REPUBLIQUE DU CAMEROUN
Paix-Travail-Patrie

MINISTERE DES ENSEIGNEMENTS SECONDAIRES

CELLULE D'APPUI A L'ACTION PEDAGOGIQUE
ANTENNE RÉGIONALE DU NORD OUEST

BP 2183 MANKON BAMENDA
TEL 233 362 209
Email : trubamenda@yahoo.co.uk

REPUBLIC OF CAMEROON
Peace-Work-Fatherland

MINISTRY OF SECONDARY EDUCATION

TEACHERS' RESOURCE UNIT
REGIONAL BRANCH FOR THE NORTH WEST

P.O. BOX: 2183 MANKON BAMENDA
TEL 233 362 209
Email : trubamenda@yahoo.co.uk

MARCH 2019

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	DATE **Thursday 28th March 2019 Morning**	

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 question. You can come back to this 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. The value of the digit 5 in the number 25821 is:
   A) 5 units
   B) 5 thousands
   C) 5 tenths
   D) 5 thousandths

2. The number 0.0031492 corrected to 3 significant figures is:
   A) 0.003
   B) 0.00314
   C) 0.00315
   D) 3.1492×10^{-3}

3. The number 631927 expressed in standard form is:
   A) 6.31927×10^{5}
   B) 6.31297×10^{-5}
   C) 63.1927×10^{4}
   D) 6.3×10^{5}

4. If – 7 is added to half a certain number, the sum is – 2. The number is:
   A) 5
   B) 10
   C) – 5
   D) – 10

5. The value of $(-2)^3 + 1$ is:
   A) – 5
   B) 9
   C) 4
   D) – 7

6. Given that $p = 2^n \times 3$ and that $q = 2 \times 3^{n-1} \times 7$ where $n \in \mathbb{N}^*$, the greatest common divisor of p and q is:
   A) 2
   B) 3
   C) $2^n \times 3^{n-1}$
   D) 6

7. Mr. Tombali bought a piece of land for 500,000FCFA and later sold it making a profit of 10%. The selling price of the land was:
   A) 50,000FCFA
   B) 550,000FCFA
   C) 500,000FCFA
   D) 450,000FCFA

8. The monthly salary (S) of a worker is directly proportional to the number of hours (H) of work he puts in. When he puts in 90 hours, his salary is 135,000FCFA. Suppose he puts in 162 hours, his salary will be:
   A) 270,000FCFA
   B) 243,000FCFA
   C) 180,000FCFA
   D) 150,000FCFA

9. On a map with scale of 1:200,000 two towns are12.35cm apart. The actual distance between the two towns is :
   A) 61.75km
   B) 6.175km
   C) 2.47km
   D) 24.7km

10. Fig. 1 is a Venn diagram that represents the relationship between two sets A and B.

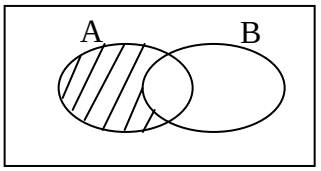

Fig.

The shaded region could be described as:
   A) B'
   B) A
   C) $A' \cap B$
   D) $A \cap B'$

11. Fig. 2 shows three towns W, X and Y. W and Y are equidistant from X.

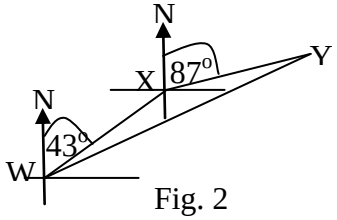

Fig. 2

The bearing of Y from W is:

A) 022^o

B) 093^{o}
C) 105^{o}
D) 065^{o}

12. Given that Q is a set and that n(P(Q)) = 64, where P(Q) is the power set of Q, n(Q) = :
A) 5
B) 4
C) 8
D) 6

13. Ade spends 24,000FCFA in buying cloth at 2,000FCFA a metre. How many more metres could he has bought if the cloth had been 400FCFA a metre cheaper?:
A) 2.4
B) 3
C) 12
D) 15

