FORM 4 PRE-MOCK 4 EXAMS

Subjects Tested:1.AGRIC 2.BIO 3.BST 4.CHEM 5.COMP 6.CRE 7.ENG 8.GEOG 9.HIST 10.KISW 11.MATHS & 12.PHY Respectively.



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FORM FOUR

PRE-MOCK 4 EXAMS

Prefer Calling Sir Obiero Amos

@ 0706 851 439

for Marking Schemes

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0706 851 439



NAME: ……

INDEX NO……. ADM NO …… SIGN ……

DATE:…….SCHOOL ……

AGRICULTURE

FORM IV

PAPER I

TIME: 2 HRS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

INSTRUCTIONS TO CANDIDATES

- *Write your name and index number in the spaces provided*
- *This paper consist of three sections A, B and C*
- *Answer **ALL** questions in Section A, B and C*

SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	**30**	
B	**20**	
C	**40**	
TOTAL	**90**	

This paper consist of 10 printed pages. candidates should check the questions paper to ascertain that all the pages are printed as indicated and that no questions are missing

SECTION A (30 MARKS)

Answer ALL the questions in this section in the spaces provided

1. List **three** characteristics of large scale farming system (1½ mks)

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2.Differentiate between grafting and budding (lmk)

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3. State **three** pieces of information contained in a land title deed (1½ mks)

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4. Distinguish between each of the following pairs of terms

i)Pricking out and thinning (lmk)

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ii)Nursery bed and a seedling bed (lmk)

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5. Give reasons for carrying out the following practices in a tomato nursery

i) Avoid excess application of nitrogen (½mk)

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ii) Sinking the nursery bed below the ground level (½ mk)

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iii) Hardening off (½mk)

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6. Give **two** ways in which cut off drains control soil erosion (l mk)

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7. State **six** ways through which soil looses fertility (3mks)

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8. Name **two** examples of potassic fertilizers (lmk)

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9. State **two** diseases of leaf that attack sorghum. (lmk)

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10 .Give **three** reasons why a farmer needs to conserve forage . (1½ mks)

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11. State **two** positive effects of high environmental temperatures on crop farming (lmk)

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12. State **four** biological methods of soil erosion control (2mks)

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13. Name **two** types of labour records (lmk)

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14. State **four** physical methods of pest control (lmk)

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15. Outline **three** reasons of top dressing a pasture land (1½ mks)

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16. State **three** symptoms of bacterial attack in crop production (1½ mks)

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17. State **four** factors which affect the quality of a silage. (2mks)

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18. State **two** conditions under which opportunity cost is zero in a farming enterprise. (lmk)

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19. Give **four** reasons of using certified seeds for planting . (2mks)

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20. State **four** factors that affect rooting of cuttings. (2mks)

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SECTION B (20MARKS)

Answer ALL Questions in this section

21. Below is a record format kept in the farm

Sow No…… Breed……	Sire No……..…… Breed……..	Date of service	Date of farrowing		Remarks
Sow1…….…… …… Sow 2			Expected	Actual	

a) Identify record format illustrated above (lmk)

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b) State **two** importance of a farmer keeping the type of records identified above (2mks)

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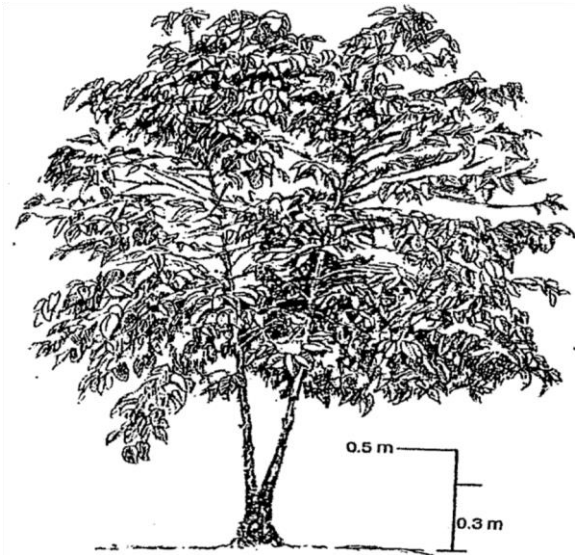
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c) Why do institutions loaning money (credit) to farmers insist on seeing farm records of the loan applicant? (lmk)

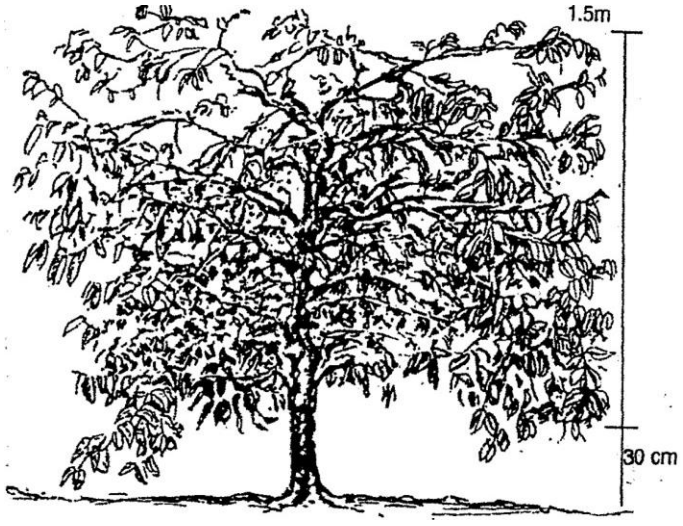
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22. The diagrams labeled **A** and **B** are illustrations of coffee established using two different formative pruning systems. Study them and answer the questions that follow.



A



B

a) Name the system of pruning illustrated in diagram **A** and **B** above. (2mks)

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b) Outline the procedure of how the pruning illustrated in diagram **B** is carried out. (3mks)

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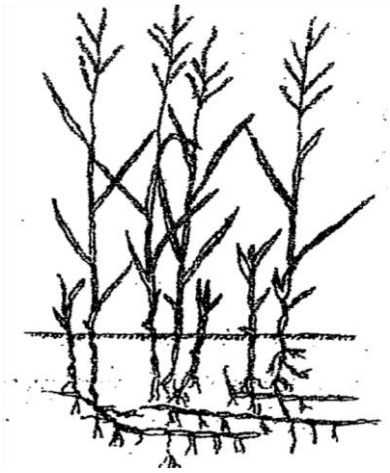
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23. The diagrams below show common weeds on arable land



C



D

i) Identify the weeds(2 mks)

C……

D……..

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ii) Why is it difficult to control weed **C** (lmk)

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iii) Name **three** chemicals used to control weed **C** in a field of coffee (3mks)

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iv) State **two** harmful effects of weed **D** (2mks)

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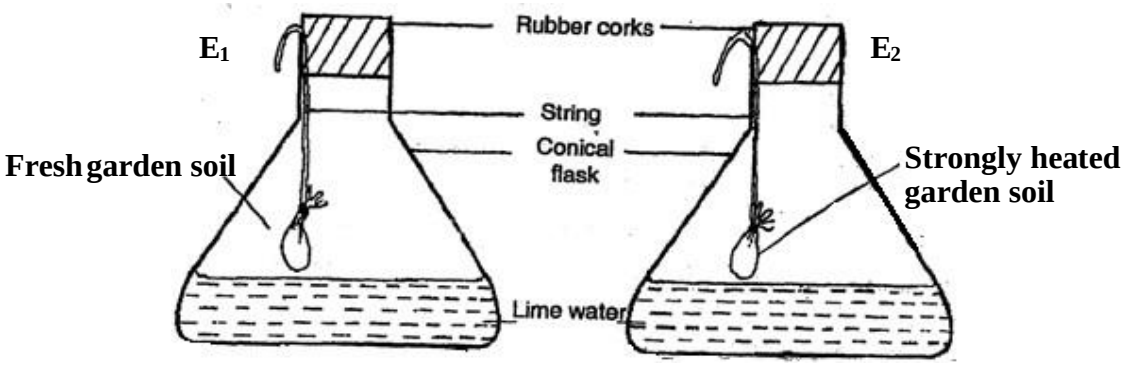
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24. The diagram below illustrates an experiment carried out by a form one boy. Study it carefully and answer the that

follow



The set ups were allowed to stand for five hours.

a) State the aim of the experiment. (lmk)

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b) Explain the results expected in

i)Set up $\mathbf{E_1}$ (lmk)

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ii) Set up $\mathbf{E_2}$ (lmk)

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SECTION C (40MARKS)

Answer ALL questions from this section

25 a) Explain **five** ways in which trees help in soil conservation. (5mks)

b) State **five** uses of water on the farm. (5mks)

c) Describe the process of treating water for domestic use using chemical treatment system. (l0mks)

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26.

a) Describe transplanting of onions in the field. (l0mks)

b) Explain the various factors that influence spacing in crops. (5mks)

c) Describe the various types of farm records kept by a dairy farmer. (5mks)

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NAME:…… INDEX NO…….

SCHOOL:…….. DATE:…….

