KCSE 2025 CEKENAS MOCKS

ALL SUBJECTS

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

The Joint KCSE mock exams for top-performing national schools in Central Kenya serve as a standardized assessment tool, designed to evaluate students' preparedness for the national examination. Those who engage with this compilation will discover a hidden gem that is unquestionably insightful, we are sure of it.

SUBJECTS COMPILED;

Mathematics, English, Kiswahili, Biology, Chemistry, Physics, CRE, IRE, Geography, History, Business Studies, Agriculture, Home-science & Computer Studies.

CENTRAL REGION

For Marking Schemes

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MWALIMU CONSULTANCY

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

BIOLOGY

231/1

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES:

a) *Write your **Name, Class** and **Adm NO** in the spaces provided above.*

b) *Answer **all** the questions in this paper in the spaces provided.*

FOR EXAMINER'S USE ONLY:

Question	Maximum Score	Candidate's Score
1 - 27	80	

Answer all the questions in the spaces provided.

1. Name any two branches of microbiology. **(2marks)**

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2. Which biological tool would a scientist require to collect rats to be used for study? **(1mark)**

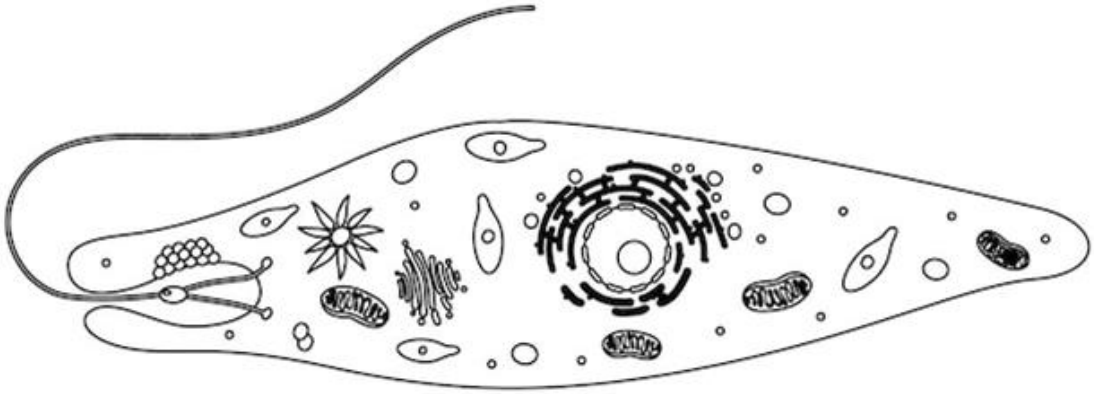
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3. When are two organisms considered to belong to the same species **(2marks)**

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4. The diagram below represents an organism



a) Name the kingdom to which the organism belongs. **(1mark)**

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b) Suggest the habitat in which the organism lives. **(1mark)**

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c) Give two reasons for your answer. **(2marks)**

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5. State two unique characteristics of Chordate not found in another Phylum. **(2marks)**

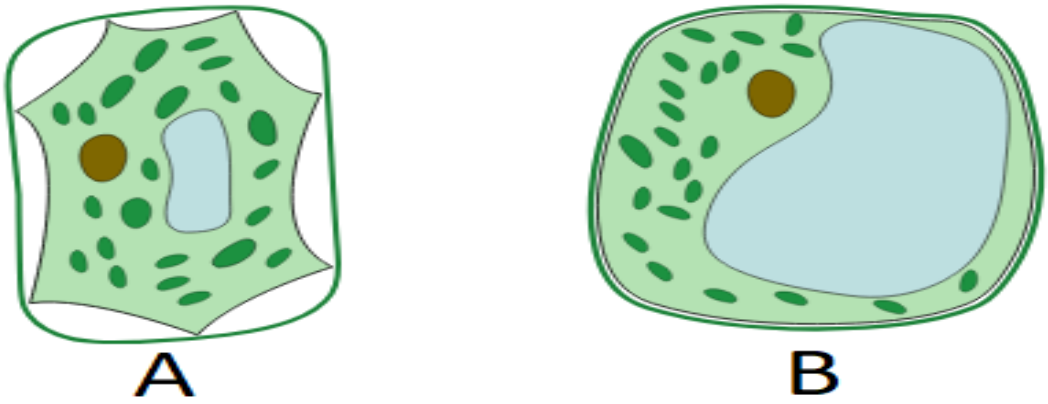
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6. Shieko sec school biology student used a microscope with X40 objective lens and X5 eye piece lens which had 2mm radius. Calculate the area of the field of view in micrometers.**(2marks)**

b) What is the average size of the cell in micrometers if there were 5 cells on the field of view **(2marks)**

7. The cells shown below were obtained from two different plant cells which were immersed in 2% and 25% salt solutions



8. (a) Which of the two cells **A** and **B** was immersed in 2% salt solution? **(1mark)**

……

(b) Comment on the nature of 25% salt solution in relation to the cell sap. **(1mark)**

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(c)What biological phenomenon leads to the observation made in **A**. **(1mark)**

……

9. a) If pepsinogen and trypsinogen were produced in their active forms, what would be their effects on the alimentary canal. **(1mark)**

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b) How else is the alimentary canal protected from the effects stated in a) above. **(1mark)**

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10. In an investigation, the pancreatic duct of a mice was blocked by tying it with a string. Explain how this affected the digestion of food. **(2marks)**

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11. Examination of the alimentary canal of a mammal showed that the food in the small intestine was more fluid than in the colon. Give an explanation for this observation.**(1mark)**

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12. Name two tissues in plants which are thickened with lignin. **(2marks)**

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13. (a) What is the importance of the following substances in blood clotting process in man?

(i) Vitamin K. **(1mark)**

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……

(ii) Thrombin. **(1mark)**

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(b) what is the disadvantage of having blood group O. **(1mark)**

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14. Name the part of the seed whose growth brings about epigeal germination. **(1mark)**

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15. a) Differentiate between gaseous exchange and ventilation **(1mark)**

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b) State the respiratory site of the following. **(2marks)**

i)Fish -

ii) Insect -

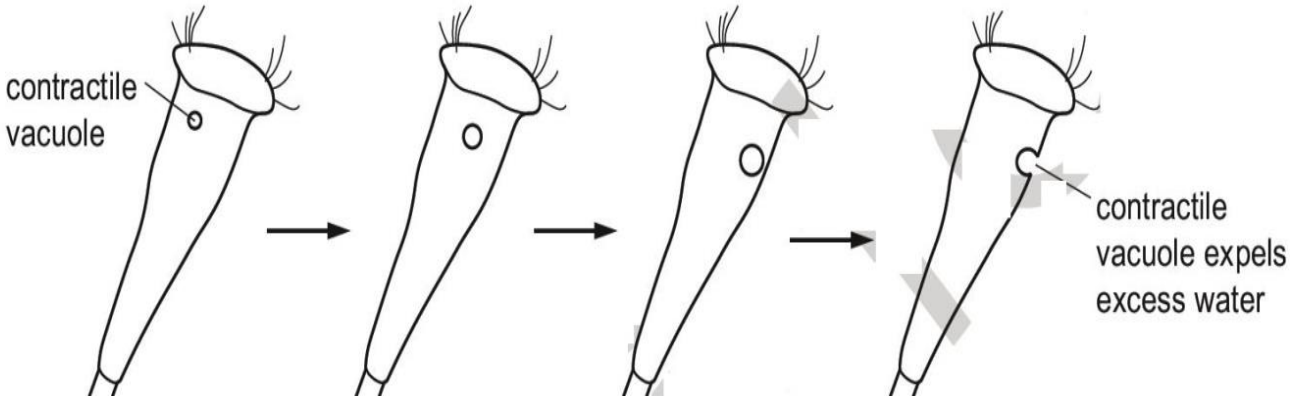
16. In an investigation, a bird was found to use 10 litres of oxygen to give a respiratory quotient of 0.7 during period of flight.

a) Name the type of food that was being respired by the bird. **(1mark)**

b) Determine the volume of carbon (IV) oxide produced during the same flight. **(2 marks)**

17. a) Single-celled Organisms with cell walls do not have contractile vacuoles. Suggest why. **(2marks)**

b) *Rhabdostyla* lives in freshwater habitats, such as pond, lakes and rivers where solute concentration is low. *Rhabdostyla* has a contractile vacuole that fills with water and empties at intervals as shown in. The contractile vacuole removes excess water.



Explain, why *Rhabdostyla* needs to remove excess water. **(3marks)**

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18. Name three plant excretory products deposited in the leaf. **(3marks)**

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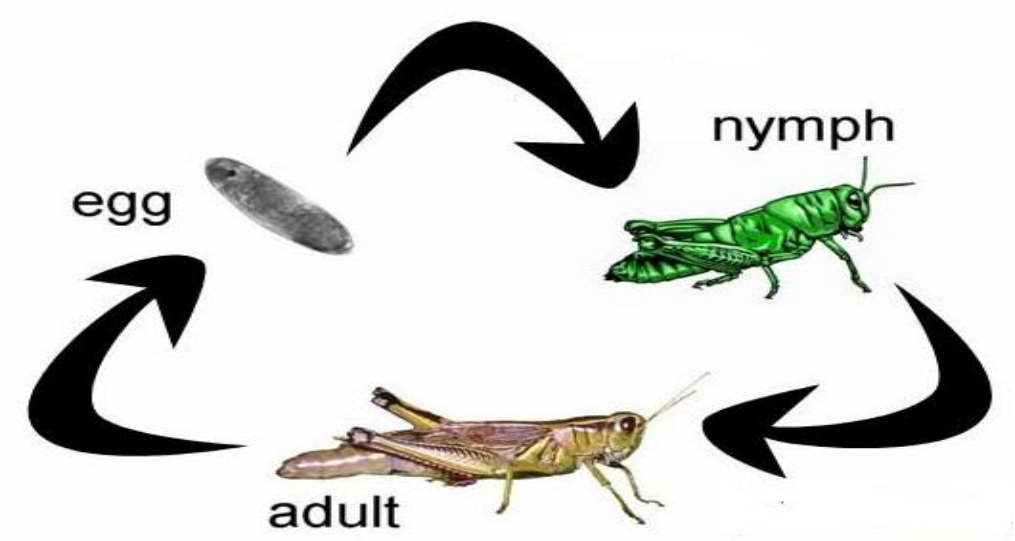
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19. State one economic importance of each of the following plant excretory products.**(2marks)**

(a) Tannin

(b) Quinine

20. Study the life cycle shown below and answer the questions that follow.



a) i) Identify the life cycle shown above. **(1mk)**

……

ii) Give a reason for your answer in ai) above. **(1mk)**

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b) Explain how the prothoracic gland is important in the life cycle above. **(2mks)**

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c) Name one stage found in the cycle of butterfly but is missing in the above cycle. **(1mk)**

……

21. Name the structures in the human body that detect: **(2marks)**

(i) External temperature changes.

……

(ii) Internal temperature changes.

……

22. (a) Name the hormone whose deficiency may lead to the excretion of glucose in urine.

(1mark)

……

(b) Name the hormone that controls the reabsorption of sodium ions in the kidney tubules.

(1mark)

……

23. Oil can be applied on stagnant water to control the spread of Malaria;

a) How does this practice control the spread of Malaria **(1mark)**

……

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b) Give a reason why this practice should be discouraged **(2marks)**

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24. a) State two importance of predation in an ecosystem. **(2marks)**

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b) Apart from predation state two other biotic factors that will influence the distribution of organisms in an ecosystem. **(2marks)**

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25. Mention two causes of genetic variation. **(2marks)**

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26. State two importances of polyploidy. **(2marks)**

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27. a) Pure lines of black and white mice were crossed. All the F1 generation were grey. Explain the absence of white and black mice in the F1 generation. **(1mark)**

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b) Define multiple alleles **(1mark)**

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28. a). State two theories that explains origin of life **(2marks)**

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b) State three evidences of organic evolution **(3marks)**

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29. a) Explain two limitations of fossil records as evidence of organic evolution.**(2marks)**

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b) Name the evidence of organic evolution exhibited by occurrence of similar amino acid molecules in a range of organism. **(1mark)**

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30. State the function of the following parts of the eye. **(2marks)**

Ciliary body –

……

……

Sclerotic layer –

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……

31. State three ways through which herbaceous stem obtain support. **(3marks)**

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KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

BIOLOGY

231/2

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

Instructions to candidates

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

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

c) *This paper consists of **two** sections; **A** and **B**.*

d) *Answer **all** questions in section **A** in the spaces provided.*

e) *In section **B** answer question **6 (compulsory)** and either and either **7** and **8** in the spaces provided after question 8.*

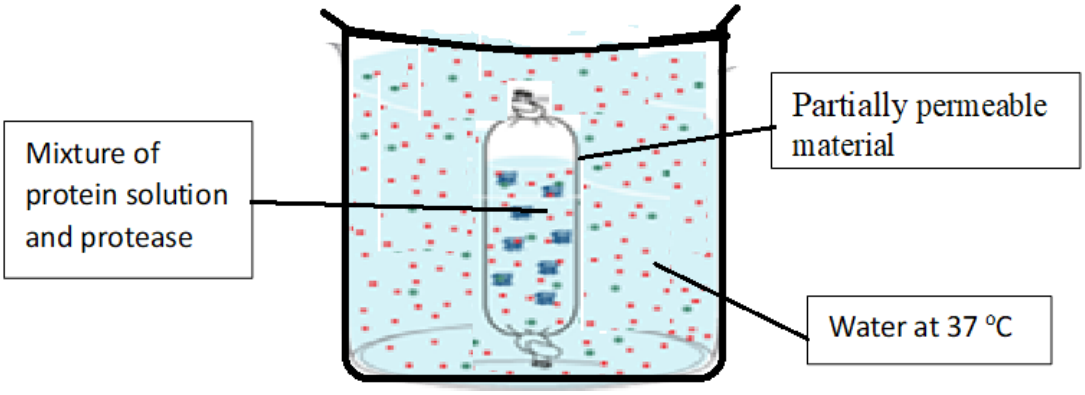
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Section	Question	Maximum Score	Candidate's Score
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
		20	
	Total Score	80	

SECTION A (40 MARKS)

Answer all questions in this section in the spaces provided

1. Form 2 students set up an experiment on diffusion as shown below. The set up was left to stand for 15 minutes.



a) What does the partially permeable material represent in a cell. **(1mark)**

……

b) Give a reason for keeping the water at 37 °C. **(2marks)**

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c) The students carried out a test for proteins using the **contents of the partially permeable material** after the 15 minutes. Suggest the conclusions made. **(1 mark)**

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Explain your answer in c) above. **(1mark)**

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d) Amino acids were found to be present in the water. Explain its source and presence there. **(3 marks)**

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2. The diagram below shows the base sequence of part of a nucleic acid strand. Observe it and answer the question that follows

G T T A C G C A

a) Giving the reason, identify the type of nucleic acid **(2 mks)**

……

……

b) Show the complimentary RNA strand **(1mk)**

……

c) Haemophilia is a genetic disorder which is transmitted through recessive gene linked to X-Chromosome. A woman who is a carrier to haemophilia married a normal man. Using the punnet square, work out the genotype of F1 Offspring **(4 mks)**

3. The equation below shows the chemical reaction that takes place in plants.

Carbon (IV) oxide + water $\longrightarrow$ Glucose +A

i) Identify substance A **(1mk)**

……

ii) Other than the reactants, state two conditions necessary for this reaction **(2mks)**

……

……

iii) Name the process represented by the equation above **(1 mk)**

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iv) Give two types of cell where this process occurs **(2mks)**

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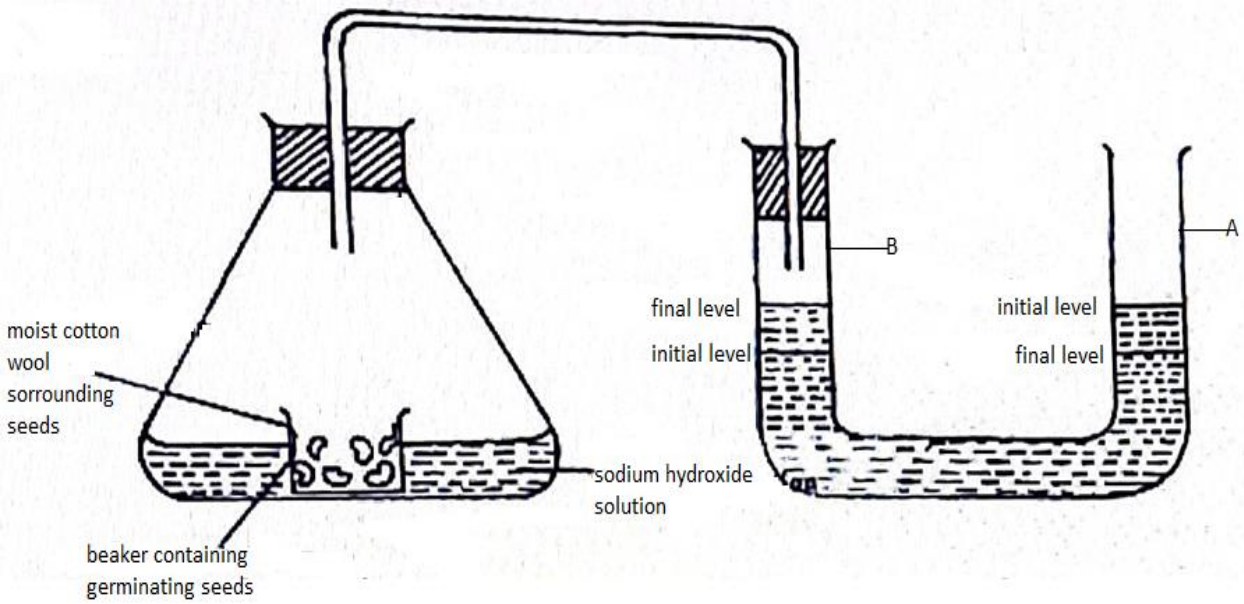
v) How would the process named in (iii) above be affected by age of leaves in plants **(2mks)**

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4. The apparatus below was set up by a student to find out the changes in gases during germination



a) After 48 hours the level of water in the U-tube at **A** and **B** was as shown. Explain the observation **(3mks)**

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b) Calculate the respiratory quotient (**RQ**) from the equation below:- **(2mks)**

$$2C_{51}H_{98}O_6 + 145O_2 \longrightarrow 102\ CO_2 + 98H_2O + Energy$$

c) Identify the substrate being respired in the above equation **(1mk)**

……

d) (i)where in the cell does glycolysis take place? **(1mks)**

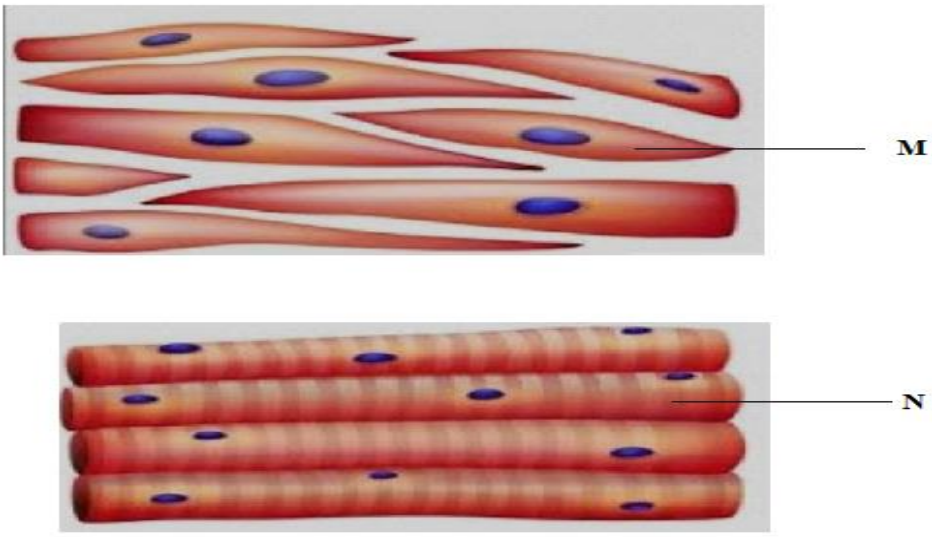
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ii) what is oxygen debt? **(1mks)**

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……

5.The figures below illustrate specialised cells in animal's body



i)Identify cells M and N **(2mks)**

M

N

ii) State two structural differences between M and N **(2mks)**

M	N

iii) Which of the above specialized cells is found in the gut or human intestines **(1mk)**

……

iii) Which organelles are found in large numbers in **N** **(1mks)**

……

iv) Name a carbohydrate and form of energy stored in **cell N** **(2mks)**

carbohydrate

form of energy

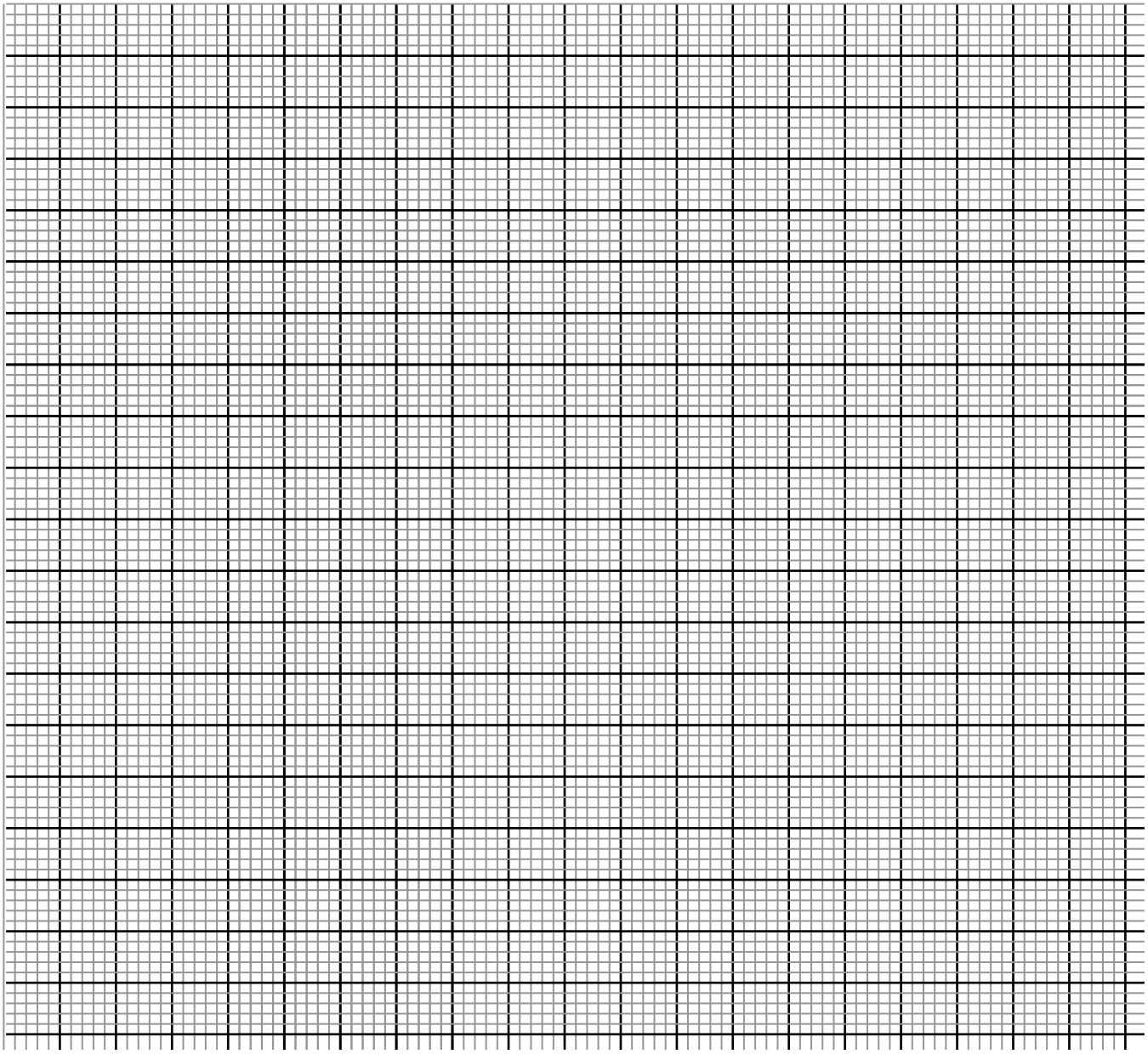
SECTION B (40 marks)

Answer question 6 (compulsory) and either question 7 or 8 in the space provided after question 8.

6. An experiment was carried out to investigate transpiration and absorption of water in a certain plant species. The plants were potted and supplied with adequate water. The amount of water lost and absorbed was determined. The results are shown in the table below;

Time of the day	**Amount of water in grams**	
	Transpiration	**Absorption**
0700	30	15
0900	40	25
1100	48	34
1300	56	45
1500	40	50
1700	25	40
1900	15	28
2100	10	21

a) Using the same axes, plot graphs to show transpiration and absorption of water in grams against time of the day. **(7mks)**



b) i)At what time of the day was the amount of water the same for transpiration and absorption**;** **(1mk)**

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ii) how much water was absorbed at 1800 hours? **(1mk)**

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c) Explain the shape of the graphs of:-

i) Transpiration **(4mks)**

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ii) Absorption **(4mks)**

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d) Suggest what would happen to transpiration and absorption of water if the experiment was continued for another 2 hours**;** **(1mks)**

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e) Name two environmental factors that affect the rate of transpiration **(2mks)**

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……

7a) Describe fertilization in flowering plants. **(14marks)**

b). Explain ways through which plants hinder self-pollination and encourage cross pollination. **(6mks)**

8(a).Describe the breathing mechanism in human **(12mks)**

(b).State the structural adaptation of insects tracheal system **(8 mks)**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

BIOLOGY

231/3

PAPER 3 (PRACTICAL)

TIME: `1¾ HOURS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO SCHOOL (CONFIDENTIAL)

- 20ml of Solution M -A mixture of Glucose, Ascorbic acid and Egg albumen
- About 5ml of 0.1 M Hydrochloric acid with a dropper
- Specimen R --- A Maize grain
- Specimen S ---- A Ripe Orange (Orange in colour)
- A scalpel blade
- A filter paper
- A filter funnel
- A boiling tube in a rack
- 10ml Measuring cylinder
- 4 Test tubes in a rack
- A 50ml empty beaker

Access to the following:

- Benedict's solution
- 1% copper II Sulphate solution with dropper
- 10%Sodium Hydroxide solution with dropper
- DCPIP solution with dropper
- Distilled water in a wash bottle

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

BIOLOGY

231/3

PAPER 3 (PRACTICAL)

TIME: `1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

a. Write your name and admission number in the spaces provided

b) Answer all questions in the spaces provided in the question paper.

c) You are required to spend the first 15 minutes of the hours allowed for this paper reading the whole paper before commencing your work.

d) Answers MUST be written on the spaces provided after each question.

e) Candidates may be penalized for recording irrelevant information and incorrect spelling especially of technical terms.

FOR EXAMINERS USE ONLY

QUESTION	Max Score	Candidate Score
1	19	
2	12	
3	09	
TOTAL SCORE	40	

1.You are provided with solution M, Dilute Hydrochloric acid ,DCPIP, Benedict's solution, 1% copper II Sulphate solution and 10% sodium hydroxide solution.

Add 2m1 of hydrochloric acid to solution M and Shake.

Filter the mixture using the filter paper and filter funnel into a boiling tube provided.

Wash the residue from the filter paper into a beaker.

Using the reagents provided carry out food tests on the residue and filtrate. (15 marks)

a) **Residue**

Food substance being tested for	**Procedure**	**Observation**	**Conclusion**
REDUCING SUGARS			
VITAMIN C			
PROTEINS			

b) **Filtrate**

Food substance being tested	Procedure	Observation	Conclusion
REDUCING SUGARS			
VITAMIN C			
PROTEINS			

c) Account for the observation in (a) and (b) above. **(2mks)**

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d) The physiological process demonstrated above occurs in all living things. Name two important processes in animals that depend on it. **(2mks)**

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2. You are provided with specimen R and S

a) (i) Give a reason why both R and S are fruits**.** **(1mk)**

ii) Why is R also a seed? **(1mk)**

(**iii)** Tabulate any two differences between specimen R and **S** **(2mks)**

Specimen R	Specimen S

(b) Using a blade provide; carefully make transverse section of specimen S.

i) Make a labelled diagram of the cut section. Label any three parts**.** **(4mks)**

(ii) Name the type of placentation in S .**Reason** **(2mks)**

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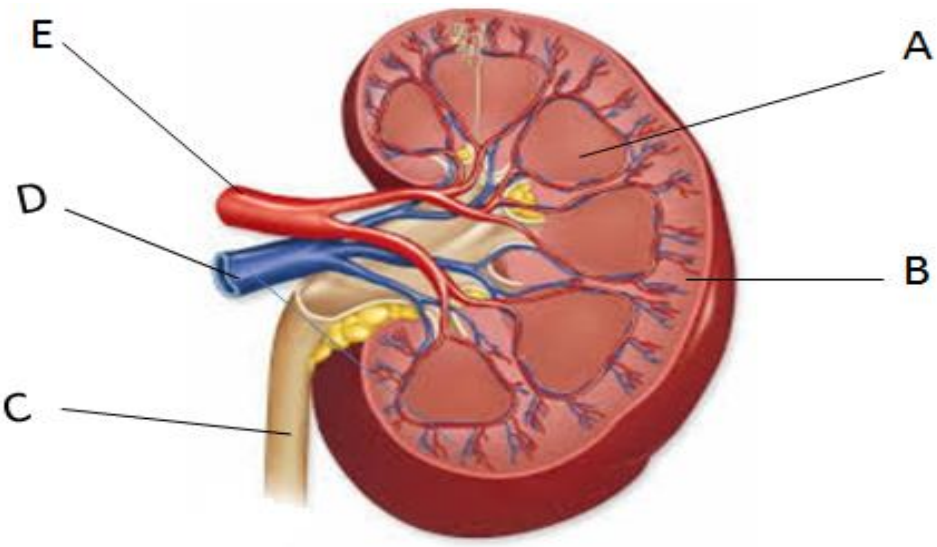
iii) What is the likely agent of dispersal of S? Reason **(2mk**

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3. The photograph below is of mammalian organ



a) i. Name the basic functional units of the organ. **(1mk)**

……

ii) State any function of the organ above. **(1mk)**

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……

b) Name the parts labelled- **A**

B

C **(3mks)**

c) How is the blood vessel E adapted its function. **(2mks)**

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……

……

d) Give two differences between blood flowing through vessel E and D **(2mks)**

Blood in E	**Blood in D**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

CHEMISTRY

233/1

PAPER 1 (THEORY)

TIME: `2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

- *Write your name and index in the **spaces** provided.*
- *Sign and write the date the examination is done.*
- *Answer **all** the questions in the spaces provided.*
- *Mathematical tables and **electronic calculators** may be used.*
- *ALL workings **MUST** be clearly shown where necessary.*
- ***Candidates should answer questions in English.***

For Examiner's Use Only

Question	Maximum score	Candidates score
1-27	80	

1. An atom of element A has mass number 23 and 12 neutrons.

(a) Write the electron arrangement of the atom **(1 mark)**

……

(b) State the period and group to which element A belongs

Group ……... **(½ mark)**

Period ……... **(½ mark)**

(c) State whether the element is a metal or a non-metal. **(1 mark)**

……

2. (a) What is an indicator? **(1 mark)**

……

……

(b) Name the indicator which can be used to determine the pH value of lemon juice. Give a reason for your answer. **(2 marks)**

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3. At $20^{O}C$, NO_2 and N_2O_4 gases exist in equilibrium as shown in the equation below:

$$\underset{\text{Brown}}{2NO_{2(g)}} \rightleftharpoons \underset{\text{pale yellow}}{N_2O_{4(g)}};\ \triangle H = -ve$$

State and explain the observation that would be made when;

(a) A syringe containing the mixture at $20\ ^{O}C$ is immersed in ice-cold water. **(1 ½ marks)**

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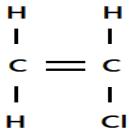
(b) The volume of the gaseous mixture in a syringe is reduced. **(1 ½ marks)**

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4. A monomer has the following structure



(a) Draw the structure of its polymer that contains two monomers. **(1 mark)**

(b) A sample of the polymer formed from the monomer has a molecular mass of 4500. Determine the number of monomers that formed the polymer (C= 12; H= 1; Cl=35.5). **(2 marks)**

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5. (a) Name the gaseous pollutant produced during Contact Process **(1 mark)**

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(b) Describe how scrubbing of the gas named in **(a)** above is done to reduce pollution. **(1 mark)**

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6. Use the table below to answer the questions that follow. (The letters are not the actual symbols of the elements)

Element	Atomic number	Boiling point (°C)
A	19	774
B	11	890
C	17	-35
D	13	2470
E	14	2360

(a) Identify an element that exists as a gas at room temperature. Explain. **(2 marks)**

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(b) Using dots (●) and crosses(**x**) draw the bonding formed when element **A** and **C** react to form a compound. **(1 mark)**

7. Lead (II) chloride can be prepared from lead (II) carbonate using the following procedure:

Step 1: Add excess lead (II)carbonate to dilute nitric (v) acid.

Step 2: Filter to obtain lead (II)nitrate solution as filtrate.

Step 3: Add sodium chloride solution to the filtrate.

Step 4: Filter off to obtain lead (II)chloride as residue.

Step 5: Wash the lead (II)chloride residue with distilled water dry between filter papers.

Why are the following steps necessary?

(a) Using **excess** lead (II)carbonate used in step 1 **(1 mark)**

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(b) Using dilute nitric(V) acid instead of sulphuric (VI) or hydrochloric acid in step 1 **(1 mark)**

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(c) Washing the lead (II)chloride residue with distilled water in step 5 **(1 mark)**

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8. Phosphorus is in group (V) of the periodic table. Explain the following observations.

