



UNIVERSITY OF EDUCATION, WINNEBA
INSTITUTE FOR TEACHER EDUCATION AND CONTINUING PROFESSIONAL DEVELOPMENT (ITECPD)
4-YR B.Ed. IN JHS EDUCATION
END OF FIRST SEMESTER EXAMINATIONS APRIL 2021

Index Number of Candidate:

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NAME OF COLLEGE: _____ Signature: _____

JBM 231: THEORIES OF LEARNING MATHEMATICS IN JHS

TIME ALLOWED: 2 HOURS

LEVEL: 200

INSTRUCTIONS:

1. Attempt **all** questions in sections A and B and **Two (2)** in section C.
2. Each question is followed by four options, **A - D**.
3. Write the letter corresponding to the correct answer in the options provided in the **answer booklet**.
4. The total marks for this paper is **40**.

SECTION A: ANSWER ALL THE QUESTIONS IN THIS SECTION

1. Which of the following is NOT a creative approach in teaching mathematics at the junior high schools?
 - A. Differentiation
 - B. Exclusion
 - C. Learning-centered classroom
 - D. Scaffolding
2. Which of the following theorists believes in information processing knowledge theory (memory)?
 - A. Behaviorists
 - B. Cognitivists
 - C. Constructivists
 - D. Developmentalists
3. Which of the following theorists is attributed with rational and instrumental learning?
 - A. Jerome Bruner
 - B. Lev Vygostky
 - C. Richard Skemp
 - D. Zottan Dienes
4. Which of the following is Not a suitable way of sequencing learning material?
 - A. Known to unknown
 - B. Known to application
 - C. Simple to complex
 - D. Unknown to known

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5. A child who accommodates mathematical concept by linking to prior knowledge stored is believed to have a ... term memory.
- A. long
 - B. low
 - C. mid
 - D. short
6. According to Vygotsky, when adults perception of a learning material is much different from children, it's termed as ...
- A. principle of multiple embodiment
 - B. principle of learning theory
 - C. zone of proximal development
 - D. zone of equity
7. When a learner builds logical sense based on the use of concrete material only, the learner is said to be in the ... stage.
- A. concrete operational
 - B. formal operational
 - C. pre-operational
 - D. sensory motor
8. Scaffolding as a pedagogical approach is attributed to.....
- A. Jean Piaget
 - B. Jerome Bruner
 - C. Lev Vygostky
 - D. Zottan Dienies
9. Select the correct order according to Jerome Bruner.
- A. Enactive - Iconic - Symbolic
 - B. Iconic - Enactive - Symbolic
 - C. Symbolic - Enactive - Iconic
 - D. Symbolic - Iconic - Enactive
10. The ability to explain, outline, summarized, translates or paraphrase is termed as.....
- A. application
 - B. experience
 - C. knowledge
 - D. understanding
11. Which of the following are repeated behaviors during play that demonstrate student's exploitation of particular mathematics ideas and concepts?
- A. Generalization
 - B. Modeling
 - C. Schemes
 - D. Skills

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12. Which intelligence refers to the capacity to analyze problems, carry out mathematical operations and investigate issues scientifically?
- A. Linguistic
 - B. Logical
 - C. Naturalistic
 - D. Spatial
13. Which of the following mathematical philosophers defined mathematics as "the science of quantity"?
- A. Aristotle
 - B. August Comte
 - C. Benjamin Pierre
 - D. Bertrand Russell
14. The process of collecting and evaluating information about learners and using them to make decisions to improve their learning is termed as.....
- A. allocation
 - B. assessment
 - C. evaluation
 - D. manipulation
15. Learning mathematics in the iconic mode involves using.....
- A. abstract symbols
 - B. hands-on experience
 - C. manipulative instruments
 - D. visual medium like pictures
16. The mathematical knowledge that deals with relationships among discrete pieces of information is known as... knowledge.
- A. conceptual
 - B. content
 - C. pedagogical
 - D. procedural
17. The theory that ascribes to the belief that what is learned tend to be context-bound is... theory.
- A. activity
 - B. cognitive
 - C. situated-cognition
 - D. social-cultural
18. The belief that children can construct their own knowledge and understand through their interaction with the environment can be ascribed to the
- A. behaviorists
 - B. constructivists
 - C. socialists

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- D. information analysts
19. Which attitude of teachers' affect the performance of junior high school students in the mathematics classroom? Teachers'
- belief about children
 - behavior as a results of motivation
 - thinking
 - values
20. Which of the following is NOT an essential characteristics of learning?
- It's a continuous process base on experience
 - It's a holistic process of adoption to the world
 - It involves transaction between a person and the world
 - It can take place without the environment

SECTION B: ANSWER ALL THE QUESTIONS IN THIS SECTION (10 MARKS)

- Which learning theory believes that learning is co-constructed?
- According to behaviorists theory of learning, any teacher phenomena that increases or decreases the occurrences of a learner is called
- At which stage of Piaget's developmental stages are children able to solve abstract problems in logical fashion?
- A skill that a child acquires within a specific time frame is referred to as
- The learning theory that focuses on the processes in learning rather than on the observed behavior is referred to as.....
- According to the constructivists, student's level of mental maturity is referred to as...
- Any event that is intended to increase the frequency of the responses it follows in psychology is known as.....
- The use of variety of instructional techniques which aimed at moving early grade learners towards stronger understanding is describe as.....
- Making mathematics ideas "real" by using words, pictures, symbols and objects is referred to as.....
- The component of adaptation that describes the situation in which any new information can fit into a learner's existing knowledge is known as.....

SECTION C: ANSWER ANY TWO (2) QUESTIONS OF YOUR CHOICE

- Identify five (5) negative attitudes of teachers that affect learner's performance in mathematics. (10mks)
- State four (4) types of attitude. Mention three (3) characteristics each. (10mks)
- State five (5) ways of ensuring effective mathematics teaching at the Junior High Schools. (10mks)
- What is learning? State any four characteristics of learning in the mathematics classroom. (10mks)

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