KAPSABET HIGH SCHOOL

443/1   -   AGRICULTURE -   PAPER 1

2 hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM----------------------------------

DATE………………………...SIGN……………………..TARGET……...INDEX…………….

INSTRUCTIONS TO CANDIDATES

- Write your name and Admission number
- This paper consist of three sections A, B and C
- Answer ALL he questions in section A and B and ANY TWO questions in section C in the spaces provided

FOR EXAMINERS' USE ONLY

Section	Questions	Maximum Score	Candidate's Score
A	1-16		
B	17-20		
C	21		
	22		
	23		

SECTION A: Answer all the questions in this section (30 Marks)

1. Name three branches of horticulture (1 ½ marks)

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2. List three aspects of light that influence crops growth (1½ marks)

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3. a) What is mixed farming (1 mark)

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b) Give three disadvantages of mixed farming to a small scale farmer (1½ marks)

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4. Give two ways how hard pans would be caused by cultivation (1 mark

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5. a) Give a reason why nitrogenous fertilizer should: (2 marks)
    i)   Be stored under dry condition

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    ii)   Be applied in most soils

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    iii)   Be applied to an established crop

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    iv)   Be applied frequently

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    b) Distinguish between complete compound fertilizer and incomplete
        compound fertilizer (1 mark)

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6. State two mechanical methods of separating soil particles according to size during soil analysis (2 marks)

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7. Give two methods of controlling stalk borer in maize production (1 marks)

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8. State two reasons why too much air in the silo is undesirable in the process of silage making (1 mark)

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9. State three ways of controlling weeds in pure grass pastures (1 ½ marks)

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10. Give four advantages of title deed to a farmer (2 marks)

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11. Outline four advantages of a mixed-legume pasture over a pure-grass pasture (2 marks)

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12. Give four management practices that promote high herbage yields in pasture production (2 marks)

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13. Give four factors that a farmer should consider in siting a nursery (2 marks)

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14. Give four benefits of using vegetable propagation in orange production (2 marks)

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15. a) What is micro-catchment? (1 mark)

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b) List any four types of micro-catchments (2marks)

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16. List four common bacterial diseases that affect crops (2 marks)

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SECTION B: Answer all the questions in this section (20 Marks)

17. Study the diagram below.
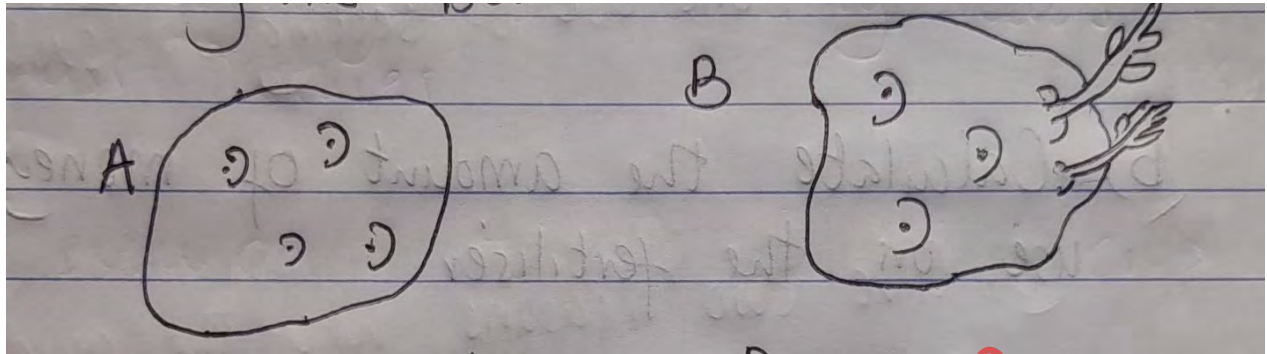
a) Name the process above used to prepare Irish potatoes in readiness for planting (1 mark)

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b) (i) Which of the two potatoes is suitable for planting? (1 mark)

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(ii) Give a reason for your answer in (b) (i) above (1 mark)

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c)   Give two reasons why maize needs to be earthed (2 marks)

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18. A farmer growing maize on 10 hectares is to dress it with sulphate of ammonia (20%N) at the rate of 120kg of S.A per hectare. At the local market S.A is available in 50kg bags selling at Ksh. 1500 per bag.
   a) Calculate the amount of S.A the farmer needs to top-dress his crop of maize (3 marks)

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   b) Calculate the amount of money he will use on fertilizer (2 marks)

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19. The diagram below illustrates a type of soil erosion. Study it carefully and answer the questions that follow.
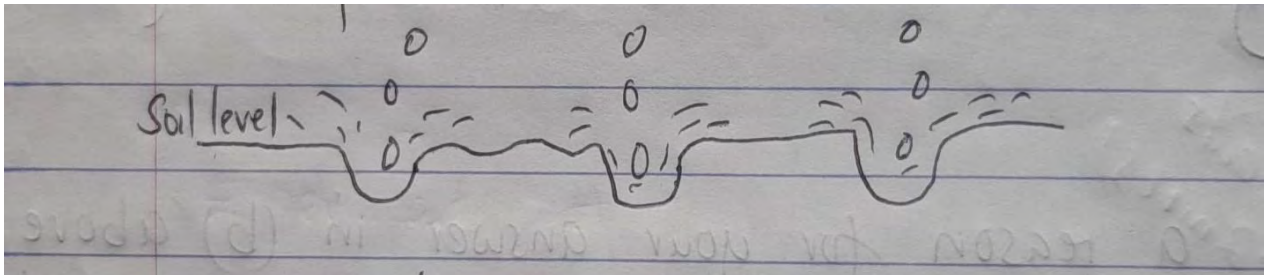
   a) Identify the type of erosion above (1 mark)

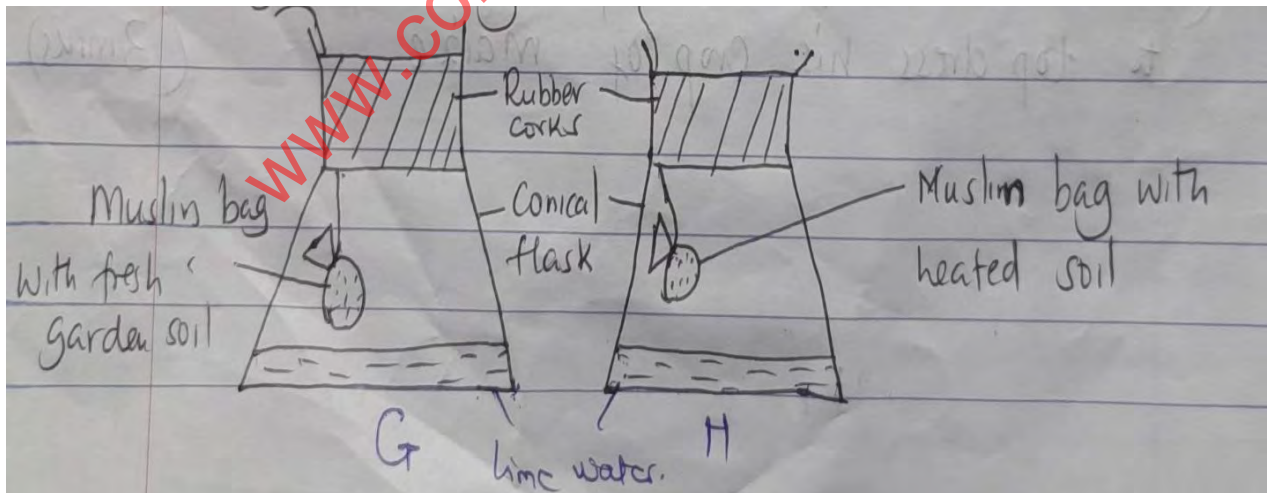……
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b) Give two factors that may accelerate the rate of the type of erosion above (2 marks)

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c) Give two effects of the type of soil erosion shown above on the farm (2 marks)

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20. Study the diagrams labelled G and H

a) Give one use of setting up such an experiment (1 mark)

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b) Give two reasons why the garden soil in the experiment H is heated (2 marks)

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c) Briefly explain what happens to the lime water in both experiment G and H

Experiment G (1 mark)

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Experiment H (1 mark)

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SECTION C: Answer TWO questions only in this section (40 Marks)

21.a) Discuss ten cultural practices of controlling pests in a crop field (10 marks)

b) Outline five factors a farmer should consider before deciding on the type of irrigation in crop production (5 marks)

c) Describe the qualities of the mother plant that should be considered when selecting vegetative material for planting (5 marks)

22.a) Discuss the factors considered when drawing a crop rotation programme (10 marks)

b) Explain the precautions that should be observed during harvesting of tea (5 marks)

c) Describe reasons for drainage as a method of land reclamation in crop production (5 marks)

23.(i) Describe production of onions under the following subheadings
   a) Ecological requirement (3 marks)
   b) Land preparation (4 marks)
   c) Harvesting and marketing (3 marks)
   d) Breaking the tops in onions (1 mark)
   e) Two pests in onions (2 marks)
   (ii) Explain seven ways soil fertility is maintained (7 marks)

KAPSABET HIGH SCHOOL

443/2   THEORY -   - AGRICULTURE   PAPER   2

2 hours

Kenya Certificate of Secondary Education *(K.C.S.E.) PRE-MOCK 2024*

Name--**ADM**-----------------------------

DATE………………………..SIGN…………………..…………….TARGET………………………….……….INDEX……….……..

Instructions to Candidates:

a)   Write your name and index number in spaces provided above
b)   This paper consists of **THREE** sections: A, B and C
c)   Answer all questions in Section A and B.
d)   All answers should be written in the spaces provided on this question paper.
e)   Candidates should answer the questions in English.
f)   Answer any two questions in section C

For Examiner's use only

Section	Questions	Maximum Score	Candidate's Score
A	1 – 20	30	
B	21 - 24	20	
C	25	20	
	26	20	
	27	20	
	TOTAL SCORE	90	

SECTION A [30 MARKS]

Answer All The Questionsin The Spaces Provided.

1. Mention **four** control measures undertaken to control brucellosis in cattle.   [2 marks]

    (i) ....

    (ii) ....

    (iii) ....

    (iv) ....

2. State **four** breeds of rabbits   [2mark]

    (i) ....

    (ii) ....

    (iii) ....

    (iv) ....

3. List any **two** physiological condition s of livestock that may be assessed to determine the health

    status of the animal.   [1 ½ mark]

    (i) ....

    (ii) ....

4. State **two** ways of preventing predation in a fish pond.   (1 mark)

    (i) ……

    (ii) ……

5. State **four** factors considered when selecting eggs for sale   [2 marks]

    (i) ……

    (ii) ……

    (iii) ……

    (iv). ……

13

6. State **four** observations on behavior of chicks under excess heat in the brooder that a farmer may notice. [2marks]

(i) ………

(ii) ………

(iii) ………

(iv). ………

7. State **four** advantages of embryo transplant (2 mark)

i. ………

ii. ………

iii. ………

iv. ………

8. Differentiate between mothering ability and prolificacy [2 marks]

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9. Name **four** practices carried out in the crush (2 marks)

(i) ………

(ii) ………

(iii) ………

(iv). ………

10. Give **four** reasons why young rams should be docked. [2marks]

(i) ………

(ii) ………

(iii) ………

(iv). ………

11. Give any **two** methods of selection done on livestock [1 mark]

(i) ………

(ii) ………

12. List **four** mechanical methods of tick control in a farm [2 marks]

(i) ………

(ii) ………

(iii) ………

(iv). ………

13. State **two** factors that determine the quality of honey [1mark]

(i) ………

(ii) ………

14. Give the terms used to describe the following

(i) Mature male pig (1 mark)

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(ii) Sterilised male birds ($^1/_2$ mark)

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(iii) Mature female goat ($^1/_2$ mark)

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15.State **four** qualities considered when selecting a heifer for dairy purposes [2 marks]

(i) ………

(ii) ………

(iii) ………

(iv). ………

16. Give **one** role of a damp proof course in the foundation of a farm building. (1 mark)

(i) ………

17. State any four causes of cannibalism in poultry production. (2 marks)

(i) ………

(ii) ………

(iii) ………

(iv). ………

18. Name the breed of camel with two humps ($^1/_2$ marks)

(i) ………

19. Give the functional difference between a ripsaw and atenon saw. (1 mark)

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20. Define the term steaming up as used in livestock production   (1 mark)

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SECTION B [20 MARKS]

Answer all questions in this section

21. Below is an activity carried out in poultry production? Study it carefully then answer the questions that follow
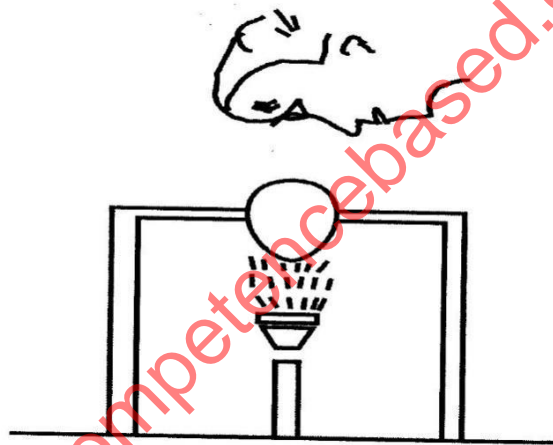
    a)   Identify the practice being carried out………………………………………(1 mark)

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    b)   State **three** defects that can be detected by this practice.   (3 marks)

    (i) ……

    (ii) ……

    (iii) ………

c). State **one** disadvantage of artificial incubation.   (1 mark)

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16

22. The diagram below represents livestock parasites

Y   Z
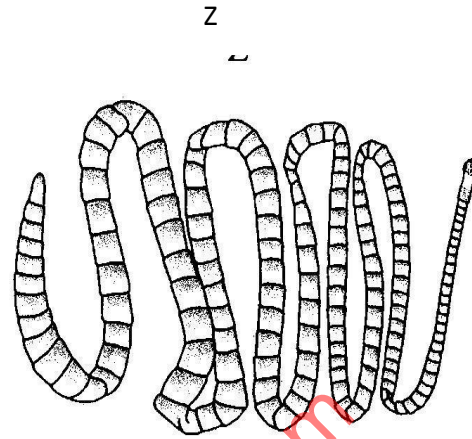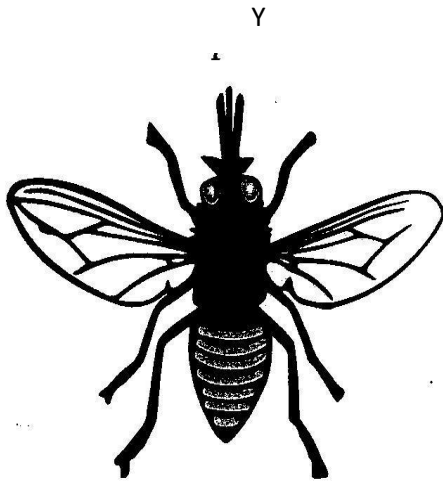
(a) Identify the parasites Y and Z   (1 mark)

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(b) In which organ in livestock is parasite Z found?   (1mark)

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(c) How is parasite Z passed from livestock to human being   (1 mark)

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(d) Give a control measure of each parasite Y and Z   (2 marks)

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23. Below are illustrations farm tools and equipment

(a).Identify the tool/equipment labelled A and B   (2 marks)

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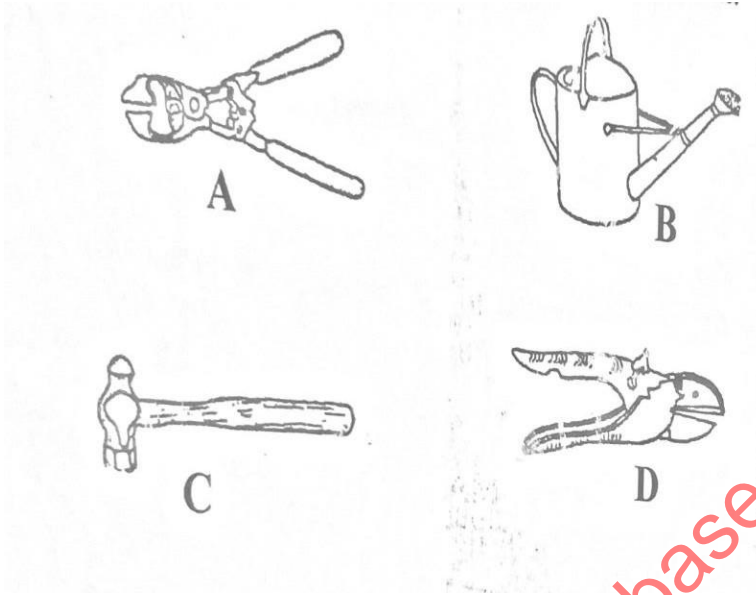
(b). State **two** appropriate uses of the tools labelled C   (1 mark)

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(c). Explain **two** maintenance practices of the tool labelled D.   (2 mark)

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24. A farmer wants to prepare a ration for layers containing 18% DCP. Using maize germ 20% DCP and a
   wheat grain 10% DCP

   (a). Calculate using peason's square method the amount of each food stuff needed in order to
   prepare 100kg of feeds.   (4 marks)

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(b).State any other method used in computation of food ratio.   (1mark)

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SECTION C [20 MARKS]

Answer all questions in this section

25. (a). Describe conditions under which bees abscond the hive.   (5 marks)

   (b). Describe the causes of stress in poultry management.   (10 marks)

   (c). Describe the uses of fences on the farm.   (5 marks)

26. (a). Explain **four** factors that affect digestibility of food in livestock.   (8 marks)

   (b). Explain the essentials of clean milk production.   (7 marks)

   (c). State the disadvantages of clean natural method of mating.   (5 marks)

27. (a). State **four** advantages of using a sub soiler in seedbed preparation.   (4 marks)

   (b). Give **six** advantages of artificial insemination in cattle management.   (6 marks)

   (c). Explain **ten** function of water in animal's body.   (10 marks)

PRACTICAL CONFIDENTIAL

Each Candidate Requires The Following:

1. About 5g(small)piece of specimen Y.

2. 4 test tubes in a test tube rack and 2 droppers.

3. 10ml of 20% hydrogen peroxide solution in a test tube.

4. 100ml empty beaker – 2.

5. 10ml measuring cylinder.

6. A pair of forceps.

7. Access to hot water maintained at 80°C from a hot water bath.

8. 2 wooden splints.

9. (1 ripe orange fruit labeled specimen K).

10. Scalpel.

11. Access to:

    (i) Sodium hydroxide solution - 4ml per candidate.

    (ii) Copper (II) sulphate solution - 2ml per candidate.

    (iii)Dilute hydrochloric acid - 2ml per candidate.

    (iv) Sodium hydrogen carbonate solution - 2ml per candidate.

    (v) Benedict's solution - 4ml per candidate.

    (vi)Source of heat.

Note:
- 5g (small) piece of fresh liver labeled as specimen Y.
- 1 ripe orange fruit labeled specimen K.

KAPSABET HIGH SCHOOL

231/1 - **BIOLOGY** - **PAPER 1**

2 hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name---ADM-------------------------------

DATE………………………..SIGN……………………..TARGET……..INDEX…………

Instructions

1. Write your name, Index Number and School in the spaces provided above.
2. Sign and write the date of the examination in the spaces provided above.
3. Answer all the questions in the spaces provided.
4. Additional pages must not be inserted.
5. Check the question paper to ascertain that all the pages are printed and that no questions are missing.
6. All answers should be written in English

FOR EXAMINER'S USE ONLY

Question	Maximum Score	Candidate's Score
1-25	80	

1. Name the branch of biology that involves the study of:
   (a) Organism for the sake of classifying them   (1mark)

   ……………………………………………………………………………………………

   ……………………………………………...………………………………………………..

   (b) Microscopic organisms.   (1 mark)

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2. The diagram below represents a plant

   (a) Name the division to which the plant belongs   (1 mark)

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   ……………………………………………………………………………………………

   (b). Give three reasons for your answer in (a) above   (3 marks)

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3. A student estimating a cell of an onion epidermal cell observed the following on the
   microscope field of view using a transparent ruler.
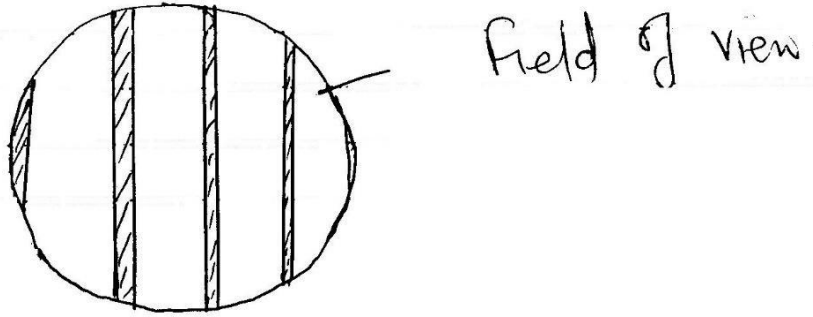
The student identifies 20 cells across the field of view. Calculate the size of the cell in micrometres. (3 marks)

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4. State the functions of centrioles in a cell. (2 marks)

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5. Study the flow diagram below
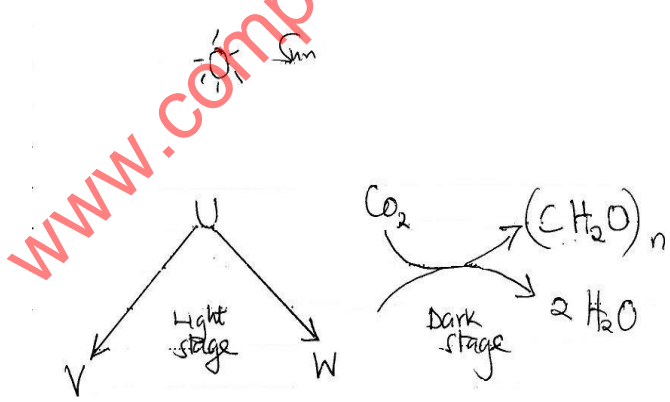
Name the substance U, V and W. (3 marks)

U……………………………………………..…..………………………………………………….

V ………………………………………………………………………………………………………

W …………………………………..............…...………………………………………………..

6. (a). State the deficiency diseases of each of the following vitamins. (3 marks)

(i). B_1 …………………………………………………………………………………………….

(ii). B_2 …………………………………………………………………………………………….

(iii). B_6…………………………………………………………………………………………..

(b). What is the role of roughage in a diet? (1 mark)

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7. State two differences between osmosis and Active transport. (2 marks)

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8. In a certain experiment, the following observation was made:

When red blood cell was placed in certain solution, the solution exerted more osmotic

pressure leading to cell losing water molecules to become (crenated/shrunk)

(a). What type of solution was the cell placed in respect to the cell's cytoplasms?

(1 mark)

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……………………………………………………………………………………………………

(b). By which physiological process did the cell lose water molecules? (1 mark)

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(c).Name two substances that make a cell membrane. (2 marks)

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9. The diagram below represents a transverse section of a plant part. Study it and answer the questions that follow.
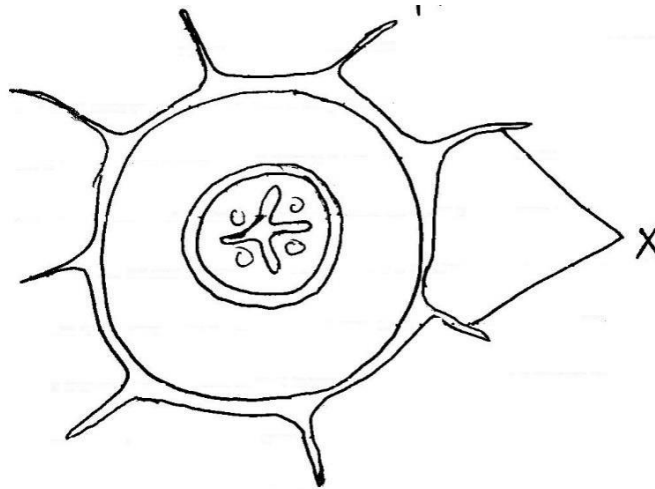
(a). Name the class in which the plant belongs.   (1 mark)

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………………………………………………………………………………………..

(b). Give a reason for answer (a) above.   (1 mark)

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(c). State three adaptations for the structure labeled X to their functions.   (3 marks)

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10. State THREE structural differences between arteries and veins in mammals.   (3 marks)

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11. (a). Why does carboxyhaemoglobin lead to death?   (3 marks)

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    (b). Name two gaseous exchange sites in higlier plants.   (2 marks)

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12. State the importance of the following features in gaseous exchange

    (i)   cartilage in the trachea   1 mark)

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    (ii)   (ii) Moisture on the surface of the alveoli.   (1 marks)

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13. The equation below shows an oxidation reaction of flow food substances

    $5C_{51}H_{98}O_6 + 145O_2 \rightarrow \quad {}^{102}CO_2 + 98H_2O + Energy$
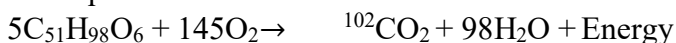
(i)   (a) Determine respiratory quotient of the Oxidation of the food substance above (3 marks)

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(ii)   Identify the food substance.   (1 mark)

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14. (a). A dog weighing 15.2kg requires 216kg while a mouse weighing 50g

        Explain.   (2 marks)

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(b). Under what condition is lactic acid formed in human muscles?   (1 mark)

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15. Equal amounts of crushed Irish potato were placed in equal volumes of hydrogen peroxide

solution at indicated PH. The volume of the gas produced was measured and recorded as shown

in the table below.

(3 marks)

PH	4.0	7.0	9.0
Volume of gas (cm^3)	2.7	7.0	9.0

(a). Name the gas that was produced. (1 mark)

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(b). Account for the difference in the volume of the gas produced in PH 4.0 and PH 9.0

(3 marks)

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(c). Name two components of blood that are not present in the glomerular filtrate. (2 marks)

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(16). Define the following terms (2 marks)

(a) Entomology

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……………………………………………………………………………………………

(b) Sensitivity

……………………………………………………………………………………………

……………………………………………………………………………………………

(17). Give two examples of continuous variations in humans. (2marks)

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(18). (a) State the causative agent of the following diseases (2 marks)

(i). Typhoid …………………………………………………..…………………………

(ii). Pneumonia ………………………………………………………………………….

(b). State three preventive measures of schistosomiasis in human beings (3 marks)

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19. Describe capture-recapture method of estimating population.   (3 marks)

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20. State three advantages of asexual reproduction in organisms.   (3 marks)

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21.The diagram below shows a phenomenon which occurs during cell division.
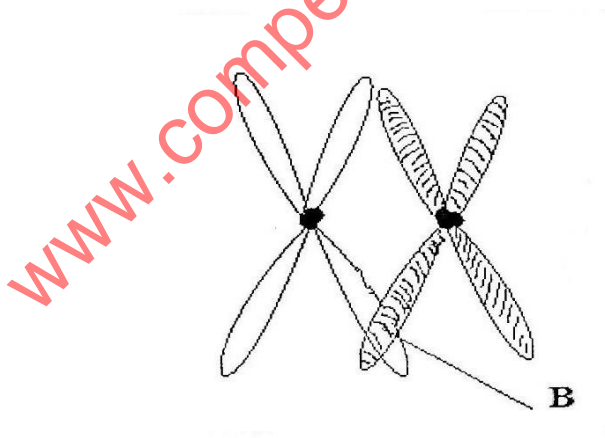
(a). Identify the stage of cell division in which the phenomenon occurs.   (1 mark)

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(b). State the importance of phenomenon taking place in the part labelled B.   (2 marks)

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22. Name the region in plants where the following take place

(a).   Primary growth   (1 mark)

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………

(b).   Secondary growth   (1 mark)

………

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23. State three parameters that can be used to estimate growth in seedlings.   (3 marks)

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24. State three reasons for classifying organism.   (3 marks)

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25. The diagram below represents a transverse section of an ovary from certain flower.
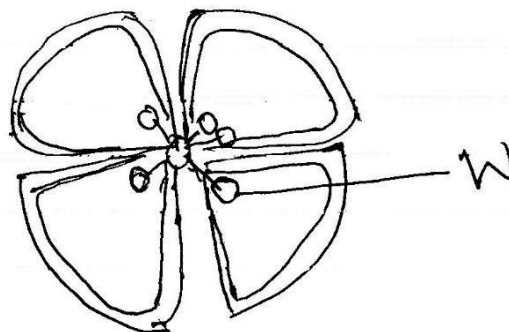
(i) Name the structure labeled W.   (1 mark)

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(ii). Name the type of placentation illustrated in this diagram.   (1 mark)

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KAPSABET HIGH SCHOOL

231/2 - -BIOLOGY PAPER 2

2 hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM---------------------------------

DATE……………………..SIGN……………………..TARGET……..INDEX……………

Instructions to the Candidates
a) Write your name and index number in the spaces provided above.
b) Sign and write the date of examination in the spaces provided above.
c) This paper consists of **TWO** sections A and B
d) Answer **ALL** the questions in section A by filling in the spaces provided.
e) In section B answer question **6 (compulsory question)** and any other **one question** from the remaining two questions (i.e. 7 or 8) in the spaces provided after question 8.
f) Candidates may be penalized for false information or even wrong spellings of technical terms.
g) This paper consists of 13 printed pages.
h) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

For Examiner's Use Only

Section	Question	Maximum score	Candidate's Score
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7	20	
	8	20	
	TOTAL	**80**	

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SECTION A – (40 MARKS)
Answer All Questions In This Section In The Spaces Provided.