(a) Phosphorus exhibits two melting points. **(1 mark)**

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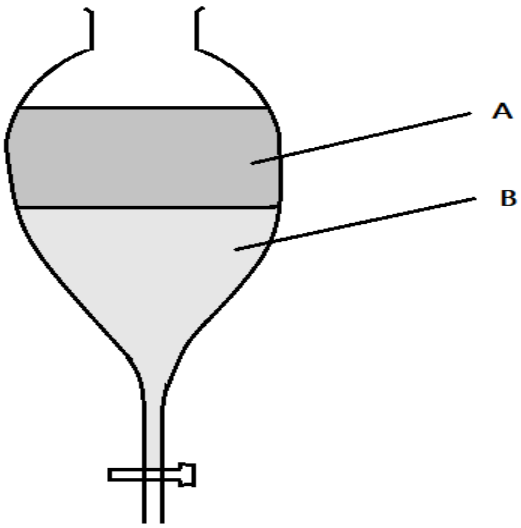
(b) The chloride of phosphorus forms musty fumes in damp air. **(2 marks)**

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9. The apparatus below was used to separate a mixture of **water** and **kerosene**.



(a) State **two** properties of the liquids that make it possible to separate them using such apparatus.

(1 mark)

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……

(b) Name the liquids **A** and **B.** **(1 mark)**

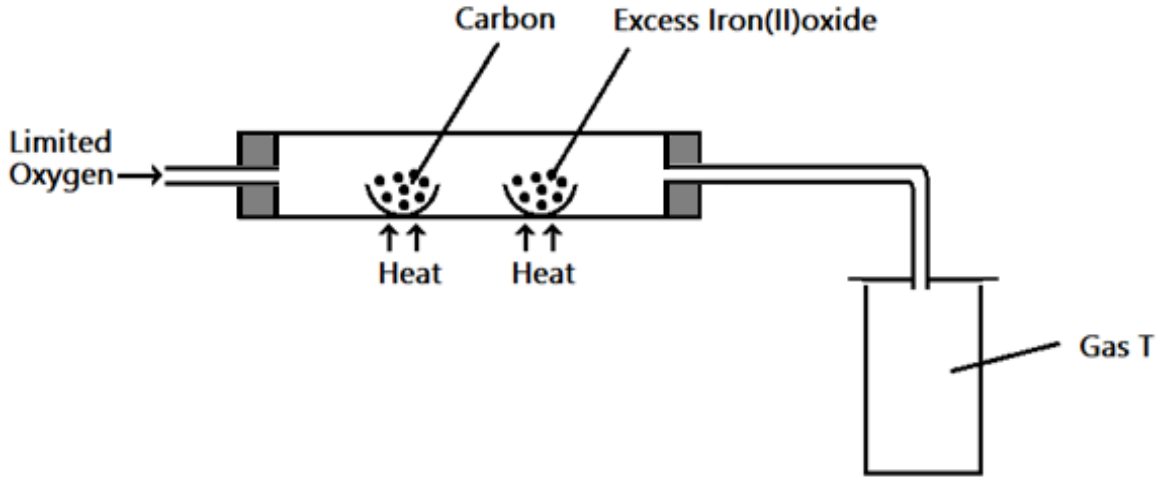
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(c) Give the name of the above method of separation. **(1 mark)**

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10. The set up below was used to obtain a sample of iron.



(a) Write **two** equations for the reactions which occur in the combustion tube.**(2 marks)**

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(b) Identify Gas **T** **(1 mark)**

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11. Chlorine gas was bubbled through potassium iodide solution.

(a) State the observation that would be made. **(1 mark)**

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(b) Write the ionic equation for the reaction that took place in (a) above. **(1 mark)**

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(c) Identify the oxidizing agent in the ionic equation (b) above. **(1 mark)**

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12. Consider the reaction chain below.

$$^{214}_{83}Bi \xrightarrow{I} {}^{210}_{81}Ti \xrightarrow{II} {}^{210}_{82}Pb \xrightarrow{III} {}^{210}_{83}Bi \xrightarrow{IV} {}^{210}_{84}Po \xrightarrow{V} {}^{206}_{82}Pb$$

(a) Identify the particles emitted in

(i) I **(½ mark)**

.....

(ii) II **(½ mark)**

.....

(b) Write the nuclear equation for the reaction that takes place in V. **(1 mark)**

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(c) State one environmental effect of radioisotopes. **(1 mark)**

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13. $25cm^3$ of 0.1M sulphuric (VI) acid required $20cm^3$ of sodium carbonate solution for complete neutralization. Calculate the concentration of sodium carbonate in moles per litre.

(3 marks)

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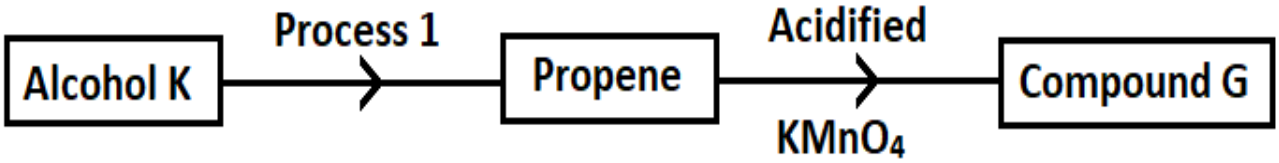
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14. Study the flow chart **below**.



(a) Write the molecular formula of alcohol **K**. **(1 mark)**

.....

(b) Name

(i) Compound **G** …… **(1 mark)**

(ii) Process **I** ……..…… **(1 mark)**

15. (a) Define the term oxidation state. **(1 mark)**

……

……

(b) Calculate the oxidation states of chromium and manganese in the following ions.

(i) Chromium in $Cr_2O_7^{2-}$ **(1 mark)**

……

……

(ii) Manganese in MnO_4^- **(1 mark)**

……

……

16. (a) What is a flame? **(1 mark)**

……

……

(**b) Which** type of flame is produced when the air hole of a Bunsen burner is closed? **(1 mark)**

……

(c) State one observable differences between a luminous and a non-luminous flame. **(1 mark)**

……

……

17. In an experiment to electroplate a copper spoon with silver, a current of 0.5A was passed for 18 minutes. Calculate the amount of silver deposited on the spoon (1 Faraday = 96500 coulombs, Ag =108) **(3 marks)**

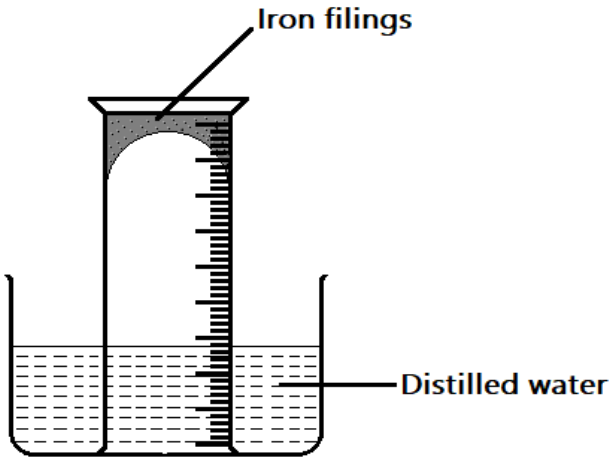
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18. A measuring cylinder containing moist iron filings was inverted in a trough of distilled water as shown in the diagram below.



(a) State and explain the observations made on the:

(i) Moist iron filings after four days; **(1 mark)**

……

……

(ii) Water level in the measuring cylinder after four days. **(1 mark)**

……

……

(b) What would be the effect of using iron filings moistened with tap water? **(1 mark)**

……

……

19. Below are properties of some elements in period 3 of the periodic table

Element	**Na**	**Mg**	**Al**
Atomic radius (nm)	0.152	0.136	0.125
Melting points (^{O}C)	97.8	650	660

(a) Explain the trend in the melting points **(2 marks)**

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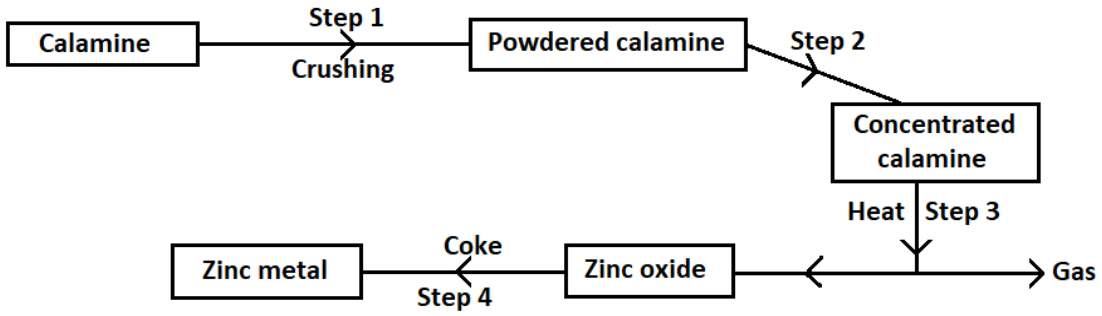
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(b) Why is there a decrease in size of the atoms from Na to Al? **(1 mark)**

……

……

20. The flow chart below shows steps used in the extraction of zinc from one of its ores.



(a) Name the process that is used in **step 2** to concentrate the ore. **(1 mark)**

……

(b) Write an equation for the reaction which takes place in **step 3**. **(1 mark)**

……

(c) State one use of zinc other than galvanizing. **(1 mark)**

……

……

21. (a) What is the type of the heat change that occurs when one mole of a substance burns completely in oxygen? **(1 mark)**

……

(b) Methane reacts with oxygen according to the equation given below.

$$CH_4\,(g) + 2O_2(g) \rightarrow CO_2\,(g) + 2H_2O\,(l) \qquad \Delta H = 890\ kJ\ mol^{-1}$$

Calculate the volume of methane which would produce 111.25 kJ when completely burnt. (Molar volume of a gas = 24 litres.) **(2 marks)**

……

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22. (a) State the Graham's law diffusion. **(1 mark)**

……

……

(b) The molar masses of gases W and X are 16.0 and 44.0 respectively. If the rate of diffusion of W through a porous material is $12cm^3s^{-1}$ calculate the rate of diffusion of X through the same material. **(2 marks)**

……

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……

23. Coal, oil and natural gas are major sources of energy. They are known as fossil. Hydrogen is also a source of energy.

(a) State two reasons why hydrogen is a very attractive fuel compared to fossil fuels **(2 marks)**

……

……

……

……

(b) State one disadvantage of using hydrogen fuel instead of fossil fuels. **(1 mark)**

……

……

24. (a) Other than salt, identify two substances that are formed when an acid reacts with a carbonate. **(1 mark)**

……

……

(b) When hydrogen chloride gas is dissolved in water, the solution formed turns blue litmus paper red but there is no effect on blue litmus paper, when the gas is dissolved in methylbenzene.

(2 marks)

……

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……

25. When burning magnesium ribbon is introduced into a gas jar full of nitrogen, it continues to burn producing a greenish yellow powder.

(a) Write an equation for the reaction between nitrogen and magnesium. **(1 mark)**

……

……

(b) Explain why magnesium continues to bum in nitrogen but sulphur does not. **(2 marks)**

……

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……

(c) State one use of nitrogen. **(1 mark)**

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……

26. Describe how the presence of calcium ions in a water sample can be tested in the laboratory.

(3 marks)

……

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……

27. (a) Name the particles that are responsible for electrical conductivity in:

(i) Solids **(½ mark)**

.....

.....

(ii) Both melts and aqueous solution **(½ mark)**

.....

.....

(b) Give two properties of graphite that make it suitable for use as an electrode. **(2 marks)**

.....

.....

(c) State one precaution that is necessary when carrying out electrolysis of molten lead (II) bromide **(1 mark)**

.....

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The Last Printed Page

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

CHEMISTRY

233/2

PAPER 2 (THEORY)

TIME: `2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

Instructions to candidates

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

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

(c) *Non-programmable silent electronic calculators and KNEC mathematical tables may be used.*

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

(e) *Candidates should answer the questions in English.*

For Examiner's Use Only

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	11	
2	13	
3	13	
4	12	
5	11	
6	08	
7	12	
Total score	80	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

*Answer **all** the questions in the spaces provided*

1. a) What is radioactivity? **(1 mk)**

……

……

b) State two differences between chemical and nuclear reactions **(2 mk)**

……

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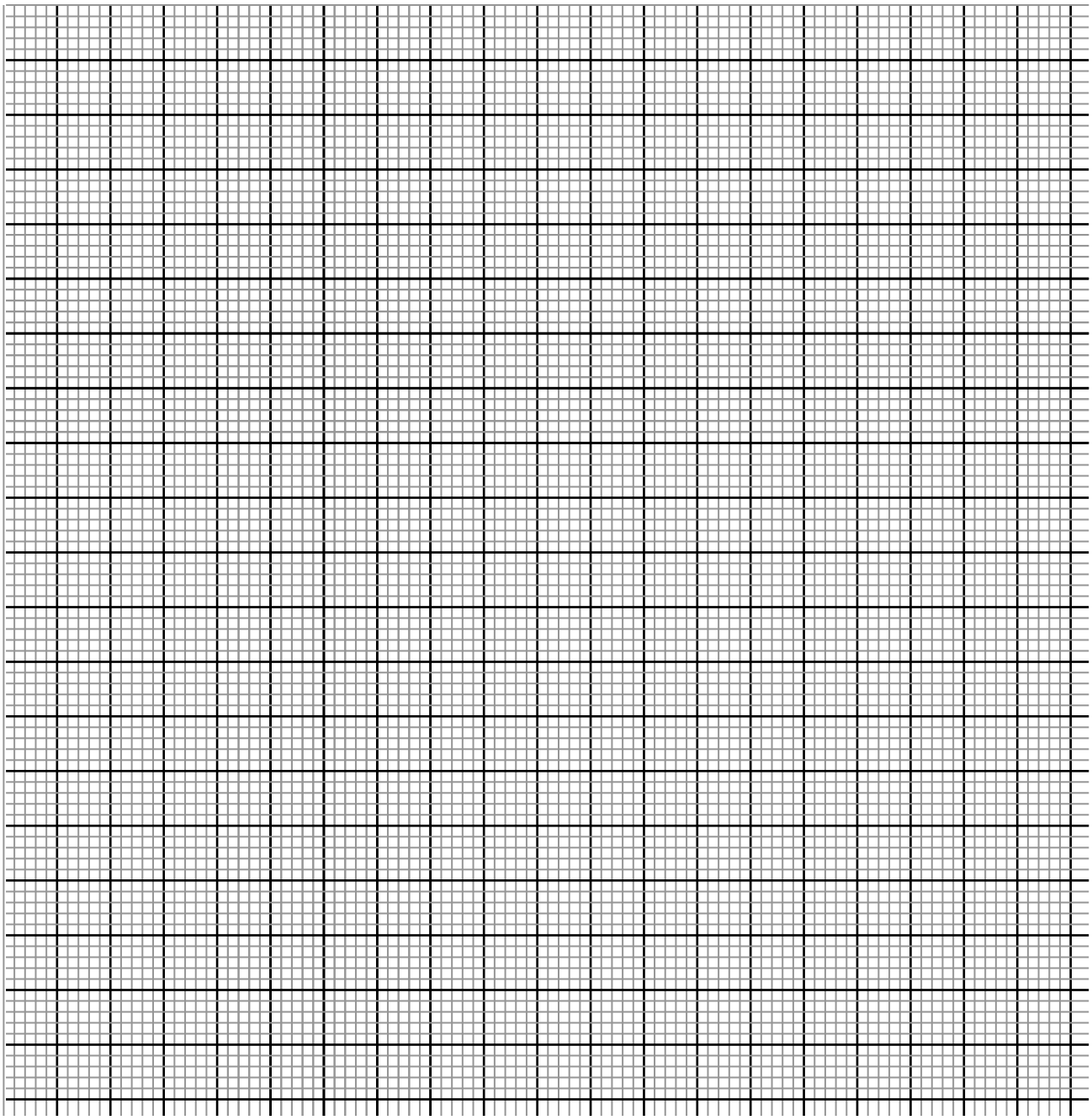
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c) The table below give the percentages of a radioactive isotope of Bismuth that remains after decaying at different times.

Time (min)	0	3	6	11	19	31	50
Percentage of Bismuth	50	40.5	32.5	24	14.5	6	1.5

i) On the grid provided, plot a graph of the percentage of Bismuth remaining (Vertical axis) against time. **(3 mk)**



ii) Using the graph, determine the:

I. Half – life of the Bismuth isotope **(1 mk)**

II. Original mass of the Bismuth isotope given that the mass that remained after 35 minutes was 0.08 g **(2 mk)**

d) Give one use of radioactive isotopes in the following fields;

i) Medicine **(1 mk)**

……

……

ii) Agriculture **(1 mk)**

……

……

iii) Food industry **(1 mk)**

……

……

2..a) The reduction potentials of Mg(s) | Mg2+(aq) and Zn(s) | Zn2+(aq) half-cells are:

$Mg^{2+}(aq) + 2e^- \rightleftharpoons Mg(s)$ $E\theta = -2.37V$

$Zn^{2+}(aq) + 2e^- \rightleftharpoons Zn(s)$ $E\theta = -0.76$ V

Using the electrode potentials, answer the following questions.

(i) Write an ionic equation for a cell made by combining the two half cells. **(1mk)**

(ii) Draw an electrochemical cell made by combining the two half cells above**.** **(3mk)**

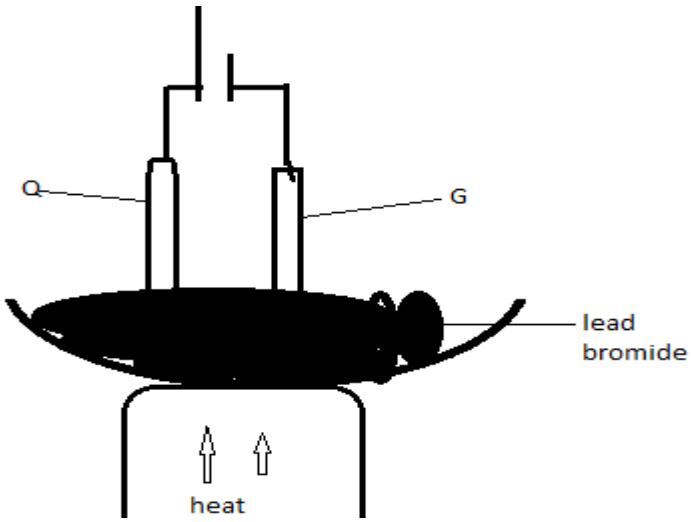
b) Use the cell representation below to answer the question that follows

Cu(s) | Cu2+(aq) | | Ag+(aq) | | Ag(s) $E\theta cell = +0.46$ V

Given that the E value for Ag+(aq) | Ag(s) is + 0.80 V, calculate the Eθ value for Cu(s) | Cu2+(aq**)..** **(2mk)**

c) In an experiment to electrolyse copper (II) sulphate solution using copper electrodes, 0.2 amperes were passed through the solution for 23 hours. Calculate the mass of copper deposited at cathode. (1 Faraday = 96,500 coulombs, Cu = 64). **(3mk)**

d)The set-up below was used to electrolyse a bromide of lead. Study it and answer the questions that follow.



(i) Write the equation for the reaction at electrode G **(1 mk)**

……

……

(ii) State the observation made at electrode Q **(1 mk)**

……

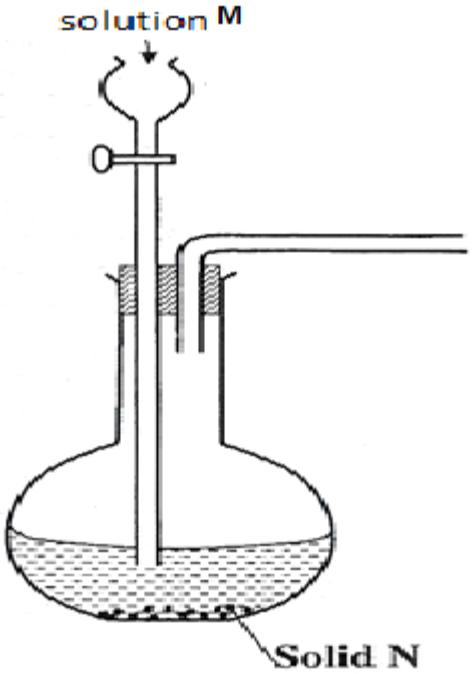
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e) List any two applications of electrolysis. **(1mk)**

……

……

3. The set up below can be used to generate a gas without heating. This occurs when substance M reacts with solid N.



a i) Complete the table below giving the names of Solution M and solid N if the gases generated are chlorine and sulphur (IV) oxide. **(2 marks)**

	Chlorine	Sulphur (IV) Oxide
Substance M		
Solid N		

(ii) Complete the diagram above to show how a dry sample of chlorine gas can be collected **(3mk)**

(b) Write balanced chemical equation to show how chlorine with cold and dilute sodium hydroxide. **(1mk)**

……

……

(c) 600cm^3 of dry chlorine gas were passed over excess heated iron powder in a combustion tube until no further change.

i) State the observations made in the combustion tube. **(1mk)**

……

……

ii) Calculate the mass of the product formed. (MGV= 24dm^3, Cl=35.5, Fe= 56) **(3mk)**

d) A soil sample was suspected to contain chloride ions. Describe a simple experiment that can used to confirm the presence of the chloride ions. **(3mk)**

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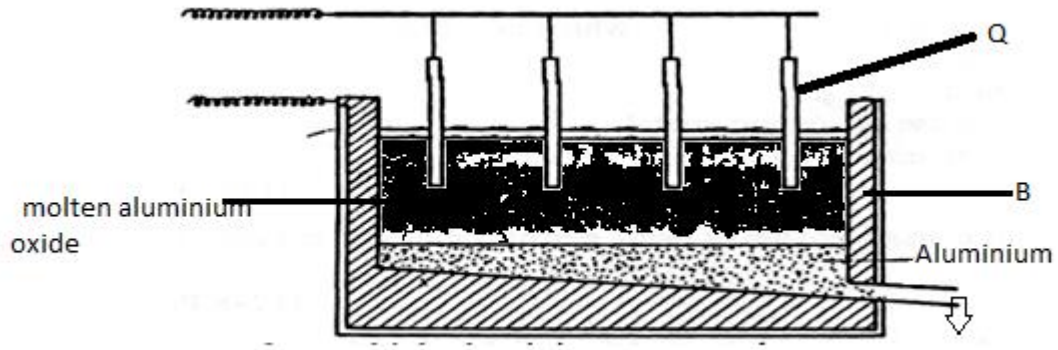
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4. The extraction of aluminum from its ore takes place in two stages, purification stage and electrolysis stage. The diagram below shows the set – up for the electrolysis stage.



a)i)Name the ore from which aluminium is extracted. **(1mk)**

ii) Outline the stages involved in the purification stage. **(2mk)**

……

……

……

b)i)Identify the electrode labelled B **(1mk)**

……

ii) The melting point of aluminium oxide is 2054^{o}C, but electrolysis is carried out between 800 – 900^{o}C.What is done to lower the temperatures? **(1mk)**

……

……

iii) The aluminium which is produced is tapped off as liquid. what does this suggest about its melting point? **(1mk)**

……

……

iv) What makes it possible to tap aluminium from the lower side **(1mk)**

……

……

v) Write the half-cell equation for the reaction taking place at electrode Q **(1mk)**

……

……

vi) State two reasons that make aluminium be used to make cooking utensils**.** **(1mk)**

……

……

……

vii) Why can't aluminium be extracted through reduction method. **(1mk)**

……

……

5. a) Explain why a solution of hydrogen chloride gas in methylbenzene does not change a blue **litmus** **(1mk)**

……

……

b) Compare the electrical conductivity of solution J with pH 6 and L pH 2. **(2mks)**

……

……

……

c)Name the process that takes place when:

i) Sulphur is heated with natural rubber. …….. **(1 mk)**

ii) Fats or oils are hydrolyzed using an alkali. …….. **(1 mk)**

d) i) Oxygen is obtained by fractional distillation of liquid air. Name two other gases which are obtained from this process during distillation. **(1mk).**

……

……

ii) Give two industrial uses of oxygen gas. **(1mk)**

……

……

e) Describe the procedure used to obtain oil from groundnuts**.** **(3mk)**

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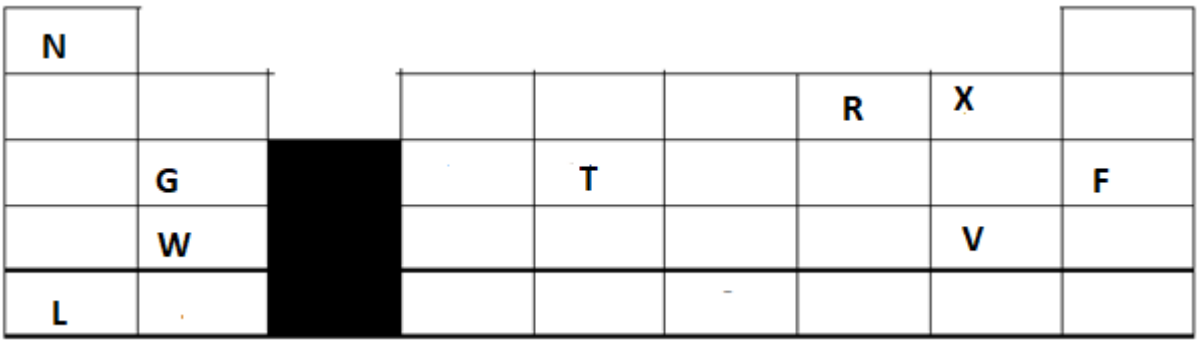
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6. The following is an extract of the periodic table. Study it and answer the questions that follow. (the letters do not represent the actual symbols of the elements.)



a) In which other group can N be placed and why? **(1mk)**

……

b)i) Write the formulae of the compound formed when elements X and W reacts**.** **(1mk)**

……

……

ii) Comment on the electrical conductivity of the compound formed above**.** **(2mk)**

……

……

……

c) Choose;

i) The most unreactive element **(1mk)**

……

ii) The strongest reducing agent. **(1mk)**

……

d) State the nature of each of the following;

i) The chloride of **W** **(1mk)**

……

ii) The oxide of T **(1mk)**

……

e) What name is given to the group of elements where G and W belong**?** **(1mk)**

……

f) Use the letter B to show the position of an element that forms a divalent anion with three energy levels in the periodic **table** **(1mk)**

g) Describe how a pure and solid sample of lead ii chloride can be separated from its solid mixture with the chloride of G. **(2mks)**

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7. a) List any two physical tests for water**.** **(1mk)**

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b) A student wanted to prepare hydrogen gas in the lab. He reacted dilute hydrochloric acid with copper metal but no gas was collected.

i) Explain this observation. **(1mk)**

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ii) What adjustments would have been made in order to collect the gas**.** **(2mks)**

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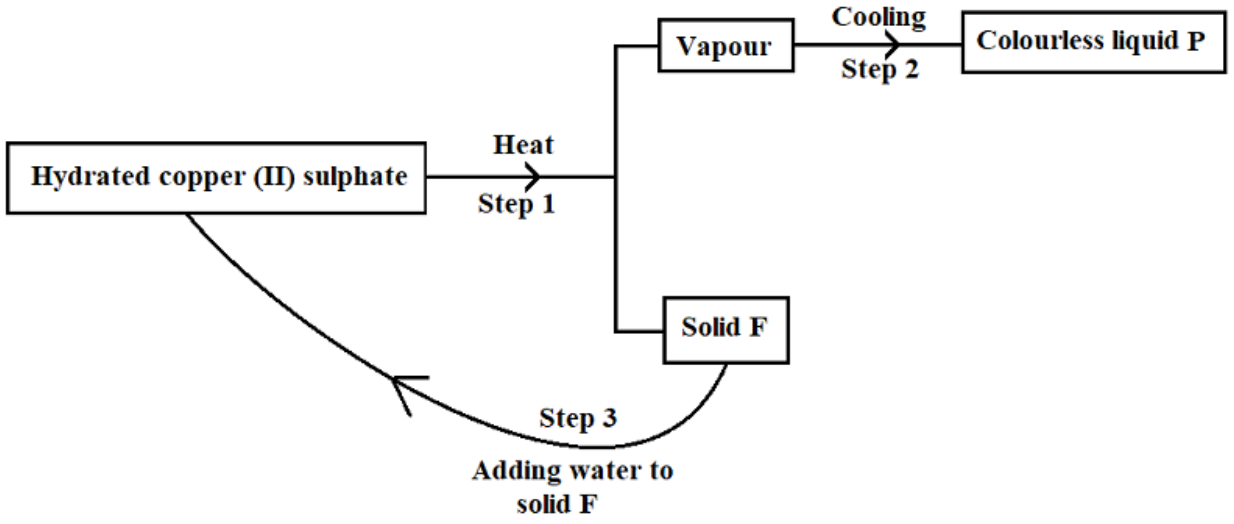
c) Metal E reacts with steam but not with cold water, metal M do not react with dilute acids, metal D reacts with cold water vigorously while metal S reduces the oxide of D. arrange the metals starting with the most reactive**.** **(2mk)**

.....

.....

.....

d) 10. Study the flow chart below and answer the questions that follow



i)Classify the change in step 1 **(1 mk)**

……

ii) Name another substance that undergoes a similar change as hydrated copper (II) sulphate when heated. **(1 mk)**

……

e)i) Explain why hydrogen is not commonly used as a **fuel** **(1mk)**

……

……

……

ii) Apart from rocket fuel, list any other two uses of hydrogen gas **(1mk)**

……

……

THE END

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

CHEMISTRY

233/3

PAPER 3 (PRACTICAL)

TIME: `2¼ HOURS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education. (KCSE)

CONFIDENTIAL

The information contained in this confidential is to enable the head of institution and the teacher in charge of chemistry to make adequate preparations for the practical examination.

Note: No one else should have access to this information either directly or indirectly

INSTRUCTIONS

In addition to the laboratory fittings each candidate requires the following:

1. Solid E – potassium chlorate 2.0 g accurately weighed in a dry boiling tube.
2. Solid A – 0.3 g magnesium powder
3. 70 cm^3 of Solution B- 1M HCI
4. 120 cm^3 of Solution C – 0.1M NaOH
5. 2 conical flasks.
6. Solid G – 0.2 g of maleic acid in a stoppered container
7. Solid F- 0.2g of magnesium sulphate.
8. 0.2 g of solid Na_2CO_3.
9. A burette (50ml)
10. A pipette (25ml) and pipette filler
11. Thermometer (-10^oC – 110^oC)
12. Volumetric flask(250ml)
13. Complete retort stand
14. A white tile
15. Six test tubes in a rack
16. One boiling tube
17. Test tube holder
18. 10ml measuring cylinder
19. 500ml distilled water in a wash bottle
20. One metallic spatula
21. one label

Access to:

1. Source of heat
2. Water bath
3. 2M NaOH solution
4. 2M dilute nitric (V) acid
5. 2M aqueous ammonia
6. 1M barium nitrate
7. 1M lead (II) nitrate
8. 1M sodium sulphate
9. Acidified potassium manganate (VII) solution

supplied in a dropper bottle

10. Phenolphthalein indicator.

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

CHEMISTRY

233/3

PAPER 3 (PRACTICAL)

TIME: `2¼ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

1. *Write your name and Index number in the spaces provided above.*
2. *Answer ALL the questions in the spaces provided in the question paper*
3. *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 read the question paper and make sure you have all the chemicals and apparatus that you may need.*
4. *Mathematical tables and silent electronic calculators may be used*
5. *ALL workings MUST be clearly shown where necessary.*

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	23	
2	10	
3	7	
TOTAL SCORE	**40**	

1. a) You are provided with;

- 0.3 g of metal **A**
- 70cm^3 of 1.0 M hydrochloric acid solution labelled as solution **B**.
- 100cm^3 of 0.1 M sodium hydroxide labeled solution **C**.
- Phenolphthalein indicator.

You are required to determine the relative atomic mass of metal **A**

Procedure I

(i) Using a burette measure 50cm^3 of solution **B** into a 250ml beaker.

(ii) Add the whole amount of solid **A** provided into the beaker containing 50.0cm^3 of solution **B** and swirl carefully until ALL the solid reacts completely.

(iii) Transfer the mixture left in the beaker after the reaction into a 250ml volumetric flask. Rinse the beaker with distilled water and transfer all the rinsing's into the volumetric flask. Make up the volume of the solution in the volumetric flask up to the mark with distilled water, shake well and label the solution **D**.

(iv) Fill a clean burette with solution **D**.

(v) Pipette 25cm^3 of solution **C** into a 250ml conical flask, add 3 drops of phenolphthalein indicator solution and titrate against solution **D** from the burette. Record your results in table I below.

(vi) Repeat the titration TWO more times to complete table I.

Table I **(4marks)**

	I	II	III
Final burette reading, cm^3			
Initial burette reading, cm^3			
Volume of solution **D** used, cm^3			

a) Calculate the average volume of solution **D** used, cm^3 **(1mark)**

……

……

……

b) Calculate

(i) Calculate the number of moles of HCI in 50.0 cm^3 of solution **B.** **(1mark)**

……

……

……

(ii) Determine the number of moles of NaOH in 25.0 cm^3 of solution **C**. **(1mark)**

……

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……

(iii) Determine the number of moles of HCl in the average volume of solution **D** used in the titration. **(1mark)**

……

……

……

c) Calculate;

(i) The number of moles of HCl in 250cm^3 of HCI solution **D**. **(1mark)**

……

……

……

(ii) The number of moles of HCl that reacted with metal **A.** **(1 mark)**

……

……

……

(d) Given that metal A forms a divalent cation,

(i) Determine the moles of metal **A** that reacted with hydrochloric acid. **(1mark)**

……

……

……

(ii) Determine the Relative atomic mass of metal **A**. **(1 mark)**

……

……

……

1. (b)

You are provided with

- 2.0g of solid **E** in a dry boiling tube.
- A thermometer
- Distilled water
- Hot water bath

You are required to determine the temperatures at which solutions of known concentrations of compound K becomes saturated and plot a solubility curve.

Procedure II

(i) Using a burette, add 5.0 cm^3 of distilled water into the boiling tube with solid **E**.

(ii) Place the boiling tube into a water bath and warm it while stirring with a thermometer until all the solid dissolves.

(iii) Remove the boiling tube from the hot water and allow the content to cool slowly while stirring with the thermometer. NOTE the temperature at which crystals start to appear and record this temperature in table II.

(iv) Add a further 2.0 cm^3 of distilled water from the burette into the boiling tube containing the mixture and repeat steps (c) and (d) above.

(v) Repeat the procedure (e) above until the volume of water added is 15.0 cm^3.

