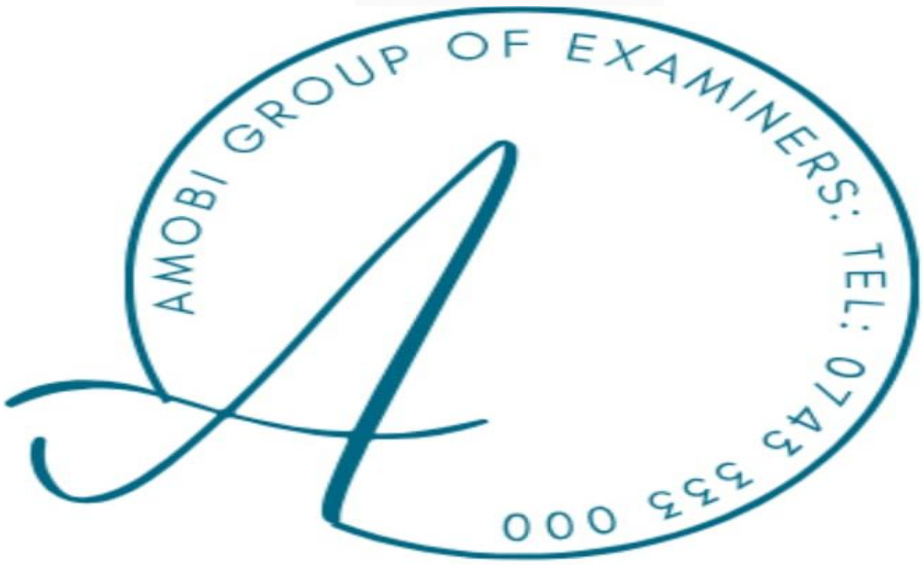




2025 NAKURU JOINT MOCK EXAMS

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ORDER OF THE 12 SUBJECTS TESTED

(ALPHABETICALLY ARRANGED)

1. **AGRICULTURE**
2. **BIOLOGY**
3. **BUSINESS STUDIES**
4. **CHEMISTRY**
5. **COMPUTER**
6. **C.R.E**
7. **ENGLISH**
8. **GEOGRAPHY**
9. **HISTORY**
10. **KISWAHILI**
11. **MATHS**
12. **PHYSCIS**

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NAME _____

CLASS_____ADMNO_____ SIGN _____DATE_____

NAKURU JOINT EVALUATION MOCK 2025

443/1 AGRICULTURE PAPER 2 FORM FOUR

2025 **TIME: 2 HOURS**

Instructions

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

b. This paper consists of 3 section A, B and C

c. Answer all questions in section A and B

d. Answer any two questions in section C

e. ALL answers must be written in the spaces provided

f. This paper consists of 14 printed pages

g. Answer all questions in English

h. Check if you have all the questions from number 1 to number 23

For Examiners Use Only			
SECTION	**QUESTION**	**MAXIMUM SCORE**	**CANDIDATE SCORE**
A	**1-16**	**30**	
B	**17-20**	**20**	
C		**20**	
		20	
Total score		**90**	

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SECTION A (30 MARKS)

Answer all questions in this section in the spaces provided.

1. State **four** entries in a breeding record in pigs production. (2mks)

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2. Give **three** ways of classifying pasture. (1½ mks)

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3. Name **two** liming materials used in the farm. (2mks)

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4. Name **four** financial books used in farm account. (2mks)

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5. Name **four** classes of livestock farming. (2mks)

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6. State **four** measures of National economic development of a country. (2mks)

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7. Name **four** fresh market tomato varieties. (2mks)

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8. State **four** disadvantages of chemical weed control. (2mks)

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9. State four importance of practicing Agroforestry. (2mks)

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10. State **three** types of production functions in Agriculture. (1½ mks)

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11.State **four** advantages of Landlordism and tenancy land tenure system. (2mks)

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12. State **four** effects of living organism in crop production. (2mks)

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13. Name **four** types of Terraces used in soil and water conservation. (2mks)

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14. Name **two** types of pruning in coffee. (2mks)

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15. State **three** functions of Agricultural finance cooperation (AFC). (1½ mks)

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16. State three sources of capital for starting Agricultural activity. (1½ mks)

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SECTION B (20 MARKS)

Answer all questions in this section in the spaces provided.

17. The diagrams below are planting materials use in crop propagation,

A



B



i) Name the planting materials A and B above

A …….. (1mk)

B …….. (1mk)

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ii) Apart from grass, name other crop propagated using material **B** (1mk)

……

iii) State any two factors that determine rooting in A. (2mks)

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18. Below is practice done during management of agroforestry tree seedling in a nursery, use it to answer the questions that follows.



i) Identify the practice. (1mk)

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ii) State three importance of the practice. (3mks)

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iii) State one disadvantages of the practice. (1mk)

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19. Some students carried an experiment in the laboratory, the following procedure was followed.

i) Put about 50g of a garden soil in 250cm^3 measuring cylinder.

ii) Added about four times its volume of water containing sodium carbonate.

iii) Covered the cylinder with the hand and shaked vigorously for about two minutes.

iv) Placed the cylinder on the bench and for one hour to allow for the content to settle as shown below.



i) State the aim of the experiment. (1mk)

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ii) What is the role of sodium carbonate in the experiment? (1mk)

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iii) Explain the observation in the cylinder after the one hour. (2mks)

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iv) Identify a control experiment for the above set up. (1mk)

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20. The diagram below represents a weed which is commonly found in the farm.



i) Name the weed above. (1mk)

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ii) Classify the weed based on morphology. (1mk)

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iii) Name two crops commonly associate with the weed. (2mks)

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iv) Identify the effect of the weed on the above named crops. (1mk)

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SECTION C (40 MARKS)

Answer any two questions from this section in the spaces after the last question

21. (i) Describe various ways of classifying pests. (5mks)

(ii) State **seven** effects of weeds. (7mks)

(iii) Describe **four** ways by which the government may help farmers to increase maize production for food security in Kenya. (8mks)

22. (i) Describe factors to consider when sitting a nursery bed. (5mks)

(ii) Describe water treatment process. (10mks)

(iii) State any **five** principles of cooperative societies. (5mks)

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23. Describe beans production under the following sub-headings

i) Selection and preparation of planting material. (3mks)

ii) Land preparation. (3mks)

iii) Planting. (3mks)

iv) Post harvest practices. (4mks)

v) State **seven** effects of pest in crop production. (7mks)

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NAME _____ CLASS_____

ADMNO_____ SIGN _____DATE_____

NAKURU JOINT EVALUATION MOCK 2025

443/2 AGRICULTURE PAPER 2 FORM FOUR

2025 **TIME: 2 HOURS**

Instruction to Candidates.

(a) Write your Name and Adm Number in the spaces provided at the top of this paper.

(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** the questions in Section **A** and B

(e) Answer question **TWO** questions from Section **C**.

(f) All answers should be written in the spaces provided on the question paper.

(g) This paper consists of 6 printed pages. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

For Examiner's Use Only

SECTION	QUESTION	STUDENTS SCORE
A	1-16	
B	17-20	
C	21	
	22	
	23	
TOTAL	90	

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SECTION A: ANSWER ALL QUESTIONS

1. State four physical characteristics of Merino sheep (2mark)

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2. State four reasons why doper sheep breeds are good for mutton (2marks)

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3. Name four causes of livestock diseases marks)

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4. Identify five control measures of intermediate host of liver flukes (2marks)

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5. Give four characteristics of succulent roughages (2marks)

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6. Give two predisposing factors of mastitis diseases in a cow (2marks)

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7. State four factors that determine the amount of feed an animal should take (2marks)

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8. Outline four advantages of artificial insemination in cattle management (2marks)

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9. State three chemical methods of timber treatment (1 ½ marks)

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10. Name four systems of tractor engine (2marks)

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11. State three types of specialized feeding practices in livestock (1 ½ marks)

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12. Identify two importance of guard rails in a furrow pen (1mark)

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13. Name two equipment that are used to handle cattle in an agricultural exhibition (1mark)

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14. State three characteristics of clean milk (1 ½ marks)

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15. Identify four functions of gear box (2marks)

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16. State three functions of rumen in ruminant animals (1 ½ marks)

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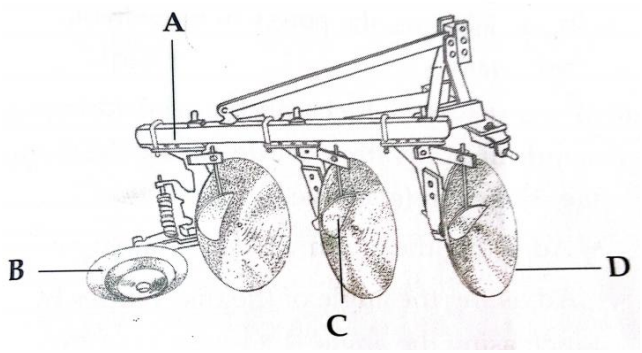
17. Give an appropriate term that refers to the following (2marks)

a. Young one of a rabbit _____
b. Mature male goat _____
c. Mature male pig _____
d. Mature female rabbit _____

SECTION B: ANSWER ALL QUESTIONS

18. Below is a farm implement study it and answer the questions that follow

a) Identify the implement (1mark)



Name the parts labeled ABC and D (2marks)

_____

_____

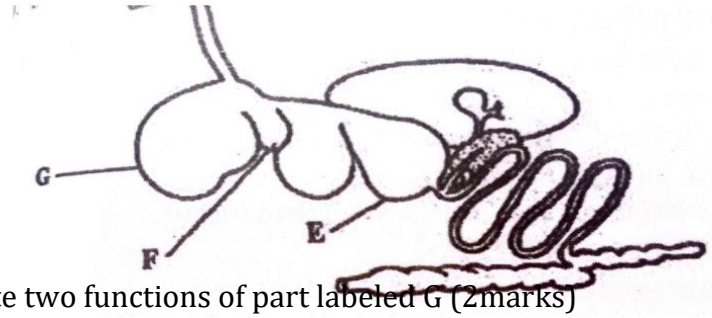
b) Name two adjustments that can be made of the implement to increase the depth of ploughing (2marks)

_____

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19. Below is an illustration of the digestive system in livestock



a) State two functions of part labeled G (2marks)

_____

_____

b) Identify the labeled parts F and E. (2marks)

_____

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The diagram below illustrates a calf rearing practice



a) Identify the practice illustrated below (1mark)

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b) Describe the procedure followed in the feeding practice named in (a) above (3marks)

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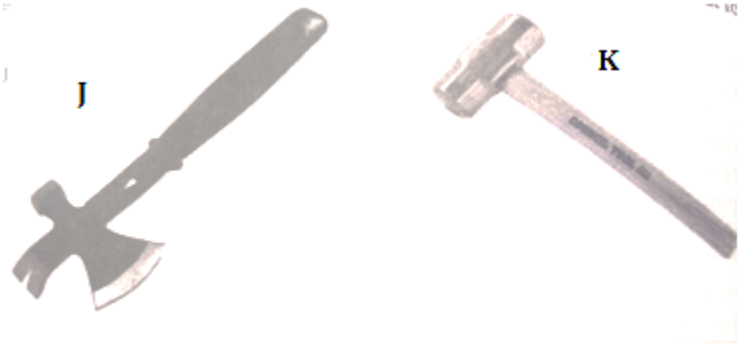
_____

c) Identify three precautions in the rearing practice (1mark)

_____

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20. The diagrams below shows farm tools. Study them and answer the questions that follow.



a) Identify tool J and K (2marks)

_____

_____

b) Classify the tools under woodwork tools and equipment (2marks)

_____

_____

c) State two uses of the tools shown above (2marks)

_____

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SECTION C: Answer question **TWO** questions

21. Discuss East coast fever disease under the following sub headings

i. Causal organism (1mark)
ii. Name the vector of the diseases (1mark)
iii. Symptoms attack (5marks)
iv. Control measures and treatment (3marks)

b. Describe the life cycle of two host ticks (5marks)

c. State any five maintenance practices of a fish pond (5marks)

22. a) Explain any five factors that should be considered when siting an apiary (10marks)

b) Describe six ideal requirements of an ideal calf pen (6marks)

c) List four causes of stress in poultry (4marks)

23. Discuss the management of a brooder before the arrival of chicks (5marks)

b) Describe Five daily maintenance of a tractor (10marks)

C) State the functions of any five parts of a zero grazing unit (5marks)

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NAME…… ADM…….

DATE…… SIGN…….

FORM 4 BIOLOGY
PAPER 1
(THEORY)
2025
TIME: 2 HOURS

NAKURU JOINT EVALUATION MOCK 2025

INSTRUCTIONS TO CANDIDATES:

(a) Write your **Name**, **ADM 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

1. State why it is difficult to calculate the respiratory quotient in plants **(2mark)**

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2. Name the class to which termites belong. **(1 mark)**

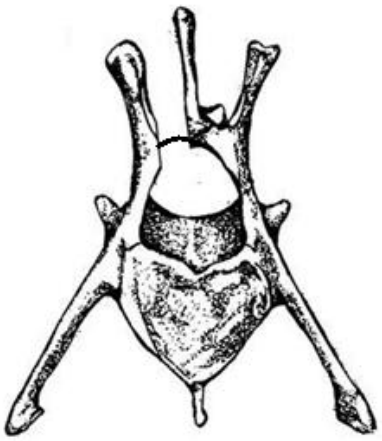
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3. State the function of a contractile vacuole in amoeba **(1 mark)**

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4. The figure below shows the frontal view of a certain vertebra.



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a) Identify the vertebra **(1 mark)**

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b) Give two reasons for your answer in 4(a) above **(2 marks)**

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5. Explain why an adult elephant flaps its ears twice as much as its calves. **(3 marks)**

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6. Explain why a human male continues to have a deep voice even after vasectomy **(2 marks)**

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7. What is the function of the Eustachian tube in the human ear? **(2 mark)**

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8. Briefly explain how colchicine causes polyploidy. **(2 marks)**

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9. State two causes of drug resistance in disease causing micro-organisms. **(3 marks)**

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10. Name the part of the brain responsible for regulating body temperature. **(1 mark)**

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11. Tendrils of passion fruit stems curl around stems of other upright plants.

(a) Which type of response is shown by these tendrils? **(1 mark)**

……..

(b) Name a hormone that is involved in the response named above. **(1 marks)**

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12. State the function of mitochondria in a cell **(2 mark)**

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13. State the agent of pollination in a maize plant. **(1 mark)**

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14. Name two components of the xylem tissue. **(2marks**

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15. What is the role of bile salts in digestion? **(2 mark)**

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16. Give two roles of the gynecophoric canal in male Schistosoma. **(2 marks)**

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17. What is the significance of the ligament in the mammalian eye? **(2 mark)**

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18. Give one advantage of placing a cover slip over the specimen. **(2 mark)**

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19. Explain why the trachea has rings of cartilage. **(2 mark)**

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20. State four differences between mitosis and meiosis **(4 marks)**

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21. Give two reasons why blood from a donor is screened before transfusion. **(2 marks)**

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22. State two roles of the ciliated cells in the human respiratory tract. **(2 mark)**

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23. Name the characteristic of living organisms illustrated when sporangium in Rhizopus bursts to release spores. **(1 mark)**

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24. Name two structures that facilitate gaseous exchange in plants. **(2 marks)**

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25. Name one hormone in the human body that functions under a positive feedback mechanism.

(1 mark)

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26. A girl could clearly read a book placed 10 cm away but could not identify her friend 20 metres away.

(a) What eye defect was she suffering from? **(1 mark)**

……

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(b) State two causes of the above defects **(2 marks)**

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(c) How can the eye defect named above be corrected? **(1mark)**

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27. Name the two end product of anaerobic respiration in animals. **(2 mark)**

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28. Explain why oxygen is important in absorptions of mineral salts from the soil **(2 mark)**

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29. What is the function of a lens in a light microscope? **(1 mark)**

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30. Give a reason why biological knowledge is useful in fostering international cooperation. **(2 mark)**

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31. The apparatus below is used in biological studies



a) Identify the apparatus and state its functions **(2 marks)**

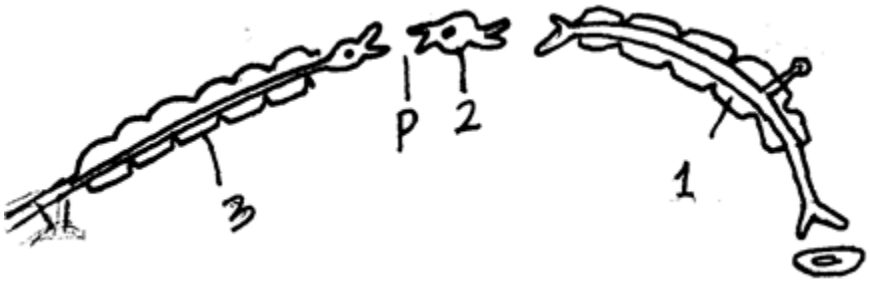
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32. In a maize the gene for purple colour is dominant to the gene for white colour. A pure breeding maize plant with purple grains was crossed with heterozygous plant. Using letter **G** to represent the gene for purple colour work out the genotypic ratio of the offspring. **(4 marks)**

33. The diagram below shows three different types of neurons along a reflex.



a) Identify the neuron labeled 1, 2 and 3 **(3 marks)**

1.....

2.....

3.....

b) Using arrow show the direction of impulse transmission on the diagram. **(1 mark)**

c) Name the part of the spinal cord where the cell bodies of neuron 2 and 3 are located.

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c) Name the part labeled P **(1 mark)**

d) Describe the transmission impulses across the part labeled P. **(4 marks)**

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34. Explain why Palisade cells are cylindrical shaped and arranged with long axis perpendicular to the leaf surface. **(2 marks)**

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35. Explain the effects of dumping untreated sewage into water sources like river. **(3 marks)**

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NAME……..

ADM……. **DATE**…… **SIGN**…….

FORM 4 BIOLOGY
PAPER 2
(THEORY)
2025
TIME: 2 HOURS

NAKURU NORTH JOINT EVALUATION MOCK 2025

INSTRUCTIONS TO CANDIDATES:

(a) Write your **Name**, **ADM Number** in the spaces provided above.

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

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

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

(e) In Section B answer question **6 (Compulsory)** and either question **7** or **8** in the spaces provided after question **8**.

1. Sickle cell anaemia is a hereditary disease due to a substitution of a gene which changes normal haemoglobin **(Hb^A)** to abnormal haemoglobin **(Hb^S).** The red blood cells of people with sickle cell anaemia are sickle shaped.

a) What are the genotypes of the offsprings from a man with sickle cell trait (carrier) and a normal woman. Show your working. (4 marks)

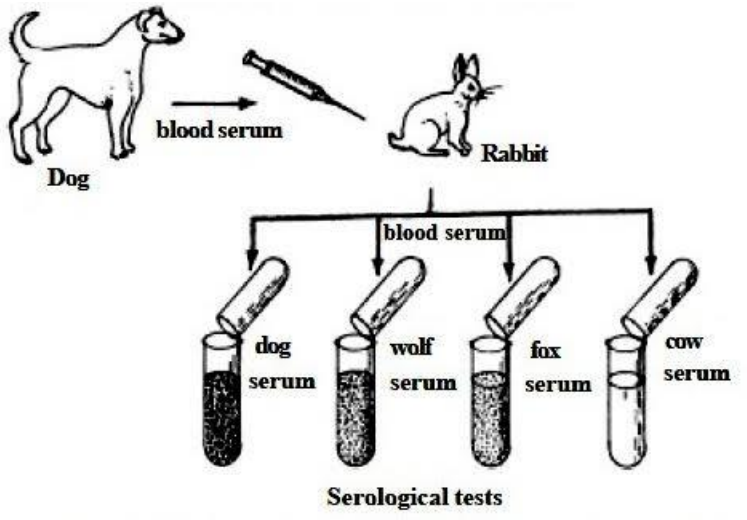
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b) What is the probability of getting an offspring who is in heterozygous condition? Give your answer in percentage form. (1mark)

c) The incidence of sickle cell disease coincides with the high incidence of malaria in tropical areas of the World, particularly among the black African. Sickle cell trait (heterozygous state) provides resistance to malaria which is a major cause of death in tropical areas. Explain. (2 marks)

d) Why do mature red blood cells do not undergo cell division (1 mark)

2. The figure below represents a serological test done to determine the evolutionary relationships of dog with wolf, fox and cow.



a) State the evidence of organic evolution illustrated by the test above (1 mark)

b) How do serological tests help infer evolutionary relationship? (3marks)

c) Which animal is phylogenetically closer to the dog? Explain (2 marks)

d) A wolf belongs to genus Canis, while a fox belongs to the genus Vulpes. The two do not have a successful mating and fertilization, give a reason (2 marks)

3. An animal cell obtained from cheek was placed in a microscope slide, methylene blue was added to stain the nucleus and cytoplasm.

a) What was the purpose of staining the cell before viewing them under microscope (2 marks)

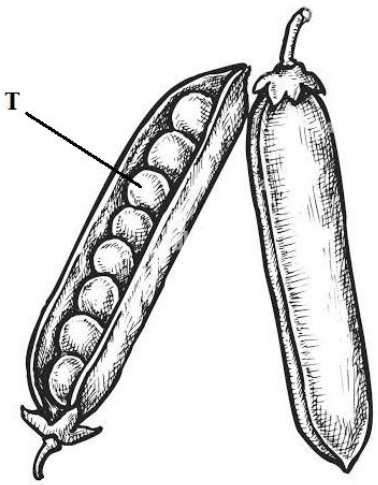
b) Name the organelles present in animal cell but absent in plant cell (2marks)

c) The cell was viewed under a light microscope using objective lens of X40 and eye piece lens of X15. Determine the total magnification of the image (2marks)

d) Name the part of a light microscope used to control the amount of light that illuminate the specimen (1 marks)

e) Name the part of the eye that has the same function as the part mentioned in 3(d) above (1 mark)

4. Study the below diagram of a fruit from a certain plant.



a) Name the type of fruit (1 mark)

b) i) How is the shown fruit dispersed (1 mark)

ii) Describe how the process identified above takes place (2 marks)

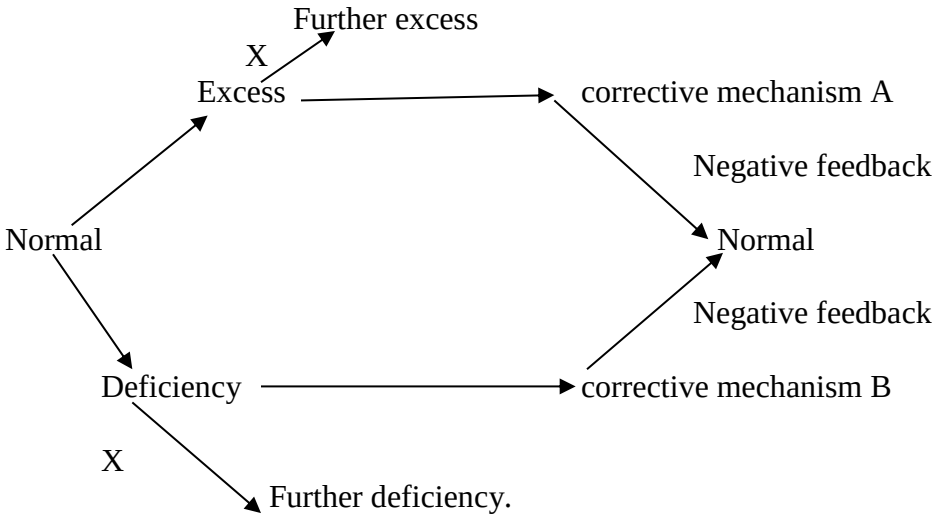
c) Name the part labeled T (1 mark)

d) i) State the type of placentation found in above fruit. (1 marks)

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ii) Explain how the placentation type named above helps in seed development (2 marks)

5. Study the diagram below and answer the questions that follow



a) Name the principle labeled X (1mark)

b) If the above diagram represented blood sugar regulation

(i) State the corrective mechanisms carried out at A (2marks)

ii) The condition that may result from the further excess (1mark)

iii) The hormone that would be responsible for correcting the deficiency (1mark)

c) Give the reasons as to why plants have less elaborate excretory systems as compared to animals (3marks)

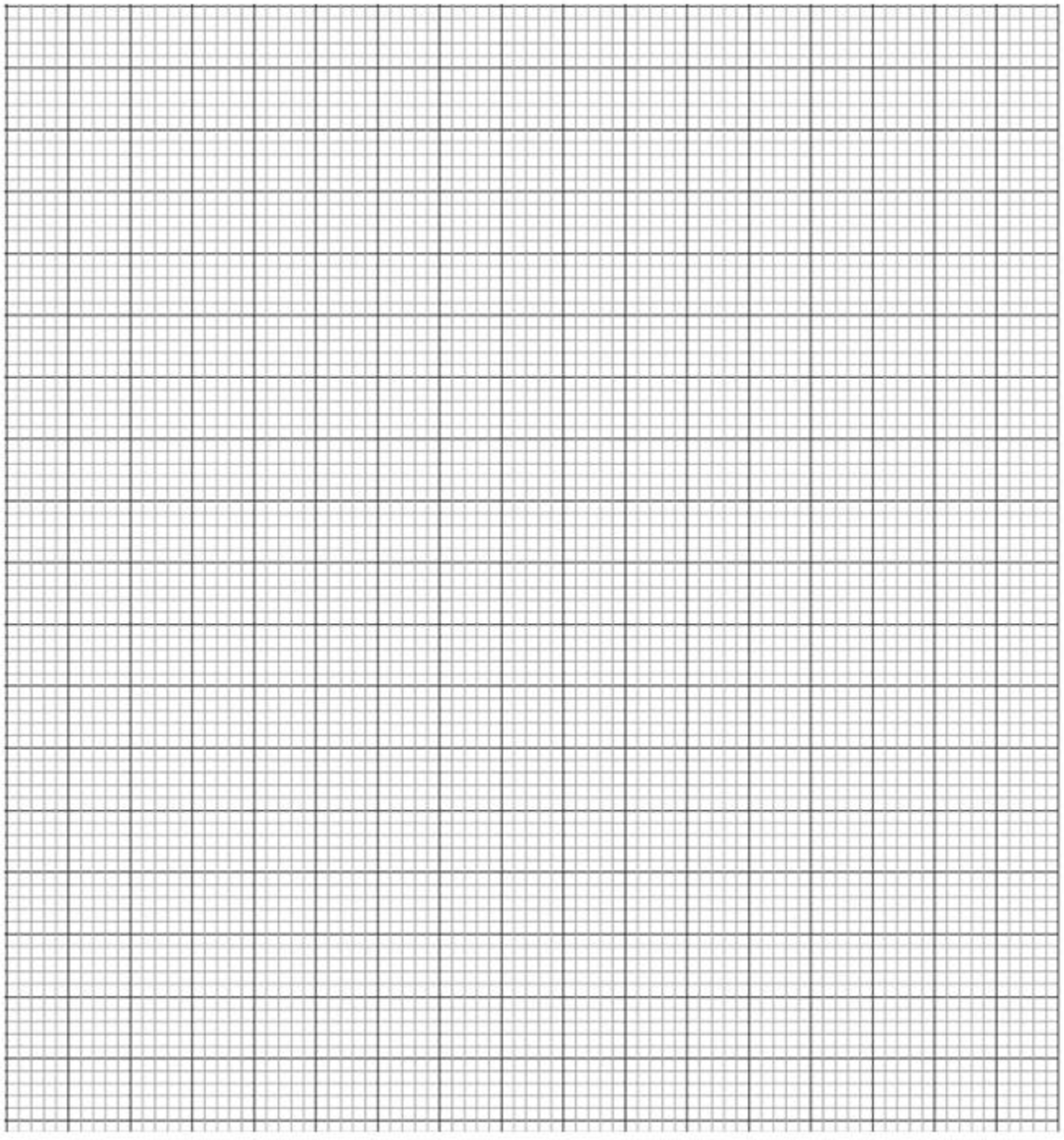
SECTION B
ANSWER QUESTION 6 COMPULSORY, AND ANY OTHER.

6. The table below shows the rate of enzyme activity on substrate at different temperature values. (Temperature in ^{0}c against rate of reaction in milligram per minute)

temp	5	15	25	30	35	40	45	50	60
Mg/min	0.5	1.3	2.4	3.1	3.7	4.1	4.1	2.7	0.0

a) Using a suitable scale, draw a graph of the rate of enzymes reaction against temperature

(6 marks)



b) What is the optimum temperature value for this enzyme? (Show how you arrived at your answer) (2 marks)

c) Suggest a reason for the results obtained at 60^0C (2mark)

d) i) If the temperature previously kept at 60^0C was lowered to 35^0C. How would you expect the results to be? (2 marks)

ii). Explain your answer in d (i) above (2 marks)

e) What products are formed by the complete digestion of sucrose? (2 marks)

f) Besides temperature name other four factors that affect the rate of enzyme reactions. (4 marks)

7. a) Describe how locomotion occurs in a finned bony fish like Tilapia (16 marks)
   b) How is a guard cell structurally adapted for gaseous exchange? (4 marks)

8. Explain the process of double fertilization in flowering plants (20 marks)

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Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 For Marking Schemes

Name: _____

Adm No: _____**Candidate's Signature**: _____ **Date**: _____

BIOLOGY

PAPER 3

FORM 4

Time: 1 HOUR 45 MIN

NAKURU JOINT EVALUATION MOCK 2025

INSTRUCTIONS TO CANDIDATES

Answer all the questions in the spaces provided.

