

MARCH 2023 FICOB0 EVEN'GUE ODETTE EVELINE

The Teachers' Resource Unit and the Regional Inspectorate of Pedagogy, in collaboration with MTA	SUBJECT CODE NUMBER 0570	PAPER NUMBER 1
GENERAL CERTIFICATE OF EDUCATION REGIONAL MOCK EXAMINATION	SUBJECT TITLE MATHEMATICS	
CANDIDATE NAME:		
CANDIDATE NUMBER:		
CENTRE NUMBER:		
ORDINARY LEVEL		

Time Allowed: One and a half hours
INSTRUCTIONS TO CANDIDATES:

Mobile phones are **NOT ALLOWED** in the examination room.

1. USE A SOFT HB PENCIL THROUGHOUT THIS EXAMINATION.
2. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Before the Examination begins:

3. Check that this question booklet is headed "Ordinary level -0570 code and subject title—MATHEMATICS -Paper 1".
4. Insert the information required in the spaces above.
5. Without opening the booklet, pull out the answer sheet carefully from inside the front cover of this booklet. Take care that you do not crease or fold the answer sheet or make any marks on it other than those asked for in these instructions.
6. Insert the information required in the spaces provided on the answer sheet using your HB pencil:

Candidate Name, Centre Number, Candidate Number, Subject Code Number, and Paper number

How to answer questions in this examination:

7. Answer ALL the 50 questions in this examination. All questions carry equal marks.
8. Non-programmable calculators are allowed.
9. For each question there are four suggested answers, A, B, C and D. Decide which answer is correct. Find the number of the question on the Answer Sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen. For example, if C is your correct answer, mark C as shown below:
[A] [B] [C] [D]
10. Mark only one answer for each question. If you mark more than one answer, you will score zero for that question. If you change your mind about an answer, erase the first mark carefully, and then mark your new answer.
11. Avoid spending much time on any question. If you find a question difficult, move to the next. You can come back to the question later.
12. Do all rough work in this booklet using, where necessary, the blank spaces in the question booklet.
13. You must not take this booklet and answer sheet out of the examination room. All question booklets and answer sheets will be collected at the end of the examination

1. Simplifying the expression $5 - 6 \div 3 \times 4 + 2$ gives
 - A. 14
 - B. -1
 - C. -7
 - D. 18

2. The number 101_{two} when doubled gives
 - A. 1100_2
 - B. 11001_2
 - C. 1011_2
 - D. 1010_2

3. Converting 23_5 to base 10 gives
 - A. 13
 - B. 23
 - C. 25
 - D. 53

4. In the problem $7 \div 3$, 7 is called
 - A. dividend
 - B. quotient
 - C. product
 - D. divisor

5. The place value of the digit 7 in the number 32.87 is:
 - A. $\frac{7}{10}$
 - B. $\frac{7}{100}$
 - C. $\frac{700}{100}$
 - D. 70

6. The H.C.F of 24 and 30 is
 - A. 6
 - B. 3
 - C. 2
 - D. 360

7. The L.C.M of 12 and 24 is
 - A. 6
 - B. 12
 - C. 24
 - D. 288

8. Given that $1\text{€} = 100\text{FCFA}$ and $1\text{£} = 1050\text{FCFA}$, the value of 3150€ in British pounds is
 - A. £315
 - B. £105000
 - C. £105
 - D. £300

9. The temperature of a body was recorded as 36.6°C . If the true temperature was 37.0°C then the percentage error is
 - A. 0.4%
 - B. 4%
 - C. 1.1%
 - D. 2.2%