1. The set up below was used to investigate a certain process.
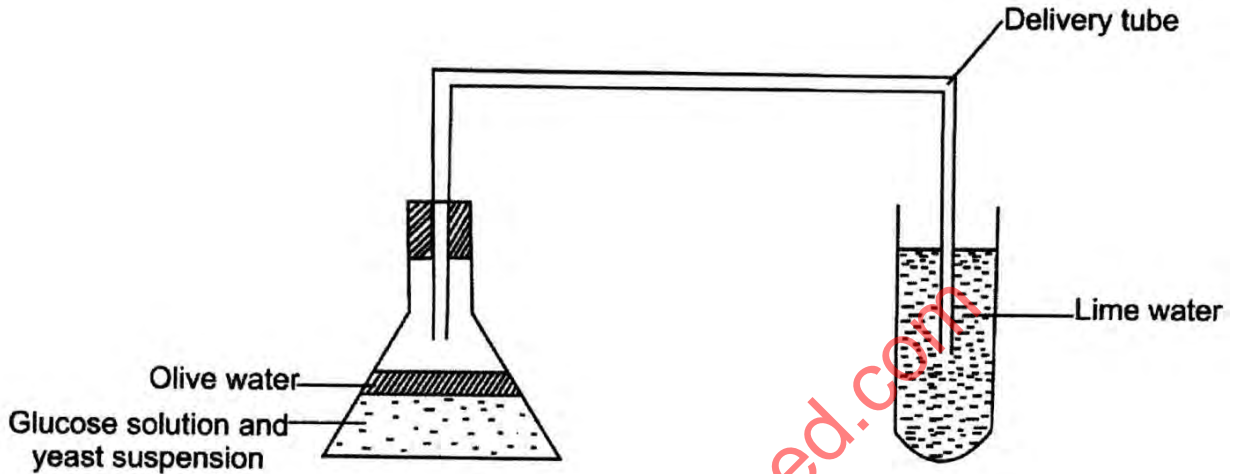
Glucose solution was boiled and olive oil added on top. It was then allowed to cool before the yeast suspension was added.

a) Name the biological process being investigated.   (1 mark)

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b) Why was the glucose solution boiled?   (1 mark)

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c) What is the importance of cooling the glucose solution before adding the yeast? (1 mark)

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d) What is the role of olive oil in the experiment?   (1 mark)

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e) What will be observed in the lime water at the end of the experiment?   (1 mark)

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f) Suggest what would be observed if a thermometer reading 25^0C was inserted in the glucose solution with the yeast suspension   (2 marks)

32

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     g) Suggest a control experiment for this set up. (1 mark)

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2. In maize the gene for Green colour is dominant to the gene for white colour. A pure breeding maize plant with green grains was crossed with heterozygous plant.

     a) (i) Using letter G to represent the gene for green colour, work out the genotypic ratio of the offspring. (5 marks)

         (ii) State the phenotype of the offspring. (1 mark)

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     b) What is genetic engineering? (1 mark)

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     c) What is meant by hybrid vigour? (1 mark)

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3. (a) Briefly discuss how the following gives evidences on specification:
    (i) Cell biology   (2 marks)

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    (ii) Comparative embryology   (2 marks)

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(b) State **one** limitation of using fossil records as an evidence of organic evolution.
(1 mark)

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    (c) (i) What is meant by the term vestigial structure.   (1 mark)

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        (ii) Name **two** examples of vestigial structures in man.   (2 marks)

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4.   The diagram below shows a tissue in a plant.
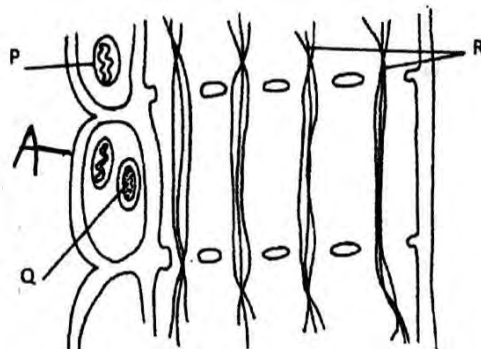
a) (i) Identify the tissue shown in the diagram above.   (1 mark)

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    (ii) State the function of the tissue shown above.   (1 mark)

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  b) State **two** functions of the part labeled A.   (2 marks)

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  c) Name the **two** compounds or substances transported by the tissue from the leaf to other parts of the plant.   (2 marks)

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  d) Explain the role of xylem in plant nutrition.   (2 marks)

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5. The results in the table below shows the effects of some conditions on seed germination. In each experiment, all other environmental conditions were kept constant except for the one being investigated.

Experiment	Treatment	% Germination
I	Seeds placed in a tightly closed container with pyrogallic acid.	0
II	(i) Seeds kept in source of light. (ii) Seeds kept in dark cupboard.	96 97
III	(i) Seeds kept in refrigerator 4^0C. (ii) Seeds kept in oven 60^0C. (iii)Seeds kept at 35^0C.	0.5 0 92
IV	Dry seeds in closed container. Moist seeds in a closed container.	0 87

a) (i)   What was the purpose of pyrogallic acid in experiment (i)   (1 mark)

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(ii)   State the aim of the experiment (ii)   (1 mark)

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b) (i)   Account for the results obtained in experiment set-up (iii)   (3 marks)

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(ii)   State why 100% germination was not achieved in experiment (ii) and (iv).
                                                                            (1 mark)

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c) Of what biological significance is the condition necessary for germination been
investigated by experiment (iv)?   (2 marks)

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SECTION B – 40 MARKS

Answer Question 6(Compulsory) and Either Question 7 or 8 in the Spaces Provided After Question 8

6. (a) An experiment was carried out to investigate the population of a certain micro-organism. Two petri dishes were used. Into the petri dish labeled M 30cm^3 of a culture medium was placed while 30cm^3 of the same culture was placed in petri dish labeled N. Equal numbers of micro-organisms were introduced in both petri dishes. The set-ups were then incubated at 35^{0}C. The number of micro-organisms in each petri dish were determined at equal intervals for a period of 60 hours. The results were as shown in the table below.

Relative number of micro-organisms	M	40	40	180	280	1200	1720	1600	1840	1560	600
	N	40	40	120	200	680	560	560	600	600	400
Time in hours		0	5	10	7.	23	30	35	42	45	60

a) (i) On the same axes draw the graphs of relative number of micro-organisms against time on the grid provided.

(ii) After how many hours was the difference between the two populations greatest?   (1 mark)

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(iii) Work out the difference between the two populations at 50 hours   (2 marks)

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(iv) With a reason state the effect on the population of micro-organisms in petri dish M if the temperature was raised to 60^0C after 20 hours   (2 marks)

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(v) Account for the shape of the curve for population in petri dish N between 46 and 59 hours
          (3 marks)

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b) Explain how the osmotic pressure in the human blood is maintained at normal level
          (5 marks)

7. (a) Describe how budding takes place in yeast   (5 marks)
(b) Discuss the economic importance of bacteria   (10 marks)
(c) Describe the methods of excretion in plants   (5 marks)

8. (a) Describe the process of photosynthesis in green plant   (10 marks)
    (b) Explain the various conditions necessary for germination   (10 marks)

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KAPSABET HIGH SCHOOL

231/3　　　　-　**BIOLOGY**　　　-　　　**PAPER 3**

1 HR 45 MIN

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name---**ADM**----------------------------------

DATE………………………..**SIGN**……………………..**TARGET**……..**INDEX**…………….

Instructions to the Candidates.

a) Write your name and index number in the spaces provided above.
b) Sign and write the date of the examination in the spaces provided above.
c) Answer **all** the questions in the spaces provided.
d) You are required to spend the first 15 minutes of the 1 ¾ hours allowed for the paper reading the whole paper carefully before commencing your work.
e) Additional pages **must not** be inserted.
f) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
g) Candidates should answer all the questions in English

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1	14	
2	13	
3	13	
Total Score	**40**	

1. You are provided with specimen K. Use it to answer the questions that follow.
   (i) Cut a traverse section of specimen K and draw a well labeled diagram of the cut surface.
   (4 marks)

   (ii) State the type of placentation of specimen K   (1 mark)

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   (iii) Apart from the placentation named in (ii), name two other form of placentation.
   (2 marks)
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   (iv) Squeeze out the juice from one of the halves of the specimen K and put it in a beaker.
   Using the reagents provided, carry out test to identify the food substances present in the
   juice.   (7 marks)

Food substance	Procedure	Observation	Conclusion

2. The diagram represents organisms in a certain habitat.

a) State **two** observable characteristics of living things displayed by the organisms.

(2 marks)

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b) (i) Name the respiratory surface used by the organism. (1 mark)

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(ii) State three adaptations of the respiratory surface named in (b) (i) above. (3 marks)

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c) The organism is found in Kingdom Animalia. Giving two external features, identify the phylum to which it belong.

Phylum (1 mark)

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External features (2 marks)

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d) By use of arrows, show the life cycle of this organism. (1 mark)

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e) Complete the table shown below on the hormones, site of production and the functions played by these hormones in metamorphosis. (3 marks)

Name of Hormone	Site of Production	Function of the Hormone
………………………	Corpus allatum	Formation of larval cuticle
Ecdysone	…………………	…………………………

3. You are provided with the following:
- \specimen Y
- Hydrogen peroxide
- 2 test tubes in a test tube rack.
- 2 labels
- 10ml measuring cylinder.
- A scalpel.
- 2 wooden splints.
- 100ml beaker.

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Procedure

(i) Label two test tubes A and B.

(ii) Measure $2cm^3$ of hydrogen peroxide and put in test tube A. Repeat the same procedure for test tube B.

(iii) Cut a small piece of specimen Y to two smaller pieces using a scalpel. Place one of the pieces in test tube A and retain the other piece for the subsequent procedure for test tube B.

(iv) Immediately, introduce a glowing splint into the mouth of the test tube. Record your observations in the table below.

(v) Put the other piece of specimen Y in an empty 100ml beaker then add 50ml boiling water from a hot water bath maintained at 80^0C. Leave the set up for 5 minutes

(vi) Remove specimen Y from the boiling water using a pair of forceps and place in test tube B. Immediately, introduce a glowing splint at the mouth of the test tube. Record your observations in the table below.

a) Record your observations in this table   (5 marks)

Test tube	Observations	
	On placing specimen Y	**On introducing a glowing splint**
A	(i) (ii)	

B		

b) Explain your answers in (a) above.

(i) A   (3 marks)

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(ii) B   (1 mark)

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c) State the role of experimental set up in test tube B.   (1 mark)

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d) Specimen Y is an organ in animals. Name the organ and state **two** other functions apart from detoxification.

Name of organ   (1 mark)

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    Functions   (2 marks)

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KAPSABET HIGH SCHOOL

561/1   -   **BUSINESS**   -   **PAPER 1**

2 hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM----------------------------------

DATE………………………..SIGN……………………..TARGET……..INDEX…………….

INSTRUCTIONS TO CANDIDATES.

    1. Answer all questions in the spaces provided.

For Examiners use only.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total

1. State four elements of the external environment that may negatively affect business
   operations.   (4mks)

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2. Outline four factors that make office managers to communicate to their staff in writing.
                                                                           (4mks)

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3. Highlight four disadvantages of monopoly markets.   (4mks)

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4. Identify the books of original entry used in recording each of the following transactions of
   Turkwel traders.   (4mks)

	Transactions	Books of Original Entry
a)	Sold goods on credit to Atieno	
b)	Bought goods on credit from Chantal Traders for sh 4000	
c)	Zuma returned goods worth sh 8000	
d)	Turkwel returned goods worth sh 11000 to Simba Traders	

5. State four roles played by Nairobi stock exchange in Kenyan economy.   (4mks)

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6. Name four types of warehouses. (4mks)

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7. State four reasons why consumers have to make a choice between competing needs. (4mks)

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8. Filling in the missing figures

	Fixed Assets	Current Assets	Capital	Liabilities
a)	275 500		315 000	115 500
b)	182 000	108 700		217 100
c)		76 400	123 100	91 900
d)	313 450	211 340	189 170	

9. Highlight four functions of money. (4mks)

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10. Identify the type of utility credited in the following circumstances. (4mks)

	Activity	Utility
a)	Carpentry	
b)	Selling bread to students	
c)	Warehousing of goods imported	
d)	Carriage of cargo to the market	

11. The following are policies issued under marine insurance, fleet policy composite policy, voyage policy, time policy.

    Identify the policy that suits the description listed below.

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	Description	Marine policy
a)	Covers a ship within a specified period of time	
b)	Covers a ship on a particular journey	
c)	Different insurers covers a ship for the same	
d)	Covers many vessels against losses under one policy	

12. This is Mutegi's demand schedule for bread in a week.

Price per loaf (shs)	No. of loaves demanded
30	1
20	2
15	4
12	6
10	8
5	12
1	20

Required: Draw the demand curve of Mutegi's bread for a whole week. (4mks)

13. The following information was extracted from the books of Jupiter Traders

Rate of stock turnover 3 times
Mark up 20%
Opening stock shs 160 000
Closing stock shs 200 000

Required:

(i) Gross profit   (2mks)

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(ii)   Sales   (2mks)

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14. Outline four business ethics that a trader should observe when dealing with customers, employees, and other businesses. (4mks)

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15. Highlight four reasons why the government requires businesses to obtain licences.

(4mks)

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16. The following information was obtained from the books of Jakayo Traders as at 1st July 2010.

Shs

Furniture	20 000
Stock	8 000
Creditor	7 000
Cash bank	12 000
Long term loan	10 000

Prepare Jakayo's balance sheet as at 1st July 2010. (4mks)

17. State four circumstance under which cash with order is mostly practiced. (4mks)

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18. Highlight four reasons why a producer of goods may use intermediaries to distribute his goods. (4mks)

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19. Outline four tools of monetary policy that government may use to reduce excess money in circulation. (4mks)

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20. Highlight four benefits that would accrue to a firm located near existing firms. (4mks)

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21. Highlight four circumstance under which personal selling may be used as a strategy in product promotion. (4mks)

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22. Give four measures that a government may take to reduce the mortality rate in a country. (4mks)

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23. Highlight four benefits of using electronic filling system in an office. (4mks)

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24. Give four factors that limit use of containers as a method of transporting goods in a developing country. (4mks)

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25. Give four factors that influence the level of national income. (4mks)

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KAPSABET HIGH SCHOOL

565/2 - **BUSINESS** - **PAPER 2**

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name---ADM----------------------------------

DATE………………………..SIGN……………………..TARGET……...INDEX…………….

INSTRUCTIONS TO CANDIDATES.

2. **This paper consist of six questions.**

3. **Answer only five questions in the writing material provided.**

4. **Indicate clearly the questions answered.**

For Examiners use only.

1	2	3	4	5	6	Total

1. (a) Explain five factors that encourage entrepreneurial development in Kenya. (10mks)

(b) Highlight five characteristics of an efficient tax system. (10mks)

2. (a) Dr Walden would like to pass a message to a firend. Explain five factors he is to consider in choosing the most appropriate means of communication to use. (10mks)

(b) Describe any five source of document that a business may have access to. (10mks)

3. (a) Explain five benefits of direct production. (10mks)

(b) The following information relates to Maralal Traders for the month of May 2014.

May 1:	Balance brought forward
	Cash shs 180,000
	Bank shs 450,000 (Cr)
3:	received a cheque of 1,500,000 from Mpasha, a debtor
7:	Cash sales shs 280,000
11:	Jolloimat, a creditor of shs 600,000 was paid by cheque of sh 400,000 and the balance by cash
14:	Received commission in cash shs 150,000
17:	A debtor, Leteipa, paid his account of 185,000 by cheque less 2% cash discount.
19:	Paid the following expenses by cheque:
	Rent shs 75,000
	Electricity shs 32,000
	Water shs 25,000
21:	Withdrew shs 100,000 from bank for personal use.
24:	Paid cash shs 133,280 to Kinai after deducting a cash discount of 2%
25:	Received a cheque of sh 200,000 from Kiyapi, a debtor
28:	Paid salaries shs 120,000 by cheque
31:	Banked all cash except shs 50,000

Required:

Record the above transactions in a three column cash book. (10mks)

4. (a) Explain five differences between private limited companies and partnerships forms of business units. (10mks)

(b) Explain clearly with aid of a diagram the change of equilibrium as a result of increase in supply of a commodity. (1omks)

5. (a) Explain five challenges that an underpopulated country may experience. (10mks)

(b) Explain five measures that a wholesaler would take to ensure smooth running of his warehouse. (10mks)

6. (a) Highlight four circumstances under which a cheque may be dishonoured. (8mks)

(b) The following trial balance related to Kimani;s business as at 31st December 2012

	DR(SHS)	CR(SHS)
Stock on 1st January 2003	60,000	
Purchases and sales	400,000	580,000
Returns	20,000	50,000
Debtors and creditors	65,000	40,000
Premises	540,000	
Machinery	200,000	
Fixtures and fittings	100,000	
Carriage outwards	8,000	
Wages and salaries	30,000	
Discounts	25,000	32,000
Commissions	16,000	14,000
Cash in hand	70,000	
Capital		818,000
	1,534,000	1,534,000

Required:

(a) Prepare a trading profit and loss account for the period ended 31st December 2012 and a balance sheet as at that date if the closing stock was worth shs 70,000

(12mks)

KAPSABET HIGH SCHOOL

PAPER

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

CHEMISTRY PAPER 3 CONFIDENTIAL

INSTRUCTIONS

In additional to the apparatus and fittings common in a chemistry laboratory, each candidate will require the following.

- About 150ml of solution labelled **A**.
- About 100ml solution labelled **B**.
- About 50ml of solution labelled **C**
- About 0.2g of sodium hydrogen carbonate in a stoppered container.
- About 0.5g of solid **M** in a stoppered container.
- About 0.5g of solid **G** in a stoppered container
- 0 – 50ml burette.
- 25ml pipette.
- Two 250ml conical flasks
- 250ml volumetric flask
- 10ml measuring cylinder.
- Six test tubes on a test tube rack.
- A boiling tube.
- test tube holder.
- Complete stand.
- A white tile.
- One metallic spatula.
- Distilled water in a wash bottle.
- One label

Access to:
- Source of heat.

- Universal indicator paper and **its pH chart**.
- 2M aqueous ammonia supplied with a dropper.
- 2M aqueous sodium hydroxide supplied with a dropper.
- $Pb(NO_3)_{2\ (aq)}$ supplied with a dropper
- Acidified potassium manganate (VII) supplied with a dropper.
- Bromine water supplied with a dropper.
- 2M dilute nitric (V) acid.
- Methyl orange indicator with a dropper
- Phenolphthalein indicator with a dropper
- Sodium chloride solution

NB:

1. Solution **A** is prepared by dissolving 4.3 cm^3 of concentrated HCl (1.18g/cm^3) to 500 cm^3 of water and dilute to 1 litre.

2. Solution **B** is prepared by dissolving 1.2g of NaOH pellets in about 600ml of distilled water and diluting to 1 litre.

3. Solution **C** is prepared by dissolving 62.9g of $Na_2CO_3.10H_2O$ in about 800ml of distilled water and then topping up to 1 litre.

4. Acidified potassium permanganate is prepared by dissolving 3.5g of $KMnO_{4\ (s)}$ in 200cm^3 of 2M $H_2SO_{4(aq)}$ and toping up to one litre solution.

5. 2M $H_2SO_{4\ (aq)}$ is prepared by diluting 110cm^3 of concentrated Sulphuric (VI) acid to make one litre of solution.

6. 2M $NaOH_{(aq)}$ is prepared by dissolving 80g of NaOH pellets in one litre of solution.

7. 2M HNO_3 is prepared by adding 128 cm^3 of Conc. HNO_3 to about 500ml of water and dilute to 1 litre.

8. Sodium chloride solution is prepared dissolving 5.85g of NaCl in 1 litre of water

9. Lead (II) nitrate solution is prepared by dissolving 30g of $Pb(NO_3)_2$ in 1litre of water

10. Solid **M** is aluminium sulphate

11. Solid **G** is maleic acid.

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KAPSABET HIGH SCHOOL

233/1 - **CHEMISTY** - **PAPER 1**

2 hours

Kenya Certificate of Secondary Education *(K.C.S.E.) PRE-MOCK 2024*

Name---**ADM**-----------------------------

DATE…………………………..…………..SIGN………………………….TARGET………………..INDEX…..……………………….

<u>INSTRUCTIONS TO CANDIDATES:</u>

(a)Write your **name, class** and **admission number** in the spaces provided above.

(b)Answer **ALL** the questions in the spaces provided in the question paper

(c) KNEC Mathematical tables and electronic calculators may be used for calculations

(d) All working **MUST** be clearly shown where necessary

(e) This paper consists of **10 printed pages**

(f) Candidates should check the question paper to ascertain that **all the pages are printed** as indicated

and that **no questions are missing**.

(g) Candidates should answer the questions in English

<u>FOR EXAMINER'S USE ONLY</u>

Question	Maximum score	Candidate's score
1-29	80	

Turn Over

1. An element Y has the electronic configuration 2.8.5

  a) Identify its period   (1mk)

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  b) Write a formula of the most stable anion formed when Y ionizes.   (1mk)

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  c) Explain the differences between the atomic radius of element Y and its ionic radius. (2mks)

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2. The table below shows tests carried out on a sample of water and the results obtained.

	Test	Results
I	Addition of sodium hydroxide solution	White precipitate which dissolves in excess
II	Addition of excess aqueous ammonia	Colourless solution obtained
III	Addition of dilute hydrochloric acid and barium chloride	White precipitate

  a) Identify the anion present in the water.   (1mark)

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  b) Write an ionic equation for the reaction in **III.**   (1mark)

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3. Solutions can be classified as acids bases or neutral. The table below shows solutions and their pH

     values.

Solution	PH - VALUES
K	1.5
L	7.0
M	14.0

(i)   Select any pair that would react to form a solution of pH 7.   (1mark)

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(ii) Identify two solutions that would react with aluminum hydroxide. Explain.   (1marks)

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4. a) State Graham's Law of diffusion.   (1mk)

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b) $60cm^3$ of oxygen gas diffused through a porous partition in 50 seconds. How long would it take

for $60cm^3$ of sulphur (IV) oxide gas to diffuse through the same partition under the same

conditions? (S = 32.0, O = 16.0)   (3 marks)

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5. Study the flow chart below and answer the questions that follow.

| Metal oxide | Add $NH_{3\,(aq}$ NH$_{3\,(aq}$ → | White precipitate X | Add excess → | Colourless solution Y |
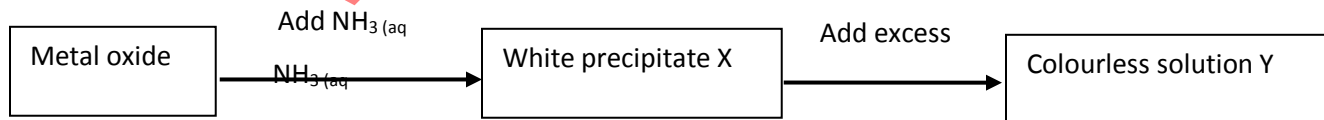
a)   Identify the metal oxide.   (1mk)

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b)   Write an ionic equation leading to the formation of the white precipitate X.   (1mk)

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    c)   Give the formula of the ions responsible for the colourless solution Y.   (1mk)

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6. Two compounds of barium are barium sulfide and barium chloride.

   (a) The hazard symbol shown in Figure below is on bottles containing barium metal.

      State the meaning of this hazard symbol.   (1mk

....

....

   (b) Give the names of the elements combined in barium sulfide.   (1mk)

....

....

   (c) Hydrogen sulphide gas is highly poisonous. Sate one safety precaution that should be taken

       when handling hydrogen sulphide.   (1mk)

....

....

7. Study the information in the table and answer questions that follow:

Isotope	69 R_1	71 R_2
Relative abundance %	61.3	38.7

(a) Determine the number of neutrons of R_1. (1mk)

....

....

(b) Calculate the relative atomic mass of element **R**. (2mks)

....

....

....

8. a) Identify the type of bond formed compound below. (1mk)

```
        O
      /   \
    H       H
```
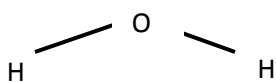
b) Using dots (•) and crosses (x) to represent electrons show bonding in magnesium oxide (2mks)

....

....

....

9. Show the products formed when the following salts are heated by writing a balanced chemical equation. (2 marks)

(i) $KNO_{3(s)}$ $\xrightarrow{\text{Heat}}$

(ii) $(NH_4)_2 CO_{3(s)}$ $\xrightarrow{\text{Heat}}$
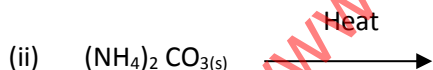
10. Explain why when one is stung by a bee application of a little solution of sodium

hydrogen carbonate helps to relieve the pain. (2 marks)

....

....

....

11. The following table gives the melting point of oxides of the third period elements.

66

Study it and answer the questions that follow.

Formula of oxides	Na_2O	MgO	Al_2O_3	S_iO_2	P_4O_{10}	SO_2
Melting point (^0O)	1190	3080	3050	1730	560	-73

(a) Explain the large difference in the melting points of Na_2O and P_4O_{10}.   (2 mark)

……

……

……

(b) Write the equation for the reaction between Al_2O_3 with;

   (i) NaOH   (1 mark)

……

……

   (ii) HCl   (1 mark)

……

……

12. A hydrocarbon slowly decolourlises bromine in presence of sunlight but does not decolourise

acidified potassium permanganate. Name and draw the structural formula of the fourth member of

the series to which the hydrocarbon belongs.   (2 marks)

13. Distinguish between ionization energy and electron affinity.   (2mks)

....

....

....

14. The set-up below was used to prepare a carbon (IV) oxide gas.

    Calcium carbonate
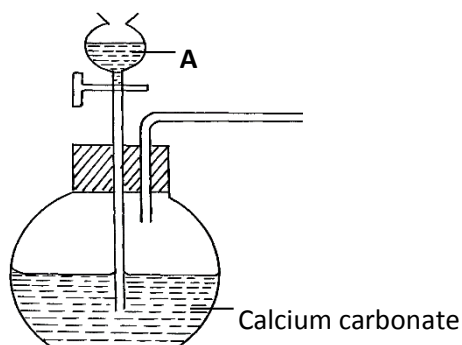
(a) Give the name of substance **A**   (1mk)

....

....

(b) Complete the diagram to show how the **dry** gas can be collected.   (2mks)

(c) Write the equation for the reaction   (1mk)

....

....

....

15. Calculate the mass of sulphur which on complete combustion would yield 7dm^3 of sulphur (IV) oxide measured at 182°c and 722 mm Hg pressure. (0=16, S=32, molar gas volume = 24dm^3 at r.t.p).   (3 mks)

68

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16. Form two students from Achiever's secondary school reacted three elements as shown in the table below

Element	Reaction with Oxygen	Reaction with water
X	Formed acidic oxide	No reaction
Y	Formed basic oxide	Formed soluble hydroxide gave off hydrogen gas
Z	Formed acidic oxide	Dissolved to form an acidic solution

Which element (s) is likely to be: (3mks)

i)   Non-metal (s)

....

....

ii)   Metal (s)

....

....

iii)   Insoluble in water.

....

....

17. A polymer has the following structure

CH₂   CH   CH₂   CH   CH₂   CH   —   —   —

| | |

CN   CN   CN
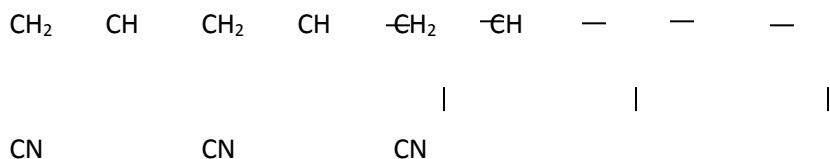
A sample of this polymer is found to have a molecular mass of 5194. Determine the number

of monomers on the polymer. (H = 1.0, C = 12.0,   N = 14.0)   (2 marks)

………

………

18. a) State the likely products of the electrolysis of molten potassium chloride at the:-

   (i) Cathode… ....(½mk)

   (ii) Anode .... (½mk)

   b) Write the equations that occur at the anode and cathode...(2mks)

   Anode…………………………………………………………………………………………………

   Cathode……………………………………………………………………………………………….