You are required to spend the first 15 minutes of the 1 ¾ hours allowed for this paper reading the whole paper carefully before commencing your work.

Additional pages must not be inserted.

FOR EXAMINERS USE ONLY.

Question	Maximum score	Candidates score
1	17	
2	09	
3	14	
Total score	**40**	

This paper consists of 6 printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing

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1. You are provided with specimen P and Q. Examine them carefully and answer the questions that follow.

(a). State three observable differences between P and Q. (3 marks)

Specimen P	**Specimen Q**

(b) Identify the parts of the flower from which specimen **P** and **Q** developed. (2 marks)

P ----------

Q ----------

(c i). Make a longitudinal section of specimen P. Draw a well-labelled diagram of one half with all its Contents intact. (4 marks)

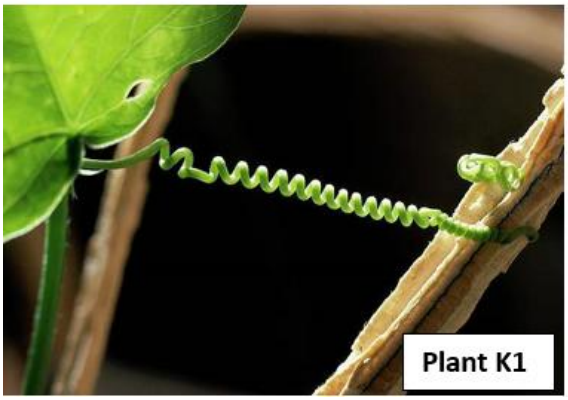
(ii). State the functions of any two structures in (c) (i) above. (2 marks)

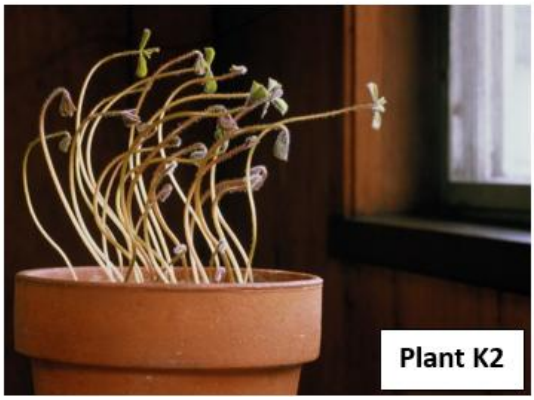
(d). Using a mortar and pestle crush specimen Q, add 5ml distilled water to make a **solution Q** and carry out appropriate tests using the reagents provided. (6 marks)

Test	Procedure	Observation	Conclusion

2. Study the photos below.

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a) Name:-

i) The stimulus operating in **Plant K1.** (1 mark)

-

ii) The type of response being investigated in **Plant K2.** (1 mark)

--

iii) Suggest a control set up for **Plant K2** investigation. (1 mark)

---

b) Describe the role of auxins in the response exhibited by **Plant K1.** (4 marks)

---

c) What is the biological value of the tropisms evident in: -

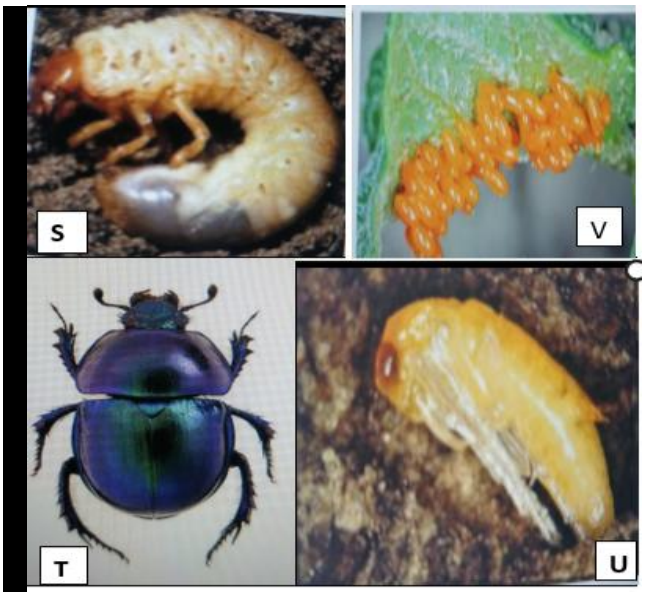
i) **Plant K1** (1 mark)

---

ii) **Plant K2** (1 mark)

---

3. Below are photos of of a certain arthropod at different stages of its life cycle.



a) Identify the stage of the life cycle represented by organism **S**. (1 mark)

---

b i) Name the stage that immediately preceed and succeed organism S in the life cycle. (2 marks)

Preceeding stage

Succeeding stage.

---

ii) What name is given to the complete life cycle of the arthropod? (1 mark)

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c) Name the gaseous exchange system of orgaism **S**. Give a visible featuret that supports your answer.
(2 marks)

---

d i) What type of food does organisms **S** feed on? Give a reason to support your answer.
(2 marks)

---

ii) State the significance of stage **U** in the life cycle of the beetle. (2 marks)

---

iii)How is specimen T adapted to locomotion in its habitat ? (2 marks)

---

e) State the role of the following in the life cycle of the arthropods. (2 marks)

i) Juvinile hormone.

---

ii) Moulting stimulating hormone.

NAME: _____

ADM NO: _____**CLASS:** _____**DATE:** _____ **SIGN:** _____

NAKURU JOINT EVALUATION MOCK 2025

BUSINESS PAPER 1 (565/1)

FORM FOUR

2025

ANSWER ALL THE QUESTIONS IN THE SPACES PROVIDED **TIME: 2 HOURS**

---

1. State four circumstances under which one may decide to start a personal business. (4 marks)

i) ……

ii) ……

iii) ……

iv) ……

2. State four elements in the demographic environment. (4 marks)

i) ……

ii) ……

iii) ……

iv) ……

3. Highlight four factors to be considered when selecting office equipment. (4 marks)

i) ……

ii) ……

iii) ……

iv) ……

4. Outline four factors that may hinder the growth of entrepreneurship in Kenya. (4 marks)

i) ……

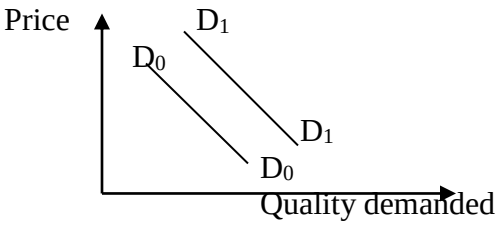
ii) ……

iii) ……

iv) ……

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5. Study the diagram below.



State four factors that may lead to the scenario above. (4 marks)

i) ……

ii) ……

iii) ……

iv) ……

6. State four internal sources of public finance. (4 marks)

i) ……

ii) ……

iii) ……

iv) ……

7. Outline four causes of cost-push inflation. (4 marks)

i) ……

ii) ……

iii) ……

iv) ……

8. State four reasons why businesses may prefer to use email instead of postal mail. (4 marks)

i) ……

ii) ……

iii) ……

iv) ……

9. Outline four benefits of trade to the economy of Kenya. (4 marks)

i) ……

ii) ……..

iii) ……

iv) ……

10. Identify the business units that match the description given in the following table. (4 marks)

Description	Business unit
a) In the event of a member's death business has to be dissolved.	
b) Can only start operating once only it receives a certificate of incorporation.	
c) Managed by a committee of nine members who are elected in an annual general meeting.	
d) Formed by a minimum of seven members with no maximum membership.	

11. Highlight four members that a government may take to reduce the mortality rate in a country. (4 marks)

i) ……

ii) ……..

iii) ……

iv) ……

12. List four types of life assurance policies. (4 marks)

i) ……

ii) ……..

iii) ……

iv) ……

13. Outline four methods used by the government to protect consumers from exploitation. (4 marks)

i) ……

ii) ……..

iii) ……

iv) ……

14. State four reasons why countries may decide to trade with each other. (4 marks)

i) ……

ii) ……..

iii) ……

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iv) …….

15. The following information was extracted from the books of Gathioro business on 31st March 2018. (4 marks)

	Kshs
Stock (01/ 04/ 17)	10,000
Stock (31/ 03/ 18)	9,000
Purchases	14,500
Sales	21,000

Calculate;

i) Margin

ii) Rate of stock turnover. (2 marks)

16. Identify the national income measurement approach under which each of the following items would be considered. (4 marks)

a) Wages and salaries –

b) Value of intermediate goods –

c) Transfer payments -

e) Expenditure on imports –

17. State four conditions that could be give a firm monopoly power. (4 marks)

i) …….....

ii) ……..

iii) ……

iv) …….

18. Outline four advantages of public warehouse. (4 marks)

i) ……

ii) ……..

iii)……

iv) ……

19. State four essentials of transport. (4 marks)

i) ……

ii) ……..

iii) ……

iv) ……

20. Identify the book of original entry prepared from each of the following source documents. (4 marks)

Source documents	Book of original entry
a) Outgoing invoice	
b) Received receipt	
c) Copy of credit note	
d) Original invoice	

21. State four circumstances under which a producer of a product may use personal selling method to promote a product. (4 marks)

i) ……

ii) ……..

iii) ……

iv) ……

22. Classify each of the following as either personal, impersonal or private account and indicate with (√) whether their balances are debit or credit balances. (4 marks)

	Item	Type of account	DR	CR
i)	Capital			
ii)	Debtors			
iii)	Wages			
iv)	Cash in hand			

23. Outline four ways in which land influences the location of industries. (4 marks)

i) ……

ii) ……

iii) ……

iv) ……

24. Outline four features that may indicate a country's state of underdevelopment. (4 marks)

i) ……

ii) ……

iii) ……

iv) ……

25. The following information was obtained from the books of Sindo Limited on 31st December, 2015.

Detailed	Kshs
Capital	24,000
Stock	1,500
Debtors	2,000
Machinery	20,000
Cash	4,000

Determine the total liabilities of the business. (4 marks)

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NAME: _____

ADM NO: _____**CLASS:** _____**DATE:** _____ **SIGN:** _____

NAKURU JOINT EVALUATION MOCK 2025

565/2
BUSINESS STUDIES
Paper 2
Time – 2½ hours

Instructions to Candidates

(a) Write your **name** and **index number** on the spaces provided.
(b) Sign and write the date of the examination in the spaces provided above.
(c) This paper consists of **FIVE** questions.
(d) Answer ***any five*** *questions*.
(e) **All questions carry equal marks.**
(f) **Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.**
(g) **Candidates should answer the questions in English.**

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1	**20**	
2	**20**	
3	**20**	
4	**20**	
5	**20**	
6	**20**	
Total Score		

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1. a) Assuming you were planning to start a business after form four, explain any **five** factors you would consider when evaluating a business idea. (10 marks)

   b) Explain **five** ways in which insurance industry contribute to development of a country. (10 marks)

2. a) Explain **five** benefits that may be realized by a country as a result of government policy to relocate industries to rural areas. (10 marks)

   b) Outline **five** ways in which an office manager can ensure that the company's property is safeguarded. (10marks)

3. a) There has been a decline in the demand for wooden furniture in Kenya. Explain **five** factors that may have cause this trend. (10 marks)

   b) Zakayo Traders had the following balances on 1st July 2012.

	SHS.
Equipment	5,600
Bank	35,000
Debtors	28,000
Creditors	66,600

During the month the following transactions took place:

July 6TH – Purchased goods worth Sh.9,500 by cheque.

July 7TH – Paid creditors, Sh. 10,600 by cheque.

July 23RD – Received a cheque of Sh.22, 000 for goods sold.

July 28TH – Withdrew Sh. 5,000 from the bank to pay salaries.

Required:

Open the relevant ledger accounts and extract a trial balance as at 30TH July, 2012. (10 marks)

4. a) Apart from selling shares explain **five** sources of finance for a public limited company. (10 marks)

   b) Inflation has been on the rise in the Kenyan economy, explain **five** monetary policies that can be used by the government to curb inflation (10 marks)

5. a) Explain **five** reasons for differences in terms of trade between countries (10 marks)

   b) The following trial balance was extracted from the books of Daisy Traders as at 31/12/2021.

Daisy Traders

Trial Balance

As at 31st December 2021

A/C NAME	DR (Shs)	CR (Shs)
Purchases & Sales	275,000	390,000
Stock (1/1/2021)	30,000	
Debtors	47,000	
Commission		36,000
Returns	10,000	6,000
Carriage inwards	16,000	
Carriage outwards	8,000	
Bad debts	3,000	
Wages	20,000	
Rates	12,000	
Buildings	450,000	
Furniture	180,000	
Bank overdraft		210,000
Insurance	19,000	
Discounts	5,000	7,000
Drawings	25,000	
Creditors		52,000
Cash at bank	250,000	
Cash in hand		
Capital	40,000	689,000
	1,390,000	1,390,000

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Additional information:

Stock was valued at Sh.50, 000 as at 31ST/12/2021.

Required:

I. Prepare Daisy Traders, Trading, profit and loss Account for the year ended 31/12/2021. (7 marks)

II. Balance sheet as at 31/12/2021. (5 marks)

6. a) State and explain **five** types of direct taxes that the government may use to collect revenue from individuals and companies. (10 marks)

b) Explain **five** reasons for which traders observe ethical practices in product promotion (10 marks)

NAME:……

ADM……CLASS……..CANDIDATES SIGNATURE……..DATE…….

NAKURU JOINT EVALUATION MOCK 2025

FORM 4

CHEMISTRY

PAPER 1 (233/1)

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

- *Write your **Name**, **Index Number** and **School** in the spaces provided above.*
- *Answer **all** the questions in the spaces provided after each question.*
- ***KNEC** Mathematical tables and **silent non-programmable** electronic calculators may be used.*
- ***ALL** working **must** be clearly shown where necessary.*
- *Candidate should **check** the question paper to ascertain that **all** the pages are printed and that no questions are missing.*
- *Candidates* should answer the questions in **English**.

FOR EXAMINER'S USE ONLY

QUESTIONS	MAX SCORE	CANDIDATE'S SCORE
1 – 29	**80**	

*This paper consists of **13** printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.*

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1. (a) Give the name of the first member of the alkyne homologous series (1 mark)

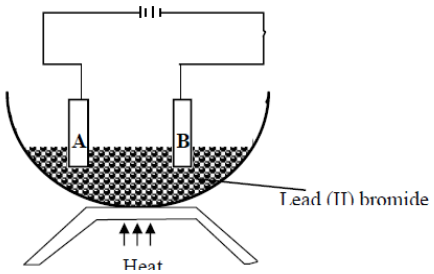
……..……

(b) Describe a chemical test that can be used to distinguish ethanol from ethanoic acid. (2 marks)

…….

……

2. Study the diagram below and use it to answer the questions that follow:-



(a) Identify electrodes **A** and **B** **(2mks)**

(b) Name the product formed at the anode (1mk)

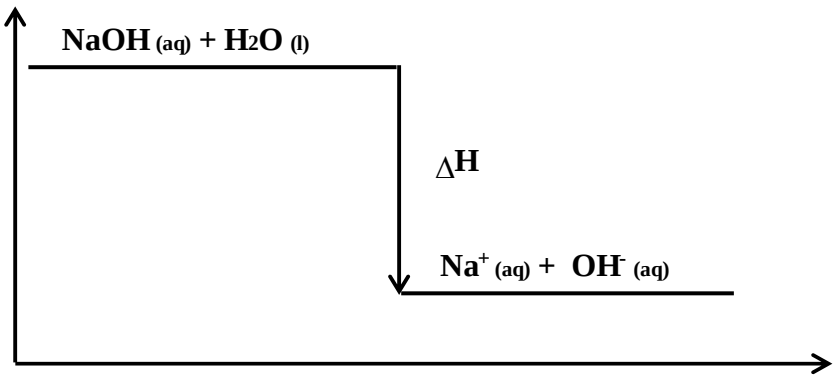
(c) Write the electrode half equation of reaction at electrode **A** **(1mk)**

……..

3. (a) What is meant by lattice energy? (1 mark)

……..

(b)Study the energy level diagram below and answer the question that follows:



What type of reaction is represented by the diagram? (1 mark)

……

4. (a) Sketch a graphical representation of Boyles law on the axes below. (1mk)



(b) A gas occupies 400 cm^3 at 25°C and 100,000 Pa. What will be its volume at 27°C and 101325 Pa? (2 marks)

5. (a) What is half- life? (1 mark)

……

……

(b) The half-life of protactinium - 234 is 1.17 minutes. Determine the mass that decays in 5.85 minutes starting with 100 g of the sample. (2 marks)

……

……

……

……

6. State **two** disadvantages of hard water. (2 marks)

……

……..

7. Hydrogen chloride gas can be prepared by reacting sodium chloride with an acid.

(a) Name the acid. (1 mark)

……..

(a) Write an equation for the reaction between sodium chloride and the acid. (1 mark)

……

(c) State **two** uses of hydrogen chloride. (1 mark)

……..

……..

8. When solid **B** was heated strongly, it gave off water and a solid residue. When water was added to the solid residue, the original solid **B**, was formed.

(a) What name is given to the process described? (1 mark)

……

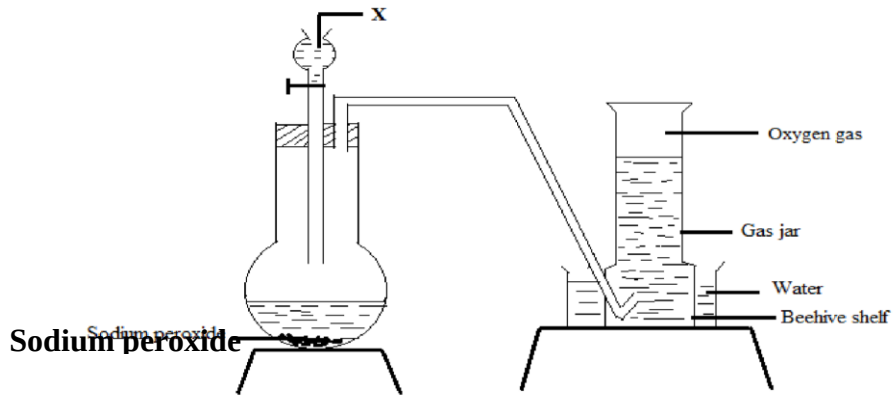
……

(b) Give **one** example of solid **A**. (1 mark)

……

……

9. The set up below can be used to prepare oxygen gas. Study it and answer the questions that follow



a) Identify **X**. (1 mark)

……

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(c) Write the equation for the reaction which occurs in the flask. (1 mark)

……

(d) State **one** use of oxygen other than in welding (1 mark)

……

10. The atomic number of an element, **M** is 13.

(a) Write the electronic configuration of the ion $\mathbf{M^{3+}}$. (1 mark)

……

(b) Write the formula of the chloride of **M**. (1 mark)

……

……

(c) State the structure of the compound formed in (b) above (1 mark)

……..

11. Concentrated sodium chloride was electrolysed using graphite electrodes. Name the product formed at the anode and give a reason for your answer. (2 marks)

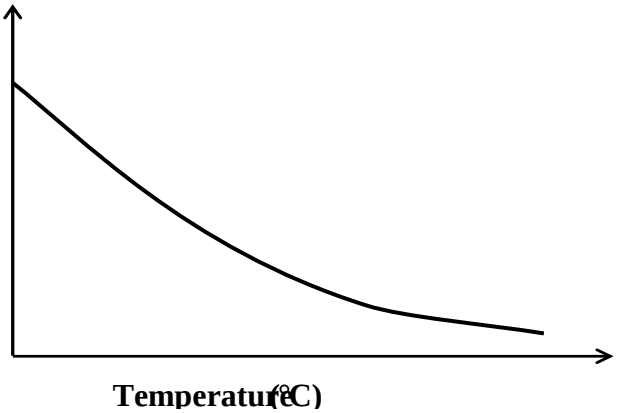
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……

12. The curve shown below shows the variation of time against temperature for the reaction between sodium thiosulphate and hydrochloric acid.



(a) Explain the shape of the curve. (2 marks)

……

……

……

(b) Other than temperature name **one** factor that affects the rate of reaction. (1 mark)

…….

13. (a) Dry ammonia was passed over heated copper (II) oxide in a combustion tube.

(i) State the observations made in the tube (1 mark)

……

(ii) Write an equation for the reaction that occurs. (1 mark)

……..……

(c) What products would be formed if red hot platinum is introduced into a mixture of ammonia and oxygen? (1 mark)

……

14. The table below shows behaviour of metals P, Q, R and S. Study it and answer the questions that follow:

Metal	**Appearance on exposure to air**	**Reaction with water**	**Reaction with dilute sulphuric (VI) acid**
P	Remains the same	Doesn't react	Reacts moderately
Q	Remains the same	No reaction	Doesn't react
R	Slowly tarnishes	Slow	Vigorous
S	Slowly turns white	Vigorous	Violent

(a) Arrange the metals in the order of reactivity starting with the most reactive. (2 marks)

……..

…….

(d) Name a metal which is likely to be **R** (1 mark)

……..
……

15. Given the following substances: sodium carbonate, orange juice and sodium bromide.

(a) Name **one** commercial indicator that can be used to show whether sodium carbonate, orange juice and sodium bromide are acidic, basic or neutral. (1 mark)

……

……

(b) Classify the substances in 15 (a) above as acids, bases or neutral. (2 marks)

Acid	
Base	
Neutral	

.

16. (a) One of the allotropes of sulphur is monoclinic sulphur, name the other allotrope (1 mark)

……..……..

(e) Concentrated sulphuric (VI) acid reacts with copper and prapanol. State the property of the acid shown in each case. (2 marks)

Copper ……..……..…

Propanol ……

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17. Study the standard electrode potentials in the table below and answer the questions that follow.

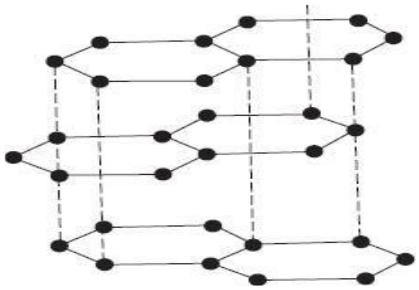
Half -reaction	E^{θ}(V)
$Ag^{+}(aq) + e \longrightarrow Ag(s)$	+ 0.80
$Cu^{2+}(aq) + 2e \longrightarrow Cu(s)$	+ 0.34
$Mg^{2+}(aq) \longrightarrow Mg(s) + 2e$	- 2.38
$Ca^{2+}(aq) \longrightarrow Ca(s) + 2e$	- 2.87

(a) Which of the metals is the strongest oxidising agent? (1 mark)

……

(b) What observations will be made if a copper coin was dropped into an aqueous solution of calcium nitrate? Explain. (2 marks)

18. The diagram below represents an allotrope of carbon.



a) name the allotrope. (1mk)

b)Explain why:- (2mks)

(i) its slipperly

(ii) Conducts an electric current

19. (a) A crystal of iodine, heated gently in a test tube gave off a purple vapour.

(i) Write the equation for the formation of purple vapour.

(1 mark)

……..

(b) What type of bond is broken when the iodine crystal is heated gently?

(1 mark)

……

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

……

20. Describe how samples of barium (II) sulphate, ammonium chloride and common salt can be obtained from a mixture of the three. (3 marks)

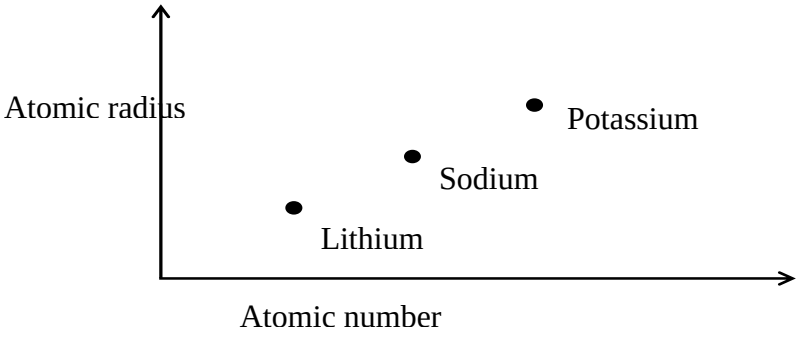
21. (a) Give the name of the process which takes places place when maize flour is converted to ethanol (1 mark)

……

(d) Write the formula of the compound formed when ethanol reacts with sodium metal. (1 mark)

……..……..

22. (a) Study the graph below which shows variation of atomic radius with atomic number



State and explain the trend shown in the graph above. (2 marks)

……

……

……

……

(e) State **one** use of sodium. (l mark)

……

……

23. A farmer intended to plant blueberries in her farm. She first tested the pH of the soil and found it to be 10.0. In order to obtain high yield, what advice would be given to the farmer if blueberries do well in acidic solution? (2 marks)

……

……

……

24. Starting with calcium nitrate solution, describe how a pure dry sample of calcium carbonate can be prepared in the laboratory. (3 marks)

……

……

……

……

……

25. A hydrocarbon contains 81.82% of carbon. If the molar mass of the hydrocarbon is 44, determine the molecular formula of the hydrocarbon. (C = 12.0; H = 1.0) (3 marks)

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26. (a) Describe how Carbon (II) Oxide can be distinguished from Carbon (IV) Oxide using calcium hydroxide solution. (2 marks)

…….

…….

…….

(f) What is the role of carbon (IV) oxide in fire extinguishing? (l mark)

…….

……..

27. (a) Name **one** source of alkanes. (1 mark)

…….

(g) Methane gas was reacted with one mole of chlorine gas. State the condition necessary for this reaction. (1 mark)

……

……

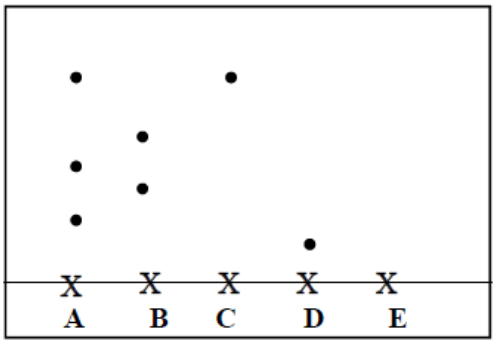
28. (a) What is meant by heating value of a fuel? (1 mark)

……..

(b) Other than heating value, name **one** factor to be considered when choosing a fuel. (1 mark)

……..

29. The following diagram shows a paper chromatogram of substances A, B, C, and D which are coloured



(a) Indicate the solvent front on the chromatogram (1mk)

(b) Which substance is pure? (1mk)

(c) Substance **E** is a mixture of **C** and **D**. Indicate its chromatogram in the diagram (1mk)

……..THIS IS THE LAST PRINTED PAGE……...

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NAME…….....

ADM NO….……**SIGNATURE**……**CLASS**.....**DATE**……

NAKURU JOINT EVALUATION MOCK 2025

233/2 CHEMISTRY PAPER 2

(THEORY)

JULY 2024

2 HOURS

CHEMISTRY -233/2

(Theory)

(Kenya Certificate of Secondary Education)

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.
(f) This paper consists of **12 printed** pages.
(g) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

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

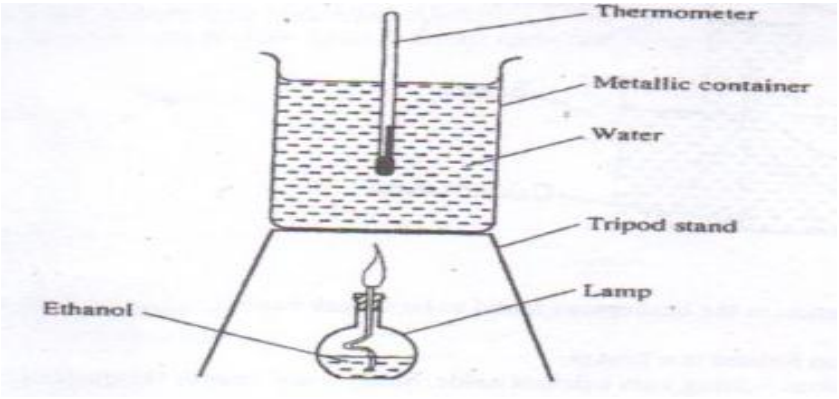
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1. State two factors that should be considered when choosing fuel for cooking. (2 marks)

……

……

(b) The diagram below represents a set –up that was used to determine the molar heat of combustion of ethanol



During the experiment, the data given below was recorded

Volume of water	$450cm^3$
Initial temperature of water	25^0 C
Final temperature of water	46.5^0 C
Mass of ethanol + Lamp before burning	125.5g
Mass of ethanol + Lamp after burning	124.0g

Calculate the:

i.Heat evolved during the experiment (density of water=$1g/cm^3$,Specific heat capacity of water =$4.2Jg^{-}K^{-}$ (2marks)

……..

……

……

ii. Molar heat of combustion of ethanol (C=12.0, O=16.0, H=1.0) (3 marks)

.....

……

……

(c) Write the thermal chemical equation for the complete combustion of ethanol. (1mark)

……

(d) The value of the molar heat of combustion of ethanol obtained (b) (ii) above is lower than the theoretical value. State two sources of error in the experiment. (2 marks)

……

……..

e) Define the term molar heat of combustion (1 mark)

……

……

2. The grid below shows a section of the periodic table. The letters do not represent the actual symbols of the elements.