14. The Greenwich Meridian is longitude 0^{0}. 15^{0} on earth represents one hour and Accra is on the Greenwich Meridian while Johanesbourg is 30^{0} East. Given that the time in Accra is 2:17pm, the time in Johanesbourg is:
A) 4:17pm
B) 12:17pm
C) 4:17a.m.
D) 3:17pm

15. p and q are two statements. The truth table that represents the statement "p and q" is:

A)

p	q	p∧q
T	T	T
T	F	T
F	T	T
F	F	T

B)

p	q	p∧q
T	T	T
T	F	F
F	T	F
F	F	F

C)

p	q	p∧q
T	T	T
T	F	T
F	T	F
F	F	T

D)

p	q	p∧q
T	T	T
T	F	F
F	T	F
F	F	F

16. Evaluating $\frac{1}{4}\ of\ \frac{1}{2}+\frac{5}{12}\div\frac{5}{6}$ gives:
A) $\frac{1}{4}$
B) $\frac{1}{2}$
C) $\frac{11}{40}$
D) $\frac{5}{8}$

17. Given the function f defined over $\Re$ by $f: x \to 2x^2 - 3$. The value of $f(-2)$ is:
A) -5
B) -7
C) 5
D) -11

18. Fig. 2 shows a relation from set A to set B.

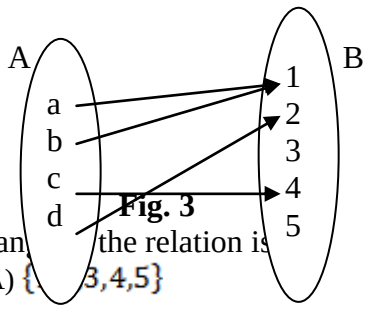

Fig. 3

The ran the relation is
A) {3,4,5}
B) $\{a,b,c,d\}$
C) $\{(a,1),(b,1),(c,4),(d,2)\}$
D) {1,2,4, }

19. Given that $(x-1)$ is a factor of the Polynomial P(x) $=x^3-3x^2+5x+k$, then the value of k is

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

20. The remainder when x^2-2x+7 is divided by $(x+4)$ is:

A) -17
B) -1
C) 15
D) 31

21. The equation $x(x+2)-3(x+2)=0$ has solution(s):

A) $\{-3,\ -2\}$
B) $\{3, -2\}$
C) $\{-3,\ 2\}$
D) $\{2\}$

22. In Fig. 4 below, PQRS is an inscribed quadrilateral where angle PSR = 80^0 and angle SRQ = 110^0

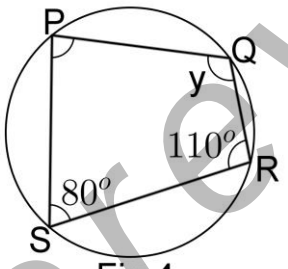

Fig 4

The value of angle y is:

A) 70^0
B) 80^0
C) 100^0
D) 180^0

23. Fig. 5 shows an isosceles triangle ABC with angle CBA = 80^0 and AB = BC.

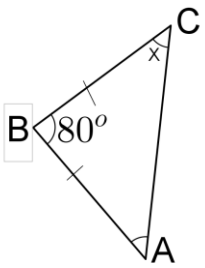

Fig. 5

The value of angle x is:

A) 50^o
B) 100^o
C) 80^o
D) 90^o

24. In Fig. 4 below, the lines (l_1) and (l_2) are parallel while (l_3) is a transversal.

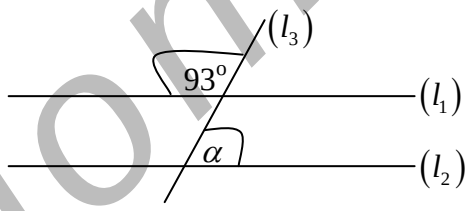

Fig. 6

The value of angle α is:

A) 87^o
B) 93^o
C) 180^o
D) 90^o

25. A bird on the top (T) of a tree sees a grasshopper (P) on the ground at an angle of depression θ as shown in Fig. 7 below.