19. Give two reasons why helium is used in weather balloons.   (2mks)

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……

……...………

20. A Bunsen burner produces a yellow flame when airhole is close. Explain.   (2mks)

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……

……

21. In an experiment, a boiling tube full of chlorine gas was inverted into a trough of water as shown below.
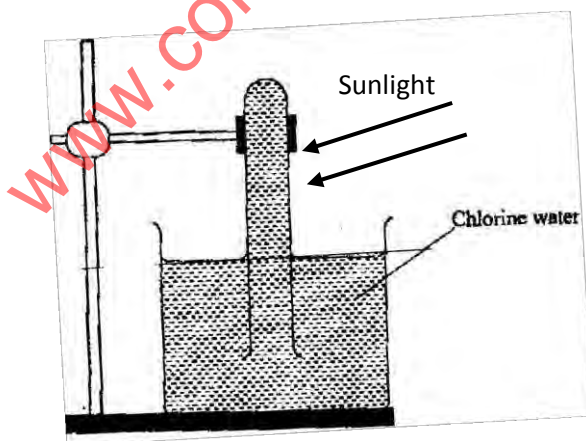
a) State and explain the observations. (2mks)

………

………

………

b) If the experiment is repeated with tetrachloromethane instead of water.

i) State the observations made. (1mk)

………

………

ii) Explain your observations in b(i) above. (1mk)

………

………

23. Study the flow chart below and answer the questions that follow.
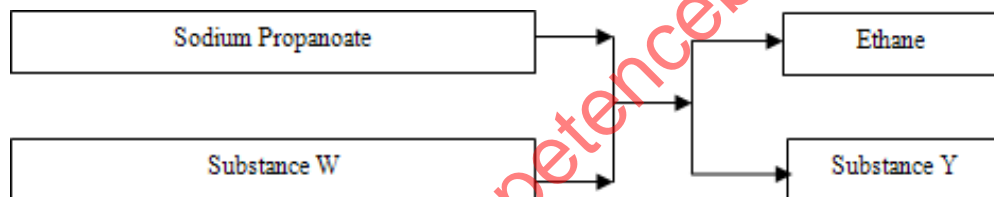
a) Name substances

W.. (½ mark)

Y.. (½ mark)

b) An organic compound K reacted with bromine to form 2,3 – dibromobutane. Draw the structural formula of K. (1mks)

24. Starting with copper metal describe how a solid sample of copper (II) carbonate can be prepared. (3 marks)

………

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………

………

25. Study the information in the table below and answer the questions that follow. The letters do not

represent the actual symbols of the elements.

Element	Electrical conductivity	Ductility	Action of water
A	Good	Good	No reaction
B	Good	Poor	No reaction
C	Good	Good	Reacts

Select the element which is

(a) Likely to be in group II of the periodic table.   (½ mark)

……

……

(b) Could be used to make electric cables.   (½mark)

……

……

(c) Likely to be graphite.   (½ mark)

……

……

26. In an investigation, sulphur (IV) oxide gas was bubbled through acidified bromine water. This was

followed by drops of barium nitrate solution.

(a) State the property of sulphur (IV) oxide under investigation.   (½ mark)

....

....

(b) i) State the observation that were made on addition on sulphur (IV) oxide into the bromine water.

(1mk)

....

....

ii) Explain the observation.   (1mk)

....

....

27. Study the flow chart below and answer the questions that follow
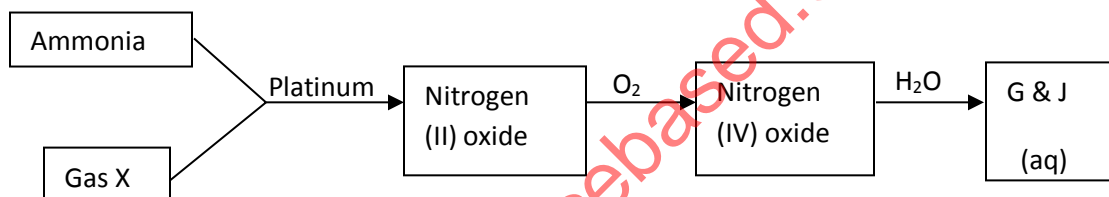
a) Identify gas X   (1mk)

....

....

b) Write an equation for the reaction between ammonia and gas X   (1mk)

....

....

c) Write an equation to show the formation of G and J   (1mk)

....

....

28. (a) Define pollution.   (1 mark)

....

....

(b) Mention **one** pollutant that is

(i) A Particle (½ mark)

....

....

(ii) Gaseous (½ mark)

....

....

29. Hydrogen gas was burnt in air to form a colourless liquid.

a) Describe a chemical test to identify the colourless liquid. (2mk)

....

....

....

b) State how the purity of the colourless liquid can be determined. (1mk)

....

....

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THIS IS THE LAST PRINTED PAGE

KAPSABET HIGH SCHOOL

233/2   **- CHEMISTRY**   **-**   **PAPER 2**

2 hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name---ADM--------------------------------

DATE………………………..SIGN……………………..TARGET……..INDEX…………..

INSTRUCTIONS TO CANDIDATES

*(a)Write your **name, class** and **admission number** in the spaces provided above.*

*(b)Answer **ALL** the questions in the spaces provided in the question paper.*

(c) KNEC Mathematical tables and electronic calculators may be used for calculations.

*(d) All working **MUST** be clearly shown where necessary.*

*(e) This paper consists of **9** printed pages.*

*(f) Candidates should check the question paper to ascertain that **all the pages are printed** as indicated and that **no questions are missing.***

(g) Candidates should answer the questions in English.

For examiners' use only.

Questions	Max-score	Candidates score
1	13	
2	10	
3	08	
4	14	
5	11	
6	13	
7	11	
Total score = 80		

1. The grid below represents part of the periodic table. Study it and answer the questions that follow. The letters do not represent the actual symbols of the elements.

			D		G		
	B		E	F		H	J
A	C						
						I	

a) State the elements that can form ions with a charge of -1. Give a reason for your answer. .(2 marks)

……
……
……………………………………………………………………………………………………….

b) What type of structure exists in the oxide of A. Give a reason for your answer? (1 mark)

……
……

c) How does the reactivity of I compare with that of H. Explain. (1 mark)

……...…
………………………………………………………………………………………………………..

d) The oxide of D has a low melting point than the oxide of element C. Explain. (1 mark)

……
……

e) With a reason choose the most;

i) Electropositive element (2 marks)

……
……

ii) Electronegative element (2 marks)

……
……

f) Compare the atomic radius of;

i) B and H (1 mark)

………………………………………………………………………………………………..…

………………………………………………………………………………………………….

ii)   D and E   (1 mark)

……………………………………………………………………………………...………

………..……………………………………………………………………………………...

g)   State and explain the observations made when concentrated Nitric (V) acid is added to turnings
     of copper.   (2 marks)

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………………………………..…………………………………………………………………..

2. The flow chart below shows how nitric (v) acid is produced on a large scale. Study it and
   answer the questions that follow.
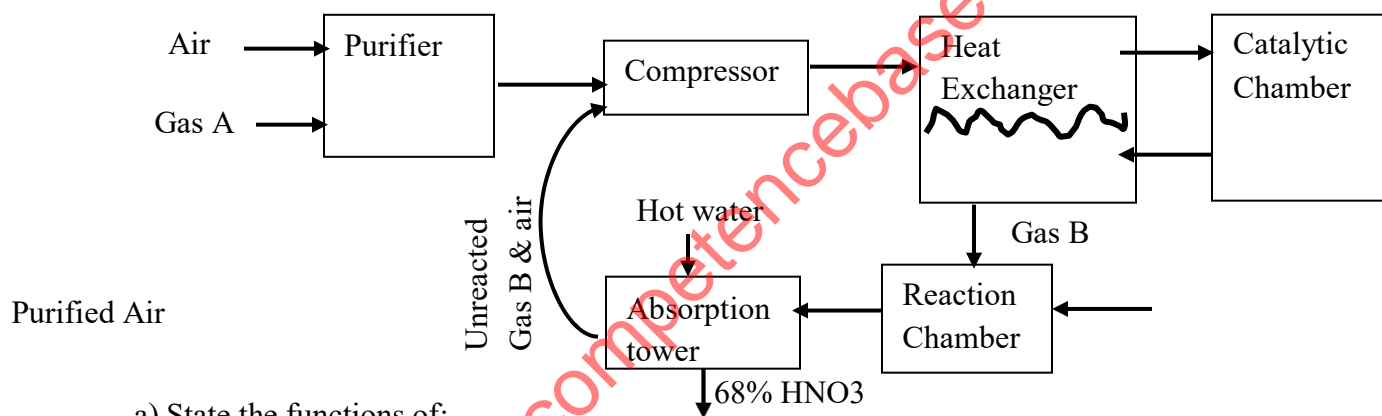
a) State the functions of:

(i) Purifier   (1mark)

……………………………………………………………………………………………………

…...……………..…………………………………………………………………………………

(ii) Heat exchanger   (1mark)

……………………………………………………………………………………………………

……………………………………………………………………………………………………

b)   Identify

(i) Gas A   (½mark)

……………………………………………………………………………………………………

…………………………..…………………………………………………………………………..

(ii) Catalyst C   (½mark)

………………………………………………………………………………………………

…...………………………………………………………………………………….……..

c) Write equations for the reaction that take place;

(i) in catalytic chamber.   (1mark)

………………………………………………………………………………………………

…………..…………………………………………………………………………………..

(ii) in absorption tower.   (1mark)

………………………………………………………………………………………………

……………………………..…………………………………………………………………..

d) Calculate the molarity of the commercial nitric (v) acid, given that it is 68% pure and has a

density of $1.42g/cm^3$. (N=14, H=1,)=16)   (3mark)

………………………………………………………………………………………….…

………………………………………………………………………………………..……

……………………………………………………………………………………………….

(e).(i) State the observation made when concentrated nitric (v) acid is added to acidified

sulphur powder and warmed.   (1mark)

………………………………………………………………………………………………

………………………………………………………………………………………………

 ii) Give a reason for the answer given in c (i) above.   (1mark)

………………………………………………………………………………………………

…………..………………………………………………………………………………….

3. Study the flow chart below starting from iron metal.
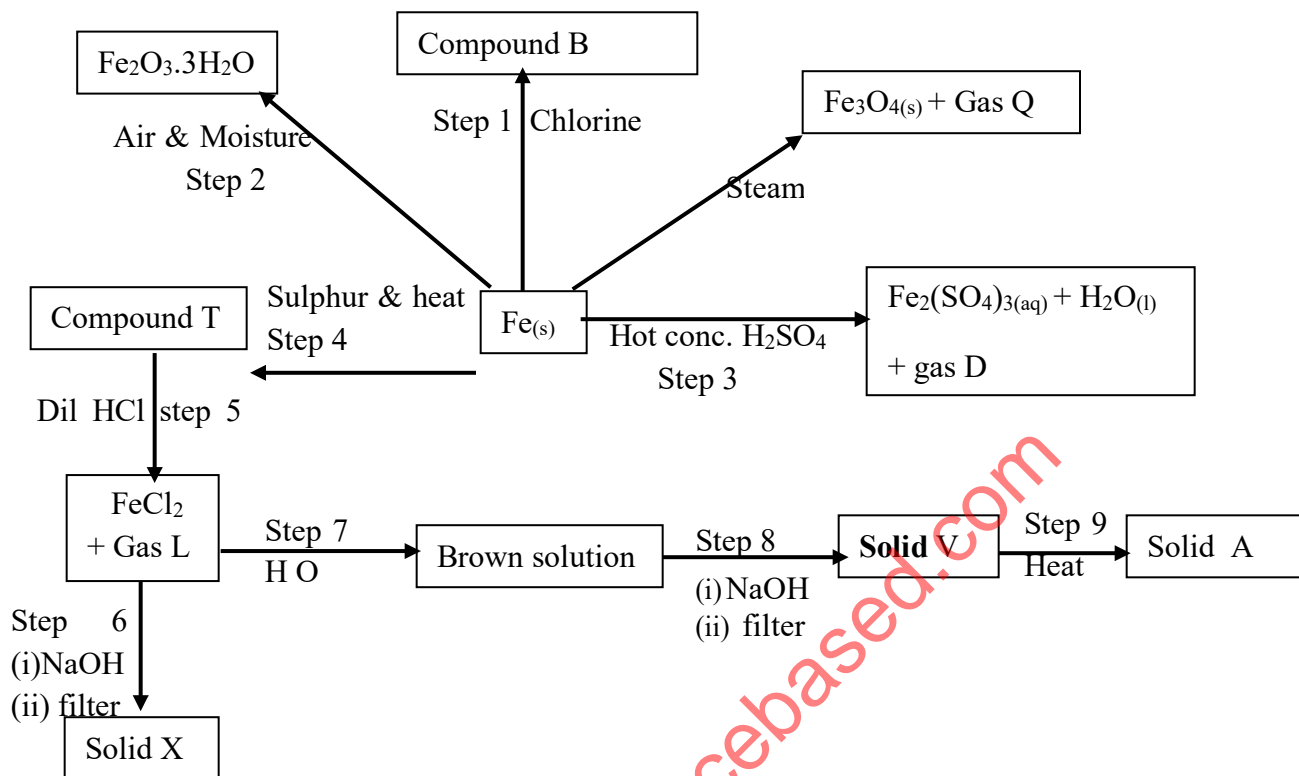
(a) Name gases (1½mk)

D……

L……...

V……………………………………………………………………………………………….............

(b) Identify the following substances. (2 ½mk)

(i) Compound B……….…………………………….…………….…………………………….

(ii) Compound T……….…………………………….…………….…………………………….

(iii) Solid A……….…………………………….…………….………………………..

(iv) Solid V……….…………………………….…………….………………………..

(v) Solid X……….…………………………….…………….………………….................

c) What name is given to the reaction in step 2?   (½mk)

………………………………………………………………………………………………

………………………………………………………………………………………………

d) State the colour of solid X   (½mk)

…………………………………………………………………………………………………

………………………………………………………………………………………………

e) Write balanced equations for the reactions that occurred in:-   (2mks)

Step 1………………………………..……………………………………………………...

Step 5………………………………………………………………………………………...

f) What property of hydrogen peroxide (H_2O_2) is indicated in step 7 of the flow chart? (1mk)

…………………………………………………………………………………………………

………………………………………………………………………………………………..

4. The set up below was used to prepare hydrogen chloride gas and salt T.
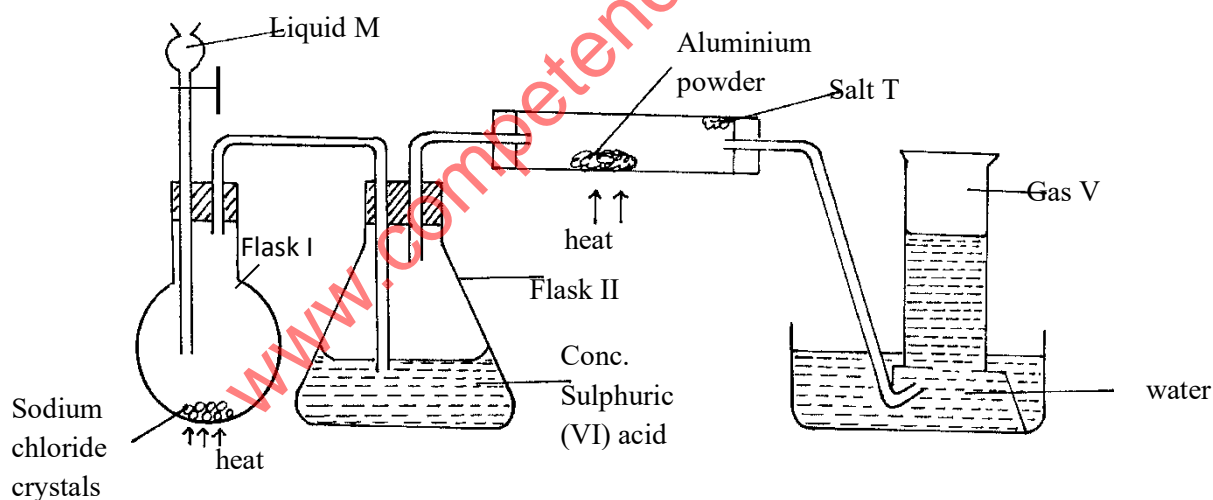
a)   **I**. Name the following

 i)   Liquid M   (½ mark)

…………………………………………………………………………………………………

………………………………………………………………………………………….....................

 ii) Gas V   (½ mark)

…………………………………………………………………………………………………

…………………………………………………………………………………………...................

    II. Write the formula of Salt T   (1mark)

………………………………………………………………………………………………………

……...…………………………………………………………………………………...................

b) Write balanced chemical equations for reactions that occur at

i) Flask I   (1mark)

………………………………………………………………………………………………………

…………...………………………………………………………………………………...................

ii) Combustion tube.   (1mark)

……

…………...………………………………………………………………………………...................

c) Name the process that formed salt T as shown in the diagram.   (1mark)

…………………………...……………………………………………………………………………

………………...…………………………………………………………………………...................

  d) Sulphuric (VI) acid is used as a drying agent in this experiment. Explain why calcium

oxide is unsuitable for the same purpose in this reaction   (2marks)

…………………………………………………………………………………………...................

……………………………………………………………………………………………………

e) The water in the trough was found to have a pH of 2.0 at the end of the experiment.

Explain.   (1mark)

…………………………………………………………………………………………...................

…………………………………………………………………………………………...................

f) Calculate the mass of salt T formed if 480cm^3 of hydrogen chloride gas measured at

 r.t.p was reacted with aluminium powder. (Al=27, Cl = 35.5, MGV=24dm^3)   (2marks)

…………………………………………………………………………………………...................

…………………………………………………………………………………………...................

…………………………………………………………………………………………...................

g) In the space provided below, draw a well labelled diagram showing how you would

 dissolve hydrogen chloride gas in water.   (1mark)

h) A solution of hydrogen chloride in methylbenzene does not react with carbonates. However, on adding water and then shaking the resulting mixture, there is vigorous effervescence. Explain the above observation. (2marks)

…………………………………………………………………………………………………

…………………………………………………………………………………………...................

…………………………………………………………………………………………………

i) Using equation, state the observation made when a gas jar containing hydrogen

chloride gas is opened near an open bottle of liquid ammonia. (1mark)

…………………………………………………………………………………...................

………………………………………………………………………………….......................

5. Name each of the processes described below which takes place when salts are exposed to air for sometime.

(i) Anhydrous copper (II) sulphate becomes wet. (1 mark)

…………………………………………………………………………………………………

…………………………………………………………………………………………………..

(ii) Common table salt forms an aqueous solution (1 mark)

…………………………………………………………………………………………………

…………………………………………………………………………………………………..

(iii) Fresh crystals of sodium carbonate $Na_2CO_3.10H_2O$ becomes covered with white powder of formula $Na_2CO_3.H_2O$ (1mark)

…………………………………………………………………………………………………

…………………………………………………………………………………………………..

(b)Write the formula of the complex ion formed in each of the reactions described below.

(i) Zinc metal dissolves in hot potassium hydroxide solution (1mark)

82

………..………

……..

   (ii) Copper hydroxide dissolves in excess ammonia solution   (1mark)

………..…

……………………………………………..………………………………………………………………………..

(c) A hydrated salt has the following composition by mass. Iron 20.2%, Oxygen 23%, Sulphur 11.5% and water 45.3%. Its relative formula mass is 278. Determine the formula of the hydrated salt.   (Fe = 56, S = 32, O = 16, H = 1)   (3marks)

……

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……

……

(d) Describe how a solid sample of lead (II) chloride can be prepared using the following reagents:- dilute nitric acid, dilute hydrochloric acid and lead carbonate.   (3marks)

………..…

………..……

………..………

……..…………

……..

6. A student set-up the apparatus shown below in order to determine the percentage by volume of oxygen in the air. Study it and answer the questions that follow.

Phosphorus

Start of experiment   **End of experiment**
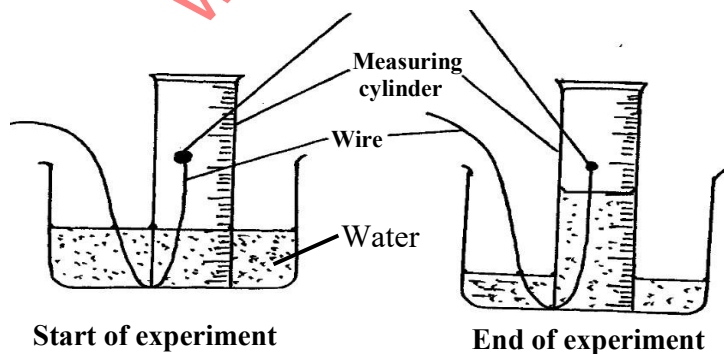
(a)(i) State one observations made in the measuring cylinder at the **start** of the experiment.

    Explain.   (2mks)

………

………

(ii) The PH of the contents of the beaker at the end of the experiment was found to be 4.

Explain the observation. (2marks)

………

………

………

(iii) The volume of air in the measuring cylinder at the end f the experiment was measured.

study the data given below and answer the questions that follow.

-Volume of air at start of the experiment = 30.65 cm^3

-Volume of air at the end of the experiment = 24.28 cm^3

Determine the percentage volume of oxygen in the air. (2marks)

………

………

………

(b)State and explain the observation made when a mixture of zinc powder and copper (II) oxide

is heated in a crucible. (2marks)

………

………

………

(c) State **two** air pollutants produced by motor vehicles. (1mark)

………

………

(d) A group of students burnt a piece of magnesium ribbon in air and its ash collected in a

Petri dish. The ash was found to comprise of magnesium Oxide and Magnesium nitride

(i) Write an equation for the reaction leading to formation of the magnesium nitride. (1mk)

………

……………………………..……………………………………………………………………………………………………..

(ii) A little water was added to the products in the Petri dish. State and explain the observation

made. (2mks)

………………………………………………………………………………………………………..…

………………………………………………………………………………………………………..

(iii) A piece of **blue** litmus paper was dipped into the solution formed in (b) above. State the observation made. (1mk)

………

………………..……………………………………………………..……………………………………..

7(a) A compound has an empirical formula C_3H_6O and a relative formula mass of 116.

i) Determine its molecular formula. (H =1, C = 12, O =16) (2 marks)

……………………………………….……………………………………………………………..………

……………..……………………………………………………………………….…………………..

ii) Calculate the percentage composition of carbon by mass in the compound. (1 mark)

…………………………………………………………………………….……………………….…

………………………………………………………………………….……………………………..

(b) Study the scheme below and answer the questions that follow.

I. State the conditions for process in step V. (1 mark)

………

………………………………..…………………………………..……………………………………

II. Name the **reaction** represented by process.

i) Z (1 mark)

………

…..……….…………………………………………………………………………………………..

ii) L (1mark)

…………………………………………………………………………………………………
…………………………………………………………………………………………………

iii) E 1 mark)

…………………………………………………………………………………………………
…………………………………………………………………………………………………

iv) N (1 mark)

…………………………………………………………………………………………………
…………………………………………………………………………………………………

III. Draw and name the structure of the substance.

i) V (1 mark)

………………………………………………………………………………………………
……………………………………………………………………………………………..

ii) P (1 mark)

…………………………………………………………………………………………………
………………………………..…………………………………………………………..

iii) U (1 mark)

…………………………………………………………………………………………………
……………………………………………………………………………………………..

KAPSABET HIGH SCHOOL

233/3   **- CHEMISTY**   **-**   **PAPER 3**

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.)PRE-MOCK 2024

INSTRUCTIONS TO CANDIDATES

- *Write your **name**, admission number and class.*
- *Answer **all** the **Q**uestions in the spaces provided.*
- *You are not allowed to start working with the apparatus for the first 15 minutes of the 2 ¼ hours allowed for this paper. This time is to enable you to read the **Q**uestion paper and make sure you have all the chemicals and apparatus you need.*
- *All working **must** be clearly shown where necessary.*
- *Mathematical tables and electronic calculators may be used.*
- ***This paper consists of 6 printed pages.***
- ***Candidates should check to ascertain that all pages are printed as indicated and that no Questions are missing.***

FOR EXAMINER'S USE ONLY

Question	Maximum Score	Candidate's Score
1	19	
2	12	
3	09	
TOTAL	40	

Question 1

You are provided with the following:

- Solution **A** ; Hydrochloric acid
- Solution **B**; 0.03M sodium hydroxide
- Solution **C**, Containing 15.74g of Na_2CO_3. $X$$H_2O$ in 250ml of the solution.

You are required to determine: -

i) The concentration of solution **A**

ii) The value of **X** in the carbonate Na_2CO_3. $X$$H_2O$

PROCEDURE A

➢ Fill the burette with solution **A**. Using clean pipette, place 25.0cm^3 of solution **B** into a 250ml conical flask.

➢ Add 2 drops of **phenolphthalein indicator** and titrate with solution **A**. Record your results in **table I** below. Repeat the experiment two more times and complete the table.

Table I (4mks)

	I	II	III
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution **A** (cm^3) used			

a) Determine the :-

(i) Average volume of solution A used. (1mk)

………………………………………………………………………………………………

………………………………………………………………………………………………

(ii) Number of moles of sodium hydroxide in 25 cm^3 of solution **B** used. (1mk)

………………………………………………………………………………………………

……………………………………………………………………………………………….

(iii) Number of moles of acid in volume of solution **A** used. (1mk)

……

……

……

(iv) Concentration of solution **A** in moles per litre. (1mk)

……

……………………………………..………………………………………………………………….

PROCEDURE B

➢ Using a **clean** pipette, place 25.0 cm^3 of solution **C** into a 250ml volumetric flask. Add about 100cm^3 of distilled water. Shake well and add more distilled water to make up to the mark. Label this solution **D**

➢ Fill the burette with solution **A**. Using a **clean** pipette, place 25 cm^3 of solution **D** into a conical flask. Add 2 drops of **methyl orange indicator** and titrate with solution **A**. Record your results in the **table II.**

➢ Repeat the titration two more times and complete **table II.**

Table II (4mks)

	I	II	III
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution **A** (cm^3) used			

b) Determine the: -

(i) Average volume of solution **A** used. (1mk)

……

……

(ii) Moles of the acid of solution **A** that reacted with the carbonate solution **D**. (1mk)

……

……

(iii) Number of moles of the carbonate in 25 cm^3 of solution **D** used. (1mk)

……
……
……

(iv) Number of moles of carbonate in 250cm^3 of solution **D**   (1mk)

……
……

(v) Concentration of carbonate solution **C** in **moles per litre**.   (1mk)

……
……

(vi) Concentration of the carbonate solution **C** in **grams per litre**.   (1mk)

……

(vii)Value of **X** in Na$_2$CO$_3$. **X**H2O (H=1.0, C=12.0, O=16.0 Na=23.0)   (1mk)

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……

Question 2

You are provided with solid **M**. Use it to carry out the tests below. Write the observations and inferences in the space provided.

(i) Place solid **M** in a boiling tube and add about 10cm^3 of distilled water. Divide the resulting solution into **five portions**

Observation	Inference
(1mk)	**(1mk)**

(ii) To the first portion add sodium hydroxide solution dropwise till excess.

Observation	Inference
(1mk)	(1mk)

(iii) To the second portion add aqueous ammonia solution dropwise till excess.

Observation	Inference
(1mk)	(1mk)

(iv) To the third portion add 3 drops of sodium chloride solution.

Observation	Inference
(1mk)	(1mk)

(v) To the fourth portion add about $2cm^3$ of HNO_3 acid.

Observation	Inference
(1mk)	(1mk)

(vi) To the fifth portion add 3 drops of lead (II) nitrate solution and warm.

Observation	Inference
(1mk)	(1mk)

Question 3

You are provided with solid **G**. Use it to carry out the tests below. Write the observations and inferences in the space provided.

(a) Using a **clean** metallic spatula, take one third of solid **G** and place on Bunsen burner flame.

Observation	Inference
(1mk)	(1mk)

(b) Place the remaining solid **G** in a boiling tube. Add $10cm^3$ of distilled water and shake the mixture until all the solid dissolves. Divide the resulting solution into **four portions**.

To the first portion add 3 drops of acidified potassium manganate (vii)

Observation	Inference
(1mk)	(1mk)

(c) To the second portion add 3drops of bromine water

Observation	Inference
(1mk)	(1mk)

(d) To the fourth portion dip universal indicator paper and determine the **pH** of the solution

Observation	Inference
(1mk)	(1mk)

(e) To the third portion add solid sodium hydrogen carbonate

Observation	Inference
(½mk)	(½mk)

KAPSABET HIGH SCHOOL

COMPUTER STUDIES   - PAPER 1

2 ½ hours

Kenya Certificate of Secondary Education *(K.C.S.E.) PRE-MOCK 2024*

Name---**ADM**------------------------------

DATE…………………………..………..SIGN…………………………...………..TARGET…………INDEX………………………….

Instructions to candidates

- Write your name and Index No in the spaces provided above.
- Sign and Write the date of the examination in the spaces provided above.
- This paper consists of two sections: A and B
- Answer all the questions in section A
- Answer question 16 and any other three questions from section B
- All answers must be written in the spaces provided on the question paper.