K	**L**				**M**		**N**	**P**
	Q		**R**	**S**		**T**	**V**	
W								

a) Name the family to which element P belongs. (1mark)

……

b) Which two elements will form carbonates that do not decompose on heating. (2 mark)

……

c) With a reason, identify an element in period three with the largest atomic radius.(2marks)

……

……

d) Write the formula of the compound formed between L and M (1 mark)

……

e) State two uses of element **R** and for each use, state property of element **R** that makes it possible for the use

(i) Use (1/2mark)

……

Property (1/2 mark)

……

(ii) Use (1/2 mark)

……

Property (1/2 mark)

……

f) Using dots **(.)** and cross **(x),** show bonding in the compound formed between **R** and oxygen . (2 marks)

……

……

……

g) In terms of structure and bonding, explain why the boiling point of the oxide of L is higher than that of N. (1 marks)

……

……

.....

h) Calculate the volume of the gas produced when 1.95g of element W reacts with water (W= 39, Molar gas volume at S.T.P= 24,000cm^3) (2 marks)

……

……

……

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3. Use the information below on standard electrode potentials to answer the questions that follow

Electronic reaction	E^{Θ} volts
$C^{2+}_{(aq)} + 2e^- \rightarrow C_{(s)}$	+0.34
$D^{2+}_{(aq)} + 2e^- \rightarrow D_{(s)}$	+0.44
$E^{+}_{(aq)} + e^- \rightarrow E_{(s)}$	-2.92
$F^{2+}_{(aq)} + 2e^- \rightarrow F_{(s)}$	-2.71
$G^{2+}_{(aq)} + 2e^- \rightarrow G_{(s)}$	-0.14
$\frac{1}{2}H_{2(g)} + e^- \rightarrow H^-_{(aq)}$	+2.87
$\frac{1}{2}K_{2(g)} + e^- \rightarrow K^-_{(aq)}$	+1.09
$L^+_{(aq)} + e^- \rightarrow \frac{1}{2}L_{2(aq)}$	0.00

a) i) Identify the strongest reducing agent. (1 mark)

……

ii) Calculate the e.m.f of the cell obtained by connecting half cells **C** and **D** (1 mark)

……

……

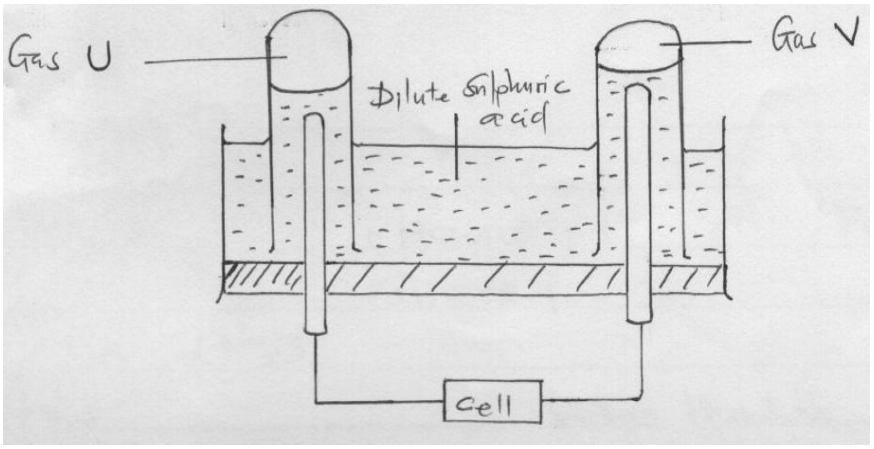
b) Draw a well labeled diagram of a cell formed by connecting half cells **C** and **D**. (3 marks)

……

……

……

c) he figure below shows the electrolysis of dilute sulphuric (VI) acid



i) On the diagram label the cathode and anode (2 mark)

ii) Name the gases **U** and **V** (2 mark)

Gas **U**

……...……..

Gas **V** ……

iii) Write the equation taking place at the anode (1 mark)

……

……

d) Define the term electrolysis (1 marks)

……

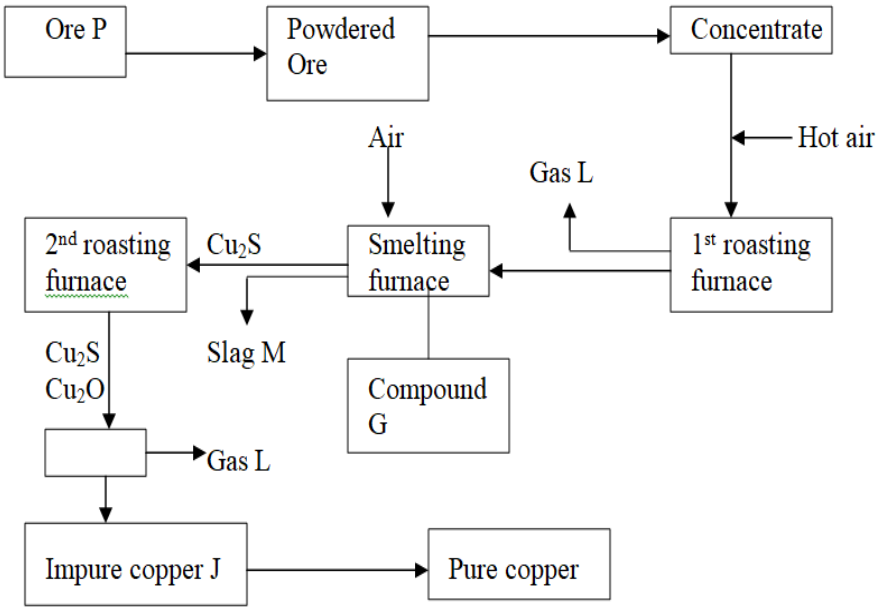
……

e)State **two** applications of electrolysis (2 marks)

……

……

4. The flow chart below outlines some processes involved in the extraction of copper from copper pyrites. Study it and answer the questions that follow.



(a) Name the following: (3 marks)

(i) Ore P ……..…..

(ii) Gas L…….

(iii) Slag M ……...….

(b) (i) Explain how the ore is concentrated. (1 mark)

……

……

(ii) Why is it necessary to grind the ore into powder? (1 mark)

……

(c) Give the purpose of adding silicon (IV) oxide compound G into the smelting furnace.

(1 mark)

……

……

(d) Pure copper is obtained from impure copper by electrolysis. Name the material used as anode and cathode. (1 mark)

Anode ……

Cathode …….

(e) What effects does this process of copper extraction have to the environment? (1 mark)

……

……

(f) State two uses of copper metal. (2 marks)

……

……

(g) A current of 100 Amperes was passed for 20 days. What mass of copper in kg was deposited at the cathode? (Cu = 64, If = 96500 C) (2 marks)

……

……

……

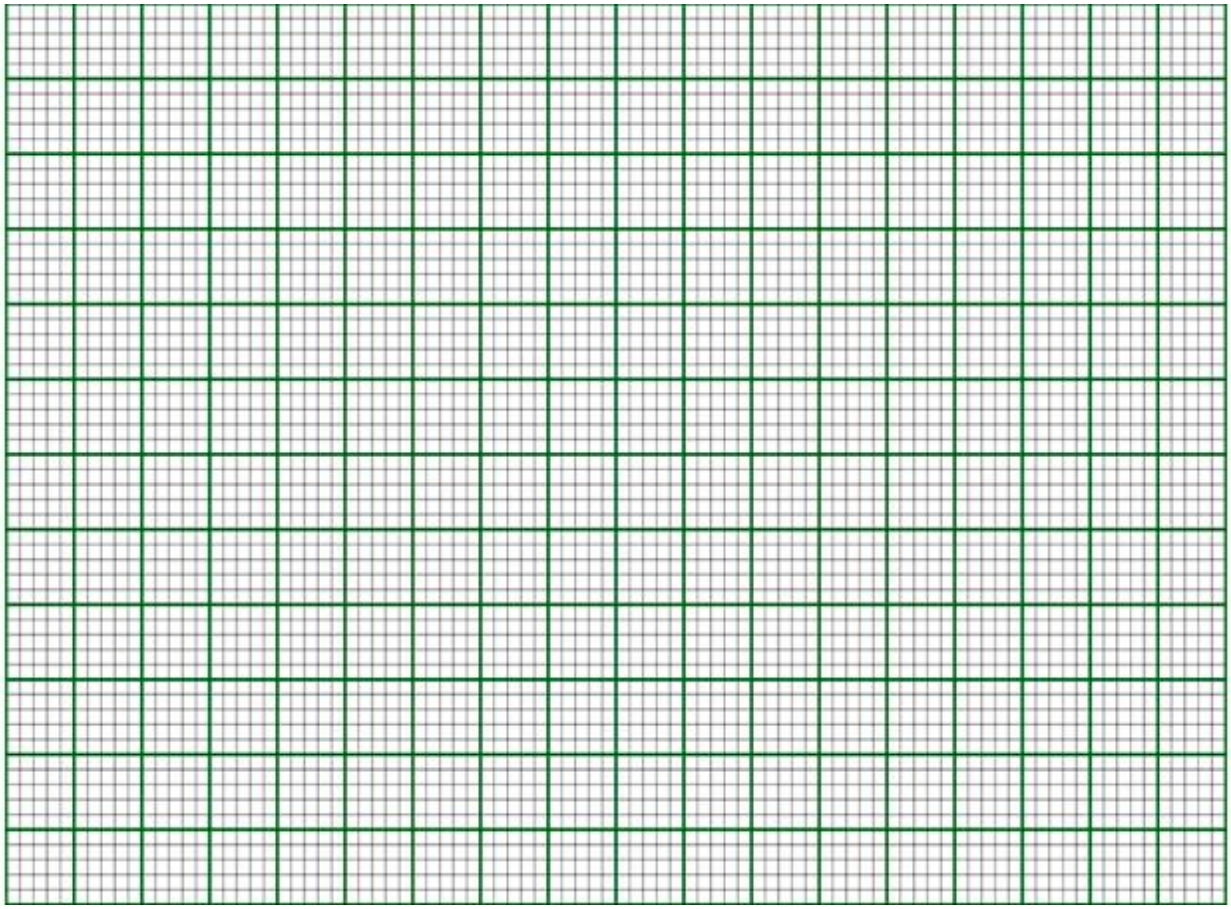
……

5. The table below shows the solubility of potassium nitrate at different temperatures.

Temperature ^{0} c	10	20	30	40	50	60	70	80	90	100
Solubility g/100g of water	80	88	96	104	114	124	136	148	162	180

a) Plot a graph of solubilities of potassium nitrate against temperature. (3mk)

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b) From your graph determine;

i) the solubility of the potassium nitrate at 65^0c. (1mk)

……

ii) the mass of potassium nitrate that would **dissolve in 50g of water at 82^0c**. (2mk)

……

……

……

c) Determine the molar concentration of potassium nitrate at 37^0 c. (N=14, O= 16, K= 39. Assume the density of solution to be $1g/cm^3$) (3mk)

……

……

……

……

d) 130g of potassium nitrate salt was added to 100g of water and heated to 90^0c. It was then cooled to 15^0 c.

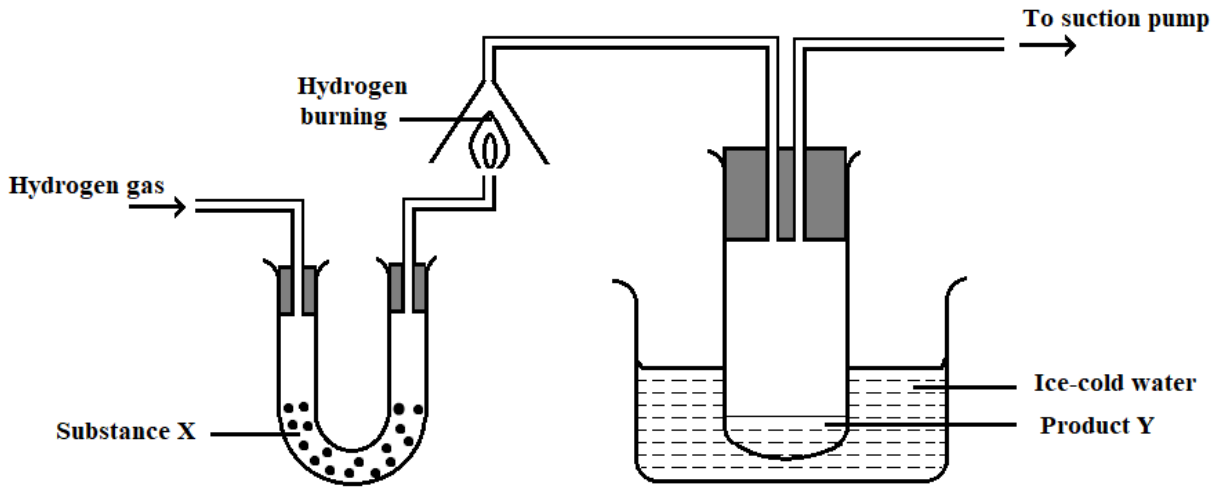
i) At what temperature were the crystals first formed? (1mk)

……

ii) Calculate the mass of crystals formed. (1mk)

……

6. The figure below shows the apparatus used to burn hydrogen in air. Use it to answer the questions that follow.



i) State the role of substance **X** (1 mark)

……

ii) Give the name of the substance that could be used as **X** (1 mark)

……

iii) State the role of the suction pump (1 mark)

……

……

iv) Name the product **Y** formed (1 mark)

……

v) Give a simple physical test to prove the identity of **Y** (2 mark)

……

……

vi) State the difference between **"dry"** and **"anhydrous".** (2 marks)

……

……

……

7 a)Name the following compounds (3 marks)

i) $CH_3CH_2CH_2OH$

……

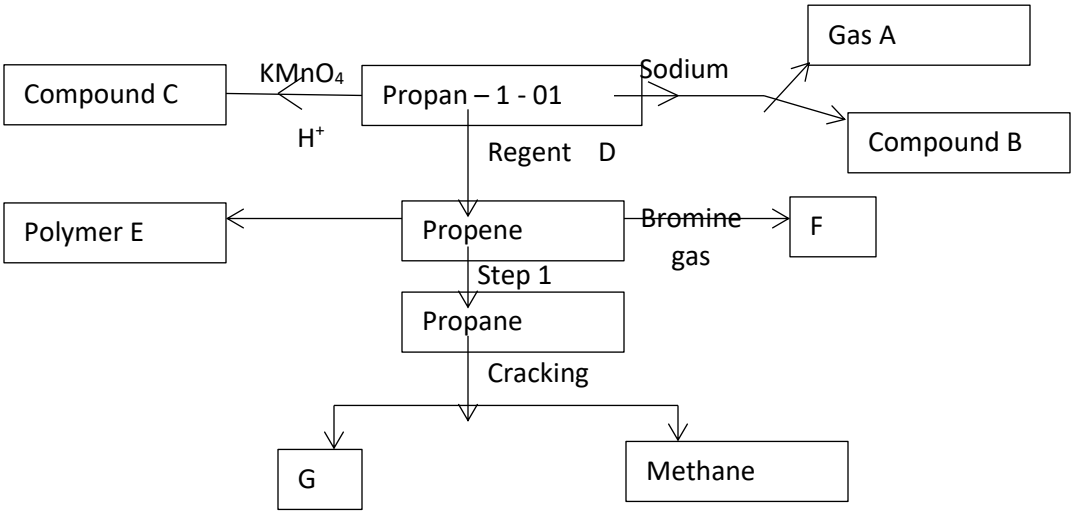
ii). $CH_3\ CH_2\ CH_2\ COOH$

……

iii). $CH_3CH_2CH_2COOCH_2CH_3$

……

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



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i. Identify product

A. ..... (1 mark)

F. ..... (1 mark)

ii. Name the compound C (1 mark)

.....

iii. State the conditions for step 1 (2 mark)

.....

iv. Name the process leading to formation of compound C (1 mark)

.....

v. Write an equation for the reaction leading to the formation of methane.(1 mark)

.....

vi. Identify reagent D. (1 mark)

.....

vii. Draw the structure of F. (1 mark)

.....

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NAME: ……

ADM NO: …… SCHOOL : ……..DATE : ……

CANDIDATE'S SIGNATURE…….

NAKURU JOINT EVALUATION MOCK 2025

233/3

CHEMISTRY

PAPER 3

TIME: $2\frac{1}{4}$HOURS

Kenya Certificate of Secondary Education (K.C.S.E)

INSTRUCTIONS TO CANDIDATES:

(i) Write your **name** and **index number** in the spaces provided **above**.
(ii) **Sign** and write the **date** of examination in the spaces provided **above**.
(iii) Answer **ALL** the questions in the spaces provided in the question paper.
(iv) You are not allowed to start working with apparatus for the first 15 minutes of $2\frac{1}{4}$Hours allowed for this paper. This time is to enable you read the question and make sure you have all the chemicals and apparatus required.

(iv) Mathematical tables and silent electronic calculators **may be** used.

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

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

FOR EXAMINER'S USE ONLY:

Question	Maximum Score	Candidate's Score
1	20	
2	13	
3	7	
Total Score	40	

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QUESTION 1

(a) You are provided with the following

(i) Sulphuric(VI) acid labeled a solution D

(ii) Solution R prepared by dissolving 40g of NaOH in 400cm^3 of distilled water and made up to 1 litre.

You are required to determine the molarity of Sulphuric (VI) acid.

PROCEDURE

(i) Fill the burette with Sulphuric (VI) acid.

(ii) Using pipette and pipette filter place 25cm^3 of solution R into conical flask.

(iii) Add 2-3 drops of phenolphthalein indicator.

(iv) Titrate solution R against solution D.

(v) Repeat the titrations to obtain two concordant titrates

(vi) Record your results in the table below.

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

(4mks)

i) Calculate the average volume of acid solution D used . (1mk)

ii) Calculate the number of moles NaOH solution (Solution R) used. (1mk)

iii) Calculate the number of moles of acid used. (1mk)

iv) Determine the molarity of Sulphuric (vi) acid. (1mk)

b) You are provided with the following;

(i) 0.85M HCL labeled solution N.
(ii) Sodium hydroxide labeled solution K.

You are required to determine the molar heat of neutralization **of** solution N

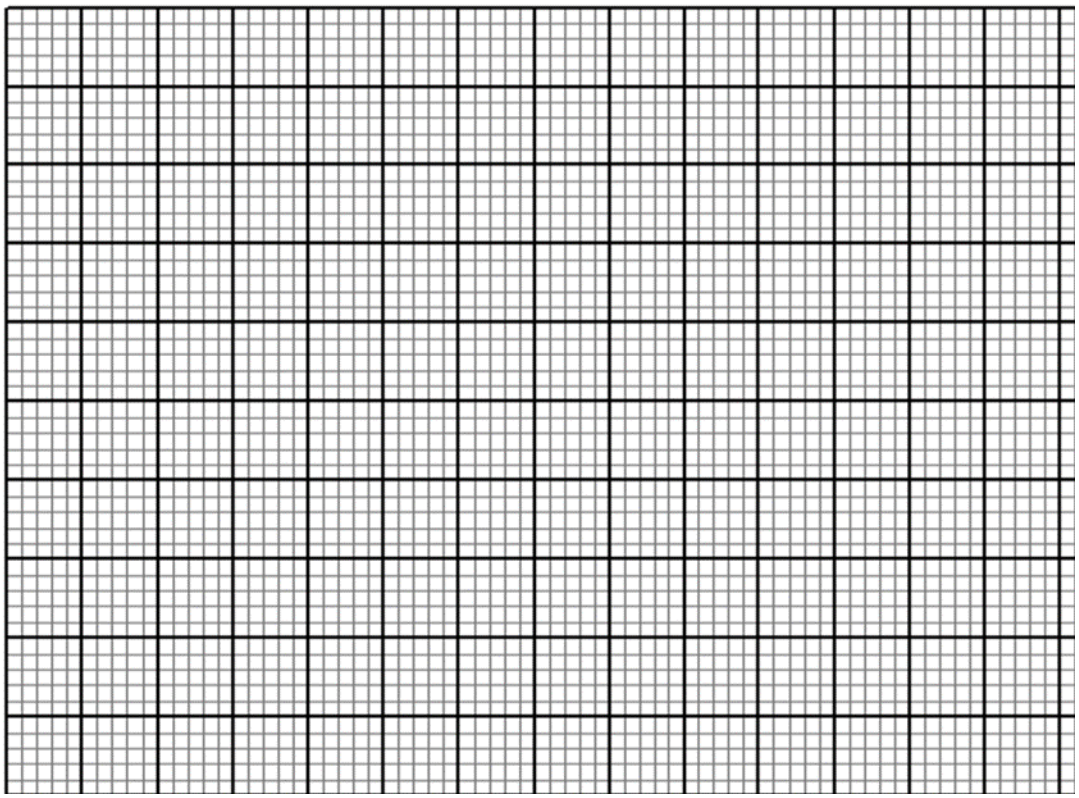
Procedure

i. Measure 50cm^3 of solution N and transfer it into a 250cm plastic beaker provided.
ii. Record the initial temperature of solution N to the nearest 0.5^{0}c.
iii. Rinse the burette thoroughly with distilled water and fill it up to the 0.0cm^3 mark with sodium hydroxide solution (Solution K)
iv. From the burette add 10cm^3 of solution K to solution N in the beaker. Stir gently with the thermometer and record the new temperature in the table below.
v. Continue adding 10cm^3 portions of Solution K recording new temperature after each addition until 80cm^3 of K has been added

Volume of Solution K added (cm^3)	0	10	20	30	40	50	60	70	80
Temperature ^{0}C									

(3mks)

a) Plot a graph of temperature (y-axis) against total volume of sodium hydroxide (Solution K) (x-axis) (3mks)



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i) From the graph determine the maximum temperature reached. (1mk)

ii) What is the temperature change? (1mk)

b) From the graph determine the volume of sodium hydroxide required for complete neutralization of hydrochloric acid. (1mk)

c) Write an Ionic equation for the neutralization reaction. (1mk)

d) Calculate the heat evolved when volume of sodium hydroxide in (c) was neutralized. Density of solution $1g/cm^3$,C=4.2j/g/k. (1mk)

e) Calculate the molar heat of neutralization. (1mk)

QUESTION 2

You are provided with solid D. Carry out the following tests and record your observation and inferences in the spaces provided.

a) Describe the appearance of Solid D. (1mk)

b) Place about half of solid D in dry test. Heat it strongly and test for any gas produced using a blue and red litmus paper.

Observation	Inferences
1mk	1mk

c) Place the rest of Solid D in boiling tube and add about $10cm^3$ of distilled water. Shake well and add about $2cm^3$ portions for each of the test below.

Observation	Inferences
1mk	1mk

i) To one portion, add aqueous NaOH drop wise until in excess

Observation	Inferences
1mk	$^1/_2$mk

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ii) To the second portion, add aqueous ammonia drop wise until in excess

Observation	Inferences
1mk	$^1/_2$mk

iii) To a third portion add about 5 drops of sodium chloride solution.

Observation	Inferences
1mk	$^1/_2$mk

iv) To a fourth portion, add dilute Barium nitrate solution.

Observation	Inferences
1mk	$^1/_2$mk

v) To a fifth, add lead (ii) nitrate solution, warm mixture

Observation	Inferences
1mk	1mk

QUESTION 3

i) You are provided with solid J. carry out the tests below and record your observation and inferences to the spaces provided.
Place a half of Solid J in a clean metallic spatula and ignite it on Bunsen burner flame.

Observation	Inferences
1mk	1mk

Put the remaining portion of solid J in a boiling tube and add about $8cm^3$ of distilled water. Shake to dissolve.

ii) To about $2cm^3$ of solution J in a test tube add 2 to 3 drops of bromine water.

Observation	Inferences
1mk	1mk

iii) To about $2cm^3$ of solution J in a test tube, add about $1cm^3$ of acidified potassium dichromate (vi). Warm gently and allow to stand for a minute.

Observation	Inferences
1mk	$^1/_2$mk

iv) To about $2cm^3$ of solution in a test tube, add a small amount of solid Sodium hydrogen carbonate.

Observation	Inferences
1mk	$^1/_2$mk

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NAME …… CLASS……

ADM NO …… CANDIDATE'S SIGNATURE ……

451/1
COMPUTER STUDIES
PAPER 1 (THEORY)
TIME: 2 ½ Hours
END TERM TWO EXAMINATIONS

NAKURU JOINT EVALUATION MOCK 2025

Kenya certificate of Secondary Education

451/1
COMPUTER STUDIES
PAPER 1
(THEORY)
TIME: 2 ½ hours

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) This paper consists of **11** printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing

FOR EXAMINER'S USE ONLY

Section	Questions	Candidate's score
A	1- 15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

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1.

a. Computers have evolved through a number of generations. List any 4 characteristics of the first generation of computers. (2 marks)

---

b. Explain the emerging trends in microcomputer technology in relation to size (1 mark)

---

2. Explain why smoke and Dust particles are harmful to a computer (1 mark)

---

3. Explain three ways that computer technology could make office more efficient (3 marks)

---

4. Differentiate between single- purpose programs and integrated software (2 marks)

---

5. What is a template? (1mark)

---

6. Name and explain the use of the following buttons found in a spell-check dialog box (3 marks)

i. Change

---

ii. Ignore Once

---

iii. Ignore all

---

7. Explain the following concepts as used in spreadsheets: (4marks)

   i. Automatic recalculation

   ---

   ii. 'What if' analysis

   ---

8. A formula =B5 + C4 was entered in Cell F5. What will it become when it is copied to Cell H8? (1 mark)

9.

   i. List any two methods used to secure data in a database (2 marks)

   ---

   ii. State three types of relationships that can be used to link tables in databases. (3 marks)

   ---

10. What is layering as used in DTP and why is it important in DTP? (2 marks)

11.

   a. Briefly describe three factors contributing to slower Internet access and growth in Kenya. (3 marks)

---

b. Outline three ways of preventing piracy with regard to data and information.

(3 marks)

---

12. Convert 767_8 to hexadecimal equivalent. (2 marks)

---

13. State three ways of minimizing threats to data integrity. (3marks)

---

14. Give three advantages of a real-time system. (3marks)

---

15. What is Telecommuting?

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Section B.

Answer Question 16(Compulsory) and any other three Questions.

16.

i. Give two advantages of compiling a program rather than interpreting it. (2 marks)

---

ii. Give two reasons why it is necessary to have a program design. (2 marks)

---

iii. Give one advantage of pseudo codes over flowcharts in designing algorithms (1 mark)

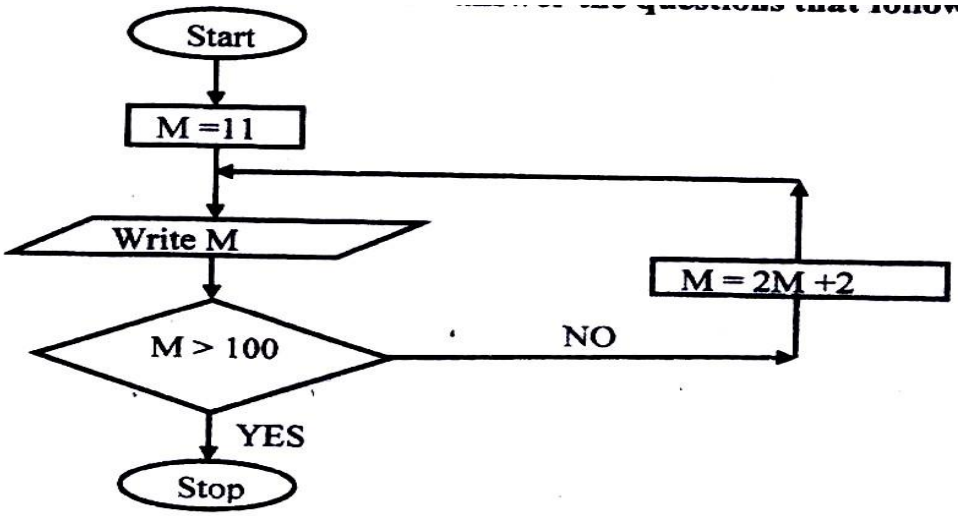
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iv. Michael deposits 1,000 in a bank at an interest rate of 10% per year. At the end of each year, the interest earned is added to the amount on deposit and this becomes the new deposit for the next year.