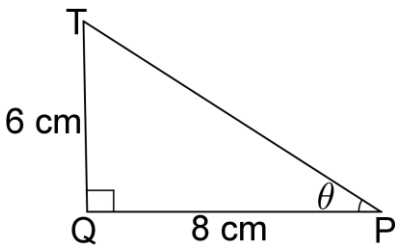

Fig. 7

Given that PQ = 8m and TQ = 6m, the value of Sin θ is:

A) $\frac{3}{5}$

B) $\frac{3}{4}$

C) $\frac{4}{5}$

D) $\frac{5}{3}$

26. The value of the angle 270^0 in radians is:

A) $\frac{1}{2}\pi$

B) $\frac{3}{2}\pi$

C) $\frac{270}{\pi}$

D) 2π

27. The solution of the inequality $2x - 3 \leq 5$ is

A) $2x \leq 8$

B) $x \geq 4$

C) $x < 4$

D) $x \leq 4$

28. The expression $x^2 - (2x-3)(2x+3)$ when expanded and simplified gives:

A) $(3+x)(3-x)$

B) $-3(3+x^2)$

C) $3(3-x^2)$

D) $3(3+x^2)$

29. $m = \frac{v^2-3k}{2v+2k}$. The value of m for which $v = -2$ *and* $k = -1$ is:

A) $\frac{5}{6}$

B) $\frac{-5}{6}$

C) $\frac{11}{6}$

D) $\frac{-11}{6}$

30. Fig.8 represents a kite with diagonals AB =8cm and DC=20cm

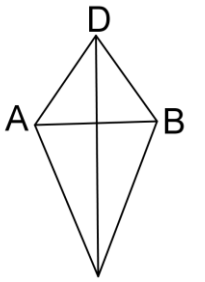

Fig.8

The area of the kite is:

A) 160 cm^2

B) 80 cm^2

C) 40 cm^2

D) 28 cm^2

31. A rectangular sheet of paper of sides 12cm by 8cm has a semi- circular piece cut out of it as shown in Fig. 9 below.

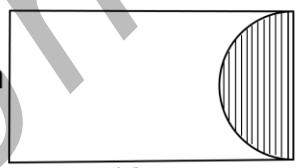

Fig. 9

The area of the unshaded portion in terms of π is:

A) 96 πcm^2

B) $8(12 - \pi)\ cm^2$

C) 8 πcm^2

D) 64 πcm^2

32. Consider the sequence 9, 13, 17, 21, …. The 10^{th} term of this sequence is:

A) 270

B) 45

C) 27

D) 4

33. The numbers 9,y,36 are consecutive terms of a geometric progression. The value of y is:

A) 4

B) 18

C) 22.5

D) -18 or 18

34. The midpoint of the line segment joining the points P(6, - 3) and Q(18, 15) is the point with coordinates:
A) (- 6, 6)
B) (12, 12)
C) (12 ,6)
D) (- 6, - 9)

35. The area of the triangle whose vertices are at the points P(0, 0), Q(0, 4) and R(2, 0) is:
A) 16 square units
B) 4 square units
C) 8 square units
D) 6 square units

36. The line L: y = 2x – 20 cuts the x-axis at a point whose coordinates are:
A) (0, 10)
B) (10, 0)
C) (0, -20)
D) (- 10, 0)

37. The gradient of the line $2x+3y-15=0$ is:
A) 5
B) $\frac{2}{3}$
C) $\frac{-3}{2}$
D) $\frac{-2}{3}$

38. The equation of the line which is perpendicular to the line $y=2x+3$ and passes through the point $(-3,\ 1)$ is:
A) $x+2y+1=0$
B) $x-2y+1=0$
C) $2x+y+5=0$
D) $x+2y-5=0$