443/1

AGRICULTURE

FORM IV

PAPER II

TERM I1,

TIME: 2 HRS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

INSTRUCTIONS TO CANDIDATES

- Write your name and index number in the spaces provided
- This paper consist of three sections A, B and C

SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	**30**	
B	**30**	
C	**40**	
TOTAL	**100**	

This paper consist of 11 printed pages candidates should check the questions paper to ascertain that all the pages are printed as indicated and that no questions are missing

1. State four mechanical methods of controlling ticks. (4mks)

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2. Give two examples of feed addictives in cattle. (1mk)

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3. Name the mineral deficiently that causes each of the following condition in livestock.
   Grass stagger (Tetany) (1/2mk)

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   Milk fever/parturient parensis (1/2mk)

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4. Name two hormones produced in a lactating cow. (2mks)

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5. What is referred to as a ‘ Notifiable disease’ (1mk)

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b) Name four examples of notifable diseases in livestock. (2mks)

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6. Outline three pre-disposing factors of footrot disease in sheep.(1 ½ mks)

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7. List any four metal work tools and equipment used in the farm. (2mks)

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8. Outline four qualities of eggs for incubation. (2mks)

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9. State four prophylactic measures used by a farmer to control livestock diseases. (2mks)

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10. Give three methods of feeding colostrums to newly born calves. (1 ½ mks)

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11. A) Define the term "zoonote disease." (1mk)

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b) Give two examples of zoonote diseases. (1mk)

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12. List three advantages of hedges. (1 ½ mks)

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13. Why is it necessary to provide grit to birds? (1mk)

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14. State four good qualities of honey. (2mks)

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15. State two causes of soft shell in eggs. (1mk)

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16. Name three methods of livestock selection. (1 ½ mks)

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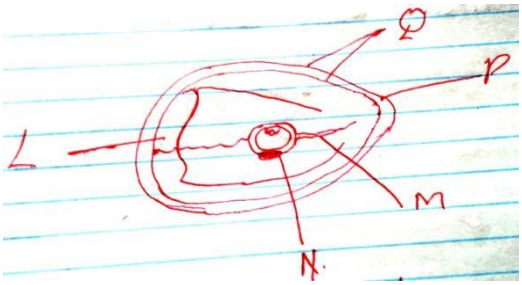
17. Name a tool used for tightening barbed wires during fencing. (1mk)

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SECTION B. (Answer all the questions.)

18. Study the diagram of an egg below and answer the question that follow.



i) Name the parts labeled N,Q and P. (1 ½ mks)

N …….

Q ……

P …….

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ii) State the function of the parts labeled M and L. (1 ½mks)

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iii) Why should the egg be turned during incubation. (1mk)

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19. State four reasons of treating timber. (4mks)

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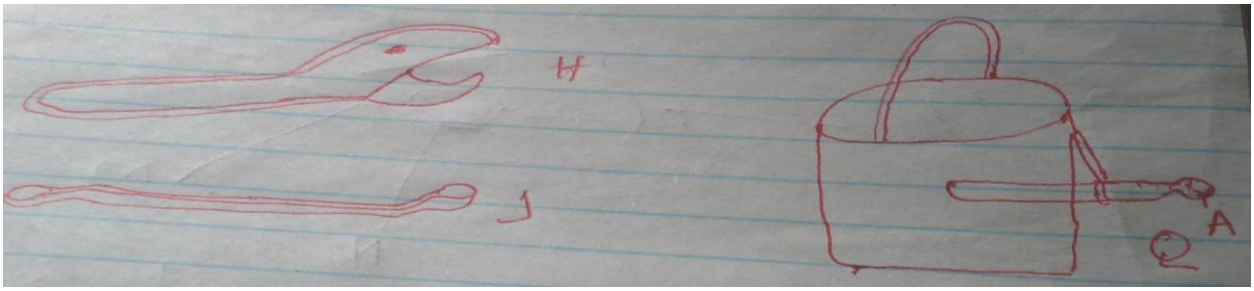
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20. Below are the diagrams of workshop tools H, J and Q. Study them and answer the question that follow.



i) Identify each tool. (1 ½ mks)

H ……..

J ……

Q ……

ii) What functional advantages does H have over J. (1mk)

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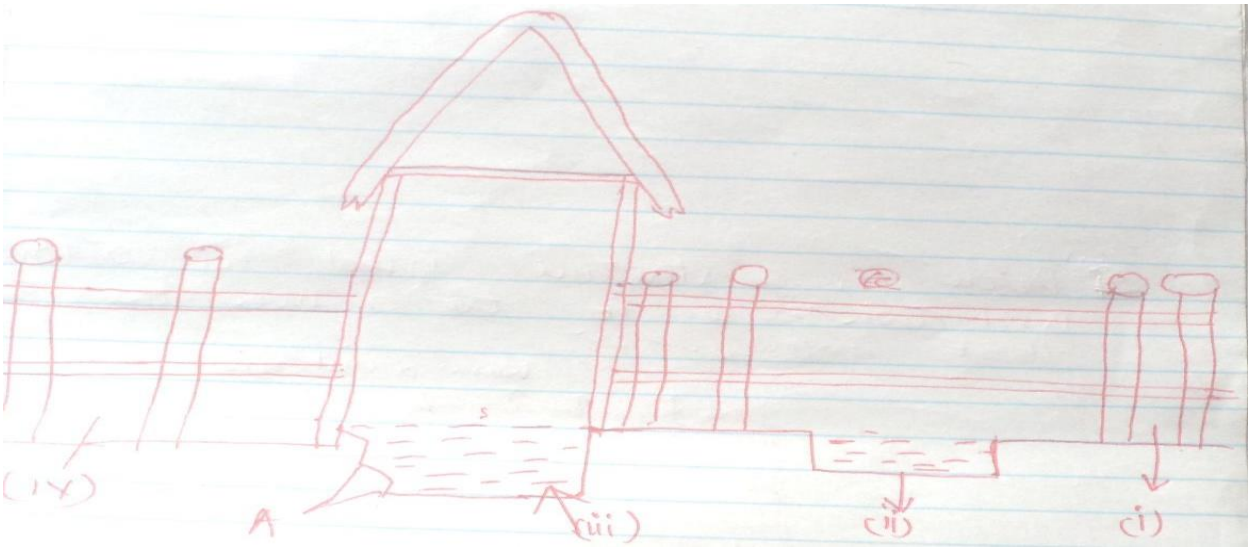
iii) Why is the part labeled H an important component of watering can. (1mk)

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21. Below is a diagram of a certain farm structure. Use it to answer the questions that follow.



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a. Name the parts labelled.

i. …….

ii. ……

iii. ……

iv. …….

b. Identify the part labeled A.(1/2 mk)

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c. Give the function of the part labeled A.(1/2 mk)

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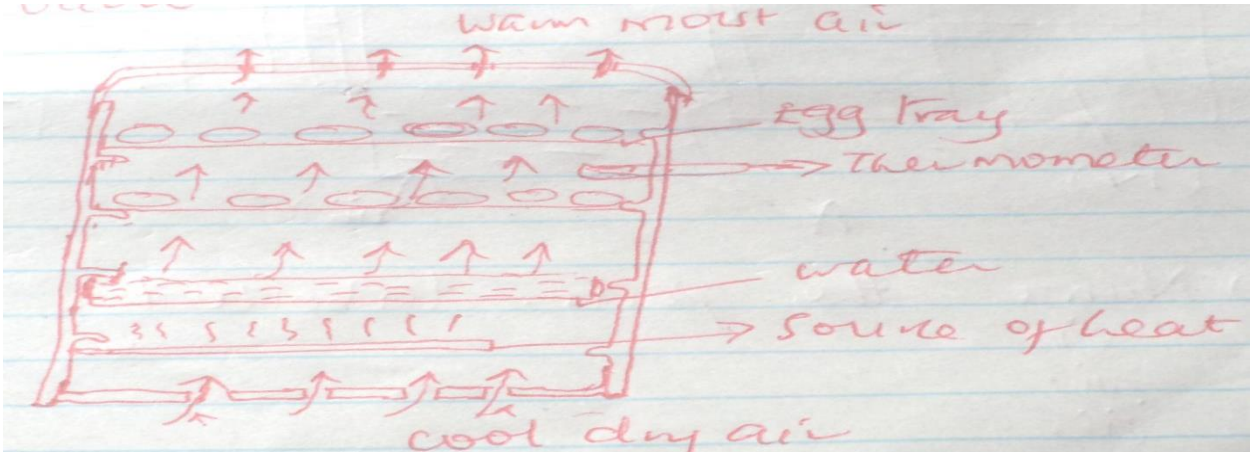
d. State two maintenance practice carried out in part (ii) above. (2mks)

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22. Below is a structure used in poultry production. Use it to answer the questions that follow.



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a. Identify the structure. (1mk)

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b. State the main function of the structure. (1mk)

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c. Give the function of the following in the structure.

Water (1/2 mk)

……

……

Thermometer (1 /2 mk)

……

……

SECTION C

Answer any two questions in this section.

23. A) Outline the use of fence in the farm. (10mks)

b) Discuss the tractor transmission system. (10mks)

24. A) Discuss foot and mouth disease under the following sub-headings.

Animal affected. (2mks)

Methods of transmission. (2mks)

Symptoms of attack. (4mks)

Control measures. (2mks)

b. Outline general control measures of livestock parasites. (10mks)

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25. Outline the various methods of maintaining farm tools and equipment. (8mks)

b. Describe artificial rearing of layer chicks from day one to end of brooding. (12mks)

NAME:……INDEX NO……..