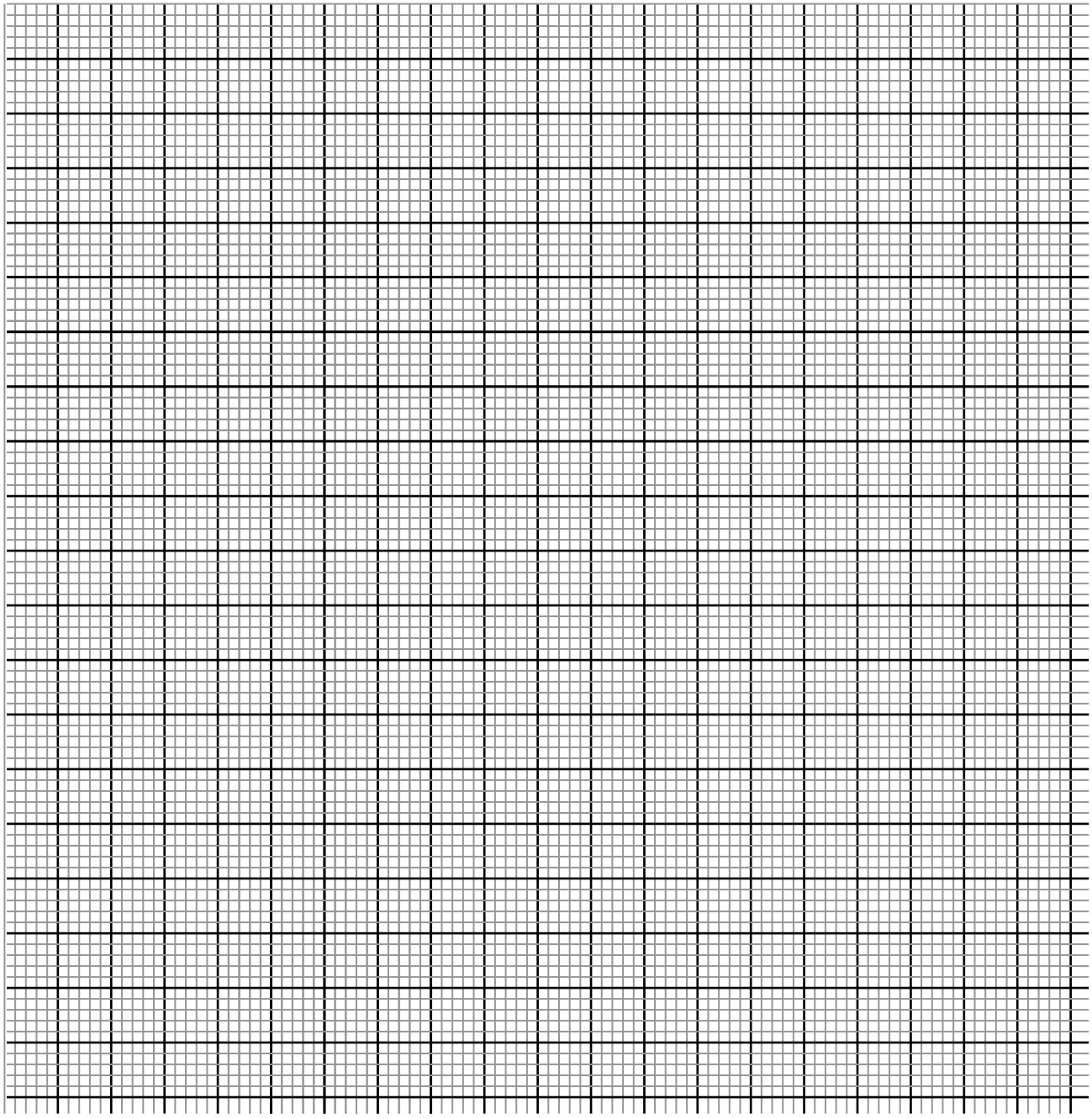
(vi) Complete table II by calculating the solubility of compound **E** in water at different temperatures.

Table II **(5 marks)**

Total volume of water added (cm^3)	Temperature at which crystals first appear. (^oC)	Solubility of substance E in g/100g water.
5.0		
7.0		
9.0		
11.0		
13.0		

On the grid provided plot a graph of solubility of compound E (vertical axis) against temperature.

(3 marks)



(i) From the graph determine the temperature at which the solubility of E in water at 35.0 ^{o}C/100g of **water** **(1mark)**

……

……

……

(ii) Determine the mass of crystals formed when a hot saturated solution of compound E is cooled from 70^{o}C to 45^{o}C **(1 mark)**

……

……

……

(iii) What is the relationship between the solubility of compound E and change in temperature **(1mk)**

……

……

2. You are provided with solid **F**. Carry out the tests below and record your observations and inferences in the spaces provided.

Place all the solid F provided in a boiling tube. Add 10 cm^3 of distilled water and shake well. Divide the resulting solution into five portions of 2 cm^3 each.

(i)

Observations	**Inferences**
(1 mark)	**(1mark)**

(ii) To the first portion, add 2 drops of barium nitrate solution followed by 2 cm^3 of dilute nitric (V) acid.

Observations	**Inferences**
(1mark)	**(½mark)**

(iii) To the second portion, add 2-3 drops of lead (II) nitrate solution followed by 2 cm^3 of dilute nitric (V) acid.

Observations	**Inferences**
(1mark)	**(½mark)**

(iv) To the third portion add about 2-3 drops of sodium sulphate.

Observations	**Inferences**
(1mark)	**(1 mark)**

(v) To the 4^{th} portion add sodium hydroxide dropwise until in excess.

Observations	**Inferences**
(1mark)	**(½ mark)**

(vi) To the 5th portion add ammonia solution dropwise until in excess.

Observations	**Inferences**
(1mark)	**(½ mark)**

3. You are provided with solid G. Carry out the tests below and record your observations and inferences in the spaces provided.

(a) Scoop a little of solid G using a metallic spatula and burn it in a Bunsen burner flame.

Observations	**Inferences**
(1mark)	**(1mark)**

(b) To the remaining portion of solid G, add about $6cm^3$ of distilled water and shake. Divide the mixture into two portions.

Observations	**Inferences**
(1mark)	**(1mark)**

(c) To the first portion add 2-3 drops of acidified potassium manganate (VII) solution.

Observations	**Inferences**
(1mark)	**(1mark)**

(d) To the second portion add solid sodium carbonate provided.

Observations	**Inferences**
(½mark)	**(½mark)**

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KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

PHYSICS

232/1

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES:

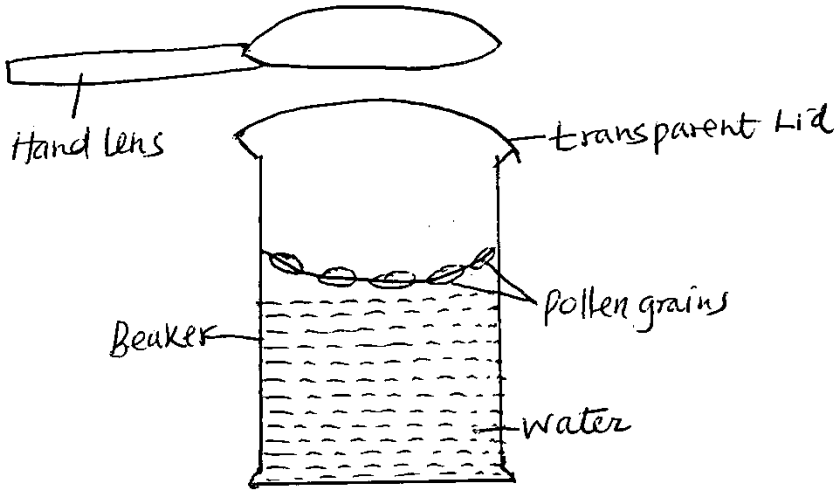
- *Write **your name, admission number**, **class and date** of examination in the space provided above.*
- *Answer **all** the questions in the spaces provided.*
- *All working **must** be clearly shown in the spaces provided.*
- *Mathematical tables may be used.*

For Examiner's Use Only

Section	Questions	Maximum Score	Candidates Score
A	1 - 14	25	
B	15	11	
	16	9	
	17	11	
	18	13	
	19	11	
Total Score		**80**	

SECTION A (25MKS) Answer all the Questions

1. The figure below shows a setup used to study Brownian motion in liquids



(i) State the functions of the hand **lens** **(1mk)**

……

……

(ii) State what is observed on the pollen grains **(1mk)**

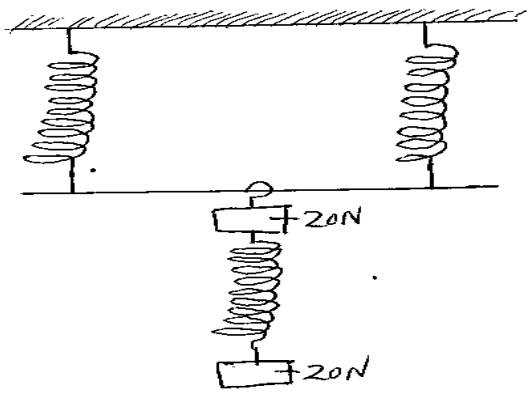
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2. An object placed on the surface of water in a beaker starts to sink immediately. It is observed that it stops sinking when half of its volume is below the water surface. State the reason for these **observations** **(1mk)**

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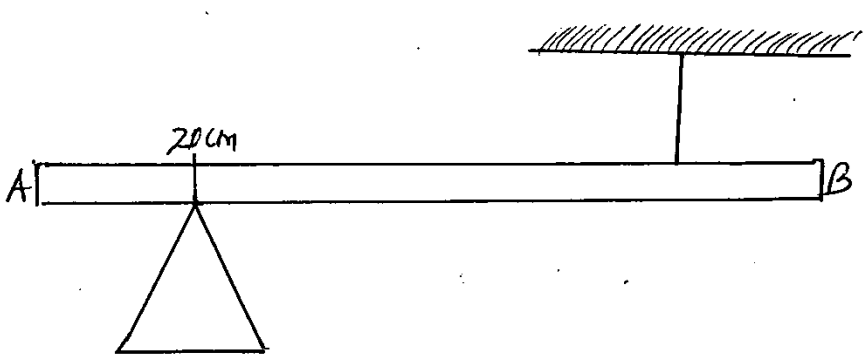
3. The three springs shown in the figure below are identical and have negligible weight. The extension produced on the system of springs is 20cm.



Determine the constant of each spring. **(2mks)**

4. A particle starts from rest and accelerates uniformly in a straight line. After 3 seconds it is 9m from the starting point. Determine the acceleration of the particle **(3mks)**

5. The figure below shows a uniform rod AB of length 1m and weight 8N pivoted at 20cm from one end. It is balanced by supporting it with a string attached to a fixed support. The tension in the string is 4N. Determine the position of the string from end A. **(3mks)**

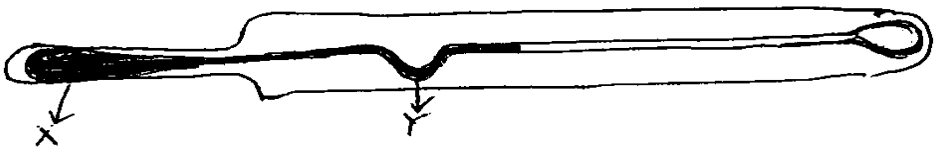


6. State the reason why the speed of water at the narrow section of a river is higher than at the wider section **(1mk)**

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7. The figure below shows a clinical thermometer which is not graduated



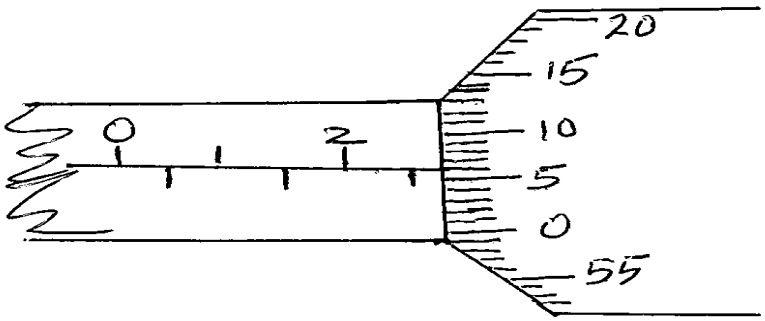
(i) Name the part indicated with letter x **(1mk)**

(ii) State the function of the part labelled y **(1mk)**

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8. A micrometer screw gauge is used to measure the thickness of a stack of 10 microscope slide cover slips. The reading with the cover slips in position is as shown below



If the micrometer screw gauge has a negative zero error of 0.01mm, determine

(i) The thickness of the slips as shown by the micrometer screw gauge **(1mk)**

(ii) The actual thickness of the slips **(1mk)**

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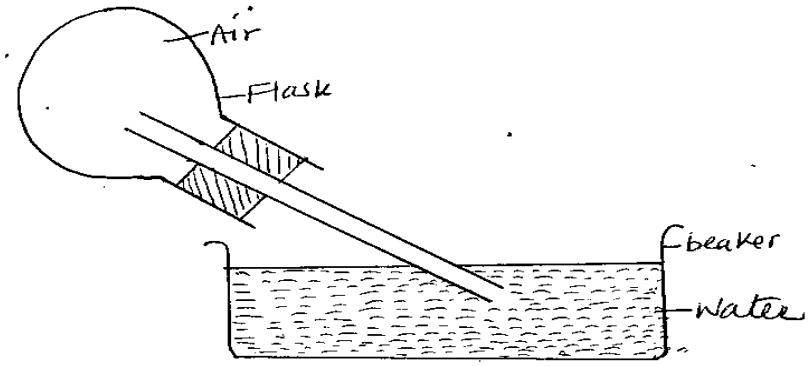
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9. State one factor affecting stability of a body **(1mk)**

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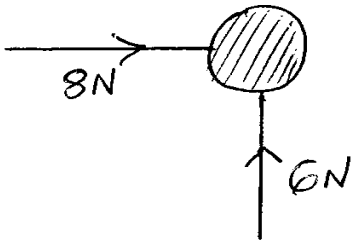
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10. The figure below shows a glass flask filled with a narrow tube dipped into a beaker containing water at room temperature. State and explain what is observed when ice cold water is poured on the flask **(2mk)**



11. Given that pressure at the deepest point in a lake is 400,000N/m^2, determine the depth of this point. (Density of water is 1000kg/m3 **(2mks)**

12. Two forces 8N and 6N acts on a body at 90° to each other as shown.



Determine the resultant force acting on the body and sketch the direction of the resultant force **(1mk)**

13. The potential difference across a lamp is 12v. Determine the electrical energy changed to heat and light when a current of 12A flows through the lamp for 10 seconds. **(2mks)**

14. What is the purpose of the vacuum in thermos flask (vacuum flask) **(1mk)**

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SECTION B 55 MARKS

15. (a) State the law of conservation of linear momentum**.** **(1mk)**

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(b) Distinguish between elastic and inelastic collision **(1mk)**

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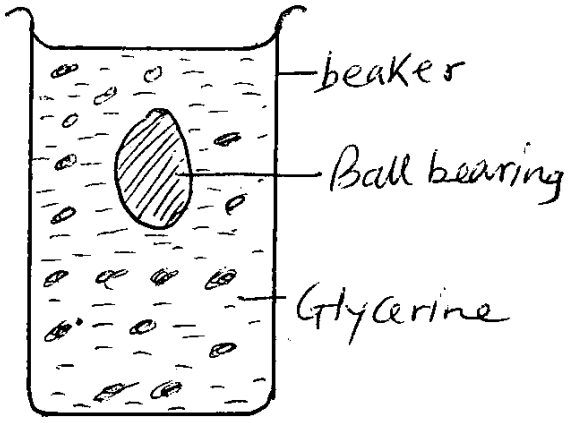
(c) A lorry of mass 2000kg travelling at 20m/s collides with a car of mass 800kg travelling at 30m/s in the opposite direction. The impact takes 2 seconds before the two bodies move with a common velocity.

Determine

(i) The common **velocity** **(3mks)**

(ii) The impulsive force **(2mks)**

(d) The figure below shows a ball bearing falling through glycerin



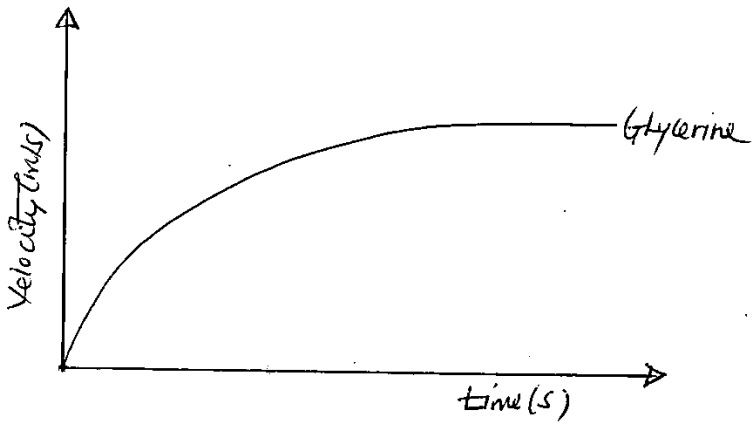
(i) Name the two forces acting on the ball bearing. **(2mks)**

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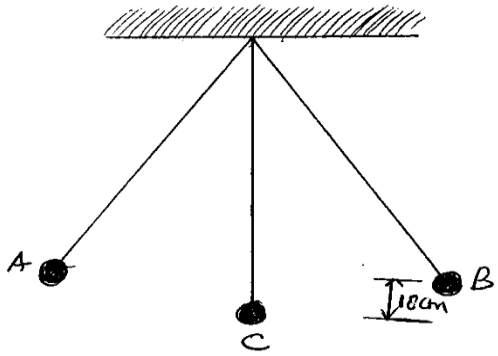
(ii) Write down an equation relating all the forces in (I) above when the ball bearing attains a constant velocity. **(1mk)**

(iii) The graph below shows the motion of the ball bearing through the above liquid



On the same axes above, sketch the graph to represent the motion of the ball bearing through alcohol and explain your graph **(1mk)**

16. The figure below shows a simple pendulum of length 80cm. The pendulum bob whose mass is 50g oscillates between points A and B through its rest position C, A and B are both 10cm higher than C.



a. (i) Indicate with an arrow, on the path A,C,B the direction of the greatest velocity of the bob as it moves from A and B **(1mks)**

(ii) State the form of energy possessed by the pendulum bob at point A. **(1mk)**

b. Determine

i.The velocity of the bob at point C **(3mks)**

ii. The tension in the string as the bob passes point C. (Take g =10m/**s^2)** **(3mks)**

c. After sometime, the pendulum comes to rest at point C. State what happens to the energy it initially possessed**.** **(1mk)**

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17. (a) Define the term centripetal force **(1mk)**

……

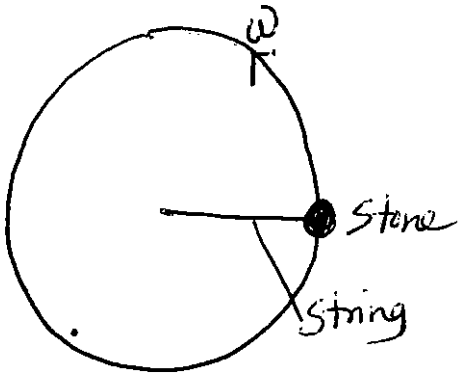
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(b) When a car is travelling on muddy road, mud flies off the fast spinning wheels, explain this observation. **(1mk)**

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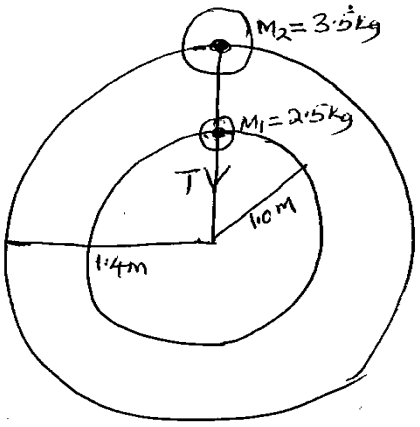
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(c) The figure below shows the path of a stone attached to a string whirled in a space in a horizontal circle.



Sketch on the diagram the path the body follows if the string breaks when the body is at the position shown. **(1mk)**

(d) Two masses M1=2.5kg and m2=3.5kg are connected by a light string and are in uniform circular motion on a horizontal frictionless surface as shown in the figure below. The masses describe circles of radius r1= 1.0m and r2=1.4m respectively and the angular velocity of the masses is 5.0 rad/s



(i) Which of the two masses is moving faster? Give a reason for your answer **(2mks)**

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(ii) Determine the:

I.Centripetal force on m1. **(2mks)**

II. Centripetal force on m2 **(2mks)**

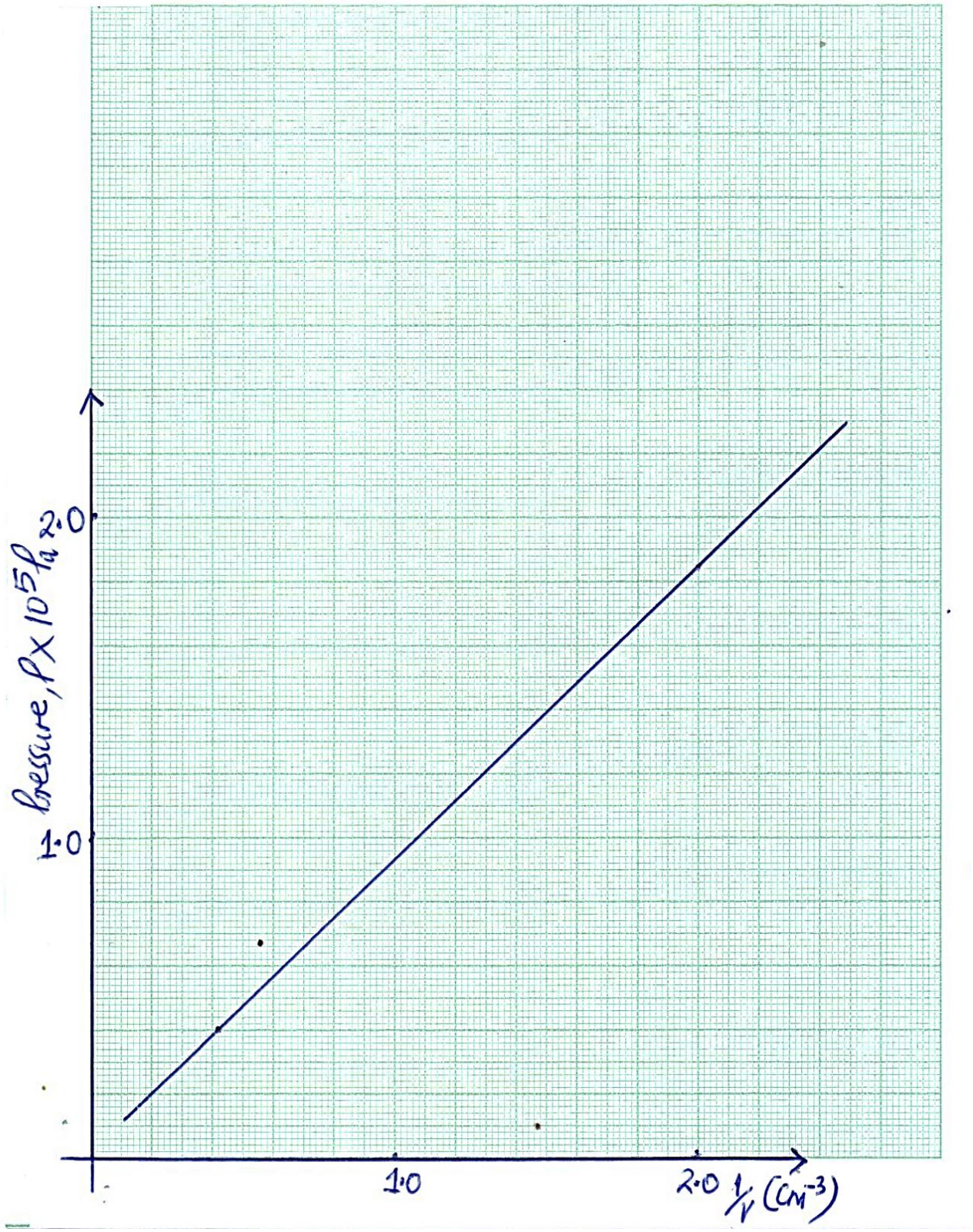
III. The tension T on the string **(2mks)**

18. **(a)** State the pressure law for an ideal **gas** **(1mk)**

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(b) An air bubble is released at the bottom of a tall jar containing a liquid. The height of the liquid column is 80cm. The volume of the bubble increases from $0.5cm^3$ at the bottom of the liquid to $1.15cm^3$ at the top. The figure below shows the variation of pressure, p on the bubble with the reciprocal of volume, I/v as it rises in the liquid.



(i) State the reason why the volume increases as the bubble rises in the liquid column **(1mk)**

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(ii) From the graph, determine the pressure on the bubble

I.At the bottom of the liquid column **(2mks)**

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II. At the top of the liquid column **(1mk)**

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(iii) Hence determine the density of the liquid in kg/m^3**.** **(3mks)**

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(iv) What is the value of the atmospheric pressure of the surrounding **(1mk)**

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(c) A rubber tube is inflated to pressure of $2.7x10^5$pa and volume 3800cm3 at temperature of 25°C. It is then taken to another place where the temperature is 15c and the pressure $2.5x10^5$ Pa. Determine the new volume. **(4mks)**

19. (a) What is meant by the term SPECIFIC LATENT HEAT OF VAPORIZATION **(1mk)**

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(b) In an experiment to determine the specific latent heat of vaporization of water, steam at 100°C was passed into water contained in a well lagged copper calorimeter. The following measurements were made.

Mass of calorimeter =50g
Initial mass of water = 70g
Final mass of calorimeter+ water + condensed steam =123g
Initial temperature of water + calorimeter = 5°c
Final temperature of mixture = 30°c
Specific heat capacity of water = 4200j/kg/k-1
Specific heat capacity of copper = 390j/kg-1/k-1
Determine

(i) Mass of the condensed steam. **(2mks)**

(ii) Heat gained by calorimeter and water **(3mk)**

(iii) Given that Lv, is the specific latent heat of vaporization of steam.

I. Write a simplified expression for the heat given out by steam**.** **(2mk)**

II. Determine the value of lv. **(3mks)**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

PHYSICS

232/2

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

A) *This paper consists of two sections A and B.*

B) *Answer all the questions in sections A and B in the spaces provided.*

C) *Non programmable silent electronic calculators may be used.*

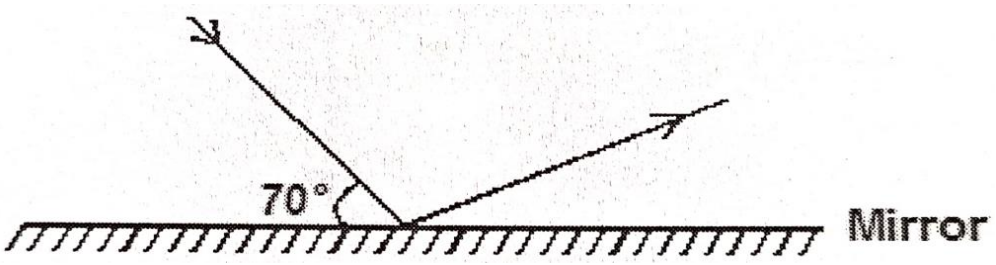
D) *Candidates should check the questions to ascertain that all the pages are printed as indicated and that no question is missing.*

FOR EXAMINER'S USE ONLY.

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-13	25	
B	14	10	
	15	12	
	16	11	
	17	12	
	18	10	
TOTAL		**80**	

SECTION A (25MARKS)

1. A ray of light is incident on a plane mirror as shown in the figure below.



If the mirror is rotated anticlockwise through angle of 8° what will be the angle of rotation of the reflected ray? **(1mark)**

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2. State two uses of a charged gold leaf electroscope **(2marks)**

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3. The table below shows part of the electromagnetic spectrum in order of decreasing wavelength.

A	B	Infrared Radiation	Visible Light	C	D

a)Name the radiation **C (1mk)**

……

b)Give one use of the wave D in **medicine** **(1mark)**

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4. A current of 0.5A flows in a circuit. Calculate the amount of charge that crosses a point in the circuit in 4 minutes. **(2marks)**

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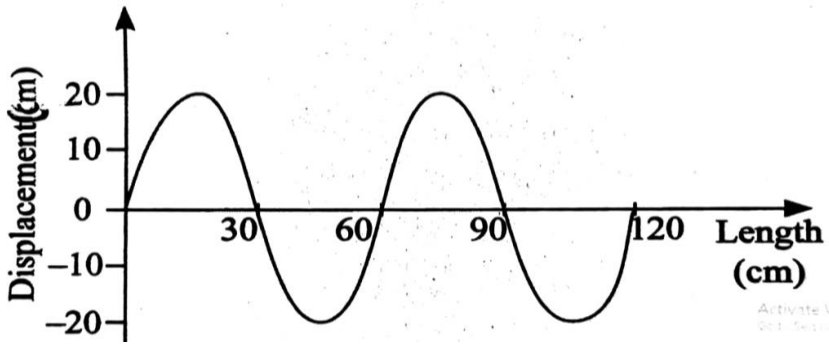
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5. Give two properties of magnetic field lines around a bar magnet. **(2marks)**

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6. The diagram below shows a displacement- position graph for a slinky spring as it is continually vibrated at one end.



What is the

i) Amplitude of the displacement**?** **(1mark)**

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ii) Wavelength of the waves **(1mark)**

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7. The critical angle for a ray travelling from glass to air is 42 ^{o}. Determine the refractive index of the glass. **(2marks)**

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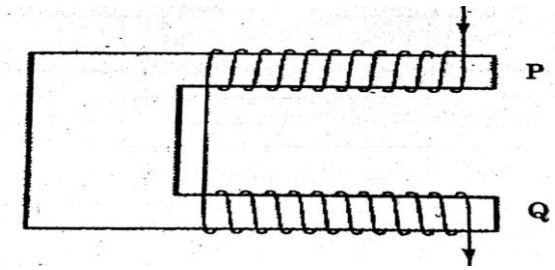
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8. The diagram below shows a current – carrying wire wound on a U-shaped soft iron.



Draw the magnetic field patterns at P and Q **(2marks)**

9. An electrical heater rated 240V, 3000W is to be connected to a 240V mains supply through a 10 A fuse. Determine whether the fuse is suitable or not. **(3marks)**

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10. State one cause of power loss in long distance transmission wire and how this loss can be minimized. **(1mark)**

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11. Explain why walls of the studio are padded with woolen materials. **(1mark)**

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12. An object is placed 8cm from a concave mirror whose radius of curvature is 20cm. Determine the position of the image. **(3marks)**

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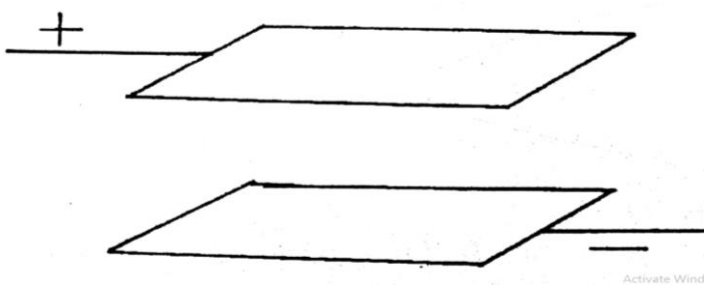
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13. The figure below shows a pair of parallel plates of a capacitor connected to battery. The upper plate is displaced slight to the left.



State with a reason the effect of this movement on the capacitance. **(2marks)**

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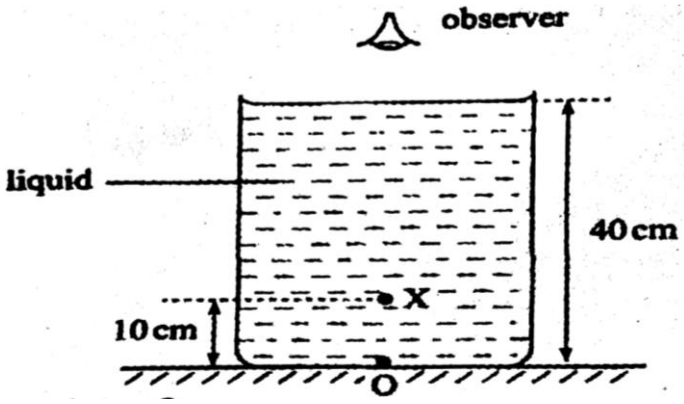
SECTION B (55 MARKS)

14a) Define the term critical angle. **(1mark)**

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b)The figure below shows an object O at the bottom of a beaker full of a liquid. An observer above the beaker sees its image at point X inside a liquid



Determine the refractive index of the liquid **(3marks)**

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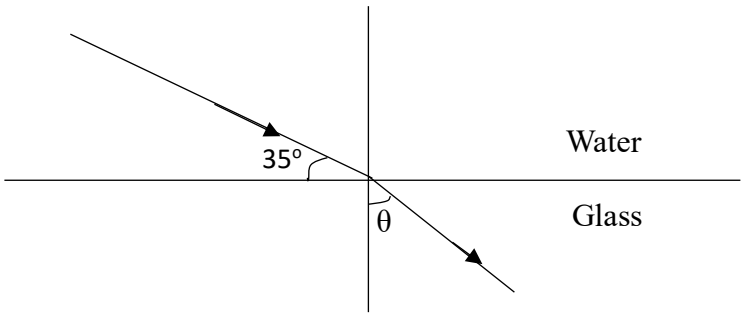
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c) The diagram below shows a ray of light travelling from water to glass. Given that the refractive index of water and glass are 1.33 and 1.5 respectively. Find the angle of refraction r in the glass

(3marks)



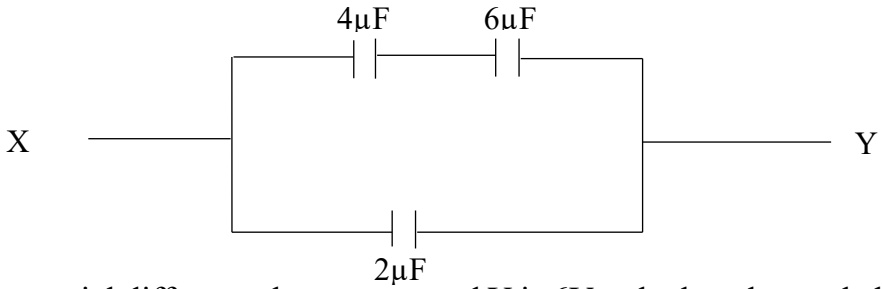
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d) The diagram below shows a simple network of capacitor.



