Focus of Performance Bases Assessment

Performance based assessment can assess the process, or product or both (process and product) depending on the learning outcomes. It also involves doing rather than just knowing about the activity or task. The teacher will assess the effectiveness of the process or procedures and the product used in carrying out the instruction. The question is when to use the process and the product?

Use the process when:

- 1. There is no product
- 2. The process is orderly and directly observable;
- 3. Correct procedures/steps in crucial to later success;
- 4. Analysis of procedural steps can help in improving the product,
- 5. Learning is at the early age.

Use the product when:

- 1. Different procedures result in an equally good product;
- 2. Procedures not available for observation;
- 3. The procedures have been mastered already;
- 4. Products have qualities that can be identified and judge

The final step in performance assessment is to assess and score the student’s performance. To assess the performance of the students the evaluator can use checklist approach , narrative or anecdotal approach, rating scale approach, and memory approach. The evaluator can give feedback on a student’s performance in the form of narrative report or grade. There are different ways to record the results of performance-based assessments.

- 1. Checklist Approach are observation instruments that divide performance whether it is certain or not certain. The teacher has to indicate only whether or not certain elements are present in the performances
- 2. Narrative/Anecdotal Approach is continuous description of student behavior as it occurs, recorded without judgment or interpretation. The teacher will write narrative reports of what was done during each of the performances. From these reports teachers can determine how well their students met their standards.
- 3. Rating Scale Approach is a checklist that allows the evaluator to record information on a scale, noting the finer distinction that just presence or absence of a behavior. The teacher they indicate to what degree the standards were met. Usually, teachers will use a numerical scale. For instance, one teacher may rate each criterion on a scale of one to five with one meaning “ skills barely present” and five meaning “skill extremely well executed.”
- 4. Memory Approach the teacher observes the students when performing the tasks without taking any notes. They use the information from memory to determine whether or not the students were successful. This approach is not recommended to use for assessing the performance of the students.

PORTFOLIO ASSESSMENT

Portfolio assessment is the systematic, longitudinal collection of student work created in response to specific, known instructional objectives and evaluated in relation to the same criteria. Student Portfolio is a purposeful collection of student work that exhibits the student's efforts, progress and achievements in one or more areas. The collection must include student participation in selecting contents, the criteria for selection, the criteria for judging merit and evidence of student self-reflection.

Comparison of Portfolio and Traditional Forms of Assessment

Traditional Assessment	Portfolio Assessment
Measures student’s ability at one time	Measures student’s ability over time
Done by the teacher alone, students are not aware of the criteria	Done by the teacher and the students, the students are aware of the criteria
Conducted outside instruction	Embedded in instruction
Assigns student a grade	Involves student in own assessment
Does not capture the student's language ability	Capture many facets of language learning performance
Does not include the teacher’s knowledge of student as a learner	Allows for expression of teacher’s knowledge of student as learner
Does not give student responsibility	Student learns how to take responsibility

Three Types of Portfolio

There are three basic types of portfolio to consider for classroom use. These are working portfolio, showcase portfolio and progress portfolio

- 1. Working Portfolio  
The first type of portfolio is working portfolio also known as “teacher-student portfolio”. As the name implies that it is a project “in work” it contains the work in progress as well as the finished samples of work used to reflect in process by the students and teachers. It documents the stages of learning and provides a progressive record of student growth. This is an interactive teacher-student portfolio that aids in communication between teacher and student.

The working portfolio may be used to diagnose student needs. In both student and teacher have evidence of student strengths and weakness in achieving learning objectives, information extremely useful in designing future instruction.

- 2. Showcase Portfolio  
Showcase portfolio is the second type of portfolio and also known as best works portfolio or display portfolio. In this kind of portfolio, it focuses on the student’s best and most representative work. It exhibits the best performance of the student. Best works portfolio may document student activities beyond school for example a story written at home. It is just like an artist’s portfolio where a variety of work is selected to reflect breadth of talent, painters can exhibit the best paintings. Hence, in this portfolio the student selects what he or she thinks is representative work. This folder is most often seen at open houses and parent visitations.

The most rewarding use of student portfolios is the display of student’s best work, the work that makes them proud. In this case, it encourages self-assessment and builds self-esteem for students. The pride and sense of accomplishment that students feel make the effort well worthwhile and contribute to a culture for learning in the classroom

### 3. Progress Portfolio

This third type of portfolio is progress portfolio and it is also known as Teacher Alternative Assessment Portfolio. It contains examples of student's work with the same types done over a period of time and they are utilized to assess their progress

All the works of the students in this type of portfolio are scored, rated, ranked, or evaluated.

Teachers can keep individual student portfolios that are solely for the teacher's use as an assessment tool. This a focused type of portfolio and is a model approach to assessment.

Assessment portfolios used to document student learning on specific curriculum outcomes and used to demonstrate the extent of mastery in any curricular area,

#### Uses of Portfolios

1. It can provide both formative and summative opportunities for monitoring progress toward reaching identified outcomes
2. Portfolios can communicate concrete information about what is expected of students in terms of the content and quality of performance in specific curriculum areas.
3. A portfolio is that they allow students to document aspects of their learning that do not show up well in traditional assessments
4. Portfolios are useful to showcase periodic or end of the year accomplishment of students such as in poetry, reflections on growth, samples of best works, etc.
5. Portfolios may also be used to facilitate communication between teachers and parents regarding their child's achievement and progress in a certain period of time.
6. The administrator may use portfolios for national competency testing to grant high school credit, to evaluate education programs.
7. Portfolios may be assembled for combination of purposes such as instructional enhancement and progress documentation. A teacher reviews students portfolios periodically and make notes for revising instruction for next year used.

According to Mueller (2010) there are seven steps in developing portfolios of students.

Below are the discussions of each step.

1. Purpose: What is the purposes of the portfolio?
2. Audience: For what audience will the portfolio be created?
3. Content: What samples of student work will be included?
4. Process: What processes (e.g. selection of work to be included, reflection in work, conferencing) will be engaged in during the development of the portfolio?
5. Management: How will time and materials be managed in the development of the portfolio?
6. Communication: How and when will the portfolio be shared with pertinent audiences?
7. Evaluation: If the portfolio is to be used for evaluation, when and how should it be evaluated?

#### Guidelines for Assessing Portfolios

1. Include enough documents (items) on which to base judgment
2. Structure the contents to provide scorable information
3. Develop judging criteria and a scoring scheme for raters to use in assessing the portfolios
4. Use observation instruments such as checklists and rating when possible to facilitate scoring.
5. Use trained evaluators or assessors

#### Guidance and Counseling

Guidance and Counseling are both process to solve problems of life, they differ only on the approach used. In guidance the client's problems are listened carefully and readymade solutions are provided by the experts. While in counseling the client's problem are discussed and relevant information are provided in-between. Through these information, the client will gain an insight to the problem and become empowered to take his own decision.

Guidance Counselor assist each student to benefit from the school experience through attention to their personal, social and academic needs.

Guidance (Downing) as pointed out by Lao (2006) is an organized set of specialized services established as an integral part of the school environment designed to promote the development of students and assist them toward a realization of sound, wholesome adjustment and maximum accomplishment commensurate with their potentialities.

Guidance (Good) is a process and dynamic interpersonal relationship designed to influence the attitude and subsequent behavior of the person.

Counseling is both process and relationship. It is a process by which concentrated attention is given by both counselor and counselee to the problems and concerns of the students in a setting of privacy, warmth, mutual acceptance and confidentiality. As a process it utilizes appropriate tools and procedure which contribute to experience. Counseling is also a relationship characterized by trust, confidence and intimacy in which the students gains intellectual and emotional stability from which he can resolve difficulties, make plans and realize greatest self-fulfillment.

Villar (2007) pointed out the different guidance services based from Rules and Regulations of Republic Act 9258, Rule 1, Section 3 Manila standard, 2007) and other services not mentioned in Rules and Regulations

1. Individual inventory/ analysis
2. Information
3. Counseling
4. Research
5. Placement
6. Referral
7. Follow-up
8. Evaluation
9. Consultation
10. Program development
11. Public relations

## Roles of the Guidance Counselor

There are 5 roles of the guidance counselor are discussed by Dr. Imelda V.G. Villar in her book “implementing a comprehensive Guidance and Counseling Programs in the Philippines (2007)

1. As Counselor
2. As Coordinator
3. As Consultant\
4. As Conductor of Activities
5. As Change Agent

## Essential Elements of Counseling Process

1. Anticipating the interview
2. Developing a positive working relationship
3. Exploring feelings and attitudes
4. Reviewing and determining present status
5. Exploring alternatives
6. Reaching decision
7. Post counseling contact

## Techniques and Methodologies used in the Guidance Process

1. Autobiography
2. Anecdotal record
3. Case study
4. Cumulative record
5. Interview
6. Observation
7. Projective techniques
8. Rating scale
9. Sociometry

## Ethical Consideration of the Counselor

1. Counselor’s responsibility to the client and to his family
2. Recognize the boundaries of their competence and their own personal and professional limitations
3. Confidentiality
4. Imposition of one’s values and philosophy of life on the client is considered unethical.

## Four Important Functions of Guidance Services

1. Counseling
  - Individual counseling
  - Small group counseling
  - Crisis counseling
  - Career counseling
  - Referrals
  - Peer helping programs
2. Prevention
  - Primary, secondary, tertiary plans and programs
  - Individual assessments coordinated student support team activities
  - Students activities
  - Transitional planning

## PART 2

### PRACTICE TEST

#### **CHILD AND ADOLESCENT DEVELOPMENT**

1. The process by which certain potentials are inherited from the parents for his development
  - a. Life
  - b. Birth
  - c. Heredity
  - d. Character
2. This theory states that there are 8 basic development stages that the individual has to pass through his life
  - a. Learning Theory
  - b. Psychoanalytic Theory
  - c. Psychosocial Theory
  - d. Cognitive Development
3. Transition age from childhood to adulthood where rapid physical changes and sex maturity occur resulting in changes in ways of feelings, thinking and acting.
  - a. Puberty
  - b. Adolescence
  - c. Early adulthood
  - d. Stage V
4. Modifying an existing scheme after an individual’s interaction with the environment, resulting in the creation of a new scheme.
  - a. Assimilation
  - b. Interaction
  - c. Recognition
  - d. Accommodation
5. Theory stating that a person’s behavior can be motivated by urges towards self satisfaction.
  - a. Psychoanalytic Theory
  - b. Cognitive development theory
  - c. Psychosocial Theory
  - d. Moral development theory
6. The ability of a child to conceptualize the retention and preservation of the same quantity under various changes.
  - a. Recognition
  - b. Reversibility
  - c. Assimilation
  - d. Conservation

7. Refers to the idea that no individual are exactly the same or alike.
  - a. Cognitive theory c. Individual differences
  - b. Exclusivity theory d. Emotional quotient
8. He is known as the Father of Modern I.Q. Test
  - a. Lewis Terman c. Laurence Kohlberg
  - b. Erick Erickson d. Martin Lesley
9. "Intellectual appreciative Experience" is ...
  - a. base on the premise that all learning has emotional correlates
  - b. obtained in the field of music, art and literature
  - c. the acquisition and retention o acts and information
  - d. assumes that human activities are based on stimulus and response
10. These statements imply that children at the early learning stage consider parents and teachers as authorities and models.
  - a. Parents and teachers should always coordinate children's activities
  - b. Parents should enforce strict discipline at home and teachers in school
  - c. Parents and teachers should be the role models at all times
  - d. Parents and teachers should always consult each other with regards the child's intellectual development
11. Any change in the behavior of an individual
  - a. Learning c. Change
  - b. Response d. Development
12. Which of the following principles IS NOT considered under Classical Conditioning by Ivan Pavlov?
  - a. Excitation
  - b. Adhesive Principle
  - c. Stimulus Generalization
  - d. None of the above
13. The reinforcement of a person's responses by presentation or removal of rewards and punishment.
  - a. Operant conditioning c. Feedback Principle
  - b. Transfer of learning d. Discipline
14. This stimulation of action best explains the behavior of an individual to take what he perceives to be the shortest route to his goals.
  - a. Recognition c. Response
  - b. Assimilation d. Motivation
15. The process by which an individual acquires the social and cultural heritage o the society where he belongs.
  - a. Socialization c. Integration
  - b. Internalization d. Acquisition
16. Philosophy of education's main function.
  - a. Aid the leaner to build his own personal philosophy
  - b. Definition o goals and setting of directions from which education
  - c. Educations carries on a lifetime cycle
  - d. Provision of academic background prerequisite to learning
17. According to Froebel, kindergarten is also known as "\_\_\_\_\_"?
  - a. children have fun and enjoyment
  - b. Garden where children could grow
  - c. He learning Center for Life
  - d. Where new beginnings begin
18. Which of the following statements is given emphasis by "humanistic education?"
  - a. The great works of man such as the classics should be enjoyed.
  - b. Man should learn the different philosophies of education
  - c. "Build a man who is distinctly civilized, educations and refined"
  - d. Develop man into a thinking individual
19. A teacher who advocates the pragmatic philosophy of education believes that experience should follow learning, thus, she has to?
  - a. require her student mastery of the lessons
  - b. encourage her students to memorize facts
  - c. equip her students with basic skills and abilities
  - d. provide her student with opportunities to apply their skills and abilities
20. How are institutions of learning encouraged to set higher standards over and above the minimum requirement for state recognition?
  - a. Scholastic achievement
  - b. Faculty development
  - c. Academic freedom
  - d. Voluntary accreditation
21. The period of physical, especially sexual, and mental maturation which is characterized by rapid somatic growth is known as
  - a. infancy c. puberty
  - b. early childhood d. adulthood
22. Claustrophobia is an irrational fear of
  - a. Darkness c. closed space
  - b. strangers d. height
23. An eye defect characterized by clear vision in one dimension but unfocused vision on the other is called
  - a. myopia c. hyperopia
  - b. astigmatism d. presbyopia
24. Which of the following statements does not apply to adolescents?
  - a. they desire the approval of their peers
  - b. they seek dependence on their parents
  - c. they have a marked sex development
  - d. none of the above
25. As young people mature, society expects them to develop competencies and assume social roles in a conventional manner.
  - a. expectation of parents
  - b. influence of peers groups
  - c. influence of formal education
  - d. cultural demands
26. The founder of the theory of psychology called psychoanalysis was
  - a. Lock c. Freud
  - b. Hume d. leibnitz
27. When the learner reaches a point where no further improvement can be expected, he is in a so-called
  - a. development crisis c. regression
  - b. learning plateau d. depression
28. Regarding the sexual maturation o boys and girls, teachers should bear in mind that:
  - a. girls mature at a late stage than boys
  - b. girls mature at an earlier stage than boys
  - c. boys and girls mature at the same time
  - d. there are no marked differences in heir time of maturity



29. Rationalization is used by student who
- always give explanation or reason for their failures rather than own their faults
  - like to take the blame for their faults
  - bribe their elders with promises
  - substitute words for deeds
30. Which of the following is true of Abnormal Psychology?
- it studies the cause of personality defects
  - it measures the accomplishments of the individual
  - it concentrates on the scholastic performance of the individual
  - it investigates the educational background of the individual
31. Which of the following is a continuous variable?
- weight
  - sex
  - nationality
  - race
32. Which of the following is true about one's IQ?
- it remains fairly constant
  - it is highly changeable
  - it is affected by attitude
  - it is never constant
33. Transfer of training easily takes place if the activities involved
- Are different
  - Have identical element
  - Occur in the same place
  - Vary in difficulty
34. When the learner is well-motivated, he performs his task
- with indifference
  - with disinterest
  - with arrogance
  - with enthusiasm
35. A six-year-old child who has a mental age of eight years has an IQ of
- 120
  - 130
  - 132
  - 133
36. The ratio obtained by dividing mental age by chronological age times 100 is called
- derived quotient
  - deviation
  - intelligence quotient or IQ
  - intelligence ratio
37. Which of the following was written by Plato?
- Sic et Non
  - The School and Society
  - The Republic
  - Emile
38. Who among those below asserted that "Education is for complete living"
- Dewey
  - Spencer
  - Kant
  - Froebel
39. The right of an educational institution and its faculty to prescribe the methods/strategies of teaching refers to:
- building style
  - choice of curriculum
  - academic freedom
  - co and extra curricular program
40. The 1987 Constitution provides that religious institution can be given
- with the students' consent
  - with the parent/guardian approval
  - with mayor's permit
  - with the school's support
41. Public schools in the Philippines are the contribution of which colonizer?
- American
  - British
  - Japanese
  - Spanish
42. Hardship allowance is given to a teacher when
- he's assigned in a depressed area
  - he's given additional teaching load
  - he's in lahar area
  - he's assigned in a hazardous area
43. The ability for quantitative learning of the relations of facts taken from newspaper readings, letter writing and the like is called:
- functional literacy
  - adjustment learning
  - Knowledge outcome
  - Social competence
44. A teacher who gives a uniform assignment to be worked out by all learners in Arithmetic is not observing a characteristic of a good assignment. Which characteristic is overlooked?
- It should be definite
  - It should be stimulating
  - It should emphasize the essential
  - It should provide for individual differences
45. If a student ask a question which the teacher does not have a ready answer, the latter should:
- dismiss the question as irrelevant
  - offer a bluff
  - admit the fact that he doesn't know the answer
  - ask volunteers to answer the question and do research on it later.
46. The heredity traits acquired by a person in his lifetime;
- are transmissible to his offspring
  - reappear in his future grandparent
  - Have no influence on the offspring
  - Become recessive traits
47. When student are given a chance to settle differences of opinion by discussion, they develop:
- fair play
  - tolerance
  - irritants
  - sociability
48. The school's responsibility towards teenagers "gang age" is:
- provide the gang all the freedom it needs
  - gives classroom activities to give direction to out-of-school youth activities
  - supervise gang activities
  - set up norms of conduct or the member of the gang
49. In an intelligence test, a 13-year old girl got a score equivalent to that of a 15-year old. This means:
- that the girl must be accelerated
  - that the girl is 2-years older mentally
  - that the girl has a chronological age of 15
  - that she has a mental age of 13

50. Which statement is not necessary to achieve the learner's interest in a learning activity?
  - a. the activity must lead to a practical end
  - b. the activity must be within the ability of the learner
  - c. the activity must fill a need recognized by the learner
  - d. the learner must have the experience that will furnish the background for the activity
51. He is responsible for the theory which recognizes the importance of developing multiple intelligence
  - a. Jean Piaget
  - b. Howard Gardner
  - c. Frederick Freobel
  - d. Sigmund Freud
52. The need to recognize and develop special sensitivity to language, thus helping the learners to use the right word, phrase and/ or graph to grasp new meaning refers to
  - a. visual intelligence
  - b. linguistic intelligence
  - c. feelings sensitivity
  - d. jargon
53. The sensitivity to tone and pitch, allowing one to produce musical scoring is intelligence in?
  - a. musical
  - b. verbal ability
  - c. quantitative exercises
  - d. qualitative analysis
54. One's ability to do abstract reasoning and manipulate symbols refers to what type of intelligence?
  - a. musical
  - b. personality identification
  - c. mental ability
  - d. mathematical-logical
55. The ability to perceive how objects are related in order to mentally perceive what is seen, thus creating concrete visual images from memory refers to?
  - a. visual-spatial intelligence
  - b. musical
  - c. language
  - d. logical reasoning
56. The capacity to analyze one's feelings and thus be able to understand and be able to know the motives of other people's actions.
  - a. spatial
  - b. personal
  - c. logical
  - d. diametric
57. The type of intelligence which enables a person to understand other person's feelings, behavior and motivation.
  - a. emotional
  - b. spatial
  - c. social intelligence
  - d. quantitative and qualitative
58. The type of intelligence which characterizes actress, actors, mimes, dancers and people of the Arts?
  - a. bodily-kinesthetic
  - b. scientific
  - c. research
  - d. emotions
59. An emerging thrust in determining one's personality, whether pleasant or unwholesome, this type of personality measurement is the wholesomeness of one's virtues, i.e., values, relationships with other, adjustments to varying situations, behavior an motivations
  - a. emotional quotient (E.Q.)
  - b. intelligence quotient (I.Q.)
  - c. maladjustment personality
  - d. anticipated behavior
60. It is a measurement of personality which is the result by dividing the mental age by the chronological age.
  - a. emotional quotient (E.Q.)
  - b. intelligence quotient (I.Q.)
  - c. multiple Intelligence
  - d. forecasted behavior quotient
61. The teacher must be aware that both heredity and environment represent complex factors, exerting many specific influences on an individual's growth. Which of the following statements best represents the influence of heredity and environment?
  - a. Heredity counts; environment is less important.
  - b. If the environment is changed, heredity becomes less important.
  - c. The relative influences of heredity and environment can vary widely in an individual's growth.
  - d. In the long run, both tend to cancel each other's influences
  - e. None of the above
62. The best possible way to measure the influence of heredity is by:
  - a. keeping the environment constant.
  - b. Ignoring the environment
  - c. Studying only fraternal o normal capability
  - d. Studying only identical twins of normal capability
  - e. Doing none of the above
63. Educators who contributed to the "open education" movement includes:
  - a. Neill and piaget
  - b. Kohl and kozol
  - c. Bruner and Silberman
  - d. All of the above
64. A child's social skills can be measured by:
  - a. direct observation and parent-teacher conferences
  - b. psychological test
  - c. adaptive behavior scales
  - d. A and C above
65. A teacher uses behavioral modification techniques in his classes. Which of the following student behaviors would he find most difficult to change?
  - a. Aggressive tendencies toward classmates
  - b. Poor habits in organizing work materials
  - c. Interrupting a speaker
  - d. Abandoning a project before it is finished
66. Learning-disabled children most characteristically have:
  - a. low IQ
  - b. poor socio-economic backgrounds
  - c. an average level of intelligence
  - d. minimal brain damage
67. Which of the following is true about educable mentally retarded children?
  - a. Their IQ range between 50 and 70
  - b. They have short attention spans and experience difficulty in generalizing
  - c. Their reading, writing, and arithmetic skills cannot be improved
  - d. A and B above
68. Which of the following is characteristics of a dyslexic child
  - a. Mirror writing
  - b. listlessness
  - c. Below-average intelligence
  - d. Hyperactivity

69. Primary reading retardation is presumed to be neurologically based, related to parietal lobe dysfunction?
- Inability to relate sound to letter symbols
  - Inadequate auditory information processing
  - Left-right directional confusion
  - Speech aphasia
70. Students with secondary reading problems have capacity to read, but are non-readers because of:
- auditory problems
  - congenital defects
  - visual-acuity impairment
  - environmental or emotional actors
71. If a teacher accepts Maslow's theory on the hierarchy of needs, he or she will probably structure objectives to:
- meet both the physiological and intellectual needs of students
  - eliminate testing
  - eliminate extrinsic motivations
  - maintain a certain anxiety level for increased competition
72. The knowledge explosion has led to crowding more and more information into curriculum courses. A likely result is that:
- the textbook will no longer be the main instructional medium in many classes
  - the child may spend more time in school
  - the teacher may have to rely more on the use of multimedia materials
  - all of the above
73. During the learning process the teacher has most control over:
- the learners
  - the learning environment
  - the learning process
  - the behavior of the learners
74. Which of the following conditions does NOT contribute to a climate psychologically suited to learning?
- The teacher acts like a "real person."
  - The teacher makes all of the decisions about students' learning activities.
  - The teacher accepts students as they are
  - The teacher shows trust in students' decisions
75. William Glasser advocates the frequent use of classroom meetings, with teacher and students sitting in a small circle. Which one of the following types of discussion would NOT be appropriate in such a setting?
- An educational-diagnostic conference on the learning weaknesses of individual students.
  - An open-ended meeting for the purpose of exploring and discussing student's ideas about the curriculum
  - A social-problem-solving meeting to resolve teacher or student problems relating to the school, the class, or any individual member.
  - A sensitivity-training meeting for the purpose of helping students face their school-related problems and learn how their actions can affect others
76. Which of the following does NOT represent a teacher's contribution to the emotional environment of the classroom?
- A strident, compelling voice.
  - A sustained sense of expectation where student achievement is concerned
  - A well-written lesson plan
  - A sense of humor in a tense situation
77. According to Jones, student commitment to accomplishing a learning goal depends on all of the following EXCEPT:
- how interesting the goal is
  - how likely it seems that the goal can be accomplished
  - what degree of challenge the goal presents
  - whether the learner will be able to tell if the goal has been accomplished
  - whether materials are ready assembled for undertaking the goal
78. The teacher who understands the adolescent's need to conform will:
- use sarcasm as a disciplinary device
  - disregard unique responses in discussion and on examinations
  - establish a learning climate that fosters feelings of security
  - lecture students on their weakness of character
79. The best public relations agents for a school are the:
- pupils
  - Teachers and pupils
  - PTA members
  - principals
80. The structured curriculum is in decided contrast to the child-centered curriculum, which:
- emphasizes fundamental education
  - is changeable and is built around student interest and needs
  - is oriented to the needs of a democratic society.
  - Utilizes the theory of mental discipline
81. According to Bruner, teacher working with young children should
- Push the children to maximum cognitive development as rapidly as possible
  - Present all information verbally so the children will listen well
  - Present new material from the concrete to the abstract
  - Present new information from the abstract to the concrete
82. from the educational viewpoint, intelligence is:
- an abstract concept
  - a trait that can be manipulated
  - good judgment
  - a form of behavior
83. Every taxonomy of educational objectives:
- describes increasingly difficult learning activities
  - describes levels of goals for learner development
  - suggest evaluation measure for teacher use
  - Classifies learning outcomes
84. A mathematics teacher following Gagne's theory of learning believes that:
- learning can take place under all conditions
  - learning is mainly a matter of accurate discrimination
  - learning takes place only when the student is in a receptive state
  - learning is reinforced chiefly by classical conditioning
85. Under which of the following conditions is a child's IQ more likely to increase?
- If the emotional climate in the classroom improves
  - If the child is given a large "research" project.
  - If the child enjoys problem solving and is given ample opportunity for it
  - If A and C are true

86. Intelligence is the basis of education. Education is the effective means for national development, hence, a country spends a large portion of its budget for the systematic training of the learner to attain full development Why is education one major concern of every country? Because
- intelligence has many facets
  - intelligence is useful in testing
  - intelligence is a safe gauge for budgetary allocation
  - intelligence test when carefully conducted, can help in determining need for future facilities for national building
87. There are no two individuals who are the same. Individual differences, when early recognize and provided for, enable the teacher to provide different motivations and approaches in guiding the learning process. Each pupil differs physically, mentally, socially and emotionally from other children. Unless the teacher provides for this nature of the learner, no amount of modern approaches in teaching can elicit favorable results.
- The paragraph highlights the need or motivating learning
  - Individual differences is an important consideration in guiding the learner
  - The above paragraph focuses on teacher-pupil relationship
  - It takes about the nature of the learning process
88. Robert Craig, et al, wrote of the phase of steps in every learning process. These include: 1.) the focusing of attention to the stimulation at hand, 2.) the interplay of the learner and the social factors that surround him, 3.) the acquisition of a new response or behavior he gives to the new learning and 4.) Retention which presupposes that the new learning is acquired. The above paragraph emphasizes
- the learning process
  - the steps/phase of how individuals learn
  - the manifestations of learning
  - why learning is a difficult process
89. Approaches in teaching change from time to time depending on the traditional of sophistication attached to the course being taught. Some mentors believe that the tie tested ways to teaching is effective. Other are easily carried away to use modern approaches in imparting new subject matter. It maybe safe to conclude that once results are realized in teaching, no specific method can be considered the one-and-only method to use. When teaching a subject area, it is safe to
- stick to the traditional way
  - be modern and most recent
  - get results in teaching
  - to try any method as they are all theories after all
90. In the early 1980's programmed teaching became popular in helping teachers to provide for individual differences in learners. The chunks of the subject matter which are divided into units are supposed to help the learner master the lesson, since it is simply to understand the frame of the lessons. No test o mastery of the units are done because the purpose is to provide information on certain subject matter Would you as a teacher use programmed instruction if you handle a subject on Values Education?
- yes, definitely
  - no, not important for the subject matter
  - I don't know
  - Why not if the subject matter calls for it
91. The data/subject matter to teach are gathered in different ways, These include historical sources like surveys, systematic observations, experimentation, interviews, etc. to be reliable and valid, the data collected must be organized, properly analyzed and interpreted. From these processes, some conclusion or generalization are done to reveal certain relationships like cause & effect. Data gathering involves:
- tedious and serious study
  - easy does it
  - data gathered are tested and filed, then verified before being used
  - no follow-up needed
92. Heredity and environment play important roles in the function of human beings. DNA or Deoxyribonucleic Acid is the biological (heredity) band of our genes. Our environment includes the house, school and the community where we live. Whether we become successful or a failure will depend on the interplay of both nature and nurture. If heredity and environment affect the individual, thus, we can conclude that
- both actors play equal roes in one's life
  - one factor, either heredity or environment exerts more influence than the other
  - neither factor is important
  - nurture and nature are the same
93. The first systematic philosopher to work in the field of education was
- Socrates
  - Aristotle
  - Plato
  - Rousseau
94. The first state in the world's history where all human capabilities were allowed to develop freely
- Rome
  - Athens
  - Sparta
  - Germany
95. They are the most practical, pragmatic people who absorbed themselves in the management of their state affairs
- Spartans
  - Athens
  - Romans
  - Chinese
96. Invented the first system of writing in the orient
- Phoenicians
  - Chinese
  - Greeks
  - Romans
97. first to introduce the use of printing press in the Philippines
- Romans
  - Chinese
  - Greeks
  - Japanese
98. conducted the world's first civil service test
- Greeks
  - Romans
  - Chinese
  - English
99. To develop the capacity of man only for war was the educational aim of the ancient
- Romans
  - Spartans
  - Athenians
  - Chinese
100. To produce a young man who would be charming in person and graceful in manner, e.g. a beautiful soul in a beautiful body is the educational aim of education of the
- Romans
  - Athens
  - Spartans
  - Italians

### **SOCIAL DIMENSIONS OF EDUCATION**

- Principal B tells her teachers that training in the humanities is most important. To which educational philosophy does he adhere?
  - Existentialism
  - Perennialism
  - Progressivism
  - Essentialism

2. Principal C shares this thought with his teachers: *"Subject matter should help students understand and appreciate themselves as unique individuals who accept complete responsibility for their thoughts, feelings, and actions."* From which philosophy is this thought based?
  - A. Perennialism
  - B. Essentialism
  - C. Existentialism
  - D. Progressivism
3. To come closer to the truth we need to *"go back to the things themselves."* This is the advice of the
  - A. behaviorists
  - B. phenomenologists
  - C. idealists
  - D. pragmatists
4. Student B claims: *"I cannot see perfection but I long for it. So it must be real."* Under which group can he be classified?
  - A. Idealist
  - B. Empiridst
  - C. Realist
  - D. Pragmatist.
5. Which of the following prepositions is attributed to Plato?
  - A. Truth is relative to a particular time and place.
  - B. Human beings create their own truths.
  - C. Learning is the discovery of truth as latent ideas are brought to consciousness.
  - D. Sense perception is the most accurate guide to knowledge.
6. On whose philosophy was A. S. Neil's Summerhill, one of the most experimental schools, based?
  - A. Rousseau
  - B. Pestalozzi
  - C. Montessori
  - D. John Locke
7. As a teacher, you are a rationalist. Which among these will be your guiding principle?
  - A. I must teach the child that we can never have real knowledge of anything.
  - B. I must teach the child to develop his mental powers to the full.
  - C. I must teach the child so he is assured of heaven.
  - D. I must teach the child every knowledge, skill, and value that he needs for a better future.
8. Teacher U teaches to his pupils that pleasure are not the highest good. Teacher's teaching is against what philosophy?
  - A. Realism
  - B. Hedonism
  - C. Epicureanism
  - D. Empiricism
9. Who among the following puts more emphasis on core requirements, longer school day, longer academic year and more challenging textbooks?
  - A. Perennialist
  - B. Essentialist
  - C. Progressivist
  - D. Existentialist
10. Which group of philosophers maintains that *"truth exists in an objective order that is independent of the knower"*?
  - A. Idealists
  - B. Pragmatists
  - C. Existentialists
  - D. Realists
11. You arrive at knowledge by re-thinking of latent ideas. From whom does this thought come?
  - A. Experimentalist
  - B. Realist
  - C. Idealist
  - D. Existentialist
12. As a teacher, you are a reconstructionist. Which among these will be your guiding principle?
  - A. I must teach the child every knowledge, skill, and value that he needs for a better future.
  - B. I must teach the child to develop his mental powers to the full.
  - C. I must teach the child so he is assured of heaven.
  - D. I must teach the child that we can never have real knowledge of anything.
13. Teacher B engages her students with information for thorough understanding for meaning and for competent application. Which principle governs Teacher B's practice?
  - A. Constructivist
  - B. Gestalt
  - C. Behaviorist
  - D. Cognitivist
14. Which is/are the sources of man's intellectual drives, according to Freud?
  - A. Id
  - B. Superego
  - C. Id and ego
  - D. Ego
15. Soc exhibits fear response to freely roaming dogs but does not show fear when a dog is on a leash or confined to a pen. Which conditioning process is illustrated
  - A. Generalization
  - B. Extinction
  - C. Acquisition
  - D. Discrimination
16. The concepts of trust vs. maturity, autonomy vs. self-doubt, and initiative vs. guilt are most closely related with the works of
 

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  - A. Erikson
  - B. Piaget
  - C. Freud
  - D. Jung
17. Teacher F is convinced that whenever a student performs a desired behavior, provided reinforcement and soon the student will learn to perform the behavior on his own. On which principle is Teacher F's conviction based?
  - A. Cognitivism
  - B. Environmentalism
  - C. Behaviorism
  - D. Constructivism

18. In a social studies class, Teacher I presents a morally ambiguous situation and asks his students what they would do. On whose theory is Teacher I's technique based?
- Kohlberg
  - Bandura
  - Piaget
  - Bruner
19. Based on Freud's psychoanalytic theory which component(s) of personality is (are) concerned with a sense of right and wrong?
- Super-ego
  - Super-ego and Ego
  - Id
  - Ego
20. Which does Naom Chomsky, assert about language learning for children?
- Young children learn and apply grammatical rules and vocabulary as they are exposed to them.*
  - Begin formal teaching of grammatical rules to children as early as possible.*
  - Do not require initial formal language teaching for children.*
- I and III
  - II only
  - I only
  - I and II
21. Which teaching activity is founded on Bandura's Social Learning Theory?
- Lecturing
  - Modeling
  - Questioning
  - Inductive Reasoning
22. Behavior followed by pleasant consequences will be strengthened and will be more likely to occur in the future. Behavior followed by unpleasant consequences will be weakened and will be less likely to be repeated in the future. Which one is explained?
- Freud's Psychoanalytic Theory
  - Thorndike's Law of Effect
  - B. F. Skinner's Operant Conditioning Theory
  - Bandura's Social Learning Theory
23. Bruner's theory on intellectual development moves from enactive to iconic and symbolic stages. In which stage(s) are diagrams helpful to accompany verbal information?
- Enactive and iconic
  - Symbolic
  - Symbolic and enactive
  - Iconic
24. In a treatment for alcoholism, Ramil was made to drink an alcoholic beverage and then made to ingest a drug that produces nausea. Eventually, he was nauseated at the sight and smell of alcohol and stopped drinking alcohol. Which theory explains this?
- Operant conditioning
  - Social Learning Theory
  - Associative Learning
  - Attribution Theory
25. A mother gives his boy his favorite snack everytime the boy cleans up his room. Afterwards, the boy cleaned his room everyday in anticipation of the snack. Which theory is illustrated?
- Associative Learning
  - Classical Conditioning
  - Operant Conditioning
  - Pavlovian Conditioning
26. Researchers conducted show that teacher's expectations of students become. Do not require initial formal language teaching for children self-fulfilling prophecies. What is this phenomenon called?
- Halo effect
  - Pygmalion effect
  - Ripple effect
  - Hawthorne effect
27. What does extreme authoritarianism in the home reinforce in learners?
- Doing things on their own initiative
  - Ability to direct themselves.
  - Dependence on others for direction.
  - Creativity in work.
28. Theft of school equipment like tv, computer, etc. by teenagers in the community itself is becoming a common phenomenon. What does this incident signify?
- Prevalence of poverty in the community.
  - Inability of school to hire security guards.
  - Deprivation of Filipino schools.
  - Community's lack of sense of co-ownership.
29. A student passes a research report poorly written but ornately presented in a folder to make up for the poor quality of the book report content. Which Filipino trait does this practice prove? Emphasis on \_\_\_\_\_.
- art over academics
  - substance over "*orma*"
  - art over science
  - "*orma*" over substance
30. Student Z does not study at all but when the Licensure Examination for Teachers (LET) comes, before he takes the LET, he spends one hour or more praying for a miracle, i.e. to pass the exam. Which attitude towards religion or God is displayed?
- Religion as fake
  - Religion as magic
  - Religion as authentic
  - Religion as real
31. During the Spanish period, what was/were the medium/media of instruction in schools?
- The Vernacular
  - English
  - Spanish
  - Spanish and the Vernacular
32. All subjects in Philippine elementary and secondary schools are expected to be taught using the integrated approach. This came about as a result of the implementation of \_\_\_\_\_.
- Program for Decentralized Education
  - School-Based Management
  - Basic Education Curriculum
  - Schools First Initiative

33. Under which program were students who were not accommodated in public elementary and secondary schools because of lack of classroom, teachers, and instructional materials, were enrolled in private schools in their respective communities at the government's expense?
- Government Assistance Program
  - Study Now-Pay Later
  - Educational Service Contract System
  - National Scholarship Program
34. What was the most prominent educational issue of the mid 1980s?
- Bilingual Education
  - Values Education
  - Accountability
  - Mainstreaming
35. Availment of the Philippine Education Placement Test (PEPT) for adults and out-of-school youths is in support of the government's educational program towards \_\_\_\_\_.
- equitable access
  - quality
  - quality and relevance
  - relevance
36. The main purpose of compulsory study of the Constitution is to \_\_\_\_\_
- develop students into responsible, thinking citizens
  - acquaint students with the historical development of the Philippine Constitution
  - make constitutional experts of the students
  - prepare students for law-making
37. Which one may support equitable access but may sacrifice quality?
- Open admission
  - School accreditation
  - Deregulated tuition fee hike
  - Selective retention
38. With which goals of educational institutions as provided for by the Constitution is the development of work skills aligned?
- To develop moral character
  - To teach the duties of citizenship
  - To inculcate love of country
  - To develop vocational efficiency
39. Studies in the areas of neurosciences disclosed that the human brain has limitless capacity. What does this imply?
- Some pupils are admittedly not capable of learning.
  - Every pupil has his own native ability and his learning is limited to this native ability.
  - Every child is a potential genius.
  - Pupils can possibly reach a point where they have learned everything.
40. Based on Piaget's theory, what should a teacher provide for children in the concrete operational stage?
- Activities for hypothesis formulation.
  - Learning activities that involve problems of classification and ordering.
  - Games and other physical activities to develop motor skills.
  - Stimulating environment with ample objects to play with.
41. Based on Piaget's theory, what should a teacher provide for children in the sensimotor stage?
- Games and other physical activities to develop motor skill.
  - Learning activities that involve problems of classification and ordering.
  - Activities for hypothesis formulation.
  - Stimulating environment with ample objects to play with.
42. Which behavior is exhibited by a student who is strong in interpersonal intelligence?
- Works on his/her own.
  - Keeps interest to himself/herself.
  - Seeks out a classmate for help when problem occurs.
  - Spends time meditating.
43. A sixth grade twelve-year old boy comes from a dysfunctional family and has been abused and neglected. He has been in two orphanages and three different elementary schools. The student can decode on the second grade level, but he can comprehend orally material at the fourth or fifth grade level. The most probable cause/s of this student's reading problem is/are \_\_\_\_\_.
- emotional factors
  - poor teaching
  - neurological factors
  - immaturity
44. A child who gets punished for stealing candy may not steal again immediately. But this does not mean that the child may not steal again. Based on Thorndike's theory on punishment and learning, this shows that \_\_\_\_\_
- punishment strengthens a response
  - punishment removes a response
  - punishment does not remove a response
  - punishment weakens a response
45. It is not wise to laugh at a two-year old child when he utters bad word because in his stage he is learning to \_\_\_\_\_.
- consider other's views
  - distinguish sex differences
  - socialize
  - distinguish right from wrong
46. John Watson said: "*Men are built not born.*" What does this statement point to?
- The ineffectiveness of training on a person's development.
  - The effect of environmental stimulation on a person's development.
  - The absence of genetic influence on a person's development.
  - The effect of heredity.
47. Which types of play is most characteristic of a four to six-year old child?
- Solitary and onlooker plays
  - Associative and cooperative plays
  - Associative and onlooker plays
  - Cooperative and solitary plays
48. All of the following describe the development of children aged eleven to thirteen EXCEPT \_\_\_\_\_.
- they shift from impulsivity to adaptive ability
  - sex differences in IQ becomes more evident
  - they exhibit increase objectivity in thinking
  - they show abstract thinking and judgement

49. Rodel is very aloof and cold in his relationships with his classmates. Which basic goal must have not been attained by Rodel during his developmental years, according to Erikson's theory on psychological development?
- Autonomy
  - Trust
  - Initiative
  - Generativity
50. Ruben is very attached to his mother and Ruth to her father. In what developmental stage are they according to Freudian psychological theory?
- Oedipal stage
  - Latent stage
  - Anal stage
  - Pre-genital stage
51. Which assumption underlies the teacher's use of performance objectives?
- Not every form of learning is observable.
  - Performance objectives assure the learner of learning.
  - Learning is defined as a change in the learner's observable performance.
  - The success of learner is based on teacher performance.
52. The principle of individual differences requires teachers to \_\_\_\_\_.
- give greater attention to gifted learners
  - provide for a variety of learning activities
  - treat all learners alike while in the classroom
  - prepare modules for slow learners in class
53. In instructional planning it is necessary that the parts of the plan from the first to the last have \_\_\_\_\_.
- clarity
  - symmetry
  - coherence
  - conciseness
54. A goal-oriented instruction culminates in \_\_\_\_\_.
- planning of activities
  - evaluation
  - identification of topics
  - formulation of objectives
55. A teacher's summary of a lesson serves the following functions, EXCEPT
- it links the parts of the lesson
  - It brings together the information that has been discussed
  - it makes provisions for full participation of students.
  - it clinches the basic ideas or concepts of the lesson.
56. In Krathwohl's affective domain of objectives, which of the following is the lowest level of affective behavior?
- Valuing
  - Characterization
  - Responding
  - Organization
57. The following are used in writing performance objectives, EXCEPT
- delineate
  - diagram
  - integrate
  - comprehend
58. If a teacher plans a constructivist lesson, what will he most likely do? Plan how he can
- do evaluate his students' work
  - do reciprocal teaching
  - lecture to his students
  - engage his students in convergent thinking
59. In mastery learning, the definition of an acceptable standard of performance is called a
- SMART
  - criterion measure
  - behavior
  - condition
60. The primary objective of my lesson is: *"To add similar fractions correctly."* Before I can do this I must first aim at this specific objective: *"To distinguish a numerator from a denominator."* What kind of objective is the latter?
- Major
  - Terminal
  - Enabling
  - Primary
61. Which behavioral term describes a lesson outcome in the highest level of Bloom's cognitive domain?
- Create
  - Evaluate
  - Analyze
  - Design
62. As a teacher, what do you do when you engage yourself in major task analysis?
- Test if learning reached higher level thinking skills.
  - Breakdown a complex task into sub-skills.
  - Determine the level of thinking involved.
  - Revise lesson objectives.
63. Teacher G's lesson objective has something to do with the skill of synthesizing? Which behavioral term is most appropriate?
- Test
  - Assess
  - Appraise
  - Theorize
64. In Krathwohl's taxonomy of objectives in the affective, which is most authentic?
- Characterization
  - Organization
  - Responding
  - Valuing
65. *"A stitch in time saves nine"*, so goes the adage.. Applied to classroom management, this means that we \_\_\_\_\_
- may not occupy ourselves with disruptions which are worth ignoring because they are minor
  - must be reactive in our approach to discipline
  - have to resolve minor disruptions before they are out of control
  - may apply 9 rules out of 10 consistently



66. How can you exhibit referent power on the first day of school?
- By making them feel you know what you are talking about.
  - By telling them the importance of good grades.
  - By reminding your students your authority over them again and again.
  - By giving your students a sense of belonging and acceptance.
67. Teacher B clears his throat to communicate disapproval of a student's behavior. Which specific influence technique is this?
- Signal interference
  - Direct appeal
  - Interest boosting
  - Proximity control
68. How can you exhibit expert power on the first day of school?
- By making them feel you know what you are talking about.
  - By making them realize the importance of good grades.
  - By reminding them your students your authority over them again and again.
  - By giving your students a sense of belonging and acceptance.
69. Teacher H strives to draw participation of every student into her classroom discussion. Which student's need is she trying to address? The need \_\_\_\_\_
- to show their oral abilities to the rest of the class
  - to be creative
  - to feel significant and be part of a group
  - to get everything out in the open
70. Which is a sound classroom management practice?
- Avoid establishing routines; routines make your student robots.
  - Establish routines for all daily needs and tasks.
  - Apply rules and policies on a case to case basis.
  - Apply reactive approach to discipline.
71. An effective classroom manager uses low-profile classroom control. Which is a low-profile classroom technique?
- Note to parents
  - After-school detention
  - Withdrawal of privileges
  - Raising the pitch of the voice
72. Which is one characteristic of an effective classroom management?
- It quickly and unobtrusively redirects misbehavior once it occurs.
  - It teaches dependence on others for self-control.
  - It respects cultural norms of a limited group students.
  - Strategies are simple enough to be used consistently.
73. How can you exhibit legitimate power on the first day of school?
- By making your students feel they are accepted for who they are.
  - By informing them you are allowed to act in loco parentis.
  - By making them realize the importance of good grades.
  - By making them feel you have mastery of subject matter.
74. With-it-ness, according to Kounin, is one of the characteristics of an effective classroom manager. Which phrase goes with it?
- Have hands that write fast.
  - Have eyes on the back of your heads.
  - Have a mouth ready to speak.
  - Have minds packed with knowledge.
75. Which is an appropriate way to manage off-task behavior?
- Make eye contact.
  - Stop your class activity to correct a child who is no longer on task.
  - Move closer to the child.
  - Redirect a child's attention to task and check his progress to make sure he is continuing to work.
76. Referring to Teacher S, Nicolle describes her teacher as "*fair, caring and someone you can talk to.*" Which power or leadership does Teacher S have?
- Referent power
  - Legitimate power
  - Reward power
  - Expert power
77. Research tells that teachers ask mostly content questions. Which of the following terms does **NOT** refer to content question?
- Closed
  - Direct
  - Concept
  - Convergent
78. Read the following then answer the question:

TEACHER: IN WHAT WAYS OTHER THAN THE PERIODIC TABLE MIGHT WE PREDICT THE UNDISCOVERED ELEMENTS?

BOBBY: WE COULD GO TO THE MOON AND SEE IF THERE ARE SOME ELEMENTS THERE WE DON'T HAVE.

BETTY: WE COULD DIG DOWN TO THE CENTER OF THE EARTH AND SEE IF WE FIND ANY OF THE MISSING ELEMENTS.

RICKY: WE COULD STUDY DEBRIS FROM THE METEORITES IF WE CAN FIND ANY.

TEACHER: THOSE ARE ALL GOOD ANSWERS BUT WHAT IF THOSE, EXCURSIONS TO THE MOON, TO THE CENTER OF THE EARTH, OR TO FIND METEORITES WERE TOO COSTLY AND TIME CONSUMING? HOW MIGHT WE USE THE ELEMENTS WE ALREADY HAVE HERE ON EARTH TO FIND SOME NEW ONES?

Question: Which questioning strategy/ies does/do the exchange of thoughts above illustrate?

- Funneling
  - Sowing and reaping
  - Nose-dive
  - Extending and lifting
79. Which questioning practice promotes more class interaction?
- Asking the question before calling on a student.
  - Focusing on divergent questions.
  - Focusing on convergent questions.
  - Asking rhetorical questions.
80. Which technique should a teacher use to encourage response if his students do not respond to his question?
- Ask a specific student to respond, state the question, and wait a response.
  - Tell the class that it will have detention unless answer are forthcoming.
  - Ask another question, an easier one.
  - Wait for a response.

81. Teacher P wants to develop the skill of synthesizing in her pupils. Which one will she do?
- Ask her students to formulate a generalization from the data shown in graphs.
  - Ask her students to answer questions beginning with "What if ... "
  - Tell her pupils to state data presented in graphs.
  - Directs her students to ask questions on the parts of the lesson not understood.
82. The following are sound specific purposes of questions EXCEPT
- to call the attention of an inattentive student
  - to teach via student answers
  - to stimulate learners to ask questions
  - to arouse interest and curiosity
83. For maximum interaction, a teacher ought to avoid \_\_\_\_\_ questions.
- informational
  - rhetorical
  - leading
  - divergent
84. If teacher has to ask more higher-order questions, he has to ask more \_\_\_\_\_ questions.
- closed
  - fact
  - concept
  - convergent
85. Which is **NOT** a sound purpose for asking questions?
- To probe deeper after an answer is given.
  - To discipline a bully in class.
  - To remind students of a procedure.
  - To encourage self-reflection.
86. After giving an input on a good paragraph, Teacher W asks her students to rate a given paragraph along the elements of a good paragraph. The students' task is in level of \_\_\_\_\_
- application
  - analysis
  - evaluation
  - synthesis
87. Read the following then answer the question

*TEACHER: IN WHAT WAYS OTHER THAN THE PERIODIC TABLE MIGHT WE PREDICT THE UNDISCOVERED ELEMENTS?*

*BOBBY: WE COULD GO TO THE MOON AND SEE IF THERE ARE SOME ELEMENTS THERE WE DON'T HAVE.*

*BETTY: WE COULD DIG DOWN INTO THE CENTER OF THE EARTH AND SEE IF WE FIND ANY OF THE MISSING ELEMENTS*

*RICKY: WE COULD STUDY DEBRIS FROM THE METEORITES IF WE CAN FIND ANY*

*TEACHER: THOSE ARE ALL GOOD ANSWERS. BUT WHAT IF THOSE EXCURSIONS TO THE MOON, TO THE CENTER OF THE EARTH, OR TO FIND METEORITES WERE TOO COSTLY AND TIME CONSUMING? HOW MIGHT WE USE THE ELEMENTS WE ALREADY HAVE HERE ON EARTH TO FIND SOME NEW ONES?*

Question: The Teacher's questions in the above exchange are examples of \_\_\_\_\_ questions.

- fact
  - concept
  - direct
  - closed
88. Read this question: "*How will you present the layers of the earth to your class?*" This is a question that
- directs
  - leads the student to evaluate
  - assesses cognition
  - probes creative thinking
89. The teacher's first task in the selection of media in teaching is to determine the \_\_\_\_\_.
- choice of the students
  - availability of the media
  - objectives of the lesson
  - technique to be used
90. Based on Edgar Dale's Cone of Experience, which activity is closest to the real thing?
- View images
  - Attend exhibit
  - Watch a demo
  - Hear
91. Based on Edgar Dale's Cone of Experience, which activity is farthest from the real thing?
- Read
  - Hear
  - View images
  - Attend exhibit
92. Which criterion should guide a teacher in the choice of instructional devices?
- Attractiveness
  - Cost
  - Novelty
  - Appropriateness
93. To elicit more student's response, Teacher G made use of covert responses. Which one did she **NOT** do?
- She had the students write their response privately.
  - She showed the correct answers on the overhead after the students have written their responses.
  - She had the students write their responses privately then called each of them.
  - She refrained from judging on the student's responses.
94. Teacher W wants to review and check on the lesson of the previous day? Which one will be most reliable?
- Having students identify difficult homework problems.
  - Having students correct each other's work.
  - Sampling the understanding of a few students.
  - Explicitly reviewing the task-relevant information necessary for the day's lesson.
95. Teacher M's pupils are quite weak academically and his lesson is already far behind his time table. How should Teacher M proceed with his lesson?
- Experientially
  - Inductively
  - Logically
  - Deductively

96. Which activity should a teacher have more for his students if he wants them to develop logical-mathematical thinking?
  - A. Problem solving
  - B. Choral reading
  - C. Drama
  - D. Storytelling
97. Which guideline must be observed in the use of prompting to shape the correct performance of your students?
  - A. Use the least intrusive prompt first.
  - B. Use all prompts available.
  - C. Use the most intrusive prompt first.
  - D. Refrain from using prompts.
98. To promote effective practice, which guideline should you bear in mind? Practice should be
  - A. done in an evaluative atmosphere
  - B. difficult for students to learn a lesson
  - C. arranged to allow students to receive feedback
  - D. take place over a long period of time
99. Which is one role of play in the pre-school and early childhood years?
  - A. Develops competitive spirit.
  - B. Separates reality from fantasy.
  - C. Increases imagination due to expanding knowledge and emotional range.
  - D. Develops the upper and lower limbs.
100. Teacher T taught a lesson denoting ownership by means of possessives. He first introduced the rule, and then gave examples, followed by class exercises, then back to the rule before he moved into the second rule. Which presenting technique did he use?
  - A. Combinatorial
  - B. Comparative
  - C. Part-whole
  - D. Sequential
101. The burnout malady gets worse if a teacher doesn't intervene to change whatever areas he or she can control. Which one can renew a teacher's enthusiasm?
  - A. Stick to job
  - B. Initiate changes in jobs
  - C. Judge someone else as wrong
  - D. Engage in self-pity
102. Which Filipino trait works against the shift in teacher's role from teacher as a fountain of information to teacher as facilitator?
  - A. Authoritativeness
  - B. Authoritarianism
  - C. Hiya
  - D. Pakikisama
103. Which method has been proven to be effective in courses that stress acquisition of knowledge?
  - A. Socratic method
  - B. Cooperative learning
  - C. Mastery learning
  - D. Indirect instruction
104. Direct instruction is for facts, rules, and actions as indirect instruction is for \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.
  - A. hypotheses, verified data and conclusions
  - B. concepts, patterns and abstractions
  - C. concepts, processes and generalizations
  - D. guesses, data and conclusions
105. For which may you use the direct instruction method?
  - A. Become aware of the pollutants around us.
  - B. Appreciate Milton's Paradise Lost.
  - C. Use a microscope properly.
  - D. Distinguish war from aggression.
106. I want to teach concepts, patterns and abstractions. Which method is most appropriate?
  - A. Indirect instruction
  - B. Discovery
  - D. Direct instruction
  - E. Problem solving
107. What should a teacher do for students in his class who are not on grade level?
  - A. Give them materials on their level and let them work at a pace that is reasonable for them, trying to bring them up to a grade level.
  - B. Give them the same work as the other students, because they will absorb as much as they are capable of.
  - C. Give them the same work as the other students, not much, so that they won't feel embarrassed.
  - D. Give them work on the level of the other students and work a little above the classmates level to challenge them.
108. By what name is indirect instruction the Socratic method also known?
  - A. Mastery learning
  - B. Indirect Method
  - C. Morrison method
  - D. Questioning method
109. Teacher B is a teacher of English as a Second Language. She uses vocabulary cards, fill-in-the-blank sentences, dictation and writing exercises in teaching a lesson about grocery shopping. Based on this information, which of the following is a valid conclusion?
  - A. The teacher is reinforcing learning by giving the same information in, a variety of methods.
  - B. The teacher is applying Bloom's hierarchy of cognitive learning.
  - C. The teacher wants to do less talk.
  - D. The teacher is emphasizing listening and speaking skills.
110. Which is a form of direct instruction?
  - A. Discovery process
  - B. Problem solving
  - C. Programmed instruction
  - D. Inductive reasoning
111. Which does **NOT** belong to the group of alternative learning systems?
  - A. Multi-grade grouping
  - B. Multi-age grouping
  - C. Graded education
  - D. Non-graded grouping
112. Teacher H gave her first-grade class a page with a story in which pictures take the place of some words. Which method did she use?
  - A. The whole language approach
  - B. The Spaulding method
  - C. The rebus method
  - D. The language experience approach

113. Teacher B uses the direct instruction strategy. Which sequence of steps will she follow?
- I. *Independent practice*
  - II. *Feedback and correctiveness*
  - III. *Guided student practice*
  - IV. *Presenting and structuring*
  - V. *Reviewing the previous day's work*
- A. V-II-IV-III-I
  - B. III-II-IV-I-V
  - C. V-IV-III-II-I
  - D. I-V-II-III-IV
114. Why should a teacher **NOT** use direct instruction all the time?
- A. It requires much time.
  - B. It requires use of many supplementary materials.
  - C. It is generally effective only in the teaching of concepts and abstractions.
  - D. It reduces students engagement in learning.
115. Teacher A is a teacher of English as a Second Language. She uses vocabulary cards, fill-in-the-blank sentences, dialogues, dictation and writing exercises in teaching a lesson about grocery shopping. Based on this information, which of the following is a valid conclusion.
- A. The teacher is applying Bloom's hierarchy of cognitive learning.
  - B. The teacher is teaching in a variety of ways because not all students learn in the same manner.
  - C. The teacher wants to make her teacher easier by having less talk.
  - D. The teacher is emphasizing reading and writing skills.
116. I combined several subject areas in order to focus on a single concept for inter-disciplinary teaching. Which strategy/method did I use?
- A. Problem-entered learning
  - B. Thematic instruction
  - C. Reading-writing activity
  - D. Unit method
117. Teacher E discussed how electricity flows through wires and what generates the electric charge. Then she gave the students wires, bulbs, switches, and dry cells and told the class to create a circuit that will increase the brightness of each bulb. Which one best describes the approach used?
- A. It used a taxonomy of basic thinking skills
  - B. It was constructivist
  - C. It helped students understand scientific methodology
  - D. It used cooperative learning
118. With indirect instruction in mind, which does **NOT** belong to the group?
- A. Problem solving
  - B. Lecture-recitation
  - C. Inductive reasoning
  - D. Discovery
119. I drew learners into several content areas and encouraged them to solve a complex question for inter-disciplinary teaching. Which strategy did I use?
- A. Problem-centered learning
  - B. Unit method
  - C. Reading-writing activity
  - D. Thematic instruction
120. In self-directed learning, to what extent should a teacher's "*scaffolding*" be?
- A. To a degree the student needs it.
  - B. None, to force the student to learn by himself.
  - C. To the minimum, to speed up development of student's sense of independence.
  - D. To the maximum, in order to extend to the student all the help he needs.
121. Which is a major advantage of a curriculum-based assessment?
- A. It is informal in nature.
  - B. It connects testing with teaching.
  - C. It tends to focus on anecdotal information on student progress.
  - D. It is based on a norm-referenced measurement model.
122. Which are direct measures of competence?
- A. Personality tests
  - B. Performance tests
  - C. Paper-and-pencil tests
  - D. Standardized test
123. "*What is most likely to happen to our economy when export continuously surpasses import*" is a thought question on \_\_\_\_\_.
- A. creating
  - B. relating cause-and-effect
  - C. synthesizing
  - D. predicting
124. The test item "*Group the following items according to shape*" is a thought test item on \_\_\_\_\_.
- A. creating
  - B. classifying
  - C. generalizing
  - D. comparing
125. In the context on the theory on multiple intelligences, what is one weakness of the paper-pencil test?
- A. It is not easy to administer.
  - B. It puts the non-linguistically intelligent at a disadvantage
  - C. It utilizes so much time.
  - D. It lacks reliability.
126. With synthesizing skills in mind, which has the highest diagnostic value?
- A. Essay test
  - B. Performance test
  - C. Completion test
  - D. Multiple choice test
127. Which one can best evaluate students' attitudinal development?
- A. Essay test
  - B. Portfolio
  - C. Observation
  - D. Short answer test
128. With specific details in mind, which one has (have) a stronger diagnostic value?
- A. Multiple choice test
  - B. Non-restricted essay test
  - C. Restricted essay test
  - D. Restricted and non-restricted essay tests

129. Teacher A discovered that his pupils are very good in dramatizing. Which tool must have helped him discover his pupils' strength?
- A. Portfolio assessment
  - B. Performance test
  - C. Journal entry
  - D. Paper-and-pencil test
130. Which can effectively measure students' awareness of values?
- A. Projective techniques
  - B. Moral dilemma
  - C. Likert scales
  - D. Anecdotal record
131. Teacher F wanted to teach the pupils the skill to do cross stitching. Her check up quiz was a written test on the steps of cross stitching. Which characteristic of a good test does it lack?
- A. Scorability
  - B. Reliability
  - C. Objectivity
  - D. Validity
132. If your Licensure Examination Test (LET) items sample adequately the competencies listed in the syllabi, it can be said that the LET possesses \_\_\_\_\_ validity.
- A. concurrent
  - B. construct
  - C. content
  - D. predictive
133. *"In the light of the facts presented, what is most likely to happen when ... ?"* is a sample thought question on
- A. inferring
  - B. generalizing
  - C. synthesizing
  - D. justifying
134. In a criterion-referenced testing, what must you do to ensure that your test is fair?
- A. Make all of the questions true or false.
  - B. Ask each student to contribute one question.
  - C. Make twenty questions but ask the students to answer only ten of their choice.
  - D. Use the objectives for the units as guide in your test construction.
135. Which test has broad sampling of topics as strength?
- A. Objective test
  - B. Short answer test
  - C. Essay test
  - D. Problem type
136. Which is the first step in planning an achievement test?
- A. Define the instructional objective.
  - B. Decide on the length of the test.
  - C. Select the type of test items to use.
  - D. Build a table of specification.
137. The first thing to do in constructing a periodic test is for a teacher to \_\_\_\_\_
- A. decide on the number of items for the test
  - B. go back to her instructional objectives
  - C. study the content
  - D. decide on the type of test to construct
138. In the parlance of test construction what does *"TOS"* mean?
- A. Table of Specifics
  - B. Table of Specifications
  - C. Table of Specific Test Items
  - D. Team of Specifications
139. Shown a picture of children in sweaters inside the classroom, the students were asked this question: *"In what kind of climate do these children live?"* This is a thought question on \_\_\_\_\_
- A. inferring
  - B. applying
  - C. creating
  - D. predicting
140. Which guideline in test construction is **NOT** observed in this test item Jose Rizal wrote \_\_\_\_\_.
- A. The central problem should be packed in the stem.
  - B. There must be only one correct answer.
  - C. Alternatives must have grammatical parallelism.
  - D. The alternates must be plausible.
141. Quiz is to formative test while periodic is to \_\_\_\_\_
- A. criterion-reference test
  - B. summative test
  - C. norm-reference test
  - D. diagnostic test
142. If teacher wants to test students' ability to organize ideas, which type of test should she formulated
- A. Multiple-choice type
  - B. Short answer
  - C. Essay
  - D. Technical problem
143. Out of 3 distracters in a multiple choice test item, namely B, C, and D, no pupil chose D as answer. This implies that D is \_\_\_\_\_
- A. an ineffective distracter
  - B. a vague distracter
  - C. an effective distracter
  - D. a plausible distracter
144. Study this group of tests which was administered with the following results, then answer the question

Subject	Mean	SD	Ronnels's Score
Math	56	10	43
Physics 41	9	31	
English 80	16	109	

- In which subject(s) did Ronnel perform best in relation to the group's performance?
- A. Physics and Math
  - B. English
  - C. Physics
  - D. Math

145. Study this group of tests which was administered with the following results, then answer the question.

Subject	Mean	SO	Ronnel's Score
Math	56	10	43
Physics	41	9	31
English	80	16	109

- In which subject(s) did Ronnel perform most poorly in relation to the group's performance?
- A. English
  - B. English and Math
  - C. Math
  - D. Physics
146. What can be said of Peter who obtained a score of 75 in a Grammar objective test?
- A. He answered 75 items in the test correctly.
  - B. He answered 75% of the test items correctly.
  - C. His rating is 75.
  - D. He performed better than 5% of his classmates.
147. In his second item analysis, Teacher H found out that more from the lower group got the test item # 6 correctly. This means that the test item \_\_\_\_\_.
- A. has a negative discriminating power
  - B. has a lower validity
  - C. has a positive discriminating power
  - D. has a high reability
148. *NSAT* and *NEAT* results are interpreted against set mastery level. This means that *NSAT* and *NEAT* fall under \_\_\_\_\_.
- A. intelligence test
  - B. aptitude test
  - C. criterion-referenced test
  - D. norm-referenced test
149. Teacher Y does norm-referenced interpretation of scores. Which of the following does she do?
- A. She describes group performance in relation to a level of mastery set.
  - B. She uses a specified content as its frame of reference.
  - C. She compares every individual students' scores with others' scores.
  - D. She describes what should be their performance.
150. Test norms are established in order to have a basis for \_\_\_\_\_.
- A. establishing learning goals
  - B. interpreting test results
  - C. computing grades
  - D. identifying pupils' difficulties
151. Which is most implied by a negatively skewed score distribution?
- A. The scores are evenly distributed from left to the right
  - B. Most pupils are achievers
  - C. Most of the scores are low
  - D. Most of the scores are high
152. Which holds true to standardized tests?
- A. They are used for comparative purposes
  - B. They are administered differently
  - C. They are scored according to different standards
  - D. They are used for assigning grades
153. Students' scores on a test were: 72, 72, 73, 74, 76, 78, 81, 83, 85. The score 76 is the \_\_\_\_\_.
- A. mode
  - B. average
  - C. mean
  - D. median
154. Are percentile ranks the same as percentage correct?
- A. It cannot be determined unless scores are given.
  - B. It cannot be determined unless the number of examinees is given.
  - C. No
  - D. Yes
155. In which competency do my students find the greatest difficulty? In the item with a difficulty index of \_\_\_\_\_.
- A. 0.1
  - B. 0.9
  - C. 0.5
  - D. 1.0
156. Study this group tests which was administered wit the following results, then answer the question

Subject	Mean	SD	Ronnel's Score
Math	56	10	43
Physics	41	9	31
English	80	16	109

- In which subject(s) were the scores most homogenous?
- A. Math
  - B. English
  - C. Physics
  - D. Physics and Math
157. Which measure(s) of central tendency separate(s) the top half of the group from the bottom half?
- A. Median
  - B. Mean
  - C. Median and Mean
  - D. Mode
158. Which applies when skewness is zero?
- A. Mean is greater than the median
  - B. Median is greater than mean
  - C. Scores have three modes
  - D. Scores are normally distributed
159. Standard deviation is to variability as mode to \_\_\_\_\_.
- A. level of difficulty
  - B. discrimination
  - C. correlation
  - D. central tendency

160. What is the mean of this score distribution: 4, 5, 6, 7, 8, 9, 10?
- 7
  - 6
  - 8.5
  - 7.5
161. Standard deviation is to variability as mean is to \_\_\_\_\_.
- coefficient of correlation
  - central tendency
  - discrimination index
  - level of difficulty
162. What measure of central tendency does the number 16 represent in the following data: 14, 15, 17, 16, 19, 20, 16, 14, 16?
- Mode
  - Median
  - Mode and median
  - Mean
163. Which one can enhance the comparability of grades?
- Using common conversion table for translating test scores in to ratings
  - Formulating tests that vary from one teacher to another
  - Allowing individual teachers to determine factors for rating
  - Individual teachers giving weights to factors considered for rating
164. Which describes norm-referenced grading?
- The performance of the group
  - What constitutes a perfect score
  - The students' past performance
  - An absolute standard
165. The search for related literature by accessing several databases by the use of a telephone line to connect a computer library with other computers that have database is termed \_\_\_\_\_.
- compact disc search
  - manual search
  - on-line search
  - computer search
166. Two students are given the WISE II. One has a full scale IQ of 91, while the other has an IQ of 109. Which conclusion can be drawn?
- The second student has significantly higher intellectual ability
  - The first student is probably below average, while the second has above average potential
  - Both students are functioning in the average range of intellectual ability
  - Another IQ test should be given to truly assess their intellectual potential
167. Which type of report refers to "*on-the-spot*" description of some incident, episode or occurrence that is being observed and recorded as being of possible significance?
- Autobiographical report
  - Biographical report
  - Value and interest report
  - Anecdotal report
168. The best way for a guidance counselor to begin to develop study skills and habits in underachieving student would be to \_\_\_\_\_.
- have these underachieving students observe the study habits of excelling students
  - encourage students to talk about study habits from their own experiences
  - have them view film strips about various study approaches
  - give out a list of effective study approaches
169. Which illustrates a developmental approach in guidance and counseling?
- Spotting on students in need of guidance
  - Teaching students how to interact in a positive manner
  - Acting as a mediator
  - Making the decision for the confused student
170. Who among the following needs less verbal counseling but needs more concrete and operational forms of assistance? The child who \_\_\_\_\_.
- has mental retardation
  - has attention-deficit disorder
  - has learning disability
  - has conduct disorder
171. The cultivation of reflective and meditative skills in teaching is an influence of \_\_\_\_\_.
- Shintoism
  - Zen Buddhism
  - Confucianism
  - Taoism
172. Helping in the development of graduates who are "*maka-Diyos*" is an influence of
- naturalistic morality
  - classical Christian morality
  - situational morality
  - dialectical morality
173. The attention to the development of a deep respect and affection for our rich cultural past is an influence of \_\_\_\_\_.
- Confucius
  - Hegel
  - Teilhard de Chardin
  - Dewey
174. Whose teaching is in support of "*Education for All*" (EFA), he asserted that in teaching there should be no distinction of social classes.
- Sun Yat Sen
  - Confucius
  - Mencius
  - Lao tsu
175. We encounter people whose prayer goes like this: "*O God, if there is a God; save my soul, if I have a soul*" From whom is this prayer?
- Stoic
  - Empiricist
  - Agnostic
  - Skeptic

176. How would you select the most fit in government positions? Applying Confucius teachings, which would be the answer?
- By course accreditation of an accrediting body
  - By merit system and course accreditation
  - By merit system
  - By government examinations
177. Whose influence is the education program that puts emphasis on self-development. through the classics, music, and rituals?
- Buddha
  - Mohammed
  - Confucius
  - Lao tsu
178. Your teacher is of the opinion that the world and everything in it are ever changing and so teaches you the skill to cope with change. What is his governing philosophy?
- Idealism
  - Existentialism
  - Experimentalism
  - Realism
179. Value clarification as a strategy in Values Education classes is anchored on which philosophy?
- Existentialism
  - Christian philosophy
  - Idealism
  - Hedonism
180. A guest speaker in one graduation rites told his audience: *"Reminder, you are what you choose to be."* The guest speaker is more of a/an \_\_\_\_\_.
- realistic
  - pragmatist
  - idealist
  - existentialist
181. *"All men are pretty much alike. It is only by custom that they are set apart"*, said one Oriental philosopher. Where can this thought be most inspiring?
- In a multi-cultural group of learners
  - In multi-cultural and heterogeneous groups of learners and indigenous peoples' group
  - In a class composed of indigenous peoples
  - In heterogeneous class of learners
182. From whom do we owe the theory of deductive interference as illustrated in syllogisms
- Plato
  - Scorates
  - Aristotle
  - Pythagoras
183. Teacher A knows of the illegal activities of a neighbor but keeps quiet in order not to be involved in any investigation. Which foundational principle of morality does Teacher A fail to apply?
- The end does not justify the means.
  - The principle of double-effect
  - Always do what is right.
  - Between two evils, do the lesser evil.
184. Teacher A is directed to pass an undeserving student with a death threat. Which advice will a hedonist give?
- Pass the student. Why suffer the threat?
  - Don't pass him. You surely will not like someone to give you a death threat in order to pass.
  - Don't pass him. Live by your principle of justice. You will get reward, if not in this life, in the next!
  - Pass the student. That will be of use to the student, his parents and you.
185. History books used in schools are replete with events portraying defeats and weaknesses of the Filipino as a people. How should you tackle them in the classroom?
- Present them and express your feelings of shame.
  - Present facts and use them as means in inspiring your class to learn from them.
  - Present them and blame those people responsible or those who have contributed.
  - Present them as they are presented, and tell the class to accept reality.
186. If you agree with Rizal on how you can contribute to our nation's redemption, which should you work for?
- Opening our doors to foreign influence
  - Upgrading the quality of the Filipino through education
  - Stabilizing the political situation
  - Gaining economic recovery
187. Rights and duties are correlative. This means that \_\_\_\_\_.
- rights and duties regulate the relationship of men in society
  - rights and duties arise from natural law
  - each right carries with it one or several corresponding duties
  - rights and duties ultimately come from God
188. A teacher who equates authority with power does **NOT** \_\_\_\_\_.
- shame
  - develop self-respect in every pupil
  - retaliate
  - intimidate
189. Which is a true foundation of the social order?
- Obedient citizenry
  - The reciprocation of rights and duties
  - Strong political leadership
  - Equitable distribution of wealth
190. In what way can teachers uphold the highest possible standards of quality education?
- By continually improving themselves personally and professionally
  - By wearing expensive clothes to change people's poor perception of teachers
  - By working out undeserved promotions
  - By putting down other professions to lift the status of teaching
191. A teacher/student is held responsible for his actions because s/he \_\_\_\_\_.
- has instincts
  - is mature
  - has a choice
  - has reason
192. The typical autocratic teacher consistently does the following **EXCEPT**
- encouraging students.
  - shaming students.
  - ridiculing students.
  - intimidating students.



193. What should you do if a parent who is concerned about a grade his child received compared to another student's grade, demands to see both students' grades?
- Refuse to show either record.
  - Show both records to him.
  - Refuse to show any record without expressing permission from principal.
  - Show only his child's records.
194. Teacher Q does not want Teacher B to be promoted and so writes an anonymous letter against Teacher B accusing her of fabricated lies Teacher Q mails this anonymous letter to the Schools Division Superintendent. What should Teacher Q do if she has to act professionally?
- Submit a signed justifiable criticism against Teacher B, if there is any.
  - Go straight to the Schools Division Superintendent and gives criticism verbally.
  - Hire a group to distribute poison letters against Teacher B for information dissemination.
  - Instigate student activists to read poison letters over the microphone.
195. Teachers often complain of numerous non-teaching assignments that adversely, affect their teaching. Does this mean that teachers must be preoccupied only with teaching?
- Yes, if they are given other assignments, justice demands that they be properly compensated.
  - Yes, because other community leaders, not teachers, are tasked to leading community activities
  - NO, because every teacher is expected to provide leadership and initiative in activities for betterment of communities.
  - Yes, because teaching is enough full time job.
196. In a study conducted, the pupils were asked which nationality they preferred, if given a choice. Majority of the pupils wanted to be Americans. In this case, in which obligation relative to the state, do schools seem to be failing? In their obligation to \_\_\_\_\_.
- respect for all duly constituted authorities
  - promote national pride
  - promote obedience to the laws of the state
  - instill allegiance to the Constitution
197. In the Preamble of the Code of Ethics of Professional Teachers, which is **NOT** said of teachers?
- LET passers
  - Duly licensed professionals
  - Possess dignity and reputation
  - With high-moral values as well as technical and professional competence
198. Teacher H and Teacher I are rivals for promotion. To gain the favor of the promotional staff, Teacher I offers her beach resort for free for members of the promotional staff before the ranking. As one of the contenders for promotion, is this becoming of her to do?
- Yes. This will be professional growth for the promotional staff.
  - No. This may exert undue influence or the members of the promotional staff and so may fail to promote someone on the basis of merit.
  - Yes. The rare invitation will certainly be welcomed by an overworked promotional staff.
  - Yes. There's nothing wrong with sharing one's blessings.
199. Each teacher is said to be a trustee of the cultural and educational heritage of the nation and is, under obligation to transmit to learners such heritage. Which practice makes him fulfill such obligation?
- Use the latest instructional technology.
  - Observe continuing professional education.
  - Use interactive teaching strategies.
  - Study the life of Filipino heroes.
200. Teacher F is newly converted to a religion. Deeply convinced of his new found religion, he starts Monday classes by attacking one religion and convinces his pupils to attend their religious services on Sundays. Is this in accordance with the Code of Ethics of - Professional Teachers?
- Yes. What he does is values education.
  - No. A teacher should not use his position to proselyte others.
  - Yes. In the name of academic freedom, a teacher can decide what to teach.
  - Yes. What he does strengthens values education.

### **CURRICULUM DEVELOPMENT**

- In the bottom-up perspective, a reader could read a text when he/she
  - uses his prior knowledge to make sense of the text.
  - selects only the meaningful segments in the text.
  - can translate the visual symbols to their aural equivalent.
  - relates the text to other texts previously read.
- Which of the following reading skills or strategies is the closest to outside-in processing or reading?
  - inferencing
  - outlining
  - predicting outcomes
  - structural analysis
- Before a reader could read the **WORD**, he must learn to read the **WORLD** first. This statement implies that
  - students or readers must know the names of the letter first before they will know what the word means.
  - readers must know the sounds of the letters first before they will know what the word means.
  - words are only representations of the concepts that the child or reader knows before encountering the print.
  - the text supplies the readers with the necessary knowledge they need to make sense of the print.
- Teacher A explicitly teaches his/her students the rhetorical patterns of an informational text taken from a science textbook. Which of the following does the teacher want to develop in the reader?
  - print skill
  - content schemata
  - formal schemata
  - vocabulary knowledge
- Teacher B uses the timeline as a graphic organizer to teach the readers to understand a given expository text. Which of the following organizational structures might be the one used in the exposition of the text's information?
  - cause and effect
  - comparison and contrast
  - enumeration-description
  - sequence or procedural
- Teacher C has presented a reading lesson to her students. The lesson went on for a span of a week. After a day or two, when the teacher introduced a new lesson that requires them the knowledge of the previous lesson, the students no longer remember it. What could be the cause of this problem?
  - There was a lack of constant drill and practice given by the teacher.
  - The text used and the instruction given in the previous lesson is within the students' independent level.
  - There was a lack of activities that integrate the students' background experiences to the text presented.
  - The text used and the instruction given in the previous lesson is within the students' instructional level.

7. A reader was asked to fill in words to the sentences that are found inside the box below. Which of the following cueing systems did the reader fail to consider?

The candy is in the sweet. It's in the inside bowl.

- a. graphophonic cues  
b. syntactic cues  
c. semantic cues  
d. pragmatic cues
8. A reader read the word “plan” with a pronunciation like “plane” in the sentence, “It’s my plan to sail across the ocean.” The deviation of the reader in reading the text can be explained by the reader’s use of
- a. syntactic cues  
b. semantic cues  
c. graphophonic cues  
d. pragmatic cues
9. An office secretary encoded her boss’s memorandum for the company’s employees. The boss returned the memo to the secretary along with the note, “Please justify this!” The secretary felt bad and wanted to resign immediately because she thinks that it’s not her job to explain the contents of the memo. What cueing system did the secretary fail to consider?
- a. graphophonic  
b. syntactic  
c. semantic  
d. pragmatic
10. A reader was asked to read the sentence found inside the box below. Instead of reading the word “moved”, he substituted it with the word “ran”. Which of the cueing systems could have interfered his reading so that he manifests such a deviation from the text?

The car moved fast.

- a. graphophonic cues  
b. syntactic cues  
c. semantic cues  
d. pragmatic cues
11. Which of the following refers to the movement of the eyes across a line of text?
- a. saccades  
b. fixation  
c. clustering  
d. regression
12. A reader was asked to read a short story. When the reader started reading the text, he encountered several words that are unfamiliar. He tried to pause for a moment and tried to convert the word from visual to aural. Which of the following physiological correlates of effective reading does the reader evidently practice in this situation?
- a. saccadic movements  
b. return sweeps  
c. fixations  
d. clustering
13. The following are the reasons why fixation is not encouraged at times EXCEPT for
- a. Fixation allows readers to think of the meaning of a word encountered.  
b. Fixation slows down fluency.  
c. Readers are given the chance to do subvocalization when they fixate.  
d. Too much fixation results to poor comprehension.
14. It refers to the learned ability to see words in groups rather than as individual words.
- a. subvocalization  
b. regression  
c. fixation  
d. clustering
15. You asked a group of students to read a passage silently. After a minute of observation, you noticed that they are moving their lips as they do saccadic movements along the page. Which of the following terms refers to the practice that you have observed from your students?
- a. subvocalization  
b. regression  
c. fixation  
d. clustering
16. You asked your students to silently read the passage you have prepared for them. The passage is all about arthropods. As a student go over his passage, you noticed that he sweeps his hands along the page. After a while, his eyebrows met, as if he doubts what the passage is all about. You noticed that he made return sweeps to the text in a backward manner, as if trying to search for a previously read word. This situation implies that the reader is doing
- a. regression.  
b. saccades.  
c. fixation.  
d. subvocalization.
17. Regression is BEST when the reader uses it as a means to
- a. search for keywords in a text.  
b. monitor comprehension when the text seems not to make sense.  
c. read a passage all over again.  
d. highlight important lines in the text for retrieval purposes.
18. Teacher D entered the classroom and posted images that she has taken from the story she is about to tell the students. Before she started telling the story to the class, she grouped the students and asked them to make a story out of the pictures posted on the board. Which of the following approaches reflects the practice of the teacher?
- a. Explicit Phonics  
b. Basal Approach  
c. Embedded Phonics  
d. Language Experience Approach
19. Teacher E entered the classroom and showed a list of word families like cat, mat, fat, rat, pat, and bat. This practice clearly shows that the teacher employs
- a. Whole-language approach.  
b. Language experience approach.  
c. Literature-based approach.  
d. Phonics approach.
20. A student asked the teacher to tell him the meaning of the word “disestablishmentarianism”, which is found in the text that the student read. Instead of explicitly stating the meaning of the word, the teacher asked the student to segment the word and look for its base word, prefix, and suffixes so that they may construct the meaning of the word through these word parts. Which of the following vocabulary strategy did the teacher use to help the students arrive at the meaning of the unfamiliar word?
- a. semantic feature analysis  
b. semantic mapping  
c. structural analysis  
d. context clues

21. You were given a long passage to read in a short period of time. Along with the passage, you were also asked to answer questions regarding the text you have read. Which of the following reading strategies should you use to successfully meet your aim?
  - a. skimming
  - b. scanning
  - c. close reading
  - d. summarizing
22. You want your students to give you a detailed account of what they have understood from the story you have all read in the classroom. Which of the following assessment measures, tools, or procedures should you use to meet your goal?
  - a. think-aloud
  - b. cloze procedure
  - c. miscue analysis
  - d. standardized tests
23. A teacher wants to know the current functional reading level of a student in her reading class in terms of word recognition. Which of the following assessment measures, tools, or procedures should the teacher use to meet her aim?
  - a. think-aloud
  - b. miscue analysis
  - c. standardized tests
  - d. informal reading inventory
24. You want to know the quality of responses the students make as they process a text while they are in the act of audibly reading it. You recorded their reading and found out that they stop at times and give personal reactions to the text. Some of the students' reactions are even stated in their mother tongue. Which of the following assessment tools or procedures refers to this practice?
  - a. think-aloud
  - b. miscue analysis
  - c. standardized tests
  - d. cloze procedure
25. You want to know the range of your students' vocabulary, graphophonic knowledge, syntactic knowledge, semantic knowledge, and pragmatic knowledge by filling in gaps within an information. Which of the following should you use to achieve your goal?
  - a. think-aloud
  - b. miscue analysis
  - c. standardized tests
  - d. cloze procedure
26. Teacher A has found out that the results of the curriculum that was implemented call for an alteration in the set of objectives and competencies. Which of the following curriculum development stages does teacher A want to happen?
  - a. curriculum planning
  - b. curriculum evaluation
  - c. curriculum change
  - d. curriculum improvement
27. Ms. Natividad, a classroom teacher, wants to try-out to her class another strategy she has learned from a seminar-workshop she has attended. Which level of curriculum is shown in this situation?
  - a. societal
  - b. experiential
  - c. instructional
  - d. institutional
28. Mr. Reyes, the principal of Bagumbato National High School, opted to use the curriculum that employs the integration of Music, Arts, P.E., and Social Studies on a longer time block. This situation clearly shows that the principal prefers to use
  - a. core curriculum design.
  - b. correlated subjects design.
  - c. broad-fields curriculum design.
  - d. single-subject curriculum design.
29. The sub-processes of curriculum planning, organization and designing, implementation and evaluation sum up the process of
  - a. curriculum and instruction.
  - b. curriculum management.
  - c. curriculum development.
  - d. curriculum assessment.
30. When the aim of the curriculum is to provide the learners with the needed skills in this ever-changing world, the curriculum reflects the belief that it should
  - a. provide learner's with the knowledge needed for social relevance.
  - b. perpetuate cumulative tradition of organized knowledge.
  - c. provide avenues for the students to do self-expression.
  - d. allow learner's self-actualization.
31. The following statements are characteristics of the subject-centered curriculum EXCEPT for
  - a. The main task is mastery learning.
  - b. The teacher has full control of the lesson.
  - c. There is a high level of cooperative interaction.
  - d. It covers much of the content in a short span of time.
32. The phase of curriculum development which involves a survey of the current needs of the learners and the demands of society is curriculum
  - a. planning.
  - b. evaluation.
  - c. organization.
  - d. implementation
33. Ms. Oliveros, a language teacher, has noticed that Bryan, a diagnosed dyslexic child, has already improved in his reading, writing, gross, and fine motor abilities. She recommended to her principal that Bryan should be learning in a regular classroom. Which of the following does the teacher want to happen?
  - a. promotion
  - b. intervention
  - c. inclusion
  - d. exclusion
34. When developers try to obtain relevant information to be able to judge the worth of an educational program, its product, procedures, and objectives, the developers are in the process of curriculum
  - a. planning.
  - b. designing.
  - c. evaluation.
  - d. alignment.
35. Johnny, a junior high school student, connected his lesson on fractions with his Social Studies lesson on land ownership during the time of Feudalism. Which curriculum design element is reflected in Johnny's practice?
  - a. articulation
  - b. integration
  - c. continuity
  - d. balance

36. Teacher B wants to give his student the freedom to choose what to learn and believe, and allow the student to set his own identity and standards. Teacher B clearly shows that he believes in
  - a. Realism.
  - b. Idealism.
  - c. Perennialism.
  - d. Existentialism
37. A curriculum developer wants to combine geography, civics and culture, and history to complete the subject area of Social Studies. The curriculum developer clearly manifests favor for the
  - a. correlated subjects curriculum design.
  - b. broad fields curriculum design.
  - c. fused curriculum design.
  - d. core curriculum design.
38. Teacher C has found out that there was a mismatch between the content she was teaching in the class and the competencies tested in the standards-based assessment (SBA) given after a year of instruction. This situation calls for curriculum
  - a. planning.
  - b. designing.
  - c. alignment.
  - d. implementation.
39. The following are characteristics of the experience-centered curriculum EXCEPT for
  - a. The classroom activities are cooperatively controlled by the learner and the teacher.
  - b. The emphasis is on the holistic development of the individual learner.
  - c. Education aims to develop a socially creative individual.
  - d. Facts and knowledge are to be mastered for future use.
40. The students' first languages are to be the medium of instruction during the first three years of formal schooling both in the public and private schools. Which of the following stakeholders in curriculum development asks for this requirement?
  - a. parents
  - b. teachers
  - c. publishers
  - d. legislators

### EDUCATIONAL TECHNOLOGY

1. Which of the following statements is correct about the domains of educational technology?
  - A. Design is the production stage while development is the planning stage.
  - B. Both the design and development are the planning stage,
  - C. Evaluation is synonymous with implementation.
  - D. Utilization is the action phase.
2. Ms. Cruz was hired in a well-equipped school but she has to start preparing her instructional materials before classes begin. Which of the following is a systematic process in preparing her materials?
  - A. design – utilization – evaluation - development
  - B. design – development – utilization – evaluation
  - C. development – design – utilization – evaluation
  - D. development – utilization – evaluation – design
3. Ms. Briones is planning to integrate technology in her Mathematics class. Which of the following would be her second step?
  - A. set the objectives
  - B. analyze the learners
  - C. utilize the materials with showmanship
  - D. evaluate the performance of the students
4. Which of the following should Ms. Gomez primarily consider in determining her teaching/learning objectives and use of instructional media?
  - A. the learner
  - B. the teacher
  - C. the instructional activity
  - D. the instructional strategy
5. Which is the best reason why teachers state the objectives before using instructional media?
  - A. To be able to practice how to operate the equipment.
  - B. To determine which media to use best.
  - C. To prepare the materials beforehand.
  - D. To secure available materials.
6. Ms. Villegas is thinking of an educational technology that can relay information clearly to her class. Which principle will guide her in the selection of the material?
  - A. interest
  - B. meaningfulness
  - C. cost effectiveness
  - D. communication effectiveness
7. Mrs. Zinampan presented real samples of rocks when she discussed the different forms of rocks. What principle in the selection of instructional material did she apply?
  - A. interest
  - B. B authenticity
  - C. cost effective
  - D. responsiveness
8. Which of the following is a limitation of conventional technologies in teaching and learning?
  - A. They pose problems on storage..
  - B. They are less abstract and more concrete.
  - C. They are readily available in the environment, around school, and in the home.
  - D. They provide hands-on learning experiences and emphasize real-world applications
9. which of the following is not a contribution of technology to the learning process? .
  - A. The quality of learning can be improved
  - B. The delivery of instructions can be more interesting
  - C. The role of the teacher can be changed into a demonstrator.
  - D. The method of teaching and learning becomes more interactive
10. In what way can instructional aids foster learning?
  - A. Reinforce learning
  - B. Entertain students
  - C. Take the place of the teacher
  - D. Holds students in the classroom
11. With the pervasiveness of technologies nowadays, a learner-centered instruction can be promoted. Which of the following statements support this approach to teaching?
  - I. It focuses on transformation of facts.
  - II. It supports the use of lecture and drill methods.
  - III. It gives emphasis on collaboration and authentic assessment.
  - IV. Students work on tasks determined and controlled by the teacher.
  - A. I and II only
  - B. I and III only
  - C. II and IV only
  - D. III and IV only

12. Prof. Villamin's students use cooperative learning, inquiry based and project-based learning approaches in creating their digital unit plans. What can be developed among the learners through these approaches?
  - A. repetition and active learning
  - B. repetition & information delivery
  - C. information processing and active learning
  - D. construction of knowledge and information exchange
13. Which of these technologies are arranged from the most symbolic to multisensory?
  - A. real objects, print, audio-visual materials, and visual materials
  - B. visual materials, audio visual materials, print and computers
  - C. visual materials, print, audio-visual materials and realia
  - D. print, audio, visual materials, and computers
14. Which group of technologies has the highest degree of abstraction?
  - A. book, imaginative literature, programmed instruction
  - B. digital video, film, versatile compact disc
  - C. video, pictures and television
  - D. realia and computer
15. Mrs. Soriano, a Grade V teacher prefers to use textbooks than other instructional materials. What could be her reason for using it?
  - A. Textbooks can be easily duplicated.
  - B. Textbooks quickly become updated.
  - C. Textbooks address the needs of diverse students.
  - D. Textbooks contain most of the materials they need to learn in the course.
16. It is impractical to bring real objects to the classroom so Ms. Simangan constructed a threedimensional visual instead. Which of the following did she construct?
  - A. cartoon
  - C. graphic
  - B. chart
  - D. model
17. If a teacher wants to teach her pupils the skill to organize and integrate related concepts, which of the following is the most appropriate graphic organizer to use?
  - A. timeline
  - C. venn diagram
  - B. fishbone
  - D. semantic webbing
18. Which graphic organizer is used to show how a series of events interact to produce a set of results again and again?
  - A. Series of events chart
  - C. cycle
  - B. Web
  - D. timeline
19. Which instructional aid requires pupils to verbalize?
  - A. graphic
  - C. . model
  - B. diorama
  - D. . video
20. Which of the following is inappropriate in using printed visuals such as charts, graphs, and drawings?
  - A. Provide written or verbal cues to highlight important aspects of visuals.
  - B. Allow the students to pass the materials from one person to another.
  - C. Use materials that everyone can see.
  - D. Present the material one at time.
21. Under what category will a globe as an instructional material fall?
  - A. Realia
  - C. solid model
  - B. mock up
  - D. cutaway model
22. Prof. Agustin would like to provide hands-on experience on the expansion and contraction of matter. Which of the following materials would be the best to use?
  - A. models
  - C. realias
  - B. pictures
  - D. slides
23. Ms. Sarah finds the chalkboard an effective instructional material up to present. However, just like any other materials, it also has its limitations. Which one is it?
  - A. It allows spontaneity, speed and change.
  - B. Absent students cannot keep up with their assignments.
  - C. It is valuable for emphasizing the major points of the lesson.
  - D. It can be used for displaying pictures and important clippings.
24. With which learning style group are manipulatives MOST effective?
  - A. Master style group
  - B. Interpersonal style group
  - C. Understanding style group
  - D. Self- expressive style group
25. Which does a pupil use when s/he sings a concept to a familiar tune in order to help himself commit the concept to memory?
  - A. rap
  - C. pop
  - B. jingle
  - D. lullaby
26. Prof. Arcilla would like to use audiocassette tape in teaching a lesson in English. In which activity is audiocassette tape very effective in the teaching-learning process?
  - A. in developing listening skills
  - B. in teaching creative writing
  - C. in composing poems
  - D. in building concepts
27. Romalyn is going to discuss about The ADDIE Model to a big class. She is planning to use a technology by which parts of her presentation could be partly hidden to make it more exciting and interesting. What do you think shall she use?
  - A. model
  - C. transparency
  - B. realia
  - D. video
28. Marife wants to make a presentation material wherein more additional transparent sheets with information can be placed over a base transparency. Which one should she make?
  - A. cut-out
  - C. silhouette
  - B. puppet
  - D. overlay
29. Which one is used with 2D and 3D materials?
  - A. Opaque projector
  - C. digital projector
  - B. overhead projector
  - D. slide projector
30. After watching the film, "Muro Ami", the students of Mrs. Tamaray are expected to show a demonstrative proof of what they have learned. How is the technology used in thissituation?
  - A. entertainment
  - C. instructional
  - B. informational
  - D. entertainment and informational
31. Self made charts and illustrations serve as universal aid for bringing fascinating and exciting experiences in the classroom. To tap the optimum potentials of these materials, which of the following should be avoided?
  - A. Giving due consideration to lettering.
  - B. Presenting materials with accurate facts.
  - C. Giving more importance to austerity over legibility.
  - D. Focusing on the main idea of the lesson presented.

32. Karyl used overhead transparencies when she presented her assigned topic to class. What type of educational technology are transparencies?  
A. printed material                      C. projected material  
B. graphic material                      D. non-projected material
33. Which instructional material/s is/are MOST fit in contextualized learning?  
A. TV    C. pictures  
B. Slides                                      D. field trip
34. Ms. Villanueva wants to teach the students the performance of a certain skill such as dancing. Which technology would be the most appropriate and convenient to use?  
A. film    C. television  
B. video                                        D. printed material
35. Slides are miniature transparencies. They can be created with simple cameras and simple equipment. They display color in a realistic manner. However, they also have some limitations. Which one is it?  
A. They can be easily updated and revised.  
B. They can be adapted to group or to individual use.  
C. They can get out of sequence if handled individually.  
D. They can be combined with taped narration for greater effectiveness.
36. Mrs. Santos used a film clip in teaching science concepts to her Grade Six class. However, she found out that it was inefficiently used in the classroom. When is a technology considered inefficient?  
A. When it makes viewing more interesting.  
B. When it increases the time to master the lesson.  
C. When it helps attain the objectives of the lesson.  
D. When it enhances understanding of new lesson.
37. Prof. Manantan's lesson in EPP is about "Pagtatanim ng halaman" to her students. How can she make her lesson more interesting and meaningful?  
A. Have a viewing activity about the lesson.  
B. Have them read their EPP book.  
C. Give them a collaborative work.  
D. Let them listen to a gardener.
38. Prof. Delos Santos would like her students to give more accurate observations about plants in the environment. Which technique would help her attain her objective?  
A. Bring them to the garden.  
B. Bring actual plants to class.  
C. Show colorful pictures to the class.  
D. Let the class read books about the topic.
39. Which of the following should be avoided in presenting visuals?  
A. Show visuals with an element of suspense.  
B. Shut off the overhead projector when explaining lengthily.  
C. Present all the materials simultaneously to hold the learners' interest.  
D. Erase any writing on the chalkboard or whiteboard when you no longer need it.
40. After listing down the advantages and disadvantages of computers, Mrs. Muñoz decided to purchase a computer for her class. Which do you think is the last consideration in purchasing the equipment?  
A. Computers can make her more efficient.  
B. Computers can be a form of entertainment.  
C. Computers can enhance teaching and learning.  
D. Computers can be used for interactive presentations.
41. Marnel prepares his school research works using computer to submit his requirements on time. Does the computer make him productive and efficient? Why?  
I. Yes, because it can generate its own data.  
II. Yes, because it can make one's work easier.  
III. Yes, because it can perform tasks fast and accurately.  
A. I and II                                      C. II and III  
B. I and III                                      D. I, II and III
42. Prof. Aguinaldo would like to integrate technology in writing a friendly letter. How can he do it effectively?  
A. Let the pupils surf a friendly letter from the Internet.  
B. Have the pupils write a friendly letter and send it through an email.  
C. Have the pupils forward a downloaded friendly letter to others via email.  
D. Let the pupils write a friendly letter using word processing and have it critiqued by  
E. their peers.
43. Which of the following is known for its strength of giving immediate feedback?  
A. video    C. digital encyclopedia  
B. story book                                      D. computer-assisted instruction
44. Which of the following computer-based instructional material can be used to learn new concepts?  
A. games    C. simulation  
B. tutorial    D. drill and practice
45. 45. Prof. Natividad would like to create a presentation material for his lesson on the types of computer-assisted Instruction. Which tool should he use?  
A. communicative tool                                      C. productivity tool  
B. Informative tool    D. situating tool
46. Prof. De Guzman uses an online learning approach by which content provides links to information at other locations and serves as a focal point for a distance education experience. Which of the following does he use?  
A. computer-aided instruction  
B. web-based instruction  
C. self-paced program  
D. teleconferencing
47. Mr. Villena searches for related literature by accessing several databases in the library computer that is connected with other computers that have databases. How is this termed?  
A. CD ROM search                                      C. mechanical search  
B. computer search                                      D. online search
48. Which pair of tools provide synchronous communication?  
A. chatroom and email  
B. email and bulletin board  
C. video conferencing and blogs  
D. instant messaging and chatroom
49. Should Mrs. Reyes allow her pupils to surf the Internet in creating a group newsletter during her English class? Why?  
A. No, because pupils may just be exchanging messages via email.  
B. No, because the pupils might open undesirable websites.  
C. Yes, to allow the pupils to chat with their friends.  
D. Yes, as long as it is used effectively.

50. Which of the following should you ask yourself in evaluating the content of an instructional material?
  - A. Do the materials reinforce learning effectively?
  - B. Are the materials of high technical quality?
  - C. Does the content match the curriculum?
  - D. Is it appropriate for the students?
51. Which of the following statements does **NOT** describe educational technology?
  - i. It includes hardware and software.
  - ii. It refers to the efficiency of teachers in using computers
  - iii. It is the development, application, and evaluation of systems, techniques and aids to improve human learning.
  - A. i only C. Both ii and iii
  - B. ii only D. Both i and iii
52. What should Mr. Asuncion determine first in the selection of media in teaching?
  - A. needs of the students C. technique to be used
  - B. availability of the media D. objectives of the lesson
53. Which is the most important reason why teachers preview materials to be used in class?
  - A. To gain confidence in using them.
  - B. To encourage viewers to be more focused.
  - C. To avoid potential problems that might occur while materials are in use.
  - D. To ensure appropriateness of the materials with the objectives and target audience.
54. After Ms. Raca planned her lesson in English, she found out that the materials at hand do not match her objectives. Which is the best thing that she can do?
  - A. Modify the available materials.
  - B. Teach the lesson the following day.
  - C. Change the objectives to match with the available materials.
  - D. Carry out the lesson as planned and use the materials at hand.
55. Prof. Balagtas used worksheets, manipulatives and models in teaching math to help her students understand the lesson and love the subject. What did she bear in mind when she used these materials?
  - A. appropriateness C. breadth
  - B. balance D. variety
56. Ms. Torres always makes sure that text, animation and color do not confuse students in her presentation materials. Which principle is applied?
  - A. simplicity C. responsiveness
  - B. variety D. cost effectiveness
57. Mrs. Reyes, a librarian, informed the students as well as the teachers that several software are available for classroom instruction and individual learning. Which material is she referring to?
  - A. Computers C. Television set
  - B. CD-ROM D. VCD and DVD players
58. Susan's mother tongue is a vernacular. Which of the following materials would be the most efficient and effective material to learn a second language?
  - A. interactive multimedia
  - B. pictures and print materials
  - C. audio compact discs and radio
  - D. printed materials and real objects
59. Computer can be a good tool for individualized instruction. Which of the following aspects can be a deterrent for its full utilization in the classrooms?
  - A. economic C. social
  - B. physical D. technical
60. With the increasing use of educational technology inside the classroom, what roles are expected of the teacher?
  - A. facilitator C. knowledge giver
  - B. demonstrator D. source of information
61. Which of the following technologies are properly classified?
  - A. computers, compact discs, film, television
  - B. imaginative literature, book, programmed instruction
  - C. versatile compact disc, printed material, diagram, sketches
  - D. digital video, phonograph, compact discs, radio, audio tape
62. Which of the following technologies are arranged from the most concrete to the most abstract?
  - A. motion pictures, verbal symbols, visual symbols, radio, realias
  - B. realias, visual symbols, television, motion pictures, still pictures
  - C. realias, motion pictures, still pictures, visual symbols, verbal symbols
  - D. verbal symbols, still pictures, visual symbols, models, motion pictures
63. Which is the best way to present instructional materials?
  - A. concrete ->semi-concrete-> abstract->semi-abstract
  - B. semi-concrete-> concrete -> abstract-> semi-abstract
  - C. abstract->semi-abstract-> semi-concrete-> concrete
  - D. concrete ->semi-concrete-> semi-abstract -> abstract
64. Which of the following technologies provide iconic experiences?
  - A. videos and computer
  - B. books and periodicals
  - C. audio and audio materials
  - D. printed and verbal symbols
65. How can Prof. Ubiña best promote the use of multimedia in teaching Science to her coteachers?
  - A. Sell multimedia at low cost.
  - B. Demonstrate its use to them.
  - C. Explain the literature supporting its use.
  - D. Convince the principal to require the use of technology.
66. There are countless things in the environment that you and your students can use to learn from such as trees, globes, pebbles, blocks etc. These real objects and models are really effective if they are utilized properly. Which of the following is incorrect about the use of real objects and models?
  - A. Familiarize yourself with the object or model.
  - B. Allow passing of a single object around the class.
  - C. Make sure that objects/models are large enough to be seen by the whole class.
  - D. Encourage students' participation through questioning and having students
  - E. decide the next step.
67. Aaron constructed a three dimensional material to simulate the circulation of blood. Which of the following did he construct?
  - A. A solid model C. mock-up model
  - B. cutaway model D. cross-sectional model
68. Which is a two-dimensional representation of the earth's geographic and/or political features?
  - A. globe C. mock-up
  - B. map D. model

69. You asked your students to illustrate what they have understood from what they have read. Which of the following non-projected visuals are you referring to?
- printed visuals
  - graphics
  - models
  - realias
70. Which software should Dr. Balagtas to manipulate numerical data in the computer?
- Spreadsheet
  - desktop publishing
  - word processing
  - multimedia
71. Prof. Silva uses projected visuals such as OHP in presenting her lesson. What could be her main reason in using such an educational technology?
- The materials are readily available.
  - Most visuals can be obtained at no cost.
  - It is more abstract than any other visuals.
  - She can easily prepare her own transparencies in advance.
72. Ms. Pacheco showed a segment of matter in “sine skwela” to her pupils without a follow-up activity. Thus, the pupils got low in the test. What does this imply?
- TV makes viewing enjoyable.
  - TV promotes mastery of the lesson.
  - TV induces alienation on the part of the learners.
  - TV is effective when learners attain the lesson objectives.
73. Which activity is closest to the real thing?
- hear
  - view images
  - watch a demonstration
  - perform in a presentation
74. Your department would like to purchase a computer set as your project. Which of the following advantages of computer will be your last consideration in purchasing it?
- It can enhance the teaching and learning process.
  - It can be used for interactive presentation.
  - It can be used for research activity
  - It can be used for entertainment.
75. Prof. Orenca will have a digitized presentation to pre-service teachers. Which of the following will make her presentation appealing and effective?
- Observe maximum use of animations and graphics together.
  - Apply as many computer effects per slide as possible.
  - Reinforce textual information with graphic organizers.
  - Use as many color as possible.
76. Why are computers increasingly becoming pervasive in schools nowadays?
- Schools advocate the use of computers.
  - They increase efficiency and productivity.
  - Anybody can operate computers without formal training.
  - Students have access to computers in school and at home.
77. There are several reasons why teachers are reluctant in using electronic media in the teaching-learning process. Which is the most common reason?
- The difficulty in integrating them in the curriculum.
  - The limited exposure of teachers to new equipment.
  - Their incompatibility to diverse needs of the learners.
  - The excessive availability of local technology in the community.
78. With the number of senses to be stimulated as criterion, which one should be first in the list?
- multi sensory aid
  - audio-visual aid
  - visual aid
  - audio aid
79. Which of the following is considered in terms of technical quality of a material?
- stereotyping
  - vocabulary level
  - color and size of text
  - students’ achievement
80. Which statement is true about the opaque projector and overhead projector?
- An opaque projector allows more flexibility than an overhead projector.
  - An overhead projector allows more flexibility than an opaque projector.
  - Opaque and overhead projectors can instantaneously project 3D visuals well.
  - The series of still visuals in an opaque projector are arranged in a fixed pattern but not in an overhead projector.
81. A grade II teacher wanted to show the parts of a seed by using a large, wooden seed visual aid with detachable cotyledons and tiny seed. Under what classification does wooden structure fall?
- assembly model
  - cutaway model
  - realia
  - solid model
82. Which term refers to a model which is constructed so as to emphasize a particular part or function?
- audio recording
  - simulation
  - mock-up
  - realia
83. Which is the best use of computers to students like you?
- They are used for chatting and surfing the net.
  - They are used for research and collaboration.
  - They are used for playing online games.
  - They are used for watching movies.
84. Which statement makes technology ineffective in student learning?
- It develops higher thinking skills.
  - It prepares students for the workforce.
  - It enhances students’ collaborative skills.
  - It decreases achievement in content learning.
85. You plan to use instructional materials to a big class-size. Which of these will you **not** use?
- pictures
  - projection device
  - 27-inch television
  - computer with LCD projector
86. Computers can be classified according to the roles they play namely communicative tool, informative tool, and constructive tool. What is the other role of computers in the options below?
- instructional tool
  - situating tool
  - utility tool
  - application tool
87. Which of the following categories of CAI will you use in your class if your objective is to increase proficiency in a newly learned skill or refresh an existing one?
- tutorial
  - drill and practice
  - simulation
  - Instructional game
88. Which of the following is an ineffective use of presentation software?
- Darken the room
  - Use appropriate pacing
  - Read directly from the slides.
  - Allow interaction with the learner.



89. Which of the following is NOT an example of communicative tool?
  - A. multimedia encyclopedia
  - B. teleconferencing
  - C. electronic mail
  - D. chat
90. Which is a characteristic of the teaching machines of B. F. Skinner?
  - A. It does not need any feedback.
  - B. It requires teacher's assistance.
  - C. It is meant for a collaborative work.
  - D. It allows a student to learn at his/her own pace.
91. Why is one-way delivery of information a misuse of communication tools?
  - A. because the teacher expects the student to study more
  - B. because it requires activities that focus on thinking than responding
  - C. because it enables the users to focus more on higher level cognitive activities
  - D. because this kind of practice lessens interaction capabilities of communication tools
92. Internet consists of thousands of connected computer networks around the world. Which term does NOT refer to *Internet*?
  - A. A. NET
  - C. "Cyberspace"
  - B. B. Online
  - D. "Information Superhighway"
93. Your class adviser is planning to have an asynchronous communication with your classmates. Which technology tools can she use?
  - A. chat and blog
  - B. chat and instant messaging
  - C. blog and video conferencing
  - D. electronic bulletin board and email
94. In your computer subject, you allow your class to chat as a part of your motivation before discussing them the roles of computer. How is chat used in this context?
  - A. Communicative tool
  - C. Application tool
  - B. Informative tool
  - D. Situating tool
95. Your mother wanted to finish her long dreamed course but she wanted to do it at home during her free time. How could you help your mother in pursuing her dream?
  - A. Encourage her to hire a helper so that she can attend regularly to her class.
  - B. Give up your study so that your mother can attend her classes.
  - C. Enroll her to the school where you enrolled.
  - D. Enroll her in distance education
96. The following statements are true about computer conferencing. Which is an exception?
  - A. It refers to live student interaction with an expert.
  - B. It is also known as discussion forum or bulletin board.
  - C. It also refers to online class discussions, forums or debates
  - D. It permits two or more individuals to engage in asynchronous text-based dialogue.
97. Which instructional tool application will you introduce to your class if your objective is to help them find and use information resources available in the internet?
  - A. Webquests
  - C. Scavenger Hunt
  - B. Hybrid course
  - D. Distance education
98. Maryjane is looking for an organized instructional program in which the teacher and learners can be physically separated. Which of the following will she choose?
  - A. Distance Education
  - B. Uniform Resource Locator
  - C. Web Quests
  - D. Computer-Based Instruction
99. Prof. Ruscoe would like to show Rizal's museum to the students but due to financial constraint, she couldn't bring them there. What should she do to make the teachinglearning process more realistic?
  - A. Conduct a virtual tour.
  - B. Use DVD with less resolution.
  - C. Show pictures of the museum to the whole class.
  - D. Go to the museum and relate all observations made.
100. Which of the following should you avoid if you were asked to evaluate the effectiveness of an instructional game after using it in teaching a lesson in high school science?
  - A. Present problems which are relevant to learning objectives.
  - B. Allow learners to select different content materials.
  - C. Provide a cooperative learning atmosphere.
  - D. Provide a scoring system.