For Examiner's Use Only

Section	Question	Candidate's Score
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	
	Total Score	

1. Identify three advantages of using computers in banking   (3mks)

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2. List three facilities that will ensure proper ventilation in a computer lab   (3mks)

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3. Give two main functions of a computer input device.   (2mks)

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4. What are turnaround documents?   (1mk)

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5. Using examples, distinguished between:

   (i)   Primary and secondary storage   (1mk)

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   (ii)   Fixed and removable disks   (1mk)

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6. Ann connected new multimedia speakers to her computer and tried to play her favorite music CD, but no sound came out. Suggest two problems that might have occurred   (2mks)

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7. Explain the following considerations when purchasing software   (2mks)

    (i) Authenticity

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    (ii) Portability

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8. Give three ways in which operating systems are classified into   (3mks)

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9. Peter tried to retrieve a document file following all the steps correctly. The filename did not appear in file list box. State three causes for this.   (3mks)

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10. State the use of the following objects in databases.   (3mks)
    i)   Tables

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  ii)   Forms

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  iii)   Query

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11. i. Explain the meaning of the following as used in computer programming.   (2mks)
   a. Syntax

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   b. Semantic

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  ii.List three ways in which data integrity can be compromised.   (3mks)

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12. i. Mobile phones have become common ICT devices. Explain some of the powerful capabilities
    that come with some of the latest embedded operating systems   (3mks)

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  ii.List two disadvantages of fiber optic cable over twisted wires.   (2mks)

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13. Describe any two types of data processing methods.   (2mks)

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14. State two advantages of USB port over the parallel port   (2mks)

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15. Differentiate between the terms signal Attenuation and Noise as used in data communication.
                                    (2mks)

Answer question 16 and any other three questions in this section

16. a) State three advantages of low -level languages (3mks)

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b) Give two differences between a compiler and an interpreter. (2mks)

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c) i) Study this flowchart and use it to answer the questions that follow.


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         ┌───────────┐              │
         │  Y = Y/10 │        ┌───────────┐
         └───────────┘        │  S = S + 1│
               │              └───────────┘
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          ╱────────╲     NO         │
Y < 10?  ╱          ╲──────────────┘
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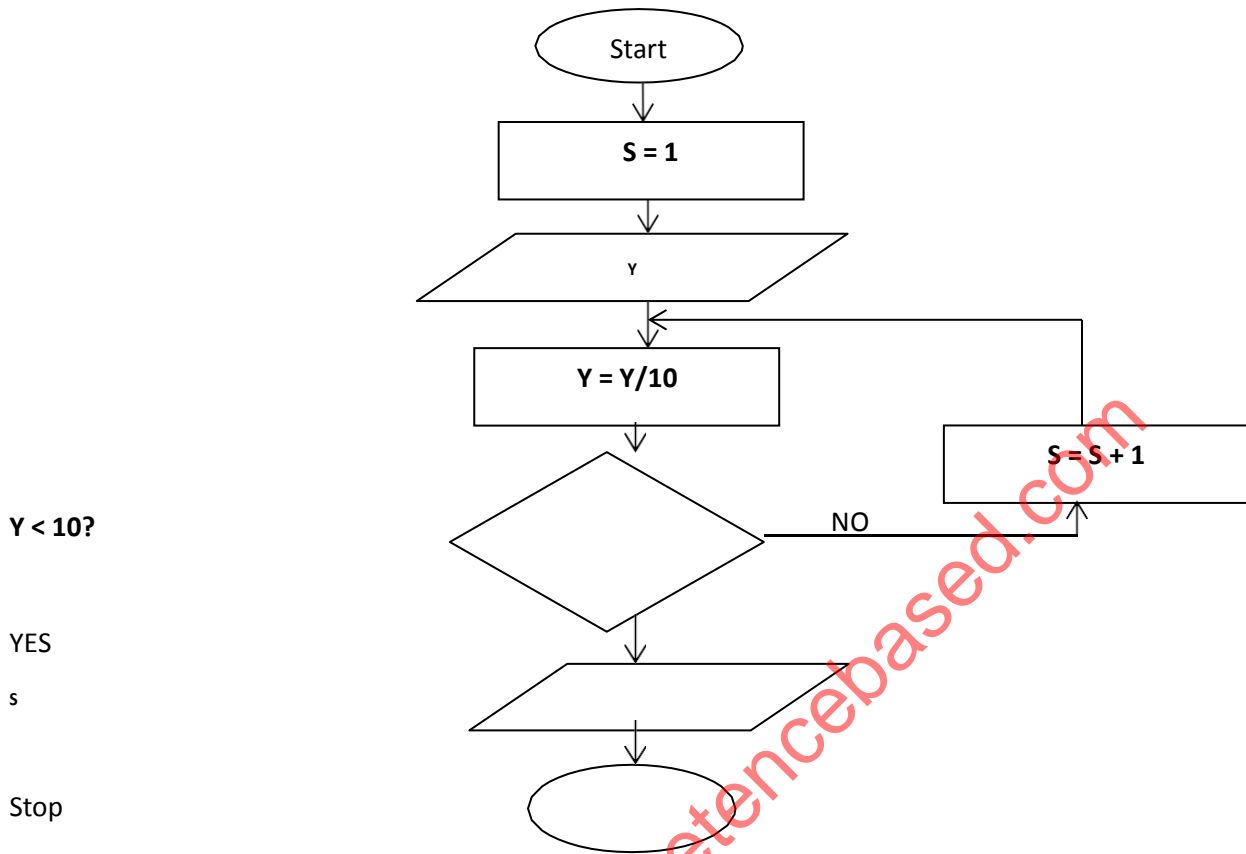
I. Give the expected output from the flowchart when the value of Y is:

(i) 48   (1 marks)

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(ii) 9170   (2 marks)

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(iii) – 800   (2 marks)

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II. Write the pseudo code that can be used to create a program represented by the above Flowchart.

17. a. Use two complement to perform the following arithmetic operations

   i) $15_{10} - 12_{10}$ (4mks)

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  ii) $10111_2 - 1011_2$ (3mks)

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b) 1011_2 is a ones complement binary representation of negative number using four bits work out the likely positive equivalent in base 10.   (4mks)

101

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c) Convert the decimal fraction 10.375_{10} into its binary equivalent   (3mks)
   Whole numbers

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   d) Assuming the existence of base five, list the numbers used in the number system   (1mk)

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18. a) State and explain two disadvantages that will come about if a network was to be installed in your
    school.   (4mks)

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   b)   Discuss two disadvantages of wireless networks.   (4mks)

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c) Write the following abbreviation in full. (2mks)

    i) F.T.P

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    ii) H.T.T.P

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d) With the aid of a diagram, discuss Hybrid topology. (4mks)

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e) Discuss four advantages of network. (2mks)

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19. a) Explain why a computer is able to display the correct time and date when it has just been switched on. (2mks)

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b) Discuss two types of special memories found in a Computer System. (4mks)

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c) i) Define a Bus with reference to a computer system. (1mk)

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ii) List two examples of buses. (2mks)

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d) Distinguish between a power cable and interface cable. (2mks)

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e) Differentiate between the different types of RAM. (4mks)

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20. a) i)   Define a system.   (1mk)

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   ii) Explain system entropy.   (2mks)

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b)   State three circumstances that can lead to development of information systems   (3mks)

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c) Distinguish parallel changes over from straight change over as used in system implementation.

                 (2mks)

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   d)   Discuss two fact finding methods.   (4mks)

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   e)   Differentiate an open system from a closed system.   (2mks)

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    f)   List two responsibilities of a system analyst.   (2mks)

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KAPSABET HIGH SCHOOL

451/2   - COMPUTER STUDIES   -PAPER   2

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM---------------------------------

DATE………………………..SIGN……………………..TARGET……...INDEX…………….

INSTRUCTIONS TO CANDIDATES.

- *Type your name and index number at the top right hand corner of each printout*
- *Sign and write the date of the examination below the name and index number on each printout*
- *Write your name and Admission number on the compact disks*
- *Write the name and version of the software used for each question attempted in the answer sheet.*
- *Passwords should not be used while saving in the compact disks.*
- *Answer all the questions*
- *All questions carry equal marks*
- *All answers must be saved in your compact disks*
- *Make a printout of the answers on the answer sheets provided.*
- *Hand in all the printouts and the compact disks.*

COMPUTER PAPER TWO

Question 1

1. Create a folder on the desktop called MAVUNO COMPANY LIMITED.　(50 marks)
(i) Using spreads sheet program enter the following data and Save the file as *mavuno payroll* inside the folder created above.(10 marks)
(ii) Insert printable borders(2 marks)
(iii) Arrange the department from A to Z (2 marks)
(iv) Rename sheet one as ***original***.(1 mark)

	A	B	C	D	E	F	G	H	I	J	K	L
1					MAVUNO COMPANY LIMITED 2022 PAYROLL							
2	PNO	NAME	GENDER	DEPARTMENT	HOURS WORKED	HOURLY RATE	BASIC PAY	GROSS PAY	TAX DEDUCTIONS	NSSF CONTRIBUTIONS	ALLOWANCES	NET PAY
3	A01	KELLY	M	MARKETTING	12	350						
4	A02	ERICK	M	ACCOUNTING	16	450						
5	A03	SILVER	F	CUTOMER CARE	5	250						
6	A04	WESLEY	M	CUSTOMER CAR	22	250						
7	A05	MONICA	F	MARKETTING	19	350						
8	A06	JUPITER	F	SALES	26	300						
9	A07	BETTY	F	ACCOUNTING	10	450						
10	A08	MARY	F	SALES	7	300						
11	A09	OLSON	M	SALES	13	300						
12	A10	JANE	F	MARKETTING	12	350						
13												
14												

(v) Copy original sheet to sheet two and rename it as payroll, calculate the following ;(12 marks)
   (a) Basic pay
   (b) Gross pay
   (c) Tax deductions
   (d) Nssf contributions
   (e) Allowances
   (f) Net pay

Nb: Use the formula below

BASIC PAY =HOURS WORKED *HOURLY RATE

ALLOWANCE ARE ALLOCATED AS 10% 0F BASIC PAY

Gross pay =BASIC PAY + ALLOWANCE

TAX DEDUCTION is calculates as 20% of the GROSS PAY

NET PAY=GROSS PAY-DEDUCTIONS

(vi) Copy names and basic pay to sheet three rename sheet three as **chart.(2 marks)**
   a) **Create column chart using employee's names, basic pay and allowances.(3 marks)**
   b) **Set the chart title as payroll at the top 2022(2 marks)**
   c) **Insert legend at the bottom(1 mark)**
   d) **Add data labels at the top(1 mark)**

e) Format chart border as; solid line, solid color-red, transparency-50%.(3 marks)

(vii) Copy *pno, name,gender,department and netpay* from payroll sheet to calculate the following ;
(2 marks)

a) Calculate the subtotals of each department and grand total, save the sheet as subtotals (4 marks)

b) Freeze the header(1 mark)

(viii) Print the following; (4 marks)

(a) Original worksheet
(b) Payroll worksheet
(c) Chart worksheet
(d) Subtotals worksheet

Question 2

Design a publication to appear exactly as shown in the next page using the following instructions.

(20marks)

a) (i) Launch the DPT package and set measurements to centimeters and the margins 2cm all round
(ii) Paper size A4 portrait.

b) Save your work as "Modern computers"
(2marks)

c) The heading "*Introduction to computers The Basics*" to have the following styles.
(5marks)

● Centered across the page
● Font face
● Font size: 18
● Background Texture: Granite
● Format the drop cap in the first line as it appears

d) The heading "Hardware" in the publication to have the styles.
(5marks)

● Font face: Arial Narrow
● Font size: 16
● Text weight: Bold
● Character spacing: 180%
● Alignment: Centered

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e) **The text under the heading "Hardware" to be in two columns and having the following styles.**

                    (3marks)

   ➢ **Font size: 12**
   ➢ **Dashed outline on the first column**
   ➢ **First character of the first column to be dropped by 4 lines as shown.**

f) **Insert the banner bearing the text auxiliary as it appears.**
   (3marks)

g) **-   Enter the text below the banner in three columns as shown**
   (4marks)
   -   Insert lines between the three columns
   (3marks)
   -   Type and format the text below the three columns exactly as it appears
   (3marks)

h) **Print the publication.**

Many people believe that knowing how to use a computer, is one of the basic skills needed to succeed in the workplace. In order to use the computer it is necessary to understand how the computer works.

Hardware

Computer hardware is made up of the equipment used to make up you computer unit. These parts include your monitor, central processing unit (CPU), keyboard, mouse, printer, and modem.

The computer is an electronic machine that performs the following four general operations:

- Input
- Storage
- Processing
- Output.

Input
The input hardware allows you to enter data into the computer. The primary devices used are the keyboard and mouse.

Processing
The central processing unit or (CPU) is the "brain" of your computer. It contains the electronic circuits that cause the computer to follow instructions from ROM (read only memory) or from a program in RAM (random access memory).

Output
Output devices such as a monitor or printer make information you input available for you to view or use.

Storage
Auxiliary storage devices, also called secondary storage devices, are used to store instructions and data when they are not being used in mem-

AUXILLIARY

To read data stored one floppy disk or to store data on a floppy disk, you insert the floppy disk in a disk drive. If the disk is unused, you must format or initialize it before your computer will allow you to store data on it. Formatting organizes the tracks around the disk into pie like slices called sectors which make it possible for your computer to save and retrieve information. The density of the bits on the track and

Floppy Disks - A floppy disk is a circular piece of oxide-coated plastic

Floppy disks are identified as being double density or high density

KAPSABET HIGH SCHOOL

313/1   -   **CRE**   -   **PAPER 1**

Kenya Certificate of Secondary Education (K.C.S.E.) PRE-MOCK 2024

Name---**ADM**---------------------------

DATE…………………………………….SIGN…………………..………..TARGET………………..INDEX……………..…………..…….

Instructions to Candidates:

1. The question paper has **six** questions.
2. Answer **any five** questions.

FOR EXAMINERS USE ONLY

QUESTION	MARKS
Q1	
Q2	
Q3	
Q4	
Q5	
Q6	
GRAND TOTAL	

Questions

1. (a) Describe the first account of creation according to Genesis 1. (8 marks)

   (b) Outline the meaning of the Biblical accounts of creation according to Genesis 1&2 (7 marks)

   (c) State five ways in which Christians continue with God's creation. (5 marks)

2. (a) Outline seven promises that God gave to Abraham during his call. (7 marks)

   (b) Why was Moses a suitable leader to the Israelites (8 marks)

   (c) State the leadership qualities that a Christian can learn from Moses. (5 marks)

3. (a) State six reasons for Kingship in Israel. (6 marks)

   (b) Explain the significance of David as an ancestor of Jesus to Christians. (8 marks)

   (c) State six lessons Christians learn from the failures of King Saul. (6 marks)

4. (a) Describe the evils that Prophet Amos condemned in Israel. (8 marks)

   (b) Explain Prophet Amos teaching on hypocritical religion in Israel. (7 marks)

   (c) State the ways through which Christians fight hypocrisy in our churches today. (5 marks)

5. (a) Describe the personal life of Prophet Jeremiah. (8 marks)

   (b) State the circumstances that led the Israelites to be taken to exile in Babylon during the time of Prophet Jeremiah. (7 marks)

   (c) State the relevance of Prophet Jeremiah's suffering to Christians today. (5 marks)

6. (a) Give reasons why pregnancy before marriage is rare in traditional African Communities. (7 marks)

   (b) State the importance of bride wealth in the traditional African Communities. (5 marks)

   (c) Explain the socio-cultural changes that have taken place in traditional African Communities in Kenya today. (8 marks)

KAPSABET HIGH SCHOOL

- CRE - PAPER 2

2 hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM-----------------------------------

DATE………………………..SIGN……………………..TARGET……..INDEX……………

INSTRUCTIONS TO CANDIDATES:

1. Answer any five questions in the answer sheet provided.
2. Candidates should check the question paper to ascertain that all pages are printed and no question are missing.

FOR EXAMINER'S USE ONLY

QUESTION		CANDIDATE'S SCORE
1		
2		
3		
4		
5		
6		
Total score		

1. (a). Basing your answer on the infancy stories, in Luke 1:5-56, describe Mary's visit to Elizabeth.

(7 marks)

(b). Describe the annunciation of the birth of Jesus by Angel Gabriel as recorded in Luke 1:26-38

(8 marks)

(c). State lessons that Christians learn from the magnificat. (5 marks)

2. (a). Narrate the Baptism of Jesus on river Jordan. (Luke 3:21-22 (6 marks)

(b). Identify four teachings of John the Baptist (8 marks)

(c). Why are Christians finding it difficult to apply the teachings of John the Baptist in their lives.

(6 marks)

3. (a). Describe the healing of the ten lepers. (7 marks)

(b). Explain four teachings from the triumphant entry of Jesus into Jerusalem. (8 marks)

(c). State five lessons that Christians learn from the suffering and death of Jesus. (5 marks)

4. (a). Describe the unity of believers as expressed in the image of the body of Christ. (8 marks)

(b). Outline St. Paul's teaching on how the gifts of the Holy Spirit should be used in the church.

(7 marks)

(c). How are the gifts of the Holy spirit misused in the church today. (5 marks)

5. (a). Identify five sources of Christian ethics. (5 marks)

(b). Explain the Christian understanding of marriage. (7 marks)

(c). State the problems related to family life today. (8 marks)

6. (a). Outline seven moral duties of employers to employees. (7 marks)

(b). Mention seven factors that determine a just wage. (7 marks)

(c). Show how retrenchment of workers affect their families. (6 marks)

KAPSABET HIGH SCHOOL

- ENGLISH - PAPER 1

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM--------------------------------

DATE………………………..SIGN……………………..TARGET……...INDEX…………….

INSTRUCTIONS TO CANDIDATES

*Write your name and admission number in the spaces provided above.

*Sign and write the date of examination in the spaces provided above.

*Answer all the questions in this paper.

*All your answers must be written in the spaces provided in the question paper.

*This paper consists of 7 printed pages.

*Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

*Candidates must answer the questions in English

FOR EXAMINER'S USE ONLY

Questions	1	2	3
Maximum score	20	10	30
Candidates score			

This paper consists of 8 printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.

1. **FUNCTIONAL WRITING**

(20mks)

Drama Club, for which you are a member, needs to raise a sum of Kshs 20,000/= to aid them on their trip to Muranga for a Drama Contest. To yours and the other members astonishment, the school Principal has offered to give you Kshs 15,000/=.

a. Write a memorandum to the other club members inviting them to a meeting to discuss;

i) how to raise the remaining amount

ii) rehearsal for the contest (12 mks)

iii)Travelling logistics

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b.Write the Principal a note to sincerely thank him/her for his/her generosity. (8mks)

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2. CLOZE TEST

Read the passage below and fill each blank space with the most appropriate word.   (10 marks)

It is an indisputable fact that agriculture (1)_____the backbone of the economy. It is therefore (2)_____that we stop over-relying on the rain-fed agriculture. Israel is a classic (3)_____of a country that has reclaimed its deserts and put them (4)_____use. Land which was (5)_____'useless'   has been turned around and (6)_____useful. Egypt which solely depends on (7)_____River Nile is a leading exporter of fruits and cereals. For our country to (8)_____self-sufficiency in food production and to get a (9)_____for export, land should be utilized to the (10)_____. This is only possible with irrigation.

3. ORAL SKILLS   (30 marks)

Read the following poem then answer the questions that follow.

I can see the rain

As I walk along the lane

I can hear the lion roar

Just as lions did of yore

I can learn to run a race

119

And I can ravel out some lace

I can fly and I can row

Let my rich imaginations flow

i)Comment briefly on the rhyme scheme used in the poem. (2mks)

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ii)Identify any two pairs of rhyming words.   (2mks)

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iii)Apart from rhyme, how else has the poet achieved rhythm.   (2mks)

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iv)How would you effectively perform line 7 in the poem above.   (2mks)

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b) Identify the silent letters in each of the following words
(4mks)

i) comb…………………………………....………………………………………….

ii) Parliament …………………………………………………………………………….

iii) Leopard…………………………………………………..……………………….

iv) gnaw……………………………………………………...…..…………………….

c) *The words in bold indicates the stressed word in the sentences below. Briefly explain what each sentence mean .*   *(3mks)*

i)The **lady** in a red dress lost her purse.

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……………………………………………………………………………………………
……………………………………………………………………..…………………….

ii)The lady in a **red** dress lost her purse.

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iii) The lady in a red dress lost her **purse**.

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d) *State what type of intonation you would use in the following sentences*.   (3   marks)

i)When were you born? ……………………………………………...………..……………….

ii)Did you complete your work? …………………………………….………..………………..

iii) What a beautiful car you have bought!...

e) *Read the genre below and answer the questions that follow.*   *(6mks)*

The great Greek grape growers grow great Greek grapes.

i) Classify the above subgenre.   (1mk)

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ii) Identify two sound patterns used in the above genre.   (4mks)

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iii) State one functions of the above sub-genre.   (1mk)

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f) You are attending an English symposium for all students in your sub county. When a student from your school takes the podium, you notice that he/she is afraid. Give three indicators of this behavior and suggest how it could be overcome.   (6mks)

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XXXXXXX This is the last printed page XXXXXXXX

KAPSABET HIGH SCHOOL

-          - ENGLISH   PAPER 2

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM---------------------------------

DATE………………………..SIGN……………………..TARGET……...INDEX…………….

Name……………………………………..………………………   Adm. No.…………

Class……………………………………………Candidate's sign……………………

INSTRUCTIONS TO CANDIDATES

Write your name, school and Index number in the spaces provided above.

Answer ALL the questions in the spaces provided

For Examiners Use Only

FOR EXAMINER'S USE ONLY

Questions	1	2	3	4
Maximum score	20	25	20	15
Candidates score				

This paper consists of 12 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.

1. Read the following passage and then answer the questions that follow. (2OMKS)

When Google hosted a boot camp in California this month for its Android operating system, there were some new faces in the room: auto manufacturers. They made the trip to learn about Android Auto, a new dashboard system meant to let a smartphone power a car's center screen. Tasks as varied as navigation, communication and music apps, all constantly talking to the cloud. And to the driver. A similar scene is playing out just a few miles down the road at Apple, where a rival system, Car Play, has been developed for iPhone users.

After years of being treated as an interesting side business, autos have become the latest obsession for Silicon Valley, with Apple assigning about 200 engineers to work on electric vehicle technology and Google saying it envisions the public using driverless cars within five years. But nowhere is that obsession playing out more immediately than in the battle to develop the next generation of cars' dashboard systems.

In the coming weeks and months, dealerships around the country will begin selling vehicles capable of running Android Auto, Apple Car Play, or both. The systems go far beyond currently available Bluetooth pairing for playing music or making a hands-free call, and allow for Google's or Apple's operating system to essentially take over the center screen and certain buttons within the car. "Consumers have spoken," said John Maddox, assistant director of the University of Michigan's Mobility Transformation Center.

"They expect to have coordination between their phone and their vehicle." Here at Google's headquarters, Android Auto is about to make its debut in Americans' cars after two years in development. Plug in a smartphone with a USB cord and the system powers up on a car's screen. The phone's screen, meanwhile, goes dark, not to be touched while driving. Apple's Car Play works similarly, with bubbly icons for phone calls, music, maps, messaging and other apps appearing on the car's center screen. (Apple declined to comment for this article.)

While the idea of constantly connected drivers zipping along roads raises concerns about distracted driving, both companies say their systems are designed with the opposite goal: to make cellphone-toting drivers safer. "We looked at what people do with their phones in the

car, and it was scary," said Andrew Brenner, who heads Google's Android Auto team. "You want to say to them, 'Yikes, no, don't do that.'"

Brenner said his team tried to figure out how to minimize distraction during tasks people frequently do while driving, while also deciding what should be prevented in the car altogether. Google even built its own driver-distraction lab, to test different variations.

Android Auto, for example, has no "back" button like the smartphone version. No "recents" button either. Google Maps has been adjusted to make fonts bigger and streets less detailed, for easier reading while driving. No action should take more than two seconds — consistent with the Transportation Department's voluntary guidelines. "Things that we don't show are just as important as what we do show," Brenner said. Music is most definitely in. Streaming video? Most definitely not.

Most social media will also be blocked, and texts can be sent only with voice commands. Apps on the screen are optimized for speed: glance, touch and eyes back to the road. "It's these little glances at the screen that people do in a car," he said.

"We want something that's very glanceable, that can be seen and done quickly." When the Android Auto project began, it included a core group of automakers like General Motors, Audi, Honda and Hyundai. Now, as it prepares for its debut, roughly two dozen car brands have signed on to offer it soon. Apple has teamed up with roughly the same number of brands, many of which will offer both systems. Most automakers are staying mum on their exact start dates, but Hyundai is expected to act shortly, and Volkswagen has indicated availability for its next Golf. GM has said the same about its Spark subcompact. One of the most widespread adopters will be Ford, which this year will begin offering both Android Auto and Car Play in conjunction with the revamping of the automaker's much-criticized Sync system.

By the end of 2016, they will be available on all Fords sold in the United States. "We don't want people to have to make a vehicle choice based on which mobile phone they have," said

Don Butler, Ford's executive director for connected vehicles and services. "We want to accommodate all customers and their devices."

Fiat-Chrysler, considered to have one of the better infotainment platforms on the market, has signed on to support Google's and Apple's systems. But a bit of lament is evident. "We're confident that our systems deliver a good experience for our customers," said Eric Mayne, a spokesman at Chrysler. "But we're not standing still either."

a) Why did Auto manufacturing companies make the trip to California?   (2mks)

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b) What according to the passage shows the seriousness that companies have autos have attached to autos?

c) What does the expression "Consumers have spoken," imply?   (2mks)

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d) Briefly explain how the system works?   (2mks)

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e) Why in your opinion do social media have to be blocked?   (3mks

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f) In point form, summarize how developers have tried to minimize distractions that may arise out of the new developments.   (5mks)

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g) **_Rewrite the following in reported speech._**   (1 mark)

"We're confident that our systems deliver a good experience for our customers," said Eric Mayne, a spokesman at Chrysler.

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…….…..

h) What do the following words mean as used in the passage?   (3 marks)

i) Debut …………………………………………………………………………………...

ii) Mum …………………………………………………………………………………...

iii) Infotainment ……………………………..…………………………………….................

2. Read the excerpt below and then answer the questions that follow. (25 marks)

I'm not sure. Perhaps it's fun," she said.

"Lying is fun?"

"l said I'm not sure. Now you did a good turn for me downstairs. They say one good turn deserves another. So, in retum, can I tell you something I'm not yet sure I should tell you?"

'Sure. Go ahead."

"They have this youth at the VOA. His name is Nick Sentinel. What does he do? He snoops on wireless transmissions, with a machine he calls-wait for it-the "Silent Listener'. While I was there this moming ..'

"While you were where? At the VOA? Yesterday you said you work for the Gambian News. Were you lying? After all, you've just said lying might be fun."

"Will you let me finish?"

"Look. I really do work for the Gambian News. "

"Skip the lies! You're a CIA agent, aren't you?"

"l won't answer that."

"Because you are or because you can't?"

"Neither." "Isn't that exactly what you would say if you were?"

"All right, I will answer it."

"Believe me. I am a reporter for the Gambian News. Normally, that is. But, since right after our interview yesterday, I am on loan to the VOA. If you must know, the VOA pays much better than the Gambian News. Will the VOA take me for keeps? No. When the loan ends, it will be thank you very much, Ms. McKenzie, but please go back to the Gambian News tomorrow and start eating boiled dirt for breakfast, lunch and supper again• Are you happy now, Dr Afolabi?"

He did not answer.

a) Place this excerpt in its immediate context. (4 marks)

b) They say one good tum deserves another". What good tum did Dr. Afolabi do for Ms Mckenzie? (2 marks)

c) Discuss one thematic concem brought out in the excerpt. (3 marks)

d) Identify and illustrate two styles used in the excerpt, (4 marks)

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e) What does a reporter-on-loan mean? (3 marks)

f) What does VOA stand for? (2 marks)

g) From the information in this excerpt, describe the character traits of Dr. Abiola. (4 marks)

h) Rewrite the sentence below beginning: (It...)

When the loan ends, it will be thank you very much.

i) Give the meaning of the following words as used in the excerpt. (2 marks)

(i) Snoops

(ii) Tum

Questions:

i)Briefly describe what happens before the excerpt .   (3marks)

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ii) Identify and illustrate major themes evident in the excerpt .   (4 marks)

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iii) In note form, state reasons why Krogstad says that he is prepared to fight for his small post in the bank as if he was fighting for his life.   (5mks)

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iv) How is Nora and Krogstad portrayed in the excerpt   (4 marks)

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v) Discuss any style used in the excerpt and show it's effectiveness   (3mks)

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vi) I shall be obliged to remind you of a few details.(Add a question tag)   (1 mark)

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vii) From your knowledge of the text, explain how Nora found herself in this predicament (3mks)

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viii)   Explain the meaning of the following words as used in the excerpt.   (3 marks)

(i).   Indiscretion

....

....

(ii).   Compel

....

....

3. *Read the oral poem below and answer the questions that follow.*

The Crop Thieves

Tswiri tswiri! I the person, I suspect?

What have you heard that makes you suspicious?

I heard things said, rumours of weaver birds;

They ate corn in Lesiba's field and finished it.

And when they left they sounded hummmmm-

They said, "Listen to the numerous weaver birds, sons of Mosima;s family.

Children of the horse that ate the courtyards and the times,

It is the numerous weaverbirds,

The grey ones that go about in swarms,

Children with the little red beaks,

Children that make a noise in the mimosa trees,

Tupu-tupu! The smoke comes out while the dew still glitters.

Howaaa! Sweaaa! – is heard in the early morning

They are finishing the corn, the numerous weaver birds.

Children with the little red beaks.

At home, it is yo! yo!