If the potential difference between X and Y is 6V, calculate the total charge stored by the capacitors**.** **(3marks)**

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15a) Define the term principal focus of a convex lens **(1mark)**

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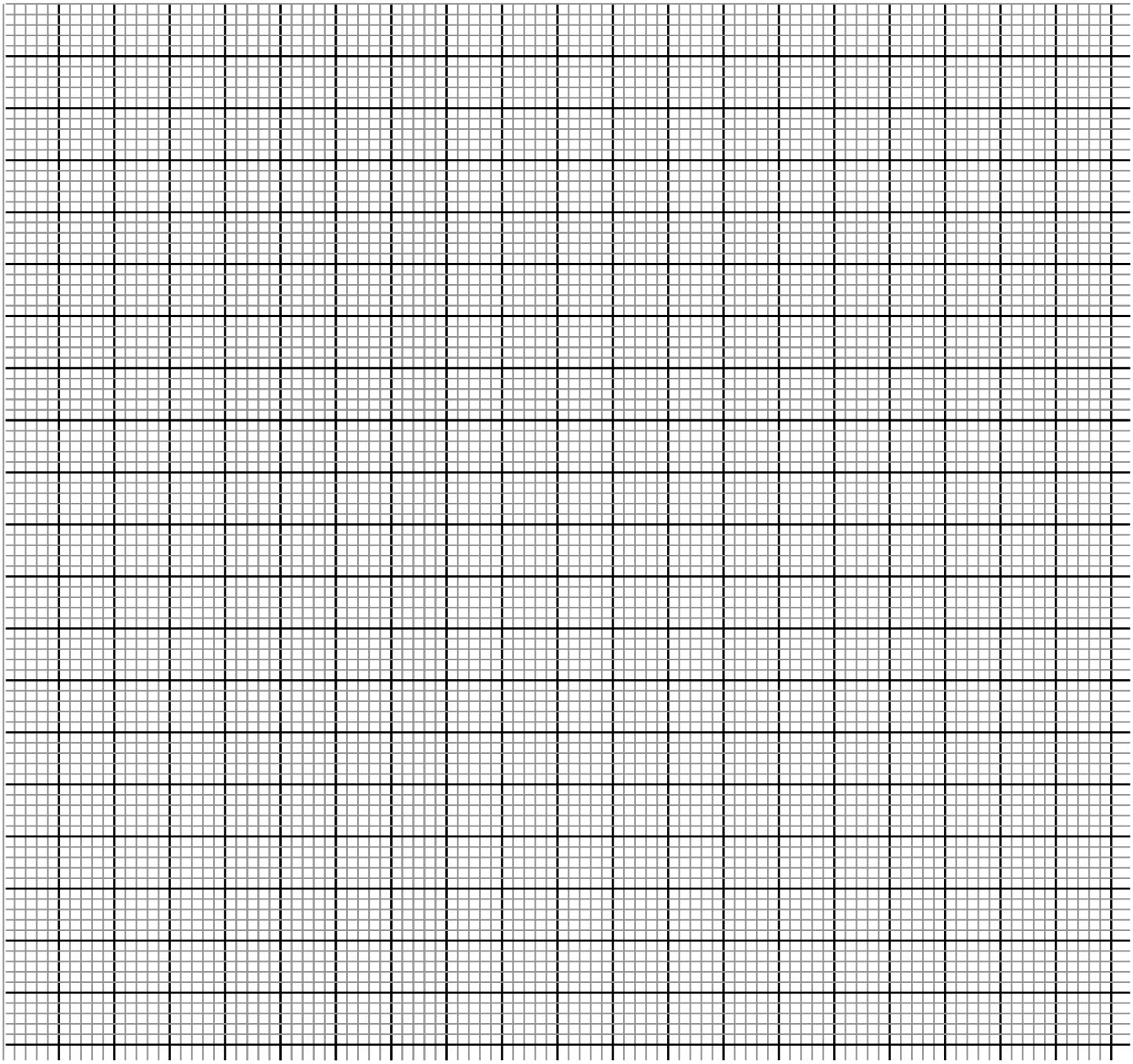
b) State two characteristics of image formed by the diverging lens. **(2marks)**

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c) An object of height 10cm is placed 25cm from a converging lens of focal length 15cm.

i) On the grid provided draw a ray diagram to locate the position of the image**.** **(3marks)**



ii) From the graph determine the;

a) Image height **(2marks)**

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b) Image distance **(2marks)**

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c) Magnification **(2marks)**

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16a) what is meant by electromotive force E.m.f of a cell **(1mark)**

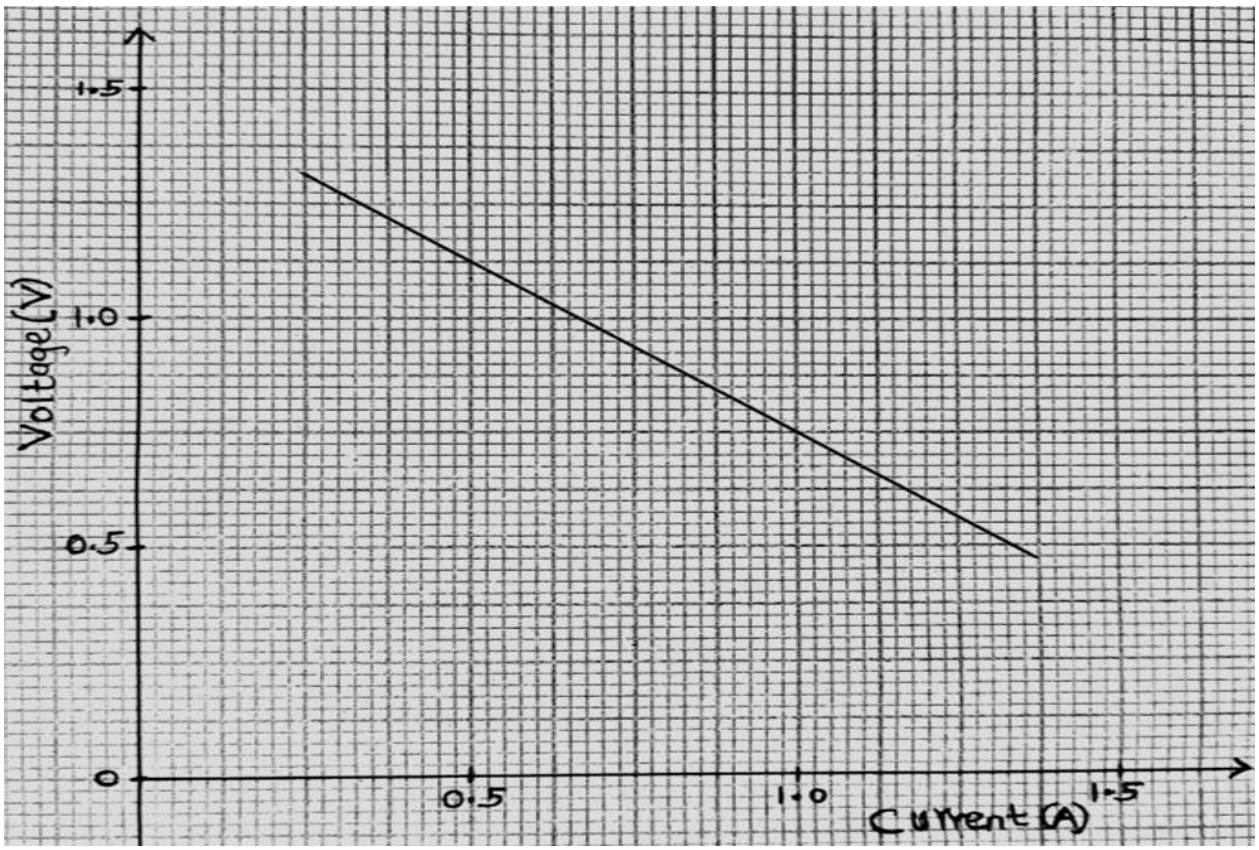
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b) Name one factor that affect resistance of a metallic conductor. **(1mark)**

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c) In an experiment to determine E.m.f ,E and the internal resistance r of a cell, a student obtained the values of voltage V and current I . He then plotted the graph of voltage V against current below.



i) Sketch the circuit that could be used to obtained the plotted results. **(2marks)**

ii) Given that **V=E – Ir** determine

I) E.m.f, E of the battery **(2marks)**

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II) Internal resistance r of the battery **(2marks)**

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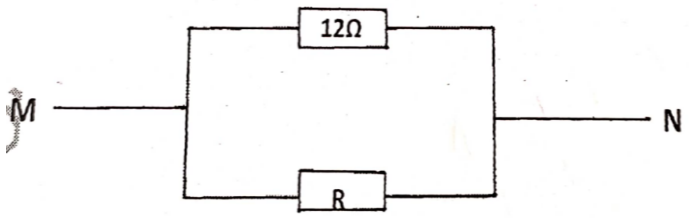
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d) What causes electrical resistance in **conductors** **(1mark)**

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e) The combined resistance of the resistors in the circuit below is 8Ω.



Find the value of R **(2marks)**

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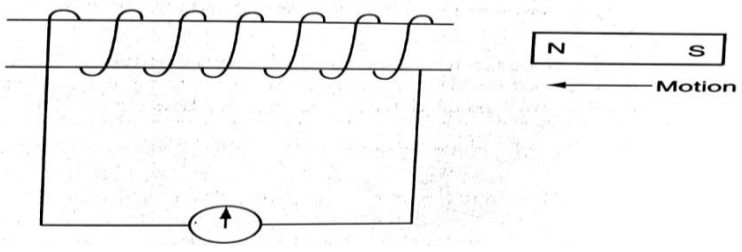
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17a) State the Lenz's law of electromagnetic induction **(1mark)**

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b) In the figure below show the direction of the induced current in the **circuit** **(1mk)**



c) Give two factors that determine the magnitude of emf induced in a coil. **(2marks)**

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d) A transformer has 1200 turns in the primary circuit and 120 turns in the secondary circuit has its primary circuit connected to a 400V a.c source.

i) Name the type of the transformer. **(1mark)**

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ii) Determine the secondary voltage **(2marks)**

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iii) Determine the efficiency of the transformer given that the current in the primary coil is 0.10A and in the secondary coil is 0.80A **(3marks)**

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iv) One of the primary ways in which power is lost in a transformer is through eddy currents. State how eddy currents can be minimized **(1mark)**

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v) State one property of soft iron that makes it suitable for use as a transformer core. **(1mark)**

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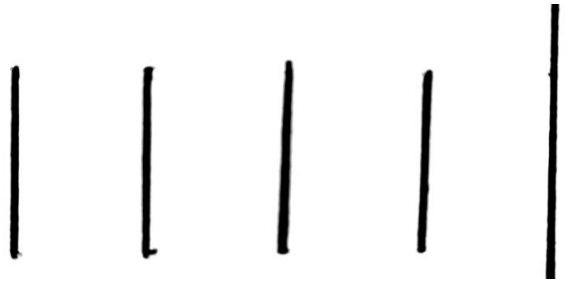
18a)Give two conditions neccessary for the formation of stationary waves **(2marks)**

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b)The figure below shows progressive wave crossing from a deep to shallow region.



Deep **Shallow**

i)On the diagram show how the waves proceed in the shallow region. **(1mk)**

ii)State the property of the waves illustrated in the diagram you have drawn above in b(i)**(1mk)**

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iii) Calculate the wavelength of a radio wave of frequency 100 kHz (Take C=3.0 x10^8 m/s).**(2mks)**

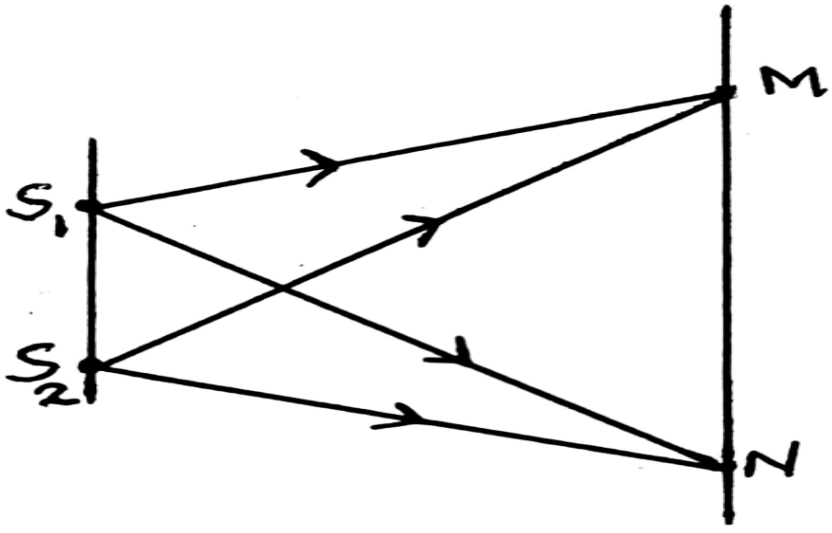
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c)The diagram below shows light rays from two coherent sources S_1 and S_2 falling on the screen. Dark and bright fridges are observed between M and N.



Explain how

I) Bright fridges are **formed** **(1mark)**

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II) Dark fridges are formed **(1mark)**

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ii)State and explain what is observed when light of a higher frequency is used **(2marks)**

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KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

PHYSICS

232/3

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

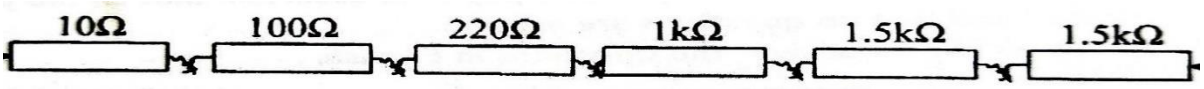
SCHOOL…… SIGN……

PHYSICS CONFIDENTIAL

QUESTION 1

You are provided with:

- One dry cell and a cell holder
- One milliammeter (**0 - 1 mA**)
- A resistor labelled k **(resistance of k =1 k Ω)**
- A chain of six resistors arranged as shown below.
- A switch
- Connecting wire



QUESTION 2

Each student should have the following:

- A metre rule.
- A retort stand, boss and clamp.
- A stop watch
- An overflow can

(volume <180 ml. To be shared if the volume greater than 180 ml)

- Two 50 ml beakers labelled X and Y
- A 25 ml measuring cylinder
- two pieces of thread; 30cm and 100cm
- Mass labelled M
- A 250ml beaker containing 200 ml of liquid L
- A 250ml beaker with water
- Electric beam balance
- Tissue paper

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

PHYSICS

232/3

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

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

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

(c) *You are supposed to spend the first **15 minutes** of the $2\frac{1}{2}$ hours allowed for this paper reading the whole paper carefully before commencing the work.*

(d) *Marks are given for a clear record of the observations actually made, their suitability, accuracy and the use made of them.*

(e) *Candidates are advised to record their observation as soon as they are made.*

(f) *Non programmable silent electronic calculators may be used.*

For Examiner's Use Only

Question 1

	a	b	c	d	e
Maximum Score	2	6	5	3	4
Candidate's Score					

TOTAL ☐

Question 2

	a	b	c	d	e	g	h	i	j
Maximum Score	2	3	2	3	2	1	3	2	2
Candidate's Score									

TOTAL ☐

GRAND TOTAL ☐

QUESTION 1 (20 marks)

You are provided with the following apparatus;

- One dry cell and a cell holder
- One milliammeter
- A resistor labelled K
- A chain of six resistors
- A switch
- Connecting wire

Proceed as follows:

(a) Set up the circuit as shown in **Figure 1**

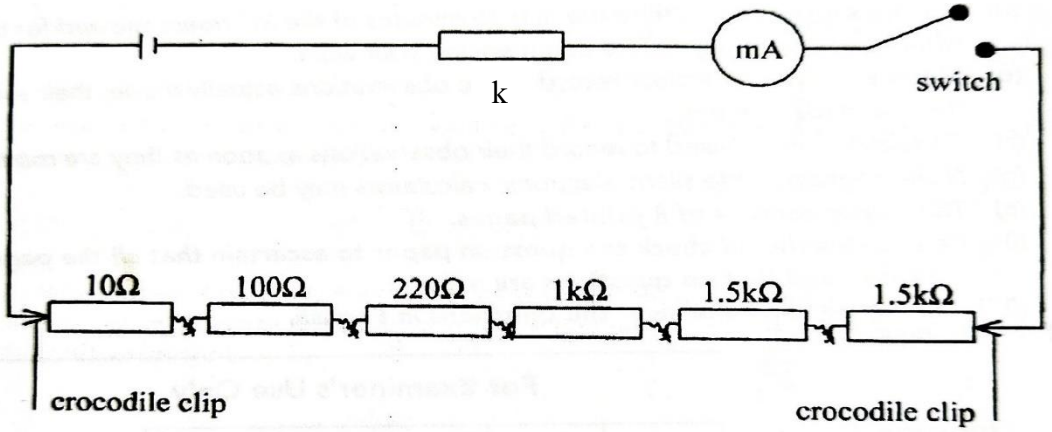


Figure 1

i) Switch on the circuit to obtain a positive deflection in the milliammeter. Record the reading $\mathbf{I_1}$ of the milliammeter. **(1mk)**

$\mathbf{I_1}$ = ……mA

ii) Remove the crocodile clips from the ends of the chains of resistors and connect them across two resistors in the resistance chain that adds up to 3.0 kΩ. Record the reading of the milliammeter, $\mathbf{I_2}$. **(1mk)**

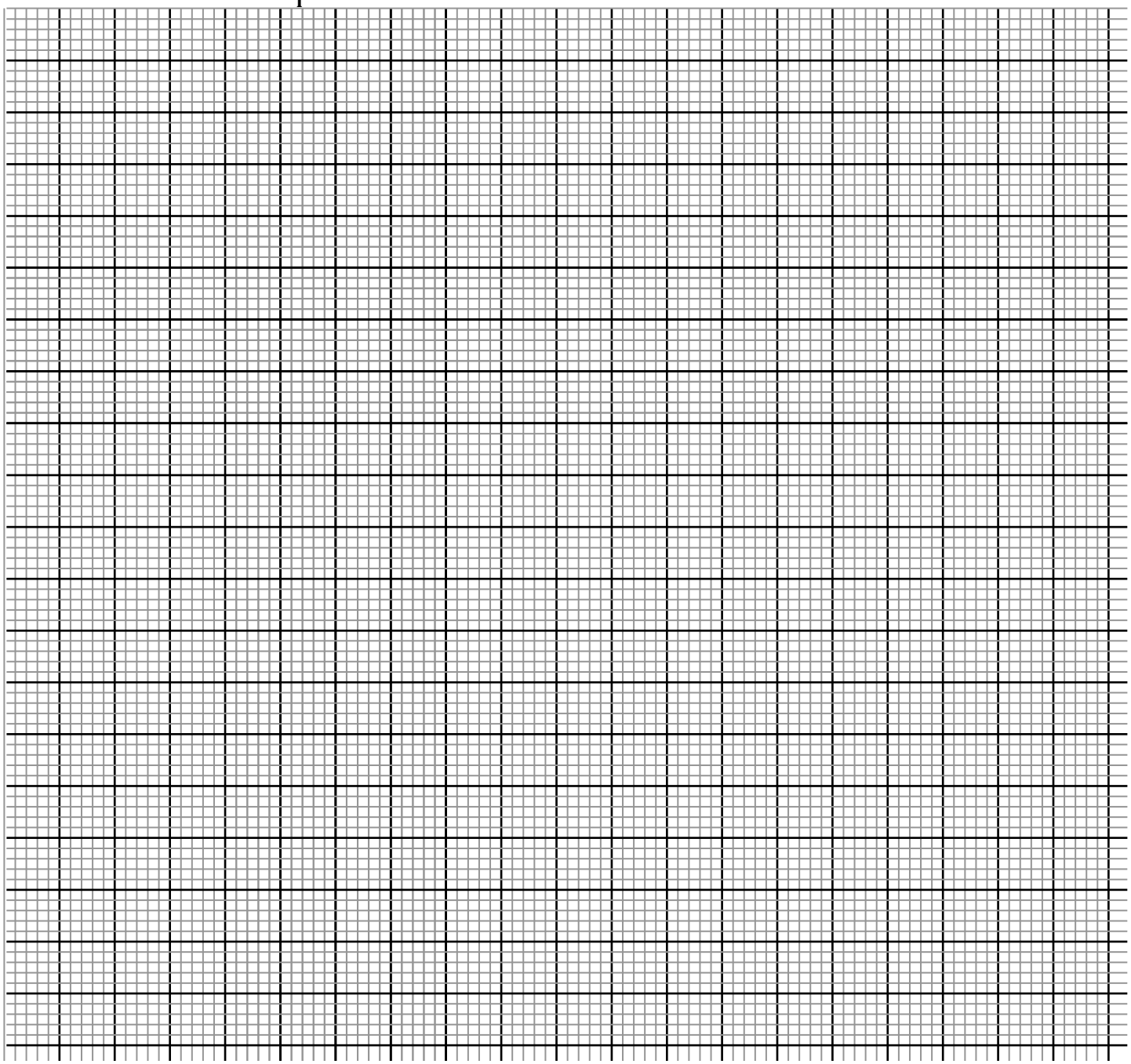
$\mathbf{I_2}$ = ……mA

(b) Repeat the procedure in (a) ii) for other values of resistance R shown in **Table 1** and complete it**.** **(6mks)**

(***The values of R may be obtained by combining two or more resistors in the chain***)

R $\times 10^3 (\Omega)$	**1.00**	**1.33**	**1.50**	**2.50**	**4.00**	**4.32**
I (mA)						
I (A)						
$\frac{1}{I}$ **(A^{-1})**						

(c) Plot graph of volume, $\frac{1}{I}$ (y-axis) against **R** **(5mks)**



(d) Determine the slope, **S** of the graph **(3mks)**

(e) Given that the graph obeys the relationship provided in the equation

$$\mathbf{E = I(R + k)}$$

I) Determine the value of **E** **(2mks)**

II) Determine the value of **k** **(2mks)**

QUESTION 2 (20 marks)

You are provided with the following apparatus:

- A Metre rule.
- A retort stand, boss and clamp.
- A stop watch
- An overflow can (about 180ml)
- Two 50 ml beakers labelled X and Y
- A 25ml measuring cylinder
- Two pieces of sewing thread; 30cm and100cm
- Mass labelled M
- A 250ml beaker containing about 200ml of liquid L
- A 250ml beaker with water
- Electric beam balance
- Tissue paper

PART A

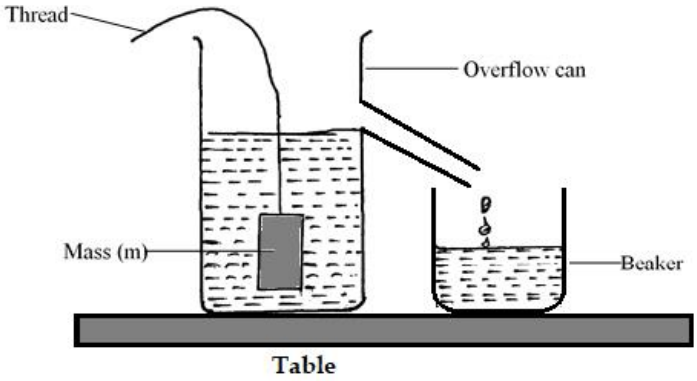
Proceed as follows:

(a) Using the beam balance, measure the mass of **M** and the mass of beaker X **(2mks)**

I) Mass, M = …….

II) Mass of beaker X, M_x = ……..……

(b) Fill the overflow can with water and until overflow through the spout stops. Place the beaker **X** below the spout. Tie mass M with a 30 cm thread and gently immerse it into the overflow can. Wait for about one minute.



i) Measure the mass of beaker with water and record it as $\mathbf{M_1}$. **(1mk)**

$\mathbf{M_1}$ = ……..

ii) Find the mass of the overflowed water in the beaker X, M_w **(1mk)**

$\mathbf{M_w}$ = ……..

iii) Pour the water in beaker **X** into the measuring cylinder and determine its volume. **(1mk)**

V = ……..

(c) Remove mass **M** from water and empty the overflow can. Wipe to the dryness, the mass **M**, beaker **X** and the overflow can using a tissue paper. Now, place beaker **Y** below the spout and fill the can with liquid L until it overflows. Wait until the flow stops. Replace beaker **Y** with the empty beaker **X**, and gently immerse mass M into the liquid.

i) After one minute, measure the mass, M_2 of the beaker with liquid L. **(1mk)**

$\mathbf{M_2}$ = ……..

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ii) Determine the overflowed mass $\mathbf{M_L}$, of the liquid **L**. **(1mk)**

$\mathbf{M_L}$ = ...

(d) Determine quantity **R** given by **(2mks)**

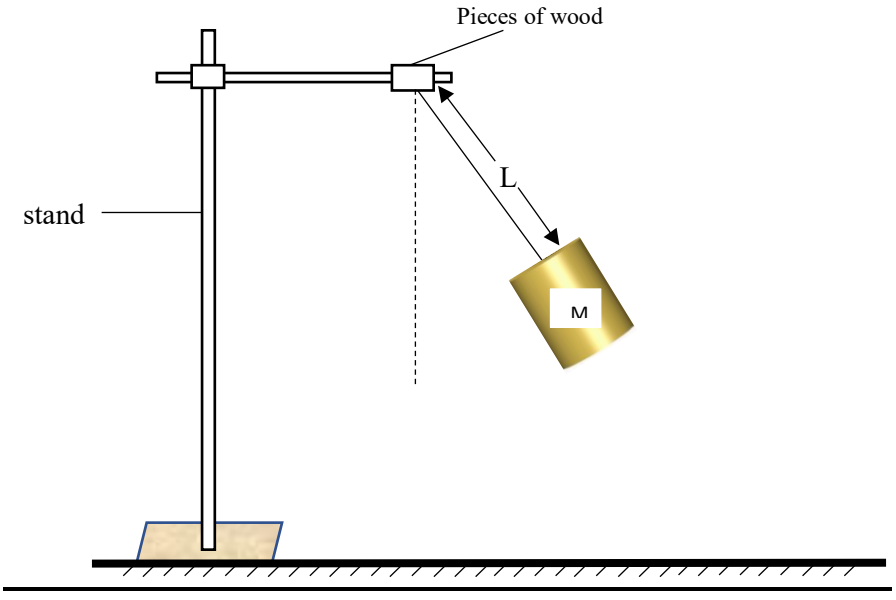
$$\mathbf{R} = \frac{\mathbf{ML}}{\mathbf{Mw}}$$

Hence, find the density of **Liquid L** (density of water = 1000 kgm^3) **(1mk)**

(e) Determine the density of the **mass, M** **(2mks)**

PART B

(a) Set up the apparatus as shown in the figure below



Adjust the length L, of the thread so that L = 70cm. Displace mass M slightly so that length L makes small angle of about 10^0 from the vertical axis and then release it.

(b) Measure and record time t, for twenty **(20)** oscillations. **(1mk)**

t = …….

(c) Repeat **(g)** above for **15** oscillations and **10** oscillations respectively. Record the time in the table below **(3mks)**

Number of oscillations (n)	20	15	10
Time, t (s)			
Periodic time, $T = \frac{t}{n}$ (s)			

(d) Find the average periodic time, $\mathbf{T_{av}}$ **(2mks)**

(e) Find the value of **β** given the equation below **(2mks)**

$$\frac{1}{(f_{av})^2} = \frac{4\pi^2 L}{\beta}$$

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KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

AGRICULTURE

443/1

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

1. *This paper consists of three sections; A, B and C.*

2. *Answer ALL the questions in section A and B.*

3. *Answer any TWO questions in section C.*

4. *All answers to be written in English*

FOR OFFICIAL USE ONLY

SECTION	QUESTION	MAX. SCORE	CANDIDATE SCORE
A	1 – 14	30	
B	15 – 18	20	
C	19 – 21	40	
	TOTAL	90	

SECTION A(40 MARKS)

Answer All the Questions In The Spaces Provided

1. Name three forms of horticulture practiced in Kenya. **(1 ½ mks)**

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2. State three disadvantages of small scale farming **(1 ½ mks)**

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3. a). State four reasons for land preparation **(2 mks)**

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b). Name two implements that can be used to carry out sub – soiling **(1mk)**

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4. State four ideal characteristics of plant used to make green manure. **(2 mks)**

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5 a). What is opportunity cost **(1mk)**

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b). Give three instances when opportunity cost does not exis**t** **(1 ½ mks)**

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6. Give four reasons why farmers may choose seeds over vegetative materials during planting **(2 mks)**

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7. Outline four ways of controlling damping off disease on vegetable seedling in a nursery (**2 mks)**

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8. State four management practices in intensive hedge grow agroforestry **(2 mks)**

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9. Name four types of market structures in agricultural marketing **(2 mks)**

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10. State two limitations of tissue culture in crop production. **(2 mks)**

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11. Differentiate between the following terms

i. Over – sowing and undersowing **(2 mks)**

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ii. Seed dressing and seed inoculation **(2 mks)**

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12. State four practices carried out during harvesting of beans **(2 mks)**

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13. Name three biological weed control methods **(1 ½ mks)**

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14. State four parameters that can be used to measure the economic development of a country.