10. The number 26354 correct to 3 significant figures is
 - A. 26300
 - B. 263
 - C. 264
 - D. 26400

11. In standard form the value of 2×8000000 is:
 - A. 16×10^6
 - B. 1.6×10^9
 - C. 1.6×10^7
 - D. 1.6×10^8

12. Writing 0.9986 to 2 decimal places gives
 - A. 1.00
 - B. 0.99
 - C. 1.90
 - D. 0.90

13. Converting 110cm to millimeters is
 - A. 1001
 - B. 1110
 - C. 1010
 - D. 1100

14. The circumference of a circle is $16\pi\text{cm}$. The radius in cm of the circle is
 - A. 2
 - B. 8
 - C. $\frac{4}{\pi}$
 - D. 4

15. The volume of a cylinder whose height equals the radius is
 - A. πr^3
 - B. $\frac{1}{3}\pi r^3$
 - C. $\frac{1}{3}\pi^3 r^3$
 - D. πr

16. Given that a semi-circle has diameter 28cm, then its perimeter is: (taking $\pi = \frac{22}{7}$)
 - A. 14cm
 - B. 56cm
 - C. 28cm
 - D. 72cm

17. Given that $\frac{3}{n} = 5$, $n \neq 0$ then $n =$
 - A. $\frac{3}{5}$
 - B. $\frac{5}{3}$
 - C. 3
 - D. 5

18. The value of the expression $(x + 2)$ when $x = -1$
 - A. 1
 - B. 3
 - C. -3
 - D. 2

19. Given that $2^x = 3$ and $2^y = 5$, then 2^{x+y} is
 - A. 15
 - B. 8
 - C. 4
 - D. 125

20. 2400FCFA shared in the ratio 2:3:7, the largest share is
 - A. 1300
 - B. 1400
 - C. 1500
 - D. 1600

21. The expression $x^2 - y^2$ can be factorized as:
 - A. $(x + y)(y - x)$
 - B. $xy(x - y)$
 - C. $(x - y)(x + y)$
 - D. $(x - y)(x - y)$

22. A network has 2 regions and 5 edges, its number of vertices is
 - A. 6
 - B. 5
 - C. 4
 - D. 3

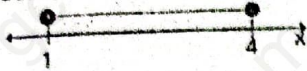
23. If r and v are two simple statements then the disjunction of r and v is

- A. $v \rightarrow r$
- B. $v \leftrightarrow r$
- C. $v \vee r$
- D. $v \vee \neg r$

24. The smallest whole number that satisfies the inequality $3n + 1 > 7$ is

- A. 2
- B. 6
- C. 1
- D. 3

25. The interval represented on the number line below is



- A. $]1, 4[$
- B. $[1, 4[$
- C. $[1, 4]$
- D. $]1, 4]$

26. What is the number of sides of a polygon whose interior angles sum up to 540° ?

- A. 1
- B. 2
- C. 3
- D. 5

27. How many lines of symmetry has the kite below?



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

28. Given the sequence 8, 15, 24, 35, ... the next number in the sequence is

- A. 48
- B. 46
- C. 50
- D. 47

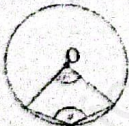
29. Given the sum of the first n terms of a series as $S_n = 5n - 3$, then the second term is

- A. 2
- B. 7
- C. 5
- D. 9

30. The geometric mean of 4 and 9 is:

- A. 6.5
- B. 6
- C. 18
- D. $\sqrt{13}$

31. In the circle centre O below, the value of θ is:



- A. 120°
- B. 150°
- C. 180°
- D. 60°

32.



In the diagram above, O is the center.

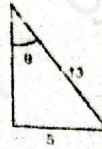
The value of α is

- A. 35°
- B. 70°
- C. 110°
- D. 145°

33. The angle formed between 0° and 90° is called?

- A. reflex angle
- B. right angle
- C. acute angle
- D. obtuse angle

34.