The children are crying,

Their mothers have gone to the fields to the birds,

It is the Zulus that have entered the country,

Take axes and loop the tree branches,

Yo! This year we shall eat five,

We shall lack even a blue-tongued goat!

It is numerous weaverbirds, the grey ones that go about in swarms.

Questions

i)What kind of oral poem is this?   (2 marks)

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ii) Explain two functions of the above oral poem   (2 marks)

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iii) Identify and illustrate two oral features of this poem   (4 marks)

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iv) What does the poem tell us about the character trait of the weaverbirds.   (2 marks)

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v) Which lines show that people will keep on suffering if they don't keep the birds away?

(2 marks)

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vi) Identify and illustrate two economic activities practiced in this community. (4 marks)

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vii) What is the attitude of the singer towards the weaverbirds?   (2 marks)

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viii) *Explain the meaning of the following lines as used in the song.*   *(2marks)*

We shall lack even a blue-tongued goat.

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ix) It is the Zulus that have entered the country.

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4.GRAMMAR. (15MKS)

a)Rewrite the following sentences according to the instructions given after each. Do not change the meaning. (4mks)

i) Juma did not do the assignment. He did not report to the teacher. (Rewrite into one sentence using a correlative conjunction)

………
………
………
………

ii) Complete with the correct alternative.

They won the match because they had enough. ....(Practice/practise)

iii) I like to swim. (change the infinitive into a gerund)

....
....

iv) My examination results were released only after I had cleared the fee balance.(Begin: Not until. ....)

....

....

....

b) *Fill in the blank spaces with the correct form of the word in brackets. (3mks)*

i)He was relieved when the three.. left his compound. (passerby)

ii) The inmates took advantage of the..to escape from custody. (confuse)

iii)The film, though poor in artistic value, was a ....success. (finance)

c) Complete the following sentences using an appropriate preposition. (3mks)

i) It is improper to hurl abuses.. people.

ii) The principal was very happy .... her students.

iii)Mueni and her family had lived in Mombasa... twenty years.

d)*Replace the underlined phrasal verb in each of the following sentences with an appropriate word.* *(3mks)*

i) Juma always **calls in on** us during meals.

…………………………………………………………………………………………………

…………………………………………………………………………………………………

ii) We felt completely **let down** by her performance.

…………………………………………………………………………………………………

…………………………………………………………………………………………………

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KAPSABET HIGH SCHOOL

101/3   **- ENGLISH**   **-**   **PAPER 3**

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM----------------------------------

DATE……………………..SIGN……………………..TARGET……..INDEX…………….

INSTRUCTIONS TO THE CANDIDATES

Answer three questions only

Questions one and two are compulsory.

In question three choose only one of the optional texts, for which you have been prepared.

Where a candidate presents work on more that one optional text, only the first to appear will be marked

Each of your essay must not exceed 450 wor

This paper consists of 2 printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.

Answer Three Questions Only

1. Imaginative Composition (20mks)
Either
Write a composition ending with the following statement:
............"Given another chance I would have done things differently."

Or

Write a composition supporting or opposing this statement:

"Both boys and girls have equal rights to their parent's property."

2.The Compulsory Set Text. (20mks)

THE SAMARITAN BY JOHN LARA **(20 marks)**

Discuss the theme of *Religion* as depicted in the play, *The Samaritan,* **by John Lara**

3.The Optional Set Texts. (20mks)
Answer any one of the following three questions.
Either
The short story: A Silent Song and Other Stories.

Drawing illustrations from MejaMwangi's an incident in the park, write an essay to discuss the problems of urbanization

Or

An Artist of the floating world by Kazuo Ishiguro.

The memory of the past can lead to a change of a life style. Justify the statement.

KAPSABET HIGH SCHOOL

PAPER 1

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

GEOGRAPHY CONFIDENTIAL

- Provide enough copies of Kisumu East maps sheet 116/2 used in KCSE 2022 December.

KAPSABET HIGH SCHOOL

312/1   **- GEOGRAPHY**   **-**   **PAPER 1**

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--**ADM**----------------------------------

DATE………………………..**SIGN**……………………..**TARGET**……..**INDEX**…………….

TIME: 2³/₄ HOURS

INSTRUCTIONS TO CANDIDATES

- This paper consists of two sections.
- Answer all questions in section **A** .
- In section **B answer question 6 and other two questions..**

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MARKS	SCORE
A	1-5	25	
B	6	25	
	7	25	
	8	25	
	9	25	
	10	25	
TOTAL MARKS		**100**	
TOTAL SCORE			

SECTION A: Answer all questions in this section

1. a) State two sub- branches of physical geography. (2 mks)
b) Give three reasons as to why it is important to study Geography. (3 mks)
2. a) Differentiate between seismic focus and epicenter. (2 mks)
b) Give three causes of earthquakes. (3 mks)
3. a) Name two major types of vegetation zones in the world. (2 mks)
b) State three characteristics of coniferous forest. (3 mks)
4. a) The diagram below shows a water cycle. Use it to answer the question that follow.
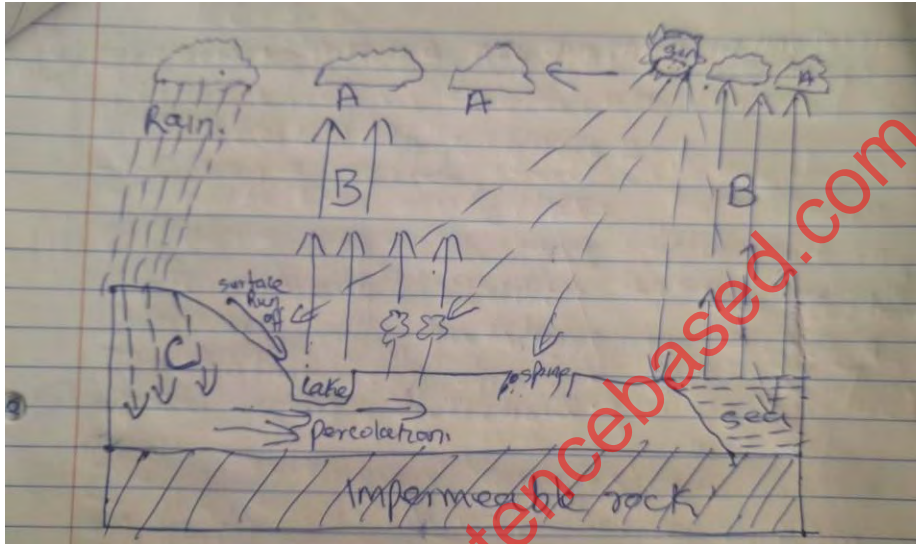
i. Name the processes labelled. (3 mks)
A_____
B_____
C_____

ii. State two factors influencing the amount of surface run-off. (2 mks)
5. a) What is a lake? (2 mks)
b) Give three reasons why some lakes in the Kenyan Rift valley are salty. (3 mks)

SECTION B
Answer question 6 and any other two questions in this section
6. Study the map of Kisumu 1:50,000 (sheet 116/2) provided and answer the following questions.

a. i) Give the longitudinal extent of the area covered by the map? (1 mk)
ii) Name the three human-made features in the grid square 0193. (3 mks)
iii) Identify two methods used to show relief on the map. (2 mks)
iv) Calculate the area of Kisumu town. Give your answer in square kilometres.(2 mks)
v) Name two types of natural vegetation. (2 mks)

b. Draw a square 10cm by 10cm to represent the area enclosed by easting 00 and 10, and Northings 80 and 90. (1 mk)

On it mark and name the following

- Air photo principal point (04) (1 mk)
- Chinga market (1 mk)
- All weather road bound surface. (1 mk)
- River Ombeyi. (1 mk)

c. Describe the distribution of settlement in the area covered by the map. (4 mks)

d. Citing evidence from the map, give three economic activities carried out in the area by the map. (6 mks)

7. a)i) Differentiate between a rock and a mineral. (2 mks)

ii) Describe the following characteristics of minerals.

a) Colour (1 mk)
b) Hardness (2 mks)

b)i) What are igneous rocks. (2 mks)

ii) State three notable differences between plutonic and volcanic rocks. (3 mks)

c)Describe the formation of the following rocks.

i. Mechanically formed sedimentary rocks. (3 mks)
ii. Chemically formed sedimentary rocks. (3 mks)

d(i) Identify the missing type of rocks. (3 mks)

Original rock	Metamorphic rock
Limestone	(i)
(ii)	Graphite
Granite	(iii)

ii) Supposing you were to carry out a field study on rocks at the Kenyan Coast.

a. State two reasons as to why you would ask for permission from the school administration. (2 mks)

b. What reasons would you give for the widespread at sedimentary rocks at the Coastal plain. (3 mks)

8. a)i) Differentiate between orogeny and orogenesis. (2 mks)

ii) State three factors that influence folding. (3 mks)

b)i) Apart from Recumbent fold name three types of folds. (3 mks)

ii) With the aid of a well labeled diagrams describe how a recumbent fold is formed. (6 mks)

c)Name three features formed by folding. (3 mks)

d) Explain four positive effects of folding to human activities. (8 mks)

9. a) i) State three sources of ocean salts. (3 mks)

ii) Name two types of tides. (2 mks)

b)With the aid of a well labeled diagrams describe how a stack is formed. (8 mks)

c)i) Name two types of submerged highland coasts. (2 mks)
ii) State two factors influencing deposition by ocean waves. (2 mks)
d)Explain four significance of oceans to human activities. (8 mks)

10. a)i) Differentiate between soil profile and soil catena. (2 mks)
ii) Draw a well labeled diagram of a mature soil profile. (5 mks)
b)i) Other than topography name three factors that influence formation of soil.
(3 mks)
ii) Explain how topography influence formation of soil. (3 mks)
iii) List three characteristics of desert soils. (3 mks)
c(i) Give three types of soil erosion. (3 mks)
ii) Explain three effects of soil erosion on human activities. (6 mks)

KAPSABET HIGH SCHOOL

312/2 - **GEOGRAPHY** - **PAPER 2**

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name---ADM----------------------------------

DATE………………………..SIGN……………………..TARGET……..INDEX…………….

Time 2 hours 45 min.

INSTRUCTIONS TO STUDENTS

- *This paper has **two** sections **A** and **B***
- *Answer **ALL** the questions in section A. In section **B** answer questions **6** and any other **TWO** questions.*

FOR EXAMINERS' USE

SECTION	QUESTION	SCORE
A	1-5	
B	6	
	7	
	8	
	9	
	10	
TOTAL		

SECTION A

1. a) What is mining? (2 mks)
b) State three ways in which minerals occur. (3 mks)
2. a) Name indigenous soft wood tree species found in the Kenyan forest. (2 mks)
b) Give three importance of agro forestry. (3 mks)
3. a) Distinguish between horticulture and market gardening. (2 mks)
b) Give three characteristics of horticultural farming in Kenya. (3 mks)
4. a) Name two major swamp areas that have been reclaimed in Kenya. (2 mks)
 b) State three physical factors that influenced the location of Perkera irrigation scheme.
(3 mks)
5. a) Identify two types of tourism. (2 mks)
b) State three problems facing tourism in Kenya. (3 mks)

SECTION B

Answer question 6 and any two questions in this section

6. The table below shows the number of Zebu cattle in different countries in Kenya in 2014**.**

County	Number of Zebu cattle
Isiolo	42500
Wajir	22600
Marsabit	20300
Mandera	15400

a) Draw a divided rectangle 15 cm long to represent the data above.(7 mks)
b) Calculate the range of the above data. (2 mks)
c) Give three advantages of using divided rectangle to represent data. (3 mks)
d) i) Give three reasons why nomadic pastoralists keep large herds of animals.(3 mks)
ii) Name two nomadic communities involved in beef cattle rearing in Kenya.
(2 mks)
iii) Explain four ways in which the government of Kenya assist nomadic pastoralists to improve the quality of their livestock. (8 mks)

7. a(i) Name two major categories of minerals. (2 mks)
ii) Identify four factors that influence the occurrence of minerals. (4 mks)
b(i) Apart from shaft mining name three other methods of mining. (3 mks)
ii) Describe how shaft mining method is carried out. (6 mks)
ci) name two areas in South Africa where diamond is mined. (2 mks)
ii) Explain four ways in which diamond mining contributed to the economy of South Africa. (8 mks)

8. a)i) Define re-afforestation. (2 mks)
ii) State four reasons why afforestation is encouraged in Kenya. (4 mks)
b(i) Name three provinces in Canada where forestry is practiced on a large scale. (3 mks)
ii) State four factors favouring exploitation of forest in Canada. (4 mks)
ci) Explain three factors that favour the growth of natural forest on the slopes of Mount Kenya.
(6 mks)

ii) Explain three problems which hinder the Kenyan government efforts to manage and conserve forest in Kenya. (6 mks)

9. a(i) Differentiate between land reclamation and land rehabilitation. (2 mks)
ii) Give four problems facing Mwea Tebere irrigation scheme. (4 mks)
   b) i) Explain three ways in which land is being rehabilitated in Kenya. (6 mks)
   ii) Name two projects in Netherlands which were aimed at reclaiming land from the sea. (2 mks)
   c) Describe the steps followed in reclaiming land for agricultural use in Netherlands. (6 mks)
   d) State five benefits which Kenya derives from irrigation farming. (5 mks)

10. The diagram below shows a fishing in the pacific ocean.

   i.   Identify the fishing ground shown above. (1 mk)
   ii. Name three types of fish species found in the fishing ground above. (3 mks)

   b) i)Differentiate between fishing and fisheries. (2 mks)
   ii) Name two inland types of fisheries in Kenya. (2 mks)

   c (i) Describe the long lining fishing method. (5 mks)
   ii) Explain four physical factors that influenced development of fishing in Japan. (8 mks)

   d)State four problems facing marine fishing in Kenya. (4 mks

KAPSABET HIGH SCHOOL

311/1   -   HISTORY AND GOVERNMENT   -   PAPER 1

2 ½ hours

Kenya Certificate of Secondary Education **(K.C.S.E.) PRE-MOCK 2024**

Name---ADM----------------------------

DATE…………………………………….SIGN……………..…………..TARGET………..INDEX……………..…….

FOR EXAMINERS USE ONLY

Section	A	B				C			Total
Questions	1 - 17	18	19	20	21	22	23	24	
Marks awarded									

TIME: 2½ hours

HISTORY AND GOVERNMENT

Paper 1

Instructions to Candidates

(a) *This paper consists of* **three** *sections* **A, B** *and* **C.**

(b) *Answer* **all** *questions in section* **A, three** *from Section* **B** *and* **two** *from Section* **C.**

(c) *Answers to all the questions must be written legibly in the answer booklet provided.*

(d) **This paper consists of three printed pages**

(e) **Candidates should check the question paper to ensure that all pages are printed as indicated and**

  no questions are missing

(f) **Candidates should answer the questions in EnglisH**

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Answer all questions in this section

1. Identify the **main** source of information on Kenyan communities. (1 mark)

2. State **two** natural reasons for the migration of Bantu into Kenya. (2 marks)

3. Identify the basic political unit of the Maasai during the pre-colonial period.
    (1 mark)

4. Give **two** evidences that shows that Chinese arrived at the East African coast.
    (2 marks)

5. Name **one** missionary society that worked in Kenya in the 19th century. (1 mark)

6. Identify **two** categories of people eligible for registration as Kenyan citizens.
    (2 marks)

7. Define the term "National integration". (1 mark)

8. State the **main** reason for the formation of Inter-Party Parliamentary Group caucus in
    1997. (1 mark)

9. Give **two** ways in which the constitution of Kenya can be amended. (2 marks)

10. Name the document that contains children rights in Kenya. (1 mark)

11. Identify **two** communities that exhibited mixed reactions. (2 marks)

12. Give **two** reasons why oathing was administered to Agiryama warriors. (2 marks)

13. Identify **two** grievances of the Indian delegation that were addressed by Devonshire White
    Paper of 1923. (2 marks)

14. State **two** features of Missionary education in Kenya during the colonial period.
    (2 marks)

15. Give the **main** impact of Oliver Lyttelton constitution of 1954. (1 mark)

16. Identify **one** type of elections in Kenya. (1 mark)

17. Who is the administrative head of the Kenyan Judiciary? (1 mark)

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SECTION B (45 MARKS)

Answer three questions in this section

18 a) Mention five economic activities of the Maasai.   (5mks)

   b) Explain five effects of Bantu migration and settlement in Kenya   (10mks)

19 a) State five reasons for the Portuguese success in the conquest of the Kenyan coast

                                                                                                          (5mks)

   b) Explain five social effects of the Indian ocean trade on the peoples of Kenyan coast
   up to 1500AD   (10mks)

20 a) State *five* duties of the British governor in Kenya during the colonial period (5mks)

   b) Discuss *five* reasons why British colonized Kenya   (10mks) 21.(a) State
five factors that facilitated the Mau Mau movement.   (5mks)

   (b) Explain **five** roles played by the African elected members of parliament in the struggle for
   independence in Kenya.   (10mks)

SECTION C 30 MARKS

Answer any two questions in this section

22. (a) Name **Five** different types of prisons in kenya 5 mks

(b) Explain **Five** factors that may undermine the administration of justice in kenya (10 mks)

23 (a) identify five categories of people whose personal freedom of movement is limited in kenya (5
mks)

   (b) Explain five rights of a child as contained in the constitution of kenya (10 mks)
24   a) state five reasons why the independence of the judiciary is important in kenya (5 mks)

(b) Explain five factors that can interfere with free and fair elections in kenya (10 mks)

KAPSABET HIGH SCHOOL

311/2   -   HISTORY   **PAPER 2**

2 ½ hours

Kenya Certificate of Secondary Education *(K.C.S.E.) PRE-MOCK 2024*

FOR EXAMINERS USE ONLY

Section	A	B				C			Total
Questions	1 - 17	18	19	20	21	22	23	24	
Marks awarded									

TIME: 2½ hours

HISTORY AND GOVERNMENT

Paper 2

Instructions to Candidates

(a) *This paper consists of **three** sections **A, B** and **C.***

(b) *Answer **all** questions in section **A, three** from Section **B** and **two** from Section **C.***

(c) *Answers to all the questions must be written legibly in the answer booklet provided.*

(d) ***This paper consists of three printed pages***

(e) ***Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing***

(f) ***Candidates should answer the questions in English***

SECTION A 25 MARKS

ANSWER ALL QUESTIONS.

1. Give the realationship between history and government 1 mk
2. Identify two types of manuscripts which is likely to contain information on history and government. 2 mks
3. Give one reason why Homo habilis was refered to as "able" man 1 mk
4. Name two sources of information on the creation theory 2 mks
5. Identify two types of regional trade (2 mks)
6. Give the main form of transport that was used in trans-saharan trade (1 mk)
7. State two characteristics of the macadamized roads in the 19th century (2 mks)
8. Identify one form of picture writing during the early civilizations (1 mk)
9. Give two factors which should be considered when sending a message (2 mks)
10. Give two inventions that improved textile manufacturing industry in Britain in 18th century 2 mks
11. Name two metals that were used as currency in pre-colonial Africa (2 mks)
12. State two similarities between the Buganda and Ndebele systems of government in the 19th century (2 mks)
13. Give one reason why the shona supported the british during the Ndebele resistance of 1893 (1 mk)
14. Name one treaty signed between lobengula and British during the process of colonization of Suth Africa during 19th century (1 mk)
15. Name the country that was blamed for the outbreak of the first world war (1 mk)
16. Give one political cause of the first world war (1 mk)
17. Give the main cause of the cold war (1 mk)
    SECTION B 45 MARKS
    Answer any three questions

18. (a) State five stages of evolution of man. (5 marks)

    (b) Describe the culture of man during the late Stone Age. (10 marks)

19 . (a) State three disadvantages of using coal as a source of energy. (3 marks)

    (b) Explain six effects of scientific inventions on industry. (12 marks)

20. a) State five methods used by the British to acquire colonies in Africa. (5 marks)

    (b) Explain five effects of the partition of Africa. (10 marks)

21.(a) Identify five causes for the rise of African nationalism. (5 marks)

b) Discuss five Problems that faced FRELIMO in the war against Portuguese in Mozambique. (10 marks)
    SECTION C 30 MARKS.
    Answer any two questions.

22. (a) Give three parts into which the Asante kingdom was divided (3 marks)

(b) Explain six aspects of the political organization of Shona kingdom during the pre-colonial period. (12 marks)

23 (a) State three functions of Emirs during the British administration in Nigeria 3 mks

(c) Explain six reasons why indirect rule policy failed in southern Nigeria (12 mks)

24. (a) Name any three treaties that formed the Treaty of Versailles.(3 marks)

(b) Explain six reasons why the League of Nations failed to preserve world Peace and security
(12   mar

KAPSABET HIGH SCHOOL

102/1 - - KISWAHILI PAPER 1

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name---**ADM**---------------------------------

DATE………………………..**SIGN**……………………..**TARGET**……..**INDEX**…………….

Muda: Saa 1¾

Maagizo

a) Andika insha **mbili**. Insha ya kwanza ni ya **lazima** kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.

b) Kila insha isipungue maneno 400.

c) Kila insha ina alama 20.

d) Kila insha **lazima** iandikwe kwa lugha ya Kiswahili.

e) Karatasi hii ina kurasa 2 zilizopigwa chapa.

f) Watahiniwa ni lazima wahakikishe kwamba kurasa zote za karatasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo.

Kwa Matumizi ya Mtahini Pekee

SWALI	UPEO	ALAMA
1	20	
	20	
Jumla	40	

MASWALI

1. Umetangazwa kuwa mwanafunzi bora katika mtihani wa kitaifa. Mwalimu Mkuu wa shule ya upili ya Tuamke amekualika katika shule hii yake kuwahutubia wanafunzi kuhusu kilichochangia ufanisi wako. Andika hotuba yako.

2. Fafanua hatua ambazo jamii imechukua kuimarisha maisha ya wanawake katika jamii.

3. Andika kisa kinachodhihirisha maana ya methali; Mui huwa Mwema.

4. Andika insha itakayomalizia kwa: Nilijitazama na kujidharau kwa nini sikuwafahamisha walimu jambo hilo mapema.

KAPSABET HIGH SCHOOL

- - **KISWAHILI** **PAPER 2**

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM-----------------------------------

DATE………………………..SIGN……………………..TARGET……...INDEX…………….

Maagizo

- Andika **Jina lako** na Nambari yako katika nafasi ulizoachiwa hapo juu.

- Tia**sahihi yako**kisha **tarehe** ya mtihani katika nafasi ulizoachiwa

- Jibu maswali yote katika nafasi ulizoachiwa katika kijitabu hiki cha majibu.

- Hakikisha kwamba kurasa zote zimepigwa chapa.

- Majibu yote ni lazima yaandikwe kwa lugha ya **Kiswahili.**

Kwa Matumizi ya Mtahini Pekee

Swali	Upeo	Alama
1	15	
2	15	
3	40	
4	10	
JUMLA	**80**	

1. **UFAHAMU: (Alama 15)**

Soma kifungu kifuatacho kisha ujibu maswali.

Tumeshuhudia baadhi ya ndugu wa familia moja wakiishi bila maelewano na wakati mwingine kukata kabisa kabisa mawasiliano. Hivi leo kuna familia ambazo haziwezi kuketi pamoja na kumaliza matatizo yao, na badala yake huchukua njia za vita ugomvi na hata pengine mauaji kama suluhisho la migogoro yao.

Kawaida maisha sio mstari mnyoofu. Kuna milima,mabonde,kona na hata mashimo. Ndiposa migogoro ni sehemu ya maisha yetu! Mara nyingi **haiepukiki**, isipokuwa kuipitia na kupata suluhisho. Ipo migogoro baina ya ndugu ambayo huleta kutoelewana,kukosesha amani nahata pengine kupoteza kabisa mahusiano. Ni wazi kuwa mahali popote wanapoishi watu au kufanya kazi pamoja, hapakosekani migogoro kwani hata vikombe vinapokuwa kabatini, havikosi kugongana.

Ukweli ni kwamba sote tunazaliwa na tabia tofauti, uwezo tofauti wa kuvumilia na hata kuamua kutenda. Katika mazingira yoyote ya kutoelewana, kiasi kikubwa cha busara, upendo, amani na imani huhitajika ili kuiondoa migogoro hiyo. Isipotafutiwa suluhisho ama utatuzi wake ukatendeka kwa jazba na chuki, migogoro ya ndugu katika familia hukua na kuzaa madhara makubwa.

Kuanzia utotoni au hadi uzimani, kunaweza kuwa na sababu nyingi ambazo huweza kupelekea kuleta tofauti baina ya ndugu. Kwa ujumla, ndugu ni watu unaowaamini, ambao hawatakupa kisogo. Walakini, hii sio wakati wote. Kwa bahati mbaya ukweli umetuonyesha kuwa kuna uhusiano wa kindugu ambao huisha vibaya. Sababu kubwa zikiwa ni mazingira ambayo ndugu wameishi ambayo wakati mwingine kuna upendeleo wa mzazi kwa mtoto au watoto fulani na kuwafanya wengine wahisi wivu, kutopendwa na kutengwa.

Zipo sababu za kiuchumi ambapo ndugu wengine katika familia wanafanikiwa zaidi kuliko wengine na kuwa na maisha bora zaidi kuliko wengine. Hali hii pia inaweza kuleta mfarakano kwa wale ambao hali zao ni tofauti na wengine, hasa iwapo hakukuwa na mazingira ya utangamano katika familia tangu awali.

Ndugu wa familia moja huzaliwa wakiwa na tabia tofauti. Kila mshiriki wa familia ana **haiba** na mtazamo wake tofauti katika masuala mbalimbali. Wengine hukasirika mara kwa mara, wengine ni wakimya sana, wapo walio wakorofi na wengine wanaopenda amani, hivyo jambo hili ni muhimu mno kulielewa mara inapotokea migogoro ili kutamua namna ya kupata suluhisho.

Jambo la kusikitisha zaidi ni kwamba migogoro hii wakati mwingine hupelekea kuvuruga mwelekeo wa maisha ya watoto hasa wakati wa ukuaji, kwani kulingana na tofauti zao, wapo wale wanaoamua kuondoka nyumbani wakiwa bado na umri mdogo na kuhamia mitaani.

Pamoja na migogoro kuwepo katika familia zetu ni vyema wazazi ama walezi waelewe tofauti za kifamilia zinavyoweza kuchangia mfarakano baina ya ndugu wa familia moja. Kwamba mzazi ama mlezi anapompendelea mtoto mmoja na kutokuwa karibu na mwingine, anatengeneza mazingira ya tofauti baina ya watoto wake. Ni vyema kuweka uwiano sawa baina ya watoto na familia ili kuweza kupunguza tofauti zinazoweza kujitokeza.

Maswali

(a).Onyesha athari **tatu** za migogoro miongoni mwa ndugu katika familia.   (Alama 3)

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(b). Eleza mambo **matano** yanayochangia kuwepo kwa watoto wanaorandaranda mitaani kwa kurejelea kifungu.   (Alama 5)

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(c). Malezi yanachangia migogoro baina ya ndugu. Thibitisha kwa kurejelea kifungu. (alama. 1)

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(d). Taja na ueleze mbinu nne za kimtindo zilizotumika katika kifungu.   (alama. 4)

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(e). Andika visawe vya maneno yafuatayo kama yalivyotumika katika kifungu. (alama.2)

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(i) haiepukiki

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(ii). haiba

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2. MUHTASARI
Soma taarifa ifuatayo kisha ujibu maswali.

Migongoni mwa starehe ambazo Waswahili wamezihifadhi mpaka leo ni kutoleana hadithi na kutegeana vitendawili. Starehe hizo ambazo kwa kawaida hufanywa nje huwa njiani au uani, ama ndani chumbani au ukumbini, aghalabu hufanywa wakati wa magharibi au usiku baada ya kila mtu kumaliza kazi ya nyumbani,dukani,shambani,ofisini na kadhalika. Mambo haya yakitazamwa sana itaonekana kuwa hayakufanywa vivi hivi.

Tangu zamani wazee wa Kiswahili waliwakataza wana wao kucheza mchana. Hawakupenda vijana wajizoeshe uvivu kwa kupiga malapa. Walisadiki kuwa mwana ambaye hakukanywa dhidi ya utiriri huu hangeweza kujifaa yeye mwenyewe na wala hata watu wengine. Isitoshe nani Asiyejua kuwa ajizi ninyumba ya njaa:Vijana walilimizwa kusaidia katika makazi mbali mbali yanayofanywa majumbani, mashambani na mahali popote palipohisiwa kuwa mtu angalifanyiwa jambo la kumpa riziki. Ndiposa ungesikia wazee wakiwaambia watoto wao, 'ukisimulia hadithi mchana utaota mkia'. Ingawa kwa watu wazima maneno haya yangekuwa masihara,kwa watoto yaliaminika sana kwa hivyo wazazi wakapata mradi wao. Hi ndiyo maana Waswahili wanasimuliana hadithi na kutegeana vitendawili jioni au usiku.