(2 mks)

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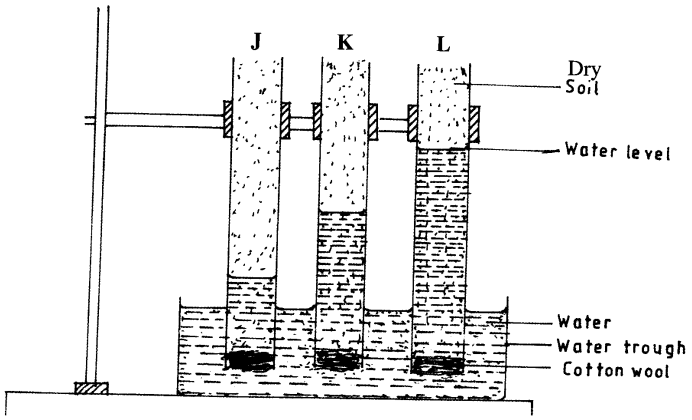
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SECTION B (20 MARKS)

ANSWER ALL THE QUESTIONS IN THE SPACES PROVIDED

15. The diagram below illustrates an investigation on a property of soil samples labelled J, K & L



a). If the levels of water shown in the diagram were observed after three hours, name the property of soil being investigated. **(1 mk)**

……

b). What is the relationship between the soil property named in (a) above and the size of soil particles? **(1 mk)**

……

……

c). Which soil sample would be suitable for growing paddy rice. **(1 mk)**

……

……

d). Give two characteristics of soil J **(2 mks)**

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16. a). Distinguish between straight and compound fertilizer **(1 mk)**

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b). A farmer applied 200kg of CAN (21%N) and DSP 150kg (40% P_2O_5) per hectare on his five hectares maize crop. Calculate the amount of Nitrogen and phosphorus the farmer applied on his crop. Show your working **(4 mks)**

……

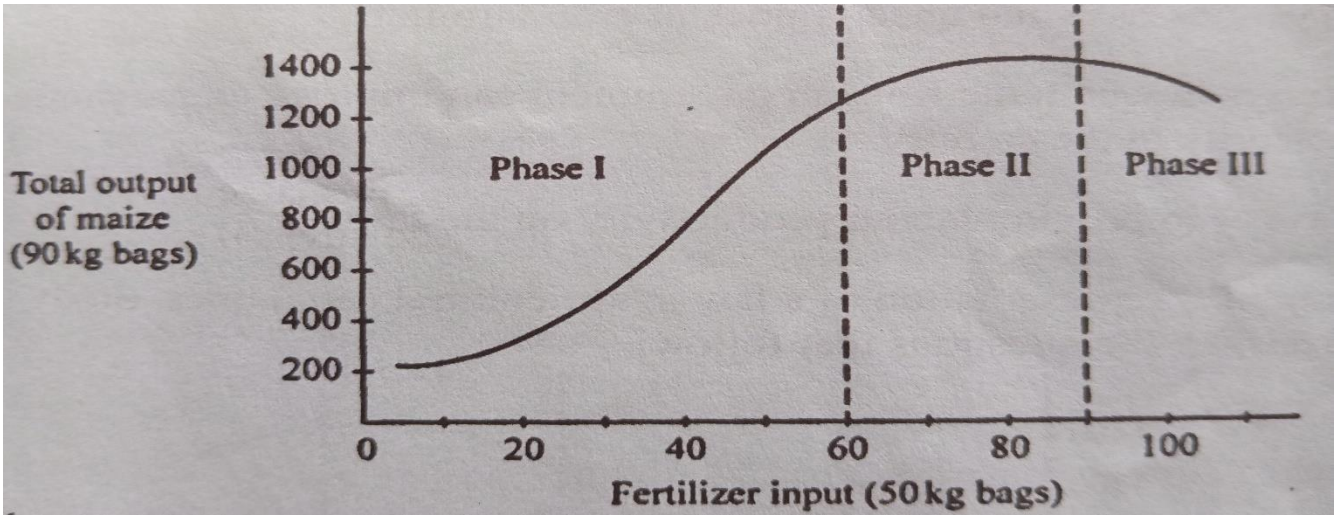
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17. Below is a graphical representation of a law in agricultural economics. Study the graph carefully and answer the questions that follow.



a). Identify the law illustrated by the graph. **(1 mk)**

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b). Explain how each additional unit of fertilizer input relates to the total output of maize in phases II and III. **(2 mks)**

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c). State the importance of the law identified in (i) above to the maize farmer. **(1 mk)**

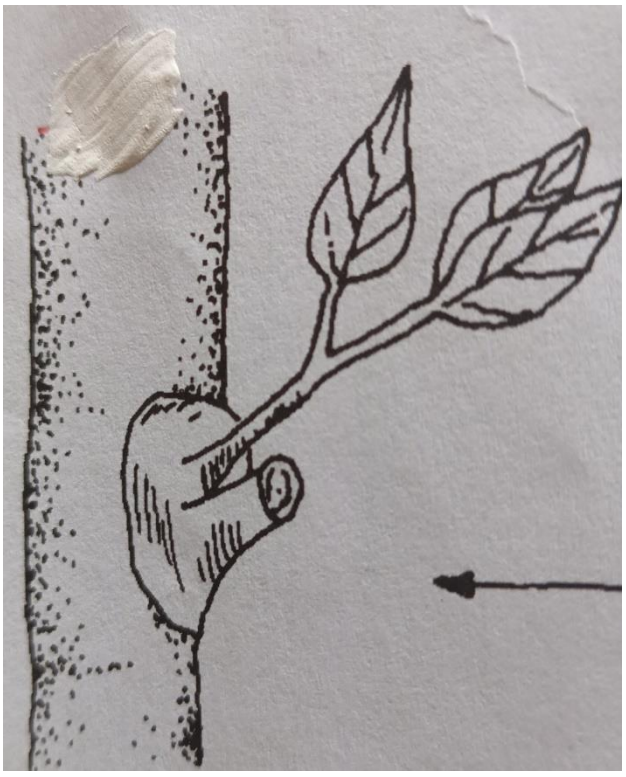
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d). Name the irrational phase of operation **(1 mk)**

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18. The diagram below shows a method of budding



a). Identify the method of budding

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b). Name two other methods of budding apart from one illustrated **(2 mks)**

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c). Give two advantages of budding in crop production

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SECTION C (40 MARKS)

ANSWER ANY TWO QUESTIONS IN THE SPACES PROVIDED

19. a). Describe five biotic factors that influence agricultural production **(5 mks)**

b). Explain five reasons for draining water – logged soils **(5 mks)**

c). Explain four factors considered when selecting planting materials **(4 mks)**

d). Describe the harvesting of tea **(6 mks)**

20. a). Give five reasons why late defoliation is discouraged in pasture utilization **(5 mks)**

b). Describe ten harmful effects of crop pests **(10 mks)**

c). Describe five methods used in water harvesting **(5 mks)**

21. a). Describe five post – harvesting management practices carried out on various crops **(10 mks)**

b). Discuss carrots production under the following sub – headings

i). Field management practices **(3 mks)**

ii. Land preparation **(3 mks)**

c). State four advantages of communal land tenure system **(4 mks)**

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KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

AGRICULTURE

443/2

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

1. *This paper consists of three sections; A, B and C.*
2. *Answer ALL questions in sections A and B.*
3. *Answer any TWO questions in section C.*
4. *All answers to be written in English*

FOR OFFICIAL USE ONLY

SECTION	QUESTION	MAX. SCORE	CANDIDATE SCORE
A	1 – 16	30	
B	17 – 20	20	
C	21 – 23	40	
	TOTAL	90	

SECTION A(30 MARKS)

Answer All The Questions In The Spaces Provided

1. State four reasons for maintaining farm tools and equipment **(2 mks)**

……

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2. Give the meaning of the following terms as used in livestock health

a). Predisposing factor **(1 mk)**

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……

b). Incubation period **(1 mk)**

……

……

3. State four practices that come immediately after complete milking in a milking shed. **(2 mks)**

……

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4.List four preventive measures of livestock **diseases** **(2 mks)**

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5. List four materials that can be used in construction of Kenya Top Bar Hive **(2mks)**

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6. State two control measures of keds in sheep **(1 mk)**

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7. State the functional difference between the following

a). Cross cut saw and rip saw **(1 mk)**

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b). Wood chisel and cold chisel **(1 mk)**

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8. State four microbial activities that occur in the rumen **(2 mks)**

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9. Name four beef cattle breeds **(2 mks)**

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10. Give four signs of heat in cattle **(2 mks)**

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11. Name four notifiable diseases of livestock **(2 mks)**

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12. State four signs of stress in a flock of chicken **(2 mks)**

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13. State four advantages of a two – stroke cycle engine **(2 mks)**

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14. State four conditions that causes swarming in bees **(2 mks)**

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15. State four visible symptoms of round worm infestation in cattle **(2 mks)**

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16. Differentiate between a broiler and a capon **(1 mk)**

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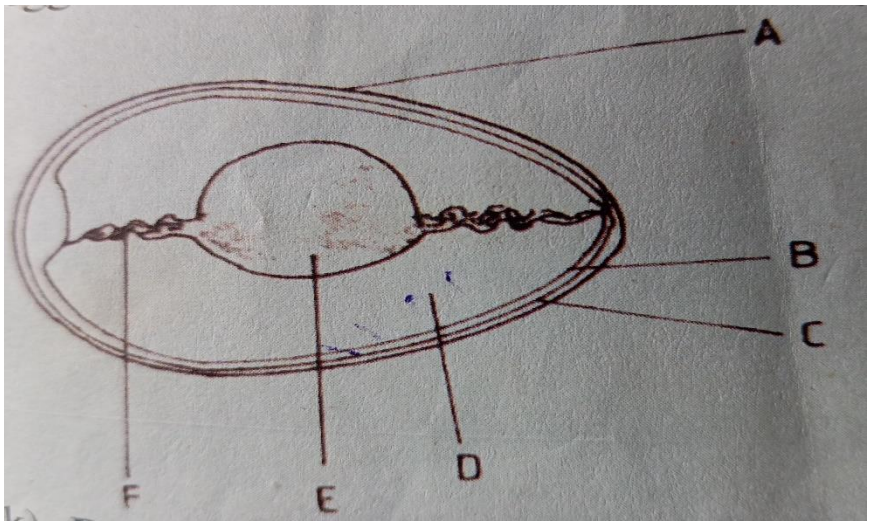
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SECTION B (20 MARKS)

ANSWER ALL THE QUESTIONS IN THE SPACES PROVIDED

17. The diagram below is an illustration of an egg. Study it carefully and answer the questions that follow.



a). Name the parts labelled **B, C, D and F** **(2 mks)**

B

C

D

F

b). State two qualities of the part labelled A that should be considered when selecting eggs for incubation **(2 mks)**

……

……

c). What is the function of the part labelled E in a fertilized egg? **(1 mk)**

……

……

18. The diagram below illustrates an external parasite of livestock



a). Identify the parasite **(1 mk)**

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b). Apart from eggs and adults, name two other developmental stages of the parasite illustrated above. **(1 mk)**

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c). Name two livestock diseases transmitted by the illustrated parasite **(1 mk)**

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d) Explain two ways in which the environment is altered to control the parasite illustrated above **(2 mk)**

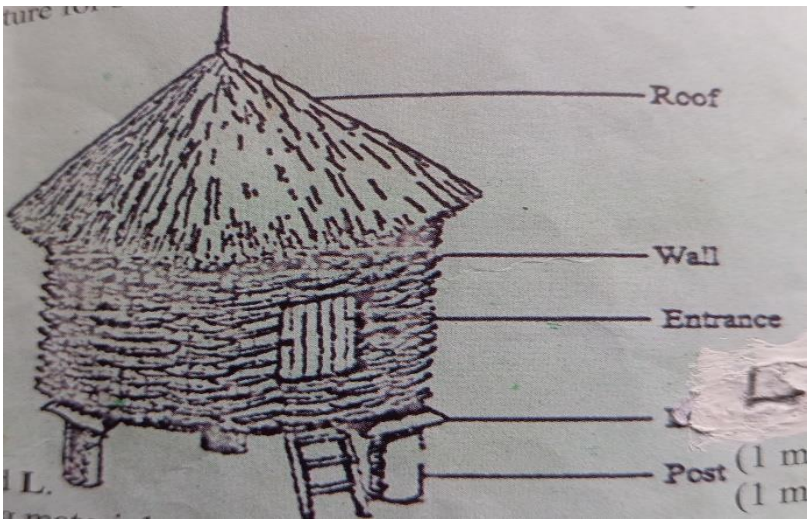
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19. The diagram below shows a farm structure for storing grains



a). Identify the farm structure **(1 mk)**

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b). State the function of the part labelled L **(1 mk)**

……

c). State one disadvantage of the roofing material used on the farm structure **(1 mk)**

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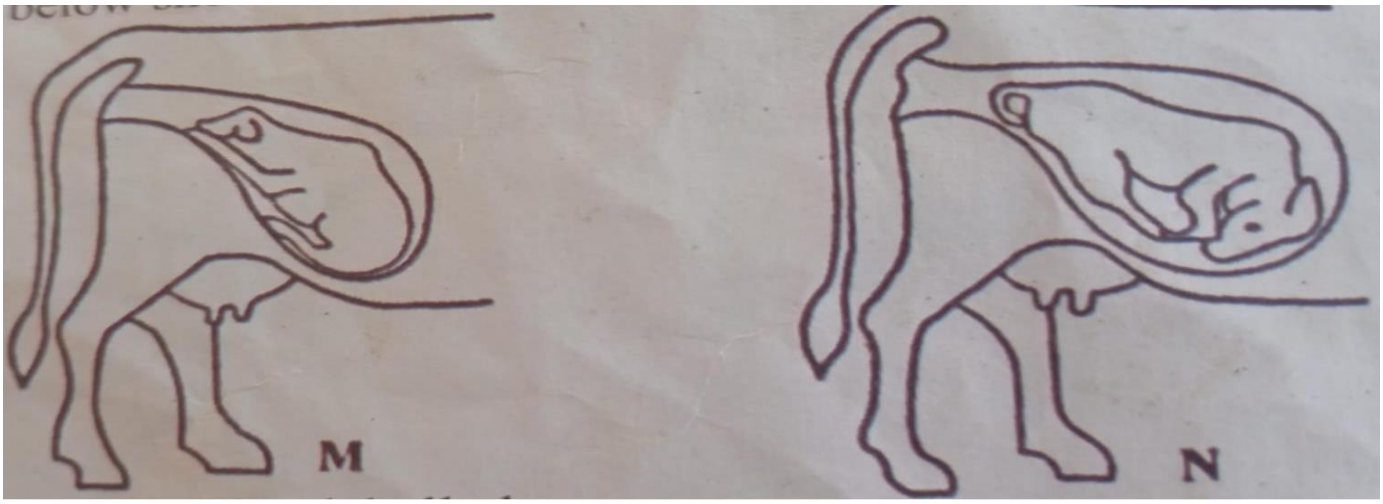
d). State two ways in which the structure is made ready for grain storage **(2 mks)**

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20. The diagram below shows a calf presentation during parturition



a). Name the presentation labelled **M and N**

M

N

b). Which one of the presentations requires the services of a qualified stockm**an** **(1 mk)**

……

c). State two signs of parturition observed on the vulva **(2 mks)**

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SECTION C (40 MARKS)

Answer Any Two Questions In The Spaces Provided

21. a). Describe milk fever disease under each of the following sub – headings

i). Cause **(1 mk)**
ii). Animal attacked **(1 mk)**
iii). Symptoms of infection **(5 mks)**
iv). Control measures **(3 mks)**
b). Explain the management practices that a farmer should carryout to improve milk production in a low yielding herd of dairy cattle under the following sub – headings**.** **(10 mks)**
i. Selection **(2 mks)**
ii. Parasite and disease control **(2 mks)**
iii. Feeding **(2 mks)**
iv. Housing **(2 mks)**
v. General management practices **(2 mks)**

22. a). Describe the working mechanism of a four – stroke cycle engine. **(10 mks)**

b). Explain five factors that should be considered when siting a farm store **(5 mks)**

c). State five differences between ruminant and non – ruminant digestive systems **(5 mks)**

23.a) Describe the management of one day old chicks in a brooder until they are eight weeks old (layer chicks) **(12 mks)**

b). i) Name four milk products **(2 mks)**

ii). Explain six problems affecting the marketing of milk in Kenya **(6 mks)**

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KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

BUSINESS STUDIES

565/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO 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) Answer **ALL** the questions in the spaces provided in the question paper.*

*d) Non-programmable **silent calculators** may be used.*

*f) Candidates should answer the questions in **English.***

FOR EXAMINER'S USE ONLY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13
Score													

Question	14	15	16	17	18	19	20	21	22	23	24	25
Score												

TOTAL SCORE

For Marking Schemes Contact 0746 222 000 / 0742 999 000

1. State four characteristics of direct production**.** **(4 marks)**

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2. Mention four basic features of a market. **(4 marks)**

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3. Indicate by a tick (✓) whether the following items relate to the account indicated in the table below. **(4 marks)**

Items	Trading A/C	Profit and loss A/C	Balance sheet
Sales			
Salaries			
Cash at bank			
Purchases			
Rent received			
Motor vehicle			
Electricity			
Bank loan			

4. List four means of transport used in land mode of transport**.** **(4 marks)**

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5. Outline four reasons why it is difficult to satisfy human wants**.** **(4 marks)**

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6. The following data was extracted from the books of Kamau Traders on 31st December 2023. Use it to prepare his trial balance as at that date

Debtors		sh 1,000
Stock	sh 4,000	
Capital		sh 6,000
Bank overdraft		sh 2,000
Cash	sh 3,000	

7. Identify the source document from which the information posted in the following journals would be extracted. **(4 marks)**

Journal	**Source document**
Sales return journal	
Purchases journal	
Cash receipt journal	
Sales journal	

8. In the spaces provided write the type of warehouse to which each description relates. **(4 marks)**

	Description	**Type of warehouse**
a)	Used to store exports and imports awaiting custom duty	
b)	Operated for owner exclusive use	
c)	Anybody can rent a space in it for storing goods	
d)	Used to store tax-free goods awaiting sale or collection by owners	

9. Outline four demographic factors that may affect business operations**.** **(4 marks)**

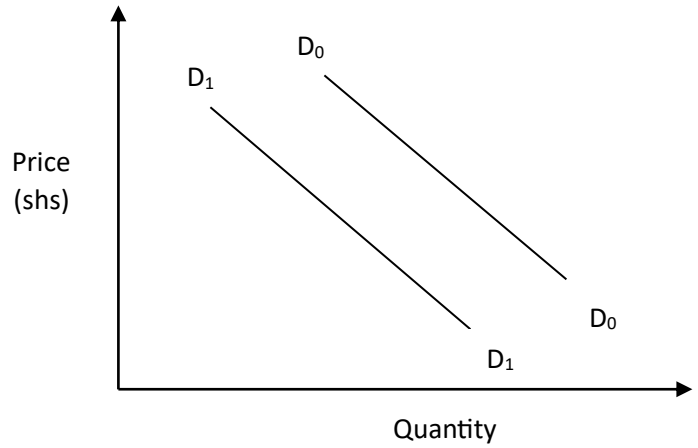
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10. The figure below shows a decrease in demand for a commodity from D_0D_0 to D_1D_1



State four possible causes that have led to the above situation. **(4 marks)**

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11. Outline four circumstances under which a country may be classified as under-developed.

(4 marks)

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12. Kariuki decided to take insurance cover for his warehouse against fire from G&G Insurance Limited. It was valued at 1,000,000 Ksh and he was to make monthly payment of 10,000 Ksh. Identify the following terms as used in insurance. (4 marks)

a) Kariuki _____

b) Fire _____

c) Ksh 1,000,000 _____

d) Ksh 10,000 _____

13. Highlight four importance of entrepreneurship in an econom**y.** **(4 marks)**

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14. Fill in the spaces in the table below. (4 marks)

Fixed Assets F.A	Current Assets C.A	Long term Liabilities (L.T.L)	Short term Liabilities (L.T.L)	Capital
a) 130,000	70,000	40,000	25,000	
b)	610,000	130,000	115,000	425,000
c) 160,000	215,000		65,000	100,000
d) 1,105,900		550,000	175,400	830,500

15. Highlight four causes of demand-pull inflation. **(4 marks)**

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16. Outline four circumstances under which face to face communication may be ineffective. **(4 marks)**

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17. Outline four services that retailers may offer to the consumers. **(4 marks)**

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18. State some of the expenses incurred by the middlemen/ intermediaries in the course of distribution of products. **(4 marks)**

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19. State four features of sole proprietorship form of a business. **(4 marks)**

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20. The participants in a two-sector economy are households and firms. Identify the relevant participant in each of the statements given below: **(4 marks)**

Statement	**Participant**
a) Payment for goods and services	_____
b) Sales of factors of production	_____
c) Payment for factors of production	_____
d) Sales of goods and services	_____

21. Outline four methods that the government of Kenya uses to regulate business activities.

(4 marks)

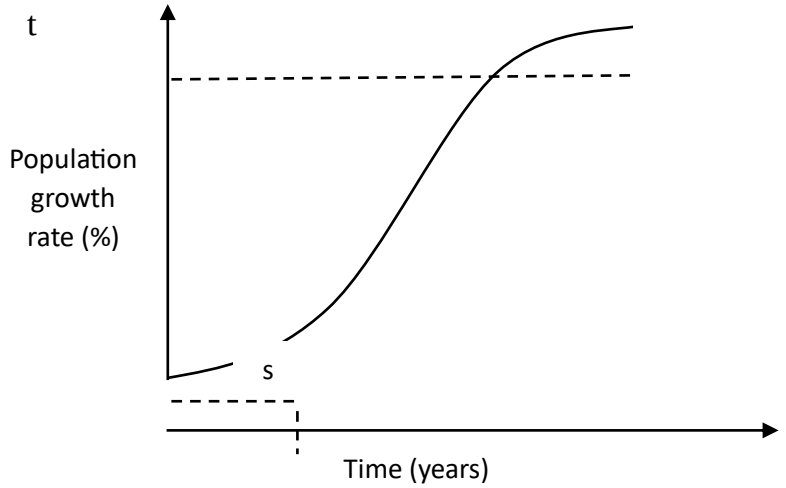
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22. The diagram below shows the rate of population growth of a given country. Outline four factors that may have contributed to the trend between 'S' and 'T'. (4 marks)



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23. Highlight four uses of a two-column cash book. **(4 marks)**

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24. Most businesses in Kenya are carrying out aggressive product promotion. Highlight four importance of product promotion. **(4 marks)**

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25. Outline four factors that may influence a firm's decision on type of goods to produce. **(4 marks)**

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KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

BUSINESS STUDIES

565/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO 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) *The paper consists of* ***six*** *questions.*

d) *Answers* ***Any Five*** *questions in the spaces provided.*

e) *All questions carry equal marks.*

f) *Non-programmable* ***silent electronic calculators*** *may be used.*

g) *Candidates should answer questions in* ***English.***

For Examiner's use only

Question	Maximum Score	Candidates Score.
1.	20	
2.	20	
3.	20	
4.	20	
5.	20	
6.	20	
TOTALSCORE		

1. a) Explain five circumstances under which a cheque may be dishonoured. **(10 marks)**

b) In the recent past Kenya government has been advocating for free trade to boost its economic development. Explain five disadvantages of free trade. **(10 marks)**

2. a) Explain five differences between a public corporation and a public limited company. **(10 marks)**

b) Explain five ways in which the Central Bank of Kenya regulates the operations of commercial banks in Kenya. **(10 marks)**

3. a) The following is Wokabi Traders trial balance as at 31st December 2023

Wokabi Traders

Trial balance

As at 31st December 2023

Details	Dr(sh)	Cr(sh)
Stock	10,000	
Bank	3,500	
Purchases	15,000	
Sales		28,000
Returns	800	1,100
Rent		580
Insurance	950	
Creditors		450
Carriage in	1,200	
Discounts	300	1,620
	31,750	31,750

Additional information: Closing stock sh 2,500

Required: Prepare a trading, profit and loss account for the period ending 31st December 2023. **(10 marks)**

b) John started a retail shop in Mutongwe Shopping Centre, after a year the business was not performing well. Explain to him five factors that can lead to business success**.** **(10 marks)**

4. a) Explain five factors that hinder economic development in Kenya. **(10 marks)**

b) Explain five methods of determining the price of a commodity**.** **(10 marks)**

5. a) Explain any five ways in which production activities negatively affect the community.

(10 marks)

b) Murang'a county government is intending to spend its revenue on development projects.

Explain five principles or guidelines that must be followed**.** **(10 marks)**

6. As at 1st July 2008, the cash book of Emoi Enterprise showed the following balances:
Cash sh 20,000 and bank overdraft sh 8,600

During the month the following transactions took place:

3/07/08: Nafula settled her account of sh 16,000 by cheque of sh 15,000

6/07/08: Paid rent by cash, sh 8,000

10/07/08: Deposited sh 6,000 into the business bank account from the cash till

15/07/08: Settled Wakuli's account of sh 20,000 by cheque and he was allowed a discount of 1%

18/07/08: Deposited sh 28,000 in the bank from private sources

21/07/08: Cash sales sh 12,000

24/07/08: Otieno a debtor settled his account by cheque of sh 8,000 having been allowed a discount of 20%

26/07/08: Purchased furniture of sh 5,200 paying by cheque

28/07/08: Received sh 3,600 cash from Nduta

30/07/08: Banked all the cash except sh 1,600

Required: Prepare three column cash-book duly balanced for the month of July 2008. **(10 marks)**

b) Explain five essentials of a good warehouse. **(10 marks)**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

ENGLISH

101/1

PAPER 1

TIME: 2 HOURS

(Functional Writing, Cloze Test & Oral Skills)

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

Write your name and admission number in the spaces provided.

Answer **ALL** questions in the spaces provided in this paper.

ALL ANSWERS MUST BE IN ENGLISH

FOR EXAMINER'S USE ONLY

S.NO	QUESTION	MAX SCORE	CANDIDATE'S SCORE	EXAMINER'S SCORE
1.	FUNCTIONAL WRITING	20		
2.	CLOZE TEST	10		
3.	ORAL SKILLS	30		
	TOTAL SCORE	**60**		

1. Imagine you passed your KCSE examination recently. While waiting to join University, you come across an advertisement for a part time job as a library aide at Busara Secondary School. You are interested in the job and you decide to inquire whether you will be housed and how much salary they will pay.

Write a **letter of inquiry** to the Principal and remember to quote the reference number of the advertisement. **20 marks**

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CLOZE TEST

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

You can achieve your long-term (i)..... by breaking them down and setting daily goals for yourself. A big dream can seem daunting, especially when you look at your (ii)…… situation and realize how far away from it you are now. (iii)..... , when you break the goal down into small actionable steps, it becomes a lot easier to achieve. When you set daily goals, you build momentum, and that inspires you to keep pushing(iv) ……..…… your ultimate goal because you know you are getting closer to it every day.

(v) ..... daily goals isn't about giving yourself random things to do every day, it's about achieving your long-term goal. So for example, let's say you want to lose 60 pounds. You look in the mirror every day saying that you need to (vi).....weight, but because you know you need to lose so much, you keep putting it off until tomorrow. (vii)…… you know it, you've gained another 10 pounds! The thought of losing 60 pounds is scary, but if you say you want to lose 60 pounds in 12 months, which works out to 5 pounds a month and just over 1 pound a week, now your goal isn't so intimidating.

You can now start working (viii) ..... toward that goal. It could involve eating a large portion of vegetables and cutting (ix).....on carbs, doing ten minutes of cardio per day, and/or drinking more water. Whatever it is, just make sure you are doing it daily (x) .....consistency is the key to your success.

(Adopted from The Power of Discipline: How to Use Self Control and Mental Toughness to Achieve Your Goals)

3. a) Read the oral poem below and then answer the questions that follow.

DEATH IS A WITCH

Solo: Ah, what shall I do, Abuluhya?
It's wrong
Chorus: Today I will say
Death is a witch, my people It snatched my child
I will remain alone
Solo: Ah what shall I really do, Abuluhya its very wrong
Chorus: Today I will say
Death is a witch, my people It snatched my child
I will weed along
Solo: Ah, what shall I really do, Abuluhya it's wrong Chorus: Today I will say
Death is a witch, my people It snatched my child
I will dance alone
Solo: My child, my friend, I cry what shall I do? I cry What shall I do? I cry x2

i) Identify **three** features that qualify the above as an oral poem. **(3 marks)**

……

……

……

ii) If you were to perform the above song before an audience, what preparations will you put in place to make your performance memorable? **(3 marks)**

……

……

……

……

iii) If you are part of the audience, how would you react to the soloist performance of the line: "Ah, what shall I really do"? **(1 mark)**

……

……

iv) What features of performance will you employ to make the performance worth listening to? Illustrate your answers **(3 marks)**

……

……

……

……

……

b) In each of the following set of words below, identify the odd one out on the basis of the *pronunciation of the highlighted vowel sounds.* ***(3 marks)***

i) L**au**ndry L**au**gh
L**au**nch T**au**nt

ii) C**oa**ch C**oa**l
C**oa**st S**oa**r

iii) C**o**bra C**o**ck

iv) C**o**ccyx C**o**bweb

……

……

c) *Provide a word in which each of the following letters is not pronounced.* ***(3 marks)***

i) d

……

…….

ii) e……

……..

iii) g……

……

d) Read conversation below and identify the intonation you would use for each of the underlined words. ***(4 marks)***

Jeff: You are welcome to attend my birthday <u>party</u>. Jane: What time will it <u>begin?</u>

Jeff: The party begins at 10.00 a.m. Remember to keep time, will <u>you?</u> Jane: <u>Yes</u>, I will.

……

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……

e) Consider the following conversation between a successful interviewee and a panel of interviewers and then answer the questions that follow.

Mustafa: (Knocks at the door gently and waits) Hamisi: Come in please. Good afternoon.

Mustafa: Good afternoon Sir! (Remains standing)

Maria: Please have a seat and let me have your documents.

Mustafa: Thank you Madam. Here they are. (He removes neatly arranged documents from a satchel)

Mwadime: Welcome to this interview. I am Mwadime (stretching his hand), to my left is Mr. Hamisi and to the right is Madam Maria. Please tell us which job you applied for, why you have interest in this job and how you got the information.

Mustafa: (Sitting upright, looking at the interviewers and smiling) Thank you sir. I applied for the position of a laboratory technician after reading the advertisement in the Daily Nation newspaper. I am interested in the job because I love working in the laboratory. I also have the necessary qualification and a one-year working experience in an institution with a big laboratory.

Maria: (Nodding as she looks at the documents) It is true you had good grades in sciences. I also noted that you arrived quite early for the interview.

Mustafa: Thank you Madam. I am humbled.

Hamisi: That is all Mustafa. We shall get back to you in a short while.

Mustafa: Thank you all. Goodbye (smiling and gently closing the door behind him)

i) Mention **two** things the interviewee did **before** the interview which could have contributed to his success. **(2 marks)**

……

……

……

ii) Identify the things that Mustafa did **during** the interview to ensure success**.** **(3 marks)**

……

……

……

……

f) *The following is a telephone conversation between Mr. Kiprop and Miss Mwema, a receptionist at Tumaini Youth Centre. Fill the missing parts appropriately.* ***(5 marks)***

Miss Mwema: (Picking the phone) Good morning, Tumaini Youth Centre. How may I help you?

Mr Kiprop:**……..……**

……..… ? (2 marks)

Miss Mwema: I 'm afraid Mr. Maneno, the storekeeper, is not in at the moment. May I take a message for him?

Mr Kiprop: Yes please.

……..

…(1 mark)

Miss Mwema: I will let him know you will deliver the stationery tomorrow. May I have your contact please?

Mr Kiprop: My telephone number is 0746222000

Miss Mwema**..... (1 mark)**

Mr Kiprop: Yes, that is the number. Who am I speaking to? Miss Mwema: Miss Mwema the receptionist.

Mr Kiprop:

…….....

.....… (1 mark)

Miss Mwema: Have a good day too and thank you for calling.

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KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

ENGLISH

101/2

PAPER 2

TIME: 2½ HOURS

Comprehension, Literary Appreciation and Grammar

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

Instructions to candidates

- *Write your **name, admission number** and **class** in the spaces provided.*
- *Sign and write the date of the examination in the spaces provided.*
- *Answer **all** questions in the spaces provided*
- *All your answers must be written in the spaces provided in this question paper.*
- *Candidates must answer all questions in English*

Question	Maximum Score	Candidate's Score
1. COMPREHENSION	***20***	
2. EXCERPT	**25**	
3. POETRY	**20**	
4. GRAMMAR	**15**	
TOTAL	**80**	

1. COMPREHENSION

Read the passage below and then answer the questions that follow.(20 MKS)

It is so easy to overestimate the importance of one defining moment and underestimate the value of making small improvements on a daily basis. Too often, we convince ourselves that massive success requires massive action. Whether it is losing weight, building a business , writing a book, winning a championship, or achieving any other goal, we put pressure on ourselves to make some earth-shattering improvement that everyone will talk about.

Meanwhile, improving by 1 percent isn't particularly notable – sometimes it isn't even noticeable—but it can be far more meaningful, especially in the long run. The difference a tiny improvement can make over time is **astounding**. Here's how the math works out: if you can get 1 percent better each day for one year, you'll end up thirty-seven times better by the time you're done. Conversely, if you get 1 percent worse each day for one year, you will decline nearly to zero .What starts as a small win or a minor setback accumulates into something much more.

Habits are the compound interest of self-improvement. The same way that money multiplies through compound interest, the effects of your habits multiply as you repeat them. They seem to make little difference on any given day and yet the impact they deliver over the months and years can be **enormous**. It is only when looking back two, five, or perhaps ten years later that the value of good habits and the cost of bad ones becomes strikingly apparent.

This can be a difficult concept to appreciate in daily life. We often dismiss small changes because they don't seem to matter very much in the moment. If you save a little money now, you're still not a millionaire. If you go to the gym three days in a row, you're still out of shape. If you study English for an hour tonight, you still haven't learned the language. We make a few changes, but the results never seem to come quickly and so we slide back into our previous routines.

Unfortunately, the slow pace of transformation also makes it easy to let a bad habit slide. If you eat an unhealthy meal today, the scale doesn't move much. If you work late tonight and ignore your family, they will forgive you. If you procrastinate and put your project off until tomorrow, there will usually be time to finish it later. A single decision is easy to dismiss.

But when we repeat 1 percent errors, day after day, by replicating poor decisions, duplicating tiny mistakes, and rationalizing little excuses, our small choices compound into toxic results. It's the accumulation of many missteps—a 1 percent decline here and there—that eventually leads to a problem.

Similarly, a slight change in your daily habits can guide your life to a very different destination. Making a choice that is 1percent better or 1percent worse seems insignificant in the moment, but over the span of moments that make up a lifetime these choices determine the difference between who you are and who you could be. Success is the product of daily habits-not once-in-a-lifetime transformations.

That said, it doesn't matter how successful or unsuccessful you are right now. What matters is whether your habits are putting you on the path toward success. You should be far more concerned with your current trajectory than with your current results .If you're

Millionaire but you spend more than you earn each month, then you're on a bad trajectory. If your spending habits don't change, it's not going to end well. Conversely, if you're broke, but you save a little bit every month, then you're on the path toward financial freedom-even if you're moving slower than you'd like.

Your outcomes are a lagging measure of your habits. Your net worth is a lagging measure ofyourfinancialhabits.Yourweightisalaggingmeasureofyoureatinghabits.Yourknowledge is a lagging measure of your learning habits. Your **clutter** is a lagging measure of your cleaning habits. You get what you repeat. Habits are a double-edged sword.

Adapted from *Atomic Habits* by JamesClear-Mwalimu Consultancy Ltd

QUESTIONS

a) What does the writer mean by the first statement of the first paragraph? **(2marks)**

……

……

……

b) What are we told about habits in the second paragraph of the passage? **(2marks)**

……

……

……

c) What is the relationship between habits and compound interest? **(2 marks)**

……

……

……

d) Cite examples from the passage to show that habits are a double-edged sword. **(2marks)**

……

……

……

e) In a summary of not more than **60** words explain why the author says the concept of habits being compound interest is difficult to appreciate in daily life. **(5marks)**

Rough copy

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Fair copy

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f) "You should be far more concerned with your current trajectory than with your current results."*(Rewrite beginning: Your….)* **(1mark)**

……

……

……

g) Explain the following imagery: "Habits are the compound interest of self-improvement."

(3marks)

……

……

……

……

h) Explain the meaning of the following words as used in the passage**.** **(3marks)**

i)astounding……

ii)enormous……

iii)clutter…….....

2. THE SAMARITAN

Read the excerpt below and then answer the questions that follow (25mks)

MOSSI: Very well, my good people. (Turning to face principal and then the teachers) I thank you Madam principal and all the teachers for your continued good work, which has won this School an outstanding reputation nationally. (pauses) The subject of today's event is yet another example of the schools outstanding performance. I am genuinely impressed by Nicole and the two students. I like the issues they have highlighted in the presentation. This is a clear indication that our schools are nurturing visionaries and innovators capable of solving our Municipality practical problems. And, of course, there can be no better resource for bettering our lives, as a municipality and as a nation. In fact, and for this very reason, the Municipal council will explore the possibility of mobilising resources in support of innovation in our schools in order to actualise the future we heard about during the presentation.

I will ensure this happens because as you know, my name is Mossi-oa-Tunya, which means the Smoke that thunders. I would especially be delighted if the medicine for regenerating my body cells was discovered today. That would enable me live four hundred and twenty-two more years! How amazing! Please think mostly in this direction! (Mossi pauses, regards his audience, turning his head slowly. Then he resumes) However, we will neither launch the innovation nor present the prize today. Not because the App is terrible. No, it is in fact an outstanding innovation; so good that it could have far-reaching implications on other areas of our social, economic and political life. As municipal leaders, we need time to reflect on these implications. (pauses) I now request the teachers and students to leave as we discuss with the principal and Teacher Nicole how we will move forward with this incredible innovation.

