UGANDA NATIONAL EXAMINATIONS BOARD
PRIMARY LEAVING EXAMINATION
2022

MATHEMATICS

Time allowed: 2 hours 30 minutes

Index No.

Random No.					Personal No.		

Candidate's name : ....

Candidate's signature : ....

School Random number : ....

District No. :

Read the following instructions carefully :

1. The paper has two sections: **A** and **B**.

2. Section **A** has 20 questions (40 marks)

3. Section **B** has 12 questions (60 marks)

4. Answer **all** questions. **All** answers to both Sections A and B must be written in the spaces provided.

5. All answers must be written using a **blue** or **black** ball point pen or ink. Diagrams should be drawn in pencil.

6. Unnecessary changes in your work may lead to loss of marks.

7. Any handwriting that cannot be easily read may lead to loss of marks.

8. Do **not** fill anything in the table indicated:

   "**For Examiner's use only**" and boxes inside the question paper.

Turn Over

*Answer **all** questions in this section*
Question **1** to **20** carry **two** marks each.

1. **Add:**   23 + 46

2. The school nurse was born in 1988. Write the nurse's age in Roman numerals.

3. If set **R** has one subset, find the number of elements in set **R.**

4. The Highest Common Factor (**HCF**) of two numbers is 6 and their Lowest Common Multiple is 36. Find the numbers if their ratio is 2 : 3.
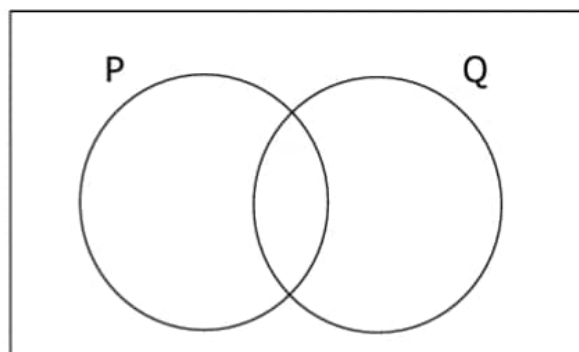
5. Find the value of a in the figure below.
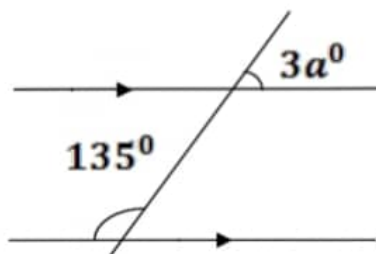
6. Solve for the value of m if $2^m \times 2^{2m} = 64$

7. Given that $P * R = \dfrac{4P+R}{R+1}$. Evaluate $4 * 2$

8. How many hectares are in 2.5 square kilometres?

9. On the Venn diagram below, shade the complement of set **Q**.

Turn Over

10. After covering $\frac{2}{5}$ of the journey, a cyclist was left with 40 km to reach his destination. Find the total distance a cyclist had to cover.

11. Express **123** four in quinary base.

12. Find the next two missing numbers in the sequence below.
    1, 6 , 15 , 28 , _____, _____

13. Round off **6.996** to the three significant figures.

14. The mathematics teacher was facing North-West and then turned anticlockwise to face South-West. Through which angle did the teacher turn?

15. A mother bought a semi-circular piece of watermelon having a diameter of 42cm. Calculate the perimeter of the piece of watermelon she bought.

(Take $\pi = \frac{22}{7}$)

16. In the space provided below, draw the net of a cone.

Turn Over

17. It started raining at 10:30pm and stopped at 9:15am. For how long did it rain?

18. Factorize completely: $6p^2q - 8pq^2$

19. Solve the inequality and list the values for **x**: $12 \leq 3\mathbf{x} < 24$

20. On selling an article at sh. 84400, a trader made a profit of $5\frac{1}{2}\%$. Calculate the actual profit which was made by the trader.

*Answer **all** questions in this section*
Marks for **each** question are indicated in the brackets.

21. In a village symposium on sanitation, (P + 1) members ate matoke (M) only, 14 members ate rice (R) and the members who ate both matoke and rice were twice those who ate matoke only.

    (a) If 9 members ate matoke, complete the Venn diagram below using the given information.