Develop a pseudo code to determine the year in which the amount accumulated first exceeds 2,000. Also for each year, print the year (starting from 1), the deposit, the Interest earned, and the total accumulated at the end of the year. (7 marks)

---

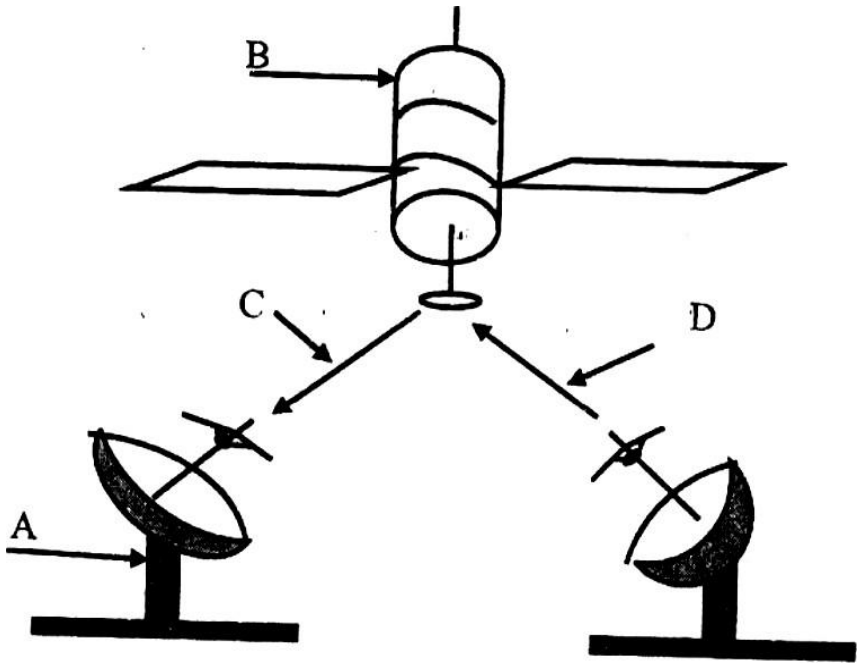
v. Study the flowchart below and answer the questions that follow:



List all the outputs from the flowchart. (3 marks)

---

17. Study the diagram below and answer the questions that follow:



a. Name the communication media depicted in the above diagram. (1 mark)

---

b. Name the parts labelled A, B, C, and D. (4 marks)

---

c. List three advantages of the above communication media. (3marks)

---

d. Distinguish between logical and physical network topology. (2marks)

---

e. Explain the function of the following network devices: (2 marks)

i. Network interface card (NIC)

---

ii. Repeater

---

f. Give three advantages of using fibre optic cables for data transmission. (3 marks)

18.

a. Outline four devices required in order to conduct a video conference. (4 marks)

---

b. Describe how computing has been applied to each of the following areas:

i. Transportation systems. (2 marks)

---

ii. Reservation systems. (2 marks)

---

c. Distinguish between "job replacement" and "job displacement" in reference to Computerization (2 marks)

---

d. Discuss the applications of Artificial Intelligence in Expert Systems. (2 marks)

---

e. State three reasons why users may resist the introduction of information and communication Technology (ICT) to their place of work. (3marks)

19.

a. Name any threes computing resources that can be distributed. (3 marks)

---

b. Define the term data integrity. (2 marks)

---

c. State two reasons for using binary in digital technology. (2 marks)

---

d. State the importance of hexadecimal notation in a data representation. (2 marks)

---

e. Use Two's compliment to subtract 101 from 1000: (2 marks)

---

f. Perform the following conversions:

i. 7.125_{10} to binary (2 marks)

---

g. $7AB_{16}$ to decimal (2 marks)

---

20. Study the worksheet below and answer the questions that follow:

	A	B	C	D	E	F
1						
2	SKYWAYS AGENCIES					
3	PRODUCT	REGION 1	REGION 2	REGION 3	REGION 4	TOTAL Sale
4	Rexona	3400	3,700	4000	4100	
5	Lifebuoy	2500	2600	2100	2500	
6	Omo	6000	6100	6300	1600	
7	Ushindi	1200	1500	1400	6400	
8	Carmel	7000	6900	7200	8000	
9	Total					
10	Maximum					
11	Average					

a. Write functions that can be entered to get total, maximum, and average of each region. (3 marks)

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b. Write down the function that returns the number of sales in the four regions whose value is greater than or equal to 2000. (2 marks)

---

c. The function = sum (B4:E4) is entered at F5 and then copied to F8. Write down the function as it appears in the destination cell.

(2 marks)

---

d. Define the term normalization as used in database design. (2 marks)

---

e. State two objectives of normalization. (2 marks)

---

f. Explain how 'parents' and 'child' tables are related in relational databases.

(4 marks)

NAME: …… ADM NO.: ……CLASS ……

CANDIDATE'S SIGNATURE: …….. DATE: ……..

NAKURU JOINT EVALUATION MOCK 2025

451/2 - COMPUTER STUDIES

Paper 2 FORM 4 (PRACTICAL) – 2½hrs

Kenya Certificate of Secondary Education (K.C.S.E)

INSTRUCTIONS TO CANDIDATES

1. Type your name and admission number at the top right hand corner of each printout
2. Sign and write the date of the examination below the name and Admno number on each printout
3. Write the name and version of the software used for each question attempted in the answer sheet
4. Passwords should not be used while saving in the compact disks
5. Answer all the questions

FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM SCORE	STUDENT SCORE
1		
2		
TOTAL SCORE		

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1. XYZ is a training college that offers three courses to students. A student sits for three types of examinations every semester. Each examination is marked out of 100%. The following table shows sample data collected from the database:

STUDENT ID	STUDENT NAME	EXAM CODE	GENDER	COURSE CODE	DATE ENROLLED	COURSE DESCRIPTION	TUITION FEE	SEMESTER
ENG-01	MIKE	01	M	ENG	01/11/2017	Diploma in Engineering	Sh. 250,000	2
CSC-002	KIOKO	02	F	CSC	02/11/2017	Diploma in Computer Science	Sh. 350,000	2
NUR-003	ABIUD	03	M	NUR	03/11/2017	Diploma in Nursing	Sh. 150,000	2
ENG-004	JANE	02	F	ENG	01/11/2017	Diploma in Engineering	Sh. 250,000	2
CSC-002	KIOKO	03	F	CSC	02/11/2017	Diploma in Computer Science	Sh. 350,000	2
-003	ABIUD	01	M	NUR	03/11/2017	Diploma in Nursing	Sh. 150,000	2

a. Using a database management application split the information in the above table into three tables namely; (15 marks)

i. Student enrolment

ii. Exam performance

iii. Courses offered

b. Create a relationship between the three tables (3 marks)

c. Create appropriate forms to be used for entering the records (6 marks)

d. Create a query to:

i. i. Show all students whose score is greater than 70% save it as HighScore (3 marks)

ii. Show students whose name end with the letter ‘E’ save it as Engineers (3 marks)

iii. Show all students taking Diploma in Computer Science save it as Comps (3 marks)

e. Create a report called Tuition Summary displaying the following details: (7 marks) • Student ID

- • Student Name
- • Course Description
- • Tuition fees
- • Total fees collected

f. Using a report called ANALYSIS, create a column chart showing students Performance in the exam. (5 marks)

g. Print the tables student enrolment, exam performance, courses offered, the Tuition summary and Analysis reports. (5 marks)

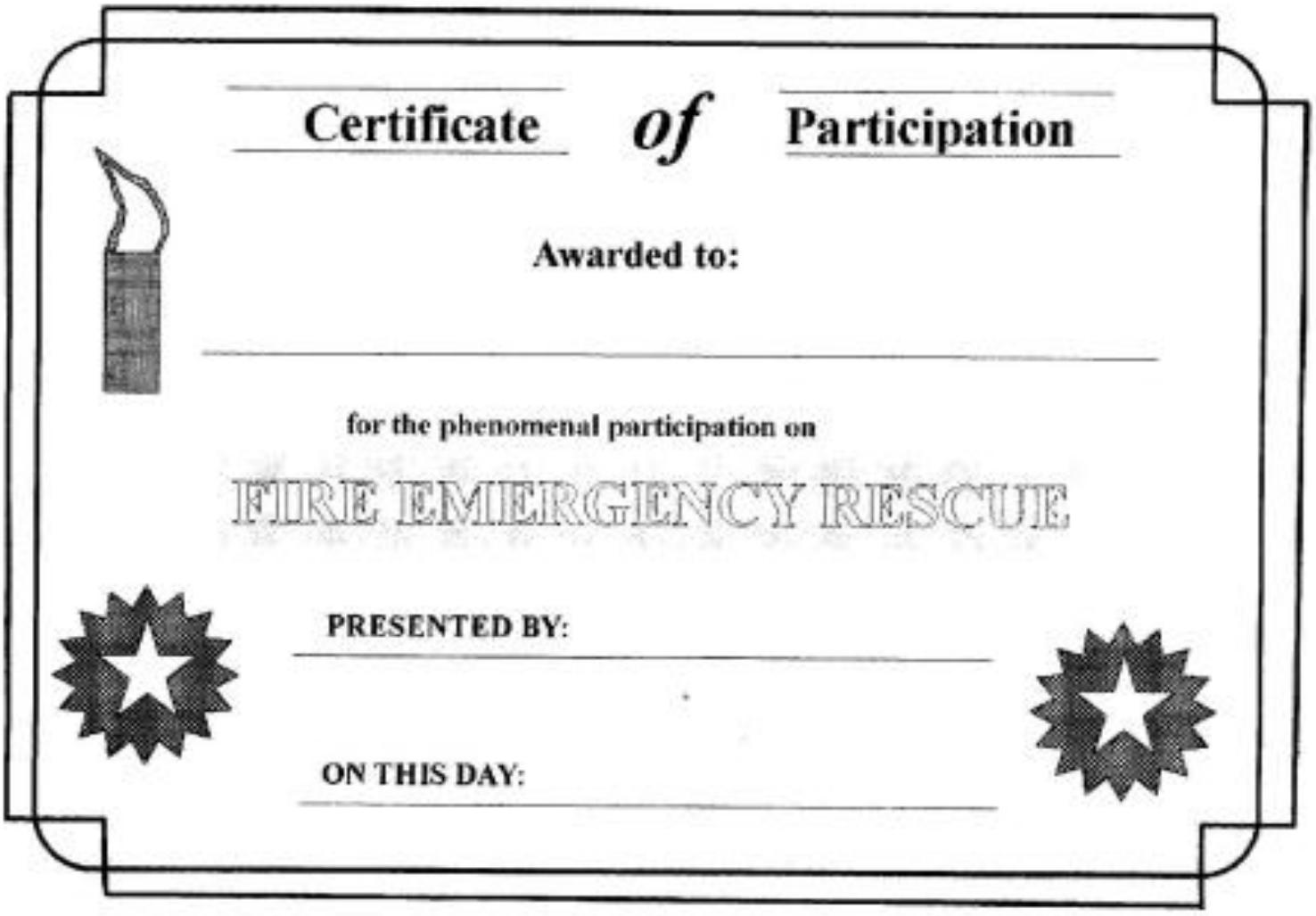
2. The management of a scout movement intends to awards certificates of participation to the scouts who attended a fire rescue seminar. Assuming that you've been tasked to design the certificate:

a. Open a DTP software and make the following page settings. 5marks

- Orientation : Landscape
- Units : Centimeters
- Paper size :A4
- Margins 2cm all round

ii. Create the certificate below and save it as Certificate 43 marks

ii. Print out the certificate 2mrks



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Name: _____

Adm No: _____**Class**: _____ **Candidate's Signature**: _____ **Date**: _____

CRE paper 313 / 1
FORM FOUR
YEAR 2025
Time: 2 ½ HOURS

NAKURU JOINT EVALUATION MOCK 2025

Instructions to Candidates

Answer any five questions

1 **a)** List **seven** minor prophetic books in the bible. **(7 marks)**

b) State **six** characteristics of God demonstrated in Genesis 1 and 2. **(6marks)**

c) Outline **ways** in which Christians show respect to God in society today. **(7marks)**

2 **a)** Identify **seven** actions that demonstrated faith in Abraham`s life. **(7marks)**

b) Explain the **meaning** of the events that took place on the night of Exodus. **(8marks)**

c) Give **five** reasons why Christians should trust God in their daily lives. **(5marks)**

3 **a)** Explain **six ways** in which Saul failed as king of Israel. **(6marks)**

b) Outline the **significance** of the Temple in Jerusalem to the Israelites. **(7marks)**

c) Give **7 circumstances** that led to the contest at Mount Carmel during the time of Prophet Elijah. **(7marks)**

4 **a)** State **six** titles given to prophets in the Old Testament. **(6 marks)**

b) Explain the evils committed by **four nations** that were to be punished by God according to Prophet Amos. **(8marks)**

c) Mention **six** ways in which Christians can avoid God's punishment today. **(6marks)**

5 **a)** Describe how the people of Judah renewed their covenant with God under the leadership of Ezra. **(8 marks)**

b) Give **five** reasons why Nehemiah carried out religious reforms in Judah. **(5 marks)**

c) In what ways do Christians renew their covenant faith with God? **(7 marks)**

6 **a)** Identify **seven** occasions when prayers were conducted in Traditional African societies. **(7 marks)**

b) Outline **seven** roles of kinship system in traditional African society. **(7 marks)**

c) What changes have taken place in property ownership in Traditional African communities? **(6 marks)**

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Name: _____

Adm No: _____**Class**: _____**Candidate's Signature**: _____ **Date**: _____

CRE PAPER (313 / 2)
FORM FOUR
Time: 2 ½ HOURS

NAKURU JOINT EVALUATION MOCK 2025

Instructions to Candidates

Answer any five questions

1a) State six prophecies of Zechariah about his son John in the Benedictus. **(6 marks)**

b) Explain how John the Baptist played the role of a forerunner for the messiah **(7 marks)**

c) Identify seven ways in which Christians play the role of John the Baptist today. **(7 marks)**

2a) Describe the healing of the epileptic boy in Luke 9:37 – 43. **(7 marks)**

b) Narrate the healing of the woman who touched Jesus cloak. Luke 8: 43 – 48. **(6 marks)**

c) Identify ways in which the church has continued with the healing ministry of Jesus. **(6 marks)**

3 a) With reference to Jesus" journey to Jerusalem, state four teachings of Jesus about salvation (Luke 18:15-19:1-27 **(8 marks)**

b) State six areas of conflict between Jesus and the Jewish religious leaders which eventually led to His death. **(6 marks)**

c) State six ways in which parents can resolve misunderstandings with their Children. **(6 marks)**

4a) Outline seven teachings of St. Paul on unity of believers as demonstrated, in the image of the body of Christ. (1 Corinthians 12:12 - 27, Ephesians 4: 1-12) **(7marks)**

b) In what ways was unity demonstrated by the Christian in the early church? **(6 marks)**

c) State seven factors which threatens unity in the church today. **(7marks)**

5a) Explain the relationship between work and leisure in the Christian view. **(8 marks)**

b) Explain the Christians teachings on male-female relationships. **(7 marks)**

c) State the role of professional ethics in a work place. **(5marks)**

6 a) Outline seven ways in which Science and Technology help to improve human life. **(7 marks)**

b) How have science and technology helped the spread of the Gospel? **(7 marks)**

c) In what ways is the church helping to reduce the rate of crime in Kenya? **(6 marks)**

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Name: _____

Adm No: _____**Class**: _____**Candidate's Signature**: _____ **Date**: _____

(101/1) ENGLISH PAPER 1
FORM 4
Time:2 HOURS 30 MINUTES

NAKURU JOINT EVALUATION MOCK 2025

Instructions to Candidates

1. Write your name, admission number and class in the spaces provided.

2. Write all the answers in the spaces provided.

3. Avoid leaving blank spaces.

4. Candidates must answer all the questions in English.

QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
1	20	
2	10	
3	30	
TOTAL SCORE	60	

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1. FUNCTIONAL WRITING (20 marks)

You have come across a job advertisement on Nation Media newspaper by Delotte Company for a position of an Internal Auditor. The candidate should have a degree in Finance. He/she should be a member of Certified Public Accountants Guild. The candidate should have 2 years work experience.

Write a curriculum vitae (CV) that you would use to apply for the job

……

……

……

2. CLOZE TEST (10 marks)

Fill in each blank space in the passage below with the most appropriate word.

You can achieve your long-term (1) _____ by breaking down and setting daily goals for yourself. A big dream can seem daunting, especially when you look at your (2) _____ situation and realize how far away from it you are now. (3) _____, 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 (4) _____ your ultimate goal because you know you are getting closer to it every day.

(5) _____ daily goals isn't about giving yourself random things to do every day it's about achieving your long-term goals. So for example, let's say you want to lose 60 pounds. You look in the mirror every day saying that you need to (6) _____ weight, but because you know you need to lose so much, you keep putting it off until tomorrow. (7) _____ you know it, you've gained another 10 pounds! The thought of losing 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 intimidating.

You can now start working (8) _____ toward that goal. It could involve eating a large portion of vegetables and cutting (9) _____ 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

(10) _____ consistency is the key to your success.

3. ORAL SKILLS(30 marks)

a) Read the following poem then answer the questions that follow (8 marks)

I want to write a poem, but I don't know where to start.
Should it be an ode to love come straight from the heart?
Or should it wax lyrical of sky and moon and stars,
Or of planets of our universe Pluto, Jupiter, or Mars?

It could be of the flora or fauna of this, our wonderful land,

Or of walking barefoot on a lonely beach kicking up the sand.
Of countries and of places where the surrounding seem so strange,
Frozen lands, dense jungles, valleys deep and of vast mountain's range.

Rivers long, the life blood of lands they pass along their way,
Irrigating crops and refreshing thirsts continually night and day.
Or of the sheer beauty of Mother Nature we can experience all around,
From the gigantic right down to microscopic, many wondrous things abound.

Maybe of the sadness felt when the highest price is paid,
Be it that of unselfish sacrifice of life or whenever it is made.

i) Identify the rhyme scheme of this poem (2 marks)

……

……

……

ii) Using illustrations show how rhythm has been achieved in the poem (3 marks)

……

……

……

……

iii) Would you use a rising or falling intonation in reading stanza 2 line 3 in this poem? Give a reason.
(1 mark)

……

……

iv) How would you say the last line of the second last stanza? (2 marks)

……

……

……

a) Identify the odd one out from the list of words according to the pronunciation of the underlined sounds
(2 marks)

i) Respect religion referee - _____

ii) Keys advise books -_____

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b) Identify the silent letter(s) in the following words (3 marks)

i) Disciplinary –

ii) Glisten –

iii) Succumb –

c) Read the short form below and then answer the questions that follow

I bought a boat because it was for sail

i) Classify the artefact above (1 mark)

A pun – _____

ii) Write the homophones of the following words evident in the artefact above (2 marks)

Boat – _____

Sale – _____

d) Indicate whether the following items have a falling or rising intonation (4 marks)

i) Get out now!

……

……

ii) The stranger was accused of theft.

……

……

iii) How did you find the English exam?

……

……

iv) Could they have left?

……

……

e) Your father who stays in the village wants to visit you in Siaya town. He has never visited you before. Your house is not far from the state.

i) Mention two ways you would specify to him the distance from the state to your house (2 marks)

……

……

……

……

f) You are the chairperson of a panel that is set to carry out an important interview.

i. Explain briefly what you would do in preparation of this important occasion (2 marks)

……

……

……

……

ii. What would you consider in selecting the most suitable interviewee? (2 marks)

……

……

……

……

g) Explain how you would go about the following during an impromptu speech

i. Inviting a guest speaker (2 marks)

……

……

……

……

……

ii. Moving message of condolence

……

……

……

……

Name: _____

Adm No: _____**Class**: _____**Candidate's Signature**: _____ **Date**: _____

PAPER 101/2
ENGLISH PAPER 2
FORM 4
Time:2 HOURS 30 MINUTES

NAKURU JOINT EVALUATION MOCK 2025

Instructions to Candidates

1. Write your name, admission number and class in the spaces provided.
2. Write all the answers in the spaces provided.
3. Avoid leaving blank spaces.
4. Candidates must answer all the questions in English.

QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
1	20	
2	25	
3	20	
4	15	
TOTAL SCORE	80	

1. COMPREHENSION (20 MARKS)

Read the passage below and then answer the questions that follow.

The world has a weight problem. Within the past decade, obesity rates have shot up by 50 percent, rising from 200 million people in 1995 to 300 million in 2003. Even places more familiar with famine than fat are starting to worry about their waistlines. Africa now has weight loss clinics. In a recent survey in India - home to half the world's undernourished population - 55 percent of women between 20 and 69 were found to be overweight. Twenty percent of Chinese adults are overweight. Brazil's childhood-obesity rate has jumped to 239 percent in a generation - four times the growth rate for youth in the United States. In March 2003, the International Obesity Task Force revealed that 1.7 billion of the planet's 6 billion people were overweight or obese. "How did we all get so fat?" The problem stems from the collision of a number of modern trends; rising affluence and urbanization; the proliferation of conveniences like cars, computers, fast food and television; and the 21st Century work culture, with its desk jobs and long hours. In rich countries, the familiar mantra of low-fat diet and exercise is routinely ignored. In the developing world, where health education is frequently non-existent, people are particularly vulnerable to the glamour of American burgers and the comfort of the couch. Rural migrants to cities are suddenly confronted with market-stall snacks and McDonald's. In newly industrialized countries packaged foods and fast food chains are promoted as an index of affluence.

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The consumption of foods high in fat, sugar and salt- combined with increasingly sedentary lifestyles - is worrying health experts. And it is killing us. Diet-linked diseases - chiefly heart disease, cancer, diabetes and hypertension, now account for more than half of all deaths in Arab countries. In Barbados, more than 60 percent of hospital and drug-service budgets go toward coping with obesity-related illnesses. In Chinese hospitals, the number of patients suffering from weight-related diseases has increased by 30 percent. The problem is so pervasive that the World Health Organization has declared obesity a global epidemic.

In many places, obesity and related illnesses such as diabetes are growing fastest among children and teenagers. These may be because those groups are more vulnerable to the excesses of their new found liberation. Teenagers from rich homes have cars can go to restaurants with their friends, and consume high-fat fast food. Nutritionists also blame food marketing and the proliferation of supermarkets for the rise in childhood obesity. Ultimately, diabetes is incurable. Although changes in diet and lifestyle can help stem the progression of the disease,it never disappears. Most patient are on insulin a decade after diagnosis. The best long-term hope for reversing the trend is for society to get its weight problems under control.

QUESTIONS

1. What is achieved by the use of figures in paragraph one? (2 marks)

_____

_____

_____

2. How can the society get the weight problem under control? (3 marks)

_____

_____

_____

_____

_____

3. Cite three indicators of the increasing danger of obesity mentioned in the passage. (3 marks)

_____

_____

_____

_____

_____

4. In what way is modern lifestyle a curse rather than a blessing? (3 marks)

_____

_____

_____

5. In about 50 words summarize what the passage says about obesity in children and teenagers.

(6 marks)

ROUGH COPY

FAIR COPY

6. The problem is so pervasive that the World Health Organization has declared obesity a global epidemic. (Rewrite the sentence beginning: So…) (1 mark)

7. Provide the meaning of the following words as used in the passage (2 marks)

a. Affluence

b. Sedentary

Q2. EXCERPT (25 MARKS)

Read the excerpt below and then answer the questions that follow

Mossi: *(Pacing about on the stage. Turns to face the principal and Nicole)* I am afraid we may not continue with this thing. Oh, I have already forgotten what you are calling it.

Pirro: (*Looking rather disappointed)* But why, Your Worship? This is a blessing for our country.

Mossi: Don't you see it? It might turn out to be a platform for misinformation, lies and witchhunt. You see, last year someone spread a rumour that I had died. He just sent a text message on some social

media and it spread like a wild bush fire. And do you know I almost actually died? During that time, I accidentally swallowed a whole toothpick!
Ramdaye: Oh, yes. I see the risk. They might spread another rumour on this platform! And you might swallow another toothpick! Yes, you will!
Basdeo: (*To Mayor*) The way I see it, that App will be a people's platform! And it will have far-reaching implications whether you launch it or not.
Mossi: (*Casting a stern look at Mr Basdeo*) I need time to think about it. I will launch it at my own convenient time. (*Turning to Nicole and the principal*) There are no two ways for now. Halt any activities regarding that thing until my office gives further guidance. (*Ramdaye nods inn approval.)* Other guests exchange knowing glances in silence.
Narine: Your Worship, the President of the Republic is scheduled to officially launch the App at the national level early next year when school reopen. We presently have some ongoing activities in preparation for it. I doubt whether this process can be stopped.
Harvester: *(Looking at the Principal and Nicole alternately*) Is that so?
Mossi: (*Looking at the principal*) The President?
Narine: Yes, Sir.
Ramdaye: Why have you kept as in the dark about this?
Narine: The Mayor's office has been duly informed, Sir.
Mossi: (*Lookingg at Narine*) Oh yes, I remember! But you never explained what kind of thing it was! No, you still have to stop it!
Pirro: I think that is beyond their powers, Your Worship.
Mossi: *(Looking at Pirro*) This thing we are talking about is a school project under their control! (*Turning to face the Principal*) It is, therefore, within your powers to find a way around it. (*Pauses, then turns to face Nicole*) Think about it. You are at the centre of it! Figure out a way… like writing to the Ministry of Education indicating that there are some fundamental errors in it that you need to attend to… get what I mean?
Nicole: I am afraid, Your Worship, the assessment of the innovations was done by senior officers at the Ministry of Education. Experienced software engineers were also involved. It passed all the tests, and no errors were found.

QUESTIONS

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

_____

_____

_____

_____

_____

_____

_____

_____

2. Discuss two themes raised in the excerpt. (4 marks)

_____

_____

_____

_____

_____

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3. From this excerpt and elsewhere in the play, why does Mayor Mossi refuse to launch the App? (2 marks)

4. Comment on the character of Mossi in this excerpt. (2 marks)

5. From elsewhere in the play, how does Mossi try to stop the App from operating? (2 marks)

6. Give reasons why the App is error-proof. (2 marks)

7. Identify and illustrate two aspects of style used in the excerpt. (4 marks)

8. Think about it. (Add a question tag) (1 mark)

9. Explain the meaning of the following expressions as used in the excerpt. (4 marks)

a. Far-reaching implications –

b. Halt –

c. Kept us in the dark –

d. Figure out a way -

Q3. ORAL NARRATIVE (20 MARKS)

Read the oral narrative below and then answer the questions that follow

Long, long time ago animals and birds spoke just like men do. When God had to stop them speaking, he made birds sing, like this chrrip! Chrrip… Lions to roar like this graagh! Graagh! And hyenas to howl like this huuu! Huuu! And do you blame God? Listen to what naughty hyena who had gone two days without any meat did. He had been wondering up and down t

he hills when he suddenly stopped, nose in the air, one foot raised. Do I smell, eh……smell food? He slowly raised his head to the skies as if to say, "Please God, let me find some food, even one rotting bone will do."

Slowly, he followed the smell, sniffing hard, stopping now and again, over grinning wider as the smell became stronger. "Here at last", He said as he came in sight of a calf that seemed dead, flies buzzing over its excrement. "God, no time to waste. Who knows the owner may be around. Oh, no! I see it is secured to a tree with a "Mukwa" I'll take my time. Ha, I am tired too, come to think of it. God gave us pretty strong senses of smell, generous old…… man. Still I do think some people tend to exaggerate, now who was it saying the other day 'ati' God is the giver of everything and that we should be grateful. O.K. Tell me, did God give this calf? Did you God? I found it myself, smelled my way there, all the way. Nice calf too, rather thin but it will do. I'll take the head home and make soup with herbs. I especially like 'muthathii', and I see one over there.

OK. Here we go, where shall I start, this lovely neck? No, I know, I will start with the 'mukwa' then I'll get on to the soft stuff, the tail, the

rump, 'Mahu'……." After chewing up half of the 'mukwa' the hyena brushed his teeth with the twig of a 'muthiga' a tree of stimulate his appetite. He stepped on the calf's tail, stuffed it in his mouth and 'snap' it went. The calf which was only very sick and tired shot up and bolted away in the twinkling of an eye. The hyena rubbed his eyes, ambled after the disappearing calf and soon fell down in exhaustion. He looked up again to the heaven, tried to speak but no words came. Hyenas have never been able to speak ever since.

Questions

(a) Categorize this narrative and give your reason. (2 marks)

_____

_____

_____

(b) Identify and explain two features of oral narratives evident in this story. (4 marks)

_____

_____

_____

_____

_____

(c) Describe two character traits of the hyena as depicted in the narrative. (4 marks)

_____

_____

_____

_____

_____

d) Identify one economic aspect of the community described in this narrative and give a reason for your answer. (2 marks)

_____

_____

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(d) What moral lesson do we learn from this narrative? (2 marks)

(e) Give a proverb with the same moral lesson as this narrative. (1 mark)

(g) If you are asked to go and collect this story in the field, state:

(i) Three things you would do before the actual field trip. (3 marks)

(ii) Two problems you are likely to encounter. (2 mark)

Q4. GRAMMAR (15 MARKS)

a) Rewrite the following sentences as instructed. (5 marks)

i) Nyambura never came late to school this term. (Begin: Not …)

ii) He wore a mask. He was unrecognizable. (combine into a sentence beginning with a present participle)

iii) He was absent from work for three days without permission. He wrote a rude letter to the manager. (Rewrite as one sentence beginning, not only …)

iv) No one likes to be sick. (Change the infinitive into a gerund)

_____

_____

v) Only one problem was yet to be solved transport to the stadium. (Punctuate the sentence)

_____

_____

b.) Use the correct form of the words in brackets to fill in the blank spaces in each of the sentences below. **(2 marks)**

i.The vehicle broke down due to poor _____ (maintain).

ii. Many _____ made the work difficult to understand. (spell)

c) Replace the highlighted words in each of the sentences with the most suitable phrasal verbs **(2 marks)**

i) The looters _____ **stole** goods of unknown value during the city riots.

ii.) When he _____**regained consciousness**, he was amazed to realize that he was in hospital.

d) **Fill in the blank spaces with the correct alternative given in the brackets.** **(2 marks)**

1. Neither of the twins _____ (is, are) rude.

2. The packet of biscuits _____ (contain, contains) twenty pieces of biscuits.

e) **Choose the correct pronoun to fill in the blank space.** **(2 marks)**

1. It is _____ (he, him) we would like to talk to.

2. Do you think that he is wiser than _____ (I, me)

f) Give two possible meanings of the following sentence. **(2 marks)**

Call me John

This is the last printed page.