QUESTIONS

1. Why is the Municipal Council ready to mobilise resources to support schools in the future? **(2mks)**

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……

2. I am genuinely impressed by Nicole and the two students. Which role does Nicole hold in the school? Who are the two students Mossi is talking about? **(4mks)**

……

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3. Apart from the medicine that regenerates body cells, mention any three other things in the play that Alvita sees in her vision of the future. **(3mks)**

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4. Identify any theme brought out in this extract. **(2mks)**

……

……

5. Mayor Mossi says they will neither launch the Samaritan App nor present the prize to the innovators. What reason does he give for this? **(1mk)**

……

……

6. From elsewhere in the play, mention any two other evils Mayor Mossi is accused of? **(2mks)**

……

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7. Discuss any two character-traits of Mayor Mossi as brought out in the excerpt. **(4mks)**

……

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8. I would especially be delighted if the medicine for regenerating my body cells was discovered today. Rewrite in reported speech. **(1mk)**

……

……

9. Identify and illustrate any aspect of style used in this excerpt. **(2mks)**

……

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……

10. Explain the meaning of the following words as used in the excerpt. **(4mks)**

a. outstanding

b. innovators

c regenerating

d. incredible

3. LITERARY APPRECIATION

Read the following poem and then answer the questions that follow. (20 mks)

Good Timber

The tree that never had to fight For sun and sky and air and light, But stood out in the open plain
And always got its share of rain, Never became a forest king
But lived and died a **scrubby** thing.
The man who ever had to toil To gain and farm his patch of soil,
Who never had to win his share Of sun and sky and light and air, Never became a manly man
But lived and died as he began.
Good timber does not grow with ease:
The stronger wind, the stronger trees;
The further sky, the greater length;
The more the storm, the more the strength. By sun and cold, by rain and snow,
In trees and men good timbers grow.
Where thickest lies the forest growth We find the **patriarchs** of both,
And they hold counsel with the stars Whose broken branches show the scars Of many winds and much of **strife**.
That is the common law of life

By Douglas Malloch

a) What is this poem about? **(3marks)**

……

……

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……

b) Explain the similarity between good timber and a manly man. **(3marks)**

……

……

……

……

c) Why couldn't the tree described in the first stanza become a forest king **? (2marks)**

……

……

……

d)What is the tone of this poem? Explain your answer. **(3marks)**

……

……

……

……

e) Identify and explain the use of any two poetic devices evident in this poem**.** **(4 marks)**

……

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……

f) What is the message of this poem? **(2marks)**

……

……

……

g) Explain the meaning of the following words as used in the poem. **(3 marks)**

i) scrubby……..

ii)patriarchs……

iii) strife……

4. <u>GRAMMAR (25mks)</u>

(a) Rewrite the following sentences according to the information given after each. Do not change the meaning. **(4marks)**

i) Do not give in to peer pressure the IG advised his police officers(*Punctuate correctly)*

……

ii) That was the first time our MPs voted to impeach a Cabinet Secretary.(Begin: Never….)

……

……

iii) The party had just started. The police officers arrived. . (Join into one sentence Beginning: Hardly….)

……

……

iv) Do not give in to peer pressure the IG advised his police officers(*Punctuate correctly)*

……

……

v) That was the first time our MPs voted to impeach a Cabinet Secretary.(Begin: Never….)

……

……

vi) The party had just started. The police officers arrived. . (Join into one sentence Beginning: Hardly….)

……

……

vii) The American public is not interested in appeasing terrorists. (Begin*: Appeasing…)*

……

……

b) Choose the correct alternative from the brackets to complete the sentenc**es. (3marks)**

(i) We were requested to remain.....(sitted, seated) as the guests left.

(ii) This .....(maybe, may be) the last match that he plays for Arsenal.

(iii) Did you say there..... (were, was) chaos in parliament during the debate on this bill?

c) **<u>Fill in the blank spaces with the correct form of the words in brackets.(3marks)</u>**

(i) The doctors' union has described the latest pay offer as .....(accept); they will not call off the strike.

(ii) Jordan was .....,(argue)the best basketball player of all time.

(iii) The autopsy revealed that his murderer had .....(strike) him on the forehead with an iron bar.

d) Replace the underlined idiomatic expressions with words of similar **meaning. (3marks)**

(i) Massive migration is a real <u>hot potato</u> for European countries.

……

(ii) The project had been given funding for another year, but it is not <u>out of the woods</u> yet.

……

(iii) I dislike that man because he tried to <u>stab</u>me<u>in the back</u>.

……

e) Fill in each blank space with the correct word. **(2marks)**

(i) Omondi would be staying .....his cousin's place for the weekend.

(ii) Please sign your name ..... the dotted line after you read then contract.

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KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

ENGLISH

101/3

PAPER 3

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONSTOCANDIDATES:-

- *Write your **name and index number** in the spaces provided above.*
- ***Sign** and write the **date** of examination in the spaces provided above.*
- *Answer **THREE** questions **ONLY.***
- *Questions **one** and **two** are compulsory.*
- *Each of your essay must not exceed **450** words.*
- *ALL answers must be written in Blue ink.*

For Examiner's Use Only:

Question	Maximum Score	Candidate'sScore
1	**20**	
2	**20**	
3	**20**	
TOTAL	**60**	

1. Imaginative Composition **(20marks)**

Either

a) Write a story in which there is a teacher, a parent and a student.

Or

b) Write a story to illustrate the saying: Better late than never.

2. The Fathers of Nations by Paul B. Vitta **(20marks)**

Seeking revenge due to discontent often leads to pain and suffering. Referring closely to Paul Vitta's Fathers of Nations, write an essay in support of this statement.

3. Optional SetTexts **(20marks)**

Answer one question only

Either

Short Story; Siundu God win;A Silent Song and Other Stories

a) Those children may suffer immensely when their parents exert a lot of pressure on them. Using specific examples from Mungoshi's*The Sins of the Fathers*, write a composition in support of this assertion.

Or

b) Play:Adipo Sidang';Parliament of Owls

Using specific examples from *Parliament of Owls*, write a composition to show that there is nothing impossible for a team that is focused and determined.

Or

c) The Novel; Kazuo Ishiguro;An Artist of the Floating World

War has a way of affecting relationships that were once every close and cordial. Drawing specific illustrations from the Kazuo's *An Artist of the Floating World*, write an essay to show the truth of this statement.

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

102/1

KISWAHILI

KARATASI YA 1 (INSHA)

MUDA: SAA 1¾

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO

1. *Andika jina lako na nambari ya usajili*

2. *Tia sahihi yako kisha andika tarehe*

3. *Andika insha mbili. Insha ya kwanza ni ya lazima*

4. *Kisha ujibu insha nyingine moja kati ya hizo tatu zilizosalia*

5. *Kila insha isipungue maneno 400*

6. *Kila insha ina alama 20*

7. *Kila insha lazima iandikwe kwa lugha ya Kiswahili*

KWA MATUMIZI YA MTAHANI PEKEE

SWALI	UPEO	ALAMA
1	20	
	20	
	JUMLA	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

1. Lazima

Wewe ni mwalimu mkuu wa Shule ya Upili ya Twajitahidi. Katika shule hii wanafunzi wana matatizo tele. Waandikie walimu wako memo ukiwaarifu kuhusu shida hizo huku ukipendekeza suluhisho.

2. Kuna njia nyingi za kuimarisha uchumi nchini Kenya. Jadili

3. Tunga kisa kitakachodhihirisha maana ya methali ifuatayo:

Mvumilivu hula mbivu

4. Andika kisa kitakachomalizika kwa maneno yafuatayo:

…Hapo ndipo nilipofahamu kuwa ushirika huleta ufanisi. Tatizo lililowakumba Wanamotopeni kwa miaka na mikaka lilitiwa katika kaburi la sahau. Walionena kuwa umoja ni nguvu waligonga ndipo.

HUU NDIO UKURASA WA MWISHO ULIOCHAPISHWA

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

102/2

KISWAHILI

KARATASI YA 2 (LUGHA)

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

Maagizo

(a) *Andika **nambari yako ya usajili** na **jina lako** katika nafasi ulizoachiwa hapo juu*

(b) *Weka sahihi yako na tarehe ya mtihani katika nafasi ulizoachiwa*

(c) *Jibu maswali yote.*

(d) *Majibu yaandikwe katika nafasi zilizoachwa wazi katika kijitabu cha maswali.*

KWA MATUMIZI YA MTAHINI PEKEE

Swali	Upeo	Alama
1	15	
2	15	
3	40	
4	10	
Jumla	80	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

1. UFAHAMU (Alama 15)

Soma kifungu hiki kisha ujibu maswali.

Kijiji cha Mulukoba kilikuwa na utulivu wa aina yake. Okolo alikuwa miongoni mwa wazaliwa wa eneo hilo. Katika miaka ya tisini alikuwa ameanza safari yake ya masomo katika Shule ya Msingi ya Magombe.Enzi hizo mshawasha na imani za watu zilihusu tu maswala ya elimu.

Okolo alifurahishwa na utangamano wa kijiji chao. Watu walishirikiana kazini, sherehe za arusi, matanga aghalabu shughuli ya mtu iligusa mwenzake. Anakumbuka vizuri ngoma zilizopigwa katika sherehe mbalimbali wanakikundi cha 'Alaki' wakiongoza ilikuwa burudani ya aina yake. Na je, baragumu lililopulizwa na Achwari kuwaita watu kununua nyama na kujuza watu kuwa fulani ameaga? Kwa kweli Mulukoba kilikuwa kijiji chenye ufanisi.

Kando na hayo, vyakula walivyokuwa navyo hasa samaki waliovuliwa mto Akanyo hususan kambare, walikuwa na ladha ya kupendeza. Okolo alifurahia sana samaki wa kukaushwa 'kerewa' namna wanakijiji walivyoita. Huyu alikuwa chaguo lake, mamake alipopika siku hiyo basi ukamilifu ulijaa moyoni mwake. Okolo alitumai kuwa atakapooa, basi mkewe ni sharti afahamu kuwa 'kerewa' ndicho chakula chake. Mto huu pia ulikuwa kitovu cha michezo ya kitoto, ulikuwa na vivukio vitatu, kwa Alaki, kwa Nikola na Bobobo. Kidimbwi kizuri cha kupiga mbizi kilikuwa kivukio cha Nikola. Vivukio hivi viliitwa majina haya kutokana na mwenye ardhi palipo kivukio hicho. Mazingira ya pale pia yalimpendeza. Hili humfanya akumbuke hadithi aliyosoma chuo kikuu ya E. Kezilahabi kuhusu Mayai Waziri wa Maradhi wakiogelea mtoni. Enzi hizo za miaka ya tisini mwanzo mtu hakujisumbua na lazima lazima za sabuni. Mradi umeona maji, kulikuwa na mawe ya kusugua mguu pale mtoni, wengine wangetumia mchanga nayo sabuni ilikuwa harita au matawi ya mti walioita 'sabuni ya wazee'. Yaani wakati huo binadamu alitumia mali asili kwenye shughuli zake za kila siku.Leo hii anapojitia marashi na hata mkewe kumkumbusha aina za sabuni nzuri, hucheka pasi yeyote kutambua kiini cha kicheko hicho.

Je, ukarimu nao wa wanakijiji. Enzi hizo watu walisaidiana. Anakumbuka babake akiwaalika wanakijiji katika sherehe tu za burudani. Atoka mchezo tiriri akiongoza burudani huku wengine wakila na kunywa. Bangaradesi mmoja wa wanakijiji angecheza wimbo wa Atoka kwa miondoko yote. Huo ndio ukamilifu uliokuwepo. Anakumbuka wagema wawili waliofahamika sana , Akong'o na Majimaji. Majimaji alikuwa rafiki wa dhati wa babake, kila mara babake angetaka kuonja kinywaji, Okolo angeshika njia hadi kwake. Pombe aliyoenzi sana babake ni 'chang'aa. Akongo alikuwa mmoja wa wagema wapenzi wa babake, alipotumwa kununua pombe, kila mara Akong'o angempa kiasi kwenye gilasi kama mbinu ya kumkumbusha ukamilifu wa mwanamume Mulukoba kwani waliokosa kunywa pombe walionekana wanyonge katika jamii. Ukweli ni kuwa Okolo alionja pombe zote, hata zingine kubugia, lililompiga mshipa kila mara ni habari ingewafikia walimu wake, hilo tu lingempa kwaheri ya masomo.

Katika shughuli hizi zote, Okolo alishauriwa na mamake kutilia maanani masomo. Ni kutokana na hali hii ukaamua kupea masomoni kwa matumaini ya kuwa kuajiriwa na vilevile kufaa kijiji chake.

Ni miaka kumi na mitano baada ya Okolo kutimiza ndoto yake. Leo hii ni mkurugenzi wa matibabu katika mojawapo wa hospitali nchini. Hatua zake za mwanzo alizofanya ni kuenda kuwafaa wenzake na wanyonge kijijini, hususan wale waliosoma nao ambao hawakufaulu kielimu. Amefadhili wanafunzi wengi mayatima hadi shule ya upili. Ndoto yake ya kufaa kijiji chake, ule ustaarabu na ujamaa ndiyo- azma yake. Gari alilonunua angalabu humsaidia yeyote mwenye safari ya dharura au hata mgonjwa. Kwa kuwa anafanya kazi mjini, yeye hupenda kuwaletea wanawake kanga. Kwa kweli miaka mitano tu jina lake lilienea na kutawala Mulukoba na kuvuka mipaka zaidi. Japo babake ameaga, amewahi kuita kikundi cha wacheza ngoma cha 'Alaki' katika hafla ya kumkumbuka babake.

Kwa kweli, malezi aliyopata kwa misingi ya ujamaa ni tiyara inayompeperusha. Kila mara atokapo mjini, yeye husalimia angalabu kila jirani yake. Mapeni yakiwa mfukoni hakosi kumuauni mwenye taabu. Lakini kwa sasa, Okolo ameanza kusadiki kisa alichosoma kwenye riwaya ya Said Ahmed ya utengano kuwa hakuwa kilichobadilika ila mabadiliko yenyewe. Okolo amejipata tu ni yeye anayegonga mlango watu kuwajulia hali. Hata majirani waliofana kama yeye hawajali. Kutia msumari kwenye kidonda ni kuwa ukarimu wake umekuwa mada ya minong'ono kijijini.

Alipotangaza kuwania udiwani hakujua kuwa ilikuwa ni mbinu ya kuchunguza ufanisi wake. Juzi amepata habari kuwa kuna baadhi ya wanaodai kuwa yeye ni mwizi wa mali ya umma, wengine wanadai ana mazingaombwe. Ajabu ni kuwa kuna wanaodai kuwa aila yake haijawahi kuwa na kiongozi hata mzee wa kijiji, hivyo basi hana nafasi pale. Kinachomkata maini zaidi ni kuna vidudu watu wanaopiga simu mjini kuchunguza kitovu cha hela zake. Lililomfikisha hatua ya leo ni kuwa amesikia kuwa kuna wale wanaomkejeli mamake kuwa muuza mboga tu atawezaje kuzaa kiongozi. Lo! Dunia ni hadaa, amesalimu amri!

Maswali

(a) Onyesha namna usasa na ukale umejitokeza kwenye kifungu hiki. **(alama 2)**

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(b) Fafanua namna swala la kinyume limeendelezwa na mwandishi. **(alama 5)**

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(c) Thibitisha kuwa jamii hii ina ustaarabu. **(alama 2)**

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(d) Tambua matatizo manne katika jamii hii. **(alama 4)**

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e) Eleza msamiati ufuatao kama ulivyotumika katika kifungu. **(alama 2)**

i) kwaheri ya masomo

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ii) amesalimu amri

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2. UFUPISHO **(Alama 15**

Soma makala haya kisha ujibu maswali yanayofuata.

Dhuluma kwa wanawake sio matokeo ya sasa baada ya uhuru, bali ni matokeo ya hali iliyokuepo tangu enzi za mababu zetu; kabla ya ukoloni. Kubaguliwa na kudhulumiwa kwa wanawake kiasi kunaoana na kunyonywa kwake kijamii kunakoshuhudiwa siku nenda miaka rudi.

Elimu ya jadi ilimwandaa mwanamke kuwa chombo kitiifu cha mwanamume. Mwanamke aliandaliwa katika unyago na katika mfumo mzima wa malezi kuwa chombo cha kutumikia mwanamume-kumstarehesha, kumfariji, kumlisha na kumzalia watoto. Mwanamke tangu jadi hakuruhusiwa kushiriki katika shughuli za kisiasa na utawala wala hakuna mtu aliyeamini kwamba mwanamke angeweza kushikilia wadhifa wowote wa uongozi.

Demokrasia ya jadi naihusudu sana; ambapo wazee walikaa chini ya mbuyu na kuamua mambo ya jumuiya. Mahakama ya kijiji ilikuwa aghalabu ni ya wazee na wanaume peke yao. Hakukuwa na mwaname aliyeshirikishwa, hata kama alikua ajuza. Sifa waliokua nayo wanawake ni ile ya usihiri na uganga. Mwanamke yeyote aliyezeeka alidhaniwa kuwa bingwa wa uchawi, ulozi na ushirikina. Kwa hivyo, wanawake ndio waliokuwa washirikina wakubwa, maana fursa ya kupata elimu pana zaidi hawakuwa nayo. Si ajabu kuwa mwanamke alipojitokeza na kusema jambo la busara, aliuupza na pengine kutukanwa hadharani.

Kwa bahati nzuri, kumezuka mwamko uliotuingiza katika enzi mpya. Vita vya wanawake vya kujihami na kujiendeleza katika ulimwengu unaotawaliwa na wanaume vimetapakaa kote katika kila sehemu ya dunia. Wanawake wengi wamekiuka misingi na mizizi ya utamduni na kung'oa asasi za kijamii na itikadi ambazo daima zimeendelea kumnyanyasa na kumuumbua utu mwanamke tangu jadi. Watetezi wa haki za wanawake zamani walilaumu suala la serikali za mataifa mwaka hadi mwaka. Huku maswala ya wanawake ya kijamii, uut na utamaduni yakishangiliwa kupitishwa, watetezi wameeleza wasiwasi wao ikiwa kupitishwa kwa maazimio kutasaidia kuleta maendeleo ya haraka kwa wanawake kimataifa au katika nchi moja. Fauka ya hayo, baadhi ya wachunguzi wanaonelea kuwa maazimio mengi hayadokezi hatua za kufikiwa haki za wanawake.

Maazimio mengine yanazungumzia juu ya kuondolewa kwa ubaguzi dhidi ya wanawake, kushiriki kwao katika uendelezaji wa amani ya kimataifa, na ushirikiano wa kimataifa, majukumu yao katika jamii, mfuko wa umoja wa Mataifa wa wanaweka (Unifem) na kuimarisha hadhi ya wanawake katika sekretariati ya Umoja wa Mataifa miongoni mwa shughuli nyingine katika mkabala huu.

Wanawake wameonyesha vipaji vyao katika nyanja mbalimbali za maisha; siasa, uchumi, utawala na kadhalika. Wanawake wamejikakamua na kudhihirisha kuwa wao pia wana jukumu muhimu la kutekeleza ili kuyaongoza maisha yao na ya watu wengi. Wadumishaji wa dhuluma za kijinsia hawana budi kusalimu amri na kuukubali ukweli huu, wapende wasipende. Mtazamo juu ya haki sawa unatokana na kukubaliwa na kuondolewa kwa aina zote za ubaya dhidi ya wanawake wanaojitolea mhanga kutetea hadhi yao pamoja na ya wanyonge wengine. Wao huonekana kama waasi, wapinga mila na watovu wa utii.

MASWALI

a) Bila kubadilisha maana asilia, fupisha aya tatu za kwanza.(Maneno 45-55) **(alama6,** utiririko 1)

<u>Matayarisho</u>

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Jibu

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b) Kwa kurejelea aya tatu za mwisho, pambanua hoja muhimu zinazoguziwa na mwandishi (Maneno 60-65) (alama 7, utiririko 1)

Matayarisho

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Jibu

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3. MATUMIZI YA LUGHA **(ALAMA 40)**

a) i) Andika neno lenye vitamkwa vya sifa zifuatazo: (alama 1)

Kikwamizo sighuna cha kaakaa gumu, irabu ya nyuma juu, kikwamizo ghuna cha kaakaa laini, irabu ya nyuma juu, kitambaza na irabu ya mbele juu.

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ii) Taja sifa zinazonyesha usawa baina ya sauti katika jozi hili.

(alama 1)

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b) Andika neno lenye muundo ufuatao wa silabi. **(alama 1)**

K-KI-KKI

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c) Ainisha mofimu katika neno hili. **(alama 3)**

mfurahisheni

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d) Tunga sentensi ukitumia nomino **uga** katika wingi pamoja na kivumishi cha pekee cha kusisitiza. **(alama 2)**

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e) Andika katika hali ya ukubwa. **(alama 2)**

Watoto wale wana miguu mirefu.

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f) Andika sentensi zifuatazo upya kulingana na maagizo. **(alama 4)**

Mwanafunzi <u>aliadhibiwa</u> kwa kuwa <u>alikosea</u> mwalimu (Badilisha maneno yaliyopigwa msitari kuwa nomino.)

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ii) Mapambano baina ya mwanadamu na mazingira yalizaa fasihi. (Anza kwa:. Fasihi...)

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iii) Margret ni mkakamavu. Onyi ni mkakamavu pia. (Unganisha iwe sentensi moja yenye kihusushi cha kulinganisha).

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iv) Maji ambayo wanakunywa ni hatari. (Tumia "o" rejeshi badala ya "amba" kuonyesha mazoea).

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g) Tunga sentensi ukitumia kishazi tegemezi kinachofanya kazi ya kiwakilishi. **(alama 2)**

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h) Kanusha; **(alama 2)**

Sisi ndisi wakulima hodari.

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i) Geuza sentensi ifuatayo iwe katika wakati uliopita hali ya kuendelea. **(alama 2)**

Watoto huchezea uwanjani.

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j) Tumia neno **huku** katika sentensi kama: **(alama 2)**

i) kiwakilishi

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ii) kielezi

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k) Tunga sentensi moja kutofautisha maneno haya**: taka** na **daka.** **(alama 2)**

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l) Andika kinyume ukizingatia maneno yaliyokolezwa. **(alama 2)**

Mjomba **alimtwika** nyanyake mzigo hivyo **akalaaniwa**.

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m) Onyesha kiima, chagizo na aina za shamirisho katika sentensi ifuatayo. **(alama 2)**

Mpodozi ambaye alikuja juzi alipaka kucha rangi jana jioni mara kadha wa kadha.

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n) Eleza matumizi ya **'ku'** katika sentensi hii **(alama 2)**

Alikusaidia kwenda kule wakati hukuwa na uwezo wa kusoma.

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o) Changanua sentensi hii ukitumia kielelezo cha mstari. **(alama 2)**

Hasikii la mwadhini wala mtekaji msikitini.

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p) Bainisha maana mbili zinazojitokeza katika sentensi ifuatayo. **(alama 2)**

Nitakupigia simu hiyo.

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q) Kibainshi hutumiwa kuonyesha maneno ya ving'ong'o. Andika na utolee mfano wa matumizi mengine ya kibainishi. **(alama 1)**

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r) Andika katika usemi wa taarifa. **(alama 2)**

Sara: Tutaonana kesho.

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s) Neema ameuona moshi ukitoka kwenye chumba chake cha malazi lakini anapuuza.Andika methali utakayotumia kumhimiza aache mapuuza. **(alama 1)**

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t) Mtu ni kwa mja,uwele ni kwa ..... na kiate ni kwa ..... **(alama 2)**

4. ISIMU JAMII **(ALAMA 10)**

a) Umealikwa kuwahubiria waumini wa dini yako katika sehemu za ibada. Fafanua sifa sita za lugha ambayo utatumia. **(alama 6)**

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b) Fafanua kwa kutoa mifano mwafaka mambo manne yanayosababisha watu kufanya makosa wanapotumia lugha ya Kiswahili. **(alama 4)**

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HUU NDIO UKURASA WA MWISHO ULIOPIGWA CHAPA

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

102/3

KISWAHILI

KARATASI YA 3 (FASIHI)

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

Maagizo Kwa Watahiniwa

• Andika jina lako, shule na nambari ya mtihani kisha utie sahihi katika nafasi ulizoachiwa hapo juu.

• Jibu maswali manne pekee.

• Swali la kwanza ni la lazima.

•Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki,yaani;

- *Tamthilia,Hadithi Fupi,Ushairi na Fasihi Simulizi.*

• Usijibu maswali mawili kutoka sehemu moja

• Majibu yote lazima yaandikwe kwa lugha ya Kiswahili pekee

KWA MATUMIZI YA MTAHINI PEKEE

Swali	Upeo	Alama
1	20	
	20	
	20	
	20	
JUMLA	80	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

SEHEMU YA A: RIWAYA

Clara Momanyi: NGUU ZA JADI

LAZIMA

1. "Lakini mbona umeamua kunyamaza hivyo? Huoni watu wanakutegemea?" "…Wajua, kinywa kilichofumbwa hakiingii nzi."

a) i) Eleza **muktadha** wa dondoo hili. **(alama 5)**

ii) Tambua **toni** katika dondoo hili. **(alama 2)**

iii)Taja **mbinu moja** ya lugha katika dondoo kisha utoe mfano wa mbinu hii katika dondoo. **(alama 2)**

b)Mataifa mengi ya bara Afrika yanakumbwa na **matumizi mabaya ya mamlaka** ambayo ni kikwazo kikubwa katika maendeleo ya kiuchumi.Kwa kutolea mifano **kumi na moja** riwayani ya 'Nguu za Jadi',tetea ukweli wa kauli hii. **(alama 11)**

SEHEMU YA B:TAMTHILIA

Timothy Arege: Bembea ya Maisha

Jibu swali la 2 au 3

2. Hata bembea ikiwa ya chuma hatimaye hulika.Wanasema papo kwa papo kamba hukata jiwe .Bembea inapolika na kukatika haiwi mwisho wa mchezo .Huungwa na mchezo kuanza tena.

a) Yaweke maneno haya katika **muktadha** wake. **(alama 4)**

b) Jadili **umuhimu** wa msemewa wa maneno haya. **(alama 6)**

c) Kwa kutoa mifano mwafaka, tambua **mbinu tatu** za lugha ambazo zimejitokeza katika dondoo hili. **(alama 3)**

d) Baadhi ya wahusika katika tamthlia ya 'Bembea ya Maisha',bembea yao ilipokatika **haikuunganishwa tena hivyo basi mchezo haukuendelea, ulifika kikomo**. Onyesha ukweli wa kauli iliyokolezwa wino kwa kutolea mifano **saba** tamthliani. **(alama 7)**

au

3."Wanasema mlango mmoja ukifunga ,macho huiona mingine mingi iliyokuwa wazi ambayo awali yalikuwa hayaoni."

a) i) Yaweke maneno haya katika **muktadha** wake. **(alama 4)**

ii) Eleza kwa kutolea hoja **nne** umuhimu wa mandhari katika tamthilia hii. **(alama 4)**

iii) Mnenewa ni mfano mzuri wa wahusika wasiokata tamaa maishani.Thibitisha ukweli wa kauli hii kwa kutoa hoja **sita** kutoka tamthiliani. **(alama 6)**

b) Jadili changamoto zinazokumba asasi ya ndoa kwa mujibu wa tamthlia ya Bembea ya Maisha. **(alama 6)**

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SEHEMU YA C: HADITHI FUPI

D.M.Lutomia na P.Muthama:***Mapambazuko ya machweo na Hadithi nyingine***

Douglas Ogutu:**Toba ya Kalia**

4. "Asante sana kwa kitambulisho hicho.Natumai rafiki zako humu nchini wanafurahia popote walipo.Kwa niaba ya kituo hiki ninatoa shukrani kwako kwa kuitikia mwito wa kuwa nasi leo."

a) Eleza **nafasi ya vijana** kwa mujibu wa hadithi ya '**Toba ya Kalia'**. **(alama 6)**

b) "Hatutakukubalia kumdhalilisha mumeo,Moshe ndugu yetu kwa kuwatawanya watoto wake kwa kisingizio cha kutafuta kazi pasi na kibali kutoka kwa yeyote."

Kwa kurejelea hadithi ya '**Nipe nafasi'** jadili changamoto **sita** anazopitia mnenewa pamoja na wahusika wa jinsia yake. **(alama 6)**

Dominic Maina Oigo.**Kifo cha Suluhu**

c) Abigael alimaliza kusoma waraka ule huku machozi yakimbubujika kama maji kwenye maporomoko…Barua ile ilimfichulia siri si haba.

Thibitisha **kauli** iliyopigiwa mstari ukirejelea hadithi ya **Kifo cha Suluhu**. **(alama 8)**

au

5. D.W.Lutomia:**Msiba wa Kujitakia**

Jioni.Machoka ameketi kitako kochoni. Amerejea akiwa amechoka zaidi ya kuchoka. Pilkapilka zake za kutafuta kibarua mchana kutwa zimegonga mwamba.Hajui la kufanya. Matumbo yake yanateta kwa kushindwa kuhimili makali ya njaa. Hajatia chochote kinywani tangu asubuhi.Taswira ya chumba chake ingeweza kumliza kipofu! Anaweza juu ya maisha yake. Maisha ya wasakatonge.Maisha ya wanaojiita 'Pangu Pakavu'.Maisha ya wapiga kura. Maisha ambayo ni tofauti sana na maisha ya waliopigiwa kura.

Maisha kati ya makundi haya mawili yaani mpiga kura na mpigiwa kura, yametengana kama mbingu na ardhi.

Machoka anabaki kukondoa macho huku maonevu yakiihukumu nafsi yake.Anasimama pale kama kigingi.Hasongi wala kufurukuta.

a)Kwa kutolea mifano,fafanua **mbinu sita** za kimtindo katika fungu hili. **(alama 6)**

b) Dokeza **suala** ambalo linajitokeza katika maneno yaliyopigwa mstari. **(alama2)**

c) Onyesha namna Wanamatopeni wanavyokumbwa na **madhila** kwa kurejelea hadithi ya '*Msiba wa Kujitakia.*' **(alama 8)**

d) Fafanua **mbinu** nne za kutambua hulka/sifa za mhusika. **(alama 4)**

SEHEMU YA D:USHAIRI

Jibu swali la 6 au 7

6. Soma shairi lifuatalo kisha ujibu maswali yanayofuata.

1. Ni sumu, sumu hatari
Unahatarisha watoto
Kwa ndoto zako leweshi
Za kupanda ngazi
Ndoto motomoto ambazo
Zimejenga ukuta
Baina ya watoto
Na maneno laini
Ya ulimi wa mzazi
Baina ya watoto na mzazi

2. Ni sumu, sumu hasiri
Unajeruhi watoto kwa pesa
Kwa pupa yako hangaishi
Ya kuwa tajiri mtajika
Pupa pumbazi ambayo
Imezaa jangwa bahili
Badala ya chemichemi
Ya mazungumzo na maadili
Baina ya watoto na mzazi
La kaburi la asubuhi.

3. Ni sumu, sumu legezi
Unalegeza watoto
Kwa mazoea yako tenganishi
Ya daima kunywa 'moja band'
Mazoea mabaya ambayo
Ulevi
Yakufunga katika klabu
Hadi saa nane usiku baridi
Huku yakilenga kutofahamiana

4. Ni sumu, sumu jeruhi
Unahasiri watoto
Kwa mapenzi yako hatari
Ya kuwaliwaza watoto kwa pesa
Zinawafikisha kwenye sigara na
Na kisha kwenya madawa
Ya kulevya
Barabara inayofikisha kwenye
Giza

Maswali

a) Shairi hili ni la **aina** gani? Eleza. **(alama 2)**

b) Masuala kadhaa yamejadiliwa katika shairi hili.Fafanua yoyote **manne**. **(alama 4)**

c) Kwa kutoa mifano mwafaka ,tambua mbinu **mbili** za uandishi zinazojitokeza katika shairi hili. **(alama 4)**

d) Eleza **sura** ya shairi hili. **(alama 4)**

e) Andika ubeti wa **nne** kwa lugha tutumbi. **(alama 4)**

f) Eleza maana ya vifungu hivi vilivyotumika katika shairi. **(alama 2)**

i) Jenga ukuta.

ii) Kwa pupa yako hangaishi.

au

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7. *Soma shairi lifuatalo kisha ujibu maswali yanayofuata***.**
Ya wapi silika hino, ya kwenda kinyumenyume?
Nilijibu hata kwa wino, majibuyo niyasome,
Kuno ‘geuza maneno, na kuyafanya maleme,
Haramu kuwa halali, insani twajilaani.

Insiya jilaani, ni bora wazi niseme,
Kukubalia idhini, mimba wakazikateme,
Hiyo nayo haki gani, wasiyoona mit ume,
Haramu kuwa halali, insani twajilaani.

Twajilaani laana, kijitakia ujume,
Nayo habari hatuna, twajiletea ukame,
Pia habari hatuna, ni wana sio vimeme,
Haramu kuwa halali, insani twajilaani.
Muswada siyo halali, wakuviavya vikembe,
Utawapea halali, mabinti wetu watambe,
Magulamu ja fahali, nao wakame pembe,
Haramu kuwa halali, insani twajilani.

Kuavya mimba ni dhambi, ya kumuudhi Rahimu,
Laana twajaza tumbi, ya moto wa jahanamu,
Tuache vino vitimbi,turudie utimamu,
Haramu kuwa halali, insani twajilani.

Jambo hili nawambia, litazidisha ukware,
Ni ya uvundo tabia, ni afueni tuisare,
Tuweze kuitubia, tuwache zino parare,
Haramu kuwa halali, insani twajilani.

Muida ndio sinao, nina mengi ya kusema,
Wapigania hakio, zingatia nayosema,
‘sipashe mswada huo , ni madhambi ya kuchoma,
Haramu kuwa halali, insani twajilani.

Maswali

a) Lipe shairi hili anwani mwafaka. **(alama 1)**

b) Changanua shairi hili **kiarudhi**. **(alama 4)**

c) Kwa kutolea maelezo mwafaka,tambua **bahari tatu** za shairi hili. **(alama 3)**

d) Bainisha mbinu zifuatazo za kimtindo katika shairi hili: **(alama 3)**

i) Tashbihi

ii)Tanakuzi

iii) Swali balagha

e) Dhihirisha mtunzi huyu alivyofanikiwa kutumia **uhuru** wake kwa kutoa mifano **miwili**, kisha ueleze **umuhimu** wa kila uhuru ulioutambua. **(alama 4)**

f) Bainisha **toni** la shairi hili. **(alama 1)**

g) Fafanua masuala **mawili** ambayo yanazungumziwa katika shairi hili. **(alama 2)**

h) Bainisha aina **mbili za urudiaji** katika shairi hili. **(alama 2)**

SEHEMU YA E:FASIHI SIMULIZI

Jibu swali la nane

8.a) Nyimbo zina majukumu chungu nzima katika jamii.Kwa kutoa mifano mwafaka ya nyimbo hizi,fafanua majukumu **matano** ya nyimbo. **alama 10)**

b) "Kama nguo yangu moja inachukua saa nne juani kukauka, je,nguo ishirini zitachukua muda gani?"