### **PRINCIPLES AND STRATEGIES OF TEACHING**

1. It has reference to what teachers do in planning, implementing and evaluating instruction.
  - a. Teaching
  - c. Teaching strategies
  - b. Curriculum
  - d. Instruction
2. The orderly process directing learners to develop their skills and habits so that they will be assisted in acquiring knowledge and attitudes.
  - a. Instructional Media
  - b. Instructional Method
  - c. Teaching Techniques
  - d. Instructional System
3. Facial Expression, writing on the board, and oral expression of the teacher is an example of
  - a. Teaching Behavior
  - b. Technical Skills of teachers
  - c. Instruction
  - d. Instructional System
4. Learning to draw, drive a car, play tennis, cook and type a poem often taught in is an example of
  - a. Cognitive Learning
  - c. Verbal Learning
  - b. Motor Skill Learning
  - d. Social Learning
5. Responding to telephone calls, writing one's name, reading a book orally is an example
  - a. Cognitive Learning
  - c. Verbal Learning
  - b. Motor skill learning
  - d. Serial Learning
6. A process wherein the pupil's attention and interest are aroused and directed to a definite purpose.
  - a. Learning
  - c. Method
  - b. Motivation
  - d. Principle

7. Contains a statement of results to be accomplished and specific means by which these results are to be attained under direction and guidance.
  - a. Method
  - b. Lesson Plan
  - c. Technique
  - d. Principle
8. Could be the means of developing good study habits and independence in work as well as preparing the pupils for the job to be done
  - a. Review
  - b. Drill
  - c. Assignment
  - d. Recitation
9. The act of repeating from memory the reciting of a lesson and often described as a session lesson hearing
  - a. Review
  - b. Recitation
  - c. Assignment
  - d. Drill
10. A teaching procedure dealing with first-hand experiences pertaining to material obtained from experimentation
  - a. Demonstration Method
  - b. Laboratory Method
  - c. Discovery Method
  - d. Deductive Method
11. Starts with generalization and principles or from general to particular
  - a. Inductive Method
  - b. Deductive Method
  - c. Classical Method
  - d. Problem Method
12. Students enact situations that arise in daily living, where values may be clarified, insights are developed and decision-making is practiced
  - a. Simulation Game
  - b. Role Playing
  - c. Demonstration
  - d. Inquiry Process
13. Encouraging students to search for and see relationships that are not obvious; also it stretches the intellect of students
  - a. Open-ended Questions
  - b. Recall Questions
  - c. Explanatory Questions
  - d. Descriptive Question
14. It is "control by enforcing obedience or orderly conduct or training that corrects and strengthens?
  - a. Management
  - b. Discipline
  - c. Techniques
  - d. Strategies
15. When students are asked to respond to incomplete statements or questions that are presented in oral/ written form
  - a. Open-ended Statement
  - b. Close-procedure
  - c. PAC Strategy
  - d. Structured Activity
16. These are all the experience which children have under the direction of a school
  - a. Curriculum
  - b. Instruction
  - c. Learning
  - d. Socialization
17. The subjects mater, not the child is important in this type of curriculum
  - a. Correlated curriculum
  - b. Subject-centered curriculum
  - c. Experience curriculum
  - d. Fused curriculum
18. The child-instead of the subject-matter is important in this kind of curriculum
  - a. Correlated curriculum
  - b. Core curriculum
  - c. Experience curriculum
  - d. Fused curriculum
19. It is a unified curriculum where subject matters from different subject field are treated unitary of the same curriculum
  - a. Core curriculum
  - b. Integrated Curriculum
  - c. Broad field curriculum
  - d. Fused curriculum
20. Teacher's initiative, imagination, puppet shows, play, reading and animated cartoons can be examples of enriching the curriculum under these resources
  - a. Specializing Resources
  - b. Creative Resources
  - c. Human Resources
  - d. Reading Resources
21. A curriculum considered basics for all students, that all must get them
  - a. Broad field curriculum
  - b. Core curriculum
  - c. Integrated Curriculum
  - d. Experience Curriculum
22. The whole body of experience utilized by the school to attain the aims of education
  - a. Psychology
  - b. Curriculum
  - c. Socialization
  - d. Methods
23. Formal education starts when the child
  - a. begins to talk
  - b. reaches the age of six years old
  - c. first enters school
  - d. begins to be inquisitive
24. That aspect of curriculum that has to do with the preservation of the best in our culture, customs and traditions has been borrowed from
  - a. Sociology
  - b. Sociometry
  - c. Psychology
  - d. Ethics
25. The curriculum must take into consideration the
  - a. aim of education
  - b. learning process
  - c. motives and incentives
  - d. instincts
26. The curriculum is
  - a. all-embracing
  - b. encompassing
  - c. all power
  - d. selective
27. In the traditional school, the focus of attention was on the
  - a. child
  - b. subject matter
  - c. method
  - d. book

28. Curriculum objects are formulated in the light of our
- past history
  - educational policy and philosophy
  - experience as a nation
  - needs in school
29. Which of the following questions encourages reflective thinking?
- What are the parts of a complete flower?
  - What do we use to observe matter?
  - In what ways can help his community
  - Why are machine-made goods cheaper than those made by hands?
30. The success of the pupils in formulating generalization greatly depends on:
- the interest of the pupils
  - the devices used
  - the subjects matter
  - the teacher's skillful questioning
31. In the inquiry method, the initiation phase calls for the teacher to set the stage for:
- finding solutions to problem
  - raising of problems
  - gathering data
  - formulating generalization
32. Method is dependent upon:
- classroom techniques
  - teacher's expectation
  - theoretical assumptions
  - available textbooks
33. To lead the students to the desired behavior, method must be implemented through:
- selected technique
  - the curriculum
  - the discussion of the teacher
  - careful observation
34. Which is not true regarding the project method?
- Many worthwhile projects are impossible because of the materials needed
  - The project method should be used occasionally but not regularly
  - The pupil or the class should carry the chief responsibility of planning the project
  - The project method is adaptable to all units in the curriculum
35. The laboratory method is also called:
- the research methods
  - the deductive method
  - the development method
  - the problem method
36. In the unit method, actual learning takes place in:
- orienting the pupils
  - collecting, discovering and recording data
  - summarizing the unit
  - organizing the unit or study
37. A statement of objectives, learning experience and the means of attaining results of teaching is called
- procedure
  - lesson plan
  - outcomes
  - strategy
38. Teaching aids which the teacher uses to make learning meaningful, productive and interesting is known as:
- device
  - technique
  - method
  - learning continuum
39. Teaching method which proceeds from the details of a lesson towards the generalization is called:
- Inductive
  - deductive
  - problem-solving
  - debate
40. A teaching method which proceeds from a generalization, principle or rule is:
- inductive
  - deductive
  - project
  - process
41. The recent approach in teaching Social Studies is called
- discovery
  - conceptual
  - process
  - formal-education
42. A method of teaching which aptly applies to lessons needing experiments is called:
- problem-solving
  - laboratory
  - observation
  - demonstration
43. What type of lesson is presented wherein the learner meets the learning experience through understanding, analysis, and generalizations of facts presented?
- review
  - drill
  - developmental
  - deductive
44. What lesson is presented when the teacher takes up the previous learning experiences of the learners in a recognized pattern of presentation?
- Drill
  - developmental
  - review
  - discussion procedure
45. A lesson which aims to focalize skills to make them fixed to the point of mastery is
- problem-type
  - drill
  - review
  - experimental
46. The law of exercise is aptly applied in a
- review lesson
  - assignment
  - drill lesson
  - check-up
47. A type of review which presents the sum-total of all activities previously presented
- integrated
  - cumulative
  - daily
  - drill
48. What recent technique o teaching calls for acting out of a situation where the participants aim to uncover a problem of great importance to the class?
- panel
  - debate-form
  - role-playing
  - lecture-form

49. What technique of in-service training for teachers involves the identification and solution of common problems by them, thru live-in sessions, conferences, and speeches of consultants?
  - a. buzz session
  - b. workshop
  - c. seminar
  - d. professional meeting
50. The non-verbal symbols used to maximize learning are referred to as
  - a. Instructional devices
  - b. Classrooms techniques
  - c. Field trips
  - d. Educational media
51. Graphic material which are eye-catching and which use slogans and topics presented in bold letterings and strong colors to serve as reminders of standards and / or important events are called
  - a. poster
  - b. film strips
  - c. projector
  - d. objects
52. What contemporary aid to teaching utilizes carefully-planned materials where each step of learning requires repetition and practice until such step is thoroughly learned?
  - a. programmed instruction
  - b. Key punching
  - c. Educational Television
  - d. Educational hardware
53. The Stimulus-Response theory of learning which involves the association between a conditioned stimulus and a response thru the repeated presentation of the stimulus was advocated by whom?
  - a. Edward Thorndike
  - b. Ivan Pavlov
  - c. Burrhus Skinner
  - d. Wolfgang Kohler
54. What plan of promoting pupils is committed to encouraging the learners to progress from grade to grade without needless repetition
  - a. non-graded scheme
  - b. individualized
  - c. heterogeneous grouping
  - d. acceleration
55. Differentiated assignments, tutorial and remedial work to would-be failures are not considered in the individualized Instruction Scheme
  - a. Yes
  - b. No
  - c. Maybe
  - d. Sometimes
56. A part of a daily lesson which serves as a carry-over for the next day of what has been presented is the
  - a. review
  - b. drill
  - c. assignment or agreement
  - d. lesson proper
57. A good learning environment is one
  - a. free from distraction
  - b. aver decorated
  - c. disturbing noise
  - d. dilapidated
58. The proper handling of the physical condition and instructional materials in the classroom to effect learning refers to
  - a. teaching method
  - b. Classroom management
  - c. Discipline grouping
  - d. Guidance-oriented
59. What refers to the process of directing immediate personal desires, interests or wishes for the purpose of achieving an effective action?
  - a. discipline
  - b. teaching
  - c. supervision
  - d. management
60. What characteristics are effective types of discipline?
  - a. vital, sympathetic, humane
  - b. formal and strict
  - c. inhibited
  - d. imposed
61. Which of these is not a quality of a good teacher?
  - a. mastery of the subject matter
  - b. broad background of liberal education
  - c. aims to enrich himself thru teaching
  - d. understand the nature of the learners
62. Which of these is a good personal qualification of a teacher?
  - a. resourceful, creative and intelligent
  - b. rich, capricious and luxurious
  - c. complaining, demanding and scornful
  - d. materialistic
63. Which of these is included among the professional ethics of school teachers?
  - a. professional jealousy
  - b. integrity
  - c. engaging in business pre-judicial to his teaching duties
  - d. gossip mongering
64. What teaching method helps the learners draw generalization from a discipline with the end in view of applying the same similar situations in the future?
  - a. discovery approach
  - b. process approach
  - c. conceptual approach
  - d. problem-solving approach
65. Which subjects are in the elementary and secondary school levels mostly concerned with the study of societal problems and issues which are significant to the learners as members of society?
  - a. Modern Mathematics
  - b. Social Studies
  - c. Filipino
  - d. Character Education
66. Which of these are considered with two essential dimensions of science teaching?
  - a. observing and inferring
  - b. seeing and observing
  - c. reading and researching
  - d. knowledge and performance

67. Which of these is not a process in science teaching?
- Measurement
  - Communication skill
  - Controlling variables
  - None of these
68. Of the process involve in the modern approach to science instruction, which one utilizes the most number of scientific processes.
- prediction
  - experimentation
  - inference
  - hypothesis
69. Give the main difference of these two objectives:
- “ to teach the importance of proper nutrition for good health “
  - “ to give the importance of proper nutrition for good health”
- The first objective is general while the second is specific.
  - The first objective is hard to do while the second is easy
  - The first objective needs a longer time while the second doesn't
  - The first objective is teacher behavior while the second pupil behavior.
70. Which of the objectives below show overt behavior?
- To appreciate the value of democracy.
  - To understand the importance of a constitution
  - To recite he preamble of the constitution
  - To show love to one's country
71. The basis by which content is outlined and institutional procedures are developed is the:
- lesson plan
  - basic text
  - objectives
  - instructional materials
72. An objective MUST specify:
- What the learner must do or say.
  - What the teacher must do or say
  - What projects are to be accomplished
  - What the learner must understand
73. “Given ten photographs of biological cells, the pupils will be able to identify six of them as plant or animal cells.” The underlined phrase is a :
- terminal behavior
  - standard or acceptable performance
  - condition for learning
  - an accomplishment to be realized.
74. “To make statement” as an objective in an English Lesson that is:
- specific
  - vague
  - correct
  - none of the above
75. What is the most fitting condition of learning for this behavior: “to conclude that plants need sunlight in order to live”?
- with the must of materials
  - given a set of pictures
  - after reading the book
  - realistic
76. Which of the following is not a criterion of a well-formulated objective?
- attainable
  - observable
  - interesting
  - realistic
77. Which task below is not in the psychomotor domain?
- imitation
  - evaluation
  - manipulation
  - articulation
78. The growth of attitudes or values is in the:
- cognitive domain
  - psychomotor domain
  - affective domain
  - behavioral domain
79. The domains of behavior do not come in isolation. This statements is :
- True
  - Acceptable
  - False
  - Partly true
80. “Will a person do it freely without any type of coercion?” This is:
- a cognitive question
  - an affective question
  - a psychomotor question
  - a behavioral question
81. “To develop appreciation of poetry” is a :
- general aim
  - specific aim
  - nature aim
  - serious aim
82. Which aim below does not belong to the group?
- To enumerate the uses of common garden tools
  - To express opinion politely
  - To explain the significance of the story
  - To identify the parts of a flower.
83. Which objective below is not realistic?
- To respect places of worship
  - To sing the national anthem correctly
  - To give the importance of cleanliness
  - To cite ways to show love one's country
84. Which objective below is not specific?
- To describe some of farming procedures
  - To define terms comprehensively
  - To pay tax promptly
  - To know the life cycle of a moth.
85. What phrase below is a standard of performance?
- Solve the problem correctly within 10 minutes
  - Identify and sketch the curve
  - With the use of a ruler
  - After several examples
86. A visible activity shows :
- overt behavior
  - covert behavior
  - confident behavior
  - artificial behavior

87. Which infinite below is not behavioral?
  - a. to describe
  - b. to select
  - c. to compare
  - d. To believe
88. Which objective below needs improvement
  - a. To prepare a seed box
  - b. To develop skill in embroidery
  - c. To plan a noon meal
  - d. To make an apron
89. Which of the following statements is correct?
  - a. Method is probably more important in college than in the elementary
  - b. Method is more important in the elementary than in high school or college
  - c. Method is more important in college than in high school
  - d. Method is less important than a lesson plan
90. What encourages the child to think, rationalize and make proper decisions?
  - a. drill
  - b. Appreciation lesson
  - c. Memorization
  - d. Problem- oriented strategies
91. The following except one are the factors that determine the choice of a method. Which is the exception?
  - a. nature o the learners
  - b. school equipment and facilities
  - c. educational background of the teacher
  - d. Subject matter
92. How well a teacher tells a story depends on:
  - a. Techniques
  - b. the plot
  - c. the method used
  - d. classroom
93. Which of the following statements is correct?
  - a. Method is synonymous with technique
  - b. A device is a teaching method
  - c. Method can be standardized
  - d. There is no single best method
94. When a teacher reviews a lesson, she is utilizing the law of:
  - a. Readiness
  - b. exercise
  - c. effect
  - d. multiple response
95. In which situation is the law of readiness best applied?
  - a. The teacher gives the aims of the lessons to be taken up
  - b. The teacher announces he subject matter at the start of the period
  - c. The teacher waits or the children to be ready before teaching her lesson
  - d. The teacher presents a song, related to the lesson
96. Which of the glowing is not an am in the inductive method
  - a. To delay judgments until truth is given
  - b. To enable pupils discover important truths for themselves.
  - c. To help student/pupil to carry out an investigation by themselves independent of the teacher
  - d. To make relationship of ideas clear to pupils
97. In the inductive method, what does the child do during the comparison and “abstraction” step?
  - a. Recalls information and directs himself to the activities to be accomplished
  - b. Perceives the common element present in the cases given
  - c. Applies the principles learned to other problems or exercises
  - d. Draw conclusion in his own words
98. The deductive method uses the following steps:
  - a. statement of the problem, generalization, inference, verification
  - b. statement of the problem, inference , generalization, verification
  - c. inference, statement of the problem, generalization, verification
  - d. inference, statement of the problem, verification, generalization
99. In reality, the type of study method is:
  - a. an inductive procedure
  - b. a deductive procedure
  - c. a traditional method
  - d. a question and answer method
100. The Herbartian formal steps corresponds to the steps of:
  - a. the inductive method
  - b. teaching an appropriate lesson
  - c. the deductive method
  - d. the project method

### **ASSESSMENT OF LEARNING AND EVALUATION**

1. The test results revealed that a great majority of the student failed. What is the best action that an effective teacher should take to insure that learning will take place?
  - a. reteach the items that are heavily missed
  - b. analyze the difficulty, them test again
  - c. give more difficult test
  - d. scold the pupils
2. When the aim is to determine where the strengths and weaknesses of the students lie before teaching of a new lesson is done, what test is given?
  - a. unit
  - b. achievement
  - c. diagnostic
  - d. summative
3. In any kind of education endeavor, these three interdependent processes are involved
  - a. evaluation, application, learning
  - b. teaching, learning, evaluation of results
  - c. testing, recording, reteaching
  - d. application, valuation, recall
4. It is a chart prepared to determine the goals, the content and the number of items to be included in the test
  - a. test chart
  - b. test book
  - c. table of specifications
  - d. skewed chart

5. The entire processes involved in conducting any scientific study include these sequential steps,
  - a. know the problem, gather and analyze needed data, then make conclusion
  - b. analyze, gather and collect data
  - c. gather data, analyze the problem, then conclude
  - d. give description, make a calculated guess, then conclude
6. Mr. Pascual, being a conscientious teacher initially, feels that many of his student dislike him, hence, they failed his course. To verify his hunch, he will conduct what study?
  - a. descriptive study of student behavior
  - b. historical study
  - c. achievement test
  - d. Self-analysis
7. Desiring to find out which among the schools she supervises achieve or underachieve the yearly target goals, Dr. Mendez will use what measure
  - a. Measure of Dispersion
  - b. Measure of Central tendency
  - c. Measure of Popularity
  - d. Measure of Locality
8. A test of intelligence based on the actual measurement of what the individual can actually do of a certain task under time pressure.
  - a. Performance test
  - b. Aptitude Test
  - c. Skill test
  - d. None of these
9. A test given to determine specific aspect of achievement made on certain skills to provide the needed remedial help to the learner.
  - a. daily test
  - b. achievement test
  - c. diagnostic test
  - d. none of the above
10. A test given to get a representative sampling of the general area of accomplishment made on certain field of learning taught and learned.
  - a. survey test
  - b. diagnostic
  - c. aptitude test
  - d. none of the above
11. A child's emotional behavior and problems can be measured by:
  - a. direct observations
  - b. psychological test
  - c. behavior checklist
  - d. behavior scales
  - e. all of the above
12. Intelligence tests that can used with children who have language difficulties include:
  - a. the Draw-A-Man test
  - b. the Letter International Performance Scale
  - c. raven's progressive Matrices Test
  - d. All of the above
13. The law requires school personnel to make a child's school records available to his or her parents. Parents have the right to:
  - a. help plan their child's instructional program
  - b. see their child's school records
  - c. receive an interpretation of any data recorded about their child
  - d. all of the above
14. Ken obtained a percentile rank of 30 on a mathematics test. Ken's parents will learn that :
  - a. Ken is a top student in the above class
  - b. Ken got 30% of the test items correct
  - c. Ken obtained a score higher than 30% of the students in the class
  - d. Ken got 70% of the items correct
15. Which o the following is a characteristic of criterion-referenced teaching strategies?
  - a. Desire behaviors are specified- for example," Given 10 sentences containing errors in noun-verb agreement, the student will be able t correct them with 100% accuracy."
  - b. Adequate instruction is given to enable students to perform the behaviors that are specified.
  - c. Using measures such as tests or specified performance, the teacher makes an analysis of whether objects are being met
  - d. Al of the above
16. Research shows that students who follow the cognitive learning approach manifest all of the following characteristics EXCEPT:
  - a. a global orientation toward the discovery of new question and solutions
  - b. an analytic mind-set toward new problems
  - c. an impulsive habit in drawing conclusions
  - d. a reflective manner when examining data
17. Blood content that at least 90% of students could reach "mastery level" if appropriate teaching techniques were used. Which of the following would NOT be appropriate advice or a teacher who wants to help underachievers to succeed?
  - a. Provide more time or slower students to complete a task
  - b. Break the curriculum into small steps, teaching incrementally
  - c. Determine grades through competitive examinations, giving constant feedback to comparative performance.
  - d. Pursue a comprehensive list of performance objectives
18. Critics of behavior-referenced instruction find that it limit students in all of the following areas EXCEPT in :
  - a. the range of behavioral objectives associated with such instruction.
  - b. The expectations for performance held out to gifted students
  - c. Opportunities for student decision-making
  - d. The accuracy of evaluations possible with such instruction
19. When a teacher reports the outcome of norm-referenced objective tests, he or she includes:
  - a. the performance of all students in the class
  - b. the objectives that were to be measured
  - c. the items missed by each student
  - d. the mode for the group.
  - e. all of the above
20. A teacher planning to use a criterion-reference measurement presumably would begin with:
  - a. a set of specific objectives for pupils achievement
  - b. varying norms of students of different abilities
  - c. modular scheduling
  - d. a variety of leaning experiences to determine student abilities
21. Standardized test for measuring pupil achievement have many advantages over teacher-made test. Which of the following is NOT an advantage of standard tests?
  - a. Students are tested under matching conditions
  - b. Such test have high reliability
  - c. Such test have high variability
  - d. The norms are based on nationwide testing
  - e. Such tests are most costly than teacher-made test.

22. A non-participating classroom observer can provide valuable information to a teacher because:
  - a. the observer is probably less subjective than the teacher
  - b. the observer can spend full time recording observations
  - c. the observer can focus on certain behaviors and systematically code them for a report
  - d. all of the above are true
23. Research on individual learning differences indicates the need for:
  - a. the traditional “lockstep” approach to classroom instruction
  - b. maximizing off-task behaviors
  - c. plenty of free time for each pupil
  - d. the use of the aptitude-treatment-interaction model
24. Students with low achievement levels prefer a classroom learning environment that is:
  - a. innovation-oriented
  - b. task-oriented
  - c. well-structured
  - d. competition-oriented
25. For a grade placement, which of the following tests would be best to administer to a 10-year-old Puerto Rican boy who does not speak English?
  - a. The Stanford-Binet Intelligence Scale
  - b. The test of General Ability
  - c. The Otis-Lennon Mental Ability Test
  - d. The Arthur Point Scale of Performance Test
26. A teacher gave two forms of a standardized test to a class of third graders. She found that the amount of fluctuation between class scores on both forms was as slight as reported in the test publisher’s:
  - a. item analysis
  - b. standard deviation
  - c. standard error
  - d. history reliability
27. Which one of the following factor is NOT a significant advantage of a standardized test over day-to-day teacher made test?
  - a. The standardized test is cost-effective.
  - b. The standardized test is more valid.
  - c. The standardized test is more reliable.
  - d. The standardized test is based on national norms.
28. Interest inventories are valuable for counseling secondary school student because they are given;
  - a. In percentiles.
  - b. In the form of a career advice.
  - c. In the form of a psychological profile.
  - d. In staines scores.
29. The ratio of “exceptional” children in general population is about.
  - a. 1:8
  - b. 1:20
  - c. 1:4
  - d. 1:10
30. Which of the following is useful for a teacher involved in a “majesty learning” program?
  - a. Summative testing over several units.
  - b. Formative testing during instruction.
  - c. Diagnostic testing.
  - d. Smaller classes and individualized instruction.
  - e. All of the above.
31. when constructing a teacher-made test, it is most important for the teacher to:
  - a. develop one-fourth of the question at the level of challenge appropriate for the testee.
  - b. ask question based on both factual and conceptual learnings
  - c. ask students to express their point of view
  - d. stress the objectives used during the lesson.
32. When teaching concepts at the elementary grade level, it is most helpful to provide pupils with
  - a. examples and non-examples of the concept
  - b. a cluster of concepts at one time
  - c. a definition of the concepts
  - d. disjunctive concepts
33. A junior high school principal wants to evaluate the science program. What is the first he should take?
  - a. Analyze pupil achievement scores
  - b. Look at national norms for achievement in the sciences
  - c. Confer with parents
  - d. Review and, if necessary, revise objectives for the program
34. A personal feeling, either positive or negative towards an object, a person or an institution.
  - a. attitude
  - b. aptitude
  - c. opinion
  - d. none of these
35. Known as one’s preparedness for learn in a certain task brought about by the influences of heredity and environment.
  - a. Characteristics
  - b. Aptitude
  - c. Interest
  - d. None of these
36. The process of identifying educational goals and the extent to which these objectives have been realized or met.
  - a. Examination
  - b. Evaluation
  - c. Planning
  - d. None of these
37. The degree to which the test scores in a class spread.
  - a. Discrimination
  - b. Interval
  - c. Dispersion
  - d. None of these
38. The item in a multiple-choice type of test which serves as a “joker”
  - a. Obstructor
  - b. Distractor
  - c. Error
  - d. none of these
39. A type of scores arrangement in a class which includes all possible score values from highest to lowest with the list of learners “names include.
  - a. Frequency table
  - b. Frequency distribution
  - c. Grade norms
  - d. None of these
40. A special liking or inclination for a particular type of undertaking.
  - a. interest
  - b. goal
  - c. attitude
  - d. none of these
41. In psychological measurement, a score of 50 is generally considered as
  - a. 49.9 – 50.9
  - b. 49 – 51
  - c. 49.25 – 50.75
  - d. 49.5 – 50.5
42. What is the best measure of typical performance to use when there are extreme measures?
  - a. mean
  - b. median
  - c. mode
  - d. standard deviation
43. What measure of central tendency is affected by extreme measures?
  - a. mean
  - b. median
  - c. mode
  - d. standard deviation
44. If the mean is larger than the median, the mode is :
  - a. below the mean
  - b. above the mean
  - c. below the median
  - d. above the median



45. When plotting the frequency polygon, which part of the score class do we use?
  - a. lower limit
  - b. higher limit
  - c. midpoint
  - d. entire class interval
46. A distribution with the greatest frequency at and around the middle and a few high and low scores is:
  - a. platykurtic
  - b. mesokurtic
  - c. leptokurtic
  - d. skewed
47. A distribution in which the scores are cluster at either end and shows a curve which is:
  - a. normal
  - b. bimodal
  - c. skewed
  - d. mesokurtic
48. One should interpret the percentile rank of a given score in the terms of percentage of:
  - a. number of correct responses
  - b. number of items in the test
  - c. number of cases in the distribution
  - d. number of wrong response
49. A distribution that is step with a narrow range is called:
  - a. kurtosis
  - b. leptokurtic
  - c. mesokurtic
  - d. platykurtic
50. The least reliable measure o dispersion is the:
  - a. range
  - b. Q
  - c. Mode
  - d. SD
51. What test includes items which measure variety of mental operations combined into a single sequence from which only a single score is taken?
  - a. objective test
  - b. omnibus
  - c. percentile
  - d. none of the above
52. What is measure of an individual's intelligence which considers both his scores in an intelligence test and his chronological age?
  - a. Intelligence quotient
  - b. Inventory
  - c. Individual test of intelligence
  - d. Mental age
53. What diagram is used to determine the social interactions among individuals in a group?
  - a. scatter diagram
  - b. sociogram
  - c. norm
  - d. parallelogram
54. What test is made after certain norms have been established?
  - a. standardized test
  - b. speed test
  - c. norm
  - d. none of these
55. What type of scores is obtained when a highly reliable measuring instrument is used?
  - a. T-score
  - b. True score
  - c. Z-score
  - d. N-score
56. The kind of statistics that is used to describe a big number o data on hand. These data usually include numerals, decimals, fraction and percentages.
  - a. descriptive statistics
  - b. inferential statistics
  - c. survey statistuics
  - d. simple statistuics
57. A test where the results are obtained from a large group. The evaluation is based on certain norm or standard set, hence, the norm becomes the basis of the test evaluation.
  - a. criterion-reference test
  - b. norm-reference test
  - c. summative test
  - d. formative test
58. The test results in this type o test are compared with an absolute standard. They indicate whether or not a student needs more or less help on certain skills.
  - a. criterion-reference test
  - b. norm-reference test
  - c. formative test
  - d. summative test
59. This evaluation device includes an analysis of all the scores in a given distribution. It is commonly used to estimate the test validity.
  - a. statistics
  - b. variables
  - c. standard deviation
  - d. quartile deviation
60. The information shows by these data, includes the highest, middle, and lowest scores, even the missing scores in a tabulated data presentation.
  - a. frequency data
  - b. gathered data
  - c. concluded data
  - d. surveyed data
61. The measure of variability not influenced by extreme scores is the:
  - a. Q
  - b. Range
  - c. MD
  - d. Sd
62. The semi-quartile range is a measurement of:
  - a. probability
  - b. reliability
  - c. central tendency
  - d. correlation
63. The measure of scores density around the median is the
  - a. range
  - b. mean deviation
  - c. quartile deviation
  - d. standard deviation
64. The greatest weakness of the range as a measure of variability it its
  - a. intricate computation
  - b. ease of computation
  - c. extreme in stability
  - d. difficulty of interpretation
65. The largest measure o variability from the central tendency distribution is:
  - a. average deviation
  - b. quartile deviation
  - c. range
  - d. standard deviation
66. Which of the following cannot illustrate two distribution is:
  - a. Cumulative frequency curve
  - b. Cumulative percentage curve
  - c. Histogram
  - d. Scattergram
67. A distribution characterized by many high scores and a few very low scores is:
  - a. Leptokurtic
  - b. Negatively skewed
  - c. Platykurtic skewed
  - d. Positively skewed
68. The range is an expression of:
  - a. central tendency
  - b. correlation
  - c. concentration
  - d. variability

69. The root-mean-square deviation is generally known as:
  - a. Average deviation
  - b. Range
  - c. Quartile deviation
  - d. Standard deviation
70. In this series of scores; 5,7,10,4,5 ; the mean is:
  - a. 5.2
  - b. 6.1
  - c. 6.2
  - d. 6.4
71. Synonymous to median, this term refers to the common average of a set of scores.
  - a. arithmetic
  - b. score
  - c. class interval
  - d. none of these
72. A system of grouping closely-related score values into a single category which is often used in tallying scores for a class.
  - a. Criterion
  - b. Class interval
  - c. Converted scores
  - d. None of these
73. A statistical index which represents the relationship between two varying measures which occurs within a class.
  - a. cross-validation
  - b. correlation coefficient
  - c. ceiling
  - d. none of these
74. The difference between the highest and lowest score in a given set of scores.
  - a. Quartile
  - b. Range
  - c. Profile
  - d. None of these
75. Scores tendency to group at one end and spread out at the opposite end of a given distribution of scores.
  - a. Skewness
  - b. Unevenness
  - c. unreability
  - d. none of these
76. When a test succeeds in determining accurately the particular attribute of a person who is tested, it is said to be
  - a. reliable
  - b. valid
  - c. variable
  - d. none of these
77. The standard used to interpret test scores
  - a. norm
  - b. percentile
  - c. mode
  - d. none of these
78. An index of a person's intelligence in relation to other of his own age group
  - a. intelligence quotient
  - b. grade norm
  - c. personality
  - d. none of these
79. Test on reading readiness examples of a group of tests.
  - a. prognostic test
  - b. cognitive test
  - c. vocabulary test
  - d. none of these
80. A rational treatment of raw scores arranged in numerical order or grouped in intervals to get information about how an individual o a group compares with the total population.
  - a. norm
  - b. frequency distribution
  - c. equalization of scores
  - d. none of these
81. Test norms are based on:
  - a. the actual performance of a representative group of students
  - b. the predetermined levels o standards of performance
  - c. he performance of a selected group of students
  - d. the anticipator performance of a group of students
82. A test with a difficulty index of 0.85 is considered:
  - a. high, therefore difficult
  - b. low, therefore easy
  - c. high, therefore easy
  - d. low, therefore difficult
83. A clear example of a future-oriented test is the :
  - a. Philippine Achievement Test
  - b. Otislemon Mental Ability
  - c. Personality Test
  - d. National College Entrance
84. Which of the types of ability is not generally measured by intelligence tests?
  - a. Quantitative
  - b. Reasoning
  - c. Verbal
  - d. Social
85. The Rorschach Test and Thematic Association Test are oath referred to as \_\_\_\_\_ tests.
  - a. projective
  - b. psychometric
  - c. sociometric
  - d. analytic
86. Which of the following is considered as a serious with personality tests?
  - a. reliability
  - b. scorability
  - c. usability
  - d. validity
87. Attitudes towards communism or socialism are best measured with:
  - a. sociometry
  - b. questionnaires & interviews
  - c. checklist & multiple choice
  - d. forced triads
88. Two classes are given the same arithmetic test and the mean for both classes is 57. The standard deviation for class A is 5.1, while that of Class is 10.3. On the basis of the above data, we may conclude that with respect to arithmetic achievement:
  - a. Class A is more heterogeneous than Class B
  - b. The teaching of arithmetic is more effective in Class A.
  - c. Class B is more heterogeneous than Class A
  - d. There is no sufficient data for making a comparison.
89. In the following distribution: 1,3,3,3,5; we can say that:
  - a. the mean is greater than the median
  - b. the median is greater than the mode
  - c. the mode is greater than the mode
  - d. the median, median and the mode have the same value
90. The distribution given in no.39 is:
  - a. skewed to the left
  - b. normal
  - c. skewed to the right
  - d. leptokurtic
91. Which of the following is an important duty of a teacher?
  - a. evaluating pupil's progress
  - b. soliciting contributions
  - c. safekeeping of the properties of the school
  - d. going on a vacation
92. Which of the following is not to be considered in preparing items for objectives tests?
  - a. make each test items comprehensible
  - b. group items belonging to the same type together
  - c. provide specific directions on how the test is to be taken
  - d. very difficult test items

93. To promote better student learning, which of these should be practical in testing?
- a. check the papers long after the test has been given
  - b. check and return corrected papers to the student as soon as possible to appraise them of their performances
  - c. pile test papers in the stockroom
  - d. use to get even with the students
94. In scoring essay test, which of the following is not a good practice?
- a. decide what qualities are to be considered in scoring the answer
  - b. write comments and correct errors on the answers
  - c. rearrange the papers after checking one questions before starting to check the next
  - d. accept all answers written by the tester
95. Which type of objective test is best or evaluating mastery of facts and information?
- a. multiple-choice
  - b. true-false
  - c. completing type
  - d. essay
96. In making test items of objective type, which o the following should be observed?
- a. no clues to the correct response should be given intentionally
  - b. each test item should be related to the item
  - c. the vocabulary level of the test should present some form of difficulty
  - d. test items should include also the irrelevant part of the lesson
97. Which of the following is not a good characteristic of an evaluative technique?
- a. has clear goals
  - b. utilizes various forms of testing
  - c. consider the nature of the learners
  - d. has ambiguous presentation
98. Which o the following is not an objective type of teacher-made test?
- a. matching type
  - b. multiple-response
  - c. completion type
  - d. essay test
99. Which of the following is not criterion in determining the effectiveness of a test?
- a. validity
  - b. cost of test
  - c. reliability
  - d. items based on factor analysis
100. Which of the following is not a purpose of evaluation?
- a. provide educational guidance
  - b. appraise the total school program
  - c. provide for the individual differences
  - d. none of these

PART 3 ANWER KEY

CHILD AND ADOLESCENT DEVELOPMENT

ANSWER KEY			
1	c	51	c
2	c	52	b
3	b	53	a
4	d	54	d
5	a	55	a
6	d	56	b
7	c	57	c
8	a	58	a
9	a	59	a
10	c	60	b
11	a	61	c
12	d	62	d
13	c	63	d
14	d	64	d
15	a	65	a
16	b	66	c
17	a	67	d
18	c	68	a
19	d	69	d
20	d	70	d
21	c	71	a
22	c	72	d
23	b	73	b
24	b	74	b
25	d	75	a
26	c	76	c
27	b	77	e
28	b	78	c
29	a	79	b
30	a	80	b
31	a	81	c
32	a	82	a
33	b	83	b
34	d	84	c
35	d	85	d
36	c	86	d
37	c	87	b
38	b	88	b
39	c	89	c

40	b	90	b
41	a	91	a
42	c	92	a
43	d	93	c
44	d	94	b
45	a	95	c
46	a	96	b
47	b	97	b
48	b	98	c
49	b	99	b
50	a	100	b

SOCIALDIMENSIONS OF EDUCATION

1.A	21.D	41.A	61.C	81.A	101.B	121.D	141.B	161.B	181.B
2.C	22.C	42.C	62.B	82.A	102.C	122.D	142.C	162.A	182.A
3.A	23.B	43.C	63.D	83.C	103.C	123.B	143.A	163.A	183.C
4.D	24.C	44.C	64.D	84.D	104.C	124.B	144.A	164.C	184.B
5.C	25.D	45.A	65.C	85.B	105.C	125.D	145.A	165.A	185.B
6.A	26.B	46.A	66.B	86.B	106.C	126.B	146.D	166.C	186.B
7.B	27.B	47.B	67.A	87.C	107.A	127.B	147.B	167.B	187.C
8.B	28.D	48.B	68.A	88.D	108.D	128.D	148.C	168.C	188.B
9.B	29.D	49.A	69.C	89.C	109.A	129.B	149.C	169.A	189B
10.D	30.B	50.B	70.B	90.B	110.C	130.D	150.B	170.B	190.A
11.A	31.D	51.A	71.D	91.A	111.C	131.A	151.C	171.B	191.C
12.A	32.C	52.C	72.A	92.D	112.B	132.C	152.C	172.B	192.A
13.D	33.D	53.B	73.A	93.B	113.C	133A	153.D	173.A	193.B
14.C	34.A	54.B	74.D	94.CA	114.C	134.D	154.C	174.D	194.A
15.D	35.A	55.B	75.D	95.A	115.B	135.C	155.A	175.C	195.C
16.B	36.A	56.D	76.B	96.A	116.D	136.D	156.D	176.C	196.B
17.C	37.A	57.A	77.A	97.A	117.C	137.B	157.C	177.A	197.A
18.B	38.D	58.D	78.D	98.A	118.D	138.B	158.D	178.B	198.B
19.B	39.C	59.B	79.B	99.C	119.A	139.A	159.A	179.C	199.D
20.D	40.B	60.C	80.A	100.C	120.C	140.B	160.A	180.D	200.B

CURRICULUM DEVELOMENT

ANSWER KEY				
1	c		21	b
2	d		22	retelling
3	c		23	d
4	c		24	a
5	d		25	d
6	c		26	c
7	b		27	c
8	c		28	c
9	d		29	c
10	c		30	a
11	a		31	c
12	c		32	a
13	a		33	c
14	d		34	c
15	a		35	b
16	a		36	d
17	b		37	c
18	d		38	c
19	d		39	d
20	c		40	d

EDUCATIONAL TECHNOLOGY

1.	D	51.	B
2.	B	52	A
3	A	53	D
4	A	54	A
5	B	55	D
6	D	56	A
7	B	57	B
8	A	58	A
9	C	59	A

10	A	60	A
11	B	61	B
12	D	62	C
13	D	63	D
14	A	64	A
15	D	65	B
16	D	66	B
17	D	67	C
18	C	68	B
19	A	69	B
20	B	70	A
21	C	71	D
22	C	72	D
23	B	73	D
24	C	74	D
25	B	75	C
26	A	76	B
27	C	77	B
28	D	78	A
29	A	79	C
30	C	80	A
31	C	81	A
32	C	82	C
33	D	83	B
34	B	84	D
35	C	85	A
36	B	86	B
37	C	87	B
38	A	88	C
39	C	89	A
40	B	90	D
41	C	91	D
42	D	92	B
43	D	93	D
44	B	94	A
45	C	95	D
46	B	96	A
47	D	97	C
48	D	98	A
49	D	99	A
50	B	100	B

**PRINCIPLES AND STRATEGIES OF TEACHING**

1	c	51	a
2	b	52	a
3	a	53	b
4	b	54	a
5	c	55	c
6	b	56	a
7	b	57	a
8	c	58	b
9	b	59	c
10	b	60	c
11	b	61	a
12	b	62	a
13	a	63	b
14	b	64	b
15	a	65	b
16	a	66	a
17	b	67	d
18	c	68	b
19	b	69	d
20	b	70	c
21	b	71	c
22	b	72	a

23	c	73	c
24	a	74	b
25	b	75	d
26	a	76	d
27	b	77	b
28	b	78	c
29	d	79	a
30	d	80	b
31	b	81	a
32	c	82	b
33	a	83	a
34	d	84	d
35	a	85	a
36	b	86	a
37	b	87	d
38	a	88	b
39	a	89	b
40	b	90	d
41	a	91	c
42	b	92	a
43	c	93	d
44	c	94	b
45	c	95	d
46	b	96	a
47	b	97	b
48	c	98	a
49	a	99	a
50	b	100	a

ASSESSMENTOF LEARNING

1	A	26	C	51	B	76	B
2	C	27	A	52	A	77	A
3	B	28	A	53	B	78	B
4	C	29	B	54	A	79	A
5	A	30	E	55	C	80	B
6	A	31	D	56	A	81	A
7	B	32	A	57	B	82	C
8	A	33	A	58	A	83	D
9	C	34	A	59	A	84	D
10	A	35	B	60	A	85	B
11	E	36	B	61	A	86	A
12	D	37	C	62	B	87	A
13	D	38	B	63	C	88	A
14	B	39	D	64	C	89	D
15	D	40	A	65	C	90	D
16	C	41	D	66	D	91	A
17	D	42	B	67	B	92	D
18	D	43	A	68	D	93	B
19	E	44	B	69	D	94	D
20	A	45	C	70	C	95	C
21	E	46	C	71	D	96	A
22	D	47	C	72	B	97	D
23	D	48	A	73	A	98	D
24	D	49	B	74	B	99	D
25	B	50	A	75	A	100	D

## TEACHING PROFESSION

1. Which of the following emphasizes the right of citizens to quality education?
  - a. The basic education level
  - b. Tertiary level
  - c. The graduate level
  - d. All levels
2. Which educational level/s provide/s for free and compulsory education as stipulated in Article IV, Section 2 of the Philippine Constitution?
  - a. Elementary level
  - b. Secondary level
  - c. Elementary and secondary levels
  - d. Tertiary level
3. Who among the following is in the category of non-academic personnel as provided for under Education Act of 1982?
  - a. Guidance counselors
  - b. School principal
  - c. School nurse
  - d. School librarian
4. How is gradual progression of teacher's salary from minimum to maximum done?
  - a. Regular increment every year
  - b. Increment after ten years of service
  - c. Regular increment every 3 years
  - d. Increment after five years
5. Which of the following is NOT recognized by the Magna Carta for Public School Teachers?
  - a. Quality education depends primarily on the quality of socio-economic status of teachers.
  - b. Advancement in education depends on the teachers' qualifications and ability.
  - c. Education is an essential factor in the economic growth of the nation.
  - d. Education is development and vice-versa.
6. What appointment can be given to Teacher A who possesses the minimum qualifications but lacks the appropriate but lacks the appropriate civil service eligibility?
  - a. Contractual basis
  - b. Permanent
  - c. Provisional
  - d. Substitute
7. Which of the following rights is intended for parents under Education Act of 1982?
  - a. The right to academic freedom
  - b. The right to privacy of communication
  - c. The right to seek redress of grievance
  - d. The right to full access to the evidence of the case
8. What can help achieve relevant quality education?
  - a. Strong curriculum
  - b. Competent instruction
  - c. School-community relations
  - d. Competent administrator
9. Which of the following provisions under the Magna Carta for Public School Teachers will most likely promote teachers' welfare and defend their interests?
  - a. Be promoted in rank and salary
  - b. Regulate their social involvement
  - c. Undergo and participate in professional development
  - d. Establish, join and maintain professional and self-regulation organizations
10. What does "teachers are persons in authority" imply?
  - a. Teachers cannot be charged.
  - b. No person can assault a teacher.
  - c. Teachers have immunity from arrest.
  - d. Decisions made by teachers are deemed right.
11. Who among the following characterizes a professional teacher?
  - a. An education graduate who received honors
  - b. A teacher who has taught for at least six years
  - c. A teacher who has attended national seminars on teaching
  - d. A teacher who qualifies for a permanent position under RA 4670
12. Who are covered by RA 4670?
  - a. Teachers in all levels
  - b. Teachers in all public elementary schools
  - c. Teachers in both public and private schools
  - d. Teachers in public elementary and secondary schools
13. Teacher B has been in active service for 10 years when he decided to pursue higher studies. Under RA 4670, what kind of leave of absence can s/he avail of?
  - a. Indefinite leave
  - b. Scholarship leave
  - c. Study leave
  - d. Vacation leave
14. When can teachers be required to work on assignment not related to their duties?
  - a. When on probation
  - b. When found inefficient
  - c. When lacking in educational qualifications
  - d. When compensated under existing laws

15. Teacher C has been teaching 7 straight years and therefore qualifies for a study leave with pay for one year. Should she pursue it, how much pay is she entitled to receive?

- a. 50% of monthly salary
- b. 60% of monthly salary
- c. 70% of monthly salary
- d. 100% monthly salary

16. Which of the following laws strengthens teacher education in the Philippines through the establishment of centers of excellence?

- a. RA 7722
- b. RA 7784
- c. RA 7796
- d. RA 7834

17. What does free public secondary educational under the law mean?

- a. Right of every student to enter public secondary schools
- b. Free from being screened to enter public secondary schools
- c. Free from payment of school fees identifies and authorized by law
- d. Free from payment of tuition and other fees for students enrolled in public secondary schools

18. Teacher D is assigned in a rural area; Teacher E in a depressed community; Teacher F in a hazardous area; and Teacher G in a place where standard of living is high. Who is entitled to a hardship allowance?

- a. Teacher D
- b. Teacher E
- c. Teacher F
- d. Teacher G

19. Teacher H contracted an illness that required rest for more than one year. Which leave should she apply for?

- a. Sick leave
- b. Personal leave
- c. Vacation leave
- d. Indefinite leave

20. A school personnel can avail of free legal service under certain circumstances. Principal I was accused of maligning her neighbor. Is Principal I entitled to the said service?

- a. Yes, she should defend herself.
- b. No, if funds are not available.
- c. No, it might bring some disagreements in school
- d. No, the case is not related to her professional duties.

21. Teacher J discusses conflicts between warring groups in Mindanao. Which pillar should he stress more?

- a. Learning to be
- b. Learning to live together
- c. Learning to do
- d. Learning to know

22. Teacher K teaches in a public school in her locality. Due to teacher shortage, her classroom teaching starts from 6 am and ends at 3 pm. Is the assignment given her just?

- a. Yes, the situation demands that she render longer teaching hours.
- b. Yes, as long as she signs a conforme letter to that effect.
- c. No, rendering longer teaching hours would make the teacher tired and exhausted.
- d. No, Magna Carta for Public School Teachers states that in the exigencies of service, any teacher may be required to render more than six hours and not more than eight hours of actual classroom teaching a day.

23. Teacher L, a graduate of BSEd with majorship in Mathematics teaches in a national high school in her province. Since she has been rated outstanding in her performance, can she be exempted from taking the LET?

- a. Yes, that is a privilege that must be given to teachers whose performance is outstanding.
- b. Yes, if approved by PRC.
- c. No, RA 7836 states that no person shall practice or offer to practice the teaching profession in the Philippines or be appointed as teacher to any position calling for a teaching position without having previously obtained a valid certificate and a valid license from the Commission.
- d. No, professional license is required of all teachers regardless of age and teaching performance.

24. Which of the following statements is NOT true about the Code of Ethics for Professional Teachers?

- a. The teacher must select which information to keep confidential
- b. The teacher must demonstrate full commitment and devotion to duty
- c. The teacher must manifest pride in the nobility of the teaching profession
- d. The teacher must make no prejudice or discrimination against any learner

25. Which of the following could be the reason for the teacher's suspension from the practice of the teaching profession?

- a. Immoral, unprofessional or dishonorable conduct
- b. Observing proper procedures in obtaining a certificate of registration
- c. Faithfulness to the code of ethical and professional standards for professional teachers
- d. Willingness to attend seminars, workshops, conferences and the like or the continuing education program prescribed by the Board and the Commission.

1. Ms. Sanchez, a BSE graduate, has not passed the LET yet. On what capacity can she be hired?

- a. Permanent status
- b. Emergency status
- c. Provisional for not less six months
- d. Provisional for not less than one year

2. Teacher M suffers from hypertension and experiences difficulty in speech. Which would be affected if he continues teaching?

- a. Personality
- b. Punctuality
- c. Effectiveness
- d. Devotion to duty

2.



3.

3. Teacher N wants to continue with her study leave for another six months after completing a school year. Could she be allowed?
- Yes, if her grades are excellent.
  - Yes, but without compensation.
  - No, other teachers should have the chance.
  - No, study leave should not exceed one year.

4. Teacher O tutors her students, who have difficulty coping with Math, after class hours. Is her act ethical?
- Yes, provided she receives just compensation.
  - Yes, provided she does not require a fee from the parent.
  - No, that is unfair to other students.
  - No, she should be free after her official time.

5. Teacher P, the English coordinator, was assisted by Teacher Q throughout the celebration of English Week. What could Teacher P do to acknowledge Teacher Q's assistance?
- Buy her a gift
  - Keep quiet about the assistance received.
  - Mention formally to the principal the assistance received.
  - Make an announcement giving due recognition of the assistance received.

6. Is holding a rally to protest the delay of benefits due a person ethically acceptable?
- Yes, when hold while on official time.
  - Yes, when hold outside the official time.
  - Yes, when hold with approval of the principal.
  - Yes, when hold together with parents and students.

7. What should a teacher do when he/she falls in love with his/her student?
- Court the student at home.
  - Propose and marry the student.
  - Wait till the student is no longer under his/her tutelage.
  - Act normally as if nothing happens and the student does not exist.

8. When a Principal starts to exercise his/her powers over making and promoting students, is his/her action acceptable?
- Yes, when the teacher cannot make decision on time.
  - Yes, when there is abuse of judgment on the part of the teacher.
  - No, teachers are more knowledgeable of their student's performance.
  - No, grading and promoting students are exclusive functions of teachers.

9. Teacher R was asked by her principal to teach pre-school class in addition to her regular grade one class. What will be the basis for her additional compensation?
- Her basic salary
  - Performance rating
  - Providing public information of their policies and procedures
  - Encouraging appreciation of government agencies

10. Which of the following shows responsiveness of public officials and employees?
- Avoiding wastage in public funds
  - Formulating rules and policies regarding work
  - Providing public information of their policies and procedures
  - Encouraging appreciation of government services

11. Teacher S, a Science teacher has been accused of sexual harassment by one of her students. What should the school principal do?
- Ask the teacher to surrender to the police.
  - Tell the teacher to stop reporting to school.
  - Advise the teacher to transfer to other school.
  - Create a committee to investigate the accusation.

12. Teacher T receives a love letter from one of her third year high school students in English. What should Mr. Martin do?
- Read her letter to the class.
  - Let the student express her feelings through letters.
  - Return the letter to the student and tell her not to do it again.
  - Surrender the letter to the parent of the student.

13. Mr. Nico, a Social Science teacher is advocating reforms which the principal failed to recognize. What should the principal do?
- Subject Mr. Nico to a disciplinary measure.
  - Just keep quiet about the behavior of Mr. Nico
  - Call Mr. Nico to the office and clarify things out with him.
  - Send Mr. Nico a memo requiring him to explain his behavior.

14. Which of the following manifests "Commitment to democracy" as explained in RA 6713?
- Maintaining the principle of accountability.
  - Committing to democratic values and ways of life.
  - Manifesting by deeds the supremacy of civilian authority over the military.
  - All of the above

15. Teacher U was ordered by her principal to come to school on four consecutive Saturdays for the training of students' editorial staff of their school paper. Is this allowed under RA 4670?
- Yes, provided the teacher is compensated.
  - No, because it's not within the regular functions of the classroom teacher.
  - Yes, because it's part of the teacher's other duties
  - No, because it's not clearly indicated in the law

16. Dr. Velasco, a schools' division superintendent acted on the complaint filed by a group of parents against the alleged misconduct of a particular teacher. She issued a memorandum requiring her to take a leave of absence for a week while the complaint is being heard yet. Was the action of the superintendent legal?
- Yes, because she is the superintendent.
  - No, because the complaint has not been heard yet.
  - Yes, the superintendent has disciplinary authority over teachers.
  - No, the superintendent has no disciplinary authority over teachers.
17. A school's academic coordinator has been found to have engaged in gambling which has caused him to be absent most of the time. Can his certificate of registration as a teacher be revoked?
- No, unless he's proven guilty.
  - No, because he's protected by his rights as a teacher.
  - Yes, because he's incompetent.
  - Yes, because habitual gambling is a dishonorable conduct and is against the practice of teaching.
18. Mr. Santos is a holder of a valid certificate of eligibility as a teacher issued by the Civil Service Commissioner and the then DECS, while Mr. Cruz is a registered professional. Who is allowed to practice the teaching profession in the Philippines?
- Mr. Santos, because of his CSC eligibility certificate.
  - Mr. Cruz, because their credentials are both recognized by law.
  - Both of them, because their credentials are both recognized by law.
  - Neither of the two because they did not take and pass the LET.
19. What is RA 6713 also called?
- Ethical Standards for public Employees
  - Code of Ethical Standards for Government Officials and Employees
  - Code of Conduct and Ethical Standards for Public Officials and Employees
  - Code of Ethical Standards and Conduct of Government Officials and Employees
20. Teacher V, a BEED graduate is preparing for the LET. Which of the following should she focus her attention more?
- General Education
  - Specialization
  - Professional Education
  - General Education and Professional Education
21. What norm of conduct is manifested by being loyal to the republic and to the Filipino people?
- Professionalism
  - Nationalism and Patriotism
  - Responsiveness to the public
  - Honesty
22. Mr. Salazar, a school superintendent, filed his statement of assets and liabilities upon assuming to office. Under what ethical standard does this practice fall?
- Divestment
  - Prohibited Acts and Transactions
  - Statement of Assets and Liabilities
  - System of Incentives
23. Principal B acted on the letter of complaint received by his office 30 days after saying he was preoccupied by more important things the past days. Is his reason acceptable?
- Yes, because he has to prioritize things.
  - No, RA 6713 states that public officials and employees must act promptly on letters and requests within 15 working days from receipt thereof.
  - Yes, because the letter of complaint can wait and is of no urgency.
  - No, the reason is simple unacceptable.
24. Which of the following is NOT in the norms of conduct under RA 6713?
- Professionalism
  - Justness and sincerity
  - Commitment to public interest
  - Responsiveness to the private
25. Which of the following is true about the teacher as a person under the Code of Ethics for Professional Teachers?
- Live with dignity at all times wherever he/she is
  - Serve as a model worthy of emulation
  - Place premium upon self-respect and self-discipline
  - All of the above.

## SOCIAL DIMENSION

- Which of the following conditions manifests trend of globalization?
  - Establishment of stronger boundaries between and among nations.
  - Increased awareness on the importance of national cultures and traditions.
  - Less and less impact of human activity on the planet earth.
  - The incorporation of local and national economies into a worldwide global economy.
- According to the Delors report, there are a number of main tensions central to the problems of the twenty first century that we need to overcome. One of them is the challenge to an individual how he or she can adapt to the changing world without forgetting or turning his/her back from the past. What kind of tension or conflict is manifested in this situation?
  - Tension between tradition and modernity
  - Tension between the global and the local
  - Tension between the universal and the individual
  - Tension between long term and short term considerations
- Which of the following features represents the new paradigm shift in education?
  - Traditional pedagogies
  - Lifelong education for all
  - Rigid subject matter boundaries
  - Knowledge as the only learning outcome

4. What is the measure of relevance in education?

- a. Democratization of access
- b. Functionality and meaningfulness
- c. Ability to sustain education through the future
- d. Excellence and effectiveness

5. What is the concern of Multicultural Education?

- a. Anticipating the future and imagining possible and probable futures.
- b. Gender equality and harnessing of the role of women in development.
- c. Promoting care for the environment and building a global culture of ecological responsibility.
- d. The exploration of concepts of cultural diversity, similarities and prejudices to promote cultural understanding.

6. Which of the following may be considered an economic impact of globalization on education?

- a. Increasing commercialization of education and the corporate takeover of education
- b. Weakening of the notion of the "citizen" as a unified and unifying concept.
- c. New technologies of information and communication creates new approaches to learning
- d. Reduction of state and government support and subsidy for education

7. Which of the following aptly describes Marshall McLuhans' concept of global village?

- a. The idea that because of rapid globalization and development in technology, the world has become one global village where increased diversity and difference among people has become more pronounced than ever.
- b. Rapid integration of the planet through media and technology where events in one part of the world could be experienced from other parts in real-time, similar to what human experience was like when we lived in small villages.
- c. Global Village is the kind of global world we are experiencing, characterized by fundamentalism, apathy and conflict brought about by clashes of cultures.
- d. People's cultural and religious identities will be the primary source of conflict in the post-Cold War world as evidenced by the conflict between fundamentalist Muslims and the western world.

8. When planning her lessons and units, Mrs. Jones is careful to include books and resources from a variety of cultures and ethnic groups. What kind of education is this?

- a. Multilingual education
- b. Transformative education
- c. Multicultural education
- d. Gender free education

9. Which of the following is NOT a characteristic of globalization?

- a. Stretching a social, political and economic activities across political frontiers, regions and continents.
- b. The growing magnitude of interconnectedness and flows of trade, investment and migration.
- c. A speeding up of global interactions and processes through worldwide systems of transportation and communication.
- d. The expansion of economic protectionism and isolation of poor countries.

10. Which of the following illustrates the major paradigm shift in education in the 21st century?

- a. Shift from rigid subject matter to a more interdisciplinary and multidisciplinary pedagogical approach.
- b. Shift from values education and emotional learning to knowledge dominated curriculum
- c. From contextualized themes generated from global and local realities to pre-organized subject matter
- d. From more flexible learning styles to a prescribed pedagogy

11. What educational approach/perspective recognizes the knowledge and experience of women, racial groups and ethnic groups as being just, as valid and relevant as the knowledge of dominant groups in mainstream academic discourse?

- a. Transformative education
- b. Multicultural education
- c. Inclusive education
- d. Global education

12. How does the notion of cultural relativity and variability affect the teaching-learning processes in school?

- a. The students' varied cultural background will in now way affect the way they will learn the lessons in school.
- b. The students can readily adjust to the way the teacher initiates learning in school because children are adaptable beings no matter what culture they come from.
- c. The child's cultural background influences the children's way of interpreting and viewing the world; hence, teachers must consider the children's world view when teaching.
- d. The teacher should be wary of differing cultural points of view and must make sure that students will see things the same way.

13. Which among the following is the focus of Civic Education?

- a. Promote understanding of human rights, concepts and values to enable learners to comprehend and transform conditions which give rise to human rights violations.
- b. Learning for effective participation in democratic and development processes at both local and national levels.
- c. Foster a vision of education for sustainable development and care for the environment.
- d. Empower people with the skills, attitudes and knowledge to build a peaceful world based on justice and human rights.

14. Which of the following initiatives would NOT help a school address diversity?

- a. Using ability grouping
- b. Using cooperative learning
- c. Working with neighborhood groups
- d. Using culturally-relevant teaching methods

15. If the teacher is emphasizing the development of the learner's competency to transform knowledge into innovations and job-creation, what pillar of education does s/he is actually promoting?

- a. Learning to Know
- b. Learning to Do
- c. Learning to Live Together
- d. Learning to Be

16. What pillar of education which emphasizes learning to be human, through acquisition of knowledge, skills and values conducive to personality development?

- a. Learning to Know
- b. Learning to Do
- c. Learning to Live Together
- d. Learning to Be

17. A class is composed of students coming from several ethnic communities including Muslims and Lumads. They seem to have difficulty understanding each others' behavior and points of view. What should the teacher do?

- a. Introduce multiculturalism in the class and provide activities for practice.
- b. Threaten the students that if there are students who do not behave and tolerant of their classmates, s/he will be dropped from class.
- c. Inform students that they will all be learning new ways of thinking and behaving in this class, so they might as well leave their cultural idiosyncrasies at home.
- d. Assign bright students to monitor and control behavior of poor students.

18. Which of the following qualities should be developed by the pillar, Learning to Live Together?

- a. Strong appreciation of the diversity of the human race
- b. Readiness to take risks and resolve or manage conflicts
- c. Scientific spirit and an inquiring mind
- d. Complete fulfillment of humans, in all the richness of his/her personality

19. Which of the following statements about Gender is correct?

- a. Gender is biologically determined.
- b. Gender is socially and culturally-constructed.
- c. Gender roles are the same in all societies.
- d. Gender is an ascribed status in society.

20. UNICEF and UNESCO are two key UN agencies which are particularly active advocates of education for peace. Which of the following is not supported by UNESCO in promoting peace in the schools?

- a. Uphold children's basic rights as outlined in the Convention on the Rights of the Child (CRC)
- b. Develop a climate that models peaceful and respectful behavior among all members of the learning community
- c. Demonstrate the principles of equality and non-discrimination in administrative policies
- d. Enable the teachers to stress peace-making in social studies classroom only when necessary

21. One way to advance peace education is through partnerships of various non-governmental organizations, education institutions, United Nations specialized bodies which link ideals of peace with research and practice. One such significant examples is the Hague Agenda for Peace and Justice for the 21st Century. What is the aim of the Agenda's Global Campaign for Peace Education?

- a. Helps coordinate local initiatives and unite educators in the common practice of educating for a culture of peace.
- b. Supports the UN Decade for a Culture of Peace and Non-violence for the Children of the World and to introduce peace and human rights education into all educational institutions.
- c. Brings together multiple traditions of pedagogy, theories of education, and international initiatives for the advancement of total human development and care for the environment through learning.
- d. Serves to enhance learning across subjects like conflict resolution initiatives.

22. The impact of conflict on children whether as victims of war or child soldiers has been brought to world attention through media, international organizations and eye witness accounts. What is the best thing to do to help children affected by conflict?

- a. Employ education to regain parts of a lost children and to facilitate the experiences that support healthy social, emotional and intellectual growth and development
- b. Provide employment opportunity for them as well as their parents to attain financial independence
- c. Offer them to migrate in neighboring country as foreign refugees
- d. Secure their safety by imposing strict curfew hour

23. The United Nations is committed to address climate through mitigation and adaptation. Which of the following is the best way of addressing the issue?

- a. Deepen strategic and operational collaboration with international and regional organizations, including international financial institutions and regional development banks, and other stakeholders.
- b. Developing a policy framework that identifies basic elements needed to prevent human rights violations.
- c. Facilitate and execute agreements on reducing emissions from deforestation and forest degradation to protect forests and sustain the livelihoods of the people who depend on them.
- d. Enhancing collaboration among humanitarian organizations, particularly from the global South, at the local, national and regional levels, to strengthen community resilience and emergency response, and establishing a monitoring system to assess progress on the implementation of preparedness measures.

24. Why are educational environments very crucial to peace education?

- a. The social, cultural, economic and political contexts in which educators work shape the specific content and methods they choose for peace education.
- b. The variety of different educational settings from rural to urban, school-based to community and within the formal curricula or non-formal popular education projects are relevant to peace education.
- c. Many teachers infuse peace education into traditional academic subjects such as literature, math, science, history, language, civics and the arts.
- d. All of the above

25. What is celebrated every December 10?

- a. Mother Language day
- b. Human Rights Day
- c. Earth's Day
- d. International Day of Tolerance

1. What kind of tension is referred to when people prefer to have quick answers and ready solution to many problems even if its calls for a patient, concerted, negotiated strategy of reform?

- a. Tension between modernity and tradition
- b. Tension between long term and short term considerations
- c. Tension between spiritual and material
- d. Tension between individual and universal

2. In what strands of the four pillars of education implies a shift from skill to competence, or a mix of higher-order skills specific to each individual?
- a. Learning to Know
  - b. Learning to Do
  - c. Learning to Live Together
  - c. Learning to Be

3. Which of the following is NOT true about the Four Pillars of Learning?
- a. The pillars of learning stress the goal of contributing to social cohesion, intercultural and international understanding, peaceful interchange, and harmony.
  - b. The Pillars of Learning imply a shift from schooling to learning throughout life by "learning how to learn"
  - c. The pillars of learning stress the importance of closer linkage between education and the world of work.
  - d. The Pillars of Learning adheres to the instrumental and purely academic view of education that focuses on the achievement of specific aims of education such as economic productivity.

4. What pillar of education of J. Delors (UNESCO) focuses on voc-tech relevant to people-centered human development?
- a. Learning to Know
  - b. Learning to Do
  - c. Learning to Live Together
  - d. Learning to Be
- Answer: B

5. The rapid traversing of ideas, attitudes and values across national borders that generally leads to an interconnectedness and interaction between peoples of diverse cultures and ways of life. What is being referred to?
- a. Cultural Globalization
  - b. Fundamentalism
  - c. Multiculturalism
  - d. Clash of civilization
- Answer: A

6. Which is considered a political impact of globalization?
- a. Changing role of education in terms of preparing students for the world of work
  - b. The threat to the autonomy of national educational systems by globalization.
  - c. Reforms in education as lifelong education
  - d. Branding, globalization and learning to be consumers
- Answer: B

7. What United Nation Decade are we celebrating for 2005-2014?
- a. Educating for Culture of Peace
  - b. Educating for International Understanding
  - c. Educating for Sustainable Development
  - d. Promoting the Rights of the Elderly
- Answer: C

8. With the growing competition brought about by globalization, what is preferred by most employers in hiring their employees?
- a. Flexible
  - b. Selective
  - c. Quick
  - d. None of the above
- Answer: A

9. Which of the following characteristics does NOT describe contextualized learning as a major paradigm shift in education?
- a. From limited access to time-bound and space limited education, to borderless education, lifelong learning for all in a learning society.
  - b. From traditional pedagogies to more modern strategies of teaching and learning.
  - c. From knowledge limited to the local scene to the globalized knowledge, values, attitudes, and skills interfaced with local wisdom.
  - d. Pre-organized subject matter to localized themes generated from the global realities and the cultural relevant, meaningful and useful to learner.
- Answer: A

10. What current trend in education focuses on the study of the basic concepts, beliefs and values underlying our democratic political community and constitutional order?
- a. Civic education
  - b. Development education
  - c. Peace education
  - c. Multicultural education
- Answer: A

11. Which of the following is the first target of the Millennium Development Goals (MDG's) formulated by member states of the UN in September 2000?
- a. Reduce child mortality
  - b. Eradicate extreme poverty and hunger
  - c. Reduce death due to HIV/AIDS and malaria
  - d. Achieve universal access to primary education
- Answer: B

12. Which among the following statements about Human Rights Education (HRE) is correct?
- a. HRE is more of the responsibilities of the state to implement human rights law rather than the protection of the rights holders
  - b. HRE should focus more on rights based on "law in books", rather than "law in real-life".
  - c. HRE needs to focus on the values, principles, and standards and human rights and how they can be translated into day-to-day actions
  - d. Human Rights Standards vary from society to society and HRE therefore should also vary in terms of approaches and methods

Answer: C

13. What is the implication and globalization to the practice and experience of education?

- a. Increase of state and government support and subsidy for education
- b. Commodification and the corporate takeover of education
- c. Greater autonomy of national educational systems
- d. Delocalization of technologies and orientations in education

Answer: B

14. Which of the following skills corresponds to the Fourth Pillar of Learning, "Learning to live together"?

- a. Empathy and cooperative social behavior
- b. Personal commitment and sense of responsibility
- c. Adaptability to change in the world of work
- d. Reasoning and problem solving skills

Answer: A

15. Which of the following is NOT a characteristic of Multicultural education?

- a. Personality empowering
- b. Socially transformative
- c. Pedagogically humanistic
- d. Culturally discriminating

Answer: D

16. What is the character of education that manifests democratization of access and inclusivity?

- a. Relevance
- b. Sustainability
- c. Quality
- d. Equity

Answer: D

17. What is the kind of education that emphasizes human-earth relationships and fosters a vision of education for sustainable development to build a global culture of ecological responsibility?

- a. Human Rights Education
- b. Development Education
- c. Environmental Education
- d. Global Education

Answer: C

18. Which of the following is NOT a benefit of multicultural education?

- a. Multicultural education increases positive relationships through achievement of common goals, respect, appreciation and commitment to equality among the teachers and students.
- b. Multicultural education decreases stereotyping and prejudice through direct contact and interaction among diverse individuals.
- c. Multicultural education promotes independence of various ethnic groups in development and supports fragmented view of the world.
- d. Multicultural education renews vitality of society through the richness of the different cultures of its members and fosters development.

Answer: C

19. Which of the following is NOT one of the benefits of social media?

- a. Mass media decreases prejudice and discrimination.
- b. Mass media enriches the educational programs.
- c. Mass media increases student's exposure to diversity.
- d. Mass media helps provoke discussion of current issues.

Answer: A

20. Which among the following rights manifests rule of law and good governance?

- a. Right to education
- b. Right to environment protection
- c. Right of participation
- d. Right to work

Answer: C

21. Which among the following is NOT a core principle of human rights?

- a. Human dignity
- b. Non-discrimination
- c. Universality
- d. Independency

Answer: D

22. How are human rights principles reflected in the activities of national and local governments?

- a. Legislating laws to include rights education in all levels of schooling
- b. Organizing local exhibit or event to highlight the children's talents and local products
- c. Asking the community leaders to volunteer in the construction of a barangay hall
- d. Lobbying to the UN High Commission for Human Rights to allocate higher budget for Philippines' Commission on Human Rights.

Answer: A

23. Which of the following could be a reason to justify peace education as a series of "teaching encounters" or teaching-learning process?

- a. Desire for peace
- b. Nonviolent alternatives for managing conflict
- c. Skills for critical analysis of structural arrangements that produce and legitimize injustice and inequality
- d. All of the above

Answer: D

24. Which of the following is accurate in regard to working with parents in diverse classrooms?

- a. The parent's culture is important, but should not influence their children's education.
- b. Teachers should demonstrate their "expertise" to parents to show they know best.
- c. Teachers should strive to use a variety of ways to keep parents informed, including parents who cannot speak English or Filipino.
- d. The importance of the family's influence on children's education has diminished over the past few years.

Answer: C

25. Which of the following is NOT a guiding statement of peace education?

- a. Peace education teaches students what to think rather than how to think.

- b. Peace education employs holistic and participatory approach.
- c. Peace education aims not to reproduce but transform.
- d. Peace builds bridges of support among key participants.

Answer: A

## PRINCIPLES AND STRATEGIES

1. To ensure the lesson will go smoothly, Teacher A listed down the steps she will undertake together with those of her students. This practice relates to?

- a. Teaching style
- b. Teaching method
- c. Teaching strategy
- d. Teaching technique

Answer: B

2. The class of Grade 6 - Einstein is scheduled to perform an experiment on that day. However, the chemicals are insufficient. What method may then be used?

- a. Project
- b. Laboratory
- c. Lecture
- d. Demonstration

Answer: D

3. Teacher C gives the class specific topic as assignment which they have to research and pass the following day. However, the students could not find any information about it. What method should Teacher C use to teach the assignment?

- a. Project method
- b. Discovery approach
- c. Lecture method
- d. Demonstration method

Answer: C

4. Pictures, models and the like arouse students interest on the day's topic, in what part of the lesson should the given materials be presented?

- a. Initiating activities
- b. Culminating activities
- c. Evaluation activities
- d. Developmental activities

Answer: A

5. In Bloom's taxonomy of educational objectives, the domains are stated from lowest to highest level. Which of the following objectives belongs to the lowest level?

- a. To identify the characters of the story.
- b. To differentiate active from passive voice.
- c. To give the available resources that could be recycled to useful things.
- d. To explain the procedure in changing improper fraction to mixed number

Answer: A

6. The class of IV - Kalikasan is tasked to analyze the present population of the different cities and municipalities of the National Capital Region for the last five years. How can they best present their analysis?

- a. By means of a table
- b. By looking for a pattern
- c. By means of a graph
- d. By guessing and checking

Answer: C

7. There are several reasons why problem-solving is taught in Math. Which is the LEAST important?

- a. It is the main goal for the study of Math
- b. It provides the content in which concepts and skills are learned and applied
- c. It provides an opportunity to develop critical and analytical thinking
- d. It provides pupils an opportunity to relate Math in the real world

Answer: A

8. Teacher D teaches in a remote high school where newspapers are delivered irregularly. Knowing the importance of keeping the students aware of current affairs, what is probably the best way to keep the students updated?

- a. Gather back issues of newspapers and let pupils compile them.
- b. Urge the pupils to listen to stories circulating in the community.
- c. Encourage the pupils to listen to daily broadcast from a transistor radio.
- d. The teacher should try all available means to get the newspaper delivered to the school

Answer: C

9. Devices can make a lecture more understandable and meaningful. What is the most important thing a teacher should consider in the selection and utilization of instructional materials?

- a. Objectives of the lesson
- b. Availability of instructional materials
- c. Attractiveness of instructional materials
- d. Degree of interest on the part of the students

Answer: A

10. Teacher E asks student A to identify and analyze events, ideas or objects in order to state their similarities and differences. In which part of the lesson does said activity take place?

- a. Preparation
- b. Generalization
- c. Application
- d. Comparison and Abstraction

Answer: D

11. Which part of the lesson is involved in the giving of situation or activities based on the concepts learned?

- a. Preparation
- b. Generalization
- c. Application
- d. Comparison and Abstraction

Answer: C

12. Teacher F wants the class to find out the effect of heat on matter. Which method will help him accomplish his objective?

- a. Project Method
- b. Laboratory Method
- c. Problem Method
- d. Expository Method

Answer: B

13. In Math, Teacher G presents various examples of plane figures to her class. Afterwards, she asks the students to give definition of each. What method did she use?

- a. Inductive
- b. Laboratory
- c. Deductive
- d. Expository

Answer: A

14. Teaching Tinikling to I-Maliksi becomes possible through the use of?

- a. Inductive Method
- b. Expository Method
- c. Demonstration Method
- d. Laboratory Method

Answer: C

15. What is the implication of using a method that focuses on the why rather than the how?

a. There is best method b. Typical one will be good for any subject c. These methods should be standardized for different subjects.

d. Teaching methods should favor inquiry and problem solving. Answer: D  
16. When using problem solving method, the teacher can

a. Set up the problem b. Test the conclusion c. Propose ways of obtaining the needed data  
d. Help the learners define what is it to be solved

Answer: D

17. Which of the following characterizes a well-motivated lesson? a. The class is quiet. b. The children have something to do.

c. The teacher can leave the pupils  
d. There are varied procedures and activities undertaken by the pupils.

Answer: D

18. Learners must be developed not only in the cognitive, psychomotor but also in the affective aspect. Why is development of the latter also important?

a. It helps them develop a sound value system.  
b. Their actions are dominated by their feelings.  
c. It helps them develop an adequate knowledge of good actions. d. Awareness of the consequences of their action is sharpened. Answer: A

19. Which of the following attributes characterizes a learner who is yet to develop the concept?

a. The learner can identify the attributes of the concept.  
b. The learner can summarize the ideas shared about the concept.  
c. The learner can distinguish examples from non-examples.  
d. The learner gets a failing grade in the tests given after the concept has been discussed. Answer: A

20. The strategy which makes use of the old concept of "each-one-teach-one" of the sixty's is similar to?

a. Peer learning b. Independent learning c. Partner learning d. Cooperative learning

Answer: D

21. Which part of the lesson does the learner give a synthesis of the things learned?

a. Motivation b. Application c. Evaluation d. Generalization Answer: C

22. Educational objectives are arranged from simple to complex. Why is this?

a. Each level is built upon and assumes acquisition of skills from the previous level.  
b. Objectives are broad and value-laden statements that lead to the philosophy of education.  
c. Be idealistic and ambitious to begin with grandiose scheme for using taxonomy in all levels.  
d. These are guidelines to be taught and learned where teachers and students evaluate learning.

Answer: A

23. Which of the following is NOT true?

a. Lesson plan should be in constant state of revision.  
b. A good daily lesson plan ensures a better discussion.  
c. Students should never see a teacher using a lesson plan.  
d. All teachers regardless of their experience should have daily lesson plan.

Answer: C

24. In Music, Teacher 1 wants to teach the class how to play the piano in the Key of C. Which of the following should be his objective?

a. To play the piano in the key of C chords  
b. To improve playing the piano in the key of C  
c. To interpret property of chords of Key of C in the piano  
d. To exhibit excellent playing of piano in the key of C

Answer: A

25. When using instructional material, what should the teacher primarily consider?

a. The material must be new and skillfully made.  
b. It must be suited to the lesson objective.  
c. The material must stimulate and maintain students' interest  
d. It must be updated and relevant to Filipino setting.

Answer: B –

## PRINCIPLES AND MOTIVATION

1. Which theory operates on the "stimulus-response principle", which means all behaviors are caused by external stimuli?

a. Contextual theory  
b. Behaviorist theory  
c. Cognitive theory  
d. Constructivist theory

Answer: B

2. Ms. Erika in her Biology class accompanies her discussion with interesting visual aids. She strongly believes that students learn better when lessons are presented with images, real or imagined aside from mere lecture method. Which learning theory does she upholds?

a. Dual-Coding Theory  
b. Information Processing Theory  
c. Meaningful Reception Learning Theory  
d. Social Cognitive Theory

Answer: A

3. Miss Rita is an excellent Physical Education teacher. She started teaching volleyball to her Grade 2 class. Despite all her efforts, her class does not seem to learn how to play the game. What law of learning was disregarded?

a. Law of Disuse  
b. Law of Effect  
c. Law of Exercise  
d. Law of Readiness

Answer: D

4. Teacher Jay, a physical education teacher, demonstrates the new skill to be learned so that his students can watch him and later reproduce the skill. What learning theory is associated with the situation?

a. Dual-Coding Learning Theory  
b. Information Processing  
c. Schema Learning Theory  
d. Social Learning

Answer: D

5. Patrice is always fearful of freely roaming dogs but does not mind dogs in a pen or on a leash. What feature of classical conditioning is exhibited?

a. Discrimination  
b. Extinction



- c. Generalization
- d. Practice

Answer: A

6. A music teacher is careful in planning activities for each lesson. He praises liberally and rewards correct answers. What view of learning is exhibited?

- a. Classical conditioning
- b. Meaningful learning
- c. Operant conditioning
- d. Social learning

Answer: C

7. Which of the theories of learning presents or states that learning skills are hierarchically arranged?

- a. Cumulative Learning
- b. Meaningful Learning
- c. Social Cognitive Learning
- d. Theory of Instruction

Answer: A

8. Which of the following best describes what meaningful learning is?

- a. When what is to be learned is new and easy for the students
- b. Materials presented are difficult and challenging to the students
- c. When the materials to be learned is related to what students already know
- d. Students find the lessons easy and relevant to what was assigned to them

Answer: C

9. Rita easily remember dates and events in history. What component of LTM does Rita have?

- a. Creative thinking
- b. Critical thinking
- c. Reflective thinking
- d. Logical thinking

Answer: C

10. An Earth Science has just completed a unit on the sun. As she recognizes her next unit on other stars, she uses the sun as a frame of reference. What view of learning was used?

- a. Discovery learning
- b. Informative learning
- c. Meaningful learning
- d. Transfer learning

Answer: C

11. Which is an application of cognitive approach to motivation?

- a. Explain the reasons for studying the topic
- b. Create a supportive classroom climate for students
- c. Provide clear and prompt feedback on assignments
- d. Begin lessons with challenging questions and conflicting events

Answer: A

12. The first people power was held in February 25, 1986. What kind of knowledge is presented?

- a. Conditional Knowledge
- b. Cognitive Knowledge
- c. Domain-Specific Knowledge
- d. Procedural Knowledge

Answer: B

13. The students of Mrs. Reyes were not able to learn the concepts that she presented yesterday so she taught the same concepts again but this time using a different teaching method. What principle of learning was applied?

- a. Concepts should be presented in varied and different ways
- b. Effort was put forth when tasks are challenging
- c. Learning by doing is more effective than just by sitting and listening
- d. Learning is aided by formulating and asking questions

Answer: A

14. Alvin is a transferee and feels uneasy with his new school. His teacher is very accommodating, warm and caring. Alvin felt comfortable with the teacher display of genuine warmth. The teacher is consistent in his manner and Alvin began to associate school with the teacher's warmth. Which theory is being illustrated?

- a. Meaningful learning
- b. Operant conditioning
- c. Classical conditioning
- d. Observational learning

Answer: B

15. After just being introduced to another guest in the party, Tom cannot remember the name of the guest he was introduced to. In what memory stage was the information stored in?

- a. Episodic memory
- b. Semantic memory
- c. Sensory memory
- d. Working memory

Answer: C

16. Vygotsky claimed that social interaction is important for learning. What does this imply?

- a. Children are independent problem solvers
- b. Children learn from adults and other children
- c. Children learn by passive presentation of information
- d. Children in the crib has no learning yet, since they are not capable of interaction

Answer: B

17. How would you help a student who is intelligent but is underachieving in class?

- a. Provide challenging activities which he/she can accomplish
- b. Recognize his talents by asking him/her to help other students with their work
- c. Identify the immediate causes of difficulties that cause his/her being an underachiever
- d. Allow him/her to work with the slow learner group to cope with the academic needs of the lesson.

Answer: C

18. Mrs. Corpuz always makes sure that her pre-school classroom is well organized and clean. She puts up interesting and colorful visuals on the bulletin boards. What principle of motivation was applied?

- a. Incentives motivate learning
- b. Internal motivation is longer lasting and more self-directive than is external motivation
- c. Motivation is enhanced by the way in which instructional material is organized.
- d. The environment can be used to focus the student's attention on what needs to be learned.

Answer: D

19. For every correct answer, the teacher would give a star to her students. What schedule of reinforcement was used?

- a. Fixed interval
- b. Fixed ratio
- c. Variable interval
- d. Variable ratio

Answer: B

20. Marga, a six year old, always asked her playmates to sit in front of her small black board and she plays teacher. Her mother is a teacher. What theory explains Marga's behavior?

- a. Classical Conditioning
- b. Operant Conditioning
- c. Social Learning
- d. Information Processing

Answer: C

21. What should the teacher do to help students learn psychomotor skills?

- a. Teacher uses verbal explanation and description of the movements in addition to live demonstration of the movements
- b. Teacher provides feedback to the learner about his/her progress
- c. Teacher encourages the learner to practice, in order to maintain his/her sharpness of the movements
- d. All of the above

Answer: D

22. The teacher presented a new lesson where in the students were asked to work on a new project which was somewhat complicated. The students showed interest while working on the project. What principle applies to the situation?

- a. Effort was put forth when tasks are challenging
- b. Lessons should be presented in varied and different ways
- c. Meaningful materials are readily learned than nonsense materials
- d. Teachers should provide opportunities for meaningful and appropriate practice

Answer: A

23. Maturation should precede certain types of learning. How is this applied in the classroom?

- a. Concepts should be taught from simple to complex
- b. Consider the age level of students in assigning tasks
- c. Follow the interest of students in assigning tasks
- d. Give the same task to all students in a particular grade level

Answer: A

24. Luz easily learns a lesson when she is working with laboratory equipment but hardly remembers a lesson the teacher lectured on. What type of learner is Luz?

- a. Auditory Learner
- b. Kinesthetic Learner
- c. Tactile Learner
- d. Visual Learner

Answer: D

25. Which of the following statements about motivation is false?

- a. External motivation is longer lasting and more self-directive than internal motivation
- b. Internal motivation is fueled by one's goals or ambitions
- c. Motivation is enhanced by the way in which the instructional material is organized
- d. Motivation to perform is affected by expectancy and value

Answer: A

## CHILD AND ADOLESCENT

1. Dr. Escoto, the school physician conducted a physical examination in Ms. Manuel's class. What concept best describes the quantitative increase observed by Dr. Escoto among learners in terms of height and weight?

- a. Development
- b. Growth
- c. Learning
- d. Maturation

Answer: B

2. Which situation best illustrates the concept of growth?

- a. A kinder pupil gains 2 pounds within two months.
- b. A high school student gets a score of 85 in mental ability test.
- c. An education student has gained knowledge on approaches and strategies in teaching different subjects
- d. An elementary grader has learned to play piano.

Answer: A

3. Which statements below best describes development?

- a. A high school student's height increased by 5'2" to 5'4"
- b. A high school student's change in weight from 110 lbs. to 125 lbs.
- c. A student had learned to operate the computer
- d. A student's enlargement of hips

4. What concept can best describes Francisco's ability to walk without a support at age of 12 months because of the "internal ripening" that occurred in his muscles, bones and nervous system development?

- a. Development
- b. Growth
- c. Learning
- d. Maturation

Answer: D

5. Teacher Jesus is now 69 years old and has been observing changes in himself such as the aging process. Which term refers to the development change in the individual?

- a. Development
- b. Growth
- c. Learning
- d. Maturation

Answer: D

6. Manuel, a five-year old boy can hold his pen and write his name with his right hand. Which term describes Manuel's action/behavior?

- a. Development
- b. Growth
- c. Learning
- d. Maturation

Answer: A

7. Which of the following theory can help Miss Samson determine the readiness of her learners by administering a readiness test?

- a. Conditioning Theories
- b. Cognitive Development Theory
- c. Maturation Theory
- d. Ethological Theory

Answer: C -

8. Mr. Francisco was very much worried about the thumb sucking of his son. A friend of him says that certain behavior among infants. Who presented that notion that certain behavior like thumb-sucking is normal behavior?

- A. Sigmund Freud
- b. Erick Ericson
- c. John Bowlby
- d. Urie Bronfenbrenner

Answer: A

9. A newborn infant move his whole body at one time, instead of moving a part of it. Which of the following principles is illustrated by his behavior? a. Development proceeds from specific to general. b. Development proceeds from general to specific. c. Development follows an orderly pattern. d. Development follows a general pattern.

Answer: B

10. Train up a child in the way he should be; when he grows up, he will not depart from it. Which principle supports this?

- a. Development is determined by his heredity
- b. Development is determined by the environment
- c. Early development is more critical than the late development
- d. Early development is less critical than late development. Answer: B

11. Which state of the psycho-sexual theory does young boys experience rivalry with their father for their mother's attention and affection?

- a. Oral b. Anal c. Phallic d. Latency

Answer: C

12. Angela focuses her attention on the school work and vigorous play that consume most of her physical energy. Which stage of psychosexual theory illustrates her behavior?

- a. Oral b. Anal c. Phallic d. Latency Answer: D

13. Which of the following is likely to be developed if infants are shown genuine affection?

- a. Trust b. Autonomy c. Initiative d. Industry Answer: A

14. Christian develops an integral and coherent sense of self. He seeks answers to the question. "Who am I"? Which of the following is Christian likely to develop?

- a. Initiative b. Identity and Role Confusion c. Intimacy d. Autonomy Answer: B

15. Ms. Reyes uses images and language to represent and understand her various lessons to preschool learners. What stage in the cognitive theory of development explains this?

- a. Sensorimotor b. Preoperational c. Concrete operation d. Formal operation

Answer: B

16. Connie develops concepts necessary for everyday living, builds healthy attitudes towards oneself, and achieve personal independence. These are among the attributes of an individual in what particular stage?

- a. Infancy and early childhood b. Middle childhood c. Adolescence d. Early adulthood

Answer: B

17. Some children are more active than others, as everyone knows-extremely high levels of activity or hyperactivity are considered problematic. How may a teacher help a child who is hyperactive?

- a. Make him the leader of the class
- b. Transfer him to another class
- c. Give him challenging activities that are appropriate to his ability level and interests.
- d. Allow him to spend longer at the playground until he gets tired.

Answer: C

18. Tessa gets jealous whenever she sees her father showing love and affection to her mother. Which of the following is she showing according to Freud?

- a. Complex b. Phallic c. Electra Complex d. Oedipus Complex

Answer: C

19. In Piaget's Theory of Cognitive Development, which of the following statements would illustrate Edward who is 11 years old? a. Able to see relationships and to reason in the abstract.

- b. Unable to breakdown a whole into separate parts.
- c. Differentiates goals and goal-directed activities.
- d. Experiments with methods to reach goals.

Answer: A

20. Trisha goes with her mother in school. She enjoys the workplace of her mother. Which of the following ecological theories is illustrated by the situation?

- a. Microsystem b. Mesosystem c. Exosystem d. Macrosystem Answer: C

21. Lito, a student in secondary level tends to spend more time with his friends and his family, thus, his behavior is greatly affected by them. In which stage in the Psychosocial Stages of Development does Lito belong?

- a. Autonomous vs Shame and Doubt b. Identity vs. Role Confusion c. Intimacy vs. Isolation d. Initiative vs. Guilt

Answer: D

22. Anna believes that authority is respected. She is now in what particular level in moral development theory of Lawrence Kohlberg?

- a. Social contract b. Law and order orientation c. Interpersonal concordance d. Universal ethics orientation

Answer: A

23. What level has a four year old learner like Maryann reached when she acquired new skills such as putting the same shapes and the same colors together?

a. Development b. Maturation c. Zone of Proximal Development d. Learning

Answer: C

24. Which of the following principles can be the basis of the growing realization of the significance of the early childhood education?

- a. The young children are capable of doing many things at an early stage.
- b. The child should be seen and should learn.
- c. The first five years of life are the formative years of the child.
- d. Early childhood experiences can be interesting and challenging.

Answer: B

25. Which of the following learner's characteristics will affect most of the learners learning in the academic class?

- a. His affective characteristics
- b. His cognitive characteristics
- c. His psychomotor characteristics
- d. His socio-emotional characteristics

## CURRICULUM DEVELOPMENT

1. Which is NOT a provision for the development of each learner in a good curriculum?

- a. Extensive arrangements are made for the educational diagnosis of individual learners.
- b. Self-directed, independent study is encouraged wherever possible and advisable.
- c. Self-motivation and self-evaluation are stimulated and emphasized throughout the learning opportunities of the school.
- d. The program provides a wide range of opportunities for individuals with same abilities, needs and interests.

Answer: D

2. Teacher Lily would like to take part in developing a subject-centered curriculum because she believes that all subjects in this type of curriculum are geared towards the hollistic development of the learner. Is her belief about the subject-centered curriculum true?

- a. Yes, because the subject-centered curriculum focuses on the learners needs, interests and abilities.
- b. No, because it is the experience-centered curriculum that emphasizes the teaching of facts and knowledge for future use.
- c. Yes, because the subject-centered curriculum involves cooperative control.
- d. No, because it is the experience centered and not the subject-centered curriculum that emphasizes integration of habits and skills in learning the knowledge component of subject areas.

Answer: D

3. In the elementary level, English literature and Social studies relate well. While history is being studied, different literary pieces during the historical period is being studied as well. What curriculum design is shown here?

- a. Separate subject design
- b. Correlation design
- c. Discipline design
- d. Broad field design

Answer: C

4. This phase of curriculum development involves decisions, among other things, on grade placement and sequencing of content. Which phase is this?

- a. Curriculum planning
- b. Curriculum evaluation
- c. Curriculum organization
- d. Curriculum implementation

Answer: C

5. One example of this design of subject-centered curriculum is that which shows social studies being combined with geography, civics, culture and history to comprises subject area. Which design is this?

- a. Correlated
- b. Broadfields
- c. Separate Subject
- d. Core

Answer: B

6. Ms. Ortiz, as Science teacher tries to enrich the content of her lesson by identifying related concepts in Math. What pattern of organizing subjects did Ms. Ortiz consider?

- a. Broadfield
- b. Correlated
- c. Core
- d. Separate Subject

Answer: B

7. Which design is easy to deliver because complementary books and materials are commercially available?

- a. Experience centered design
- b. Problem design
- c. Process design
- d. Subject centered design

Answer: D

8. What refers to the matching between curriculum and test to be used to assess the learners?

- a. Alignment
- b. Auditing
- c. Articulation
- d. Delivery

Answer: A

9. Ms. Mateo, a History teacher considers the element of time in arranging content of her lessons in World History. What way of establishing sequence is given emphasis by Ms. Mateo?

- a. Simple to complex
- b. Part to whole
- c. Concrete to abstract
- d. Chronological

Answer: D

10. Mr. Rivera, a new teacher believes that education is a process of development and is life itself; therefore, experience related to the child's need and interest should be given primary consideration. What educational philosophy is being exhibited by Mr. Rivera?

- a. Idealism
- b. Reconstructionism
- c. Progressivism
- d. Realism

Answer: C

11. A stakeholder in curriculum development, Mr. Cruz, a district supervisor and a member of the school board has one of the following primary roles.

- a. Support and participate in parent-school organization activities.
- b. Authorize school expenditures for curriculum development, implementation and evaluation
- c. Enact legislation to effect curriculum improvement.
- d. Recommend changes in curriculum.

Answer: D

12. The schools in the first District plan to adopt the reading program used in the third district. What level of curriculum improvement is used?

- a. Variation
- b. Value orientation
- c. Substitution
- d. Restructuring

Answer: C

13. Mr. Bernardo, a curriculum consultant on Economics insists that in selecting the curriculum content, it is better that throughout the high school years, economic geography concepts be used to recur and be repeated with depth for effective learning. What criterion in content selection is shown here?

- a. Validity
- b. Continuity
- c. Significance
- d. Learnability

Answer: B

14. The Filipino learners envisioned by the Department of Education (DepEd) in the light of K-12 Curriculum is

- a. Technologically literate or logistically developed Filipino
- b. Functionally literate or logistically developed Filipino
- c. Scientifically Advanced and Values Oriented Filipino
- d. National Oriented and Internationally Competitive Filipinos

Answer: B

15. Teacher Dominguito believes that a new respect for the child is fundamental in curriculum. Thus, all activities in the classroom are geared towards the development of the child - the center of the educative process. To which approach in curriculum does Teacher Dominguito adhere?

- a. Learner-centered
- b. Subject-centered
- c. Problem-centered
- d. Pragmatic

Answer: A

16. Mrs. Manuel, the Principal of Bagong Barrio Elementary School invited the Brgy. Captain in the school to solicit inputs for a new curriculum in Social Science which highlights indigenous knowledge in the community. What is shown in this situation?

- a. Community members as supporters of curriculum
- b. Community members as curriculum resources
- c. Community members as managers of curriculum
- d. Community members as beneficiaries of curriculum

Answer: B

17. Teacher Bert puts emphasis on the immediate felt interests and needs of his students and not on the anticipated needs and interests. What type of curriculum does teacher Bert adheres?

- a. Subject-centered
- b. Learner-centered
- c. Experience-centered
- d. Culture-based

Answer: C

18. What type of curriculum divides the school day into different periods such as language arts, social studies, science and health, arithmetic, etc.?

- a. Correlated
- b. Broad fields
- c. Integrated
- d. Separate Subject

Answer: D

19. Which curriculum design element is taking place when Eduardo, a 4th year student can connect the lessons he learned in a subject area to a related content in another subject area?

- a. Articulation
- b. Balance
- c. Continuity
- d. Integration

Answer: D

20. The following curricular changes took place in what particular period? Restore Grade VII, double-single session was abolished and more textbooks were written by Filipino authors.

- a. American Period
- b. Philippine Republic
- c. Japanese Occupation
- d. New Society

Answer: B

21. This concept includes the sub-processes of curriculum planning, organization, implementation and evaluation. Which concept is this?

- a. Curriculum development
- b. Curriculum assessment
- c. Curriculum management
- d. Curriculum and instruction

Answer: A

22. If curriculum is the "means", what is the "end"?

- a. Strategies
  - b. Instruction
  - c. Technique
  - d. Approaches
- Answer: B

23. The curriculum used during the period in Philippine history terminated the use of English as a medium of instruction, What period is this?

- a. American
- b. Spanish
- c. Commonwealth
- d. Japanese

Answer: D

24. Which of the following statements about the concept of curriculum is NOT quite acceptable?

- a. It refers to all experiences that both the school and the teacher provide the students with.
- b. It is the set of acquired knowledge, habits and skills
- c. It consists of everything that goes within the school.
- d. It is a planned action for instruction

Answer: C

25. What process is being undertaken by curriculum developers when they enrich or modify certain aspects of a particular program without changing its fundamental conceptions?

- a. Curriculum improvement
- b. Curriculum change
- c. Curriculum design
- d. Curriculum implementation

Answer: A

## EDTECH

1. Which of the following statements has a very limited definition of educational technology?

- a. It is a profession composed of various job categories.
- b. It refers to the computers used for teaching and learning.
- c. It includes audiovisual materials, interactive multimedia and self-instructional materials.
- d. It is the development, application and evaluation of system, techniques and aids to improve human learning

Answer: B

2. Which of the following statements is correct about the domains of educational technology?

- a. Design is the production stage while development is the planning stage.
- b. Both the design and development are the planning stage.
- c. Evaluation is synonymous with implementation.
- d. Utilization is the action phase.

Answer: D

3. Ms. Gomez is planning to integrate technology in her Mathematics class. Which of the following would be the logical steps in doing this?

- I. Set the objectives
- II. Analyze the learners
- III. Utilize the materials with showmanship
- IV. Evaluate the performance of the students

- a. I, II, III, IV
- b. II, I, III, IV
- c. I, II, IV, III
- d. II, I, IV, III

Answer: B

4. Which of the following is a limitation of models and real objects in teaching and learning?

- a. They pose problems on storage
- b. They make learning more concrete.
- c. They provide hands-on learning experiences.
- d. They are readily available in the environment, around school and in the home.

Answer: A

5. Which group of technologies has the highest degree of concreteness?

- a. Realia and computer
- b. Video, picture and television
- c. Digital video, film, versatile compact disc
- d. Book, imaginative literature, programmed instruction

Answer: A

6. Mrs. Del Prado placed text together with the relevant graphics on the same page in her multimedia presentation. Which principle did she apply?

- a. Split attention
- b. Spatial contiguity
- c. Cost effectiveness
- d. Communication effectiveness

Answer: A

7. Mrs. Olivarez presented real samples of rocks in her General Science class. What principle did she apply?

- a. Appropriateness
- b. Authenticity
- c. Responsiveness
- d. Simplicity

Answer: B

8. Which is the best reason why teachers state the objectives before using instructional media?

- a. To secure materials
- b. To prepare the materials beforehand.

- c. To determine which media to use best.
- d. To be able to practice how to operate the equipment

Answer: C

9. Which of the following should Mr. Rivera primarily consider in determining the teaching-learning objectives and use of instructional media?

- a. The assessment tool to be used
- b. The learning activities
- c. The learner
- d. The teacher

Answer: B

10. Which of the following technologies provide iconic experiences to students/ children?

- a. Video and books
- b. Pictures and videos
- c. Radio and recording
- d. Modules and periodicals

Answer: B

11. Which of these technologies used in the classroom are arranged from the most symbolic to multisensory?

- a. Real objects, print, audio-visual materials and visual materials
- b. Visual materials, audio visual materials, print and computers
- c. Visual materials, print, audio-visual materials and realia
- d. Print, audio-visual materials, computers and realia

Answer: D

12. Which of the following is inappropriate in using printed visuals such as charts, graphs and drawings?

- a. Provide written or verbal cues to highlight important aspect of visuals
- b. Present the instructional materials simultaneously
- c. Use materials that everyone can see
- d. Make the presentation suspenseful

Answer: B

13. Susan wants to learn more English. Specifically, she wants to improve her listening skills. She has a CD player, a tape recorder and has internet access. As an English teacher, what do you suggest?

- I. CDs with English listening drills
- II. Tapes with English listening drills
- III. Internet website such as Go4English, English Language Listening Lab or Randall's listening Lab

- a. I and II
- b. II and III
- c. I or III
- d. I, II and III

Answer: D

14. Which of the following statements is incorrect about the contributions of technology to student learning?

- a. The quality of learning can be improved.
- b. The delivery of instruction can be more interesting.
- c. The method of teaching and learning becomes more interactive.
- d. The role of the teacher can be changed into knowledge dispenser.

Answer: D

15. Mr. Tarnate, an ICT teacher takes into account technology standards to address the needs of the students and help them adapt with the changing society and technology Which of the following standards is an exception?

- a. Creativity and innovation
- b. Research and information literacy
- c. Model digital-age work and learning
- d. Technology operations and concepts

Answer: C

16. Ms. Vinluan, a computer teacher demonstrates understanding of local and global issues and exhibits ethical and legal use of information and communications technology tools. Which is true about her?

- a. She models digital-age work and learning
- b. She facilitates and inspires student learning and creativity.
- c. She promotes and models digital citizenship and responsibility.
- d. She designs and develops digital-age learning experiences and assessments

Answer: C

17. With the fast-paced evolution of technologies nowadays, why are teachers encouraged to shift gradually from a teacher-centered instruction to a learner-centered instruction?

I. A learner-centered instruction focuses on transformation of facts.

- a. II and IV only
- b. I, II and IV only
- c. I, III and IV only
- d. II, III and IV only

Answer: C

18. Ms. Hernandez employs student-centered instruction as the learners create their digital portfolios in her computer class. What could be developed among them through this approach?

- a. Repetition and active learning
- b. Mastery of skills and information delivery
- c. Information processing and passive learning
- d. Construction of knowledge and information exchange

Answer: D

19. Mr. Torres will have a multimedia presentation in his Science class. Which of the following should he avoid?

- a. Consider technical quality.
- b. Apply different computer effects per slid.
- c. Present information through graphic organizers
- d. Use contrasting colors for text and background.

Answer: B

20. Mrs. Sison would like to integrate technology in writing a friendly letter. Which of the following is the most effective way of doing it?

- a. Let the pupils surf a friendly letter from the internet
- b. Have the pupils write a friendly letter and send it through an email.
- c. have the pupils forward a downloaded friendly letter to others via email.
- d. Let the pupils write a friendly letter using word processing and have it critiqued by their peers.

Answer: D

21. Which of the following computer-based instructional materials can be used to learn new concepts?

- a. Games
- b. Tutorial
- c. Simulation
- d. Drill and practice

Answer: B

22. Professor dela Cruz would like to create a presentation material for her lesson on the types of computer-assisted instruction. To make her presentation effective, which?

- a. Situating tool
- b. Informative tool
- c. Productivity tool
- d. Communicative tool

Answer: C

23. Professor Reyes is thinking of an online learning approach by which content provides links to information at other locations and serves as a focal point for a distance education experience. Which of the following should she use?

- a. Teleconferencing
- b. Self-paced program
- c. Web-based instruction
- d. Computer-aided instruction

Answer: C

24. Which is NOT a basic consideration in selecting and evaluating the content of an educational technology tool?

- a. Does it match the content?
- b. Can it be easily dismantled?
- c. Will it motivate and maintain interest?
- d. Is there evidence of its effectiveness?

Answer: B

25. Your father wanted to finish his long dreamed course but he wanted to do it at home during his free time. Would you recommend an online learning?

- a. Yes, because online learning is the "in" thing
- b. No, because online learning inhibits student-teacher interaction.
- c. No, because hiring a helper would enable him to attend regularly in his class.
- d. Yes, because he could learn at his own pace using a wide spectrum of technologies.

Answer: D

## FOUNDATION OF EDUCATION

1. The Department of Education gives greater emphasis on the development of basic skills. What is the philosophical basis for this?

- a. Essentialism b. Existentialism c. Perennialism d. Pragmatism Answer: A

2. Teacher M views his students as unique, free-choosing and responsible individuals. All classroom activities revolve around the said premise. What theory underlies this?

- a. Essentialism b. Existentialism c. Progressivism d. Realism Answer: B

3. Religious rituals in the classroom and in the school programs prove the deep natural religiosity of the Filipinos. Which philosophy has greatly contributed to the tradition?

- a. Buddhism b. Confucianism c. Hinduism d. Islam Answer: B

4. In order to make Roman education truly utilitarian, how should the day-to-day lessons be taught?

- a. Taught in the students' native dialect
- b. Taught interestingly through the play way method
- c. Related and linked to the events happening in everyday life
- d. Practiced at home under the guidance of their respective parents. Answer: C

5. Which influenced the military training requirements among students in the secondary and tertiary levels?

- a. Chinese b. Greeks c. Orientals d. Romans Answer: D

6. Which philosophy has the educational objective to indoctrinate Filipinos to accept the teachings of the Catholic church which is foster faith in God?

- a. Realism b. Pragmatism c. Idealism d. Existentialism Answer: C

7. Virtue as one component in the teaching of Rizal as a course focuses on the teaching of good and beauty consistent with the good and beauty in God. What philosophy supports this?

- a. Existentialism b. Idealism c. Progressivism d. Social Reconstructionism Answer: B

8. Giving education the highest budgetary allocation, the Philippine government recognizes the possible contribution of its future citizens to the national development goals of the Philippine society. Which stressed this goal of education for social transformation?

- a. Athenian education b. Followers of Christ
- c. Greek education d. Roman education Answer: D

9. The progressivists emphasized the individuality of the child. What is the concern of the reconstructionists?

- a. Experiential learning b. Socialization c. Social problem

Answer: C

10. One of the following quotations does not conform to the Christian doctrine of Education for Humanitarianism. Which one is it?

- a. Do unto others as you would like others do unto you
- b. Love thy neighbor as thyself
- c. Not on bread alone is man to live but on every utterance that comes from mouth of God
- d. Whatever good things we do to our poor, helpless brothers, we do it for God. Answer: C

11. Scouting and Citizen's Army Training (CAT) give training in character-building, citizenship training, etc. Which leads to the creation of a new social order and a new society eventually. What philosophy supports this?

- a. Existentialism b. Perennialism c. Progressivism d. Social reconstructionism Answer: D

12. Teacher V demonstrated the technique on how to group students according to their needs and interests and how to use self-paced instructional materials. Which philosophy is manifested in this activity?

- a. Essentialism b. Progressivism c. Realism d. Social Reconstructionism Answer: B

13. Teacher G, a Christian Living teacher, puts so much significance on values development and discipline. What could be her educational philosophy?

- a. Idealism b. Pragmatism c. Progressivism d. Realism

Answer: A

14. Which one does not illustrate the principle that rights and duties are correlative?

- a. The right of an unmarried pregnant teacher to abort her baby in relation to her duty to protect her name and her job as a teacher



- b. The right of a state to compel students to military service is reciprocated by the duty of the state to protect them  
 . c. The right to a living wage involves the duty of the school administrators to give the salary agreed upon and the duty of the teachers to give a fair amount of work.  
 d. The right to life of children and to be given respect of such right. Answer: A
15. Why should a teacher take the obligation upon himself to study and understand the custom and traditions of the community where he works?  
 a. To change the culture of the community.  
 b. To have a sympathetic attitude for the people of the community.  
 c. To identify the weaknesses of the culture of the community.  
 d. To please the people of the community. Answer: B
16. A teacher who is a recognized expert in carpentry works, taught his students how to prepare and construct good and aesthetic furniture from local resources. What cultural transmission process is this?  
 a. Acculturation b. Enculturation c. Indoctrination d. Observation Answer: B
17. Every first day of the school year, Miss Reyes prepared activities which will make her Grade 2 children, sing, plan, learn and introduce themselves to the class. What process did the teacher emphasize?  
 a. Acculturation b. Enculturation c. Indoctrination d. Socialization Answer: D
18. Which program in the educational system seems to be aligned to the Christian humanitarian principle respect for the human personality?  
 a. The alternative learning system delivery b. The functional literacy program for the out-of-school youth and adults c. The promotion of the basic human rights of the Filipino d. The study of the Philippine Constitution Answer: C
19. With a death threat over his head, Teacher Liza is directed to pass an undeserving student, if she is a hedonist, which of the following will she do?  
 a. Don't pass him, live her principle of justice. She will get reward, if not in this life, in the next.  
 b. Don't pass him. She surely will not like someone to give you a death threat in order to pass.  
 c. Pass the student. That will be of use to her, the student and his parents.  
 d. Pass the student. Why suffer the threat?  
 Answer: D
20. Which philosophy approves a teacher who lectures most of the time and requires his students to memorize the rules of grammar?  
 a. Existentialism b. Idealism c. Pragmatism d. Realism  
 Answer: B
21. In a student conducted, the pupils were asked which nationality they would prefer if given a choice. Majority of the pupils wanted to be Americans. In this case, in which obligation relative to the state are schools seemed to be failing?  
 a. Instill allegiance to the constitutional authorities b. Promote national pride c. Promote obedience to the laws of the state d. Respect for all duly constituted authorities. Answer: B
22. Which subject in the elementary and likewise in the secondary schools are similar to the goal of Rome to train the students for citizenship?  
 a. Communication ARts b. MAPEH/PEHMS c. Science d. THE/TLE Answer: D
23. Which of the following schools practices is not based on Social Reconstructionism?  
 a. Establishment of SDF b. Exemption of Scouts from CAT c. Promoting culture and arts in schools d. Promoting project WOW  
 Answer: C
24. Which of the following is the focus of the Japanese education in the Philippines?  
 a. Democratic ideals and nationalism b. Love and service to one's country c. Religion and love for Asian brothers d. Vocational and health education  
 Answer: D
25. According to reconstructionism, the goal of education is to bring about a new social order. Which practice best manifests this view?  
 a. The class conducts scientific experiments to discover or verify concepts.  
 b. The class discusses role models and their impact on society.  
 c. The class allowed to engage in divergent thinking.  
 d. The class undertakes well-planned projects in the community. Answer: D

## MEASUREMENT & EVALUATION

1. Who among the teachers described below is doing assessment?  
 a. Mrs. Bautista who is administering a test to her students.  
 b. Mr. Ferrer who is counting the scores obtained by the students in his test.  
 c. Ms. Leyva who is computing the final grade of the students after completing all their requirements.  
 d. Prof. Cuevas who is planning for a remedial instruction after knowing that students perform poorly in her test  
 Answer: C
2. Mr. Fernandez is judging the accuracy of these statements. Which statements will he consider as correct?  
 I. Test is a tool to measure a trait.  
 II. Measurement is the process of qualifying a given trait.  
 III. Assessment is the gathering of quantitative and qualitative data.  
 IV. Evaluation is the analysis of quantitative and qualitative data for decision making  
 A. I and II only  
 b. III and IV only  
 c. I, II, and III  
 d. I, III and IV  
 Answer: D
3. If I have to use the most authentic method of assessment, which of these procedures should I consider?  
 a. Traditional Test  
 b. Performance-based Assessment  
 c. Written Test  
 d. Objective Assessment  
 Answer: B
4. After doing the exercise on verbs, Ms. Borillo gave a short quiz to find out how well students have understood the lesson. What type of assessment was done?  
 a. Summative Assessment  
 b. Formative Assessment  
 c. Diagnostic Assessment  
 d. Placement Assessment  
 Answer: B
5. Who among the teachers below performed a diagnostic assessment?  
 a. Ms. Santos who asked questions when the discussion was going on to know who among her students understood what she was trying to emphasize.  
 b. Mr. Colubong who gave a short quiz after discussing thoroughly the lesson to determine the programs of learning.  
 c. Ms. Ventura who gave 10-item test to find out the specific lessons which the students failed to understand.

d. Mrs. Lopez who administered a readiness test to the incoming grade one pupils.

Answer: C

6. You are assessing for learning. Which of these will you likely do?

- a. Giving grades to students
- b. Reporting to parents the performance of their child.
- c. Recommending new policies in grading students.
- d. Assessing the strengths and weaknesses of students.

Answer: D

7. Ms. Saplan is planning to do an assessment of learning. Which of these should she include in her plan considering her purpose for assessment?

- a. How to give immediate feedback to student's strengths and weaknesses
- b. How to determine the area of interest of learners
- c. How to certify student's achievement
- d. How to design one's instruction

Answer: C

8. You targeted that after instruction, your students should be able to show their ability to solve problems with speed and accuracy. You then designed a tool to measure this ability. What principle of assessment did you consider in this situation?

- a. Assessment should be based on clear and appropriate learning targets or objectives.
- b. Assessment should have a positive consequence on student's learning
- c. Assessment should be reliable.
- d. Assessment should be fair.

Answer: A

9. Ms. Ortega tasked her students to show how to play basketball. What learning target is she assessing?

- a. Knowledge
- b. Reasoning
- c. Skills
- d. Products

Answer: C

10. Mr. Ravelas made an essay test for the objective "Identify the planets in the solar system". Was the assessment method used the most appropriate for the given objective? Why?

