

STUDENT'S ID NO: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_



UNIVERSITY OF GHANA

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DEPARTMENT OF TEACHER EDUCATION  
SCHOOL OF EDUCATION AND LEADERSHIP  
COLLEGES OF EDUCATION

END OF SEMESTER ONE EXAMINATIONS FOR LEVEL 300, 2021/2022  
B.ED. PROGRAMME

COURSE CODE: TEUP 303

COURSE TITLE: TEACHING AND ASSESSING MATHEMATICS FOR UPPER  
PRIMARY (INTERMEDIATE)

*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. Isaac counted some oranges and said there are 78 oranges. Isaac has used "number" in the \_\_\_\_\_ Sense.  
A. Cardinal  
B. Nominal  
C. Ordinal  
D. Ratio
  
2. A students' registration or index number is a use of number in the \_\_\_\_\_ sense  
A. Cardinal  
B. Nominal  
C. Ordinal  
D. Ratio

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3. In a morning walk, three teacher trainees step off together. Their steps measure 80 cm, 85 cm, and 90 cm respectively. What is the minimum distance each should walk so that all can cover the same distance in complete steps?
- A. 12240cm
  - B. 612200cm
  - C. 6800cm
  - D. 7200cm
4. Counting back as a counting skill is relevant for \_\_\_\_\_ operation.
- A. addition
  - B. division
  - C. multiplication
  - D. subtraction
5. Three tankers contain 403 litres, 434 litres and 465 litres of diesel respectively. Find the maximum capacity of a container that can measure the diesel of the three tankers at the same time.
- A. 26 litres
  - B. 31 litres
  - C. 42 litres
  - D. 78 litres
6. Which of the following is a perfect number?
- A. 6
  - B. 12
  - C. 14
  - D. 28
7. In 145,467,325,10235, which digit is in the ten-thousandths place?
- A. 3
  - B. 4
  - C. 6
  - D. 7
8. Complete the sequence 21, 25, 33, 49, 81, \_\_\_\_.
- A. 101
  - B. 113
  - C. 132
  - D. 145

9. What is a mathematical pattern?
- A. A sequence of equations
  - B. A sequence that follows a specific rule
  - C. It tells you how to process your number to get a particular answer
  - D. It tells you the order to do your operations
10. Which fraction is not equivalent to  $\frac{3}{4}$ ?
- A.  $\frac{75}{100}$
  - B.  $\frac{9}{16}$
  - C.  $\frac{9}{12}$
  - D.  $\frac{30}{40}$
11. What is the relationship between square and triangular numbers?
- A. Difference of any two triangular numbers gives one square number
  - B. Difference of two consecutive triangular numbers gives one square number
  - C. Sum of two consecutive square numbers gives one triangular number
  - D. Sum of two consecutive triangular numbers gives one square number
12. Which of the following is *always* true about prime numbers?
- A. All odd numbers are prime
  - B. All prime numbers are odd
  - C. Prime numbers have no whole divisor
  - D. Only one even number is Prime
13. Which of the following rules describes the sequence 2, 4, 10, 28, 82, ...?
- A. Cube the previous term and subtract 4
  - B. Multiply the previous term by 2 and add 2
  - C. Multiply the previous term by 3 and subtract 2
  - D. Square the previous term.
14. Fortune spent  $\frac{1}{2}$  of her pocket money on airtime. She spent  $\frac{1}{6}$  of her money on course books. What fraction of her pocket money did Fortune spend all together?
- A.  $\frac{1}{2}$
  - B.  $\frac{2}{3}$
  - C.  $\frac{1}{4}$
  - D.  $\frac{4}{6}$

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15. Which of the Dienes block piece will you use to represent 3 in the number 2375?
- A. Block
  - B. Flat
  - C. Longs
  - D. Units
16. Jerry ate  $1\frac{1}{4}$  of pizzas and Raymond ate  $1\frac{2}{3}$  of pizzas. How much pizza did Raymond eat than Jerry?
- A.  $\frac{5}{12}$
  - B.  $\frac{4}{12}$
  - C.  $\frac{3}{12}$
  - D.  $\frac{2}{12}$
17. The aim of assessing the numeracy skills of your pupils is to \_\_\_\_\_
- A. compare your students
  - B. grade students
  - C. improve students' learning
  - D. report students' performance to parents
18. Which decimal fraction represents three hundredth?
- A. 0.3
  - B. 300.0
  - C. 300
  - D. 0.03
19. Which of the following forms of assessment is summative in nature?
- A. Assessment as learning
  - B. Assessment for learning
  - C. Assessment in learning
  - D. Assessment of learning

