

# JSS 3 FIRST TERM EXAMINATION

## MATHEMATICS

### QUESTION PAPER

**Class:** JSS 3    **Term:** First Term    **Total:** 30 marks

**Time:** 1 Hour

#### SECTION A: OBJECTIVE QUESTIONS

Instruction: Answer all questions. Choose the correct answer from options A–D. Each question carries 1 mark.

- Find the simple interest on ₦5,000 at 10% per annum for 2 years.  
A. ₦500  
B. ₦1,000  
C. ₦1,500  
D. ₦2,000
- The formula for simple interest is:  
A.  $SI = (P \times R \times T)/100$   
B.  $SI = P + R + T$   
C.  $SI = P \times R + T$   
D.  $SI = (P + R + T)/100$
- Find the amount on ₦4,000 at 5% simple interest for 2 years.  
A. ₦4,200  
B. ₦4,300  
C. ₦4,400  
D. ₦4,500
- Compound interest is interest calculated on:  
A. The principal only  
B. The interest only  
C. The rate only  
D. The principal and accumulated interest
- ₦1,000 is invested at 10% compound interest per annum for 2 years. What is the amount?  
A. ₦1,100  
B. ₦1,200  
C. ₦1,210  
D. ₦1,220
- Convert  $101_3$  to base ten.  
A. 3  
B. 4  
C. 5  
D. 6
- Convert  $7_{10}$  to base two.  
A.  $101_2$   
B.  $110_2$   
C.  $111_2$   
D.  $100_2$
- What is  $101_2 + 11_2$ ?  
A.  $110_2$   
B.  $1000_2$   
C.  $111_2$   
D.  $1010_2$

9. The base of the binary number system is:
- A. 2
  - B. 8
  - C. 10
  - D. 16
10. Simplify  $\frac{1}{2} + \frac{1}{4}$ .
- A.  $\frac{1}{6}$
  - B.  $\frac{2}{6}$
  - C.  $\frac{3}{4}$
  - D.  $\frac{1}{4}$
11. Calculate  $\frac{3}{4} - \frac{1}{2}$ .
- A.  $\frac{1}{4}$
  - B.  $\frac{1}{2}$
  - C.  $\frac{2}{4}$
  - D.  $\frac{3}{2}$
12. Find  $\frac{2}{3} \times \frac{3}{5}$ .
- A.  $\frac{2}{5}$
  - B.  $\frac{5}{2}$
  - C.  $\frac{6}{8}$
  - D.  $\frac{3}{5}$
13. Calculate  $\frac{1}{2} \div \frac{1}{4}$ .
- A.  $\frac{1}{8}$
  - B. 2
  - C.  $\frac{1}{2}$
  - D. 4
14. If 2 exercise books cost ₦600, how much will 4 cost at the same rate?
- A. ₦900
  - B. ₦1,000
  - C. ₦1,200
  - D. ₦1,500
15. If 4 workers complete a job in 6 days, how many days will 8 workers take, at the same rate?
- A. 2 days
  - B. 3 days
  - C. 6 days
  - D. 12 days
16. When two quantities increase or decrease in the same ratio, they are in:
- A. Inverse proportion
  - B. Direct proportion
  - C. Equal fractions
  - D. Compound interest
17. If y decreases as x increases so that their product remains constant, the relationship is:
- A. Direct proportion
  - B. Simple interest
  - C. Inverse proportion
  - D. Compound interest
18. Evaluate  $12 + 6 \div 3$ .
- A. 6
  - B. 14
  - C. 18
  - D. 10
19. Evaluate  $20 - (3 \times 4) + 2$ .
- A. 6

- B. 8
- C. 10
- D. 14

20. A boy has ■2,000. He buys a book for ■750 and a pen for ■250. How much remains?

- A. ■500
- B. ■750
- C. ■1,000
- D. ■1,250

## SECTION B: THEORY QUESTIONS

Instruction: Answer any THREE questions. Each question carries 3 marks.

### 1. Simple Interest

- a. Calculate the simple interest on ■6,000 at 5% per annum for 2 years. (2 marks)
- b. Find the total amount. (1 mark)

### 2. Compound Interest

■2,000 is invested at 10% compound interest per annum for 2 years. Calculate:

- a. The amount after the first year. (1 mark)
- b. The amount after the second year. (2 marks)

### 3. Number Bases

- a. Convert 1101■ to base ten. (2 marks)
- b. Convert 9■■ to base two. (1 mark)

### 4. Fractions

Evaluate: a.  $\frac{2}{3} + \frac{1}{6}$  (1 mark); b.  $\frac{5}{6} - \frac{1}{3}$  (1 mark); c.  $\frac{2}{5} \times \frac{3}{4}$  (1 mark).

### 5. Proportion and BODMAS

- a. If 3 pens cost ■450, find the cost of 5 pens. (1 mark)
- b. Evaluate  $18 - (2 \times 4) + 6 \div 3$ . (2 marks)

**Mark allocation:** Section A = 20 marks; Section B = 9 marks (answer any 3); free bonus mark = 1. Total = 30 marks.