- a. Yes, because essay test is easier to construct than objective test.
- b. Yes, because essay test can measure any type of objective.
- c. No, he should have conducted oral questioning.
- d. No, he should have prepared an objective test.

Answer: D

11. Mr. Cidro wants to test students' knowledge of the different places in the Philippines, their capital and their products and so he gave his students an essay test. If you were the teacher, will you do the same?

- a. No, the giving of an objective test is more appropriate than the use of essay.
- b. No, such method of assessment is inappropriate because essay is difficult.
- c. Yes, essay test could measure more than what other tests could measure.
- d. Yes, essay test is the best in measuring any type of knowledge.

Answer: A

12. What type of validity does the Pre-board examination possess if its results can explain how the students will likely perform in their licensure examination?

- a. Concurrent
- b. Predictive
- c. Construct
- d. Content

Answer: B

13. Ms. Aviz wants to determine if the students' scores in their Final Test is reliable. However, she has only one set of test and her students are already on vacation. What test of reliability can she employ?

- a. Test-Retest
- b. Kuder Richardson Method
- c. Equivalent Forms
- d. Test-Retest with Equivalent Forms

Answer: B

Refer to this case in answering items 14-15

Two teachers of the same grade level have set the following objectives for the day's lesson. At the end of the period, the students should be able to:

- a. Construct bar graph, and
- b. Interpret bar graphs

To assess the attainment of the objectives, Teacher A required the students to construct a bar graph for the given set of data then she asked them to interpret this using a set of questions as guide. Teacher B presented a bar graph then asked them to interpret this using also a set of guide questions.

14. Whose practice is acceptable based on the principles of assessment?

- a. Teacher A
- b. Teacher B
- c. Both Teacher A and B
- d. Neither Teacher A nor Teacher B

Answer: A

15. Which is true about the given case?

- a. Objective A matched with performance-based assessment while B can be assessed using the traditional pen-and-paper objective test.
- b. Objective A matched with traditional assessment while B can be assessed using a performance-based method.
- c. Both objective A and B matched with performance-based assessment.
- d. Both objective A and B matched with traditional assessment.

Answer: A

16. In the context of the Theory of Multiple Intelligence, which is a weakness of the paper-pencil test?

- a. It puts non-linguistically intelligent at a disadvantage.
- b. It is not easy to administer.

- c. It utilizes so much time.
- d. It lacks reliability.

Answer: A

17. Mr. Umayam is doing a performance-based assessment for the day's lesson. Which of the following will most likely happen?

- a. Students are evaluated in one sitting.
- b. Students do an actual demonstration of their skill.
- c. Students are evaluated in the most objective manner.
- d. Students are evaluated based on varied evidences of learning

Answer: B

18. Ms. del Rosario rated her students in terms of appropriate and effective use of some laboratory equipment and measurement tools and the students ability to follow the specified procedures. What mode of assessment should Miss del Rosario use?

- a. Portfolio Assessment
- b. Journal Assessment
- c. Traditional Assessment
- d. Performance-based Assessment

Answer: D

19. Mrs. Hilario presented the lesson on baking through a group activity so that the students will not just learn how to bake but also develop their interpersonal skills. How should this lesson be assessed?

- I. She should give the students an essay test explaining how they baked the cake.
- II. The students should be graded on the quality of their baked cake using a rubric.
- III. The students in a group should rate the members based on their ability to cooperate in their group activity.
- IV. She should observe how the pupils perform their tasks.

- a. I, II, and III only
- b. I, III, and IV only
- c. I, II and IV only
- d. I, II, III, and IV

Answer: C

20. If a teacher has set objectives in all domains or learning targets and which could be assessed using a single performance task, what criterion in selecting a task should she consider?

- a. Generalizability
- b. Fairness
- c. Multiple Foci
- d. Teachability

Answer: C

21. Which term refers to the collection of students' products and accomplishments in a given period for evaluation purposes?

- a. Diary
- b. Portfolio
- c. Anecdotal record
- d. Observation report

Answer: B

22. Mrs. Catalan allowed the students to develop their own portfolio in their own style as long as they show all the non-negotiable evidences of learning. What principle in portfolio assessment explains this practice?

- a. Content Principle
- b. Learning Principle
- c. Equity Principle
- d. Product Principle

Answer: C

23. How should the following steps in portfolio assessment be arranged logically?

- I. Set targets
- II. Select evidences
- III. Collect evidences
- IV. Rate Collection
- V. Reflect on Evidences

- a. I, II, III, IV, V
- b. I, III, II, V, IV
- c. I, II, III, V, IV
- d. I, III, V, II, IV

Answer: B

24. Which could be seen in a rubric?

- I. Objective in a high level of cognitive behavior
- II. Multiple criteria in assessing learning
- III. Quantitative descriptions of the quality of work
- IV. Qualitative descriptions of the quality of work

- a. I and II only
- b. II, III and IV only
- c. I, II and III
- d. I, II, III and IV

Answer: B

25. The pupils are to be judged individually on their mastery of the singing of the national anthem so their teacher let them sing individually. What should the teacher use in rating the performance of the pupils considering the fact that the teacher has only one period to spend in evaluating her 20 pupils?

- a. Analytic
- b. Holistic
- c. Either holistic or analytic
- d. Both holistic and analytic

Answer: B

1. Mrs. Pua is judging the worth of the project of the students in her Science class based on a set of criteria. What process describes what she is doing?

- a. Testing
- b. Measuring
- c. Evaluating
- d. Assessing

Answer: C

2. Mrs. Acebuche is comparing measurement from evaluation. Which statement explains the difference?
- Measurement is assigning a numerical value to a given trait while evaluation is giving meaning to the numerical value of the trait.
  - Measurement is the process of gathering while evaluation is the process of quantifying the data gathered.
  - Measurement is the process of quantifying data while evaluation is the process of organizing data.
  - Measurement is a pre-requisite of assessment while evaluation is the pre-requisite of testing.

Answer: A

3. Ms. Ricafort uses alternative methods of assessment. Which of the following will she not likely use?
- Multiple Choice Test
  - Reflective Journal Writing
  - Oral Presentation
  - Developing Portfolios

Answer: A

4. Ms. Camba aims to measure a product of learning. Which of these objectives will she most likely set for her instruction?
- Show positive attitude towards learning common nouns
  - Identify common nouns in a reading selection
  - Construct a paragraph using common nouns
  - User a common noun in a sentence

Answer: C

5. The students of Mrs. Valino are very noisy. To keep them busy, they were given any test available in the classroom and then the results were graded as a way to punish them. Which statement best explains if the practice is acceptable or not?
- The practice is acceptable because the students behaved well when they were given a test.
  - The practice is not acceptable because it violates the principle of reliability.
  - The practice is not acceptable because it violates the principle of validity.
  - The practice is acceptable since the test results are graded.

Answer: C

6. Ms. Delos Angeles advocates assessment for learning. Which will she NOT likely do?
- Formative Assessment
  - Diagnostic Assessment
  - Placement Assessment
  - Summative Assessment

Answer: A

7. At the beginning of the school year, the 6-year old pupils were tested to find out who among them can already read. The result was used to determine their sections. What kind of test was given to them?
- Diagnostic
  - Formative
  - Placement
  - Summative

Answer: C

8. The grade six pupils were given a diagnostic test in addition and subtraction of whole numbers to find out if they can proceed to the next unit. However, the results of the test were very low. What should the teacher do?
- Proceed to the next lesson to be able to finish all the topics in the course.
  - Construct another test parallel to the given test to determine the consistency of the scores.
  - Count the frequency of errors to find out the lessons that the majority of students need to relearn.
  - Record the scores then inform the parents about the very poor performance of their child in mathematics.

Answer: C

9. Mrs. Noguerras is doing an assessment of learning. At what stage of instruction should she do it?
- Before instruction
  - After instruction
  - Prior to instruction
  - During the instructional process

Answer: D

10. Mr. Cartilla developed an Achievement Test in Math for her grade three pupils. Before she finalized the test she examined carefully if the test items were constructed based on the competencies that have to be tested. What test of validity was she trying to establish?
- Content-validity
  - Concurrent validity
  - Predictive validity
  - Construct validity

Answer: A

11. Mrs. Robles wants to establish the reliability of her achievement test in English. Which of the following activities will help achieve her purpose?
- Administer two parallel tests to different groups of students.
  - Administer two equivalent tests to the same group of students
  - Administer a single test but two different groups of students.
  - Administer two different tests but to the same group of students.

Answer: B

Refer to the situation below in answer items 12 and 13  
A teacher set the following objectives for the day's lesson:  
At the end of the period, the students should be able to:

- Identify the parts of friendly letter
- Construct a friendly letter using the MS Word, and
- Show interest towards the day's lesson

To assess the attainment of the objectives, Ms. Cidro required the students to construct friendly letter and have it encoded at their Computer Laboratory using the MS Word. The letter should inform one's friend about what one has learned in the day's lesson and how one felt about it.

12. Which is NOT true about the given case?
- Ms. Cidro practices a balanced assessment.
  - Ms. Cidro's assessment method is performance-based.
  - Ms. Cidro needs a rubric in scoring the work of the students.
  - Ms. Cidro's assessment targets are all in the cognitive domain.

Answer: D

13. If Mr. Paraiso will have to make a scoring rubric for the student's output, what format is better to construct considering that the teacher has limited time to evaluate their work?

- a. Analytic Rubric
- b. Holistic Rubric
- c. Either A or B
- d. Neither A nor B

Answer: B

14. The school principal has 3 teacher applicants all of whom graduated from the same institution and are licensed teachers. She only needs to hire one. What should she do to choose the best teacher from the three?

- I. Give them a placement test.
  - II. Interview them on why they want to apply in the school.
  - III. Let them demonstrate how to teach a particular lesson.
  - IV. Study their portfolios to examine the qualities of the students' outputs when they were in College.
- a. I and II.
  - b. II and III.
  - c. I and III, IV
  - d. II, III and IV

Answer: D

15. What should be done first when planning for a performance-based assessment?

- a. Determine the "table of specifications" of the tasks
- b. Set the competency to be assessed.
- c. Set the criteria in scoring the task.
- d. Prepare a scoring rubric.

Answer: B

16. To maximize the amount of time spent for performance-based assessment, which one should be done?

- a. Plan a task that can be used for instruction and assessment at the same time.
- b. Assess one objective for one performance task.
- c. Set objectives only for cognitive domains.
- d. Limit the task to one meeting only.

Answer: A

17. Who among the teachers below gave the most authentic assessment task for the objective "Solve word problems involving the four basic operations"

- a. Mrs. Juliano who presented a word problem involving a four fundamental operations and then asked the pupils to solve it.
- b. Mrs. Mandia who asked her pupils to construct a word problem for a given number sentence that involves four fundamental operations and then asked them to solve the word problem they constructed.
- c. Mrs. Malang who asked her pupils to construct any word problem that involves the four fundamental operations and then asked them to show how to solve it.
- d. Mrs. Pontipendra who asked her pupils to construct any word problem that involves the four fundamental operations then formed them by twos so that each pair exchanged problems and help solve each other's problem.

Answer: D

18. Which is wrong to assume about traditional assessment?

- a. It can assess individuals objectively.
- b. It can assess individuals at the same time.
- c. It is easier to administer than performance test.
- d. It can assess fairly all the domains of intelligence of an individual

Answer: D

19. Which statement about performance-based assessment is FALSE?

- a. It emphasizes merely process.
- b. It also stresses doing, not only knowing.
- c. It accentuates on process as well as product.
- d. Essay tests are an example of performance-based assessments.

Answer: A

20. Under which assumption is portfolio assessment based?

- a. Portfolio assessment is a dynamic assessment.
- b. Assessment should stress the reproduction of knowledge.
- c. An individual learner is adequately characterized by a test score.
- d. An individual learner is inadequately characterized by a test score.

Answer: D

21. Which is a good portfolio evidence of a student's acquired knowledge and writing skills?

- a. Project
- b. Test Results
- c. Reflective Journal
- d. Critiqued Outputs

Answer: C

22. When planning for portfolio assessment, which should you do first?

- a. Set the targets for portfolio assessment.
- b. Exhibit one's work and be proud of one's collection
- c. Select evidences that could be captured in one's portfolio
- d. Reflect on one's collection and identify strengths and weaknesses

Answer: A

23. Which kind of rubric is best to use in rating students' projects done for several days?

- a. Analytic
- b. Holistic
- c. Either holistic or analytic
- d. Both holistic and analytic

Answer: A

24. Which is not true of an analytic rubric?

- a. It is time consuming
- b. It is easier to construct than the holistic rubric
- c. It gives one's level of performance per criterion

d. It allows one to pinpoint the strengths and weaknesses of one's work.

Answer: B

25. Mrs. Bacani prepared a rubric with 5 levels of performance described in 5-excellent, 4-very satisfactory, 3-satisfactory, 2 needs improvement, 1-poor. After using this rubric with these descriptions, she found out that most of her students had a rating of 3. Even those who are evidently poor in their performance had a rating of satisfactory. Could there be a possible error in the use of the rubric?

- a. Yes, the teacher could have committed the generosity error.
- b. Yes, the teacher could have committed the central tendency source of error.
- c. No, it is just common to see more of the students having grade of 3 in a 5-point scale.
- d. No, such result is acceptable as long as it has a positive consequence to the students.

Answer: B

1. In a positively skewed distribution, the following statement are true except

- a. Median is higher than the mode.
- b. Mean is higher than the Media.
- c. Mean is lower than the Mode.
- d. Mean is not lower than the Mode.

Answer: C

2. Which of the following questions indicate a norm - referred interpretation?

- a. How does the pupils test performance in our school compare with that of other schools?:
- b. How does a pupil's test performance in reading and mathematics compare?
- c. What type of remedial work will be most helpful for a slow- learning pupil?
- d. Which pupils have achieved master of computational skills?

Answer: A

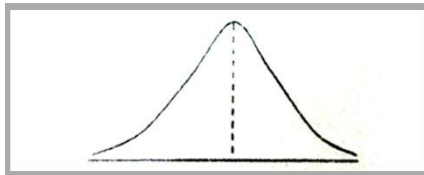
3. What is the performance of a student in the National Achievement Test (NAT) if he obtained/got a stanine score of 5?

- a. Between average and above average
- b. Between average and below average
- c. Below average
- d. Average

Answer: D

4. Based on the figure, which is true about the distribution?

- a. Mean=55, median=48, mode=34
- b. Mean=46, median=40, mode=37
- c. Mean=63, median=63, mode=63
- d. The distribution is mesokurtic



Answer: C

5. If quartile deviation is to median, what is to mean?

- a. Standard deviation
- b. Mode
- c. Range
- d. Variance

Answer: A

6. In a normal distribution, which of the following is true?

- a. median=mode=mean
- b. median≠mode=mean
- c. median≠mode≠mean
- d. Mean=median=mode

Answer: D

7. Which of the following situations may lower the validity of test?

- a. Mrs. Josea increases the number of items measuring each specific skill from three to five.
- b. Mr. Santosa simplifies the language in the directions for the test.
- c. Miss. Lopeza removes the items in the achievement test that everyone would be able to answer correctly.
- d. None of the above.

Answer: D

8. In a negatively skewed distribution, which of the following statements is true?

- a. Mode is lower than the mean.
- b. Mean is lower than the mode.
- c. Median is higher than the mode.
- d. Mode is lower than the median.

Answer: B

9. In a negatively skewed distribution, the following statements are true EXCEPT?

- a. Mean is not higher than the median
- b. Median is lower than the mode.
- c. Mean is lower than the mode.
- d. Mode is less than the median.

Answer: D

10. Miss Cortez administered a test to her class and the result is positively skewed. What kind of test do you think Miss Cortez gave to her pupils?

- a. Post test
- b. Pretest
- c. Mastery test

d. Criterion-referenced test

Answer: B

11. The result of the test given by teacher A showed a negatively skewed distribution. What kind of test did Teacher A give?

- a. The test is difficult
- b. It is not too easy nor too difficult
- c. It is moderately difficult
- d. It is easy

Answer: D

12. When the distribution is skewed to the right, what kind of test was administered?

- a. Difficult
- b. Easy
- c. Average/moderately difficult
- d. Partly easy- partly difficult

Answer: A

13. In a negatively skewed distribution, what kind of students does Teacher B have?

- a. Very good
- b. Very poor
- c. Average
- d. Heterogeneous

Answer: A

14. In a positively skewed distribution, the students are?

- a. Very good
- b. Very poor
- c. Average
- d. Normally distributed

Answer: B

15. In a positively skewed distribution, which of the following statements is true?

- a. Mode = 67 while Media = 54
- b. Median = 53 while Mean = 41
- c. Mean = 73 while Mode = 49
- d. Median = 34 while Mode = 42

Answer: C

16. Which statements represent criterion-referenced interpretation?

- a. Lucretia did better in solving the linear equation than 80% of representative Algebra students.
- b. Lucretia's score indicates that she is able to solve about two thirds of all one-variable linear equations of such complexity.
- c. Students who have reached Lucretia's level on linear equations usually succeed in the subsequent unit on simultaneous equations with special help or extra time; i.e., Lucretia is ready to move ahead.
- d. All of the above

Answer: B

17. Bernard obtained a 97 percentile rank in an aptitude test. This means

- a. He answered 97% of the items correctly.
- b. He belongs to the 97% of the group who took the test.
- c. 79% of the examinees did better than her on the test.
- d. He surpassed 97% of those who took the test.

Answer: D

18. Which set of scores has the least variability?

Set 1 0,5,10,15,20

Set 2 25,35,45,55

Set 3 0,2,8,15,20

Set 4 505,501,503

- a. Set 1
- b. Set 2
- c. Set 3
- d. Set 4

Answer: D

19. Standard deviation is to variability as mode to?

- a. Correlation
- b. Discrimination
- c. Central tendency
- d. Level of difficulty

Answer: C

20. Goring performed better than 65% of the total number of examinees in the district achievement test. What is his percentile rank?

- a. P35
- b. P65
- c. P66
- d. P75

Answer: B

21. Which is a guidance function of a test?

- a. Identifying pupils who need corrective teaching
- b. Predicting success in future academic and vocational education
- c. Assigning marks for courses taken
- d. Grouping pupils for instruction within a class

Answer: B

22. Mr. Reyes, an elementary school teacher in Science found out that many of his pupils got very high scores in the test. What measure of central tendency should he use to describe their average performance in the subject?

- a. Mean
- b. Median
- c. Mode
- d. Range

Answer: B

23. Which of the following indicates how compressed or expanded the distribution of scores is?

- a. Measures of position
- b. Measures of central tendency
- c. Measures of correlation
- d. Measures of variability

Answer: D

24. The proportion passing the upper and lower group is .80 and .95, respectively. What is the index of difficulty?

- a. .38
- b. .40
- c. .58
- d. 1.02

Answer: C

25. Mr. Gringo tried to correlate the scores of his pupils in the Social studies test with their grades in the same subject last 3rd quarter. What test validity is he trying to establish?

- a. Content validity
- b. Construct validity
- c. Concurrent validity
- d. Criterion related validity

Answer: C

1. If a test item has a difficulty index of 0.06, how would you describe the test item?

- a. It is very easy.
- b. It is moderately difficulty.
- c. It is very difficult
- d. It is difficult

Answer: C

2. Two sections have the same mean but the standard deviation of section 2 is higher than section 1. Which of the two sections is more homogeneous?

- a. Section 1
- b. Section 2
- c. Both A and B
- d. None of the above

Answer: A

3. Miss Corteza administered a test to her class and the result is positively skewed. What kind of test do you think Miss Corteza gave to her pupils?

- a. Posttest
- b. Pretest
- c. Mastery test
- d. Criterion-referenced test

Answer: B

4. In his second item analysis, Mr. Gonzales found out that more from the lower group got the test item 15 correctly. What does this mean?

- a. The item has become more valid
- b. The item has become more reliable
- c. The item has a positive discriminating power
- d. The item has a negative discriminating power

Answer: D

5. Q1 is 25th percentile as media is to what percentile?

- a. 40th percentile
- b. 60th percentile
- c. 50th percentile
- d. 75th percentile

Answer: C

6. Which is implied by a positively skewed scores distribution?

- a. The mean, the median, and the mode are equal.
- b. Most of the scores are high
- c. Most of the scores are low.
- d. The mode is high

Answer: C

7. In a normal distribution curve, what does a T-score of 60 mean?

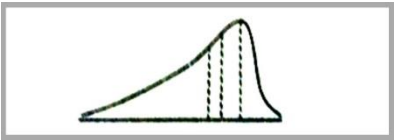
- a. Two SDs below the mean



- b. Two SDs below the mean
  - c. One SD below the mean
  - d. One SD above the mean
- Answer: D

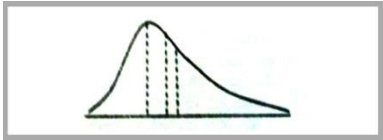
For items 8 to 13, what does each figure/distribution on the right indicate?

- 8. a. mean > median > mode
- b. mean < mode > median
- c. mean > mode < median
- d. mean < median < mode



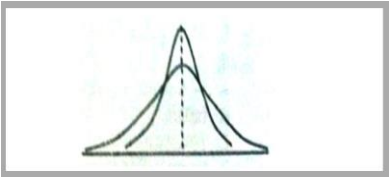
Answer: D

- 9. a. mode < mean < median
- b. mode > mean > median
- c. median < mode > mean
- d. none of the above



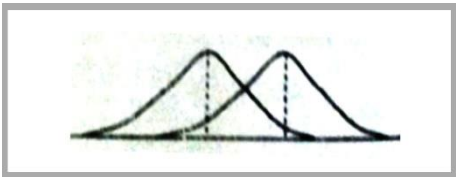
Answer: D

- 10. a. equal means, unequal standard deviations
- b. equal means, equal standard deviations
- c. unequal means, equal standard deviations
- d. unequal means unequal standard deviations



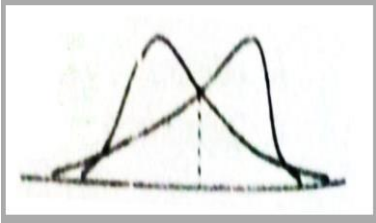
Answer: A

- 11. a. unequal means, equal standard deviations
- b. unequal means, equal standard deviations
- c. equal means, equal standard deviations
- d. equal means, unequal standard deviations



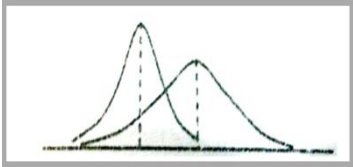
Answer: A

- 12. a. unequal variability, equal means, different shapes
- b. unequal means, equal variability, different shapes
- c. equal variability, equal means, different shapes
- d. unequal variability, unequal means, different shapes



Answer: C

- 13. a. unequal means, equal standard deviations
- b. equal means, unequal standard deviations
- c. equal means, equal standard deviations
- d. unequal means, unequal standard deviations



Answer: D

- 14. In conducting a parent- teacher conference, which of the following is NOT true?
  - a. Be friendly and informal
  - b. Be a know-it-all person
  - c. Be willing to accept suggestions
  - d. Be careful in giving advice
- Answer: B

- 15. In a frequency distribution, what is the midpoint of the class interval whose lower and upper limits are 99.5 and 109.5?
  - a. 107.0
  - b. 105.0
  - c. 104.5
  - d. 102.5
- Answer: C

- 16. In a frequency distribution, what is the interval size of the class whose lower and upper limits are 9.5 and 19.5?
  - a. 11.0
  - b. 10.0
  - c. 9.0
  - d. 5.0
- Answer: B

- 17. Given a mean of 55 and a standard deviation of 8, what two scores include one standard deviation below and above the mean ?
  - a. 46 and 63
  - b. 47 and 64
  - c. 47 and 63
  - d. 46 and 64
- Answer: C

- 18. Given the same mean of 55 and standard deviation of 8, what score corresponds to two standard deviation above the mean?
- a. 70
- b. 71
- c. 72
- d. 73

Answer: B

19. What principle of test construction is violated when one places very difficult items at the beginning; thus creating frustration among students particularly those of average ability and below average?
- a. All the items of particular type should be placed together in the test.
  - b. The items should be phrased so that the content rather than the form of the statements will determine the answer.
  - c. All items should be approximately 50 percent difficulty.
  - d. The items of any particular type should be arranged in an ascending order of difficulty.

Answer: D

20. Mrs. Reyes would like to find out how well her students know each other. What assessment instrument would best suit her objective?
- a. Self-report instrument
  - b. Sociometric technique
  - c. Guess-who technique
  - d. All of the above

Answer: C

21. Mr. Reyes asked his pupils to indicate on the piece of paper the names of their classmates whom they would like to be with for some group activity, what assessment technique did Mr. Reyes use?
- a. Self-report technique
  - b. Guess-who technique
  - c. Sociometric technique
  - d. Anecdotal technique

Answer: C

22. Which of the following assessment procedures/tools is useful in assessing social relation skills?
- a. Anecdotal record
  - b. Attitude scale
  - c. Peer appraisal
  - d. any of the above

Answer: C

23. If the proportion passing for the upper and lower group is .90 and .30 respectively, what is the discrimination index?
- a. .40
  - b. .50
  - c. .60
  - d. .70

Answer: C

24. Which is an example of affective learning outcome?
- a. Interpret stimuli from various modalities to provide data needed in making adjustments to the environment
  - b. Judge problem and issues in terms of situations involved than in terms of fixed dogmatic thinking
  - c. Appreciate the quality and worth of the story read
  - d. None of the above

Answer: B

25. Mr. Mirasol who is a high school teacher in English conducted an item analysis of her test. She found out that four of the items of the test obtained the following difficulty and discrimination indices and as follows:

Item Number	Difficulty Index	Discrimination Index
1	.58	.49
2	.92	.72
3	.09	.32
4	.93	.15

Which of the above items should be discard in her item pool?

- a. Item 1
- b. Item 2
- c. Item 3
- d. Item 4

Answer: D

PHILOSOPHIES OF EDUCATION

PHILOSOPHIES OF EDUCATION

What is Philosophy?

- is the science that seeks to organize and systemize all fields of knowledge as a means of understanding and interpreting the totality of reality.
- systematic and logical explanation of the nature, existence, purpose and relationships of things, including human beings in the universe.

Main Branches of Philosophy

- 1. Metaphysics – deals with the first principles, the origin an essence of things, the causes and end of thing.
  - it is the science of existence.
- 2. Epistemology – deals with knowledge and with ways of knowing.
  - Conceptua
  - Perceptual
    - Intuitive
- 3. Axiology – deals with purposes and values.
  - Ethics
- 4. Logic – deals with the correct way of thinking.

Major Philosophies of Education

- 1. Idealism – (Platonic) Reality consists of transcendental universal, form, or ideals which are the object of true knowledge. (DECS order No. 13 s 1998 – Revised rules and regulation on the teaching of religion in public elementary and secondary schools)
- 2. Naturalism – This opposed to idealism. This is the view that the whole of reality is nature.
- 3. Pragmatism – a tendency, movement, or more definite system of thought in which stress is place upon critical consequence and values as standard for explicating philosophic concept, and as a test of truth lies in its practical consequence and that the purpose of conduct.

- James
- Chiller
- Dewey

4. Supernaturalism – has a purpose to educate the individual for his life here on earth and to prepare for the life beyond.

Humanism – places human being over in above worldly things.

5. Realism– universals are independent of antecedent to and more real than the specific individual instances in which they manifest.

6. Progressivism

– dominated by the technological experimental advancement which have so powerfully shaped our modern culture.

(DECS order No. 57 s 1998 – Clarification on the changes in the Social Studies Program, WH for 3rd year and Economics for 4th year)

(DECS order No 91 s. 1998 – Changes in the THE program of the NSEC)

Some important features of Progressivism

The child as the center of the educational process.

It emphasizes learning by doing.

Advocates of Progressivism

John Dewey

William Kilpatrick

7. Existentialism

- Puts emphasis on the uniqueness of the individual.
- Existence precedes, that is, essence is created by existence.
- Human nature is a product of existence.
- Holds the view that human existence, or the human situation is the starting point of thinking.
  - It emphasizes concreteness of the individual.
- It values the freedom of choice, individual dignity, personal love, and creative effort.

(DECS order no. 65 s. 1998 – revised Guidelines on the selection of honor students in secondary level)

(DECS order no. 10 s. 1998 – Revised system of rating and reporting of student performance for secondary schools)

Freedom of choice is an important value of existentialism and is determined or affected to a large extent several factors among which are the following:

Influence of the family especially the parents.

Influence of peers and associates.

Religious orientation

Social approval

Cultural patterns

Financial status

Psychological traits

Sex

Health and physical fitness

Education

8. Positivism

- a philosophical movement characterized by an emphasis upon science and scientific method as the only source of knowledge.

9. Relativism

- a doctrine of relationism or relativity – a theory that knowledge is relative to the limited nature of the mind and the condition of knowing.

10. Materialism

- it maintains that all events are not true to the nature of independent reality and that holds that absolutely true knowledge is impossible.

11. Empiricism

- it spouses that legitimate human knowledge arises from what is provided to the mind by the senses or by introspective awareness through experience.

-hence it believes on education through

12. Romanticism

- it questioned the notions of the enlightenment that had dominated Europe in the early 18th century.

13. Epicureanism

- philosophical teaching about nature and ethics that was derived from the writing of Epicurus.

- this philosophy base its knowledge on sense perception, asserting that sensations are invariably good.

14. Hedonism

- it centers on pleasure

- learning is pleasurable

15. Utilitarianism

- it believes that any moral theory that value of human actions, policies, and institutions by their consequences in men's experience or by general welfare of all person affected by them.

16. Communism

- disregard basic human rights and educates the young for subservience to the state.

17. Fascism

– conceives that the state is an absolute.

18. Progressivism

- it emphasizes that educational concern must be on the child interest, desires, and the learners freedom as an individual rather than the subject matter.

19. Essentialism

- it ascribes ultimate reality to immense embodied in a thing perceptible to the senses.

The Educational Philosophies of Frontier Thinkers of Education

SOCRATES

- The end of life is knowledge.
- Knowledge is virtues
- “Know thyself”

2. PLATO

- Each person should devote his life to that which he is best fitted to do.
- The function of education is to determine what each individual is by nature fitted to do.
- Social justice (Give what is due to whom it is due)
- Intellectual aristocracy (The rule of the intellectual elite)

3. ARISTOTLE

- Virtue is not possession of knowledge but state of the will.
- The end of education is knowledge alone, but the union of the intellect and the will or knowledge express in action.
- Reality, not ideas but the performance, is the highest function.
- Adaptation of education to the form of government.
- Objective and scientific not introspective method of education

4. Comenius

- Development of the whole life.
- Follow the order of nature.
- Training for character.
- Both sexes should be included in education.

## 5. LOCKE

- a. “*Tabula rasa*” or “blank paper” theory
  - a child is born with a blank mind (neither good or bad)
- b. Education can shape the pupil according to the will of the teacher.
- c. Formal discipline
  - Training gained in one area can be applied in another area.

## 6. Rousseau

- a. Development of the child according to his nature.
- b. Man should live a simple life.
- c. The child, the important
- d. Use of instinctive tendencies as the starting point of education

## 7. Pestalozzi

- a. Education as the process of organized growth.
- b. All education should be founded upon laws of natural development of the child.
- c. Use of object in teaching.
- d. Emphasis on method and technique of teaching.

## 8. HERBART

- a. Doctrine of apperception
- b. Education should be specific.
- c. Mind is a unity, possessing but one power, that of entering into relation with its environment.

## 9. FROEBEL

- a. Self-activity as the means of development.
- b. Play, spontaneous activity, manual and industrial development are utilized to promote self-realization.
- c. Process of education determined by the nature of the child.

## 10. Spencer

- Knowledge that is best for use in life is also best for the development of power.
- Emphasis on physical education.
- Importance of science in the curriculum

## 11. WILLIAM JAMES

- Mental activity is functional.
- Knowledge is instrumental.
- It is consequences that make the choice good or bad.

## 12. JOHN DEWEY

- Education is life
- Education is growth
- Education is a social process
- Education is a continuous reconstruction of experiences.

## 13. JESUS CHRIST

- Right relationship with God should precede all kinds and types of education.
- “But seek ye first the kingdom of God, and His righteousness, and everything shall be added unto you” (Matthew 6:33)
- Education should be used for service.
- “Give thyself” is the philosophy of service of Jesus.

## FUNCTION OF PHILOSOPHIES OF EDUCATION

1. Provide guidelines in the formulation of the educational policies and programs and in the construction of curricula.
2. Provide direction toward which all educational effort should be exerted.
3. Provide theories and hypothesis which may be tested for their effectiveness and efficiency.
4. Provide norms or standards for evaluation purposes.

### Importance of Philosophy of Education to the Teacher

1. Provides the teacher with basis for making his decision concerning his work.
2. Help the teacher develop a wide range of interest, attitudes, and values concomitant to his professional life as teacher.
3. Makes a teacher more aware of his own life and work, and makes him more dynamic, discriminating, critical and mentally alert.
4. Philosophy of education saves time, money and effort

### Philosophical Foundation of Education

#### A. Hinduism

- (Dharma), characterized by honesty courage, service, faith, self-control, purity, and non-violence
- Dharma can be achieved through Yoga
- Believes that one should be able to control and regulate his desires, not to devote life to sensual pleasure success.
- Religion should be practical.
- God is truth and the best way to seek the truth is by practicing non-violence (Ahimsa)

#### B. Buddhism

- Believes that personal gratification is the root of suffering in the world.

#### The teaching of Buddha centered on four noble truths:

1. All life is suffering, pain, and misery
2. Selfish craving and personal desire.
3. Suffering can cease.
4. Way to overcome this misery is through following the Eight Fold Paths

## 2. Chinese Philosophies

#### Confucianism,

- an essentially optimistic system of belief, argued that those who were naturally virtuous should, while behaving with loyalty and respect, help to govern their country by maintaining their independence and criticizing their rulers if necessary: The government served its citizens, rather than the reverse.

#### Taoism,

- by contrast, taught that humans should withdraw from culture and society, devoting themselves to meditation and, like water, adapt themselves to natural forces.

## 3. Japanese Philosophy

#### Zen Buddhism

- No savior/s paradise, faith on God, no scriptures.
- The third eye helps one to see things in addition to what our two eyes show us, and should be attuned to the things around us.
- Emphasizes silent meditation, aiming to awaken the mind in each person.

## 4. Muslim Philosophy

#### Islam

- Emphasized a total commitment in faith obedience, and trust to one and only God.
- Koran, its sacred book is the word of God.
- Each person will be tried on the judgment when Allah will judge all souls.
- Believes in paradise, an oasis of flowing water, pleasant drinks, food and sensual delights.
- Five Pillars of Islam:
  - 1. Belief in one God
  - 2. Prayer
  - 3. Fasting

- 4. Alms giving
  - 5. Pilgrimage to Mecca
5. Christian Philosophy  
 God is the Creator of all thing  
 Jesus is the Messiah, Christ, Son of God  
 Human being is a sinner who requires redemption  
 Jesus came down to earth to redeem mankind  
 Baptism is necessary for salvation  
 There is life after death

### PROFESSIONAL EDUCATION

1. Devices can make a lecture more understandable and meaningful. What is the most important thing a teacher should consider in the selection and utilization of instructional materials?
  - A. Objectives of the lessons
  - B. Availability of instructional materials
  - C. Attractiveness of instructional materials
  - D. Degree of interest on the part of the students
2. Teacher E asks student A to identify and analyse events, ideas or objects in order to state their similarities and difference. In which part of the lesson does said activity take place?
  - A. Preparation
  - B. Generalization
  - C. Application
  - D. Comparison & abstraction
3. Which part of the lesson is involved in giving of situation or activities based on the concepts learned?
  - A. Preparation
  - B. Generalization
  - C. Application
  - D. Comparison & abstraction
4. Teacher F wants the class to find out the effect of heat on matter. Which method will help him accomplish his objective?
  - A. Project method
  - B. Laboratory method
  - C. Problem method
  - D. Expository method
5. In Math, teacher G presents various examples of plane figures to her class. Afterwards, she asks the students to give the definition of each. What method did she use?
  - A. Inductive
  - B. Laboratory
  - C. Deductive
  - D. Expository
6. Teaching Tinkling to I – Maliksi becomes possible through the use of
  - A. Inductive method
  - B. Expository method
  - C. Demonstration method
  - D. Laboratory method
7. What is the implication of using a method that focuses on the why rather than the how?
  - A. There is best method
  - B. A typical one will be good for any subject
  - C. These methods should be standardized for different subjects
  - D. Teaching methods should favour inquiry and problem solving
8. When using problem solving method, the teacher can
  - A. Set up the problem
  - B. Test the conclusion
  - C. Propose ways of obtaining the needed data
  - D. Help the learners define what is to be solved
9. Which part of the lesson does the learner give a synthesis of the things learned?
  - A. Motivation
  - B. Application
  - C. Evaluation
  - D. Generalization
10. The strategy of teaching which makes of old concept of “each-one-teach-one” is similar to
  - A. Peer learning
  - B. Independent learning
  - C. Partner learning
  - D. Cooperative learning
11. When using instructional material, what should the teacher primarily consider?
  - A. The material must be new and skilfully made
  - B. It must be suited to the lesson objective
  - C. The material must stimulate and maintain students’ interest
  - D. It must be updated and relevant to Filipino setting
12. Which is NOT a provision for the development of each learner in a good curriculum?
  - A. Extensive arrangements are made for the educational diagnosis of individual learners
  - B. Self-directed, independent study is encouraged wherever possible and advisable
  - C. Self-motivation and self-evaluation are stimulated and emphasized throughout the learning opportunities of the school
  - D. The program provides a wide range of opportunities for individuals with the same abilities , needs and interests
13. In the elementary level, English literature and Social studies relate well. While history is being studied, different literary pieces during the historical period is being studied as well. What curriculum design is shown here?
  - A. Separate Subject design
  - B. Discipline design
  - C. Correlation design
  - D. Broad field design
14. Ms. Mateo, a History teacher considers the element of time in arranging the content of her lessons in World History. What way of establishing sequence is given emphasis by Ms Mateo?
  - A. Simple to complex
  - B. Part to whole
  - C. Concrete to abstract
  - D. Chronological
15. Teacher Dominguito believes that a new respect for the child is fundamental in curriculum. Thus, all activities in the classroom are geared towards the development of the child- the centre of the educative process. To which approach in curriculum does Teacher Dominguito adhere?
  - A. Learner-centered
  - B. Subject-centered
  - C. Problem-centered
  - D. Pragmatic
16. Which curriculum design element is taking place when Eduardo, a 4<sup>th</sup> year student can connect the lessons he learned in a subject area to a related content in another subject area?
  - A. Articulation
  - B. Balance
  - C. Continuity
  - D. Integration
17. The following curricular changes took place in what particular period? Restore Grade VII, double-single session was abolished and more textbooks were written by Filipino authors
  - A. American period
  - B. Philippine republic
  - C. Japanese occupation
  - D. New society
18. What process is being undertaken by curriculum developers when they enrich or modify certain aspects of a particular program without changing its fundamental conceptions?
  - A. Curriculum improvement
  - B. Curriculum change
  - C. Curriculum design
  - D. Curriculum implementation
19. What refers to the authenticity of the content selected by the curriculum developer?
  - A. Feasibility
  - B. Learn ability
  - C. Significance
  - D. Validity
20. Which is NOT a component of curriculum designing?
  - A. Objective
  - B. Learning content
  - C. Learning experiences
  - D. Diagnosis of needs
21. What do you call the curriculum when the teacher puts into action all the different planned activities planned activities in the classroom?
  - A. Recommended curriculum
  - B. Written curriculum
  - C. Taught curriculum
  - D. Supported curriculum
22. Prof. Delos Santos is thinking of an online learning approach by which content provides links to information at other locations and serves as a focal point for a distance education experience. Which of the following should she use?
  - A. Teleconferencing
  - B. Self-paced program
  - C. Web-based instruction
  - D. Computer-aided instruction
23. With the increasing use of educational technology inside the classroom, what role is expected of the teacher?
  - A. Facilitator
  - B. Researcher
  - C. Knowledge giver
  - D. Source of information
24. It is impractical to bring real objects to the classroom s Aaron constructed a three-dimensional visual instead. Which of the following did he construct?
  - A. Chart
  - B. Cartoon
  - C. Model
  - D. Graphic organizer
25. Prof. Mandanas would like to use an audio compact disc in teaching a lesson in Filipino. In which activity in the teaching-learning process is it very effective?
  - A. In developing listening skills
  - B. In teaching creative writing
  - C. In composing poems
  - D. In building concepts.
26. If I have to use the most authentic method of assessment, which of these procedures should I consider?
  - A. Traditional Test
  - B. Performance-based assessment
  - C. Written test
  - D. Objective assessment

27. After doing the exercise on verbs, Ms. Borillo gave a short quiz to find out how well the students have understood the lesson. What type of assessment was done?  
A. Summative assessment B. **Formative assessment** C. Diagnostic assessment D. Placement assessment
28. Ms. Ortega tasked her students to show how to play basketball. What learning target is she assessing?  
A. Knowledge B. Reasoning C. **Skills** D. Products
29. What type of validity does the pre-board examination possesses if its results can explain how the student will likely perform in their licensure examination?  
A. Concurrent B. **Predictive** C. Construct D. Content
30. Which term refers to the collection of student's product and accomplishments in a given period for evaluation purposes?  
A. Diary B. **Portfolio** C. Anecdotal record D. Observation report
31. Mrs. Pua is judging the worth of the project of the students in her Science class based in a set of criteria. What process describes what she is doing?  
A. Testing B. Measuring C. **Evaluating** D. Assessing
32. Ms. Ricaforte uses alternative methods of assessment. Which of the following will her NOT likely use?  
A. **Multiple choice test** B. Reflective journal writing C. Oral presentation D. Developing portfolios
33. Mrs. Nogueras is doing an assessment OF learning. At what stage of instruction should she do it?  
A. Before instruction B. After instruction C. Prior to instruction D. **During the instructional process**
34. In a positively skewed distribution, the following statements are true EXCEPT  
A. Median is higher than the mode B. Mean is higher than the median C. **Mean is lower than the mode** D. Mean is not lower than the mode
35. If quartile deviation is to median, what is to mean?  
A. Standard deviation B. Mode C. **Range** D. Variance
36. Miss Cortez administered a test to her class and the result is positively skewed. What kind of test do you think Miss Cortez gave to her pupils?  
A. **Post-test** B. Pretest C. Mastery test D. Criterion-referenced test
37. The result of the test given by teacher A showed a negatively skewed distribution. What kind of test did teacher A give?  
A. **The test is difficult** B. It is not too easy or too difficult C. It is moderately difficult D. It is easy
38. Standard deviation is to variability as mode to \_\_\_\_\_  
A. Correlation B. Discrimination C. Central tendency D. **Level of difficulty**
39. Goring perform better than 65% of the total number of examinees in the district achievement test. What is his percentile rank?  
A. P35 B. P65 C. **P66** D. P75
40. Which is a guidance function of a test?  
A. Identifying pupils who need corrective teaching B. Redacting success in future academic and vocational education C. **Assigning marks for courses taken** D. Grouping pupils for instruction within a class
41. Mr. Labanga, an elementary school teacher in Science found out that many of his pupils got very high scores in the test. What measure of central tendency should he use to describe their average performance in the subject?  
A. Mean B. Median C. **Mode** D. Range
42. Which of the following indicates how compressed or expanded the distribution of scores is?  
A. **Measure of position** B. Measure of central tendency C. **Measures of correlation** D. Measure of variability
43. Mr. Gringo tried to correlate the scores of his pupils in Social studies test with their grades in the same subject last 3<sup>rd</sup> quarter. What test validity is he trying to establish?  
A. Content validity B. Construct validity C. Concurrent validity D. **Criterion-related validity**
44. In his second item analysis, Mr. Gonzales found out that more from the lower group got the test item 15 correctly. What does this mean?  
A. The item has become more valid B. The item has become more reliable C. **The item has a positive discriminating power** D. The item has a negative discriminating power
45. Mr. Lorenzo would always give the chapter test on a Friday. What schedule of reinforcement is used by Mr. Lorenzo?  
A. **Fixed Interval** B. Variable Interval C. Fixed Ratio D. Variable Ratio
46. Here is a test item: "The improvement of basic education should be the top priority of the Philippine Government. Defend or defy this position." What type of question is this?  
A. Analysis B. Convergent C. **Evaluative** D. Low level
47. Student A wishes to write a lesson plan. Which question s/he asks herself first?  
A. **What material will I need?** B. How will I get things started? C. **What do I want to accomplish** D. What exercises will I give my students?
48. Which of the following characterizes best an effective classroom manager? One who is friendly yet  
A. Rigid B. demanding C. **business-like** D. buddy-buddy
49. Which of the classroom activity below is effective?  
A. **The concept learned is applicable to daily life** B. The variety of instructional materials used is evident C. The techniques and approaches used are varied D. The laughter and enjoyment of students are contagious
50. Which of the following characterizes best a well-managed class? Which learners?  
A. Are controlled by the teacher B. Pursue their task without inhibition C. Blindly obey teacher's instructions D. **Are engaged in an activity that leads them to realize the set goal**
51. Which of the following belongs to a lower-order thinking skills?  
A. Teaching for meaning B. **Asking convergent question** C. Encouraging creativity D. Making the students aware of their mental processes
52. When should Teacher M undertake the task of setting up routine activities?  
A. Every homeroom period B. Every day at the start of the session C. **On the very first day of school** D. As soon as the students have adjusted to their schedule
53. Which of the following marks a conducive environment?  
A. Excessive praise B. long assignments C. Individual competition D. **cooperative learning**
54. Which of the following helps develop critical thinking?  
A. Asking low level questions B. Asking convergent questions C. Blind obedience authority D. **Willingness to suspend judgement until sufficient evidence is presented**
55. What design element established the vertical linkage form level to level to avoid getting gaps and wasteful overlaps?  
A. **Articulation** B. Balance C. Scope D. Sequence
56. What refers to the authenticity of the content selected by the curriculum developer?  
A. **Feasibility** B. Learnable C. Significance D. **Validity**
57. What do we call the allocation of content to a definite grade capable of learning?  
A. Time allotment B. Grade Level C. **Grade replacement** D. Maturity level
58. Which pattern of experience centered curriculum centers on the normal activities of children and is based on each child's needs, interests and potentials?  
A. **Child centered** B. Activity C. Social function D. Specific competencies
59. Which curriculum development phase focuses on the change which will take place in certain aspects of the curriculum without changing the fundamental conceptions?  
A. Curriculum planning B. Curriculum improvement C. **Curriculum design** D. Curriculum evaluation
60. Which is NOT a component of curriculum designing?  
A. Objective B. Learning content C. Learning experiences D. **Diagnosis of needs**
61. Who controls the subject centered curriculum?



- A. Learner subjects  
B. Teacher  
C. Parent  
D. Separate

62. To ensure success in curriculum development, which of the following specific actions should a curriculum leader avoid?  
A. Work with people not over them  
B. Keep channels of communication open  
C. **Use your status frequently to establish discipline**  
D. Show that you too desire to improve

63. Which of the following is a reason for the continuous appraisal of the existing curriculum in all levels?  
A. New national policies in government  
B. Economic status of the people  
C. **Changing needs and condition of society**  
D. Political trust of the country

64. Which of the following best defines curriculum development?  
A. The total mental phenomenon directly received at any given time  
B. **The planning of learning opportunities intended to bring about certain desired changes in pupils and the assessment of the extent to which these changes have taken place**  
C. A continuous cycle of activities in which all elements of curriculum are considered  
D. Education is aiding each child to be socially creative individuals

65. What do you call the curriculum when the teacher puts into action all the different planned activities in the classroom?  
A. Recommended Curriculum  
B. **Taught Curriculum**  
C. Written Curriculum  
D. Supported Curriculum

66. All the reading theories recognize the role of the reader and the text in the comprehension process. However, only the interactive model accounts for the role of the reading situation in the meaning-making process. What factors does the interactive model consider in the reading process?  
A. Outcome  
B. task  
C. **context**  
D. purpose

67. Reading in the content area aims to help students make sense of the text and negotiate meanings as readers actively interact with the text. Which of the following activities will nest achieve this goal?  
A. Have reading of the text be done at home  
B. **Allow students to ask questions**  
C. Make them read silently  
D. Practice oral reading fluency

68. Ronald is about to buy a book. After taking a book form the display shelf, he looked at the title, opened it and looked at the table of contents, then the summary found at the back cover. He realized that what he took from the shelf is not what he needs. Which of the following strategies do you think id Ronald do to decide why he does no need it?  
A. Scanning  
B. Close reading  
C. **Skimming**  
D. Careful slow reading

69. After M. Rivas planned her lesson in English, she found out that the materials at hand do not match her objectives. Which is the best thing she can do?  
A. **Modify the available materials**  
B. Change the objectives to match with available materials  
C. Teach the lesson the following day  
D. Carry out the lesson as planned and use the materials at hand

70. With the increasing use of the educational technology inside the classroom, what role is expected of the teacher?  
A. **Facilitator**  
B. Knowledge giver  
C. Researcher  
D. Source of information

71. It is impractical to bring real objects to the classroom so Aaron constructed a three-dimensional visual instead. Which of the following did he construct?  
A. Chart organizer  
B. Cartoon  
C. **Model**  
D. Graphic

72. Standard deviation is to variability as mode to \_\_\_\_\_  
B. Discrimination  
C. Central tendency  
D. **Level of difficulty**

73. Goring perform better than 65% of the total number of examinees in the district achievement test. What is his percentile rank?  
B. P35  
C. **P66**  
D. P75

74. Which is a guidance function of a test?  
A. Identifying pupils who need corrective teaching  
B. Redacting success in future academic and vocational education  
C. **Assigning marks for courses take**  
D. Grouping pupils for instruction within a class

75. Mr. Labanga, an elementary school teacher in Science found out that many of his pupils got very high scores in the test. What measure of central tendency should he use to describe their average performance in the subject?  
A. Mean  
B. Median  
C. **Mode**  
D. Range

76. Which of the following indicates how compressed or expanded the distribution of scores is?  
A. Measure of position  
B. Measure of central tendency  
C. **Measures of correlation**  
D. Measure of variability

77. Mr. Gringo tried to correlate the scores of his pupils in Social studies test with their grades in the same subject last 3<sup>rd</sup> quarter. What test validity is he trying to establish.  
A. Content validity  
B. Construct validity  
C. Concurrent validity  
D. **Criterion-related validity**

78. In his second item analysis, Mr. Gonzales found out that more from the lower group got the test item 15 correctly. What does this mean?  
A. The item has become more valid  
B. The item has become more reliable  
C. **The item has a positive discriminating power**  
D. The item has a negative discriminating power

79. Q1 is 25<sup>th</sup> percentile as median is to what percentile?  
A. **40<sup>th</sup> percentile**  
B. 60<sup>th</sup> percentile  
C. 50<sup>th</sup> percentile  
D. 75<sup>th</sup> percentile

80. Mrs. Del Salvatier would like to find out how well her students know each other, what assessment instruments would best suit her objective?  
A. Self-report instrument  
B. **Sociometric technique**  
C. Guess-who technique  
D. All of the above

81. Which of the following assessment procedures/tools is useful in assessing social relation skills?  
A. Anecdotal record  
B. **Attitude scale**  
C. Peer appraisal  
D. Any of the above

82. Which educational level/s/provide/s for free and compulsory as stipulated in Article Iv, section 2 of the Philippine constitution?  
A. Elementary level  
B. Secondary level  
C. **Elementary & secondary levels**  
D. Tertiary level

83. Who among the following is in the category of non- academic personnel as provided for under Education Act 1982?  
A. Guidance counsellors  
B. School principals  
C. **School nurse**  
D. School librarian

84. How is gradual progression of teacher's salary form minimum to maximum done?  
A. Regular increment every year  
B. Increment after ten years of service  
C. **Regular increment every 3 years**  
D. Increment after 5 years

85. What appointment can be given to Teacher a who possesses the minimum qualifications but lacks the appropriate civil service eligibility?  
A. Contractual basis  
B. Permanent  
C. **Provisional**  
D. Substitute

86. Which of the following is true about human development?  
A. Human development consider both maturation and learning  
B. Development refers to the progressive series of changes of orderly coherent type toward the goal maturity.  
C. Development is the gradual and orderly unfolding of the characteristics of the individuals as they go through the successive stages of growth  
D. **All of the above**

87. What do you call the quantitative increase in terms of height and weight as observed but the school physician during the physical examination of the students?  
A. Development  
B. Learning  
C. **Growth**  
D. Maturation

88. Mrs. Alvarez conducts research on the psychological domain of development. In what particular area of the child's development is Mrs. Alvarez mostly like to be interested with?  
A. Perpetual abilities  
B. **Emotions**  
C. Brain-wave patterns  
D. Use of language

89. Which of the following is the correct order of psychosexual stages proposed by Sigmund Freud?  
A. **Oral stage, anal stage, phallic stage, latency stage, genital stage**

- B. Anal stage, oral stage, phallic stage, latency stage, genital stage  
C. Oral stage, anal stage, genital stage, latency stage, phallic stage  
D. Anal stage, oral stage, genital stage, latency stage, phallic stage
90. What is the best description of Erickson’s psychological theory of human development?  
A. **Eight crises all people are thought to face**  
B. Four psychological stages in the latency period  
C. The same number of stages as Freud’s but with different names  
D. A stage theory that is not psychoanalytic
91. In Erickson’s theory, what is the unresolved crisis of an adult who has difficulty establishing a secure, mutual relationship with a life partner?  
A. Initiative vs. Guilt  
B. **Intimacy vs. Isolation**  
C. Autonomy vs. Shame and Doubt  
D. Trust vs. Mistrust
92. Alyssa is eight years old, and although she understand some logical principles, she still has troubles in understanding hypothetical concepts. According to Piaget, Alyssa belongs to what particular stage of cognitive development?  
A. Sensorimotor  
B. **Concrete operational**  
C. Preoperational  
D. Formal operational
93. Which of the following provides the best broad description of the relationship between heredity and environment in determining height?  
A. **Heredity is the primary influence, with environment affecting development only in severe situations.**  
B. Heredity and environment contribute equally to development  
C. Environment is the major influence on physical characteristics.  
D. Heredity directs the individual’s potential and development determines whether and to what degree the individual reaches that potential.
94. What is the correct sequence of prenatal stages of development?  
A. Embryo, germinal, fetus  
B. Germinal, fetus, embryo  
C. **Germinal, embryo, fetus**  
D. Embryo, fetus, germinal
95. When a baby realized that a rubber duck which has fallen out the tub must be somewhere on the floor, he is likely to achieved what aspect of cognitive development?  
A. **Object permanence**  
B. Differed imitation  
C. Mental combination  
D. Goal-directed behavior
96. Which of the following will be Freud’s description of the child’s behavior if he has a biting, sarcastic manner?  
A. Anally explosive  
B. Anally retentive  
C. **Fixated in the oral stage**  
D. Experiencing the crisis of trust vs. mistrust
97. What is Freud’s idea about a young boy’s guilt feeling brought about by jealousy of his father’s relationship with his mother?  
A. Electra complex  
B. **Oedipus complex**  
C. Phallic complex  
D. Penis envy complex
98. When a little girl who says she wants her mother to go on vacation so that she can marry her father, Freud believes that he is voicing a fantasy consistent with?  
A. Oedipus complex  
B. **Electra complex**  
C. Theory of the mind  
D. Crisis of initiative vs. Guilt
99. Which of the following can best describe the prescribe the preschooler’s readiness to learn new task and play activities?  
A. **Emerging competency and self-awareness**  
B. Relationship with parents  
C. **Theory of the Mind**  
D. Growing identification with others
100. Erickson’s noted that when preschoolers eagerly begin many new activities but are vulnerable to criticism and feelings failure, they are experiencing what particular crisis?  
A. Identity vs. role confusion  
B. **Initiative vs. Guilt**  
C. Basic trust vs. mistrust  
D. Efficacy vs. helplessness
101. Teacher P, the English coordinator was assisted by Teacher Q throughout the celebration of English Week. What should Teacher P do to acknowledge Teacher Q’s assistance?  
A. Buy her a gift  
B. Keep quiet about the assistance received  
C. Mention formally to the principal the assistance received  
D. **Make an announcement giving due recognition of the assistance received**
102. Is holding a rally to protest the delay of benefits due a person ethically acceptable?  
A. Yes, when hold while on official time  
B. Yes, when hold with the approval of the principal  
C. **Yes, when hold outside the official time**  
D. Yes , when hold together with parents and students
103. What should a teacher do when he/she falls in love with/her student?  
A. Court the student at home  
B. Propose and marry the student  
C. **Wait till the student is no longer under his/her tutelage**  
D. Act normally as if nothing happens and the student does not exist
104. When principal starts to exercise his/her powers over making and promoting students, is his/her action acceptable?  
A. Yes, when the teacher cannot make decision on time  
B. Yes, when there is abuse of judgement on the part of the teacher  
C. **No, teachers are more knowledgeable of their student’s performance**  
D. No, grading and promoting students are exclusive functions of teachers
105. Teacher R was asked by her principal to teach pre-school class in addition to her regular grade one class, what will be for her additional compensation?  
A. Her basic salary  
B. Number of years of service  
C. Performance rating  
D. **Her regular salary + 25% of her basic pay**
106. Which of the following shows responsiveness of public officials and employees?  
A. Avoiding wastage in public funds  
B. **Providing public information**  
C. Formulating rules regarding work  
D. Encouraging appreciation of government services
107. Teacher S, a Science teacher has been accused of sexual harassment by one her students. What should the school principal do?  
A. Ask the teacher to surrender to the police  
B. Advice the teacher to transfer to other school  
C. Tell the teacher to stop reporting to school  
D. **Create a committee to investigate the accusation**
108. Teacher T receives a love letter form one of her third year high school student in English. What should Mr. Martin do?  
A. Read her letter to the class  
B. Kept the student express her feelings through letters  
C. **Return the letter to the student and tell her to not do it again**  
D. Surrender the letter to the parent of the student
109. Mr. Nico, a Social Science teacher is advocating reforms which the principal failed to recognize. What should the principal do?  
A. Subject Mr. Nico to a disciplinary measure  
B. Just keep quiet about the behavior of Mr. Nico  
C. **Call Mr. Nico to the office and clarify things out with him**  
D. Send Mr. Nico a memo requiring him to explain his behavior
110. Which of the following manifests “Commitment to democracy” as explained in R.A. 6713  
A. Maintaining the principle of accountability  
B. Committing to democratic values and ways of life  
C. Manifesting by deed the supremacy of civilian authority over the military  
D. **All of the above**
111. Teacher U was ordered by her principal to come to school on four Consecutive Saturdays for the training of the students’ editorial staff of their school paper. Is this allowed under R.A. 4670



- A. Yes, provided the teacher is compensated  
 B. No, because it's not within the regular functions of the classroom teacher  
 C. Yes, because it's part of the teachers other duties  
 D. No, because it's not clearly indicated in the law
112. In observation and imitation learning. What should be the learner's response when the teacher initially models the behaviour?  
 A. Reproduce and match  
 B. Pay attention  
 C. Imitate and practice  
 D. Shows satisfaction
113. What is the correct sequence of the information processing?  
 A. Sensory register –STM-LTM  
 B. STM-sensory register-LTM  
 C. Sensory register LTM-STM  
 D. LTM-sensory register- STM
114. What should be the hierarchy of the type's of learning according to the cumulative learning theory?  
 1. Problem solving learning  
 2. Discrimination learning  
 3. Rule learning  
 4. Concept learning  
 A. 2-1-3-4  
 B. 2-1-4-3  
 C. 2-3-4-1  
 D. 2-4-3-1
115. Which is essential in meaningful reception learning?  
 A. Concepts are presented to learner and received by them  
 B. Concepts are related to one another  
 C. Concepts are discovered by the learner  
 D. Concepts are solicited from learners
116. Grace is bilingual. She speaks both English and Filipino fluently. She begins to study Spanish and immediately recognizes many similarities between Spanish and Filipino languages and uses this information to acquire the new language faster. What kind of transfer was Grace able to use?  
 A. Lateral transfer  
 B. Specific transfer  
 C. General transfer  
 D. Vertical transfer
117. Cristina has been staring at the match stick puzzle problem. She figured out how to solve it. Suddenly, a bright idea flashes in her mind and excitedly, successfully solves the puzzle problem. What type of learning is exhibited?  
 A. Analytic learning  
 B. Insight learning  
 C. Discovery learning  
 D. Trial and error learning
118. Marko excels in adding numbers. He learned this skill in his Math class. He is now able to apply this skill in his Music class. What type of transfer was used?  
 A. Lateral transfer  
 B. Specific transfer  
 C. General transfer  
 D. Vertical transfer
119. Mr. Lorenzo would always give the chapter test on a Friday. What schedule of reinforcement is used by Mr. Lorenzo?  
 A. Fixed Interval  
 B. Variable Interval  
 C. Fixed Ratio  
 D. Variable Ratio
120. To remember the six digits 8,4,3,9,4,5, the Math teacher grouped the number in twos 84,39,45 or in threes, 843,945. What control process of retaining information is referred to?  
 A. Chunking  
 B. Rehearsing  
 C. Interfering  
 D. Remembering
121. Here is a test item: "The improvement of basic education should be the top priority of the Philippine Government. Defend or refute this position." What type of question is this?  
 A. Analysis  
 B. Convergent  
 C. Evaluative  
 D. Low level
122. What can help achieve the relevant quality education?  
 A. Strong curriculum administrators  
 B. Competent instruction  
 C. School-community relations  
 D. Competent
123. Which of the following provisions under the Magna Carta for public School teachers will most likely promote teachers' welfare and defend their interests?  
 A. Be promoted in rank and salary  
 B. Regulate their social involvement  
 C. Undergo and participate in professional development  
 D. Establish, join and maintain professional & self – regulating organization
124. What kind of tension is referred to when people prefer to have quick answers and ready solution to many problems even if it calls for a patient, concerted, negotiated strategy of reform?  
 A. Tension between modernity and tradition  
 B. Tension between long term and short term considerations  
 C. Tension between spiritual and material  
 D. Tension between individual and the universal
125. In what strands of the four pillars of education implies a shift from skill to competence, or a mix of higher –order skills to each individual?  
 A. Learning to know  
 B. Learning to do  
 C. Learning to live together  
 D. Learning to be
126. Which pillar of education of J. Delors (UNESCO) focuses on voc-tech relevant to people-centered human development?  
 A. Learning to know  
 B. Learning to do  
 C. Learning to live together  
 D. Learning to be
127. Which of the following is NOT a characteristic of Multicultural Education?  
 A. Personally empowering  
 B. Socially transformative  
 C. Pedagogically humanistic  
 D. Culturally discriminating
128. What is the kind of education that manifests democratization of access and inclusivity?  
 A. Relevance  
 B. Sustainability  
 C. Quality  
 D. Equity
129. Which among the following rights manifests rule of law and good governance?  
 A. Right to education  
 B. Right to environmental protection  
 C. Right of participation  
 D. Right to work
130. Which among is NOT a core principle of human rights?  
 A. Human dignity  
 B. Non-discrimination  
 C. Universality  
 D. Independency

## PREBOARD EXAMINATION

## PROFESSIONAL EDUCATION

### The Teaching Profession, Social Dimensions for Education

- To whom does the word teacher refer?
  - Full time teachers
  - Part time teachers
  - Guidance counselors
  - Librarians
  - Division Superintendent
  - I, II, and III
  - I and III
  - I, II, III, and IV –I,II,V BEST ANSWER
  - III and IV
- Teacher Kevin has not practiced his profession for the past five years. Can he go back to teaching immediately?
  - Yes, if nobody can take his place
  - No, unless she has enrolled in refresher course of 12 units
  - No
  - Yes
- Is membership to the accredited professional organization for teachers mandatory for all LET passers?
  - No
  - Yes, when the teacher is already teaching
  - Yes

- d. Only for LET passers who are not repeaters
4. Which is true of the periodic merit exam for teacher provided for in RA 7836?
  - I. Consist of oral exam
  - II. Consist of written exam
  - III. May serve as additional basis for merit promotion in addition to performance rating
  - IV. Taken with fee of P 1000 per examinee
  - a. I only
  - b. I and IV
  - c. **II and III – I, II, III BEST ANSWER**
  - d. II only
5. Can Manny Pacquiao be given a special permit to teach boxing in a special school?
  - a. No, he is not a teacher education graduate
  - b. No, he has not passed the LET
  - c. Yes, he is a graduate of ALS
  - d. **Yes, he has excelled and gained international recognition**
6. Is it professional for a teacher to receive gifts from the student and parents?
  - a. Not at all
  - b. **No, especially if done in exchange for requested concessions**
  - c. Yes, if deserved
  - d. Yes, in-season and out-of-season gifts
7. An Education graduate without a license is accepted to teach in a private school? Is this in violation of RA 7836?
  - a. **No provided he has taught for at least 3 years**
  - b. Yes. No one may teach without a license
  - c. No
  - d. Yes
8. For relevance to business and industry, what did the First Biennial National Education on Education (2008) impose for updating the Licensure Examination for teachers?
  - a. Moral or ethical values
  - b. **Technical and scientific competencies**
  - c. Upgraded laboratory facilities
  - d. Vocational skills
9. What does the Teacher Education Development Program signify as a prerequisite for employment of teachers in basic education schools?
  - a. **National Standard Competencies among teachers**
  - b. Licensure Examination for Teachers
  - c. Induction of new teachers
  - d. Job interviews for teacher applicants
10. Among active participation of school officials and teachers in the community, which of the following is not appropriate due to prevailing religious sentiments?
  - a. Literacy assistance for out of school children/youths
  - b. Household campaign for healthful practice
  - c. **Promoting contraceptives for planned parenthood**
  - d. Introducing cooperative thrift practices
11. Which of the following is not John Dewey's contribution to the sociological foundation of education?
  - a. Facilitating learning along social conditions of the learner
  - b. As a social process, education begins at birth
  - c. **True education is transmission of knowledge**
  - d. The school is a continuation of home
12. Of the following, which is most fundamental to building up a strong school culture of excellence?
  - a. High standards of performance
  - b. Student-centered curriculum
  - c. **Mission and core values**
  - d. Student handbook of conduct
13. Among rights of the schools, which is not provided by the law?
  - a. **Right for basic education to determine subjects of the study**
  - b. Right to enforce administrative systems
  - c. Right to provide proper governance
  - d. Right for institutions of higher learning to determine academic grounds for admission
14. What kind of grassroots model best advances Education for All as served children of slum city dwellers?
  - a. **Mobile education on Kariton**
  - b. Leaf flyers for out-of-school children
  - c. Radio education modules
  - d. Educational television
15. After the implementation of NCBTS, results of LET still reveal low performance among examinees. What can teacher education institutions do to upgrade their graduates' LET performance?
  - a. **Review curriculum vis-à-vis TOS**
  - b. Intensify Field Study Courses
  - c. Hire expensive review trainers
  - d. Implement selective admission in TEIs
16. What is the cultural trait of conflicting values that aims to please people in different venues and situations rather than abide by principles?
  - a. Crab mentality
  - b. Split personality
  - c. **Kanya-kanya system**
  - d. Bahala na mentality
17. Among qualities which employers look for in the 21<sup>st</sup> century workplace, which is the most challenging and demanding?
  - a. **Aptitude for teamwork**
  - b. Skills and social behavior
  - c. Readiness to take risks
  - d. Specific competencies for work
18. In educating the whole person as demanded by the "Learning to be" pillar of the 21<sup>st</sup> century education, where does the concept of meaning, purpose and engagement belong?
  - a. Mind and body
  - b. Aesthetic sense
  - c. Spiritual values
  - d. **Personal responsibility**
19. Which program directly embodies both the pre-service and in-service programs?
  - a. BESRA – Basic Education Sector Reform Agenda
  - b. **TEDPA – Technical Education Development Program**
  - c. K-12
  - d. BEC – Basic Education Curriculum
20. How can the efforts of four agencies (DepEd, CHED, PRC, CSC) be best achieved for the training and development of teachers?

- a. Synchronization
  - b. cost-reduction
  - c. streamlining
  - d. sharing of resources
21. What is the core of the Teacher Education Development Program?
- a. high order thinking skills or HOTS
  - b. student-centered learning
- c. National Competency-Based Teaching Standards
- d. Technology integration in instruction
22. What is known as a self-appraisal for professional growth that is acceptable and useful for recognizing weakness and strengths for a new beginning teacher?
- a. master teacher's evaluation
  - b. student's evaluation
  - c. principal's evaluation
- d. self-evaluation
23. Among reforms for enhancing teacher professionalism, which has been implemented by law in order to determine whether prospective teachers have acquired professional competencies prior to granting them a permit to teach?
- a. accrediting a national organization for teachers
  - b. setting up centered for excellence in teacher education centers
- c. licensure examination
- d. creation of a professional board for teachers
24. From global competence as defined by international educators, which is the most appropriate characteristic of globally competent individual?
- a. familiarity with new culture
  - b. open-mindedness to new culture
- c. adaptability to new work environment
- d. foreign-language policy
25. For a school, which of the following is most significant in repairing shorelines with depleted coral reefs?
- a. outreach by depositing rubber tires as artificial coral reefs
  - b. implement reporting system against dynamite fishermen
  - c. legislative lobby to disallow tourism in endangered shorelines
- d. outreach by educating the villagers on protection of coral reefs
26. In a tertiary school, the President organized a Fun Run for students, faculty and personnel to enjoy camaraderie, physical exertion under the sun, sense of engagement and achievement. What does the activity promote?
- a. spiritual vigor
  - b. cultural consciousness
  - c. national integrity
  - d. moral integrity
27. In the Education Act of 1901 which established a free public education in the Philippines, what language was imposed under the one-language policy?
- a. Spanish
- b. English
- c. Tagalog
  - d. Filipino
28. Of the following, which is the most functional intervention in order to achieve a basic right of every Filipino Child under the Constitution and Magna Carta for Disabled Persons?
- a. Philosophy of education
- b. policy for curricular reform
- c. home study program
  - d. structural organization
29. Of the following interventions, which is directly aimed at responding to the transitional gap between academic achievement and employment?
- a. identification of centers of excellence
  - b. deregulation of tuition fees
- c. school networking with business and industry
- d. voluntary accreditation of schools
30. In the formal education system during Hispanic times in the Philippines, what was not implement but which we enjoyed during the American period?
- a. vocational education
  - b. private education
  - c. religious education
  - d. public education
31. If Dr. Jose Rizal lives in the 21<sup>st</sup> century, what character expression and commitment would have shown our generation?
- a. inventor of techniques
  - b. citizen and producer
  - c. member of family and community
- d. creative dreamer
32. In the learning to do pillar of new education, what is the enabling factor that can make the learner fully contribute to a peaceful and just society?
- a. knowledge
  - b. skills
  - c. insights
- d. values
33. Before being able to fully learn to live and work together under the pillar of the 21<sup>st</sup> century education, what must the learner attain for himself?
- a. find peace within oneself
  - b. attain an altruistic mind
  - c. love his fellowmen
  - d. become self-actualized
34. The Transparency International's perception that the Philippines suffers a cultural malaise of corruption, what component of our character needs to be further developed along the Learning To Be Pillar of education in the 21<sup>st</sup> century?
- a. Familial-social component
  - b. Physical-economic component
  - c. Intellectual-emotional component
- d. Ethical-spiritual component
35. This powerful European country supplied arms to Afghanistan rebels who were fighting a terrorist war in the Middle East. What was the principle of moral discernment applicable in this case?
- a. Principle of double effect
  - b. Principle of lesser evil
  - c. Principle of material cooperation
- d. Principle of moral cooperation
36. Which of the following best defines a morally mature person?
- a. Cultural values clarification

- b. Unhampered exercise of one's right
  - c. Transmittal of one's moral viewpoint
  - d. Knowledge and practice of universal moral values**
37. Educated in a religious school, Sansa goes to confession every day to be free of any kind of sin. How do you characterize Dona's moral attitude?
- a. Callous
  - b. Pharisaical
  - c. Scrupulous
  - d. Strict**
38. How would you characterize the moral attitude of Hispanic friars who taught religion but were unfaithful to their vow of property by amassing the land properties of natives?
- a. Scrupulous
  - b. Strict
  - c. Lax
  - d. Pharisaical**
39. How would you characterize the moral attitude of prisoners with criminal minds, who have no sensitivity to the welfare of other people?
- a. Pharisaical
  - b. Strict
  - c. Lax
  - d. Callous**
40. What was the degree of moral certitude when U.S. statement decided to drop the atomic bombing on Hiroshima and Nagasaki to prevent mass deaths by a land invasion of Japan?
- a. Doubtful
  - b. Certain**
  - c. Perplexed
  - d. Probable
41. Teacher Slash is of the thinking that from the very start students must be made to realize study is indeed hard work. To which philosophy does Teacher Susan adhere?
- a. Essentialism
  - b. Perennialism**
  - c. Progressivism
  - d. Reconstructionism
42. If your students appear to be more interested in a topic outside your planned lesson for the day, you set aside your lesson plan for that day and grasp the opportunity to discuss the topic of particular interest to your students. Strike the iron while it is hot! Which philosophy governs for your action?
- a. rationalism
  - b. empiricism
  - c. existentialism**
  - d. progressivism
43. Students must be taught self-responsibility is the desire of the \_\_\_\_\_ teacher.
- a. Existentialist**
  - b. Utilitarianist
  - c. Pragmatic
  - d. Constructivist
44. Who asserts that teaching is not just depending knowledge into the empty minds of the learners? It is helping students create knowledge and meaning of their experiences?
- a. Constructivist**
  - b. Essentialist
  - c. Existentialist
  - d. Pragmatist

## SITUATIONAL

In a faculty meeting, the principal told his teachers: We need to improve our school performance in the National Achievement Test. What should we do? The teachers gave varied answers as follows:

1. Let's give incentives and rewards to students who get a rating of 85%
  2. Let's teach them to accept complete responsibility for their performance
  3. Let's make the school environment conducive for learning
  4. Let's make use of the experiential methods of teaching
45. On which educational philosophy is response #1 anchored?
- a. Behaviorism**
  - b. Progressivism
  - c. Existentialism
  - d. Essentialism
46. Which response/s come/s from a behaviorist?
- a. 1 and 3**
  - b. 2 and 4
  - c. 1 and 2
  - d. 3 and 4
47. If you lean toward a progressivist philosophy, with which response do you agree?
- a. 4**
  - b. 2
  - c. 1
  - d. 3

How a teacher relates to his/her pupils depends on his/her concepts about him/her. In a faculty recollection, the teachers were asked to share their thoughts of the learner, their primary customer. What follows are the gists of what were shared:

Teacher A – The learner is a product of his environment. Sometime he has no choice. He is determined by his environment.

Teacher B – The learner can choose what he can become despite his environment.

Teacher C – The learner is a social being who learns well though an active interplay with others

Teacher D – The learner is a rational being. Schools should develop his rational and moral powers

48. Whose philosophical concept is that of Teacher A?
- a. Behaviorist's**
  - b. Existentialist's
  - c. Progressivist's
  - d. Rationalist's
49. If you agree with Teacher C, you are more of a/an
- a. Progressivist**
  - b. Perrenialist
  - c. Essentialist
  - d. Rationalist

50. Whose response denies man's freewill?

- a. Teacher A's
- b. Teacher C's
- c. Teacher B's
- d. Teacher D's

#### Human Growth and Development, Facilitating Learning, Developmental Reading

51. From a broad vantage view of human development, who has the primary duty to educate the youths or children?

- I. Parents
- II. Teachers
- III. the state
- IV. the schools

52. Of the three aspects of learning, which is not mentioned as needed so that the individual learner in the 21<sup>st</sup> century can learn how to learn?

- a. Ability to think
- b. Mathematical skills
- c. Memory skills
- d. Concentration

53. Which of the following belongs to the more sophisticated learning-to-learn skills for the individual learner?

- a. To ask and gather data
- b. To listen and observe
- c. To process and select information
- d. To read with understanding

54. Of the following effects on learning, what is the effect of simulations that make students feel and sense experience in the classroom?

- a. Reinforcing learning
- b. Providing experiences that otherwise might not be had
- c. Motivating students
- d. Changing attitudes and feelings

55. Of the following effects on learning, what is the effect of assigning various sections of the newspaper, and allowing choice depending on the learner's choice?

- a. Encouraging participation
- b. Reinforcing learning
- c. Allowing different interests
- d. Changing attitudes and feelings

56. A young mother observes her seven year old girl glued to her computer games. What aspect of the family life may suffer due to obsession of the young with technology gadgets?

- a. Family social life
- b. Family economic life
- c. Discipline and obedience
- d. Parent-child relationship

57. Which of the following is not an advanced process of meta-cognition among learners?

- a. Learning how to recognize thoughts
- b. Acquisition of new knowledge
- c. Assessing own thinking
- d. Learning how to study

58. Of comprehension or thinking strategies, which is relating one or two items, such as nouns and verbs?

- a. Basic elaboration strategies
- b. Complex rehearsal strategies
- c. Complex elaboration strategies
- d. Affective strategies

59. Of skills teacher should understand and students need to acquire, which is the ability to integrate complex information into categories through its attributes (characteristics, principles or functions)?

- a. Scanning
- b. Complex cognitive
- c. Sharpening-leveling
- d. Complexity-simplicity

60. Inculcating moral maturity among students, which of the following relates to belief and ideals?

- a. Promoting human equality
- b. Refraining from prejudiced action
- c. Avoiding deception and dishonesty
- d. Respecting freedom of conscience

61. Research studies showed that children in slums generally have lower reading achievement than children in urban schools. What factor is shown to affect reading achievement?

- a. Mobility
- b. Personality and emotional factors
- c. Socio-economic status
- d. Listening comprehension

62. When preacher Xian read the Genesis story on creation, he explained that God is so powerful he created the universe in only seven days. What level of reading comprehension did preacher John apply?

- a. Evaluative reading on character, plot or style
- b. Literal reading the lines
- c. Applied reading beyond the lines
- d. Interpretative reading between the lines

63. What is the main organization and orientation of science and social studies reading materials?

- a. Expository
- b. Descriptive
- c. Narrative
- d. Argumentative

64. In his History class, teacher Naomi used a current events IQ contest to determine champions in identifying people, places, and events. What learning objective outcome does she aim to achieve?

- a. Knowledge or recall
- b. Perpetual abilities
- c. Application
- d. Responding

65. In Erikson's stage theory of development questionnaire, which affirmation does not belong to the stage of initiative vs. guilt?

- a. People can be trusted
- b. In difficulty, I will not give up
- c. I feel what happens to me is the result of what I have done
- d. I am prepared to take a risk

66. For cognitive learning, what are sets of facts, concepts, and principles that describe underlying mechanism that regulate human learning, development and behavior?
- Facts
  - Concepts
  - Theories**
  - Hypothesis
67. Literature teacher Kim introduced figures of speech in poetry to improve ability of her students to interpret verses. What kind of thinking is she developing in her students?
- Critical thinking
  - Metaphoric thinking**
  - Convergent thinking
  - Divergent thinking
68. Of clusters of meaningful learning activities, which does not belong to spatial learning activities?
- Visualization
  - Concept-mapping
  - Peer tutoring**
  - Art projects
69. From cluster of meaningful learning activities, which does not belong to verbal-linguistic intelligence learning?
- Ecological field trip**
  - Debates
  - Journal writing
  - Reading
70. Which of the following violates the principle that “each child’s brain is unique and vastly different from one another”?
- Giving ample opportunity for a pupil to explore rather than simply dish out information
  - Employing principles in multiple intelligence in teaching
  - Making a left-handed pupil write with her right hand as this is better**
  - Allowing open dialogue among students of various cultural backgrounds
71. Of the following which is normally expected of Grade VI pupils?
- Getting along with classmates
  - Being independent of parents
  - Showing class leadership**
  - Displaying a male or feminine social role
72. From categories of exceptionalities in the young child and adolescents what involves difficulties in specific cognitive processes like perception, language, memory due to mental retardation, emotional/behavioral disorder, or sensory impairment?
- Learning disabilities**
  - Speech and communication disorders
  - Emotional/conduct disorders
  - Autism
73. Of the following, which is most true of adolescents?
- Hormonal changes**
  - Last splurge of dependence
  - Unruly behavior
  - Defiance of peer group
74. Research says, “people tend to attribute successes to internal causes and their failures to external causes.” What does this imply as a most potent key to success?
- Reasoning**
  - Imagination
  - Application
  - Motivation
75. From Kohlberg’s theory of moral development, what is the moral reasoning or perspective of Mother Teresa who pledged her life to serve the sick and very old?
- Social contract
  - Universal principles**
  - Obedience
  - Law and order
76. Blind cyclist and teacher Maria Bunyan won 8<sup>th</sup> place in the able-bodied Sydney 2000 Olympics. Of the following, which is the central and fundamental quality she displayed by never thinking that blindness is an impediment to becoming a great athlete?
- Perseverance
  - Passion
  - Dedication
  - Self-belief**
77. How can new information be made more meaningful to students?
- Relating it to knowledge they already know**
  - Valuing new knowledge
  - Demonstrating novelty of new knowledge
  - Increasing retention of new knowledge
78. Under the domains of learning, to what domain do Reflex movements, perceptual abilities, and non-discursive communication belong?
- Psychomotor
  - Affective
  - Cognitive**
  - Reflective
79. In what development stage is the pre-school child?
- Early childhood**
  - Babyhood
  - Infancy
  - Late childhood
80. What is mainly addressed by early intervention program for children with disabilities, ages 0 to 3 years old?
- Ensuring inclusion for special children
  - Early growth development lag**
  - Identifying strengths and weaknesses in special children
  - Preventing labeling of disabled children
81. What is the degree of moral certitude of Jade Althea who entered into marriage only out of obedience to her parents, but uncertain whether she wanted marriage at all?
- Certain
  - Lax
  - Probable
  - Doubtful**
82. On categories of exceptionality in the young, what is difficulty in focusing and maintaining attention, and/or recurrent hyperactive and impulsive behavior?
- ADHD**



- b. Emotional/conduct disorders
  - c. Autism
  - d. Speech and communication disorders
83. What kinds of skills are commonly dominant in subjects like Computer, PE, Music, and the like?
- a. Problem-solving skills
  - b. Manipulative skills**
  - c. Affective skills
  - d. Thinking skills
84. How is the disorderly behavior of children classified when they tell lies?
- a. Moral**
  - b. Intellectual
  - c. Social
  - d. Psychological
85. Which of the following is not among the major targets of the child-friendly school system (CFSS)?
- a. All school children are friendly**
  - b. All children complete their elementary education within six years
  - c. All children 6-12 years old are enrolled in elementary schools
  - d. All grade six students pass the division, regional, and national tests
86. Research studies that reading power affects college students who have insomnia, conflicts with parents, poor rapport with other people. What factor(s) is shown to effect reading achievement?
- a. Home conditions
  - b. Socio-economic status
  - c. Personality and emotional factors**
  - d. Perception and comprehension
87. Among the following, which is the abstract form of learning, parents teach their children?
- a. Tumulong ka sa paglinis ng bahay
  - b. Magbasa ka ng libro
  - c. Palagi kang magdasal
  - d. Mapakabuti ka**
88. What characteristic differentiate spiritual intelligence or spiritual quotient as developed by Harvard University, from sectarian religion (E.g. Christian, Buddhist, Jewish, etc.)?
- a. Authoritarian values
  - b. Universal values
  - c. Creedal values**
  - d. Sectarian values
89. Among models of reading strategies, what did student Jk adopt when she reads back and forth, attending to both what is in her mind and what's on the page?
- a. Bottoms-up
  - b. Interactive**
  - c. Down-top
  - d. Top-down
90. Of the following, how can self-esteem be best developed among learners?
- a. Doing fair share in community work
  - b. Fulfilling commitments**
  - c. Through relationships with others
  - d. Displaying self-control
91. Of Piaget's Cognitive Concepts, which refer to the process of fitting a new experience to a previously created cognitive structure or schema?
- a. Assimilation**
  - b. Schema
  - c. Accommodation
  - d. Equilibrium
92. In Piaget's stages of cognitive development, which is the tendency of the child to only see his point of view and to assume that everyone has the same point of view?
- a. Reversibility
  - b. Egocentrism**
  - c. Symbolic function
  - d. Centration
93. Which is the most basic in Maslow's hierarchy of needs?
- a. Socialization**
  - b. Actualization
  - c. Self-esteem
  - d. Altruism
94. Which aspect of multi-intelligence is enhanced by asking students to work on a physical model of the atom after a teacher's discussion on the subject of the atom?
- a. Interpersonal
  - b. Linguistic
  - c. Kinesthetical**
  - d. Mathematical
95. Among specialist in reading, who are mainly concerned about reading as a thinking process that involves the recognition of printed or written symbols which serve as thought stimuli?
- a. Semantics
  - b. Psychologists
  - c. Linguists**
  - d. Sociologists
96. Sequence the following events on the historical development of reading:
- I. Greek letters and the Roman alphabet were developed
  - II. Through the Semite's ingenuity, sounds, and symbols gave rise to the Phoenician alphabet
  - III. People used pictures and characters to convey messages
  - IV. Researchers showed the processes of reading, comprehension, and interpretation
- a. I, II, III, and IV
  - b. I, II, IV and III
  - c. III, II, I and IV**
  - d. IV, II, I and III
97. How is the disorderly behavior of children classified when they don't focus and lack attention?
- a. Intellectual**
  - b. Social
  - c. Moral
  - d. Psychomotor
98. How do you describe transfer of learning across subject matter, e.g value of thrift in Economic and Social Science?
- a. Horizontal
  - b. Spiral
  - c. Vertical**

- d. Cyclic
- 99. What broad learning is needed for a learner to desire to learn throughout life?
  - a. Four basic Rs
  - b. Basic education**
  - c. General education
  - d. Pre-school system
- 100. What observation attests to the fact that the sudden student's motivation vary according to socio-cultural background?
  - a. Females mature earlier than boys
  - b. Children from low-income household meet more obstacle in learning**
  - c. Genetic endowments may show gifted endowments among the young
  - d. Brains of boys are bigger and better than those of females

#### Assessment of Learning, Field Study, Practice Teaching

- 101. Of the types of validity tests, what is concerned with the relation of test scores to performance at some future time, e.g. Freshmen college test can show success in college?
  - a. Curriculum validity
  - b. Criterion validity
  - c. Content validity
  - d. Predictive validity**
- 102. The test questions in Teacher Dae Dae's test were confusing and subject to wrong understanding, especially to poorer students. What was wrong with the test?
  - a. Inappropriate level of difficult of items
  - b. Unclear directions
  - c. Ambiguity**
  - d. Test items inappropriate for outcomes being measured
- 103. Of the following, which exemplifies the best example of cooperation and voluntarism in the Parent-Teacher Associations?
  - a. Helping hands after a natural crisis, e.g. devastating storm**
  - b. Attending regular meetings
  - c. Fund raising for PT funds
  - d. Running the school canteen
- 104. Among standardized tests, which reveals strengths and weaknesses for purposes of placement and formulating an appropriate instructional program?
  - a. Personality tests
  - b. Achievement tests
  - c. Diagnostic tests**
  - d. Competency tests
- 105. Among standardized tests, which can show how students perform in comparison with each other and to students in other schools?
  - a. Competency tests
  - b. Subject exit tests
  - c. Achievement tests**
  - d. Diagnostic tests
- 106. Teacher Bea Bunana makes her tests easy for students to understand, easy to administer and score and suitable to test conditions, e.g. time. What is she achieving for her tests?
  - a. Efficiency**
  - b. Usability
  - c. Reliability
  - d. Validity
- 107. Of the following subjects, which does not belong to performance-based subjects in which direct instruction is effectively used?
  - a. Values education**
  - b. Music
  - c. Science
  - d. Mathematics
- 108. Which of these approaches would reform assessment outcomes?
  - a. Apply sanctions on low performing schools
  - b. Focus on testing without investing the learner's needs
  - c. Use understanding as means of giving feedback on students learning**
  - d. Compare results of performance of all schools
- 109. Using extrinsic motivational assessment, what could be the most noble motive in students pursuing a lifetime work and mission for the teaching profession?
  - a. Promise of high rank and prestige
  - b. Social service to upcoming generations**
  - c. Economic security and welfare
  - d. Respected position in society
- 110. To what process of evaluation does determining the extent objectives are met belong?
  - a. Authentic
  - b. Formative
  - c. Criterion-referenced**
  - d. Norm-referenced
- 111. Which form of the foundation of all cognitive objects without which the next level of higher thinking skills cannot be attained?
  - a. Knowledge**
  - b. Synthesis
  - c. Application
  - d. Analysis
- 112. What primary response factor is considered by Essay questions?
  - a. Factual information
  - b. Wide sampling of ideas**
  - c. Originality
  - d. Less time for construction and scoring
- 113. Among written categories of assessment methods, what did teacher Maggie Lagid use when she assessed the stock knowledge of her students through questioning in an open class?
  - a. Oral questioning**
  - b. Performance test
  - c. Product rating scale
  - d. Observation and self-report
- 114. In the context of the 6 facets of understanding cited by Wiggins and McTighe, what is a proof of a student's understanding a principle?



- a. Stating given examples
  - b. Repeating it as given by the teacher
  - c. Applying it to solve his problem**
  - d. Retaining it in memory for a long period of time
115. What does it mean if student Pete got a 60% percentile rank in class?
- a. He scored better than 60% of the class**
  - b. He scored less than 60% of the class
  - c. He got 40% of the test wrongly
  - d. He got 60% of the items correctly
116. Which of the following may not be adequately assessed by a paper and pencil test?
- a. Sight reading in music**
  - b. Multiplication skills
  - c. Subject-verb agreement
  - d. Vocabulary meaning
117. What should be done with test item whose difficulty index is .98?
- a. Revise it**
  - b. Retain it
  - c. Reject it
  - d. Reserve it for another group of students
118. What is known as the scoring guides for rating open-ended questions?
- a. Rubrics
  - b. Outcomes
  - c. Scales**
  - d. Outputs
119. What does it mean to say that the facility index of a test item is .50?
- a. It is reliable
  - b. It is valid
  - c. It is moderate in difficulty**
  - d. It is very easy
120. With the mode of answering as a point of reference, which of the following does not belong to this test group?
- a. Completion
  - b. Essay**
  - c. Problem-solving
  - d. Matching
121. One half of the class scored very low. Teacher Janus gave another tests to determine where were the students were weakest. What type of test is this?
- a. Aptitude test
  - b. Remedial test
  - c. Diagnostic test**
  - d. Readiness test
122. On what is normative marking based?
- a. High marks of few students
  - b. Failure of some students
  - c. Normal curve of standard distribution
  - d. Student achievement relative to other students**
123. What cognitive domain is involved in the student's clarifying information from conclusion?
- a. Synthesis
  - b. Evaluation
  - c. Analysis**
  - d. Application
124. Which of the following indicates a strong negative correlation?
- a. -75**
  - b. -15
  - c. -10
  - d. -25
125. What is the graphic illustration for the relationship between two variables?
- a. Histogram
  - b. Normal curves
  - c. Frequency polygons
  - d. Scatter diagram**
126. What does a negative discrimination index mean?
- a. The test item has low reliability
  - b. More from the lower group answered the test item correctly**
  - c. More from the upper answered the test correctly
  - d. The test could not discriminate between the upper and lower group
127. What is the deviation from a standard or desired level of performance?
- a. A problem
  - b. A deficit
  - c. A defect
  - d. A gap**
128. How does a student's 80 percentile score interpreted?
- a. High in all the skills being tested
  - b. Higher than 80% of the members of the group**
  - c. Better relative to the competencies targeted
  - d. 80% of the specified content
129. Of the types of validity for tests, what is focused on the extent to which a particular tests correlates with acceptable measure of performance?
- a. Curricular validity
  - b. Content validity
  - c. Criterion validity**
  - d. Predictive validity
130. Among general categories of assessment methods, what instruments did pre-school teacher Justine use when he rated the handwriting of his students using a prototype handwriting model?
- a. Product rating scale
  - b. Performance test**
  - c. Written response instruments
  - d. Observation and self-reports
131. On what should teacher's evaluation of a learner's work be based?
- i. Attendance
  - ii. Merit
  - iii. Quality of academic performance
  - iv. Behavior in class
    - a. I and II

- b. II, III, and IV
- c. II and III
- d. I, II, III, and IV

132. Self-evaluation can be done in various ways, but this is not one of them:
- a. Use of an evaluation instrument
  - b. Written reflection
  - c. Self-videotape of class performance
  - d. **Per feedback session**
133. In her test, Teacher Marian R unknowingly gave clues to the answers that reduce usability of the test. What was wrong with the test?
- a. Ambiguity
  - b. Unclear directions
  - c. **Poorly constructed test items**
  - d. Test too short
134. In preparing classroom tests, which of the following checklists is the LAST among steps in tests preparation?
- a. How are the objective items to be scored?
  - b. **How are the test results to be reported?**
  - c. How I have prepared a table of specifications?
  - d. How are the test scores to be tabulated?
135. What formula is used to total and compute test scores at the end of the year?
- a. [Test scores = transmutation table] x 100
  - b. [Highest score + Lowest possible score] x 100
  - c. [Student's score x 100]
  - d. **[Student's score + Highest possible score] x 100**
136. What can be said of student performance in a positively skewed score distribution?
- a. **A few students performed excellently**
  - b. Most students performed well
  - c. Almost all students had average performance
  - d. Most students performed poorly
137. Which is true when the standard deviation is small?
- a. Scores are toward both extremes
  - b. Scores are spread apart
  - c. **Scores are tightly bunched together**
  - d. The bell curve is relatively fat
138. In her tests, Teacher Tomden made tests that were either too difficult or too easy. What was wrong with her tests?
- a. Unclear directions
  - b. **Inappropriate level of difficulty of the test items**
  - c. Ambiguity
  - d. Identifiable patterns of answers
139. What is an alternative assessment tool that consists of a collection of work artifacts or in progress accomplishment by a targeted clientele?
- a. Evaluation instrument
  - b. Rubric
  - c. Achievement test
  - d. **Portfolio**
140. What computation did teacher Panny use in getting the difference between the highest and lowest scores in each class?
- a. Mean
  - b. **Range**
  - c. Standard deviation
  - d. Median
141. Which measure of central tendency is most reliable when scores are extremely high and low?
- a. Cannot be identified unless individual scores are given
  - b. **Median**
  - c. Mode
  - d. Mean
142. Which measure of central tendency is most reliable to get a picture of the class performance whose raw scores in a quiz are: 97, 95, 85, 86, 77, 75, 50, 10, 5, 2, 1?
- a. Mode
  - b. None. It is best to look at individual scores
  - c. Mean
  - d. **Median**
143. Self-evaluation has become an important kind of performance assessment among teachers, useful as an honest self-criticism and a starting point to removal evaluation by supervisors, peers, or students. How is self-evaluation described?
- a. Evidence of teaching performance
  - b. Substitute to supervisor's rating
  - c. **Guide for self-adjustment**
  - d. Tool for salary adjustment
144. What is the common instrument used in measuring learning in the affective domain?
- a. Multiple choice
  - b. Checklist
  - c. Scaling
  - d. **Questionnaire**
145. On the test giver's list of Do's, which of the following is not relative to motivating students to do their best?
- a. Read test directions
  - b. Reduce test anxiety, e.g. "Take a deep breath."
  - c. Explain the purpose of the test
  - d. **Tell students: "I will be proud of you if you perform well."**
146. What is the range if the score distribution is: 98, 93, 93, 93, 90, 88, 87, 85, 85, 85, 70, 51, 34, 34, 34, 20, 18, 51, 12, 9, 8, 6, 3, 1?
- a. 93
  - b. 85
  - c. **97**
  - d. Between 51 and 34
147. What does the test mean if the difficulty index is 1?
- a. Very difficult
  - b. Missed by everyone
  - c. **Very easy**
  - d. A quality item
148. What is the meaning of a negative correlation between amount of practice and number of errors in tennis?
- a. The increase in the amount of practices does not at all affect the number of errors
  - b. **As the amount of practice increases, the number of errors decreases**
  - c. The decrease in the amount of practice sometimes affects the number of errors
  - d. Decrease in the amount of practice goes with decrease in the number of errors

149. An entering college would like to determine which course is best suited for him. Which test is appropriate for this purpose?
- Aptitude test**
  - Intelligence test
  - Achievement test
  - Diagnostic test
150. Which of the following criteria is the basis for selecting tests that yield similar results when repeated over a period of time?
- Efficiency
  - Validity
  - Usability
  - Reliability**

### Principles and Methods of Teaching, Educational Technology, Curriculum Development

151. Facilities such as classrooms, fixtures, and equipment can often damage the morale of new teachers and become an obstacle for adapting well to the school environment. What should be the policy for assigning said physical facilities?
- needs of student's basis**
  - position ranking basis
  - first-come, first-served basis
  - service seniority basis
152. There are various functions a fellow teacher or peer coach can help new teachers. What role does a peer coach play by being present/available to share ideas, problems and success with a new teacher?
- a provider of technical feedback
  - a facilitator of strategies**
  - an analyzer of teaching job
  - a close peer or companion
153. Teacher Princess sees to it that her classroom is clean and orderly so her pupils will less likely disarrange seats and litter on the floor. On which thought is her action based?
- existentialism
  - progressivism
  - behaviorism**
  - reconstructionism
154. Teacher Nancy is directed to pass an undeserving student with a death threat. Which advise will a utilitarian give?
- Don't pass him. You surely will not like someone to give you a death threat in order to pass
  - Pass the student. That will be off use to the student, his parents and you.**
  - Pass the student. Why suffer the threat?
  - Don't pass him. Live by your principle of justice. You will get reward, if not in this life, in the next!
155. In what setting is differentiated and multi-lingual teaching most effective?
- special children with classes
  - multi-grade classes
  - children with diverse cultural backgrounds**
  - pre-school children
156. After the embarrassing incident, Teacher Kevin vowed to himself to flunk the student at the end of the school term. What has Dante done that is against the guidelines for using punishment?
- Punishing immediately in an emotional state
  - Using double standards in punishing
  - Doing the impossible
  - Holding a grudge and not starting with a clean slate**
157. Following the principles for punishing students, which of the following is the LEAST desirable strategy for classroom management?
- Punishing while clarifying why punishment is done
  - Punishing while angry**
  - Punishing the erring student rather than the entire class
  - Give punishment sparingly
158. According to the guidelines on punishment, what does it mean that the teacher should give the student the benefit of the doubt?
- Make sure facts are right before punishing**
  - Doubt the incident really happened
  - Don't punish and doubt effectiveness of punishment
  - Get the side of the students when punishing
159. Which of the following guidelines for punishment may be done?
- Don't punish students outside of school rules on punishment**
  - Don't threaten the impossible
  - Don't use double standards for punishing
  - Don't assign extra homework
160. For group guidance in classroom management, what element is lacking when there is too much competitiveness and exclusiveness with the teacher being punitive and partial to some students?
- Dissatisfaction with classroom work
  - Poor interpersonal relations
  - Poor group organization**
  - Disturbance in group climate
161. To demonstrate here authority Teacher Kokeyni made an appeal to undisciplined students. What kind of appeal did she make by saying, "Ladies and gentlemen, don't engage in that kind of behavior, you can do much better?"
- Invoke peer reaction
  - Exert authority
  - Internalizing student's image of themselves**
  - Teacher-student relationship
162. What is the term for the leap from theory to practice in which the teacher applies theories to effective teaching methods and theories?
- Integration process**
  - Informational process
  - Conceptualization process
  - Construction process
163. Of subcategories of movement behavior, what is happening when the teacher ends an activity abruptly?
- Thrust
  - Truncation**
  - Stimulus-bounded
  - Flip-flop
164. Of subcategories of teacher movement behavior, what is happening when the teacher goes from topic or activity to other topic or activities, lacking clear direction and sequence of activities?
- Truncation
  - Dangle
  - Thrust**
  - Flip-flop

165. Of subcategories of teacher movement behavior, what is happening when the teacher is too immersed in a small group of students or activity, thus ignoring other students or activity?
- Truncation
  - Flip-flop
  - Stimulus-bounded**
  - Thrust
166. From classroom management strategies applied on erring students, which of the following should not be done?
- Surprise quiz
  - Communicating problems to parents
  - Parent-principal conference
  - Shaming erring student before the class**
167. Among mistaken goals in the Acceptance Approach to discipline, what happens when students defy adult by arguing, contradicting, teasing, temper tantrums, and low level hostile behavior?
- Power seeking**
  - Withdrawal
  - Revenge seeking
  - Attention getting
168. Teacher Ann Patuan dealt effectively with a minor infraction of whispering by a student to a neighbor during class. Which of the following did she do?
- Reprimand quietly
  - Continue to teach and ignore infraction
  - Reprimand student after class
  - Use nonverbal signals (gesture or facial expression)**
169. What mistake is teacher Senemin Basic trying to avoid by never ignoring any student or group of students in her discussions and other activities?
- Non-direction
  - Dangled activity
  - Divided attention**
  - Abrupt end
170. Teacher Dra D Explorer is a great lecturer and so she is invited to speak and represent the school on many occasions. What is one quality of her lecturers when she follows a planned sequence, not diverting so as to lose attention of her listeners?
- Explicit explanations
  - Continuity**
  - Inclusion of elements
  - Fluency
171. Teacher Aldub makes certain content interesting to his students. Focusing on learners, he also uses many simple examples, metaphors and stories. What is this quality of lesson content?
- Interest**
  - Feasibility
  - Self-sufficiency
  - Balance
172. Teaching English, teacher Krizzy is careful about her lesson content. What quality of content did he achieve when she made certain her information came with the “information explosion” which she got in the Internet, such as how to effectively teach phonetics?
- Learnability
  - Significance**
  - Balance
  - Interest
173. Teacher Kevin made certain his lesson content can be useful to his students, taking care of their needs in a student-centered classroom. What is this kind of quality content?
- Utility**
  - Balance
  - Self-sufficiency
  - Interest
174. In the implementation of the curriculum at the classroom level, effective strategies are called “Green”. Which of the following belongs to the Green Flag?
- Homogenous students grouping
  - Content delivery based on lessons
  - Excess in chalkboard talk
  - Student interest and teacher enthusiasm**
  - Rigidity if movement
175. In the implementation of the curriculum at the classroom level, ineffective strategies are called “Red”. Which of the following belongs to the Red Flag?
- Content applied to real-life situations
  - Overemphasis on drill and practice**
  - Available enrichment activities
  - Integration of problem solving
176. Teacher Maggie explains by spicing her lectures with examples, descriptions and stories. What is this quality in her lectures?
- Planned sequence
  - Elaboration through elements**
  - Use of audiovisuals
  - Simple vocabulary
177. Can technology take the place of the teacher in the classroom? Select the most appropriate answer:
- No. It is only an instrument or a tool
  - Yes, when they hire less teachers and acquire more computers
  - Yes. When teachers are not competent
  - Yes, such as in the case of Computer-assisted instruction (not teacher-assisted instruction)**
178. What kind of tool is technology as evidenced by its use in word processing databases, spreadsheets, graphics design and desktop publishing?
- Analyzing tool
  - Encoding tool
  - Productivity tool**
  - Calculating tool
179. In avoiding implying sickness or suffering, which of the following is the most preferable way to refer to those with disabilities like polio?
- “Is polio-stricken”
  - “Had polio”
  - “Polio victim”**
  - “Suffers from polio”
180. If threat of punishment is necessary on erring students, how should this best be done?
- Make the threat and reinforce with warning
  - Make the threat with immediate punishment
  - Ward and threat at the same time

- d. First a warning before the threat
181. Among cognitive objectives, what is also known as an understanding and is a step higher than more knowledge of facts?
- Comprehension
  - Analysis
  - Synthesis
  - Application
182. What is the quality of teacher Pining Garcia's lecture when she makes use of various pictures, charts, graphs, videos to support her lectures?
- Simplified vocabulary
  - Enrichment through visual aids
  - Causal and logical relationships
  - Continuing sequence
183. In determining the materials and media to use, what consideration did Teacher Ina A. Mag adopt when he chose materials that can arouse and sustain in curiosity?
- Satisfaction
  - Interest
  - Expectancy
  - Relevance
184. Which of the following is true of a democratic classroom?
- Teacher acts as firm decision maker
  - Students decide what and how to learn
  - Consultation and dialogue
  - Suggestions are sent to higher officials for decisions
185. This is appropriate use of technology which can unite people of the world rather than exploit them?
- For pornography
  - For social media
  - For financial fraud
  - For propaganda
186. From structures in Multifunctional Cooperative Learning, which involves each student writing in turn one answer as a paper and pencil is passed around the group?
- Jigsaw
  - Inside-outside circle
  - Roundtable
  - Partners
187. How does the "humaneness" of the teacher best described when he/she is full interest and enthusiasm in the work of teaching?
- Responsiveness
  - Perceptiveness
  - Knowledge
  - Sensitivity
188. Teacher Lester Cruz Valdez gets more information about how his students learn in order to upgrade his pedagogy. What principle is he following?
- Teachers should keep track of learning outcomes
  - Teachers should value information
  - Teachers should document information data on students
  - Teachers should teach and test learning
189. In order to assist new teacher, which is the most effective way to clarify the schools' goals and responsibilities early in the first year?
- Student's handbook
  - Orientation
  - Principals' memorandum
  - School curriculum
190. Of components of direct instruction, which involves teachers and students working together on a skill or task and figuring out how to apply the strategy?
- Consolidation
  - Guided practice
  - Application
  - Modeling
191. In direct/expositive instruction, what is the logical pattern of procedures in a lesson adopted?
- Provide motivation and draw commitments
  - Explain rationale and objectives
  - Provide feedback
  - Practice for mastery
- II, I, IV, and III
  - IV, I, II and III
  - I, IV, III, and II
  - I, II, IV and III
192. Teacher JanJan made certain his lesson content is within the capacity of his young forum grade learners. What is the quality of John's lesson content when he fits lesson to learner's capacity to absorb lesson content?
- Learnability
  - Balance
  - Validity
  - Interest
193. From structures of Multifunctional Cooperative Learning, which makes each group to produce a group product to share with the whole class?
- Coop-coop
  - Think-pair-share
  - Team Word-Webbing
  - Partners
194. This is the more appropriate understanding of technology in education?
- Methods and process
  - Inventions and equipment
  - Channels and instruments
  - Hardware, designs, and environment
195. A teacher introduces herself as teacher only. What does this imply?
- She must have been forced to pursue a career in teaching.
  - The teaching profession is not a very significant one
  - The teaching profession is the lowest paid profession
  - She takes no pride in the teaching profession
196. In the guided exploratory approach to learning, which is not the term used for Inquiry learning?
- Heuristic learning
  - Problem-solving learning
  - Discovery learning

- d. Expository learning

197. What is another quality of teacher Lassie Pecson’s lectures when she used words that are within the grasp of her listeners, avoiding technical terms and jargons?  
a. Use of specific descriptions and examples  
b. Enriched audiovisuals

c. Normal vocabulary

d. Planned sequence

198. In delivering her lessons, teacher Blackie Lou Blanco is careful that no topic is extensively discussed at the expense of other topics. That guiding principle in selection and organization of lesson content is she following?  
a. Significance  
b. Self-sufficiency  
c. Feasibility

d. Balance

199. In determining materials and media to use, what consideration did Teacher Grachie adopt when she gave importance to the level of outcome and the learner’s sense of fulfillment in performing the task?  
a. Expectancy  
b. Satisfaction  
c. Interest  
d. Relevance

200. In the inductive approach to learning, what is not among the facilitating skills needed on the part of the teacher?  
a. Teacher giving generalization of principles  
b. Commenting to pave way for generalizations or principles  
c. Organizing answers  
d. Asking the right questions

GENERAL EDUCATION

LET Reviewer-ENGLISH

LECTURE NOTES

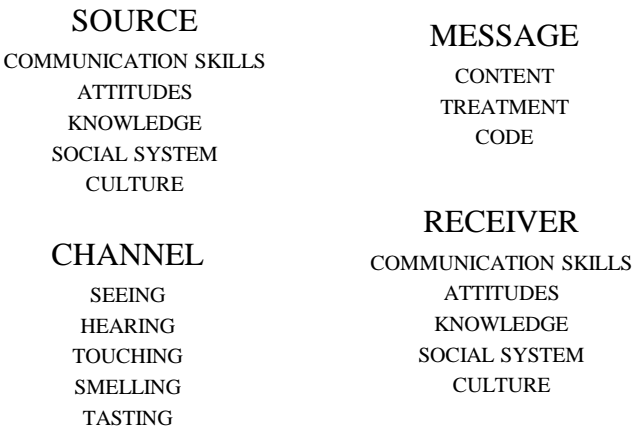
MODELS OF COMMUNICATION

The communication process is indeed a paradox. We always communicate with each other, yet defining the process itself seems to be a very difficult task. Language of different historical periods, in their dire attempts to bridge the gap, were able to formulate their own theories to explain the process of communication, Since the linear representation of Aristotle to the complex depiction of modern linguist, we can say that this endeavor has come a long way.

Renowned linguist have different points of view about the communication process, and this diversity proves to be the fuel that keeps linguist of today on taking forward steps en route to the better understanding of this process.

Two to be discussed in this chapter, each representing the traditional and the contemporary schools of thought as regards communication. Berio’s representation, being the most widely cited and extensively use model, will be discussed to explain in the basic components of the communication cycle, while the Dance Helix model will be clarified to give a fresh and novel perspective on the practice of other long-standing theories.

David Berios’s paradigm of the communication process is considered one of the most recognizable representations. It has four major components: source, receiver, message, and the channel. That is why at times this model is also called **SMRC**.



**Berios’Model**

SMRC’s linearity is oftentimes criticized, but Berio’s elucidations regarding the significance of each component redeem it all. According to him, the interlocutors’ ( source and receiver) , and attitude are

communication skills, knowledge, socio-cultural system, and attitude are important for successful communication to take place ( Berio, 1960). For example, if the source has a higher level of language proficiency compared to the receiver, or vice versa, then problems are expected. Refer to the sample conversation below and then try, to figure out what caused the lapse in communication.

Conversation Sample

**Setting:** Jakarta International Airport Immigration Counter  
**Situation:** The immigration officer is interviewing a tourist about the latter’s whereabouts.  
**Specifications:** The immigration officer is a native speaker, while tourist is a beginner learning of English language.  
**Immigration Officer:** Good morning, Miss! May I know your travel itinerary?  
**Tourist:** Uhh....sory. What is that again?  
**Immigration Officer:** oh, I mean... where do you plan to go?  
**Tourist:** Oh, I see. Actually I plan to go to the Metropolitan Museum and to the Museum of Modern Art, and maybe stay for another two days in New York City before flying to Florida.  
**Immigration officer:** Okay. Welcome to America. Enjoy your vacation!



In the sample conversation above, the difference between the proficiencies of the interlocutors led to lapses in communication. It is also noticeable that success of the process relies largely on the one who has higher proficiency. Since the tourist has limited vocabulary (being a beginner), the immigration officer paraphrased the statement to fit the level of the tourist. Discrepancy between knowledge of the interlocutors also poses great treat. Read the sample conversation below and try to cite some reasons for the communication breakdown.