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Name: _____

Adm No: _____**Class**: _____**Candidate's Signature**: _____ **Date**: _____

101/3
FORM FOUR
ENGLISH PAPER 3
(Creative Composition and Essays Based on Set Texts)
Time: 2 Hrs 30 Min

NAKURU JOINT EVALUATION MOCK 2025

Instructions to Candidates

a) All your answers must be written in the foolscaps provided

b) Answer three questions only.

c) Question 1 and 2 are compulsory

d) In question three, choose only one of the optional set text.

e) Your essay must not exceed 450 words

For Examiner's Use Only

Questions	Maximum Score	Candidate's Score
1.	20	
2.	20	
3.	20	
	Total Score	

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1. Imaginative Composition (Compulsory)

(a) Write a composition ending with the following statement.

..... Since that day, I have always promised myself to remain focused in my studies.

Or

Write a composition explaining what Kenyan youths can do to help fight against alcohol and substance use.

2. The Compulsory Set Text

Fathers of Nations

Power corrupts. Basing Illustrations from Fathers of Nations, write an essay to support the statement

(20 marks.)

3. The Optional Set Texts

Answer any one of the following three questions.

Either

(a) The Short Story

People living in the street encounter serious problems. Using relevant illustrations from the short story "The Neighborhood Watch by Rem'y Ngamije, write an essay in support of this statement.

Or

(b) The Play

Adipo Sidang, Parliament of Owls

Selfish leaders make and break laws to favour themselves and oppress the citizens. With reference to Parliament of Owls by Adipo Sidang, write an essay in support of this statement

Or

(c) The Novel

Kazuo Ishiguro, An Artist of the Floating World

People's irresponsible deeds will cost them later in life . With close reference to Kazuo Ishiguro's Novel, An Artist of the Floating World, write an essay in support of this statement.

NAME: ……

CLASS……ADM:.....DATE……..SIGNATURE……..

NAKURU JOINT EVALUATION MOCK 2025

Kenya Certificate of Secondary Education

312/1 GEOGRAPHY Paper 1

TIME: 2 HOURS 45 MINUTES

INSTRUCTIONS TO CANDIDATES

- *This paper has **two** sections: **A** and **B***
- *Answer **ALL** the questions in **section A.***
- *In section **B,** answer **questions 6** and any other **TWO** questions.*
- *All the answers must be written on the foolscaps provided/attached after page 4.*
- *Candidates must answer the questions **in English**.*

FOR EXAMINER'S USE ONLY

Section	Questions	Maximum Score	Candidate's Score
A	1 - 5	25	
B	6	25	
		25	
		25	
		Total Score	

This paper consists of 4 printed pages. Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions/pages are missing.

SECTION A

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(Answer all the questions from this section)

1. (a) Differentiate between rotation and revolution of the earth. (2 marks)

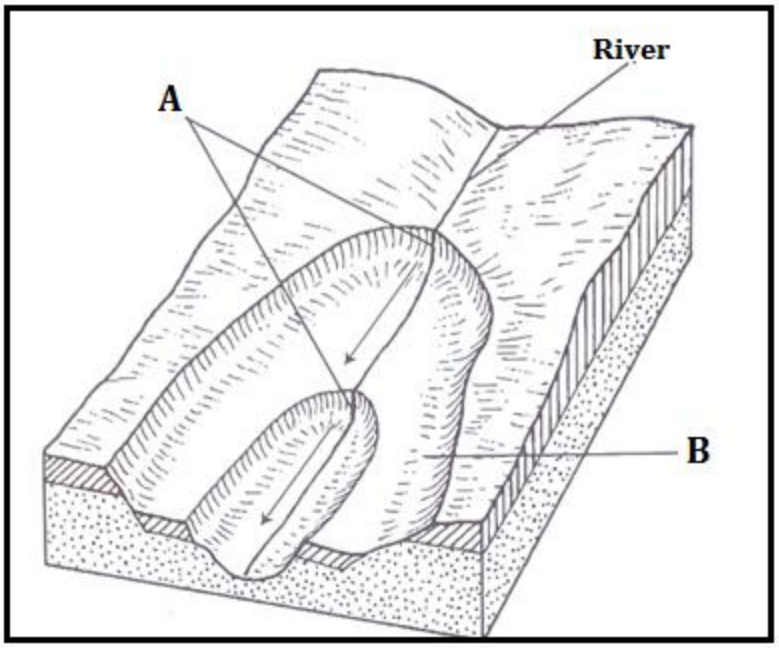
   (b) State **three** characteristics of the earth's inner core. (3 marks)

2. (a) Give **three** examples of extrusive igneous rocks. (3 marks)

   (b) State **three** reasons why sedimentary rocks are common along the coast of Kenya. (3 marks)

3. State **four** causes of vulcanicity. (4 marks)

4. The diagram below shows some features formed due to river rejuvenation.



   (a) Identify the features marked A and B. (2 marks)

   (b) Give **three** main types of river drainage systems. (3 marks)

5. (a) What is soil catena? (2 marks)

   (b) List **three** factors that influence the development of soil catena. (3 marks)

SECTION B ***(Answer question 6 and any other two questions from this section)***

6. Study the map of Tambach (1:50,000 sheet 90/3) provided and use it to answer the following questions.

(a) (i) What is the magnetic variation of the area when the map was drawn? (1 mark)

(ii) Identify **two** types of scale on the map extract. (2 marks)

(b) (ii) What is the six figure grid reference of the cattle dip to the east of Kesup? (2 marks)

(ii) Give the position of Lake Kamnorok by latitude and longitude. (2 marks)

(c) (i) Describe the relief of the area covered by the map. (6 marks)

(ii) Explain **two** factors that have favoured the establishment of saw mills in the area covered by the map. (4 marks)

(d) (i) Draw a square 12 cm by 12 cm to represent the region from northing 77 to northing 80 and west of easting 81. (1 marks)

(ii) On the square, mark and label:
- A plantation
- Road D 329
- A cattle dip
- The region representing Uasin Gishu district. (5 marks)

(iii) What is the scale of the sketch that you have drawn? (2 marks)

7. (a) (i) Differentiate between weather and weather forecasting. (2 marks)

(ii) Give **three** examples of low clouds. (3 marks)

(b) Explain how the following factors affect the temperature of a place:

(i) Cloud cover. (3 marks)

(ii) Aspect. (3 marks)

(c) With the aid of a well labelled diagram, describe how convectional rainfall is formed. (8 marks)

(d) Suppose you were to carry out a field study at a weather station:

(i) State **three** objectives that you would set for the study. (3 marks)

(ii) Give **three** follow up activities for the field study. (3 marks)

8. (a) (i) What is continental drift? (2 marks)

(ii) Name **three** land masses that split from Gondwaland according to the continental drift theory. (3 marks)

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(b) Describe the **three** types of tectonic plate boundaries. (6 marks)

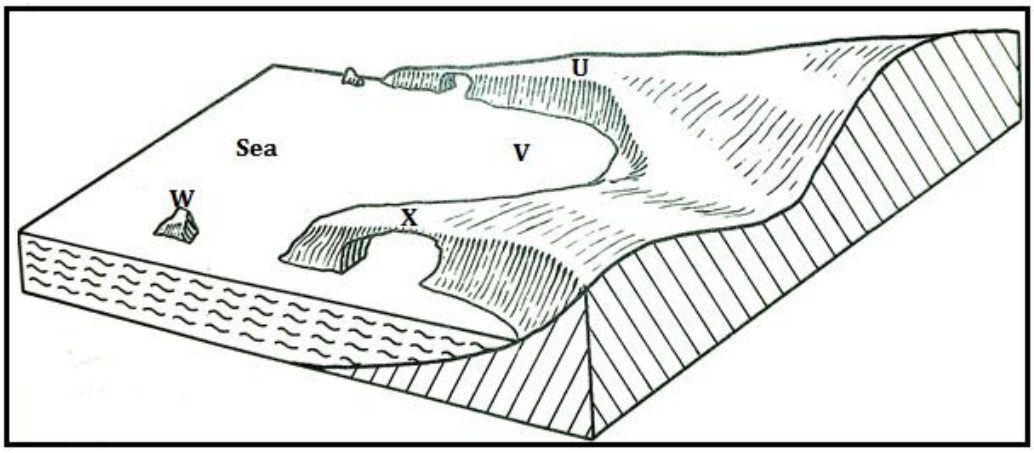
(c) With the aid of well labelled diagrams, describe how Fold Mountains were formed. (10 marks)

(d) Explain **four** negative effects of Fold Mountains to people. (8 marks)

9. (a) (i) Define the term ocean. (2 marks)

(ii) Name **three** types of islands. (3 marks)

(b) The diagram below shows some features formed due to wave erosion. Name the features marked U, V, W and X. (4 marks)



(c) (i) Outline **three** factors which influence the development of coasts. (3 marks)

(ii) Describe how a beach is formed at the coast. (5 marks)

(d) Explain **four** economic benefits of coastal features. (8 marks)

10. (a) State **five** characteristics of karst landscapes. (5 marks)

(ii) Name **four** karst surface features. (4 marks)

(b) Give **four** sources of ground water. (4 marks)

(c) Explain how the following factors influence the occurrence of ground water:

(i) Nature of rocks. (2 marks)

(ii) Vegetation cover. (2 marks)

(d) Explain **four** conditions that favour the location of an artesian well. (8 marks)

NAME……..

ADM: …… **CLASS:**…….. **CANDIDATE SIGNATURE:** …….. **DATE:** ……..

NAKURU JOINT EVALUATION MOCK 2025

FORM FOUR GEOGRAPHY PAPER 2 (312/2)

TIME: 2 HOURS 45 MINUTES

INSTRUCTIONS TO CANDIDATES

- This paper has **two** sections: **A** and **B**
- Answer all the questions in section **A.**
- Answer **question 6** and other **two** questions from section **B**.
- All the answers must be written on the foolscaps provided.
- Candidates must the questions in **English**.

FOR EXAMINER'S USE ONLY.

Section	Questions	Maximum score	Candidates score
A	**1-5**	**25**	
B	**6**	**25**	
		25	
		25	
	Total score	**100**	

This paper consists of 4 printed pages. Candidates should check the question paper to ascertain that all pages are printed as indicated and that no question /pages are missing.

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SECTION A (Answer all the questions from this question)

1. (a) Give **two** main indigenous softwood tree species in Kenya. (2 marks)

   (b) State **three** reasons why agroforestry is encouraged in Kenya. (3 marks)

2. (a) List **two** biological factors that influence agriculture. (2 marks)

   (b) State **three** characteristics of shifting cultivation. (3 marks)

3. (a) Define the term ecotourism. (2 marks)

   (b) State **three** factors that hinder domestic tourism in Kenya. (3 marks)

4. (a) Name **two** areas in Kenya where lightning strikes are highest. (2 marks)

   (b) Give **three** effects of air pollution. (3 marks)

5. The diagram below shows the functional zones of an urban centre. Use it to answer question (a).



(a) (i) Identify the zones marked **X** and **Y**. (2 marks)

(ii) State **three** characteristics of Central Business District. (3 marks)

SECTION B (ANSWER QUESTION 6 AND ANY TWO QUESTIONS FROM THIS SECTION)

6. The table below shows the number of tourists who visited Kenya from European Countries for a period of four years.

No. of tourists	**2011**	**2012**	**2013**	**2014**
Germany	600	820	700	850
France	430	620	410	730
Italy	330	440	350	600
Spain	180	200	230	420

(a) (i) Using a vertical scale of 1cm to represent 200 tourists, present the above Data using a compound bar graph. (9 marks)

(ii) State **three** advantages of using compound bar graph as a method data Presentation. (3 marks)

(b) Distinguish between management of wildlife and conservation of wildlife. (2 marks)

(c) State **four** problems associated with wildlife in Kenya. (4 marks)

(d) (i) Name **three** main tourist resorts in Switzerland. (3 marks)

(ii) Give **four** reasons why Switzerland receives more tourists than Kenya. (4 marks)

7. (a) (i) Define the term mining. (2 marks)

(ii) List **three** ways in which minerals occur. (3 marks)

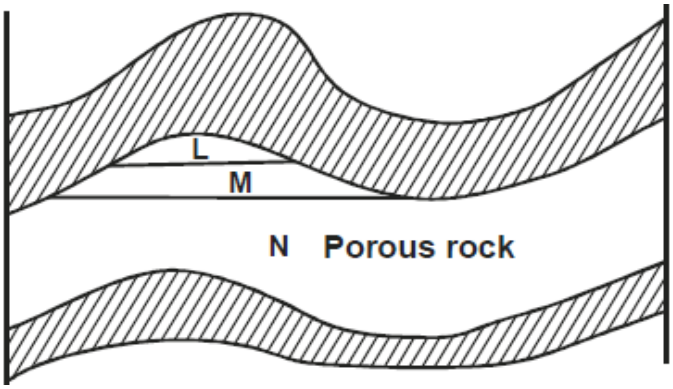
(iii) Name the areas where the following minerals are mined in Kenya;

- Flourspar (1 mark)
- Diatomite (1mark)
- Limestone (1 mark)

(b) Describe how minerals are extracted using vertical shaft method. (6 marks)

(c) Study the diagram below and use it to answer the question that follow;

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(i) Name the parts marked **L**, **M** and **N**. (3 marks)

(ii) Explain **four** contribution of petroleum production in Middle East countries. (8 marks)

8. (a) Define the term land rehabilitation. (2 marks)

(b) Give **four** methods used in land rehabilitation in Kenya. (4 marks)

(c) (i) Explain **four** factors that favored the establishment of Perkerra Irrigation Scheme. (8 marks)

(iii) State **three** ways in which salinity of soil was reduced in the polders in Nether lands. (3 marks)

(iv) Explain **four** differences between land reclamation in Kenya and Netherlands. (8 marks)

9. (a) (i) Define the term population. (2 marks)

(ii) Name **two** primary sources of population data. (2 marks)

(b) Explain **four** physical factors that influence population distribution in East Africa. (8 marks)

(c) Explain **three** negative effects of a high population growth. (6 marks)

(d) (i) Apart from rural-rural migration, give **three** other forms of internal Migration. (3 marks)

(ii) State **four** causes of rural-rural migration in East Africa. (4marks)

10. (a) (i) What is regional trade? (2 marks)

(ii) Give **five** major imports to Kenya. (5 marks)

(b) (i) Explain **four** benefits which member states of South African Development Co-operation derive from the formation of the trading (SADC) bloc. (8 marks)

(ii) Name **two** countries in Africa that belong to more than one trading Bloc. (2 marks)

(c) Explain **four** problems facing regional trading blocs in Africa. (8 marks)

NAME……..……

ADM NO……CLASS…….CANDIDATES SIGNATURE……. DATE……

NAKURU JOINT EVALUATION MOCK 2025

HISTORY AND GOVERNMENT

PAPER 1

TIME: 2 HOURS 30 MINUTES

Instructions to candidates:

a) This paper consists of three sections A, B and C.

b) Answer all questions in section A, Three questions from section B and Two questions from section C.

c) Answers to all Questions must be written in the foolscaps provided.

d) Candidates should check the Question paper to ascertain that all pages are printed as indicated and no Questions are missing.

e) Answer all questions in English

SECTION A 1-17	SECTION B				SECTION C			
	18	19	20	21	22	23	24	TOTAL

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SECTION A. (25 Marks) ***Answer all questions***

1. Give the main source of the history of Kenyan communities before colonization. (1 mark)
2. Identify two functions of the Njuri Ncheke among the Ameru in the 19th century. (2 marks)
3. Name the remnant of southern cushites in Kenya. (1 mark)
4. Give two reasons why the Portuguese built Fort Jesus. (2 marks)
5. Identify two main items of trade from the interior coast of Kenya during the long distance trade. (2 marks)
6. State one development right of the child. (1 mark)
7. Highlight two ways in which the constitution of Kenya promote national unity. (2 marks)
8. State the main duty of the Governor in Kenya during the colonial period. (1 mark)
9. Mention two roles that Jomo Kenyatta played in Kikuyu Central Association. (2 marks)
10. State two reasons why the second Lancaster House conference was convened in 1962. (2 marks)
11. Identify two political assassinations that took place in Kenya between 1963 -1970. (2 marks)
12. Give the main reason for the declaration of state of emergency in Kenya in 1952. (1 mark)
13. Outline one example of special courts in Kenya. (1 mark)
14. Who is the administrative head of national assembly in Kenya? (1 mark)
15. Identify one source of Nyayo philosophy. (1 mark)
16. State two principles of devolved government in Kenya. (2 marks)
17. Give one external source of government revenue in Kenya. (1 mark)

SECTION B (45 MARKS) Answer only three questions

18 (a) Name three communities that belong to coastal Bantus in Kenya. (3 marks)

(b) Explain six results of the migration and settlement of the highland Nilotes in Kenya. (12 marks)

19 (a) Identify five factors that led to the growth of towns along the coast of Kenya before 19th century. (5 marks)

(b) Discuss five reasons for the Portuguese success within the east African coast. (10 marks)

20 (a) Give three methods used by the colonial government to acquire lands in Kenya. (3 marks)

(b) Explain six ways in which the colonial promoted settler farming in Kenya. (12 marks)

21 (a) State five problem experienced by the British colonial administration in Kenya. (5 marks)

(b) Describe five roles played by political parties in the struggle for independence in Kenya. (10 marks)

SECTION C (30 marks) Answer only two questions

22 (a) Identify **five** constitutional changes in the executive in the year 2010. (5 marks)

(b) Explain **five** challenges Kenya encountered in search of a new constitution. (10 marks)

23 (a) Identify **three** functions of correctional services in Kenya. (3 marks)

(b) Discuss **six** reforms undertaken to improve the correctional services in Kenya (12 marks)

24 (a) state **three** components of a national budget. (3 marks)

(b) Explain **six** ways of managing public finance by county government. (12 marks)

NAME: _____

ADM NO: _____ **CLASS:** _____ **DATE:** _____ **SIGN:** _____

NAKURU JOINT EVALUATION MOCK 2025

HISTORY & GOVERNMENT

FORM: 4

PAPER 2 (311/2)

TIME: 2 HOURS 30 MIN

INSTRUCTIONS TO CANDIDATES

- This paper consists of **THREE** sections **A**, **B** and **C**
- Answer **ALL** questions in section **A (25 marks)**
- Answer any **THREE** questions in section **B (45 marks)**
- Answer any **TWO** questions in section **C (30 marks)**
- All answers must be written in the foolscaps provided.

SECTION A (25 marks)

1. Give ONE contribution of archaeology to the study of History. (1 mark)

2. Identify TWO activities that influenced early man to set up permanent settlement. (2 marks)

3. Identify ONE area in Africa where agriculture began. (1 mark)

4. State TWO disadvantages of human transport. (2 marks)

5. State TWO uses of bronze in ancient Benin. (2 marks)

6. Give the MAIN reason for the decline of Meroe. (1 mark)

7. State TWO advantages of mobile phone as a means of communication. (2 marks)

8. Give TWO uses of steam power in Europe during the 19th Century. (2 marks)

9. State ONE function of the Lukiiko in the Buganda Kingdom in the 19th Century. (1 mark)

10. Mention TWO methods used by European powers to acquire colonies in Africa. (2 marks)

11. State TWO privileges enjoyed by the assimilated Africans in the four French communes in Senegal. (2 marks)

12. State **TWO** causes of the Ndebele war of 1893. (2 marks)

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13. Name the military wing of the African National Congress in South Africa. (1 mark)

14. State **ONE** objective of the Arusha Declaration in Tanzania. (1 mark)

15. Give the **MAIN** political challenge that the Democratic Republic of Congo has been facing since independence. (1 mark)

16. Identify **ONE** weapon used during the cold war. (1 mark)

17. Name the agency of the United Nations Organization which deals with the problem of refugees. (1 mark)

SECTION B (45 marks) Answer any **THREE** uestions

18. a) State FIVE factors which led to the development of early agriculture in Mesopotamia. (5 marks)

b) Explain FIVE effects of Agrarian Revolution in Europe. (10 marks)

19. a) Outline FIVE ways of obtaining slaves from the interior of West Africa during the Trans-Atlantic trade. (5 marks)

b) Explain FIVE factors that contributed to the decline of the Trans-Atlantic trade. (10 marks)

20. a) State FIVE causes of the Maji Maji Rebellion in Tanganyika (1905 - 1907). (5 marks)

b) Explain FIVE effects of the Chimurenga war of 1896 - 1897. (10 marks)

21. a) State THREE roles of Kwame Nkrumah in the struggle for independence in Ghana. (3 marks)

b) Explain SIX challenges faced by FRELIMO in the struggle for independence in Mozambique. (12 marks)

SECTION C (30 marks)

Answer any **TWO** questions

22. a) Outline ***Five*** factors which contributed to the growth of Buganda Kingdom in the 19th Century. (5 marks)

b) Describe the social organization of the Asante Kingdom. (10 marks)

23. a) State ***Five*** terms of the Treaty of Versailles signed in 1919. (5 marks)

b) Explain ***Five*** causes of the Second World War (1939 - 1945) (10 marks)

24. a) State ***Five*** duties of the Monarchy in Britain. (5 marks)

b) How are the powers of the president of the United States of America checked? (10 marks)

Jina ……

Nambari ya usajili ……..Darasa ……Tarehe ……

MTIHANI WA MWIGO WA NAKURU 2025

KISWAHILI KARATASI 1 (102/1)

KIDATO CHA NNE

INSHA

Muda: 1 ¾

Maagizo

(a) Andika insha **mbili**. Insha ya kwanza ni ya **lazima**.
(b) Kasha chagua insha nyingine moja kati ya hizo tatu zilizobakia.
(c) Kila insha isipungue maneno **400.**
(d) kila insha ina alama 20.
(e) Kila insha **lazima** iandikwe kwa lugha ya Kiswahili.

1. Wewe ni katibu wa kamati ya maslahi ya klabu ya wasanii chipukizi mtaa wa Rehema. Kumekuwa na visa vya kuzorota kwa usalama. Andika kumbukumbu za mkutano wenu uliofanyika kujadili suala hili.
2. Fafanua umuhimu wa zoezi la upanzi wa miti nchini.
3. Andika kisa kitakachodhihirisha maana ya methali; Fahali wawili wapiganapo nyasi ndizo ziumiao.
4. Andika kisa kitakachoanza kwa:
   Nilikaa pale kwa mseto wa hisia, nisijue kama nilifurahishwa ama nilihuzunishwa na kisa hicho……..

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Jina: _____

Nambari: _____**Darasa**: _____**Sahihi ya Mtahiniwa**: _____ **Tarehe**: _____

101/2
KISWAHILI KARATASI YA PILI
KIDATO CHA NNE
MTIHANI WA MWISHO WA MUHULA
MUHULA WA PILI
MUDA: SAA 2 ½

MTIHANI WA MWIGO WA NAKURU 2025

Maagizo kwa Watahiniwa

a) Andika jina lako na nambari ya usajili katika nafasi zilizoachwa hapo juu.
b) Jibu maswali yote
c) Majibu yote yaandikwe kwa Kiswahili
d) Majibu yote yaandikwe ndani ya kijitabu hiki cha maswali.
e) Hakikisha kurasa zote za mtihani zipo.

Swali	Upeo	Alama
1	15	
2	15	
3	40	
4	10	
Jumla	80	

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UFAHAMU (ALAMA 15)

Soma kifungu kifuatacho kisha ujibu maswali yafuatayo.

Kutokana na malalamishi ya mara kwa mara kuhusu uamuzi viwanjani nchini, Mitambo ya teknolojia ya Kusaidia Uamuzi (VAR) katika ligi zetu, hasa kwenye Ligi kuu ya Kenya (FKF-PL) inahitajika kwa dharura.

Ligi hii inapaswa kuwa miongoni mwa 10 bora Afrika ili kuvutia wachezaji wazri kutoka nje ya bara hili, lakini uamuzi duni imedidimika, itasaidia kupunguza makosa ambayo yamekuwa yakitokea mara kwa mara.

Tumeshuhudia mabao yakiingia na kuhesabiwa baad aya waamuzi kuamuru yawe mabao. Lakini baada ya kutazama picha za marudio, baadhi yao yanabatilishwa. Hapa, teknologia itasaidia kupunguza visa hivi ili washindi wapate haki yao.

Tumeshuhudia waamuzi na wasaidizi wao wakishtuka mpira umeanza haraka na bao kufungwa katika hali hiyo, lakini picha za marudio zinaonyesha yaliingia kinyume cha kanuni zilizowekwa.

Tutakubaliana kwamba, duniani kuna mabadiliko yametokea katika nyanya mbalimbali na FKF inapaswa kuelewa kwamba mambo mengi yameanza kuendeshwa kwa usasa ambapo karibu kila kitu kinakumbatia teknolojia. Teknolojia imegusa karibu kila fani ya maisha ya binadamu na hakuna anayeweza kuhepa. Hali hii imeshika kiasi katika kila jambo ndiposa FIFA ikaamua kuleta VAR kusaidia katika uamuzi uwanjani, mbona hatujaanza.

Vifaa vya teknolojia vimesaidia katika mambo katika sekta mbalimbali ikiwemo michezo kwa ajili ya kupata **mafanikio** katika sekta hiyo. Sio tu kwa ajili ya kubaini udhaifu wa waamuzi wetu katika soka, bali kuvutia wawekaji kufanikisha mchezo huu.

Tunahitaji **wawekezaji** waje wasaidie timu zetu, lakini lazima tuonyeshe timu Fulani haipendelewi kama ilivyo sasa kwenye ligi zetu. Wawekezaji wanapovutiwa na uendeshaji wa mradi popote pale, mafanikio ya haraka hupatikana na kubadilisha maisha ya wahusika.

Maswali

1. Mitambo ya teknolojia ya kusaidia uamuzi (VAR) Katika Ligi Kuu ya Kenya inahitajika kwa dharura. Thibitisha. (ala 2)

2. Kwa nini Ligi Kuu ya Kenya inapaswa kuwa bora miongoni mwa mengine barani Africa.

3. Taja madhara yanayotokana na kutotumia VAR. (ala 4)

4. Kupitia teknologia, kumekuwepo na mbalimbali. Yataje kulingana na kifungu. (ala 3)

5. Kwa mujibu wa kifungu, toa sababu ya FKF kushirikiana na serikali ili kuleta VAR mapema nchini. (ala 3)

6. Toa maana ya maneno yafuatayo kulingana na kifungu. (ala 2)
i) Mafanikio

ii) Wawekezaji

UFUPISHO (ALAMA 15)

Soma makala yafuatayo kisha ujibu maswali.

Ukitaka kufaulu maishani lazima ujue kuwa una kazi kubwa sana inayokungoja. Baada ya kukabili vilivyo kazi hiyo kwa kutumia nyanya mbali mbali utayaimarisha maisha yako. Karibu kila mtu aaliyestawi amepitia katika vikwazo vingi tena vya kutatiza kuliko vikwazo wanavyovipita vijana wa kisasa. Vijana wote wanatakiwa saa wasugue bongo zao sawasawa watende mambo mengi mazuri kuliko wanayoyaona. Wasitosheke nay ale yaliyotendwa na wazee wao. Kila kijana iwapo atakuwa na moyo kama huo nchi zote zitaendelea kwa kasi.

Kwa kujisaidia katika kujiendeleza, yafuatayo yanafaa kuzingatiwa vijana wanatakiwa wawe watotowenye kuelewana na wazazi wao ambao watawaelekeza vyema kitabia na wakiwa ni wazazi waelewe, watawapa watoto wao maelekezo na radhi ambavyo ni bora kuliko mali. Watoto wenyewe wajue wanataka nini, wawe na malengo katika maisha yao na wakazanie kupata kile wanachokitaka bila kutaka tama, watie bidii katika kila wanalifanya, wapande kusoma bila kulazimishwa kwani kusoma kwa kulazimishwa hampi mja amani. Kutaka kushurutishwa ili asome ni sawa na ng'ombe apelekwaye mtoni kunywa maji naye akifika mtoni akatae kunywa maji. Mtoto mwenyewe anatakiwa ajitafutie na anue kuwa hasara ni yake asipofanya bidii na ajiamshe kifikira, motto huyu asiridhishwe na kupokea vitu vidogodogo, kamwer na asiwe mwenye tama wala kumtazama kupewa zawadi kama peremende na hela kila. Lazima ajue kuwa kupewa au kutopewa ni mamoja. Aelewe hali yao, wazazi wakiwa na kitu cha kumpa aone kwamba ni sawa! Wakiwa hawana pia aone kuwa ni sawa. Mtoto anatakiwa kuwa muelewe. Anatakiwa awe na ile fikira ya kujitafutia. Hata kama anatoka katika aila yenye utajiri azoee kutafuta ili ikiwezekana atajirike hata zaidi. Asitegemee cha ndugu kwani huenda akafa akiwa maskini. Kidogo chako ulichokitolea jasho ni bora kuliko kikubwa cha mwenzio.

Vijana wanatakiwa kuwa na nidhamu ya kiwango cha juu popote walipo, wawe ni watu wa kijamii wasikate tama eti kwa ajili masomo ni magumu bali wakazane kutafuta jinsi ya kuyarahisisha ili kuyaelewa, hatimaye, watayamudu na wafanikiwe maishani. Yafaa vijana waelewe kuwa hakuna kizuri kinachopatikana kwa urahisi, daima dawamu wakumbushwe umuhimu wa kuwaheshimu watu na wakati. Wasidharau walimu au wenzao, wasipoteze wakati wao kusengenya, wapuuze wanaowanyanyasa, wasingatie hata neno moja la kuwaudhi wanaloambiwa na watoto waovu. Vijana wawe tayari kukosolewa na kuomba msamaha wa makosa yao. Wanapaswa wawe ni watu wanaowaelewa wenzao na kuchukuliana vyema nao, wawadhamini wengine kwa vile walivyo. Wasidhamaini vitu vya anasa kupita inavyostahili, kama maisha ya starehe au mavazi ya kitajiri. Watoto wengi wasio na chochote wanaopuuza mambo ya anasa ndio wanaofaulu pakubwa katika maisha. Wenye tamaa hawafaulu kwani huishia kuwa wezi kwa kuwa na hamu na kujipatia vya mwosho wakajipatia gerezani.

