Examination Index Number.....

PRESIDENT'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

BUNDA DISTRICT COUNCIL

FORM II PRE-MOCK EXAMINATION

BASIC MATHEMATICS

TIME: 2:30 HOURS **JUNE, 2022**

INSTRUCTIONS

1. This paper consist a total of Ten (10) compulsory questions
2. Show clearly all the working and answer in your answer sheet
3. All writing must be in blue ink except drawings which must be in pencil
4. **NECTA** mathematical table may be used
5. All communication devices and calculator are not allowed in examination room
6. Write your examination number on every page of your answer booklet(s)

Answer All Questions

1. (a) Mlimani city mall is opened every day of the week. Edwine, meshack and Baraka visit the mall together one Saturday. After that edwine visit it every second day, meshack visit it every third day and Baraka visit it every fifth day.
   i) After how any days will they be at the mall together again?
   ii) What day of the week will that be?

   (b) i) Onyango walked three fifth of his journey. John walked three fouth of his journey. If these two people have the same length of their journey, who remains with the shortest distsnce?

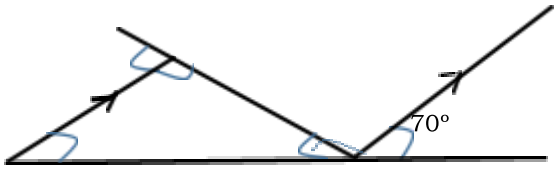
   ii). Mr Alananga bought a car for TShs 500,000. In one year it lost 24% of its value. How much was it worth after one year?

2. (a) i) Estimate 978 x 543

   ii). From the 1967 Tanzania mainland census, there were 526,910 children under the age of fifteen. Round off this number to Millions and Thousands

   (b) How many dacigrams are in there *0.00912 tonnes?*

3. (a) Use the following figure to find the value of *(X+Y)-(W+Z)*



(b) A church farm is 3500m long and 2800m wide, if Matiti walked around the farm fifteen times, what distance did he walk in metres?

4. (a) A father's age is four times the age of his son. If the sum of their ages is 50 years, find the age of the son.

(b) Solve graphically $y = x^2+3x-4$ and $y = 2x+8$

5. (a) Mihayo bought a second hand car for *TShs 5,800,000* and spent *TShs 900,000* on its repair. If he sold the for *6,300,000*. What is his profit.

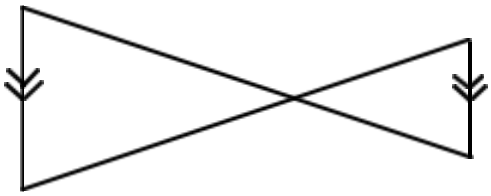
(b) The interest in four years on a principal of *TShs 90,000* is *TShs 12,600*. Find the rate.

6. (a) Without drawing graph, write down the gradient and y-intercept of $3y - 4x = 2$
   (b) The gradient of the line $ky = (k + 1)x + 7$ *is 3*. Find the value of ***k***

7. (a) Rationalize the following denominator $\sqrt{7} + 2\sqrt{2} \,/\, 8 - 2\sqrt{3}$

   (b) Evaluate the expression $2log_{10}{}^{5} + log_{10}{}^{36} - log_{10}{}^{9}$ without using tables

8. (a) Use the figure below to:-



   i) To prove that $\triangle$ ABC is similar to $\triangle$ EDC
   ii) Calculate the length $\overline{EC}$ and $\overline{CD}$

   (b) State any two theorems for triangles to be congruent

9. (a) In a right-angled triangle, tanQ= 5/12. Find the value of;- i) SinQ and ii) 2cosQ

   (b) A ladder is 15m long, rest against a vertical wall such that the foot of the ladder is 6m from the wall of a horizontal floor. Find the height above the floor at the point where the ladder touches the wall

10. (a) By using a sketch, find the image of point Q(4,5) after reflection in the line y-x=0 followed by another reflection in the line –y-x=0

    (b) Draw a triangle ABC with vertices A(2,-1), B(4,1) and C(-1,3). Using an enlargement factor of 2, draw its image on the same set of axis and write coordinates of vertices of the enlarged triangle.

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