"Jibu - ni saa moja tu kwani zinatumia jua lile lile moja kukauka."

i) Tambua kijipera hiki. . **(alama 1)**

ii)Taja sifa za kijipera hiki. **(alama 4)**

c) Umekusudia kutumia mbinu ya **kushiriki** kufanya utafiti kuhusu tungo za aina hii. Eleza **manufaa matano** ya mbinu hii. **(alama 5)**

HUU NDIO UKURASA WA MWISHO ULIOCHAPISHWA

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

CHRISTIAN RELIGIOUS EDUCATION

313/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

1) Write the Name, Admission number and Index number in the spaces provided above.

2) Sign and write the Date of the examination in the spaces provided above.

3) Answer any five questions.

4) Each question carries 20 marks.

5) Candidates should answer the questions in English.

FOR EXAMINER'S USE ONLY

QUESTION	**1**	**2**	**3**	**4**	**5**	6	**CANDIDATES TOTAL SCORE**
CANDIDATES SCORE							

Answer Any Five Questions

1a. Give the Pauline books in the Bible. **(7mks)**

b. Outline seven teachings about human beings from the Genesis stories of creation**.** **(7mks)**

c. State six ways in which the church is spreading the word of God in Kenya**.** **(6mks).**

2 a. Describe the covenant ceremony between God and Abraham in Genesis 15:1-19 **(7mks)**

b. Give seven reasons why the Israelites broke the covenant while at Mt.Sinai. **(7mks)**

c. Identify six lessons Christians learn from the incident when the Israelites broke the covenant at Mt. Sinai. **(6mks).**

3 a. Outline seven factors that led to the division of the kingdom of Israel after the death of Solomon. **(7mks)**

b. Identify seven conditions that made it difficult for Prophet Elijah to stop idolatry in Israel. **(7mks).**

c. Give six forms of idolatry that threaten Christians today. **(6mks)**

4 a. State seven importance of prophets in **Israel.** **(7mks)**

b. Explain the teaching of prophet Amos on Israel's election**.** **(7mks)**

c. Give six ways through which the Christians in Kenya can avoid God's punishment today.**(6mks)**

5 a. Identify six reasons why prophet Jeremiah condemned necromancy in Judah. **(6mks)**

b. State seven promises that the Israelites made when they renewed their covenant with God during the time of Nehemiah.(Nehemiah 10:28-29) **(7mks)**

c. Give seven lessons that Christians learn from the renewal of the covenant during the reign of Nehemiah. **(7mks)**

6 a. Outline the role of priests in traditional African Society. **(7mks)**

b. Identify seven ways in which the Traditional African Society maintain their relationship with the ancestors**.** **(7mks)**

c. Explain six factors that have affected the traditional African people's dependence on God.**(6mks)**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

CHRISTIAN RELIGIOUS EDUCATION

313/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

1) Write the Name, Admission number and Index number in the spaces provided above.

2) Sign and write the Date of the examination in the spaces provided above.

3) Answer any five questions.

4) Each question carries 20 marks.

5) Candidates should answer the questions in English.

FOR EXAMINER'S USE ONLY

QUESTION	**1**	**2**	**3**	**4**	**5**	6	**CANDIDATES TOTAL SCORE**
CANDIDATES SCORE							

Answer Any Five Questions

1 a. Outline Isaiah's prophesy on the suffering servant. **(7 marks)**

b. Describe the annunciation of the birth of Jesus by Angel Gabriel to Mary in Luke 1:26-38 **(7 marks)**

c. Outline six lessons Christians learn from the annunciation of the birth of Jesus. **(6 marks)**

2 a. State seven reasons why Christians should undergo baptism. **(7 marks)**

b. Describe the call of the first disciples of Jesus in Luke 5:1-11 **(8 marks)**

c. Give the lessons that Christians learn from the call of the first disciples. **(5 marks)**

3 a. Give six reasons why Judas betrayed Jesus. **(6 marks)**

b. Identify the events that took place when Jesus died on the cross to the time he was buried in Luke 23:44-56 **(8 marks)**

c. Give six reasons why the resurrection of Jesus is important to Christians **(6 marks)**

4 a. State the fruits of the Holy Spirit as taught by ST Paul in Galatians 5:22-23 **(6 marks)**

b. Explain the teachings of Jesus about the vine and the branches in John 15:1-10 that reveal about the unity of believers **(8 marks)**

c. Give six causes of disunity in the church today **(6 marks)**

5 a. Explain the traditional understanding of marriage **(7 marks)**

b. State six importances of professional codes of ethics **(6 marks)**

c. Outline seven reasons why Christians condemn idleness in the society today **(7 marks)**

6 a. State seven ways in which wealth is acquired in traditional African society **(7 marks)**

b. Explain the importance of law and order in the country **(7 marks)**

c. Give six ways in which Christians in Kenya help those who have been released from prison **(6 marks)**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

HISTORY AND GOVERNMENT

311/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

(a) *Write your* ***name, index number*** *and the* ***name*** *of your school in the spaces provided above.*

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

(c) *This paper consists of THREE sections A, B and C*

(d) *Answer all questions in section A, choose three questions in section B and two questions in section C*

(e) *Answers to all questions must be written in the answer booklet provided*

FOR EXAMINER USE ONLY

SECTION A	SECTION B				SECTION C			GRAND TOTAL
1-17	18	19	20	21	22	23	24	

SECTION A (25MKS)

Answer all questions in this section

SECTION A: 25 MARKS

1. Give two ways in which the study of History and government promotes a sense of patriotism in the learner. **(2mks)**

2. Identify two ways through which a Kenyan archaeologist identify a prehistoric site. **(2mks)**

3. Name the original homeland of the Eastern cushites . **(1mk)**

4. State one way in which the migration of the cushites into Kenya affected the Agikuyu during the pre-colonial period. **(2mks)**

5. State one way in which the knowledge of iron working helped in the migration of the bantu. **(1mk)**

6. State two duties of the Orkoiyot among the Nandi. **(2mks)**

7. Give two factors that enabled the Arabs to sail from oman to the Kenyan coast. **(2mks)**

8. Give one political factors which causes conflicts in Kenya. **(1mk)**

9. Identify the treaty which marked the colonial spheres of influence in East Africa in 1886. **(1mks)**

10. State the main reason why the local government was established in Kenya during the colonial period. **(1mk)**

11. State two ways in which colonial land policies in Kenya undermined African farming. **(2mks)**

12. Give one problem faced by trade unions movements during the colonial period in Kenya. **(1mk)**

13. Give the main function of the civil service in Kenya. **(1mk)**

14. State two ways through which the government has encouraged the preservation of African culture through music and dance. **(2mks)**

15. State two objectives of devolution of government. **(2mks)**

16. Give one reason why the government of Kenya prepares the national budget. **(1mk)**

17. Name one type of public expenditure. **(1mk)**

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SECTION B(45 MARKS)

18. (a) State five reasons that led to the coming of Arabs to the Kenyan Coast. **(5mks)**

(b)Explain five results of Christian missionary activities in **Kenya.** **(10mks)**

19. (a) Give five causes of collaboration between Lenana and the British**.** **(5mks)**

(b) Explain five positive effects of urbanization in Kenya, during the colonial period. **(10mks)**

20. (a) Name three pillars of Nyayo philosophy (Nyayoism) **(3mks)**

(b) Explain six social impact of the national philosophies on the development of Kenya. **(12mks)**

21. (a) Identify three types of land holdings in Kenya. **(3mks)**

(b) Explain six challenges facing the agricultural sector in Kenya since independence. **(12mks)**

SECTION C: 30 MARKS.

22. (a) State three reasons why the constitution is important in Kenya. **(3mks)**

(b) Explain six functions of the Kenya national Human rights and equality commission. **(12mks)**

23. (a) Name three factors to be considered in delimitation of electoral units in Kenya. **(3mks)**

(b) Explain six functions of the independent electoral and Boundaries commission (IEBC) in Kenya. **(12mks)**

24. (a) Identify three types of constitutionally established funds in Kenya. **(3mks)**

(b)Explain six challenges facing devolved governments in Kenya**.** **(12 mks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

HISTORY AND GOVERNMENT

311/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

(a) *Write your* ***name, index number*** *and the* ***name*** *of your school in the spaces provided above.*

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

(c) *This paper consists of THREE sections A, B and C*

(d) *Answer all questions in section A, choose three questions in section B and two questions in section C*

(e) *Answers to all questions must be written in the answer booklet provided*

FOR EXAMINER USE ONLY

SECTION A	SECTION B				SECTION C			GRAND TOTAL
1-17	18	19	20	21	22	23	24	

SECTION A (25MKS)

Answer all questions in this section

1.Give two methods used by elders to pass information to the young generation on History and Government in the traditional African communitie**s.** **(2mks)**

2.outline two reasons why archaeological sites were located near water sources **(2mks)**

3.Identify two factors that has contributed to food shortage in the third world countries **(2mks)**

4.Give the main form of transport that was used during the trans-Saharan t**rade** **(1mk)**

5. Identify two modern means of print **media.** **(2mks)**

6. Identify the type of constitution applied in **Britain** **(1mk)**

7.Give two benefits of the development of the railway transport in Europe during the 19th century**.** **(2mks)**

8. Outline the main factor that led to the growth of the ancient town of Kilwa. **(1 mark)**

9.Name one country in north Africa that was colonized by Franc**e** **(1mk)**

10.Identify two political results of partitioning Africa by European **powers** **(2mks)**

11.State two duties of chiefs in Zimbabwe during the colonial **period** **(2mks)**

12.Outline two external factors that promoted nationalism in **Mozambique** **(2mks)**

13.Define "Monroe doctrine" as applied by the united states of **America** **(1mk)**

14.Name the serving united nations (UN) **secretary general** **(1mk)**

15. Identify one political challenge facing common market for eastern and southern Afric**a (1mk)**

16.Give one social reform introduced by Mobutu Sese Seko as the president of democratic republic of Congo **1mk)**

17. Name one major political parties in India **(1mk)**

SECTION B (45MARKS).

ANSWER ANY THREE QUESTIONS IN THIS SECTION

18 a). State three benefits of settling in villages during the late stone **age** **(3mks)**

b) Explain six challenges faced by early humans in hunting and gathering activities**. (12mks)**

19 a) Give three problems faced by factory workers in Europe during the industrial revolution **(3mks)**

b) Explain 6 positive effects of scientific inventions on medicine. **(12 marks)**

20 a) Outline five European activities in Africa during the 19th century **(5mks)**

b) Explain five reason why Africans were defeated during the majimaji rebellion **(10mks)**

21 a) Outline three factors which facilitated the application of the French policy of assimilation in the four communes of Senegal **(3mks)**

b). Explain six reasons why the use of indirect rule was unsuccessful in southern Nigeria **(12mks)**

SECTION C (30MARKS). ATTEMPT ANY TWO QUESTIONS

22.a). Give three functions of Lukiiko in the kingdom of Buganda during the pre-colonial period **(3mks)**

b). Describe the political organisation of the Shona kingdom during the pre-colonial period (**12mks)**

23.a). State five benefits of the east African community to its member states up to 1977 **(5mks)**

b). Explain Why the 1945 Manchester (Pan-African) Congress was a landmark in the history of Africa **(10mks)**

24 a). Outline three types of federal courts in the united states of Americ**a** **(3mks)**

b). Explain six functions of the cabinet in **India** **(12mks)**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

GEOGRAPHY

312/1

PAPER 1

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO THE CANDIDATES

a) *Write your name and admission number in the spaces provided*

b) *Answer All questions in section A*

c) *In section B answer question 6 and any other two questions*

d) *Students should check the question paper and ensure that all pages are printed and that no question s are missing.*

For Examiner's Use Only

Section	Questions	Candidate's Score	Maximum Score
A	1-5		25
B	6		25
			25
			25
	Total Score		100

SECTION A
ANSWER ALL QUESTIONS

1.a) Explain the origin of the earth and the solar system according to the Nebula cloud theory. **(4marks)**

b) Name **two** planets that do not have natural satellites. **(2marks)**

2.a) Differentiate between physical and human environment **(2 marks)**

b) Give **three** sub branches of physical geography **(3 marks)**

3.a) Define earth movements **(2 marks)**

b) State the boundaries associated with tectonic plates movements **(3 marks)**

4.Describe how an oasis is formed. **(4 marks)**

5.(a) Differentiate between secondary vegetation and planted vegetation **(2 marks)**

(b) State **three** characteristics of Mediterranean vegetation. **(3 marks)**

SECTION B.

Answer question 6 and any other two questions from this section

6. (a) Study the map of Tambach **1:50 000 (sheet 90/3)** provided and answer the Following questions.

(i) Name ***three*** human features found in grid square 8260. **(3 marks)**

(ii) Measure the length of all-weather road loose surface C 51from the junction near the mining camp to the southern edge of the map. Give your answer in Kilometers. **(2 marks)**

(iii) Convert the map scale into a statement scale? **(2 marks)**

(iv) Give **two** ways through which relief has been represented in the area covered by the map. **(2 marks)**

(c) Draw a square 15cm by 10cm to represent the area enclosed by easting 78 and 95 and northing 60 and 70. **(1 mark)**

On it mark and label the following features.

(i) River Kerio. **(1 mark)**

(ii) Lake Kamnorok. **(1 mark)**

(iii) Seasonal swamp. **(1 mark)**

(iv Tambach Municipality **(1 mark)**

(d) (i) Describe the drainage of the area covered by the map. **(6 marks)**

(ii) Citing evidence from the map, state ***five*** functions of Tambach town. **(5 marks)**

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7. a) What is a rock? **(2 marks)**

b)i) Give **three** examples of intrusive igneous rocks **(3 marks)**

ii) Explain **three** ways in which sedimentary rocks are formed **(6 marks)**

c)i) Describe the formation of a **sill** **(4 marks)**

ii) State the characteristics of a composite volcano. **(4 marks)**

d) Explain three positive influences of volcanic mountains on human activities **(6 marks)**

8.a) i) What is a delta? **(2 marks)**

ii) Explain **two** conditions which favour the formation of a delta **(4 marks)**

iii) Give **two** examples of Arcuate deltas in Africa **(2 marks)**

iv) Apart from arcuate delta, state **two** other types of deltas **(2 marks)**

b) Describe the following processes of river erosion

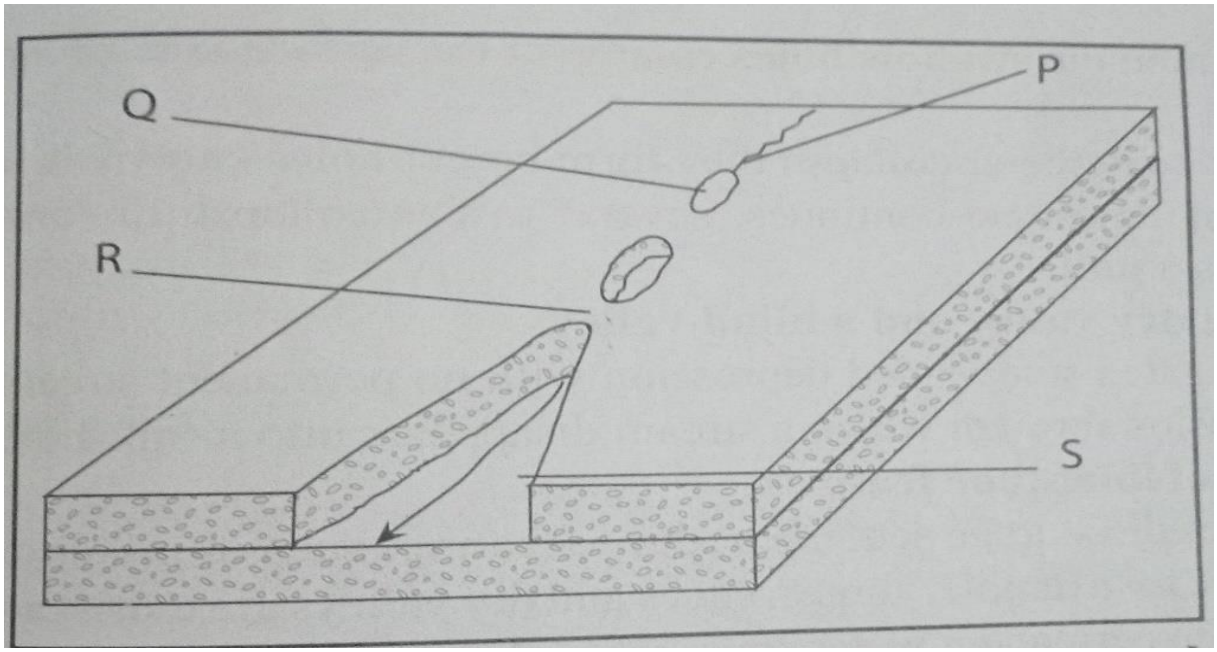
- **Abrasion** **(3 marks)**
- **Hydraulic action** **(3 marks)**

c) State **three** ways in which gorges are formed **(3 marks)**

d) i) Describe the dendritic drainage pattern **(3 marks)**

ii) State **three** negative influences of rivers **(3 marks)**

9. a) i) The diagram below shows a do line, a feature resulting from Karst scenery. Study it carefully and use it to answer the questions that follow.



Identify the parts labeled **P, Q, R** and **S** **(4 marks)**

ii) Describe the formation of a limestone pillar. **(5 marks)**

b) State **four** conditions necessary for the formation of a Karst scenery. **(4 marks)**

c) Explain **three** significance of limestone features. **(6 marks)**

d) You intended to carry out a field study in a limestone area.

i) Give **three** reasons why you are likely to find few settlements. **(3 marks)**

ii) State **three** ways how you would prepare **(3marks)**

10.(a) (i) What is weathering? **(2 marks)**

(ii) Give **three** factors influencing the rate of weathering **(3 marks)**

(b) Name **three** processes of slow mass wasting. **(3 marks)**

(c) (i) A part from block disintegration, list four other physical weathering processes. **(4 marks)**

(ii) Describe how block disintegration occurs. **(5 marks)**

(d) Explain **four** positive significances of weathering to human activities. **(8 marks)**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

GEOGRAPHY

312/2

PAPER 2

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO THE CANDIDATES

e) *Write your name and admission number in the spaces provided*

f) *Answer All questions in section A*

g) *In section B answer question 6 and any other two questions*

h) *Students should check the question paper and ensure that all pages are printed and that no question s are missing.*

For Examiner's Use Only

Section	Questions	Candidate's Score	Maximum Score
A	1-5		25
B	6		25
			25
			25
	Total Score		100

SECTION A (25 MARKS)

Answer all the questions in this section

1.(a). State three roles played by transport in the economy of Kenya. **(3marks)**

(b) Name two highways created in Africa to ease transport across the continent. **(2mark)**

2(a). Apart from wood name two other sources of renewable **energy** **(2 mark**

b) Give three disadvantages of Using wood fuel and source of energy**.** **(3 marks)**

3(a). Other than Ghana, name two countries in West Africa where cocoa is grown. **(2 Marks)**

(b) Physical conditions that favor the growth of cocoa in Ghana. **(3 Marks)**

4(a). State *three* causes of mortality in East Africa. **(3 Marks)**

(b) Give *two* causes of rural-rural migration in Kenya**.** **(2 Marks)**

5) (a) what is industrialization **(2Marks)**

.(b). Give three efforts that have been made to decentralize industries in Kenya? **(3 marks)**

SECTION B (75 MARKS)

Answers question six and any other two questions from this section.

6. The table below shows the value of beef products from 2020 to 2023

Value of beef products (million ksh)

YEAR / BEEF	2020	2021	2022	2023
Beef	13,200	8,300	7,300	12,400
Hides	4,200	4,500	4,700	6,100
Hooves	7,300	7,800	7,400	8,900

a) (i) Using a scale of 1cm to represent 1000 million Kenya shillings, draw a comparative bar graph to represent the value of beef products from 2020 to 2023 **(7marks)**

(ii) State three advantages of using a comparative bar graph to represent statistical data **(3marks)**

b) i) State four factors which favour beef farming in the Rift Valley **(4 marks)**

ii) Identify two traditional breeds of cattle kept by nomadic pastoralists in Kenya **(2 marks)**

c.(i) State three factors favouring beef farming in Kenya **(3marks)**

(ii) Explain three significance of beef farming in **Kenya** **(6marks)**

7a) (i) Give three problems faced in the control of tsetse fly in **Kenya** **(3marks)**

(ii) Explain four physical factors that influenced the location of Mwea tebere irrigation scheme **(8marks)**

b) (i) Give two main projects of land reclamation in Netherlands **(2marks)**

(ii) Explain three benefits of Zuider Zee projects in Netherlands **(6marks)**

c) Explain three similarities between land reclamation in Kenya and Netherlands **(6marks)**

8a) Give four reasons why conservation of wildlife is encouraged in Kenya. **(4marks)**

b) Explain how the following factors influence the distribution of wildlife in East Africa

- Climate **(2marks)**
- Vegetation cover **(2marks)**
- Soil **(2marks)**

c) **(i)** State four ways in which Maasai mara game reserve benefits the Maasai **Community** **(4marks)**

(ii) Give three measures being taken in Kenya to promote domestic tourism **(3marks)**

(iii) Explain four ways in which the government of Kenya would promote sustainable Tourism. **(8marks)**

9. a (i). State three ways mining dereliction can be reclaimed **(3marks)**

(ii). Name the minerals found in the following areas **(3 marks)**

i. Kasese 1mk

ii. Shinyanga **1mk**

iii. Kariandusi **1mk**

(b). Give three problems facing oil industry in the Middle East **(3 marks)**

c) Explain four ways in which mining leads to development of industries. **(8 marks)**

d) You are to carry out a field study on effects of land dereliction around your school.

i) Give three reasons why you would require a route map of the area of the study. **(3 marks)**

ii) For your study, you have prepared a working schedule. State three items you would include in the schedule. **(3 marks)**

(iii). Identify two benefits that your visit to the area will have in the community. **(2 marks)**

10. (a).(i) Give three Characteristics of wholesalers; **(3marks)**

(ii). Name two Invisible exports from Kenya to the rest of the World **(2marks)**

(b). State four reasons why EastAfrican Community (EAC)was revived in the year 2001. **(4marks)**

(c). Explain four reasons why Kenya experiences unfavourable balance of trade **(8marks)**

(d) Explain four measures undertaken by the Kenyan government to promote international trade **(8 marks)**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

MATHEMATICS

121/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

1. *Write your name and admission number in the spaces provided at the top of this page.*
2. *This paper consists of two sections:* **Section I and Section II.**
3. *Answer **all** questions in* **section I** and any five questions in Section **II.**
4. *Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.*
5. *Marks may be given for correct working even if the answer is wrong.*
6. ***KNEC** Mathematical tables may be used.*

For Examiner's Use Only

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total

Grand Total

17	18	19	20	21	22	23	24

SECTION I (50 Marks)

1. Express the following as a fraction in its simplest form. **(3 marks)**

$0.\dot{1}2\dot{3}$

2. The radius of a sphere is increased by 5%. Calculate the percentage increase in its volume.

(3 marks)

3. A watch which loses a half minute every hour was set to read the correct time at 0545h on Monday. Determine the time in the 12 hour system the watch will show on the following Friday at 1945h **(3 marks)**

4. Using mathematical tables, evaluate: **(4 marks)**

$\frac{2}{9272} + \sqrt[3]{20.7726} - \sqrt{0.2643}$

0.

5. Three masses of sugar are grouped into 0.64 kg, 0.56 kg and 0.68 kg. Find the greatest mass of sugar that can be taken an exact number of times from the three masses. **(3 marks)**

6. Simplify the following algebraic expression. **(3 marks)**

$\frac{x+3}{3} - \frac{x-7}{4} - \frac{1}{2}(5-x)$

7. Five interior angles of an irregular polygon measure 144° each. The rest are 135° each. Find the number of sides of the polygon. **(3 marks)**

8. The coordinates of points A, B, and C are (0, −4), (2, −1) and (4, 2) respectively. Show that the three points are collinear. **(3 marks)**

9. Simplify the expression given by **(3 marks)**

$$\frac{x}{x-3} - \frac{2x+3}{x^2-3x}$$

10. Eight coins were tossed together and the number of heads (X) resulting was noted. The operation was repeated 256 times and the frequency distribution of the number of heads is given below.

No of heads (X)	0	1	2	3	4	5	6	7	8
Frequency (f)	1	9	26	59	72	52	29	7	1

Calculate the median. **(3 marks)**

11. Town A and B are 540km apart. A matatu left town A at 8.00 a.m towards B at a speed of 60 km/h. A van left town B towards A at a speed of 120 km/h at 9.00 a.m. At what time did they meet. **(4 marks)**

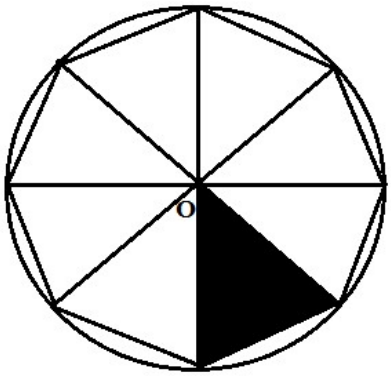
12. Solve the inequality and represent it on a number line; **(3 marks)**

$6 - 4x \geq x < \frac{4x + 10}{3}$

13. Find the value of α given that $\tan 60° + 5sin\frac{4}{5}\alpha - 5cos\frac{13}{15}\alpha = \tan 60°$ **(3 marks)**

14. Solve for x and y in the expression; $8^{2x} \times 3^{-\frac{1}{2}y} = 36$ **(3 marks)**

15. Complete the figure below by adding the correct missing features if it has a rotational symmetry of order 4 about O. **(3 marks)**



16. During a certain month, the exchange rates in a bank were as follows;

Currency	Buying (Ksh)	Selling (Ksh)
1USD	129.0	134.0
1 Euro	135.51	143.52

A tourist left Kenya to United States with Ksh. 1 000 000. At the airport, he exchanged all the money to dollars and spent 190 dollars on air ticket. While in the US he spent 4500 dollars for upkeep and proceeds to Europe. While in Europe he spent a total of 2000 Euros.

How many Euros did he remain with**?** **(3 marks)**

SECTION II (50 Marks)

Answer FIVE questions ONLY in this section.

17. The gradient of a straight line L_1 passing through the points P (3, 4) and Q (a, b) is $-\frac{3}{2}$. A line L_2 is perpendicular to L_1 and passes through point Q and R (2, −1).

Find;

a) Equation of L_1. **(3 marks)**

b) Equation of L_2 **(3 marks)**

c) The values of **a** and **b**. **(4 marks)**

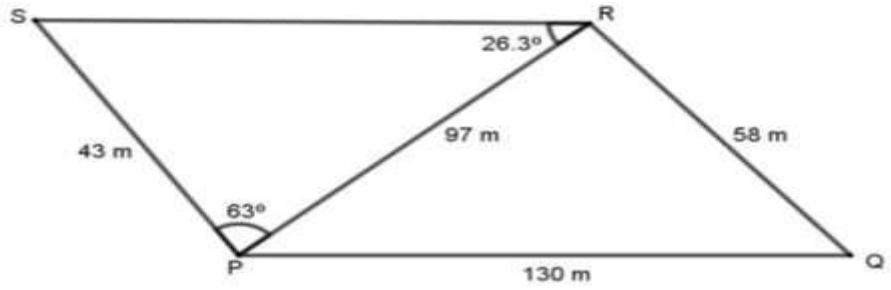
18. A metal sphere has a radius 5 cm and a density of 2.4 g/cm^3.

a) Calculate the mass of the ball in kg **(4 marks)**

b) The ball is dropped into a cylindrical container which is partially filled with water. The ball is fully sub-merged. If the cylinder has a base radius of 8cm, calculate the change in the water level. **(3 marks)**

c) The sphere is melted down to form a metal cylinder of same radius. Calculate the height of the cylinder formed. **(3 marks)**

19. The diagram below represents a field PQRS on horizontal ground in which $PS = 43m$, $PQ = 130\ m$, $QR = 58\ m$, $PR = 97\ m$, angle $PRS = 26.3°$ and angle $RPS = 63°$.



a) Find the size of angle PRQ, correct to 2 decimal places. **(3 marks)**

b) Calculate the area of the field PQRS, to the nearest square metre. **(2 marks)**

c) Calculate the shortest distance from S to PR. **(2 marks)**

d) A pole is erected at S. T is the top of the pole. Given that the angle of elevation of T from P is 3.9, find the greatest angle of elevation of T along the path PR. **(3 marks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

20. (a) Fid the inverse of $\begin{pmatrix} 4 & 3 \\ 5 & 6 \end{pmatrix}$ **(2 marks)**

(b) In the month of June 2013, a cereal dealer sold 200 bags of rice and 150 bags of wheat at a total of Sh. 805 000. The following month he sold 200 bags of rice and 240 bags of wheat at a total of Sh. 960 000. Use the matrix method to find the selling price of each bag of rice and that of each bag of wheat. **(4 marks)**

(c) In august 2013, he increased the selling price of a bag of rice by 8% but reduced the price of a bag of wheat by 4%. In that month he sold half as many bags of rice as he sold in July and twice as many bags of wheat as he sold in June. Using matrix method calculate the amount of money he got from the sales of **august** **(4 marks)**

21. The velocity of a particle after t seconds is given by $V = t^2 - 2t + 4$.

a) Use the mid- ordinate rule with six strips to estimate the displacement of the particle between t = 1 and t = 13. **(4 marks)**

b) Determine the exact displacement of the particle between t = 1 and t = 13. **(4 marks)**

c) Calculate the percentage error arising from the estimate in (a) above. **(2 marks)**

22. Four points P, Q, R and T are on the same horizontal ground. Point Q is 800 metres to the north of point P. Point R is 700 metres on a bearing of 060° from Q. Point T is to the east of P and the bearing of R from T is 320°.

a) Using a scale of 1: 200, show the relative positions of the four towns**.** **(4 marks)**

b) Using the drawing in (a) above, find:

i. The distance between town P and R. **(2 marks)**

ii. The bearing of town P from R. **(1 mark)**

c) A vertical mast stands at town R such that the angle of elevation of the top of the mast from P is 65°.Calculate the height of the mast in metres. **(3 marks)**

23. Three business partners Betty, Bob and Sheriff contributed Sh. 500 000, Sh. 300 000 and Sh. 600 000 respectively to start a business of matatu plying Murang'a - Nairobi route. The matatu carries 14 passengers with each paying Sh. 250. The matatu makes two rounds trip every day and is ever full. Each day Sh. 6 000 is used to cover costs of wages.

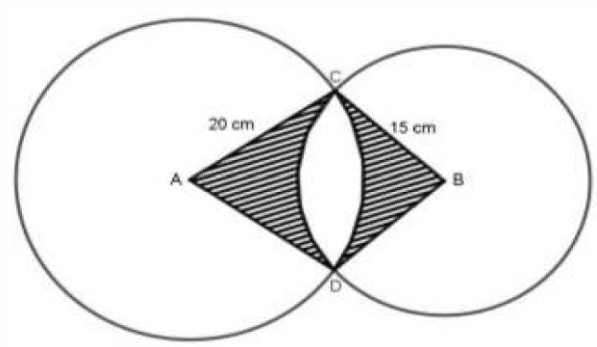
a) Calculate their profit per day. **(2 marks)**

b) The matatu works for 25 days per month and is serviced every month at a cost of *Sh*. 10 000. Calculate their monthly profit in June. **(1 mark)**

c) The three partners agreed to save 40% of the profit, 24% to be shared in the ratio of their contribution and the remaining to be shared equally. Calculate Betty shares in the month of June. **(5 marks)**

d) The matatu developed a mechanical problem and they decided to sell it through an agent who charged a commission of 5% on the selling price. Each partner received *Sh*. 475 000 from the agent after he had taken his commission. Determine the price at which the agent sold the matatu. **(2 marks)**

24. The diagram below shows two intersecting circles of radii 20 cm and 15 cm such that their centers A and B are 30 cm apart.



Calculate to 2 d.p.

a) The area of the sector ACD. **(3 marks)**

b) The area of sector BCD**.** **(3 marks)**

c) The length of the common chord CD. **(2 marks)**

d) The area of quadrilateral ACBD. **(1 mark)**

e) The shaded area **(1 mark)**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

MATHEMATICS

121/12

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

1. *Write your name and admission number in the spaces provided at the top of this page.*
2. *This paper consists of two sections:* **Section I and Section II.**
3. *Answer **all** questions in* **section I** and any five questions in Section **II.**
4. *Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.*
5. *Marks may be given for correct working even if the answer is wrong.*
6. ***KNEC** Mathematical tables may be used.*

For Examiner's Use Only

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total

17	18	19	20	21	22	23	24

Grand Total

SECTION 1 (50 marks)

1. (a) Expand and simplify $(2x - y)^5 + (2x + y)^5$ **(2 marks)**

(b) Use the expansion above to evaluate $3.75^5 + 4.25^5$ **(2 marks)**

2. Point N divides lines AB internally in the ratio 1: 3 if A has coordinates of (7, −5, −11) and B (−1, 1 ,4) respectively, find the position vector of N **(3 marks)**

3. Solve for the value of x in $x^2 - x - 6 = 0$**.** **(3 marks)**

4. Make h the subject of the formula **(3 marks)**

$x = \sqrt[3]{c - h^3 b}$

5. The first term of arithmetic progression is 3. The sum of the first 11 terms of the AP is 253. Find the common difference of the AP **(3 marks)**

6. Write log 100 − 2 log 50 as a single number **(2 marks)**

7. The dimensions of a rectangle are 10 cm and 15 cm. If there is an error of 5% in each of the measurements, calculate the maximum percentage error in the area of the rectangle. **(3 marks)**

8. A diameter AB has coordinates (2, 4) and (6, 2) respectively. Find the equation of the circle.

(3 marks)

9. Three coins are tossed together;

(a)List down the eight possible outcomes. **(2 marks)**

(b) Find the probability of getting 3 heads **(1 mark)**

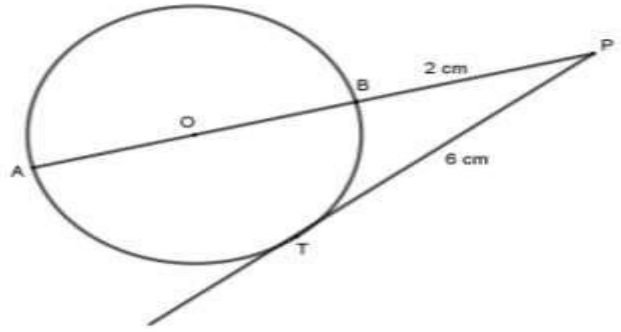
10. Kamau sold a mixture of two types of coffee which were costing Sh. 50 per kg and Sh. 60 per kg at Sh. 324 for 5 kg of the mixture after making a profit of 20%. Find the ratio of the mixture**.** **(3 marks)**

11. The cash price of a bed is sh22600. Magdalene opts to buy the bed on hire purchase term by paying a deposit of sh4400. If the simple interest of 22% p.a is charged on the balance and she is supposed to repay by 24 equal monthly instalments determine the amount of each instalment.