SCHOOL:……..DATE:…….

BIOLOGY

FORM IV

PAPER 1

TIME: 2 ½ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS
PRE-MOCK 4 EXAMS

INSTRUCTIONS TO CANDIDATES

- Write your name and admission number in the spaces provided above.
- Answer ALL questions in the spaces provided.

TOTAL SCORE

1. Name the part of a flower that develops into:

[i] Seed [1mk]

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……

[ii] Fruit [1mk]

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2. State two ways in which floating leaves of aquatic plants are adapted to gaseous exchange. [2mk]

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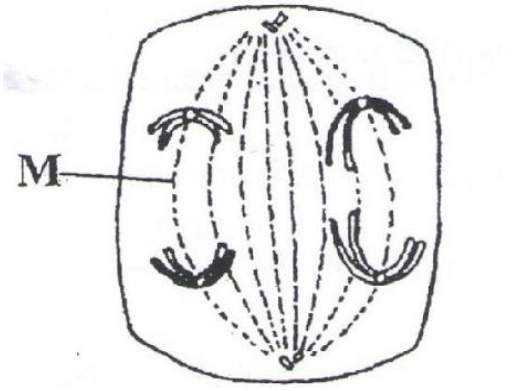
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3. The diagram below represents a stage during cell division



[a] [i] Identify the stage of cell division [1mk]

……

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[ii]Give two reasons for your answer in [a] [i] above [2mk]

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[b] Name the structures labeled M [1mk]

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[b] Name the class to which millipede belongs [1mk]

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4[a] Distinguish between the terms [2mk]

Homodont and heterodont

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……

[b]what is the function of the carnassial teeth [2mk]

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5.An A blood group patient involved in a road accident required an urgent blood transfusion. His relatives were invited to donate blood.

[a]Name the possible relative who would not donate blood to him [2mk]

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[b]State why the others would not be in a position to donate blood to him [2mk]

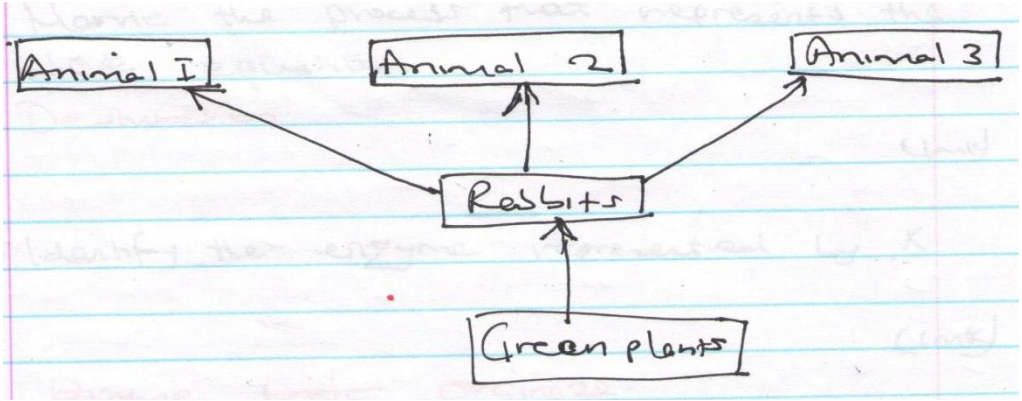
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6. The flow chart shows a part of a food relationship in an ecosystem



[a]

[i]Name the food relationship shown [1mk]

……

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[ii] How many trophic levels are shown in the diagram [1mk]

……

……

……

[b]What is the main source of energy in the ecosystem [1mk]

……

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7. Name the only epidermal cell in plants that contain chloroplast [1mk]

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……

8. The equation below represents a metabolic process that occurs in the mammalian liver

Amino Acids $\xrightarrow{\text{Enzyme x}}$ organic compound

[a]Name the process that represents the above equation [1mk]

……

……

[b]Identify the enzyme represented by x [1mk]

……

……

[c] What is the importance of the process to the mammal [1mk]

……

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……

9. [a] Name the carbohydrate that is stored in mammalian muscle [1mk]

……

……

[b]What name is used to describe removal of indigestible and undigested food material from the alimentary canal [1mk]

……

……

10.[a]Carl Linnaeus developed the taxonomic units of classification

[i]What is taxonomy [1mk]

……

……

[ii]Why was the system of classification by carl linneaus described as natural system of classification [2mk]

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11. Phagocytes also called granulocytes or polymorphs are cells found in the blood whose they ingest pathogens and cell debris

[i]why are they called polymorphs. [1mk]

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[ii]Name the cell organelle most abundant in phagocytes to enable them function effectively [1mk]

12. Name the:

[a] Material that strengthens xylem tissue [1mk]

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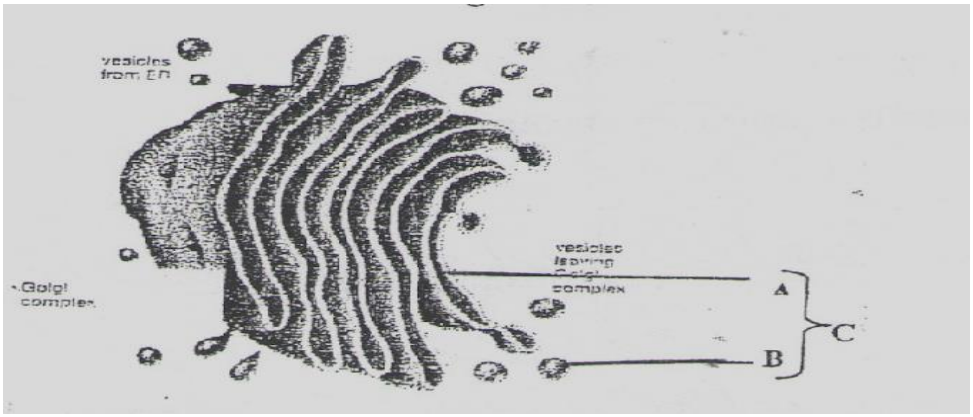
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[b]Tissue that is removed when the part of a plant is ringed [1mk]

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13. The diagram below represents a cell organelle.



[i]State the function of this organelle [1mk]

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……

[ii]Name each of the parts A and B

A [1mk]

……

……

B [1mk]

……

……

14. In which two ways do guard cells differ from other epidermal cells [2mk]

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15.Through cellular respiration, the chemical energy stored in glucose molecule is converted into which specific molecule [3mk]

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[b]Name the substance that speed up chemical reaction without being used up in those reactions [1mk]

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16.During germination and early growth, the dry weight of endosperm decreases while that of embryo increase explain [2mk]

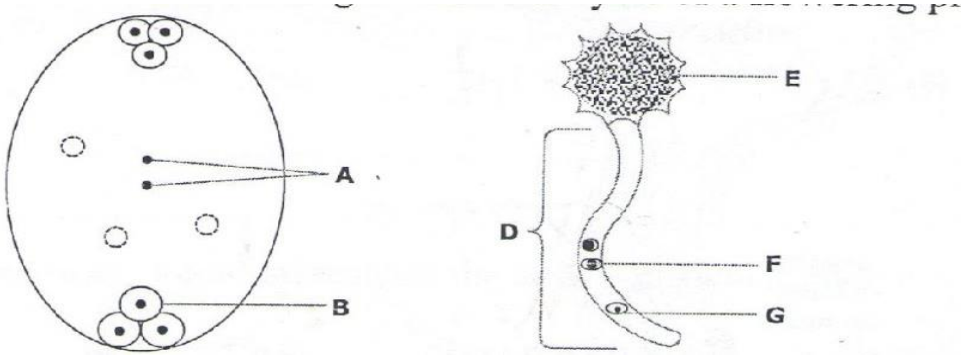
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17. The diagrams below show changes in the life cycle of flowering plants



[i]Complete the table below by choosing the letters from the diagram which refers to each of the stages given [4mk]

STAGE OF LIFE CYCLE	LETTER
Male gametophyte	
Tube nucleus	
Female gamete	
Male gamete	

[1mk]

18 [a]. State 2 characteristics of kingdom Monera that are not found in other kingdoms [2mk]

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19.State three ways by which plants compensate for lack of the ability to move from one place to another [3mk]

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20. State three physiological processes that are involved in movements of substances across the cell membrane [3mk]

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21. If the human pancrease is not functional:

[a]Name the hormone which will be deficient [1mk]

……

……

[b]Name the disease the human is likely to suffer from [1mk]

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……

22. The oxidation state of a certain food is represented below by a chemical equation

$2C_3H_2O_2N + 6O_2 \quad (NH_4)_2CO_2 + 5CO_2 + 5H_2O$

[a] Calculate the respiratory quotients[RQ] of the food substance [2mk]

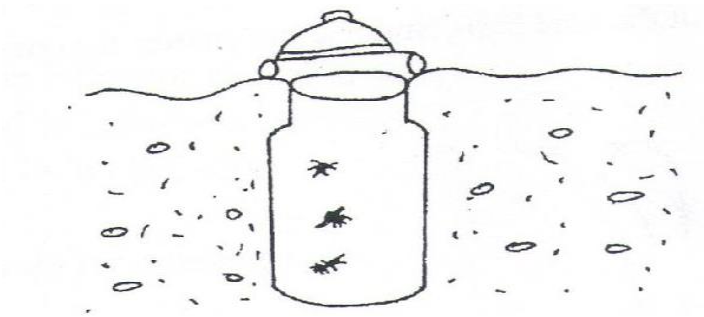
[b]Identify the food substrate [1mk]

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23. The diagram below shows an apparatus used during collection of specimen



[a]Identify the apparatus [1mk]

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[b]What is the use of the apparatus named above [1mk]

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……

24. State two factors in an ecosystem that affect the distribution of organisms [2mks]

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25. A DNA strand has the following base sequence G C C T A G A T C A C

What is the sequence of the

[i] Complementary DNA strand [1mk]

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[ii] M-RNA strand copied from this DNA strand [1mk]

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26. State three limitations of fossil records as evidence of organic evolution [3mk]

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27. How does nutrition as a characteristic of living organism differ in plants and animals [2mk]

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28.State the function of the following parts of a light microscope .