Maswali.

i) Fupisha aya ya kwanza kwa maneno 70. (al 6)

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ii) Bila kupoteza ujumbe uliokusudiwa na mwandishi, fupisha aya mbili za mwisho. (maneno 70 – 80) (al 9)

3. **Matumizi ya lugha (Alama 40)**

a) Andika irabu zenye sifa zifuatazo. (ala 2)

i) Wastani tandazwa

ii) Juu viringwa

b) Bainisha silabi inayotiwa shadda katika maneno yafuatayo. (ala 2)

i) Baragumu

ii)Nge

c) Ainisha mofimu katika maneno yafuatayo. (ala 2)

i) Msamaha

ii) Asomaye

d) Tunga sentensi kudhihirisha matumizi ya alama ya mkato. (ala 2)

e) Ainisha vitenzi katika sentensi ifuatayo. (ala 2)

Mkulima yuko shambani anapalilia mimea.

f) Ainisha virai katika sentensi ifuatayo. (ala 2)

Wale wawili walijenga kando ya mto.

g) Andika sentensi ifuatayo upya kwa kufuata maagizo. (ala 2)

Nchi nyingi za Kiafrika zimekumbwa na mafuriko mwaka huu.

(Anza: Mafuriko ……..)

h) Andika sentensi ifuatayo upya kwa kufuata maagizo. (ala 2)

Mgeni aliyefika ni Yule aliyealikwa. (Tumia amba…)

i) Bainisha maana mbili zinazojitokeza katika sentensi ifuatayo. (ala 2)

Katana angalifuata mwelekeo wa mshauri wake angalifaulu.

j) Tumia nomino ya jamii badala ya maneno yaliyopigwa mstari katika sentensi ifuatayo. (ala 2)
Karisa alisimama karibu na taka nyingi alipokuwa akitazama mkusanyiko wa nyota.

k) Geuza maneno yaliyopigwa mstari kuwa vitenzi. (ala 2)
Mkurugenzi aliwapa ushauri wafanyakazi watie bidii kazini.

l) Ainisha yambwa katika sentensi hii. (ala 3)
Yusufu alitumiwa hundi ya karo na shangazi yake kwa posta.

m) Changanua sentensi ifuatayo kwa njia ya mstari. (ala 4)
Dhahabu ni madini yanayothaminiwa na wengi.

n) Ainisha vishazi katika sentensi ifuatayo. (ala 2)
Kondoo ambao walichinjwa jana walikuwa wagonjwa.

o) Ainisha viambishi katika neno: kitaandikiwa. (ala 4)
i) kimuundo

ii) Kimajukumu

p) Tunga sentensi yenye muundo ufuatao. (ala 2)
KN (N+RH) + KT (T + E)

q) Eleza dhana ya ‘ngeli’ (ala 1)

r) Andika sentensi ifuatayo katika umoja. (ala 2)
Nyua walizojenga hapa zimesaidia kukabiliana na wahalifu hao.

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4. <u>Isimu jamii. (Alama 10)</u>

a) Thibitisha kwa hoja tano nadharia kuwa Kiswahili ni lugha ya Kibantu. (ala 5)

b) Umealikwa kama mtoa nasaha katika shule jirani, toa sifa tano za lugha utakayotumia katika hotuba yako. (ala 5)

Jina: _____

Nambari: _____**Darasa**: _____**Sahihi ya Mtahiniwa**: _____ **Tarehe**: _____

KISWAHILI
KIDATO CHA NNE
KARATASI YA TATU (FASIHI)
MUDA: SAA 2 ½

MTIHANI WA MWIGO WA NAKURU 2025

Maagizo kwa Watahiniwa

a) Jibu maswali manne
b) Swali la kwanza ni la lazima.
c) Maswali mengine matatu yachaguliwe kutoka sehemu nne zilizobaki; yaani; Tamthilia, Hadithi fupi, Fasihi simulizi na ushairi.
d) Usijibu maswali mawili kutoka sehemu moja
e) Majibu yote lazima yaandikwe kwa lugha ya Kiswahili.
f) Majibu yote yaandikwe kwenye karatasi ya majibu.

Swali	Upeo	Alama
1	20	
	20	
	20	
	20	
Jumla	80	

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SEHEMU YA A: RIWAYA (NGUU ZA JADI)

1. **Swali la lazima**

Alishangaa barua hiyo iliingia vipi mle ndani. Kwa nini ……. aweke barua yake ndani ya mkoba wake bila kuisoma? Au alisahau alipokwenda zake uhamishoni? Na ilitoka wapi hasa? …… aliamua kuifungua bahasha, liwe liwalo. Potelea mbali hata kama haikuwa yake …….. mwenyewe alikuwa kesha mtema kama masuo. Barua ile ina maana gani kwake sasa hata akiisoma? Alijaribu kuitatanua ili gundi iachilie ule upeto wa juu wa bahasha lakini wapi. Gundi ilikazana kumsumbua hadi akaamua kuirarua raru raru bahasha ili mradi aifikie ile barua. Alikuwa mwangalifu asiirarue hata hivyo barua aliyotamani sana kuisoma. Aliichomoa akaona ilikunjwa peto tatu. Aliikunjua huku mikono ikitetemeka. Vidole vilijaa jasho kwa shauku ya kutaka kujua yaliyoandikwa. Iliandikwa kwa wino mweusi uliokoza.

a) Tambua muktadha wa dondoo hili. (alama 4)

b) Changanua mtindo katika kifungu hiki. (alama 10)

c) Fafanua sifa za wahusika wanaorejelewa. (alama 6)

SEHEMU YA B: TAMTHILIA YA BEMBEA YA MAISHA

Jubu swali la 2 au 3

2. Matatizo anuwai yanakabili jamii ya Bembea ya Maisha. Eleza kwa kutoa mifano mwafaka. (alama 2)

3. "Tena mtu asiyekujua wala hajapata kukutia jicho! Mpita njia na shughuli zake si ni malaika huyo? Kana kwamba umalaika una ngazi ……."
   a) Fafanua muktadha wa dondoo hili. (alama 4)
   b) Eleza 'umalaika' wa mrejelewa. (alama 8)
   c) Tambua mbinu yoyote ya lugha inayojitokeza katika dondoo hili. (alama 4)
   d) Fafanua sifa za msemaji. (alama 4)

SEHEMU YA C: HADITHI FUPI:

MAPAMBAZUKO YA MACHWEO NA HADITHI NYINGINE

Jibu swali la 4 au 5.

4. ‘ Pombe ina madhara chungu nzima’ Thibitisha ukweli wa kauli hii ukirejelea hadithi ya kila mchezea wembe. (alama 20)

5. Soma kifungu kifuatacho kisha ujibu maswali yafuatayo.

“Akili za masomo huna ……..zinachangamkia barua na mambo ya wanaume tu. Mamako alikuwa vivyo hivyo na unajua kilichomfika. Kweli mtoto wa nyoka ni nyoka!” Yunuke alimfokea. Alikizima kibatari kile na giza kuu likaivaa nyumba. Mwezi mmoja baada ya mtihani kukamilika, Ombati alifika kijijini kwa ajili ya likizo ya mwezi wa Disemba. Alifika nyumbani kufanya maandalizi ya kupeleka Mike katika shule ya upili kwani alikuwa na imani kuwa angepita mtihani. Ombati alikuwa na jingine. Sabina aliwasikia binamu zake waliokuwa katika shule ya upili wakizungumza kuhusu mpango wa baba yao wa kumwoza kwa kijana mmoja mwendesha pikipiki ili apate mahari ambayo dadake Nyaboke hakumpa.

a) Tambua mbinu zozote za lugha ambazo zinajitokeza katika kifungu hiki. (alama 4)

b) Fafanua maudhui yoyote matano yanayojitokeza katika dondoo hili. (alama 10)

c) Hakika mwishowe machweo yalifika. Huku ukirejelea hadithi ya Mapambazuko ya Machweo, tetea kauli hii.

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SEHEMU YA D: FASIHI SIMULIZI

Jibu swali la 6 au 7.

6. a) Fafanua maana ya miviga. (alama 2)

   b) Eleza sifa saba za miviga. (alama 7)

   c) Tambua hawara nne za Miviga. (alama 8)

   d) Taja mifano yoyote mitatu ya miviga. (alama 3)

7. Soma kifungu hiki kisha ujibu maswali.

Hadithi ya Jabali inasimuliwa na jamii nyingi. Jabari alizaliwa kashika mkuki mkononi. Mawio ambayo kilio chake, ambacho kwa kweli kulikuwa mgurumo, kilipasua anga, nyota kubwa ilianguka kutoka mbinguni. Ulimwengu mzima ulitetemeka na kutwaa giza.

Hata kabla mama mtu hajampa ziwa, Jabali alikuwa amevuvumka na kuwa ghulamu wa miraba mine. Haikuchukua muda, hata vita kati ya jamii ya Sule na Suna vikaanza; kikosi cha Sule cha wapiganaji mia moja kikawajia vijana wa Suna kwa sime na nyuta. Jabari aliwakabili kwa konde pekee akakirambisha dongo kita kizima.

a) Bainisha kipera cha utungo huu. (alama 1)

b) Toa sababu nne kutoka kwa kifungu kuthibitisha jibu lako la (a). (alama 4)

c) Eleza munufaa matano ambayo jamii itapata kutokana na kipera hiki. (alama 5)

c) Eleza changamoto nne ambazo mkusanyaji wa data kuhusu kipera hiki angekumbana nazo. (alama 10)

SEHEMU YA E: USHAIRI

8. Soma shairi kisha ujibu maswali yanayofuata.

Niokoa muokozi, uniondolee mashaka
Kuyatukua siwezi, mjayo nimedhikika
Nimekitiri simanzi, ni katika kuudhika
Mja wako nasumbuka, nipate niyatakayo

Mja wako nasumbuka, nataka kwao afua
Nirehemu kwa haraka, nami nipate pumua

Naomba hisikitika, na mikono hiinua
Mtenda ndiwe moliwa, nipate niyatakayo

Mtenda ndiwe moliwa, we ndiwe Mola wa anga
Mazito kuyaondoa, pamoja kuyatenga
Ukauepusha ukiwa, ya pingu zilonifunga
Nikundulia muwanga, nipate nitakayo

Nikundulia muwanga, nipate toka kizani
Na huzuni n'ondolea, itoke kwangu moyoni
Mambo mema niegheshea, maovu nisitamani
Nitendea wa manani, nipate niyatakayo

Igeuze yangu nia, dhaifu unipe mema
Nili katika dunia, kwa afia na uzima
Moliwa nitimizia, yatimize yawe mema
Nifurahike mtima, nipate niyatakayo

a) Taja aina ya shairi. (alama 2)
b) Fafanua dhamira ya mshairi. (alama 2)
c) Tambua na ueleze bahari zozote tatu za shairi. (alama 3)
d) Eleza muundo wa shairi hili. (alama 4)
e) Msahiri ametumia uhuru wake wa utunzi. Eleza kwa mifano mine. (alama 4)
f) Eleza toni ya shairi. (alama1)
g) Andika ubeti wa pili katika lugha ya nathali. (alama 4)

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NAME: ……

INDEX NO. ……..CANDIDATE'S SIGNATURE: ……..... DATE: ……..

NAKURU JOINT EVALUATION MOCK 2025

121/1

MATHEMATICS (ALT A)

PAPER 1

2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

1. *Write your name and index 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** from 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. *Non-Programmable silent electronic calculators and KNEC Mathematical Tables may be used.*
7. *This paper consists of 16 printed pages. Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.*

For Examiners' Use Only

SECTION I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total

SECTION II

17	18	19	20	21	22	23	24	Total

Grand Total	

SECTION I (50 MARKS)

Answer all questions in this section

1. Evaluate without using a calculator or mathematical table. (3 marks)

$$\frac{(2\frac{2}{7}-1\frac{5}{6})\div\frac{5}{6}}{\frac{2}{3}of\ 2\frac{1}{4}-1\frac{1}{7}}$$

2. A perpendicular line is drawn from a point (4, 6) to the line 5y+4x = 20. Find its equation in the form of, ay+bx = c where a, b, c are integers. (3 marks)

3. Simplify completely by factorization $\frac{20-45x^2}{6x^2-x-2}$ (3 marks)

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4. Solve for x in the equation $8^{(2x-1)} \times 32^{x} = 16^{x+1}$ (3 marks)

5. A bank in Kenya buys and sells foreign currencies as follows.

	Buying (Ksh)	Selling (kshs.)
1 Us dollar	85.86	86.06
1 sterling pound	142.41	142.73

A tourist from United States of America converted 43521 US dollars into Kenya shillings.

i) Calculate the amount in Kenya shillings that she received (1 mark)

ii) While in Kenya, the tourist spent sh. 2437821 and converted the balance into sterling pounds. How much in Sterling pound did the tourist receive? (3 marks)

6. Wasike bought 3 bags of DAP fertilizer and 4 bags of CAN fertilizer at sh. 21500. Had he bought 2 bags of DAP and 5 bags of CAN, he would have spent sh. 400 less. Find the cost of one bag of each type of fertilizer. (3 marks)

7. Use square roots and reciprocals tables to evaluate to 4 significant figures the expression.

$$(0.06458)^{\frac{1}{2}} + \frac{2}{0.4327}$$ (3 marks)

8. Express 128 and 200 as a product of their prime factors in power form hence evaluate

$$\sqrt{\frac{128}{200}}$$ (3 marks)

9. Given that $\sin\theta = \frac{2}{3}$ and θ is acute angle, find $\tan(90-\theta)$. Give the answer to 4 significant figures. (3 marks)

10. Given the column vector $\underset{\sim}{P} = \begin{pmatrix} -5 \\ 3 \end{pmatrix}$, $\underset{\sim}{q} = \begin{pmatrix} 4 \\ -8 \end{pmatrix}$ and $\underset{\sim}{r} = \begin{pmatrix} 6 \\ -9 \end{pmatrix}$, $\underset{\sim}{t} = 2\underset{\sim}{p} - \frac{1}{2}\underset{\sim}{q} + \frac{1}{3}\underset{\sim}{r}$

    i) Express t as a column vector (2 marks)

    ii) Calculate the magnitude of vector t in (i) above correct to 2 d.p. (1 mark)

11. Four machines give out signals at intervals of 24 seconds, 27 seconds, 30 seconds and 50 seconds. At 5.00 p.m. all the four machines give out a signal simultaneously. Find the time this will happen again. (3 marks)

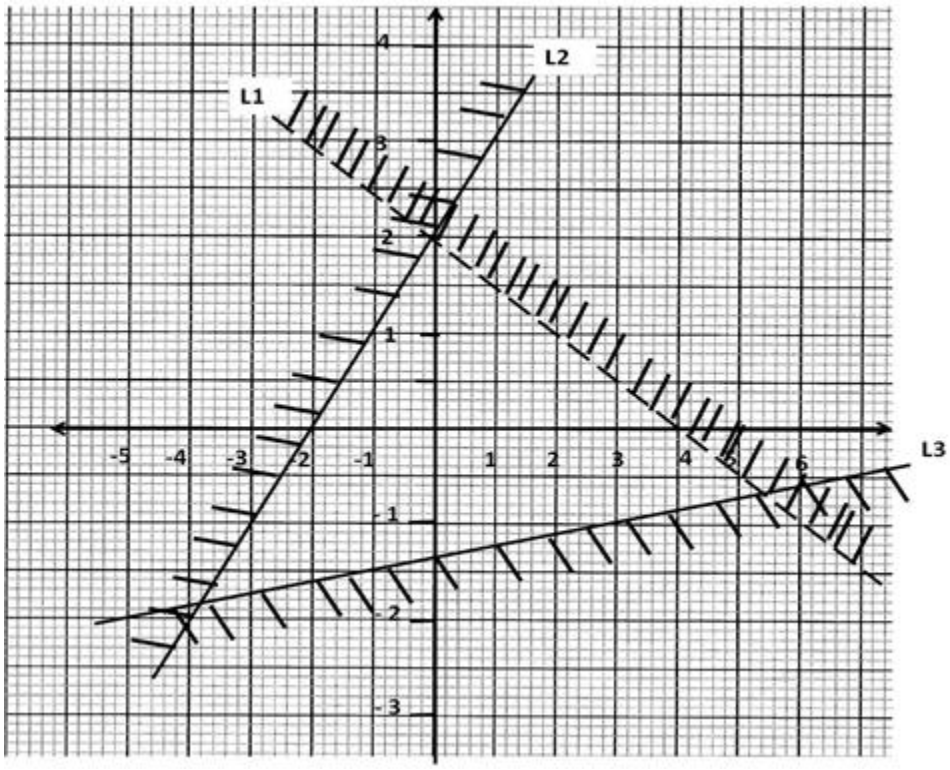
12. A wire in form of an arc with radius 12 cm and center angle 150^0 is formed into a circle. Find the radius of the circle. (3 marks)

13. The exterior angle of a regular polygon in equal to one – third of interior angle. Calculate the number of sides of the polygon and give its name. (3 marks)

14. The area of a parallelogram is 121 cm^2 and its sides are 11 cm and 16 cm long. Find the sizes of all the angles of the parallelogram. (3 marks)

15. Use logarithms table to evaluate $\sqrt[3]{\frac{0.006549}{81.06tan43^0}}$ (4 marks)

16. a) Form the three inequalities that satisfy the given region R. (3 marks)



SECTION II (50 MARKS)

Answer any five questions from this section in the spaces provided below in each question.

17. (a) Using a ruler and a pair of compasses only, construct triangle ABC in which BC = 6cm, AB = 8.8 cm and < ABC = 22 ½ ^{0}, (4 marks)

b) Measure AC and <ACB (2 marks)

c) Construct a circle that passes through A, B and C. (3 marks)

d) What is the radius of this circle (1 mark)

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18) Forty students in a form 2 class were weighed and their masses recorded to the nearest kilogram as shown below.

45	48	56	39	47	36	45
37	46	33	43	51	42	47
47	40	46	41	45	43	46
54	42	51	39	42	45	44
49	50	46				
39	42	48				
50	38	45				
35	52	46				

a) Using class intervals of 5kg tabulate this data in a frequency table (4 marks)

b) Find the modal frequency (1 mark)

c) Modify the table and use it to calculate the mean mass of the students (5 marks)

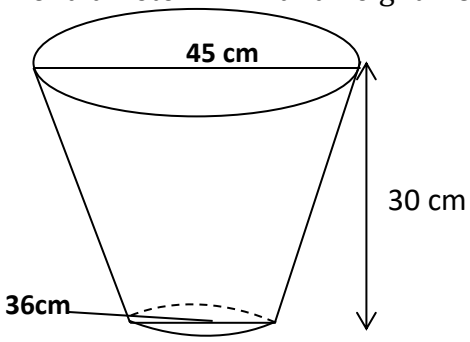
19) A bus left town A at 11.45 a.m. and travelled towards town B at an average speed of 80km/h. A Matatu left town B at 1.15 p.m. and travelled towards town A along the same road at an average speed of 120km/hr. The distance between the two towns is 840km. Determine;

a) The time of day when the two vehicle met. (4 marks)

b) How far from town A they met? (2 marks)

c) How far outside town B the bus was when the Matatu reached town A. (4 marks)

20) The diagram below shows a frustrum which represents a bucket with an open end diameter of 30 cm and a button diameter of 24 cm. The bucket is 30 cm deep as shown and it is used to fill an empty cylindrical tank of diameter 2.1 m and height 1.6 m.



a. Leaving π in your answer, calculate

(i) The capacity of the bucket (6 marks)

b) The capacity of the tank (2 marks)

b) Determine the number of buckets that must be drawn in order to fill the tank. (2 marks)

21) Four business partners Duncan, Dennis, David and Derrick decided to buy a minibus. They agreed to pay for the cost of the minibus in the ratio 3:4:5:6. Basing their contributions on the marked price of the minibus, they found that Derrick would pay sh. 360000 more than Duncan. The sales agent however allowed them a 10% discount on cash payment.

a) Calculate

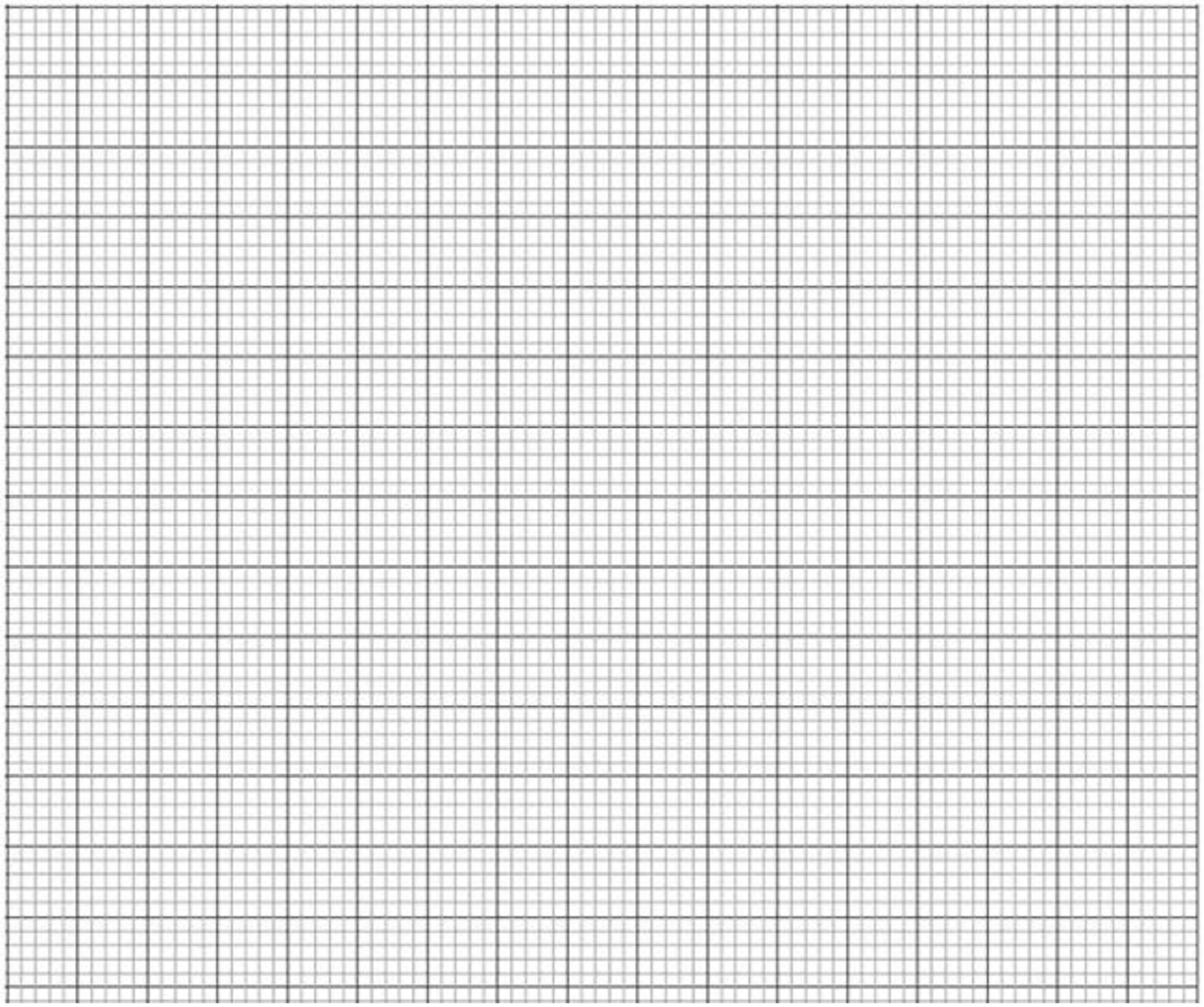
i) The marked price of the minibus (2 marks)

ii) How much more Duncan and David paid than Derrick. (5 marks)

b) The four partners agreed to share monthly profits from the minibus in the ratio of their contributions after setting a side 12% of the profit for emergencies. If the minibus realized sh.72, 000 in profits during one month, calculate David's share of the profits for that month. (3 marks)

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22) a) The points A (2, 6), B (1, 1) C (3, 4) and D (5, 3) are vertices of a quadrilateral ABCD. Plot ABCD on the grid below to form quadrilateral ABCD. (2 mark)



b) ABCD undergoes a rotation of positive 90^0, about the origin. on the same grid, draw the image A'B'C'D' and state the coordinates of A'B'C'D'. (3 marks)

c) A'B'C'D' undergoes a reflection in the X – axis to give A''B''C''D''. On same grid, draw A''B''C''D'' and state the coordinates of A''B''C''D'' (3 marks)

d) A''B''C''D'' is the image of ABCD under a reflection. On the grid, mark the mirror line and state its equation. (2 marks)

23 . (a) Find the inverse of the matrix (2 marks)

$$\begin{bmatrix} 2 & 5 \\ 4 & 3 \end{bmatrix}$$

(b) A transport company has two types of vehicles for hire: Lorries and buses. The vehicles are hired per day. The cost of hiring two lorries and five buses is Sh. 156,000 and that of hiring 4 lorries and three buses is Sh. 137,000.

(i) Form two equations to represent the above information. (2 marks)

(ii) Use matrix method to determine the cost of hiring a lorry and that of hiring a bus.

(3 marks)

(c) Find the value of x given that $\begin{bmatrix} 2x-1 & 1 \\ x^2 & 1 \end{bmatrix}$ is a singular matrix

(3 marks)

24) Four points A, B, C, and D are situated on a horizontal plane such that B is 200 m on a bearing of 065^0 from A. C is 300m on a bearing of 120^0 from B and D is 150m due west of C.

a. Using a suitable scale, draw an accurate scale drawing representing the positions of A, B, C, and D.

(6 marks)

c) By measuring use your scale drawing to find the distance and bearing of:-

i) D from A (2 marks)

ii) B from D (2 marks)

NAME……..……..ADM NO……..…..CLASS…..…….

INDEX NO……..CANDIDATES SIGNATURE……DATE…….

121/2

MATHEMATICS ALT A

PAPER 2

TIME: 2½ HOURS

NAKURU JOINT EVALUATION MOCK 2025

Kenya Certificate of Secondary Education

INSTRUCTION TO CANDIDATE'S:

- ✓ *Write your name, stream and index number in the spaces provided at the top of this page*
- ✓ *This paper contains two sections:* ***Section I and Section II***
- ✓ ***Answer all questions in section I and any five in section II***
- ✓ ***Show all the steps in your calculations giving your answer at each stage in the spaces provided below each question.***
- ✓ *Marks may be given for correct working even if the answer is wrong.*
- ✓ ***Non programmable*** *silent electronic calculators and KNEC mathematical table may be used except where stated otherwise*

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	**TOTAL**

Grand Total	

This paper consists of 16 printed pages.

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

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SECTION I (50 MARKS).