Wazazi ambao hawataki watoto wao watembeetembee au wacheze michezo ambayo itawafanya wakimbiekimbie na kujihasiri huwatia ndani ili wawe nao kuanzia magharibi. Waswahili wana itikadi nyingi zinazohusiana wakati wa magharibi. Ni ajabu kuwasikia wakisema kuwa magharibi huwaleta pamoja na kutoleana hadithi. Na hata kama si hivyo hii ni fursa nzuri kwa wazazi kuzungumza na watoto wao ambao kutwa nzima huwa hawakupata nafasi kuwa nao.

Starehe hizi pia huongeza elimu, na kama wahenga wasemavyo, elimu ni mwanga uangazao.. Kwa mfano watoto watategewa vitendawili, jambo hili litawafanya wafikiri. Na kufikiri huku kutawafanya wavumbue mambo mengi ambayo mengine hapo awali hawakuyajua na kuyathamini. Vile vile huwafunza werevu wa kufumba na kufumbua mafumbo ambayo elimu inayohitaji kiwango kikubwa cha busara.

Kutoleana hadithi ni miongoni mwa starehe ambazo kwazo hujifunza mambo mengi sana. Katika hadithi watoto wanaweza kujifunza mambo yanayohusu mila na desturi, katika mambo

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haya watu hujifunza tabia nzuri, heshima na uvumilivu. Pia katika hadithi mtu anaweza kujifunza mambo ya historia na pia ya mazingira aliyoyazoea na hata mambo ambayo hayajui.

Aidha hadithi ni chombo ambacho wazee hukitumia kuwafundisha watoto mbinu za kuzungumzia. Wazee wenye busara aghalabu huwapa nafasi watoto wao wabuni na wasimulie hadithi zao. Wakati mwingine jamaa mbili jirani huweza kukutana kufanya mashindano ya kutambiana hadithi. Mazoezi kama haya huwawezesha vijana kufikia viwango vya juu vya ufasaha na matumizi ya lugha na ujasiri na ukakamavu wa kuweza kusema mbele za hadhira kubwa katika maisha yao. Baadhi ya watambaji wakubwa waliopata kusifiwa haikosi mwanzo wao ulikuwa wa namna hii. Hadithi pia huwafundisha watu kuhusu maisha duniani. Zinaweza kuwafunza jinsi ya kuishi na ndugu, majirani, marafiki, wake au waume. Ulimwenguni humu tunamoishi na mambo mengi yanoyomtatiza binadamu kwa namna mbalimbali. Hadithi zinaweza kupendekeza mambo ya kufanya na kuonyesha njia zenye mapato mema tunapofikiwa na hadhaa kadhaa. Zinaweza pia kukanya kiburi na kuonyesha faida ya kutosema uwongo ama kuishi katika maisha yasiyo muruwa, yaliyojaa kiburi na majivuno. Hapana shaka hadithi zinaweza kuongoza na kuwafanya wawe watiifu na raia wema katika nchi zao.

Maswali

(a). Kwa nini mwandishi akaoanisha utambaji wa hadithi na wakati wa jioni? (Maneno 40)

(alama 5, alama 1 ya mtiririko)

Nakala chafu

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Nakala safi

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(b). Kwa maneno kati ya 70 na 90 eleza umuhimu wa kutambiana hadithi na kutegeana vitendawili, kulingana na mwandishi.   **(Alama 8, 1 ya mtiririko)**

Nakala chafu

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Nakala safi

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3. MATUMIZI YA LUGHA   **(Alama 40)**

(a). Andika neno lenye kikwamizo sighuna cha ufizi, irabu ya mbele wastani, nazali ya midomo na irabu ya chini kati. (alama 2)

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(b). Eleza muundo wa silabi katika neno <u>mbilikimo.</u> (Alama1)

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(c). Andika upya kwa kutumia 'o'-rejeshi tamati.

Majarida ambayo yatasomwa yameagizwa (alama. 1)

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(d). Tunga sentensi zifuatazo (alama 2)

    i) Arifu

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    ii) Rai

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e) Tunga sentensi moja yenye kiwakilishi cha A-unganifu,kitenzi kishirikishi kipungufu na kijalizo (alama.2)

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f) Andika sentensi zifuatayo katika hali ya udogo (Alama 2)
    Mbuzi wake amekaata kamba akaingia shambani na kula mahindi.

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g). Andika katika usemi wa taarifa   (Alama 2)

"Wanasiasa hawa wenu wakipigana hivi wataharibu nchi" Rais alisema.

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h). Changanua sentensi kwa jedwali.   (alama.4)

Jirani aliyenisaidia juzi ataondoka mwakani.

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i). Onyesha yambwa katika sentensi ifuatayo

Alawi alifumiwa mkeka mzuri na shangaziye kwa miyaa.   (alama 3)

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j). Eleza tofauti ya kisarufi ya maneno yaliyopigia mstari   (alama.2)

i) Duka la mwalimu limechomeka

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ii) Duka la mwalimu limechomeka

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k). Tunga sentensi kuonyesha wakati ujao, hali ya mazoea   (Alama 2)

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l(I). Tumia neno pongezi katika sentensi kama   (Alama 2)

i). Nomino

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(ii). Kihisishi

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m). Eleza matumizi ya 'na' katika sentensi ifuatayo:Ridhaa na Mwangeka walikuwa wameketi karibu na jumba lakifahari walipoitwa na Apondi.   (alama.3)

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n). Andika sentensi zifuatazo upya kulingana na maagizo

    (i). Mwana <u>mwadilifu</u> huwaletea wazaziwe fahari.   (alama 1).

     (Badilisha neno lililopigiwa mstari kuwa nomino.)

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    (ii). <u>Nyota nyingi</u> ziliipamba anga usiku huo.   (alama 1)

     (Tumia nomino ya jamii badala ya maneno yaliyopigiwa mstari)

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(iii). Makokha ni mkakamavua Onyango ni mkakamavu pia.   (alama 1)

    (Unganisha iwe sentensi moja yenye kihusishi cha kulinganisha.)

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(iv). 'Kibali,nionyehse ulipoandika zoezi hilo.'Mwalimu alisema. (alama.1)
(Tumia kiwakilishi nafasi badala ya nomino ya pekee.)

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o). Kwa kutunga sentensi, onyesha ngeli mbili za neno '**upwa**' (alama.2).

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p). Andika maana mbili zinazojitokeza katika sentensi hii. (alama.2)
   Selume alimsimulia Ridhaa kisa chake.

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q). Tunga sentensi moja kubainisha maana mbili za neno. (alama.2)
   Kina

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r). Rubani ni kwa ndege,………….ni kwa meli na……………..ni kwa matwana. (alama 2)

ISIMU JAMII **(Alama 10)**

Wewe ni mtaalamu wa maswala ya usalama. Umepewa fursa kuhutubia warsha inayojumuisha maafisa wa usalama kutoka katika vikosi mbalimbali kuhusu jukumu lao katika kudumisha usalama,amani na maridhiano nchini.

(a). Taja sajili ambayo utatumia kisha ueleze sababu ya jibu lako. (alama 2)

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(b). Andika huku ukifafanua vipengele vinane vya kimtindo utakavyotumia kufanikisha
   mazungumzo yako. (alama 8)

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KAPSABET HIGH SCHOOL

-        - KISWAHILI   PAPER 3

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name---**ADM**----------------------------------

DATE………………………..**SIGN**……………………..**TARGET**……..**INDEX**……………

MAAGIZO:
   a) Jibu maswali manne pekee
   b) Swali la kwanza ni la lazima
   c) Maswali hayo mengine yachaguliwe kutoka sehemu nne zilizobaki, yaani Riwaya, Tamthilia, Hadithi fupi na Fasihi Simulizi.
   d) Usijibu maswali mawili kutoka sehemu moja.
   e) Majibu yote lazima yaandikwe kwa lugha ya Kiswahili.

Kwa Matumizi ya Mtahini Pekee

Swali	Upeo	Alama
1	20	
	20	
	20	
	20	
Jumla	80	

SEHEMU YA A: USHAIRI
<u>Swali la Lazima</u>
1. Soma shairi hili kisha ujibu maswali yanayofuata:

Shimo: Ali Salim Zakwany

1. Mwambieni kibushuti, asiruke shimo lile
    Kimo chake kama goti, kwenda ng'ambu sifikile
    Mtu haoli bahati, akasahau umbile
    Kila muwania mbele, na nyuma 'sisahawile

2. Afanyayo ni hatari, sijitie mpulele
    Mambo yote ajasiri, shari asithibutile
    Mjalia watu kheri, shairi ni yake vivile
    Kila muwania mbele, na nyuma 'sisahawile

3. Asambe ndiyo busara, kutenda kitendo kile
    Itamuwia hasara, na madhara kama yale
    Mola mwingi wa subira, ajapo chomwa vidole
    Kila muwania mbele, na nyuma 'sisahawile

4. Licha na yeye nyadungo, chuya katika mchele
    Hata warefu ja pondo, hawatusi shimo lile
    Walojaribu kitendo, shimoni watumbukile
    Kila muwania mbele, na nyuma sisahawile

5. Nimefika kituoni, nasema mumuwasile
    Mfua maji ngamani, ili kwamba sizamile
    Chombo huungia mwambani, na nahodha ni yuyule
    Kila muwania mbele, na nyuma 'sisahawile

Maswali

a) Lipe shairi hili kichwa mwafaka. (alama 1)
b) Fafanua toni ya shairi hili. (alama 4)
c) Taja na utoe mifano ya tamathali za usemi mbili zinazopatikana katika shairi. (alama 4)
d) Eleza umbo la shairi hili. (alama 4)
e) Kwa kutoa mifano minne, eleza aina moja ya idhini ya kishairi iliyotumika zaidi katika shairi. (alama 3)
f) Andika ubeti wa tano kwa lugha ya nathari. (alama 4)

SEHEMU YA B: NGUU ZA JADI -CLARE MOMANYI

Jibu swali la 2 au 3

2. "Tangu lini mke amuulize mumewe kule aendako au atokako?.....Ama kweli, wanawake wa kisasa wanavunja kila mwiko uliowekwa na wazee."

i) Yaweke maneno haya katika **muktadha** wake.   (alama4)

ii) Kwa kutoa mfano,**taja mbinu ya lugha** iliyotumika.   (alama2)

iii) Eleza **umuhimu wa msemaji**   (alama4)

(iv) Kwa kutoa mifano **kumi** kutoka riwayani, fafanua jinsi **mwanamke amesawiriwa** katika jamii ya Matuo.   (alama 10)

3. Jamii ya Matuo katika riwaya ya 'Nguu za Jadi' imekumbwa na **usaliti** si haba. Kwa kutoa mifano mwafaka riwayani, onyesha ukweli wa kauli hii.   (alama20)

SEHEMU YA C: TAMTHILIA - BEMBEA YA MAISHA (Timothy Arege)

4. Ukirejelea Anwani ya Tamthilia ya Bembea ya Maisha, onyesha namna wahusika wanavyobembea maishani mwao.   (alama 20)

5. Maskini mke wangu! Kumbe ugonjwa haukumsaza mwaka baada ya mwaka. Umemla bila huruma. Awali niliona kuwa mchezo kumbe ilikuwa kweli yake ninaona imesimama. Ni mwele hakika. Laiti ningejua, jana ningeishi tofauti. Silezi zetu za maisha tungezila zilivyokuja kwa furaha. Siku hazigandi wala jana hairudi. Sasa jana imebaki kumbukizi baada ya kusombwa na wakati mfano wa mafuriko msimu wa masika."

   a) Yaweke maneno haya katika muktadha wake   (alama 4)
   b) Eleza kwa mfano mbinu nne za kimtindo zilizotumika   (alama 4)
   c) Barusha toni katika dondoo hili.   (alama 2)
   d) Ni maudhui gani yanayojitokeza katika dondoo hili?   (alama 4)
   e) Onyesha sifa za mzungumzaji zinazodhihirisha kuwa silezi zao hawakuzila kwa furaha.

                                                                                 (alama 6)

SEHEMU YA D: HADITHI FUPI - MAPAMBAZUKO YA MACHWEO NA HADITHI ZINGINE.

6. (a) Fafanua mbinu za kimtindo katika dondoo lifuatalo. (alama 6)

"Jimbo la matopeni lilikuwa limegeuzwa ngome ya watu fulani binafsi. Watu wenye ushawishi mkubwa serikalini! Watu wasiojali maisha ya wapiga kura kama Machoka na Zuhura. Wapiga kura walioamka siku hiyo asubuhi ya majogoo, wakastahimili baridi kali ya bukrata. Wakavumilia jua kali la mchana. Zuhura alikumbuka namna yeye na wenzake walivyotunga foleni ndefu kwenye vituo vya kupigia kura. Yote haya wakiwa na matumaini ya maisha bora ya baadaye, si bora maisha! Kumbe wajinga ndio waliwao! Mzigo mzito wa maisha haukuwatisha wala kuwakosesha usingizi viongozi wao. Ama kweli, mzigo wa mwenzio ni kanda la usufi. "

(b) Onyesha namna wanamatopeni wanavyokumbwa na madhila kwa kurejelea hadithi ya "Msiba wa kujitakia" (alama 14)

7. "Katika hali ile ya uchungu, kilio na mtanziko wa mawazo, akaiona simu yake imeanguka chini ya kitanda….. Haidhuru hata kama atamuunga mkono mwanawe."
  (i) Eleza muktadha wa maneno haya. (alama 4)
  (ii) Fafanua mbinu ya kimtindo inayojitokeza katika dondoo hili. (alama 2)
  (iii)Eleza sifa nne za anayerejelewa katika dondoo hili. (alama 4)
  (iv)Eleza jinsi "taasubi ya kiume" inavyoshughulikiwa na mwandishi wa "fadhila za punda". (alama 10)

SEHEMU YA E: FASIHI SIMULIZI

8. Ewe Mainga wa Ndumi
  Siwe uloambia akina mama
  Siku   tulopiga   foleni
  Chakula cha msaada kupata
  Turudishe vifaranga kwenye miji
  Wageuke vijusi tena
  Njaa isiwaangamize?

  Siwe   ulopita
  Matusi ukitema
  Chumvi na sukari kuturushia ja samadi?
  Uhitaji wetu ukatutuma

Kuokota vihela uloturushia
Ukatununua, kura ukapata?
Sasa miaka mitano imetimia
Waja tulaghai tena
Mainga wa Ndumi huna lolote safari hii
Ubunge   umekudondoka   ukitazama
Wanyonge tumeamua
Kwingine kujaribu.

a) Eleza aina ya kipera hiki.   (alama 2)

b) Huku ukitoa mifano, tambua mbinu za lugha nne zilizotumiwa katika utungo huu.

                                                                 (alama 8)

c) Tambua nafsineni katika utungo huu.   (alama 2)

d) Fafanua toni ya utengo huu.   (alama 2)

e) Fafanua umuhimu wa kipera hiki.   (alama 6)

KAPSABET HIGH SCHOOL

121/2   -   - MATHEMATICS   PAPER 2

2 ½ hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM----------------------------------

DATE………………………..SIGN……………………..TARGET……..INDEX…………….

Instructions to Candidates

a) Write your name and index number in the space provided above.
b) This paper consists of **TWO** sections: **section I** and **section II.**
c) Answer **all** the questions in **section I** and only **five** questions from **section II.**
d) All workings and answers must be written on the question paper in the spaced provided below each question.
e) **Non-programmable** silent electronic scientific calculators and KNEC Mathematical tables may be used EXCEPT where stated otherwise
f) The paper consists of 15 printed pages.
g) Candidates should check carefully to ascertain that all the pages are printed and no questions are missing.

For Examiner's Use Only

Section I

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**Total**
Candidate's Score																	

Section II

Grand Total

Question	17	18	19	20	21	22	23	24	Total
Candidate's Score									

SECTION I: 50 MARKS

1. Given that the expression $4X^2 + 28x + (K + 37)$ is a perfect square. Find the value of K.
   (3 marks)

2. Calculate the percentage error in the volume of a cylinder whose radius 8.75cm and its height 32.5cm. (3 marks)

3. Make X the subject of the formula (3 marks)
   $$b = \frac{C\sqrt{X^2-1}}{X}$$

4. In the figure, O is the centre of the circle. Line AB is parallel to line DC and angle ΔDC $= 55^0$
   Determine the size of ΔACB. (3 marks)
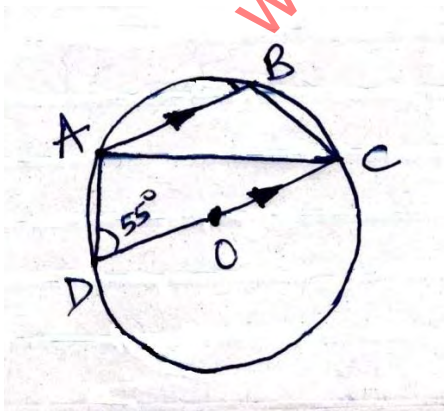
5. Solve for X given that;

   $\frac{1}{2} \log_2 9 + \log_2 [5x - 4] = 7$ (3 marks)

6. An inlet tap can fill an empty tank in 6 hours. It takes 10hrs ro fill the tank when the inlet tap and outlet tap are both opened at the same time. Calculate the time the outlet takes to empty the full tank when the inlet tap is closed.

   (2 marks)

7. Solve the equation (4 marks)

   $x + 3y = 13$

   $x^2 + 3y^2 = 43$

8. Simplify $\dfrac{4}{\sqrt{6} + \sqrt{2}}$ (2 marks)

9. The cash price of a TV set is Ksh.20,000. A customer bought it on hire purchase terms by paying a deposit of Sh.10,000 followed by 18 equal monthly installments of Sh.900 each. Annual interest, compounded semi-annually was charged on the balance for the period of 18 months. Determine correct to 1d.p the rate of interest per annum.
    (4 marks)

10. The equation of a circle is given by $X^2 + 4X + y^2 - 2y - 4 = 0$. Determine the centre and radius of the circle.   (3 marks)

11. In the figure AOBP is a straight line. PZ is a tangent to the circle. If PZ = 12cm and BP = 6cm, find the radius of the circle.   (3 marks)
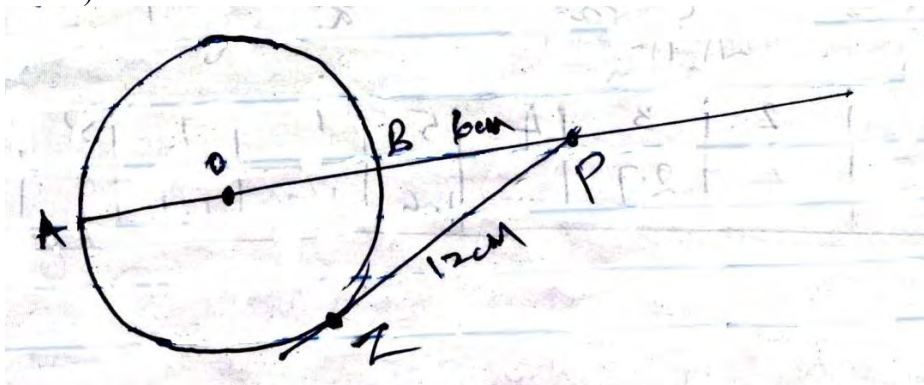
12. (a) Expand $(1 - \frac{3}{10}X)^5$ Leave the co-efficient as fraction in their lowest form.

(2 marks)

(b)   Use the first three terms of the expansion in (a) above to estimate the value

   $(0.97)^5$ (4 marks)

13. Using the assumed mean of 50, determine the variance of the following set of numbers;
       52, 45, 42, 59, 56, 46.   (3 marks)

14. The table below shows the value of t and the corresponding values of h for a given relation.

t	1	2	3	4	5	6	7	8
h	8	4	2.7	2	1.6	1.3	1.1	1

    a) On the grid, draw the graph to represent the information on the table given.(2 marks)
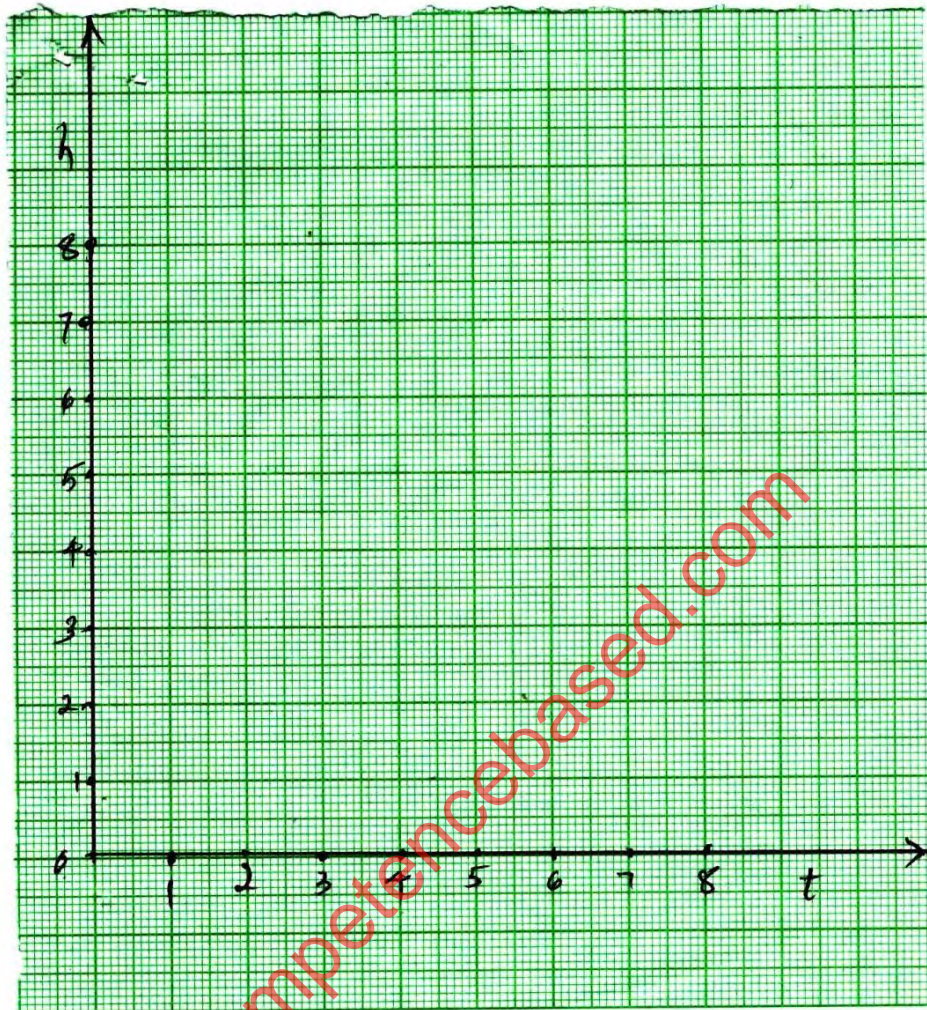
b)   Use the graph to determine the rate of change of h at t = 4.   (2 marks)

15. Given that $\mathbf{P} = 2\mathbf{i} - 3\mathbf{j} + \mathbf{k}$, $Q = 3\mathbf{i} - 4\mathbf{i} - 3\mathbf{k}$ and $\mathbf{R} = 3P + 2Q$, find $|\mathbf{R}|$ correct to 2 decimal places.   (3 marks)

16. Maize flour and millet flour were mixed. If the maize flour costs sh.60 per kilogram and millet flour sh.90 per kilogram, find the ratio of maize flour to millet flour that gives a mixture costing sh.85 per kilogram. (3 marks)

SECTION II: 50 MARKS
Attempt Only Five Questions In This Section

17. A cup has 8 white plates and 4 brown ones all identical in shape and size. Mrs. Kamau selected 3 plates at random without replacement.
    a) Draw a tree diagram representing this information. (2 marks)

    b) Find the probability that she chooses:
    (i) Two white plates and one brown in that order. (2 marks)

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(ii) At least one white plate. (3 marks)

(iii)   Three plates of the same colour. (3 marks)

18. (a) A quantity P varies partly as the square of M and partly a constant. When P = 3.8, M = 2 and when P = -0.2, M = 3.
Find:
    (i) The equation that connects P and M (4 marks)

(ii) The value of P when M = 10.   (1 mark)

(b) Q varies as the cube of x and inversely as the square root of R. If X is increased by 20% and R is decreased by 36%;
   (i) Find the law connecting Q, X and R.   (2 marks)

(ii) Find the percentage change in Q   (3 marks)

19. Three consecutive terms of geometric progression are 9^{2x+1}, 81^x and 729 respectively. Calculate.
   a) The value of x   (3 marks)

   b) Find the common ratio   (2 marks)

   c) Calculate the sum of the first 10 terms of the series.   (2 marks)

d) Given that the fifth and sixth terms of this G.P forms the first two consecutive of arithmetic sequence; calculate the sum of the first 20 terms of the sequence.(3 marks)

20. The table below shows income tax rates in a certain year.

Monthly taxable income in Kshs	Tax rates
0 – 12298	10%
12299 – 23885	15%
23886 – 35472	20%
35473 – 47059	25%
47060 and above	30%

In the year, the monthly earnings of Mr.Korir
Basic salary   Ksh.60,000
Medical allowance   Ksh.16,500
Ksh.4,837.50 was erroneously exempted from his taxations.

a) Calculate Mr. Korir taxable income   (2 marks)

b) Calculate Mr. Korir net tax for that month if his personal tax relief was Sh.1408 per month. (6 marks)

c) Calculate Mr. Korir net pay for that month. (2 marks)

21. The vertices of the triangle ABC are A(3, 3); B(1, 1) and c [5, 3] are mapped onto triangle $A_1B_1C_1$ by a matrix $\begin{pmatrix} 0 & 1 \\ 1 & -2 \end{pmatrix}$

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a) (i) Find the co-ordinates of A_1, B_1 and C_1 (2 marks)

(ii) On the grid provided below, draw triangle ABC and $A_1B_1C_1$ (2 marks)
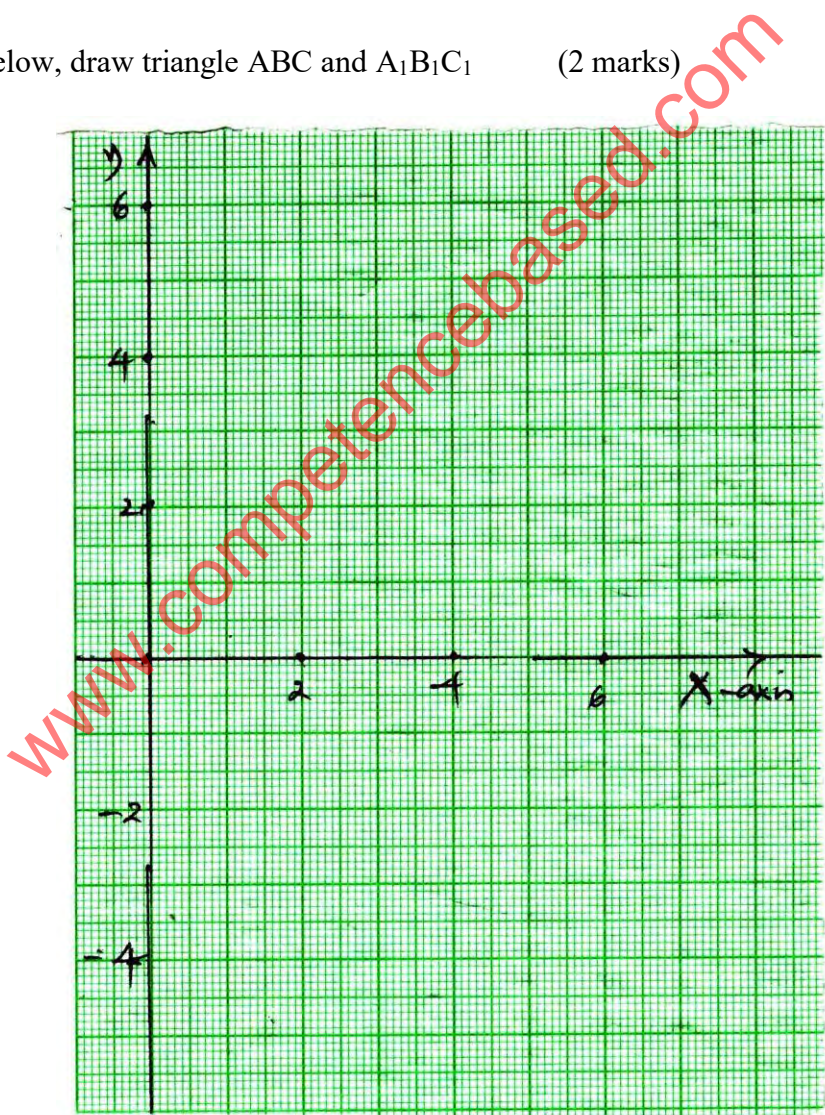
b) (i) Triangle $A_2B_2C_2$ is the image of the triangle $A_1B_1C_1$ under a transformation matrix. $\begin{pmatrix} -2 & 0 \\ 0 & -1 \end{pmatrix}$

Determine the co-ordinates of A_2, B_2 and C_2 (2 marks)

(ii) Find the area of triangle $A_2B_2C_2$ (2 marks)

c) Determine a single matrix that maps ABC onto $A_2B_2C_2$ (2 marks)

22. The table below shows the distances in kilometers covered by employees of a certain factory.

Distance (Km)	1 – 5	6 – 10	11 – 15	16 – 20	21 – 25	26 – 30
Number of workers	3	6	8	7	4	2

If the actual mean of the data above is 14.5km;
a) (i) Fill in the table given below.