[i] Body tube [1mk]

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[ii] Diaphragm [1mk]

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29. State three characteristics of gaseous exchange surfaces [3mk]

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30. State two sources of variations [2mk]

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NAME:……INDEX NO……..

SCHOOL:…….DATE:…….

BIOLOGY

FORM IV

PAPER II

TIME: 2 ½ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

PAPER II

INSTRUCTIONS TO CANDIDATES

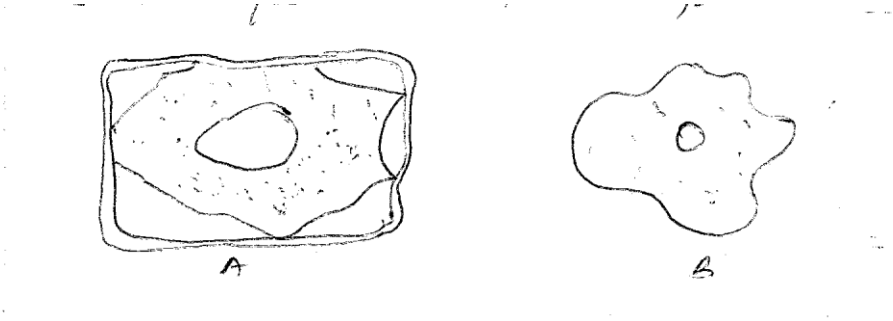
- *Write your name and index number in the spaces provided above.*
- *Answer ALL questions in the spaces provided.*
- *Answer all questions in **Section A.***
- *Answer question **10** in Section B and either question **11 0r 12.***

TOTAL SCORE

Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

Instructions to candidates: Answer All Questions in the Spaces Provided

1. The diagram shows two types of cells placed in a certain solution. Study them and answer questions that follow



a. Name the physiological process responsible for the observed results.[1 Mark]

……

……

b. Give the correct biological term used to describe cells A & B. [2 Marks]

A – ……..

B – ……

2. The equation below shows a chemical reaction that takes place in plants.

Carbon (iv) oxide + water ⟶ A + water

a. Identify substance A. [1 Mark]

……

……

b. Name the process represented by the equation. [1 Mark]

……

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c. Other than the reactants state **two** conditions necessary for this reaction[2 Marks]

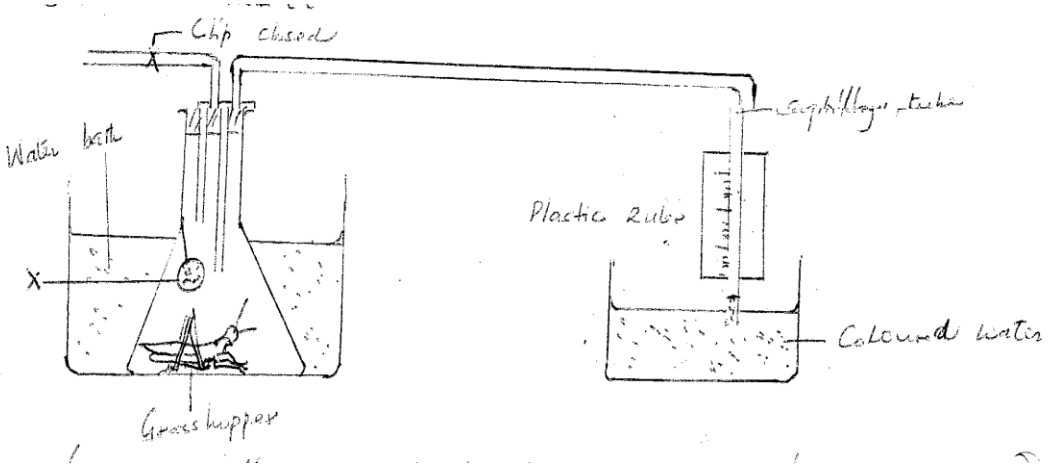
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3. The diagram below illustrates an experiment used to determine rate of respiration in a small insect.



a. Name the chemical compound labeled X and state its function. [2 Marks]

Compound –

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Function –

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b. Why is the conical flask placed in a water bath? [1 Mark]

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c. What would happen to the level of coloured water after 5 minutes? Explain:[2 Marks]

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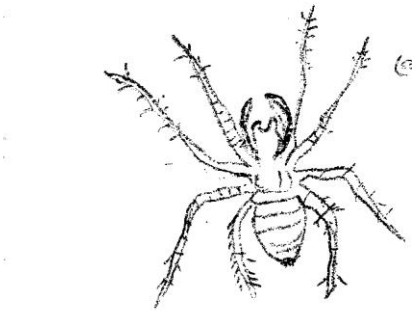
d. How can a control experiment be set? [1 Mark]

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4. In a biology lesson a student collected the animal in the diagram below. Use it to answer questions that follow;



a. Name the phylum and class to which the organism belongs

i. Phylum _____[1 Mark]

ii. Class_____[1 Mark]

b. Give two reasons for your answer in 1 (i), (ii) above [4 Marks]

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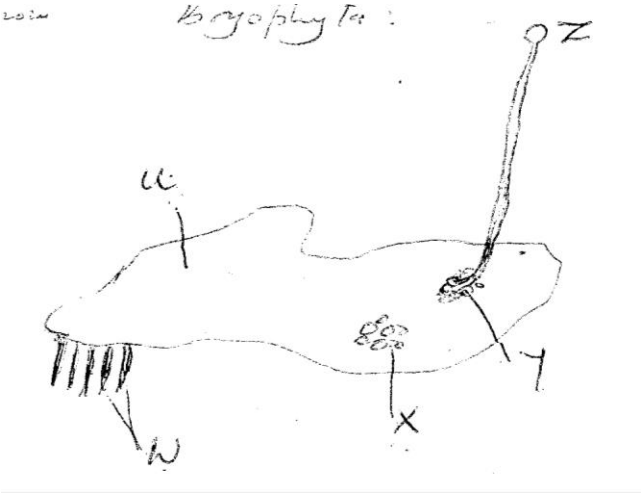
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5. The diagram below represents a plant in the division Byrophyta:



a. Name the parts labeled [5 Marks]

U ……..

W ……

X ……

Y ……

Z ……

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b. Name one function of part labeled. [3 Marks]

X

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Y

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Z

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6.

a. It is observed that when apical bud of a plant is removed, lateral buds sprouts, where as they do not sprout in presence of the apical bud;

i. What is the biological term used to describe this? [1 Mark]

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ii. Give one application of this phenomena in agriculture. [1 Mark]

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b. State four roles of IAA in plant growth and development: [4 Marks]

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c. In epigeal germination the cotyledon is brought above the soil surfaces; Explain [2 Marks]

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7.

a. State 2 structural modifications of nephrons in desert mammals. [2 Marks]

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b. State a kidney disease whose symptom is coloured and turbid urine [1 Mark]

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8. In a biological experiment; a cross was made between a tall pea plant & dwarfs plants; their progeny was selfed and the resulting plants were in a mixture in the ratio of 3:1. Make a biological cross to show these outcomes. [4 Marks]

9. Explain geographical distribution as evidence of organic evolution. [2 Marks]

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SECTION B

Answer Questions 10 (Compulsory) and either question 11 or 12 in the Spaces Provided

10. The table below shows the changes observed in the dry weight in milligrams of a barley seedling, its embryo and Endosperm during the first ten days after the onset of germination.

	Dry weight in milligrams		
(days)	yo	sperm	seedling

a. Using a suitable scale and on the same axis, plot a graph of dry weight of embryo, endosperm and whole seedling against time. [8 Marks]

(PROVIDE A GRAPH PAPER)

b. State and account for the changes in dry weight shown by:-

i. Endosperm [4 Marks]

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ii. Embryo [4 Marks]

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c. Explain the role of water during germination [4 Marks]

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11.

a. Describe how the mammalian heart is adapted to its function
[10 Marks]
b. How does gaseous exchange take place in terrestrial plants?
[10 Marks]

12.

a. How is the Epidermis of a green plant adapted to its function?
[6 Marks]
b. Describe how structural factors affect rate of transpiration in plants
[8 Marks]
c. Describe how xerophytes adapted to minimize water loss in their habitat.
[6 Marks]

NAME:……..

INDEX NO……. ADM NO……..SIGN ……..

SCHOOL:…….DATE:…….

BIOLOGY

FORM IV

PAPER III

TIME: 2 HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

PAPER 231/3

PRACTICAL.