Conversation Sample

**Setting:** Computer repair shop  
**Situation:** One client wants to have her laptop fixed.  
**Specifications:** Both the client and the technician have the same language of proficiency.  
*Client:* Good morning! May I ask why my laptop shuts down automatically just right after turning it on?  
*Technician:* Okay, let me see it.  
*Client:* So what do you think?  
*Technician:* I think your laptop has been infected by Trojans and worms...  
*Client:* Huh? Trojans? Worms?  
*Technician:* Yes. By the way, do you do defragmentation every once in a while? Doing so greatly helps the performance of your computer.  
*Client:* Huh? What is that again? Defragment...what?  
*Technician :* Defragmentation. Anyway, to fix your laptop, I will just rebot and reformat everything, is that ok with you?  
*Client:* I am not really familiar with you are saying. So fix it and send me the Bill Ok?

In conversation above, the technician uses jargon exclusive to those who are adept in the computers and information technology. For someone who is not really into the technicians of computer software and hardware nomenclature, understanding what the technician is saying poses great difficulty that can later on lead to communication breakdown.

English Language Learning

Learning the English language circles around the Three Sets of Four, and below is a table that summarizes these sets.

MACRO SKILLS	CUEING SYSTEMS	COMMUNICATIVE COMPETENCIES
Learning	Phonology	Grammatical
Speaking	Morphology	Discourse
Reading	Semantics	Sociolinguistic
Writing	Syntax	Strategic

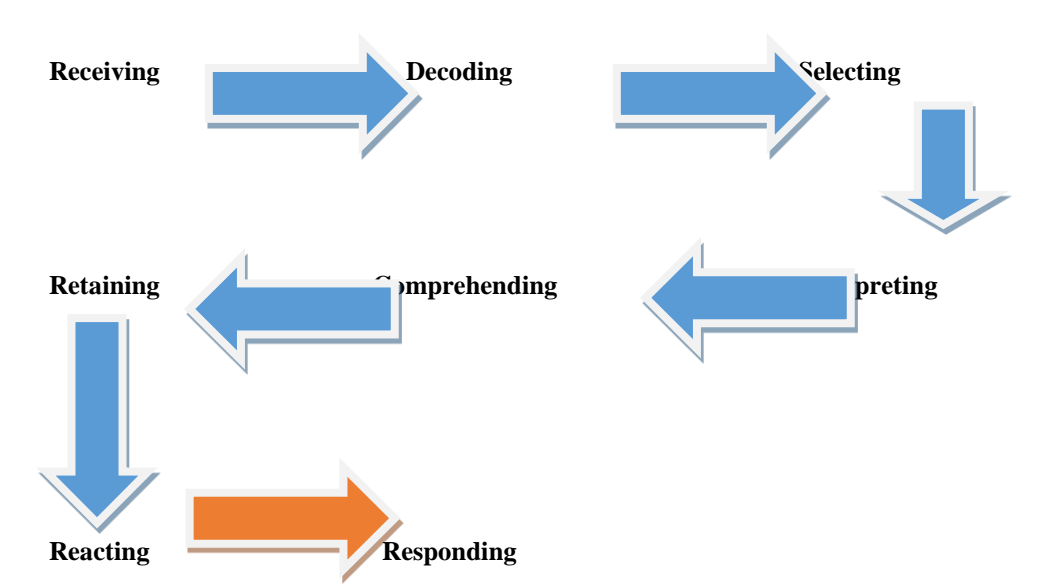
THE FOUR CUEING SYSTEMS

CUEING SYSTEM	Definition
Phonology	Pertains to the sounds of language
Morphology	Pertains to formation of words <div>Types of morphemes<ul style="list-style-type: none"><li>✓ Bound morpheme ( dependent)</li><li>✓ Free morpheme (independent)</li></ul></div>
Semantics	Pertains to meaning derivation
Syntax	Grammar, structure, and form of the language

LISTENING

- Experts say that listening is the first language skill that students learn. If we are to think about it, this claim may be true. Upon hearing things, the one can speak-just like how we learned our first utterances. Parents keep on repeating words until the babies initiate and repeat the utterances successfully ( behaviorist). But is listening as easy as it may sound?

The Listening Process



The receiving of the message from the source signals is the start of listening process. The listener, then, will decode the message and select important parts of the message that will help the listener in interpreting it. Based on the interpretation, the receiver now comprehends the message and retains information needed for him to react and respond.

Kinds of Listening

Interactional/ Emphatic Listening

- This type of listening is very common at times done in an informal setting. This happens when persons listen to each other for the purpose of communicating and empathizing. At times, the aim of this type of listening is to accomplish tasks or to come up with something.
- In classroom setting, this is when students listen to each other for them to able to accomplish given tasks and activities.

Transactional/Critical Listening

- In this type of listening, the listener is concerned with acquiring new knowledge for the purpose of improving his skill in generalizing and decision making.
- In a classroom setting, this is when the students listen to their teacher to gain more knowledge

THREE MODELS OF LISTENING

Joan Morely in her essay “Aural Comprehension, instruction: principles and Practices” made mention of the three modes of listening, namely: Unidirectional, Birectional, and Autodirectional.

**Unidirectional**      —————➔ If the listener cannot respond to the things he/she heard

**Bidirectional**      —————➔ If the listening process is reciprocal-meaning, two way ( indicated by prefix “bi”)

**Autodirectional**      —————➔ If the listening process is reflexive-meaning, the speaker this is intrapersonal listening

SPEAKING

Language and language learning developed as fast as civilization. In the olden times, man used language merely for survival-now, language functions as one important medium of change and innovation.

But the question still remains... what is language? Language was defined by Webster as the expression and communication of emotions or ides between human beings by means of speech and hearing that is systematized and confirmed by usage among a given people over a period of time. If we are to look a Webster’s definition can infer that there are only two functions of language.

The first one is to express how one feels ( emotions); and the second one is to express how one thinks (ideas). He also mentioned two important factors of language speaking (speech) and listening (hearing). The two word systematized in Webster’s definition can also be related to grammar-meaning it follows certain rules and systems, and lastly, he also mentioned”period of time”, which can be interpreted as the changes language goes through with me.

Webster’s definition is in line with the structurist’s. For them language follows a system-meaning, one cannot just mix letters to form words. X,Y, K, and D cannot be combined to form a meaningful word-well, at least in English. In the sentence” she is pretty,”it will be erroneous if one will change “is” to “are”. These instances are the bases of the structurist in saying that language is a system. They also believes that language is primary vocal, is another claim of the structurists. For them, and other Webster, speaking and listening are important language skills. They also adhere to the concept that language is arbitrary. For them, language constantly goes through series of innovations developments, and changes. The word “thee”, “thou”, “growist”, and hath” are no longer used today. This is one proof that language, just as other things, constantly changes.

The cognitivist, however, believe that language is a mental phenomena. For them, language learning is innate in the individual. According to them, there is one part in our brain called LAD (language acquisition device) that is responsible for language acquisition. If we are to analyze their definition, we can infer that language (for them) is not learned but acquired. The difference of learning from acquiring is that learning is voluntary while acquiring is involuntary. We choose to learn, but we no choice what to acquire. We acquire traits from our parents, but we learn how to solve math problems.

The functionalist have rather functional definition about language. For them language performs specific functions, such as to express, to persuade, to give or ask information, and to make someone to do something. Most people will agree with this definition, because practically these functions are what language is really for.

The behaviorists also have their own definition of language. For them, language is learned through imitation, repetition, and reinforcement. If a teacher teaching grade one pupils will ask her students to say word the she does, then pupils learned( imitation). If the teacher will ask the same pupils to repeat saying the world over and over again, then the pupil will be punished. On the other hand, if the pupil was able to say it correctly, then he/she will receive a prize. Given the two instances above, then the pupils learned ( reinforcement)

THE SEGMENTALS

According to the structurist, language is primarily vocal, but the question is-how to speak properly? Is it merely opening and closing the mouth? Or is there a complex process that guides speech production? In this action, you will know how the speech mechanism works.

The Family of Consonant Sounds

Consonant sounds can be classified according to the three dimensions: the place of articulation (where the sounds is made), the manner of articulation (how the sounds is made), and voicing (voiceless or voiced).

Manner of Articulation  
Stops/Plosives

These are sounds produced when the air stream is compressed and passes through a small creating friction. The sounds F,V,S,Z,H,TH ( voiced) and voiceless), Sh Zh, are the members of this group.

Affricates

These are sounds produced when a plosive is followed by a fricative. Ts ( Ch), and Dz (J) are the members of this group.

Nasals

Nasal sounds are produced when the oral cavity is blocked, and so the air passes through the nose. N, M, and Ng are nasal sounds.



Liquid/Lateral

Sounds are produced when air stream moves around the tongue in an unobstructed manner. Sounds like L and R are examples.

Glides

Glides are sounds that are close to vowel sounds, like W and Y.

Point of Articulation

Labio Dental	Lower lips touches upper teeth
Dental	Tip of the tongue and the inner edge of the upper teeth
Alveolar	Tip of the tongue and the alveolar ridge
Palatal	The tongue and hard palate
Velar	Dorsal tongue and soft palate
Glottal	Throat passage

Voiced or Voiceless

A sound is voiced if the vocal cords vibrate, whereas a sound is voiceless if the vocal cords are not vibrating upon the production of sounds.

Consonant Chart

Place of Articulation							
Manner							
	Bilabial	Labio Dental	Dental	Alveolar	Palatal	Velar	Glottal
Stop				TD		KG	
Fricative		FV	Th  (voiced and voiceless	SZ	SH ZH		H
Affricate					TS DZ		
Nasal	M			N		NG	
Loud				L	R		
Glide	W				Y		

VOWELS

Vowels sounds are produced with one’s mouth open. It is also a fact that all vowel sounds are voiced sounds can be classified according to the height of the tongue and jaw, and the way the mouth opens.

Vowel sounds can be classified as SPREAD, ROUND,OR NEUTRAL.

SPREAD

/i/	Long/i/sound as in “phoenix” and “beat”
/ɪ/	Short /ɪ/ sound as in “bit”, “captain”, “pin”, and “maariage”
/e/	Soft /e/ sound as in “hate”, “mate”, “grape”, and “gate”
/E/	Hard /E/ sound as in “let”, “set”, “any”, and “jeopardy”
/ae)	Combination of /a/ and /e/ as in “family”, “man”, “anger”, and “hamburger”

NEUTRAL

/Y/	Unaccented schwa sound as in “towel”, and “America”
/ʌ/	Accented schwa as in “judge”, and “cup”

ROUND

/u/	Long /u/ sound as in “balloon”, “soon”, and “pool”
/ʊ/	Short /ʊ/ sound as in ”pull”, “would”, “push”, and”cook”
/o/	Complete/o/ sound as in “boat”, “phone”, and”own”
/a/	The /a/ sound as in” dark”, sergeant”, and “psalm”

THE SUPRA SEGEMENTALS

**Juncture**  
Juncture is defined as the pauses and rests in a given speaking discourse. It is commonly represented by a single slash(/) for short pauses, double slashes (/ /) for long pauses, and three slashes(/ / /) for rests at the end of the paragraph

**Pitch**  
This is the highness or lowness of sound

**Volume**  
This is the loudness or softness of sound

**Intonation**  
This is the rising and falling sound

**Stress**  
This is the placement of emphasis or force on certain words or syllables

READING

Jean Chall, Proposes skills that are essential for real reading to take place. She said that there are five skills that a student must have like.

- 1. **Phonemic Awareness**- being familiar with the sounds of the language
- 2. **Phonics** – drawing out the relationship between the symbol and the sound ( graphonemic relationship)
- 3. **Fluency** – the ability to blend and mix the sounds to form a meaningful utterance
- 4. **Vocabulary**- the ability to attach meaning to words
- 5. **Comprehension**- the ability to create and decode meaning from a group of words.

Chall also constructed a matrix of stages of reading development. She states that there are six stages namely:

**Stage 0 Pre-Reading Stage**  
In this stage, the students are being exposed to the different sounds of the language. This is the reason why songs, nursery rhymes, and poetry are being read to the students of reading. Automatically in recognizing a particular language is the key in the next stages. The teacher can determine if the students have phonemic awareness if they can name from language the words they hear are from.

**Stage 1 Initial Reading Stage**  
In this stage, the students will start to realize the correspondence between the symbol and the sound. For example, upon seeing the symbol M, the students will know that the sound is /m/ as in “mother”

**Stage 2 Confirmation Stage**  
This stage is deemed to be very crucial in reading development and according to Chall, most will mistake fluency for comprehension. She reiterates that mere verbalization of written text cannot be considered complete reading.

**Stage 3 Reading to Learn (Academic Reading)**  
The first three stages are considered”learning to read stages” while stage 3 up until stage 5 are “reading to learn stages”. In this particular stage, students must be beyond fluency. They must be able to comprehend what they read because if not, they will have difficulty in learning

**Stage 4 Multiple Viewpoint Stage and Stage 5 Construction and Judgment Stage**  
After reading a text, if students were able to give their opinions they belong to the fourth stage. On the other hand, if students were able to criticize a particular text, and in turn were able to write their own, they belong to fifth stage

**Purpose of Reading**  
**Skimming**- reading to get the main idea  
**Scanning** – reading to get specific information

- Other Purposes of Reading**
- 1. Information searching
  - 2. General comprehending
  - 3. New information learning
  - 4. Information evaluating and synthesizing

WRITING

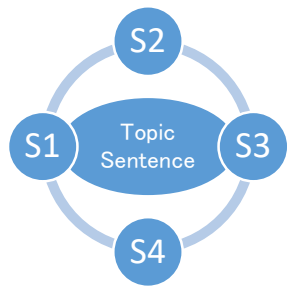
The Paragraph

The paragraph is defined as a group of unified, coherent, well-developed sentences that are properly and logically organized to support one specific idea or topic.

Based on the given definition, we can infer that it is important for a paragraph to have Unity, Coherence, logical Organization, support or Development, proper Emphasis, and one governing and limiting topic sentence- “UCODE TS”

The paragraph Paradigm

Based on the diagram below, we can say that a paragraph is unified if all the sentences are about the topic sentence. It has coherence if all the sentences are connected with each other properly and logical and coherent order.



GRAMMAR

Part of Speech

NOUNS

A noun names something- person, place, things, events, phenomena, emotions, etc.

Kinds of Nouns

- 1. **Proper nouns**- names of specific persons, things, or places
- 2. **Common nouns**- refer to any one of a class of persons, places, or things
- 3. **Count nouns**- nouns that can be counted and quantified using numbers
- 4. **Non count nouns** **Mass nouns**- nouns that cannot be counted and quantified using measurements
  - **Mass nouns**, abstract nouns, events, occasions and phenomena are under non count nouns.
- 5. **Collective nouns**- nouns that name a group of persons or things
- 6. **Compound nouns**- nouns that are made up of two words acting as a single unit.
  - Compound nouns may be written as separate words hyphenated words, or combined words.

PRONOUNS

Pronouns are words that stand for nouns

Kinds of Pronouns

- 1. **Personal pronouns**- these are pronouns that refer to the person speaking, the person spoken to, or the person or thing spoken about.

	SINGULAR	PLURAL
FIRST PERSON	I ( Subjective)  ME ( Objective)	WE ( Subjective)  US ( Objective)
SECOND PERSON	YOU	YOU
THIRD PERSON	SHE, HE, HER,HIM, IT	THEY ( Subjective)  THEM ( Objective)

- 2. **Possessive pronouns**- these are pronouns that show possession

POSSESSIVE ADJECTIVES	POSSESSIVE PRONOUNS
MY	MINE
OUR	OURS
YOUR	YOURS
THEIR	THEIRS
HIS	HIS
HER	HERS
ITS	

Examples:

**Possessive Adjective:** This is my book ( “my” qualifies the book)

**Possessive Pronoun:** This book is mine. (‘mine” represents the owner of the book)

3. Reflexive and Intensive Pronouns

	SINGULAR	PLURAL
FIRST PERSON	MYSELF	OURSELVES
SECOND PERSON	YOURSELF	YOURSELVES
THIRD PERSON	HIMSELF  ITSELF  ONSELF	THEMSELVES

Example:

REFLEXIVE	INTENSIVE
The pronoun refers to the subject	The pronoun shows emphasis
a. I see myself in his actions b. Did you teach yourself? c. He cut the paper himself d. They were shocked about themselves	a. I, myself is the culprit b. You, yourself teach c. He, himself cut the paper d. They themselves were shocked

4. *Indefinite Pronouns*- do not refer to a specific noun.

SINGULAR	PLURAL	BOTH SINGULAR AND PLURAL
ANY ,EVERYONE	BOTH, SEVERAL	NONE
ANYBODY, NO ONE	FEW	ALL
EVERYBODY	MANY	SOME
ANYONE		

5. *Interrogative pronouns*- used in asking questions

INTERROGATIVE PRONOUNS		
WHO	HOW	TO WHOM
WHAT	WHOM	TO WHAT
WHICH	WHOSE	TO WHICHWHERE
WHY	WHEN	

6. *Demonstrative pronouns*- used in pointing nouns

SINGULAR	THIS	THAT
PLURAL	THESE	THOSE

ADJECTIVES

An adjective qualifies and tells something about a NOUN or PRONOUN through descriptions.  
It answers the questions:  
What kind?  
Which one?  
How many?  
How much?

Comparison of Adjectives

POSITIVE	COMPARATIVE	SUPERLATIVE
BIG	BIGGER	BIGGEST
USEFUL	MORE USEFUL	MOST USEFUL
ACTIVE	LESS ACTIVE	LEAST ACTIVE
BAD	WORSE	WORST

Order of Adjectives

Descriptive Adjectives

determiner	observation					origin	material	qualifier	noun
		size	shape	age	color			sports	Car
An	Expensive				Red	European			Necklace
An	Extrai-ordinary								Daisies
Six			Long stemmed		White	american			Hair
Her	shiny	Short			Black				Dog
My		Big		Old		German			Boxes
Those		Long					Ceramic	jewelry	Locket
That	Smooth	Big							Insects

Few		Tiny			African		gold		Films
Some	Erotic				Indian				

### VERBS

Ofentimes. Verbs are defined as action words. But reality, verbs are far more than that. Verbs also link ideas in a sentence, help other verbs, and state conditions. We can classify verbs into (1) verbs actions, (2) linking/be verbs, (3) helping verbs, (4) emphatic verbs, and of course, (5) modals.

#### Action Verbs

These are verbs that express action. A majority of verbs are of this nature, and that is why most of the time, learners tend to define verbs as action words. Words like run, walk, talk, sing, dance, etc. are common examples of action verbs. We can further classify actions verbs into two more sub classifications-Regular and Irregular verbs.

#### Regular verbs

Action verb is considered regular if its past form is derived by adding d or ed. Let us take the word walk for an example; the past form of walk is walked.

BASE FORM	PAST FORM
Watch	Watched
Bake	Baked
Pick	Picked
Save	Saved

#### Irregular verbs

Action verb is considered irregular if its past form is derived not by adding d or ed, but through a change or through retention in spelling.

BASE FORM	PAST FORM
Pay	Paid
Put	Put
Say	Said
write	Wrote

### Linking verbs

#### Linking Verbs as Copula

The copula is defined by Celce-Muricia as the link between the subject and non verbal predicates ( nouns, adjectives, and some adverbials). The copula also carries the tense and would determines subject-verb agreement.

Examples:

She is beautiful---She is a pronoun, and beautiful is an adjective.  
 She is beautiful---She is singular, that is why we used “is”

#### Linking Verbs as Perception Corpulas

These are verbs that expresses no action, but at the same time, are not conventional ( is, are, was, were) linking verbs. They are called Perception copulas because they are perceived through the senses ( mental or sensory)

Examples:

Appear                      Seem                      Feel                      Look  
 Smell                      Sound                      Taste

#### Linking Verb as State Copulas

State copulas are verbs that are not locomotive. They are more of a condition than an action.

Examples:

Lie                              Remain  
 Rest                              Stand

#### Linking Verbs as Change of State Copulas

These linking verbs do not express instant locomotion or movement. Mostly, these verbs express changes from one state to another.

Examples:

Become                      Come                      Fall  
 Get                              Go                              Grow  
 Turn

These are also called helping verbs because they always appear with another verb in a sentence ( main verb). Linking verbs such as is, was, were, are considered auxiliary verbs if they appear together with a for a s verb in progressive form. Other helping verbs are has, have, and had.

The verb has is used for singular subjects in the present tense. The verb “have” is used for plural subjects in the present tense, and had is used doe both singular and plural subjects in the past tense. Has, have and had, are also considered Auxiliary verbs if they appear in a sentence with another verb( main verb) in the past participial form.

Example:

She has taken a bath already                              the verb”has” functions as an auxiliary

### Emphatic Verbs

Emphatic verb are used to give certain emphasis. These verbs are do, does, and did. Do is used for plural subjects in the present tense. DOES is used for singular subjects in the present tense, and DID for both plural and singular in the past tense.

The verbs, DO,DOES, and DID can also be used as main verbs. They are only considered em phatic verbs if they appear in a sentence with another verb in its base form.

Example:  
She did not drink her milk ----- DID is used as an emphatic verb

Modals

According to Celece-Muria, modals are helping verbs that are used to give a proposition. A degree of probability, to express one’s attitude, and to perform various social functions such as expressing politeness or indirectness when making request, giving advice, or grabting permission. It is always couples with a verb on its base form.

- a. Stating Ability  
I can do anything
- b. Expressing Regret  
I should have loved you
- c. Giving warning  
You may be in danger
- d. Expressing Admission with Reservation  
I might be wrong, but I know what I did
- e. Expressing observation  
You must do this

ADVERBS

Adverbs modify verbs, adjectives, or another adverb.

Adverb of Manner

This answers the question how a thing is done  
Example:  
He did the job poorly  
Question: How did he do the job?  
Answer: Poorly

Adverb of Time

This answers the question when the action happened  
Example:  
He will go there tomorrow  
Question: When will he go there?  
Answer: Tomorrow

Adverb of Frequency

This answers the question how often  
Example:  
She is there every week  
Question: how frequent is she there?  
Answer: every week

PREPOSITION

A preposition links words with a sentence. It also states how two separate things are related. A preposition may indicate a location, direction, possession, or cause.

Common Prepositions

In front of	About	In	Beneath
In regard to	Above	Near	During
Inside	Across	Down	By
In spite of	Against	Despite	By means
Into	Among	From	Amid

CONJUNCTION

If prepositions link words within a sentence, conjunctions relate or join words into single unit.

Coordinating Conjunctions- connect words or group of words  
Examples: but, and, for, nor, or, so, yet  
TIP: Coordinating conjunctions connect words of the same grammatical structures.

Correlative Conjunctions- connect words under the same grammatical structure, but they always appear in pairs.  
Examples: either....or, neither... nor

Subordinating Conjunctions- connects two complete ideas to make one dependent to other.  
Examples: inasmuch as, whenever, unless

INTERJECTION

These are words that express strong feelings or emotions. They may function as an independent sentence with the speaker as the subject.  
Examples: ouch, aha, alas, oh, hurray

Subject and Verb Agreement

Collective Nouns

These nouns can either take a singular or plural verb depending on how they are used in a sentence. On the other hand, if a collective noun is perceived as one entity, then it would take a singular verb. On the other hand, if a collective noun is perceived as individuals the group, it will take a plural verb.

*Examples:* Our debate team has won the competition  
Our debate team have won all their battles

***Noun ending in –s-and –ics***

Nouns ending in s and ics are always paired with verbs in the singular form

*Examples:* Mathematics is my favorite subject  
Measles is a dangerous disease

***Nouns in sets of twos.***

Nouns of this nature take a singular verb if the word” pair” is present. If not. They take a plural verb.

*Examples:* A pair of scissors in on the table  
The scissors are on the table

***“A number” and “The number”***

Sentence beginning with the phrase “ a number” always take a plural verb, while sentences that begin with “ the number” take a singular verb”

*Examples:* A number of students have been expelled  
The number of students being expelled is rising.

***Fraction and Percent***

Nouns in percent and in fraction take a singular verb if paired with a non-count noun, and vice versa.

*Examples:* 50% of the Earth’s water is still safe for drinking  
One-third of the students were expelled

***Compound Nouns***

Compound subjects joined by a conjunction take plural verbs.

*Examples:* Paul and Robin are brothers

***Neither...nor and Either...or***

The verb must agree with closet noun.

*Example:* Neither John nor his brothers are going to America

***As well and Together with***

The verb must agree with the first noun (subject).

*Example:* the president, together with his advisers, is leaving tomorrow

**Tenses**

***Simple Present Tense***

Verbs in the present tense express habitual or factual actions.

*Examples:* She sings  
The sun shines

***Simple Past Tense***

Verbs in the past tense express actions that happened in the past.

*Example:* She sang yesterday

***Simple Future Tense***

Verbs in the future tense express actions that will happen in the future.

*Example:* She will sing.

***Present Progressive Tense***

Verbs in the present progressive tense, express actions that are happening at the moment.

*Example:* She is singing.

***Past Progressive Tense***

This expresses a continuing action that started and ended in the past.

*Example:* She was singing all afternoon yesterday.

***Future Progressive Tense***

This expresses a continuing action that will happen in the future.

*Example:* She will be singing in the competition.

***Present Perfect Tense***

This expresses an action that started in the past, but is still happening at present

*Example:* I have sung a song.

***Past Perfect Tense***

This expresses two past actions, in which one happened before the other.

*Example:* she had sung before she danced.

***Future Perfect Tense***

This expresses two future actions, in which one will happen before the other.

*Example:* She will have sung before she dances.

***Present Perfect Progressive Tense***

This expresses an action that started in the past and still happening at present and will most likely continue to happen in the future.

*Example:* She has been singing since this morning.

***Past Perfect Progressive Tense***

This expresses two past actions, where the first one was still happening when the second one transpired.

*Example:* She had been singing before the bomb exploded.

***Future Perfect Progressive Tense***

This expresses two future actions, where the first action is still happening when the second one is transpires.

*Example:* She will have been singing before the bomb explodes.

SUMMARY	SUMMARY
Present	I dance
Past	I danced
Future	I will dance
Present Progressive	I am dancing
Past Progressive	I was dancing all afternoon yesterday
Future Progressive	I will be dancing
Present Perfect	I have danced
Past Perfect	I had danced before I sang
Future Perfect	I will have danced before I sing
Present Perfect Progressive	I have been dancing since then
Past perfect Progressive	I had been dancing when the bomb exploded
Future Perfect Progressive	I will have been when the party ends

Faulty Modifiers

**Dangling Modifier-** absence of the word being modified  
*Example:* Inside the store, shoes must be worn  
Who must wear the shoes?  
Customers must wear shoes inside the store.

**Misplaced Modifier-** the modifier modifies the wrong word.  
*Example:* Turning green, I watched the lights turning green.

**Fragment-** group of words masquerading as a sentence  
*Example:* The justice system in the olden times

Sentence

Four Kinds of Sentences according to Function

**Declarative-** states an idea and express facts and opinion  
*Example:*  
She is a pretty girl  
We must learn how to swim  
The earth is round

**Interrogative-** used in asking questions  
- Ends with a question mark

*Example:*  
Who are you?  
What is the capital city of Hungary?

**Imperative-** used in asking someone to do something  
- “you” is the implies subject

*Example:*  
Go away  
Turn around  
Write your name

**Exclamatory-** used to express strong feeling or emotion  
-end with a exclamation point

*Example:*  
Fire!  
Bomb!  
You won!

Four Kinds of Sentences According to Structure

**Sentence Patterns with Transitive Verbs**  
**S-AV-DO ( Subject-Action Verb-Direct Object)**  
Beth read the book quickly  
I gave him a book

**S-AV-IO-DO (Subject- Action Verb- Indirect Object-Direct Object)**  
I gave the place a new coat of paint  
Mr. Padilla gave me the test results

**S-AV-DO-OC (Subject- Action Verb-Direct Object- Object Complement)**  
The judges considered him a champion  
The movie’s ending made her happy  
Sentence Patterns with Linking Verbs

**S-LV-PN (Subject-Linking Verbs-Predicate Nominative**  
That boy is the culprit



One of the contestants is she.

**S-LV-PA (Subject- Linking Verb- Predicate Adjective**

The show is cool

The singer sounds bad

**Four Kinds of Sentences According to Structure**

*Simple Sentence*- composed of one independent clause

*Compound Sentence*- composed of two or more independent clauses

*Complex Sentence*- composed of one independent clause and two or more dependent clauses

*Compound- Complex*- composed of two or more independent clauses and one or more subordinate clauses

*Examples:*

Simple Sentence	I tried to stop her
Compound Sentence	I tried to stop her, but she still went away
Complex Sentence	I tried to stop her when she left
Compound- Complex	I tried to stop her when she left, but she still went away

LITERATURE

**Introduction to Fiction**

**FICTION**

Fiction is a prose imaginative composition which may or may not be based on history or fact.

The different types of fiction are the following:

**Short story**- a relatively brief prose fictional composition based in a single main incident which is designed to produce a single dominant impression.

**Novel**- a prose fictional work of considerable length that deals with a series of complications involving characters in a particular setting.

**Drama**- a composition in prose or verse designed for stage performance through mine and dialogue.

**Allegory**- a symbolic fictional account conveying meaning/s beyond the literal

**Element of Fiction**

**Plot**

The plot is a series of events knit together following the principle of cause and effect. It is also deemed to be an arrangement of incidents, the narrative structure, the organization of a narrative, and the logical sequence of actions. A plot can be arranged and organized in two ways, the first one is through Chronology-which means that the events are arranged according to time and space, and the second one is through Climax-which means that the events are organized according to order of suspense.

There are also two types of plot, the first one is called organic, which means the story sprouted from just one conflict; and the second one is episodic, which means there are two or more sources of conflicts.

**Conflict**

Conflict is considered as the soul of the plot, and it is the tension between opposing forces in the story. It can be external, which means that conflict is from outside forces; or internal which means the conflict resides the main character.

Here are the types of conflicts:

- ✓ Physical-man vs. nature
- ✓ Social- man vs. man
- ✓ Psychological- man vs. self
- ✓ Cosmic- man vs. God

**Character**

Characters in the story are the moral agents of actions. They are the invented personages in fiction.

There are two types of characters namely major and minor. Under major characters, we have the protagonist, who is the central character where the story revolves; and the antagonist, who prevents the protagonist in solving the conflict. Under minor characters we have foil, who has the opposite traits of the main protagonist; the confidant, who serves as the friend of the protagonist; and the background characters, who are not closely related with the protagonist.

We also have two kinds of character. The first one is round, which means the character was able to undergo change, while the second one is called flat, which means there was no change in the outlook and action of character.

**Setting**

The setting serves as the background of the story, may it be physical, mental, or spiritual. It serves as the backdrop and sets the mood of the characters. There are three elements of setting. The first one is time, which sets the duration of the events; next is place, which talks about the locally; and the third one is atmosphere, which is the emotion or the mood.

**Theme**

Theme is considered as the central message of the story. It is the universal truth expressed in the text.

**Point of View**

This pertains to the vantage point where the story is narrated. Below are the different types;

**FIRST person**- a principal character in the story is the one narrating it.

**SECOND person (unlimited)**- an indirect disclosure of the narrating self for characterization and analysis

**THIRD person**-(limited) also known as the central intelligence point of view; the author choose a character from whose consciousness the entire story is told

**CAMERA EYE**- presents the dialogues, and the incidents of a narrative like a mechanical recording device.

**REVOLVING**-characterized by a narrative shift from one point of view to another

**COMPOSITE point of view**-gives a comprehensive view of the events and incidents in the story through the different angles adapted by several narrating characters

**Figurative Language**

1.

*Synecdoche*-an association of some important part with the whole it represents.  
Example: the face who launched a thousands ships
2.

*Simile*- an indirect association  
Example: she like a flower
3.

*Personification*-given human attributes to an inanimate object (animal, idea, etc.)  
Example: the sun is looking down on me.
4.

*Oxymoron*- a self-contrasting statement  
Example: Loud silence
5.

*Metonymy*- an association wherein the name of something is substituted by something that represents it.  
Example: Toothpaste is sometimes called Colgate
6.

*Metaphor*- a direct comparison  
Example: you are the sunshine of my life
7.

*Irony*- the contrast between what was expected and what actually happened  
Example: No smoking sign during a cigarette break
8.

*Hyperbole*- an exaggeration  
Example: Cry me a river
9.

*Euphenism*- Creating a positive connotation out of something negative.  
Example: Loved child (illegitimate child)
10.

*Ellipsis*- omission of words in a sentence  
Example: She walked away and so the world turns...
11.

*Asyndeton*- Not putting any connectors (conjunctions or prepositions)  
Example: No retreat, no surrender
12.

*Apostrophe*- A direct address to an abstract things or a person who passed away  
Example: Love, please come and take me.

**WORD LITERATURES**

WORKS	AUTHORS
<i>The Epic of Gilamesh</i>	LEQI-UNNINNI, SCRIBE (700BCE)
<i>Lliad</i> <i>Odyssey</i>	HOMER, (800 BCE)
<i>The Analects</i>	CONFUCIUS (551-479 BCE)
<i>The Oresteia</i> <i>Agamemnom</i>	AESCHYLUS (496-406 BCE)
<i>Theban Plays:</i> <i>Oedipus Rex</i> <i>Oedipus at Colonus</i> <i>Antigone</i>	SOPHOCLES (496-406 BCE)
<i>Alcestis</i> <i>Medea</i> <i>Hippolytus</i> <i>The Trojan Women</i> <i>Electra</i>	EURIPIDES 9484-406 (BCE)
<i>The Histories</i>	HERODOTUS (484-425 BCE)
<i>The History of the Pelipennesian War</i>	THUCYDIDES (470-400 BCE)
<i>The Art of War</i>	SUN-TZU (450-380 BCE)
<i>Lysistrata</i> <i>The Clouds</i> <i>The Birds</i>	ARUSTOPHANES (448-388 BCE)
<i>The Republic</i>	PLATO (428-348 BCE)
<i>Ethics</i> <i>Politics</i> <i>Poetics</i>	ARISTOTLE ( 384-322 BCE)
<i>The Book of Mencius</i>	MENCIUS (400-320 BCE)
<i>The Ramayana</i>	VALMIKI (300 BCE)

<i>The Mahabharata</i>	VYASA (200BCE)
<i>The Bhagavad Gita</i>	ANONYMOUS (200BCE)
<i>Records of the Grand Historian</i>	SSU-MA CHE’IEN (145-86BCE)
<i>Of the Nature of Things</i>	LUCRETUS 1(100-50 BCE)
<i>The Aeneid</i>	VIRGIL (70-19 BCE)
<i>Mediations</i>	AURELIUS, MARCUS (121-180)
<i>The Confessions</i>	SAINT AGUSTINE (354-430)
<i>The Cloud Messenger</i> <i>Sakuntala/Shakuntala</i>	KALIDASA (400)
<i>The Koran</i>	MUHAMMAD (650)
<i>The Platform Sutra of the Sixth Patriach</i>	HUI-NENG (638-713)
<i>Shah Nameh</i>	FIRDAUS (940-1020)
<i>The Pillow Book</i>	SEI SHONAGON (965-1035)
<i>The Tale of Genji ( First Novel in the world)</i>	MURSAKI, LADY SHIKIBU (976-1015)
<i>The Rubaiyet</i>	KHAYAM, OMAR (1048)
<i>The Divine Comedy</i>	ALIGHIERI, DANTE (12655-1321)
<i>The Romance of the Three Kingdoms</i>	KUAN-CHUNG, LUO (1330-1400)
<i>The Canterbury Tales</i>	CHAUCEY, GEOFFREY (1342-1400)
<i>1001 Nights/Arabian nights</i>	ANONYMOUS (1500)
<i>The Prince</i>	MACHIAVELLI, NICOLO (1469-1527)
<i>Gargantua and Pantagruel</i>	RABELAIS, FRNCOIS (1483-1553)
<i>Journey to the West</i>	WU CHE’ENG-EN (1500-1582)
<i>Essays-Apology for Raymond Sebond</i>	MONTAIGNE, MICHEI (1533-1592)
<i>Don Quixote</i>	SAAVEDRA. MIGUEL DE CERVANTES (1547-1616)
<i>Romeo and Juliet</i> <i>Much Ado About Nothing</i> <i>Twelfth Knight</i> <i>Merchant of Venice</i>	SHAKESPEARE, WILLIAM (1564-1616)
<i>Devotions</i> <i>Sermons</i> <i>First and Second Anniversaries</i>	DONNE, JOHN (1573-1631)
<i>Dialogue Concerning The Two Chief World Systems</i>	GALILEI, GALILEO (1574-1642)
<i>Leviathan</i>	HOBBS, THOMAS (1588-1
<i>Discourse on Method</i>	DESCARTES, RENE (1596-1650)
<i>Paradise Lost</i> <i>Lycidas</i> <i>Areopagitica</i>	MILTON, JOHN (1608-1674)
<i>The School for Wives</i> <i>Rartuffe</i> <i>The Would-Be Gentleman</i>	MOLIERE (1622-1673)
<i>Thoughts</i>	PASCAL, BLAISE (1623-1662)
<i>Pilgrims</i>	BUNYAN, JOHN (1628-1688)
<i>Second Treatise of Government</i>	LOCKE, JOHN (1632-1704)
<i>The Narrow Road to the Deep North</i>	BASHO, MATSU (1644-1694)
<i>Robinson Crusoe</i>	DEFOE, DANIEL (1660-17310

<i>Gulliver’s Travel</i>	SWIFT, JONATHAN (1667-1745)
<i>Candid</i>	VOLTAIRE (1694-17178)
<i>An Enquiry Concerning Human Understanding</i>	HUME,DAVID (1711-1776)
<i>Tom Jones</i>	FIELDING, HENRY (1707-1754)
<i>Confessions</i> <i>The Social Contact</i>	ROUSSEAU, JEAN JACQUES (1712-1778)
<i>Tristram Shandy</i>	STERNE, LAURENCE (1713-1768)
<i>The Life of Samuel Johnson</i>	BOSWELL, JAMES (1740-1795)
<i>Basic Documents in American History</i>	JEFFERSON, THOMAS
<i>Faust</i>	WOLFGANG VON GOETHE, JOHANN
<i>A Poison Tree</i>	BLAKE, WILLIAM (1757-1827)
<i>The Prelude</i>	WORDSWORTH, WILLIAM (1770-1850)
<i>The Ancient Mariner</i> <i>Christabel</i> <i>Kublai Khan</i>	COLEERIDE, SAMUEL TAYLOR (1772-1834)
<i>Pride and Prejudice</i> <i>Emma</i>	AUSTEN, JANE (1775-1817)
<i>The Read and the Black</i>	STENDHAL (1783-1842)
<i>Pere Goriot</i> <i>Eugenie</i> <i>Cousin Bette</i>	DE BALZAC, HONORE (1799-1850)
<i>Self Reliance</i>	EMERSON, RALPH WALDO (1803-1882)
<i>The Scarlet Letter</i>	HAWTHORNE,NATHANIEL (1804-1864)
<i>Democracy in America</i>	DE TOCQUEVILLE, ALEXIS (1805-1859)
<i>On Liberty</i> <i>The Subjection of Women</i>	MILL.JOHN STUART (1806-1873)
<i>The Voyage of the Beagle</i> <i>The Origin of the Species</i>	DARWIN, CHARLES (1809-1859)
<i>Dead Souls</i>	GOGOL, NIKOLAI (1809-1882)
<i>The Cask of Amontillado</i> <i>Annabel Lee</i>	POE, EDGAR ALLAN (1809-1849)
<i>Vanity Fair</i>	THACKERY, WILLIAM MAKEPEACE (1811-1863)
<i>Pickwick Papers</i> <i>The Tale of Cities</i> <i>A Christmas Carol</i> <i>David Copperfield</i> <i>Great Expectations</i>	DICKENS, CHARLES (1812-1870)
<i>The Warden</i>	TROLLOPE, ANTHONY (1815-1882)
<i>Jane Eyre</i>	BRONTE, CHARLOTTE (1816-1855)
<i>Wuthering Heights</i>	BRONTE, EMILLY (1818-1848)
<i>Walden</i> <i>Civil Disobedience</i>	THOREAU, HENRY DAVID (1817-1862)
<i>Fathers and Sons</i>	TURGENEY, IVAN (1818-1883)
<i>The Communist Manifesto</i>	MARX, KARL (1818-1883)
<i>Moby Dick</i>	MELVILLE, HERMAN (1819-1891)

<i>The Mill on the Floss</i> <i>Middlemarch</i> <i>Silas Marner</i>	ELIOT, GEORGE (1819-1880)
<i>Leaves of Grass</i>	WHITMAN, WALT (1819-1892)
<i>Madame Bovary</i>	FLAUBERT, GUSTAVE (1821-1880)
<i>Crime and Punishment</i> <i>Brothers Karamazov</i>	DOSTOYEVSKY, FYDOR (1821-1880)
<i>War and Peace</i> <i>Annakarenina</i>	TOLSTOY, ELO (1828-1910)
<i>The Soul Selects Her Society</i> <i>A Dimple in the Tomb</i>	DICKENSON, EMILY (1830-1886)
<i>Huckleberry Finn</i> <i>Tom Sawyer</i>	TWAIN, MARK (1835-1910)
<i>The Mayor of Casterbridge</i>	HARDY, THOMAS (1840-1928)
<i>The Interpretation of Dreams</i>	FRUED, SIGMUND (1856-1939)
<i>Uncle Vanya</i> <i>Three Sisters</i> <i>The Cheery Orchard</i>	CHEKOV, ANTON (1860-1904)
<i>The Age of Innocence</i> <i>The House of Mirth</i>	WHARTON, EDITH (1862-1937)
<i>The Road Not Taken</i> <i>Stopping by the Woods on a Snowy Evening</i>	FROST, ROBERT (1874-1963)
<i>A Passage of India</i>	FORSTER, E.M (1879-1970)
<i>Ulysses</i>	JOYCE, JAMES (1882-1941)
<i>Mrs. Dalloway</i> <i>To the Lighthouse</i> <i>Orlando</i>	WOOF, VIRGINIA ( 1882-1941)
<i>Sons and Lovers</i> <i>Lady Chatterley’s Lover</i> <i>The Fox</i>	LAWRENCE, DFAVID HERBERT (1885-1930)
<i>A long Day’s Journey into the Night</i> <i>Mourning Becomes Electra</i>	O’NEIL, EUGENE (1888-1953)
<i>Waste Land</i>	ELIOT,T.S (1888-1965)
<i>Brave New World</i>	HUXLEY, ALDOUS ( 1894-1963)
<i>The Sound and the Fury</i> <i>A Rose for Emily</i>	FAULKNER, WILLIAM (1897-1962)
<i>Old Man and the Sea</i>	HEMINGWAY, ERNEST (1899-1962)
<i>1984</i> <i>Animal Farm</i>	ORWELL, GEORGE (1903-1950)
<i>The English Teacher</i>	NARAYAN, R.K
<i>Waiting for Godot</i>	BECKETT, SAMUEL (1906-1989)
<i>One Hundred</i> <i>Love in the Time of Cholera</i>	MARQUEZ, GABRIEL GARCIA (1928-PRESENT)
<i>Things Fall Apart</i> <i>No longer At Ease</i>	ACHEBE, CHINUA (1930-PRESENT)
<i>Sula</i>	MORRISSON (1931-PRESENT)

<i>The Beloved</i>  <i>Jazz</i>  <i>Song of Solomom</i>	
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FILIPINO AUTHORS and their WORKS

WORKS	AUTHORS
Magnificence and other stories	ALFON, ESTRELLA
The Knifed Horizon A Stun of Jewels	ANGELES, CARLOS
How My Brother Leon Brought Home a Wife and Other Stories	ARGUILLA, MANUEL
Sunflower Poems	AYALA, TITA LACAMBRA
The Archipelago Telex Moon Sunlight on Broken Stones	BAUTISTA, CIRILO
What is an Educated Filipino	BENITEZ, FRNCISCO
Dead Stars Stepping Stories Half a Life	BENITEZ, FRNACISO
The Living and the Dead A Wind Over the Earth Distance to Andromeda	BRILLANTES, GREGORIO
America is in the Heart ( Autobiographical) The Laughter of My Father The Voice of Bataan The Power of the People	BULOSAN, CARLOS
People in the War The Visitation of the Gods The Butcher, The Baker, and the Candlestick Maker	CORDERO-FERNANDO, GILDA
The Wedding Dance	DAGUIO, AMADOR
No Certain Weather Barter in Panay Daedalus and OtherPoems Masks and Signatures	DEMETILLO, RICARDO
The Devil Flower House of Images	ENRIQUEZ, EGMIDIO ALVAREZ DEMETILLO, RICARDO
Palabas: Essays on Philippine Threater	FERNANDEZ, DOREEN
Poems in Spanish and Ilocano	FLORENTINO, LEONA
Now and at the Hour	FORD, AIDA RIVERA
Fire Poem/Rain Poem Popular Delusions Planet waves	GAMALINDA, ERIC
Poems	GLORIA, ANGELA MANALANG
The Winds of April A Season of Grace Seven Hills Away Children of the Ash-Covered Loam The Bamboo Dancers	GONZALES N.V.M
Children of the City	GUERRERO, AMADIS MA
Dogeaters Gangster of Love	HAGEDOREN, JESSICA
Encanto Blood Sacrifice	IGLORIA, MARIA LUISA
Juanita Crus Ang Dalaga sa Tindahan	JALANDONI, MAGDALENA
Ermita Poon My Brother, My Executioner	JOSE, FRANCISO SIONIL
The Woman Who Had Two Navels Summer Soistice May Day Eve	JOAQUIN, NICK
Small Key Desire Sunset	LATORENA, PAZ
Literature and Society	LOPEZ, SALVADOR
Reevaluation Abot-Tanaw	LUMBERA, BIENVENIDO
My humble Opinion Women Enough	NAKPIL, CARMEN GUERRERO
The Virgin The Hand of the Enemy	POLOTAN-TUVERA-KERIMA
Mythology The Creatures of Philippine Lower	RAMOS. MAXIMO
Zita The Wound and the Scar	ROTOR, ARTURO
The Volcano The Man Who ( Thought He) Looked Like Robert Taylor The Day the Dancers Came Scent of Apples	SANTOS, BIENVENIDO
Lidia	SOTTO, JUSN CRISOSTOMO
His Native Coast The Tracks of Babylon Blade of Fem	TIEMPO, EDITH
Valediction sa Hillcrest	TINO, ROLANDO

Claudia and Her Mother	
Man Songs Footnote to Youth	VILLA, JOSE GARCIA
Like the Molave	ZULUETA DA COSTA, RAFAEL
Twisted	ZAFRA, JESSICA

IDIOMATIC EXPRESSIONS

EXPRESSION	MEANING
<i>Come hell of high water</i>	I am by your side come hell or high water. This means the speaker would not leave the one he/she is speaking with no matter what happens
<i>Put your finger in the pie</i>	To finish the task at a much earlier time, everyone must put his/her finger in the pie. It means they must do their share in a particular task.
<i>Be in the limelight</i>	The soprano did her best to be in the limelight. It means to be at the center of everybody’s attention.
<i>Flogging a dead horse</i>	Rallies and mass demonstrations against the RH law are like flogging a dead horse. It means that the work being done is futile.
<i>Bring home the bacon</i>	The speech coach cheered his contestants. He said “Bring the bacon!” It means that he wants the team to win.
<i>Between the devil and the deep blue sea</i>	This situation is hopeless!. It is like the devil and the deep blue sea. This situation is at its worst and the resolution is seen to be unpleasant.
<i>In your face</i>	The debater was criticized straight in her face. To state something in an aggressive manner.
<i>Under the weather</i>	She did not attend her class. She said that she feels under the weather. The person is sick.
<i>Back to square one</i>	Her efforts are wasted since she is back to square one. The person has to start again from the beginning.
<i>Hold your horses</i>	The commandant reminds his team hold their horses until the right time comes. Be patient.
<i>Tickled your horses</i>	The news tickled her pink. Made one every happy.
<i>When pigs fly</i>	There is no chance of us being husband and wife, unless when pigs fly. Impossible to happen.
<i>At the pink of health</i>	She looks beautiful and well rested. I assume she is at the pink of health Good health.

<i>Phrasal Verbs</i>	
<i>Add up</i>	<i>Add</i>
<i>Bring about</i>	<i>Cause to happen</i>
<i>Bring up</i>	<i>Raise</i>
<i>Call off</i>	<i>Cancel</i>
<i>Carry on</i>	<i>Continue</i>
<i>Back up</i>	<i>Support</i>
<i>Bring off</i>	<i>Accomplish</i>
<i>Carry out</i>	<i>Complete</i>
<i>Count in</i>	<i>Include</i>
<i>Cut down</i>	<i>Reduce</i>
<i>Fill out</i>	<i>Complete (printed form)</i>
<i>Fill up</i>	<i>Complete ( container0</i>
<i>Hang up</i>	<i>Suspend</i>
<i>Hold up</i>	<i>Rob</i>
<i>Pay off</i>	<i>To complete payment</i>
<i>Touch up</i>	<i>Repair</i>
<i>Turn down</i>	<i>Refuse</i>
<i>Throw over</i>	<i>Reject</i>

<i>Save up</i>	<i>Accumulate</i>
<i>Put off</i>	<i>Postpone</i>
<i>Down play</i>	<i>Diminish</i>
<i>Figure out</i>	<i>Understand</i>
<i>Breakdown</i>	<i>Analyze</i>

Practice Test

Choose the correct meaning of the underline word.

Vocabulary:

- The teacher-adviser monitors the class activities of his pupils.  
a. Demands                      c. Identifies  
b. Observes                     d. regulates
- There is a need to renovate the old school building to avoid future accidents.  
a. repair                         c. restore  
b. repaint                        d. redecorate
- The athlete was in a sanguine mood after the ball game  
a. Frustrating                  c. sad  
b. happy                         d. discouraging
- There is a need for an amicable settlement between the parent and the teacher  
a. embarrassing    c. peaceful  
b. humble                        d. continuing
- There is an altercation going on between the teacher and principal in the office.  
a. dispute                        c. settlement  
b. competition                 d. jealousy
- The English teacher is proficient in her teaching.  
a. effective                        c. engrossed  
b. expert                         d. perfect
- Stipulate in your constitution and by-laws the qualified of the officers.  
a. specify                         c. fasten  
b. attach                         d. underline
- Integrate values in all your subject areas  
a. remove                         c. decrease  
b. include into                 d. criticize
- His preposterous reason made him the talk of the campus.  
a. magnificent                 c. funny  
b. ridiculous                     d. positive
- The singer was fidgety as the judges were deciding on the winner.  
a. appealing                      c. restlessly  
b. with love                      d. none of these
- He was deprive of a mother’s love  
a. satisfied                        c. chosen  
b. debarred                       d. given
- The flagrant pupils came shouting with stones in their hands.  
a. industrious                    c. notorious  
b. group of pupils               d. intelligent
- There was a question of fraud among the notorious pupils who took the special examination.  
a. cheating                        c. unfairness  
b. injustice                        d. favoritism
- Her answer was explicable in public  
a. undetermined    c. unacceptable  
b. can be explained            d. unreasonable
- She looked haggard when she came in  
a. fresh                            c. gaunt  
b. at ease                         d. inspired

Subject-Verb Agreement

- Everybody in the gymnasium \_\_\_\_\_ frustrated when the candidate did not appear in public.  
a. was                              b. were
- A bag of candies and a bottle of coke \_\_\_\_\_ on the table.  
a. Is                                 b. are
- That \_\_\_\_\_ seem correct.  
a. don’t                            b. doesn’t
- Either the boys or girls \_\_\_\_\_ here.  
a. is                                 b. are
- The number of teacher in the school \_\_\_\_\_ from year to year.  
a. vary                              b. varies
- One-third of the classroom \_\_\_\_\_ under water.  
a. was                                b. were
- She is one of those honor pupils who always \_\_\_\_\_ into confusion.  
a. get                                b. gets
- Each of the members of the club \_\_\_\_\_ a duty to perform.  
a. Have                              b. Has
- Mrs. Tecson’s creativeness and concern \_\_\_\_\_ well appreciated.  
a. is                                 b. are
- There \_\_\_\_\_ many pupils here.  
a. Is                                 b. are
- Many years of his life \_\_\_\_\_ spent in province  
a. Was                                b. were
- No one \_\_\_\_\_ at home.  
a. is                                 b. are
- My leg and my arm \_\_\_\_\_ aching.  
a. Is                                 b. are
- She \_\_\_\_\_ to read novels.  
a. like                                b. likes
- There \_\_\_\_\_ eight men in the game.



- a. is                                      b. are

Identify the figure of speech in the following statement.

31. Michael shouts like mike does.
  - a. hyperbole                                      c. metaphor
  - b. simile    d. litotes
32. Dona was tired to death after a long day of cooking.
  - a. simile    c. metaphor
  - b. hyperbole                                      d. personification
33. She has a Venus beauty
  - a. simile    c. metaphor
  - b. hyperbole                                      d. litotes
34. As the rain falls, the leaves dance merrily while the cool breeze touches my lips gently.
  - a. Hyperbole                                      c. metaphor
  - b. litotes    d. personification
35. Mt. Apo is a small volcano compared to Mt. matutum.
  - a. Litotes    c. Metaphor
  - b. Hyperbole                                      d. Simile
36. Chris was a limb in the group during the disco party.
  - a. simile    c. hyperbole
  - b. metaphor                                      d. litotes
37. Her lips are as cold as ice
  - a. simile    c. personification
  - b. metaphor                                      d. synecdoche
38. James was crushed by the death of Kris.
  - a. simile    c. hyperbole
  - b. personification                                      d. metaphor
39. Her skin is as white as onion
  - a. simile    c. hyperbole
  - b. metaphor                                      d. litotes
40. She has the King Solomon ideas.
  - a. Simile    c. metaphor
  - b. Hyperbole                                      d. personification

#### IV. Vocabulary

41. That coke is delicious
  - a. looks good                      c. looks colorful
  - b. tastes good                      d. smells good
42. I won't come anymore
  - a. come soon                      c. already came
  - b. never come                      d. any of these
43. The story is uninteresting
  - a. very interesting
  - b. interesting in some part
  - c. not interesting
  - d. some how interesting
44. She was attracted by the hedge
  - a. stone                                      c. fence
  - b. low bushes                                      d. none of these
45. The memo is compulsory.
  - a. must be done                                      c. must be kept
  - b. a request    d. optional
46. She has to economize.
  - a. earn more money                                      c. put business
  - b. spend less    d. spend more
47. The pond is shallow
  - a. has clear water
  - b. is full of mass
  - c. is not deep
48. The oil trickles down the machine
  - a. flows rapidly
  - b. flows little by little
  - c. flows in large quantities
49. That pond is full of fry.
  - a. small fish                                      c. mosquito
  - b. frogs    d. wraps
50. I sneaked out.
  - a. went out noisily                                      c. went out easily
  - b. went out without attracting
51. He hasn't come yet
  - a. he'll come later                                      c. he won't come
  - b. we won't wait for him                                      d. he will never come
52. You will sprinkle the flower once a day
  - a. change    c. cut
  - b. water    d. throw
53. These fish are fresh
  - a. cooked    c. cheap
  - b. newly caught                                      d. rotten
54. The light is dim
  - a. off    c. colored
  - b. not bright                                      d. very bright
55. The ants are motile
  - a. small    c. numerous
  - b. movable                                      d. big

#### V. Answer the following correctly.

56. How do you address a Christmas card where the husband is a Doctor of Philosophy and the wife is an attorney? Which is the right form?
  - a. Dr. and Atty. Ben Marquez
  - b. Dr. Ben Reyes and Atty. Rose Reyes

- c. Dr. Reyes and Atty. Reyes
  - d. Dr. and Mrs. Ben Reyes
57. Writing to your superior, what complimentary wending should be used?
- a. truly yours,                      c. Yours truly,
  - b. very truly yours,                d. Truly very your's
58. Choose the proper use of everyday.
- a. You find this headline everyday.
  - b. You find this headline everyday in the newspapers.
  - c. You don't find the issue clear everyday.
  - d. I read the issue everyday
59. Which declaration shows determination?
- a. What an embarrassing situation!
  - b. I have good words for you.
  - c. This time, I won't stop teaching.
  - d. I will still think about it.
60. When you are writing to someone you hardly know, the salutation should be
- a. My dear Mrs. Ponce
  - b. Dear Mrs. Ponce
  - c. To ever dearest Mrs. Ponce
  - d. My ever dearest Mrs. Ponce
61. "Early to bed, early to rise, keeps a man healthy, wealthy, and wise" means
- a. sleep early and wake up early so you will become wealthy
  - b. Develop healthy habits of going to bed early and getting
  - c. Sleeping is the root of making wealth
  - d. Sleeping will give you a healthy mind.
62. "Tell me who your friends are and I'll tell you who you are" means
- a. You are the judges as to who your peers are.
  - b. Your friends are your everyday companions.
  - c. You choose your friends.
  - d. Tell me who you to be with.
63. Which of this word are synonymous with settlement?
- a. Autonomy                      c. Accord
  - b. Breakthrough    d. Policy
64. What does it mean by saying "Not all close eyes are asleep".
- a. Not all eyes are blind.
  - b. The eyes seem to be closed, yet she knows what's going on.
  - c. When we sleep sometimes we open our eyes.
  - d. Sleeping is not always closing our eyes.
65. What is meant by live within your means?
- a. Grow as your live
  - b. Liking is the means of growing.
  - c. Spend according to your income.
  - d. Growing is the means to live.
66. "I am the master of my fate, I am the captain of my soul" was written by
- a. Henley                          c. Elliot
  - b. Dickens                        d. Shelley
67. "A thing of beauty is a joy forever" expressed the philosophy of
- a. Spencer                        c. Elliot
  - b. Keats                            d. Tennyson
68. America's greatest humorist
- a. Benjamin Franklin        c. Washington Irving
  - b. Mark twain                    d. Samuel Clemens
69. A long narrative poem dealing with persons of heroic proportion and actions of great significance
- a. Ballad                          c. Sonnet
  - b. Epic                             d. Elegy
70. Considered the father of the modern American short story
- a. Shakespeare                c. Edgar Allan Poe
  - b. Bacon                          d. Robert frost
71. It is a Japanese poem with 17 syllables.
- a. Niponggo                      c. Canto
  - b. Haiku                            d. Tanaga
72. A collection of literary pieces
- a. Prose                            c. Anthology
  - b. Biography                    d. Diary
73. Verse with 14 iambic pentameter lines
- a. Epic                             c. Verse
  - b. Sonnet                         d. Prose
74. Longest epic ever written
- a. Invictus                        c. Mahabharata
  - b. Lam-ang                       d. Lament
75. Stories that reflect people's beliefs and are handed from generation to generation
- a. Prose                          c. Poetry
  - b. Folktales                      d. Ballad
76. These are not tales making use of animals as characters
- a. Myths                            c. Fables
  - b. Legends                        d. Fiction
77. Known for his pen name "Dolores Manapat"
- a. Antonio Luna    c. Graciano Lopez Jaena
  - b. Marcelo H. del Pilar    d. Andres Bonifacio
78. Filipino essayist an Patriots who edited and published "La Solidaridad"
- a. Apolinario Mabini        c. Jose Rizal
  - b. Andres Bonifacio        d. Marcelo H. del Pilar
79. His words were the source of inspiration for the poem "Like the Molave"
- a. Mabini                         c. Quezon
  - b. Carlos Romulo            d. Rizal
80. A poem lamenting the dead
- a. Sonnet                         c. Elegy
  - b. Ode                             d. Satire
81. Represent of a thing or ideas of a person
- a. hyperbole                      c. Heroic Couplet
  - b. Allusion                        d. Personification
82. A speech by a person who reveals his thoughts
- a. Sonnet                         c. soliloquy

- b. Metaphor                      d. simile
83. Figure of speech where two different things are compared thru the use of “as” and “like”  
a. simile                      c. facsimile  
b. allegory                      d. epic
84. Author of “how My Brother Leon Brought Home a Wife”  
a. Manuel Arguilla                      c. Paz Benitez  
b. Fernando maramag                      d. None of these
85. These stories, which reflect the people’s belief, are handed down from one generation to another by word of mouth.  
a. novels                      c. prose  
b. folktales                      d. poetry
86. A type of literature which narrates heroic deeds and supernatural happenings with local color and which people sing or chant  
a. epic                      c. verse  
b. poetry                      d. riddles
87. He wrote the famous letter “To the Women of Malolos”  
a. Gregorio del Pilar                      c. Jose Rizal  
b. Andres Bonifacio                      d. Emilio Jacinto
88. A kind of literary piece which moralizes and was written in letter form between two sisters dwelling in the city ad the other in the province.  
a. urbana at Felisa                      c. Manang Biday  
b. Pasyon, religious play                      d. None of these
89. How is the author of “The legend of sleepy Hollow” which revolves around a headlines horseman’s tale  
a. George Washington                      c. Washington Irving  
b. Robert Surtess                      d. Shakespeare
90. Considered as one of the world’s greatest short stories and it is Edgar Allan Poe’s story of terror about a hypochondriac living in morbid fear.  
a. Annabel Lee                      c. Macbeth  
b. The fall of the house of Usher                      d. The Raven
91. He is Edmond Rostand’s famous character who is a poet and a soldier noted for his peculiar nose.  
a. Roxanne                      c. Ichabod  
b. Don Quixote                      d. Cyrano de Bergerac
92. “If eyes are made for seeing, then beauty is its own excuse for being “- is taken from the poem’  
a. The bells                      c. Don juan  
b. Sonnet                      d. Rhodora
93. A great epic poem whose plot centers around the anger and wrath of Achilles against Agamemnon, a geek leader  
a. Bernardo Carpio                      c. The Odyssey  
b. The Iliad of Homer                      d. Myth
94. “I am the master of my fate, I am the captain of my soul”., is taken room the poem  
a. O Captain, my captain  
b. Invictus  
c. The arrow and the Song  
d. None of these
95. He was the American President who said: “Ask not what America will do for you, but what together we can do for the freedom of man.”  
a. Gerald Ford                      c. Harry Truman  
b. F. Roosevelt                      d. Abe Lincoln
96. The speech of Abe Lincoln which end, thus; “That the government of the people, by the people, for the people, shall not perish from the earth.” – is in his famous  
a. farewell Address at Springfield  
b. Inaugural Address  
c. Address at Gettysburg  
d. None of these
97. The figure of speech, which uses exaggerated statement for aesthetic reason.  
a. Alliteration                      c. Hyperbole  
b. Onomatopoeiad. Metaphor
98. His famous work is Mona Lisa  
a. Jose Rizal                      c. Juan Luna  
b. Leonardo da Vinci                      d. Pavarotti
99. The famous painting Juan Luna made  
a. Spolarium                      c. Rice Paddies  
b. Bahag-hari                      d. Sunset
100. The stature of David was created by  
a. Sigfried Vandike                      c. Michelangelo  
b. Vincent Gogh                      d. Andre Warbol

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**LET REVIEWER-FILIPINO**

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**LECTURE NOTES**

**Wika**

**Ilang mga pananaw ukol sa wika:**

“...Maari nating hiramín sa loob ng isang panahon ang wika ng ibang bayan, ngunit hindi tayo tunay na makapag-aangkin ng isang wikang pambansa maliban sa pamamagitan ng pagpapatibay, pagpapaunlad at paggamit ng isang wika na sariling atin.” (Manuel L. Quezon)

Parang hininga ang wika, sa bawat sandali ng buhay natin ay nariyan ito. Palatandaan ito na buhay tayo, at may kakayahang umugnay sa kapwa nating gumagamit din nito. (Bienvenido L. Lumbera)

Ang wika ay isang panlipunang penomenon. Ibig sabihin, mahalaga ito hindi lamang s indibidwal kundi lalo na sa lipunang kanyang kinabibilangan. (Pamela C. Constantino)

Mahalagang kasangkapan ng panlipunang kapital ang wika na ang gamit ay gawing episyente o mabisa ang mga transaksyon sa isang ekonomiya. (Tereso Tullao, Jr.)

- Ang pag-aaral ng wikang Filipino ay binubuo ng dalawang kakayahan:
- kakayahang makabuo ng mga pahayag o pangungusap na may wastong kayariang pambalarila; tinatawag itong kakayahang linggwistika o *linguistic competence*
  - kakayahang maunawaan at magamit ang mga pangungusap na may wastong pambalarilang kayarian sa angkop na panlipunang kapaligiran ayon sa hinihingi ng sitwasyon; tinatawag itong kakayahang komunikatibo o *communicative competence*.

**Ponolohiya**

- Patern o kumbinasyon ng mga tunog sa loob ng isang wika
- Ponema – pinakamaliit ngunit pinakamakahulugang yunit ng tunog ng isang wika.

**Mga Ponemang Segmental**

Ito ay makabuluhang tunog sa Filipino na ginagamitan ng mga katumbas na titik upang mabasa at mabigkas. Kabilang dito ang mga ponemang katinig, patinig, diptonggo, at klaster.

**Mga Ponemang Katinig**

Ang mga katinig ng Filipino ay maiaayos ayon sa punto o paraan ng artikulasyon at kung ang mga ito ay binibigkas nang may tinig o walang tinig.

**Mga Ponemang Patinig**

Ang mga patinig ng Filipino ay maiaayos sa tsart ayon sa kung aling bahagi ng dila ang gumagana sa pagbigkas ng isang patinig—unahan, sentral, likod—at kung ano ang posisyon ng nasabing bahagi sa pagbigkas—mataas, nasa gitna, o mababa.

Posisyon ng Bahagi ng Dila sa Pagbigkas	Bahagi ng Dila		
	Harap	Sentral	Likod
Mataas	i	( <i>ə</i> )	u
Gitna	e		o
Mababa		a	

Ang /i/, halimbawa, ay tinatawag na mataas-harap sapagkat kapag binibigkas ito, ang harap na bahagi ng dila ang gumagana na karaniwan ay umaarko nang pataas.

May limang pangunahing patinig ang wikang Filipino: ang /a/. /e/, /i/, /o/, at /u/. Gayon man, mapapansing isinama sa tsart ang ponemang (*ə*) (*schwa*) na gamitin sa Pangasinan, ilang pook sa Ilokos, Maranaw, at iba pang lugar sa Pilipinas.

Sa maraming katutubong wika ng Pilipinas at maging sa wikang Filipino, mga *allophone*, o maaaring mapagpalit-palit, ang mga tunog ng /e/ at /i/, gayon din ang mga tunog ng /o/ at /u/. Tulad nito:

/lala-keh/ ~ /lala-kih/ ‘man’  
/baba-eh/ ~ /baba-ih/ ‘woman’  
/miyer-koles/ ~ /miyer-kules? ‘Wednesday’

**Mga Diptonggo**

Tumutukoy ang diptonggo sa mga pinagsamang tunog ng isang patinig (a, e, i, o, u) at isang malapatinig (w, y). Nasa ibaba ang tsart ng mga diptonggo sa wikang Filipino.

Posisyon ng Bahagi ng Dila sa Pagbigkas	Bahagi ng Dila		
	Harap	Sentral	Likod
Mataas	iw, iy		uy
Gitna	ey		oy, ow
Mababa		ay, aw	

Mga halimbawang salita:

aywan                      baytang alay  
awdisyon                restawran                dilaw

**Mga Klaster**

Ang mga klaster o kambal-katinig sa Filipino ay dumarami dahil sa pagpasok ng ng mga salitang Ingles sa sa wikang Filipino. Ang klaster ay ang magkakabit na dalawang magkaibang katinig sa isang pantig.

Mga halimbawa:

blakbord                brigada                kard  
kliyente krokis    nars  
komonwelt        transportasyon    dimpols

**Mga Ponemang Suprasegmental**

Tumutukoy ang mga ponemang suprasegmental sa mga makahulugang yunit ng tunog na karaniwang di tinutumbasan ng titik o letra sa pagsulat. Kabilang sa mga ponemang suprasegmental ang tono (pitch), haba (length), diin (stress), at antala (junction).

**Tono**

Tinutukoy ang tono sa paraan ng pagbigkas na maaaring malambing, pagalit, mabilis na parang nagmamadali, mahina at iba pa. Naiiba-iba ang tono o pagtaas at pagbaba ng tinig sa wikang Filipino batay sa iba’t ibang layunin at damdamin ng nagsasalita. Halimbawa maiiba-iba ang intonasyon sa sumusunod na pangungusap ayon sa inihahayag na emosyon ng nagsasalita. Basahin ang mga pangungusap batay sa ipinahahayag na emosyon:

Ikaw nga! (nagulat)  
Ikang nga! (pagalit)  
Ikaw pala. (ordinaryong pagbati)  
Ikaw pala. (walang interes na pagbati)

**Diin**

Ginagamit sa gramatikang ito ang dalawang magkahiwalay na *bar* (/ /) upang maglaman ng notasyong ponemik na sisimbolo sa paraan ng pagbigkas ng isang salita. Ginagamit din ang *tuldok* / . / upang matukoy ang *pantig* o silabol ng isang salita na may diin (stress). Ito

ay nangangahulugan naman ng *pagpapahaba ng pantig* na laging may kasamang patinig. Tulad ng sumusunod kung saan may diin at pinahahaba ang pantig na sinusundan / . /:

- /kasa.ma/\* = companion
- /kasama/ = tenant
- /magnana.kaw/ = thief
- /magna-na.kaw/ = will steal
- /magna.nakaw/ = will go on stealing

Punto at Intonasyon

Tumutukoy ang punto sa kakaibang pagbigkas ng isang grupo ng mga tao. Halimbawa sa rehiyong Tagalog, iba-iba ang punto ng mga Batangenyó, Kabitenyo, taga-Quezon, Rizal, Bataan, at iba pang nasa Katagalugan. Sa pagsasalita pa lamang, madaling matukoy kung saan nagmula ang isang tao, lalo pa’t gumagamit siya ng “Ala e!” kung taga-Batangas, ng “Aru!” kung taga-Queson at iba pa. Ang ilang lugar naman sa Cebu na gumagamit ng “Agi!”

Hinto

Ito ay ang pagtigil sa pagsasalita na maaaring panandalian (sa gitna ng pangungusap), o pangmatagalan (sa katapusan ng pangungusap). Sa pasulat na komunikasyon, sinisimbolo ng *kuwit* (,) ang panandaliang paghinto at ng *tuldok* (.) ang katapusan ng pangungusap.

Halimbawa

Juan Carlo Jose ang pangalan niya.//

(Tinutukoy si Juan Carlo Jose at sinasabi ang kanyang buong pangalan. Maaaring itinuturo lamang si Juan Carlo Jose, o maaari rin namang kaharap siya ng mga nag-uusap.)

Juan/ Carlo Jose ang pangalan niya.//  
(Kinakausap si Juan, at ipinakikilala sa kanya si Carlo Jose.)  
Juan Carlo/ Jose ang tawag sa kanya.//

(Kausap ang isang lalake na Juan Carlo ang pangalan. Ipinakikilala sa kanya si Jose, o kaya’y itinuturo si Jose.)

Alpabetong Filipino

Ang alpabetong Filipino ay binubuo ng 28 letra na ganito ang ayos:

A, B, C, D, E, F, G, H, I, J, K, L, M, N, Ñ, NG, O, P, Q, R, S, T, U, V, W, X, Y, Z,

Sa 28-letrang ito ng alpabeto, 20 letra ang nasa dating ABAKADA (A, B, K, D, E, G, H, I, L, M, N, NG, O, P, R, S, T, U, W, Y), at 8 letra ang dagdag dito (C, F, J, Ñ, Q, V, X, Z) na galing sa mga umiiral na wika ng Pilipinas at sa iba pang wika.

Ang ngalan ng mga letra. Ang tawag sa mga letra ng alpabetong Filipino ay ayon sa tawag-Ingles maliban sa Ñ (enye) na tawag-Kastila.

Silabikasyon

Sa kasalukuyan ay may mga kayarian ng pantig na ambag ng mga lokal na wika at panghihiram.

Ang pagtukoy sa pantig, gayundin sa kayarian nito, ay sa pamamagitan ng paggamit ng simbolong **K** para sa katinig at **P** para sa patinig. Narito ang ilang halimbawa ng mga pantig.

Kayarian	Halimbawa
P	<u>u</u> -pa
KP	<u>ma</u> -li
PK	<u>is</u> -da
KPK	<u>han</u> -da
KKP	<u>pri</u> -to
PKK	<u>eks</u> -perto
KKPK	<u>plan</u> -tsa
KKPKK	<u>trans</u> -portasyon
KKPKKK	<u>shorts</u>

Palabuuan ng Salita

- Morpholohiya – ito ay sistema ng pagsasama-sama ng mga morpema sa pagbuo ng mga salita sa isang wika. Pag-aaral ng mga morpema ng wika.

Morpema – pinakamaliit na yunit o bahagi ng wika na nagtataglay ng sariling kahulugan. Ito ay maaaring isang salita o bahagi lamang ng salita.

Mga Paraan ng Pagbuo ng Salita

Payak ang anyo ng salita kapag binubuo ito ng salitang-ugat lamang, tulad nito:

langit	yaman	sulat
ilog	puti	lantad/hantad
bahay	diwa	talino

Maylapi ang anyo ng salita kapag binubuo ito ng salitang-ugat at panlaping maaaring ilagay sa unahan o hulihan ng salitang-ugat. Dahil sa panlaping nag-uuri, nagkakaroon ng iba’t ibang kahulugan ang salita, tulad ng makikita sa loob ng parenthesis:

Mga Panlaping Ginagamit sa Pagbuo ng Pangngalan

-an

- lalagyan ng maraming bagay na isinasaad ng salitang-ugat  
Halimbawa: atisan, manggahan, aklatan
- pook na ginagampanan ng kilos na isinasaad ng salitang-ugat  
Halimbawa: saingan, katayan, laruan

3. panahon o maramihang pagganap na isinasaad ng salitang-ugat  
Halimbawa: binyagan, anihan, taniman

4. gantihang kilos  
Halimbawa: tulakan, tulungan, kuwentuhan

5. maramihan o sabayang kilos  
Halimbawa: suguran, bilihan, sigawan

-in

1. relasyong isinasaad ng salitang-ugat  
Halimbawa: pininsan, inale, inapo

2. nagsasaad ng karaniwang gamit o tungkulin ayon sa salitang-ugat  
Halimbawa: salain, salukin, pikutin

ka-

1. kasama sa pangkat, katulong sa gawain  
Halimbawa: kabayan, kalahi, kaklase

2. nagsasaad ng relasyon ayon sa isinasaad ng salitang-ugat.  
Halimbawa: kalaro, kausap, kamag-anak

tag-

1. nagsasaad ng panahon  
Halimbawa: tag-init, tag-ulan, tag-araw

Mga Panlaping Ginagamit sa Pagbuo ng Pang-uri

ma- + su	:	mahusay, maganda
mapag- + su	:	mapagbigay, mapagtanong
-in / -hin + su	:	silanganin, kanluranin, artistahin (nangangahulugan ng pagtataglay ng katangiang inihuhudyat ng salitang-ugat ang lahat ng panlaping ito)
maka- + su	:	makabayan, makabago, makamanggagawa (mahilig, kampi, may malasakit)
mala- + su	:	malabituin, malasanto, malatelenobela (tila, parang, halos)
pala- + su	:	palaluto, palabasa, palabati, palakain
su + -in	:	sakitin, bugnutin, magagalitin (may tendensi, ugali o pagkamahilig)
ka- + su	:	kalahi, kasukat, kakulay (kaisa, katulad)
su + -an/-han	:	noohan, pangahan, ilongan, matahan (labis ang laki, malaki sa karaniwan)
-al	:	emosyonal
uwal/-wal	:	aktuwal/aktwal
-ante	:	importante, bastante

Mga panlapi para maipakita ang *nasyonalidad* o rehiyong pinagmulan, pati sekswalidad:

-o/a	:	Amerikano/Amerikana, Australyano/a
-es/esa	:	Hapones/Haponesa
-ano/a	:	Ilokano/a, Bicolano/a
-ense	:	Pangasinense
-enyo/enya	:	Batangenyo/a

*Inuulit* ang anyo ng salita kapag inuulit ito ng parsyal o buo, tulad nito:

maganda-ganda (nangangahulugan ng moderasyon, di labis, di kulang)  
mataas-taas  
malayu-layo

masamang (+-ng) + masama :masamang-masama  
(naghahayag ng kasukdulan)

*Tambalan* ang anyo ng salita kapag binubuo ito ng dalawang salitang maaaring magkaroon ng ibang kahulugan kapag pinagsama. May gitling (-) sa pagitan ng dalawang salitang pinagtambal subalit taglay pa rin nito ang kani-kanilang kahulugan. Wala nang gitling ang dalawang salitang pinagtambal kung nagkaroon na ito ng pangatlong kahulugan.

Halimbawa:	
balat + sibuyas	: balat-sibuyas (sensitibo)
ningas + kugon	: ningas-kugon (mabuti lamang sa simula)
kapit + tuko	: kapit-tuko (di humihiwalay)
palabat + bunga	: pabalat-bunga (pakitang-tao)
isip + lamok	: isip-lamok (kahinaan ng pag-iisip, di nag-iisip)
bores + ipis	: boses-ipis (mahinang-mahina ang boses)

bahaghari  
dalagambukid

Mga Panlaping Makadiwa o Panlaping Ginagamit sa Pagbuo ng Pandiwa

1. Pandiwang pokus sa tagaganap o aktor  
Panlaping mag-, um-, mang-, maka-, makapag  
Halimbawa: magsaing, bumili, umasa, mangisda, makapagbenta

- 2. Pandiwang pokus sa layon  
Panlaping i, -an, ipa, -in  
Halimbawa: igisa, balatan, ipaukit, tabasin
- 3. Pandiwang pokus sa ganapan  
Panlaping –an, pag—an  
Halimbawa: saingan, pagsalangan, paglutuan
- 4. Pandiwang pokus sa tagatanggap  
Panlaping i-, ipang-, ipag-  
Halimbawa: ibili, ipanghingi, ipagluto
- 5. Pandiwang pokus sa instrumento  
Panlaping ipang-  
Halimbawa: ipangsalok, ipambili, ipandilig
- 6. Pandiwang pokus sa sanhi  
Panlaping ika-, ikapang-  
Halimbawa: ikagulat, ikainis, ikinagaling, ikinapanghina
- 7. Pandiwang pokus sa direksyunal  
Panlaping –an  
Halimbawa: puntahan, kuhanan, utangan

Pagbabagong Morponemiko

- Karamihan sa mga pagbabago sa anyo at bigkas ng mga salita ay sanhi ng pagdaragdag ng panlapi o pagsasama ng dalawa o higit pang morpema upang bumuo ng salita. Ang nagaganap na pagbabago ay tinatawag na pagbabagong morponemiko.

Asimilasyon	pang + bansa = pambansa; mang + daya = mandaya pang + tukoy = pantukoy; mang + dukot = mandukot pang + talo = panalo; mang + kuha = manguha
Pagpapalit	ano + ano = anu-ano
Paglilipat	y + in + akap = yinakap = niyakap lipad + in = linipad = nilipad yaya + in = yinaya = niyaya
Pagbabago ng Ponema	ma + dama = marami; ma + dapat = marapat tamad + in = tamarin; lipad + in = liparin
Pagkakaltas	bili + han = bilihan = bilhan; dakip + in = dakipin = dakpin tirah + an = tirahan = tirhan; sarah + an = sarahan = sarhan
Pagdaragdag	paalala + han = paalalahan; paalalahan + an = paalalahanan
Pag-aangkop	hintay + ka = teka

Kaantasan ng Katangiang Ipinahahayag ng Pang-uri

- 1. Lantay – karaniwang anyo ng pang-uring ginagamit sa paglalarawan  
Halimbawa: mataba, palabiro, sutil
- 2. Katamtaman – nagpapahayag ng katamtamang antas ng paglalarawan. Gumamit ng mga salitang medyo, nang kaunti o nang bahagya.  
Halimbawa: Medyo maitim siya ngayon.  
Payat siya nang bahagya ngayon.

Maaari rin ang katamtamang antas sa pamamagitan ng pag-uulit ng salitang-ugat o dalawang unang pantig nito.  
Halimbawa: Malayu-layo rin ang kanilang bagong bahay.

- 3. Masidhi – nagagawa ang pag papasidhi ng pang-uri sa pamamagitan ng pag-uulit ng salita at paggamit ng pang-angkop na na o –ng.  
Halimbawa: Masayang-masaya siya ngayon.

Sa pamamagitan ng paggamit ng mga panlaping napaka-, pagka at kay.  
Halimbawa: Pagkalapi-lapit lang ng kanilang tirahan.  
Kay init-init ng panahon ngayon.  
Napakasungit ng kaibigan mo.

Sa pamamagitan ng paggamit ng mga salitang lubha, masyado, totoo, talaga, tunay, ubod ng, hari at iba pa.  
Halimbawa: Talagang maaasahan ang kaibigan kong iyon.  
Tunay na mahal ang mga bilihin ngayon.

Antas ng Hambingan

- 1. Pahambing – tawag sa mga pang-uring ginagamit sa paghahambing ng dalawang tao, bagay, o pook.  
Halimbawa: Kasinlaki mo si Kuya.  
Kapwa matalino ang magkapatid.  
Di kasinhusay ni Paul si Christian.  
Di hamak na mainam tumira sa probinsya kaysa Manila.
- 2. Pasukdol – panlaping ginagamit sa pagbuo ng pasukdol na anyo ng pang-uri ay ang pinaka- at ka- -an.  
Halimbawa: Pinakamabili ang tinda nilang paputok.  
Kasuluk-sulukan ang kanilang pinuntahang bahay.

Pokus ng Pandiwa

- Ito ay tumutukoy sa makahulugang ugnayan ng pandiwa at ng paksa ng pangungusap. May pitong (7) uri ng pokus ang pandiwa.
- 1. Pokus sa Tagaganap/Aktor – ang paksa ay ang tagaganap ng kilos na ipinahihiwatig ng pandiwa. Mga panlaping ginagamit: mag-, um-/um, mang-, maka-, at makapag-  
Halimbawa: Sumalok ng tubig ang bata.
- 2. Pokus sa Layon – binibigyang-diin sa pangungusap ay ang layon. Mga panlaping ginagamit: i-, -an, ma, ipa, at –in.  
Halimbawa: Isinalok ng bata ang timba.

- 3. Pokus sa Ganapan – binibigyang-diin ng paksa ay ang lugar o ang ganapan ng kilos. Mga panlaping ginagamit: pag-...-an/-han, mapag-...-an/-han, at pang-...-an/-han  
Halimbawa: Pinagsalukan ng bata ng tubig ang balon.
- 4. Pokus sa Tagatanggap – ang paksa ay ang tagatanggap o ang pinaglalaanan ng kilos na ipinahahayag ng pandiwa. Mga ginagamit na panlapi: i-, ipang-, at ipag-  
Halimbawa: Ipinangsalok niya ng tubig ang ama.
- 5. Pokus sa Intrumento o Gamit – ang paksa ng pangungusap ay ang instrumento o gamit sa pagsasagawa ng kilos na isinasaad ng pandiwa. Panlaping ginagamit: ipang-  
Halimbawa: Ipinangsalok niya ng tubig ang timba.
- 6. Pokus sa Direksyon – ang paksa ng pangungusap ay ang direksyon o tinutungo ng kilos na isinasaad ng kilos. Mga panlaping ginagamit: -an/-han.  
Halimbawa: Pinagsalukan ng bata ng tubig ang balon.
- 7. Pokus sa Sanhi – ang paksa ng pangungusap ay ang dahilan o sanhi ng kilos. Mga panlaping ginagamit: i-, ika- at ikapang-  
Halimbawa: Ikinatakot ng bata ang pagkaubos ng tubig.

Aspekto ng Pandiwa

- Ang aspekto ay ang katangian ng pandiwa na nagsasaad kung nasimulan na o hindi pa ang kilos. Ang mga pandiwa sa Filipino ay nababanghay sa tatlong aspekto.
- 1. Perpektibo/Pagnagdaan – ang kilos ay nasimulan na o natapos na. Maaari rin itong magsaad ng kilos na *katatapos lamang*. Nabubuo ito sa pamamagitan ng paggamit ng unlaping ka- at pag-uulit ng unang katinig at unang patinig o unang patiniog lamang ng salitang-ugat.  
Halimbawa: Nagtinda siya ng isda sa palengke.  
Katitinda lang niya ng isda sa palengke.
- 2. Imperpektibo/Pangkasalukuyan – ang kilos ay nasimulan na at ipinagpapatuloy pa.  
Halimbawa: Nagtitinda siya ng isda sa palengke.
- 3. Kontemplatibo/Panghinaharap – ang kilos ay di pa nasisimulan.  
Halimbawa: Magtitinda siya ng isda sa palengke.

Ang Paningit o Ingklitik

- Ang paningit o ingklitik ay katagang isinisingit sa pangungusap upang higit na maging malinaw ang kahulugan nito.  
Halimbawa: ba, kasi, kaya, daw/raw, din/rin, ho, lamang/lang, man, muna, na, naman, nga, pa, pala, sana, tuloy, at yata.

Ayos ng Pangungusap sa Filipino

- Ang batayang pangungusap sa Filipino ay binubuo ng dalawang panlahat ng bahagi—ang panaguri at ang paksa.
- 1. Paksa – pinag-uusapan o pinagtutuunan ng pansin sa pangungusap.
- 2. Panaguri – nagbibigay ng kaalaman o impormasyon tungkol sa paksa.

Iba’t Ibang Uri ng Panaguri sa Filipino:

- 1. Panaguring Pangngalan  
Halimbawa: Kompyuter ang gustong regalo ng bata.  
Aklat-pambata ang dala ko.
- 2. Panaguring Panghalip  
Halimbawa: Sila ang kamag-anak ko.  
Tayo ang maghahatid ng sulat.
- 3. Panaguring Pang-uri  
Halimbawa: Malungkot ang buhay sa Dubai.  
Mahal ang nabili kong damit.
- 4. Panaguring Pandiwa  
Halimbawa: Tumalon ang bata.  
Pumitas ng talbos si Joan.
- 5. Panaguring Pang-abay  
Halimbawa: Ngayon ang alis namin.  
Ganito ang paluluto ng yema.

Karaniwang-Ayos ng Pangungusap – likas ng kayarian ng pangungusap sa Filipino na mauna ang panaguri sa paksa. Ginagamit ito sa pang-araw-araw na usapan.  
Halimbawa: Nakabili ng dyip ang Tatay.  
Naglaba kami ng mga damit sa sapa.

Di Karaniwang-Ayos ng Pangungusap – higit na gamitin sa mga pormal na sitwasyong komunikatibo, tulad ng pulong, sa hukuman, o pakikipag-usap sa mga pinuno.  
Halimbawa: Ako ay naatasang mamuno ngayon.  
Sila ay maghahain ng reklamo laban sa Kapitan ng barangay.

Ang Wastong Gamit ng Salita

Ng at Nang

Gamit ng NG

- ginagamit bilang pantukoy  
Halimbawa: Nag-aaral *ng* Ilokano si Sonia.
- ginagamit bilang pang-ukol na ang katumbas sa ingles ay with  
Halimbawa: Hinampas niya *ng* payong ang aso.
- ginagamit bilang pang-ukol na ang katumbas ay sa  
Halimbawa: Magsisiwi *ng* Pilipinas ang magagaling na doktor.



Gamit ng NANG

- ginagamit na pangatnig sa hugnayang pangungusap bilang panimula ng katulong na sugnay o sugnay na di makapag-iisa  
Halimbawa: *Nang* siya ay dumating, dumagsa ang tao.
- ginagamit bilang pang-abay na nanggaling sa “na” na inangkupan ng “ng” kayat nagiging “nang”  
Halimbawa: Nagbalita *nang* malakas ang aking kaibigan sa opisina.

May at Mayroon

Gamit ng May

- ginagamit ang may kung ang sumusunod na salita ay:

Pangngalan

Halimbawa: *May* batang nahulog.

Pandiwa

Halimbawa: *May* sasayaw na babae mamayang gabi.

Pang-uri

Halimbawa: *May* bagong bahay na nasunog.

Panghalip na paari

Halimbawa: *May* kanya-kanya tayong alam.

Pantukoy na mga

Halimbaa: *May* mga batang pupunta dito mamaya.

Pang-ukol na sa

Halimbawa: May *sa*-kalabaw ang boses ng taong iyan.

Gamit ng Mayroon

- sinusundan ng panghalip na palagyo  
Halimbawa: Mayroon *kaming* dadaluhang pulong bukas.
- sinusundan ng isang kataga  
Halimbawa: Mayroon *ding* pulong ang kababaihan.
- ginagamit sa patalinghagang kahulugan  
Halimbawa: Si Mayor Favila ang *mayroon* sa lahat.

Subukin at Subukan

subukin – “pagsusuri o pagsisiyasat sa uri, lakas o kakayahan ng isang bagay o tao.”  
subukan – “tingnan kung ano ang ginagawa ng isang tao o ng mga tao.”  
Halimbawa: Subukin mong gamitin ang sabon na ito.  
Sunubukan nila ang disiplina ng mga mag-aaral.

Pahirin at Pahiran

pahirin – pag-aalis o pagpawi  
pahiran – paglalagay ng bagay  
Halimbawa: Pahirin mo ang dumi sa iyong mukha.  
Pahiran mo ng pulang pintura ang gate.

Walisin at Walisan

walisin – pandiwang pokus sa layon.  
walisan – pandiwang pokus sa ganapan.  
Halimbawa: Walisin mo ang mga tuyong dahon sa bakuran.  
Walisan mo ang bakuran.

Maliban at Bukod

maliban – (except o aside) may kahulugang matangi sa bagay na binanggit ay wala nang iba.  
bukod – (in addition to o besides) karagdagang sa mga bagay na binanggit.  
Halimbawa: Maliban sa lupa, wala na siyang maiiwan sa nag-iisang anak.  
Bukod sa lupa, may bahay pa siyang maiiwan sa nag-iisang anak.

Kung at Kong

Gamit ng Kung

- ginagamit na pangatnig sa mga sugnay na di makapag-iisa sa mga pangungusap na hugnayan  
Halimbawa: Kung siya’y narito, tayo’y magiging magulo.

Gamit ng Kong

- buhat sa panghalip na ko ang kong at nilalagyan lamang ng pang-angkop na *ng* sa pakikiugnay sa salitang sumusunod:  
Halimbawa: Ipinagtapat *kong* nangyari.

Din at Rin; Daw at Raw; Doon at Roon

Gamit ng din, daw, doon

- ginagamit kapag ang nauunang salita ay nagtatapos sa katinig maliban sa w at y  
Halimbawa: Napanood din nila ang pelikula.  
Napanood daw nila ang pelikula.  
Napanood doon nila ang pelikula.

Gamit ng rin, raw, roon

- ginagamit kapag ang nauunang salita ay nagtatapos sa patinig. Ang w at y ay itinutuing na malapatinig. Samakatuwid, ang rin, raw, roon ay ginagamit kapag ang sinusundang salita ay nagtatapos sa mga titik na ito.
- Halimbawa: Himala rin ang kailangan niya.  
Kaliwete raw ang dalaga.  
Umuwi roon ang kanyang asawa.

**Ika at Ika-**

Gamit ng ika

- ginagamit bilang panlapi sa bilang na isinusulat bilang salita
- Halimbawa: ikatlong taon  
Ikalimang araw

Gamit ng ika-

- ginagamit ang ginitlingan na “ika” bilang panlapi kung mismong bilang ang isusulat.
- Halimbawa: ika-25 ng Enero  
Ika-5 taon

**Maka at Maka-**

Gamit ng maka

- ginagamit ang “maka” na walang gitling kung pangngalang pambalana ang kasunod na salita
- Halimbawa: Naglunsad ng poetry reading ang mga *makabayan*.

Gamit ng maka-

- ginagamit ang may gitling na “maka-“ kapag sinusundan ng pangngalang pantangi
- Halimbawa: *Maka-Nora* ang mga nanonood ng kanyang mga pelikula.

**Gawin at Gawan**

- ginagamit ang mga panlapi -in/-hin sa mga pandiwang pokus sa layon
- Halimbawa: *Gawin* mo ang sa tingin mo ay tama.

- ginagamit ang panlaping -an/-han sa mga pandiwang pokus sa direksyon
- Halimbawa: Subukan mong *gawan* siya ng mabuti.

**Ang Wikang Filipino sa 1987 Konstitusyon ng Republika ng Pilipinas**

Artikulo XIV – Edukasyon, Syensya at Teknolohiya, Mga Sining, Kultura, at Isports

**Wika**

Seksyon 6. Ang wikang pambansa ng Pilipinas ay Filipino. Samantalang nalilinanang ito, ito ay dapat na payabungin at pagyamanin pa salig sa umiiral na wika sa Pilipinas at sa iba pang mga wika.  
Alinsunod sa mga tadhana ng batas at sang-ayon sa nararapat na maaaring ipasya ng Kongreso, dapat magsagawa ng mga hakbangin ang Pamahalaan upang ibunsod at puspusang itaguyod ang paggami ng Filipino bilang midyum ng opisyal na komunikasyon at bilang wika ng pagtuturo sa sistemang pang-edukasyon.

Seksyon 7. Ukol sa mga layunin ng komunikayon at pagtuturo, ang mga wikang opisyal ng Pilipinas ay Filipino at, hangga’t walang ibang itinataadhana ang batas, Ingles.  
Ang mga wikang panrehiyon ay pantulong na mga wikang opisyal sa mga rehiyon at magsisilbi na pantulong na mga wikang panturo roon.  
Dapat itaguyod nang kusa at opsyonal ang Kastila at Arabic.

Seksyon 8. Ang Konstitusyong ito ay dapat ipahayag sa Filipino at Ingles at dapat isalin samga pangunahing wikang panrehiyon, Arabic at Kastila.

Seksyon 9. Dapat magtatag ang Kongreso ng isang komision ng wikang pambansa na binubuo ng mga kinatawan ng iba’t ibang mga rehiyon at mga disiplina na magsasagawa, mag-uugnay at magtataguyod ng mga pananaliksik sa Filipino at iba pang mga wika para sa kanilang pagpapaunlad, pagpapalaganap at pagpapanatili.

**Pagbasa**

Mga papanaw ukol sa pagbasa:

- Ang pagbasa ay isang masalimuot na prosesong pangkaisipan kung saan ang mambabasa’y aktibong nagpaplano, nagdedesisyon at nag-uugnay ng mga kasanayan at istrateghiyang nakatutulong sa pag-unawa.
- Ang pagbasa ay isang kompleks na gawaing kinapapalooban ng may kamalayan at walang kamalayang paggamit ng iba’t ibang estratehiya, kasama na ang mga estratehiya sa paglutas ng suliranin upang makabuo ng modelo ng kahulugang ninanais ipahatid ng awtor (Jonhston, 1983).
- Ang pagbasa’y proseso ng pamimili ng mga pahiwatig pangwika batay sa ekspektasyon ng bumabasa. Habang ang bahagi ng impormasyon ay nakikilala, nakagagawa ang mambabasa ng pansamantalang desisyon o hinuha na patutunayan niya, iwawaksi o pagtitibayin habang bumabasa (Kenneth Goodman, 1976).
- Dahil magkaugnay ang pagbasa at pag-iisip, binanggit ni Mikuleckey (1990) ang ginawang pagtutulad nina Kintsch at Van Dijk (1978), Rumelhart at Ortony (1977) at Winograd (1977), sa pagbasa sa pagpoproseso ng impormasyon upang maunawaan kung paano nag-iisip at umuunawa ang isang tao. Ayon sa kanila, dalawang aspekto ng “human information processing system” ang nagkakatulungan kapag nagbabasa ang isang tao:
  - *Concept Driven* o Itaas-Pababa – kapag ang bumabasa ay higit na nakatuon sa kug ano ang alam niya upang maintindihan ang binabasa.
  - *Data Driven* o Ibaba-Pataas – kapag higit na umaasa ang bumabasa sa mga impormasyong tekstwal.

**Ang Mapanuring Pagbasa**

- Ang mapanuring pagbasa ay isang halimbawa ng marahan at maingat na pagbasa na nangangailangan ng masusing prosesong pangkognitibo. Pangunahing layunin nito ay malayang pag-iisip at kasanayan sa pagsusuri a pagtataya.

**Mga Kasanayan sa Mapanuring Pagbasa**

1. Paghinuha sa maaaring mangyari
2. Pagpapangkat ng mga ideya
3. Paghahambing at pagtutulad
4. Pagtatangi ng katotohanan sa palagay/opinyon
5. Pagbuo ng konklusyon
6. Pagbibigay ng sanhi at bunga
7. Pagkakasunud-sunod ng mga ideya
8. Paglalagom
9. Pagtukoy at pagpapahalaga sa katangian ng tauhan
10. Pagsusuri ng mga impormasyon
11. Pagpapakahulugan sa matatalinghagang pahayag
12. Pagpapakahulugan sa mga pahiwatig ng pahayag
13. Pagtukoy sa magkakaugnay na ideya/konsepto
14. Pagtukoy sa suliraning tinutukoy sa binasa
15. Pagbibigay reaksiyon sa himig at tono ng seleksyon

Proseso ng Pagbasa

- Ang pagkuha ng impormasyon ay di lamang nakakamit sa pagbasa ng mga nakalimbag na sagisag. Mayroon ding mga impormasyong ginagamit ang bumabasa na nasa kanyang isipan na kanyang binabalikan kung kailangan niya sa pagbasa ng teksto. Ito ay ang mga di biswal na impormasyon ng binubuo ng datihang kaalaman (prior knowlegde).

Teoryang Iskema sa Pagbasa

- Ginagalugad ng mambabasa ang mga nakaimbak o nakalagay niyang network ng mga abstraktong ideya sa kanyang isipan upang humanap ng iskema na tumutugma sa mga elemento o impormasyong taglay ng teksto (Anderson, 1985).
- Habang bumabasa, patuloy na naaapektuhan ng makabuluhang iskemang nagising ang pagpoproseso ng impormasyon. Sa pamamagitan ng nagising na iskema, naghihinuha ang mambabasa ng mga impormasyong semantika, sintaktika at leksikal upang makabuo ng kahulugan.

Metakognisyon sa Pagbasa

- Pagkakaroon ng kamalayan, kaalaman at kasanayan sa pagkontrol sa sariling proseso ng pag-iisip o pag-unawa.
- Ang metakognisyon ay ang mataas na kasanayang pampag-iisip na kinapapalooban ng aktibong pagkontrol sa mga prosesong kognitiv na napapaloob sa pagkatuto (Livingston, 1996).
- Sa pamamagitan ng metakognisyon, nalalampasan ang kognisyon dahil nagagawa nitong malinan sa mambabasa ang may kamalayang paggamit ng mga estratehiyang kognitibo at pahalagahan sa halip na simpleng gamitin lamang ang mga ito. Binibigyang-diin ng metakognisyon ang malawakang kontrol sa mga proseso sa halip na sa mga tiyak na estratehiya o gawain (McNeil, 1987).
  - Tatlong Uri ng Prosesong Metakognitiv Ayon kay McNeil:
    - Kaalaman ng mambabasa sa kanyang sariling kahinaan at kalakasan sa pagbasa;
    - Kaaalam kung alin estratehiya ang angkop na gamitin ayon sa sitwasyon; at
    - Kalaaman ng mambabasa sa pagsubaybay sa kanyang pag-unawa o pagkaalam kung kailan siya di na nakauunawa.

Komunikasyon

- Aktibong proseso ng paghahatid at pagkuha ng mensahe at tugon (feedback) sa pamamagitan ng interaksyon ng tagahatid at tagatanggap.
- Ang komunikasyon ay ang pagpapahayag, pagpapahatid o pagbibigay ng impormasyon sa mabisang paraan. Ito ay isang paraan ng pakikiugnayan, pakikipagpalagayan, o pakikipag-unawaan.
- Ang komunikasyon ay proseso ng pagbibigay (giving) at pagtanggap (receiving).
- Kung kahulugang komunikatibo ang susuriin sa isang pahayag, tiyak na iuugnay ito sa tungkulin ng komunikasyon at ang kaugnay na gawi ng pagsasalita tulad ng ipinakikita ng sumusunod na tsart ni Gordon Wells.

Tungkulin ng Komunikasyon (Functions of Communication)	Gawi ng Pagsasalita (Speech or Commucation Arts)
A. Pagkontrol sa kilos o gawi ng iba (Controlling Function)	Pakikiusap, pag-uutos, pagmumungkahi, pagpupunyagi, pagtangga, pagbibigay babala
B. Pagbabahagi ng damdamin (Sharing feelings)	Pakikiramay, pagpuri, pangsang-ayon, pahayag, paglibak, paninisi, pagsalungat
C. Pagbibigay o pagkuha ng impormasyon (Getting factual information)	Pag-uulat, pagpapaliwanag, pagtukoy, pagtatanong, pagsagot
D. Pagpapanatili sa pakikipag-kapuwa at pgkakaroon ng interaksyon sa kapuwa (Ritualizing Function)	Pagbati, pagpapakilala, pagbibiro, pagpapasalamat, paghingi ng paumanhin
E. Pangangarap at paglikha (Imagining/Creating Function)	Pagkukuwento, pagsasadula, pagsasatao, paghula

Panitikan

- Ang salitang Tagalog na “panitikan” ay galing sa unlaping PANG- (na nagiging PAN- kapag ang kasunod na ugat ay nagsisismula sa d, l, r, s, t); sa ugat ng TITIK (letra) na nawawalan ng simulang T sa pagkakasunod sa PAN-; at sa hulaping – AN, samakatwid: *pang \* titik \* an*.
- Ang salitang ito ang panumbas ng Tagalog sa “literatura” o “literature” na parehong batay sa ugat na Lating “litera” na ang kahuluga’y “letra” o titik.
- Ayon kay Hno. Azarias, sa kanyang aklat na “Pilosopia ng Literature”, ang Panitikan ay pagpapahayag ng mga damdamin ng tao hinggil sa mga bagay-bagay sa daigdig, sa pamumuhay, sa lipunan at pamahalaan, at sa kaugnayan ng kaluluwa sa Bathalang lumikha.
- “Nasusulat na tala ng pinakamabuting kaisipan at damdamin ng tao.” (W.J. Jong)

Anyo ng Panitikan

- Tuluyan (prosa) – maluwig na pagsasama-sama ng mga salita sa katutubong takbo ng pangungusap. Halimbawa, anekdota, alamat, maikling katha, kathambuhay, sanaysay, talambuhay, dula, at iba pa.
- Patula – pagbubuo ng pahayag sa pamamagitan ng salitang binilang sa pantig (6, 8, 12, 16, o 18 sa taludtod) at pinapagtugma-tugma sa mga dulo ng mga taludtod sa loob ng isang estropa (stanza). Halimbawa, liriko, oda, pastoral, kurido, tulang pasalaysay, tulang padula, soneto, at iba pa.

Matandang Panitikan

Ang matandang panitikan ay inuuri sa dalawa:

- Pasalita – kabilang sa panitikang hindi nakasulat ang mga pahayag na binubuo ng maiikling taludturan tulad ng salawikain, kasabihan, bugtong, mga talinghaga at mga awiting-bayan.
- Pasulat – sa paglipas ng panahon, ang panitikang ito’y nagpasalin-salin sa bibig ng mga mamamayan; ito ay napagyaman, hanggang sa naging maunlad ang panulatan at palimbagan at napatala na sa mga aklat – mga akdang kababakasan ng nakalipas na panahon..

**Salawikain o Sawikain at Kasabihan** – karamihan sa mga ito ay may impluwensya ng Arabe, Malay at ng Indo-Tsina.

**Salawikain o Sawikain** – nagtataglay ng talinghaga. Nagsisilbing mga panuntunan sa buhay – mga bata ng kaugalian at patnubay ng kagandahang-asal. Binubuo ito ng mga taludtod na karaniwa ay dadalawa, may sukat at tugma at nagbibigay-aral.

Halimbawa:

Ang bato sakdal man ng tigas  
Tubig na malambot ang nakaaagnas.

Di man makita ang apoy  
Sa aso matutunton.

Ang inahing mapagkupkop  
Di man anak isusukob.

**Sabi o Kasabihan** – hango sa karunungan ng matatandang may mga karanasan sa buhay. May himig paalaala, kung minsang parang nanunudyong, ang mga ito’y hindi gumagamit ng malalalim na mga talinghaga. Payak lamang ang kahulugan ng mga ito na kasasalaman din ng gawi at ugali ng tao.

Halimbawa:

Anak na di paluhain  
Ina ang patatangisin.

Walang sumisira sa bakal  
Kundi kanya ring kalawang.

Nasa banig	Ang maniwala sa sabi
Lumipat sa sahig.	Walang bait na sarili.
Kuwalta na	
Naging bato pa.	

**Bugtong, Talinghala, Tanaga** – sa aklat na *Vocabulario de la Lengua Tagala* (1754) nina Padre Juan de Noceda at Pedro de San Lucar, maraming maiikling matulaing pagpapahayag na kinabibilangan ng bugtong, talinghaga, at tanaga.

**Bugtong** – tugmang naghahamon sa tao na mag-isip nang madalian nang walang pagbabatayan kundi ang inilalarawan ng mga salita. May layunin itong mapasigla ang guniguni at mapatalas ang isip.

Halimbawa:

Di matingalang bundok Darak ang nakakamot. (BALAKUBAK)	Kinalag ang balangkas Sumayaw nang ilagpak. (TRUMPO)
Kakabiyak na niyog Magdamag inilibot. (BUWAN)	Isang balong malalim, Punung-puno ng patalim. (BIBIG)

**Talinghaga** – isang payak na metaporang may walong pantig sa bawat taludtod. Ito ay may sukat at tugma.

Halimbawa:

Labong ng kawayang bagong tumutubo  
Langit na mataas ang itinuturo;  
Kapg tumanda na at saka lumago,  
Lupang pinagmulan, doon din ang yuko.

**Tanaga** – ayon kina Noceda at Sanlukar, isang tulang may apat na taludtod na pipituhing-pantig at naghahamon din sa isip.

Halimbawa:

Ang tubig ma'y malalim	Baging akong kalatkat
Malilirip kung lipdin	Kaya ako nataas
Itong budhing magaling	Sa balite kumalat
Maliwag paghanapin.	Nakinabang ng taas.

**Bulong** – tulang ginagamit sa panggagamot o pang-iingkanto.

Halimbawa:

Huwag magagalit, kaibigan,  
Aming pinuputol lamang  
Ang sa ami'y napag-utusan.

Tabi po, tabi po  
Huwag pong manununo.

**Awiting-bayan** – tulad ng alinmang tula, ang mga ito ay may sukat at tugma. Di nakilala ang mga kumatha ng maraming awiting bayan.

Itinala ni Epifanio de los Santos Cristobal ang sumusunod na awiting-bayan:

1. suliranin (awit sa paggaod)
2. talindaw (awit sa pamamangka)
3. diona (awit sa panliligaw at pagkakasal)
4. oyayi o ayayi (awit sa paghehele)
5. kumintang (awit sa pakikidigma; nang lumao'y naging awit sa pag-ibig)
6. sambotani (awit sa pagtatagumpay)
7. kundiman (awit ng pag-ibig)
8. dalit (himno)

**Epiko** – mga tulang-salaysay tungkol sa mga bayani at sa kanilang kabayanihan. Ang mga bayaning ito ay tila mga bathala sa pagtataglay ng kapangyarihan. Ang mga epiko ay paawit kung isalaysay. Sinasabing ang mga epiko ng mga Bisaya, Tagalog, Iluko, Ifugao, at Bikol ay napasulat sa Alibata, samantala ang epiko ng Mindanao ay nakasulat sa Sanskrito.

Halimbawa:

1. Hudhud (Ifugao)
2. Ibalon (Bikol)
3. Biag ni Lam-ang (Ilokano)
4. Maragtas (Hiligaynon-Iraya)

**Akdang Panrelihiyon**

1. **Doctrina Cristiana** – Ito ang kauna-unahang aklat na nilimbag sa Pilipinas. Nilimbag ito sa pamamagitan ng silograpiya noong 1593.
2. **Nuestra Señora del Rosario** – sinulat ito at inilimbag ni Pari Blancas de San Jose, O.P., noong 1602 sa Imprenta ng Santo Tomas.
3. **Barlaan at Josaphat** – sinulat ito ni Pari Antonio de Borja, S.J., at inilathala noong 1708 at muli noong 1712. Ito ay batay sa sa mga salaysay mula sa Bibliya. Ipinalalagay na ito ang kauna-unahang nobelang Tagalog kahit salin lamang.
4. **Pasyon** – sa panahon ng kuwaresma, ang buhay at pagpapakasakit ng Panginoong Hesukristo ay inaawit.
5. **Mga Dalit kay Maria** – sabayang inaawit bilang handog kung buwan ng Mayo sa pag-aalay ng bulaklak sa Mahal na Birhen.

**Pari Modesto de Castro** – dahil sa kanyang *Urbana at Feliza*, tinagurian siyang “Ama ng Tuluyang Klasika sa Tagalog.”

**Ang Dula**

**Panunuluyan** – isang uri ng dulang pangrelihiyon na namalasak noong panahon ng Kastila. Ang pinakadiwa nito ay ang paghahanap ng bahay na matutuluyan ng mag-asawang San Jose at Birheng Maria noong bisperas ng Pasko.

**Senakulo** – isang uri ng dulang makarelihiyon na ang pinakamanuskrito ay ang pasyon. Itinatanghal ito kung Mahal na Araw, kadalasa’y nagsisimula sa Lunes Santo at nagtatapos ng Biyernes Santo, kung minsan pa’y umaabot ng Linggo ng Pagkabuhay. Ito ay itinatanghal sa entablado. Tinatawag din itong “pasyon sa tanghalan”.

**Moro-Moro** – itinatanghal sa entablado. Dalawang pangkat ang naghaharap dito: ang mga Kristiyano at ang mga moro. Tinawag itong *comedia de capa y espada* na sa kalauna’y naging kilala sa palasak na tawag na “moro-moro”. Nasusulat sa anyong tula, pumapaksa sa paglalaban ng mga Kristiyano at mga di-Kristiyanong tinawag ng mga Kastilang “moro”. Laging magtatagumpay ang mga Kristiyano sa mga paglalaban.

**Tibag** – ito ay may kaugnayan sa senakulo sapagkat ito ay nauukol sa paghanap sa krus na kinamatayan ni Kristo sa bundok ng Kalbaryo. Ang mga tauhan dito ay sina Emperatris Elena at ang kanyang anak na si Emperador Constantino. Tinawag na tibag sapagkat ito ay nauukol sa pagtibag ng bundok ng Kalbaryo sa paghanap ng krus.

**Mga Unang Tula**

Ang unang tula sa Tagalog ay sinulat ni **Tomas Pinpin** at kasamang inilimbag sa kanyang aklat na *Librong Pag-aaralan nang manga Tagalog sa Uicang Castila*. Ang tula ay binubuo ng magkasalit na taludtod sa Tagalog at Kastila sa layuning matutuhan ang Kastila.

**Felipe de Jesus** – ipinalalagay ng mga mananaliksik na ang kritikong si Felipe de Jesus ng San Miguel, Bulakan, ang unang tunay na makatang Tagalog.