(Attempt all the questions in this section)

1. Find the selling price of 5 kg of a mixture of maize flour and millet flour if 4 kg of maize flour costing sh. 75 per kg is mixed with 6 kg of millet flour costing sh. 50 per kg and a profit of 20% is realized. (3 marks)

2. The radius of a cylinder is given as 3.50 cm while its height is exactly 12 cm. Find the percentage error in the volume of the cylinder, giving your answer to three significant figures. (take $\pi = \frac{22}{7}$) (3 marks)

3. Solve the equation $\log_2(2x^2 - 8) - \log_2(x + 2) = 3$ (3 marks)

4. Solve the equation $2x^2 + 10x + 12 = 0$ by completing the square method. (3 marks)

5. Make b the subject of the formula. (3 marks)

$$x = \frac{a}{\sqrt{(a-b)(a+b)}}$$

6. Simplify the expression: $\frac{5}{7-2\sqrt{3}} - \frac{2}{7+2\sqrt{3}}$ (3 marks)

7. Triangle ABC is such that AB = 10 cm, BC = 12 cm and AC = 20 cm. calculate correct to 2 decimal places the;
   a) Angle ABC (2 marks)

   b) A circle passes through the vertices of triangle ABC. Calculate the radius of the circle.(2 marks)

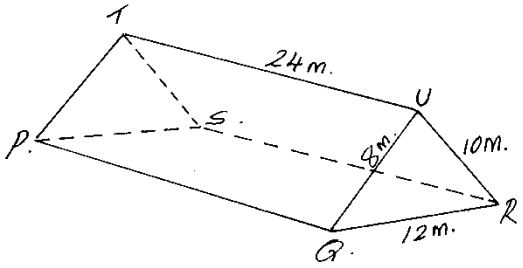
8. Karanu bought a computer whose marked price was 25,000 on hire purchase terms. She paid a deposit of 25% of the cash price and cleared the balance by paying 12 equal monthly instalments of sh2000 each. Calculate the rate of compound interest charged per month. (3 marks)

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9. Solve the following equation $8\cos x = sin^2 x + 6$ for $0^0 \leq x \leq 360^0$ (4 marks)

10. Given that A (4, -2, 6) and B (-2, 1, -3) and that a point N divides AB in the ratio -2:5. Find the vector **ON** in terms of **i** **j** and **k**. (3 marks)

11. The roof of a ware house is in the shape of a triangular prism as shown below



Calculate the angle between faces RSTU and PQRS (3 marks)

12. The equation of a circle is given by $2x^2 + 2y^2 - 12x + 8y - 6 = 0$. Determine the centre and the radius of the circle. (3 marks)

13. Expand $\left(1 - \frac{x}{2}\right)^6$ in ascending powers of x up to the fourth term. Hence use your expansion to evaluate $(0.95)^6$ to three significant figures. (3 marks)

14. The gradient function of a curve is given as $\frac{dy}{dx} = 3x^2 + 4x + 4$. Find the equation of the curve given that the curve passes through the point (1, 2). (3 marks)

15. The first, second and fifth terms of an arithmetic sequence are the first three consecutive terms of a geometric sequence. Find the common ratio of the geometric sequence. (3 marks)

16. In a transformation, an object with area 12cm^2 is mapped onto an image whose area is 24cm^2. Given that the matrix of transformation is $\begin{bmatrix} x & 4 \\ 1 & (x-1) \end{bmatrix}$ find the value of x, hence state two possible matrices (3 marks)

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SECTION II (50 marks)

(Answer ONLY FIVE questions in this section in the spaces provided)

17. Three quantities *x, y* and *z* are such that *x* varies directly as the square root of *y* and inversely as the square of *z*.

a) (i). Given that $x = 12$, and $y = 36$, and $z = 3$, find an equation connecting x, y and z (3 marks)

(ii) Find *x* when $y = 121$ and $z = 5$ (1 mark)

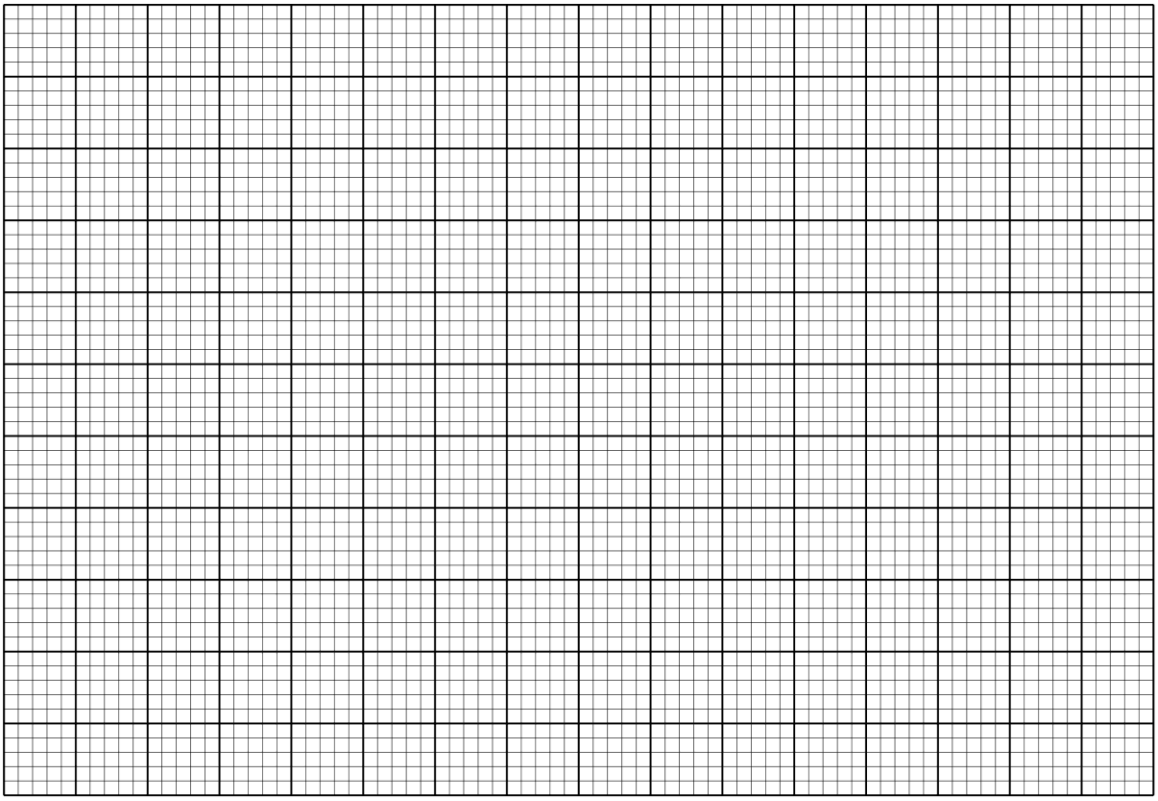
b) i) Express y in terms of x and z (2 marks)

ii) If *x* increases by 21% and *z* decreases by 10%, find the percentage increase in *y* (4 marks)

18. Complete the table below correct to 2 decimal places. (2 marks)

X	-180^0	-150^0	-120^0	-90^0	-60^0	-30^0	0^0	30^0	60^0	90^0	120^0	150^0	180^0
Y=2Cos x		-1.73			1		2		1	0			
Y=Cos (x-60)	-0.5			-0.9		0			1				-0.5

(b) On the same axes plot the graphs of y= Cos ($x-60^0$) and y = 2 Cos x. (use a scale of 1 unit for 30^0 on the x axis and 1 unit for 0.5 units on the y axis) (4 marks)



(c) Using the graph above determine the values of x for which $\cos(x-60^0) - 2\cos x = 0$ (1 mark)

(d) State the period and amplitude of each of the waves above. (2 marks)

	amplitude	period
Y = 2Cos x		
Y = Cos(x - 60)		

(e) Describe the transformation which maps y= $\cos(x-60^0)$ to y = 2cosx. (1 mark)

19. Mrs Mutiso has two cupboards A and B in her kitchen. Cupboard A has 7 white cups and 5 brown cups while cupboard B has 4 white cups and 6 brown ones. All the cups are identical in size and shape.

a) There was a blackout in the town and Mrs Mutiso had to select two cups, one after the other without replacing the previous one, from any of the cupboards.

i. Draw a tree diagram for the information. (2 marks)

ii. Calculate the probability that she chooses two cups of the same colour. (3 marks)

iii. Calculate the probability that she chooses two cups of different colours (1 mark)

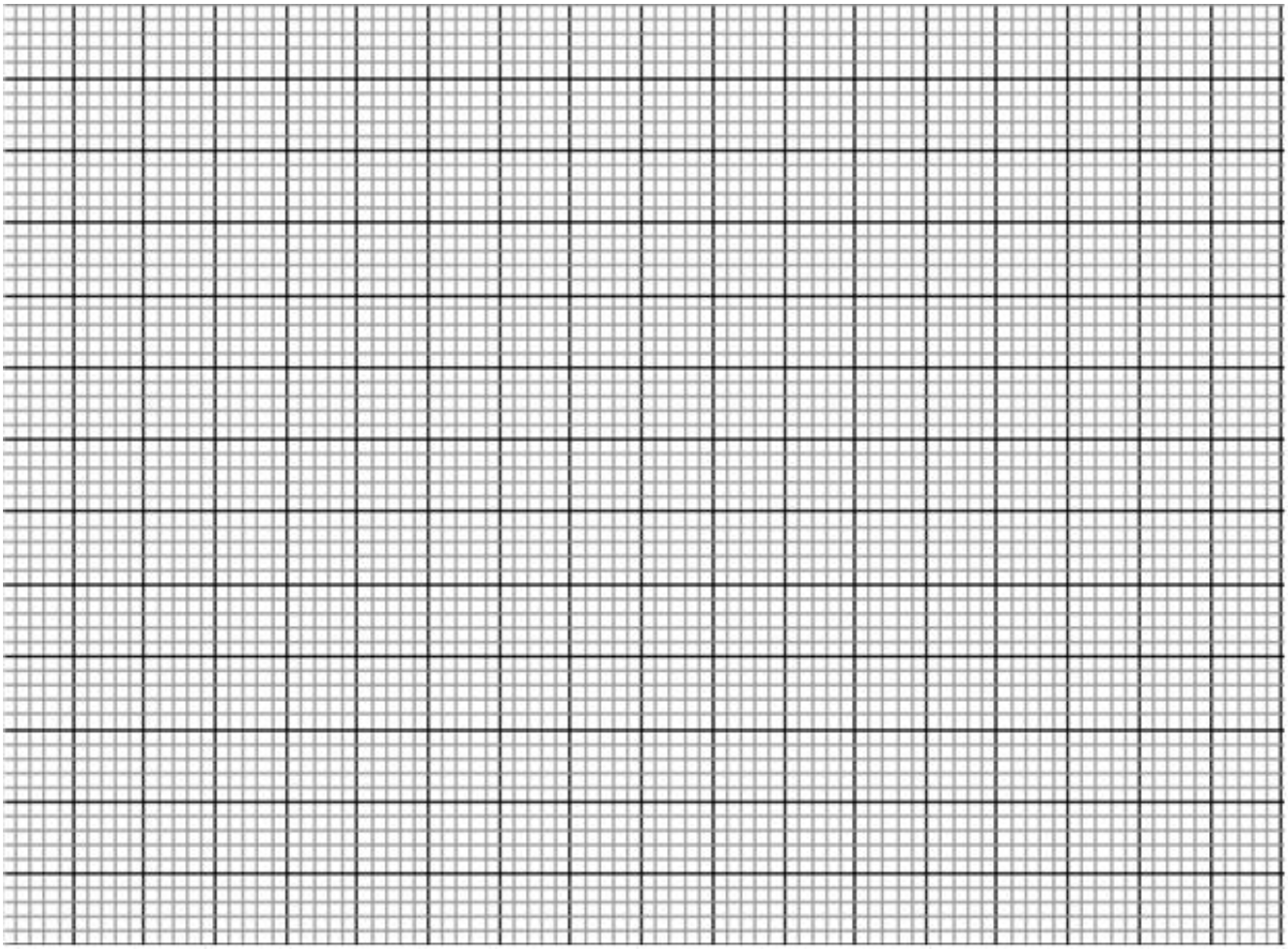
b) On another day, she selected two cups from cupboard B. After using them she placed them in cupboard A. Later in the day, she selected one cup from cupboard A. Find the probability that she chose a white cup. (4 marks)

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20. A contractor intends to transport 800 bags of cement using a lorry and a pick up. The lorry can carry a maximum of 40 bags while a pick up can carry a maximum of 20 bags. The pickup has to make more than twice the number of trips the lorry makes. The total number of trips made by the pickup has to be less than 40 while those made by the lorry have to be at least 5. By letting x and y to be the trips made by the lorry and pickup respectively:

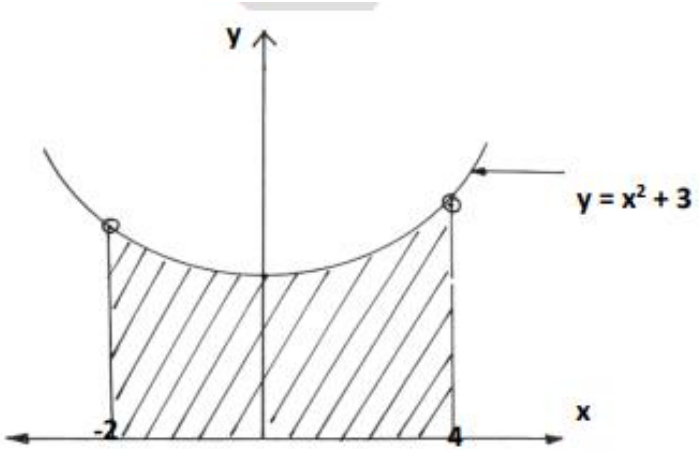
a) Write down all the inequalities to represent the above situation. (4 marks)

b) Represent the inequalities above on the grid provided. (4 marks)



c) Find the number of trips to be made by the lorry and the pickup respectively in order to minimise cost if the cost per trip is Ksh 2000 for the lorry and Ksh 1000 for the pickup. (2 marks)

21. Below is a sketch of the area bounded by the curve $y = x^2 + 3$ and the lines x=-2, x=4 and y=0.



a) Use the trapezium rule with six trapezia to estimate the area of the shaded region (4 marks)

b) Find the exact area bounded by the region in (a) above (3 marks)

c) Find the percentage error in the area for the approximation using trapezium rule (3 marks)

22. An aero plane left town P $(60^{O}N, 55^{0}E)$ at 7:00 am local time on Monday and travelled towards another town Q $(60^{0}N, 125^{0}W)$ at a speed of 500 knots using the **shortest route**. (Take $\pi = \frac{22}{7}$ and radius of the earth R= 6370 km)

a) (i) Calculate the distance travelled in nautical miles. (2 marks)

(ii) Calculate the local time at Q when the plane arrived at Q (3 marks)

b) Another plane left P at 1.30 pm local time and travelled to T $(60^{0}N, 90^{0}E)$ along the parallel of latitude. Calculate the:

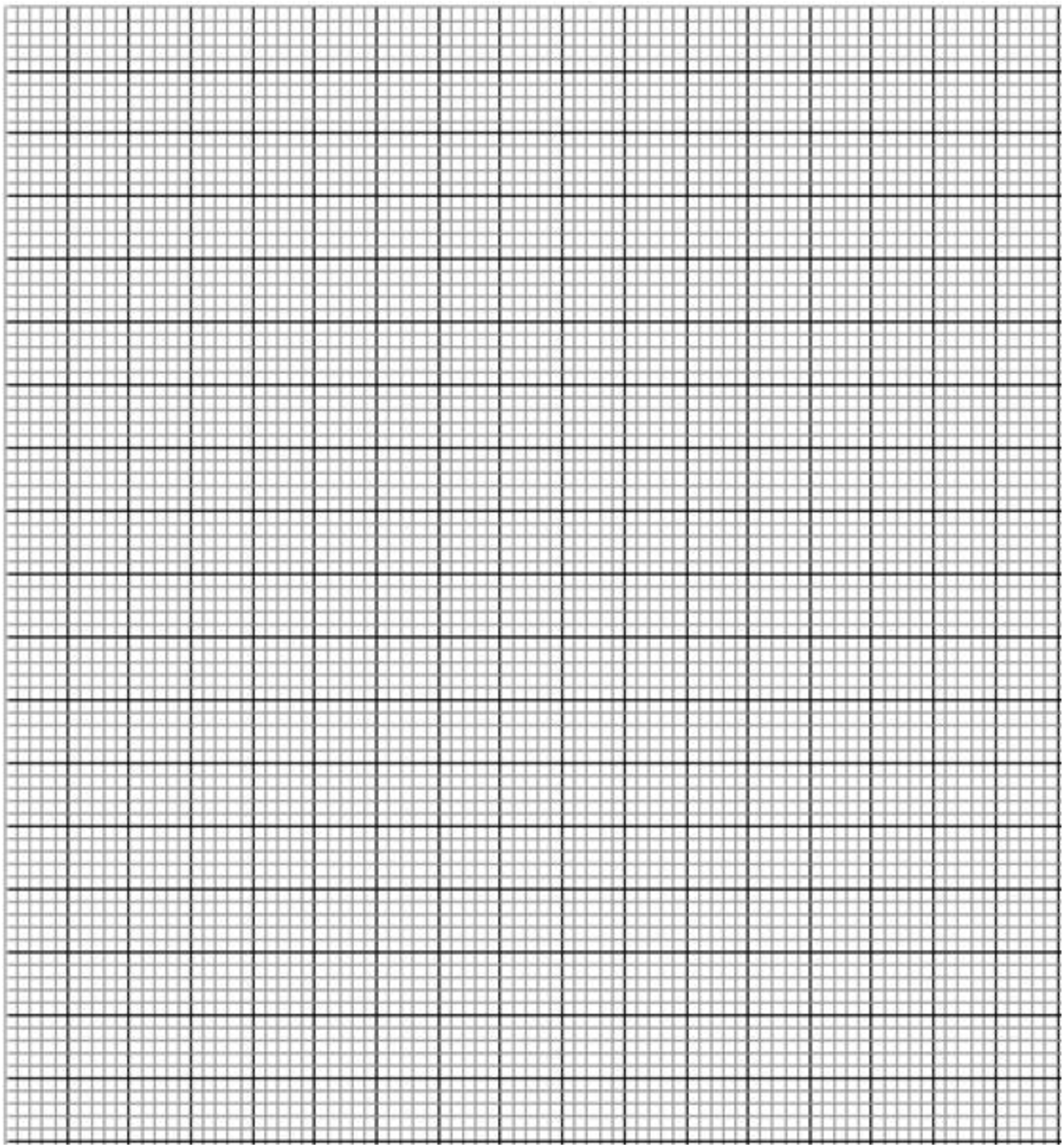
(i) Distance between P and T to the nearest km (2 marks)

(ii) Local time of arrival at town T if the plane flew at the speed of 470 km/h (3 marks)

23. The data below shows the heights of students in a class.

Height	130 -139	140 -149	150-159	160-169	170-179	180-189	190-199
Frequency	3	12	32	22	7	3	1

a) Draw a cumulative frequency curve on the grid provided (4 marks)



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b) Use the graph to find:

i) The median height. (2 marks)

ii) The interquartile range (2 marks)

iii) The percentage of students with a height greater than 172cm (2 marks)

24. Using a ruler and a pair of compasses only, construct a parallelogram ABCD such that AB=10 cm, AD=6 cm and angle BAD=60^o. (3 marks)

(b) On the same diagram, construct:

(i) The locus of a point P such that P is equidistant from AB and AD; (1 mark)

(ii) The locus of a point Q such that Q is equidistant from A and B; (1 mark)

(iii) The locus of a point T such that ATB = 120^0; (3 marks).

(c) Shade the region R bounded by the locus of P, the locus of Q and the locus of T within the trapezium such that AR ≤ RB, angle BAR ≤ angle DAR and angle ARB ≥ 120. (2 marks)

Name.....

ADM No.....CLASS….....Candidate's Signature..... Date.....

232/1

PHYSICS

FORM FOUR

Paper 1 (Theory)

Time: 2 Hours

NAKURU JOINT EVALUATION MOCK 2025

INSTRUCTIONS TO CANDIDATES

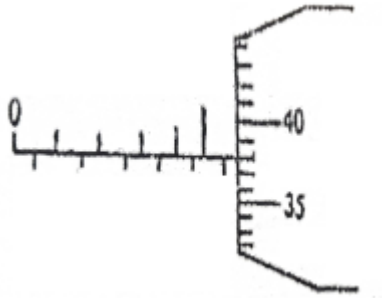
* Write your name, class and admission number in the spaces provided above.
* Sign and write the date of examination in the spaces provided above.
* This paper consists of two sections; A and B
* Answer **all** the questions in section A and B
* All working and answers must be written on the question paper in the spaces provided below each question.
* Non-programmable silent electronic calculators and KNEC mathematical tables may be used.

For Examiner's Use Only

A	**1 - 10**	**25**	
	11	**11**	
	12	**11**	
	13	**13**	
	14	**12**	
	15	**08**	
Total Score		**80**	

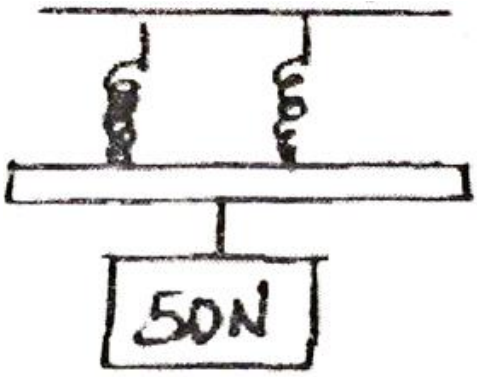
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1. Figure 1 below shows the reading of a micrometer screw gauge that has an error of 0.07mm. Record the actual reading of the measurement. (2 marks)



2. State the effect of addition of impurities on surface tension of liquids. (1 mark)

3. Figure 2 below shows two identical springs of spring constant 5N/cm supporting a load of 50N.



Calculate the effective extension of the two springs. (3 marks)

4. Most buses have their luggage racks below the passenger seats instead of on the roof.

Explain why. (1 marks)

5. The height of mercury column in a barometer at a certain place is 76cm. What would be the height of the column of paraffin in the same place? (Density of paraffin: 0.8 kg/cm^3, Density of mercury: 13.6 g/cm^3) (3 marks)

6. A certain machine uses 400N effort to raise a 600N load. If the efficiency of the machine is 80%, calculate its Velocity Ratio (VR). (3 marks)

7. Water flows steadily along a horizontal pipe at a volume rate of 8.0×10^{-3} m^3/s.

If the cross-sectional area of the pipe is 7.0 cm^2, determine the velocity of the fluid. (3 marks)

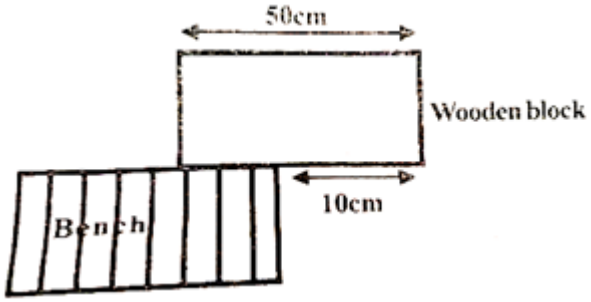
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State how the volume of a given mass of water changes when:

a) Water is cooled from 4°C to 0°C (use a sketch graph). (2 marks)

b) Water freezes to ice at 0°C. (1 mark)

8. Figure 3 shows a uniform wooden block of mass 5 kg and length 50 cm lying on a bench. It hangs over the bench by 10 cm. Use the diagram to answer the questions below:



a) Indicate in the figure the forces acting on the wooden block. (1 mark)

b) Determine the minimum force required for the ruler to topple. (3 marks)

9. State why gases are easily compressible compared to liquids and solids. (1 mark)

10. Explain why covering oneself with two thin blankets is warmer than using a single thick blanket. (1 marks)

SECTION B:(55 MARKS)

11. a) i) Explain why a bucket of water can be swung in a vertical circle without the water pouring out. (1 mark)

ii) A car of mass 800 kg moves on a circular track of radius 20 m. The force of friction between the tyres and the tarmac is 4800 N. Determine the maximum speed at which the car can be driven without skidding. (3 marks)

b) A stone is whirled with uniform speed in a horizontal circle having a radius of 10 m. It takes the stone 10 seconds to describe an arc of length 8 m. Determine:

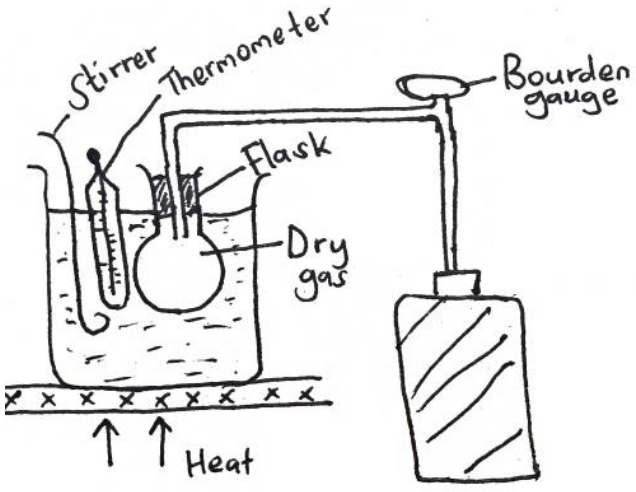
i) Angular velocity. (2 marks)

ii) Period. (2 marks)

c) State a reason why an object is accelerating while its velocity remains constant in circular motion. (1 mark)

d) State two factors that affect critical speed. (2 marks)

12. Figure 4 below shows a set-up that a student used to investigate the pressure law of a gas.



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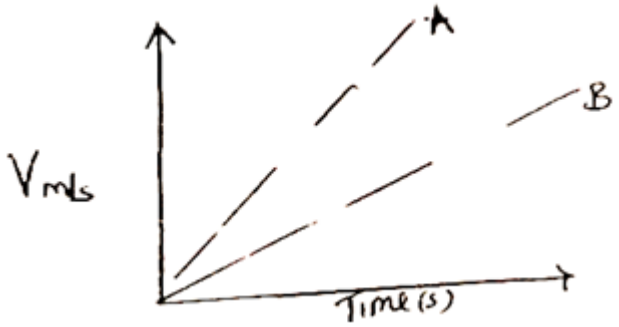
a)i) State measurements that should be taken in the experiment. (2 marks)

ii) Explain how measurements in (i) above may be used to verify the pressure law. (3 marks)

b) Using kinetic theory of gases, explain Boyle's law. (3 marks)

c) Oxygen gas of volume 2500 cm^3 at 10°C and pressure of 3 N/cm^2 is compressed until its volume is 500 cm^3 at pressure of 6 N/cm^2. Determine the new temperature of the gas in Kelvin. (3 marks)

13.a)Figure 5 shows a velocity-time graph of two objects A and B drawn on the same axis.



The two objects have equal masses. The same force is applied against each object. State with a

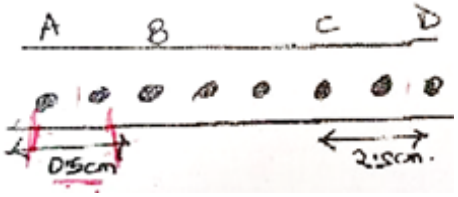
reason which object stops in a shorter distance. (2 marks)

b) An object moving at 30 m/s starts to accelerate at 5 m/s², so that its velocity becomes 50 m/s.

i) Determine the distance moved during the accelerating time. (3 marks)

ii) The object is now braked so that it comes to rest in 5 seconds. Determine the braking force if it's mass was 2700g. (2 marks)

c) Figure below shows the motion of a trolley on a ticker timer whose frequency is 50Hz



Determine the;

i) Initial velocity between A and B. (2 marks)

ii) Final velocity between C and D. (2 marks)

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iii) Acceleration of the trolley during the motion. (2 marks)

14. Explain why a drop of methylated spirit on the back of the hand feels colder than a drop of water at the same temperature. (2 marks)

b) A block of metal whose is 150g and at a initial temperature of 100°C is dropped into a lagged calorimeter of heat capacity 40J/k containing 100g of water at 25°C ;the final temperature of the mixture is 34°C.(Specific of water =4200J/kg/K)Determine;

i) Heat gained by the calorimeter (3 marks)

ii) Heat gained by water (2 marks)

iii) Heat lost by the metal block (2 marks)

c) Specific Heat capacity of the metal block (2 marks)

d) A student heated some water and noticed that it boiled at 102°C.State one possible reason for this observation (1 mark)

15.a)State the Law of Floatation (1 mark)

b) The figure below shows a uniform rod of height 8cm floating vertically in a beaker containing two immiscible liquids P and Q. The densities of the liquids are 800kg/m3 and 1200kg/m3 respectively the cross-sectional area of the rod is 2cm2.

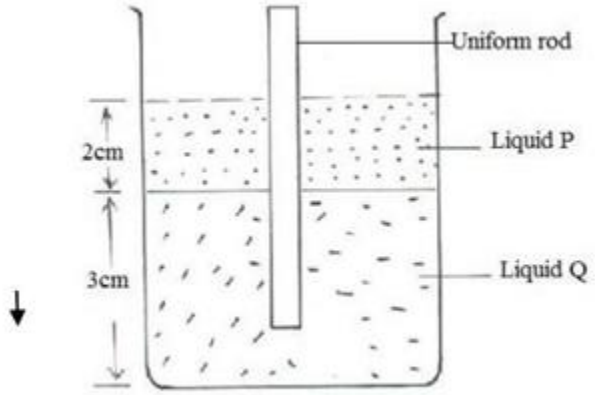


Fig 13

Determine;

i) the weight of liquid P displaced by the rod (3 marks)

ii) the weight of liquid Q displaced by the rod (2 marks)

iii) The mass of the rod (2 marks)

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NAME: _____

ADM NO: _____**CLASS:** _____**DATE:** _____ **SIGN:** _____

NAKURU JOINT EVALUATION MOCK 2025

PHYSICS PAPER 2
FORM: 4
2 Hrs

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

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

(e) All working must be clearly shown in the spaces provided in this booklet.

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

(g) This paper consists of 14 printed pages.

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

(i) Candidates should answer the questions in English.

SECTION A (25MARKS)

Answer all the questions.

1. A number reaction is represented by the following equation

$$_{92}^{a}X \longrightarrow {}_{b}^{234}Y + \text{Alpha particle}$$

Determine values of a and b (2mks)

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2. . **Figure 2** shows the displacement -time graph for a certain wave.