MAX. 40 MKS.

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Answer all the questions in the spaces provided.

1. You are provided with substance L.Carry out food tests on the substance using the reagents provided .Record your procedure , observations and conclusions in the table below.(9mks)

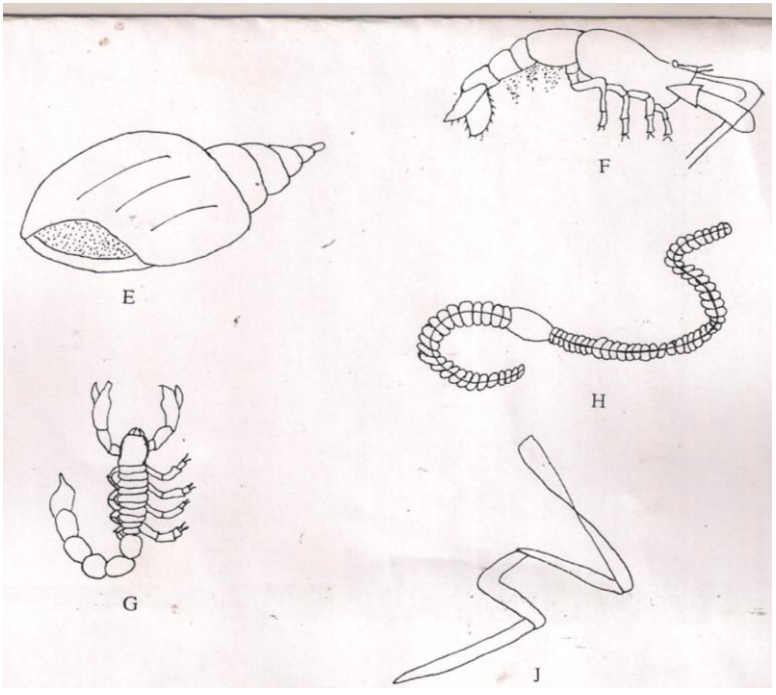
Food substance	Procedure	Observation	Conclusions

2 During a visit to a museum, students were shown ten specimens of organisms on display.The teacher provided a dichotomous key (shown in a separate page) to enable them to place each species on display into its taxonomic group. Five of the specimens that were on display are shown in the diagrams provided.

Dichotomous Key.

1.(a) Animal with a flattened body….. ……..go to 9.
(b)Animal without a flattened body…… go to 2.
2.(a)Animal with body in a shell …….Mollusca.
(b)Animal with body in shell…….. go to 3.
3.(a)Animal with segmented body….. ……go to 4.
(b)Animal with body not segmented…….Nematoda.
4.(a)Animal with jointed appendages go to 6.
(b) Animal without jointed appendages to 5.
5.(a)Animal with long and cyndrical body……..annelida.
(b)Animal with short stout body…….. Trenada.
6.(a) Animal with antennae……...go to7.
(b) Animal without antennae ….. ……go to 8.
7.(a)Animal with one pair of antennae…… Insecta.
(b) Animal with more than one pair of antennae…….. crustacean.
8.(a)Animal with pincer –like mouthparts…….. Arachida.
(b) Animal with sucking mouth parts…….….Acarina.
9.(a)Animal with long ribbon-like body …….…….cestoda.
(b) Animal with circular body…….. rinoidea).

Use the dichotomous key to identify the taxonomic group of each of the five specimens shown in the drawings.



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In each case, show in sequence the steps (ef 1a,2a,5a, 7b) in the key that you followed to arrive at the identify of each specimen.(5mks)

Animal **Steps followed** **Identity**

E

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F

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G

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H

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J

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b)i)Nam the phylum and the class to which specimen M belongs(2mks)

Phylum:

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Class:

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ii) Name the observation features that enabled you to place it in the class above.(3mks)

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(c)With the help of a hand lens, examine the body of specimen M.

i)State with a reason in each case he observable features that enable the specimen to be a disease vector.(2mks

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(ii) Name one disease transmitted by specimen M.(1mk)

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iii) State two methods that can be used to prevent specimen M from spreading diseases.(2mks)

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3 You are provided with specimens labeled S_1 S_2 and S_3

a. Using a scarpel blade split S_1 longitudinally and draw a well labeled diagram to show the internal structures.

State your magnification (4mks)

b. With a reason ,state the class to which the plant from specimen S_1 belongs to.

Class(1mk)

……

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Reason(1mk)

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c. Specimen S_2 is a germinated seedling of S_1.In the table below, name three structures and say which structure in S_1developed into the structure in S_2.

Structure in S_1	**Structure in S_2**

d.(i) Using specimens S_1 and S_3 ,name the type of germination in :-

S_4

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S_3 (1mk)

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ii. Give the difference between the this type of germination in (d) (i) above (2mks)

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iii.Account for the type of germination in :- S_1 2mks

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S_3(2mks)

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Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

NAME .....

INDEX NO …….. ADM…….. SIGN ……..……..

STREAM ..... Date.....

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

BUSINESS STUDIES
PAPER II
FORM IV
2 HOURS

Instructions to candidates
Answer all the questions in this paper.

FOR OFFICIAL USE ONLY

QUESTIONS	1	2	3	4	5	6	7	8	9	10	11	12
MARKS												

	13	14	15	16	17	18 19	20	21	22	23	24	25

INSTRUCTIONS TO CANDIDATES

a) *Write your name, signature, index number and the examination date in the spaces provided above.*

b) *Answer all the questions.*

c) *All the answers should be written in the spaces provided in this booklet.*

TOTAL SCORE

Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

1. State **four** characteristics of services. (4mks)

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2. Outline **four** disadvantages of division of labour. (4mks)

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3. Mention **four** advantages of using Automatic Vending Machines. (4mks)

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4. Give **four** benefits one gets from self-employment. (4mks)

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5. Outline **four** factors to consider when intending to buy office furniture. (4mks)

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6. Name the source document to which each of the following description relate. (4mks)

Description	**source document**
(i) Issued by the seller to a buyer for cash paid	_____
(ii) Used for processing and authorizing payments	_____
(iii) Sent to a credit buyer to demand payment	_____
(iv) Used to correct undercharge	_____

7. Outline **four** principles of co-operatives. (4mks)

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8. Highlight **four** measures that the government puts in place to create conditions that will be favorable for business development. (4mks)

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9. State **four** advantages of transporting oil by pipeline rather than by road. (4mks)

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10. Outline **four** advantages of audio-visual communication. (4mks)

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11. Highlight **four** ways in which the production activities of firms in your country affect the environment. (4mks)

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12. Highlight **four** disadvantages of a private warehouse. (4mks)

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13. Ragati and Nzonge operates a business with a stock valued at ksh.350,000 and have interests of 3/5 and 2/5 respectively. Ragati decided to insure 2/4 of the stock against fire. Sometimes later fire occurred at their business premises and destroyed stock worth ksh.

250,000. Calculate the amount of compensation Ragati would get from the insurance company. (4mks)

14. Outline **four** sources of monopoly power. (4mks)

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15. Name **four** sources of public finance. (4mks)

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16. State **four** benefits that would accrue to a customer who borrows a loan from a non-bank financial institution. (4mks)

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17. Match **each** of the statements given below with the relevant type of capital. (4mks)

Statement	**Type of capital**
a. Resource invested into a business by the owner	_____
b. Excess of current assets over current liabilities	_____
c. Amount invested into the business by outsiders	_____
d. Represents total finance in a firm	_____

18. The following information was extracted from the books of farmers choice supermarket on 31st Dec 2009

	shs
Average stock	30,000
Closing stock	40,000
Purchases	336,000
Carriage inwards	2,000
Return outwards	18,000
Margin	1/6

Required. Calculate sales for the year . 4mks

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19. Outline **four** important characteristics of a general journal. (4mks)

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20. Apex traders provided you with the following

Margin	25%
Cost of sales	15,000
Opening stock	2,000
Closing stock	1,000

Operating expenses 2% of capital
Sales and capital are in the ratio of 1:4

Calculate :

a. Rate of stock turnover
b. Purchases
c. Return on capital

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21. Indicate the subsidiary ledger in which each of the following should be recorded. 4mks

Account	**Subsidiary ledger**
a. Return inwards	_____
b. Bank	_____
c. Drawings	_____
d. Juma traders (a debtor)	_____
e. Discount received	_____
f. Uchumi wholesalers (a supplier)	.....

22. Highlight **four** types of advertising. (4mks)

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23. State **four** natural sources of energy in Kenya. (4mks)

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24. The statement below described various types of goods. Identify the type of goods best described by each statement. (4mks)

    a. Owned by the government on behalf of its citizens. _____

    b. Goods that are capable of directly satisfying human want. _____

    c. Goods that are used to make other goods. _____

    d. Goods that get spoilt within a very short time. _____

25. Identify **four** reasons why many youths in urban centre are starting hawking businesses. (4mks)

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NAME.....

INDEX No..... **ADM NO** …… **Signature**.....

DATE..... **SCH** ……

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

BUSINESS STUDIES
PAPER 2
FORM IV
TIME: $2^1/_2$ HOURS

INSTRUCTIONS TO CANDIDATES:
> Write your name and index number in the spaces provided above.
> Answer any five questions in the answer booklet provided.
> All questions carry equal marks.