**Mga Tulang Romansa**

**Kurido** - tulang pasalaysay na may sukat na walong pantig sa taludtod at may mga paksang kababalaghan at maalamat (karamiha’y halaw at hiram sa paksang galing sa Europa) na dala rito ng mga Kastila. Inaawit ito nang mabilis o “allegro”. May walong pantig ang taludturan. (Halimbawa: Ibong Adarna).

**Awit** – isang uri ng tulang binubuo ng labindalawang pantig bawat taludtod ng isang saknong at kung inaawit ay marahan o “andante”. (Halimbawa: Florante at Laura)

**Mga Manunulat ng Kurido at Awit**

**Ananias Zorilla** – may akda ng awit na **Dama Ines** at **Prinsipe Florinio**.

**Jose de la Cruz** (1740 – 1829) – kilala sa sagisag na Huseng Sisiw. Siya ang kauna-unahang mag-aayos ng tula. Tinawag siyang Huseng Sisiw sapagkat sisiw ang karaniwang pabuya na ibinibigay ng nagpapgawa sa kanya ng mga tula ng pag-ibig at ng mga nagpapaayos sa kanya ng tula. Kumatha ng *Historia Famosa ni Bernardo Carpio, Doce Pares de Francia,Rodrigo de Villas, Adela at Floranteat Flora at Clavela*.

**Francisco Baltazar** (Balagtas) 1788 -1862 – Isinilang sa Panginay. Bigaa, Bulacan noong ika-2 ng Abril, 1788. Sumulat ng Florante at Laura na inialay niya sa kanyang iniibig na si Maria Asuncion Rivera (M.A.R.) na tinawag niyang si “Celia” sa akda.

**Karagatan** – isang paligsahan sa tula na nilalaro bilang parangal sa isang namatay. Ang mga kasali rito ay umuupo nang pabilog at nasa gitna ang hari.

**Duplo** – isa pang paligsahan sa pagtula na karaniwang ginaganap sa bakuran ng namatayan, sa ikasiyam na gabi matapos mailibing ang namatay, bilang panlibang sa mga naulila.

**Ensilada** – isa pang paligsahan sa pagtulana ginagawa bilang pang-aliw sa namatayan. Ito ay ginagawa gabi-gabi habang nagsisiyam ang namatay.

**Panahon ng Pagbabago at Paghihimagsik**

**Herminigildo Flores** – isang manunulat sa panhon ng himagsikan. Sa kanyang mga sinulat ay lalong bantog ang mahabang tulang may pamagat na, “Hibik ng Pilipinas sa Inang Espanya”.

**Mga Pangunahing Manunulat-Propagandista**

**Jose P. Rizal** (1861 – 1896) – Naipalimbag niya sa Berlin ang nobelang *Noli Me Tangere* (1887). Noong 1890, tinapos niya ang ikalawang nobela, ang *El Filibusterismo* sa Ghent, Belgium. Gumamit si Rizal ng mga sagisag na “Dimas-Alang” at “Laong-Laan”. Si Rizal ay nakapagsasalita ng dalawampu’t dalawang wika.

**Marcelo H. del Pilar** – bilang pangunahing pinuno ng Kilusang Propaganda, ipinakita niya kaagad ang pagtutol sa mga pamamalakad ng mga Kastila. Lantad ang gayon niyang damdamin sa pahayagang *Diariong Tagalog*, na itinatag at pinamatnugutan niya noong 1882.

Noong Nobyembre 15, 1889, napasalin sa kanya ang pagiging patnugot ng *La Solidaridad*. Gumamit siya ng mga sagisag tulad ng “Dolores Manapat”, “Piping Dilat”, “Maitalaga”, “Kupang”, “Carmelo”, “L.O. Crame” at “Pupdoh”.

Mga Akda ni del Pilar:

1. “Pag-ibig sa Tinubuang Lupa” – salin ng tulang “Amor Patrio” ni Rizal.
2. Caiigat Cayo (1888)
3. Dasalan at Tocsohan (1888)
4. Ang Kadakilaan ng Dios
5. Sagot ng Espanya sa Hibik ng Pilipinas (1889)
6. Dupluhan...Dalit...mga Bugtong...

**Graciano Lopez Jaena** (1856-1896) – itinatag niya sa Espanya ang *Circulo Hispano-Filipino*; sumulat ng mga ulat para sa Circulo. Noong 1889, itinatag niya ang *La Solidaridad* at naging unang patnugot nito. Nang mapalipat kay M. del Pilar ang tungkulin ng patnugot, naging manunulat na lamang siya ng pahayagan. Nagkubli siya sa pangalang “Diego Laura”. Sa kanyang panahon, higit siyang kinilalang orador kaysa manunulat. Sinulat niya ang *Fray Botod*, isang maikling nobelang mapang-uyam na naglalarawan sa “kasibaan ng mga prayle”. Ang *Fray Botod* ay prayleng napakalakas kumain.

**Mariano Ponce** (1863-1899) – gumamit ng mga sagisag na “Naning”, “Tikbalang”, “Kalipulako”. Kabilang sa mga akda niya ang “Mga Alamat ng Bulakan”, at ang dulang “Pagpugot kay Longino”.

**Antonio Luna** (1866-1899) – parmasyutikong gumamit ng sagisag na Taga-ilog sa kanyang pag-akda. Marami siyang naiambag sa *La Solidaridad*. Kabilang sa mga akda niya ang “Noche Buena”, “La Tertulia Filipina”, “La Maestra de Mi Pueblo” at ang “Impresiones”.

**Pedro A. Paterno** (1858-1911) – may-akda ng *Ninay* isang nobelang sosyolohiko. Ito ang unang nobelang sinulat sa Kastila ng isang Pilipino.

**Pascual Poblete** (1858-1921) – nobelista, makata, mananalaysay at tinaguriang “Ama ng Pahayagan”. Siya ang nagtatag ng mga pahayagang *El Resumen*, *El Grito del Pueblo* at *Ang Tinig ng Bayan*. Siya rin ang kauna-unahang nagsalin sa Tagalog ng Noli Me Tangere.

**Jose Maria Panganiban** (1865-1895) – sumulat ng mga sanaysay, lathalain at mga talumpati sa ilalim ng sagisag na Jomapa.

**Pedro Serrano Laktaw** – leksikograpo at manunulat; isa ring pangunahing Mason. Siya ang unang sumulat ng *Diccionario Hispano-Tagalog* (1889).

**Isabelo delos Reyes** – nagtatag ng “Iglesia Filipina Independente”; nagtamo ng gantimpala sa Exposisyon sa Madrid, sa sinulat na “El Folklore Filipino”.

Fernando Canon – kaklase ni Rizal sa Ateneo. Sumulat siya ng tula ukol kay Rizal. Sa mga tulang pang-Rizal nagsimula ang kanyang katanyagan.

Kapwa pintor naman sina **Juan Luna** at **Felix Resureccion Hidalgo**.

**Mga Akdang Mapanghimagsik**

Ang paghihimagsik laban sa mga Kastila ay pinagtampukan ng mga akda nina Bonifacio at Emilio Jacinto, mga akdang nasulat sa Tagalog, ang wikang opisyal ng Katipunan. Samantala, ang paghihimagsik laban sa mga Amerikano ay tinampukan naman ng mga akda nina Apolinario Mabini at Jose Palma.

**Andres Bonifacio** (1863-1897) – kinilalang “Ama ng Demokrasyang Pilipino” kinilala rin siyang “Dakilang Plebyo”. Siya ay kasal kay Gregoria de Jesus, ang tinaguriang “Lakambini ng Katipunan”. Si Bonifacio ay gumamit ng mga sagisag na “Agap-ito Bagumbayan” at “May Pag-asa”.

Mga Akda ni Bonifacio:

1. Pag-ibig sa Tinubuang Lupa (tula)
2. Sampung Utos
3. Pahimakas (salin ng *Mi Ultimo Adios* ni Rizal)
4. Mga Katungkulang Gagawin ng mga Anak ng Bayan (dekalogo ng Katipunan)
5. Ang Dapat Mabatid ng mga Tagalog (sanaysay)
6. Katapusang Hibik ng Pilipinas (tulang tugon sa tula ni del Pilar na Sagot ng Espanya sa Hibik ng Pilipinas)

**Emilio Jacinto** (1875-1899) – kinilalang “Utak ng Katipunan” dahilan na rin sa kanyang katalinuhan. Sumulat ng *Kartilya ng Katipunan*. Ginamit niya sa pagsulat ang sagisag na “Dimas-Illaw”; ginamit naman niyang pangalan bilang kasapi ng Katipunan ang “Pingkian”.

Mga Akda ni Jacinto:

1. A La Patria (tulang hawig sa Mi Ultimo Adios ni Rizal)
2. A Mi Madre (isang oda)
3. Liwanag at Dilim (katipunan ng mga sanaysay)
4. Ang Tao ay Magkakapantay
5. Kalayaan

**Apolinario Mabini** (1864-1903) – kilala sa bansag na “Dakilang Lumpo”. Tinaguriang siyang “Utak ng Himagsikan”. Bilang manunulat, marami siyang akda sa Kastila – mga akdang pampolitika, sosyolohiko, pampamahalaan at pilosopiko.

Mga Akda ni Mabini:

1. La Revolucion Filipino
2. El Verdadero Decalogo (Ang Tunay na Dekalogo)

**Jose Palma** (1876-1903) – kabilang sa mga manunulat sa panahon ng rebolusyon laban sa mga Amerikano. Ang tulang “Filipinas” ang makabuluhan niyang ambag sa panitikan. Ito ang naging titik ng musikang nalikha ni Julian Felipe.

**Pag-unlad ng Tula**

**Unang Hati**. Sa mga unang tatlumpu hanggang apatnapung taon ng pananakop ng mga Amerikano, ang mga makatang Pilipino ay mapapangkat sa dalawa: *nakatatanda* at *nakababata*.

1. Nakatatanda – kabilang sa nakatatanda sina Lope K. Santos, Pedro Gatmaitan, at Iñigo Ed. Regalado. Ang unang pangkat na ito ay aral sa Kastila.
2. Nakababata – sa nakababata naman ay sina Jose Corazon de Jesus, Teodoro Gener, Ildefonso Santos, Cirio H. Panganiban, Aniceto F. Silvestre at Amado V. Hernandez.

**Lope K. Santos** (1879-1963) – tinatawag na “Ama ng Balarilang Pilipino”. May-akda ng *Banaag at Sikat*. Bilang makata, laging mababanggit kaugnay ng pangalan niya ang mga tulang “Ang Pangginggera”, “Puso’t Diwa”, “Mga Hamak na Dakila,” at “Sino Ka – Ako’y Si...”

**Pedro Gatmaitan** – Ang kanyang mga tula ay napatanyag dahil sa hindi malayong paggunita sa mga kabayanihan ng mga bayani ng digmaan at ng himagsikan 1896. Nagkubli siya sa mga sagisag na “Pipit-Puso”, “Dante”, “Ernesto Salamisim” at “Alitaptap”. Nakilala ang kanyang “Tungkos ng Alaala”, isang katipunan ng kanyang mga natatanging tula.

**Ikalawang Hati**. Sa panahong ito namayani ang mga nakababatang Jose Corazon de Jesus (Huseng Batute), Cirio Panganiban, Deogracias A. Rosario, Ildefonso Santos, Benigno Ramos at Aniceto Silvestre.

**“Ilaw at Panitik”** – isang tanyag na samahang pangwika na natatag noon. Ang unang pangulo ng samahan ay si Jose Esperanza Cruz, naging patnugot ng *Liwayway*. Panahon din ito ng mga patimpalak sa pagtula at pagsulat ng tula, at sa mga ganitong pagkakataon ang mga makatang kasapi ng “Ilaw at Panitiki” ay naghali-halili sa pagkakamit ng unang gantimpala.

**Balagtasan** – supling ng matandang duplo. Abril 6, 1924, idinaos ang kauna-unahang balagtasan. Ginanap iyon sa bulwagan ng Instituto de Mujeres, sa Kalye Tayuman, Tondo, Maynila. Ang pamagat ay “Bulaklak ng Lahing Kalinis-linisan”. Si Jose Corazon de Jesus ang lumagay na “Paruparo” at si Florentino Collantes naman ang sa “Bubuyog”. Si Sofia Enriquez naman ang mabangong “Kampupot” o *Bulaklak ng Kalinisan*, samantala si Lope K. Sntos ang siyang nag-*lakandiwa*. Si Jose Corazon de Jesus ang nanalo sa labanang iyon, ayon sa pasiya ng hurado. Naging unang *Hari ng Balagtasan* si Batute.

**Jose Corazon de Jesus** – naging “Makata ng Pag-ibig” sa halalan ng mga mambabasa ng pahayagang Mithi noong 1916. Isa sa mga tanyag niyang tula ang “Isang Punongkahoy”.

**Florentino Collantes** – naging katunggali ni Batute sa mga pagbabalagtasan. Naibigay sa kanya ang karangalang “Makata ng Bayan” kapanabay ng pagbibibay kay Lope K. Santos ng karangalang “Paham ng Wika”. Kabilang sa mga tula niya ang sumusunod: *Ang Sawa, Sa Dakong Silangan, Ang Lumang Simbahan* at *Ang Tulisan*.

Iba Pang Makata

**Teodoro E. Gener** – pangunahing tula niya ang “Subo ng Sinaing”, “Guro” at “Pag-ibig”.

**Aniceto F. Silvestre** – makata ng damdamin. Ang kanyang tulang “Filipinas” ay ipinagwagi niya ng gantimpala sa tula sa isang patimpalak na Surian ng Wikang pambansa noong 1946.

**Teo S. Baylen** – ang mga tula niya sa loob ng tatlumpung taon ay isina-aklat niya sa kanyang *Tinig na Darating*.

Ang Pag-unlad ng Dula

- Ang dula ay isang sangay na panitikang naglalahad ng isang pangyayari o mga pangyayaring kinasasangkutan ng isa o dalawang pangunahing tauhan at ng iba pang mga katulong na tauhan na itinatanghal sa isang dulaan.

**Sarsuwela** – bilang panooring panlibangan, ay ipinakilala ng mga Kastila noong mga taong 1878-1879 ngunit di nagkaroon ng sapat na panahon upang umunlad at lumaganap. Kaagaw pa nito ang moro-moro na mas dinudunog ng mga mamamayan.

Mga Nakilalang Mandudula

**Severino Reyes** (1861-1942) – pangunahing manunulat ng sarsuwela si Severino Reyes. Kilala rin siya sa sagisag na “Lola Basyang” dahil sa kanyang mga kuwentong-bayan na inilathala sa Lingguhang Liwayway. Ang kanyang sarsuwelang *Walang Sugat* ang itinuturing na kanyang obra-maestra. Noong 1922, naging patnugot siya ng *Liwayway*.

**Patricio Mariano** – isang mandudula, peryodista, kuwentista, nobelista at makata. Marami siyang nasulat na dula na kinabibilangan ng *Anak ng Dagat, Ang Tulisan, Ang Dalawang Pag-ibigi, Ako’y Iyo Rin*, at iba pa. Siya ng tinaguriang Dekano ng mga Mandudulang Tagalog.

**Hermogenes Ilagan** – siya ang masasabing kaagaw ni Severino Reyes sa kasigasigan sa paglikha at pagtatanghal ng sarsuwela. Ang pinakatanyag niyang dula ay ang *Dalagang Bukid*.

**Julian Cruz Balmaseda** – namumukod ang kanyang aral sa pag-iimpok sa sulang *Ang Piso ni Anita*. Ito ang dulang nagtamo ng unang gantimpala sa timpalak ng Kawanihan ng Koreo; sa kanyang *Sa Bunganga ng Pating*, binaka niya ang sakit na nililikha ng salaping patubuan.

**Aurelio Tolentino** (1868-1913) – dalubhasa sa paggamit ng tatlong wika, Pampango, Tagalog at Kastila. Maraming dula siyang nasulat tulad ng *Bagong Kristo*, isang sulang sosyolohiko; *Sumpa**an*, isang romantikong sarsuwelang may tatlong yugto. Ngunit higit sa lahat ng mga dula niya, ang nakilala’y ang kanyang *Kahapon, Ngayon at Bukas*. Isang alegoriya ang dulang ito ay naglalahad sa pamamagitan ng mga simbolikong tauhan na pinagdadaanan ng Pilipinas.

**Juan K. Abad** – nang magsimula ang himagsikan sinunog ng lahat ni Abad ang kanyang mga akdang nanunuligsa sa pamahalaan at sa mga prayle at pagkaraa ay umanib siya sa Katipunan. Hinarap ni Abad ang pagbaka sa *comedia* sa paniniwalang ito ay nakakalason sa isipan ng mga Pilipino.

Ang Pag-unlad ng Nobela

- Ang kauna-unahang nobelang Tagalog na ipinalimbag sa anyong aklat ay ang *Nena at Neneng* ni Valeriano Hernandez Peña; inilimbag ito noong 1905. Isusunod na sana ang *Banaag at Sikat* ni Lope K. Santos, na labis na pinananabikang mabasang muli, subalit dahilan sa kakapalan nito, nauna ang *Miminsan Akong Umibigi* ni Valeriano Hernandez Peña na lumabas noong 1906. Sumunod na rin nang taon din iyon ang *Banaag at Sikat* ni Santos.
- Ang Kathambuhay o nobela ay isang sangay ng panitikang naglalahad ng maraming pangyayaring kinasasangkutan ng isa o dalawang pangunahing tauhan at iba pang katulong na mga tauhan at ang buong pangyayari ay sumasaklaw nang higit na mahabang panahon kaysa maikling katha.

Ang Panahong Ginto ng Nobelang Tagalog

- Panahong saklaw ng unang dalawampung taon, nasulat ang mga nobelang nagtataglay ng mga katangiang kasalaminan ng panahon at umayon sa layuning “makapagturo ng mabuti, makapaghimaton ng pag-iwas sa mga sakuna at kasawian sa buhay, makapagbinhi ng mabuting kaugalian at makapagpaunlad ng isip.” Sa palagay ni Regalado, “hindi maitatanggi ng sino man na ang nobekang Tagalog ay nagkaroon ng Panahong Ginto...at ang panahong iyon ay sumasaklaw sa mga taong buhat sa 1905 hanggang 1921.”

Ang Maikling Kuwento

- Ang anyo ng maikling kuwento ay nakilala lamang sa Pilipinas ng mgaunang taon ng ika-20 siglo nang narito na ang mga Amerikano. Ang mga unang anyo ng maikling kuwento ay ang (1) *dagli*, na ang himig ay nangangaral. Ang mga ito’y namumuna at nanunuligsa, at (2) *pasingaw o munting kasaysayan* na nagpapahayag ng pag-ibig sa mga nililigawan o hinahangaang paraluman.
- Ang maikling kuwento ay isang sangay ng panitikang naglalahad ng isang natatangi at mahalagang pangyayari sa buhay ng isang pangunahing tauhan s aisang takdang panahon.

Sangkap ng Maikling Kwento:

1. **Paksang-diwa** o **tema** – pangunahing kaisipan ng kuwento, ng isang pangkalahatang pagmamasid sa buhay ng may-akda na nais niyang ipabatid sa mambabasa.
2. **Banghay** – balangkas o istruktura ng mga pangyayaring kinapapalooban ng mga kilos, pagkahubog ng tauhan, tunggalian at mga hadlang, at mga detalye na buhat sa simula ay mabilis sa pag-akyat sa kasukdulan. Ito ay mabilis na sinusundan ng wakas.
3. **Katimpian** – higit na masining ang matimping paglalarawan ng damdamin.
4. **Paningin** – pananaw na pinagdaraanang ng mga pangyayari sa isang katha. Ito ang kahulugan ng paningin.

Apat na paraan ng pagsasalaysay ng kuwento ayon sa paningin ng nagpapahayag:

- a. **Paningin sa Unang Panauhan** – sumasanib ang may-akda sa isa sa mga tauhan na siyang nagsasalaysay sa unang panauhan.
  - b. **Paningin sa Pangatlong Panauhan** – pangatlong panauhan ang ginamit ng manunulat sa pagsasalaysay ng mga pangyayari sa kuwento. Ang isipan at damdamin ng mga tauhan ay maaari niyang utusan.
  - c. **Itinakdang Obhetibong Paningin** – maaaring ang pangunahing tauhan o ang alin man sa mga katulong na tauhan ang tauhang nagsasalaysay.
  - d. **Obhetibong Paningin** – ang tagapagsalaysay ay nagsisilbing isang kamera na malatang nakalilibot subalit maitatala lamang nito ang tuwirang nakikit at naririnig.
5. **Pahiwatig** – nagiging malikhain ang mga mambabasa sapagkat naiiwan sa kanyang guniguni o imahinasyon sa mga pangyayaring nagaganap o maaaring maganap sa kuwento.
  6. **Simbolo** – ito ang mga salita na kapag binanggit sa isang akda ay nag-iiwan ng iba’t ibang pagpapakahulugan sa mambabasa. Halimbawa, ang *puti* ay kumakatawan sa kalinisan o kawagasan.

Deogracias A. Rosario – Ama ng Maikling Kuwentong Tagalog

Sanaysay

- Naglalarawan ng mga kuru-kuro at pansariling kaisipan ng isang manunulat. Ang sanaysay ay maaaring maanyo (pormal) at maaari namang malaya (di-pormal o personal).
- Ang salitang sanaysay ay salitang-likha ni Alejandro G. Abadilla (AGA). Ayon sa kanya, ito ay pinagsanib na mga salitang *pagsasalaysay ng isang sanay o nakasulat na karanasan ng isang sanay sa pagsasalaysay*. Di gaya ng maraming salitang-likha, ang sanaysay ay dagling tinanggap ng bayan.

Dalawang uri ng Sanaysay:

1. maanyo o pormal – tanging layunin nito ay magbigay ng kaalaman
2. malaya o di-pormal – higit na kaaliw-aliw na basahin dahil sa ang mga salitang ginamit ay madaling maintindihan at ang paksa ay karaniwan.

Talambuhay

- Naglalahad ng mahahalagang pangyayari sa buhay o kasaysayan ng isang tao. Kapag ang talambuhay ay nauukol sa taong siyang sumulat, ito ay tinatawag na **pansariling talambuhay** (autobiography).

Pangulong Tudling

- Naglalahad ng kuru-kuro ng patnugot ng isang pahayagan. Ang mga pitak ng mga kolumnista ay kahawig ng pangulong tudling, lamang, ang kuru-kuro ng patnugot ay higit na matimbang o may bigat at siyang kuru-kuro na ng pahayagan.

Panahon ng Hapones (1942-1944)

- Marami ang nagsasabing “gintong panahon” daw ng maikling kuwento at ng dulang Tagalog ang panahong ito. Sa panahong ito, halos ipinagbawal ang Ingles ng mga mananakop kung kaya’t naging luwalhati naman ng wikaing Tagalog ang pangyayaring ito.
- Sa pangangasiwa ng Surian ng Wikang Pambansa, ang pinakamahusay na maikling kuwento ng panahong iyon ay pinili. Ang tatlong kuwentong nanguna ay ang mga sumusunod: “Lupang Tinubuan” ni Narciso G. Reyes, “Uhaw ang Tigang na Lupa” ni Liwayway Arceo, at “Lunsod, Nayon at Dagat-dagatan” ni N.V.M. Gonzales.
- Tatlong uri ng tula ang namalasak noong panahon ng Hapon: Karaniwang anyo, malayang taludturan, na ang pinakamarami ay haiku at tanaga.

**Tanaga** – isang uri ng tulang Tagalog noong unang panahon na sa katipiran ng pamamaraan ay maihahalintulad sa *Haiku* ng mga Hapones, bagamat lalong maikli ang haiku. Ang tanaga ay may sukat at tugma. Ang bawat taludtod ay may pitong (7) pantig.

Halimbawa:

Palay

Palay siyang matino  
Nang humangi’y yumuko,  
Ngunit muling tumayo;  
Nagkabunga ng ginto.

Gawad Pambansang Alagad ng Sining (Panitikan)

Amado V. Hernandez	-	1973
Jose Garcia Villa	-	1973
Nick Joaquin	-	1976
Carlos P. Romulo	-	1982
Francisco Arcellana	-	1990
Levi Celerio	-	1997 (Musika at Panitikan)
N.V.M. Gonzalez	-	1997
Edith L. Tiempo	-	1999
F. Sionil Jose	-	2001
Virgilio S. Almario	-	2003
Alejandro R. Roces	-	2003



Mga Teorya/Pananaw Pampanitikan

Teorya

- Ito ang pormulasyon ng palilinawing mga prinsipyo ng mga tiyak na penomena, paniniwala, o ideya upang makalikha ng isang sistematikong paraan ng pagpapaliwanag ng mga ito.

Teoryang Pampanitikan

- Ang pagbabalangkas ng mga prinsipyo na magpapaliwanag sa pinagmulan at kalikasan ng panitikan, ano ito ngayon at ano dapat ito, papaano ito nalikha at papaano ito nagagamit ng lipunan.
- Isang sistema ng mga kaisipan at mga kahalagahan na nagbibigay-kahulugan sa kalikasan at tungkulin ng panitikan pati na sa proseso ng paglikhang masining, at mga layunin ng may-akda at ng tekstong pampanitikan.

Teoryang Klasisismo

- Pagtuklas at pagtanaw sa katotohanan, kagandahan, at kabutihan ang nilalayan ng klasisismo. Hinahangad nito na palawakin ang pananaw at pang-unawa ng matwid na tao, at makamtan yaong tinatawag na grandeur d’ame o pagkadakila ng pagkatao. At dahil ang tao ay sadyang may katutubong karupukan, kinakailangan din na ang panitikan ay makatulong sa paglilinis o pagpupurga sa kalooban at niloloob upang lalong makatulong sa pagkakamit ng kadakilaan ng katauhan.

Teoryang Humanismo

- Walang higit pang kawili-wiling paksa kaysa tao. Kung pumasok man ang kalikasan sa sining ay upang lalong mapalitaw ang mga katangian ng tao. Ang Diyos man ay nagiging makabuluhan sa daigdig dahil sa tao sapagkat kung walang tao sa daigdig, walang makakaisip ng anuman tungkol sa Diyos. Hindi nito sinasabi na higit na dakila ang tao kaysa Diyos. Isinesentro lamang nito sa daigdig ang tao.

Teoryang Romantisismo

- Higit na pinahahalagahan ang “damdamin” kaysa ideyang siyentipiko o may batayan. Nananalig ang mga romantisista sa Diyos; naniniwala sila sa katwiran, siyensya, eksperimento at obserbasyon (empirisismo); materyal din ang tingin nila sa kalikasan at santinakpan. Ngunit para sa kanila, kulang pa at hindi maipaliliwanag o nasasagot ng mga ito ang mga tanong at mga karanasan tungkol sa puso.

Teoryang Realismo

- Higit na mahalaga ang katotohanan kaysa kagandahan. Hinahangad nito ang katotohanan at ang makatotohanang paglalahad at paglalarawan ng mga bagay, mga tao at lipunan, at alin pa mang maaaring mapatunayan sa pamamagitan ng ating mga sentido. Ang paraan ng paglalarawan ang susi, at hindi ang uri ng paksa. Naniniwala ang realismo na ang pagbabago ay walang hinto.

Teoryang Naturalismo

- Pinalawak ng naturalismo ang saklaw ng realismo. Tinangka kasi ng naturalismo ang mas “matapat, di-piniling representasyon ng realidad, isang tiyak na hiwa ng buhay na ipinakita nang walang panghuhusga”. Dahil sa walang muwang na “scientific determinism,” binigyang-diin ng naturalismo ang namana (o aksidente) at pangpisikal na likas ng tao kaysa mga katangian niyang pangmoral o rasyonal. Naipakitang ang mga indibidwal ay produkto ng pinanggalingan at kapaligiran.

Teoryang Formalismo

- Ang isang akda ay may sariling buhay at umiiral sa sarili nitong paraan. Nasa porma o kaanyuan ng isang akda ang kasiningan nito. Ang porma ay binubuo ng imahe (gamit ng lengguwahe na kumakatawan sa mga bagay, aksiyon at mga ideyang abstrakto), diksiyon (pagpili ng mga salita at paraan ng pagkakaayos nito), sukat, tugma, at iba pa. Kailangang magkasama ang porma at ang nilalaman upang magkaroon ng buong kahulugan ang isang akda.

Teoryang Imahismo

- Malaya ang makatang pumili ng anumang nais na paksain ng kanyang tula. Gumagamit ng wika o salitang pangkaraniwan. Kailangang angkop at tiyak ang bawat salita, at walang hindi kinakailangang palamuti. Ang *imagism*, isang tradisyon ng panulaang modernista na sadyang tiwalag sa tradisyon ng pangangaral o pang-aliw bilang akdang pansining ay may bukod-tanging kairalan, at hindi ito kailangang ipasailalim sa anumang layuning hindi makasining. Wika nga, “Art for art’s sake”.

Teoryang Siko-Analitika

- Masalimuot ang teorya ni Freud. Sa pinakamadaling sabi, ang panitikan sa kanya ay ang kabuuan ng kamalayan at di-kamalayan: lumalabas dito ang mga bagay na di masasabi o maisusulat ng makata nang tuwiran sa harap ng ibang tao.

Arketipal na Pananaw

- o mitolohikal na oryentasyon. Ito ay isa pang pagdulog na tila kawangis ng sikolohikal na pananaw. Tulad ng sikolohikal na pananaw, nakapako ang atensiyon nito sa paraan ng paglikha at ang epekto nito sa mambabasa. Subalit waring higit na malawak ang larangang sinusuyod ng arketipong pananaw sapagkat buong kalipunan ng mga sagisag at imaheng palagiang lumilitaw sa mga teksto ng pandaigdigang kultura ang pinagpapakuan nito ng masusing pansin.

Teoryang Eksistensiyalismo

- Tulad ng romantisismo, ito ay mahilig sa eksperimentasyon tungo sa “tunay” na buhay at pananalita o ekspresyon. Sinusuri nito ang lahat ng bagay bilang “lived facts”; wala itong dini-diyos at itinuturing na dapat igalang (sacred) maliban sa kalayaan, pagka-responsable at indibidwalismo ng bawat tao – ng manunulat o ng mambabasa. Walang makapagsasabi ng kung alin ang tama o mali, totoo o malikmata, importante o walang silbi, maliban sa taong nakararanas sa pinag-uusapan.

Teoryang Istrukturalismo

- lisa ang simulain ng teoryang ito: ang pagpapatunay na ang wika o lengguwahe, ay hindi lamang hinuhubog ng kamalayang panlipunan kundi humuhubog din sa kamalayang panlipunan. Nakabaon ang panlipunang kamalayan sa paggamit ng wika (social discourse) o paggamit sa mga salita ayon sa mga kinikilalang tuntunin at pagsasapraktikang panlipunan (social conventions).

Teoryang Dekonstruksiyon

- Binibiyang-diin sa teoryang ito ang kamalayan ng manunulat at ng mambabasa bilang mga produkto ng social discourse na nakasulat. Ito ay naangkop sa panitikang nakasulat bilang produkto ng isang tiyak na may-akda na tagapagdala o tagapagingat ng isang tradisyong pang-intelektuwal at pampanitikan. Ang kahulugan ng isang tekto ay nasa kamalayang gumagamit sa teksto, at hindi sa teksto mismo.

Teoryang Moralistiko

- Pinalalagay na ang akda ay may kapangyarihang maglahad o magpahayag hindi lamang ng literal na katotohanan kundi ng mga panghabambuhay at unibersal na mga katotohanan at mga di-mapapawing pagpapahalaga (values). Pinahahalagahan ang panitikan di dahil sa mga partikular na katangian nito bilang likhang-isip na may sinusunod na sariling mga batas at prinsipyo sa kanyang pagiging malikhain, kundi dahil sa mga aral na naidudulot nito sa mga nakikinig o bumabasa.

Teoryang Historikal/Sosyolohikal

- Di teksto bilang teksto ang lubusang pinagtutuunan ng pansin kundi ang kontekstong dito’y nagbigay-daan; hindi ang partikular na kakanyahan lamang ang sinusuri kundi ang mga impluwensiyang dito ay nagbigay-hugis—ang talambuhay ng awtor, ang

politikang sitwasyon sa panahong naisulat ang akda, ang mga tradisyon at kombensiyon na maaaring nakapagbigay sa akda ng mga katangian.

**Marxistang Pananaw**

- Ang panitikan ay tinitignan bilang instrumento ng pagbabago, o bilang behikulo na magagamit upang mabuksan ang isipan ng tao sa kanilang kalagayang api.

**Feministang Pananaw**

- Pinagtutuunan ng pananaw Feminismo ang kalagayan o representasyon ng kababaihan sa isang akda. Layunin nito na baguhin ang mga de-kahong imahen o paglalarawan sa kababaihan sa anumang uri ng panitikan. Layunin ng pananaw na ito na masuri ang mga akdang pampanitikan sa paningin o perspektiba ng babae. Dahil sa matagal na panahon, halos mga lalaki ang nagsusuri kung kaya hindi man maka-lalaki ang pananaw, ay nagtatanghal lamang ng mga nagawa ng kalalakihan.

**Mga Tayutay o Mga Salitang Patalinhaga**

**Tayutay** (Figures of Speech)

- Nagpapaganda sa akda, nagpapalalim sa kaisipan at nagpapayaman sa guniguni ng bumabasa. Ang mga tayutay ay madalas na gamitin sa mga akdang pampanitikan.

1. **Patulad** o **Simile** – paghahambing ng dalawang bagay na magkaiba ng uri (ginagamitan ng salitang para, gaya, katulad, kaparis, at iba pa).

Halimbawa:  
*Para* ng halamang lumaki sa tubig,  
Daho’y nalalanta munting di madilig.

2. **Pawangis** o **Metapora** – paggamit ng salitang nangangahulugan ng isang bagay sa pagpapahayag ng ibang bagay.

Halimbawa:  
Sapagkat ang haring may hangad sa yaman  
*Ay mariing hampas* ng langit sa bayan.

3. **Sinekdoke** – gumagamit ng bahagi sa halip ng kabuuan o ng kabuuan sa halip ng bahagi.

Halimbawa:  
At ang balang *bibig* na binubukalan  
Ng sabing magaling at katotohanan.

4. **Pangitain** o **Vision**

Halimbawa:  
Sa sinapupunan ng Konde Adolfo’y  
*Aking natatanaw si Laurang sinta ko.*

5. **Panawagan** o **Apostrophe** – kagyat na pagtutol sa naunang pagpapahayag at pananawagan sa tao o bagay na wala roon.

Halimbawa:  
*Kamataya’y* nahan ang dating bangis mo?

6. **Pabaligho** o **Paradox** – pahayag na wari’y salungat o laban sa likas na pagkukuro ngunit nagpapakilala ng katotohanan.

Halimbawa:  
*Ang matatawag kong palaya sa akin  
ng ama ko’y itong ako’y pagliluhin  
agawan ng sinta’t panasa-nasaing  
lumubog sa dusa’t buhay ko’y makitil.*

7. **Padamdang** o **Exclamation** – pagbubulalas ng masidhi o matinding damdamin.

Halimbawa:  
Nanlilisik ang mata’t ang ipinagsaysay  
Ay hindi ang ditsong nasa orihinal,  
Kundi ang winika’y *ikaw na umagaw*  
*Ng kapurihan ko’y dapat kang mamatay!*

8. **Pandiwantao** o **Personification** – binibigyang-katauhan ang isang bagay na walang buhay o kaisipang basal (*abstract*).

Halimbawa:  
Parang walang malay *hanggang sa magtago’t*  
*Humilig si Pebo sa hihigang ginto.*

9. **Pahalintulad** o **Analogy** – tambalang paghahambing, pagkakawangki ng mga pagkakaugnay.

Halimbawa:  
Inusig ng *taga* ang *dalawang leon*,  
*si Apolo* mandin sa *Serpyente Piton*.

10. **Enigma** – naikukubli ang kahulugan sa ilalim ng malabong pagtukoy.

Halimbawa:  
Tapat ang puso ko’y di nagunamgunam  
*Na ang paglililo’y nasa kagandahan.*

11. **Papanuto** o **Aphorism** – maikling paglalahad ng isang tuntuning pangkaasalan.

Halimbawa:  
*Kung ang isalubong sa iyong pagdating  
ay masayang mukha’t may pakitang-giliw  
pakaingatan mo’t kaaway na lihim,  
siyang isaisip na kakabakahin.*

12. **Tanong na Mabisa** o *Rhetorical Question*– tanong na naglalayong magbunga ng isang tanging bisa at hindi upang magtamo ng kasagutan.

Halimbawa:  
*Anong gagawin ko sa ganiton bagay  
ang sinta ko kaya’y bayaang mamatay?*

13. **Pagmamalabis** o *Hyperbole* – pahayag na ibayong maindi kaysa katotohanan o lagpas sa maaaring mangyari.

Halimbawa:  
*Bababa si Marte mula sa itaas,  
Sa kailalima’y aahon ang parkas.*

14. **Aliterasyon** – paulit-ulit na tunog ng isang katinig na ginagamit sa mga magkakalapit na salita o pantig.

Halimbawa:  
At sa mga pulong dito’y nakasabog, nangalat, nagpunla.  
Nagsipanahanan, nangagsipamuhay, nagbato’t nagkuta.

15. **Asonansya** – inuulit ang tunog ng isang patinig sa halip ng katinig.

Halimbawa:  
Ang buhay ng tao at sa taong palad,  
Nasa ginagawa ang halaga’y bigat.

16. **Onomatopeya** – pagkakahawig ng tunog ng salita at ng diwa nito.

(1) **Tuwirang onomatopeya** – kapag ginagagad ng ga tunog ng patinig at katinig ang tunog ng inilalarawan ng taludtod.

Halimbawa:  
Ikaw’y iniluwal ng baha sa bundok  
Hahala-halakhak at susutsut-sutsot.

(2) **Pahiwatig na onomatopeya** – kapag ang mga tunog ng patinig at katinig ay hindi gumagagad kundi nagpapahiwatig lamang ng bagay na inilalarawan.

Ayon kay Lope K. Santos, ang ating mga titik ay nag-aangkin ng sari-sariling pahiwatig na kaisipan. Ang A ay nagpapahiwatig ng kalakhan, kalinawan, kalawakan, kalantaran, samantalang ang I ay nagtataglay ng diwa ng kaliitan, labuan, karimlan, kalaliman, kalihiman, at iba pa.

a	–	araw, buwan, ilaw, buwan, linaw, tanghal
i	–	gabi, lilim, lihim, kulimlim, liit, unti, itim
i	-	Ang suot ay puti’y may apoy sa bibig, Sa buong magdamag ay di matahimik, Ngunit ang hiwagang di sukat malirip, Kung bakit sa gabi lamang namamasid.

Mga Uri ng Matalinghagang mga Pananalita

Pahayag Idyomatiko (Idiomatic Expression)

- Isang pariralang ang kahulugan ay di mahahanago sa alinmang bahagi ng pananalita.
- Ang kahulugan ng mga ito ay di bunga ng pagsasama ng kahulugan ng mga salitang bumubuo sa mga ito kundi isang natatanging kahulugang naiiba sa mismong parirala.
- Malayo ang kahulugang literal o tuwirang kahulugan sa kontekstuwal o tunay na kahulugan.
- Matatag na ang pagiging gamitin ng mga pahayag idyomatiko dahil ginagamit na sa mahabang panahon at bahagi na ng talaslaitaan ng bayan.
- Nagpasalin-salin ito sa bibig ng mg tao.

Halimbawa:  
alagang ahas – taksil, walang utang-na-loob, kalawang sa bakal  
gagapang na parang ahas – maghihirap ang buhay, maghihikahos, magiging miserable ang buhay  
parang ahas na kuyog – galit na lahat ang buong angkan sa kagalit ng isa sa kanila  
bagong ahon – baguhan sa pook, bagong salta  
alanganin – bakla, tomboy  
lumilipad sa alapaap – walang katiyakan, alinlangan  
inalat – minalas, inabot ng alat  
pinakain ng alikabok – tinalo sa isang karera ng takbuhan  
nasagap na alimuom – nakuhang tsismis, sabi-sabi, bali-balita, alingasngas

Patayutay na Pananalita ((Figurative Word or Phrase)

- Isang salita o parirala na ang kahulugan ay ipinahihiwatig ng salita o ilan sa mga salita sa parirala.
- Nasisinag ang kontekstuwal na kahulugan sa mga salitang ginagamit.

Halimbawa:  
magulo pa sa sangkuwaltang abaka – masalimuot, napakagulo, nakalilito, walang-walang kaayusan  
abo ang utak – walang pang-intindi, bobo, tanga, mahina ang ulo  
anay – lihim na kaaway  
anak sa labas – anak sa di tunay na asawa, anak sa ibang babae  
parang iniihan ng aso – di mapakali, di mapalagay, balisa  
buhol-babae – mahina o madaling makalas ang pagkakatali, di matatag/matibay  
agawin ang buhay – iligtas ang buhay sa kamatayan  
mag-alsa ng boses – sumigaw (sa galit), magtaas ng tinig  
mabigat ang katawan – masama ang pakiramdam o di maganda ang pakiramdam, tamad

Eupemistikong Pananalita (Euphemistic Expression)

- Pananalitang ipinapalit sa mga salita o pariralang kapag ipinahayag sa tuwirang kahulugan ay nagdudulot ng pagkalungkot o pagdaramdam, pagkarimarim, pagkalagim o ibang di kanais-nais na damdamin sa pinagsasabihan o nakakarinig.

- Ginagawa ang ganitong pagpapalit upang maging kaaya-aya sa pandinig ang pahayag at nang maiwasan ang makasugat ng damdamin ng iba.
- Madalas na ginagamit ang mga eupemistikong pananalita sa mga pahayg kaugnay ng kamatayan, maseselang bahagi ng katawan ng tao at sa malalaswang gawain.

Halimbawa:

Eupemistikong Pananalita	Kahulugan
sumakabilang buhay	
o binawian ng buhay	namatay
pagsisiping o pagtatalik	pag-aasawahan

Practice Test

I. Direksyon: Piliin ang titik ng sagot sa bawat bilang.

1. May prinsipyo si Daves, kaya nang mabalitaan niyang *may tali sa ilong* ang kanyang kaibigan dahil sunud-sunuran sa lahat ng ipinag-uutos ng kanyang hepe, pinangaralan niya ito.
  - a. nasa ilalim ng kapangyarihan
  - b. di makahalata
  - c. kulang ang pagkalalake
  - d. walang iisang salita
2. Ang lihim na kanyang iniingatan ay nabunyang dahil siya ay *nahuli* sa kanyang *sariling bibig*.
  - a. tsismosa
  - b. sa sariling bibig nagmula ang katotohanan
  - c. pagiging totoo
  - d. di marunong magsinungaling
3. Talagang *sakit ng ulo* ang pag-aasawa nang wala sa panahon.
  - a. masasakitin ang ulo
  - b. di nag-iisip
  - c. malaking suliranin o alalahanin
  - d. mahirap isipin
4. Ang taong *may krus sa dibdib* ay pinagpapala ng Diyos.
  - a. maunawain
  - b. mapagmahal
  - c. maka-Diyos
  - d. mapagpatawad
5. Pagdaan ng mga taon, saka mo pa lamang makikita na may *pileges ang noo* mo.
  - a. nagiging batang muli
  - b. nagiging isip-bata
  - c. maraming problema
  - d. matanda na
6. Paano ko maiintindihan ang kanyang ulat, e *bores-ipsis* siya.
  - a. mahina ang bores
  - b. di makarinig
  - c. di marinig magsalita
  - d. a at c
7. Galit ako sa mga istudyante *parang kampana ang bibig* sa loob ng klase.
  - a. tulad ng tunog ng kampana ang bores
  - b. mukhang kampana
  - c. malakas ang bores
  - d. malaki ang bukas ng bibig kung magsalita
8. Bukod sa pagtuturo, nais *ibuhos* ni Miguel *ang isip* sa pagguhit.
  - a. ituon ang isip
  - b. ubusin ang panahon
  - c. mag-isip nang mag-isip
  - d. maging malikhaing
9. Kaya matumal ang paninda mo ay *isang bakol ang mukha mo*. Ngumiti ka naman.
  - a. nakakunot ang noo
  - b. nakangiwi
  - c. malungkot
  - d. nakasimangot
10. *Lumuha* ka man *ng bato*, di na maibabalik ang buhay ng iyong ama.
  - a. matinding panangis
  - b. di makaikyak o makaluha
  - c. di matinag
  - d. wala ng pakiramdam

Direksyon: Basahin at unawain ang tula. Sagutin ang mga tanong.

Hapunan

Nagdiriwang sa hapag ang tatlong payat na tinapa; tinatanuran ng nilagang kamatis na binudburan ng maghapon pagtitiis sa ilalim ng matinding sikat ng araw. Iniingatang may lumusot na butil ng pawis sa awang ng mesang kawayan; biyaya itong hulog ng langit kaya’t dapat pag-ingatan. Hati ang mag-asawa	1
sa nakahaing tinapa. Salit-salitan sa sawawang nilapirot sa asin.	2
Bumukal ang maliliit na butil ng pawis sa noo ng mag-asawang pagal sa pagbubungkal ng lupa.	3
Tahimik na tahimik	4

sa harap ng hapunang pambihira.

11. Anong larawang-diwa ang ipinakita ng tula?
  - a. pagsasama ng mag-asawa
  - b. kahirapan ng buhay
  - c. payak na buhay sa bukid
  - d. pagtitipid ng mga magsasaka
12. *Iniiingatang may lumusot na butil ng pawis sa awang ng mesang kawayan.* Ang butil ng pawis ay nangangahulugan ng/na \_\_\_\_\_.
  - a. pagtiisan ang anumang pagkaing nasa hapag.
  - b. pagpapahalaga sa pagkaing nasa hapag dahil ito ay kanilang pinaghirapan.
  - c. pagiging kuntento sa kung anong mayroon.
  - d. pasasalamat sa biyayang tinanggap.
13. Anong saknong ang nagpapahayag ng positibong pananaw.
  - a. 1
  - b. 2
  - c. 3
  - d. 4
14. Alin sa mga saknong ng binasang tula ang nagpapahiwatig ng pagkakaroon ng pag-asa ng mag-asawa?
  - a. 1
  - b. 2
  - c. 3
  - d. 4

Direksyon: Basahin ang sanaysay. Sagutin ang mga tanong.

Itanghal nga natin ang nasyonalismong Pilipino. Itambal ang diwang malaya, ang sipag sa paggawa at taimtim na pagmamahal sa mga likas at pinaunlad na pamana ng ating mga ninuno. Pagyamanin at pagmalasakitan silang palagi. At huwag limutin na sila ang susing ginto sa tunay na kalayaan at katubusan ng Pilipinas.

Ating tandaan, na sa sandaling ang Pilipinismo’y maging kalangkap ng ating buhay na pang-araw-araw, sa ating mga basar, groseri at pamilihan ay mamumutiktik na ang mga produktong Pilipino at sila ang magiging gamit sa bahay-bahay; hindi na ang mga *made in USA*, *made in Japan* at *made in Germany*. At mangyari pa, mawawala na ang mga sawimpalad na kababayang namumulot sa mga basurahan upang makatawid sa gutom.

#### MATUTUHAN LAMANG NG PILIPINO NA SIYA’Y MAGPAKA-PILIPINO.

##### - Pilipinismo: Susi ng Bayang Tagumpay

ni Amado V. Hernandez

15. Ano ang paksa ng binasang sanaysay?
  - a. Pagtangkilik sa mga produktong Pilipino
  - b. Pagmamalasakit sa pamana ng mga ninuno
  - c. Pagtulong sa mga sawimpalad na Pilipino
  - d. Pagiging makabayan
16. Batay sa binasang sanaysay, ano ang masasabing kalagayan ng lipunang Pilipino?
  - a. Pinagmamalasakitan ang mga ninuno na nakipaglaban upang makamit ang kalayaan ng Pilipinas
  - b. Higit na pagtangkilik sa mga produktong banyaga kaysa mga produktong Pilipino
  - c. Pagkakaroon ng mahihirap na Pilipino na namumulot sa mga basurahan
  - d. Maraming Pilipino ang nagnanais na makapangibang-bansa
17. Ipinaliwanag ng sanaysay na kung ang Pilipinismo’y magiging kalangkap ng pang-araw-araw na buhay ng mga Pilipino, \_\_\_\_\_.
  - a. dadami ang mga produkto gawa ng mga Pilipino.
  - b. mababawasan ang mga Pilipinong kumakalam ang sikmura.
  - c. hindi na aangat ng mga banyagang produkto sa ibang bansa.
  - d. higit na makakamit ang pag-unlad sa buhay ng bawat Pilipino.
18. Ano ang itinuturo ng binasang sanaysay?
  - a. Pagtatanghal ng nasyonalismong Pilipino.
  - b. Itambal ang diwang malaya, ang sipag sa paggawa at taimtim na pagmamahal sa mga likas at pinaunlad na pamana ng ating mga ninuno.
  - c. Pagyamanin at pagmalasakitang palagi silang susing ginto sa tunay na kalayaan at katubusan ng Pilipinas.
  - d. Mawawala na ang mga sawimpalad na kababayang namumulot sa mga basurahan upang makatawid sa gutom.

Direksyon: Basahin ang bahagi ng kuwento. Sagutin ang mga tanong.

Kay Ama niya inihabilin ang paglilibing sa kanya. Dito sa Maynila, sinabi na naman niya. Mag-iisa akong malilibing dito, Tiyo Julio, ngunit gusto kong dito malibing.

“Magdasal ka,” payo ni Ama, “iyang hinanakit mo’y kalimutan mo na. Masama iyang babaunin mo pa ang mga iyan.”

“Mahirap makalimutan, Tiyo Julio. Natatandaan ba ninyo noon, noong maliit ako? Noong hindi ko matagpuan ang libing ni Ama’t Ina? Wala akong mauwian doon, Tiyo Julio. Mag-iisa rin ako.”

Tumungo ang maputing ulo ni Ama; pati siya’y ibig na ring maluha sa sinasabi ni Layo.

“Walang hindi umuuwi sa kanyang bayan. Mayroon nga rian, namamatay sa Amerika, pagkatapos manirahan doon nang kay tagal, ngunit ang huling kahilingan ay ang malibing dito sa atin.”

“Maganda ang sinabi ninyo, Tiyo Julio.”

“Wala ngang hindi umuuwi sa atin, sa kanyang bayan, Layo. Ikaw man ay uuwi rin.”

Lahat ay umuuwi sa kanyang bayan, ibig ko ring sabihin kay Layo. Maaaring narito ka, ngunit ang iyong kaluluwa ay naglalakbay na pabalik doon. Maaaring naging mapait ang kabataan mo roon, ngunit huwag mong sabihing ikaw ay di babalik.

Ngayo’y hindi siya nakatingin sa akin, ni kay Ama, ni kay Ising. Nakatingin siya sa kisame. Nakaangat ang kanyang baba at tila mga mata ng isang bulag ang kanyang mga mata. Alam kong naglalakbay ang kanyang diwa: marahil, nalalaman ko kung saan naglalakbay iyon.

Gusto kong isipin na ngayo’y naglalakbay ang kaluluwa ni Layo patungo sa aming bayan; gusto kong isipin na ngayo’y tila mga tuyong dahon nang malalaglag ang kanyang hinanakit: gusto kong isipin na sa paglalakbay ng kanyang kaluluwa, sa paglalakbay na iyong pabalik, ay nakatatagpo siya ng kapayapaan...

Nalagay sa mga pahayagan ang pagkamatay ni Layo.

Ang sabi sa pahayagan ay ilalagak daw ang kanyang bangkay sa San Roque.

Ang kabaong ni Layo ay isinakay sa isang itim na kotse.

Mula sa Maynila, naglakbay iyon sa mga bayan-bayan.

Tumitigil iyon sa mga bahay-pamahalaan. Nanaog ang nakaunipormeng tsuper at ipinagbigay-alam ang pagdaraan.

Hapon na nang dumating iyon sa San Roque.

Sa San Roque, marami ang naghihintay na makikipaglibing kay Layo.

Naghihintay rin sa kanya ang lupa ng sariling bayan.

- **Sa Lupa ng Sariling Bayan**  
ni Rogelio R. Sikat

19. Ano ang maituturing na kasukdulan ng kuwentong binasa?
- a. Pagsasabi ni Tiyo Julio na ang lahat umuuwi sa sariling bayan
  - b. Pag-uuwi ng bangkay ni Layo sa San Roque
  - c. Paghahabilin ni Layo na ilibing siya sa Maynila
  - d. Pagkikipaglibing ng mga taga-San Roque kay Layo
20. Ang suliranin ng kuwento ay binigyang-solusyon sa pamamagitan ng \_\_\_\_\_.
- a. pagpanaw ni Layo dahil sa kanyang karamdaman.
  - b. pangangaral ni Tiyo Julio
  - c. pag-uuwi ng bangkay ni Layo sa San Roque, ang kanyang sariling bayan
  - d. paglalathala sa pahayagan ng ukol sa pagpanaw ni Layo
21. Ano ang ibig ipakahulugan ng wakas na ito: *Naghihintay rin sa kanya ang lupa ng sariling bayan?*
- a. Lahat ay umuuwi sa kanyang bayan.
  - b. Tanggap pa rin siya ng mga taga-San Roque.
  - c. Pagkakaroon ng lubos na kapayapaan.
  - d. Pagkawala ng hinanakit ni Layo sa San Roque.
22. *Mahirap makalimutan, Tiyo Julio. Natatandaan ba ninyo noon, noong maliit ako? Noong hindi ko matagpuan ang libing ni Ama’t Ina? Wala akong mauuwian doon, Tiyo Julio. Mag-iisa rin ako.* Anong damdamin ang mababakas kay Layo sa mga pahayag niyang ito?
- a. hinanakit
  - b. kalungkutan
  - c. pangungulila sa mga magulang
  - d. pagtatampo
23. Anong katotohanan ng buhay ang mababakas sa binasang kuwento?
- a. Ang mga sugat ay napaghihilom ng panahon.
  - b. Ang pakikiramay ay bahagi ng pakikipagkapwa.
  - c. Lahat ay naghahangad ng isang maayos na libing.
  - d. Walang hindi umuuwi sa sariling bayan.

Direksyon: Basahin ang kuwento. Sagutin ang mga tanong.  
*Opener* ako kinabukasan. Mas gusto kong maging *opener*, kakaunti lang kasi ang kumakain. Karamihan mga nag-oopisina at lagi pang *take out*. Lagi silang mga nagmamadali. Kapag konti ang kumain, konti ang aking lilinisin.

Pero sa kawnter ako napunta. Kahit takot akong humawak ng pera, kailangan kong matutunan ang lahat ng bahagi ng operasyon. Ingat na ingat ako sa pagsusukli dahil kapag nagkulang ang aking benta, kaltas sa sahod ko.

Habang napupuno ng pera ang lalagyan ng benta at wala namang bumibili, inisip ko ang una kong sasahurin. Mamaya, pag-*out* ko, tiyak na may laman na ang ATM ko.

“Siguro konti para sa mga delata’t sabong panligo at panlaba, bayad kay Nanay at ‘yung matitira, baon at pamasah ko,” pagkukwenta ko.

Pagkatapos ng anim na oras, ini-*remit* ko ang benta kay Ma’am Sarri. Naglog-*out* ako at kumain. Minadali ko ang pagkain. Sabik na ‘kong makuha ang aking sahod.

Pinuntahan ko ang bangkong tumatanggap ng ATM ko. Pumasok ako at ipinasok sa *machine* ang kard at agad kong pinindot ang PIN na galing sa pangalan ni Nanay. Habang hinihintay ko ang lalabas sa *screen*, may pumasok. Sa tunog ng kanyang sapatos sa sahig, at sa suot niyang *long-sleeve* at kurbata, halatang nag-oopisina siya. May dalawng machine sa loob. ‘Yung isa ang ginamit niya. Tumunog ang machine na gamit ko.

“Pambihira! Wala pa!” dinig ko sa mamang de-opisina.

Naisip ko, nagiging mabangis pala ang tao kapag nade-*delay* ang sahod. Siguro, tulad ko, malaki rin ang pangangailangan niya. May utang din siyang dapat bayaran.

Gusto kong pagsisipain ang *machine* dahil wala pa rin ang sahod ko. Lumabas na ako’t sumakay na dyip papuntang Quiapo na dadaan sa eskwelahang pinapasukan ko.

Pagkatapos ng klase ko, pumunta uli ako sa bangkong pinuntahan ko kanina. Ipinasok ko ang ATM kard ko at pinindot ang PIN. Parang nag-iisip ang *machine*. At ilang sandali pa, namilog ang aking mata sa aking nakita.

“Sa wakas!”

Nanginginig kong kinuha ang dadaaning sahod ko. Kay sarap tanggapin ang perang pinagpaguran. Di ko na binilang dahil alam kong di ito maaaring magkulang. Matatalino ang mga *machine* na ‘to. Maggo-groseri ako. Pero di pa ‘ko nakakalayo sa bangko, ay may biglang umakbay sa akin.

“Akina! Bilisan mo!” ang mahina ngunit madiin niyang iniutos sa akin.

Mahigpit ang pagkakaakbay niya sa ‘kin. Iginawi niya ako sa madalim na lugar palihis ng Taft Avenue. At saka niya ako tinutukan ng patalim. Di na ‘ko nakapalag.

‘Nung ibinibigay ko ang unang sahod ko, parang ibinibigay kong buung-buo ang sarili ko. Habang papalayo ang holdaper lubusan ko siyang nakilala. Siya ‘yung pumasok kanina sa loob, ‘yung mukhang de-opisina.

Kasabay kong lumuha ng dilim ang buwan. Nagdidilim ang isip ko. Gusto kong biglang mawala na lang.

Sa pag-uwi ko, naalala ko si Nanay. Di ko pa siya mababayaran ngayon. At kailangan ko uling magkaroon ng dagdag na lakas ng loob upang muling mangutang.

- **McDonaldisasyon**

24. Alin sa sumusunod na pangyayari ang kasukdulan ng kuwentong binasa?
  - a. Nang ibinibigay niya sa holdaper ang kanyang unang sahod.
  - b. Nang makuha na niya ang pinakaaasam na sahod na ATM.
  - c. Nang umuwi na siya at maalala ang kanyang Nanay.
  - d. Nang may umakbay sa kanyang holdaper at igawi siya sa madilim na lugar.
25. Sa pag-uwi ko, naalala ko si Nanay. Di ko pa siya mababayaran ngayon. At kailangan ko uling magkaroon ng dagdag na lakas ng loob upang muling mangutang. Ano ang tawag sa bahaging ito ng kuwento kung saan binibigyang solusyon ang suliranin?
  - a. wakas
  - b. kasukdulan
  - c. kakalasan
  - d. suluranin
26. Ano ang ipinahihwatig ng wakas ng kuwento?
  - a. May mga taong maaaring mautangan sa oras ng kagipitan.
  - b. Patuloy na pagkakaroon ng pag-asa sa buhay
  - c. Anuman ang suliraning maranasan, tuloy pa rin ang buhay.
  - d. Walang magulang ang makatitiis sa kanyang anak.
27. *Kasabay kong lumuha ng dilim ang buwan. Nagdidilim ang isip ko. Gusto kong biglang mawala na lang.* Anong damdamin ang mababakas sa pangunahing tauhan sa bahaging ito ng kuwento?
  - a. matinding kabiguan
  - b. panghihinayang
  - c. paghahanap ng katarungan
  - d. kawalan ng pag-asa
28. Anong katotohanan ng buhay ang mababakas sa binasang kuwento?
  - a. May mga pagsubok sa buhay na kailangang harapin.
  - b. Di nakakamit ng mahihirap ang katarungan.
  - c. May mga taong kumakapit sa patalim kapag nagigipit.
  - d. Talamak ang karahasan sa isang lipunang dumaranas ng kahirapan.

Nang makitang walang-kibo ang maysakit, nabuhos ang loob ni Padre Florentino sa isang suliranin at naibulong: “Nasaan ang kabataang dapat mag-alay ng kaniyang kasariwaan, ng kaniyang mga panaginip at sigasig ukol sa kabutihan ng kaniyang Inang Bayan? Nasaan siya na dapat kusang-loob na magbuhos ng kaniyang dugo upang mahugasan ang nakaparaming kahihyan, ang napakaraming pagkakasala, ang napakaraming kasuklam-suklam? Dalisay at walang batik dapat ang alay upang tanggapin ang paghahandog!...Nasaan kayo, mga kabataan, na magsasakatauhan sa sigla ng buhay na tumakas sa aming mga ugat, sa kadalisayan ng pag-iisip na nabulok sa aming mga utak, sa apoy ng sigasig na napugto sa aming mga puso? Hinihintay namin kayo, O mga kabataan! Halikayo, sapagkat hinihintay namin kayo!”

At dahil naramdaman niyang namamasa ang kaniyang mga mata, binitawan niya ang kamay ng maysakit, tumindig, at lumapit sa bintana upang masdan ang malawak na karagatan.

- **El Filibusterismo**

Jose Rizal

Salin ni Virgilio S. Almario

29. Sino ang sinisimbolo ni Padre Florentino sa kasalukuyang panahon?
  - a. mga gurong nagtuturo ng kasaysayan
  - b. matandang nawawalan ng pag-asa
  - c. pangulo ng Pilipinas
  - d. mga Pilipinong hangad ay pagbabago
30. Ang maysakit sa binasang bahagi ng El Filibusterismo ay sumisimbolo sa \_\_\_\_\_.
  - a. mga Pilipinong nawalan ng pag-asa.
  - b. sakit ng lipunang Pilipino.
  - c. bigong paghihimagsik ng mga bayani
  - d. mga Pilipinong nagbuwis ng buhay
31. Alin sa sumusunod na teorya ang mababakas sa binasang bahagi ng El Filibusterismo?
  - a. Humanismo
  - b. Eksistensyalismo
  - c. Realismo
  - d. Romantesismo

Direksyon: Tukuyin ang simbolo ng lupa sa sumusunod na saknong ng tula.

Di na ako yaoang basal na bahagi ng daigdig,

Kundi lupang nalinang na ng kalabaw at ng bisig;

Ang datihang pagka-gubat ay hinawan at nalinis.

- Lope K. Santos, Ako’y si Bukid

32. Ang lupa sa tula ay sumisimbolo sa \_\_\_\_\_.
  - a. kabataan
  - b. kasaganaan
  - c. kabuhayan

d. bayan  
Aling pag-ibig pa ang hihigit kaya  
Sa pagkadalisay at pagdakila  
Gaya ng pag-ibig sa tinubuang lupa?  
Aling pag-ibig pa? Wala na nga, wala.

- Andres Bonifacio, Pag-ibig sa Tinubuang Lupa

33. Ang lupa sa tula ay sumisimbolo sa \_\_\_\_\_.  
a. kabataan  
b. kasaganaan  
c. kabuhayan  
d. bayan

Nakayapak, mahilig tayong tumahal sa lupa.

Lupang mahalumigmig, malambot, marangay.

- Lamberto E. Antonio, Lupa

34. Ang lupa sa tula ay sumisimbolo sa \_\_\_\_\_.  
a. kabataan  
b. kasaganaan  
c. kabuhayan  
d. bayan

35. *Noong sumiklab ang Ikalawang Digmaang Pandaigdig, sumapi si Ka Amado sa mga gerilya bilang Intelligence Officer. Pagkatapos ng giyera, nagsimula ang kanyang pagkilos bilang lider-manggagawa.*

Anong uri ng panandang diskurso ang mga nakahilig na salita?

- a. komparison at kontras  
b. enumerasyon  
c. order o pagkakasunud-sunod  
d. sanhi at bunga

36. Di na naituturo nang maayos ang mga asignaturang tulad ng Araling Panlipunan ay babawasan pa ang oras ng pagtuturo nito. *Kung kaya* di nakapagtataka na ang mga istudyante ay nagiging pasibo sa mga usapin sa eskwela at sa lipunan.

Anong uri ng panandang diskurso ang mga nakahilig na salita?

- a. komparison at kontras  
b. enumerasyon  
c. order o pagkakasunud-sunod  
d. sanhi at bunga

Direksyon: Basahin ang sumusunod na talata. Tukuyin kung anong uri ng teksto ang mga ito.

Nagkaroon ako ng pasyenteng bata na ang amoy ng sipon ang inirereklamo ng ina. Ayon sa ina, mabaho raw ang sipon ng bata (hindi mabaho ang karaniwang sipon). Nang sinilip ko ang loob ng butas ng ilong, nakita ko ang waring piraso ng tela na nakasukso doon. Malalim na ang pagkakabaon nito sa loob ng ilong. Nang makuha ko ito, nagulat ako na foam pala ito ng sifa na unti-unting ipinasok ng bata sa loob ng ilong hanggang sa mapipi ito doon.

- Luis P. Gatmaitan, MD

37. Ang talata ay isang uri ng tekstong \_\_\_\_\_.  
a. descriptiv  
b. informativ  
c. narativ  
d. informativ

Ang kompyuter ay produkto ng makabagong teknolohiya. Ito ay isang elektronikong kasangkapan na ginagamitan ng kuryente. Binubuo ito ng tatlong mahahalagang bahagi: monitor, keyboard, at CPU (central processing unit). Tumutulong ito sa tao upang mapadali ang pagmamanipla ng mga datos.

- Ligaya Tiamson Rubin

38. Ang talata ay isang uri ng tekstong \_\_\_\_\_.  
a. descriptiv  
b. informativ  
c. narativ  
d. informativ

*Taong 2001*, bigla na lamang naglaho si Danny at walang makapagsabi kung saan siya naroon. Hinanap siya ng mga kamag-anak at kakilala. Buong Mindanao ay hinagilap siya subalit walang balitang nakalap tungkol sa kanya. *Hanggang isang araw*, may isang taong sumulpot at ibinalitang nakakulong si Danny sa Malaysia dahil sa salang pagpupuslit ng tao patungong Sabah.

39. Ang talata ay isang uri ng tekstong \_\_\_\_\_.  
a. descriptiv  
b. informativ  
c. narativ  
d. informativ

40. Isang tuntunin o kautusang kinikilala at pinagtibay ng karanasan at nauugnay lalung-lalo na sa mga bagay at kapakanang maaaring mangyari o may kahalagahan sa buhay. Nagsilbing batas at tuntunin ng kagandahang-asal ng mga tao.

- a. salawikain  
b. kawikaan  
c. kasabihan  
d. lahat ito

41. Alin sa sumusunod ang mali?  
a. buk-san  
b. kop-ya  
c. to-kwa



- d. kap-re
42. Alin sa sumusunod ang tama?
  - a. sob-re
  - b. ek-spe-ri-men-to
  - c. trans-krips-yon
  - d. ek-sklu-si-bo
43. Ang yosi, boylet, jologs ay mga halimbawa ng anong kategorya ng wika?
  - a. literari
  - b. kolokyal
  - c. lalawiganin
  - d. balbal
44. Ito ay itinuturing na mahalagang ambag sa palatunugang Filipino. Ang tunog na ito ay maaaring nasa unahan, gitna at hulihan ng posisyon.
  - a. N
  - b. NG
  - c. C
  - d. F
45. Alin sa sumusunod ang mali?
  - a. Ang alpabetong Filipino ay binubuo ng 28 letra.
  - b. Sa 28 letra ng alpabeto, 20 letra ang nasa dating ABAKADA.
  - c. 8 letra ang dagdag sa alpabetong Filipino.
  - d. Ang lahat ng letra sa alpabetong Filipino ay binibigkas nang pa-Ingles.
46. Ito ay mga salitang may pekulyaridad at sa isang lalawigan lamang naririnig.
  - a. kolokyal
  - b. literari
  - c. balbal
  - d. lalawiganin
47. Filipino ang ating pambansang lingua franca
  - a. ginagamit mong wika sa klase
  - b. ginagamit mong wika sa pakikipag-usap sa mga piling tao
  - c. wikang komon na ginagamit ng dalawang taong nag-uusap na magkaiba ang katutubong wika
  - d. wika sa pang-araw-araw na buhay
48. Kinikilala ng Estado bilang pundasyon ng isang matatag na bansa.
  - a. Wikang Pambansa
  - b. Pamilya
  - c. Edukasyon
  - d. Mag-asawa
49. Romantikong kuwento ng pag-ibig at digmaan ng mga Ifugao na inaawit ng kababaihan.
  - a. Aliguyon
  - b. Hudhud
  - c. Ulpit
  - d. Mumbaki
50. Alinsunod sa tadhana ng batas at sang-ayon sa nararapat sa maaaring ipasya ng Kongreso, dapat magsagawa ng mga hakbangin ang \_\_\_\_\_ upang ibunsod at puspusang itaguyod ang paggamit ng Filipino.
  - a. akademya
  - b. lipunan
  - c. pamahalaan
  - d. mamamayan
51. Ito ay isang uri ng tekstong naglalarawan ng isang biswal na konsepto tungkol sa tao, bagay, pook, o pangyayari. Maaaring nagbibigay rin ito ng mas malalim na paglalarawan sa kabuuan ng bagay o ng isang pangyayari.
  - a. informativ
  - b. deskriptiv
  - c. narativ
  - d. argumentativ
52. Ang isang teksto ay \_\_\_\_\_ kung ito ay naglalahad lamang ng isang mahalagang pagkukuro, paniniwala o pananaw. Di ito humihikayat sa mambabasa upang tanggapin ang mga patotoo ukol sa isang pananaw.
  - a. informativ
  - b. deskriptiv
  - c. narativ
  - d. argumentativ
53. \_\_\_\_\_ ang teksto kung nagtataglay ito ng mahahalaga at tiyak na impormasyon tungkol sa mga tao, bagay, lugar at pangyayari.
  - a. informativ
  - b. deskriptiv
  - c. narativ
  - d. argumentativ
54. Hindi, makakapunta si Lee sa ating pulong mamaya.
  - a. di makakapunta si Lee sa pulong
  - b. makakapunta si Lee sa pulong
  - c. di siguradong darating si Lee
  - d. nakapunta na si Lee sa pulong
55. Pagsunud-sunurin ang sumusunod ayon sa tuntunin sa paghihiram.
  1. Bigkasin sa orihinal na anyo ang hiniram na salita mula sa Kastila, Ingles at iba pang wikang banyaga, at saka baybayin sa Filipino.
  2. Gamitin ang kasalukuyang leksikon ng Filipino bilang panumbas sa mga salitang banyaga.
  3. Kumuha ng mga salita mula sa iba't ibang katutubong wika sa bansa.
    - a. 1,2,3
    - b. 2,3,1
    - c. 3,1,2
    - d. 3,2,1

## II. Direksyon: Piliin ang titik ng sagot sa bawat bilang.

1. Madali kasi siyang *napakagat sa pain*.
  - a. naloko
  - b. napakain
  - c. napahanga
  - d. napaniwala
2. Madali nilang nakamit ang tagumpay, *magkataling-puso* kasi sila.
  - a. magkaibigan
  - b. magkasundo
  - c. mag-asawa

- d. magkakilala

3. Di niya matanggap ang *kasawiang-palad* na inabot ng kanyang pamilya.

a. aksidente

b. kamalasan

c. naputulan ng kamay

d. nawalan ng suwerte

4. Magkasundung-magkasundo sila sa lahat ng bagay, pano’y *kumakain sila sa iisang pinggan*.

a. magkaibigan

b. ayaw maghugas ng pinggan

c. magkasundo

d. magkasama sa iisang bahay

5. Umuwi siya isang gabi na parang *lantang bulaklak*.

a. walang lakas

b. hinang-hina

c. nawalan ng puri

d. nanlalata

6. Di dapat silang magsama dahil sila ay parang *langis at tubig*.

a. may sama ng loob

b. di magkasundo

c. mainit ang dugo sa isa’t isa

d. magkaaway

7. Ayaw kong maniwala na kaya nakakuha siya ng mataas na marka sa pagsusulit ay dahil *dinuktor* ito ng iba.

a. minalian

b. winasto kahit mali

c. inayos sa pamamagitan ng pandaraya

d. ipinawasto sa iba

8. Talagang *tabla ang mukha* mo. Di mo man lang inisip na ako ang nagpasok sa iyo sa trabaho. Bakit mo ako siniraan sa ating Boss?

a. walang munti mang kahihiyan

b. mukhang tabla ang mukha

c. mahiyain

d. walang utang na loob

9. Kaya nagmamagandang-loob si Paulo ay dahil *naghuhugas* siya ng *kamay*. Huwag mo siyang paniwalaan.

a. takot magkaroon ng kasalanan sa ibang tao

b. nagbabayad ng kasalanan sa isang tao

c. humihingi ng patawad nang di-tahasan

d. umiiwas magkaroon ng pananagutan sa isang naganap na pangyayari

10. Ngayon lang ako nakakita ng labanang *ngipin sa ngipin*.

a. walang ayawan

b. ubusan ng lahi

c. gantihan nang ubos-kaya

d. lakas sa lakas

Direksyon: Basahin at unawain ang tula. Sagutin ang mga tanong.

SA TABI NG DAGAT

ni Ildefonso Santos

Marahang-marahang1

manaog ka, Irog at kita’y lalakad,  
maglulunoy kitang  
payapang-payapa sa tabi ng dagat;  
di na kailangang  
sapinan pa ang paang binalat-sibuyas,  
ang dating garing  
sa sakong na wari’y kinuyom na rosas!

Manunulay kita,2

habang maaga pa, sa isang pilapil  
na nalalatagan  
ng damong may luha ng mga bituin...  
patiyad na tayo’y  
mangaghahabulang simbilis ng hangin,  
ngunit walang ingay,  
hanggang sumapit sa tiping buhangin...

Pagdating sa tubig,3

mapapaurong kang parang nangingimi,  
gaganyakin kita  
sa nangaroong mga lamang-lati;  
doon ay may tahong,  
talaba’t halaang kabigha-bighani,  
hindi kaya natin  
mapuno ang buslo bago tumanghali?

Pagdarapit-hapon4

kita’y magbabalik sa pinanggalingan,  
sugatan ang paa  
at sunog ang balat sa sikat ng araw!  
Talagang ganoon...  
Sa dagat man, Irog, ng kaligayahan,  
lahat, pati puso,  
ay naagnas ding marahang-marahan...  
1932

11. Anong larawang-diwa ang ipinakita ng tula?
- a. pangingisda
- b. pagsusuyuan

- c. pag-iibigan
  - d. paghihirap
12. *Di na kailangang sapinan pa ang paang binalat-sibuyas. Ano ang kahulugan ng paang binalat-sibuyas?*
- a. maselan
  - b. may-kaya
  - c. babae
  - d. delikado
13. Anong saknong ng tula ang nagbibigay ng positibong pananaw sa nagbabasa?
- a. 1
  - b. 2
  - c. 3
  - d. 4
14. Alin sa sumusunod na taludtod ng tula ang nagpapakita ng kagandahan?
- a. sakong na wari’y kinuyom na rosas
  - b. sa isang pilapil na nalalatagan ng damong may luha ng mga bituin
  - c. sugatan ang paa at sunog ang balat sa sikat ng araw
  - d. sa dagat man, Irog, ng kaligayahan, lahat, pati puso, ay naaagnas ding marahang-marahan

Direksyon: Basahin ang sanaysay. Sagutin ang mga tanong.

Ikalat natin ang aral at kaisipan ni Balagtas. Itanghal natin siya sa kanyang dapat kalagyan. Siya ang idolo ni Rizal, Mabini, Bonifacio at ng iba pang mga bayani, ang naging bukal ng kanyang panulat at pakikibaka. Kaya dapat din siyang kilalanin at itanghal, bungkalin at basahin ang iba pa niyang mga akda. Ipabasa natin sa ating mga kaibigan ng magagandang saknong sa *Florante at Laura*. Sumulat tayo ng mga artikulo tungkol kay Balagtas at ipalathala ito sa mga magasin. Magkaroon ng pagkakataon ang mga hindi Tagalog o ang ibang lahi na makilala siya, tulad ng mga dakilang makata sa daigdig. Kailangan nating maipakilala si Balagtas sa buong bansa at sa buong daigdig. Gumawa ng mga *sticker, tarpaulin*, at iba pa, ng magagandang linya buhat sa kanyang awit upang ipaskil o idikit sa mga paaralan, pampasaherong dyip, bus, FX, pedicab, sa mga *waiting shed, mall*, tambayan, tindahan, palengke, at iba pa o maging palamuti ng mga *mug, t-shirt, sombrero*, at iba pang ating malimit na isinusuot. Ipabasa sa mga programa sa telebisyon at radyo ang ilan sa mga linya o bahagi ng kanyang mga akda. At kung maaari ay maging isang teleserye o fantaserye ang *Florante at Laura*, tiyak na hahakot ito ng *rating*. Pero higit pa sa mga ito, kailangan nating isabuhay ang mga sinabi ni Balagtas. Ang mga pag-alaala sa kanya tuwing Abril 2 at ang pagsasagawa ng Balagtasan tuwing Buwan ng Wika ay hindi dapat maging pabalat bunga lamang. Kailangan nating siyang basahin. Kailangang maisapanahon ang paraan ng paggunita sa kanya lalo na sa ngayong panahon ng makabagong teknolohiya.

- **Ang Awit na Florante at Laura sa Aking *Ipod* at Si Francisco Balagtas sa Aking *Desktop***

15. Ano ang paksa ng binasang sanaysay?
- a. Pagkakalat ng mga gintong kaisipan ni Balagtas
  - b. Pagkilala kay Francisco Balagtas Baltazar
  - c. Pagkalimot sa mga aral ni Balagtas
  - d. Pagpapakilala sa masang Pilipino si Balagtas
16. Alin sa sumusunod na kaisipan sa sanaysay ang maiuugnay sa lipunan?
- a. Isapanahon ang paraan ng paggunita kay Balagtas lalo na ngayong panahon ng makabagong teknolohiya.
  - b. Isabuhay ang mga sinabi ni Balagtas para sa mga kabataan.
  - c. Ang mga pag-alaala kay Balagtas tuwing Abril 2 ay hindi dapat maging pabalat bunga lamang.
  - d. Si Balagtas ang idolo ni Rizal, Mabini, Bonifacio at ng iba pang mga bayani.
17. Alin sa sumusunod na pahayag ang nagpapaliwanag kung bakit dapat pahalagahan si Balagtas?
- a. Ikalat natin ang aral at kaisipan ni Balagtas dahil siya ang idolo ni Rizal, Mabini, Bonifacio at ng iba pang mga bayani, ang naging bukal ng kanilang panulat at pakikibaka.
  - b. Ang pag-alaala sa kanya tuwing Abril 2 at ang pagsasagawa ng Balagtasan tuwing Buwan ng Wika ay hindi dapat maging pabalat bunga lamang.
  - c. Kailangan nating siyang basahin.
  - d. Kailangang maisapanahon ang paraan ng paggunita sa kanya lalo na sa ngayong panahon ng makabagong teknolohiya.
18. Alin sa sumusunod na pahayag ang nagtuturo?
- a. Kailangang maipakilala si Balagtas sa buong bansa at sa buong daigdig.
  - b. Ipabasa sa mga programa sa telebisyon at radyo ang ilan sa mga linya o bahagi ng kanyang mga akda.
  - c. Maging isang teleserye o fantaserye ang *Florante at Laura*.
  - d. Kailangang maisapanahon ang paraan ng paggunita sa kanya lalo na sa ngayong panahon ng makabagong teknolohiya.

Direksyon: Basahin ang kuwento. Sagutin ang mga tanong.

“Nung gabi, sa gilid ng isang tindahang sarado kami nahiga ni Tatay. Di ako makatulog. Kahit anong gawin ko, di pa rin ako makatulog. Iniisip ko ang aming bahay, ang aming mga gamit. Ang dalawa naging pinggan at baso, ang aming kutsara’t platito, ang aming kaldero’t takure, ang kahon ng aming damit, ang boteng makulay at pati ang mga piktyur.

Paggising namin, walang mainit na kape, walang mainit na pandesal.

Sa buong maghapon, nagkargador si Tatay. Pagkatapos na maibaba ang lahat ng gulay, mga karne naman, mga damit, mga tela, mga bihon at harina, mga mantel, batya at palanggana. Kaya paghapon na, hapung-hapo si Tatay. Ako, naiiwan muna sa harap ng simbahan. Tapos ganon uli kinabukasan. Magkakargador uli si Tatay at maiiwan uli ako sa harap ng simbahan.

“Wag kang lalayo, pag-uwi ko, masarap na tukneneng ang pasalubong ko sa ‘yo,” ang bilin lagi sa akin ni Tatay.

Pero iniisip ko pa rin ang aming may gulong na bahay. Mabawi pa kaya namin ni Tatay ang aming may gulong na bahay?

At isang hapon, laging gulat ko nang iparada ni Tatay sa aking harapan ang aming may gulong na bahay. Isang drayber na uli ang aking Tatay. Nabawi na rin namin ang aming bahay. Isa-isa kong tinignan ang aming mga gamit.

“Sa wakas!” ang nasigaw ko.

Pinasakay ako ni Tatay sa aming bahay at saka niya ito minaneho patungo sa aming pinagliliiguan. Inalis namin ang aming mga gamit at saka inisis ni Tatay ang loob at labas, ako naman sa manibela. Sinabon at saka binihusan ng tubig. Tapos naging matingkad na asul ang aming bahay.

“Ang bangong higaan!” ang nasabi ko.

Mula noon, lagi kong binabantayan ang aming bahay. Ako na rin ang nagpapaalala kay Tatay kung bawal itong iparada sa gilid ng kalsada.

Tuwing gabi, di pa rin nauubos ang mga kwento ni Tatay tungkol sa mga may gulong na bahay.

At habang nakahiga kami sa mabangong higaan at natatanaw ang malawak na langit, ay sinabi ni Tatay, “Ngayon, aking Bunso, hinding-hindi na mahihiwalay sa atin ang ating munting bahay, ang ating mabango at may gulong na bahay.”

Habang bumababa ang mga asul na asul na ulap.

- **May Gulong na Bahay**

19. Batay sa iyong binasa, ano sa palagay mo ang kasukdulan ng kuwento?  
a. Nang matulog ang mag-ama sa gilid ng isang tindahang sarado  
b. Nang magkargador ang ama upang makaipon ng pambawi ng kanilang bahay  
c. Nang mawala ang bahay na kariton ng mag-ama  
d. Nang iparada ng ama ang kanilang may gulong na bahay sa karapan ng bata
20. Paano binigyang solusyon ang suliranin ng kuwento?  
a. Paghihintay ng anak sa kanyang ama  
b. Pagkakargador ng ama upang kumita  
c. Pagpupunyagi ng ama na mabawi ang kanilang bahay  
d. Pangangako ng ama sa kanyang anak na mababawi nila ang kanilang bahay
21. Ano ang ibig ipakahulugan ng: *Habang bumababa ang mga asul na asul na ulap* bilang wakas ng kuwento?  
a. Lahat ng problema ay nabibigyang-solusyon.  
b. Hindi dapat mawalan ng pag-asa.  
c. Maging kuntento sa kung ano ang mayroon.  
d. Ang kaligayahan ay hindi matatamo sa mga materyal na bagay.
22. *Di ako makatulog. Kahit anong gawin ko, di pa rin ako makatulog. Iniisip ko ang aming bahay, ang aming mga gamit. Ang dalawa naging pinggan at baso, ang aming kutsara’t platito, ang aming kaldero’t takure, ang kahon ng aming damit, ang boteng makulay at pati ang mga piktyur.* Anong damdamin ang mababakas sa batang nagkukuwento sa mga pahayag niyang ito?  
a. panlulumo  
b. pagkabalisa  
c. panghihinayang  
d. pagkalungko
23. Anong katotohanan ng buhay ang mababakas sa binasang kuwento?  
a. Mahalaga ang bahay sa bawat bata.  
b. Tungkulin ng magulang na ipagkaloob sa mga anak ang maayos na buhay.  
c. May mga taong kuntento sa kung anong mayroon sila.  
d. Di dapat husgahan ang mahihirap.

Direksyon: Basahin ang kuwento. Sagutin ang mga tanong.

“Okey lang,” sabi niya sa sarili. “Sino ba si Eric? Nobyo lang na hanggang ngayo’y nagdedepende pa rin sa magulang. Okey lang.”

Naghihimagsik ang kanyang damdamin. Parang sasabog ang kanyang dibdib. A, kung mapaghihingahan lamang niya ng sama ng loob ang mga libro. Kung malulutas lamang ng *psychology books* ang kanyang suliranin. Mangyari, kahit anong pag-iwas ang kanyang gawin, si Eric pa rin ang laman ng kanyang isipan. Kahit ngayong nasa *library* siya. Wala sa sariling tinitigan ang hlera ng mga libro sa kabinet. Kanina’y memoryado niya ang *call number* ng librong hinahanap. Mangyari’y makalawang ulit na siyang nagpabalik-balik sa *card catalogue*. Isinulat sa kapiрасong papel ang *call number*, ang pamagat ng libro at ang may-akda. Minemorya. Pero nang malingunan kanina si Eric, kinabahan. Namutla. Di makatinag. Matigas ang leeg na itinuon ang paningin sa hlera ng mga libro. Nasa likuran niya si Eric, at sa minsang paggalaw niya, presto! A, bakit ba ganoon? Kung sino ang iniawasan mo ay siya mong nakikita?

Brag! Nahulog ang hawak niyang libro. Di naman niya makuhang pulutin. Baka lumingon si Eric.

“Gie!” tawag mula sa kanyang likuran.

Kilala niya ang tinig. Bumilis ang tibok ng kanyang puso. Bago nakaiwas, nasa harapan na niya si Eric. Iniabot ang nahulog na aklat.

“Namatanda ka ba? Naengkanto? *Why don’t you speak up?*” Hinahabol ni Eric ang paghinga. “Ang labo mo naman, Gie. *Library* ‘to. Puwede mo naman akong kausapin, di ba?” Napalakas ang tinig ni Eric.

K-R-I-N-G! *Bell* iyon ng *librarian*. Napalingon sila sa mesa ng istriktong puno ng *library*. Itinuro ng *librarian* ang malaking *sign board*: SILENCE.

Napahiya wari, nagkatinginan sila. Si Gie ang unang umiwas. Pilit iniwas ang mukha sa binata.

Dati-rati, sa ganoong pagkakataon, lalo nilang iniinis ang masungit na *librarian*. Naroong magsenyasan sila na animo mga piping nag-uusap. O di naman kaya’y tutop ng kaliwang palad ang kanilang bibig hanggang sa sila’y umalis. At sa labas, sabay silang magtatawanan. Pero ngayon, parang pinitpit na luya si Gie. Walang kibo, isang bakol pa ang mukha. A, kabisado na niya ng dalaga. Ang pagmamaktol nito’y nangangahulugan galit sa kanya si Gie.

- **OKEY SA ‘YO SI ERIC, ‘TAY?**  
ni Pat V. Villafuerte

24. Alin sa sumusunod na pangyayari ang kasukdulan ng kuwentong binasa?  
a. Paghihimagsik ng damdamin ni Gie.  
b. Nang sitahin sila ng istriktong *librarian*.  
c. Nang mahulog ang hawak na libro ni Gie.  
d. Nang marinig niya ang isang pamilyar na tinig.
25. Bakit sinita ng *librarian* sina Gie at Eric?  
a. Bawal ang mag-usap sa loob ng *library*.  
b. Nakakaistorbo sila sa ibang estudyante.  
c. Bawal ang maingay sa loob ng *library*.  
d. Di nila sinusunod ang nakapaskil na *sign board*.
26. Ano ang ipinahihiwatig ng huling bahagi ng kuwento?

- a. Galit si Gie sa mahigpit na *librarian*.
  - b. May tampo si Gie kay Eric.
  - c. Napahiya nang labis si Gie.
  - d. Naguguluhan si Gie.
27. *Naghihimagsik ang kanyang damdamin. Parang sasabog ang kanyang dibdib.* Anong damdamin ang mababakas kay Gie sa bahaging ito ng kuwento?
- a. paghihimagsik
  - b. panghihinayang
  - c. matinding pag-ibig
  - d. sama ng loob
28. Anong katotohanan ng buhay ang mababakas sa binasang kuwento?
- a. Di dapat seryosohin ang unang pag-ibig.
  - b. Piliin ang wastong lugar sa pag-uusap.
  - c. Walang pinipili ang pag-ibig.
  - d. Di maitatago ang tunay at wagas na damdamin.

At si Donya Victorina, ang tanging babaeng nakaupo sa piling ng mga Europeo, ang makapagsasabi kung tamad ang Tabo, matigas ang ulo, at sumpungin. Nerbiyosang tulad ng dati, nilalait ni Donya Victorina ang mga kasko, bangka, balsang niyog, ang mga namamangkang Indio, at pati ang mga naglalaba at mga naliligo na ikinayayamot niya ang katuwaan at tawanan. Oo nga, maaaring bumuti ang takbo ng Tabo kung walang mga Indio sa ilog, walang mga Indio sa bayang ito! Oo nga, kung wala na kahit isang Indio sa mundong ito. Nawala sa isip niya na pawang mga Indio ang nagtitimon, Indio ang mga marino, Indio ang mga makinista, Indio ang siyamnapu't siyam na bahagi ng mga pasahero, at isa rin siyang Indio kung kakayurin ang kulapol niya sa mukha at huhubarin ang mayabang niyang damit.

- **El Filibusterismo**  
Jose Rizal

Salin ni Virgilio S. Almario

29. Sino ang sinisimbolo ni Donya Victorina sa kasalukuyang panahon?
- a. Pilipinong nagsisilbi sa ibang bansa
  - b. Pilipinong banyaga sa sariling bayan
  - c. Pilipinong walang pagmamahal sa sariling bayan
  - d. Pilipinong may *colonial mentality*
30. *Oo nga, maaaring bumuti ang takbo ng Tabo kung walang mga Indio sa ilog, walang mga Indio sa bayang ito!* Ang Tabo ay maaaring sumimbolo sa \_\_\_\_\_.
- a. mga Pilipino
  - b. bansang Pilipinas
  - c. mahabang kasaysayan ng pananakop
  - d. ekonomiya
31. Alin sa sumusunod na teorya ang mababakas sa binasang bahagi ng El Filibusterismo?
- a. Humanismo
  - b. Eksistensyalismo
  - c. Realismo
  - d. Romantesismo

Direksyon: Tukuyin ang simbolo ng lupa sa sumusunod na saknong ng tula.

Hindi ko na ibig na maging halaman

na namumulaklak ng may bango't kulay.

At sa halip nito'y ibig ko na lamang

Maging lupa ako't magsilbing taniman.

- David T. Mamaril, Lupa at Halaman

32. Ang lupa sa tula ay sumisimbolo sa \_\_\_\_\_.
- a. kamatayan
  - b. buhay
  - c. pagsamba sa Diyos
  - d. kabataan

Nakalaan akong

malamay:

lupa ang simula ng lahat ng bagay,

diyan din sisibol

ang binhi ng baging pag-asa at buhay.

- Amado V. Hernandez, Lupa

33. Ang lupa sa tula ay sumisimbolo sa \_\_\_\_\_.
- a. kamatayan
  - b. buhay
  - c. pagsamba sa Diyos
  - d. kabataan

Sa maghapon, tatlong ulit yumukod

Ang kaniyang palaspas pahalik sa lupa

- Rio Alma, Sa Panahon ng Babaylan

34. Ang lupa sa tula ay sumisimbolo sa \_\_\_\_\_.
- a. kamatayan
  - b. buhay
  - c. pagsamba sa Diyos
  - d. kabataan

Direksyon: Punan ng panandang diskurso ang mga patlang sa talata.

Isang kasunduan ang nilagdaan namagbibigay ng dagdag ng karapatan at benepisyo sa mga Overseas Filipino Worker (OFW) sa Timog Korea. Ang kasunduan ay nilagdaan ng mga kinatawan ng Pilipinas at Timog Korea. Sa ilalim ng kasunduan, ang mga OFW sa Timog Korea ay magkakaroon ng karagdagang benepisyo \_\_\_\_\_ ang industrial accidents insurance, medical insurance, at employment insurance.

35. Anong panandang diskurso ang dapat ilagay sa patlang?
- ang mga halimbawa
  - kabilang dito
  - ang apekto
  - tulad ng

Magkakaroon ang Kalakhang Maynila ng krisis sa basura sa susunod na dalawang taon. Ito ang naging babala ng Metro Manila Development Authority (MMDA). At upang maiwasan ito, \_\_\_\_\_ nang maghanap ang MMDA ng iba pang tapunan ng basura sakaling mapuno na ang mga kasalukuyang tapunan ng basura. \_\_\_\_\_ ay ang paghihikayat sa mga mamamayan na iwasan ang pagtatapos ng basura sa mga ilog at pampublikong lugar.

36. Anong mga panandang diskurso ang dapat ilagay sa mga patlang?
- una, Ikalawa
  - noon, Ang sumunod
  - sinimulan, Pagkatapos
  - bago, Nang lumaon

Direksyon: Basahin ang sumusunod na talata. Tukuyin kung anong uri ng teksto ang mga ito.

Nagbago ang mukha ng Tondo. Tapos na raw ang masasayang araw ng mga “halang ang kaluluwa” dahil ang mga dating siga, ngayon ay nagtataguyod na ng mga proyekto para sa mga kabataan. Ito raw ay para makaiwas sa mga rambol at droga. Pero sa paglilinis ng Tondo sa kanyang imahe, may ilang lugar naman sa Metro Manila ang tila nanganganak ng bagong pugad ng mga siga.

37. Ang talata ay isang uri ng tekstong \_\_\_\_\_.
- informativ
  - descriptiv
  - narativ
  - ekspositori

Layunin ng 13 bansa sa Asta sa inilunsad na Asian Environmental Compliance Network (AECEN), kasama ang Pilipinas na isulong at pagtibayin ang pagpapatupad at pagpapasunod sa mga batas pangkalikasan. Isa itong napakagandang simulain ng isang ugnayang makapagsasaayos ng mga problemang dulot ng pagkasira ng ating mga likas-yaman.

38. Ang talata ay isang uri ng tekstong \_\_\_\_\_.
- informativ
  - descriptiv
  - narativ
  - ekspositori

Sa isang Parliamentary System, ang namumuno sa gobyerno (ang tawag sa kanya ay Prime Minister o Premier) ay di direktang hinahalal ng mamamayan. Sa sistemang ito, ang mga mamamayan ay naghahalal muna ng mga kasapi ng Parliament. Ang mga kasapi naman ng Parliament ang maghahalal ng Prime Minister. Ang Prime Minister, kasama ang kanyang gabinete na pipiliin din niya mula sa mga kasapi ng Parliament, ang siyang magpapakatibay ng gobyerno. Kadalasan, ang pinuno ng partidong may pinakamaraming nanalo sa Parliament ang siyang pinipiling Prime Minister.

39. Ang talata ay isang uri ng tekstong \_\_\_\_\_.
- informativ
  - descriptiv
  - narativ
  - ekspositori
40. Ito ay pagsasagawa ng plano, pamamaraan, patakaran o batas upang magkaroon ng isang pamantayan sa paggamit ng alpabetong Filipino.
- intelektwalisasyon
  - pagsasalin
  - instandardisasyon
  - ispeling
41. Kailangang itaas ang antas ng wikang Filipino upang magamit ito sa mga larangang pangkaisipan tulad agham, medisina, teknolohiya, at iba pa.
- intelektwalisasyon
  - pagsasalin
  - instandardisasyon
  - ispeling
42. Ang lahat ng wika ay arbitraryo dahil
- nagkakaiba-iba ang sistema ng paggamit nito
  - may napagkasunduang sistema ng paggamit nito
  - may mga di sumusunod sa itinakdang sistema ng paggamit nito
  - ginagamit ito sa pakikipag-usap sa ibang tao
43. Alin sa mga sumusunod ang di totoo?
- Ang wika ay may istruktura.
  - Ang wika ay binubuo ng mga tunog.
  - Ang wika ay di nanghihiram.
  - Ang wika ay may katumbas na simbolo o sagisag.
44. Tawag sa isang taong maraming alam na wika
- dalubwika
  - polyglot
  - linguist
  - translator
45. Paraan ng pagsasalita na naririnig sa isang partikular na lalawigan o bayan.
- sociolect
  - idiolect
  - dialect
  - punto
46. May sariling register ang ekonomiks. Ang register ay \_\_\_\_\_.
- mga salitang hinihiram mula sa ibang wikang banyaga
  - mga salitang di mahahanapan ng katumbas sa wikang Filipino
  - salitang kalimitang ginagamit sa isang larangan tulad ng ekonomiks
  - salitang pinanatili na lamang ang orihinal na ispelang

47. Alin sa sumusunod ang daglat?
  - a. KWF /key-dobolyu-ef/
  - b. Fe /ef-i/
  - c. Kgg. /kapital key-ji-ji/
  - d. MLQ /em-el-kyu/
48. Alin sa sumusunod ang di papantig?
  - a. pa-pan-tig
  - b. p-a-p-a-n-t-i-g
  - c. pa-ti-tik
  - d. bay-ba-yi
49. NAGPAGANDAHAN – Ilang pantig mayroon ang salitang ito?
  - a. 4
  - b. 5
  - c. 6
  - d. 7
50. Ito ay siyentipikong pag-aaral ng wika.
  - a. translation
  - b. sociolinguistics
  - c. linguistics
  - d. code switching
51. Alin sa sumusunod na pahayag ang di totoo?
  - a. Ang wikang Filipino ay naging instrumentong politikal nang sakupin tayo ng dayuhan noong siglo 16.
  - b. Ang Doctrina Christiana ay inilimbag para sa mga katutubo.
  - c. Ang pagsasalin ng mga tekstong Espanyol ang panimulang hakbang sa pag-angkin ng mga misyonero sa Tagalog.
  - d. Wikang katutubo ang ginamit ng mga Kastila sa pagpapalaganap ng Kristiyanismo.
52. Ang Florante at Laura ni Francisco Balagtas Baltazae ay isang \_\_\_\_\_.
  - a. diona
  - b. awit
  - c. korido
  - d. romance
53. Sino ang sumulat ng tulang “Sagot ng Espanya sa Hibik ng Filipinas”?
  - a. Jose Rizal
  - b. Andres Bonifacio
  - c. Marcelo H. del Pilar
  - d. Graciano Lopez-Jaena
54. Kinikilalang “Ama ng Maikling Kuwento ng Tagalog”
  - a. Edgardo M. Reyes
  - b. Rogelio Sicat
  - c. Deogracias A. Rosario
  - d. Genoveva Edroza Matute
55. Alin sa sumusunod ang pangungusap na walang paksa?
  - a. Maraming salamat!
  - b. Sasama ka ba?
  - c. Namili kami sa Divisoria.
  - d. Alin ang bibilin mo?

**III. Tukuyin ang kahulugan ng sumusunod na pahayag idinamitika sa kahon sa ibaba. Isulat ang titik ng sagot sa patlang.**

a. mabagal lumakad	b. madaldal
c. may asawa na	d. iniligtas sa kamatayan
e. matinding kagutuman	f. masama ang rekord
g. malaki ang agwat	h. matinding pagsubok
i. nagpigil ng sarili	j. malaking kamalasan

1. Naghunusdili ang babae kaya naayos agad ang problema.
2. Parang gutom na aso ang batang aking pinakain.
3. Hindi matanggap ni Mang Nestor ang dagok ng kapalaran sa kanilang pamilya.
4. May pananagutan na sa buhay ang kanyang napangasawa.
5. Parang palakang kokak kung magsalita ang babaeng iyon.
6. Inagaw sa kamatayan ni Aling Lilia ang anak sa nasusunog nilang bahay.
7. Parang nakikipagprusisyon ang batang iyong kung maglakad.
8. Langit at lupa ang kanilang kalagayan kaya di nagtagal ang kanilang pagsasama.
9. Nagdaan ako sa butas ng karayom bago ko natamo ang aking mga pangarap.
10. Hindi siya nanalo sa eleksyon dahil basa ang kanyang papel.

Pagsasalin. Tukuyin ang katumbas sa salitang ingles ng sumusunod na matalinghagang mga pananalita. Isulat ang titik ng sagot sa patlang.

- a. one who speaks convincingly
  - b. one who immediately strikes another with his hand or fist when irritated
  - c. to live in solitude
  - d. cruel; merciless; ruthless
  - e. great liking; passionately fond of
  - f. sterile; unproductive
  - g. one who has no perseverance; one who just relies on whatever fortunes comes his way
  - h. very much alike; very similar
  - i. hard-headed
  - j. prostitute; whore
11. Hindi na magkakaanak si Sonia dahil sira ang aparato niya.
  12. Matigas ang ulo ng kanyang anak.
  13. Ang napangasawa niya ay kalapating mababa ang lipad.
  14. Marami siyang naloko dahil matamis ang dila niya.
  15. Walang puso ang pumatay ng aso.
  16. Patay na patay ang binata sa anak na babae ni Mang Gustin.
  17. Nag-ermitanyo si Ruben nang mamatay ang maybahay.
  18. Parang biniyak na bunga ang magkapatid.
  19. Magaan ang kamay ni Sally sa mga anak.
  20. Ang taong parang hipong tulog ay hindi uunlad sa buhay.

- 21. Dagdagan ang pagkain  
Kumain ka \_\_\_\_\_.
- 22. Simulan ang pagkain  
Kumain ka \_\_\_\_\_.
- 23. Kadarating pa lang  
Dumating \_\_\_\_\_ siya.
- 24. Simulan ang pagtulog  
Matulog ka \_\_\_\_\_.
- 25. Dagdagan ang oras ng paghihintay.  
Hintayin \_\_\_\_\_ natin siya.
- 26. Huwag ng hintayin.  
Iwan \_\_\_\_\_ natin siya.
- 27. Simulan ang pag-aaral.  
Mag-aral ka \_\_\_\_\_.
- 28. Pagtataka sa pagdating  
Aba nandito ka \_\_\_\_\_ pala!
- 29. Hindi matanda  
Bata \_\_\_\_\_ si Tolits.
- 30. Humihingi ng dagdag.  
Bigyan mo ako ng isa \_\_\_\_\_.

IV. Tukuyin ang kahulugan ng sumusunod na pahayag idyomatiko sa kahon sa ibaba. Isulat ang titik ng sagot sa patlang.

a. payat na mataas	g. hindi magkasundo
b. kinukuwartahan	h. lumalaban sa makapangyarihan
c. mapagpatawad	i. buhay na maraming pagsubok
d. matalik at matapat na kaibigan	j. naubos ang pera sa sugal
e. anak na maliliit	k. ngiting pakunwari
f. walang galang	l. mga abubot

- 1. Ngiting aso ang ipinakita niya sa kanyang kaibigan.
- 2. Parang aso't pusa ang magkapatid.
- 3. Kahit saan siya magtungo ay dala niya ang kanyang mga retaso.
- 4. Parang tutubing karayom ang banyagang kanyang napangasawa.
- 5. Kahiramang suklay niya ang aking kapatid na babae.
- 6. Nanalo siya sa eleksyon dahil may krus sa dibdib ang taong iyon.
- 7. Baligtad ang bulsa ni Mang Nestor kahapon sa perya.
- 8. Naging palabigasan ni Lilia ang kanyang anak na panganay dahil may trabaho na ito.
- 9. Pilit tinahak ni Sally ang landas na matinik kung kaya siya nagtagumpay.
- 10. Huwag mo nang ituloy ang demanda, para ka lang bumangga sa pader.

Pagsasalin. Tukuyin ang katumbas sa Ingles ng sumusunod na matalinghagang mga pananalita. Isulat ang titik ng sagot sa patlang.

- 11. Hilamos-pusa ang kanyang ginawa sapagkat maginaw ang panahon.
- 12. Hubarin mo na ang damit mo sapagkat hinahabol na ng sabon.
- 13. Huwag ka nang magpilit sumama sa piknik nila baka masabon ako ng Nanay kapag nalamang umalis ka.
- 14. Kumukulo ang dugo ko tuwing nakababasa ako tungkol sa mga lalaking nang-aabuso ng mga babae.
- 15. Maraming hirap na ang tiniis mo sa iyong asawa kaya kailangan mo nang magdilat ng mata.
- 16. Nagdamdam si Angela nang malaman niyang siya'y pamasak-butas lamang sa kasintahan ni Ruben.
- 17. Hindi magustuhan ni Rosa si Roy dahil sa ginawa niyang ligaw-Intsik.
- 18. Ang taong mahaba ang dila ay malimit maging dahilan ng away.
- 19. Makatulo-laway ang katawan ng babaing nakilala nila kanina sa parke.
- 20. Makalaglag-matsing ang tinging iniukol ni Tomas sa nililigawang si Nena.

- a. to be scolded; to be reprimanded
- b. to open the eyes
- c. conveyor of what is heard or seen; talkative; tale bearing
- d. substitute
- e. an alluring look or a fascinating stare
- f. wooing by means of giving gifts and visiting the ladylove at noontime
- g. mouth-watering
- h. very angry; very much annoyed
- i. very dirty ; needs bathing or washing
- j. quick and superficial washing of the face

Direksyon: Piliin ang titik ng sagot sa bawat bilang.

- 21. Ipinagdiriwang ang Buwan ng Wika tuwing buwan ng \_\_\_\_\_.
  - a. Marso
  - b. Abril
  - c. Hunyo
  - d. Agosto
- 22. Ang Araw ni Balagtas ay tuwing \_\_\_\_\_.
  - a. Marso 2
  - b. Abril 2
  - c. Hunyo 2
  - d. Agosto 2



23. Manunulat-Propagandista na gumamit ng sagisag-panulat na “Laong-Laan”.
- a. Jose P. Rizal
  - b. Marcelo H. Del Pilar
  - c. Graciano Lopez-Jaena
  - d. Mariano Ponce
24. Alin sa mga sumusunod ang hindi akda ni Emilio Jacinto?
- a. La Patria
  - b. A Mi Madre
  - c. Liwanag at Dilim
  - d. Dasalan at Tocsohan
25. Alin sa sumusunod na salita ang dapat na walang gitling (-)?
- a. kahoy-gubat
  - b. ala-ala
  - c. kabi-kabila
  - d. maka-Johnson
26. Tinutukoy si Maria Josefa Cruz at sinasabi ang kanyang buong pangalan. Maaaring itinuturo lamang si Maria, o maaari rin namang kaharap siya ng mga nag-uusap.
- a. Maria Josefa Cruz ang tawag sa kanya.//
  - b. Maria/ Josefa Cruz ang tawag sa kanya.//
  - c. Maria Josefa/ Cruz ang tawag sa kanya.//
  - d. Maria Josefa Cruz/ ang tawag sa kanya.//
27. Kinakausap si Maria, at ipinakikilala sa kanya si Josefa Cruz.
- a. Maria Josefa Cruz ang tawag sa kanya.//
  - b. Maria/ Josefa Cruz ang tawag sa kanya.//
  - c. Maria Josefa/ Cruz ang tawag sa kanya.//
  - d. Maria Josefa Cruz/ ang tawag sa kanya.//
28. Kausap ang isang babae na Maria Josefa ang pangalan. Ipinakikilala sa kanya si Cruz, o kaya’y itinuturo si Cruz.
- a. Maria Josefa Cruz ang tawag sa kanya.//
  - b. Maria/ Josefa Cruz ang tawag sa kanya.//
  - c. Maria Josefa/ Cruz ang tawag sa kanya.//
  - d. Maria Josefa Cruz/ ang tawag sa kanya.//
29. Namili ng mga tela ang nanay sa Baclaran para kay Mely.
- a. pokus sa layon
  - b. pokus sa ganapan
  - c. pokus sa tagaganap
  - d. pokus sa tagatanggap
30. Binili ng nanay ang mga tela sa Baclaran para kay Mely
- a. pokus sa layon
  - b. pokus sa ganapan
  - c. pokus sa instrumento
  - d. pokus sa tagatanggap

Piliin ang wastong sagot sa loob ng panaklong.

- 31. Nawawala ng takip (nang, ng) kaldero.
- 32. Tawag (nang, ng) tawag ang kanyang amang nasa sa Singapore.
- 33. Ipinamana na (nang, ng) matanda ang kanyang mga lupa sa anak.
- 34. Paano (daw, raw) natin ipagdiriwang ang Buwan ng Wika?
- 35. Bakit di pa (doon, roon) sila matulog bukas?
- 36. Tinutulungan (raw, daw) nila ang mga batang-lansangan.
- 37. Dumating (rin, din) ang mga hinihintay naming lumang damit.
- 38. Nagsalita (din, rin) ang mga manggagawang nawalan ng trabaho.
- 39. (May, Mayroong) batang naiwan sa loob ng simbahan.
- 40. (May, Mayroon) siyang aasikasuhin sa Maynila.
- 41. (May, Mayroon) mga dadalhin akong aklat bukas.
- 42. (May, Mayroon) pa kaya akong masasakyan pauwi?
- 43. (MakaNora, Maka-Nora) pala ang nanay mo.
- 44. (Maka-bansa, Makabansa) ang aking mga mag-aaral.
- 45. Sa (ika-17, ika 17) ng Abril ang kanyang alis papuntang Canada.
- 46. (Ikalawa, Ika-lawa) ko ng pagpunta rito.
- 47. (Dalhin, Dalhan) mo ng pagkain ang iyong tatay sa bukid.
- 48. (Dalhin, Dalhan) mo na itong bigas sa tindahan.
- 49. (Walisan, Walisin) mo na ang iyong silid.
- 50. (Walisan, Walisin) natin ang mga tuyong dahon sa bakuran.

LET REVIEWER- MATHEMATICS

Lecture Notes

ARITHMETIC

Real numbers – all numbers having decimal representations.  
Rational numbers – all numbers that is a quotient of two integers whose divisor is not equal to zero.  
Irrational numbers – any that is not rational and represented by a non repeating decimal.

A. **Integers** – the set of positive numbers, zero, and negative numbers.

I = {...-3, -2, -1, 0, 1, 2, 3...}

Operation on Integers

➤ Addition

In adding integers with the same sign, add the numbers and copy the sign of the given numbers.

Example:

a)  $(-3) + (-6) = -9$                       b)  $2 + 5 = 7$

In adding integers with opposite signs, subtract the numbers and copy the sign of the larger number.

Example:

a)  $(-12) + 8 = -4$                       b)  $18 + (-15) = 3$

➤ Subtraction  
In subtracting integers, change the sign of the subtrahend. Then, proceed to the steps in adding integers.

Example:

a)  $14 - (-5) = 14 + 5 = 19$                       b)  $-8 - (-10) = -8 + (-10) = -18$

➤ Multiplication/Division  
The sign of the product/quotient of two integers with the same sign is positive (+).

Examples:

a)  $(-3)(-3) = 9$                       b)  $4 / 2 = 2$

The sign of the product/quotient of two integers with opposite signs is negative (-).

Examples:

a)  $14 \times (-3) = -42$                       b)  $(-51) / 3 = -17$

**B. Law of Addition and Multiplication**

*Commutative Law of Addition*  
 $A + B = B + A$

*Associative Law of Addition*  
 $A + (B + C) = (A + B) + C$

*Commutative Law of Multiplication*  
 $AB = BA$

*Associative Law of Multiplication*  
 $A(BC) = (AB)C$

*Distributive Law*  
 $(A + B)C = AC + BC$

**C. Least Common Multiple (LCM)**

The LCM of two or more numbers is the smallest number which is the common multiple among the numbers.

Example: Find the LCM of 18 and 24.