Class	Frequency	Midpoint (x)	d = x-14.5	d^2	fd^2	
1 - 5	3					
6 – 10	6					
11 – 15	8					
16 – 20	7					
21 – 25	4					
26 - 30	2					
	$\sum f =$				$\sum fd^2 =$	

(ii) Use the values obtained from the table above to calculate standard deviations. (2 marks)

b)   (i)   Find upper and lower quartiles.   (2 marks)

(ii) Hence calculate quartile deviation.   (2 marks)

23. In this question use a ruler and a pair of compasses.
a)   (i) Construct triangle ABC such that AB = 9cm, AC = 7cm and $\angle CAB = 60^0$ (2 marks)

(ii)   Construct the locus of point P within the triangle such that P is equidistant from A and B. (2 marks)

(iii) Construct the locus of point Q within the triangle such that CQ ≤ 3.5cm. (2 marks)

b) On the diagram in part (a)
  (i) Shade the region R, containing all the points enclosed by the Locus of P and Q, such that AP≥BP   (2 marks)

  (ii) Find the area of triangle ABC   (3 marks)

24. The table below shows some values of the curves $y_1 = 2 \cos x$ and $y_2 = 3 \sin x$
  a) Complete the table to 1 decimal place   (2 marks)

X^0	0^0	30	60	90	120	150	180	210	240	270	300	330	360
$Y_1 = 2 \cos x$	2		1	0		-1.7		-1.7	-1		1	1.7	2
$Y_2 = 3 \sin x$	0	1.5		3	2.6		0		-2.6			-1.5	0

b) On the grid provided, draw the graph of $y_1 = 2 \cos x$ and $y_2 = 3 \sin x$ for $0^0 \leq x \leq 360^0$
On the same axes   (5

marks)
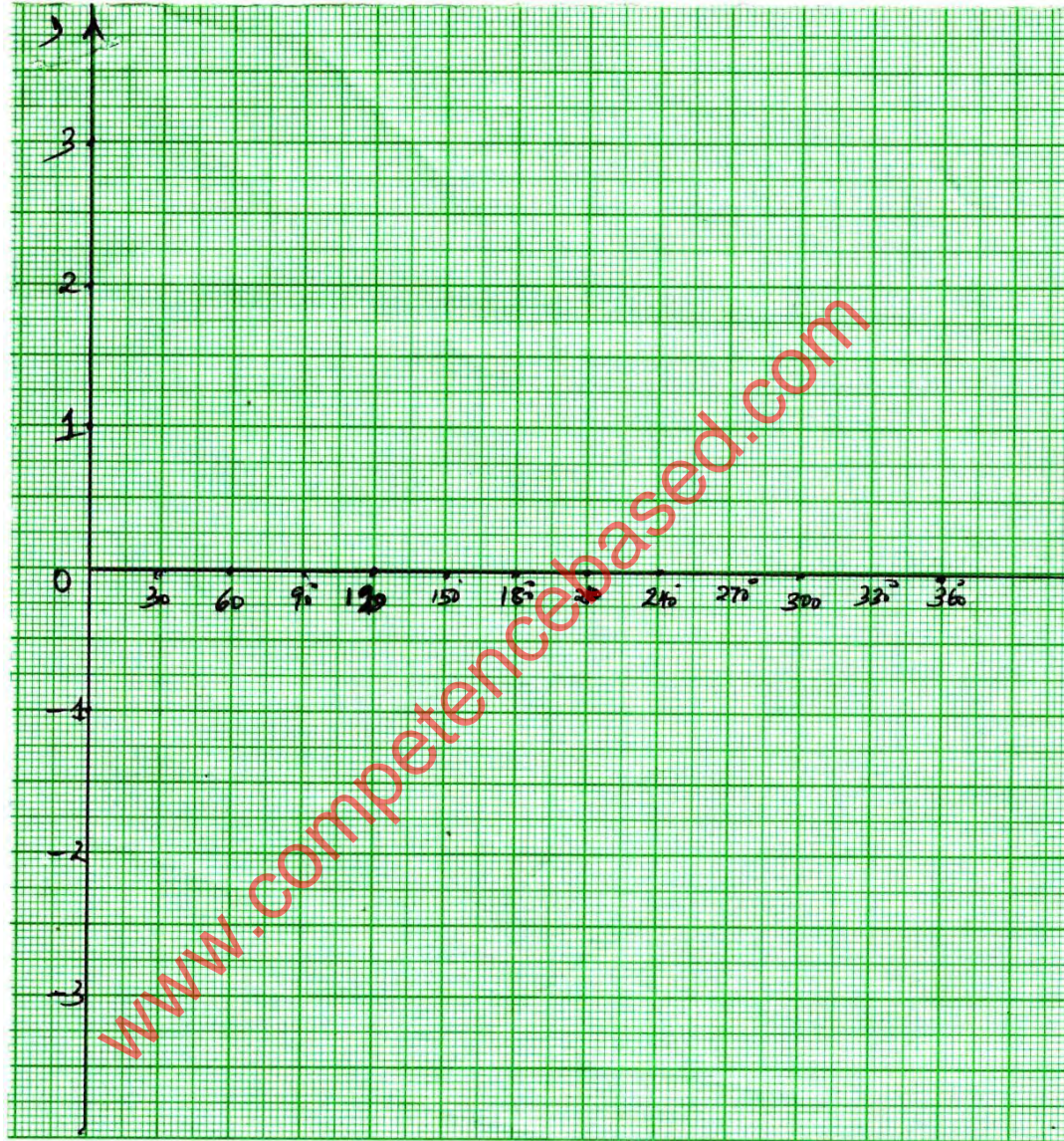
c) Use the graph to find the values of x when $2 \cos x = 3 \sin x$ (2 marks)

d) Find the difference of the amplitude of $y = 2 \cos x$ and $y = 3 \sin x$.   (1 mark)

KAPSABET HIGH SCHOOL

- - MATHEMATICS PAPER 1

2 ½ hours

Kenya Certificate of Secondary Education **(K.C.S.E.)PRE-MOCK 2024**

Name--ADM----------------------------------

DATE………………………..SIGN……………………..TARGET……..INDEX…………….

Instructions to Candidates

1. Write your name, Admission number and class in the spaces provided.
2. Sign and write date of the examination in the spaces provided.
3. The paper contains TWO sections: Section I and II
4. Answer ALL questions in section I and **STRICTLY ANY FIVE** questions from section II.
5. All working and answers must be written on the question paper in the spaces provided below each question.
6. Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.
7. Marks may be awarded for correct working even if the answer is wrong.
8. Non-programmable silent electronic calculators and KNEC Mathematical tables may be used except where stated otherwise.

For Examiner's use only

Section I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL

GRAND TOTAL

Section II

17	18	19	20	21	22	23	24	25	TOTAL

This paper consists of 15 printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing

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Section I (50 Marks)

Answer ALL questions in the section in the space provided.

1. Evaluate $\dfrac{-12 \div (-3)x4 - (-20)}{-6 \; x \; 6 \; 3 + (-6)}$ (2 Marks)

2. Mr. Owino spends $\dfrac{1}{3}$ of his salary on school fees. He spends 2 of the remainder on food and a fifth of what is left on transport. He saves the balance. In certain month he saved Sh. 3400. What was his salary?

(3 Marks)

3. Simplify: (3 Marks)

$2y^2 - 3xy - 2x^2$

$4y^2 - x^2$

4. Find x if $3^{2x+3} + 1 = 28$ (2 Marks)

5. The circle below whose area is 18.05cm^2 circumscribes triangle ABC where AB = 6.3cm, BC = 5.7cm and AC = 4.2cm. Find the area of the shaded part.
    (4 Marks)
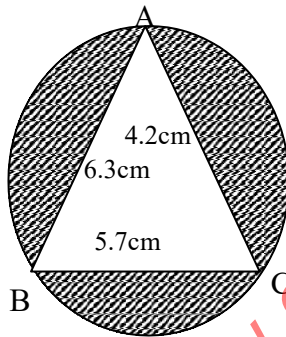
6. A salesman gets a commission of 2.4% on sales up to Sh. 100,000. He gets additional commission of 1.5% on sales above this. Calculate the commission he gets for sales worth Sh. 280,000.   (3 Marks)

7. A rectangle whose area is 96m^2 is such that its length is 4metres longer than its width. Find

   (a) It dimensions (2 Marks)

   (b) Its perimeter (1 Mark)

8. The sum of interior angles of a triangle is given by $[10x-2y]^0$ while that of a hexagon is given by $[30x+24y]^0$ .Calculate the values of x and y (3 Marks)

9. In triangle ABC below, AC = BC, AB is parallel to DE, AB = 15cm, DE = 7.5cm and BE = 6cm.
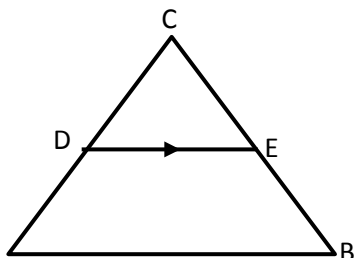
A ————————→

Calculate

(a) Length CE   (2 Marks)

(b) Area of quadrilateral ABED.   (2 Marks)

10. A measuring cylinder of base radius 5cm contains water whose level reads 6cm high. A spherical object is immersed in the water and the new level reads 10cm. Calculate the radius of the spherical object   (3 Marks)

11. Using a ruler and pair of compasses only, construct triangle ABC in which AB = 6cm, BC = 8cm and angle ABC = 45^0. Drop a perpendicular from A to BC to meet line BC at M. Measure AM and AC.   (4 Marks)

12. In a book store, books packed in cartons are arranged in rows such that there are 50 cartons in the first row, 48 cartons in the next row, and 46 in the next and so on.
    (a) How many cartons will there be in the 8th row?   (2 Marks)

(b) If there are 20 rows in total, find the total number of cartons in the book store. (2 Marks)

13. Draw the net of the solid below and calculate the total surface area of its faces.(3 Marks)
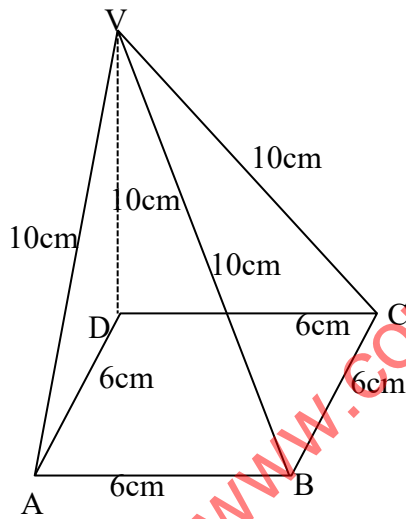
14. Solve the following inequalities and state the integral values. (3 Marks)

$2x - 2 \leq 3x + 1 < x + 11$

15. Solve for x in $2^{2x} - 18 \times 2^x = 40$ (3 Marks)

16. A translation maps triangle ABC onto $A^1B^1C^1$ where A[1,-1], B[2,2], C[3,1] and C^1[-1,3]. Find,

           i.   Translation vector   (1 Mark)

           ii.   The coordinate of A^1 and B^1 [2 Marks]

Section II (50 Marks):

*Answer any **FIVE** questions in this section in the spaces provided.*

17. The distance between towns A and B is 360km. A minibus left town A at 8.15 a.m. and traveled towards town B at an average speed of 90km/hr. A matatu left town B two and a third hours later on the same day and travelled towards A at average speed of 110km/hr.

(a) (i) At what time did the two vehicles meet? (4 Marks)

(ii) How far from A did the two vehicles meet? (2 Marks)

(b) A motorist started from his home at 10.30 a.m. on the same day as the matatu and travelled at an average speed of 100km/h. He arrive at B at the same time as the minibus. Calculate the distance from A to his house. (4 Marks)

18. Karis owns a farm that is triangular in shape as shown below.
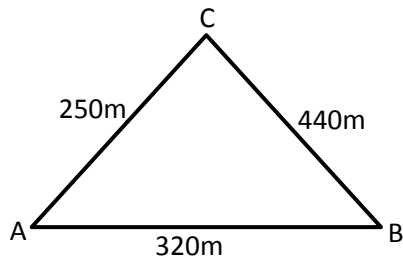
(a) Calculate the size of angle BAC   (2 Marks)

(b) Find the area of the farm in hectares   (3 Marks)

(c) Karis wishes to irrigate his farm using a sprinkler machine situated in the farm such that it is equidistant from points A, B and C.
(i) Calculate the distance of the sprinkler from point C.   (2 Marks)

(ii) The sprinkler rotates in a circular motion so that the maximum point reached by the water jets is the vertices A, B and C. Calculate the area outside his farm that will be irrigated.   (3 Marks)

19. A ship leaves port M and sails on a bearing of 050^0 heading towards island L. Two Navy destroyers sail from a naval base N to intercept the ship. Destroyer A sails such that it covers the shortest distance possible. Destroyer B sails on a bearing of 20^0 to L. The bearing of N from M is 100^0 and distance

NM = 300KM. Using a scale of 1cm to represent 50km, determine:-

(i) The positions of M, N and L. (3 Marks)

(ii) The distance travelled by destroyer A (3 Marks)

(iii) The distance travelled by destroyer B. (2 Marks)

(iv) The bearing of N from L. (2 Marks)

20. A number of people agreed to contribute equally to buy books worth KSh. 1200 for a school library. Five people pulled out and so the others agreed to contribute an extra Shs. 10 each. Their contributions enabled them to buy books worth Shs. 200 more than they originally expected.

(a) If the original numbers of people was x, write an expression of how much each was originally to contribute. (1 Mark)

(b) Write down two expressions of how much each contributed after the five people pulled out. (2 Marks)

(c) Calculate the number of people who made the contribution. (5 Marks)

(d) Calculate how much each contributed. (2 Marks)

21. Two lines L_1, $2y - 3x - 6 = 0$ and L_2, $3y + x - 20 = 0$ intersect at a point A.
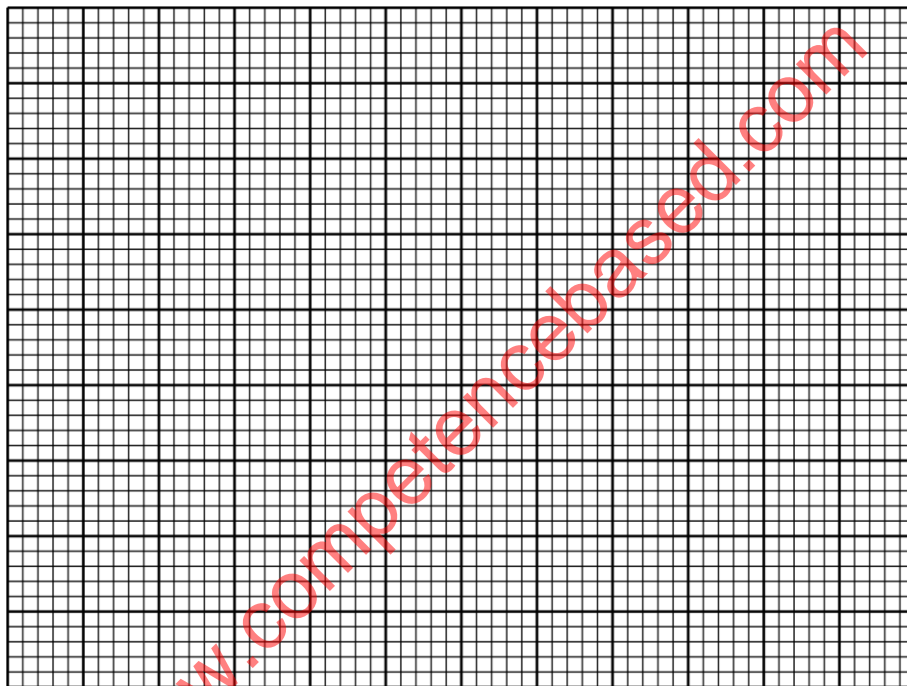
    a)   Find the coordinates of A. [3marks]

    b)   A third line L_3 is perpendicular to L_2 at point A. Find the equation of L_3 in the form y = mx + c where m and c are constants. [3marks]

    c)   Another line L_4 is parallel to L_1 and passes through [-1,3]. Find the x and y-intercept of L_4. [4marks]

22. The vertices of triangle PQR are P (0,0), Q (6, 0) and R (2, 4)

   (a)   Draw triangle PQR on the grid provided.   (1 mark)

   (b)   Triangle $P'Q'R'$ is the image of a triangle PQR under an enlargement scale factor $-\frac{1}{2}$

          and centre (2, 2). On the same grid draw triangle $P'Q'R'$ and write down its
coordinates.   (3 marks)

(c) On the same grid draw triangle $P''Q''R''$ the image of triangle $P'Q'R'$ under a positive quarter turn about point (1, 1). (3 marks)

(d) Draw a triangle $P''Q''R''$ the image of triangle $P''Q''R''$ under reflection in the line $y = 1$.

(2 marks)

(e) State the type of congruence between triangle $P''Q''R''$ and triangle $P'Q'R'$.(1 mark)

23. The table shows marks obtained by 100 candidates at Goseta Secondary School in Biology examination.

Marks	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-94
Frequency	6	14	24	14	x	10	6	4

(a) Determine the value of x (1 Mark)

(b) State the modal class (1 Mark)

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(c) Calculate the median mark (4 Marks)

(d) Calculate the mean mark (4 Marks)

24. In the triangle below P and Q are points on OA and OB respectively such that OP:PA=3:2 and OQ:QB =1:2 AQ and PQ intersect at T. Given that OA= a and OB= b
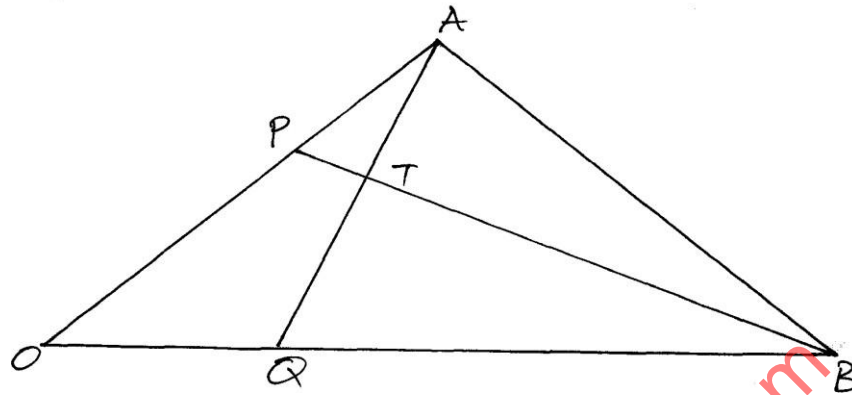
(a) **Express AQ** and **PQ** in terms of a and b (2mks)

(b) Taking **BT**=k**BP** and **AT**=h**AQ** where h and k are real numbers.
   (i) Find two expressions for **OT** in terms of a and b (2mks)

(ii) Use the expressions in b (i) above to find the values of h and k. (5mks)

(c) In what ratio does T divide **AQ**.? (1mk)

KAPSABET HIGH SCHOOL

PHYSICS   PAPER 3

2 ½ hours

PHYSICS PAPER 3 CONFIDENTIAL

Question 1

Each candidate to have the following apparatus

- 2 new dry cells
- Cell holder
- Ammeter (0-1A)
- Voltmeter
- 6 connecting wires (at least 3 with crocodile clips)
- Nichrome wire SWG 28 (d=0.38mm) mounted on a mm scale with the ends labeled (A and B)
- A switch
- Micrometer screw gauge (may be shared)
- Jockey key.

Question 2

PART A

Each candidate to have the following apparatus

- Retort stand, clamp and boss
- A piece of thread (1.2 metre)
- Two small pieces of wood blocks
- Pendulum bob
- Meter rule
- Stop watch

PART B

Each candidate to have the following apparatus

- A concave mirror   (Focal length = 16 cm)
- Mirror holder
- White screen
- Metre rule
- A candle

KAPSABET HIGH SCHOOL

- - PHYSICS PAPER 1

2 hours

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM----------------------------------

DATE………………………..SIGN……………………..TARGET……...INDEX…………….

Instructions to candidates

- This paper consists of two sections *A* and *B*.
- Answer **all** the questions in the two sections in the spaces provided after each question
- All working **must** be clearly shown.
- Electronic calculators, mathematical tables may be used.
- All numerical answers **should be expressed** in the **decimal** notations.
- You may use 'g' as $10m/s^2$

For Examiner use only

SECTION	QUESTION	MAX MARKS	CANDIDATE'S SCORE
A	1 – 13	25	
B	14	13	
	15	13	
	16	14	
	17	07	
	18	08	
	TOTAL	80	

This paper consists of 10 printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.

SECTION A (25 MARKS)

1. Figure 1, shows a Vernier caliper of zero error 0.02 cm being used for measuring the diameter of a cylindrical container of height 10 cm. The scale reading of the Vernier is as shown alongside.
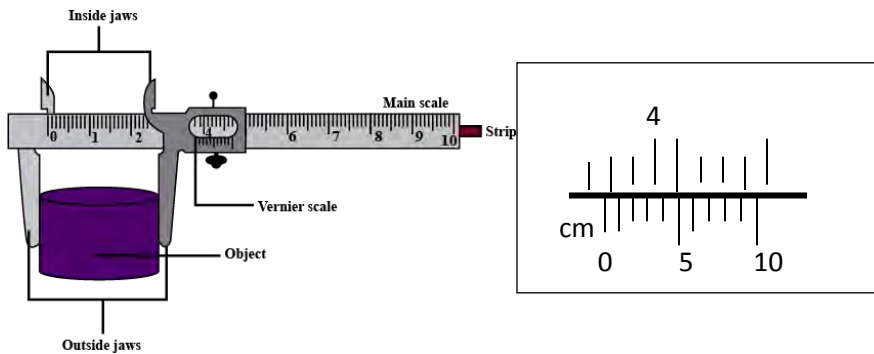
Figure 1

a. Determine the diameter of the container (2 marks)

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b. Estimate the volume of a liquid which can completely fill the container (2 marks)

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2. State **one** factor that affects the turning effect of a force on a body. (1 mark)

Figure 2 shows some air trapped by mercury in a glass tube. The tube is inverted in a dish containing mercury.
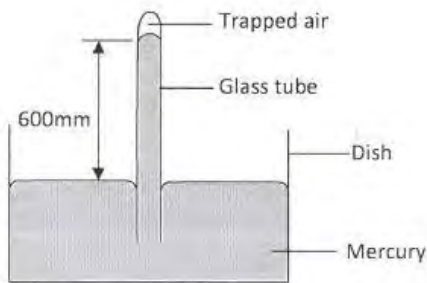
Figure 2

Given that the atmospheric pressure is 760 mmHg and the height of mercury column in the tube is 600 mm, determine the pressure of the air trapped in the tube in mmHg. (2 marks)

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3. Figure 3 shows drops of mercury and water on a glass surface, Explain the difference in the shapes of the drops.
    (2marks)

Mercury   water

Glass surface

Figure 3

4. A ball is thrown from the top of a cliff 20m high with a horizontal velocity of $10ms^{-1}$. Calculate the distance from the foot of the cliff to where the ball strikes the ground. (3 marks)

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5. Explain o**n**e advantage of mercury over alcohol as a thermometric liquid.   (1mark)

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6. A body of mass **M** is allowed to slide down an inclined plane. State **two** factors that affect its final velocity at the bottom of the inclined plane.   (2marks)

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7. A stopwatch reads 08:10:84 and 09:10: 90 before and after an experiment respectively. Determine the duration of the event in SI units. (2marks)

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8. Explain the meaning of thermodynamics as a branch of physics. (1 mark)

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9.
   a. State the Hooke's Law. (1mark)

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   b. **Figure 4** shows identical spiral springs supporting a load of 90N. Each spring has a spring constant k = 200N/m
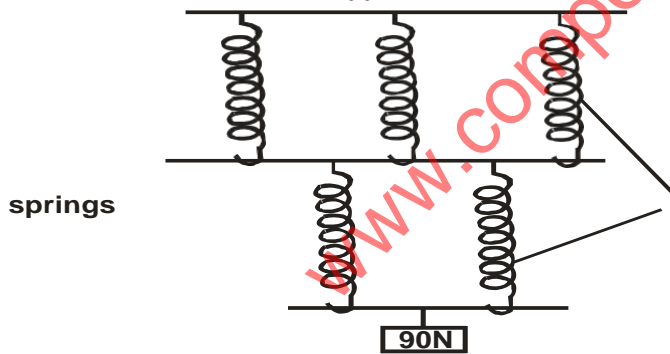
springs

Figure 4

Determine the total extension of the system (take the weight of the cross bars and springs to be negligible) (2 marks)

10. **Figure 5** shows a rectangular loop with a thin thread loosely tied and dipped into a soap solution.

Draw on the space provided what is observed when point **A** is punctured. (1mark)
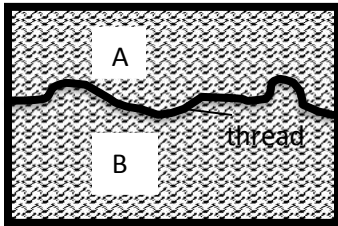
Figure 5

11. Two horizontal strings are attached to a block, resting on a frictionless surface, as shown in figure 6.
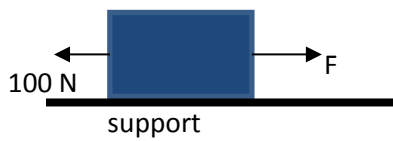
Figure 6

A force of 100N pulls on one string. The block does not move. Find the value of the force, F on the other string. (1 mark)

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12. A wooden bench feels neither warm nor cold when touched by your bare hands. Explain this observation. (2 marks)

SECTION B (55 MARKS)

13. (a) State the principle of conservation of linear momentum. (1 mark)

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(b)   Distinguish between elastic and inelastic collision. (1 mark)

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(c) A striker kicks a ball of mass 200g initially at rest with a force of 78N.Given that the foot was

in contact with the ball for 0.30s; determine the takeoff velocity of the ball.(3 marks)

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(d) A high jumper usually lands on thick soft mattress. Explain how the mattress helps in

reducing the force of impact. (2 marks)

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(e)   A ball is thrown horizontally from the top of a vertical tower of height 75m and strikes the ground at a point 80m from the bottom of the tower. Determine the:

(i) Time taken by the ball to hit the ground. (*Acceleration due to gravity=10m/s²*) (3 marks)

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(ii) Initial horizontal velocity of the ball. (3 marks)

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14.14.
a) State two factors that affect the boiling point of a liquid (2 marks)

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b) 100g of a liquid at a temperature of 10^0 C is poured into a well lagged calorimeter. An electric heater rated 50W is used to heat the liquid. The graph in figure 7 shows the variation of the temperature of the liquid with time.
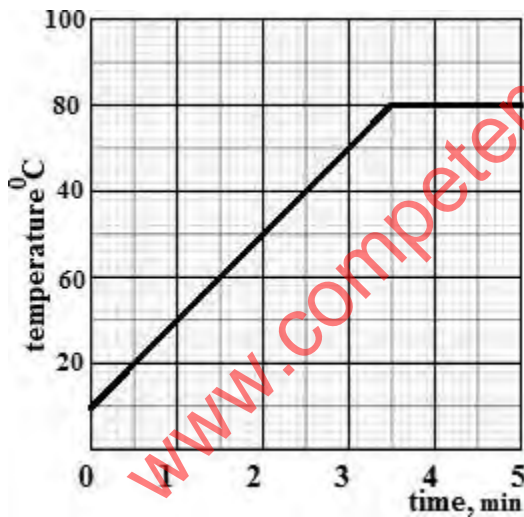
Figure 7

(i) From the graph, determine the boiling point of the liquid (1 mark)

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(ii) Determine the heat given out the by the heater between the times t = 0.5 minutes and t = 5.0 minutes   (3 marks)

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c) From the graph determine the temperature change between the times t = 0.5 minutes and t = 5.0 minutes, hence determine the specific heat capacity of the liquid   (3 marks)

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d) 1.8 g of vapor was collected from above the liquid between the times t= 3.5 minutes and t= 4.5 minutes. Determine the specific latent heat of vaporization of the liquid (4 marks)

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15.15.
a) State the law of floatation   (1 mark)

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b) Figure 8 below shows a simple hydrometer
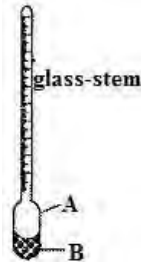
A ....

B ....

Figure 8

i.   Identify the parts labelled A and B   (2 marks)

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ii. State the purpose of the part labelled B   (1 mark)

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c)   How would the hydrometer be made more sensitive?   (1 mark)

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d)   Describe how the hydrometer is calibrated to measure relative density   (3 marks)

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e) Figure 9 shows a cork floating on water and held to the bottom of the beaker by a thin thread.
   i.   Name the forces acting on the cork   (3 marks)
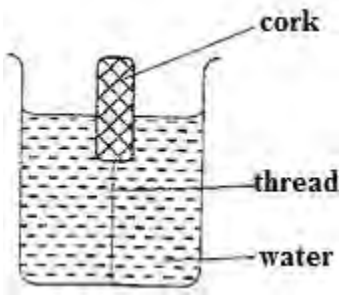
Figure 9

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   ii. Describe how each of the forces mentioned in (i) above changes when water is added until the container is completely filled   (3 marks)

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16.16.
   a) Figure 10 shows a graph of pressure against volume for a fixed mass of a gas at constant temperature.