Questions	Maximum score	Candidates score
1	20	
2	20	
3	20	
4	20	
5	20	
6	20	
TOTAL SCORE		

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

   (b) Differentiate between a public limited company and a public corporation. (10mks)

2. (a) Explain clearly the malpractices by traders against which consumers may need protection by the government. (10mks)

(b) Explain clearly with the aid of a diagram the change in equilibrium as a result of a change in demand of a commodity. (10mks)

3. (a) Discuss five benefits that a customer may get by using Automated Teller Machine (ATM) for financial transactions. (8 mks)

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

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

REQUIRED:

(a) Prepare a trading profit and loss account for the period ended 31st December 2012 and a balance sheet as at that date if the closing stock was worth shs 70,000 (12 mks)

4. (a)Explain clearly the problems associated with expenditure approach method in measurement of national incomes. (10mks)

   (b) Outline five reasons why ethical practices is necessary in product promotion. (10mks)

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5. (a) Jane,a petty cashier was given Sh ,2000 on 1st June 2005. During the month, she made the following payments:

2005

June 2 Stationery Sh 100, staff tea Sh 80.
5 Telephone bill Sh 50, postage stamps Sh 100.
8 Travelling Sh 200, telephone Sh 100.
10 Stationery Sh 50, staff tea Sh 100.
15 Postage stamps Sh 50, travelling Sh 100.
20 Sundry expenses Sh 100.
23 Stationery Sh 80, telephone Sh 40.
25 Travelling Sh 50, sundry expenses Sh 100.
28 Envelopes Sh 20, staff tea Sh 50.
30 Adhiambo, a creditor, was paid Sh 100.

Use the following analysis columns to prepare a petty cash book:
Stationery, Staff tea, Travelling. Telephone, Sundry expenses. Ledger accounts. (12 mks)

(b) Explain five demerits that a country may suffer when the government becomes a major investor
in business. (8 mks)

6. (a) Explain the role played by insurance industry in promoting the development of Kenyan economy. (10mks)

(b) Explain clearly the tools of monetary policy used by the central bank to control inflation. (10mks)

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NAME……

INDEX NO…… STREAM……SIGN……

DATE…… SCHOOL …….

233/1
CHEMISTRY
PAPER 1
FORM IV
TIME 2 HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

INSTRUCTIONS TO CANDIDATES

- Write your name and Index Number in the spaces provided above.
- Write the date of examination in the spaces provided above.
- Answer **ALL** questions in the spaces provided.
- Mathematical tables and electronic calculators may be used.
- All workings **MUST** be clearly shown where necessary.

For Examiners' use only

Questions	Maximum Score	Candidate's Score
1- 30	80	

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

1. State two reasons why we use the non-luminous flame in a laboratory instead of using the luminous flame. (1mk)

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……

2. Chlorine has two isotopes with atomic mass 35 and x occurring in the ratio 3:1 respectively. The relative atomic (R.M.A) OF CHROLINE IS 35.5. Determine the value of x. (3mks)

3. The use of cfc_5 has been linked to the depletion of the ozone layer.
   a) What does CFC stand for? (1mk)

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   b) Explain the problem associated with the depletion or the ozone layer. (1mk)

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c) State another environmental problem caused by CFC_5.

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4. In an experiment to prepare Nitrogen C1) oxide, ammonium nitrate was gently heated in a flask.
    a) Write the equation for the reaction that took place in the flask. (1mk)

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b) State and explain how the gas was collected. (1mk)

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c) A sample of the gas was tested with damp blue and red litmus paper what observations were made. (1mk)

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5. During an experiment sulphure (IV) oxide gas was formed to diffuse through a certain pore at a rate of 25cm3 per minute. When the experiment was repeated under the same conditions with another gas G, gas G was found to diffuse through the same pore at a rate of 26.26cm^3 per minute. Work out the molecular mass of Gas G. (0=16, 5=32) (3mks)

6. Element Y whose atomic number11 react with chlorine gas to form a compound.
    a) Name the group and period to which Y belongs. (1mk)

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    b) Write an equation for the reaction. (1mk)

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7. Draw all structural formulas for all the isomers with molecular formula $C_2H_3CL_3$.(2MKS)

8. Calculate the volume of 0.6M sulphuric (VI) acid solution needed to neutralize $30cm^3$ of 0.2M potassium hydroxide. (2mks)

9. Use dot (.) and crosses (x) to show the bonding of the following compounds.
   a) NH_3 (1MK)

   b) NH_4^+ (1MK)

10. Analysis of a compound showed that it had the following composition: 69.42%carbon, 4.13% hydrogen and the rest oxygen. Find the molecular formula of the compound (C=12, O=16, H=1) (3MKS)

11. A reference book states that the solubility of $CuSO_4$ in water at 15^oc is 19g/100g of water. What is meant is meant by this statement. (1mk)

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12. State two uses of hydrogen gas. (2mks)

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13. Explain how a solid mixture of sulphure and potassium Chloride can be separated into solid sulphur and potassium chloride. (3mks)

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14. Aqueous ammonia was added to a solution copper (ii) sulphate dropwise until in excess. State the observations made when
    a) A few drop of aqueous ammonia were added.(1mk)

……

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    b) Excess aqueous ammonia was added. (1mk)

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15. By use of chemical equations distinguish the reaction of magnesium with water and magnesium with steam. (2mks)

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The table below gives the number of electrons, protons and neutrons in substances X, Y, and Z.

Substance	Electrons	Protons	Neutrons
X	10	10	10
Y	10	8	10
Z	8	8	8

a) Which letter represents an ion? (1mk)

……

……

b) Which of the substances are isotopes? Give a reason. (2mks)

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16. a) What is meant by the terms.
    1) Element (1mk)

……

……

2) Atomic number (1mk)

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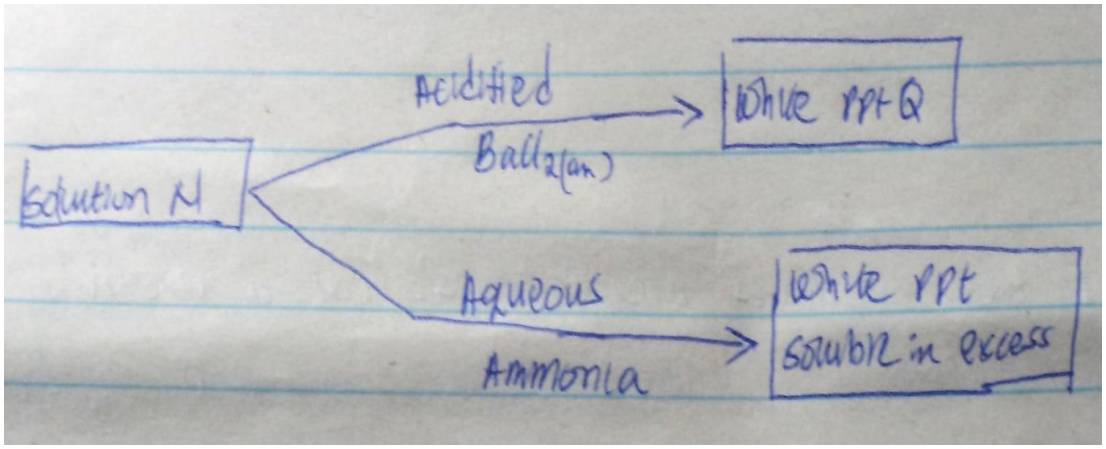
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(b) The formula for a chloride of titanium is $TiCl_3$. What is the formula of its sulphate? (1mk)

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17. The chart below shows a scheme or reactions involving a sample of solution N. Study it and answer the questions that follow.



1) Identify the cation and the anion in solution N, (2mks)

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2) Write an ionic equation to show how Q is formed. (1mk)

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18. Name the process

Solid carbon (IV) oxide (dry ice) changes directly into gas. (1mk)

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19. When carbon (IV) oxide gas was passed through aqueous calcium hydrogen a white precipate was formed.

a) Write an equation for the reaction that took place. (1mk)

……

……

b) State and explain the changes that would occur when excess carbon (iv) oxide gas is bubbled through the white precipitate. (2mks)

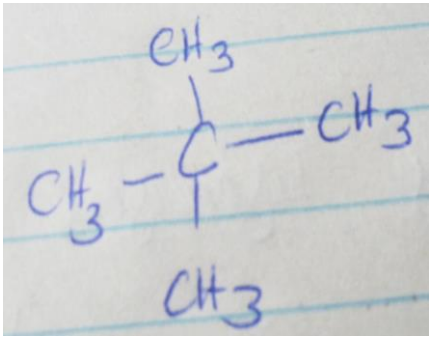
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20. Give the names of the following compounds



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Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

21. Explain why burning magnesium continue to burn in a gas jar full of sulphure (iv) oxide while humming splint would be extinguished. (3mks)

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22. When hydrogen sulphide gas was bubbled into aqueous solution of iron (iii) chloride a yellow precipitate was formed.
    a. State another observation that was made. (1mk)

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    b. Write an equation for the reaction that took place. (1mk)

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    c. What type of reaction was undergone by hydrogen sulphade gas in this reaction? (1mk)

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23. A. What is allotropy (1mk)

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B. Name two allotropes of carbon. (2mk)

