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UNIVERSITY OF GHANA

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DEPARTMENT OF TEACHER EDUCATION

SCHOOL OF EDUCATION AND LEADERSHIP

COLLEGES OF EDUCATION

END OF SEMESTER ONE EXAMINATION FOR LEVEL 300, 2025

B.ED. PROGRAMME

COURSE CODE: **TEUP 303:** COURSE TITLE: **TEACHING AND ASSESSING MATHEMATICS FOR UPPER PRIMARY (INTERMEDIARY)**

Instruction: Answer **all** questions in Section A and any **three** questions in Section B.

Time: 2 hours

SECTION A

[25 Marks]

Answer all the questions in this section.

1. What is the place value of 5 in 58,762?
   A. 50,000
   B. 5,000
   C. 500
   D. 50

2. Which of the following is an example of technology in teaching?
   A. A printed textbook
   B. An interactive whiteboard
   C. A chalkboard
   D. A paper test

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3. A student is asked to imagine rotating a cube. What skill is the student using?
   A. Logical reasoning
   B. Number sense
   C. Spatial reasoning
   D. Measurement skills

4. A reflex angle is an angle that is:
   A. Less than 90°
   B. Between 90° and 180°
   C. Greater than 180° but less than 360°
   D. Exactly 360°

5. A cube has how many vertices?
   A. 6
   B. 8
   C. 10
   D. 12

6. Which unit is used to measure mass?
   A. Liters
   B. Kilograms
   C. Meters
   D. Square centimeters

7. If a clock shows 3:45 PM, what is the time in 24-hour format?
   A. 15:00
   B. 15:45
   C. 03:45
   D. 12:45

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8. Which of the following is an example of a categorical variable?
   A. Types of fruits sold in a shop
   B. The heights of students in a class
   C. The number of books read in a month
   D. The weights of newborn babies

9. A teacher records students' scores and represents them in a stem-and-leaf plot. What is the benefit of this representation?
   A. It shows the mean of the data directly
   B. It organizes data while preserving individual values
   C. It shows trends over time
   D. It eliminates extreme values

10. A five-number summary consists of:
   A. Mean, mode, range, interquartile range, and standard deviation.
   B. Minimum, first quartile, median, third quartile, and maximum.
   C. Percentage, discount, high purchase, profit and loss.
   D. Probability, cardinality, events, mutual and classical

11. In a probability experiment, what is the sample space?
   A. The total number of outcomes in an event
   B. The set of all possible outcomes
   C. The number of times an event occurs
   D. The most likely outcome

12. Which type of triangle has two equal sides and two equal angles?
   A. Isosceles triangle
   B. Scalene triangle
   C. Right-angled triangle
   D. Equilateral triangle

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13. Which type of drawing represents a 3D object on a 2D surface?
    A. Isometric drawing
    B. Orthogonal drawing
    C. Number line
    D. Top view sketch

14. Why is it important to provide timely feedback?
    A. It helps students correct mistakes before moving on to new topics
    B. It prevents students from making any mistakes in the future
    C. It allows teachers to spend less time grading tests
    D. It makes students more competitive with each other

15. What should teachers consider when selecting assessment tools?
    A. The cost of the materials
    B. Whether the tool aligns with learning objectives
    C. The popularity of the tool among other teachers
    D. The length of the assessment

16. $\frac{2}{3}$ of 90 is:
    A. 60
    B. 45
    C. 30
    D. 75

17. Which of the following is the expanded form of 4,308?
    A. 4 + 3 + 8
    B. 4,000 + 300 + 8
    C. 400 + 30 + 8
    D. 4,000 + 38

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18. The number 36 is a multiple of which of the following?

A. 5

B. 7

C. 9

D. 11

19. How many tens are in 4 560?

A. 4

B. 45

C. 46

D. 456

20. Which fraction is equivalent to $\frac{5}{8}$?

A. $\frac{10}{12}$

B. $\frac{10}{16}$

C. $\frac{5}{6}$

D. $\frac{3}{7}$

21. What is the primary goal of micro-teaching?

A. Reduce lesson planning

B. Eliminate student errors

C. Avoid classroom interaction

D. Improve teaching skills through practice

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22. One benefit of technology in numeracy instruction is:
    A. Reducing the need for teachers
    B. Eliminating textbooks
    C. Avoiding practical work
    D. Enhancing student engagement

23. Which of the following is an example of formative assessment?
    A. End-of-term examination
    B. National standardized tests
    C. Weekly quizzes and teacher feedback
    D. Final project evaluation

24. When analyzing student performance data, what should a teacher focus on?
    A. Only the final grades
    B. Patterns of errors and learning progress over time
    C. The highest-scoring students
    D. The number of students passing or failing

25. A jug contains 2.5 liters of juice. How many milliliters is this?
    A. 25 mL
    B. 250 mL
    C. 2500 mL
    D. 2,500,000 mL

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SECTION B (Answer any THREE questions from this section)

1. (a) Explain why understanding number patterns is important in mathematics. **10 marks**

(b) Convert $(231)_4$ to base 10. **10 marks**

(c) Explain the concept of theoretical probability vs. experimental probability **5 marks**

2. (a) Discuss why lesson planning is important **15 marks**

2. (b) How can teachers evaluate the effectiveness of their micro-lessons? **10 marks**

3 **(a)** Define mean, median, and mode. **12 marks**

(b) Find the mean of 45, 50, 60, 70, 80. **2 marks**

(c) Why is probability important in decision-making? **6 marks**

(d) What is the probability of drawing a red card from a deck of 52 cards? **5 marks**

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4. (a) What are mathematical misconceptions, and why is it important for teachers to address them? **15marks**

(b) A student believes that multiplication always makes numbers bigger. How would you correct this misconception? **10marks**

5. (a) A class survey shows that 40% of students like soccer, 30% like basketball, and 30% like volleyball. What is the probability that a randomly selected student does NOT like soccer? **15marks**

(b) A bag contains 4 red balls, 3 blue balls, and 3 green balls. What is the probability of drawing a blue ball? **6marks**

(c) Identify the LCM and HCF of 16 and 20. **4marks**