- i)  $18 = 3 \times 3 \times 2$      $24 = 3 \times 2 \times 2 \times 2$
- ii) The common factor is 3 and 2, so delete these in one of the factors
- iii) LCM is equal to  $3 \times 3 \times 2 \times 2 \times 2$  or 72

**D. Divisibility**

A number is divisible by a certain number if the remainder of their quotient is equal to zero.

Divisibility by 2 – even number  
Example: 22 is an even number, therefore it is divisible by 2

Divisibility by 3 – sum of digits is divisible by 3  
Example: The sum of the number 111 is equal to three ( $1+1+1 = 3$ ) which is divisible by 3, therefore 111 is divisible by 3.

Divisibility by 4 – Last two digits is divisible by 4  
Example: The last two digits of the number 528 is 28 which is divisible by 4, therefore 528 is divisible by 4.

Divisibility by 5 – Last digit ends by 5 or 10  
Example: The last digit of 635 is 5 therefore it is divisible by 5.

Divisibility by 6 – divisible by 2 and 3  
Example: 222 is an even number which makes it divisible by 2. The sum of its digits is equal to 6 which is divisible by 3. Since it is both divisible by 2 and 3, 222 is divisible by 6.

Divisibility by 8 – The last three digits is divisible by 8  
Example: The last three digits of 6328 is 328 which is divisible by 8, therefore 6328 is divisible by 8.

Divisibility by 9 – sum of digits is divisible by 9  
Example: The sum of 2736 is 18 which is divisible by 9, therefore 2736 is divisible by 9.

Divisibility by 10 – ends with zero  
Example: The last digit of 820 is zero therefore it is divisible by 10.

E. **Fraction** – a number written as a ratio of two whole numbers.

➤ **Expressing Mixed Numbers as Fractions**

A mixed number consists of a whole number and a fraction. Any mixed number can be changed into fraction. One way of changing a mixed number to fraction is by multiplying the whole number to the denominator of the fraction and then the product will be added to the numerator. The result will then be written over the denominator.

Example: Change  $2\frac{3}{5}$  into a fraction

$$((2 \times 5) + 3) / 5 = 13/5$$

➤ **Multiplication of fractions**

In multiplying fractions, multiply the numerators together for the numerator of the product and the denominators together for the denominator of the product.

Example:

$$5/8 \times 3/7 = 15/56$$

➤ **Division of fractions**

The division of fraction is changed to multiplication of fraction by changing the divisor into its reciprocal and proceeding as in multiplication.

Example:

$$3/4 \div 4/5 = 3/4 \times 5/4 = 15/16$$

➤ **Addition/Subtraction of fractions**

When the fractions have the same denominator, add or subtract the numerators and write the result over the common denominator.

Example:

$$2/15 + 6/15 = 8/15$$

When the fractions have different denominators, express the fraction to equivalent fractions having a common denominator. Find the Least Common Denominator. The LCD of the desired fraction is the Least Common Multiple (LCM) of the given denominators.

Example:

$$3/4 + 7/8 + 5/6 = 18/24 + 21/24 + 20/24 = 59/24$$

Finding the LCD,

$$4 = 2 \times 2$$

$$8 = 2 \times 2 \times 2$$

$$6 = 2 \times 3$$

$$\text{LCD} = 2 \times 2 \times 2 \times 3 = 24$$

➤ **Addition/Subtraction of Mixed Numbers**

The sum/difference of mixed fractions is equal to the sum/difference of the whole number added to the sum/difference of the fraction.

Example:

$$3\frac{1}{2} + 4\frac{2}{6} = 3\frac{3}{6} + 4\frac{2}{6} = 7\frac{5}{6}$$

➤ **Lowest Term**

A fraction is in its lowest term if the numerator and the denominator are prime to each other. Two numbers are prime to each other when the only common divisor or factor is 1.

To express a fraction in its lowest terms, divide the numerator and denominator by a factor common to both until the only common divisor is 1.

Example:

$$24/36 = (24/12) / (36/12) = 2/3$$

➤ **Equivalent Fractions**

**F. Decimals**

➤ **Addition of Decimals**

In adding decimals, write the given numbers so that the decimal point falls in line or arranged in one column. Then proceed as in addition of whole numbers and place the decimal point to the sum in the same column as the other decimal points.

Example: Add 32.8, 5.235, 122.2

$$\begin{array}{r} 32.8 \\ + 5.235 \\ 122.2 \\ \hline 160.235 \end{array}$$

➤ **Subtraction of Decimals**

Write the given numbers so that the decimal point falls in line or arranged in one column. Then proceed as in subtraction of whole numbers and place the decimal point to the difference in the same column as the other decimal points. If the minuend contains fewer figures after the decimal point than the subtrahend, annex zeroes.

Example: Subtract 2.34 from 12.5

$$\begin{array}{r} 12.50 \\ - 2.34 \\ \hline 10.16 \end{array}$$

➤ **Multiplication of Decimals**

To multiply a decimal, multiply as in whole numbers; then, beginning from the right of the product, move the decimal point to the left depending on the number of decimal places of both factors.

Example: Multiply 53.165 by 3.02  
 $53.165 \times 3.02 = 160.5583$

➤ Division of Decimals

To divide a decimal, divide as in whole numbers and place the decimal point in the quotient above the point in the dividend.

Example: Divide 81.5 by 2

When the divisor is a decimal fraction, convert the divisor into a whole number by moving the decimal point to the right of it, and move also the decimal point of the dividend.

Example: Divide 32.2 by .125

## G. Percent

Percent is only another name for hundredths. Since percent means hundredths, it can be converted to a decimal or a fraction.

### *Conversion of fractions, decimal and percents*

➤ Fraction to Decimal

Divide the numerator by the denominator.

Example: Change  $\frac{3}{5}$  to decimal form.  
 $\frac{3}{5} = 0.60$

➤ Decimal to Percent

Move the decimal point two places to the right and write the % sign.

Example: Change 0.02 to percent  
 $0.02 = 2\%$

➤ Fraction to Percent

First, change the fraction to decimal by dividing and then change the decimal to percent by moving the decimal point and writing the % sign.

Example: Change  $\frac{2}{5}$  to percent  
 $\frac{2}{5} = 0.4$   
 $0.4 = 40\%$

➤ Percent to Decimal

Move the decimal point two places to the left and remove the % sign.

Example: Change 35% to decimal  
 $35\% = 0.35$

➤ Decimal to Fraction

Write the decimal number as the numerator of the fraction. The denominator of the fraction will be the last place value in the decimal.

Example: Change 0.7 to fraction  
 $0.7 = \frac{7}{10}$

➤ Percent to Fraction

Write the percent as the numerator of a fraction with a denominator of 100.

Example: Change 23% to fraction  
 $23\% = \frac{23}{100}$

Example: In a class of 25 students, 10 are male. We can describe this statement by saying:

- a)  $\frac{2}{5}$  of the class are males. (Fraction)
- b) 0.4 of the class are males. (Decimal)
- c) 40% of the class are males. (Percent)

NOTE: In verbal problems concerning fractions, decimals and percents, the word “of” usually means multiplication.

### *Finding a percent of a number*

To find the percent of a certain number, express the percent as a decimal and multiply.

Example:

- a) 5% of 600 =  $0.05 \times 600 = 30$
- b) 20% of 50 =  $0.20 \times 50 = 10$

To find what percent one number is of another number, divide the first number by the second and express the result as percent.

Example:

- a) Find what percent 25 is of 625  
 $\frac{25}{625} = 0.04$  or 4%
- b) 30 is what percent of 120?  
 $\frac{30}{120} = 0.25$  or 25%

To find a number when a certain percent is given, express the percent as a decimal and divide the known part of the number by the decimal.

Example:

- a) 15 is 25% of what number?  
 $15 \div 0.25 = 60$

- b) 25 is 10% of what number?  
 $25 / 0.10 = 250$

### *Finding the percent of increase and decrease*

To find the percent of increase and decrease in a quantity, divide the amount of increase or decrease by the original number before the increase or decrease.

Example:

- a) A farmer harvested 60 cavans of palay last year and 80 cavans this year. What is the percent of increase?

$$80 - 60 = 20$$
$$20/60 = 33 \frac{1}{3} \%$$

- b) A farmer harvested 80 cavans of palay last year and 60 cavans this year. Find the percent of decrease.

$$80 - 60 = 20$$
$$20/80 = 25\%$$

## H. Ratio and Proportion

Ratio – comparison of two quantities

- expressed by the quotient obtained by dividing the first quantity by the second quantity

Proportion – formed when we express the fact that one ratio is equal to another

Example:

$$\begin{aligned} 2:4 &= 3:6 \\ 2/4 &= 3/6 \\ 2(6) &= 3(4) \\ 12 &= 12 \end{aligned}$$

## Kinds of Proportion

- a) Direct Proportion

If two quantities are related in a manner that an increase or decrease in one will produce the same kind of change in the other, the two quantities are directly proportional with each other.

Example: Ms. Ramirez used 15 meters of cloth for 6 dresses. How many meters will be used for 10 dresses?

$$\begin{aligned} 15:6 &= n:10 \\ 15/6 &= n/10 \\ 6n &= 150 \\ N &= 25 \text{ meters} \end{aligned}$$

- ### b) Indirect Proportion

If two quantities are related in a manner where an increase or decrease in one will produce an opposite change in the other, then the two quantities are inversely proportional with each other.

Example: If 40 men can build a house for 15 days, how long will 20 men do the same work?

$$\begin{aligned} 40:20 &= n:15 \\ 40/20 &= n/15 \\ 20n &= 600 \\ N &= 30 \text{ days} \end{aligned}$$

- ### c) Partitive Proportion

This proportion is used when a number is divided into parts proportional to a given ratio.

Example: Divide 636 into parts proportional to 3:4:5

$$\begin{aligned} 3 + 4 + 5 &= 12 \\ 3/12 \times 636 &= 159 \\ 4/12 \times 636 &= 212 \\ 5/12 \times 636 &= 265 \end{aligned}$$

## I. Consecutive Numbers

A collection of numbers is said to be consecutive if each number is the successor of the number which precedes it.

Example:

- a) 1,2,3,4                      b) 2,4,6,8

➤ **Average of Consecutive Numbers**

The average of consecutive numbers is the average of the smallest and largest number.

Example:

- a) 2,4,6,8  $(2 + 8) / 2 = 10 / 2 = 5$

➤ Counting Consecutive Integers

The number of integers from  $R$  to  $S$  inclusive is  $S - R + 1$ .

Example: How many integers are there from 21 to 242, inclusive?

$$242 - 21 + 1 = 222$$

➤ **Sum of Consecutive Numbers**

Sum = average x number of terms

Example: What is the sum of the integers from 21 to 242?

$$\begin{aligned}\text{Average} &= (242 + 21) / 2 = 131.5 \\ \text{No. of terms} &= (242 - 21 + 1) = 222 \\ \text{Sum} &= 222 \times 131.5 = 29193\end{aligned}$$

**J. Exponents and Roots**

Exponent – no. of times that a number/base will be multiplied to itself.

$$b^n \text{ or } b^{\wedge}n$$

where b = base  
n = exponent

Example:

$$3^{\wedge}4 = 3 \times 3 \times 3 \times 3 = 81$$

*Laws of Exponent*

➤  $b^m \times b^n = b^{m+n}$

Example:  $3^3 \times 3^4 = 3^{(3+4)} = 3^7$

➤  $(bm)^{\wedge}n = b^{mn}$

Example:  $(3^2)^2 = 3^{(2 \times 2)}$

➤  $a^m b^m = (ab)^{\wedge}m$

Example:  $2^2 \times 3^2 = (6)^2$

NOTE:

a)  $b^0 = 1$  , for any non-zero value of b

Example:  
 $1080^0 = 1$

b)  $b^{-n} = 1/b^n$

Example:  
 $25^{-2} = 1/25^2 = 1/625$

Roots = an exponent that is a fraction

$$\sqrt{2} = 2^{\frac{1}{2}}$$

*Laws of Radicals*

>  $\sqrt[n]{a} \bullet \sqrt[n]{b} = \sqrt[n]{ab}$

Example:  $\sqrt[2]{9} \bullet \sqrt[2]{16} = \sqrt[2]{9 \bullet 16} = 12$

>  $\frac{\sqrt[n]{a}}{\sqrt[n]{b}} = \sqrt[n]{\frac{a}{b}}$   
Example:  $\frac{\sqrt[3]{216}}{\sqrt[3]{27}} = \sqrt[3]{\frac{216}{27}} = 2$

**K. Multiplication Shortcuts**  
*To save time and effort*

- a) Multiplying by 10 or a multiple of 10  
When a number is multiplied by 10 or by a multiple of 10 (100, 1000, etc.), move the decimal point of the number as many places to the right as there are zeroes in the multiple of 10.

Example:

$$\begin{aligned}22.5 \times 10 &= 225 \\ 22.5 \times 100 &= 2250 \\ 22.5 \times 1000 &= 22500\end{aligned}$$

- b) Multiplying by the reciprocal of 10 or its multiple  
When a number is multiplied by a reciprocal of 10 or its multiples (0.1, 0.01, 0.001, etc.), move the decimal point of the number to as many places to the left as there are decimal places in the reciprocal of 10 or its multiple.

Example:

$$\begin{aligned}22.5 \times 0.1 &= 2.25 \\ 22.5 \times 0.01 &= 0.225 \\ 22.5 \times 0.001 &= 0.0225\end{aligned}$$

- c) Multiplying two numbers that both end with 5 and whose lefthand digits are the same.  
Two numbers ending with five when multiplied shall always have 25 for its rightmost digits. The lefthand digits of the product will be obtained by multiplying the lefthand digit of the multiplicand by a number which is the same digit increased by 1.  
Example:

$$\begin{aligned}25 \times 25 &= 2<5> \times 2<5> \\ &= 6<25>\end{aligned}$$

The rightmost digits, 5 and 5 were multiplied to get 25. The lefthand digit 2, was multiplied by 3 (2 increased by 1) which gives a result of 6. Putting these together, the result is 625.

$$\begin{aligned}45 \times 45 &= 4<5> \times 4<5> \\ &= 20 <25>\end{aligned}$$

The rightmost digits, 5 and 5 were multiplied to get 25. The lefthand digit 4, was multiplied by 5 (4 increased by 1) which gives a result of 20. Putting these together, the result is 2025.

- d) Multiplying two numbers whose rightmost digits make a sum of 10 and whose lefthand digits are the same.  
When multiplying such numbers, we multiply the rightmost digits of the two numbers. The other digit shall be multiplied by a number which is the same digit increased by 1.

Example:

$$36 \times 34 = 3 \times 6 \times 3 \times 4 \\ = 12 \times 24$$

The rightmost digits, 6 and 4, were multiplied and gave the result of 24. The lefthand digit 3, was multiplied by 4 (3 increased by 1) and gave a result of 12. Putting these together, the result is 1224.

\*If the rightmost digits are 9 and 1, we will write its product as “09”.

Example:  $49 \times 41 = 4 \times 9 \times 4 \times 1$   
 $= 2009$

The rightmost digits, 9 and 1 were multiplied to get 09. The other digit 4, was multiplied by 5 (4 increased by 1) to get 20. Putting these together, we get 2009.

- e) Multiplying two digit numbers to 11  
The lefthand of the two digit number that will be multiplied will be placed on the lefthand of the product. The righthand of the two digit number will be placed on the righthand of the product. The middle part of the product is the sum of the lefthand and righthand of the two digit number. If the sum is greater than 10, it will be carried to the lefthand digit number.

Example:

- a)  $23 \times 11 = 2 \ 5 \ 3$   
For the middle part,  
 $2+3 = 5$   
b)  $59 \times 11 = 6 \ 4 \ 9$   
For the middle part.  
 $5+9 = 14$   
1 will added to the lefthand digit which is 5  
 $5+1 = 6$   
The answer will then be 649.

## ALGEBRA

### ALGEBRA

**Algebra** is a branch of mathematics concerning the study of structure, relation and quantity. The name is derived from the treatise written by the Persian mathematician, astronomer, astrologer and geographer, Muhammad bin Mūsā al-Khwārizmī titled *Kitabal-Jabrwa-l-Muqabala* (meaning "The Book of Compulsion and Encountering" "*The Compendious Book on Calculation by Completion and Balancing*"), which provided symbolic operations for the systematic solution of linear and quadratic equations.

Together with geometry, analysis, combinatorics, and number theory, algebra is one of the main branches of mathematics. Elementary algebra is often part of the curriculum in secondary education and provides an introduction to the basic ideas of algebra, including effects of adding and multiplying numbers, the concept of variables, definition of polynomials, along with factorization and determining their roots.

In addition to working directly with numbers, algebra covers working with symbols, variables, and set elements. Addition and multiplication are viewed as general operations, and their precise definitions lead to structures such as groups, rings and fields.

A **variable** is a letter that represents a number. Since it represents a number, you treat it just like you do a number when you do various mathematical operations involving variables.

“x” is a very common variable that is used in algebra, but you can use any letter (*a, b, c, d, ....*) to be a variable.

An **algebraic expression** is a number, variable or combination of the two connected by some mathematical operation like addition, subtraction, multiplication, division, exponents, and/or roots.  
 $2x + y$ ,  $a/5$ , and  $10 - r$  are all examples of algebraic expressions.

You **evaluate an expression** by replacing the variable with the given number and performing the indicated operation.

Sometimes, you find yourself having to write out your own algebraic expression based on the wording of a problem.

In that situation, you have to

1. read the problem carefully,
  2. pick out key words and phrases and determine their equivalent mathematical meaning,
  3. replace any unknowns with a variable, and
  4. put it all together in an algebraic expression.
- Here are some commonly used terms that signal specific mathematical operation.

**Addition:** sum, plus, add to, added to, more than, increased by, total

**Subtraction:** difference of, minus, subtracted from, less than, decreased by, less, diminished by

**Multiplication:** product, times, multiply, twice, thrice, of

**Division:** quotient divide, into, ratio

### Simplifying algebraic expressions

Some pointers to remember:

- A. To simplify any given expression, it is advised that one should be guided by the acronym, PEMDAS (Parentheses- Exponentiation- Multiplication-Division- Addition-Subtraction).

The strategy suggests that:

1. The operations inside the parenthesis (or any grouping symbol) should be performed first.

- 2. Exponent should be dealt after step 1 is accomplished.
  - 3. The operations: Multiplication and Division should be performed before Addition and Subtraction.
- B. The order in which letters and numbers are used as factors does not matter.  
(Commutative Property of Multiplication)

Example:  $21mn = 21nm$

C. You may use the following laws of exponents to simplify terms with roots or powers.

D. Combining like terms  
Terms having identical literal coefficients are combined.

**POLYNOMIALS**

Polynomials are algebraic expressions which is the sum of finite number of terms, each of which is the product of a finite collection of numbers and variables. A polynomial contains positive integral exponents.

$6x^2 + 4y - 5$  is a polynomial while  $20x^{-4} + y^2 - 3$  is not.

Polynomials like  $3x^2$  and  $5xyz^4$  which have only one term are called **monomials**. Those with two terms like  $x - 4y$  are called **binomials**.  $5x^3 - xy^2 + 4$  is an example of a **trinomial**; that is, it is composed of three terms.

- I. Addition and Subtraction of Polynomials  
Just like any algebraic expression, the process of addition can be conveniently carried out by combining like terms. In order to subtract two polynomials, convert the problem to addition and proceed.
- II. Multiplication of Polynomials  
Multiplication of polynomials is based upon the method of multiplying monomials, together with the repeated use of the distributive law.

Binomials as Factors

a) Product of Two Binomials

Illustrative examples:

- 1.  $(x + 1)(x + 2) = x^2 + 3x + 2$
- 2.  $(x + 5)(x - 7) = x^2 - 2x - 35$

Note: When multiplying two binomials with only one variable, the middle term is just the sum of the constant terms where each one takes the operation that precedes it as its sign (i.e., 1 for  $x + 1$ , and -7 for  $x - 7$ ).

b) Binomial Raised to a Nonnegative Integer

It is practical to use the Pascal's Triangle in order to identify the numerical coefficient of specific term of a binomial expansion of a binomial of the form  $(a + b)^n$ , where a and b are any variable, and n is a nonnegative integer.

The Pascal's Triangle is illustrated below:

0						1	
1					1	1	
2				1	2	1	
<b>3</b>			<b>1</b>	<b>3</b>	<b>3</b>	<b>1</b>	
4			1	4	6	4	1
5		1	5	10	10	5	1

The numbers on the left indicate the value by which the binomial is being raised.

For example,

“3” is for  $(x + y)^3$  and the numbers on its right are the coefficients of the expansion.

So that  $(x + y)^3 = 1x^3 + 3x^2y + 3xy^2 + y^3$

The literal coefficients are either a single variable raised to the highest exponent or a product of the two variables whose exponents add up to the original (the exponent of the given).

c. Special Products

For any variable <sup>x</sup> and <sup>a</sup>, or any constant **a**,

$$\begin{aligned} (x + a)(x + a) &= (x + a)^2 = x^2 + 2ax + a^2 \\ (x - a)(x - a) &= (x - a)^2 = x^2 - 2ax + a^2 \\ (x + a)(x - a) &= x^2 - a^2 \\ (x + a)(x + b) &= x^2 + (a + b)x + ab \\ (x + a)(x^2 - ax + a^2) &= x^3 + a^3 \\ (x - a)(x^2 + ax + a^2) &= x^3 - a^3 \\ (x + a)^3 &= (x^3 + 3ax^2 + 3a^2x + a^3) \\ (x - a)^3 &= (x^3 - 3ax^2 + 3a^2x + a^3) \end{aligned}$$

III. Division of Polynomials

The following are some of the points to consider when dividing a polynomial:

- 1. If the divisor is a monomial (a variable, a constant or a product of variable/s and constant) each term is to be divided one-by-one.
- 2. **If the divisor is a binomial, the dividend should be written in a decreasing order of exponent. In case a**
- 3. The division continues step by step until a remainder is reached whose degree is less than the degree of the divisor. If the remainder is zero, the division is said to be exact.

Example: Divide  $6x^3 - x^2 + 11x + 4$  by  $3x + 1$

$$\begin{array}{r} 2x^2 - x + 4 \\ 3x + 1 \overline{) 6x^3 - x^2 + 11x + 4} \\ \underline{-6x^3 + 2x^2} \phantom{+ 11x + 4} \\ -3x^2 + 11x \phantom{+ 4} \\ \underline{- -3x^2 + x} \phantom{+ 4} \\ 12x + 4 \\ \underline{-12x + 4} \\ 0 \end{array}$$

**EQUATIONS**

An equation is a statement that says two algebraic expressions are equal.



There are two important things to note in solving equations (finding the roots or value of the variable/s that will satisfy the given):

- i) If you add or subtract the same algebraic expression to or from each side of an equation, the resulting equation is equal to the original equation; and
- ii) If you multiply or divide both sides of an equation by a nonzero algebraic expression, still the resulting equation is equivalent of the original equation.

**Solving Two Equations with Two Unknowns**

**A. By Substitution**

Use one equation to solve for one unknown in terms of the other, change the second equation in only one unknown and then solve.

Example: Solve for the value of x and y in system of equation,

$2x + y = 4$  (equation 1)  
 $3x + 2y = 6$  (equation 2)

Solution:

Using equation 1, solve for y in terms of x,  $y = -2x + 4$  (equation 3)  
Now, substitute the value of y obtained in equation 3 to equation 2, then solve for the value of x.

$3x + 2(-2x + 4) = 6$   
 $3x + (-4x) + 8 = 6$   
 $-x = 6 - 8$   
 $-x(-1) = -2(-1)$   
 $x = 2$

Since  $y = -2x + 4$  (equation 3) and  $x = 2$ , by substitution  
 $y = -2(2) + 4$   
 $y = 0$

**B. By Elimination through addition or subtraction**

Sometimes we can solve two equations by adding them or subtracting one from the other.

Example: Solve for x and y:  $x + 2y = 4$  (equation 1)  
 $4x - 2y = 6$  (equation 2)

Solution: Adding equations 1 and 2, we were able to eliminate terms containing the variable y,

$x + 2y = 4$   
 $4x - 2y = 6$   

---

 $5x = 10$

then solve for the value of x,

$5x = 10$   
 $x = 2.$

By subtracting the value of x to either equation 1 or 2 we will be able to find the value of y.

$x + 2y = 4$  (equation 1)  
 $2 + 2y = 4$   
 $2y = 2$   
 $y = 1$

**Solving Quadratic Equations**

Equations in the form  $ax^2 + bx + c = 0$ , where  $a \neq 0$ , are called quadratic equations.  
In order to find the value of the variable that will satisfy the given quadratic equation:

- 1. Group all the terms on one side of the equation so that the other side is zero.
- 2. Combine the terms on the nonzero side.
- 3. Factor the expression into linear expressions (if possible).
- 4. Set the linear factors equal to zero and solve.

The method is based on the fact that if a product of an expression is zero, then at least one of the expressions must be zero.

Example: Solve for x in  $x^2 + 5x = -6$

Solution:

- 1.  $x^2 + 5x + 6 = 0$
- 2.  $(x + 2)(x + 3) = 0$
- 3.  $x + 2 = 0$  or  $x + 3 = 0$
- 4.  $x = -2$  or  $x = -3$  Solution set  $\{-2, -3\}$ .

Note: a quadratic equation will usually have two different solutions, but it is possible to have only one solution or even no real solution or root.

You can also solve for the value of the variable in a quadratic equation by using the quadratic formula,  
Given  $ax^2 + bx + c = 0$  then

The quadratic formula will always give you the solution to any quadratic equation, but if you can factor the equation, factoring will give you the solution in less time. If you can't find the solution immediately, then use the formula.

**Solving Radical Equations**

When the given variable in an equation occurs in a square root, cube root, and so on, that is; it occurs in a radical, the equation is called a radical equation.

In some cases, a suitable operation changes a radical equation into linear or quadratic.

Example:  $\sqrt[3]{2x-4} - 2 = 0$   
 $(\sqrt[3]{2x-4})^3 = (2)^3$   
 $2x - 4 = 8$   
 $2x = 12$   
 $x = 6$

Note that the most commonly used procedure is to isolate the most complicated radical on one side of the equation and then eliminate it by raising both sides of the equation to a power equal to the index of the radical.

Checking is necessary to identify the solution set of the given equation. Sometimes, the value(s) do not satisfy the given. Those which satisfy the equation are included in the solution set while those which do not are discarded.

**Inequalities**

An inequality is a statement involving two expressions separated by one of the inequality symbols  $<$ ,  $\leq$ ,  $>$ ,  $\geq$  or  $\neq$ .

The following basic principles are used in working with inequalities:

1. If  $a < b$  then  $a + c < b + c$
2. If  $a < b$  then  $a - c < b - c$
3. If  $a < b$  and  $c > 0$  then  $ac < bc$
4. If  $a < b$  and  $c < 0$  then  $ac > bc$
5. If  $a < b$  and  $c < d$  then  $a + c < b + d$
6. If  $a < b$  and  $b < c$  then  $a < c$

The above principles also applies when the inequality symbol is replaced by  $>$ ,  $\leq$ ,  $>$ ,  $\geq$  or  $\neq$ .

As with equations, one method of solving inequalities is to replace it by a series of equivalent inequalities until an inequality with an obvious solution like  $x > 5$  is obtained. Operations used in solving equations may be used to solve inequalities.

The following procedures leave the inequality symbol unchanged:

- i) simplifying both sides of the inequality by combining like terms;
- ii) adding or subtracting the same expression or quantity to both sides of the inequality; and
- iii) multiplying or dividing by the same positive number or expression.

The following procedure reverses the sense of inequality symbols, thus making it inconsistent:

- i) interchanging the two sides of inequality  
 $8 < x$  becomes  $x < 8$
- ii) multiplying or dividing both sides by the same negative expression without changing the inequality symbol  
 $-4x > 12$  becomes  $\frac{-4x}{-4} > \frac{12}{-4}$

Note: When you multiply or divide both sides of an inequality with a negative quantity, the inequality symbol is replaced as follows: (a)  $>$  by  $<$  and (b)  $\leq$  by  $\geq$ .

Example 1: Solve the inequality  $3(x + 2) \geq 2(5 - x)$

Solution:

$$\begin{aligned} 3(x + 2) &\geq 2(5 - x) \\ 3x + 6 &\geq 10 - 2x \\ 3x + 2x &\geq 10 - 6 \\ 5x &\geq 4 \\ x &\geq \frac{4}{5} \end{aligned}$$

Example 2: Solve the inequality  $4x - 10 < 5x - 3$

Solution:

$$\begin{aligned} 4x - 10 &< 5x - 3 \\ -10 + 3 &< 5x - 4x \\ -7 &< x \quad \text{or} \quad x > -7 \end{aligned}$$

## VERBAL PROBLEMS

Verbal Problems are solved by translating them into appropriate algebraic equations. These are the general steps in solving a verbal problem

- Read the problem carefully
- Determine the given and the unknown quantities
- Write the working equation
- Solve the equation
- Check if the answer satisfies the conditions given by the problem

## Motion Problems

The general formula for this type of problem is:

$$\text{Distance} = \text{Rate} \times \text{Time}$$

Example:

Two trains start at the same time and travel toward each other from cities 260 miles apart. How many hours will it take for them to meet if one train travels at 60 mi/h and the other travels at 70 mi/h?

Given:

Rate of train 1: 60 mi/h

Rate of train 2: 70 mi/h

Distance of Stations from each other = 260 mi

Let:

$t$  = time from when the train starts to when they meet

$60t$  = distance traveled by train 1

$70t$  = distance traveled by train 2

Solution:

$$60t + 70t = 260$$

$$130t = 260$$

$$t = 2$$

It takes 2 hours for the trains to meet

## Work Problems

It is always assumed that workers in the same category work at the same rate.

The general formula for work problems is:

$$1/t_1 + 1/t_2 = 1/t$$

where:  
t<sub>1</sub> = time taken by the 1<sup>st</sup> person  
t<sub>2</sub> = time taken by the 2<sup>nd</sup> person  
t = time taken by both

*the formula can be extended depending on the number of persons involved in the problem*

Example

Jamee can clean the house in 6 hours. Christine can do the same job in 5 hours. How long will it take them to clean the house together?

$$\begin{aligned} 1/6 + 1/5 &= 1/t \\ (1/6 + 1/5)30 &= (1/t)30 \\ 5 + 6 &= 30/t \\ 11 &= 30/t \\ t &= 30/11 \text{ or } 2 \frac{8}{11} \text{ hours} \end{aligned}$$

Counting Problems:

In a public survey done by the SWS 60% owned a mobile phone, 80% owned a landline and 50% owned both a mobile phone and a landline. What percent of those surveyed owned a mobile phone or a landline?

People who owned a mobile phone or a landline = people who own a mobile phone + people who own a landline – people who own both a landline and a mobile phone

$$\begin{aligned} \text{People who own a mobile phone or a landline} &= 60\% + 80\% - 50\% \\ &= 90\% \end{aligned}$$

90% percent of those surveyed owned either a landline or a mobile phone

VARIATION

Direct Variation

*If the ratio of two variables is a constant (not zero), then either variable is said to vary directly as the other.*

If the variables are x and y then:.

$$y/x = k$$

*where k is called the constant of variation and can be any constant except zero*

Example:

If y varies directly as x and x = 13 and y = 5. What is the value of y when x = 21?

Solution:

If we are given one set of values of x and y, we can solve for the value of k and in turn find the corresponding value of y at a certain value of x.

$$\begin{aligned} y &= kx \\ 5 &= 13k \\ k &= 5/13 \end{aligned}$$

since we need to find the value of y at x = 21

$$\begin{aligned} y &= 21(5/13) \\ y &= 8 \frac{1}{13} \end{aligned}$$

Inverse Variation

*If the product of two variables x and y is constant (not zero), then x and y is said to vary inversely.*

$$xy = k$$

Example:

If the volume of a gas varies inversely as the pressure and if the gas occupies 20 cubic centimeter at a pressure of 40 lb, what is the volume of the gas at a pressure of 50 lb?

Solution:

We have two variables, the volume and the pressure. Knowing one set of values of V and P, we can solve the constant k.

$$\begin{aligned} xy &= k \\ 800 &= k \end{aligned}$$

Substituting the value of k in the equation VP = k we can get the new volume of the gas at 80 lb.

$$\begin{aligned} VP &= 800 \\ V &= 800/80 \\ V &= 10 \text{ cc} \end{aligned}$$

SEQUENCE AND PROGRESSION

A sequence is a set of numbers, which obeys a fixed law. In the sequence 3, 6, 9, 12 ... 3, 6, 9, 12 are called terms of the sequence.

Arithmetic Progression

A sequence of numbers, called terms, in which each term after the first is formed from the preceding term by adding to it a fixed number called the common difference.

$$a_n = a_1 + (n-1) d$$

where:

$a_n$  = last term  
 $a_1$  = 1st term in the progression

$n$  = number of terms  
 $d$  = common difference

Example

Find the 38<sup>th</sup> term of the series 7,1,-6 . . .

Given:

$a_1= 7$   
 $n = 38$   
 $d = -6$

Solution:

$a_n = 7 + (38-1) -6$   
 $a_n = 7 + (37) -6$   
 $a_n = -215$

The nth term or the last term of an arithmetic progression can be solved by using the formula:

$S_n = (n/2) (a_1 +a_n)$  or  $S_n = (n/2) (2a_1 +(n-1)d)$

Example:

Find the sum of the first 100 terms of the progression 10,7,4 ...

Solution:

Given:

$a_1= 10$   
 $n = 100$   
 $d = -3$

Solution:

$S_n = (100/2) (2(10)+(100-1)-3)$   
 $= 50( 20 + 99(-3))$   
 $= 78$

**Geometric Progression**

A sequence is a considered a geometric progression when the ratio of two consecutive terms in the sequence is always the same.

$a_n = a_1r^{(n-1)}$

where:

$r$  = common ratio

Example:

Write the first 3 terms of the geometric progression in which  $a_n$  is 5 and  $r$  is ½.

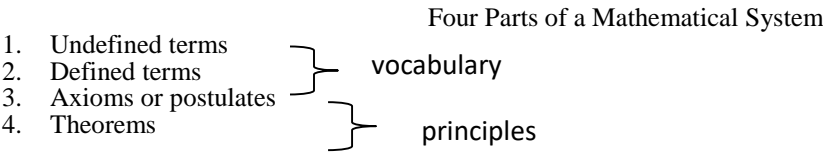
$a_2 = 5(1/2) = 5/2$   
 $a_3 = 5(1/2)^2 = 5/4$

the first three terms of the geometric progression are 5, 5/2, 5/4

GEOMETRY

Geometry is an example of a mathematical system. Being a mathematical system, it is characterized by (1) acceptance of undefined terms on which definitions are based and (2) a set of assumed principles from which other principles can be deduced. In geometry, the assumed principles are called **postulates** in geometry while **axioms** in algebra.

The statements that are deduced (or proved) are known as **theorems**.



**Undefined Terms**

“Point”, “line”, and “plane” are terms often used without being defined. Instead, they are simply described and serve as building blocks for later terminology. A **point**, which is represented by a dot, has location but not size; that is, a point has no dimension. **Lines** have quality of “straightness” that is not defined but assumed. Whereas a point has no dimensions, a line is one-dimensional; that is, the distance between any two points on a given line can be measured. **Plane**, another undefined term is two-dimensional; that is, it has infinite length and infinite width, but no thickness.

- Notations**

$\overleftrightarrow{AB}$  “line AB”

$\overline{AB}$  “line segment AB”

$\overrightarrow{AB}$  “ ray AB”

$AB$  “length of segment AB”

**Postulate 1**

*Through two distinct points, there is exactly one line.*

**Postulate 2**  
The measure of any line segment is a unique positive number.

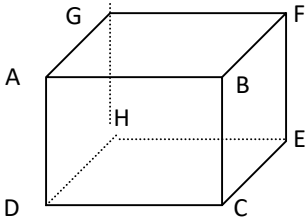
**Postulate 3**  
If Z is a point on  $\overline{AB}$  and  $A-Z-B$ , then  $AZ + ZB = AB$ .

**Postulate 4**  
Through three non-collinear points, there is exactly one plane.

**Postulate 5**  
If two distinct planes intersect, then their intersection is a line.

**Postulate 6**  
Given two distinct points in a plane, the line containing those points also lies in the plane.

- Sample Problem:**  
In the figure on the right, AB and EF are said to be skew lines because they neither intersect nor are parallel.  
How many planes are determined by
- (a) parallel lines AB and DC (ans. 1)
  - (b) intersecting lines AB and BC (ans. 1)
  - (c) skew lines AB and EF (ans. infinitely many)
  - (d) lines AB, BC, and DC (ans. 1)
  - (e) points A, B, and F (ans. 1)
  - (f) points A, C, and H (ans. 1)
  - (g) points A, C, F, and H (ans. 4)



ANGLES

If two lines meet at a point, they form an **angle**. The point is called the vertex of the angle and the lines are called **rays** of the angle. Thus, as defined, angle is the union of two rays that share a common endpoint.

**Naming Angles**

- (i)  $\angle ABC$
- (ii)  $\angle B$  (Given that B is the vertex of the angle)
- (iii)  $\angle 1$  or  $\angle x$  where x or 1 is written inside the angle

**Adjacent angles** are angles having the same vertex and a common side and one angle is not inside the other.

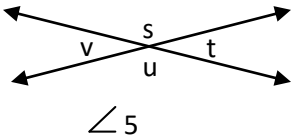
**Postulate 7**  
The measure of an angle is a unique positive number.

**Postulate 8**  
If a point D lies in the interior of  $\angle ABC$ , then  $m\angle ABD + m\angle DBC = m\angle ABC$ .

**Congruent angles** are angles with the same measure.  
**Complementary angles** are pair of angles whose sum adds up to 90 degrees.  
**Supplementary angles** are a pair angles whose measure adds up to 180 degrees.

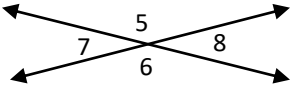
When two straight lines intersect, the pairs of nonadjacent angles formed are known as **vertical angles**, and vertical angles are congruent.

In the figure on the right,  
 $\angle s$  and  $\angle u$  are vertical angles  
as  $\angle t$  and  $\angle v$



Practice on these:

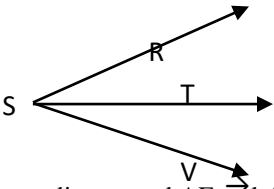
1) Consider the figure below,  $l$  and  $m$  intersect so that



$$\begin{aligned} m\angle 5 &= 2x + 2y \\ m\angle 8 &= 2x - y \\ m\angle 6 &= 4x - 2y \end{aligned}$$

Find the value of x and y.

2) Given:  $m\angle RST = 2x + 9$   
 $m\angle TSV = 3x - 2$   
 $m\angle RSV = 67^\circ$   
Find x.

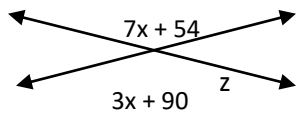


3) Suppose that (a)  $\angle FAC$  and  $\angle CAD$  are adjacent and AF and AD are opposite rays. What can you say about  $\angle FAC$  and  $\angle CAD$ ?

4) The two angles are complementary and one angle is 12 degrees larger than the other. Using the variables x and y, find the size of each angle.

$$\angle z$$

5) Find the value of .

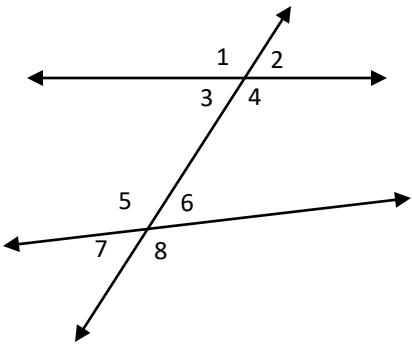


A **transversal** is a line that intersects two (or more) other lines at distinct points; all of the lines lie in the same plane.

In the figure on the right,  
the **interior angles** are:  $\angle 3$  and  $\angle 5$  and  $\angle 4$  and  $\angle 6$

**exterior angles** are:  $\angle 1$ ,  $\angle 2$ ,  $\angle 7$ , and  $\angle 8$

Two angles that lie in the same relative positions  
when two lines are cut by a transversal are  
**corresponding angles**.



Corresponding angles: and , and and and

Two angles that have different vertices (plural of “vertex”) and lie on opposite sides of the transversal are alternate **interior angles**.

Alternate interior angles:  $\angle 3$  and  $\angle 6$  ,  $\angle 4$  and  $\angle 5$

Two exterior angles that have different vertices and lie on opposite sides of the transversal are **alternate exterior angles**.

Alternate exterior angles:  $\angle 1$  and  $\angle 8$  and  $\angle 2$  and  $\angle 7$

**Parallel Lines**

Parallel lines are lines in the same plane that do not intersect.

**Postulate 9**

*Through a point not on a line, exactly one line is parallel to the given line.*

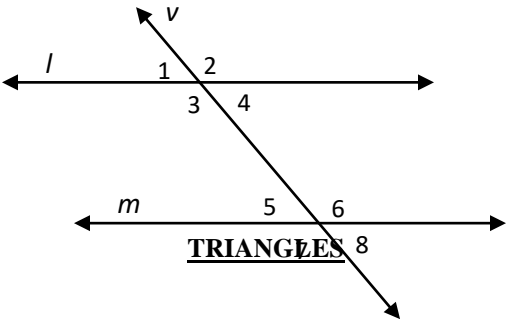
**Postulate 10**

*If two parallel lines are cut by a transversal, then the corresponding angles are congruent.*

Try this:

In the figure, if  $l \parallel m$  (read as  $l$  parallel to  $m$ )  
and  $m \angle 1 = 117^\circ$ , find

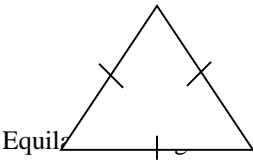
- (a)  $m \angle 2$
- (b)  $m \angle 3$
- (c)  $m \angle 4$
- (d)  $m \angle 5$



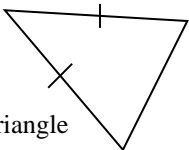
A **triangle** is a 3-sided polygon.

**Types According to the Number of sides of Equal Length**

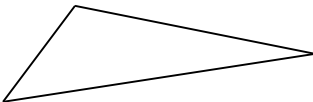
- Equilateral triangle** “has three sides of equal length”
- Isosceles triangle** “has two sides of equal length”
- Scalene triangle** “none of the sides are equal in length”



Equilateral triangle



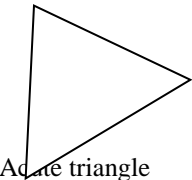
Isosceles triangle



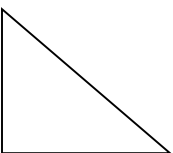
Scalene triangle

**Types According to Component Angles**

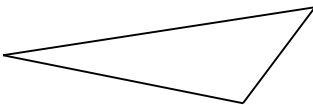
- Acute triangle**- all angles measure less than  $90^\circ$
- Right triangle**- has a right angle
- Obtuse triangle** – one of the angle measures greater than  $90^\circ$



Acute triangle



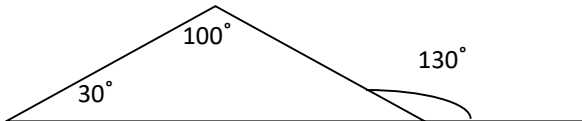
Right triangle



Obtuse triangle

**Significant Facts About Triangles**

- The sum of the angles of a triangle is  $180^\circ$ .
- The measure of the exterior angle of a triangle is equal to the sum of two the remote interior angles.

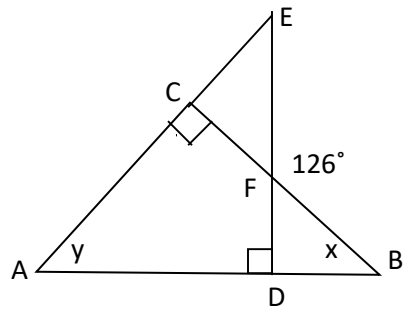


3. If two angles of a triangle are congruent to the two angles of a second triangle, the third angles are congruent.

Illustrative example

$\angle A \cong \angle E$        $\angle B \cong \angle F$        $\angle C \cong \angle D$

Given  $\angle A = 36^\circ$ ,  $\angle B = 90^\circ$ ,  $\angle C = 54^\circ$  and  $\angle D = 126^\circ$ . Find  $x$  and  $y$ .



Solution:

$90^\circ + x = 126^\circ$  ( Since  $126^\circ$  is the measure of the exterior angle of the triangle and by (2) the sum of the remote angles  $x$  and the right angle must be equal to it.)

solving for  $x$ ,  
 $x = 126^\circ - 90^\circ$   
 $x = 36^\circ$

To solve for  $y$ , we can use (1).  
 $y + x + 90^\circ = 180^\circ$

since  $x = 36^\circ$   
 $y + 36^\circ + 90^\circ = 180^\circ$   
solving for  $y$ ,  
 $y = 180^\circ - (36^\circ + 90^\circ)$   
 $y = 180^\circ - (126^\circ)$   
 $y = 54^\circ$

Therefore  $x = 36^\circ$  and  $y = 54^\circ$ .

Alternative solution:

To find the value of  $y$ , we can simply subtract the value of  $x$  from  $90^\circ$  since the angle other than  $x$  and  $y$  is a right angle.

**Right Triangles**

**The Pythagorean Theorem**

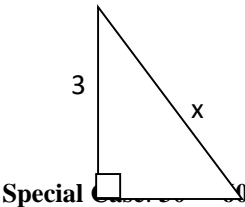
In any right triangle, the sum of the squares of the length of its legs is equal to the square of the length of the hypotenuse.

In symbols,

$a^2 + b^2 = c^2$  where  $a$  and  $b$  are length of the legs and  $c$  is the length of the hypotenuse.

Example

Find the length of the hypotenuse,  $x$ .



$x^2 = 3^2 + 4^2$   
 $x^2 = 9 + 16$   
 $x^2 = 25$   
 $x = 5$

Note: we only considered the positive root since the length is nonnegative

Special  $30^\circ - 60^\circ - 90^\circ$  triangle

- a) The leg opposite the  $30^\circ$  angle is  $\frac{1}{2}$  the hypotenuse.
- b) The leg opposite the  $60^\circ$  angle is  $\frac{\sqrt{3}}{2}$  of the hypotenuse.
- c) An altitude in an equilateral triangle forms a  $30^\circ - 60^\circ - 90^\circ$  triangle and is therefore equal to  $\frac{\sqrt{3}}{2}$  of the hypotenuse.

Formula to find the area of a triangle:

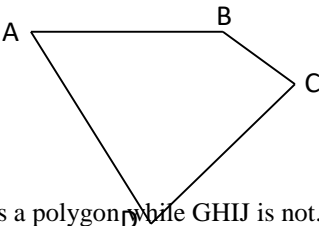
$A = \frac{1}{2}bh$  where  $b$  is the length of the base and  $h$  is the altitude

For an equilateral triangle,

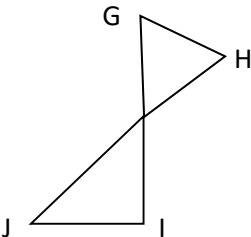
$A = \frac{s^2\sqrt{3}}{4}$  where  $s$  is the length of the side of the equilateral triangle.

**Polygons**

Polygon is a closed figure in a plane composed of line segments which meet only at their endpoints. The line segments are called sides of the polygon and a point where two sides meet is called a vertex of the polygon.

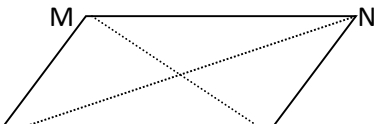


ABCD is a polygon while GHIJ is not.



- 1. Polygons are classified by the number of angles or sides they have.
- 2. If the sides and angles of the polygon are all equal in measurement, that polygon is called a **regular polygon**.
- 3. The sum of the measures of the angles of a polygon with  $n$  sides is  $(n-2) 180^\circ$ .

In a parallelogram:



- a) Opposite sides are parallel.
- b) Opposite sides are congruent.
- c) Opposite angles are congruent.
- d) Consecutive angles are supplementary.
- e) Diagonals bisect each other.
- f) Each diagonal bisects the parallelogram into two congruent triangles.

In a **rectangle**, in addition to the properties listed above:

- a) All angles are right angles
- b) Diagonals are congruent.]

In a **rhombus**, the properties are the same with that of a parallelogram,

- a) All sides are congruent.
- b) Diagonals are perpendicular.
- c) Diagonals bisect the angles.

A **square** has all the properties given above.

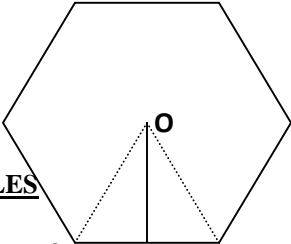
The **apothem** of a regular polygon is perpendicular to a side, bisects that side, and also bisects a central angle.

**OX** is an apothem.

It bisects AB, and is perpendicular to AB  
and bisects  $\angle AOB$

The **area** of a regular polygon is equal to

one- half of the product of its apothem and perimeter.



### CIRCLES

Circle is a set of points equidistant from a fix point called the **center**.

A **tangent** is a line that touches a circle at exactly one point; the point of intersection is the **point of contact** or the **point of tangency**.

A **secant** is a line (or segment or ray) that intersects a circle at exactly two points.

A polygon is **inscribed in a circle** if its vertices are points on the circle and its sides are chords of the circle. In such case, the circle is **circumscribed about the polygon**.

### CIRCLES, ANGLES and ARCS

Given:  $m \widehat{AB} = 92^\circ$   
 $m \widehat{DA} = 114^\circ$   
 $m \widehat{BC} = 138^\circ$

Find the measure of each of the numbered angles.

Solution:

$$(a) \quad m \angle X = 360^\circ - (m \widehat{DA} + m \widehat{AB} + m \widehat{BC})$$

$$= 360^\circ - \frac{(114^\circ + 92^\circ + 138^\circ)}{2}$$

$$= \frac{360^\circ - 344^\circ}{2}$$

$$= \frac{16^\circ}{2}$$

$$= 8^\circ$$

Therefore, angle 1 is equal to 8 degrees.  
 (Note that Theorem 2 is applied to arrive to the final answer.)

$$(b) \quad m \angle 2 = \frac{1}{2} m \widehat{AB}$$

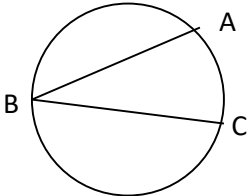
$$= \frac{1}{2} (92^\circ)$$

$$= 46^\circ$$

#### THEOREM 2

*The measure of an inscribed angle of a circle is one-half the measure of its intercepted arc.*

If  $\widehat{AC} = 130^\circ$   
 then  $\angle ABC = 65^\circ$



$$(c) \quad m \angle 3 = \frac{1}{2} (m \widehat{AB} - m \widehat{CD})$$

but,

$$m \widehat{CD} = 360^\circ - (m \widehat{AB} + m \widehat{DA} + m \widehat{BC})$$

$$= 360^\circ - (92^\circ + 114^\circ + 138^\circ)$$

$$= 360^\circ - 344^\circ$$

$$= 16^\circ$$

$$\text{Now,} \quad m \angle 3 = \frac{1}{2} (92^\circ - 16^\circ)$$

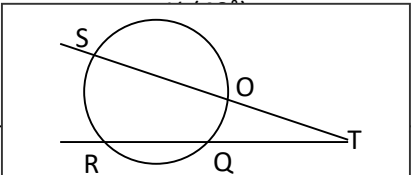
$$= \frac{1}{2} (76^\circ)$$

$$= 37^\circ$$

#### THEOREM 3

*An angle outside the circle formed by two secants, a secant and a tangent, or two tangents is equal in degrees to one half the difference of its intercepted arc.*

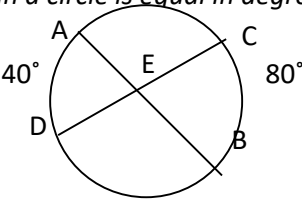
If  $\widehat{RS} = 60^\circ$ ,  $\widehat{QR} = 20^\circ$   
 then  $\angle RTV = \frac{1}{2} (60^\circ - 20^\circ)$





**Theorem 4**

An angle formed by two chords intersecting in a circle is equal in degrees to one-half of the sum of its intercepted arcs.



If  $m \widehat{AD} = 40^\circ$  and  $m \widehat{CB} = 80^\circ$

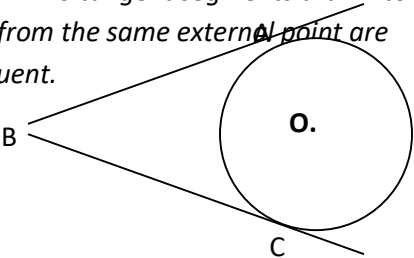
(d)  $m \angle 4 = \frac{1}{2} (m \widehat{AB} + m \widehat{CD})$   
 $= \frac{1}{2} (92^\circ + 16^\circ)$   
 $= \frac{1}{2} (108^\circ)$   
 $= 54^\circ$

(e)  $m \angle 5 = \frac{1}{2} (m \widehat{DA} + m \widehat{BC})$   
 $= \frac{1}{2} (114^\circ + 138^\circ)$   
 $= \frac{1}{2} (252^\circ)$   
 $= 126^\circ$

(f)  $m \angle 6 = \frac{1}{2} (m \widehat{AB})$   
 $= \frac{1}{2} (92^\circ)$   
 $= 46^\circ$

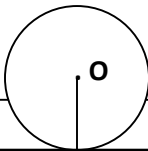
**Theorem 5**

Two tangent segments drawn to a circle from the same external point are congruent.



**Theorem 6**

The radius (or any other line through the center of a circle) drawn to a tangent at

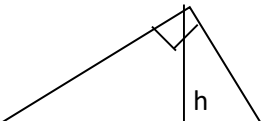
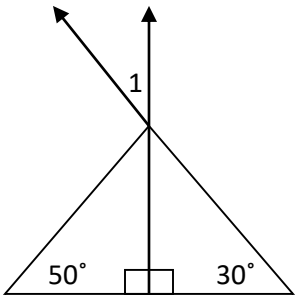


**FORMULAS IN FINDING THE AREA, VOLUME, PERIMETER and CIRCUMFERENCE**

- 1. Rectangle:  $A_R = lw$   
 $P_R = 2l + 2w$  where  $l$  is the length and  $w$  is the width
- 2. Parallelogram:  $A = bh$  where  $b$  is the length of the base and  $h$  is the altitude  
 $P = 2b + 2$  (length of the slanting side)
- 3. Rhombus:  $A = \frac{1}{2} d_1 d_2$   
 $P = 4s$
- 4. Square:  $A = s^2$  where  $s$  is the length of the sides  
 $P = 4s$
- 5. Triangle:  $A = \frac{1}{2} bh$  where  $b$  is the length of the base and  $h$  is the altitude  
 $P = a + b + c$  where  $a, b,$  and  $c$  are the length of the sides of the triangle  
Equilateral triangle:  $A = s^2 \frac{\sqrt{3}}{4}$
- 5. Trapezoid:  $A = \frac{1}{2} h (b_1 + b_2)$  where  $b_1$  and  $b_2$  are length of the parallel sides
- 6. Circle:  $A = \pi r^2$  where  $r$  is the radius and  $\pi$  is the constant (approx. 3.14)  
 $C = 2\pi r$  or  $C = \pi d$  where  $d$  is the diameter
- 7. Regular polygon:  $A = \frac{1}{2} a P$  where  $a$  is the apothem and  $P$  is the perimeter  
 $P = n \cdot s$  where  $n$  is the number of sides and  $s$  is the length of the sides

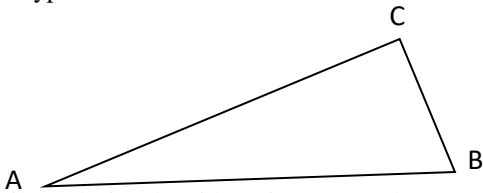
**Exercises**

1. If  $m \angle 1 = 3x - 9$ , what the value of  $x$ ?



2. If  $h = 12$  and  $a = 9$  then  $b =$  \_\_\_\_\_ ?

3. In triangle ABC,  $\angle C$  is a right angle,  $AC = 40$ ,  $BC = 30$ .  
Find the altitude to the hypotenuse.



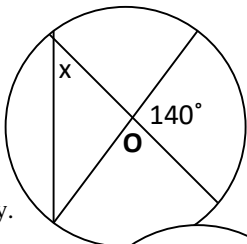
4. Find the area of an equilateral triangle with perimeter equal to 9 cm.

5. An equilateral triangle has an altitude of  $5\sqrt{3}$  cm long. Find its area.

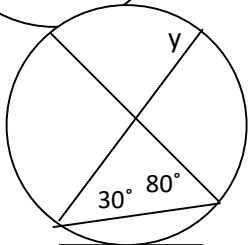
Note: To be given before the end of the first 2 hours—Geometry

Exercises

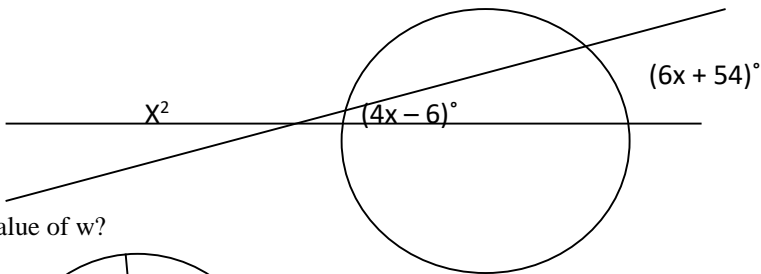
1. O is the center of the circle. Find the value of  $x$ .



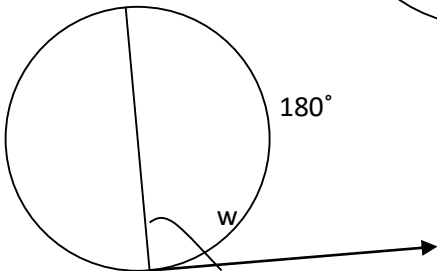
2. Find the value of  $y$ .



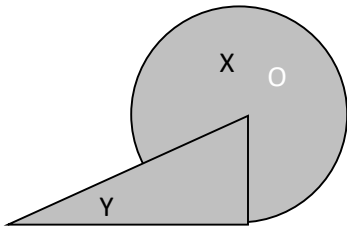
3. Find the value of  $x$ .



4. What is the value of  $w$ ?



5. In the figure below, if radius OX is 12 and the area of the right triangle OXY is 72, what is the area of the shaded region?



Note: Figure not drawn to scale

Note: To be given before the end of the last 2 hours (Session for Geometry)

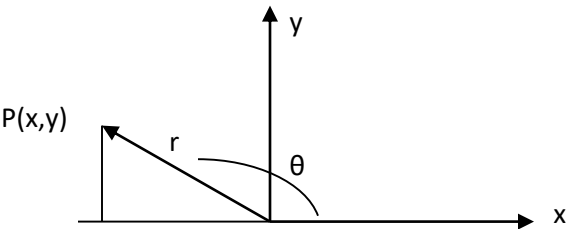
A. Trigonometric Functions

TRIGONOMETRY

Let P(x,y) be any point other than the origin on the position. The distance from the point to the origin is

terminal side of an angle  $\theta$  in standard  
 $r^2 = x^2 + y^2$

The six trigonometric functions are defined as:



$\sin \theta = \frac{y}{r}$     $\csc \theta = \frac{r}{y}$     $\tan \theta = \frac{y}{x}$   
 $\cos \theta = \frac{x}{r}$     $\sec \theta = \frac{r}{x}$     $\cot \theta = \frac{x}{y}$

Example:  
The terminal side of an angle  $\alpha$  goes through the point (5,12). Find the values of the six trigonometric functions of angle  $\alpha$ .

Finding r:  
 $r^2 = \sqrt{x^2 + y^2}$   
 $r^2 = \sqrt{5^2 + 12^2}$   
 $r^2 = \sqrt{25 + 144}$   
 $r^2 = \sqrt{169}$   
 $r = 13$

$\sin \theta = \frac{12}{13}$     $\csc \theta = \frac{13}{12}$     $\tan \theta = \frac{12}{5}$   
 $\cos \theta = \frac{5}{13}$     $\sec \theta = \frac{13}{5}$     $\cot \theta = \frac{5}{12}$

B. Reciprocal Identities

Some of the functions are reciprocals of each other. Reciprocal identities hold for any angle  $\theta$  that does not lead to a zero denominator.

$\sin \theta = \frac{1}{\csc \theta}$     $\csc \theta = \frac{1}{\sin \theta}$   
 $\cos \theta = \frac{1}{\sec \theta}$     $\sec \theta = \frac{1}{\cos \theta}$   
 $\tan \theta = \frac{1}{\cot \theta}$     $\cot \theta = \frac{1}{\tan \theta}$

Example:

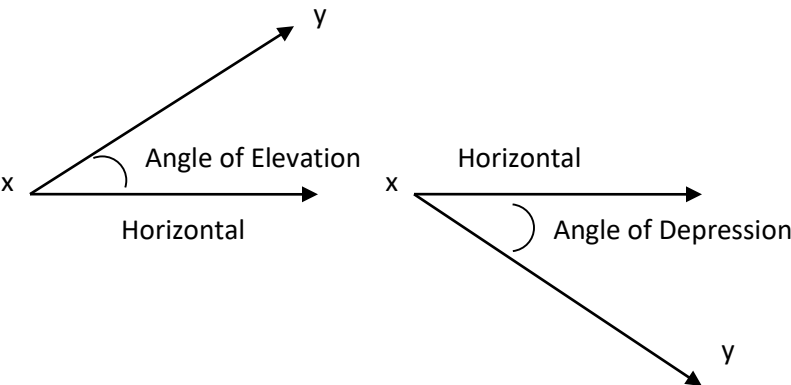
Find  $\sec \theta$  if  $\cos \theta$  is  $\frac{6}{7}$

$\sec \theta = \frac{1}{\frac{6}{7}}$   
 $\sec \theta = \frac{7}{6}$

C. Function Values of Special Angles

$\theta$	$\sin \theta$	$\cos \theta$
$30^\circ$	$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$
$45^\circ$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$
$60^\circ$	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$

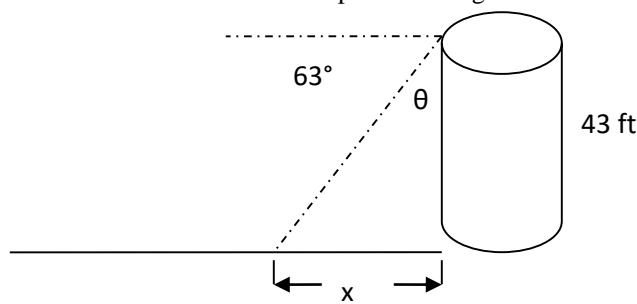
D. Common Applications of Right Triangles



- 1. The **angle of elevation** is the angle made by the ray xy (above horizontal) and the ray with endpoint x as shown in the figure above.
- 2. The **angle of depression** is the angle made by ray xy (below horizontal) and the ray with endpoint x as shown in the figure above.

Example:

The angle of depression is measured from the top of a 43 ft tower to a reference point on the ground. Its value is found to be 63°. How far is the base of the tower from the point on the ground?

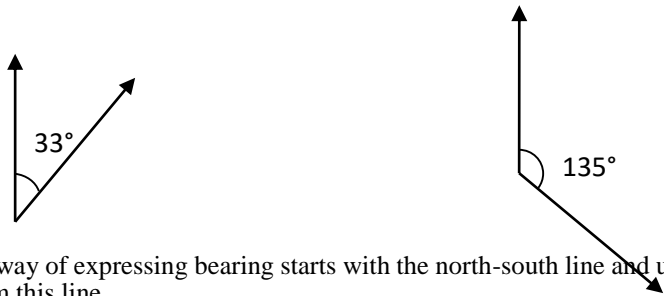


Solution:

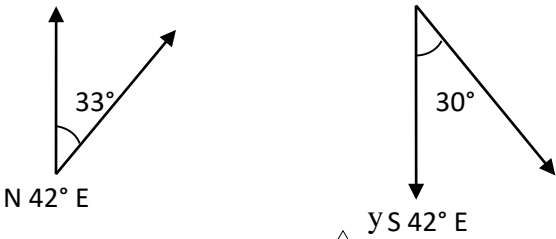
$$\tan 27 = \frac{x}{43}$$
$$43(\tan 27) = x$$
$$x = 21.91\,ft$$

$$\theta = 90 - 63$$
$$\theta = 27$$

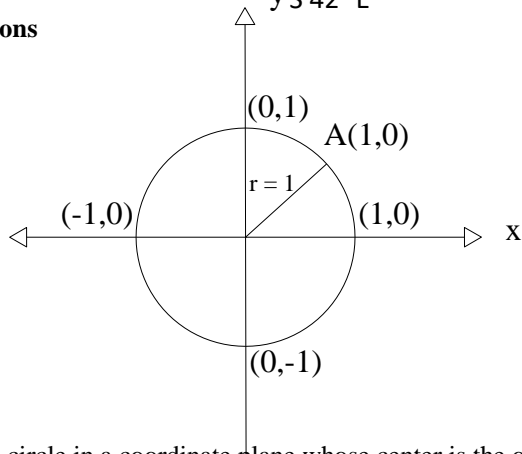
3. In both air and sea navigation. The clockwise angle from north of the line of sight to a point of reference is called the **bearing** of the point. There are two common ways to express bearing.
- a. If a single angle is given it is understood that the bearing is measured in a clockwise direction from due north.



- b. The second way of expressing bearing starts with the north-south line and uses an acute angle to show the direction, either east or west, from this line.



E. Circular Functions



1. Consider a circle in a coordinate plane whose center is the origin (0, 0) and the radius is 1. This circle is called the **unit circle**. The equation governing this circle is  $x^2 + y^2 = 1$  and every point in the unit circle must satisfy this equation.
2. An arc running counterclockwise from point (1,0) is an arc of **positive length** while an arc running clockwise from the same point is an arc of **negative length**.
3. A **circular function** is defined in terms of the arc length and the coordinates (x,y) in the terminal point of the arc as it moves around the unit circle

Domain:  $\mathbb{R}$

Range:  $\{(x, y) \mid -1 \leq r \leq 1\}$

*For sine and cosine functions only*

$$\cos \theta = \frac{x}{r}$$
$$\sin \theta = \frac{y}{r}$$

$$\tan \theta = \frac{y}{x} \ (x \neq 0)$$
$$\cot \theta = \frac{x}{y} \ (y \neq 0)$$

$$\sec \theta = \frac{r}{x} \ (x \neq 0)$$
$$\csc \theta = \frac{r}{y} \ (y \neq 0)$$

4. Behavior of Sine and Cosine Functions

Special numbers for sine and cosine functions

$\theta$	A(0)	$\sin\theta$	$\cos\theta$
0	(1,0)	0	1
$\pi/2$	(0,1)	1	0
$\pi$	(-1,0)	0	-1

$\frac{3\pi}{2}$	(0,-1)	-1	0
$2\pi$	(1,0)	0	1

Signs of Circular Functions

Quadrants	$\sin \theta = \frac{y}{r}$	$\cos \theta = \frac{x}{r}$	$\tan \theta = \frac{y}{x}$	$\cot \theta = \frac{x}{y}$	$\csc \theta = \frac{r}{y}$	$\sec \theta = \frac{r}{x}$
I	+	+	+	+	+	+
II	+	-	-	-	+	-
III	-	-	+	+	-	-
IV	-	+	-	-	-	+

### 5. Conversion of Radians to Degrees and Vice Versa

A rotation of 360° (one revolution) is equal to 2  $\pi$  radians therefore half a revolution is equal to  $\pi$  radians.

$$\frac{radians}{\pi} = \frac{degrees}{180^{\circ}}$$

Example:

Convert  $\frac{2\pi}{3}$  radians to degrees

$$\frac{2\pi}{3} = \frac{degrees}{180^{\circ}}$$

$$\frac{2}{3} = \frac{degrees}{180^{\circ}}$$

$$120^{\circ} = degrees$$

### 6. Arc Length

The length s of the arc intercepted on a circle of radius r by a central angle of measure  $\theta$  radians is given by the product of the radius and the radian measure of angle.

$$s = r\theta$$

Example:

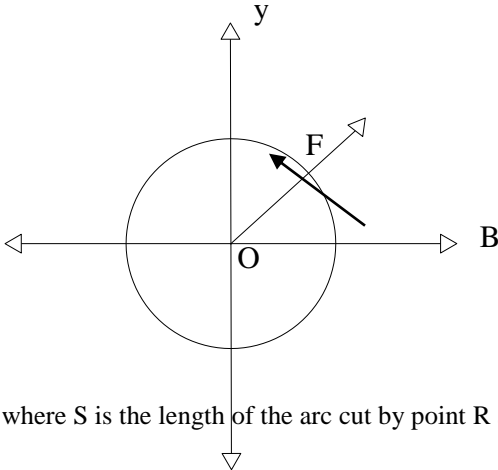
A circle has a radius of 19cm. Find the length of the arc intercepted by a central angle measuring  $\frac{3\pi}{8}$  radians.

$$s = r\theta$$

$$s = 19\left(\frac{3\pi}{8}\right)$$

$$s = \frac{57\pi}{8} centimeters$$

### 7. The measure of how fast the position of F is changing is called the **linear velocity** (v)



$$v = \frac{s}{t} \text{ where S is the length of the arc cut by point R at time t}$$

### 8. the measure of how fast angle FOB is changing is called **angular velocity** ( $\omega$ )

$$\omega = \frac{\theta}{t} \text{ where } \theta \text{ is the measure of angle FOB at time t}$$

Example:

Suppose point F is on a circle with radius of 8cm and ray OF is rotating with an angular velocity of  $\pi/10$  radians per second.

a) find the angle generated by F in 5 seconds.

$$\omega = \frac{\theta}{t}$$

$$\frac{\pi}{10} = \frac{\theta}{5}$$

$$\theta = \frac{\pi}{2}$$

b) find the distance travelled by F along the circle in 5 seconds

$$s = r\theta$$

$$s = 8 \frac{\pi}{2}$$

$$s = 4\pi \text{ cm}$$

c) find the linear velocity of F

$$v = \frac{s}{t}$$

$$v = \frac{4\pi}{5} \text{ cm per second}$$

## F. Trigonometric Identities

Basic Identities

$$\sin(-\theta) = -\sin \theta$$

$$\cos(-\theta) = \cos \theta$$

$$\tan(-\theta) = -\tan \theta$$

Phytagorean Identities

$$\sin^2(\theta) + \cos^2(\theta) = 1$$

$$1 + \tan^2(\theta) = \sec^2(\theta)$$

$$1 + \cot^2(\theta) = \csc^2(\theta)$$

Sum and Difference Identities

$$\cos(A \mp B) = \cos A \cos B \pm \sin A \sin B$$

$$\sin(A \pm B) = \sin A \cos B \pm \cos A \sin B$$

$$\tan(A \pm B) = \frac{\tan A \pm \tan B}{1 \mp \tan A \tan B}$$

Double Angle Identities

$$\sin 2\theta = 2 \sin \theta \cos \theta$$

$$\cos 2\theta = \cos^2 \theta - \sin^2 \theta$$

$$= 1 - 2 \sin^2 \theta$$

$$= 2 \cos^2 \theta - 1$$

$$\tan 2\theta = \frac{2 \tan \theta}{1 - \tan^2 \theta}$$

$$\sin^2 \theta = \frac{1 - \cos 2\theta}{2}$$

$$\cos^2 \theta = \frac{1 + \cos 2\theta}{2}$$

Half Angle Identities

$$\sin \frac{\theta}{2} = \pm \sqrt{\frac{1 - \cos \theta}{2}}$$

$$\cos \frac{\theta}{2} = \pm \sqrt{\frac{1 + \cos \theta}{2}}$$

$$\tan \frac{\theta}{2} = \pm \sqrt{\frac{1 - \cos \theta}{1 + \cos \theta}}$$

$$= \frac{\sin \theta}{1 + \cos \theta}$$

$$= \frac{1 - \cos \theta}{\sin \theta}$$

Proving identities:

One way of proving identities is to write equivalent expressions on one side of the equation until you arrive at an expression that is identical to the other side of the equation. Another way is by replacing expressions on both sides of the given equation with equivalent expressions until they are identical.

Example:

$$\text{Prove } \cot \theta = \cos \theta \csc \theta$$

$$= (\cos \theta) \left( \frac{1}{\sin \theta} \right)$$

$$= \frac{\cos \theta}{\sin \theta}$$

$$= \cot \theta$$

## G. Solving Oblique Triangles

Triangles that are not right triangles (oblique triangles) can also be solved using the trigonometric functions

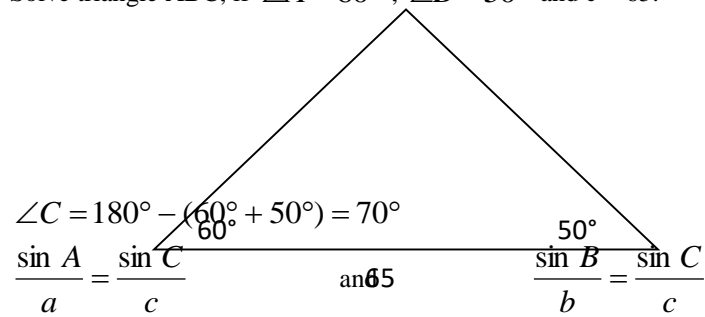
1. Law of Sines

For any triangle ABC in which a,b, and c are the lengths of the sides opposite the angles with measures A,B, and C respectively.

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

Example:

Solve triangle ABC, if  $\angle A = 60^\circ$ ,  $\angle B = 50^\circ$  and  $c = 65$ .



$$\begin{aligned}\frac{\sin 60}{a} &= \frac{\sin 70}{65} \\ 65 \sin 60 &= a \sin 70 \\ \frac{65 \sin 60}{\sin 70} &= a \\ 59.9 &= a\end{aligned}$$

$$\begin{aligned}\frac{\sin 50}{b} &= \frac{\sin 70}{65} \\ 65 \sin 50 &= b \sin 70 \\ \frac{65 \sin 50}{\sin 70} &= b \\ 52.99 &= b\end{aligned}$$

## 2. Law of Cosines

For any triangle ABC in which a,b, and c are the lengths of the sides opposite the angles with measures A,B, and C respectively.

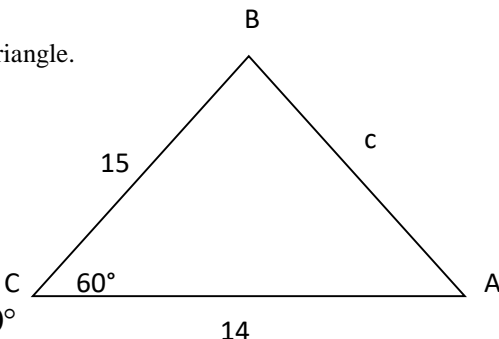
$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$b^2 = a^2 + c^2 - 2ac \cos B$$

$$c^2 = a^2 + b^2 - 2ab \cos C$$

Example:

Find the length of side  $c$  for the given triangle.



$$\begin{aligned} c^2 &= a^2 + b^2 - 2ab \cos C \\ c^2 &= 15^2 + 14^2 - 2(14)(15) \cos 60^\circ \\ c^2 &= 211 \\ c &= 14.53 \text{ units} \end{aligned}$$

## INVERSE TRIGONOMETRIC FUNCTIONS

- $y = \sin^{-1} x$  or  $y = \arcsin x$  means  $x = \sin y$ , for  $y$  in  $\left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$
- $y = \cos^{-1} x$  or  $y = \arccos x$  means  $x = \cos y$ , for  $y$  in  $[0, \pi]$
- $y = \tan^{-1} x$  or  $y = \arctan x$  means  $x = \tan y$ , for  $y$  in  $\left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$

Function	Domain	Range	Quadrant
$y = \sin^{-1} x$	$[-1, 1]$	$\left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$	I and IV
$y = \cos^{-1} x$	$[-1, 1]$	$[0, \pi]$	I and II
$y = \tan^{-1} x$	$(-\infty, \infty)$	$\left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$	I and IV
$y = \cot^{-1} x$	$(-\infty, \infty)$	$[0, \pi]$	I and II
$y = \sec^{-1} x$	$(-\infty, -1] \cup [1, \infty)$	$[0, \pi], y \neq \frac{\pi}{2}$	I and II
$y = \csc^{-1} x$	$(-\infty, -1] \cup [1, \infty)$	$\left[-\frac{\pi}{2}, \frac{\pi}{2}\right], y \neq 0$	I and IV

Example:

1. Find  $y$  in the following:

a.  $y = \sin^{-1} \frac{1}{2}$

y is the number in  $\left[ \frac{-\pi}{2}, \frac{\pi}{2} \right]$  whose sine is  $\frac{1}{2}$

$$\sin y = \frac{1}{2}$$

$$\sin \frac{\pi}{6} = \frac{1}{2}$$

$$y = \frac{\pi}{6}$$

$\therefore$  Since  $\frac{\pi}{6}$  is in the range of the arcsin function we can conclude that  $y = \frac{\pi}{6}$

## STATISTICS

A. Statistics is the study of techniques concerned with the collection, analysis, and interpretation of data.

Statistics is used to

- a. Summarize and describe data (**descriptive statistics**)
- b. Draw conclusions from the data (**inferential statistics**)

B. If for example, one is to gather data from a survey. All the data collected is referred to as **population**. When only part of the data is collected it is referred to as **sample**.

C. **Random sampling** means selecting individuals entirely by chance. A random sample must be taken from many places in the population, the more samples, the better the chances of getting the true picture of the population.

### D. Fundamental Counting Principle

When one event can occur in m different ways and another event can occur in n different ways, then together the events can occur in m\*n different ways provided that the second event is not in any way influenced by the first event.

Example:

How many even numbers of two digits each can be formed from the digits 1, 2, 3, 4, 5, 6, 8 and 9, if repetition of digit is not allowed?

The units place can be filled by 2, 4, 6, and 8. This place can be filled 4 ways.

The tens place can be filled 8 ways because repetition is not allowed.

Therefore the number of even two digit numbers if repetition is not allowed is:

$$4 \times 8 = 32$$

E. An arrangement of a group of objects in a definite order is called **permutation**.

The number of Permutations of n distinct elements taken r at a time, denoted  ${}_nP_r$  is given by the formula:

$${}_nP_r = \frac{n!}{(n-r)!} \text{ for } 0 \leq r \leq n$$

Example:

How many different ways can 9 people be seated in a row of 4 chairs?

$${}_nP_r = \frac{n!}{(n-r)!}$$

$${}_9P_4 = \frac{9!}{(9-4)!}$$

$$= 3024 \text{ ways}$$

The number of distinguishable permutations P of n elements taken n at a time with  $r_1$  like elements,  $r_2$  like elements of another kind, and so on is given by the formula:

$$P = \frac{n!}{r_1!r_2!r_2!...}$$

Example:

How many permutations can be made using all the letters of the word institution?

$$P = \frac{12!}{3!2!2!3!}$$

$$= 3,326,400$$

The number of circular permutations of n objects where n is a natural number is  $(n-1)!$

Example:



In how many ways can 9 people be seated at a round table?

Number of ways =  $(9 - 1)! = 40,320$

- F. A group of objects or things, irrespective of their order is called a **combination**. A combination of n elements of a set taken r at a time, denoted  ${}_nC_r$ , is any r-element subset of the given set.

$${}_nC_r = \frac{n!}{r!(n-r)!} \text{ for } 0 \leq r \leq n$$

Example:  
In how many ways can a committee of 6 be chosen from 10 people?

$${}_{10}C_6 = \frac{10!}{6!(10-6)!}$$

$${}_{10}C_6 = \frac{10!}{6!(4)!}$$

$${}_{10}C_6 = \frac{10 \cdot 9 \cdot 8 \cdot 7}{(4)!}$$

$${}_{10}C_6 = 210$$

- G. In sample space that contains equally likely outcomes that can be counted, the **probability** that an event E will occur, P(E), is the ratio of the number of outcomes in the event to the number of outcomes in the sample space.

$$P(E) = \frac{\text{number of outcomes in the event}}{\text{number of outcomes in the sample space}}$$

Example:  
A die is rolled. Find the probability of each event.

- a. P(getting 1) = 1/6
- b. P(getting an even number) = 3/6 = 1/2
- c. P(getting 1,2,3,4,5, or 6) = 6/6
- d. P(getting an 8) = 0/6 = 0

- H. A table showing the distribution of measures of the same kind is called a **frequency distribution**. The frequency distribution can be used to organize data.

Example:  
Construct a frequency distribution for the marks of 15 pupils in an algebra exam.

32 33 34 31 33 35 40 39 37 31 35 30 29 37 36

Interval	Frequency
39-40	2
37-38	2
36-35	3
34-33	3
32-31	3
29-30	2

I. **Measures of Central tendency**

In a large population a great number of individuals cluster near the middle of the scale. The concentration of cases near the middle helps us to describe and compare distributions easily.

- a. **Mean** is the arithmetic average of the data. It is denoted as  $\bar{x}$ .  
$$\bar{x} = \frac{1}{n} \sum x_i$$
 where n is the number of values, each  $x_i$  is an individual value
- b. **Mode** is the value of the measure that occurs most frequently.
- c. **Median** is the value of the middle measure when the measures have been arranged in rank order. If there is no middle value, we take the midway between the values of the middle two cases.

Example:  
Find the mean median and mode for the following quiz scores.  
5, 7, 10, 10, 7, 9, 5, 6, 7, 7, 4

$$\bar{x} = \frac{5 + 7 + 10 + 10 + 7 + 9 + 5 + 6 + 7 + 7 + 4}{11}$$

$$\bar{x} = 7$$

First arrange the scores into ascending order.  
4, 5, 5, 6, 7, 7, 7, 7, 9, 10, 10  
**The median of the scores is 7**

The value that occurs most frequently is 7 therefore the mode is 7.

J. **Measures of Variation**

Shows the variability or dispersion of the data.

- a. The **range** of a set of data is the difference between the highest value and the lowest value. It shows the distance of the scattering values away from the middle.

Example:

Given a set of scores in a Biology test 99, 95, 78, 61, 54, 87, 75.  
The highest score is 99 and the lowest score is 54  
The range of the set is  $99 - 54 = 45$

b. Variance ( $\sigma^2$ )

The greater the variance the more the scores vary from the mean.

$$\sigma^2 = \frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^2$$

Each value  $x_i - \bar{x}$  is called a deviation from the mean

Example:

**Example:**  
Find the variance for the data set 10, 2, 3, 9, 1 with  $\bar{x} = 5$

$x$	$x - \bar{x}$	$(x - \bar{x})^2$
10	5	25
2	-3	9
3	-2	4
9	4	16
1	-4	16

$$\sum_{i=1}^n (x_i - \bar{x})^2 = 70$$

$$\sigma^2 = \frac{1}{5}(70)$$

$$\sigma^2 = 14$$

c. Standard Deviation ( $\sigma$ )

The standard deviation is the most frequently used measure of the spread of the set of data.

$$\sigma = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n}}$$

In the preceding example the variance was computed to be 14. To get the standard deviation, we take the square root of the variance which is the  $\sqrt{14}$ . The standard deviation for the preceding example is approximately 3.74.

K. When data is distributed in a **bell shape** or **normal curve** it is assumed that approximately 68% of the values are within 1 standard deviation of the mean, approximately 95% are within 2 standard deviations of the mean and about 99.8% are within 3 standard deviations of the mean.

L. A **z – score** is the number of standard deviations the value is from the mean. The sign of the z – score tells its direction from the mean.

$$z = \frac{x - \bar{x}}{\sigma}$$

Example:

What is the z-score for 90 when  $\bar{x} = 60$  and  $\sigma = 3$

$$z = \frac{x - \bar{x}}{\sigma}$$
$$z = \frac{90 - 60}{3}$$
$$z = 10$$

$\therefore 90$  is 10 standard deviations above the mean.

## Practice Test

**Multiple Choices:**

- What is the average of A, B, C?
  - ABC/3
  - $(A+B+C)/3$
  - $3(A+B+C)/3$
  - $ABC/A+B+C$
- Which of the following has the LEAST Numerical value?
  - $11/12$
  - $6/8$
  - $5/7$
  - $3/4$
- If 2 apples cost P25.00, how many apples can be purchased for P100.00?
  - 8 apples
  - $\frac{1}{2}$  dozen
  - 2 dozens
  - $1\frac{1}{2}$  dozens

4. If 2 tablespoons = 1 liquid oz., and 5 tablespoons =  $\frac{1}{4}$  cup, then, how many liquid ounces are there in one cup?
  - a. 4 ounces
  - b. 10 ounces
  - c. 16 ounces
  - d. 24 ounces
5. 2 is what percent of 5?
  - a. 25%
  - b. 38%
  - c. 40%
  - d. 35%
6. Five (5) average office workers earn a total average monthly salary of P10, 000. If the average monthly salaries of two of these workers total P 4,000, what is the average monthly income of each of the remaining three workers?
  - a. P 6,000.00
  - b. P 2,000.00
  - c. P 2,500.00
  - d. P 4,000.00
7. Which of the following equation has the LEAST value?
  - a.  $6+3 \times 4$
  - b.  $6 \times 4 + 3$
  - c.  $6+4 \times 3$
  - d.  $6 \times 3 + 4$
8. 3.54 is multiplied by 10 to the fifth power, what would be the value?
  - a. 3.054
  - b. 30.54
  - c. 305.40
  - d. 354,000
9. If the short hand of the clock is at 4, what is the degree of its' angle?
  - a. 90
  - b. 120
  - c. 130
  - d. 150
10. There are two numbers whose sum is 48. One of the numbers is greater by 6. What are the numbers?
  - a. 23,24
  - b. 21,27
  - c. 22,26
  - d. 23,26
11. Add:  $17 \frac{5}{8} + 21 \frac{3}{4} = ?$ 
  - a.  $38 \frac{3}{8}$
  - b.  $39 \frac{3}{8}$
  - c.  $39 \frac{4}{8}$
  - d.  $38 \frac{4}{8}$
12. My uncle's weight is two times that my nephew. My aunt's weight is half that of my nephew. What is the total weight of the three? Which of the following formulae will apply for the correct answer?
  - a.  $x^3 + 2 \frac{1}{2}$
  - b.  $\frac{1}{2} + 3x$
  - c.  $(2x) + (x) + (1/2x)$
  - d.  $2x + 1/2x^2$
13.  $2 \frac{3}{4}$  of P100 is equal to
  - a.  $\frac{6}{4} \times 100$
  - b.  $\frac{11}{4} \times 100$
  - c.  $\frac{11}{4} + 100$
  - d.  $\frac{6}{4} + 100$
14. Which of the following fraction is > than  $\frac{1}{3}$ ?
  - a.  $\frac{22}{63}$
  - b.  $\frac{15}{46}$
  - c.  $\frac{4}{11}$
  - d.  $\frac{33}{98}$
15. In  $1 \frac{1}{2}$  hours, the minute hand of a clock rotates through an angle of how many degrees?
  - a. 60
  - b. 90
  - c. 180
  - d. 540
16. When the fraction  $\frac{2}{3}$ ,  $\frac{5}{7}$ ,  $\frac{8}{11}$  and  $\frac{9}{13}$  are arranged in an ascending order, the result would be?
  - a.  $\frac{8}{11}$ ,  $\frac{5}{7}$ ,  $\frac{9}{13}$ ,  $\frac{2}{3}$
  - b.  $\frac{5}{7}$ ,  $\frac{8}{11}$ ,  $\frac{2}{3}$ ,  $\frac{9}{13}$
  - c.  $\frac{2}{3}$ ,  $\frac{8}{11}$ ,  $\frac{5}{7}$ ,  $\frac{9}{13}$
  - d.  $\frac{2}{3}$ ,  $\frac{9}{13}$ ,  $\frac{5}{7}$ ,  $\frac{8}{11}$
17. ADD:  $48.63 + 96.28 + 436.45 + 2385 = ?$ 
  - a. 581.60
  - b. 581.5985
  - c. 581.5990
  - d. 581.5986
18. 15 is 20% of what number?
  - a. 75
  - b. 78
  - c. 80
  - d. 70
19. 7 is 5 percent of what number?
  - a. 120
  - b. 125
  - c. 145
  - d. 140
20. The ratio of two numbers 5: 3 and their differences is 20. What are the numbers?
  - a. 50, 30
  - b. 55, 35
  - c. 40, 60
  - d. 45, 65
21. The ratio of two numbers is 16: 33. The larger number is 264. What is the smaller number?
  - a. 131
  - b. 130
  - c. 129
  - d. 128
22.  $\frac{3}{4}$  of 100 is equal to 5 times what number?
  - a. 10
  - b. 75
  - c. 25
  - d. 15
23. What is the smallest positive number which, when it is divided by 3, 4 or 5, will leave a remainder of 2?
  - a. 42
  - b. 22
  - c. 62
  - d. 122
24. Which of the following number has the largest numerical value?
  - a.  $(3+3+3)$  to 3<sup>rd</sup> power
  - b.  $(3 \times 3)$  to 3<sup>rd</sup> power
  - c.  $(4 \times 3 \times 3)$  to 2<sup>nd</sup> power
  - d. 3 cube + 3 square
25. Eight percent of 36 is 72% of what number?
  - a. 2.06
  - b. 2.88
  - c. 3.24
  - d. 4
26. Which of the following has the greatest value?
  - a.  $\frac{6}{10}$
  - b.  $\frac{8}{12}$
  - c.  $\frac{17}{24}$
  - d.  $\frac{7}{9}$
27. If 25% of 50% of 80 is 10, then  $\frac{1}{4}$  of  $\frac{5}{10}$  of 80 is
  - a. 40
  - b. 20
  - c. 15
  - d. 10
28. What number is 35 more than 70?
  - a. 105
  - b. 135
  - c. 170
  - d. 185
29. The number is 15 less 7; when added to ten, what will the number be?
  - a. 28
  - b. 18
  - c. 17
  - d. 15
30. What is  $-2 + (-3.1) + (-.02)$ ?
  - a. -.512
  - b. 5.012
  - c. 0.512
  - d. -5.12

31. What part of an hour elapses between 11:50 am and 12:14 pm ?  
a. 2/5                      b. 7/30                      c. 17/30                      d. 16
32. A motion was passed by a vote of 6 is to 4. What parts of votes cast were in favor of the motion?  
a. 6/10                      b. 6/4                      c. 4/6                      d. 4/10
33. If three miles is equivalent to 4.83 kilometers, then 11.27 kms is equivalent to how many miles?  
a. 2 1/3                      b. 7 1/3                      c. 5                      d. 7
34. Ever good Systems employ 115 people. During the low season, it laid off 20% of its employees. By what percent must the company increase its' manpower to return to full capacity?  
a. 20                      b. 22                      c. 23                      d. 25
35. Golen Bell Books offer 2004 World Almanac marked at P2, 450.00 less discount of 10% and 5 %. Another bookstore offers the same book but with a single discount of 15%. How much does the buyer save by buying at the best price?  
a. P12.25                      c. P 12.00  
b. P 12.50                      d. P10.50
36. Lulu travels a distance of 20 kilometers at 60 kms. per hour (kph) and then returns over the same route at 40 kph. What is his average rate for the round trip in kms. per hour?  
a. 50kms                      b. 48 kph                      c. 47 kph                      d. 46 kph
37. Mr. Milby took his four children to the trade exhibit. The total cost of their admission tickets was P 135.00 Mr. and Mrs. Alonzo and their six children had to pay P 220.00. What was the cost of an adult ticket and that of a child's ticket?  
a. P 35.0 & P 25.00                      c. P 24.00 & P 35.00  
b. P 25.00 & P 35.00                      d. P35.00 & P 28.00
38. Cass and uma both have part time jobs. Last week, Cass worked 8 hours and Uma, 5 hours and both of them earned a total of P800.00. This week, Uma worked 12 hours and Cass, 4 hours and they earned a total of P1, 250.00. How much is Cass's hourly rate?  
a. P 48.00                      b.P49.50                      c. P 44.08                      d. P44.50
39. What is Uma hourly rate?  
a. P89.90                      b. P89.00                      c. P88.75                      d. P 89.47
40. If X is located on line segment AB and point Y is located on line segment CD, If  $AB = CD$  and  $AX > CY$ , then :  
a.  $XB > YD$                       c.  $XB > YD$   
b.  $AX > XB$                       d.  $AX > XB$
41. If  $W > X$ ,  $Y < Z$  and  $X > Z$ , then which of the following equation must be true?  
a.  $W > X > Y > Z$                       c.  $X > Z > Y > W$   
b.  $W > X > Z > Y$                       d.  $Z < Y < X < W$
42. The number of degrees through which the hour hand of a clock moves in two hours and 12 minutes is?  
a. 66 degrees                      c. 126 degrees  
b. 72 degrees                      d. 732 degrees
43. Emang is 15 years old. Veronica is one-third older. How many years ago was Veronica twice as old as Emang.  
a. 3                      b. 5                      c. 7.5                      d. 10
44. A train running between Calamba and Magallanes arrives at its destination 10 minutes late when it goes at 40 kms. per hour. And 16 minutes late when it goes at 30 kms. per hour. What is the difference between the two towns?  
  
a. 25 kms. b. 12 kms. c. 75 kms. d. 80 kms.
45. Jake is 67 years old. His son Jay is 29 years old. In how many years will Jay be exactly half his father's age?  
a. 6                      b. 7                      c. 8                      d. 9

### **PROBLEM SOLVING :**

46. Jamie bought 55 copies of phil. History and paid a total of P 3,850.00. If she buys 3 copies more of the same book, how much will she pay in all?  
a. P4,060                      b. P4,260                      c. P4,160                      d. P4,150
47. A manufacture finds that 150 pieces of pens are defective and unsuitable for sale. If the defective pens are equivalent to three percent of the production, how many pens are being produced?  
a. 5100                      b. 4990                      c. 5000                      d. 5150
48. Trisha is paid P 380.00 per hour for the 1<sup>st</sup> hrs. She works in a day. For every hour thereafter, she is paid P 475.00 per hour. If she works 4 more hours' day for 3 days in a week, how much does she earn per week?  
a. P2,1000                      b. P2,0900                      c. P2,0950                      d. P2,9990
49. Maxine owns 40% of the stock in Millennium Traders, Inc. Justine owns 15,000 shares. Aleah owns all the shares not owned by Maxine or Justine. How many shares does Maxine own if Aleah has 25 % more shares than Maxine?  
a. 45,000 shares                      c. 60,000 shares  
b. 50,000 shares                      d. 75,000 shares  
c.
50. What would Aleah' total number of shares in Millennium Traders Inc?  
a. 75,500                      c. 75,050  
b. 75,600                      d. 75,000
51. Two trains start from the same station at the time but travel in opposite directions. Their rate is 45 miles per hour and 65 miles per hour respectively. After how many hours will the train be 640 miles apart?  
a. 4 hrs. 40 mins                      c. 6 hrs  
b. 5 hrs 48 mins                      d. 4 1/2 hrs
52. C is the midpoint of line segment AE, B and D are in the line AE so that  $AB = BC$  and  $CD = DE$ . What percent of AC is AD?  
a. 33 %                      b. 50 %                      c. 133 %                      d. 150 %
53. Admission tickets to a college play cost P20 for students and P 50 for non-students. If 550 tickets were sold and total receipts amounted to P 15,500. How many tickets of each type were sold?  
a. 160 & 390                      c.150 & 400  
b. 100 & 450                      d.170 & 380

54. Mang Jose, a gardener, can mow a lawn in 3 hrs. After 2 hrs., it rained and he stopped mowing the lawn, in the afternoon, Aling Tina, completed the rest of the work in one hour and 30 minutes. How long would it take Aling Tina to mow the lawn by herself?
- 2 hr. and 30 mins.
  - 1 hr. and 22 mins.
  - 1 hr. and 45 mins.
  - 2 hr. and 22 mins.
55. A couple wants to have only four children so spaced that the first is older than the second by 2 years, the second older than the third by three years, the third older than the fourth by 4 years. If their plan is realized, how old will the eldest child be when the youngest is nine years old?
- 18 yrs. Old
  - 16 yrs. Old
  - 17 yrs. old
  - 15 yrs. Old
56. Write 3.4 % as a fraction.
- $3.4 / 100$
  - $3.4 / 1000$
  - $.34 / 100$
  - $.34 / 1000$
57. Write  $\frac{3}{4}\%$  as a decimal.
- .75
  - .075
  - .0075
  - .00075
58. The number missing in the series 6, 12, 20, 30, ?, 56, 72 is ?
- 38
  - 42
  - 44
  - 48
59. If the following numbers are arranged in order from smallest to the largest, what will be the correct order?  
 $\frac{9}{13}$  \*  $\frac{13}{9}$  \* 70% \*  $\frac{1}{70}$
- Bacd
  - Cbad
  - Cdab
  - Acdb
60. 3 is 6 % of a certain number. What is the number?
- 53
  - 50
  - 48
  - 18
61. What is the average of 0.6, 6.6, 0.4, and 2.4?
- 1
  - 10
  - $2\frac{1}{2}$
  - 2
62. What is the sum of  $\sqrt{12} + \sqrt{27}$ ?
- $\sqrt{29}$
  - $5\sqrt{3}$
  - $3\sqrt{5}$
  - $13\sqrt{3}$
63. Find 65% of 75.
- 4.87
  - 488
  - 48.75
  - 487.50
64. P25.00 is 20% of what?
- P 1,250
  - P 125.00
  - P 128.50
  - P 120.00
65. 12 is 125% of what number?
- 9.6
  - 8
  - 9
  - 10
66. What percent of 16 is 40?
- 2.5 %
  - 2500 %
  - $\frac{1}{4}$
  - 250%
67.  $1\frac{1}{4}$  subtracted from its reciprocal is?
- $-\frac{9}{20}$
  - .45
  - 25
  - $\frac{9}{20}$
68. What is the ratio of  $\frac{1}{4}$  to  $\frac{3}{5}$ ?
- 1:3
  - 3:20
  - 5:12
  - 3:4
69. What is the difference between  $\sqrt{150}$  and  $\sqrt{54}$ ?
- $3\sqrt{6}$
  - $16\sqrt{6}$
  - $6\sqrt{2}$
  - $2\sqrt{6}$
70. One tenth is what part of three-fourths?
- $\frac{3}{40}$
  - $\frac{1}{8}$
  - $\frac{2}{15}$
  - $\frac{15}{2}$
71. How many  $\frac{1}{8}$ 's are there in  $2\frac{5}{8}$ ?
- 21
  - 22
  - 23
  - 24
72. A blue neon light blinks every 4 seconds. A red one blinks every 5 seconds, while a green one blinks every 6 seconds. How many times will they blink together in one hour?
- once
  - 10 times
  - 20
  - 60
73. Which of the following is divisible by 3, but not by 9?
- 11,070
  - 20,103
  - 45,072
  - 19,386
74. The distance between two towns on a given map is  $2\frac{3}{4}$  cm. If  $\frac{1}{2}$ cm represents 6 km. What is the distance between the two towns?
- 18 km
  - 33 km
  - 36 km
  - 42 km
75. Margo paid P400 for a blouse. If the blouse was sold at 20% discount, what was its original price?
- P 80
  - P 480
  - P 500
  - P 540
76. Julius drove 193.5 kilometers did he travels in one hour? How long it will take him to travel 150.5 kilometers more?
- 43 km & 3.5 hrs.
  - 54 km & 4 hrs.
  - 40 km & 7.3 hrs.
  - 42 km & 4 hrs.
77. Mr. Perez earned P27, 895 from mango plantation. He also earned 352,168 from his poultry farm. How much did he earn in all?
- P 379,953
  - P 380,063
  - P 379,963
  - P 479,063

78. Christine bought 8 kilos margarine. She used  $2\frac{1}{3}$  kilos for baking cake and  $1\frac{1}{2}$  kilos for spaghetti. How many kilos of margarine were left?  
 a.  $5\frac{5}{5}$  kilos                      c.  $5\frac{1}{6}$  kilos  
 b.  $4\frac{1}{6}$  kilos                          d.  $3\frac{5}{6}$  kilos
79. Mrs. Salas bought 6 meters of wire for P20. How much will 9 meters of wire cost?  
 a. P 15    b. P 20 c. P 25            d. P 30
80. Belen deposited P4, 000 in a bank with an interest of  $7\frac{1}{2}\%$  per Annum. How much is the interest of her money after one year?  
 a. P 100                                  c. P 1000  
 b. P 300                                  d. P 3000
81. There are 40 pupils with only 20 textbooks in the science class of Mrs. Dela Cruz. What is the pupil textbooks ratio?  
 a. 1:2    b. 2:1                      c. 2:3                      d. 20:40
82. On test 25 questions, Uma made 4 mistakes. What percent did he answer correctly?  
 a. 80% b. 84%                      c. 85%                      d. 82%
83. Mrs. Ponti borrowed P1, 500 at 10% interest per annum for 6 months. How much did she pay back?  
 a. P 1,525                                  c. P 1,575  
 b. P 1,500                                  d. P 1,595
84. Which polygon has four equal sides?  
 a. Rhombus                              c. Scalene  
 b. Equilateral                          d. Isosceles
85. Which two numbers total the sum of 72 the difference being 12?  
 a. 32 and 40                              c. 41 and 31  
 b. 30 and 42                              d. 24 and 48
86. The ratio of the number of boys to the number of girls in a class is 2:3. If there are 40 students in the class. How many boys are there?  
 a. 8    b. 16                      c. 18                      d. 24
87. Mrs. Paredez paid P94.50 for  $3\frac{1}{2}$  dozen of eggs. How much would two dozen of such eggs cost?  
 a. 50.50 b. 54.00 c. 55.00    d. 56.00
88. Mark divides his day into leisure, sleep, and work in the ratio 1:2:3. How many hours does he spend work.  
 a. 4 hr    b. 8 hr                      c. 10 hr                      d. 12 hr
89. It takes 20 men to build a house or 60 days. How many men will be needed to build in 15 days?  
 a. 5    b. 80    c. 100                      d. 120
90. Which of these is a correct proportion?  
 a.  $3:5 = 5:10$                               c.  $1\frac{1}{2}:2 = 5:7$   
 b.  $7:10 = 15:18$                               d.  $4:9 = 2:4\frac{1}{2}$
91. The area of rectangle is  $17\text{ cm}^2$  Find its perimeter if its length is 13 cm  
 a. 9 cm    b. 30 cm    c. 44 cm    d. 54 cm
92. What is the sum of the first five prime numbers?  
 a. 11                      b. 18                      c. 26                      d. 28
93. In a sequence of start and stops an elevator travels from the first floor to the fifth floor and then to the second floor. From there, the elevator travels to the fourth and then to the third floor. If the floors are 3 meters apart how far has the elevator traveled?  
 a. 18 m                      b. 27 m                      c. 30 m                      d. 45 m
94. 14.3 is equal to  
 a.  $0.143 \times 100$                               c.  $143 \square 100$   
 b.  $14.3 \times 100$                                   d.  $0.143 \times 1000$
95. Which of the following has the greatest value?  
 a. 0.351 b.  $35/100$  c.  $3/10$     d.  $3/9$
96. Which of the following numbers is greater than  $-3/2$ ?  
 a.  $-4/3$                       b. -3                      c.  $-7/4$                       d. -2
97. Simplify  $1/3 + 2/5 - 2/6$   
 a.  $1/14$                       b.  $1/5$                       c.  $2/3$  d.  $2/5$
98. Find the product of  $(2\frac{1}{2}) (5/7) (2/5)$   
 a. 0                      b.  $5/44$                       c. 1 d.  $5/7$
99. Simplify  $[2(-3)^2 - (-4)(-5) - 2]$   
 a. -4                      b. 14                      c. 28    d. 10

Definitions of Science

- ✚ An organized body of knowledge gathered over a long period of time to explain the world we live in.
- ✚ Knowledge or a system covering general truths or the operation of general laws especially as obtained and tested through scientific method.

Scientific Method

1. Identifying the problem (Questioning)
2. Gathering Preliminary data
3. Formulating a hypothesis\*
4. Testing of the hypothesis
5. Analysis and Interpretation of data
6. Drawing of Conclusion

Independent Variable – variable changed by the experimenter

Dependent Variable – variable that responds to the variable that is changed in the experiment.

Experimental group – groups that receive treatment.

Control group – opposite of Experimental.

- ✚ hypothesis – it is what we think the answer to the question is and it should be stated in terms of the variables defined.

Laws and Theories

\*Scientific law – a description of a natural occurrence that has been observed many times.

\*Scientific theory – a reasonable explanation of a scientific law. It is derived from a hypothesis that has been supported by repeated testing.

\*Model – helps visualize occurrences and objects that cannot be observed directly.

**Note:** Scientific laws and theories cannot be proven absolutely. They are maintained as long as all observations support them.

Measurements

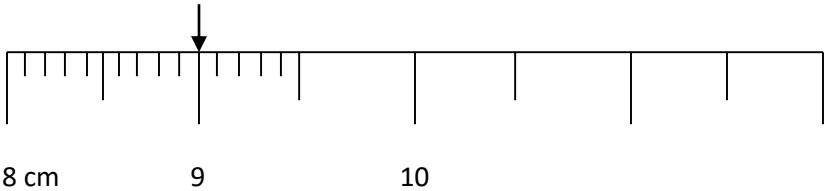
- ✚ In science, the metric system is used in all measurements for its convenience and simplicity.
- ✚ The International System of Units (SI) uses the seven base quantities and units given below:

Physical Quantity	Unit Name (symbol)
Mass	Kilogram, kg
Length	Meter, m
Time	Second, s
Amount of Substance	Mole, mol
Temperature	Kelvin, K
Electric current	Ampere, A
Luminous intensity	Candela, cd

A. Reading Metric Measurements

No. of significant digits = no. of certain digits + one uncertain digit (0 or 5)

**Example 1:** The diagram below is a metric ruler used to measure the length of a pencil. How long is the pencil?

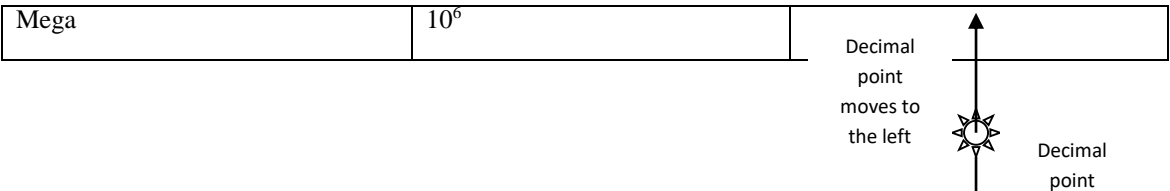


The smallest fraction of a centimeter in the metric ruler is 0.1 cm. This corresponds to the last certain digit in any measurement. The pointer reads 9.0 cm. One uncertain digit should be added. In this case it is 0.

**Answer: Length of pencil = 9.00 cm**

B. Converting Metric Units

Conversion of metric units is easily performed,



Kilo	10 <sup>3</sup>	
Deka	10 <sup>2</sup>	
Hector	10 <sup>1</sup>	
Base unit	10 <sup>0</sup>	
Deci	10 <sup>-1</sup>	
Centi	10 <sup>-2</sup>	
Milli	10 <sup>-3</sup>	
Micro	10 <sup>-6</sup>	

**Example 2: How many grams are there in 37.d centigrams?**

🚦 To convert 37.5 cg to grams, count the number of steps from centi to base unit. Since it moves upward, the movement of the decimal point is to the left.  
**Answer: 0.375 g**

**Major Regions of the Earth**

1. Lithosphere – the solid part and the largest portion of the earth
2. Hydrosphere – the liquid part. It covers about 71% of the earth’s surface
3. Atmosphere – the gaseous portion that envelops the earth
4. Biosphere – the region where living things are found.

**Rocks and Minerals**

Everywhere you look, you find rocks of different shapes and sizes. What is important to remember about rocks is the way they were formed. The varying conditions for the rock formation influence the characteristics that each rock develops,

- 🚦 Igneous rocks – formed from hardened magma and lava.  
e.g. Rhyolite, Granite, Basalt, etc.
- 🚦 Sedimentary rocks – form from deposited fragments or particles of other rocks that have been weathered and eroded.  
e.g. limestone, conglomerate, dolomite, shale
- 🚦 Metamorphic rocks – rocks that have undergone changes due to heat and pressure  
e.g. marble (from limestone), slate(from shale)

\* Rocks are made up of minerals which are either elements or compounds.

**Weathering** is a term for all processes which combine to cause the disintegration and chemical alteration of rocks at or near earth surface.

**Erosion** includes all the process of loosening, removal, and transportation which tend to wear away the earth’s surface.

**Lithification** is the conversion of unconsolidated sediment into solid rock.

**Weather and Climate**

**Meteorology** – the study of the earth’s atmosphere, weather and climate

**Weather** – the daily condition of the earth’s atmosphere

**Climate** – general conditions of temperature and precipitation in a large area over a long period of time.

**Gases found in the atmosphere:**

- Nitrogen** – about 78%
  - nitrogen in air reacts with chemicals to produce nitrates, which are used by living things for the manufacture of proteins
  - is returned to the atmosphere by the process of decay
- Oxygen** – 21%
  - used for respiration
  - for combustion processes
- Other gases** – (water vapor, CO<sub>2</sub>, O<sub>3</sub>)

**Layers in the atmosphere**

1. Troposphere – layer where life exists
    - where different weather conditions prevail
    - has lowest temperature
  2. Stratosphere – contains ozone that serves as a protective shield against UV rays.
    - where jetstream is found
  3. Mesosphere – layer where meteoroids that enter the earth’s atmosphere are burned.
  4. Ionosphere – contains ions that are used for radio communications
  5. Exosphere – orbit space for artificial satellites.
- 🚦 The uneven temperature and pressure in the atmosphere result in the movement of air called winds.  
 🚦 Monsoons are examples of winds that result from the differences in the absorption and reflection of thermal energy by different materials of Earth.

**Ecology**

1. **Ecology** – the study of how living things interact with their environment.
2. **Ecological Factors**
  - a. biotic – all living factors in the environment
  - b. abiotic – nonliving factors that are essential to living organisms
3. Population – a group of the same species living together



- 4. Community – all the different populations living together
- 5. Ecosystem – community of different living things interacting with one another and with their nonliving environment
- 6. Biomes – a large area whose ecological communities are determined by its climate.

Solar System

The probable origin of our solar system, specifically the sun, is similar to that of other stars. The age of a star is related to its temperature and its color. **Bluish and white** stars are the hottest and youngest stars. The least hot and the oldest star are the **reddish stars**.

**Nebular theory** – states that the solar system originated from a rotating gas and dust cloud composed of hydrogen, helium and some heavier elements.

**Ptolemaic Theory** – The earth is stationary; each planet and the sun revolved around the earth.

**Copernican Theory** – This theory considers the sun as the center of the solar system. The earth and other planets revolve around the sun in a circular orbit.

Planets

- Mercury- Rocky, cratered surface; extremely thin atmosphere
- Venus-Thick cloud cover; green house effect
- Earth-liquid water, life
- Mars-polar ice caps, pink sky, dominant volcanoes
- Jupiter-Great red spots, thin ring; huge magnetosphere
- Saturn-many rings and ringlets, Titan only moon with substantial atmosphere
- Uranus-Rotates on side; worldwide ocean of superheated water
- Neptune- Unusual satellite rotation, 4 rings, great dark spot.