39. Given that the lines $3x+6y+5=0$ and $2x+ky-13=0$ are parallel, the value of k is:
A) $\frac{1}{2}$
B) 2
C) 4
D) – 1

40. The value of $r \neq 2$, that satisfies the relation $\frac{5}{r-2}-\frac{1}{2}=2$ is:
A) 4
B) $\frac{16}{3}$
C) 12
D) 0

41. Given the matrix equation
$\begin{pmatrix}2 & 3\\ 7 & 5\end{pmatrix}=\begin{pmatrix}2 & 3\\ 7 & y-2\end{pmatrix}$
The value of y is:
A) 5
B) – 7
C) 7
D) 9

42. The matrix M is of order $4\times 2n-1$ and matrix N is of order 5×3. The value of n for which the produce MN is possible is:
A) 3
B) 2
C) 5
D) 4

43. The transpose of matrix M = $\begin{pmatrix}2 & 3\\ 5 & 1\end{pmatrix}$ is:
A) $\begin{pmatrix}1 & -3\\ -5 & 2\end{pmatrix}$
B) – 13
C) $\begin{pmatrix}2 & 5\\ 3 & 1\end{pmatrix}$
D) $\frac{1}{-3}\begin{pmatrix}1 & -3\\ -5 & 1\end{pmatrix}$

44. A triangle ABC with vertices A (2, 5), B (5, - 2) and C (0, -1) is reflected along the y-axis to give the image triangle A′B′C′. The coordinates of the vertices of A′B′C′ are:
A) A′(-2, 5) , B′(-5,-2) , C′(0, - 1)
B) A′(-2, 5) , B′(5,2) , C′(0, 1)
C) A′(-2, 5) , B′(-5,2) , C′(0, 1)
D) A′(2, 5) , B′(-5,2) , C′(0, 1)

Fig. 10 below represents a connected network

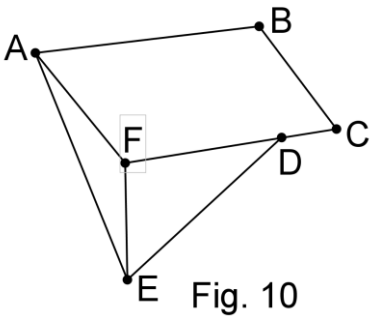

Fig. 10

45. The number of nodes in Fig. 10 is:

A) 8
B) 6
C) 4
D) 7

---

46. The number of arcs in Fig. 10 is:

A) 3
B) 6
C) 8
D) 7

---

47. Given that $\overrightarrow{OA} = -6\mathbf{i} + 5\mathbf{j}$ and $\overrightarrow{OB} = 2\mathbf{i} - \mathbf{j}$, the value of $|\overrightarrow{AB}|$ is:

A) 14
B) 10
C) 2
D) $\sqrt{28}$

---

48. In Fig. 11 below, O is the centre and AB a chord to a circle.

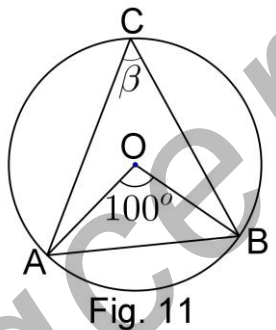

Fig. 11

Given that angle AOB = 100^0, the value of the angle β is:

A) 200^0
B) 100^0
C) 80^0
D) 50^0

---

49. Table 1 below shows the marks obtained by 20 students in an oral test.

Marks	0	5	7	10	12	13
No. of students	2	5	4	1	2	6

Table 1

The modal mark is:

A) 6
B) 13
C) 47
D) 7

---

50. A bag contains 3 red balls and 5 yellow balls that are identical in shape. The probability of choosing a red ball and a yellow ball from the bag, in that order, without replacement is:

A) $\frac{15}{56}$
B) $\frac{15}{64}$
C) $\frac{1}{15}$
D) $\frac{3}{5}$
