NATIONAL PRIVATE EDUCATIONAL INSTITUTIONS ASSOCIATION (NPEIA)

MOCKS MASTER SET I 2023

MATHMATICS

TIME ALLOWED: 2 HOURS 30 MINUTES

Index no.

Name :

School :

Stream : _____ Signature: _____

District :

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

<u>Read the following instructions carefully.</u>

1. This paper has two sections A and B. Section A has 40 questions and section B has 15 questions

2. Answer ALL questions. Answers to both sections A and B must be written in the spaces provided.

3. All working must be done using a blue or black ball point pen or ink. Any working done in pencil other than graphs, pictures and diagrams will not be marked.

4. No calculators are allowed in the examination room.

5. Unnecessary changes of work may lead to loss of marks

6. Any hand writing that cannot easily be read may lead to loss of marks.

7. Do not fill anything in the box indicated for 'Examiner's use only' and those inside the question paper

FOR EXAMINER'S USE ONLY		
QN. NO.	MARK	EXR'S No.
1-10		
11-20		
21-30		
31-40		
41-43		
44-46		
47-49		
50-52		
53-55		
TOTAL		

1	Work out: $33 \times 2 =$	2	Express 4Kg into grammes.
3	Write CDXXIV in Hindu – Arabic numerals	4	Find the range of -4 and -3
5	Given that Set R = {all natural even numbers less that 10}, how many subsets are in set R?	6	A bag contains 5 red pens and 3 blue pens. Find the probability of picking either blue or black pen from the bag?
7	Add: $33_{five} + 12_{five}$	8	Using a ruler, a sharp pencil and a pair of compasses only, construct an angle that is complementary to 30^0.
9	Find the next number in the sequence: 4, 9, 25, 49, _____	10	Given the decimal numbers: 0.6, 0.7, 0.5, 0.2 and 0.3, circle only two numbers that gives a total of 1.

11	What percentage of the diagram below is un shaded?	12	Round off 759.75 to the nearest whole number.
13	A taxi takes 2 hours 15 minutes to travel from Kampala to Jinja. At what time should it leave Kampala to reach Jinja at 10:10 am?	14	The L.C.M of 12 and k is 36 and their G.C.F is 6. Find the value of **k**.
15	The figure below is a cuboid, if the area of all faces making the figure is 94cm², find the value of **w** in centimeters. 4cm W 5cm	16	In Kasagama primary school, the Kitchen is at a bearing of 195^0 from the head teacher's office. Using a sketch diagram, find the bearing of the head teacher's office from the Kitchen.
17	Demas sold a radio for Sh. 25,000 making a loss of sh. 3,000. At what price did he buy the radio?	18	Solve the inequality: $8 - 2h > 2$

19	Work out: 3 + 5 X 2	20	Given that 3 US dollars is equivalent to Ug Sh.10,950. Find the number of dollars that Kabugo will buy with Ug.Sh. 730,000.

SECTION B (60 marks)

21 a) Given the numeral; 84,051

l) Write down the place value of 0. *(1mark)*	ll)	Without dividing, show that the given numeral can be divisible by 3. *(2marks)*

lll) Find the sum of the value of 4 and the place value of 5. *(3marks)*

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22 Medi bought the following items from the market.

> 2kg of rice at sh. 3,800 per kg,
> 6Kg of Soya flour at sh. 1,500 every half a Kg,
> 500ml of cooking oil for sh. 6,000 per litre,
> 4 heaps of Onions at sh. 2000

a) How much money did he spend altogether? *(4 marks)*
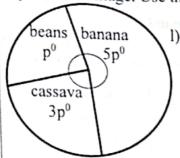
b) If he used sh. 6,000 for transport and remained with only sh. 3,400 in his wallet, how much money did he have at the beginning? **(2marks)**

23	The Venn diagram below shows 80 guests who attended the party and were served Water (W) and Soda(S). The number of guests who were served with Soda only is half the number of guests who were Served with Water, Complete the Venn diagram below. **(2 marks)**	b)	How many guests were served with Water? **(3 marks)**

$n(\varepsilon) = 80$

$n(S)$ $n(W)=y$

16

8

24	a) A tray has 30 eggs. How many trays can be got from 27;120 eggs? **(2marks)**	b)	Subtract 341 from 2000. **(2marks)**

25	A tank has two taps that pour water into it. Tap D turned on alone fills the tank in 15 minutes and tap G turned on alone fills it in 10 minutes. One day, the tank was $33\frac{1}{3}$ % full and the two taps turned on at the same time. How long did it take to fill the tank? **(4 marks)**

26	In the table below, the sum of the values is the same horizontally, vertically and diagonally. Study and complete it carefully by showing the working. **(5 marks)**

9	4	___
___	6	___
7	___	3

27. a)	The mean of the numbers; 15, 4, 10, r, 8 and 15 is 11, find the value of **r**. **(2 marks)**	b)	Find the median of the numbers **(2 marks)**

28	The figure below shows a rectangular sheet of paper measuring 30cm long by 20cm wide. If each side is increased by 10%, calculate the percentage increase in the area. **(6 marks)**

30cm

20cm

29. a)	Express 15 metres per second into Kilometres per hour. **(3 marks)**	b) A Mathematics examination started at 12:15am. Express the time the paper started in 24 hour clock system. **(2 marks)**

30	The average of three consecutive odd numbers is 9. If the largest number is h, find the square of the smallest number. **(5 Marks)**

31	Using a pair of compasses, a ruler and a pencil only, construct a parallelogram HEAR in which line segment EA= 6.5cm, angle HEA = 60^0 and line segment AR = 4cm. **(4 marks)**

32. The circle graph below shows the number of farmers who grow various crops in Mpumudde village. Use the data given to answer questions that follow.

l) Find the value of p. $\qquad$ (2 marks)

ll) If 100 farmers grow cassava, How many farmers are in Mpumudde village altogether? (2 marks)

lll) Express the number of farmers who grow beans as a percentage of all the farmers in the village.

(1 mark)

Wish you success