**Asteroids** - are objects that orbit the sun like planets. However they are smaller than the planets and so they are sometimes called minor planet.

**Meteoroids** – are objects smaller than the asteroids that revolve around the sun.

**Comet** - is a mass of frozen materials such as water, methane and ammonia along with the bits of rock and dust.

**Solar eclipse** – when the sun, the moon and the earth are in straight line. During solar eclipse, the sun can’t be seen from earth because the moon covers it.

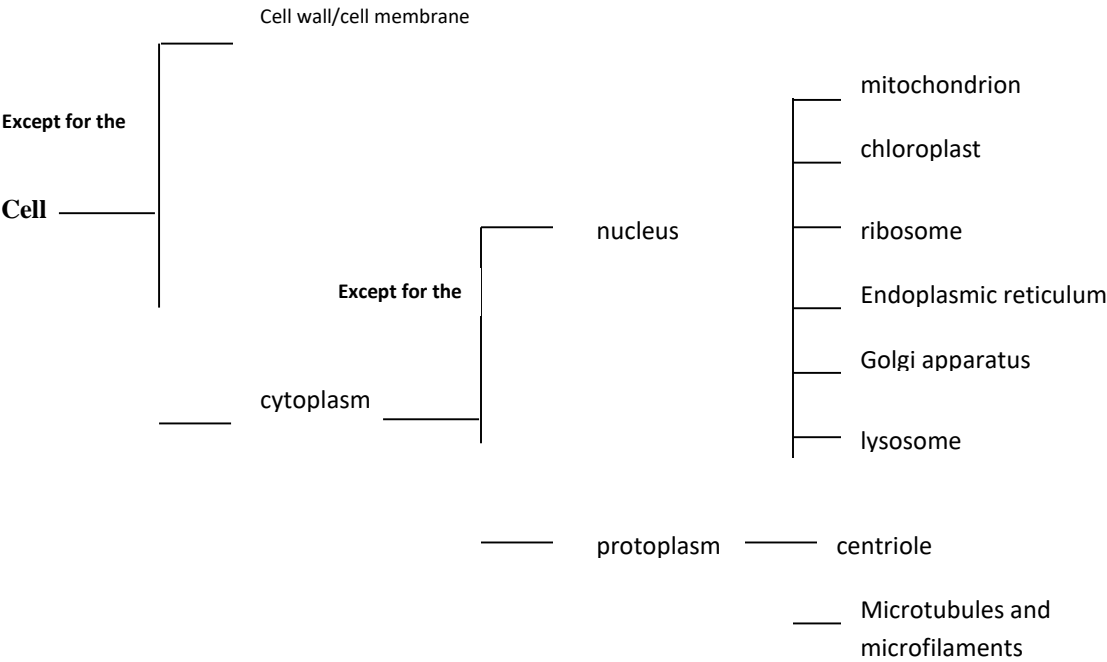
**Lunar eclipse** – same as solar but in this case the sun covers the moon.

Biology

**Biology** – the branch of science that deals with the study of living systems and life processes.

A. Cells

This is probably the most basic term that you would need to know. All living systems are composed of cells. They are the basic unit of structure and function in living things. Following is an illustration and concept map of a cell and the different structures contained in it.



Organelles are structures with specific functions found within living cells.

- ❖ Nucleus – This organelle is arguably the most important structure in the cell because it serves as the control center in which individual functions of the other organelles are coordinated.
- ❖ Cell wall/cell membrane – the cell wall in plant cells and in some monerans and protists provides rigidity for support to the cells and a characteristic shape for functionality and structure. The cell membrane on the other hand is selectively permeable.
- ❖ Mitochondrion – this organelle is also called as “powerhouse of the cell”. It serves as the site where ATPs are abundantly synthesized.
- ❖ Chloroplast – this serves as the site of photosynthesis among plants and photosynthetic algae.
- ❖ Ribosome – this serves as the site of protein synthesis.
- ❖ Endoplasmic Reticulum – These organelles serve as channels or passageways through which materials are transported to the different parts of the cell.
- ❖ Centriole – this serves for cytokinetic purposes and is very common among dividing cells
- ❖ Lysosome – the structure is also called “suicidal bag” as it releases digestive juices

- ❖ Golgi apparatus – this serves for selection and packaging of cellular materials.

Differences between plant and animal cells

Structure	Plants	Animals
1. cell wall	Present	Absent
2. chloroplast	Present	Absent
3. centriole	Absent	Present
4. lysosome	Absent	Present
5. vacuole	One/large	Many/small

How did the concept of the cell come about?

The **Cell Theory** serves as the basis on which everything that we know about the cell is anchored. There are three elements to this theory;

1. All living things are made up of cells.
2. Cells are the basic unit of structure and function in living systems.
3. All cells come from preexisting cells.

Like any biological structure, the cell is composed of **biomolecules** that are intricately combined to enable the cell to perform its metabolic functions.

- a. Carbohydrates – immediate source of energy
  - elemental composition: C, H, O
  - building blocks: monosaccahrides
  - e.g. *sucrose* (table sugar), *maltose*, *amylase*
- b. Fats/Lipids – these molecules serve as another source of energy after carbohydrates
  - elemental composition: C, H, O
  - building blocks: fatty acids and a glycerol backbone
  - e.g. waxes, oils, and cholesterol
- c. Proteins – these molecules serve as sources of building materials.
  - elemental composition: C, H, O, N, S
  - building blocks: amino acids
  - e.g. amylase, actin and myosin
- d. Nucleic Acids – these molecules include the RNA’s and the DNA’s
  - elemental composition: C, H, O, N, P
  - building blocks: nucleotides

Cells according to complexity

- 🚩 **Prokaryotic cells** – have no membrane-bound nucleus and organelles; typical of bacteria and blue-green algae
- 🚩 **Eukaryotic cells** – have membrane-bound nucleus and organelles; typical of protests, fungi, plants, and animals.

Cell Transport

Passive Transport – does not require the expenditure of energy; moves particles through the concentration gradient.

Active transport – requires the expenditure of energy; moves particles against the concentration gradient.

**Diffusion** - this refers to the process in which molecules of solvent move from an area of high concentration to an area of low concentration.

**Osmosis** – this refers to the diffusion of particles or molecules across selectively permeable membrane.

Cell Reproduction

This refers to the process by which cells divide to produce daughter cells. It involves either mitosis if somatic or body cells are involves or meiosis if germ or sex cells are involved.

**Mitosis** - refers to the division of the somatic cells

- also referred to as equational division because the ploidy number of the daughter cells is equal to the ploidy number of the dividing cell.

**Meiosis** - refers to the division of germ cells

- also referred to as reductional division because the ploidy number of the daughter cells is only half that of the parent cell

B. Botany

Plants are autotrophic organisms capable of synthesizing their own food for growth and maintenance through the process of photosynthesis. Their cells are eukaryotic (i.e. with a distinct nucleus and other membrane-bound organelles) like fungal and animal cells, but are distinguished by the presence of cellulosic cell walls, plastids and large vacuoles. Plant cells may also contain non-living inclusions called ergastic substances that are products of the cell’s metabolism, like crystals and starch.

*Major plant cell types:*

Three major plant cell types, parenchyma, collenchyma and sclerenchyma, make up the different tissues of the plant. Although they assume various shapes, they are most easily distinguished by general features and location in plant body.

- Parenchyma cells are usually large, thin-walled and are extremely variable in shape.
- Collenchyma cells have primary cell walls that are thickened irregularly by cellulose and pectin materials.

- Sclerenchyma cells have a comparatively thick primary cell wall bearing heavy depositions of lignified secondary substance laid down in a laminated pattern.

Tissues are aggregate of cells with similar structure and function. Some of the cells in the tissue may even undergo further cell modification and change in function. Thus it is difficult to classify plant tissues on the basis of a single criterion like function, origin or structure.

- Meristematic tissues are composed of immature cells and regions of active cell division. They provide for growth and are found in the root tip.
- Permanent tissues
  - a. Epidermis –composed of tiny openings principally on the underside of the leaves that regulate the exchange of water and gases called stomates.
  - b. Periderm – constitute the corky outer bark of trees.
  - c. Vascular tissues – composed of xylem and phloem; xylem functions for the transport of water and minerals upward from the roots while phloem functions for the transport of food materials.

### **Different Plant Parts**

#### **Root**

It is typically underground organ of the plant axis that functions principally for anchorage and absorption of water and minerals from the soil. The first formed root is the primary root. It develops from the radicle of the seed embryo. Some root arises from other plant organs like stems and leaves hence are described as adventitious. There are two general types of root system, the fibrous which is found in monocotyledons, and the taproot, characteristic of dicotyledons.

#### **Stem**

The stem is readily recognized by the presence of nodes. Leaves are born on these nodes. The intervening area between the two nodes is an internode.

#### **Leaf**

It is a flattened, green, lateral appendage that carries out the functions of photosynthesis and transpiration. Chlorophyll gives the leaf its green color.

#### **Flower**

It is a modified branch representing the reproductive structure of an angiosperm. It is generally divided into four parts: the green sepals, brightly colored petals, the male structure stamen, and the female structure known as pistil (carpel). Each of these has a collective term, respectively, the calyx, corolla, androecium and gymnoecium.

#### **Fruit**

The fruit is the ripened ovary with functions to protect and disperse the seeds. It is the product of the entire pistil and other floral parts that may be associated with it. Two processes precede fruit development; pollination or the transfer of pollen from the anther to the stigma and fertilization or the fusion of a sperm nucleus and an egg cell.

### ***Photosynthesis and Transpiration***

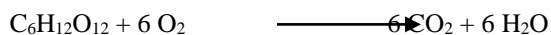
Photosynthesis and transpiration are physiological processes occurring in leaves. Photosynthesis involves the trapping of the radiant energy and its conversion into chemical energy. It takes place in the chloroplast of the leaves. Transpiration is the loss of water in vapor form through the stomates, minute openings distributed on the surface of leaves. A stoma has a pair of epidermal cells called guard cells. Water moving into the guard cells cause latter to be turgid thereby opening the stomal pore. When the water moves out of the guard cells, these become flaccid and the stomal pore closes.

The numerous stomates of a leaf serve as entry point for a carbon dioxide (photosynthesis) and the exit for water vapor (transpiration). If transpiration proceeds at a rate much faster than that of the roots could absorb water from the soil, the plant tissues suffer from water deficit, causes plant to wilt.

#### **General Equation:**

Photosynthesis:  $6\text{ CO}_2 + 6\text{ H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_{12} + 6\text{ O}_2$

#### **Respiration**



- it is a complex process by which energy in the form of ATP is released from food molecules ingested by organisms.

### ***Plant Taxonomy***

It is the science of classification, nomenclature and identification of plants. It is the most basic and a unifying field of botany.

Classification is the arrangement of plants into categories that have similar characteristics. These categories called taxa are arranged into hierarchy to form a classification system. The smallest taxonomic unit is the species. Similar species form a genus and related genera, a family. The most inclusive category, the kingdom comprises all plants.

Nomenclature is the orderly assignment of names to taxa or categories in accordance with the rules of International code of botanical nomenclature. A plant's scientific name is a binomial, that is, it is composed of a generic name (genus) and a specific epithet. The name of the person who proposed the binomial completes the scientific name (*Oryza sativa* L.)

**C. Genetics**      **Genetics** is the study of heredity and variation. **Heredity** is the transmission of traits from generation to generation while **variation** deals with genetic differences between organisms. The process mainly involved in heredity and variation is **cell division**.

The cells in all organisms grow and reproduce by cell division. A unicellular bacterium, after doubling in size, can reproduce by dividing into two cells. In multicellular organisms like man, increase in size is attained by dividing its constituent cells.

### ***Gene Segregation and Interaction***

**Dominant Allele** - alternative trait that is expressed in the phenotype.

**Recessive Allele** – alternative trait whose expression is marked in the phenotype.

**Law of Dominance** – state that only dominant alleles are expressed in the phenotype and that recessive alleles are masked among hybrids but are manifested among pure breeds.

**Law of Co-dominance** – states that two equally dominant alleles are equally expressed in the phenotype and that no blending is achieved.

**Law of Incomplete Dominance** – states that among multi-allelic traits, two dominant alleles that are not dominant enough to mask the expression of one another, are incompletely expressed in the phenotype, hence a blended trait is achieved.

**Mendel’s law** may be separated into two rules: first, the law of Independent Segregation of Alleles and second, the Law of Independent Assortment.

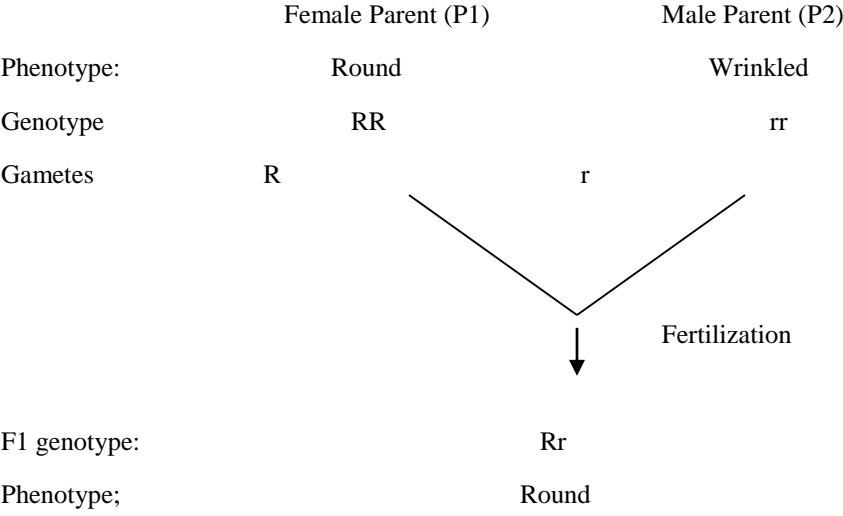
**\*Law of Independent Segregation** states that the alleles in a gene pair separate cleanly from each other during meiosis.

**\*Law of Independent Assortment** states that the alleles of the different genes separate cleanly from each other and randomly combining during meiosis.

These laws can be illustrated using monohybrid and dihybrid cross:

a. Monohybrid Cross

One of the pairs of alternative characters in sweet peas studied by Mendel waqs round vs wrinkled seed. These distinctive characters or traits are called **phenotype** while the gene or genetic content coding for these traits is the **genotype**. In example below, both parents are **homozygous** so that the round (P1) and wrinkled (P2) parents have the RR and rr genotypes, respectively. The gametes produced after meiosis by P1 is R and by P2 is r so the progeny of the first filial generation (F1) have **heterozygous** (Rr) genotypes. Since R is dominant over r, then the F1’s have round phenotype. This is an example of **complete dominance**. R masks the expression of r. This is the **dominant** allele. The allele that is masked ( r ) is the **recessive**.



To demonstrate that the F1’s are heterozygous, a testcross can be conducted wherein the F1 plants are crossed to the homozygous recessive parents (rr). The recessive parent contributes the gametes ( r ) while the other parent contributes R and r. Testcross results in 1 Rr (round): 1 rr (wrinkled) or 1:1 segregation ratio.

Rr      x      rr

Gametes	r
R	Rr (round)
r	rr (wrinkled)

Genotypic Ratio: 1Rr      :      1rr

Phenotypic Ratio:      1round    : 1 wrinkled

b. Dihybrid Cross

The members of gene pairs located on different homologous chromosome segregate independently of each other during meiosis.

Mendel studied two phenotypes, texture and color of seeds with two alternative traits; round and yellow seeds vs. wrinkled and green seeds. He crossed pure breeding round, yellow seeded plants with pure breeding wrinkled, green seeded plants. The F1 progenies were all yellow round seeded plants. The F2’s gave 315 round, yellow: 101 wrinkled yellow; 108 round, green and 32 wrinkled, green plants. Approximately 9:3:3:1.

The method used in getting the genotypic ratio among F2 progeny is called Punnett Square or Checkerboard method.

*Molecular Basis of Heredity*

The first part dealt with the physical basis of heredity – the chromosomes. Chromosomes are the carriers of the multitude of genes. Genes or hereditary units, on the other hand, are actually fragments or portions of the **deoxyribonucleic acid or DNA**.

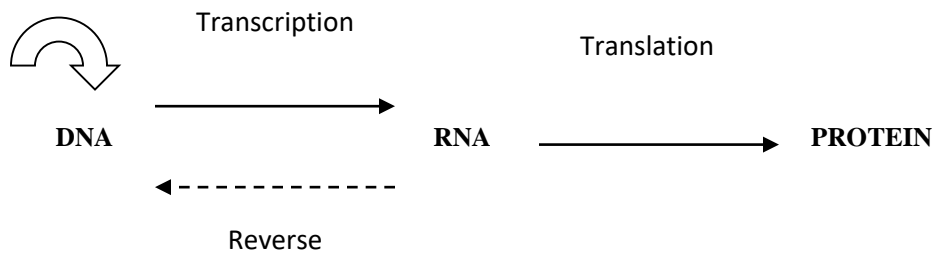
A chromosome is made up of one very long DNA packaged with histones to fit inside a minute nucleus of the cell. Eukaryotic cells with several chromosomes would, therefore, contain more than one molecule of DNA. Prokaryotic cells and viruses generally possess one long molecule of DNA either naked or associated with proteins but not as organized as compared to eukaryotic chromosomes. The DNA has been tagged as the genetic material of all organisms with the exception of some viruses with **ribonucleic acid or RNA** as their genetic material.

*Central Dogma of Molecular Biology*

DNA as the genetic material is capable of transmitting biological information from a parent cell to its daughter cells and, in a broader perspective, from one generation to another. The information stored in its base sequence is copied accurately by **replication**. Replication is a process of faithfully copying a DNA to produce two DNA molecules identical to the parent DNA. These DNA molecules are then passed on to the daughter cells via the chromosomes during cell division.

The information stored in the DNA when expressed will result to a particular trait of an individual. The trait is expressed through the action of proteins either directly or indirectly.

The central dogma of molecular biology consists of three general processes namely: **replication** (DNA synthesis), **transcription** (RNA synthesis) and **translation** (protein synthesis). The transfer of information from cell to cell or from generation to generation is achieved by replication. On the other hand, the transfers of information from the DNA to the proteins involve two processes: transcription and translation. Generally, all organisms follow this mode of transfer except for some viruses that undergo **reverse transcription**.



**Mutation** – changes in the  $\text{C}_2\text{H}_5\text{O}_2$  are essentially heritable.

- a. Deletion – refers to a segment of base pairs in the DNA that is spliced off.
- b. Substitution – refers to a segment of the base pairs in the DNA that is replaced by a different series of base pairs.
- C. Translocation – refers to segments of base pairs that are differently positioned.
- d. insertion – refers to base pairs that are added to segment of DNA.

**Evolution** – this process refers to the gradual change in populations through time.

#### D. Animal Development (30 minutes)

##### *Animal Cells, Tissues and Tissue Organization*

Animal tissues are generally classified into four categories: Epithelium, Connective Tissue, Muscle and Nerve. These animal tissues make up all the organ systems of the body.

- Epithelium, in its simplest form, is composed of a single continuous layer of cells of the same type covering an external or internal surface.
- Connective Tissue, has the widest range encompassing the vascular tissue(blood and lymph), CT proper, cartilage and bone.
- Muscular tissue consists of elongated cells organized in long units of structures called muscle fibers or muscle cells. The two general categories of muscle, smooth and striated. Striated or skeletal muscle functions for voluntary control while smooth muscle functions for involuntary contractions.
- The nerve cells or neurons comprising the nervous tissue each possess a cell body which contains the nucleus and the surrounding cytoplasm. The process come in contact with other nerve cells, or with other effector cells through a point of contact called synapse.

##### *Animal Development*

Animal development is a series of events that is controlled by the genetic information in the nucleus and factors in the cytoplasm. It starts with fertilization and ends into the arrangement of cells which gives the embryo its distinct form. Features which are unique to organism such as the shape of the face, location and number of limbs and arrangement of brain parts are molded by cell movements in response to the action of genes in the nucleus and molecules in the cytoplasm.

##### *Stages of Development*

###### *a. Gametogenesis*

Each species has its own chromosome number. Somatic cells of humans have 23 pairs of chromosomes (22 pairs somatic and one pair sex; one chromosome of each pair is originally derived from the father and the other from the mother. The chromosomal pair comes in contact with each other and exchange segments during meiosis. This phenomenon provides combinations of parental traits hence there is more variability in the characters of the offspring.

Gametogenesis changes the diploid cells into haploid sperms and ova. Cells undergo meiosis, a sequence of two divisions during which the chromosomes divide only once. The resulting cells have only half the number of the chromosomes of the parent cells. This process prevents doubling of the chromosomes during fertilization.

The male germ cells, initially round and large, are changed into slender and flagellated cells. The cytoplasm is practically lost and mature cells develop a head, neck and tail. The female germ cells gradually increase in size as a result of growth.

###### *b. Fertilization*

The ovum and the sperm unite thus restoring the diploid chromosome number of the species. In humans, each gamete has 23 chromosomes (haploid). Upon fertilization the zygote acquires 46 chromosomes. At this stage of development, the genetic sex of the individual is established.

###### *c. Cleavage*

The unicellular zygote undergoes cleavage characterized by active mitoses. It is not a period of growth but a time in which the zygote is divided into a large number of small cells, the blastomeres. Each blastomere nucleus has the same DNA since these are derived from the same cell, the zygote. Cleavage ends with the formation of the multicellular organism.

###### *d. Blastula*

The mass of blastomeres forms a hollow fluid-filled cavity, the blastocoel. In frogs, cells below the blastocoel are large; these are the macromeres.

In humans, at this embryonic stage, the 32-cell cell blastocyst burrows into the uterus. The blastocyst has two distinct cell types; an inner cell mass and an outer shell, the trophoblast. The former will become the embryo, the latter will give rise to the extra-embryonic membranes termed amnion and chorion.

#### e. Gastrula

Gastrulation, a stage of extensive cell movements, rearranges the embryonic cells. Cells are translocated to the different areas thus acquiring new neighbors and new positions. The neighbor cells may act as inducers in the formation of structures. The different cell movements establish the third germ layer, the mesoderm.

At the end of gastrulation, the embryo has three primary germ layers: an outer ectoderm, an inner endoderm and middle mesoderm. At this stage tissues have become committed to form one type of organ- a brain or stomach.

The ectoderm gives rise to the epidermis of the skin, sense organs and the nervous system. The endoderm gives rise to the organs of the respiratory and digestive systems. The mesoderm gives rise to the organs of the circulatory, skeletal, muscular, excretory and reproductive systems, connective tissues and linings of body cavities.

#### f. Neurula

Toward the end of gastrulation, the ectoderm along the dorsal surface elongates to form a layer of columnar cells, the neural plate. This region thickens and moves upwards forming the neural fold which then fuse to form a hollow tube, the neural tube. Closing of the neural tube starts at the head region and continues posteriorly. This piece of tissue gives rise to skin pigments, nerves and the adrenal medulla.

#### g. Organ formation

The ectoderm, mesoderm and endoderm formed in the gastrulation are the source materials for the development of organs. At this stage the component cells are still undifferentiated and do not show any adult feature. These masses are further subdivided into groups of cells until the organ acquires its unique characteristics and specific location.

#### h. Brain Formation

The earliest form of the brain is the neural tube. At this stage, the brain shows three regions- prosencephalon (forebrain), mesencephalon (midbrain) and the rhombencephalon (hind brain). Later, the prosencephalon divides into telencephalon and diencephalons. The mesencephalon remains undivided.

In frogs, the brain is a straight tube and remains in that condition in adult. In humans, the embryonic brain undergoes bending and twisting. Hence in adult, the hindbrain is adjacent to the forebrain and the eyes become anterior to the nose.

#### i. Limb Formation

Limbs start as buds at the embryonic sides, which later develop as paddle-like extremities. Later, circular constrictions appear dividing the limb into three main segments. Fingers and toes develop when cells at the most distal end die. The upper limb rotates 90° sideward so that the thumbs move sideward. The lower limb rotates 90° towards the center, placing the big toe at the center.

### E. Ecosystem and Ecology

The branch of biology that pertains specifically to the relationship of an organism with that of its environment is known as *ecology*. Ecology is a body of knowledge that covers the economy of nature. It involves the study of overall relationship of an organism to its inorganic/organic environment, that is, the physical world; and its relation and interaction with other organisms, both plants and animals alike.

The basic functional unit and the most important concept in ecology is the ecosystem, as it includes both plants and animals and the physical environment, each of which influencing the other. Ecosystem or ecological system may refer to biotic assemblage of plants, animals, microbes interacting among them and with that of the physico-chemical environment.

#### *Components of the Ecosystem and Trophic Levels*

The ecosystem has two basic components – the biotic (living) and abiotic (non-living) components. The biotic component is further subdivided into two units, namely, the autotrophs (self nourishing/self feeding) and the heterotrophs (other feeding).

The **autotrophs** are usually chlorophyll-bearing organisms, that are able to harness solar energy. In the presence of water and carbon dioxide, they convert this energy into (chemically-stored energy) known as adenosine triphosphate or ATP. They assume the role as producers in an ecosystem. Plants are the typical producers. However, in aquatic systems, algal communities or phytoplanktons may be the producers.

**Heterotrophs**, on the other hand, are those that depend on the producers as food. They are generally classified as consumers, although those that secure food directly from the producers are better known as herbivores or primary consumers. A secondary consumer or carnivore, on the other hand, derives its nourishment indirectly from the producers by devouring the herbivore. In some ecosystems, tertiary consumers exist. Other heterotrophs include also the decomposers where organic matter is reduced to simpler substances. Structurally therefore, the ecosystem can composite the following, that is, the abiotic factors; the producers; the macroconsumer; and the decomposers.

The **abiotic component**, on the other hand covers climatic, edaphic (soil) and topographic factors.

**Climate** includes light, temperature, precipitation and wind. Light influences the biotic components in many ways, as in photosynthesis, flowering seed dormancy, leaf senescence, nesting, migration and hibernation. Light quality penetrating with increasing water depths also determines the type of producers (i.e. green algae in shallow water and red algae at greater depths). Temperature affects living organisms by influencing their metabolic processes. It can determine the type of vegetation in different ecosystems depending on its availability.

**Water** as the universal solvent plays an important role in the ecosystem as it serves as a medium for biochemical processes. It can determine the type of vegetation in terrestrial ecosystems depending on its availability. In aquatic ecosystems, however, what plays important roles are salinity, pH, temperature and dissolved oxygen.

**The atmosphere** is a major reservoir of nutrients important to life. Nutrient cycling in the atmosphere is further facilitated by wind. The latter also accelerates evapo-transpiration rate causing damage to plant structures. However, it plays an important role in facilitating seed dispersal and in the distribution of plants and animals.

**Biome** - is a geographical unit uniformly affected by a common prevailing climate havin a similar flora and fauna.

**Terrestrial biomes** the world over include:

- ❖ Tropical rainforests – which have the highest species diversity
- ❖ Coniferous forests – which harbors the pine-trees
- ❖ Deserts – characterized by very low species diversity
- ❖ Grasslands – also variously called savannahs, steppes and scrubs
- ❖ Taigas and
- ❖ Tundras-characterized by permafrosts

**Aquatic biomes** on the other hand include:

- ❖ Marshlands
- ❖ Lakes
- ❖ Seas and oceans and
- ❖ Estuaries

**Five Kingdoms**

- ❖ **Monera** – prokaryotic; unicellular; includes the bacteria and the cyanobacteria.
- ❖ **Protista** – eukaryotic; unicellular/colonial; includes the flagellates, the ciliates, the sarcodines and the algal systems.
- ❖ **Fungi** – eukaryotic; unicellular (yeasts) and multicellular (molds and mushrooms).
- ❖ **Plantae** – eukaryotic; multicellular;
- ❖ **Animalia** – eukaryotic; multicellular; includes the invertebrates and vertebrates.

Ecological Relationships

- a. Mutualism – “give and take” relationship
- b. Commensalisms- a relationship where the commensal is benefited and the host is neither benefited nor harmed
- c. Parasitism – a relationship where the parasite is benefited and the host is harmed
- d. Competition – neither organism in this relationship is benefited
- e. Predation – a relation where the predator is benefited and the prey is harmed

**Food Chain**

Three components of a Food Chains

- a. Producers – occupies the 1<sup>st</sup> trophic level; composed of plants and photosynthetic algae
- b. Consumer
  - herbivore – occupies the 2<sup>nd</sup> trophic level; 1<sup>o</sup> consumer
  - carnivore – occupies the 3<sup>rd</sup> trophic level; 2<sup>o</sup> consumer
  - omnivore – occupies either the 2<sup>nd</sup> or 3<sup>rd</sup> trophic levels.
- c. Decomposer – the last component of a food chain

**Energy Transfer** - energy is transferred from one trophic level to another following the 10 % rule.

**Food Web** - it is a feeding relationship that is illustrative of a series of interlinking food chains.

*Ecological Laws*

Two ecological laws can demonstrate this relationship between organisms and their environment. These include *Liebig’s Law of Minimum* and *Shellford’s Law of Tolerance*.

- *Liebig’s Law of Minimum* states that “growth and survival of an organism is dependent primarily on the nutrients that are least available. “A plant will grow and develop well where a particular nutrient critical for growth and survival is found to be inadequate or not available at all in that particular area. Take note that magnesium is an important component for the production of chlorophyll, being the central atom of pigment.
- *Shellford’s Law of Tolerance* states that “the existence of the organism is within the definable range of conditions.” This means that “ organisms then can live within a range between too much and too little”. Thus an organism han an optimum range of conditions (peak) curve and an intolerance zone, where number of organisms is at its lowest or zero.

Chemistry

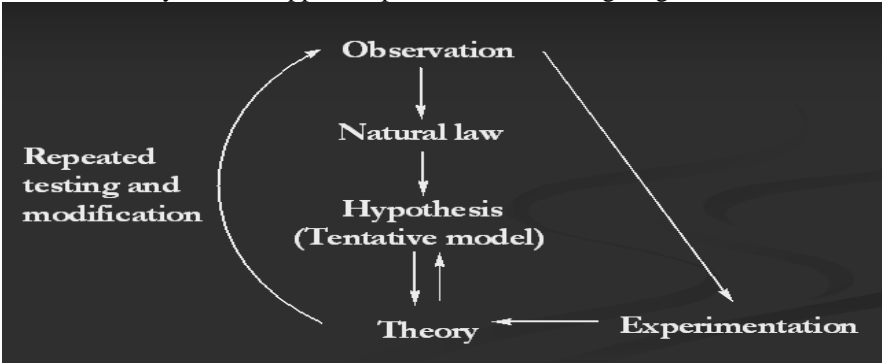
**Chemistry**- is a science that studies matter, its properties, structure and the changes it undergoes together with the energy involved.

**Branches of Chemistry**

- Analytical Chemistry
- Physical Chemistry
- Inorganic Chemistry
- Organic Chemistry
- Biochemistry

**Scientific method**- a systematic approach/procedure in investigating nature; a combination of observations, experimentation and

formulation of laws, hypotheses and theories; an organized approach to research



STEPS IN A SCIENTIFIC METHOD

1. Observation or Data Gathering

Observations-things perceived by the senses; can be quantitative or qualitative

- Qualitative – consist of general observations about the system
- Quantitative – consist of numbers obtained by various measurements of the system

Examples:

- Ice floats in water
- Vinegar is sour
- Body temperature is 39.0°C
- An object weighs 1.5 kg

Observation vs. Inference

Inference – interpretation of the observation

e.g. The clouds are dark. (observation)

It might rain. (inference)

2. Are the observations answerable by any natural law?

Law (natural law) - a pattern or consistency in observation of natural phenomena; a verbal or mathematical statement which relates a series of observation

e.g. Law of Conservation of Mass

Law of Thermodynamics

3. Defining a problem

4. Formulate a possible solution (Hypothesis Making)

Hypothesis- an educated guess to explain an observation; a tentative explanation of a natural law based on observation

5. Experimentation

- Is the hypothesis really the answer to the problem?

6. Interpret results.

7. Generate a generalization.

Theory- a hypothesis that survived testing through experimentation; a model or a way of looking at nature that can be used to explain and make further predictions about natural phenomena

Laboratory Rules and Techniques

- Do not return extra chemicals to the main supply unless so directed. To avoid waste, take from the supply only the amount of material needed.
- Perform experiments with the apparatus at arm’s length from the body never directly under the face.
- If you must smell a substance, hold the container at a distance and, with a cupped hand, waft the fumes toward your nose.
- Never use cracked or broken equipment. It can complete its breaking.
- Never pour water into concentrated acid. Always add the acid to the water with stirring.
- Read the lower meniscus of a colorless liquid at eye level. Use the upper meniscus when the liquid is colored.
- Never weigh hot substances.

Measurements in Chemistry

Rules on the Use of Significant Figures

NON- ZERO DIGITS All non-zero digits are significant

ZEROS IN MEASUREMENTS

There may be some confusion about the zero in a measurement. Rules will be used to determine whether zeros are significant or not.

1. Trailing Zeros

Final zeros after a decimal point are always significant.

e.g. 25.330 g has 5 significant figures

2. Captive Zeros

Zeros that are found between any two non-zero digits are significant.

e.g 706.3 mm has 4 significant figures

3. Leading Zeros

a. Zeros before a decimal point are not significant.

e.g 0.786 g has 3 significant figures.

b. When there are no digits before a decimal point or when the digit before a decimal point is zero, the zeros after the decimal point preceding other digits are not significant.

e.g. 0.000543 cm³ has 3 significant figures

4. Final Zeros in a whole number may or may not be significant.

To resolve this, use of exponential is recommended.

EXACT NUMBERS Any number that is exact such as the number 3 in the statement “there are three feet in one yard” is said to have unlimited number of significant figures.

ADDITION AND SUBTRACTION

The sum or difference should have the same number of digits to the right of the decimal point as the factor with the least number of digits to the right of the decimal point.

e.g.                    35.986  
                          +    675.8



567.3839  
1279.1699 → 1279.2 (five significant figures)

MULTIPLICATION AND DIVISION

The result obtained by multiplication and/or division must have the same number of significant figures as the factor with the least number of significant figures.

e.g (34.6)(3450.0)/345 =346.00 → 346 (three significant figures)

RULES FOR ROUNDING OFF NUMBERS

When the answer to a calculation contains too many significant figures, it must be rounded off to the proper number of significant figures. The rules for rounding off is summarized as follows:

- 1. If the digit to be removed is less than 5, drop this digit and leave the remaining numbers unchanged. Thus, 1.23 becomes 1.2 when rounded off to two significant figures.
- 2. If the digit to be removed is equal to or greater than 5, drop this digit and increase the preceding digit by one. Thus, 3.46 becomes 3.5 when rounded off to two significant figures.

ACCURACY AND PRECISION

Accuracy → refers to the nearness of a value to the true or actual value.  
→ measured by percentage error  
Error – the difference between a measured value and the true (or most probable) value.  
% error =  $\frac{\text{Average value} - \text{True value}}{\text{True value}} \times 100\%$

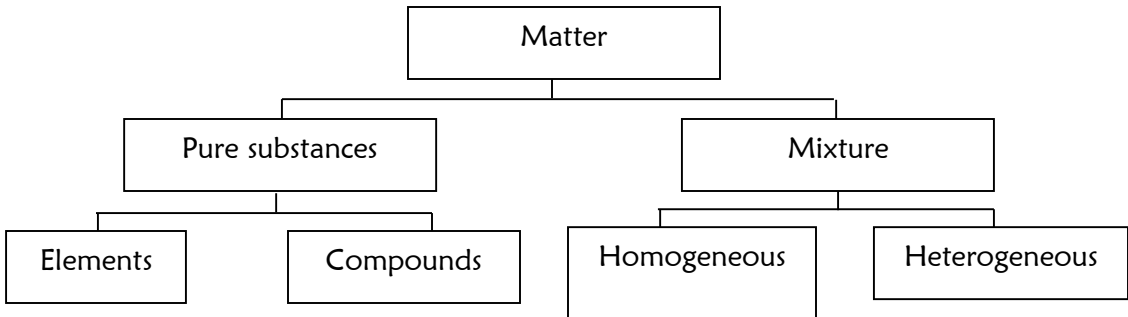
Higher % error, less accurate

Precision → indication of the agreement among different measurements of the same event.  
→ measured by deviation  
Deviation – absolute value of the difference of the measured value from the average value  
Deviation =  $\frac{\text{Measured value} - \text{Average value}}{\text{Average value}}$

Higher deviation, less precise

MATTER

Matter- anything that has mass, takes up space (volume) and possesses inertia



Pure Substance- homogeneous matter that cannot be separated into its components by physical means; with fixed composition and distinct properties

Types of Pure Substances:

- a. Elements- pure substance composed only of 1 type of atom; cannot be decomposed by ordinary means into simpler substances (Ex. H, He, Au, W)
- b. Compounds- two or more elements chemically combined in a definite and constant proportion (Ex. KCl, CH<sub>3</sub>COOH, MgCl<sub>2</sub>)

Ionic Compounds

- Structural units are the cations and anions
- In the solid state, the ions do not move from their positions in the lattice but only vibrate in place

Properties of Ionic Compounds

Melting Point: High  
Electrical Conductivity: Solid Non-conducting  
Molten Conducting  
Aqueous Conducting  
Hardness: Very Hard  
Malleability: Brittle

Covalent Molecular Substances

- Uncharged or neutral structural units (molecules) in the crystal lattice.
- The atoms in each molecule are held together by strong COVALENT BONDS.

Properties of Covalent Molecular Compounds

Melting Point: Low  
Electrical Conductivity: Solid Non-conducting  
Molten Non-conducting  
Aqueous Non-conducting  
Hardness: Soft  
Malleability: Brittle

Covalent Network Substances

- The structural units that occupy the lattice points in the solid are ATOMS.
- The atoms are bound to each other by strong COVALENT BONDS.

Properties of Covalent Network Substances

Melting Point: Very high  
Electrical Conductivity: Solid Non-conducting (except graphite)  
Molten Non-conducting  
Aqueous Insoluble  
Hardness: Very Hard  
Malleability: Brittle

Mixture- combination of different substances in variable proportions; can be separated into its components by physical methods of separation

Types of Mixtures:

- a. Homogeneous- uniform composition and properties throughout a given sample, but composition and properties may vary from one sample to another (e. g. solutions)
- b. Heterogeneous- with non-uniform properties throughout a sample where components retain their identity and phase boundaries exist (e.g. colloids, suspensions)

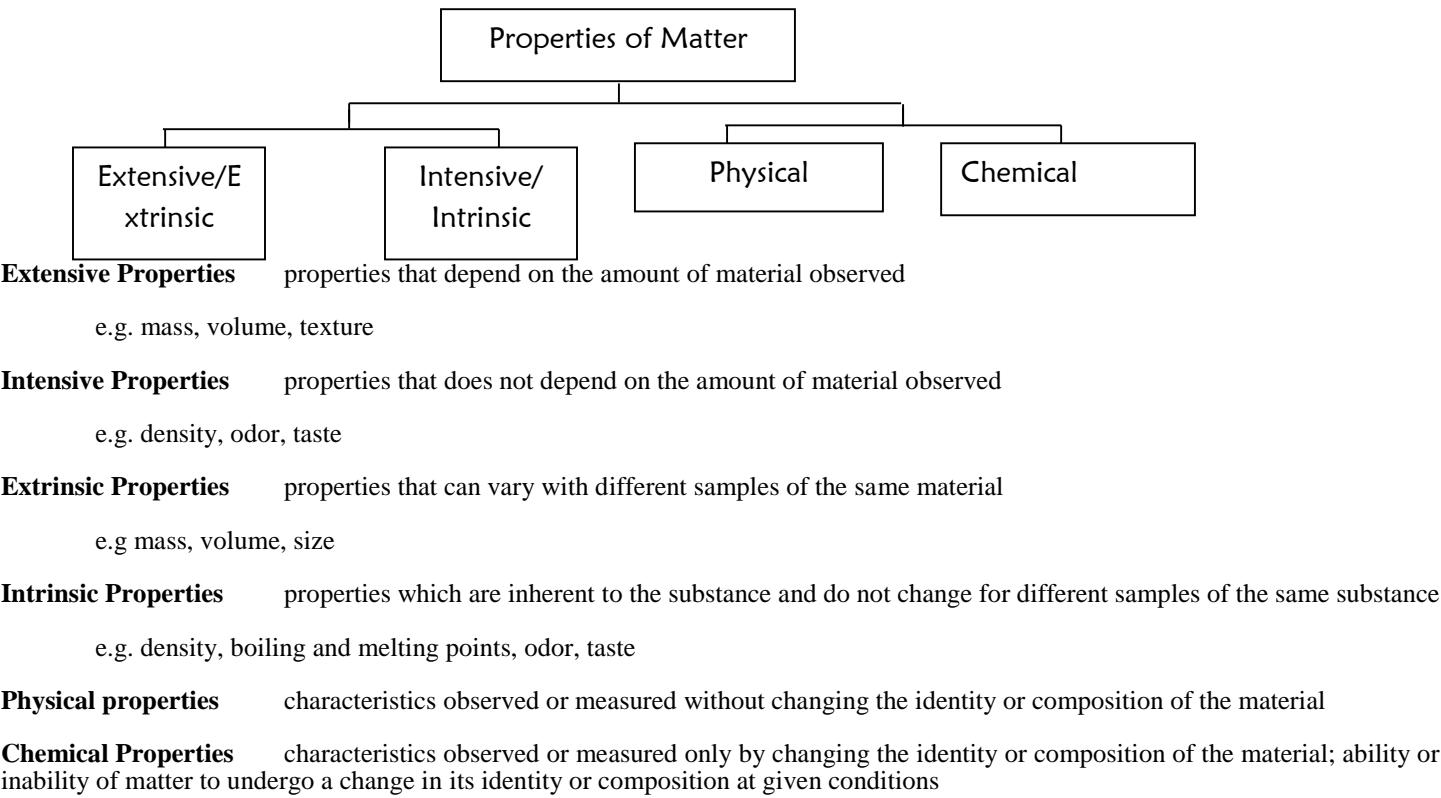
Other Classification of Matter

- a. Physical States of Matter (Phases of Matter)
  - SOLID – rigid, has definite volume and shape
  - LIQUID – fluid ( has ability to flow), takes the shape of the portion of the container they occupy
  - GAS – fluid, expands to fill up its container
- b. Special forms based on arrangement of particles and the degree of cohesiveness

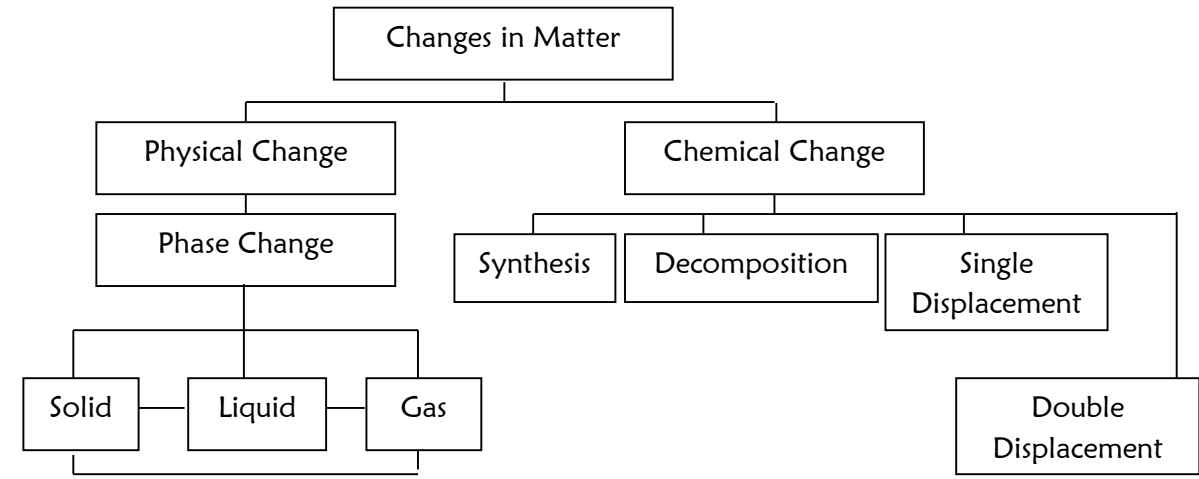
Crystalline solids; amorphous solids; liquid crystals

- Crystalline solids – high degree of cohesiveness and very orderly arrangement of particles
- Amorphous/non-crystalline solids – disordered arrangement of particles but with a high degree of cohesiveness
- Liquid crystals – medium degree of cohesiveness and very orderly arrangement of particles; allows a degree of ordered motion of particles

PROPERTIES OF MATTER



Changes in Matter



**Physical Change** changes in the phase or state of a substance but not its composition

e.g. changes in state (liquid → gas), shape or size (granules → powder)

Phase Change – determined by existing conditions of temperature and pressure

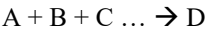
Sublimation	Solid to Gas	Deposition	Gas to Solid
Melting	Solid to Liquid	Freezing	Liquid to Solid
Evaporation	Liquid to Gas	Condensation	Gas to Liquid

**Chemical Change** substances are converted into other substances

e.g. rusting of iron, burning of wood

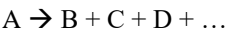
**Types of Chemical Reactions**

1. SYNTHESIS / COMBINATION – formation of a bigger compound from simpler ones



2. DECOMPOSITION - A single compound is broken down to 2 or more simpler substances

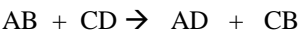
- Solids require heat ( $\Delta$ )



3. Single Displacement- Cation or anion is replaced by an uncombined element



4. Double Displacement – Metathesis Exchange of partners



Other types:

- ❖ Combustion - Reaction with  $O_2$  to form  $CO_2$ ,  $H_2O$ ,  $N_2$  and oxides of any other elements present
  - ❖ Precipitation - Formation of a precipitate when a solution is added to another
- Precipitate – an insoluble or slightly soluble solid that forms when 2 solutions are mixed.

**Solubility Rules**

1. All nitrates are soluble.
  2. All acetates are soluble.
  3. All  $NH_4^+$  salts are soluble.
  4. All salts of Group 1 are soluble.
  5. All chlorides are soluble except chlorides of  $Hg_2^{2+}$ ,  $Pb^{2+}$  and  $Ag^+$ .
  6. All bromides are soluble except bromides of  $Hg_2^{2+}$ ,  $Pb^{2+}$  and  $Ag^+$ .
  7. All iodides are soluble except iodides of  $Hg_2^{2+}$ ,  $Pb^{2+}$  and  $Ag^+$ .
  8. Most sulfates are soluble except Group 2,  $Pb^{2+}$  and  $Hg^{2+}$ .
  9. All phosphates are insoluble except  $NH_4^+$  and Group 1.
  10. All chromates are insoluble except  $NH_4^+$  and Group 1.
- ❖ Neutralization -Reaction between an acid and a base forming water and salt

**LAWS OF CHEMICAL COMBINATION**

1. Law of Conservation of Mass

- Antoine Lavoisier (1743-1794) - “Father of Chemistry”
- 🚦 Established chemistry as a quantitative science
- 🚦 Studied combustion

“In a chemical reaction, the total mass of the starting materials (reactants) is equal to the total mass of the materials produced (products).”

2. Law of Definite Proportion or Composition

- Joseph Proust (1754-1826)
- 🚦 Showed that copper carbonate always has the ff. proportion by mass:
- 🚦 5.3 parts Cu : 4 parts O : 1 part C

“Any sample of a pure chemical substance contains the same elements in the same definite proportion by mass of its elements.”

3. Law of Multiple Proportion

- John Dalton (1766-1844)

“In different compounds of the same elements, the different masses of one element that combine with a fixed mass of the other element are in the ratio of small whole numbers.”

**HISTORICAL DEVELOPMENT OF ATOM**

- 🚦 **Greeks (400 BC)**
- Matter was composed of 4 fundamental substances: FIRE, EARTH, WATER, AIR

### ✚ Leucippus and Democritus (5th BC)

- First to propose that matter is made up of tiny indivisible particles called “atomos” meaning indivisible

### ✚ Lucretius and the Greeks (1 BC)

- What appears as a solid object may actually consist of small particles
- There must be some limit to the number of subdivisions which can be formed on any bit of matter
- Matter can be resolved ultimately into a unit which is indivisible and indestructible

“ATOM” means cannot be cut/destroyed

- The Greeks were only concerned on the existence of the atom but not on its nature

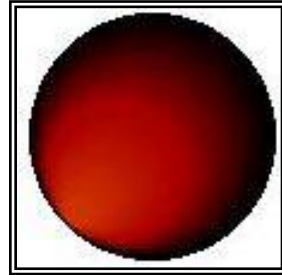
## DALTON’S ATOMIC THEORY

### ● John Dalton (1766-1844)

- In 1808, published the book “A New System of Chemical Philosophy” wherein he presented the atomic theory in detail.

Dalton’s Billiard Ball Model

- The atom is a tiny, hard, indestructible sphere.



### Dalton’s Atomic Theory

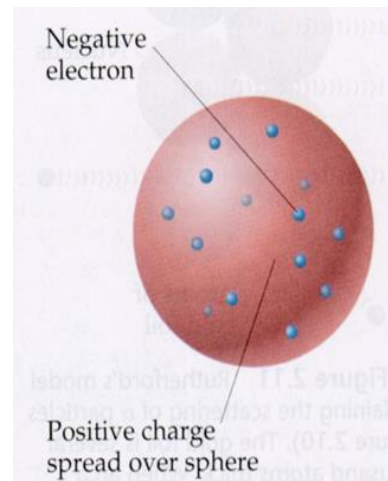
1. Matter consists of tiny particles called atoms which are indestructible.
2. All atoms in a given element are identical and have the same mass.
3. Atoms of different elements have different properties.
4. Reactions involve only the rearrangement of atoms; separation or union. When atoms combine to form compounds, the ratio of the no. of combining atoms is fixed.

### Thompson’s Raisin Bread/ Plum Pudding Model

### ● Joseph John Thomson (1904)

- Studied cathode ray tubes

- The cathode rays are repelled by the negative pole of a magnetic field
  - This suggests that the ray consists of a stream of negatively charged particles
- All atoms must contain electrons.



randomly

- An atom is a diffuse, spherical cloud of positive electrification with embedded negatively charged electrons.
- Thomson measured the charge to mass ratio of the electron:  

$$e/m = -1.76 \times 10^8 \text{ c/g}$$
- He also showed that whatever metal is used as a cathode and whatever gas is present inside the tube, the cathode ray consist of the same particles as shown by the same  $e/m$  ratio.

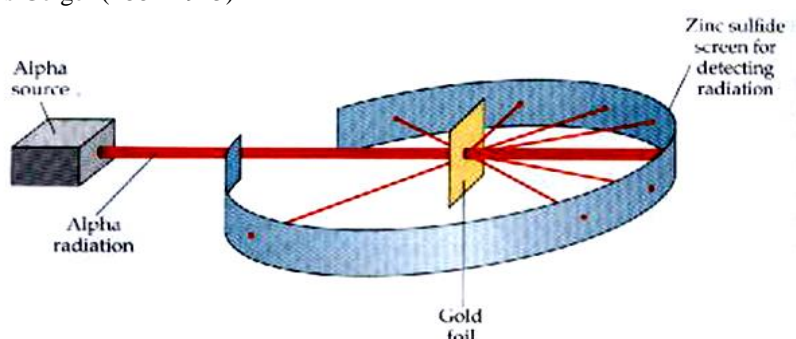
### Importance of Thomson’s Experiment

- It correctly suggested that the atom consists of an arrangement of + and – charges.
- It postulated the presence of the electron in all matter
- **Robert Millikan (1909)**
  - Using oil drop experiments, he determined the charge of an electron:
    - $-1.6 \times 10^{-19} \text{ c}$
  - Thus the mass of an electron is (using  $e/m$  ratio):
    - $9.11 \times 10^{-28} \text{ g}$

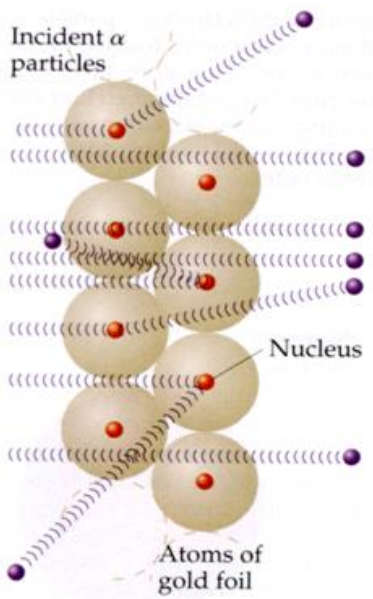
## Rutherford’s Nuclear Atom Model (Alpha Scattering Experiment)

### ● Ernest Rutherford (1871-1937) and Hans Geiger (1882-1945)

- Majority were undeflected
- Some were slightly deflected

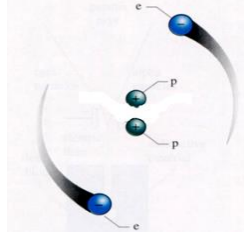


- Few bounced off



Explanations:

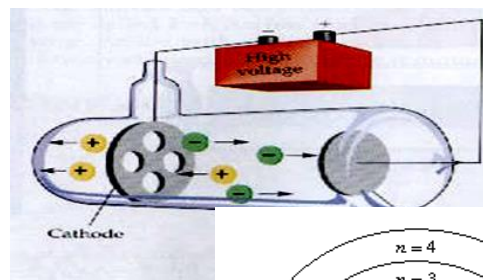
- Most of the mass and all the (+) charges on an atom are centered in a very small region called the nucleus.
- The atom is mostly empty space.
- The magnitude of (+) charge is different for different atoms.
- Electrons move around the (+) nucleus.



Eugene

Goldstein (1850-1930)

- Goldstein, in 1886 identified the positively charged particle and named it proton



passing through the holes  
mass of the H atom  
sign to that of the

- He used cathode with holes and observed rays opposite in direction to those of the cathode rays.
- The mass of this particle almost the same as the
- The charge is equal in magnitude (but opposite in electron)

### Bohr's Solar System Model of the Atom

- Neils Bohr (1885-1962)
- In 1913, tried to explain the line spectra of hydrogen

Features:

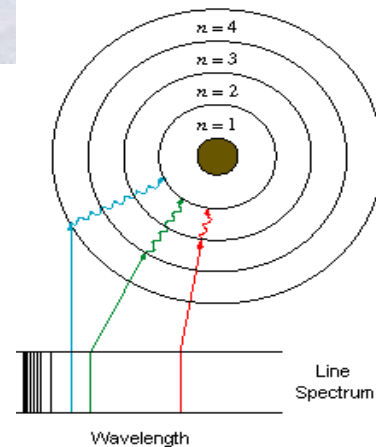
- The electrons move about the nucleus in certain circular orbits.
- Only certain orbits and energies are allowed.
- The electron can remain in an orbit indefinitely.
- In the presence of radiant energy, the electron may absorb E and move higher E

### Quantum or Wave-Mechanical Model

- Louis de Broglie (1892-1987), Erwin Schrodinger (1887-1961), Heisenberg (1879-1976)

Features:

- The energy of the electron is quantized.
- The electron moves in 3-D space around the nucleus but not in an orbit of definite radius.
- The position of the electron cannot be defined exactly, only the probability.



to an orbit with

Werner

### Heisenberg Uncertainty Principle

- There is a fundamental limitation to just how precisely we can know both the position and the momentum of a particle at a given time.

### The Nature of Light

- Radiant energy that exhibits wavelike behavior and travels through space light in a vacuum. It has oscillating magnetic and electric fields in planes each other.

### Primary Characteristics of Wave

#### 1. WAVELENGTH, $\lambda$

- distance between two consecutive peaks or troughs in a wave

#### 2. FREQUENCY, $\nu$

- number of waves or cycles per second that pass a given point in space

Relationship of  $\lambda$  and  $\nu$

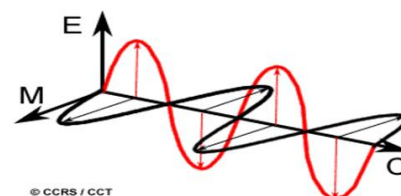
$$\lambda \propto 1/\nu \quad \text{or} \quad \lambda \nu = c$$

Where  $c$  = speed of light ( $2.9979 \times 10^8$  m/s)

### Atomic Spectra

- The spectra produced by certain gaseous substances consist of only a limited number of colored lines with dark spaces between them.
- This discontinuous spectra.
- Each element has its own distinctive line spectrum- a kind of atomic fingerprint.

### Robert Bunsen (1811-1899) and Gustav Kirchhoff (1824-1887)



at the speed of  
perpendicular to

- Developed the first spectroscope and used it to identify elements.

**Max Planck (1858-1947)**

- Explained certain aspects of blackbody radiation
- Blackbody – any object that is a perfect emitter and a perfect absorber of radiation
  - Sun and earth’s surface behave approximately as blackbodies
- Proposed that energy, like matter, is discontinuous.
- When the energy increases from one allowed value to the next, it increases by a tiny jump or *quantum*.
- Matter could absorb or emit energy only in the whole number multiples of the quantity.
 

$E = h \nu$ 

where E is energy

$h$  is Planck’s constant =  $6.626 \times 10^{-34}$  Js

$\nu$  is frequency

$\Delta E = n h \nu$ 

Where n is an integer (1,2,3...)

- Energy is “quantized” and can only occur in discrete units of size  $h\nu$  (packets of energy called Quantum)
- Transfer of energy can only occur in whole quanta, thus, energy seems to have particulate properties.

**Albert Einsetein(1879-1955)**

- Proposed that electromagnetic radiation is itself quantized
- Electromagnetic radiation can be viewed as a stream of particles called PHOTONS

**Summary of the Works of Einstein and Plancks**

- Energy is quantized. It can occur only in discrete units called quanta.
- Electromagnetic radiation, which was previously thought to exhibit only wave properties, also exhibit particulate properties, thus the dual nature of light.

*If light has particulate properties, not just wave, does matter also have wave properties, not just particulate?*

**Louis de Broglie (1892-1987)**

- Small particles of matter may at times display wavelike properties.
- For a particle with velocity,  $v$ 

$m = h / \lambda \nu$

$\lambda = h / m v$

Thus, we can calculate the wavelength for a particle.

- All matter exhibits both particulate and wave properties.
- Large pieces of matter predominantly exhibit particulate properties because their  $\lambda$  is so small that it is not observable.
- Very small pieces of matter such as photons exhibit predominantly wave properties.
- Those with intermediate mass, such as electrons, show clearly both particulate and wave properties.

**MODERN VIEW OF THE ATOM**

ALLOTROPE – elements with different forms (composed of one type of element)

ISOTOPES – elements with different mass number due to the difference in the number of neutrons

ISOBARS – different elements with the same mass number but different atomic number

Atom and the subatomic particles

- The diameter of an atom is in the order of  $10^{-8}$  cm
- The nucleus is roughly  $10^{-13}$  cm in diameter (1/100,000 diameter of the atom)
- The charge of the nucleus is a unique character of the atoms of an element
- The charge is positive

Particles within the nucleus

**PROTON**

- Eugene Goldstein (1886)
- from Greek “protos” meaning “first”
- mass of  $p^+ = 1.67 \times 10^{-24}$  g
- charge =  $+1.60 \times 10^{-19}$  c
- The no. of  $p^+$  is a unique property of an element
 

$\# \text{ of } p^+ = \text{atomic \#, } Z$

$= \text{nuclear charge}$

$= \# \text{ of } e^- \text{ s in a neutral atom}$

**NEUTRON**

- James Chadwick (1932)
- Protons cannot account for the total mass of the atom
- Has the same mass as the proton but has no charge
- Symbol:  $n^0$
- **mass of  $p^+$  + mass of  $n^0$  = mass of atom (atomic mass)**

$\# \text{ of } p^+ + \# \text{ of } n^0 = \text{mass \#, } A$

$A = Z + \# \text{ of } n^0$

**ELECTRON**

- Ernest Rutherford
- negatively charged
- in a neutral atom :
  - $\# \text{ of } e^- = \# \text{ of } p^+ = Z$

**Summary:**

Particle	Discovery	Mass in grams	Charge
Electron	discovered by JJ Thomson; name given by George Stoney	$9.11 \times 10^{-28}$	-1
Proton	discovered by Rutherford in 1911, name given by Goldstein	$1.67 \times 10^{-24}$	+1
Neutron	discovered and named by James Chadwick, 1932	$1.67 \times 10^{-24}$	0

Symbol of the Atom

A

X

Z

- X is the symbol of the element
- A is the mass #
- Z is the atomic #

**Atomic number, Z,** is the number of protons in the nucleus

Ex. The element N has 7 protons, so Z= 7.

**Mass number, A,** is the sum of the number of protons and neutrons in the nucleus of an atom

Ex. An atom with 5 protons and 5 neutrons has an atomic number of 5 and a mass

number of 10

ISOTOPES

- Francis William Astron (1877-1945)
    - observed using the mass spectrometer that neon has 3 isotopes
  - The listed atomic mass of an element is the weighted average of the atomic masses of the naturally occurring isotopes.
- Atomic mass =  $\Sigma$  (% abundance)(isotopic mass)

For Ions

- (+) charge – cation
  - Lost electrons equal to the charge
- (-) charge – anion
  - Gained electrons equal to the charge

NUCLEAR CHEMISTRY

- proposed by Marie Curie (1867-1934)

Spontaneous disintegration of an unstable atomic nucleus with accompanying emission of radiation in order to form a more stable species.

Nuclear Equation

- The sum of the mass #'s (A) must be the same on both sides
- The sum of atomic #'s (Z) must be the same on both sides

Nuclide

- A nucleus with a specified mass # (A), # of p<sup>+</sup> (Z) and # of n<sup>0</sup>
  - Stable nuclide
  - Radioactive nuclide

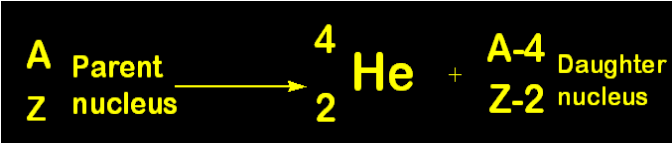
Stability of Nuclide

- ODD-EVEN RULE**
  - Even # of n<sup>0</sup> and p<sup>+</sup> : more likely to be stable
  - Odd # of n<sup>0</sup> and p<sup>+</sup> : more likely to be unstable
- MAGIC NUMBER**
  - Isotopes with specific # of p<sup>+</sup> or n<sup>0</sup> are more stable than the rest:
  - 2, 8, 20, 28, 50, 82 and 126
- All nuclides with 84 or more protons are radioactive.
  - e. g. Po, At ....

TYPES OF RADIOACTIVE DECAY

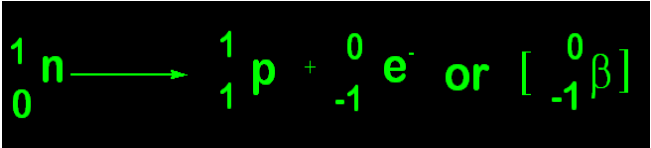
1. ALPHA DECAY OR EMISSION

- α- particle:
- Heavy, travel short distances
- Usually emitted by a heavy nuclei



2. BETA DECAY OR EMISSION OR NEGATRON EMISSION

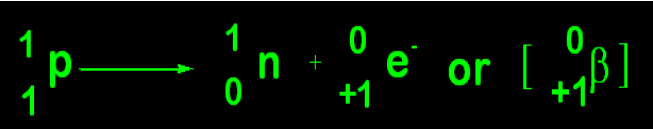
- β particle (negatron)
- Usually when neutrons are in excess, into protons with emission of beta



they are transformed particles.

3. POSITRON EMISSION

- Usually when p<sup>+</sup> are in excess, these are n<sup>0</sup> with emission of positron

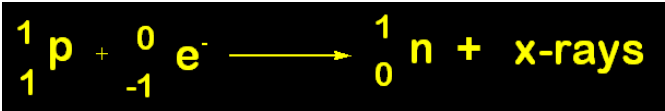


transformed into

4. ELECTRON CAPTURE OR K- CAPTURE



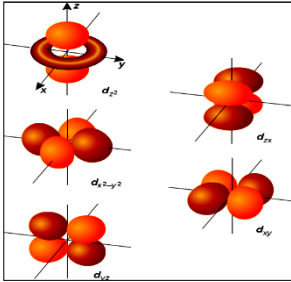
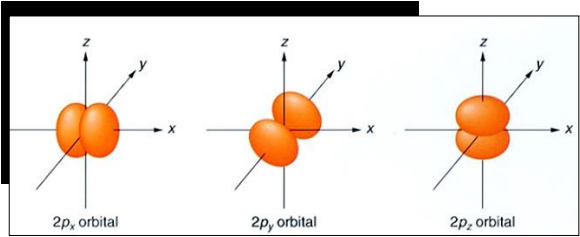
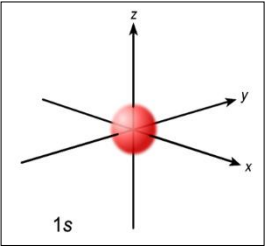
- Usually happens when  $p^+$  are in excess (as emission)
- Nuclear stability achieved by capturing  $e^-$ s (lowest E level or K- shell) converting
- X-rays emitted



in positron  
one of the inner  
a  $p^+$  to a  $n^0$

5. GAMMA EMISSION ( $\gamma$  – radiation is emitted)

- high energy photons or radiation similar to x-rays but shorter  $\lambda$  , high  $\nu$ , high penetration
- no mass, A and Z of nucleus remain unchanged



NUCLEAR FISSION

- Heavy nucleus splits into 2 or more lighter nuclei
- Occurs when a heavy nucleus is struck with projectiles or bullets (nuclear particles)

NUCLEAR FUSION

- Nuclei of lighter elements are made to combine to form heavier nuclei
- Occurs at very high temp.
- More E released but difficult to harness

HALF-LIFE,  $t_{1/2}$

- Time required for half of radioactive nuclei in a sample to undergo radioactive decay
  - Constant for every radioactive isotope
- $t_{1/2} = \ln 2 / k$   $k$  is the rate

$\ln (N/N_0) = -kt$        $N_0$  = initial amount or activity

$N$  = amount left or activity left after time  $t$

THE ELUSIVE ELECTRON

Quantum Number – describes the orbital and the electron

ORBITAL is an energy state for an electron described by the three quantum numbers  $n$ ,  $l$  and  $m_l$

- may hold two electrons with opposite spins

1. Principal Quantum Number ( $n$ )

- Take positive, nonzero integral values: 1,2,3...
- Main energy level or principal shell
- As  $n$  increases:
  - orbital becomes larger,  $e^-$  becomes farther from the nucleus
  - higher E-  $e^-$  is less tightly bound to the nucleus

2. Azimuthal or Angular Momentum Quantum Number ( $l$ )

- Values: 0 to  $n-1$  for each value of  $n$
- Sublevel or subshell
- Related to the shape of the orbital

Orbital Symbol

- combination of  $n$  and  $l$

- consists of a number (for  $n$ ) and a letter (for  $l$ )

e.g.  $3s \rightarrow n = 3 ; l \text{ is } s = 0$

3. Magnetic Quantum Number ( $m_l$ )

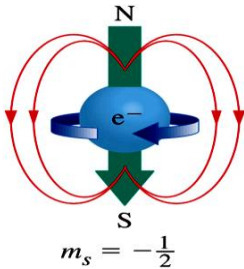
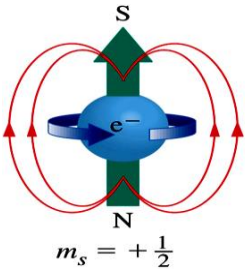
- Values: 1 to  $-1$  including zero
  - Related to the orientation in space of the angular momentum associated with the orbital
- Degenerate orbitals – orbitals having the same energies

e.g. the three  $p$ -orbitals have the same energy

$l$	Letter designation
0	s
1	p
2	d
3	

4. Electron Spin Quantum Number ( $m_s$ )

- Values:  $+1/2$ ,  $-1/2$
- The value does not depend on any of the three numbers



quantum

Pauli Exclusion Principle (Wolfgang Pauli 1900 -1958)

- In a given atom, no 2  $e^-$ 's can have the same set of 4 q.nos.

Thus, an orbital can hold only 2  $e^-$ 's, and they must have opposite spins.



Electronic Configuration – describes the manner in which electrons are arranged in an atom

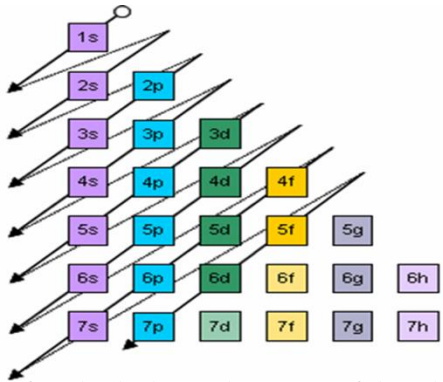
Ground state electronic configuration- lowest energy arrangement of electrons

Excited state- allowed arrangements of electrons other than the ground state

Isoelectronic- same number of electrons

Rules to remember when writing ground state electronic configurations

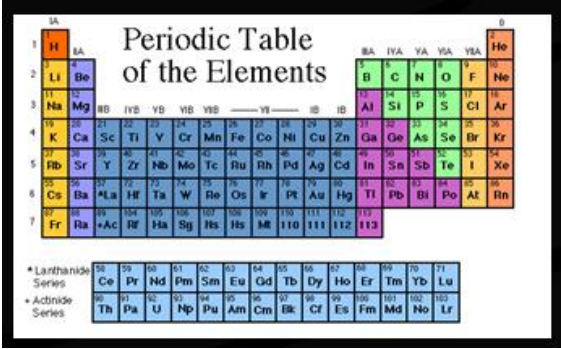
- ⌘ **Aufbau Principle**- the orbitals of an atom are filled in energy order of increasing
  - According to the (n+l) rule. The lower the value of (n+l), the lower the energy of the orbital. If the (n+l) values of two orbitals are the same, the one with lower n is filled first.
- ⌘ **Hund’s Rule of Multiplicity**- the lowest energy arrangement of electrons in a set of degenerate orbitals is where there is a maximum number of electrons of the same degenerate orbitals singly before pairing. spin. Electrons occupy



THE PERIODIC TABLE

The Elements

- there are 112 elements to date, 90 of which are naturally occurring



1. Johann Wolfgang Dobereiner’s Law of Triads (1817)

- In a triad , the combining weight of the central member is the average of its partners.

2. John Newlands’ Law of Octaves (1865)

- When elements are arranged in increasing atomic mass, every eighth element had similar properties.

Shortcomings:

- Some positions were forced just to maintain his proposition
- Some positions contained 2 elements
- There were no room for other elements which may be discovered

3. Julius Lothar Meyer’s Atomic Volume Curve and Periodic Table (1869)

- A periodic trend in properties is observed when elements are arranged in increasing atomic weights.

4. Dmitri Mendeleev’s Periodic Table and Periodic Law (1869)

- Properties of elements are periodic functions of their atomic weights
- Predicted the discovery of 10 elements

The Modern Periodic Law

- The properties of the elements are functions of their atomic numbers

Groups

- Vertical rows
- Previous notation: IA – VIIIA, IB – VIII
- New IUPAC\* notation: 1-18
  - \*IUPAC – International Union of Pure and Applied Chemistry
- Elements belonging to the same group have similar (not identical) properties

Special names of some groups

- Group 1 – Alkali metals
- Group 2 – Alkaline earth metals
- Group 17 – Halogens
- Group 18 – Noble Gases

Periods

- Horizontal rows
- Properties of elements that belong to a period show a pattern or trend that is repeated in the next period
- Numbered 1-7

Pattern in Ion Formation

- Most elements form ions (except noble gases)
  - Group 1 : +1
  - Group 2 : +2
  - Group 13 : +3
  - Group 14 : do not readily form ions
  - Group 15 : -3
  - Group 16 : -2
  - Group 17 : -1

Of the known elements, 11 are gases at room temperature. four are liquids at 25°C, Hg, Br, Ga and Cs. If Fr can be prepared in large quantities, it is expected to be a liquid.

Property	Across a period (left to right)	Down a group (top to bottom)
atomic size/radius	Decreasing	Increasing
ionization energy	Increasing	Decreasing
affinity for electrons	Increasing (upto Group 17)	Decreasing
Tendency to form Cation	Decreasing	Increasing
Tendency to form Anion	Increasing (upto Group 17)	Decreasing

Metallic Character	Decreasing	Increasing
Electronegativity	Increasing	Decreasing

Note: The size of the cation is smaller as compared to its neutral atom

The size of the anion is larger as compared to its neutral atom.

Atomic Size

- ▶ Covalent radius – ½ the distance between the nuclei of two identical atoms joined by a single covalent bond.
- ▶ Metallic radius – ½ the distance between the nuclei of 2 atoms in contact in the crystalline solid metal.

Ionization Energy

- ▶ Energy required to remove an e- from a gaseous atom or ion

X<sub>(g)</sub>→ X<sup>+</sup><sub>(g)</sub> + e<sup>-</sup>

Where the atom or ion is assumed to be in its ground state

Affinity for electrons

- ▶ Tendency of an atom or ion to attract additional e-

X<sub>(g)</sub> + e<sup>-</sup> → X<sup>-</sup><sub>(g)</sub>

Electronegativity

- ▶ The attraction of an atom for shared electrons.

Note:

Metals react with oxygen gas forming a basic oxide in water.

Nonmetals react with oxygen gas forming an acidic oxide in water.

### CHEMICAL LANGUAGE AND SHORTHAND

Chemical symbols

An element is represented by a symbol which may be one or two letters; the first is capitalized and the second is in the lower case. The symbols may be derived from the Greek, German or Latin names of the elements.

### Binary Covalent Compounds

Binary covalent compounds are formed between two non-metals

#### A. Naming binary covalent compounds

1. Identify the elements present in the compound given by the chemical formula. The name of the more metallic element is written first.
2. Change the suffix of the less metallic element to –ide.
3. Use the prefix corresponding to the number of atoms present in the compound.

Number	Greek Prefix	Number	Greek Prefix
1	Mono-	6	Hexa-
2	Di-	7	Hepta-
3	Tri-	8	Octa-
4	Tetra-	9	Nona-
5	Penta	10	Deca-

The mono- prefix is frequently omitted, particularly for well-known substances. If no prefix is use, it usually implies that no number of atoms of element is one. However, experts in nomenclature caution that this can be dangerous and suggest that it is better to include the mono- prefix.

Some compounds are known only by their common names. The most common of this are:

#### Forrmula

H<sub>2</sub>O

NH<sub>3</sub>

PH<sub>3</sub>

#### Name

Water

Ammonia

Phosphate

#### . Writing formulas of binary compounds

1. Represent each kind of element in a compound with the correct symbol of element.
2. Indicate by a subscript the number of atoms of each element in a molecule of the compound.
3. Write the symbol of the more metallic element first. (H is an exception to this rule.)

IONIC COMPOUNDS

Compounds formed between metals and nonmetals are called ionic compounds.

A. Naming Ionic Compound

1. Write the name of the cation first, followed by the name of the anion.
2. Unlike binary covalent compounds, PREFIXES ARE NOT USE to indicate the number of ions present in the formula.

Note that for ionic compounds, the prefixes are not attached to the chemical name to denote the number of atoms of the elements. The number of atoms is implied by the charges of the cation and the anion. It is therefore important to know the charges of the common cations and anions.

3. Most transition metals can exist in more than one ionic form. Thus, it is important to know the charge of the cations in their compounds.

Examples:	Formula	Stock system	Old system
	SnCl <sub>4</sub>	tin (IV) chloride	stannic chloride
	SnBr <sub>2</sub>	tin (II) bromide	stannous bromide

The method of indicating the charge of the cation involves placing a Roman numeral equivalent to the magnitude of the charge of the cation in parenthesis after the English name is called the Stock System of Nomenclature.

Some ionic compounds form crystals that contain a certain proportion of water molecules apart from the ions of the compound. Such compounds are called HYDRATES. Hydrates are named just like other ionic compounds except for the addition of the “hydrate” with a Greek prefix indicating the number of water molecules per unit of the ionic compound.

Example:    CuSO<sub>4</sub>•5H<sub>2</sub>O    copper (II) sulfate pentahydrate or cupric sulfate pentahydrate

B. Writing Formulas of Ionic Compounds

1. Write the symbol of the positive ion (cation) first, followed by the symbol of the negative ion (anion).
2. Write the charge of each ion over the symbol of that ion. Usually, for the main group elements, the group number usually gives the charge of the monoatomic ion. Remember that Group 1 elements would have a charge of (+1); Group 2 (+2); Group 3 (+3); Group 16 (-2); Group 17 (-1); and Group 18 (0) unless indicated.
3. Choose a subscript that will make the net charge zero. The simplest procedure is to use the absolute value of the charge of the anion as the subscript for the cation; and the absolute value of the cation charge as the subscript for the anion (CROSS-OVER RULE). When both subscripts in the formula can be divided by same number to simplify the formula, you should do so, unless you know the actual molecule represented.
4. For hydrates, follow the same steps, then add a centered dot, followed by the number of water molecules (indicated by the prefix) and the chemical formula of water.

ACIDS

A. Naming Binary Acids

Binary acids contain only two different elements- hydrogen and a nonmetal. Binary acids are named as *hydro \_\_\_\_ic acid*, where the stem of the nonmetal is inserted in place of the line. Thus,

HF- hydrofluoric acid and HBr- hydrobromic acid

The names hydrogen fluoride and hydrogen bromide are also used for HF and HBr, respectively. Both names are correct although the convention is that these compounds are named as acids when they are present in aqueous solutions. Thus, HF in aqueous solution is hydrofluoric acid, but pure HF is referred to as hydrogen fluoride.

B. Naming Oxyacids

Another type of acid is the oxyacids derived from the oxyanions. Since some elements form more than one oxyanion, they also form more than one oxyacid. The name of the oxyacid is derived from the name of the oxyanion with a change in the suffix using the following rules:

1. If the name of the oxyanion ends in –ate, the name of the oxyacid will be of the form \_\_\_\_*ic acid*.

Example	SO <sub>4</sub> <sup>2-</sup>	sulfate	H <sub>2</sub> SO <sub>4</sub>	sulfuric acid
	ClO <sub>4</sub> <sup>-</sup>	perchlorate	HClO <sub>4</sub>	perchloric acid

2. If the name of the oxyanion ends in –ite, the name of the oxyacid will be of the form \_\_\_\_*ous acid*.

Example	SO <sub>3</sub> <sup>2-</sup>	sulfite	H <sub>2</sub> SO <sub>3</sub>	sulfurous acid
	ClO <sup>-</sup>	hypochlorite	HClO	hypochlorous acid

Names and Symbols of Some Common Polyatomic Anions

Formula	Name	Formula	Name
OH <sup>-</sup>	Hydroxide	NO <sub>3</sub> <sup>-</sup>	Nitrate
O <sub>2</sub> <sup>2-</sup>	Peroxide	NO <sub>2</sub> <sup>-</sup>	Nitrite

CN <sup>-</sup>	Cyanide	CH <sub>3</sub> COO <sup>-</sup>	Acetate
N <sub>3</sub> <sup>-</sup>	Azide	CrO <sub>4</sub> <sup>2-</sup>	Chromate
SO <sub>4</sub> <sup>2-</sup>	Sulfate	Cr <sub>2</sub> O <sub>7</sub> <sup>2-</sup>	Dichromate
SO <sub>3</sub> <sup>2-</sup>	Sulfite	MnO <sub>4</sub> <sup>-</sup>	Permanganate
HSO <sub>4</sub> <sup>-</sup>	Hydrogen sulfate or bisulfate	C <sub>2</sub> O <sub>4</sub> <sup>2-</sup>	Oxalate
HSO <sub>3</sub> <sup>-</sup>	Hydrogen sulfite or bisulfite	SCN <sup>-</sup>	Thiocyanate
PO <sub>4</sub> <sup>3-</sup>	Phosphate	CO <sub>3</sub> <sup>2-</sup>	Carbonate
HPO <sub>4</sub> <sup>2-</sup>	Hydrogen phosphate	HCO <sub>3</sub> <sup>-</sup>	Hydrogen carbonate or bicarbonate
H <sub>2</sub> PO <sub>4</sub> <sup>-</sup>	Dihydrogen phosphate		

Some common oxyanions

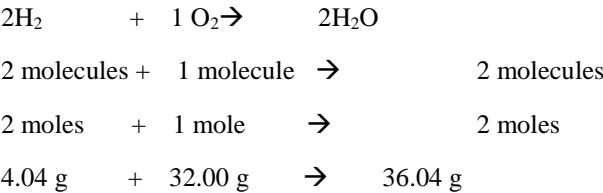
Chlorine		Bromine	
ClO <sub>4</sub> <sup>-</sup>	Perchlorate	BrO <sub>4</sub> <sup>-</sup>	Perbromate
ClO <sub>3</sub> <sup>-</sup>	Chlorate	BrO <sub>3</sub> <sup>-</sup>	Bromate
ClO <sub>2</sub> <sup>-</sup>	Chlorite	BrO <sub>2</sub> <sup>-</sup>	Bromite
ClO <sup>-</sup>	Hypochlorite	BrO <sup>-</sup>	Hypobromite

STOICHIOMETRY

Chemical Reactions

- Processes in which substances are changed into one or more new substances
- Represented by chemical equations:  

Reactants → Products



■ FOLLOWS THE LAW OF CONSERVATION OF MASS

Balancing Chemical Equations

Some important points:

- Use correct chemical formulas
- Adjust only the coefficients, NOT the subscripts
- Balance elemental forms ( e.g. Ar, Cu, Na, O<sub>2</sub>, N<sub>2</sub>, I<sub>2</sub>, S<sub>8</sub>...) and H and O last.
- Use the simplest possible set of whole no. coefficients

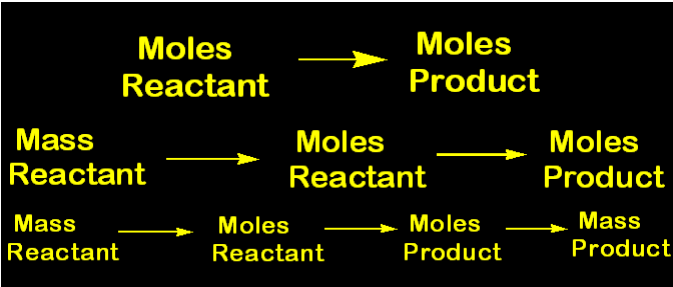
Stoichiometry- The quantitative study of reactants and products in a chemical reaction

Mole Method - The stoichiometric coefficients in a chemical equation can be interpreted as the number of moles of each substance.

Steps:

- Write correct chemical formulas and balance the equation.
- Convert the quantities into moles.
- Use the mole ratios to calculate moles of the required substance.
- Convert calculated moles to whatever units required.

Three types of calculation:



The Mole

In 1971, at the 14<sup>th</sup> meeting of the General Conference of Weights and Measures, scientists agreed to adopt the *mole* as the unit of an amount of substance

The **mole** (abbreviated mol) is the amount of substance that contains the same number of elementary particles as the number of atoms in exactly 12 grams of C-12.

Ways of expressing the mole:

- by number of particles (use Avogrado’s number, 6.02 x 10<sup>23</sup> particles per mole)

2. by mass (use molar mass)

3. by volume (use molar volume, 22.4 L at STP)

Interconversions

$$\div \text{MM} \quad \times 6.02 \times 10^{23}$$

Mass  $\longleftrightarrow$  Mole  $\longleftrightarrow$  No. of particles

The  $m \times \text{MM}$  the  $\div 6.02 \times 10^{23}$  mole of a substance. The molar mass is numerically equal to the atomic mass (or atomic weight) of an atom or the formula mass of a molecule, a compound or a polyatomic ion.

### Formula and Composition

The percentage composition of a compound is a list of the percentages by weight of the elements in the compound. The percentage by weight of an element in a compound is numerically equal to the number of grams of the element that are present in 100 g of the compound

Ex. What is the percentage composition of quick lime, CaO?

Ans. 71.5% Ca, 28.5% O

**Empirical Formula**- is the formula with lowest possible whole number subscripts to represent the composition of the compound. It can be determined from the % composition data.

Ex. Barium carbonate, a white powder used in paints, enamels and ceramic, has the following composition: Ba, 69.58%; C, 6.090% and O, 24.03%. Determine its empirical formula

Ans. BaCO<sub>3</sub>

**Molecular Formula**- gives the actual composition or the actual number of atoms of each element present in one molecule or one formula unit of the compound

Ex. Molecular formula of glucose: C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>

Empirical Formula of glucose: CH<sub>2</sub>O

### Stoichiometry of Reactions

**Chemical Stoichiometry**- is the quantitative relationship of the amounts of reactants used and amounts of products formed in a reaction. This mass relationship is expressed in the balanced equation for the reaction.

**Percent yield**- portion of the theoretical yield of product that is actually obtained in the reaction

% yield = (actual amt of product obtained / theoretical amt) x 100

Theoretical Yield - the amount of product that would result if all the LR reacted.

- Maximum obtainable yield

Actual Yield - The amount of product actually obtained from a reaction

- Always less than theoretical yield

**Limiting reactant**- reactant that is completely consumed in the reaction. It also determines the amount of products that can be formed.

**Excess reactant**- reactant that is not completely used up in a chemical reaction

### TIES THAT CHEMISTRY BIND

**Chemical Bonds**- net forces of attractions that hold atoms together

Properties:

- Bond energy – amount of energy that must be supplied to separate the atoms that make a bond
- Bond length – distance between 2 nuclei of 2 covalently bonded atoms
- Bond order – number of bonds between atoms

Types of Chemical Bonds

a. **covalent bond**- pair of electrons that is shared by two atoms of nonmetals; represented by Lewis structure or electron dot formula

Types of Covalent Bonds:

Single bond - two atoms held by one e- pair

Double bond – two atoms held by 2 e- pairs

Triple bond – two atoms held by 3 e- pairs

- **Higher Bond order, shorter Bond length, higher Bond energy**

Polar covalent bond – one atom is more electronegative than the other atom; unequal sharing of electrons; the more electronegative atom is partially negative and the less electronegative atom is partially positive.

Nonpolar covalent bond – equal sharing of electrons

Coordinate Covalent Bond – the electrons being shared comes from a single atom

b. **ionic bond or electrovalent bond**– It is the transefer of electrons from a metal to a nonmetal, i.e., the metal loses an electron while the nonmetal gains an electron converting them intro charged ions.

- attraction between cations and anions

c. **metallic bond**- the attraction between the cations in the lattice and the “sea of delocalized electrons” moving within the lattice

**Lewis Structure**-one or a combination of Lewis symbols to represent a single atom (neutral or charged), a molecule or a polyatomic ion.

- based on Octet Rule

Octet rule- the observed tendency of atoms of the main block elements to lose, gain or share electrons in order to acquire an octet of electrons in their outermost main energy level It is more appropriately called Noble Gas Rule

Electron Pairs could either be

- Lone pairs – pairs of electrons localized on an atom
- Bonding pairs – those found in the space between the atoms

Drawing Lewis Structures

1. Sum the valence electrons from all atoms (total # of e-’s)

Total electrons = sum of the valence electrons of all atoms – charge

2. Determine the central atom and draw the skeletal structure.

Cental atom is the most metallic atom or the least electronegative.

3. Use a pair of e-’s to form a bond between each pair of bound atoms.

4. Distribute remaining electrons to the terminal atoms to satisfy octet.

5. If there are still available electrons, put them on the central atom to satisfy octet.

6. If the central atom does not satisfy octet, move electron pair (lone pair) from the terminal atoms towards the central atom to form multiple bonds.

STRICT FOLLOWERS of OCTET: C, N, O, F and H (2 electrons)

7. Check the Lewis structure. H and F are always terminal atoms and joined by a single bond.

HYPERVALENT ATOM – atom that could accommodate more than the octet due to low-lying d- orbitals.

RESONANCE -The use of two or more Lewis Structures to represent a particular molecule or ion.

- Can be written for molecules/ions having a double or a triple bond and single bond(s).

Resonance Structures- one of two or more Lewis structures for a single molecule that cannot be represented accurately by only one Lewis structure.

- The true structure is the average or the “hybrid” of the resonance structures.

FORMAL CHARGE- Used to evaluate non-equivalent Lewis structures (different from resonance structures)

= no. of valence electron in the free state – no. of nonbonding electrons – no. of bonds

**GEOMETRY OR SHAPE OF MOLECULES**

- the three-dimensional arrangements of atoms in a molecule

- governed by VSEPR Theory

Valence Shell Electron Pair Repulsion (VSEPR) Theory

- The structure around a given atom is determined principally by minimizing electron pair repulsions

Steps for using VSEPR Theory

1. Draw the Lewis structure for the molecule/ion.
2. Count the e- pairs around the central atom and arrange them in the way that minimizes repulsions.
3. Determine the positions of the atoms from the ways the e- pairs are shared.
4. Name the molecule structure from the positions of the atoms.

Type of Molecule	Geometry	Polarity
AX <sub>2</sub>	Linear	Nonpolar
AX <sub>3</sub>	Trigonal planar	Nonpolar
AX <sub>2</sub> E	Bent or V-shaped	Polar
AX <sub>4</sub>	Tetrahedral	Nonpolar
AX <sub>3</sub> E	Trigonal pyramidal	Polar
AX <sub>2</sub> E <sub>2</sub>	Bent or V-shaped	Polar
AX <sub>5</sub>	Trigonal bipyramidal	Nonpolar
AX <sub>4</sub> E	See-saw –shaped	Polar
AX <sub>3</sub> E <sub>2</sub>	T-shaped	Polar
AX <sub>2</sub> E <sub>3</sub>	Linear	Nonpolar
AX <sub>6</sub>	Octahedral	Nonpolar
AX <sub>5</sub> E	Square pyramidal	Polar
AX <sub>4</sub> E <sub>2</sub>	Square planar	Nonpolar
AX <sub>3</sub> E <sub>3</sub>	T-shaped	Polar
AX <sub>2</sub> E <sub>4</sub>	Linear	Nonpolar

\* The polarity are always TRUE if the substituents are the same since the net dipole is zero. The dipole moments cancel out.

X → number of substituents      E → no. of lone pairs

Repulsion Order:

Lone Pair (LP) – LP repulsion > LP- bonding pair (BP) repulsion > BP- BP repulsion

\*For the VSEPR model , molecules with multiple bonds, multiple bonds count as one effective e- pair

\* When a molecule exhibits resonance, any one of the resonance structures can be used to predict the geometry

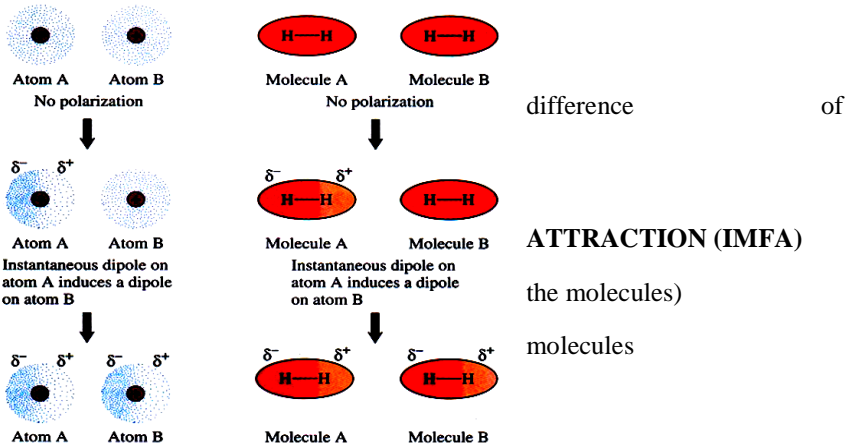
Bond Polarity – results from a net dipole moment

Dipole moment – results from the electronegativity difference of

INTERMOLECULAR FORCES OF

- Interactions among molecules (not within)
  - Weaker than ionic or covalent bonding
  - Explains the physical states of the
- Types:

1. London Dispersion Forces (LDF)
2. Dipole-Dipole Forces (DDF)
3. Hydrogen Bonding



London Dispersion Forces (LDF)

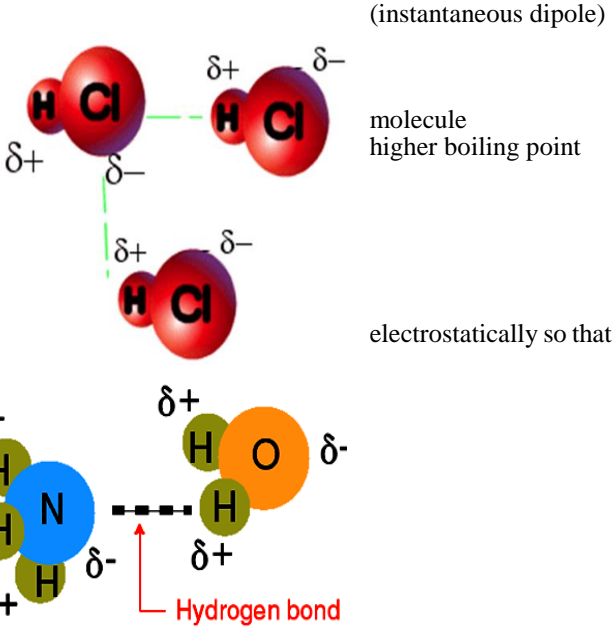
- Relatively weak forces that exist among noble gas atoms and non-polar molecules
- Atoms can develop a momentary non-symmetrical e- distribution
- This atom can induce a similar dipole in the neighboring atom

Polarizability

- The ease with which a dipole can be induced in an atom or
- Increases with increasing no. of e-'s (increased MM). → results to
- Increasing polarizability, stronger LDF

Dipole-dipole Forces

- Exhibited by polar molecules
- Stronger than LDF
- Only about 1% as strong as covalent or ionic bonds
- Molecules with dipole moments can attract each other the positive and negative ends are close to each other

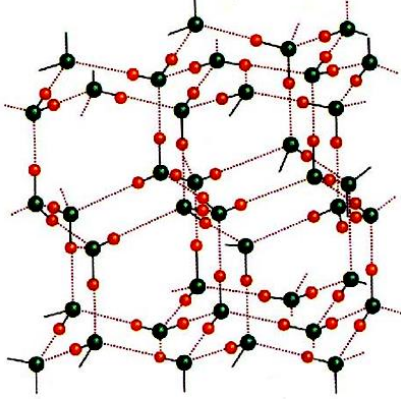


Hydrogen Bonding

- Special type of dipole-dipole forces
- Exhibited by molecules with H-F, H-O or H-N bonds
- Occurs when an H atom is “sandwiched” between F,O or N:

Strongest IMFA due to:

- Small size of the H atom – molecules can approach each other closely
- High electronegativity of F,O,N – H is pulled closely; highly polar bond



The structure of ice due to H-bonding is shown on the left. There is hollow space making ice less dense than water.

Nature of Liquids as Effects of IMFA

1. Surface Tension- Ability to resist an increase in surface area

Stronger IMFA, higher surface tension

2. Viscosity – fluid’s resistance to flow

Stronger IMFA, higher viscosity

3. Vapor Pressure- Vapor exerted by a vapor at equilibrium with its liquid at a given temp.

Stronger IMFA, lower vapor pressure

4. Enthalpy of Vaporization, ΔHvap- Energy that must be supplied to evaporate a liquid at 1 atm

Stronger IMFA, higher ΔHvap

5. Boiling Point- temperature at which the vapor pressure of a liquid equals atmospheric pressure

Stronger IMFA, higher boiling point



6. Freezing Point/ Melting Point- temperature at which the rate of liquid converting to solid equals the rate of solid converting to the liquid

Stronger IMFA, higher FP/MP

7. Heat of Fusion,  $\Delta H_{fus}$ - amount of heat required to melt a specified amount of solid at its MP

Stronger IMFA, higher  $\Delta H_{fus}$

PHASE CHANGES AND PHASE DIAGRAMS

The Kinetic Molecular Theory (KMT)

- Applied to gases:
  1. Gases consist of large number of particles (molecules or atoms).
  2. The gas particles are far apart. The volume therefore is negligible.
  3. The particles are in constant, random and rapid motion. They move in all directions
  4. At higher temp. the particles move faster. As the temp. of the gas increases, the ave. KE of the particles also increases.
  5. The particles are so far apart that the repulsion or attraction between them is negligible.

KMT extended to liquids

1. Liquids consist of large number of particles.
2. These particles are close together.
3. The particles are in constant motion. Their motion is more limited compared to that in gases because of their nearness to each other but their can slip around one another.
4. The dependence between temperature and KE is the same as that in gases.
5. The particles experience attractive forces between them since they are closer to each other.

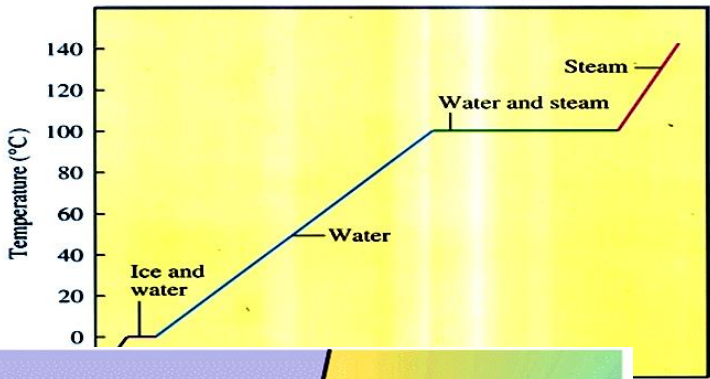
KMT extended to liquids

1. Solids like liquids and gases consist of large number of particles.
2. The particles are close together, as in liquids. The difference is that the molecules in a solid have a very well-ordered arrangement.
3. The movement of particles consist mostly of vibration within a fixed point.
4. The dependence between temp. and KE is the same as that of gases and liquids.
5. The particles experience attractive forces between them. These forces are stronger compared to that in liquids.

Factors Affecting Vaporization

1. Atmospheric pressure – the lower the pressure above the liquid, the faster the rate of vaporization
2. Humidity – high humidity, slow rate of vaporization
3. Surface area – a large surface area provides more molecules the opportunity to escape
4. Motion of the atmosphere – vaporization occurs rapidly in moving air than in still air

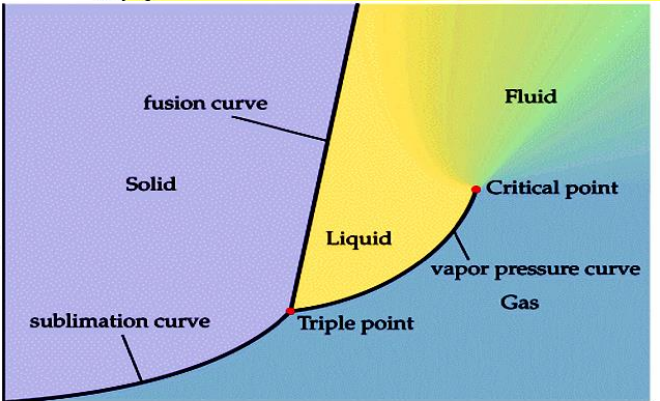
Heating Curve



At constant temperature, phase change occurs and at this temperature, kinetic energy is constant while potential energy is increasing

At increasing temperature, kinetic energy is increasing while potential energy is constant.

PHASE DIAGRAM



- Triple point – all 3 states are present
- Critical point:
  - Critical temp. – temp.above which the vapor cannot be liquefied no matter what pressure is applied
  - Critical pressure – pressure required to produce liquefaction at the critical temp.

Supercritical Fluid (SCF)

- Has the high density of a liquid but the low viscosity of a gas
- Molecules in SCF, being in much closer proximity than in ordinary gases, can exert strong attractive forces on the molecules of a liquid or solid solute

GASES

Properties:

- Expansion
- Indefinite shape
- Compressibility
- Ease of mixing
- Low density

Jan Baptista van Helmont- coined the term “chaos” or “gas”

Evangelista Toricelli- showed that the air in the atmosphere exerts pressure; designed the first barometer

Properties of Gases (Measurable)

1. Pressure (P)- force per unit area



$$P = F/A \quad \text{SI unit: } 1 \text{ Pa} = 1 \text{ N/m}^2$$

Standard atmosphere : 1 atm = 760 mmHg = 760 torr = 101325 Pa = 1.01325 bar

2. Volume (V)- space occupied by the gas (unit: L, mL)

$$1 \text{ dm}^3 = 1 \text{ L}; 1 \text{ cm}^3 = 1 \text{ mL}$$

3. Temperature (T)- expressed in K, °C or °F

$$K = ^\circ\text{C} + 273.15$$

Absolute zero temp = 0 K = -273.15°C → molecules stop moving

Standard Temperature and Pressure (STP): 0°C, 1 atm

Standard Ambient Temperature and Pressure (SATP): 25°C, 1 bar

4. no. of moles of gas (n)

Gas Laws

1. Boyle's Law- Robert Boyle

- the volume occupied by a given mass of gas at const temp is inversely proportional to the pressure

$$(V \propto 1/P)$$

- does not apply to liquids and solids
  - applies only at moderate or low P and moderate or high T
- $$P_1 V_1 = P_2 V_2$$

2. Charles's Law- Jacques Charles (1746-1823)

- the volume occupied by a given mass of gas at const pressure is directly proportional to temp ( $V \propto T$ )

- Charles is the first person to fill a balloon with hydrogen gas (Made the first solo balloon flight)
- $$\frac{V_1}{T_1} = \frac{V_2}{T_2}$$

$$T_1 \quad T_2$$

3. Avogadro's Law- Amadeo Avogadro (1776-1856)

- for a gas at const T and P, V is directly related to the no. of moles of gas ( $V \propto n$ )

Molar volume- one mole of any gas at STP occupies a volume of 22.4 L

$$\frac{V_1}{n_1} = \frac{V_2}{n_2}$$

$$n_1 \quad n_2$$

4. Gay-Lussac's law- the pressure occupied by a given mass of gas at const volume is directly proportional to temp ( $P \propto T$ )

$$\frac{P_1}{T_1} = \frac{P_2}{T_2}$$

$$T_1 \quad T_2$$

5. Combined gas law

$$(PV)/T = k, \text{ hence } (P_1 V_1)/T_1 = (P_2 V_2)/T_2$$

6. Ideal Gas Law

$$PV = nRT$$

Where P = Pressure (atm)

V = Volume (L)

n = no. of moles (mol)

R = Universal gas constant = 0.0821 L-atm/mol-K

T = Temperature (K)

Dalton's Law of Partial Pressures

- For a mixture of gases in a container, the total pressure exerted is the sum of the pressures that each gas would exert if it were alone.

$$P_{\text{total}} = P_1 + P_2 + P_3 + \dots + P_n$$

- Where  $P_1$ ,  $P_2$  and  $P_3$  are partial pressures of the gas each gas would exert if it were alone in the container.

Graham's Law of Effusion - Thomas Graham (1805-1869)

“ The rates of effusion of 2 different gases are inversely proportional to the square roots of their molar masses.”

Effusion -Escape of gas particles from their container through a tiny orifice or pinhole.

For 2 gases A and B:

$$\frac{\text{Rate of effusion of A}}{\text{Rate of effusion of B}} = \frac{\sqrt{MM_B}}{\sqrt{MM_A}}$$

## SOLUTIONS

-homogeneous solutions

Components:

- SOLUTE – substance being dissolved; present in smaller amount
- SOLVENT – the dissolving medium; present in larger amount

Solubility -The maximum amount of solute that can be dissolved in a given amount of solvent at a given temperature

Types of Solutions:

- DILUTE SOLUTION – relatively little solute present
- CONCENTRATED SOLUTION – relatively large amount of solute present

Types of Solutions based on amount of solute dissolved:

- UNSATURATED – contains less than the maximum amount of solute that can be dissolved
- SATURATED – contains the maximum amount of solute that can be dissolved
- SUPERSATURATED – contains greater than the maximum amount of solute that can be dissolved

Concentration-The amount of solute present in a given quantity of solvent or solution

Ways of Expressing Solution Concentration

1. Molarity, M = moles of solute/ L of solution
2. Mass Percent or Weight Percent = (g solute/ g solution) x 100%
3. Mole Fraction, X = moles of a component/moles of solution  
= moles solute/ (moles of solute + moles of solvent)
4. Molality, m = moles solute/ kg solvent

## FACTORS AFFECTING SOLUBILITY

1. Structure effects

“Like dissolves like”

In general, substances that have similar IMFA have strong solute-solvent interactions and tend to form solutions.”

2. Pressure

- Affects solutions containing gases
- Higher pressure, higher solubility of a gas in liquid

3. Temperature

For solid solute and liquid solvent:

- For an endothermic dissolution: higher temperature, higher solubility
- For an exothermic dissolution: higher temperature, lower solubility

For gas solute and liquid solvent:

- Increasing temperature, lower solubility

Stoichiometry in solutions:

- Relate mole of reactant to mole of another reactant
- Relate mole of reactant to mole of product
- Relate mole of product to mole of another product

→ makes use of balanced chemical equation

→ always convert to mole since the balanced equation is in terms of mole.

DILUTION – procedure for preparing a less concentrated solution from a more concentrated one.

$$M_1 V_1 = M_2 V_2 \quad \text{where } M = \text{molarity and } V = \text{volume}$$

## COLLIGATIVE PROPERTIES

- Solution properties that depend on the amount of solute present and not on the nature of the solute

1. Vapor Pressure Lowering

- The presence of a non-volatile solute lowers the vapor pressure of a solvent

2. Boiling Point Elevation

- The presence of a non-volatile solute increases the boiling point of a solution

$$\text{BP}_{\text{solution}} - \text{BP}_{\text{solvent}} = K_b m \quad \text{where } K_b \text{ is the boiling point elevation constant}$$

m is the molality

3. Freezing Point Depression

- The presence of a non-volatile solute decreases the freezing point of a solution

$$FP_{\text{solvent}} - FP_{\text{solution}} = K_f m \text{ where } K_f \text{ is the freezing point depression constant}$$

m is the molality

#### 4. Osmotic Pressure

- Pressure required to stop osmosis

Osmosis -selective passage of solvent molecules through a porous membrane from a dilute solution to a more concentrated one

Semi-permeable membrane -- Allows the passage of solvent molecules but blocks the passage of solute molecules

$$\pi = MRT$$

Where  $\pi$  = osmotic pressure

M = molarity of solution

R = gas constant

T = Kelvin temp.

### ACIDS AND BASES

Arrhenius Definition (Svante Arrhenius, 1859-1927)

- Acid - substance that when dissolved in water, increases  $[H^+]$
- Base - substance that when dissolved in water, increases  $[OH^-]$

Bronsted-Lowry Definition (J.N. Bronsted and T.M. Lowry, 1923)

- Acid – a proton donor
- Base - a proton acceptor
  - Conjugate base – product formed when an acid loses a proton
  - Conjugate acid- product formed when a base accepts a proton

Monoprotic acid – donates 1 mole  $H^+$  per mole of acid

Polyprotic acid – donates more than 1 mole  $H^+$  per mole of acid

Amphiprotic - Substance that can act either as a proton donor or proton acceptor

$$K_w = [H_3O^+] [OH^-] = 1.0 \times 10^{-14}$$

$$pH = -\log [H_3O^+]$$

$$pOH = -\log [OH^-]$$

$$pH + pOH = 14$$

Strong Acids

- HCl
- HI
- $HNO_3$
- HBr
- $HClO_4$
- $H_2SO_4$  (1st ionization only)

Strong Bases

- Hydroxides of Groups 1 and 2

Weak Acids and Bases – ionizes to small extent

The larger the  $K_a$  (ionization constant of acid), the stronger the acid, greater  $[H_3O^+]$

The larger the  $K_b$  (ionization constant of base), the stronger the base, greater  $[OH^-]$

Lewis Definition (Gilbert Newton Lewis, 1875-1946)

- Base – a substance that can donate an e- pair
- Acid – a substance that can accept an e- pair

Titration

- a neutralization reaction
- a solution is gradually added to another solution until the solute of the first solution has completely reacted with the solute of the second solution

Indicator – an organic compound that changes color depending on the pH

e.g. phenolphthalein      colorless – acidic

faint pink – neutral

pink – basic

Equivalence Point- the point at which the solute of the first solution has completely reacted with the solute of the other solution

Endpoint – approximates the equivalence point. It is very close to the equivalence point.

Standardization – it is the process of determining the concentration of a solution using a standard solution. The solution has a known concentration.

Titrant- the solution usually placed on the buret. This is usually the solution of known concentration.

Analyte- the solution of unknown concentration usually placed in the Erlenmeyer flask.

### BUFFERS

- A solution that resists drastic changes in pH when small amounts of acids or bases are added.

Components:

- A weak acid and its conjugate base (in salt form) **OR**
- A weak base and its conjugate acid (in salt form)

$$pK_a = -\log K_a$$

$$pK_b = -\log K_b$$

Henderson-Hasselbach equation:  $pH = pK_a + \log \frac{[base]}{[acid]}$

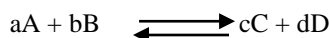
## CHEMICAL EQUILIBRIUM

- The state in which the forward and backward reactions continue to occur but the concentrations of all reactants and products remain constant with time.

Characteristics:

1. **Dynamic Situation** – the forward and backward reactions continue to exist
2. **Balance** - the rate of forward reaction is equal to the rate of backward reaction
3. **Law of Mass Action** – reactions in equilibrium can be expressed in a Definite Mathematical Expression

For a general equation:



$$K_{eq} = \frac{[C]^c [D]^d}{[A]^a [B]^b} \text{ where } K_{eq} \text{ is the equilibrium constant}$$

[ ] molar concentration

In the expression, only aqueous and gaseous substances are included. Solids and liquids are not included since their concentrations are relatively constant.

$K_{eq} = K_c$   $K_c$  is the equilibrium constant when substances are expressed in molar concentration

$K_p = K_c (RT)^{\Delta n_g}$   $K_p$  is the equilibrium constant when substances are expressed in their partial pressures

$R$  is the universal gas constant and  $T$  is the temperature in Celsius

$\Delta n_g$  is the difference between the number of moles of gaseous particles of products and reactants

$K_{eq} > 1$ , at equilibrium, reaction system consist mostly of products

-shift to the right

- very large  $K_{eq}$ : reaction goes to completion

$K_{eq} < 1$ , at equilibrium, reaction system consist mostly of reactants

-shift to the left

- reaction does not occur to a significant extent

Le Chatelier's Principle -Henry Louis Le Chatelier (1850-1936)

- If a change in conditions (a "stress") is imposed on a system at equilibrium, the equilibrium position will shift in a direction that tends to reduce that change in conditions.

Factors Affecting Equilibria

1. Change in concentration

- If a reactant or product is added to a system at equilibrium, the system will shift away from the added component.
- If a reactant or product is removed, the system will shift toward the removed component.