(3 marks)

12. Solve for x in the equation $-3\ sin^2x + 8\ cosx = 0$ for $0° \leq x \leq 360°$ **(3 marks)**

13. In the given figure below, O is the centre of the circle and AOBP is a straight line. PT is a tangent to the circle at T.

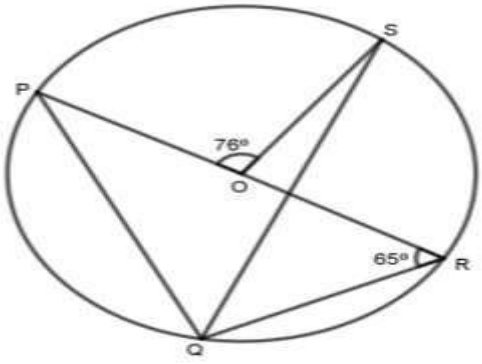


If $PT = 6\ cm$ and $BP = 2\ cm$, find the radius of the circle. **(3 marks)**

14. Draw a line PQ 6cm long and construct the locus of point R such that $\angle PRQ = 60°$.

(3 marks)

15. The figure below shows a circle centre O with POR as the diameter. Angle POS = 76° and angle PRQ = 65°



Giving reasons for your answer, find the size of:

a) $\angle PQS$ **(2 marks)**

b) $\angle PQR$ **(1 mark)**

16. An airplane flies at an average speed of 500 knots due East from P (53.4°N, 40°E) to another point Q. It takes 2 hours 15 minutes to reach point Q. Calculate:

i. The distance in nautical miles it travelled. **(1 mark)**

ii. The longitude of point Q correct to 2 decimal places**.** **(2 marks)**

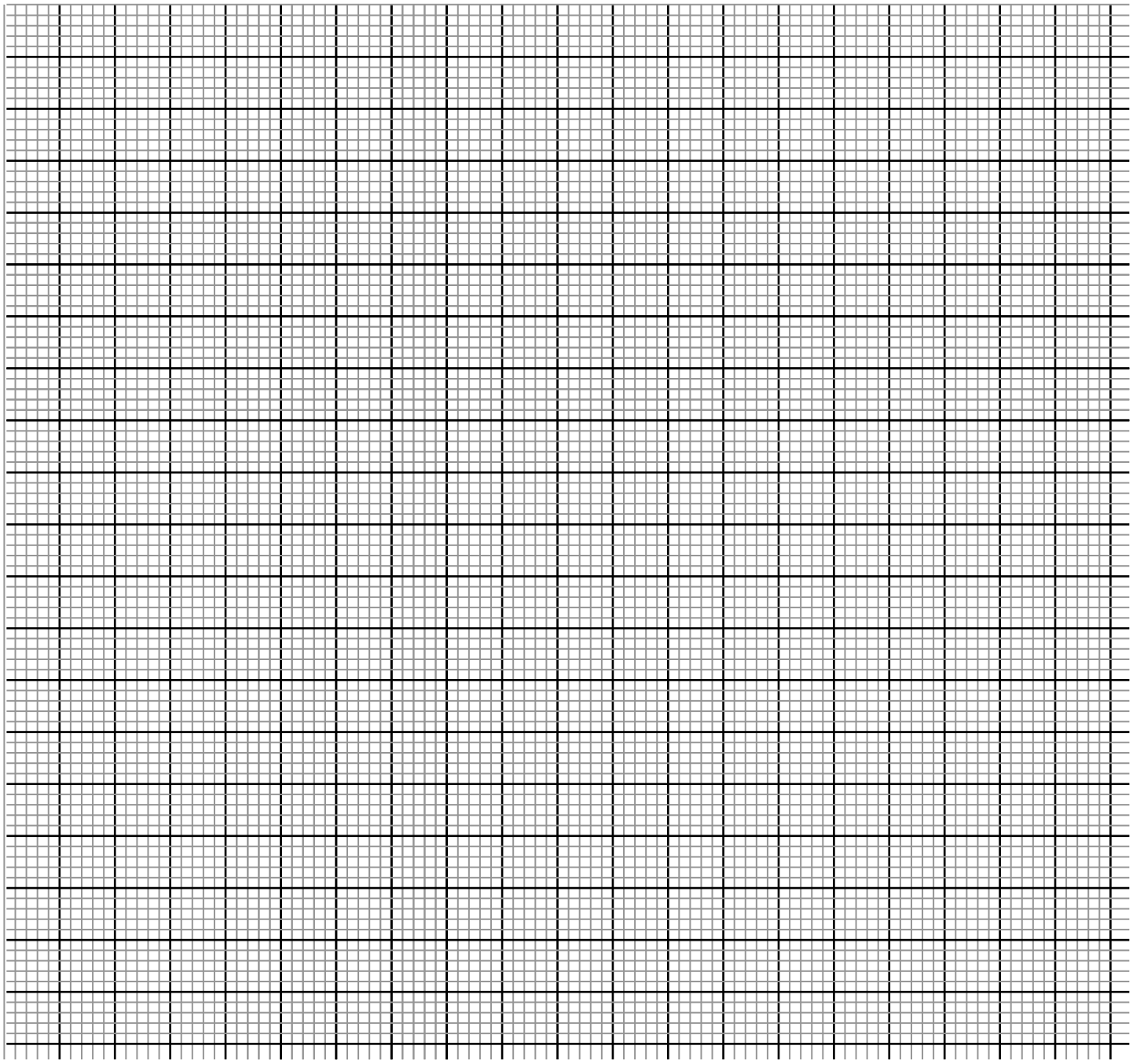
SECTION II (50 marks)

Answer ONLY five questions in this section

17. (a) Complete the table below for the functions $y = 3\cos 2x + 2$ and $y = \sin 2x$, giving your answer values to two decimal places. **(2 marks)**

$x°$	0	30	60	90	120	150	180	210	240	270
$y = 3\cos 2x + 2$		3.5		−1	0.5		5			
$y = \sin 2x$	0	0.87			−0.87		0		0.87	

(b) On the grid provided, draw the graphs of $y = 3\cos 2x + 2$ and $y = \sin 2x$ for $0° \leq x \leq 270°$. **(4 marks)**



(c) Use your graph to solve the equation, $\sin 2x - 2 = 3\cos 2x$ for $0° \leq x \leq 270°$**.** **(2 marks)**

18. The equation of the curve is $y = x^3 + x^2 - x - 1$

a) Determine;

i. The gradient function. **(3 mark)**

ii. The stationary points of the curve (**2 marks)**

iii. The nature of the stationary points **(3 marks)**

b) Sketch the curve **(2 marks)**

19. (a) A quantity Q varies directly as the square of P and inversely as the cube root of R. Given that $Q = 15$ when $P = 6$ and $R = 27$, find P when $Q = 81$ and $R = 125$. **(3 marks)**

(b) The square of a quantity m varies partly as the square of t and partly as the cube of r. Given that $m = 27$, when $t = 3$ and $r = 5$ and $m = 78$ when $t = \sqrt{114}$ and $r = 10$.

i. Find the formula connecting m, t and r. Hence find the possible value of m when $t = 8$ and $r = 15$. **(4 marks)**

ii. Find the percentage change in r when m and t are each decreased by 10%. **(3 marks)**

20. A passenger plane takes off from airport A $(60°N, 5°E)$ and flies directly to another airport B $(60°N, 17°E)$ along the parallel of latitude and then flies due north for 600 nautical miles to another airport C.

(a) Find the position of airport C. **(2 marks)**

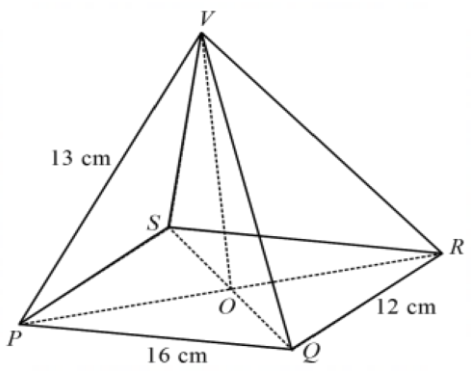
(b) Find the distance between airports A and B along a circle of latitude in nautical miles. **(2 marks)**

(c)If the plane travels at an average speed of 300 knots, find total flight time. **(2 marks)**

(d) Given that the plane left airport A at 9.20 am, find the local time of arrival at airport C. **(2 marks)**

(e) Given the position of another airport D $(70°N, 163°W)$, calculate to two decimal places the shortest distance between airports C and D in kilometers. **(2 marks)**

21. Figure below is a pyramid on a rectangular base. $PQ = 16cm$, $QR = 12cm$ and $VP = 13cm$.



Find

a) The length of **QS**. **(2 marks)**

b) The height of the pyramid to 1 decimal place. **(2 marks)**

c) The angle between **VQ** and the base. (**2 marks)**

d) The angle between plane **VQR** and the base. **(2 marks)**

e) The angle between planes **VQR** and **VPS** **(2 marks)**

22. The vertices of a triangle PQR are P (−3, 2), Q (4, 3) and R (x, y). A transformation M maps triangle PQR onto triangle P′Q′R′ whose vertices are $P'(-8, 6)$, $Q'(5,9)$ and $R'(6, -12)$. a) Find the;

i. Matrix M**.** **(3 marks)**

ii. Coordinates of R. **(1 mark)**

b) Triangle P″Q″R″ is the image of triangle $P'Q'R'$ under a shear with $y - axis$ invariant and $P'(-8, 6)$ is mapped onto $P'(-8, 30)$.

Determine the;

i. Shear matrix. **(2 marks)**

ii. Coordinates of Q and R. **(2 marks)**

iii. The single matrix which maps triangle PQR onto triangle PQR. **(2 marks)**

23. The table below shows the mass of infants in a clinic.

Mass (Kg)	1.0–1.9	2.0–2.9	3.0–3.9	4.0–4.9	5.0–5.9	6.0–6.9	7.0–7.9	8.0–8.9	9.0–9.9
No of kids	2	4	5	7	10	6	3	2	1

a) State modal frequency. **(1 mark)**

b) Calculate the quartile deviation of the data to 2 decimal places. **(4 marks)**

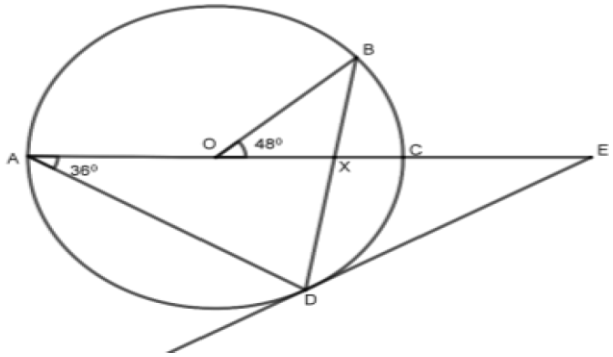
c) Using an assumed mean of 4.45

Calculate to 1 decimal place;

i. Variance. **(4 marks)**

ii. Standard deviation **(1 mark)**

24. In the figure below, O is the centre of the circle. A, B, C and D are points on the circumference of the circle. A, O, X and C are points on a straight line. DE is a tangent to the circle at D. Angle BOC = 48° and angle CAD = 36°.



a) Giving reasons or otherwise, find the value of the following angles:-

i. Angle ADB **(2 marks)**

ii. Angle CBA **(1 mark)**

iii. Angle BDE **(2 marks)**

iv. Angle CED **(3 marks)**

b) It is also given that AX = 12 cm, XC = 4 cm, DB = 14 cm and DE = 20 cm. Calculate DX

(2 marks)

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

COMPUTER STUDIES

451/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

Instructions to Candidates

(a) Write your name and index number in the spaces provided above.

*(b) This Paper consists of **two** sections **A** and **B**.*

*(c) Answer **all** the questions in **section A**.*

*(d) Answer **question 16** (compulsory) and any other **three** questions from section **B**.*

*(e) **All** answers should be written in the spaces provided.*

(f) Candidates should answer the questions in English.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	
TOTAL MARKS		

For Marking Schemes Contact 0746 222 000 / 0742 999 000

SECTION A (40 MARKS)

Attempt ALL questions from this section

SECTION A (40 MARKS) ANSWER ALL THE QUESTIONS IN THIS SECTION

1. State the meaning of the following terms used in computer science **(2marks)**

(a) Software

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……

(b) Drive

……

……

2. a) What is warm booting? **(1mark)**

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b) State three reasons for warm booting. **(2 Marks)**

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3. List two precautions taken against crashing of a HDD. **(2 Marks)**

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4. Give three examples of Web browsers commonly used today to access the internet **(3marks)**

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5. State three ways in which an operating system secures a computer system. **(3 Marks)**

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6. Distinguish between computer onboard devices and peripheral devices. **(2 Marks)**

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7. Explain the difference between Footnote and endnote. **(2 Marks)**

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8. Name two types of non-printable guides used in DTP. **(2 Marks)**

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9. State three causes of data loss in computing. **(3 Marks)**

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10. A school purchased a computer software. State **three** uses of the documentation provided with the software. **(3marks)**

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11. Mary wanted to download his favourite movie from YouTube. State any three factors that may determine how long to complete the download. **(3 Marks)**

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12. Peter a data entry clerk experienced the following errors during typing:

After every calculation, the result was less than the expected number of digits.

a) 345.789654 was given as 345.789

b) 128.73575 was typed as 128.74

i) Identify the error in each case **(2 Marks)**

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ii) State two ways the clerk would have prevented such errors. **(2 Marks)**

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13. List **three** ways in which a farmer can use computers to manage his green house **(3marks)**

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14. i) Define the term field properties. **(2marks)**

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ii) Differentiate between a a validation rule and validation text. **(2marks)**

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15. Describe the following network communication devices.

A hub **(1mark)**

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……

A Switch **(1mark)**

……

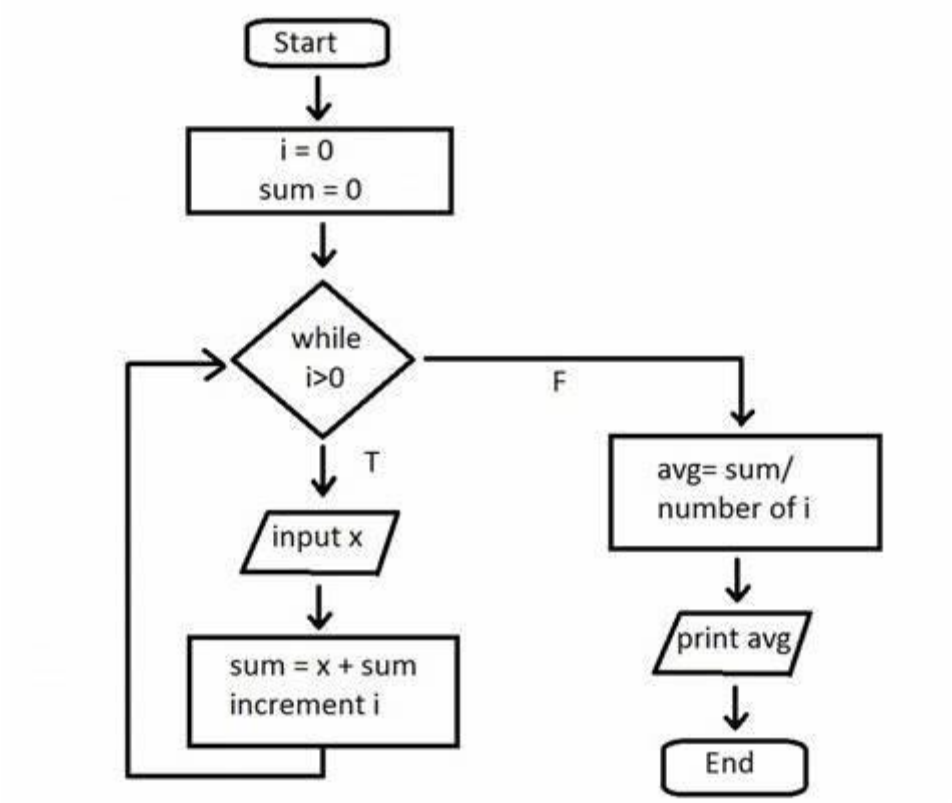
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SECTION B (60 MARKS) Answer Question 16 (compulsory) and any other three questions from this section.

16. a) Using a well labeled flowchart structure, differentiate between Nested IF and IF…THEN…ELSE control structures **(5 marks)**

b) Name two types of flowcharts. **(2marks)**

c) Study the following flowchart and extract a pseudocode from it. **(8marks)**



17. a) Differentiate between data validation and data verification. **(2 Marks)**

b) Briefly explain the following validation techniques **(2 Marks)**

i) Presence check

ii) Range check **(2marks)**

iii) Data Type Check **(2marks)**

c) Differentiate between indexed sequential and direct file organization. **(2 Marks)**

d) State four advantages of distributed processing modes. **(4 Marks)**

e) List **three** types of optical disks **(3marks)**

18. (a) Describe the following terms with reference to security of data:

(i) Log files **(1½ marks)**

(ii) Firewalls. **(1½ marks)**

b) A students' database comprises of students' details table and fees received table as shown below:

Students' details table	**Fees Received table**
Surname	Admission Number
Middle Name	Amount
Admission Number	Date
First Name	Receipt Number
Course	

(i) State the primary key field for each table. **(2marks)**

ii) State the field, which should serve as the linking field for the two tables. **(1mark)**

c) Describe the following terms with respect to computer security:

i) Logic bombs **(2marks)**

ii) Physical security **(2marks)**

iii) Tapping. **(2marks)**

(d) List three functions of antivirus software. **(3marks)**

19. **a)** A student set up a spreadsheet to compare share prices in six companies over five years.

	A	B	C	D	E	F	G	H
1	Name of company	Share price	Share price	Share price	Share price	Share price	Average share price	Highest share price
2	Year:	2005	2006	2007	2008	2009		
3	Global Oil	81	190	305	130	140	169	305
4	GSD	619	722	622	325	324	522	722
5	KLN	60	71	71	63	45	62	71
6	Nesto	316	418	522	600	640	499	640
7	Takkco	149	316	394	202	122	237	394
8	Uniway	122	135	254	365	570	289	570

(i) What formula is in cell G5 to find the mean share price for KLN? **(2marks)**

(ii) What formula is in cell H5 to find the highest share price for KLN? **(2marks)**

(iii) If the data in cell E4 was changed to 425, which cells would be automatically updated? **(2 marks)**

(iv) State the cells that are needed to create a line graph to show the share prices for years 2006 to 2008. **(2 marks)**

(v) The student wants to extend the spreadsheet to include share prices for 2010. Describe how the student would do this. **(2marks)**

b) Ministry of Education is changing the education system in Kenya from 8-4-4 to a new system by using a few schools to test the new system.

i) Identify the type of change over system being used here. **(1mark)**

ii) What would be the advantage of using this changeover strategy. **(2marks)**

c) Distinguish between firmware and device drivers as used in computers. **(2 marks)**

20. a) Give **three** ways of representing signed binary numbers in a computer. **(3marks)**

b) Given the binary number 101011101111011, determine the number of:

Nibbles **(1mark)**

Bytes **(1mark)**

c) Perform the following binary arithmetic and leave your answer in denary form.

i) $1101.101_2 + 1011.01_2 + 111.11_2$ **(2marks)**

ii) $10001.1001_2 - 1011.111_2$ **(2marks)**

iii) Convert $7\,{}^{4}/_{5\ 10}$ to binary **(2marks)**

d) Name the disk management activity described below: **(4marks)**

i) Allows contents of a file to occupy contiguous sectors for faster access disk

ii) Aligns tracks and sectors in a disk

iii) Deletes idle files to create more disk space

iv) Creation of copies of important files on another drive

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

COMPUTER STUDIES

451/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

- ✓ *Write your Name, Admission number, Class, Date and Signature on the top center of each printout.*
- ✓ *Passwords should NOT be used while saving your documents*
- ✓ *This paper consists of TWO questions.*
- ✓ *Answer all questions*
- ✓ *All questions carry equal marks*

FOR OFFICIAL USE

QUESTION	MARK AWARDED
1	
2	
TOTAL	

QUESTION 1

Table 1, **table 2** and **table 3** are extracts of records kept in a HUDUMA Centre for clients, officers and consultations respectively.

Clients numbers	Names	Year of Birth	Gender
0120	Jean	1970	Female
0121	Paul	1982	Male
0122	Alice	1976	Female
0123	Allan	1998	Male

Table 1

Officers numbers	Names
520	Charles
521	Susan
522	James
523	Isaac

Table 2

Consultation Number	Consultation Date	Client Number	Officer Number	Service
101	07/09/201	0120	520	Birth certificate
202	09/09/201	0123	521	Passport
303	13/09/201	0121	522	National ID
405	14/09/201	0120	520	Birth certificate
507	15/09/201	0121	522	National ID
608	16/09/201	0122	521	Passport
704	16/09/201	0123	523	Driving licence
808	17/09/201	0121	522	National ID
901	30/09/201	0122	521	Passport
1021	01/10/201	0123	523	Driving licence

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Table 3

(a) (i)Using a database application package, create a database file named CLIENTSINFO. **(1 mark)**

(ii) Create three tables named CLIENTS, OFFICERS and CONSULTATIONS that will be used to store the data in **table 1**, **table 2** and **table 3** respectively. **(14 marks)**

(iii) Set the primary key for each table. **(3 marks)**

(iv) Create the relationships among the tables. **(2 marks)**

(b) (i)Create a data entry form for each table. **(3 marks)**

(ii) Enter the data in **table 1**, **table 2** and **table 3** into the Clients, Officers and Consultations tables respectively. **(9 marks)**

(c)(i)Create a query named ClientAge to display Clients' Names, Gender and Age on the year of visit. **(4 marks)**

(ii) Create a query named Susandetails to display Clients' Names, Service and Consultation Dates for clients served by Officer Susan. **(3 marks)**

(d) (i) Create a report to display the Clients' Names, Consultation Dates, Services and the Names of the Officers consulted. The records in the report should be grouped by Clients' Names and the number of consultations by each client should be displayed. **(5 marks)**

(ii) Title the report as "Consultations per Client" and save it as Consultations **(2 marks)**

(e) Print the following:

(i) Tables: **Clients**, **officers** and **consultations**; **(1 mark)**

(ii) Queries: **ClientAge** and **Susandetails**; **(1 mark)**

(iii)Report: **Consultations**; **(1 mark)**

(iv)Form: **Consultations**. **(1mark)**

QUESTION 2

(a) Create a new workbook and name it as form 4 computer Exams **(1 mark)**

Name	Class	Adm no.	CAT 1	CAT 2	CAT 3	Total	Average	Class Position	Remarks
John Mwangi	E	7984	80	70	59				
Jane Kuria	W	7896	75	55	72				
Benson Kimani	E	8092	86	59	75				
John Kamau	E	7460	80	79	70				
Betty Maina	W	7892	76	75	80				

Eliza Cate	E	7800	38	48	25				
Mark James	W	8490	37	51	29				
Koech Benson	W	8184	30	86	75				
James Waiyaki	E	8082	25	25	25				
Abuya Ken	E	8083	30	25	25				
Leonard B	W	8047	39	24	25				

b) **Enter** the following data in sheet 1 **(20 marks)**

c) **Rename** the sheet as Term Two results (**1 mark)**

d) Find:

i) Totals **(2 marks)**

ii) Average **(2 marks)**

e) Use the **IF** function to award remarks as follows **(3 marks)**

A student whose average is above or equals 65 is given "excellent"

An average of 55 or above but less than 65 award "average work"

An average less than 55 award "work below average"

f) i) **Award** position to student basing on the average scored. **(3 marks)**

ii) On the last rows enter formulas to count students from both classes. **(2 marks)**

g) **Sort** the students list by class position in ascending order. **(2 marks)**

h) i) **Copy** the entire worksheet onto sheet 2 rename it "lower group". **(2 marks)**

ii) Filter "Lower group" sheet to display students from "E" class and whose average score is below 50. **(4 marks)**

i) **Draw** a bar graph to display the following information. **(3 marks)**

The three cats

Names

Title as "TERM TWO COMPUTER ANALYSIS"

i) **Place** the legend at the bottom of the graph. **(1 mark)**

ii) **Save** the chart on a new sheet and name it graphical analysis. (**1 mark)**

j) **Print**

i) The filtered lower group. **(1 mark)**

ii) The chart. **(1 mark)**

iii) Term Two results sheet. **(1 mark)**

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

HOME SCIENCE

441/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

INSTRUCTIONS TO CANDIDATES

1. The paper consists of three sections
2. Answer all questions in sections A and B, and any two question in section C.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAX. SCORE	CANDIDATE SCORE
A	1 - 19	40	
B	20	20	
C	21-23	40	
TOTAL		100	

SECTION A – 40 MARKS

1.State two signs of a well-groomed person**.** **(2mks)**

……

……

2. Highlight two habits to avoid when using medicine. **(2mks)**

……

……

3. Suggest two ways of preventing fractures. **(2mks)**

……

……

4. Give two known dangers of poor sanitation **(2mks)**

……

……

5. list down three precautionary measures to take when cleaning stainless steel. **(3mks)**

……

……

……

6. Point out two advantages of cooking with electricity. **(2m)**

……

……

7. State three qualities of a well-made cuff. **(3mks)**

……

……

……

8. Give three dangers of excessive weight gain during pregnancy. **(3mks)**

……

……

……

9. highlight two points to bear in mind when planning meals for a bedridden invalid. **(2m)**

……

……

10. State three reasons for complete drying of laundered articles

……

……

……

11. Give two characteristics that make hard water unsuitable for laundry**.** **(2mks)**

……

……

12. Outline two reasons why buffet type of meal service is suitable for a large number of guests. **(2mks)**

……

……

……

13. Give three points to bear in mind when making openings**.** **(3mks)**

……

……

……

14. Suggest two ways of preventing infection in a baby through the umbilical cord. **(2mks)**

……

……

15. Point out two factors that may interfere with a family budget. **(2mks)**

……

……

16. State two points to remember when darning articles **(2mks)**

……

……

17. Give two factors to consider when choosing sleeves. **(2mks)**

……

……

18. State two importance of having labels on manufactured goods**.** **(2mks)**

……

……

SECTION B- 20 MARKS (COMPULSORY)

19. You have set aside one Saturday morning to carry out a number of tasks;
Explain how you will:-

(a) Launder a loosely colored cotton leso**.** **(8mks)**

(b) Clean a polished wooden table **(7mks)**

(c) Clean an earthenware cooking pot**.** **(5mks)**

SECTION C – 40 MARKS

Answer only two questions from this section

20(a) Explain four factors to consider when using left over foods**.** **(8ms)**

(b) Explain four ways of conserving nutrients during food preparation and cooking of leafy vegetables **(8mks)**

(c) Outline four limitations of complimentary feeding**.** **(4mks)**

21(a) Explain three rules to be observed when stewing beef. **(6mks)**

(b) Discuss three common problems of breast feeding . **(6mks)**

(c)Outline four reasons for using interfacings on garments. **(8mks)**

22(a) Explain on four disadvantages of building maisonette houses**.** **(8mks)**

(b) Discuss four factors that determine the efficiency of a detergent **(8mks)**

(c)Identify four functions of eggs in flour mixtures**.** **(4mks)**

END

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

HOME SCIENCE

441/2

PAPER 2

TIME: 2½ HOURS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education. (KCSE)

CONFIDENTIAL

HOMESCIENCE 441/2

CLOTHING CONSTRUCTION

Provide each student with:

1) Plain light weight fabric 70cm long by 90cm wide

2) Sewing cotton thread to match the fabric

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

HOME SCIENCE

441/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

HOMESCIENCE 441/2

CLOTHING CONSTRUCTION

A pattern of a child's dress is provided. You are advised to study the sketches, instructions and the layout before you begin the test.

Materials provided

1. Pattern Pieces.

A. Skirt front

B. Skirt back

C. Front yoke

D. Back yoke

E. Collar

F. Front neck facing

G. Back neck facing

H. Frill

2. Plain light weight cotton fabric 90cm wide and 70cm long.

3. Sewing cotton thread to match the fabric.

The Test.

Using the materials provided, cut out and make the LEFT HALF of the child's dress to show the following processes:

a) The joining of the front yoke to the front skirt and back yoke to the back skirt using unneatened overlaid seam (ease in the skirts to the yoke)

b) The making of the shoulder seam using a double stitched seam.

c) The making of the side seam using an open seam.

d) The preparation of the collar.

e) The attachment of the collar using the facings.

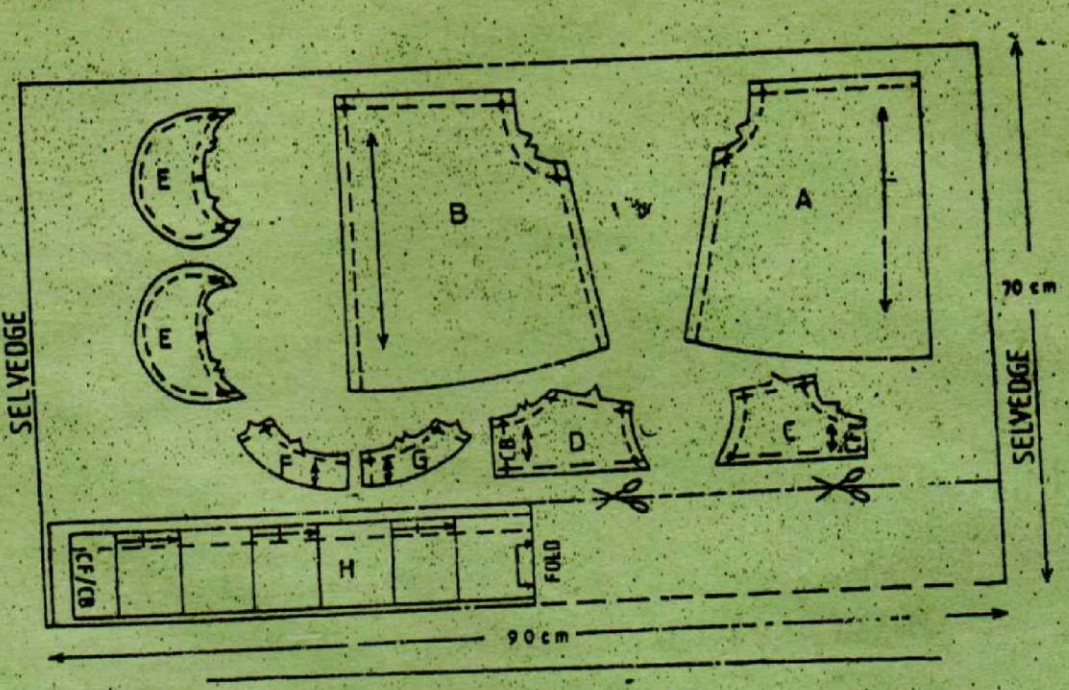
f) The preparation of the frill and its attachment using an overlaid seam. Neatened half of the seam only.

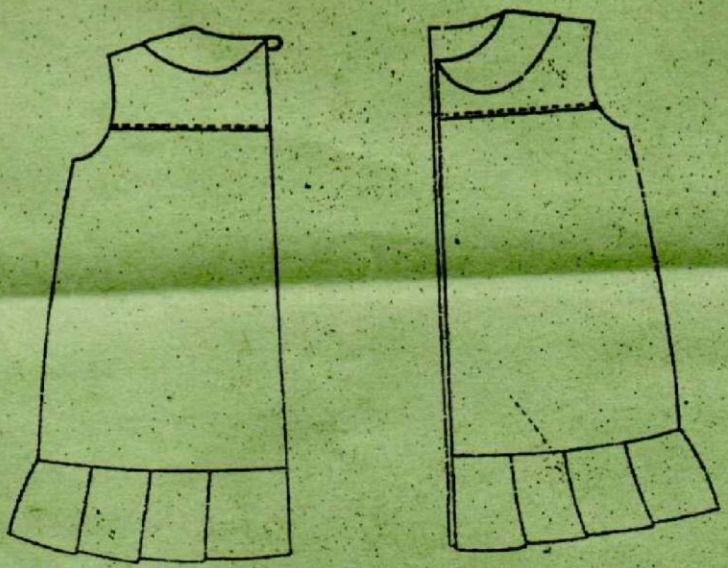
g) Making a loop for a 1cm button.

OMIT hem management.

At the end of the examination, firmly sew onto your work, on a single fabric, a label bearing your Name, Index Number. Remove the needle, pins and loose threads from your work. Fold your work neatly and place it in the envelope provided. Do not put scraps of the fabric in the envelope. Do not seal the envelope.

THE LAYOUT (Not drawn to scale)





BACK VIEW

FRONT VIEW

KCSE 2025 CEKENAS MOCK

(CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM)

HOME SCIENCE

441/3

PAPER 3

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education. (KCSE)

443

FOOD AND NUTRITION

(HOME SCIENCE PRACTICAL)

TIME 1¾ HRS

Planning session 30 min

Practical session 1¼ hrs

INTRODUCTION TO CANDIDATES

1. Read the test carefully

2. Write your name and Admission No in every sheet of paper used.

3. Text books and Recipes may be used during the planning session as reference materials

4. You will be expected to keep to your order of work during the practical session.

5. You are only allowed to take away your reference materials at the end of the planning session.

6. You are not allowed to bring additional notes to the practical session

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THE TEST

You are left at home with your sister , using the ingredients listed below prepare , cook and serve a two dish meal for the 2 of you. Include a nutritious drink.

INGREDIENTS

Rice/ potatoes

Green leafy vegetables/ cabbage

Carrots

Dhania

capsicum

Onions

Tomatoes

Salt

Oil

Beef/chicken

Oranges/pineapples

Spices of choice

Corgettes

Sugar

Use separate sheets of paper for each task listed below and a carbon paper to make duplicate copies.

Proceed as follows:

1. 1dentify the dishes
2. Write down your order of work.
3. Make a list of food stuffs, materials and equipment you will require.

THE END

CALL/TEXT/WHATSAPP

0746 222 000

0742 999 000

mwalimuconsultancy@gmail.com

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