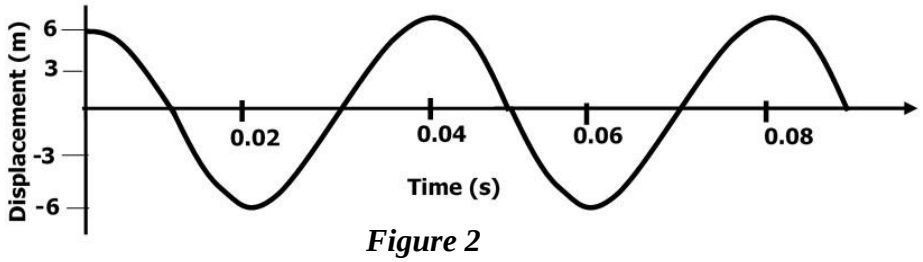


Figure 2

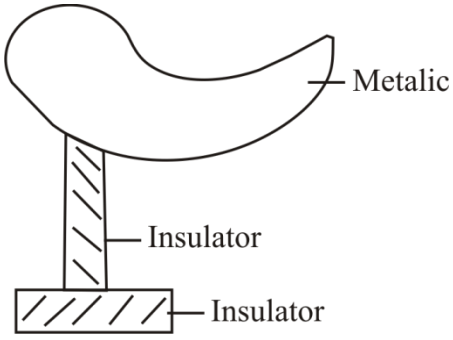
Determine:

(i) Amplitude (1 mark)

(ii) Frequency. (2marks)

3. Using domain theory, explain how electric current produces a magnetic effect in an electromagnet. (2mks)

4. A metallic body shaped as shown in the figure below is positively charged and insulated from the ground. Show the charge distribution (1mark)



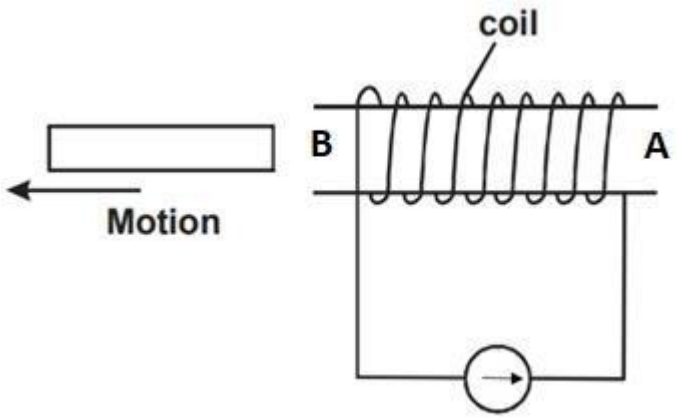
5. Given a dry cell, a diode and connecting wires, draw a circuit in which the diode is reverse biased (2mks)

6. Optics is a branch of physics. Explain what it deals with. (1mk)

7. A model preparing for beauty contest stands 70 cm away from a concave mirror of focal length 90 cm. State two characteristics of the image observed. (2mks)

8. (a). State Lenz's law of electromagnetic induction. [1mk]

(b). The diagram below shows a bar magnet being withdrawn from a solenoid.

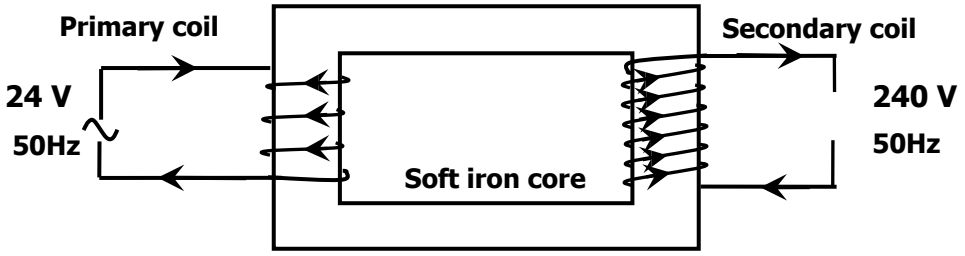


The centre zero galvanometer is observed to deflect in the direction shown. State the polarity of;

(1 mark)

A …….

9. Figure below shows a single phase demonstration transformer intended to converted 24V, 50Hz as AC supply to 240V, 50Hz



(i) What is the purpose of the soft iron core? (1mark)

(ii) If the primary core has 50 turns of coil, how many turns of coils should the secondary have? (2mks)

10. An electric bulb is rated 75W, 240V. Determine the energy consumed by the bulb in 3 minutes. (3 marks)

11. The electrical conductivity of a metal conductor decreases with increase in temperature. Explain. (2 marks)

12. Transistor radios receive radio signals from more stations at night than during the day. Explain (2 marks)

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SECTION B (55MARKS)

13. (a) Define the term "diffraction" as applied in waves (1 mark)

(b) **Figure 13** shows the rays of monochromatic light incident on two adjacent slits S_1 and S_2

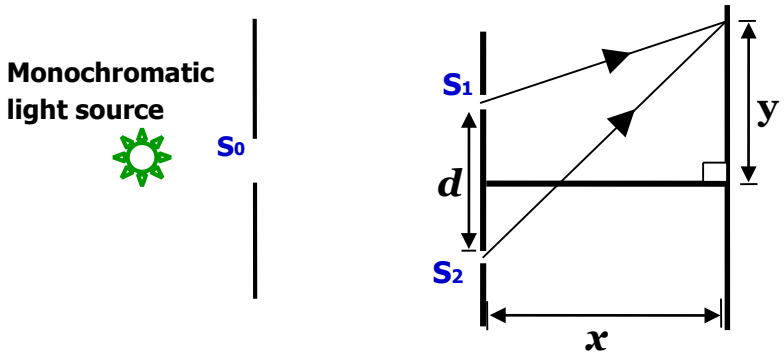


Figure 13

(i) Give the meaning of monochromatic source of light. (1 mark)

(ii) State what is observed on the screen when the (2 mark)

(ii) State what is observed on the screen when the

I. Slit separation, d, is reduced. (1 mark)

II. Distance, x, is increased. (1 mark)

III. White light source is used. (1 mark)

14. (a)(i) State what is meant by absolute refractive index of a material. (1mark)

(ii) **Figure 15** shows an object, O below the base of a glass block of length, d. An observer above the glass block sees its image I at a distance of 10 cm from the base.

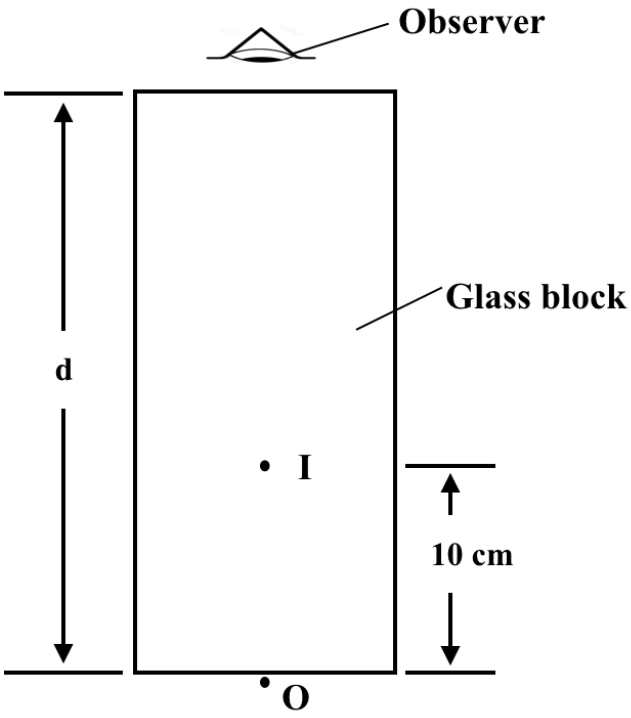
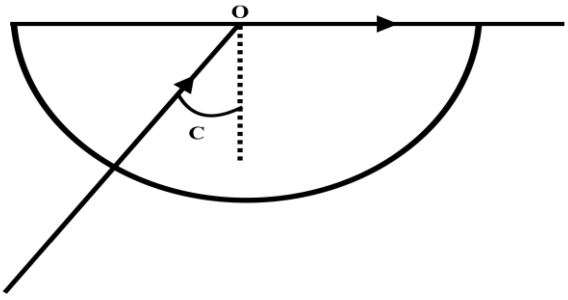


Figure 15

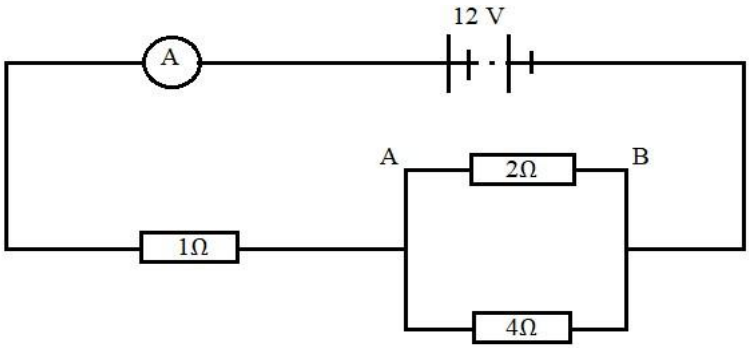
If the refractive index of the glass is 1.5, determine the length d. (3 marks)

(b) **Figure 16** shows a monochromatic ray of light incident at glass-air interface.



Determine the value of angle C. (Take the refractive index of glass = 1.5) (2marks)

15. (a) Study the circuit diagram below and answer the questions that follow



Calculate

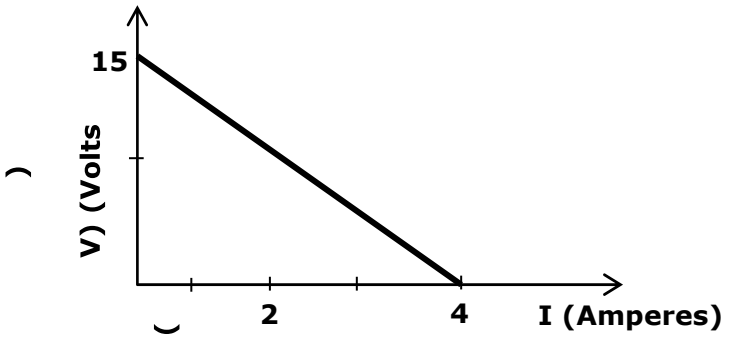
(ii).total resistance (2marks)

(i). the current flowing through the ammeter. (2marks)

(ii). the current through the 4Ω (2marks)

(b) Figure 12 shows the variation of voltage against current.

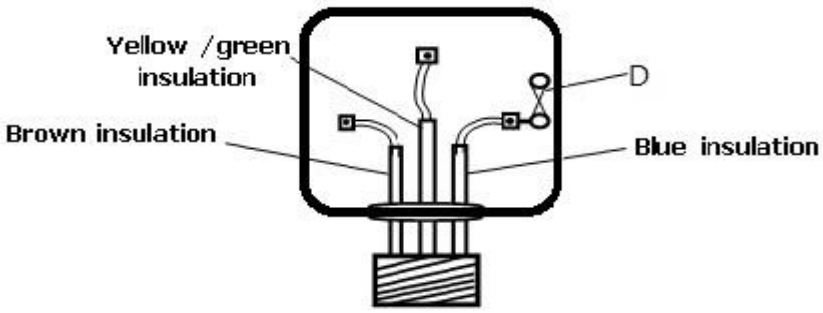
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(i) .the e.m.f, E of the cell. $E = IR + Ir$ (1mark)

(ii) .the internal resistance, r, of the cell. (3marks)

(c) .The figure shows a standard 3-pin plug. The cable contains three wires namely brown, blue and green/yellow.



(a) (i) Name the device marked D and briefly describe how it works

D = (1 mark)

How it works (2marks)

16.(a)Figure 5 shows an X-ray tube.

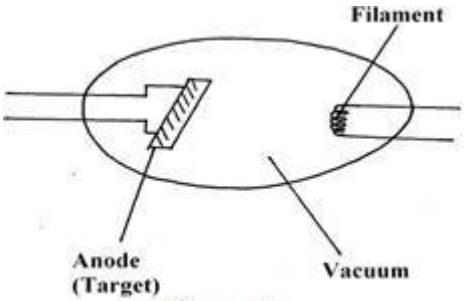


Figure 5

(i). Name the metal used to shield the tube operators from the radiation.

(1 mark)

(ii). Give a reason for your answer in (I) above. (1 mark)

(iii) State **one** industrial use of X-rays. (1 mark)

(iv). State **one** factor that determines the hardness of the X-rays produced in the tube.

(1mark)

17. The results obtained for various monochromatic radiations of different colors are shown graphically in **Figure 9**.

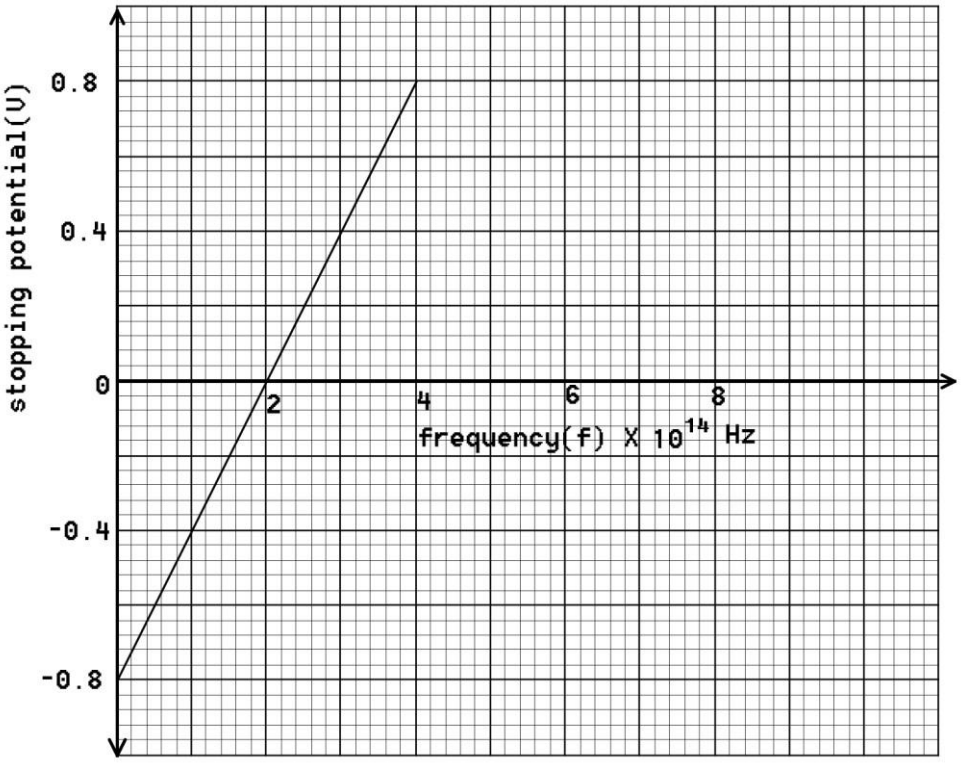


Figure 9

i) Indicates that there is a frequency below which no electrons are emitted. Explain this

(1 mark)

ii) From the graph determine;

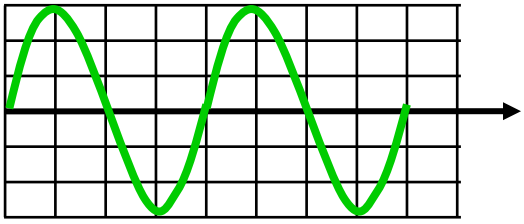
(a) Plank's constant, **h** (Take electron charge, $e^- = 1.6 \times 10^{-19}C$) (3 marks)

(b)The work function of the metal, $\mathbf{W_o}$ (1mark)

(c) Sketch on the same graph, the expected graph of another metal which has a

Lower work function than the metal used (1mark)

18. The figure below shows the trace on the screen of an a.c signal connected to the y-plates of C.R.O with time base on.



(a) Given that the time control is **5ms/div**, and the y-again is at **100V/div**, determine:

i) The frequency of the a.c signal. (3mark)

ii) The peak voltage of the input signal

(2marks)

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(b) **Figure** shows part of a circuit containing three capacitors.

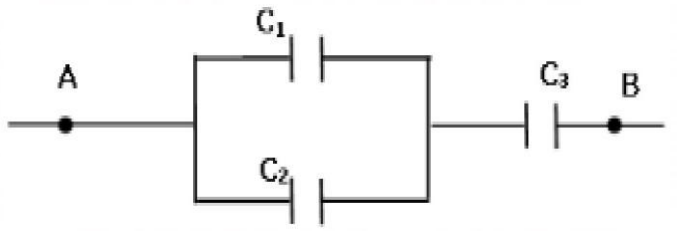
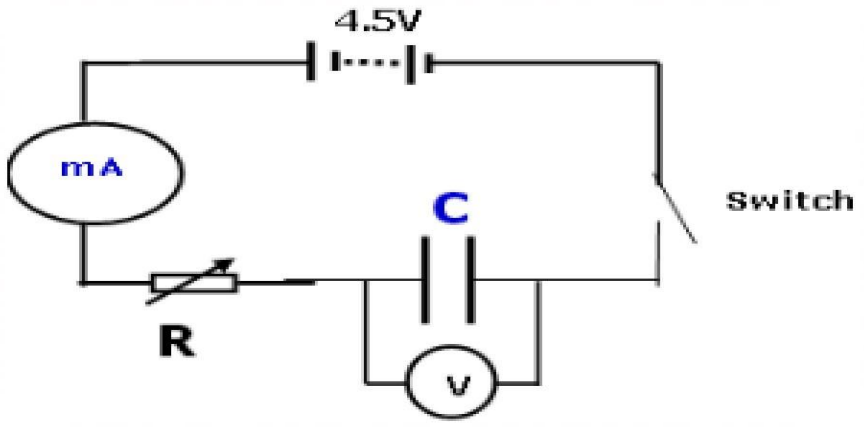


Figure 6

Derive an expression for C_T , the effective capacitance between A and B.

(3 marks)

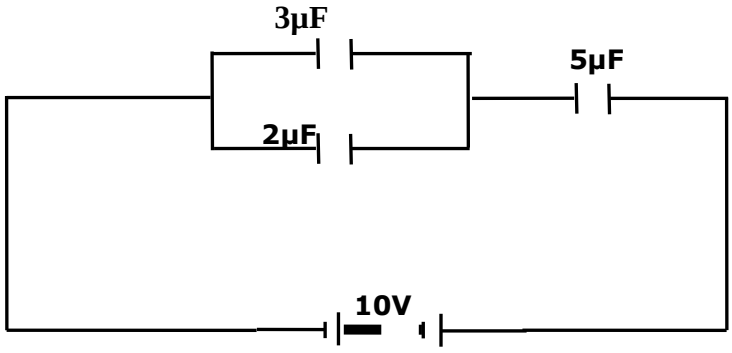
(c). **Figure** shows a capacitor **C** being charged.



(i) Explain how the capacitor is charged. (3 marks)

(ii) State the purpose of the resistor **R**. (1 mark)

(d). Figure shows a circuit diagram with three capacitors.

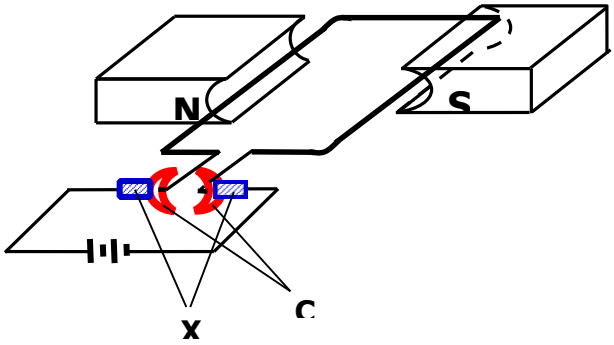


(i) Determine the effective capacitance of the arrangement. (2mark)

(ii) Find the energy stored in the combinations of capacitors (3mark)

(ii) Explain how lighting a match box near the cap of a charged electroscope would cause the electroscope to discharge (1mark)

The diagram in **figure 10** shows a simple electric motor in which a coil is put in the magnetic field.



(i) Name the parts labeled

X …… (1 mark)

NAME……

INDEX NUMBER……CLASS……CANDIDATES SIGNATURE……DATE…….

NAKURU JOINT EVALUATION MOCK 2025

PHYSICS

FORM 4

PAPER 232/3

TIME: 2HOURS 30 MINUTES

INSTRUCTIONS TO CANDIDATES

- Answer **ALL** the questions in the spaces provided
- Candidates are advised to record the observations as soon as they are made
- Mathematical tables and **non-programmable** scientific calculators may be used
-

QUESTION 1

You are provided with the following

- ✓ An ammeter
- ✓ A voltmeter
- ✓ Two cells (size D)
- ✓ A cell holder
- ✓ A switch
- ✓ A wire labelled L mounted on a millimeter scale
- ✓ A micrometer screw gauge (to be shared)
- ✓ Six connecting wires at least four with crocodile clips

Proceed as follows

a. (i) Using a micrometer screw gauge, measure and record the diameter d of the wire **L**

(1/2 mark)

d=……mm

d=……m

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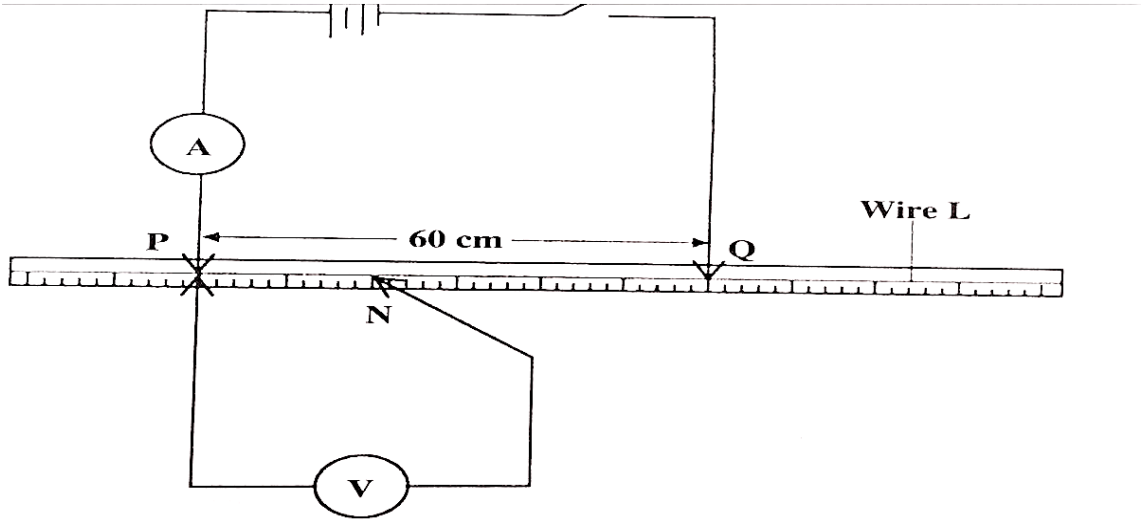
(ii) Determine the area of the wire (1/2 marks)

b. Place the two cells **in series** in the cell holder and use the voltmeter to measure the total electromotive force(emf) of the battery (1 mark)

E_0=……. V

c. Starting with the switch open, connect the circuit as shown in **figure 1** below **P** and **Q** are points on the wire **L** such that **PQ**=60cm (**PQ** should remain 60cm throughout the experiment)

N is a point on the wire such that **PN** is 10cm (0.1m)



d. (i) Close the switch and record the current I (1 mark)

I=……..A

(ii) Measure and record in the table 1 the potential difference across **PN**

(iii) Measure and record the potential difference across PN for the other values of PN shown in the table

Table 1

Length PN (m)	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**
P. d (v)						
Resistance (V/I) Ω						

(6 marks)

e. On the grid provided, plot a graph of resistance (y-axis) against length L (5 marks)

f. From the graph, determine:

i. The slope S from the graph (3 marks)

ii. Calculate the resistivity **p** of the wire and give its SI unit given that (1 mark)

$$R = \frac{pL}{A}$$

iii. The constant K and its units given that (2 marks)

$$S = \frac{4K}{\pi d^2}$$

g. Determine the constant t given that (1 marks)

$$t = \frac{E_O - V_n}{I}$$

Where Vn is the p.d at PN=0.6m

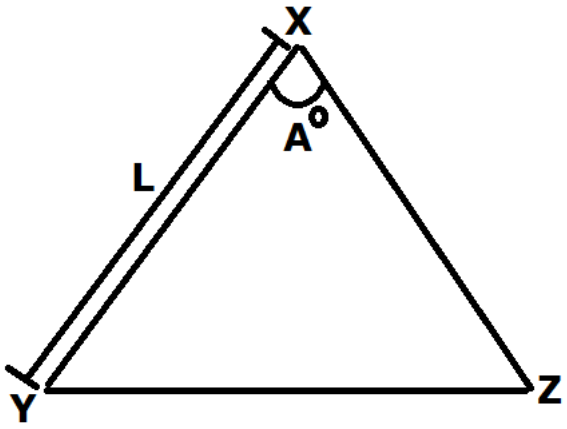
QUESTION 2: PART 1

You are provided with the following:

- ✓ Triangular glass prism labelled X
- ✓ Six optical pins
- ✓ A soft board
- ✓ A plain sheet of paper

Proceed as follows;

a) Fix the sheet of paper on the soft board using two optical pins. Place the triangular prism on the paper and trace its outline on the sheet of paper with the side labelled X on the sheet. See figure 2



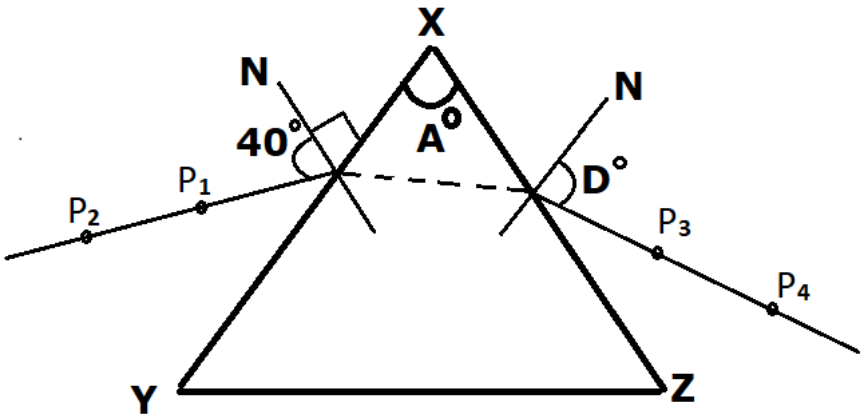
Measure the angle A and the length **L**

A=……. (1 mark)

l=…….. (1 mark)

b) At a point about a third way along one of the sides of the outline from angle A, draw a normal (2 marks)

c) Draw a line at an angle $i = 40^0$ to the normal. Stick two pins P_1 and P_2 vertically on this line(See figure 3)



Place the prism accurately on the outline just like before. By viewing through the opposite side, stick the two pins P_3 and P_4 vertically such that they are in line with the two images of pins P_1 and P_2

d) Remove the prism and the pins. Draw a line joining the marks made by P3 and P4. Extend the lines P_1P_2 and P_3P_4 to meet, draw a normal where P_3P_4 meet side XZ. Hence measure the angle of deviation D

D=…… (1 mark)

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e) For the two other values of the **angle i** shown in the **table 2**, locate and measure the corresponding angle of deviation**. Complete Table 2**

Table 2

i	**40^0**	**50^0**	**60^0**
D			

(2 marks)

f) (i) Determine the average value D_m of D (2 marks)

(ii) Determine the constant K using the equation; (3 marks)

$$k = \frac{\sin\left(\frac{A+D_m}{2}\right)}{\sin\frac{A}{2}}$$

PART 2

You are provided with the following;

- ✓ Meter rule
- ✓ Retort stand, clamp and boss
- ✓ 500ml beaker ¾ full of water
- ✓ 100g mass
- ✓ 50g mass
- ✓ 3 pieces of thread

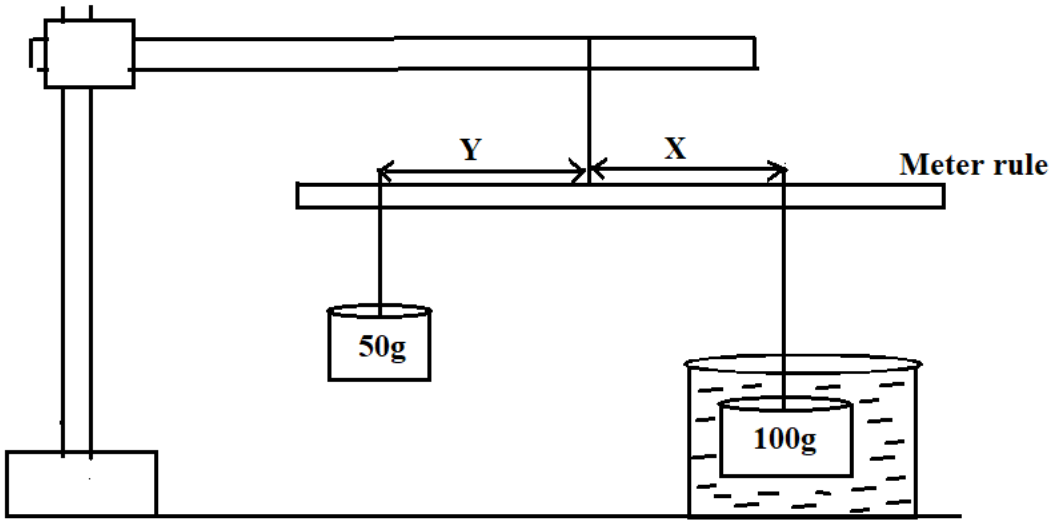
Proceed as follows

(a) Balance the meter rule horizontally by suspending it from the stand and clamp with one of the threads. Record the balance point **G**

G=…… (1 mark)

(b) (i) Suspend the 100g mass from the center of the rule at a point X such that X=10cm from point G. With 100g mass completely immersed in water in the beaker, hang the 50g mass from the center of the meter rule and adjust its position until the system is in equilibrium as shown in the figure below.

Note the point of suspension P of the mass 50g (1 mark)



iv. Measure distance Y (1 mark)

v. Using the information above, calculate the upthrust on the 100g mass if the density of water is $100kg/m^3$ (4 marks)