In the diagram above, the value of

$\cos \theta$ is

- A. $\frac{12}{13}$
- B. $\frac{13}{5}$
- C. $\frac{5}{13}$
- D. $\frac{13}{12}$

35. Two points A and B are such that the bearing of A from B is 060° . What is the bearing of B from A?

- A. 060°
- B. 240°
- C. 120°
- D. 030°

36. Evaluating $\sin 30^\circ + \cos 60^\circ$ gives:

- A. $\frac{\sqrt{3}}{2}$
- B. $-\frac{1}{2}$
- C. 1
- D. $\frac{1}{2}$

37. The determinant of the matrix $\begin{pmatrix} 2 & -3 \\ 1 & 1 \end{pmatrix}$ is:

- A. -1
- B. 1
- C. 5
- D. -5

38. Given that $N = \begin{pmatrix} 3 & 1 \\ 1 & -1 \end{pmatrix}$, then N^2 is:

- A. $\begin{pmatrix} 6 & 2 \\ 2 & 2 \end{pmatrix}$
- B. $\begin{pmatrix} 9 & 1 \\ 1 & 1 \end{pmatrix}$
- C. $\begin{pmatrix} 10 & 2 \\ 4 & 2 \end{pmatrix}$
- D. $\begin{pmatrix} 6 & 2 \\ 2 & -2 \end{pmatrix}$

39. The adjoint of the matrix $M = \begin{pmatrix} 2 & 3 \\ 4 & 5 \end{pmatrix}$ is

- A. $\begin{pmatrix} 2 & 4 \\ 3 & 5 \end{pmatrix}$
- B. $\begin{pmatrix} 5 & 3 \\ 4 & 2 \end{pmatrix}$
- C. $\begin{pmatrix} -2 & 4 \\ 3 & -5 \end{pmatrix}$
- D. $\begin{pmatrix} 3 & -5 \\ -4 & 2 \end{pmatrix}$

40. Given the line $y - 2x - 8 = 0$, the gradient is

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

41. Given that m_1 and m_2 are the gradients of the lines l_1 and l_2 respectively. The condition for the lines l_1 and l_2 to be parallel is

- A. $m_1 \neq m_2$
- B. $m_1 + m_2 = 0$
- C. $m_1 m_2 = -1$
- D. $m_1 = m_2$

42. Given that $\bar{a} = \begin{pmatrix} -2 \\ 3 \end{pmatrix}$ and $\bar{b} = \begin{pmatrix} 5 \\ -2 \end{pmatrix}$.

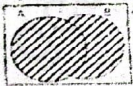
$\bar{a} + 2\bar{b} =$

- A. $\begin{pmatrix} 8 \\ -1 \end{pmatrix}$
- B. $\begin{pmatrix} 10 \\ -7 \end{pmatrix}$
- C. $\begin{pmatrix} 3 \\ 1 \end{pmatrix}$
- D. $\begin{pmatrix} 10 \\ 1 \end{pmatrix}$

43. If $\bar{a} = 3i + 4j$, then $|3\bar{a}|$ is

- A. 5
- B. 18
- C. 15
- D. 45

44. The shaded portion in the Venn diagram below represents



- A. $A \cap B$
- B. $A \cup B$
- C. $A' \cap B'$
- D. $A' \cup B'$

45. Given that $A = \{1, 2, 3, 6\}$, then $n(A)$ is

- A. 4
- B. 6
- C. 8
- D. 16

46. Given that $f(x) = 1 - 2x$, then $f(-1)$ is

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

47. The median of numbers 6, 11, 4, 13, 5, 8, 5, 8 is

- A. 13
- B. 7
- C. 8
- D. 9

48. The range of the data 2, 5, 1, 10, 5, 8 is

- A. 6
- B. 8
- C. 9
- D. 7

49. In a well shuffled pack of 52 playing cards, a card is selected at random. What is the probability of obtaining a king and a queen?

- A. 0
- B. $\frac{1}{52}$
- C. $\frac{1}{26}$
- D. $\frac{1}{13}$

50. The probability of an event not occurring is $\frac{2}{5}$. the probability of the event occurring is

- A. $\frac{2}{5}$
- B. $\frac{1}{5}$
- C. $\frac{3}{5}$
- D. $\frac{2}{3}$

END

GO BACK AND CHECK YOUR WORK