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24. Ammonium sulphate is a fertilizer produced by passing ammonia gas into concentrated sulphure (VI) acid. Calculate the mass in kg of sulphure (VI) acid required to produce 25kg or the fertilizer. (s=32, 0=16, N=14,H=1) (3mks)

25. The reaction between hot concentrated Sodium hydrogen and chlorine gas produces sodium chloride (v), sodium chloride and water.
    a. Write the equation for the reaction. (1mk)

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b. Give one use of sodium chlorate (v). (1mk)

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26. Explain why a solution of hydrogen chloride gas in methylbenzene does not conduct electricity but solution of a gas in water conduct electricity. (2mks)

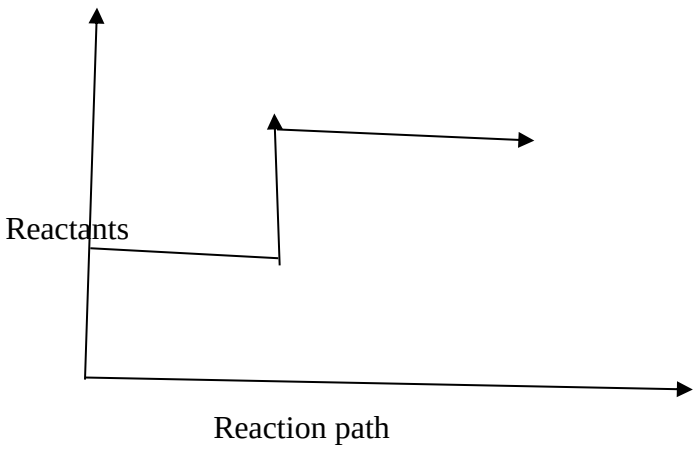
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27. Below is a sketch of a reaction profile. Study it and then answer the question that follows. State and explain the type of reaction represented by the profile. (2mks)



28. I) what are amphoteric oxides? (1mk)

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ii) Give a chemical formula example of an amphoric oxide. (1mk)

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29. Calcium oxide can be used to dry ammonium gas.
    i. Explain why Calcium oxide is not used to dry hydrogen Chloride gas. (2mks)

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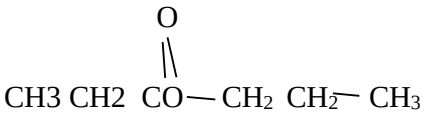
    ii. Name one drying agent of hydrogen chloride. (1mk)

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30. When an organic compound Y is reacted with aqueous Sodium carbonate it produces carbon (iv) Oxide. Y reacts within propanal to form a pleasant smelling compound whose formula is.



    i. Name and draw the structure formula of compound Y. (2mks)

ii. What is the name given to the group of compound to which Z belongs? (1mk)

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31. Element X and Y have atomic numbers 20 and 8 respectively.

i. Write the electron arrangement of their ions. (2mks)

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ii. Write the formula of the compound formed between X and Y. (1mk)

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NAME…….

SCHOOL ……..

INDEX NO…… ADM NO…… SIGN ……

DATE……STREAM ……

233/2
CHEMISTRY
(THEORY)
FORM IV
PAPER II
TIME 2 HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

CHEMISTRY PAPER II

INSTRUCTIONS TO CANDIDATES

Write your name and index number in the spaces provided.

Sign and write the date of examination in the spaces provided

Answer all the questions in the spaces provided

All working must be shown where necessary

Electronic calculators and mathematical tables may be use.

FOR EXAMINERS USE ONLY

Questions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Total score**
Max score	**12**	**11**	**11**	**14**	**12**	**11**	**10**	**80**
Candidates score								

This paper consists of 12 Printed pages.

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1. Study the information given below and answer the questions that follow.

Element	**Atomic radius(nm)**	**Ionic radius nm**	**Formula of oxide**	**Melting point(^{0}c)**
A	0.364	0.421	A_2 O	-119
D	0.830	0.711	D O_2	837
E	0.592	0.485	E_2 O_3	1466
G	0.381	0.446	G $_2O_3$	242
J	0.762	0.676	J O	1054

a. Which elements are non-metals .Give a reason?(2mks)

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b. I)Write a formula of a compound formed when J combines with A(1mk)

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ii)What type of bond exists between J and D.(1mk)

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c. Explain why the melting point of the oxide of E is higher than that of the oxide of G.(2mks)

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d. i)Which two elements would react with each other most vigorously. Give a reason.(2mks)

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ii)Which element would be suitable for making utensils for boiling water. State two properties that make the elements suitable for the use.(2mks)

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e. Elements Q and R have electronic configuration 2.8.2 and 2.8.6. Respectfully.

i)Explain why the ionic radius of R is expected to be greater than its atomic radius.(1mk)

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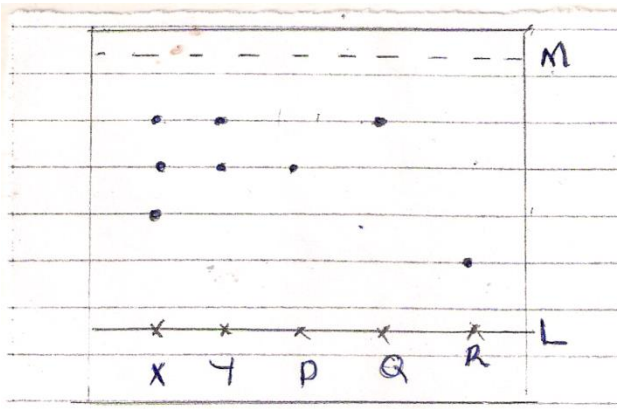
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ii)Write the equation for the reaction between Q and R.(1mk)

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2. The chromatogram below is of an acid and enzyme x and y and three simple sugar P,Q and R.



a. I)Name two simples sugars present in both x and y.(2mks)

ii)Name lines L and M. (2mks)

L- ……..

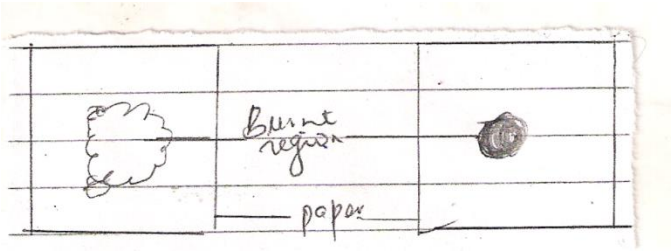
M- ……

iii)What property is exhibited by simple sugar x.(1mk)

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b.Two pieces of paper were lowered into different Bunsen burner flames and removed quickly. The results were as shown below.



i.)Which paper was lowered into a Bunsen burner whose air hole were closed.Explain(

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i) Which of the above flames is likely to be a non-luminous flame(Note; the one on the left is flame A while the one on the right is flame B). Explain (2mks)

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c.Oxygen can be obtained industrially by fractional distillation of liquid air

i. Why is the gas mixture passed through sodium hydroxide solution.(1mk)

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ii) In the final stage,which gas distills out.explain.(1mk)

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iii)Name two commercial uses of oxygen gas.(1mk)

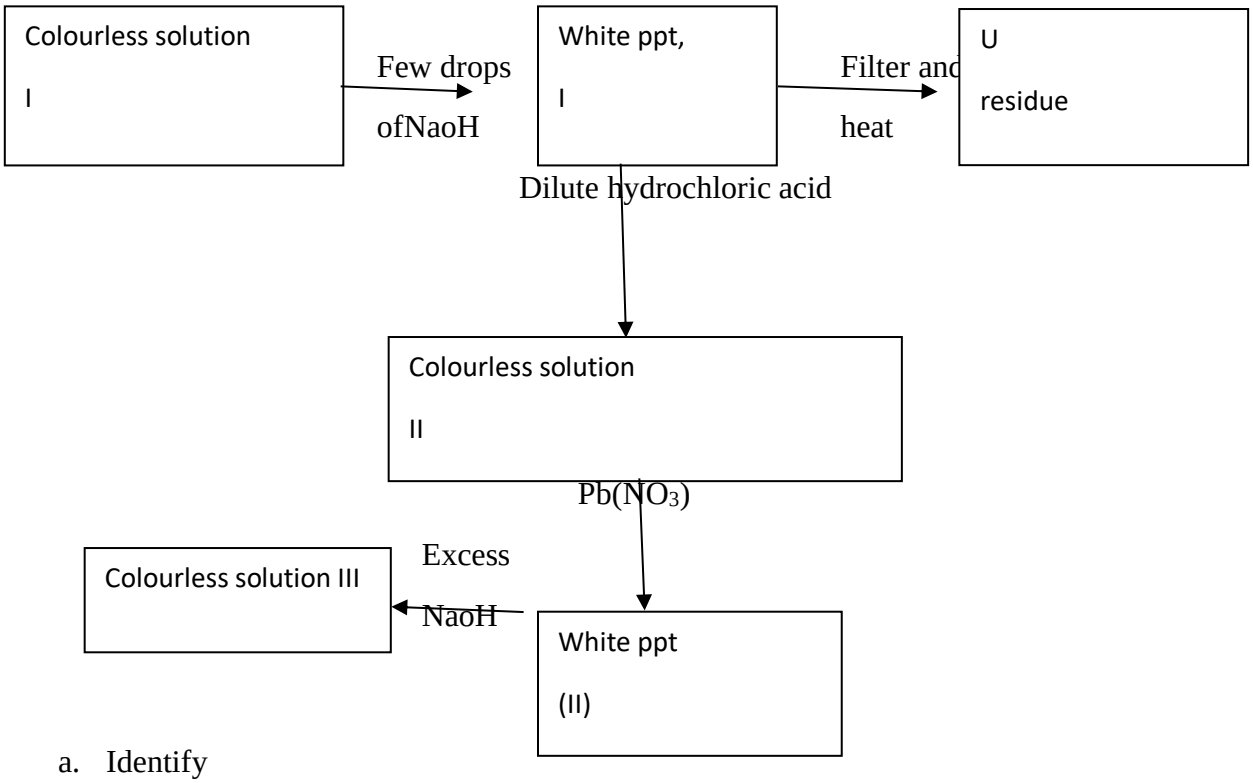
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3. Study the flow diagram and answer the questions below.