2. Change in pressure

→ affects only system involving gases

Three ways to change the pressure of gaseous systems at a given temperature:

- a. Add or remove a gaseous reactant or product at constant volume- same effect as change in concentration
- b. Add an inert gas (not involved in the reaction) at constant volume – increase in total pressure but has no effect on concentrations or partial pressures of the reactants or products
- c. Change the volume of the container – when the volume of the container holding a gaseous system is reduced, the system responds by reducing its own volume. This is done by decreasing the total no. of gaseous molecules in a system

3. Change in temperature

1.  **$K_{eq}$  value changes with temperature**
2. Energy is treated as a reactant (endothermic) or product (exothermic)
3. If energy (heat) is added, the equilibrium will shift to the direction which consumes the added energy

4. Catalyst

- Speeds up both the forward and backward reactions
- Equilibrium is achieved more rapidly but the equilibrium amounts are unchanged
- Therefore, has no effect on equilibria

## CHEMICAL KINETICS

- The area of chemistry concerned with the speeds or rates at which a chemical reaction occurs

Collision Theory- Chemical reactions occur as a result of collisions between reacting molecules.

- For a reaction to proceed, reacting particles must collide effectively to enable outer shell electrons to interact.
- Collisions to be effective, must be with enough energy to overcome repulsive forces between electrons surrounding the nuclei of atoms.

Activation Energy ( $E_a$ )

■ The threshold energy that must be overcome to produce a chemical reaction  
Transition State or Activated Complex

- A temporary species formed by the reactant molecules as a result of the collision before they form the product.

## FACTORS AFFECTING REACTION RATES

### 1. Concentration

- higher concentration, higher reaction rate; more molecules, more collisions

### 2. Temperature

- Higher temperature, more collisions with high energy, higher reaction rate

### 3. Catalyst

- A substance that increases the reaction rate without itself being consumed.
- hastens the reaction by providing a path with lower activation energy thus less energy is needed for a reaction to proceed

### 4. Pressure

- affects gaseous systems
- higher pressure, more collisions; higher reaction rate

## THERMOCHEMISTRY

- Study of heat changes in chemical reactions
- Thermal energy transferred between 2 bodies that are at different temperatures
- Units: 1 calorie = 4.184 J

System → A specific part of the universe that is of interest

Surrounding → The rest of the universe outside the system

Exothermic Process :  $Q = (-)$

- Heat is transferred from the system to the surroundings

Endothermic Process:  $Q = (+)$

- Heat is transferred from the surroundings to the system

## LAW OF THERMODYNAMICS

1. First Law of Thermodynamics - Energy can be converted from one form to another, but cannot be created nor destroyed.

2. Second Law of Thermodynamics - In any spontaneous process, there is always an increase in the entropy (disorder) of the universe

- The entropy of the universe is increasing

- SPONTANEOUS PROCESS – occurs without outside intervention (given the right conditions)
- NON-SPONTANEOUS PROCESS – can occur as long as they receive some sort of outside assistance
- $\Delta G < 0$  (negative) – SPONTANEOUS
- $\Delta G > 0$  (positive) – NON- SPONTANEOUS
- $\Delta G = 0$  (zero) – at equilibrium

$$\Delta G = \Delta H - T\Delta S$$

## CALORIMETRY

- Measurement of heat changes

- CALORIMETER – a closed container used to measure heat changes

Specific Heat Capacity ( $C_p$ )

- The amount of heat required to raise the temperature of 1g of the substance by 1°C.
- An intensive property

Heat Capacity ( $S$ )

- The amount of heat required to raise the temperature of a given quantity of a substance by 1°C
- An extensive property
- $S = m C_p$  where  $m$  = mass

Amount of Heat,  $Q$

$$Q = mC_p\Delta T \quad \text{where } m \text{ is mass and } \Delta T \text{ is final temperature} - \text{initial temperature}$$

If Q is positive, the process is endothermic.  
If Q is negative, the process is exothermic.

Note:  $Q_{sys} = -Q_{surr}$

**OXIDATION – REDUCTION (REDOX) REACTION**

- Electron transfer reactions

**HALF- REACTION**

- Shows the electrons involved in a redox reaction
  - a. Oxidation half-reaction
    - Half-reaction that involves loss of electrons
    - REDUCING AGENT (Reductant) – donates e-’s
  - b. Reduction half-reaction
    - Half-reaction that involves gain of electrons
    - OXIDIZING AGENT (Oxidant) – accepts e-’s
- Mnemonics:

LEORA – Loss of Electron, Oxidation, Reducing Agent  
GEROA- Gain of Electron, Reduction, Oxidizing Agent

**Disproportionation Reaction**

- same substance on the reactant side is oxidized and reduced

**Comproportionation Reaction**

- same substance on the product side is oxidized and reduced

**Oxidation State**

- A concept that provides a way to keep track of electrons in redox reaction according to certain rules.

**RULES & CONVENTIONS FOR DETERMINATION OF OXIDATION STATES**

**Fundamental Rules:**

1. The sum of the oxidation state for all atoms in the formula for an electrically neutral compound is **zero**.
2. The oxidation state for any element in the free or uncombined state is **zero**.
3. The oxidation state for an ion is the same as its charge.

**Special Convention**

1. In all hydrogen compounds, the oxidation state for H is +1.  
Exception: in hydrides where H is –1
2. In all oxygen compounds, the oxidation state for O is –2.  
Exception: in peroxides where O is –1
3. In all halides, the oxidation state for the halogens is –1.
4. In all sulfides, the oxidation state for sulfur is –2.
5. In binary compounds, the element with the greatest attraction for electrons is assigned a negative oxidation state equal to its charge in its ionic compound.

**Electrochemistry**

- Area of chemistry that deals with the interconversion of electrical and chemical energy

**Electrochemical Cell/ Voltaic Cell/ Galvanic Cell**

- The experimental apparatus for generating the use of a spontaneous redox reaction.

**Parts:**

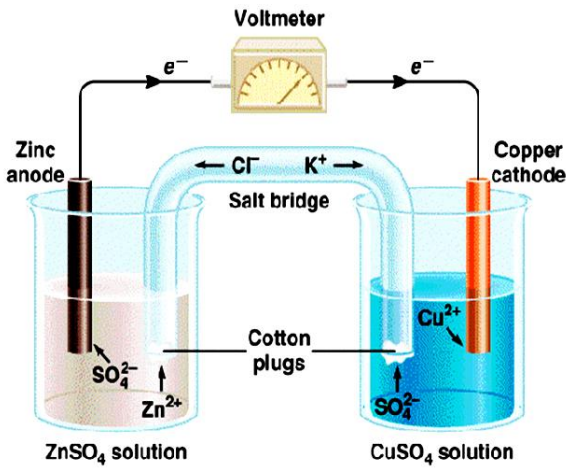
**Anode**

- Electrode at which oxidation occurs
- Negative (-) terminal
- Electrons leave

**Cathode**

- Electrode at which reduction occurs
- Positive (+) terminal
- Electrons enters

What occurs?



of electrical and  
electricity through

- Electrons flow from anode to cathode in the external circuit.
- Oxidation occurs at the anode, anions flow toward the anode within the cell
- Reduction occurs at the cathode, cations flow toward the cathode within the cell

Anolyte – where anode is immersed

Catholyte- where cathode is immersed

Salt Bridge – maintains the neutrality

External Wire- pathway for electron flow

Voltmeter

- Measures the cell potential
- Gives positive readings in volts

Cell Representation or Diagram

- Anode | Reducing species (oxidized form) || oxidizing species (reduced form) | cathode  
Where | - boundary between different phases (e.g. electrode and solution)  
|| - boundary between half-cell compartments (e.g. salt bridge)

Mnemonics: ABC → anode- bridge- cathode

CELL POTENTIAL / CELL VOLTAGE / ELECTROMOTIVE FORCE (emf or E)

- The difference in electrical potential between the anode and the cathode
- Higher cell potential, higher energy given off by e<sup>-</sup>'s, strong tendency to generate electric current
- 1 volt = 1 joule / 1 coulomb
- 1V = 1J/C
- Energy (J) = charge(C) x cell potential (V)

E<sup>0</sup> cell → positive → spontaneous process

For reactions in which reactants and products are in their standard states,

$\Delta G^\circ = -nFE^\circ_{\text{cell}}$		
$\Delta G^\circ$	$E^\circ_{\text{cell}}$	Spontaneity
-	+	spontaneous
0	0	at equilibrium
+	-	non-spontaneous

Note: Higher reduction potential → higher tendency to undergo reduction

Higher oxidation potential → higher tendency to undergo oxidation

Electrolytic Cell

- Electrical energy is used to cause a non-spontaneous chemical reaction to occur
- ELECTROLYTIC CELL is the apparatus used.

1. Two electrodes share the same compartment
2. Has a single electrolyte
3. The conditions are usually far from the standard : gas pressures are rarely close to 1 atm and solutions are not 1 M.

Battery withdraws e<sup>-</sup>'s from the anode and pushes them to the cathode.

Anode → where oxidation occurs; positive

Cathode → where reduction occurs; negative

Electron flows from anode to cathode

Anions go to the anode and cations go to cathode

E<sup>0</sup>cell is negative → non-spontaneous

## CORROSION

→ conversion of metal to its metal oxide

Rusting – corrosion of iron

## ORGANIC CHEMISTRY

- study of carbon and its compounds; chemistry of the hydrocarbons (compounds containing only carbon and hydrogen) and their derivatives.

Hydrocarbons:

1. Alkane – C<sub>n</sub>H<sub>2n + 2</sub>

- all single bonds

2. Alkene – C<sub>n</sub>H<sub>2n</sub>

- double bond between carbon and hydrogen is present

3. Alkyne – C<sub>n</sub>H<sub>2n - 2</sub>

- triple bond between carbon and hydrogen is present

Aromatic → cyclic derivative

Aliphatic → open-chain

Oxygen Containing

1. Alcohol (R-OH)

2. Ethers (R-O-R)

- 3. Carboxylic Acids (RCOOH)
  - 4. Esters (RCOOR)
  - 5. Aldehydes (RCOH)
  - 6. Ketone (RCOR)
- Others:
- 1. alkyl halides (RX) where X is either F, Cl, Br, I
  - 2. amines (RNH<sub>2</sub>)
  - 3. amides (RCONH<sub>2</sub>)

NOMENCLATURE OF ALKANES

Alkanes are named by the IUPAC (International Union of Pure and Applied Chemistry) system, which uses a systematic set of rules. Many also have non-systematic common or trivial names that are still in use.

Common Names

At a time when relatively few organic compounds were known, it was customary to name new compounds at the whim of their discoverers. Urea was so named because it was isolated from urine. Morphine, a painkiller, was named after Morpheus, the Greek god of dreams. Barbituric acid, a tranquilizer, was named by its discoverer after his friend Barbara. These older names for organic compounds are now called **common or trivial names**; many of these names are still widely used in the chemical literature and in commerce.

In the common nomenclature, the total number of carbon atoms in an alkane, regardless of their arrangement, determines the name. The first three alkanes are methane, ethane and propane.

For alkanes beyond propane, certain prefixes are used to differentiate the different structural isomers.

- The prefix **normal or n-** is used to indicate that all carbons are joined in a continuous chain.
- The prefix **iso-** is used to indicate that one end of an otherwise continuous chain terminates in a (CH<sub>3</sub>)<sub>2</sub>CH- group
- The prefix **neo-** is used to indicate that one end of an otherwise continuous chain terminates in (CH<sub>3</sub>)<sub>3</sub>C- group

THE IUPAC System

The system of nomenclature so devised is presently known as the IUPAC system.

Systematic names of organic compounds consist of three main parts:

Prefix – stem – suffix

The **stem** indicates the number of carbon atoms in the backbone or parent chain of the molecules. The **parent chain** is the longest continuous chain of carbon atoms.

Backbone	Stem	Backbone	Stem
C <sub>1</sub>	Met-	C <sub>11</sub>	Undec-
C <sub>2</sub>	Eth-	C <sub>12</sub>	Dodec-
C <sub>3</sub>	Prop	C <sub>13</sub>	Tridec-
C <sub>4</sub>	But-	C <sub>14</sub>	Tetradec-
C <sub>5</sub>	Pent-	C <sub>15</sub>	Pentadec-
C <sub>6</sub>	Hex-	C <sub>16</sub>	Hexadec-
C <sub>7</sub>	Hept-	C <sub>17</sub>	Heptadec-
C <sub>8</sub>	Oct-	C <sub>18</sub>	Octadec-
C <sub>9</sub>	Non-	C <sub>19</sub>	Nonadec-
C <sub>10</sub>	Dec-	C <sub>20</sub>	Eicos-

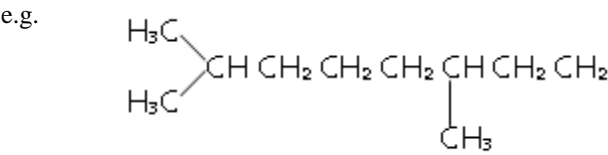
The suffix identifies the type or class of the compound. For alkane, the suffix is **–ane**.

Attached to the backbone are the **side-chains or substituents**. The substituents present are indicated by the **prefix**. In alkanes, the side-chains are called **alkyl groups**, which are derived from alkanes through the removal of one hydrogen atom. They are named by changing **–ane** ending of the parent alkane to **–yl**.

Steps:

1. Locate the parent chain
  - a. Find the longest continuous chain present in the molecule and use the name of that chain as the parent name.
  - b. If there are two different chains of equal length, choose the one with the larger number of branch points as the parent chain.
2. Number the carbon atoms in the parent chain so that the substituents are given the lowest position numbers.
3. Identify the substituents and the position of the carbon atoms to which they are attached.
  - a. If there are two substituents on the same carbon, assign them both the same number.
  - b. There must always be as many numbers in the name as there are substituents.
4. Write the name of the compound by first arranging all substituents in alphabetical order and preceeding the name of each substituent by the position number and then adding the name of the parent chain; use hyphens to separate the different prefixes and commas to separate numbers.
  - a. If the same alkyl group occurs more than once as a substituent, indicate by prefixes di-, tri-, tetra-, etc. However, do not use these prefixes for alphabetizing purposes.
5. Prefixes such as cyclo, neo- and iso- are included in alphabetizing substituents, while hyphenated prefixes such as tert-, sec-, n- are ignored.





2,6-dimethyloctane

For alkenes

The same as alkanes with some modifications:

- a. The parent chain must contain the double bond.
- b. The parent chain is named by changing the **–ane** ending of the corresponding alkane to **–ene** and indicating the position of the double bond by the lowest number possible.
- c. The carbons bearing the substituents are also given the lowest numbers possible, but the double bonds takes precedence.

For alkynes

The rules are the same as for naming of alkenes, except that the ending **–yne** replaces **–ene**

Biochemistry	
Polymers	Building Blocks
Protein	amino acids
Carbohydrates	monosaccharides
Nucleic Acids	nucleotides
Lipids	fatty acids + glycerol
Saccharides – Sugars	
Monosaccharide → one unit	
Disaccharide → two units of monosaccharide	
Glycogen → stored food in animals	
Starch → stored food in plants	
Cellulose → supporting framework of plants	
Nucleotides	
Components	
1. Nitrogenous Base (adenine, guanine, cytosine, thymine, uracil)	
2. Sugar moiety	
3. phosphate group	
DNA – deoxyribonucleic acid	
RNA – ribonucleic acid	

Physics

A. Vector and Scalar

Scalar quantity – a quantity which is expressed by magnitude only

Examples:

- a) Mass

b) Time

c) Temperature
- d) Area

e) Distance

Vector quantity – a quantity which is expressed by magnitude and direction

Examples:

- a) Force

b) Velocity

c) Weight
- d) Acceleration

e) Displacement

- An arrow is used to represent a vector

Parts of the arrow

- a) arrowhead – indicates the direction of the vector

b) length of the arrow – represents the magnitude of the vector

c) Tail – represents the origin of the vector
- Resultant vector – sum/difference of two or more vectors which will give the same effect as the original vectors.

Process of finding the resultant vector

- a) addition – if vectors have the same direction

Example: Kelly walks 2 meters to the east. After 10 seconds, he continued walking 3 meters to the same direction. What is his displacement?

D = 2m + 3m = 5m to the east

Using an arrow,

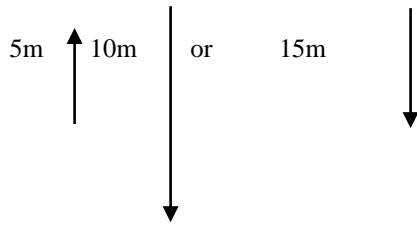


- b) Subtraction – if vectors are acting on opposite directions. The resultant vector takes the direction of the larger vector.

Example: A ball was tossed upward from the building and reached the height of 5m above the building. It the moved downwards, traveling 10m until it hits the ground.

$$D = -10\text{m} + 5\text{m} = -5\text{m}$$

Using an arrow,



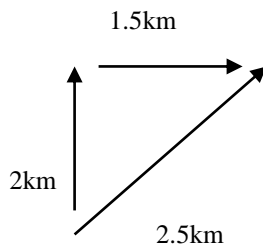
- c) Pythagorean Theorem – if vectors are acting at a right angle with one another

Example: Marivic first walks 2km north before proceeding 1.5 km east. What is her displacement?

$$D = \sqrt{(2^2 + 1.5^2)}$$

$$D = 2.5 \text{ km}$$

Using an arrow,



- d) Component Method – if several vectors are acting on different directions, x and y component are mathematically added to find the resultant vector.

Example: An airplane flies in a northeasterly direction at 100kph at the same time that there is a wind blowing at 20kph to the northwest. What is the resultant velocity of the plane?

X-components:

$$V_{x\text{plane}} = +V_{\text{plane}} \cos 45^\circ$$

$$= 70.71\text{kph}$$

$$V_{x\text{wind}} = -V_{\text{wind}} \cos 45^\circ$$

$$= -14.14\text{kph}$$

Y-components:

$$V_{y\text{plane}} = +V_{\text{plane}} \sin 45^\circ$$

$$= 70.71\text{kph}$$

$$V_{y\text{wind}} = +V_{\text{wind}} \sin 45^\circ$$

$$= 14.14\text{kph}$$

Resultant Velocity

$$V_x = V_{x\text{plane}} + V_{x\text{wind}}$$

$$= 70.71 - 14.14$$

$$= 56.57 \text{ kph}$$

$$V_y = V_{y\text{plane}} + V_{y\text{wind}}$$

$$= 70.71 + 14.14$$

$$= 84.85\text{kph}$$

## B. Mechanics

Motion – change in position of an object relative to other objects that are considered at rest.

- Linear Motion  
*Distance vs. Displacement*

Distance – total path length traveled by a body.

Displacement – change in position of an object. It represents the straight line path between the starting and end points.

Example:

- Jen travels 5km to work and back. What is the distance she travels? What is the displacement?  
Distance = 5km + 5km

$$= 10\text{km}$$

$$\text{Displacement} = 5\text{km} - 5\text{km}$$

$$= 0$$

\*since there is no change in position, her displacement is zero

b. Rocky walks 20 km due north from his camp. Late in the afternoon, he walks back 11km south along the same path.

i. What is his total displacement from the camp?

ii. What is the total distance he traveled?

$$\begin{aligned} \text{i. Displacement} &= 20\text{km} + (-11\text{km}) \\ &= 9\text{km due north} \end{aligned}$$

$$\begin{aligned} \text{ii. Distance} &= 20\text{km} + 11\text{km} \\ &= 31 \text{ km} \end{aligned}$$

*Speed vs. Velocity*

Speed – measure of how fast an object travels

- Average speed – ration of total distance traveled to the time needed to cover that distance.

$$\text{AverageSpeed} = \frac{\text{TotalDistanceTravelled}}{\text{ElapsedTime}}$$

Example: It takes a school bus 1 hour to travel 20km. What is its average speed?

$$\text{AverageSpeed} = \frac{20\text{km}}{1\text{hr}} = 20 \frac{\text{km}}{\text{hr}}$$

- Instantaneous speed – is the speed at particular instance in time

$$\text{Instantaneous Speed} = \frac{\Delta x}{\Delta t} = \frac{x_2 - x_1}{t_2 - t_1}$$

Example: What is the speed of a car that covered 150km in two hours?

$$\text{Instantaneous Speed} = \frac{\Delta x}{\Delta t} = \frac{150\text{km} - 0}{2\text{hrs} - 0} = 75 \frac{\text{km}}{\text{hr}}$$

- Velocity – rate of motion with direction

$$\text{Velocity} = \frac{\text{displacement}}{\text{time}}$$

Example: Rocky drives a distance of 80km in 2 hours towards the north direction. What is his velocity?

Given:

$$d = 80\text{km}$$

$$t = 2\text{hrs}$$

Find: v

Solution:

$$v = \frac{80\text{km}}{2\text{hrs}}$$

$$v = 40 \frac{\text{km}}{\text{hrs}} \text{ north}$$

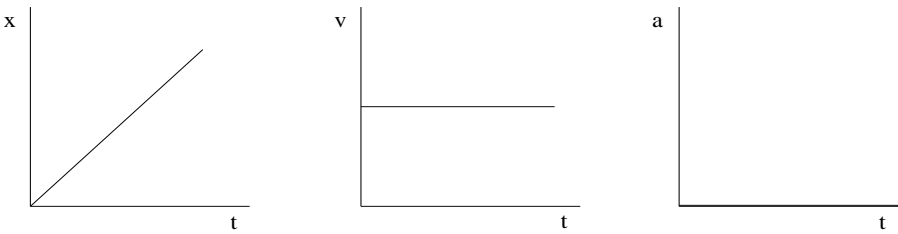
- Acceleration – rate of change of velocity

$$\text{Acceleration} = \frac{\text{ChangeOfVelocity}}{\text{time}}$$

Example: A driver steadily increases his velocity from  $30 \frac{\text{km}}{\text{hr}}$  to  $60 \frac{\text{km}}{\text{hr}}$  in 2 hours. What is his acceleration?

$$a = \frac{60 \frac{km}{hr} - 30 \frac{km}{hr}}{2hrs} = 15 \frac{km}{hr^2}$$

**Graphs relating displacement, velocity and acceleration**

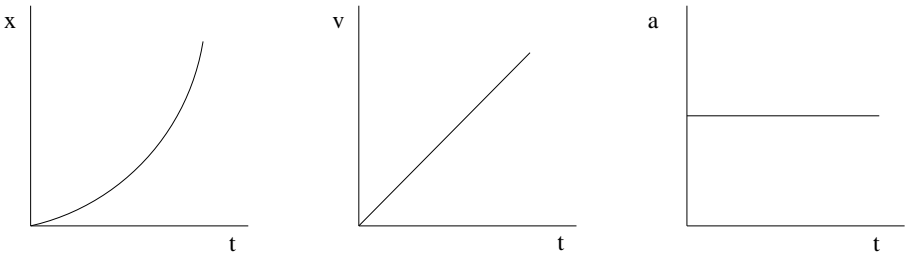


Zero acceleration, constant velocity

Where

x = displacement  
 v = velocity  
 a = acceleration  
 t = time

$$\sqrt[n]{a} \bullet \sqrt[n]{b} = \sqrt[n]{ab}$$



constant acceleration, increasing velocity

Where

x = displacement  
 v = velocity  
 a = acceleration  
 t = time

- Ideal linear motion

a) Uniform Motion – motion with constant velocity

$$\Delta x = vt$$

Where

$$\Delta x = x - x_o$$

v = velocity

t = time

Example: What is the displacement of a car moving at a constant velocity of 20m/s after 2 seconds?

Given:

$$v = 20\text{m/s}$$

$$t = 2\text{s}$$

Find:  $\Delta x$

Solution:

$$\Delta x = vt$$

$$\Delta x = 20\text{m/s (2s)}$$

$$\Delta x = 40\text{m}$$

b) Uniform Accelerated Motion – motion with constant acceleration

$$V_f = V_o + at$$

$$X = X_o + V_o t + \frac{a t^2}{2}$$

$$V_f^2 = V_o^2 + 2a\Delta X$$

$$\frac{\Delta x = (V_f + V_o)t}{2}$$

Where:

V<sub>f</sub> = final velocity

V<sub>o</sub> = initial velocity

a = acceleration

t = time

X = final position

X<sub>o</sub> = initial position

ΔX = X – X<sub>o</sub>, displacement

Example: A cyclist is moving with a velocity of 2m/s and accelerates to 4m/s after 2 seconds. What is the acceleration of the cyclist?

Given:

V<sub>f</sub> = 4m/s

V<sub>o</sub> = 2m/s

t = 2 s

Find: a

Solution:

$$V_f = V_o + at$$

$$a = \frac{(V_f - V_o)}{t}$$

$$a = \frac{(4\text{m/s} + 2\text{m/s})}{2\text{s}}$$

$$a = 1 \text{ m/s}^2$$

c) Freefall - a good example of uniform accelerated motion

- one dimensional motion where the moving object is only under the influence of gravity

- gravitational acceleration is equal to -9.8m/s<sup>2</sup>

$$V_f = V_o + gt$$

$$Y = Y_o + V_o t + \frac{g t^2}{2}$$

$$V_f^2 = V_o^2 + 2g\Delta Y$$

$$\frac{\Delta Y = (V_f + V_o)t}{2}$$

Where:

V<sub>f</sub> = final velocity

V<sub>o</sub> = initial velocity

g = -9.8m/s<sup>2</sup>, gravitational acceleration

t = time

Y = final position

Y<sub>o</sub> = initial position

ΔY = Y – Y<sub>o</sub>, displacement

Example: A ball is dropped from a building without an initial velocity. Find the velocity of the ball after 5 seconds.

Given:

T = 5 s

$$V_o = 0$$

Find:  $V_f$

Solution:

$$\begin{aligned} V_f &= gt \\ &= (-9.8\text{m/s}^2) 5\text{s} \\ &= -49\text{m/s} \end{aligned}$$

Example: A mango falls from a tree. How far does it fall after 0.5 seconds?

Given:

$$t = 0.5 \text{ s}$$

$$V_o = 0$$

Find:  $\Delta Y$

Solution:

$$\Delta Y = V_o t + \frac{gt^2}{2}$$

$$\Delta Y = \frac{\left(-9.8 \frac{m}{s^2}\right)(0.5s)^2}{2}$$

$$\Delta Y = -19.6\text{m}$$

$V_o$

$h$

d) Projectile Motion – curved motion of an object that is projected into the air and acted upon by the gravitational force of the earth

- a combination of uniform motion and freefall

Projectile – an object thrown into the air that is allowed to move freely and is influenced only by gravity

**RANGE**

Range – horizontal distance covered by a projectile

Time of flight – time in which the projectile is up in the air

Trajectory – curve traced by the path of the projectile

Maximum height,  $h$  – the vertical displacement traveled by the projectile in its trajectory

Conditions of Projectile Motion throughout the flight:

- Neglect the effect of air resistance to the body
- The horizontal and vertical motions are independent of each other. Separate the displacement and velocity to its x and y components.

Along the horizontal:

- the x component of the velocity is constant throughout the flight
- the horizontal displacement  $x$ , follows uniform motion
- Formula along the horizontal is the same as uniform motion

Along the vertical:

- the y component of the velocity acts as freefall and thus, only affected by the gravitational acceleration
- The velocity's sign is positive (+) for upward motion while for downward motion, it is negative (-).
- Upon hitting the ground, its velocity is always equal to zero.
- The time required for the projectile to reach its maximum height from its firing point is equal to the time that the projectile will reach the same height of its firing point from the maximum height.
- Formula along the vertical is the same as freefall

When vertical displacement is at its maximum height:

- the x component of the velocity is constant
- the y component of the velocity is equal to zero
- the acceleration is still equal to  $g, -9.8\text{m/s}^2$

Example: A stone is thrown with an initial horizontal velocity of 10m/s from the top of a tower 200m high. Where is the stone after 2s? When will it hit the ground? What is its speed just before it hits the ground?

Given:

$$V_x = 10\text{m/s}$$

dy = 200m

t = 2s

Find: dx after 2s, t, Vf

Solution:

i)            Δx = vt

                 Δx = (10m/s)(2s)

                 Δx = 20m

ii)             $Y = Y_o + V_o t + \frac{g t^2}{2}$

Since there is no initial velocity along the vertical and the top of the building is the reference point, Yo and Vyo is equal to zero.

$$t = \sqrt{\frac{2Y}{g}}$$

$$t = \sqrt{\frac{2(-200m)}{-9.8 \frac{m}{s^2}}}$$

t = 6.38 s

iii)             $V_f = V_o + gt$

$$V_f = 0 + (-9.8 \frac{m}{s^2})(6.38s)$$

$$V_f = -62.52m / s$$

**C. Newton’s Laws of Motion**

- explains why objects move, and define the relationship between the external forces acting on a body – as well as between two or more interacting bodies and the motion that arises from the action of these forces.

- First Law of Motion (Law of Inertia)  
*“Every material continues to be at rest if it is at rest or in uniform motion if it is in motion, unless it is compelled to change that state by forces acted upon it.”*

Inertia – is the tendency of an object to resist a change in its state of motion

Mass – is a measure of an object’s inertia

Weight – force acted upon an object due to gravity

Force – a push or a pull (e.g. gravitational force, friction, normal forces, electromagnetic force, etc.)

- a vector quantity with SI unit of Newton (N = kg-m/s²)

- Second Law of Motion (Law of acceleration)  
*“The acceleration of an object is directly proportional to the net force acting on the object, is in the direction of the net force, and is inversely proportional to the mass of the object.”*

$$a = \frac{F}{m}$$

$$F = ma$$

\* Force and mass have opposite effect on acceleration. The more massive the object, the less is the acceleration. This means that acceleration is inversely proportional to the mass. The greater force will result to greater the acceleration. Force is directly proportional to the acceleration of an object.

Example: Neglecting friction, what constant force will give a mass of 50kg an acceleration of 5m/s²?

Given:

m = 50kg

a = 5m/s²

Find: F

Solution:

F = ma

F = (50kg)( 5m/s²)

F = 250 kg-m/s² or 250N

3) Third Law of Motion (Law of action-reaction)

*“Whenever one object exerts a force on a second object, the second object, exerts an equal and opposite force.”*

Hence, if your hand exerts a force of 20N in a wall, the wall will also exert a force of 20N in your hand

**D. Momentum and Impulse**  
Momentum

Momentum is a physical quantity obtained when the mass of an object is multiplied to its velocity. It has the same direction as the velocity. This means that an object with large mass and velocity has high momentum. Accordingly, an object at rest has a momentum equal to zero.

$$p = mv$$

Where:

$$p = \text{momentum}$$

$$m = \text{mass}$$

$$v = \text{velocity}$$

Example: A truck full of sand with a mass of 40,000kg travels east with a velocity of 50m/s. What is the truck’s momentum?

Given:

$$m = 40,000\text{kg}$$

$$v = 50\text{m/s}$$

Find: p

Solution:

$$p = mv$$

$$p = (40000\text{kg}) (50\text{m/s})$$

$$p = 2,000,000 \text{ kg-m/s}$$

Impulse

Impulse is a vector quantity that has the same direction as the force. It is equal to the product of force and time. It is also associated with the change of momentum.

$$J = \Delta mv$$

$$\frac{J}{\Delta t} = \frac{\Delta mv}{\Delta t} = \frac{m\Delta v}{\Delta t} = ma = F$$

$$J = F\Delta t$$

Where:

$$J = \text{impulse}$$

$$F = \text{Force}$$

$$\Delta t = \text{change in time}$$

$$m = \text{mass}$$

$$v = \text{velocity}$$

Example: A bat hits the baseball. The bat and the baseball remain in contact for 0.005 seconds. The 0.1kg ball leaves the bat with a velocity of 100m/s. What is the average force of the bat on the baseball?

Given:

$$t = 0.005\text{s}$$

$$m = 0.1\text{kg}$$

$$v = 100\text{m/s}$$

Find: F

Solution:

$$F = \frac{mv - mv_0}{\Delta t}$$

$$F = \frac{(0.1 \times 100) - 0}{0.005}$$

$$F = 2000N$$



## Law of Conservation of Momentum

*“The total momentum of a system remains constant if the net external forces acting on the system are equal to zero.”*

$$\sum_{before} mv = \sum_{after} mv$$

As stated, the total linear momentum of the system does not change. This means that if you add all the momenta, you will get the same result even if the objects are colliding with each other

Collision – any string interaction between two bodies that lasts a relatively short time

Two types of Collision

- i) Elastic collision – after the collision, the objects is still separatd from each other
- ii) Inelastic collision – after the collision, the objects move as one unit

External Forces – Forces exerted on any part of the system by any body outside the system

## E. Work, Energy, Power

Work – the product of force and displacement

$$W = F \bullet \Delta x \cos \theta$$

Where:

W = work

F = force

$\Delta x$  = displacement

NOTE: A force does no work if it is perpendicular to the displacement

Example: A 100N block lies on a frictionless surface. A force of 20N was applied horizontally where the block had moved 5m. Find the work done by the force and weight of the block.

Given:

Weight of the block = 100N

Force applied = 20N

Displacement = 5m

Find: Work by the force and weight

Solution:

$$\text{i) } W_{force} = F \bullet \Delta x \cos \theta$$

$$W_{force} = 20N \bullet 5m \cos 0$$

$$W_{force} = 100Nm = 100Joules$$

$$\text{ii) } W_{weight} = F \bullet \Delta x \cos \theta$$

$$W_{weight} = 100 \bullet 0 \cos 90$$

$$W_{weight} = 0$$

The work done by the weight is equal to zero since it is perpendicular to the displacement.

Energy – capacity to do work

- a scalar quantity

Types of Mechanical Energy

a) Potential Energy – The energy stored on an object due to its position.

- i) Gravitational Potential Energy
$$PE_{grav} = mgh$$

Where:

PE = Potential Energy

m = mass

g = gravitational acceleration

h = height

- ii) Elastic Potential – energy stored on an elastic material due to its stretching or compressing

$$PE_s = \frac{1}{2}k\Delta x^2$$

Where:

PE = Potential Energy

k = force constant of the spring

$\Delta x$  = extension/compression of the spring

- b) Kinetic Energy – energy of an object in motion

$$KE = \frac{1}{2}m v^2$$

Where:

KE = Kinetic energy

m = mass

v = velocity

### Practice Test

- Which is not considered as adaptive mechanism of living things?
  - Modification of body parts to suit the environment.
  - Presence of specialized structures like thorns and fins.
  - Possession of camouflage features like color, pattern or shape.
  - Reproduction for the preservation of a certain species.
- Biologists are at present involved in gene manipulation by altering the genes in nuclei. Which aims seem to be the most important of such manipulation?
  - to cure ancient genetic diseases like cancer
  - to prolong life
  - to create new types of agricultural plants and animals
  - to make significant changes in man himself
- Which chemical substance produced by the body regulates and coordinates the functions and activities of bodily organ?
  - gene
  - Deoxyribonucleic acid
  - hormone
  - enzyme
- Which endocrine abnormality is characterized by dwarfness, low intelligence and sex immaturity?
  - myxedema
  - cretinism
  - tetany
  - acromegaly
- What is the present connotation of symbiosis?
  - a give and take relationship of organism
  - any type of relationship between two dissimilar organisms living together
  - a one- sided relationship between two species
  - neutral relationship that exist between two organisms
- Living things are classified either as aerobic or anaerobic as they grow or metabolize in the presence or absence of:
  - carbon dioxide
  - nitrogen
  - water
  - oxygen
- What is the structural difference between plants and animals?
  - Plant cells have plastids but animal cells do not.
  - Plant cells have a stiff cell wall of cellulose but animal cells do not.
  - Animal cells have centriole but the cells of higher plants do not.
  - Plant cells have only a thin membrane but animals do not.
- Only living things can respond to stimuli, to physical and chemical changes in their environment. Such a characteristic is called:
  - metabolism
  - irritability
  - movement
  - specific organization
- The preservation of specie is made possible through:
  - reproduction
  - adaptation
  - metabolism
  - growth
- Which process involves in the movement of dissolved molecules (solute) through a differentially permeable membrane?
  - diffusion
  - osmosis
  - Brownian movement
  - dialysis
- Which refers to the earth's entire zone of air, land and water which occupied by living things?
  - biosphere
  - biome
  - bioassay
  - biomass
- Which body organ is responsible for the removal of waste from the blood and body fluids?
  - liver
  - pancreas
  - kidney

d. large intestine

13. What is meant by excretion?

- a. Elimination of waste and undigested food from the anus.
- b. Removal from the cells and blood streams of substances which are no further use in the body.
- c. Release from the cell of some substance that is utilized elsewhere in some bodily process.
- d. Absorption of soluble food by the body cells.

14. The clotting of the blood is essentially the function of:

- a. red blood cells
- b. white corpuscles
- c. plasma
- d. hemoglobin

15. All living things have a tendency to maintain uniformity or stability in their internal environment called:

- a. anabolism
- b. metabolism
- c. epigenesis
- d. homeostasis

16. What is an ecosystem?

- a. A basic unit that shows interaction between living things and their environment.
- b. A recognizable unit which shows plant and animal distribution as influenced primarily by climate.
- c. A fundamental unit that shows various types of relationship among organism.
- d. A distinct unit that shows how physical factor can affect other abiotic components in the environment.

17. Which plant structure transports organic nutrients both up and down the stem and roots?

- a. xylem
- b. vascular bundle
- c. parenchyma
- d. phloem

18. Under what condition does a living organism live best or has the greatest chance of survival?

- a. maximal
- b. minimal
- c. optimum
- d. standard

19. Which traps light energy from the sun for use in the photosynthesis?

- a. carbon dioxide
- b. water
- c. chlorophyll
- d. oxygen

20. Smoking cigarettes:

- a. causes ulcer
- b. decreases the vital capacity of the stomach
- c. leads to emphysema and lung cancer
- d. leads to abnormal life

21. Blood cells and plasma factors are important:

- a. immune defense
- b. invaders
- c. external defenses
- d. internal defenses

22. A spinal nerve is:

- a. motor nerve
- b. sensory nerve
- c. neuron
- d. mixed nerve

23. The anterior pituitary stimulates the:

- a. motor coordination
- b. consciousness
- c. sense reception
- d. homeostasis

24. What do all methods of birth control have in common?

- a. they all use some device
- b. they are all expensive
- c. they interrupt lovemaking
- d. they prevent the egg from coming in contact with the sperm

25. Pregnancy begins:

- a. upon successful implantation
- b. during the follicular phase
- c. when the egg is fertilized
- d. when ovulation occurs

26. The fact that many insects are now immune to DDT is an example of:

- a. natural selection
- b. genetic drift
- c. geographical isolation
- d. translocation

27. The nutrient glucose is useful to the body:

- a. to prevent goiter
- b. as a source of energy
- c. active reabsorption
- d. during the process of respiration

28. Radiant energy is covered into chemical energy during:

- a. oxidation
- b. glycolysis
- c. respiration
- d. photosynthesis

29. Which of the following is not a form of vegetative reproduction?

- a. regeneration
- b. budding
- c. spore formation
- d. vegetation by runners

30. Nitrogenous waste is produced by the metabolism of:

- a. fats
- b. carbohydrates
- c. proteins
- d. starches

31. Which of the following is a reflex act?

- a. breathing
- b. blinking
- c. walking
- d. sleeping

32. In an ecosystem:

- a. only energy is recycled
- b. only materials are recycled
- c. both materials and energy are recycled
- d. neither materials nor energy is recycled

33. Distribution of plants is affected by:

- a. type of soil
- b. amount of light
- c. amount of rainfall
- d. A, B, and C are correct

34. Which decoction contains traces of iron to arrest hemorrhage?  
a. corn silk                      b. ampalaya leaves flowers                      c. gumamela                      d. coconut milk
35. Hyperacidity can destroy the lining of the stomach. Which of the following substance can ease the discomfort?  
a. water therapy  
b. milk of magnesia  
c. starch solution  
d. gelatin
36. Deficiency of carbohydrates is characterized by:  
a. sluggishness  
b. pallor  
c. obesity  
d. bone deformation
37. Salt as a preservative causes:  
a. cell shrinkage                      b. ionization                      c. hydrolysis                      d. hydration
38. What do you call the practical or industrial application based on scientific principles?  
a. scientific method                      b. technology                      c. theory                      d. experimentation
39. What is the principal cause of earthquakes?  
a. faulting  
b. landslides  
c. nuclear explosions  
d. volcanic erupt
40. Purification of metals can be done best by:  
a. filtration  
b. flotation  
c. aeration  
d. electrolysis

LET REVIEWER- SOCIAL SCIENCE

Lecture Notes

Peace Education, Human Education & Global Education

To address present critical issues, there is a need to revise our teacher education curriculum to make it truly integrated and holistic in content and approach. To do so, we need to identify 3 important areas of concerns:

- Peace Education – This area affirms personal and global responsibilities for the promotion of peace, cooperation, disarmament, justice and non-violent resolution of conflict.
- Human Rights Education – Promotes understanding of Human Rights concepts and values to enable learners to comprehend and transform conditions which give rise to human rights violation.
- Global Education – Involves learning about those problems and issues which cut across national boundaries and about the interconnectedness of system – cultural, ecological, economic, political, and technological. It also includes citizenship education.

Objectives of Peace Education

1. Knowledge
  - a. Peace – students should investigate different concepts and examples of peace on a variety of levels from personal to global.
  - b. Conflict and Violence – students should study the problems of violence
  - c. Some Peaceful Alternatives
    - disarmament
    - non-violent conflict resolution
    - development based on justice
    - human rights respect
    - human solidarity
    - environmental care
  - d. Ethical and Practical Rationale – students should study the ethical and practical basis for the above-cited peaceful alternatives in order to provide added motivation for learning.
2. Attitudes/Values
  - a. Self-respect
  - b. Respect for others
  - c. Respect for human life/nonviolence
  - d. Global concern
  - e. Ecological concern
  - f. Cooperation
  - g. Openness/Tolerance
  - h. Social Responsibility
  - i. Positive Vision
3. Skills
  - a. Reflection
  - b. Critical Thinking
  - c. Decision-making
  - d. Imagination
  - e. Communication
  - f. Conflict Resolution
  - g. Group Building

Principles and Concept About Peace

“Since wars begin in the minds of men and women, it is in the minds of woman and men that the defense of peace must be constructed.”

Love	<ul style="list-style-type: none"> <li>• self-worth/self-esteem</li> <li>• positive self-criticism</li> <li>• deep sense of responsibility</li> <li>• fidelity/loyalty</li> <li>• sense of reconciliation</li> <li>• gentleness</li> <li>• trust and respect</li> <li>• openness</li> <li>• concern for others</li> <li>• sense of sacrifice</li> <li>• courage</li> <li>• endurance</li> </ul>
Compassion	<ul style="list-style-type: none"> <li>• kindness</li> <li>• sensitivity to others needs</li> <li>• nurturing</li> <li>• moral strength/fortitude</li> <li>• goodwill</li> <li>• supportiveness</li> </ul>
Harmony	<ul style="list-style-type: none"> <li>• mutual trusts and understanding</li> <li>• cooperation/collaboration</li> <li>• sense of belongingness/cultural worth</li> <li>• effective communication</li> <li>• sense of reconciliation</li> </ul>
Tolerance	<ul style="list-style-type: none"> <li>• mutual respect</li> <li>• respect for personal and cultural differences (unity in diversity)</li> <li>• genuine acceptance and accommodation</li> <li>• peaceful conflict resolution</li> <li>• acceptance and appreciation of diversity of cultures</li> <li>• respect for minority groups and foreigners</li> <li>• sense of humor, courtesy/cordiality, open-mindedness</li> </ul>
Caring and Sharing	<ul style="list-style-type: none"> <li>• love</li> <li>• concern</li> <li>• generosity</li> </ul>
Interdependence	<ul style="list-style-type: none"> <li>• sense of interconnectedness with others and with creation</li> <li>• globalization/nationalization and internationalism</li> <li>• sense of subsidiarity</li> <li>• non-violence</li> <li>• active participation</li> <li>• global understanding/mutual respect among nations</li> <li>• creative and collective responsibility and cooperation</li> <li>• transformational leadership</li> <li>• commitment to the future</li> </ul>
Empathy	<ul style="list-style-type: none"> <li>• appreciation of the other</li> <li>• awareness</li> <li>• concern</li> </ul>
Spirituality	<ul style="list-style-type: none"> <li>• inner peace</li> <li>• belief in one’s material and spiritual development</li> <li>• reverence and respect for life</li> <li>• commitment to genuine human development</li> <li>• confidence in human spirit</li> <li>• freedom of thought, conscience and belief</li> </ul>

**Human Rights Education**

Human rights is defined as the supreme, inherent and alienable right to life, dignity, and self development. It is concerned with issues on both areas of civil and political rights and economic, social and cultural rights founded on internationally accepted human rights obligations to which the Philippines government is a state party. (Educator’s Human Rights Handbook, Commission on Human Rights).

**The Fundamental Principles Underlying The Human Rights Standards**

Universality – that human rights should be enjoyed by everyone without discrimination as to sex, age, language, religion, or race. Wherever a person is, whether in a rich or poor country, in a tribe, and whoever the person is, a king, queen or pauper, man or woman, old and young s/he can claim such rights.

Inviolability – that human rights as an irreducible element of one’s humanity cannot be abrogated or violated unless determined by law and “solely for the purpose of securing due recognition and respect for the rights of other an of meeting the just requirements of the general welfare, morality, and public order in a democratic society.”

Interdependence – a person’s well being cannot be enjoyed in a piece meal. Human dignity cannot be taken in increments. This means that certain rights cannot be sacrificed in favor of other rights because taken together, these rights make human beings whole.

**The Different Groups of Rights**

**According to Nature**

- Civil Rights – are those rights when the law will enforce at the private individuals for the purpose of securing to them the enjoyment of their means of happiness. Examples are right to life, liberty, and security, freedom to travel, right to due process.
- Political Rights – are those rights which enable us to participate in running the affairs of the government either directly or indirectly. Examples are the right to vote, right to information on matters of public concern and the right initiative, freedom of speech, of the press, of assembly.
- Economic and Social Rights – are those which the law confers by law upon the people to enable them to achieve social and economic development, thereby ensuring them their well being, happiness and financial security. Example: are the right to property, education, and promotion of social justice.
- Cultural Rights – are those rights that ensure the well being of the individual and foster the preservation, enrichment and dynamic evolution of national culture based on the principle of unity in diversity in a climate of free artistic and intellectual expression.

### **According to Recipient**

Individual Rights – are those being accorded to individuals

Collective/Group Rights – are those of the society, those that can be enjoyed only in company with others.

### **According to Source**

Natural Rights – are rights believed to be based on reason or given by Supreme Being. They existed long before they were recognized by law. Examples of which are right to life, right to property, right to justice, right to freedom, right to peace

Legal Rights – are rights recognized by laws. Examples of which are right to habeas corpus, right to be presumed innocent until proven guilty, right to bail, etc.

### **According to Implementation**

Immediate – are those rights the States can readily implement because these are dependent on the States’ political will such as civil and political rights.

Progressive/Incremental – are those rights whose implementation is dependent on availability of the states’ resources and thus can only be enjoyed gradually. Such rights are the social, economic and cultural rights.

### **Human Rights are Guaranteed By:**

#### **National Human Rights Mechanism:**

- Legislation – international human rights laws still have to be translated and incorporated into the national laws of States parties. This can be done either through (1) amending and supplementing national laws to suit international laws and (2) promulgating new legal documents.
- Education and Campaign – much of human rights violations occur because of lack of human rights awareness among the people. Educating state agents such as the police, government officials and public servants is crucial only as an immediate measure to prevent violations of human rights. However, dissemination of human rights in the grassroots and educating the people especially the marginalized is a major requirement for human rights protection and promotion.
- National Programs of Action – human rights are not juts a compilation of laws, these are a framework for governance, a national vision that must be pursued. Human rights should guide government leaders in formulating policies and programs. The everyday conduct of government activities should be guided by the principles of human rights.

### **Global Education**

“Global education involves learning about those problems and issues that cut across national boundaries, and about the interconnectedness of systems—ecological, cultural, economic, political and technological. Global education involves perspective taking—seeing things through the eyes and minds of others—and it means the realization that while individuals and groups may view life differently, they also have common needs and wants.”

#### **Global Education involves the:**

- Study the systems (economic, political, ecological, technological)
- Study of human values (universal and diverse)
- Study of persistent problems (war and peace, human rights, environmental issues)
- Study of global history (development of global systems and human values)

### **Issues Relevant to Global Education**

#### **Children’s Rights**

- The Convention on the Rights of the Child is a universally agreed set of non-negotiable standards and obligation which spells out the basic human rights that children everywhere – without discrimination.

#### **Disasters**

- Reducing human suffering and economic losses caused by natural and technological disasters comes from preparedness and mitigation through policies, education and strategic and rapid responses.

#### **Education**

- Investing in education systems helps build human capital and ensures that people can participate more fully in society.

#### **Environment**

- As the world’s population grows there is more and more pressure on the environment to produce enough food and energy without consuming the resources faster than they can be replaced.

#### **Food Security**

- Providing for the physical, social and economic access by all people at all times to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.

#### **Governance**

- Effective governance means competent management of a country’s resources in a way that is fair, open, accountable and responsive to people’s needs.

#### **HIV/AIDS**

- The HIV/AIDS pandemic represents one of the greatest challenges facing developing countries.
- Health
- Improving the basic health and the quality of health service delivery and addressing the health effects of natural disasters and emergencies are the means of improving the health of people.
- Human Rights
- The Universal Declaration of Human Rights sets forth the human rights and fundamental freedoms of all men and women in all nations, everywhere in the world.
- Infrastructure
- The development and maintenance of essential public services and systems is an important ingredient for sustained economic growth and poverty reduction.
- Micro credit
- Small scale business development is an important means of helping individuals out of poverty.
- Peace building
- The support structures and processes which strengthen and solidify peace in order to avoid a relapse into conflict.
- Poverty Alleviation
- The Complex web that keeps people poor is being addressed through economic growth and improving governance, education and health.
- Refugees
- Forced to flee their homes because of persecution refugees are a significant group who need international protection as they seek a durable solution to their plight.
- Rice
- Highlighting the importance of rice as a primary food and income source in many developing countries.
- Rural Development
- The majority of the world’s poor live in rural areas, and are disproportionately dependent on natural resources for their livelihoods, especially resources such as forests and fisheries.
- Volunteering
- Many people give their time and skills without pay to make a contribution to assist others.
- Water
- Water is the source of life – vital for health, food and ecoomic development.
- Women
- Improving the status of women is not just a women’s issue, but a goal that requires the active participation of both men and women.

**Global Citizenship**

**A Global Citizen is Someone Who:**

- is aware of the wider world and has a sense of their own role as a world citizen;
- respects and values diversity;
- has an understanding of how the world works economically, politically, socially, culturally, technologically, and environmentally;
- is outraged by social injustice;
- participates in and contributes to the community at a range of levels from local to global;
- is willing to act to make the world a more sustainable place;
- takes responsibility for their actions.

**The Key Elements of Global Citizenship**

**Knowlegde and Understanding**

Social justice and equity	<ul style="list-style-type: none"> <li>• understanding of global debates</li> </ul>
Diversity	<ul style="list-style-type: none"> <li>• deeper understanding of different cultures and societies</li> </ul>
Globalization and interdependence	<ul style="list-style-type: none"> <li>• complexity of global issues</li> </ul>
Sustainable development	<ul style="list-style-type: none"> <li>• understanding of key issues of Agenda 21</li> <li>• lifestyles for a sustainable world</li> </ul>
Peace and conflict	<ul style="list-style-type: none"> <li>• complexity of conflict issues and conflict resolution</li> </ul>

**Skills**

Critical thinking	<ul style="list-style-type: none"> <li>• handling contentious and complex issues</li> </ul>
Ability to argue effectively	<ul style="list-style-type: none"> <li>• political literacy</li> <li>• participating in the relevant political processes</li> </ul>
Ability to challenge injustice and inequalities	<ul style="list-style-type: none"> <li>• campaigning for a more just and equitable world</li> </ul>
Respect for people and things	<ul style="list-style-type: none"> <li>• following a personal lifestyle for a sustainable world</li> </ul>
Co-operation and conflict resolution	<ul style="list-style-type: none"> <li>• negotiation</li> <li>• conflict resolution</li> </ul>

**Values and Attitudes**

Sense of identity and self-esteem	• open-mindedness
Empathy and sense of common humanity	• sense of individual and collective responsibility
Commitment to social justice and equity	• commitment to the eradication of poverty
Valuing and respecting diversity	• valuing all people as equal and different
Concern for the environment and commitment to sustainable development	• commitment to sustainable development
Belief that people can make a difference	• willingness to work towards a more equitable future

## Economics

- The study that deals with how scarce resources are allocated to maximize the unlimited wants that individuals and societies want to fulfill.
- The study of how individuals and societies choose to use the scarce resources that nature and previous generations have provided.
- The study of how societies choose to use scarce productive resources that have alternative uses to produce commodities of various kinds, and to distribute them among different groups.
- Economics is the science which studies human behavior as a relationship between ends and means which have alternative uses (Lionel Robbins, 1935).
- Economics or political economy is an “inquiry into the nature and causes of the wealth of nations” (Adam Smith, 1976).
- Economics is the science of production. Production is a social force insofar as it channels human activity into useful ends (Karl Marx, 1848).

## Elements of an Economic System

1. Resources – which include land, labor and capital
2. Outputs – which can either be consumption goods
3. Capital goods – items which are used to produce other goods and services in the future, rather than being consumed today
4. Processes of production
5. Processes of distribution

## Branches

- a. Macroeconomics – the branch of economics that examines the economic behavior of aggregates – income, employment, output, and so on – on a national scale.
- b. Microeconomics – the branch of economics that examines the functioning of individual industries and the behavior of individual decision-making units, that is, business firms and households.

## Methods of Economics

- a. Positive economics – an approach to economics that seeks to understand behavior and the operations of systems without making judgment. It describes what exists and how it works.
- b. Normative economics – an approach to economics that analyzes outcomes of economic behavior, evaluates them as good or bad, and may prescribe courses of action. Also called “policy economics”.

## Economics is important to the:

- a. Individual – as a consumer who wants to maximize satisfaction and minimize expenditure.
- b. Businessmen – as a producer who wants to maximize profits and minimize costs.
- c. Government – in providing a high standard of living for the people.

## Basic Economic Problems

1. What to produce?
2. How to produce?
3. For whom to produce?
4. How much to produce?
5. How much more to produce?

## Economic Systems

1. Capitalist System – an economy in which individual people and firms pursue their own self-interest with any central directions or regulations. This is also known as laissez-faire economy, free enterprise, price mechanism, or free market economy.
2. Command Economy – an economy in which a central authority or agency draws up a plan that establishes what will be produced and when, and makes rules for distribution.
3. Mixed Economy – it is a regulated market economy. In reality, all economies are, to some extent, mixed. It is just a matter of degree of intervention.

## Factors of Production

1. Land (Natural Resources) – includes all resources found in the sea and on land. Raw materials, landscapes, ports (natural harbor), climatic conditions, geographical location.
2. Labor (Human Factor) – any kind of work, either mental or manual in nature, which has the sole purpose of receiving rewards.
3. Capital (Man-Made) – wealth used for production
4. Entrepreneur (Management) – usually the organizer in a company

## Price System

- Is the mechanism by which producers and consumers transmit information about production to one another. It is referred to as the basic coordination and communication system of a market economy because it helps producers make production decisions and whereby keeps the economy balance.

## Market

- A set of arrangements by which buyers and sellers of a good are in contact to trade that good.

## Demand

- The amount of a good buyers want to purchase at different prices.
- behavior of buyers

## Quantity Demanded

- The amount (number of units) of a product that a household would buy in a given period if it could buy all it wanted at the current market price.

## Demand Schedule



- A table showing how the quantity demanded of some product during a specified period of time changes as the price of that product changes, holding all other determinants of quantity demanded constant.

### **Demand Curve**

- A graphical depiction of a demand schedule. It shows how the quantity demanded of some product during a specified period of time will change as the price of that product changes, holding all other determinants of quantity demanded constant.

### **Shortage**

- Excess demand

### **Law of Demand**

- The lower the price, the higher the quantity demanded of a particular commodity.

### **Factors Affecting Demand**

#### Price Factor

1. Price of the product itself

#### Non-Price Factors

1. Fashion, taste, and climate
2. Changes in income
3. Changes in population
4. Changes in the price of related goods
5. Advertisements
6. Introduction of new products
7. Social and economic conditions
8. Festive seasons
9. Speculation

### **Supply**

- The amount of a good sellers want to sell at different prices.
- behavior of sellers

### **Quantity Supplied**

- The amount of a particular product that firm would be willing and able to offer for sale at a particular price during a given time period.

### **Supply Curve**

- A graph illustrating how much of a product a firm will supply at a different price.

### **Surplus**

- Excess supply

### **Law of Supply**

- The positive relationship between price and quantity supplied: An increase in market price will lead to an increase in quantity supplied, and a decrease in market price will lead to a decrease in quantity supplied.

### **Factors Affecting Supply**

#### Price Factor

1. Price of the good itself

#### Non-Price Factors

1. Climatic Conditions
2. Cost of Production
3. Technological Advancements
4. Government Policies (e.g. tax, subsidies)
5. Time Period
6. Price of Related Goods (Competitive Supply, Joint Supply)

### **Equilibrium Price**

- The price at which the quantity demanded and the quantity supplied are equal.

### **Market Structures**

1. Perfectly Competitive Markets has the following characteristics:
  - a. There are many buyers in the market
  - b. There are many sellers in the market
  - c. Goods are homogeneous and not differentiated
  - d. There must be free entry to and exit from the market
  - e. Both consumers and the producers have perfect knowledge about the market situation
  - f. There is mobility of factors of production
  - g. No transport cost
  - h. There is independence in decision making
  - i. There is no preferential treatment
2. Monopoly has the following characteristics:
  - a. There is only one single seller but two types of monopoly (Natural and Private Monopoly)
  - b. Many buyers are available
  - c. There are barriers to entry
  - d. The product does not have close substitutes
  - e. An important assumption is that monopolist can only control price or quantity but not both
3. Monopolistic Competition has the following characteristics:
  - a. There are many buyers
  - b. There are many sellers but not as many as in perfect competition
  - c. Products are differentiated
  - d. There is ease of entry and exit, but not as easy as in perfect competition
  - e. Non-price competition exist (ex., advertisements, sales promotion, etc.)
  - f. No perfect knowledge is assumed
  - g. One producer can lower the price without affecting other firms.
4. Oligopoly has the following characteristics:

- a. There are many buyers in the market
- b. There are few sellers in the market
- c. Products sold can either be homogenous or differentiated
- d. Barriers to entry exist but these are not as restrictive as monopoly
- e. There is interdependency in pricing and output in relation to other firms
- f. Price can be determined through:
  - price leadership
  - dominant firm
  - cartel
  - collusion

### Opportunity Cost

- The value of the next best alternative that the decision forces the decision-maker to forgo. Rational decision making, be it in industry, government, or households, must be based on opportunity cost calculations.

### Economic Goods

- Things of value that you can see, touch, and show to others.

### Economic Services

- Intangible things that have value but often cannot be seen, touched or shown to others.

### Taxation

- It is an inherent power of the state to impose and collect revenues to defray the necessary expenses of the government.
- It is a compulsory contribution imposed by a public authority irrespective of the amount of services rendered to the payer in return.
- It is a compulsory levy on private individuals and organizations by the government to raise revenue to finance expenditures on public goods and services.

### Purpose of Taxation

1. To collect revenue for the government
2. To redistribute income
3. To combat inflation
4. To correct an adverse balance of payments
5. To check consumption of goods which are considered undesirable
6. To protect local/infant industries
7. To influence population trends
8. To improve unfavorable terms of trade
9. To reallocate resources
10. To create a sense of identity

### The Four “R” s

- Taxation has four main purposes or effects:
  - Revenue –
    - Taxes raise money to spend on roads, schools and hospitals, and on more indirect government functions like market regulation or justice systems. This is the most widely known function.
  - Redistribution
    - This means transferring wealth from the richer sections of society to poorer sections.
  - Repricing
    - Taxes are levied to address externalities: tobacco is taxed, for example, to discourage smoking.
  - Representation

### Theory

- Taxation is a necessity and indispensable, for without taxes government cannot function and exist.

### Basis

- It is found in the reciprocal duties of protection and support between the state and its inhabitants.

### Sources and Origin of Taxation

1. The Constitution
2. Statutes or Presidential Decrees
3. Bureau of Internal Revenue regulations
4. Judicial Decisions
5. Provincial, City, Municipal and Barrio Ordinances
6. Observance of International Agreements
7. Administrative Rulings and Opinions

### Objects of Taxation

1. Persons – whether natural or judicial
2. Property of any kind
3. Transactions, interest and privileges

### Limitations on the Powers of Taxation

1. Inherent Limitations
  - a. The tax must be for public purpose
  - b. No improper delegation of legislative power to tax
  - c. Exemption of government entities
  - d. Territorial jurisdiction
  - e. Observance of International Law
2. Constitutional Limitations
  - a. Equal protection of the law
  - b. Uniformity rule
  - c. Observance of due process of law
  - d. Non-impairment of obligation of contracts
  - e. Non-imprisonment for non-payment of poll tax
  - f. Non-impairment of religious freedom
  - g. No appropriation for religious purposes
  - h. Property tax exemption
  - i. Non-impairment of the jurisdiction of the Supreme Court in tax cases

## Classification of Taxes

1. Progressive Income Tax – the higher the income, the higher the tax rate.
2. Proportional Tax – the tax rate is constant and unaffected by the level of income.
3. Regressive Tax – the higher the income, the lower the tax rate.

## Types of Taxes

### A. Direct Taxes

1. The burden cannot be shifted to the third party
2. Direct taxes are based on income and wealth
3. In most cases, direct taxes are progressive in nature
4. Direct taxes are compulsory in nature

Examples:

- income tax
- residence tax
- real state tax
- immigration tax
- estate/gift/inheritance tax

### B. Indirect Taxes

1. The tax burden can be shifted to the third party
2. Indirect taxes are based on expenditures and consumption
3. All indirect taxes are regressive in nature
4. Indirect taxes are optional in the sense that they can be avoided

Examples:

- sales tax
- import tax
- VAT/EVAT

## Characteristics of a Sound Tax System

- Efficiency – must generate revenues greater than the amount of money the government must spend to collect taxes.
- Equity – individuals and groups belonging to the same income bracket must be taxed equally while those belonging to different income groups must be taxed differently.
- Convenience – to set up measures and procedures that will make it more convenient for taxpayers to pay.
- Stability – tax system must not be too often or it will encourage taxpayers to withhold tax payments until a more preferred system is put in place.

## Agrarian Reform Program

### What is Agrarian Reform?

- Agrarian Reform is the redistribution of lands to farmers and regular farmworkers who are landless, irrespective of tenurial arrangements. Agrarian reform is not just the transfer of lands, it includes a package of support services: economic and physical infrastructure support services, (credit, extension, irrigation, roads and bridges, marketing facilities) and human resource and institutional development or social infrastructure building and strengthening.

### What is the legal basis for CARP?

- The Comprehensive Agrarian Reform Program (CARP) was passed in 1988 under the administration of President Corazon C. Aquino.
- The legal basis for CARP is Republic Act 6657 otherwise known as Comprehensive Agrarian Reform Law (CARL) signed by Aquino on June 10, 1988. It is an act instituting a CARP to promote social justice and industrialization, providing the mechanism for its implementation, and for other purposes.

### What does CARP cover?

- CARP covers all alienable and disposable lands of the public domain devoted to or suitable for agriculture, all lands of the public domain in excess of the specific limits, all other lands owned by the Government devoted to or suitable for agriculture, and all private lands devoted to or suitable for agriculture regardless of the agricultural products raised or that can be raised thereon.

## Cooperatives

### What is a Cooperative?

- A cooperative is a duly registered association of persons with a common bond of interest, who have voluntarily joined together to achieve a lawful common social or economic end, making equitable contribution to the capital required and accepting a fair share of the risks and benefits of the undertaking in accordance with universally accepted cooperative principle.
- By forming a cooperative you pool money, human resources and talent to build capital and work together to produce more goods and raise incomes.
- Through cooperatives, you can look for the other sources of loans at low interest rates of borrowing from informal lenders or users.

### What are the Principles of Cooperativism?

- The cooperative principles were reformulated by the International Cooperative Alliance in Vienna in 1966 during its 23 Congress:
  - Voluntarism
    - Each member of a cooperative becomes a member voluntarily and is not restricted by social, political or religious discrimination.
  - Democracy
    - Coops are democratic organizations with officers and managers elected or appointed in a manner agreed on by members. Each member, no matter the amount of his share, is entitled to one vote.
  - Limitation of Share Capital Interest
    - Interest on a member share capital is limited so that no person—especially those with money—can have an overwhelming equity in the coop.
  - Sharing all location of cooperatives surplus or savings
    - Mandates distribution of surplus equitably so that no member, gains at the expense of another.
  - Provision for the education and training of cooperatives members, officers and employees, and of the general public in the principles and techniques of cooperation

- Promotion of cooperation between cooperatives at local, national and international levels.
- Concern for community by working for its sustainable development through policies approved by the cooperative members.

### **Kinds of Cooperative**

- Credit Cooperative
  - Promotes thrift and savings among its members and creates funds in order to grant loans for productivity.
- Consumer Cooperative
  - The primary purpose is to procure and distribute commodities to member and non-members.
- Producers Cooperative
  - Undertakes joint production whether agricultural or industrial.
- Service Cooperative
  - Engages in medical, and dental care, hospitalization, transportation, insurance, housing, labor, electric lights and power, communication and other services.
- Multi-Purpose Cooperative
  - Combines two (2) or more of the business activities of these different types of cooperatives

### **The Categories of Cooperatives According to Membership and Territory:**

In terms of membership:

1. Primary – the members of which are natural person of legal age;
2. Secondary – the members of which are primaries;
3. Tertiary – the member of which are secondaries upward to one or more apex organizations. Cooperatives whose members are cooperatives are called federations or unions.

In terms of territory, cooperatives are categorized according to areas of operation which may not be coincide with the political subdivision of the country.

### **The General Steps in Forming a Cooperative**

Six Steps in Setting Up A Cooperative:

1. Get Organized.
  - You must have at least 15 members. At once determine the common problems you would want to solved and the basic needs you would want provided for through a cooperative.
2. Prepare a general statement called an economic survey.
  - This will help you measure your cooperatives chances of success.
3. Draft the cooperatives by-laws.
  - The by-laws contain the rules and regulation governing the operation of the cooperative.
4. Draft the articles of cooperation.
  - Indicate the name of the cooperative, its members, terms of existence and other pertinent description about your cooperative.
5. Secure bond of your accountable officers, normally the treasurer, or the treasurer and the manager.
  - The amount of the bond is to be decided upon by the Board of Directors, based on the initial network of the cooperatives which includes the paid-up capital, membership fees and other assets of the cooperatives at time of registration.
6. Register your cooperative with the Cooperative Development Authority (CDA), you must submit four copies each of the Economic Survey, By-Laws, and Articles of Cooperation and Bond of Accountable Officer(s).

### **Members of a Primary Cooperative**

- If you are a Filipino of legal age, you can ba a coop member if you meet the qualifications prescribed by the coop's by laws.
- The board of directors act on application for membership.
- A member may exercise his rights only after having paid the fees for membership and acquired shares in the cooperative.

### **Two Kinds of Membership in the Cooperative**

Two Kinds of Members:

1. Regular Member – entitled to all the rights and privileged of membership as stated in the Cooperative Code and the coops by-laws.
2. Associate Member – has no right to vote and to be voted upon and is entitled to such rights and privileged provided by the cooperatives by laws.

### **New Cooperative Law**

- Cooperative Code of the Philippines (RA 6938)
- Cooperative Development Authority (RA 6939)
- Executive Order 95 and 96 were issued by Pres. Fidel Ramos in June 1993, providng for implementation guidelines for some of he provisions of he two vs.cited.

### **Cooperatives Values**

- self-help
- self-responsibility
- democracy
- equality
- solidarity
- equity
- honesty
- openness
- social responsibility
- caring for others

## Sociology

- The scientific and systematic study of society, including patterns of social relations, social stratification, social interaction, and culture.
- The science of society and the social interactions taking place in that society.
- The study of human society: its origin, growth, structure, function, customs, traditions, group life and institutions.
- Sociology is considered a branch of the social sciences.

## Importance

- To obtain factual information about our society and the different aspects of our social life.
- To enable us to see the connection between our own personal experiences and the social forces in the bigger social world which influence our life

## Auguste Comte

- The term “sociologie” was first used in 1780 by the French essayist Emmanuel Joseph Sieyès (1748-1836) in an unpublished manuscript.
- The term was used again and popularized by the French thinker Auguste Comte in 1838.
- Comte had earlier used the term ‘social physics’, but that term had been appropriated by others, notably Adolphe Quetelet.
- Comte hoped to unify all studies of humankind—including history, psychology, and economics.
- His own sociological scheme was typical of the 19<sup>th</sup> century; *he believed all human life had passed through the same distinct historical stages (theology, metaphysics, positive science) and that, if one could grasp this progress, one could prescribe the remedies for social ills.*
- Sociology was to be ‘queen of the positive sciences’. Thus, Comte has come to be viewed as the “Father of Sociology”.

## Sociological Scholars

- These scholars greatly influenced the founding of sociology:
  - Auguste Comte
  - Emile Durkheim – Social Facts (material and non-material) are to be studied empirically, not philosophically, mechanical (social) solidarity and organic solidarity society
  - Karl Marx – Dialectical Materialism and Economic Determinism
  - George Herbert Mead – interrelatedness of humans and society (social self)
  - Vilfredo Pareto
  - Robert E. Park
  - Georg Simmel
  - Ferdinand Tönnies – Gemeinschaft and Gesellschaft
  - Max Weber – Bureaucratization as ideal type of Verstehen

## Scope and Topics of Sociology

- Sociologists study society and social action by examining the groups and social institutions people form, as well as various social, religious, political, and business organizations.
- They also study the social interactions of people and groups, trace the origin and growth of social processes, and analyze the influence of group activities on individual members and vice versa.
- Sociologists research macro-structures and processes that organize or affect society, such as, but not limited to, race or ethnicity, gender, globalization, and social class stratification.
- They study institutions such as the family and social processes that represent deviation from, or the breakdown of, social structures, including crime and divorce. And, they research micro-processes such as interpersonal interactions and the socialization of individuals.
- Sociologists are also concerned with the effect of social traits such as sex, age, or race on a person’s daily life.
- Sociologists study the many dimensions of society.

## Three Basic Theoretical Approaches:

- The structural-functional approach
- The social-conflict approach
- The symbolic-interaction approach

## Sociological Paradigm

- Specific ‘points of view’ used by social scientists in social research.
- Sociological paradigms are particular paradigms that embody the sociological perspective and the sociological imagination.
- A sociological paradigm usually refers to the broad schools of thought in sociology that encompass multiple theories from the same perspective. These include:
  - Conflict Paradigm – focuses on the ability of some groups to dominate others, or resistance to such domination, including Marxism.
    - Feminism – focuses on how male dominance of society has shaped social life.
  - Functionalism – also known as a social system paradigm, examines what functions the various elements of a social system perform in regard to the entire system.
  - Interactionism – believes that meaning is produced through the interactions of individuals.
  - Darwinism Paradigms – also known as the evolutionary paradigm, sees a progressive evolution in social life.
  - Positivism Paradigm – Social Positivists believe that social processes should be studied in terms of cause and effect using the scientific method.

## Sociological Research

- The basic goal of sociological research is to understand the social world in its many forms.
- Quantitative methods and qualitative methods are two main types of sociological research methods.
- Sociologists often use quantitative methods—such as social statistics or network analysis—to investigate the structure of a social process or describe patterns in social relationships.
- Sociologists also often use qualitative methods—such as focused interviews, group discussions and ethnographic methods—to investigate social processes.
- Sociologists also use applied research methods such as evaluation research and assessment.

## Society and Culture

### Society

- A system of interacting individuals and interrelated groups sharing a common culture and territory
- A group of people living together in a social system of long established relationships, recognizing and following a certain way of life

## Two Types of Society

- Non-industrial
- Industr

## Social Structure

- The patterned and recurrent social relationship among persons in organized collectivities

## Forms of Social Structure

- Primary group structures – families, friendship groups and work groups
- Purposely organized structures – voluntary organizations and associations
- Territorial structures – city, community, neighborhood
- Latent structures – sex or racial categories

## Social Groups & Social Organizations

### Social Groups

- Primary group – family and friendship group considered the building blocks of the larger society
- Secondary group – groups where interaction among members are impersonal, business like. Focus of the group is on development of skills and specialized know how.

### Gemeinschaft & Gessellschaft (Ferdinand Toennies)

#### Gemeinschaft

- A community of intimate private and exclusive living and familialism. Maybe likend to our tribal goup, fishing villages, agricultural village

#### Gessellschaft

- Large secondary group where there is division of labor, specialization, functional interdependence

#### In-group and Out-group

- Based on sense of belonging. These are not actual groups but a kind of relationship exist in the mined. The used of “we” (in-group) and “they” (out-group) defines this grouping.

#### Informal and Formal Groups

- Based on form of organization
- Informal group – arises spontaneously our of interaction
- Formal group – also called social organization

Formal organizations are necessary in industrialized complex societies. Goals of formal organizations are for:

- profit
- the spiritual needs of people
- education
- workers benefits
- service to the poor

## Bureaucracy

- The administrative machinery of a formal organization or social organization which is aimed to enable members to meet their goals.

## Socialization

- Process through which a person acquires the skills and behavios necessary for social living.

### Elements of Socialization

1. Child’s culture
2. Biological inheritance
3. Child’s interaction

Family – Most important socializing agent

School – Transmitter of culture

Language – An important tool in socialization

Social Order – Means by which people fill their expected role

### Status

- The position a person occupies in society by virtue of age, birth, marriage, occupation or achievement

### Ascribed status

- Position assigned to the individual

### Achieved status

- Acquired through competition

### Agencies of Socialization

- Family
- Peer group
- Church
- School
- Mass media
- Work place

## Social Interaction

- Refers to the various actions and interactions of individual in a social situation.

### Social Process

- Cooperation – people work together for a common good
  - Assimilation – blending/fusing two cultures
  - Acculturation – adaptation of culture upon contact
  - Amalgamation – brought about by intermarriage
- Competition and Conflict

## Culture

- From the Latin *cultura* stemming from colere, meaning “to cultivate”
- Refers to patterns of human activity and the symbolic structures that give such activities significance and importance.
- Cultures can be “understood as systems of symbols and meaning that even their creators contest, that lack fixed boundaries, that are constantly in flux, and that interact and compete with one another”.
- Culture can be defined as all the ways of life including arts, beliefs and institutions of a population that are passed down from generation to generation.
- “the way of life for an entire society”

## Components of Culture

- **Non-material culture**
  - **Social Norms** – rules or expectation that define what is acceptable or required in a social situation
    - **folkways** – commonly known as customs, traditions and conventions of society
    - **mores** – “a way of behaving,” “a custom as determined by usage or practice and not by law”
    - **laws** – formalized norms enacted by people who are vested by political and legal authorities designated by the government
  - **Values** – abstract standards that persist overtime and serve as guides to what is right and proper for people in society
  - **Knowledge** – the total range of what has been learned or perceived as true. This could be natural, supernatural, and magic knowledge.
- **Material culture** (products of technology)
  - Artifacts: simple tools to computer

## Culture Within A Society

- Large societies often have subcultures, or groups of people with distinct sets of behavior and beliefs that differentiate them from a larger culture of which they are a part.
- The subculture may be distinctive because of the age of its members, or by their race, ethnicity, class, or gender.
- The qualities that determine a subculture as distinct may be aesthetic, religious, occupational, political, sexual, or a combination of these factors.

## Cultures By Region

- Regional cultures of the world occur both by nation and ethnic group and more broadly, by larger regional variations.
- Similarities in culture often occur in geographically nearby peoples.
- Many regional cultures has been influenced by contact with others, such as by colonization, trade, migration, mass media, and religion.
- Culture is dynamic and changes over time. In doing so, cultures absorb external influences and adjust to changing environments and technologies. Thus, culture is dependent on communication.
- Local cultures change rapidly with new communications and transportation technologies that allow for greater movement of people and ideas between cultures.

## Cultural Bias

- Cultural bias is when someone is biased due to his or her culture.
- Cultural bias can also relate to a bias that a culture possesses. For instance, a bias against women could be held by a culture who degrades women.

## Ethnocentrism

- The tendency to look at the world primarily from the perspective of one’s own culture.
- Ethnocentrism often entails the belief that one’s own race or ethnic group is the most important and/or that some or all aspects of its culture are superior to those of other groups.

## Cultural Universal

- Is an element, pattern, trait, or institution that is common to all human cultures on the planet.
- Examples of elements that may be considered cultural universal are gender, roles, the incest taboo, religious and healing ritual, mythology, marriage, language, art, music, cooking, games and jokes.
- The principal cultural universal are:
  - Food
  - Water
  - Clothing
  - Shelter
  - Social organization
  - Family
  - Communication
  - Recreation
  - Arts
  - Environment
  - History
  - Spirituality

## Filipino Society & Culture

### Development of the Filipino Culture

- Asian or Oriental Culture
  - Malayan as the indigenous core with strains of Aeta, Indonesian, Hindu, Arab and Chinese culture
- Western or Occidental Culture
  - Spanish – strongly manifested in our religious and cultural orientation
  - American – manifested in Filipino political orientation

### Pre-Spanish Settlements

- The social unit was the barangay, from the Malay term balangay, meaning a boat.
- The barangay were generally small. Most villages boasted of only thirty to one hundred houses.
- Most communities were coastal, near-coastal or riverine in orientation. This was because the principal sources of protein came from the seas and the rivers, the people relying more on fishing than on hunting for sustenance.
- Dealing with traders meant coming in contact with Chinese, Arabian and Indian civilizations. Thus, the coastal communities in Manila, Cebu, Jolo, and Butuan attained a higher cultural level.
- Most of the members of a community were related to one another by blood or marriage. Besides kinship, common economic interests and shared rituals formed the bases for community cohesion.
- The barangay was a social rather than a political unit, each one a separate entity with only informal contacts with the other villages.

### Social Hierarchy in Luzon

- Based on Spanish records, William Henry Scott concluded that there were three social classes in pre-Spanish Luzon and Visayas.
  - Maginoo** – highest among all classes
    - This was composed of datos and their families
      - Datu – political and economic leader
    - Babaylanes – a Visayan term for spiritual leader, katalonan was the Tagalog counterpart
  - Maharlika** – next to the maginoo class
    - This class was composed of warriors who served as protectors of the barangay from its enemies.
    - The Maharlika did not pay taxes but they were obliged to accompany the datu in times of war.
  - Timawa – free person
    - During the Spanish period, being timawa meant being free to be exploited and enslaved by the Spaniards.
    - Composed the main bulk of the population.
  - Slaves** – lowest class
    - aliping namamahay** – lived in their own houses and was called only by the datu to help in building a house or in farming.
    - aliping saguigulid** – lived in the datu’s house because of a large debt he had incurred.

### Social Classes in the Visayas

- Datu** – highest class
  - Composed of the political leader, his family and those who belonged to their class.
- Timawa** – belonged to the second class and were known as free people.
- Oripun** – lowest class. They could be bought and sold.

### Culture And Civilization of Ancient Societies

- Ancient Filipino civilization was reflected in the political system, economy, religion and belief system, system of writing and traditions.
  - Politics – the political leader in the barangay level was the datu.
  - Religion – the ancient Filipinos’ religion was called animism. They believed that gods and goddesses inhabit in nature. This religion is also called anitoism.
    - Bathala (Tagalog)
    - Laon (Visayans)
    - Kabunian (Ibalois)
  - Economy – the artifacts excavated by the archeologists proved that the external trade was alive.
    - Agriculture – Kaingin system – burning of one part of the forest in order to clear the area to be used for planting.
  - System of writing – the ancient system of writing was called baybayin. Composed of 14 consonants and three vowels.
  - Residence – houses were built in places where there was steady supply of food.
    - Bahay-kubo – made from nipa and bamboo and had good ventilation.
  - Belief in After Life – early Filipino believed in the after-life. The afterlife was believed to be a continuation of life on earth, thus valuables were also buried alongside the dead.
    - Manunggul Jar – reflection of this belief

### Deviance and Social Control

#### Deviance

- The process by which those who violate group norms are identified as norm violators
- People are often said to have a disorder because their behavior deviates from what their society considers acceptable. What constitutes normality varies somewhat from one culture to another, but all cultures have—such norms. When people violate these standards and expectations, they may be labeled mentally ill (Thomas Szasz)

#### Deviants

- People who diverges from group norms while deviates are those who display divergent behavior but are not identified as norm violators.

#### Component of Deviant Behavior

- Act or unit of action
- Actor who exhibits the behavior
- Social situation
- Audience of definers of the act

#### Social Control

- Refers to all those attitudes and behaviors originating in the social environment that have the effects of directing or restricting the attitude and behavior of an individual or group.

#### Theories on the Causes of Deviance

- Anomie Theory** – groups with fewer opportunities to achieve success goals will have greater motivation to violate norms and higher rates of deviance.
- Subculture Theory** – the greater motivation to violate norm will result in different patterns of deviance depending upon the availability of illegitimate opportunities in the neighborhood.
- Differential Association Theory** – specific direction of a person’s motivation and action depends upon frequency and intensity of interaction with others.
- Labeling Theory** – assumes that most people commit deviant acts at one time to another

#### Social Mobility

- Refers to movement up or down in social status. This usually involves a change in occupation. This process may be speeded by:
  - Revising one’s standard of living
  - Cultivating class-typed modes of behavior
  - Manipulating associational membership
  - A strategic marriage

#### Social Stratification

- Exists when there is a hierarchy of position with differences in wealth, power and prestige and when there is intergenerational transmission of advantage or disadvantage stemming from one’s location in the hierarchy.



- **Caste system** – made upon religiously sanctioned and hierarchically ranked groupings in which membership is fixed at birth and is permanent. This is found in India where the rank order are: (1) Brahmins; (2) Kshatriya; (3) Vaishyas; (4) Sudras. Untouchable is considered outcasts.
- **Social Class System** – composed of economic groups that are based upon similarities in occupation, income and wealth. Social mobility is allowed in this system.
- **Race and Ethnicity** – both passed on from parents to child but race refers to the genetic transmission of physical characteristics and ethnicity refers to socialization into distinct cultural patterns.

#### Nature of formal organization

- It is a deliberately constructed social unit with explicitly coordinated activities designed to contribute toward the attainment of a stated goal.
  - **Bureaucracy** – where there is a clearly ordered hierarchy of positions or officers; a defined sphere of competence; activities are recorded; positions are filled on the basis of expertise; operation is based upon a system of general rules; and relationship among people within a bureaucratic organization is impersonal.

#### Institutions

- Cluster of norms associated with important social activities.
  - **Family** – basic social unit which is the source of intimate social relationship and the most effective agent of transmitting culture.
  - **Economic Institutions** – is the actual organization and utilization of natural and human resources by a given society at a given time in accordance with their cultural patterns.
  - **Religion** – is any set of attitudes, beliefs, and practices pertaining to supernatural power.
  - **Political Institutions**
  - **Educational Institutions**

#### Values Education, Ethics, & Moral Education

##### Values

- Expressions of the ultimate ends, goals or purposes of social action. They are society's moral imperatives that deals with what ought to be.
- "A thing has a value when it is perceived as good and desirable." (DECS)
- Values are made up of assumptions and beliefs, which our culture endorses as appropriate bases for responses to events, facts, and states. It is our assumptions and beliefs that influence us to see things the way we do (F. Landa Jocano, Filipino Value System).
- ...there is no negative Filipino values. There are only wrong uses of the values. That is why we label as crime the misuse of values or the violation of value principles, particularly the legal ones (F. Landa Jocano)
- Values are the reason why we see and do things the way we do. They are "the guiding principles in our lives with respect to the personal and the social ends we desire—such as salvation or peace—and with respect to moral conduct and personal competence—such as honesty and imagination" (Kouzes and Posner, 1993).

#### Forces that Shape Contemporary Filipino Values

##### Foundation of the Filipinos Oriental Nature

- Aeta, Indonesian, Malayan, Hindu, Arabian, Chinese Interpersonal and social relationship revolve around blood ties, marriage and ritual kinship

##### Filipinos' Occidentalism

- Spanish influence is manifested in our religious, political, economic, educational life and even in our language, dress and diet.
  - Emphasis on spiritual aspect had shaped out attitude towards divorce, birth control, fiestas and ceremonies.
  - Gambling and our aversion to manual labor could be traced to Spain's inferior regard for us
- Americanization of Filipinos
  - Manifested in our political and social outlook. With the introduction of a democratic system of government we become aware of our rights and privileges. The popularization of education gave us the opportunity for social mobility.
- Japanese Occupation

##### DECS Values Education Program (1988)

- This program drew inspiration from 1986 EDSA Revolution and the 1987 Constitution where the vision of a "just and humane society" was emphasized. This vision calls for a shared culture and commonly held values such as "truth, justice, love, equality, and peace."

#### Philosophy of Values Education Program

- Rational understanding of the Filipino as a human being in society and his or her role in shaping society and the environment. The task of education is to help this human being (Filipino) develop his or her human potential so he or she can contribute to the growth of Philippine culture and must be able to harness human and non-human resources to attain a *just and humane society*.

##### Core Value

- Human dignity (the human person is of infinite value)

##### Theories of Values Formation

- **Psycho-Analytic Theory (Sigmund Freud, 1856-1939)**
  - Suggests that unconscious forces act to determine personality and behavior. The unconscious is that part of the personality about which a person is unaware. It contains infantile wishes, desires, demands and needs that are hidden, because of their disturbing nature, from conscious awareness. Freud suggested that the unconscious is responsible for a good part of our everyday behavior. According to Freud, one's personality has three aspects:
    - The id – is the primitive, instinctive component of personality that operates according to the pleasure principle.
    - The ego – is the decision-making component of personality that operates according to the reality principle.
    - The superego – is the moral component of personality that incorporates social standards about what represents right and wrong.
- **Behaviorist View (John B. Watson, 1878-1958)**
  - Behaviorism is a theoretical orientation based on the premise that scientific psychology should study only observable behavior.

- Behavior refers to any overt (observable) response or activity by an organism. Watson asserted that psychologist could study anything that people do or say—shopping, playing chess, eating, complimenting a friend—but they could not study scientifically the thoughts, wishes, and feelings that might accompany these behaviors.
- **Social-Cognitive Learning Theorist (Albert Bandura)**
  - “Most human behavior is learned by observation through modeling” (Albert Bandura)
  - Observational learning occurs when an organism’s responding is influenced by the observation of others, who are called models. This process has been investigated extensively by Albert Bandura. Bandura does not see observational learning as entirely separate from classical and operant conditioning.
  - Bandura maintains that people’s characteristic patterns of behavior are shaped by the models that they’re exposed to. In observational learning, a model is a person whose behavior is observed by another. At one time or another, everyone serve as a model for others. Bandura’s key point is that many response tendencies are the product of imitation.
- **Confluent Theory – Tracks of Consciousness (Brian Hall)**
  - Acquisition of value is dependent upon and could be limited by one’s level of consciousness (the older one gets, the higher level of consciousness and the wider the range of needs and value options).
- **Psycho-Social/Epigenetic Theory (Eric Erikson)**
  - Erikson concluded that events in early childhood leave a permanent stamp on adult personality.
  - Erikson partitioned the life span into eight stages, each characterized by a psychosocial crisis involving transitions in important social relationships.
  - According to Erikson, personality is shaped by how individuals deal with these psychosocial crises. Each crisis is a potential turning point that can yield different outcomes.
  - Erikson described the stages in terms of these alternative outcomes, which represent personality traits that people display over the remainder of their lives.
  - Erikson’s Stage Theory
    - Erikson’s theory of personality development posits that people evolve through eight stages over the life span. Each stage is marked by a psychosocial crisis that involves confronting a fundamental question, such as “Who am I and where am I going?” The stages are described in terms of alternative traits that are potential outcomes from the crises. Development is enhanced when a crisis is resolved in favor of the healthier alternative.
- **Person-Centered Theory (Self-Theory) – (Carl Rogers, 1902-1987)**
  - “It seems to me that at bottom each person is asking, “Who am I, really? How can I get in touch with this real self, underlying all my surface behavior? How can I become myself?”
  - Rogers (1951) argue that human behavior is governed primarily by each individual’s sense of self, or “self-concept”—which animals presumably lack.
  - Rogers viewed personality structure in terms of just one construct. He called this construct the self, although it’s more widely known today as the self-concept. A self-concept is a collection of beliefs about one’s own nature, unique qualities, and typical behavior.
  - Both he and Maslow (1954) maintained that to fully understand people’s behavior, psychologist must take into account the fundamental human drive toward personal growth. They asserted that people have a basic need to continue to evolve as human beings and to fulfill their potentials.
- **Humanistic Theory – Abraham Maslow’s Self-Actualization Theory**
  - Maslow proposed that human motives are organized into a hierarchy of needs—a systematic arrangement of needs, according to priority, in which basic needs must be met before less basic needs are aroused.
  - Maslow argued that humans have an innate drive toward personal growth—that is, evolution toward a higher state of being. Thus, he described the needs in the uppermost reaches of his hierarchy as growth needs. These include the needs for knowledge, understanding, order, and aesthetic beauty. Foremost among them is the need for self actualization, which is the need to fulfill one’s potential.
  - Maslow summarized this concept with a simple statement: “What a man can be, he must be.”
  - According to Maslow, people will be frustrated if they are unable to fully utilize their talents or pursue their true interests.
- **Cognitive Moral Development (Lawrence Kohlberg)**
  - There exist a structural bases written each person that determine the process of perceiving value. This series of progression depends on the person’s interaction with the environment. *Moral reasoning* is related to moral behavior.
  - Kohlberg’s stages of moral development describe the young child as being in the “Premoral Stage” (up to about eight years), which basically means that “the child believes that evil behavior is likely to be punished and good behavior is based on obedience or avoidance of evil implicit in disobedience.”

## Ethics & Moral Education

### Ethics

- Comes from the Greek word ethos, “usage,” “character,” “custom,” “disposition,” “manners”
- The analysis of concepts such as “ought,” “should,” “duty,” “moral rules,” “right,” “wrong,” “obligation,” “responsibility,” etc.
- The inquiry into the nature of morality or moral acts.
- The search for the morally good life.

### Imperatives of Ethics

- Existence of God or a Supreme Being
- Existence of human freedom
- Immortality of the soul

### Philippine History

Terms from the Philippine Revolution

#### Cavite Mutiny

- Filipino soldiers in the fort of San Felipe in Cavite rose in mutiny under the leadership of Sergeant La Madrid. The cause was the abolition of some privileges of the Filipinos. GOMBURZA were arrested and killed because of the suspicion that they were involved in the said mutiny.

#### El Filibusterismo

- Rizal’s second novel, published in 1891 in Belgium, with the financial support of Valentin Ventura, who lent him the money to print the book. Rizal dedicated this book to GOMBURZA, the three martyr-priests. This is a political novel in which Rizal predicted the coming of the revolution.

#### Insulares

- Spaniards born in the Philippines.

**Kalayaan**

- Newspaper of the Katipunan, which first came out on January 1896, with Emilio Jacinto as editor.

**Katipunan**

- The secret revolutionary movement founded by Andres Bonifacio on July 7, 1892 in Tondo, Manila. It means **KATAASTAASAN KAGALANG-GALANG NA KATIPUNAN NANG MGA ANAK NG BAYAN**. It laid down three fundamental objectives: Political, Moral and Civic. The political aim consisted in working for the separation of the Philippines from Spain. The moral objective focused on the teaching of good manners, hygiene, good morals and attacking obscurantism, religious, fanaticism, and weaknesses of character. The civic aim revolved around the principle of self-help and the defense of the poor and the oppressed.

**La Liga Filipina**

- Founded by Rizal on July 3, 1892, in Tondo, Manila, its aims were:
  - to unite the whole archipelago into one compact, vigorous, and homogenous body;
  - mutual protection in every want and necessity;
  - defense against all violence and injustice;
  - encouragement of instruction, agriculture, and commerce; and
  - study and application of reforms.

**La Solidaridad**

- Organ of the Reform Movement in Spain, with Graciano Lopez-Jaena as its first editor. Its first issue came out on February 15, 1889. Its aim was to gather, to collect liberal ideas which were daily exposed in the camp of politics, in the field of science, arts, letters, commerce, agriculture, and industry. Known as *Sol* to the propagandists, it became the mouthpiece of the Filipinos in Spain.

**Magdalo**

- One faction of the Katipunan in Cavite, led by Baldomero Aguinaldo, with headquarters in Kawit, Cavite.

**Magdiwang**

- The other Katipunan faction in Cavite, led by Mariano Alvarez, with headquarters in Noveleta, Cavite.

**Noli Me Tangere**

- Rizal’s masterpiece, published in 1887. This is a sociohistorical novel based on facts that Rizal gathered while in the Philippines. It is a novel, but not fiction. The novel gained popularity immediately, but the Spaniards authorities, especially the friars whom Rizal ridiculed in the novel, prohibited its reading.

**Pact of Biak-na-Bato**

- Agreement made between the Filipinos and the Spaniards, mediated by Pedro Paterno, wherein Aguinaldo and his companions would go into voluntary exile in Hong Kong while Governor Gen. Primo de Rivera would pay cash money to the rebels.

**Palabra de Honor**

- Word of honor, or keeping one’s promises.

**Peninsulares**

- The Spanish-born residents of the Philippines.

**Spolarium**

- The most famous painting of Juan Luna.

**The True Decalogue**

- A political tract written by Apolinario Mabini which became the bible of the Filipino rebels.

**Thomasites**

- American teachers who came to the Philippines in 1901 to teach English to the Filipinos. The first batch of these teachers arrived aboard the American ship *Thomas*, hence, they were called **Thomasites**.

**The Philippine National Heroes**

<b>Dr. Jose Rizal</b>	–	The National Hero
<b>Andres Bonifacio</b>	–	The Great Plebian and Father of the Katipunan.
<b>General Gregorio del Pilar</b>	–	Hero of the Battle of Tirad Pass.
<b>General Emilio Aguinaldo</b>	–	President of the First Philippine Republic.
<b>Apolinario Mabini</b>	–	Sublime Paralytic and Brains of the Revolution.
<b>GOMBURZA</b>	–	Martyred Priests of 1872.
<b>Trece Martirez</b>	–	13 Martyrs from Cavite.
<b>Emilio Jacinto</b>	–	Brains of the Katipunan.
<b>General Antonio Luna</b>	–	Cofounder of <i>La Independencia</i> .
<b>Melchora Aquino</b>	–	( <i>Tandang Sora</i> ) Mother of Balintawak.
<b>Graciano Lopez-Jaena</b>	–	Greatest Filipino Orator of the Propaganda Movement.
<b>Panday Pira</b>	–	First Filipino Cannon-maker.
<b>Mariano Ponce</b>	–	Propagandist, Historian, Diplomat and Managing Editor of <i>La Solidaridad</i> .
<b>Gregoria de Jesus Bonifacio</b>	–	Lakambini of Katipunan and wife of Andres Bonifacio.
<b>Fernando Ma. Guerrero</b>	–	Poet of the Revolution.
<b>Felipe Agoncillo</b>	–	Outstanding Diplomat of the First Philippine Republic.
<b>Rafael Palma</b>	–	Cofounder of <i>La Independencia</i> and First UP President.

<b>Juan Luna</b>	–	Greatest Filipino Painter.
<b>Marcelo H. del Pilar</b>	–	Greatest Journalist and Moving Spirit of the Propaganda Movement.
<b>Leona Florentino</b>	–	First Filipino Poetess (Ilocos Sur).
<b>Pedro Paterno</b>	–	Peace of the Revolution.
<b>Isabelo delos Reyes</b>	–	Founder of Philippine Socialism.
<b>Artemio Ricarte</b>	–	Revolutionary General, known as Viborra.
<b>Jose Palma</b>	–	Wrote the Spanish Lyrics of he Philippine National Anthem.
<b>Lakandola</b>	–	Chief of Tondo, Friendly to the Spaniards.
<b>Rajah Soliman</b>	–	The Last Rajah of Manila.
<b>Leonor Rivera</b>	–	Cousin and Fiancee of Jose Rizal.
<b>Marcela Mariño Agoncillo</b>	–	Maker of the First Filipino Flag.
<b>Galicano Apacible</b>	–	One of the Founders of Katipunan.
<b>Jose Ma. Panganiban</b>	–	Bicolandia’s Greatest Contribution to the Historic Campaign for Reforms.
<b>Diego Silang</b>	–	Leader of the Ilocano Revolt.
<b>Maria Josefa Gabriela Silang</b>	–	Continued the Fight After her Husband’s Death.
<b>Lapu-Lapu</b>	–	Chieftain of Mactan Who Killed Magellan. First Filipino Hero.
<b>Francisco Dagohoy</b>	–	Leader of the Longest Revolt in Bohol.
<b>Epifanio delos Santos</b>	–	A Man of Many Talents; the Former Highway 54 is Now Named After him (EDSA).
<b>Francisco Balagtas Baltazar</b>	–	Prince of Tagalog Poets.
<b>Teresa Magbanua</b>	–	First Woman Fighter in Panay. Visayan Joan of Arc.
<b>Trinidad Tecson</b>	–	Mother of Biak-na-Bato.
<b>Agueda Esteban</b>	–	Wife of Artemio Ricarte who carried secret messages about Spanish troops.
<b>Marina Dizon</b>	–	Daughter of One of the Trece Martirez.
<b>Gen. Francisco Makabulos</b>	–	Leader of the Revolt in Tarlac.
<b>Julian Felipe</b>	–	Composer of the Philippine National Anthem.

### Practice Test

#### Part 1

- All of the following constitute the meaning of political science except:
  - A basic knowledge and understanding of the state.
  - It is primarily concerned with the association of human beings into a political community.
  - Common knowledge every events taking place in the society.
  - It deals with the relationship among men and groups which are subject to the control by the state.
- It refers to the community of persons more or less numerous, permanently occupying a definite portion of territory, having a government of their own to which the great body of inhabitants render obedience, and enjoying freedom from external control.
  - Sovereignty
  - Nation
  - Citizenship
  - State
- It refers to the agency through which the will of the state is formulated, expressed and carried out.
  - Government
  - Sovereignty
  - Constitution
  - Laws
- What are the four elements of state?
  - people, territory, sovereignty, government
  - people, constitution, territory, government
  - government, law, peace, territory
  - constitution, people, land, independence
- What theory asserts that the early states must have been formed by deliberate and voluntary compact among the people to form a society and organize government for their common good?
  - Necessity Theory
  - Devine Right Theory
  - Social Contact Theory
  - Social Compact Theory
- Government exists and should continue to exist for the benefit of the people.
  - The statement is a general truth.
  - The statement is just an assumption.
  - The statement is a fallacy.
  - There is no basis for judgment.
- What are the forms of government in which the political power is exercised by a few privilege class.
  - Oligarchy and Aristocracy
  - Aristocracy and Monarchy
  - Theocracy and Fascism
  - Democracy and Tyranny
- The pre-colonial Philippines has no established government. Its villages and settlements were called *barangays*.
  - Only the first statement is true and correct.
  - Only the second statement is true and correct.
  - Both statements are true and correct.
  - Both statements are untrue and incorrect.
- There were four social classes of people in the pre-colonial*barangays*. They were the nobles, freemen, serfs, and the slaves.

- a. Only the first statement is true and correct.
  - b. Only the second statement is true and correct.
  - c. Both statements are true and correct.
  - d. Both statements are untrue and incorrect.
10. What are the two known written codes during the pre-Spanish era in the Philippines?
  - a. Maragtas and Kalantiaw Codes
  - b. Sumakwil and Sulayman Codes
  - c. Panay and Subanon Codes
  - d. Hammurabi and Ur Nammu Codes
11. Under the Spanish colonial government, who directly governed the Philippines?
  - a. The Governor-General
  - b. The Viceroy of Mexico
  - c. The Royal Audiencia
  - d. The King of Spain
12. What is the first city to be established in 1565 in the Philippines?
  - a. Manila
  - b. Davao
  - c. Cebu
  - d. Iloilo
13. The government which Spain established in the Philippines was defective. It was a government for the Spaniards and not for the Filipinos.
  - a. Only the first statement is true and correct.
  - b. Only the second statement is true and correct.
  - c. Both statements are true and correct.
  - d. Both statements are untrue and incorrect
14. What was the secret society founded in 1896 that precipitated the glorious revolution against the Spaniards.
  - a. The Katipunan
  - b. The Kalahi
  - c. The Biak-na-Bato Republic
  - d. The Ilustrado
15. Arrange the sequence of governments during the revolutionary era:
  1. The Dictatorial Government
  2. The Revolutionary Government
  3. The Biak-na-Bato Republic
  4. The First Philippine Republic
  - a. 2 3 1 4
  - b. 3 1 2 4
  - c. 4 1 3 2
  - d. 1 2 3 4
16. Arrange according to its establishment during the American Regime:
  1. The Commonwealth Government
  2. The Military Government
  3. The Civil Government
  - a. 1 2 3
  - b. 2 3 1
  - c. 3 2 1
  - d. 2 1 3
17. What was the civil government established during the Japanese occupation of the Philippines?
  - a. The Japanese Imperial Government
  - b. The Philippine Republic
  - c. The Puppet Government of Japan
  - d. The Philippine Executive Commission
18. The Constitution used by the Philippine government from the commonwealth period until 1973.
  - a. The Malolos Constitution
  - b. The Biak-na-Bato Constitution
  - c. The 1935 Constitution
  - d. The 1901 Constitution
19. What kind of government was installed under the 1973 Constitution under the Marcos regime?
  - a. Modified Presidential system
  - b. Modified Parliamentary system
  - c. Military system
  - d. Bicameral system
20. A de facto government acquires a de jure status when it gains wide acceptance from the people and recognition from the community of nations.
  - a. The statement is true and valid.
  - b. The statement is an assumption.
  - c. The statement is a fallacy.
  - d. The statement is doubtful.
21. It is defined as written instrument by which the fundamental powers of the government are established, limited and defined and by which these powers are distributed among the several departments or branches for their and useful exercise for the benefit of the people.
  - a. Laws
  - b. Statutes
  - c. Constitution
  - d. Ordinances
22. There is no Constitution that is entirely written or unwritten.
  - a. The statement is true and correct.
  - b. The statement is incorrect.
  - c. The statement is partially correct.
  - d. There is no basis to conclude.
23. Requisites of a good written constitution.
  - a. Brief
  - b. Broad
  - c. Definite
  - d. All of the given options
24. Who has the authority to interpret the constitution?
  - a. Private individual
  - b. Courts
  - c. Legislative and Executive departments of the government
  - d. All of the given options
25. "We, the sovereign Filipino people, imploring the aid of Almighty God, in order to build a just and humane society and establish a government that shall embody our ideals and aspirations, promote our common good, conserve and develop our patrimony, and secure to ourselves and our posterity the blessings of independence and democracy under the rule of law and the regime of truth, justice,

freedom, equality and peace, do ordain and promulgate this Constitution.”

What part of Constitution is this?

- a. General Provision
- b. Amendments
- c. Preamble
- d. National Patrimony

## Part II

1. The problem of scarcity \_\_\_\_\_.
  - a. arises only in poor countries.
  - b. exists because the price of goods is too high.
  - c. exists because of limited resources.
  - d. will eventually be solve by better planning.
2. “If an individual is to maximize the utility received from the consumption, he or she should spend all available income...” This statement assumes \_\_\_\_\_.
  - a. that saving is impossible.
  - b. that the individual is not satiated in all goods.
  - c. that no goods are “inferior.”
  - d. both A and B.
3. An individual’s demand curve
  - a. represents the various quantities that the consumer is willing to purchase of a good at various price levels.
  - b. is derived from an individual’s indifference curve map.
  - c. will shift if preferences, price of other goods, or income change.
  - d. all of the above.
4. What is a firm?
  - a. A president, some vice presidents, and some employees
  - b. Any organization that wants to make a profit.
  - c. Any accumulation of productive assets.
  - d. Any organization that turns inputs into outputs
5. If more and more labor is employed while keeping all other inputs constant, the marginal physical productivity of labor \_\_\_\_\_.
  - a. will eventually increase.
  - b. will eventually decrease.
  - c. will eventually remain constant.
  - d. cannot tell from the information provided.
6. In general, microeconomic theory assumes that the firms attempt to maximize the difference between \_\_\_\_\_.
  - a. total revenue and accounting costs.
  - b. price and marginal cost.
  - c. total revenues and economic costs.
  - d. economic costs and average cost.
7. In a competitive market, efficient allocation of resources is characterized by \_\_\_\_\_.
  - a. a price greater than the marginal cost of production.
  - b. the possibility of further mutually beneficial transactions.
  - c. the largest possible sum of consumer and producer surplus.\
  - d. a value of consumer surplus equal to that of producer surplus.
8. Price controls \_\_\_\_\_.
  - a. are always popular with consumers because they lower prices.
  - b. create shortages.
  - c. increase producer surplus because firms can now sell a greater quantity of a good at a lower price.
  - d. are necessary to preserve equity.
9. The excess burden of tax is \_\_\_\_\_.
  - a. The amount of which the price of a good increases
  - b. The loss of consumer and producer surplus that is not transferred elsewhere.
  - c. The amount y which a person’s after-tax income decrease as a result of the new tax.
  - d. The welfare costs to firms forced to leave the market due to an inward shift of the demand curve.
10. In the opening of the free trade, if world prices of a good are less than domestic prices of that same good, \_\_\_\_\_.
  - a. domestic consumers will experience a loss of surplus.
  - b. domestic prices will drop to the world price level.
  - c. all domestic producers of that good will try to find another market because they can’t compete with foreign producers.
  - d. domestic producers will increase the quantity supplied in order to crowd out the foreign produced goods.
11. It states that as the price of the commodities increase the amount of goods the consumer is willing to purchase decrease and as the price of the commodities decrease the willingness of the consumer to buy increases and other factor remain constant.
  - a. Law of Diminishing Marginal Utility
  - b. Law of Gravity
  - c. Law of Supply
  - d. Law of Demand
12. A deliberate attempt to recognize and transform existing agrarian system with the intention of improving the distribution of agricultural incomes and thus fostering rural development.
  - a. Millennium Development Plan
  - b. Land Reform
  - c. Water Reform
  - d. Development Goals
13. What is the process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income?
  - a. Economic growth
  - b. Industry
  - c. Economic development
  - d. Employment
14. A system whereby the determination of exchange rate is left solely to the market forces.
  - a. Foreign exchange liberalization
  - b. Import liberalization
  - c. Terms of trade
  - d. Foreign investment
15. All are possible results when a high population growth rate continues in the Third World except
  - a. growth of slums
  - b. spread of diseases due to poverty and poor sanitation
  - c. not enough schools, hospitals, roads, bridges, etc.
  - d. increased Gross National Product
16. Which of the following is the nature of power of taxation?
  - a. It is inherent in sovereignty.
  - b. It is legislative in nature.
  - c. It is subject to constitutional and inherent limitations.
  - d. All of the above
17. A kind of tax based on the rate of which decreases as the tax base or bracket increases.
  - a. Progressive
  - b. Graduated
  - c. Regressive
  - d. Proportional

18. Agrarian reform program, Philippine experience is a success.
- a. The statement is generally true.
  - b. The statement is doubtful.
  - c. The statement is untrue.
  - d. There is no basis to conclude.
19. It is also known as the Comprehensive Agrarian Reform Law (CARL)
- a. Presidential Decree # 2
  - b. Presidential Decree # 27
  - c. Republic Act 6657
  - d. Republic Act 5766
20. The Cooperatives Development Program of the government is designed primarily to support the agrarian reform program. It aims to achieve a dignified existence for the small farmers free from pernicious institutional restraints and practices.
- a. Only the first statement is true and correct.
  - b. Only the second statement is true and correct.
  - c. Both statements are true and correct.
  - d. Both statements are untrue and incorrect.

ANSWER KEY

English

1B	11B	21A	31B	41B	51A	61B	71B	81D	91D
2A	12C	22B	32B	42B	52B	62A	72C	82C	92D
3B	13A	23B	33C	43C	53B	63C	73B	83A	93B
4C	14B	24A	34D	44B	54B	64B	74C	84B	94B
5A	15C	25B	35A	45A	55B	65C	75B	85B	95D
6B	16A	26D	36B	46B	56D	66A	76C	86A	96C
7A	17B	27A	37B	47B	57B	67B	77B	87C	97C
8B	18B	28B	38C	48B	58C	68B	78D	88A	98B
9B	19B	29B	39A	49A	59C	69B	79C	89C	99A
10C	20B	30B	40C	50B	60B	70C	80C	90B	100C

FILIPINO-Part 1

1A	6D	11B	16B	21B	26B	31A	36D	41C	46D	51B
2B	7C	12B	17D	22A	27A	32C	37A	42A	47C	52D
3C	8A	13A	18A	23A	28A	33D	38B	43D	48B	53A
4D	9D	14D	19B	24B	29D	34B	39C	44B	49B	54B
5D	10A	15D	20C	25C	30A	35C	40A	45D	50C	55B

Filipino-Part II

1A	6B	11C	16A	21A	26B	31C	36C	41A	46C	51B
2C	7C	12A	17A	22B	27A	32B	37D	42B	47C	52B
3A	8A	13C	18D	23C	28D	33D	38A	43C	48B	53C
4A	9D	14A	19C	24D	29C	34C	39A	44B	49B	54C

5B	10C	15A	20B	25C	30B	35B	40C	45B	50C	55A
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Filipino- Part III

1I	4C	7A	10F	13J	16E	19H	22na	25pa	28na
2E	5B	8G	11F	14A	17C	20G	23na	26na	29pa
3J	6D	9H	12I	15D	18H	21pa	24na	27na	30pa

Filipino- Part IV

1K	6C	11J	16d	21D	26A	31ng	36daw	41may	46kilawa
2G	7J	12I	17F	22B	27B	32nang	37din	42mayroon	47dalhan
3A	8B	13A	18C	23A	28C	33ng	38rin	43maka-nora	48dalhin
4D	9I	14H	19G	24D	29C	34raw	39may	44maka-bansa	49walisan
5D	10H	15b	20E	25B	30A	35roon	40mayroon	45ika-17	50walisin

Mathematics

1B	11B	21A	31B	41B	51A	61B	71B	81D	91D
2A	12C	22B	32B	42B	52B	62A	72C	82C	92D
3B	13A	23B	33C	43C	53B	63C	73B	83A	93B
4C	14B	24A	34D	44B	54B	64B	74C	84B	94B
5A	15C	25B	35A	45D	55B	65C	75B	85B	95D
6B	16A	26B	36B	46B	56D	66C	76C	86A	96C
7A	17B	27A	37B	47B	57B	67B	77B	87C	97C
8B	18B	28B	38C	48B	58C	68B	78D	88A	98B
9B	19B	29B	39A	49A	59C	69B	79C	89C	99A
10C	20B	30B	40C	50B	60B	70C	80C	90B	100C

Science

1D	5A	9A	13A	17D	21A	25C	29A	33D	37A
2C	6D	10D	14C	18C	22D	26A	30C	34B	38B
3C	7A	11A	15D	19C	23B	27B	31B	35B	39A
4B	8B	12C	16A	20C	24D	27D	32C	36A	40D

Social Science Part 1

1C	6A	11D	16B	21C
2D	7A	12C	17D	22A
3A	8C	13C	18C	23D
4A	9C	14A	19B	24D
5C	10A	15B	20A	25C

Social Science Part 11

1C	6C	11D	16D
2D	7C	12B	17C