    (2 marks)

    n(R)=14   n(M)=9

    ....   P + 1
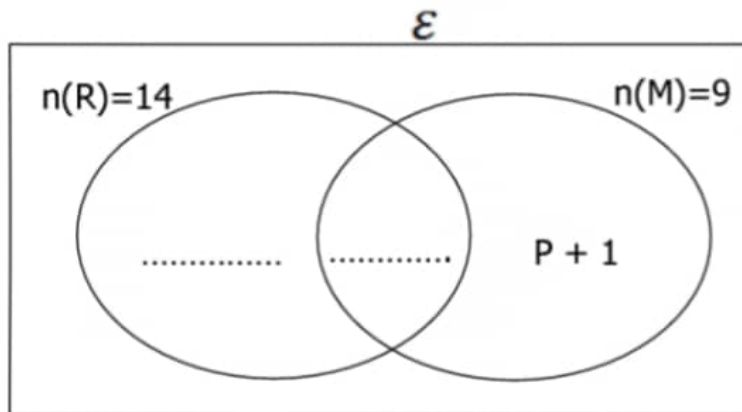
    (b) How many members ate rice only?

    (3 marks)

    (c) Find the number of members who attended the symposium altogether.

    (1 mark)

22. At a certain school, three bells are used at intervals of 30, 40 and 45 minutes for lower, middle and upper primary classes respectively. If they last rang them together at 9:00am, at what time will they be rung together again?

(4 marks)

23. (a) Write in words: **9703.**

(2 marks)

   (b) Expand **72.03** using exponents.

(2 marks)

(c)   What is the place value of **3** in the number **67384**?

<div align="right">*(1 mark)*</div>

24.   (a)   Using a pair of compasses, a ruler and a pencil only, construct a quadrilateral **WXYZ** with point **O** as its centre, line **OX** = 3cm and line **OY** = 4cm.

<div align="right">*(4 marks)*</div>

(b)   Find the area of the quadrilateral formed.

<div align="right">*(2 marks)*</div>

Turn Over

25. (a) A worker spends $\frac{1}{7}$ of his monthly salary on food, $\frac{2}{3}$ of the remainder on rent and he saves the rest. Find his annual salary if his monthly saving is sh.140000.

(4 marks)

(b) Work out his total monthly expenditure.

(1 mark)

26. The sum of 3 consecutive odd numbers is 81.
   (a) Find the numbers if the first number is n^2.

(4 marks)

(b)   Work out the sum of the second and third numbers.

27.   The exterior angle of a regular polygon is $\frac{2}{3}$ the interior angle.

(a)   Find the size of the interior angle.

(b)   Name the regular polygon.

Turn Over

28. A housemaid went shopping with two notes of sh.20000 each and spent it as shown below.

Item	Quantity	Unit cost	Total cost
Bread	4 loaves	Sh. 3000 per loaf	Sh. ....
Beans	$2\frac{2}{3}$ kg	Sh. ....per kg	Sh. 4000
Beans	...................kg	Sh. 2000 per kg	Sh. 8000
Curry powder	500g	Sh. ....per kg	Sh. ....
Total Expenditure			Sh.26400

(a) Complete the table above.

(5 marks)

(b) Find her change.

(1 mark)

29. (a) Given that: **a = -4** and **b = 5**, find the value of **2b − a.**

(2 marks)

(b) Simplify: 5k − 2(3 − k).

(2 marks)

(c) If **x** = $\sqrt[3]{64}$, find the value of **x**.

(2 marks)

Turn Over

30. The figure below is a triangular garden inside a rectangular fence having width of 10m. Study the figure and use it to answer questions that follow
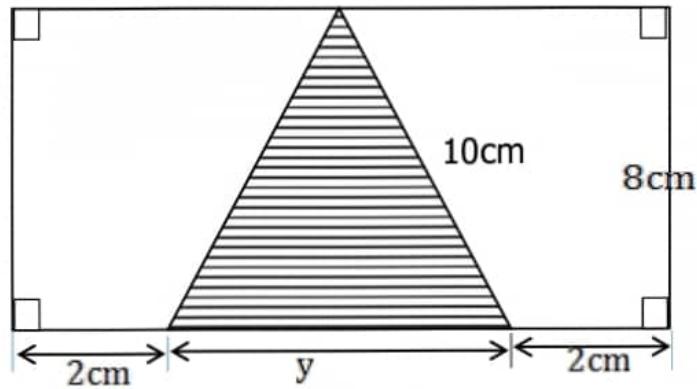
(a) Find the base of the garden.

(2 marks)

(b) Work out the area of the fence left unoccupied by the garden.

(3 marks)

31. The table below shows marks scored by contestants in National quiz competitions. Study it carefully and answer the questions that follow.

Marks	35	40	50	70	90
Number of contestants	2	3	2	2	1

(a) What is the modal mark?

(1 mark)

(b) How many contestants got above the modal mark?

(1 mark)

(c) Calculate the mean mark.

(2 marks)

32. A tourist drove from game Reserve **K** to game Reserve **L** IN $\frac{3}{4}$ hours and later returned via the same route at an average speed of **90**km/hr in **4**hours after when he had rested for **15**minutes. Find the average speed for the whole journey.

(4 marks)

END

CamScanner