Figure 10

In the space provided, sketch a graph of pressure, p against $\frac{1}{v}$ (1 mark)

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b) Explain the pressure law using the kinetic theory of matter   (3 marks)

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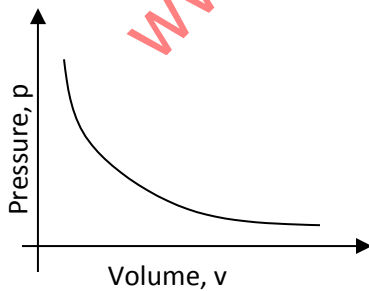
c) $20cm^3$ of a gas exerts a pressure of 760mmHg at 25^0C. Determine the temperature of the gas when the pressure increases to 900mmHg and the volume decreases to 15 cm^3
.(3 marks)

17.17.
a) Define the term velocity ratio of a machine   (1 mark)

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b) The figure 11, below shows part of the hydraulic lift system. State any **one** property of the liquid under which the hydraulic system works   (1 mark)
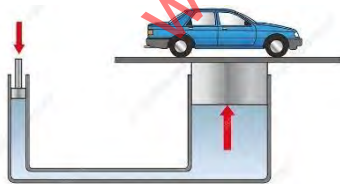

Figure 11

c) The hydraulic lift machine above has velocity ratio 45 and it overcomes a load of 4500 N when an effort of 135 N is applied. Determine:
   i.   The mechanical advantage of the machine   (2 marks)

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    ii.   Efficiency of the machine   (3 marks)

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    iii.   The percentage of work that goes to waste   (1 mark)

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This is the last printed page

KAPSABET HIGH SCHOOL

32/2   -   -   PHYSICS   PAPER 2

2 hours

Kenya Certificate of Secondary Education .

.
(K.C.S.E.)PRE-MOCK 2024

Name--ADM----------------------------

DATE………………………..SIGN…………………………………..TARGET……..INDEX…………………..

Instructions to CandidateS

- *Write your name and index number in the spaces provided above.*
- *Sign and write the date of the examination in the spaces provided above*
- *This paper consists of **two** sections **A** and **B**.*
- *Answer **all** the questions in section **A** and **B** in the spaces provided*
- *All working **MUST** be clearly shown in the spaces provided in this booklet.*
- *Non programmable silent electronic calculators and KNEC mathematical tables may be used except where stated otherwise.*

   Take: Speed of light in vacuum C = 3.0 x 10^8m/s

   Acceleration due to gravity g = 10N/S

FOR EXAMINER'S USE ONLY

Section	Question (s)	Max. Score	Candidates Score
A	1 – 12	25	
	13	12	
	14	8	
	15	11	
	16	12	
	17	12	
B	**Total**	80	

This paper consists of 12 printed pages. Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing

SECTION A (25 MARKS)

Answer all the questions in the spaces provided.

1. Figure 1 below shows a ray of light incident to the first of the two mirrors placed at an angle of 60^0
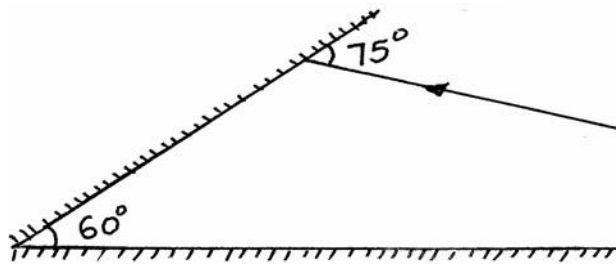
fig 1

Complete the path of the ray after reflection from the mirrors. (**1mk**)

2. Figure 2 below shows a positive charge near a plate carrying negative charge.

fig 2

Draw the electric field between them. **(2mks)**

3. Two pins are hanging from a magnet as shown in the diagram below (figure 3)
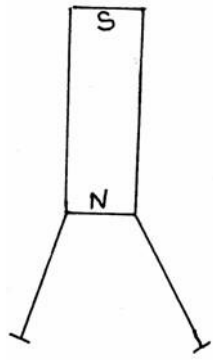
fig 3

Explain why they do not hang vertically downwards.   **(2mks)**

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4.   Draw the diagrams to illustrate what happens when plane waves are incident on a slit.

   i) When the width of the slit is large compared with the wavelengths of the waves.   **(2mks)**

   ii) When the width of the slit is small compared with wavelength of the waves.   **(2mks)**

5. What energy conversion occurs in a photocell? **(1mk)**

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6. i) Arrange the following waves in order of decreasing wavelength; infrared, X-rays, micro-waves

and visible light **(1mk)**

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ii) State one application of visible light. **(1mk)**

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7. State two advantages of an alkaline battery over lead acid battery. **(2mks)**

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8. A girl shouts and ears an echo after 0.6 seconds later from a cliff. If velocity of sound is 330m/s,
calculate the distance between her and the cliff. **(3mks)**

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9. What is dispersion of light? **(1mk)**

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10. Determine the reading of an ammeter in figure 4 below **(2mks)**
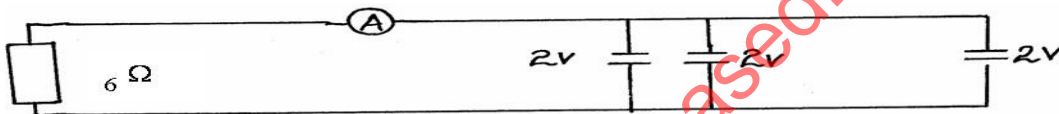
fig 4

11. A ray of light is incident on a glass oil interface as shown in figure 5 below. Determine the value of r (Take refractive index of glass and oil as 3/2 and 6/3 respectively) **(3mks)**
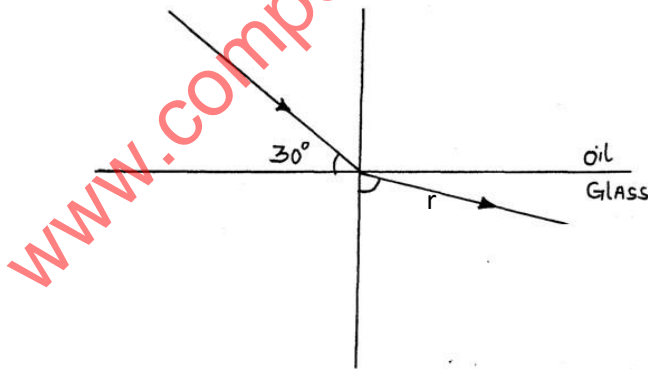
fig 5

12. State two factors that affect the capacitance of a parallel plate capacitors. **(2mks)**

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SECTION B (55 MARKS)

13. (a) State Ohm's law. **(1 mark)**

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(b) You are provided with the following apparatus:

- Connecting wires
- An ammeter
- Fixed resistor
- A voltmeter
- A variable resistor
- Switch
- 2 dry cells in a cell holder

(i) In the spaces below, draw the circuit that can be used using the apparatus above to verify

Ohm's Law. **(3 marks)**

(ii) Briefly explain how you can obtain the results to verify Ohm's law. **(4 marks)**

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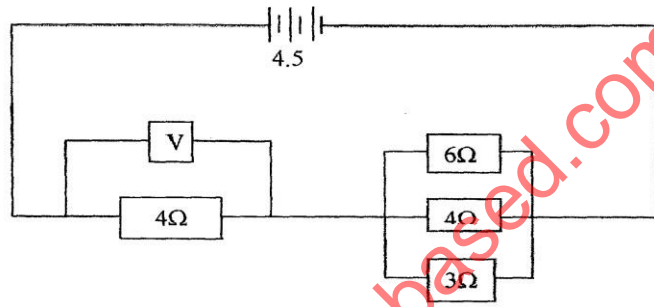
(c) Study the circuit diagram below and answer the questions that follow.

(i) Calculate the effective resistance of the circuit. **(3marks)**

(ii) Find the voltmeter reading.

(**2marks)**

14. (a) A Girl stands some distance from a high wall and claps her hands

    (i) What two measurements would need to be made in order to determine the speed of sound? **(2mks)**

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    (ii) **Describe** how you would make use of these measurements **(3mks)**

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   **(iii)** The speed of sound in air is 330m\s.How far from the wall would you stand? Choose an answer from the following distances .10m, 200m, 500m.
Give reasons why you did not choose each of the other two distances **(2mks)**

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    (iv) The frequency of the sound emitted by the loud speaker is 1020Hz. **Calculate** the wavelength of the sound wave in air where its velocity is 340m\s (2mks)

b) Figure 15 shows the set up used to demonstrate interference of sound

Fig 15
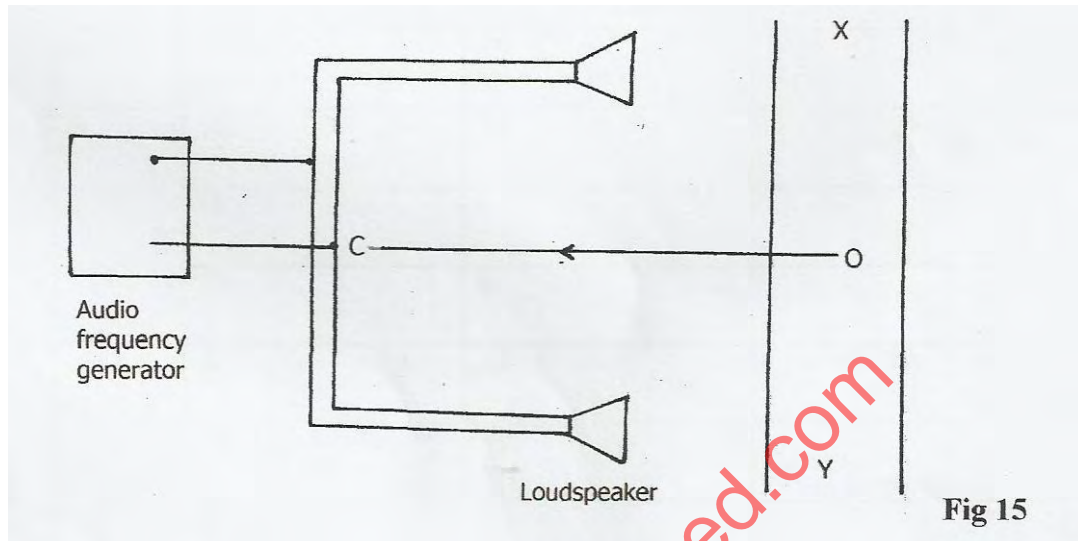
i)   An observer O, moves along XY.

        State the observation(s) made. (1 mark)

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 (ii) State what would be observed if a cathode ray oscilloscope is moved along line XY. **(1 mark)**

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 (iii) What will a student hear if he moves along the line OC?   **(1 mark)**

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227

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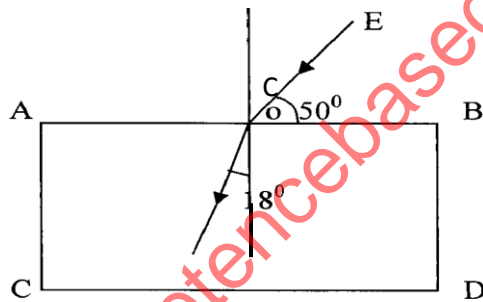..

15. (a) State the conditions to be satisfied for total internal reflection to occur.

(2marks)

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(b) A ray of light traveling in the direction EO in air enters a rectangular block as shown in the diagram. The resulting angle of refraction is 18°.

18°

Find:

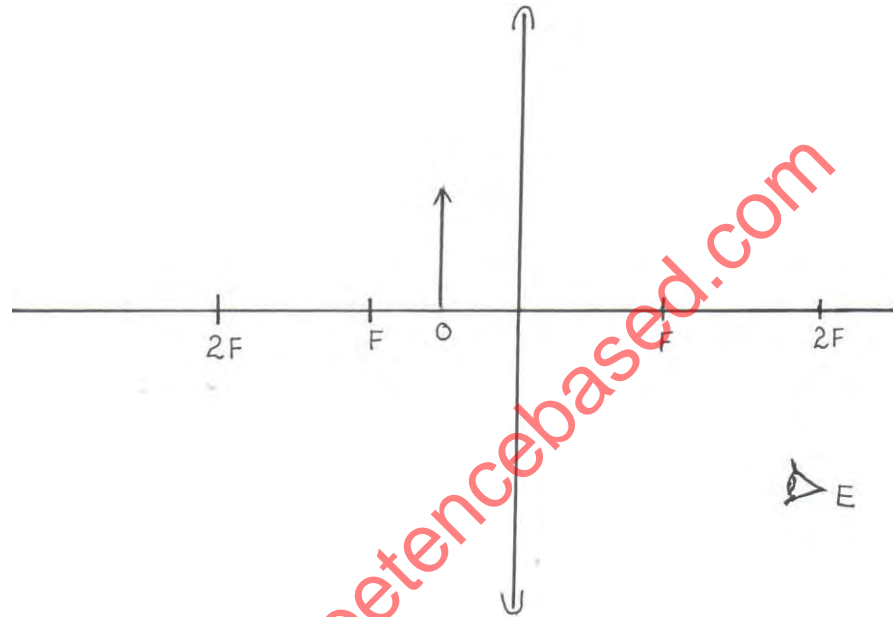**(i)** The refractive index of the block.   **(2marks)**

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(ii) The critical angle C of the block.

(3marks)

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16.   (a)   The figure below shows an object in front of lens.

(i)   Using rays locate the image as seen by observer, E.   **(2 marks)**

(ii)   Give **one** application of such a lens as used above.   **(1 mark)**

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(b) Figure below shows a diagram of the human eye. Sketch a ray diagram showing how lens is used to correct long sightedness. **(2 marks)**

(c) An object of height 10.5cm stands before a diverging lens of focal length 20cm and a distance of 10cm from the lens. Determine;

(i) image distance. **(3 marks)**

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(ii) height of the image. **(3mark)**

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(iii) magnification. **(2 mark)**

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230

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17. (a) State the Lenz's law of electromagnetic induction.   (1 mark)

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(b) A bar magnet is moved into a coil of an insulated copper wire connected to a zero

       centre galvanometer as shown below
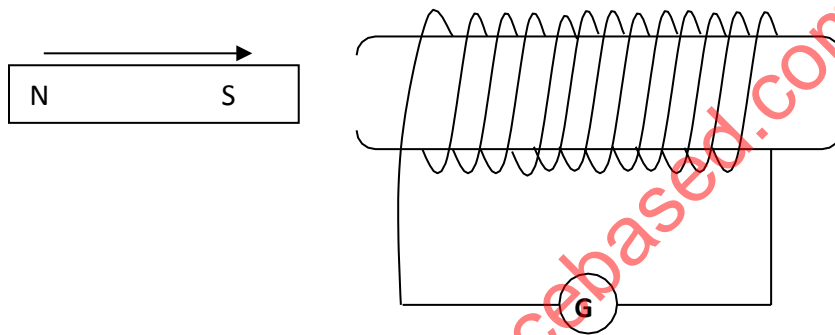
        (i)   Show on the figure above the direction of the induced current in the coil   (1 mark)

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        (ii)   State and explain what is observed on the galvanometer when the south pole of the magnet is
                    moved into and then withdrawn from the coil.   (2 marks)

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  (c) A transformer has 800 turns in the primary and 40 turns in the secondary winding.

       The alternating voltage connected to the primary is 240V and current of 0.5.A. If 10% of the power
       is dissipated as heat within the transformer, determine the current in the secondary coil.

(3 marks)

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KAPSABET HIGH SCHOOL

232/3   **- PHYSICS -**   **PAPER 3**

Kenya Certificate of Secondary Education
(K.C.S.E.) PRE-MOCK 2024

Name--ADM--------------------------------

DATE………………………..SIGN……………………..TARGET……..INDEX…………….

Instructions

- *Write your name, admission number, class and signature in the spaces provided at the top of the page.*
- *Answer **all** the questions in the spaces provided in this paper.*
- *You are supposed to spend the first 15 minutes of the 2 ½ hours allowed for this paper reading the whole paper carefully before your start.*
- *Marks will be given for clear record of observations actually made, for their suitability and accuracy, and the use made of them.*
- *Candidates are advised to record their observations as soon as they are made.*
- *Electronic calculators and mathematical tables may be used.*

FOR EXAMINER'S USE ONLY

Question(s)		Maximum Score	Candidate's Score
1		20	
2	A	11	
	B	9	
TOTAL		40	

This paper consists of **8** printed pages. Candidates are advised to check and to make sure all pages are printed.

QUESTION ONE.

You are provided with the following;

- 2 new dry cells
- Cell holder
- Ammeter (0-1A)
- Voltmeter
- 6 connecting wires (at least 3 with crocodile clips)
- Nichrome wire mounted on millimeter scale
- Micrometer screw gauge (may be shared)
- Jockey   .

Proceed as follows;

a) Using micrometer screw gauge, measure the diameter, D of the nichrome wire.

    i)   D = _____ mm

    ii)   D = _____ m   (1mark)

    iii)   The cross sectional area A is obtained by;

        $A = \pi r^2$ Where r = D/2

Determine the cross sectional area (A) in SI units.   (2marks)

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b) Set up the apparatus as shown below.

Nichrome wire Mounted on cm scale.
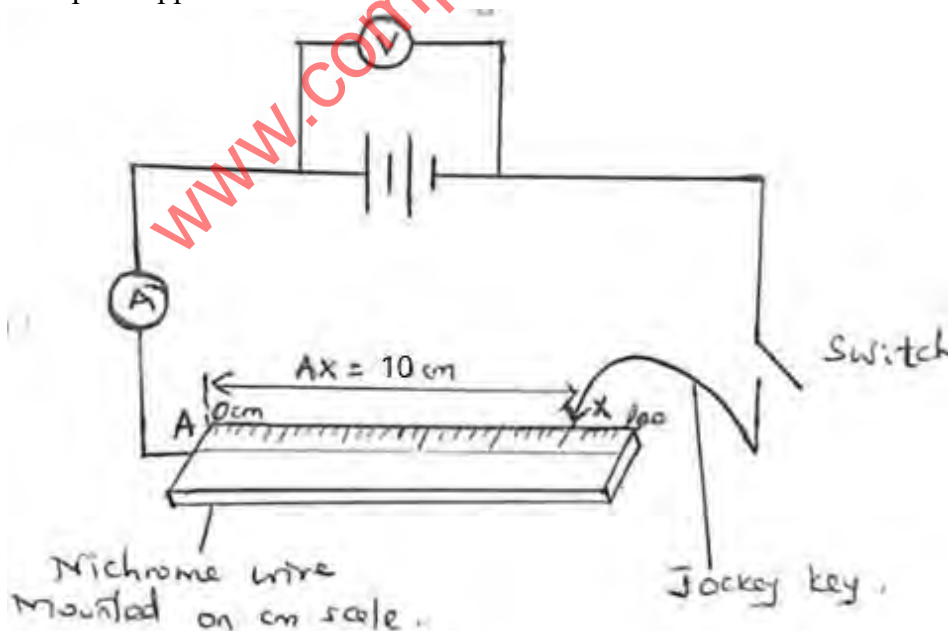
c) Record the e.m.f across the terminals of the dry cells when the switch is open.

Emf = _____

d) Adjust the position of jockey key such that length AX= 10cm.
Close the switch and record the voltmeter and ammeter reading on the table given.

e) Repeat step d) above for the other lengths shown on the table.

f) Complete the table.   (5 marks)

Length, L AX (cm)	10	20	30	50	70	80
Voltage (V)						
Current (A)						
Resistance(V/I) (Ω)						

g) Plot a graph of resistance (Ω) against Length (cm) on the graph provided below.(5 marks)
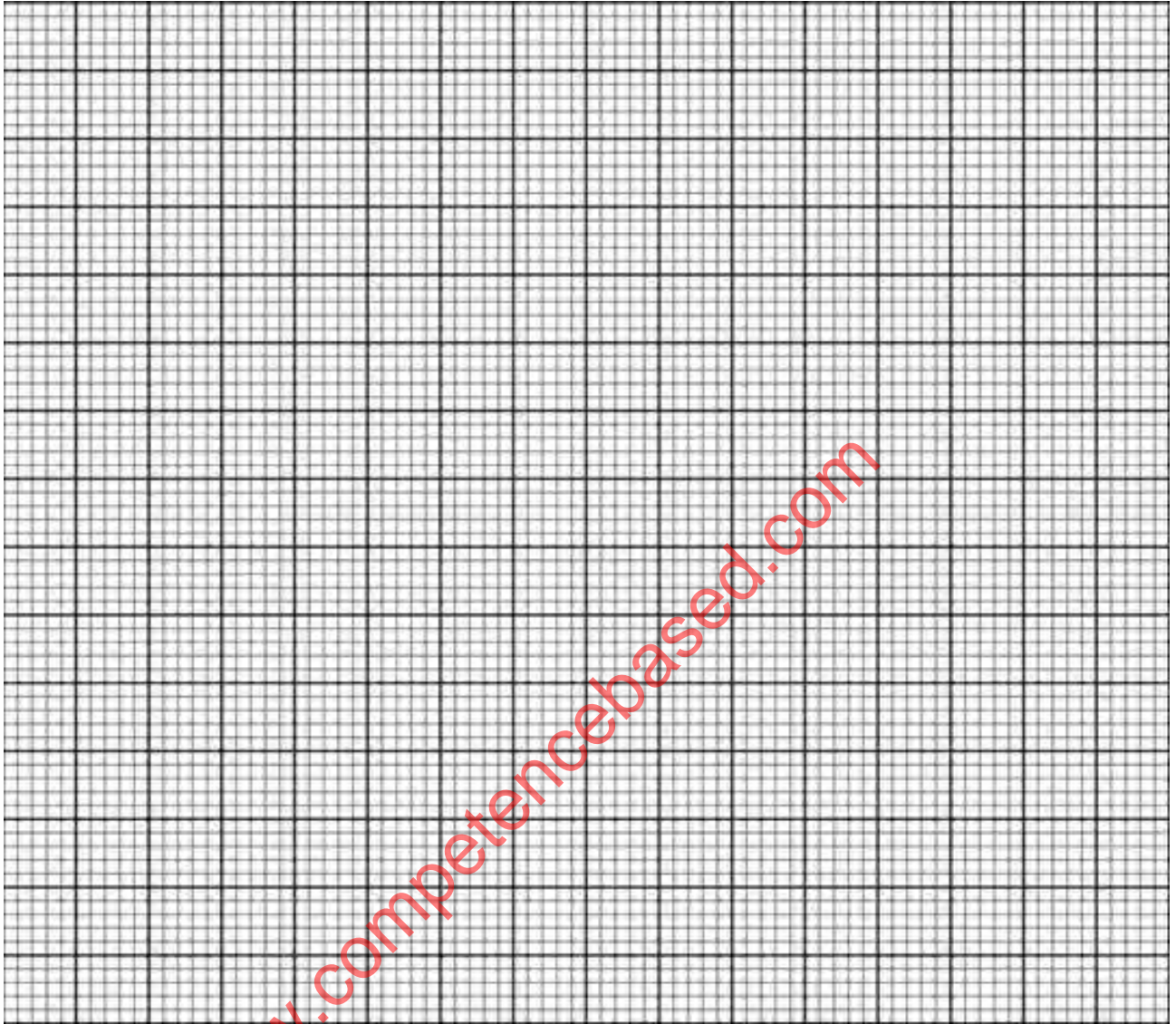
h)   i) Determine the slope of your graph.   (3marks)

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          ii)   The relationship between L and R is given by the equation; $R = \frac{\rho L}{A}$, determine the

value of ρ.   (2marks)

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iii)   Suggest what constant ρ represents.   (1mark)

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QUESTION TWO (A)

You are provided with the following apparatus;

- Retort stand, clamp and boss
- A piece of thread
- Two small pieces of wood blocks
- Pendulum bob
- Meter rule
- Stop watch

Procedure;

Tie the bob to one end *20cm length* of the thread and suspend it from the retort stand with the help of the wooden blocks as shown in the diagram.

20 cm
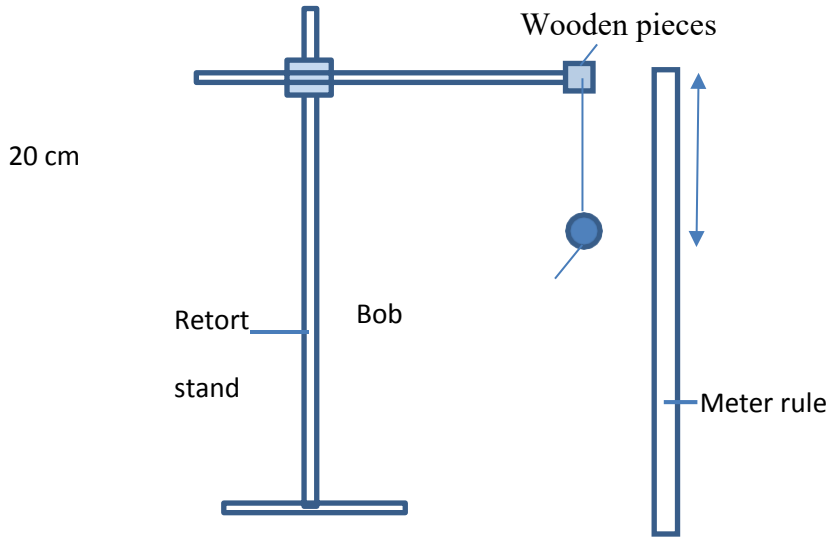
Displace the bob by a small angle say 10^0; start the stopwatch simultaneously and allow it to swing to make **ten** oscillations. Stop the clock and record the time taken in the table below.

Length L (m)	0.20	0.40	0.60	0.80
Time t for 10 oscillations (s)				
Period T (s)				
T^2 (s^2)				
Q = $4\pi^2 \dfrac{L}{T^2}$				

Repeat the same procedure for different lengths of thread 40cm, 60cm, 80cm and record the corresponding times t taken in the table above.

Fill in the table above by determining the various values of T, T^2 and Q as stated in the table. (8marks)

Determine the average value of quantity **Q** and state its SI units   (2 marks)

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Name the physical quantity represented by Q   (1 mark)

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QUESTION TWO (B)

You are provided with the following apparatus.

- A concave mirror
- Mirror holder
- White screen
- Meter rule
- A candle

Procedure

i)   Set the apparatus as shown in the diagram below
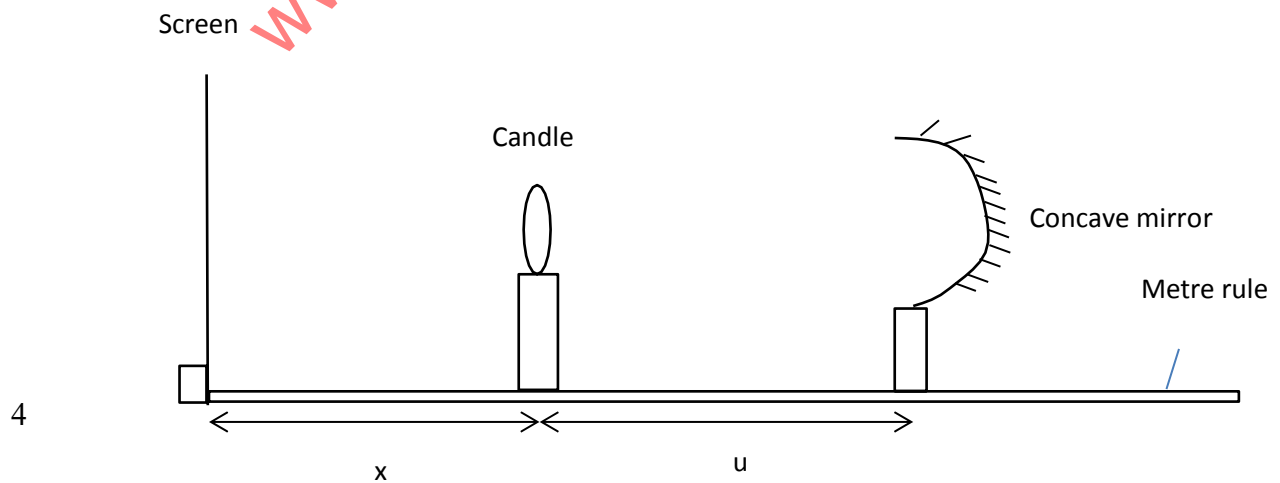
ii) Place a candle at a distance of x = 10 cm from the screen. Move the mirror to and fro to focus a clear, sharp image of the candle flame on the screen.

iii) Measure the distance u between the mirror and the candle and the distance v between the candle and the screen.

iv) Repeat the experiment for x = 15 cm and 20 cm. Complete the table below.   (6 marks)

X (cm)	10	15	20	25
u(cm)				
$V = (u + x)$(cm)				
$Z = \dfrac{uv}{u+v}$ (cm)				

v)

Determine the average value of Z.   (2marks)

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vi) What is the significance of Z?   (1mark)

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