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20. What is the main reason for teaching Collecting and Handling Data at the Upper Primary? For \_\_\_\_\_
- A. effective planning
  - B. obtaining good grades in the exam
  - C. further studies at the JHS
  - D. grouping of data
21. A scaled down teaching encounter in class size and time is referred to as \_\_\_\_\_ teaching.
- A. diagnostic
  - B. macro
  - C. micro
  - D. small class-size
22. A mathematical activity where a number is assigned to an attribute is referred to as ...
- A. Calculation
  - B. Comparing
  - C. Evaluation
  - D. Measurement
23. The probability that Kofi will come to school today is  $\frac{2}{5}$ . What is the probability that he won't come to school?
- A.  $\frac{2}{5}$
  - B.  $\frac{3}{5}$
  - C.  $\frac{5}{3}$
  - D.  $\frac{5}{2}$
24. A basic school learner described a shape as having 4 right angles and all sides being the same length. What shape is that?
- A. Rectangle
  - B. Kite
  - C. Square
  - D. Triangle

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25. How many faces does a solid sphere has?

- A. 1
- B. 2
- C. 3
- D. 4

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SECTION B

[75 Marks]

Answer any three questions in this section.

ANSWER ANY THREE QUESTIONS

1.
  - a. A basic 5 learner wants to know what a place value is, how will you explain what a place value is to him or her? (4 marks)
  - b. With a named material, explain how you will guide a primary 6 learner to add 256 and 175. (10 marks)
  - c. Explain the difference between number and numeral to your upper primary learner. (3 marks)
  - d. With relevant examples, explain four reasons why you assess your pupils in mathematics? (8 marks)
  
2.
  - a. During your teaching experiences at college, you were taken through micro teaching. Explain the following concepts in Micro lesson planning:
    - i. Planning (3 marks)
    - ii. Teaching (3 marks)
    - iii. Feedback (3 marks)
  - b. Explain how you would help a primary 4 pupil to solve  $36 \div 9$  by
    - i. sharing. (4 marks)
    - ii. grouping. (3 marks)
  - c. How will you guide your primary four learners to explain the following concepts of plane shapes in geometry:
    - i. Face. (3 marks)
    - ii. Edge. (3 marks)
    - iii. Vertex. (3 marks)
  
3.
  - a. What is assessment? (3 marks)
  - b. Mention any three (3) roles of technology in the teaching and learning of mathematics. (6 marks)
  - c. Using the paper folding and step by step approach, help a basic 5 learner to perform the operation  $\frac{2}{5} + \frac{2}{2}$ . (8 marks)

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d. Copy and complete the table below:

Solids	No. of faces	No. of vertices	No. of edge (E)
Square pyramid	5		8
Triangular pyramid			6
Triangular prism		6	
Cube	6		
Cuboid		8	

(8 marks)

4. a. The following are the scores obtained by 30 learners in a test marked out of 10.

Using this data, guide the learners in your Upper Primary class to:

3 7 10 9 9 9 8 9 9 6

4 8 5 5 6 3 8 7 7 9

3 9 10 8 9 7 8 7 6 9

i. Construct a frequency distribution table.

(5 marks)

ii. Construct a simple bar chart for the data collected.

(5 marks)

iii. Find the mean, median, and mode of the distribution.

(8 marks)

b. With the help of a diagram, explain the concept of a perimeter of a rectangle to your upper primary learners.

(4 marks)

c. What is micro teaching?

(3 marks)

5. a. A learner performed this operation in class exercise after your lesson delivery.

$$\begin{array}{r}
 34 \\
 + 69 \\
 \hline
 913
 \end{array}$$

i. What concept is the learner lacking?

(3 marks)



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- ii. Mention two appropriate teaching and learning materials to use in helping the learner to overcome his/her misconception? (4 marks)
- iii. How do you remediate this problem that you have diagnosed as a professional teacher? (7 marks)
- b. Explain four reasons for preparing a lesson plan (8 marks)
- c. What is the relationship between the faces, edges, and vertices of plane shapes? (3 marks)