a. Identify

i. White ppt I (1mk)

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ii. Solution II (1mk)

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iii. Residue II (1mk)

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b. Write ionic equation for the reactions colourless solution (II) with $Pb(NO_3)$(1mk)

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c. Write observations that would be made when ammonia solution is added drop wise till in excess to the colourless solution(II) (2mks)

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d. Below are P^H values of some solutions

Solution	Z	Y	X	W
P^H	6.5	3.5	2.2	7.2

i. Which solution is likely to be
   a. Acidic rain (1mk)

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   b. Potassium hydroxide (1mk)

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ii. A basic substance V reacted with both solutions Y and X. What is the nature of V.(2mks)

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iii. Name two substances that shows this characteristic in question (ii) above.(2mks)

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4. A sample of crude oil was heated and its vapour passed over red-hot pumicestone. A mixture of gases was evolved which decolourised bromine in tetra chloromethane and burnt in air with a yellow flame.
   a. What process is taking place when the vapour from the crude oil passes over heated pumice.(1mk)

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   b. Name the most likely type of compound causing decolourisation of the bromine solution.(1mk)

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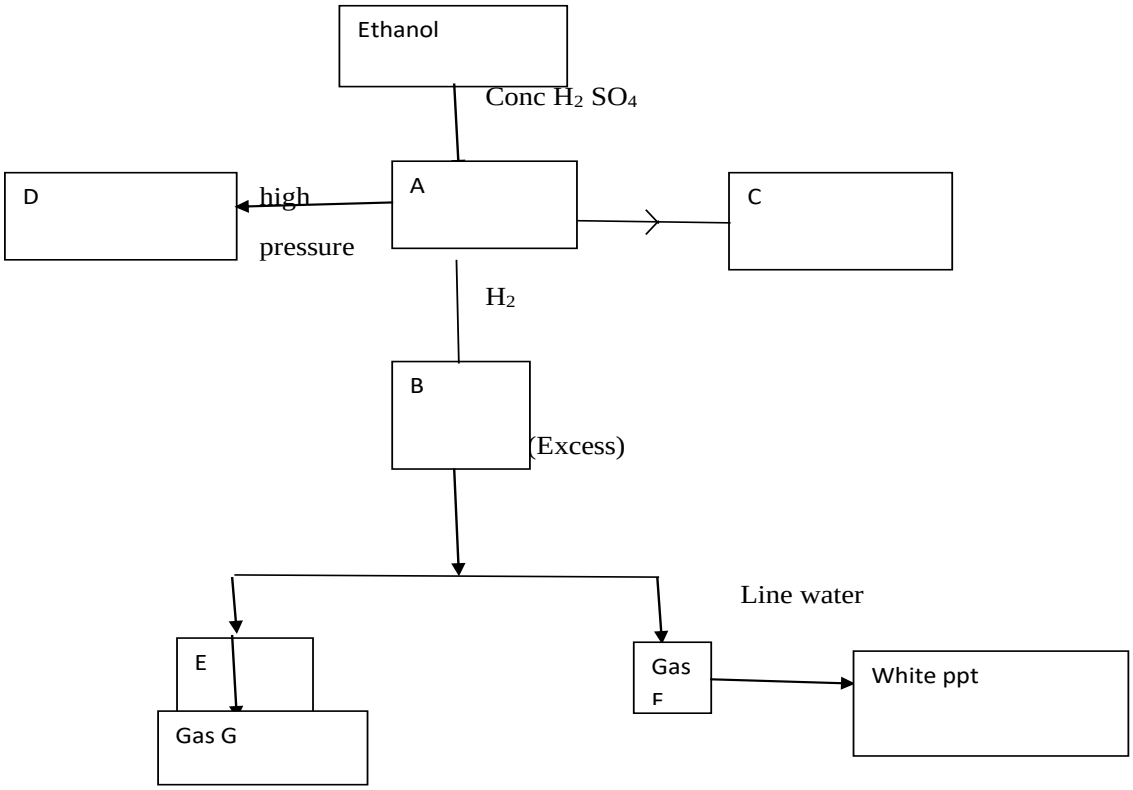
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   c. Name two compounds formed when the gas mixture above burns in air.(1mk)

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



a. Write down the equation for the formation of

i. Substance C

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ii. E and F

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iii. Gas G

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b. Substance D was formed to have molecular mass of 42,000 .Determine the number of molecules present in the substances(H+1 ,C=12) 2mks

c. State

i. The condition necessary for the conversion of ethanol to substance A.(1mk)

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……

ii. The catalyst required in the conversion of A and B.(1mk)

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5. The table below gives the solubility of hydrated copper(ii) sulphate in mol dm^{-3} at different temperatures.

Temperature(^{0})	Solubility mol dm^{-3}
20	8×10^{-2}
40	12×10^{-2}
60	16×10^{-2}
80	22×10^{-2}
100	30×10^{-2}

i. On the grid provided plot a graph of solubility of copper(II) sulphate (vertical axis) against temperature.(3mks)

(PROVIDE A GRAPH PAPER)

ii. From the graph ,determine the mass of copper(II) sulphate deposited when the solution is cooled from 70^0c to 40^0.(Molar mass of hydrated copper(ii) sulphate = 250g)

b.In an experiment to determine the solubility of sodium chloride ,5.0 cm^3 of a saturated solution of sodium chloride weighing 5.35g were placed in a volumetric flask and diluted to a total volume of 250$cm^{3.}$

25.0 cm^3 of the dilute solution of sodium chloride completely reacted with 24.1 cm^3 of 0.1 M silver nitrate solution.

$Ag\ No_{3(aq)} + NaCl_{(aq)} \longrightarrow Ag\ Cl_{(s)} + NaNO_3(aq)$

Calculate;

i. Moles of silver nitrate in 24.1cm^3 of solution.(1mk)

ii. Moles of sodium chloride in 25.0cm^3 of solution.(1mk)

iii. Moles of sodium chloride in 250cm^3 of solution(1mk)

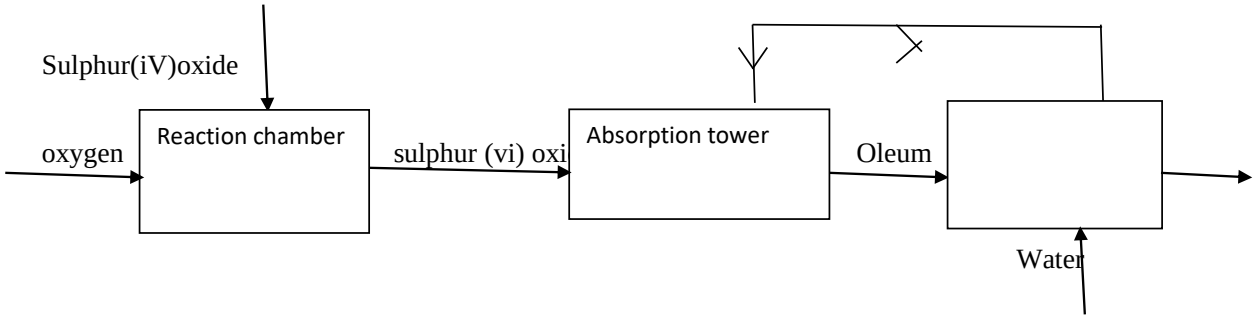
iv. Mass of sodium chloride in 5.0cm^3 of saturated chloride solution (Na=23.0 Cu=35.5) (1mk)

v. Mass of water in 5.o cm^3 of saturated solution of sodium chloride(1mk)

vi. The solubility of sodium chloride in g/100 g of water.(2mks)

6. The flow chart below shows some of the processes involved in large scale production of sulphur((vi) acid .

Use it to answer the questions that follow.



a. Name the process

b. I)Name substance A.(1mk)

ii)Write an equation for the process that takes place in the absorption tower.(1mk)

c. Vanadium (v) oxide is commonly used catalyst in the process.
   i. Name another catalyst which can be used for this process.(1mk)

   ii. Give two why reasons vanadium (v) oxide is commonly used catalyst.(2mks)

d. Sate and explain the observations made when concentrated sulphuric (vi) acid is added to crystals copper(ii) sulphate in a beaker(2mks)

e. The reaction of concentrated sulphuric (vi) acid with sodium chloride produces hydrogen chloride gas.State the property of concentrated sulphuric (vi) acid illustrated in the reaction.(1mk)

f. Name two uses of sulphuric (vii) acid.2mks

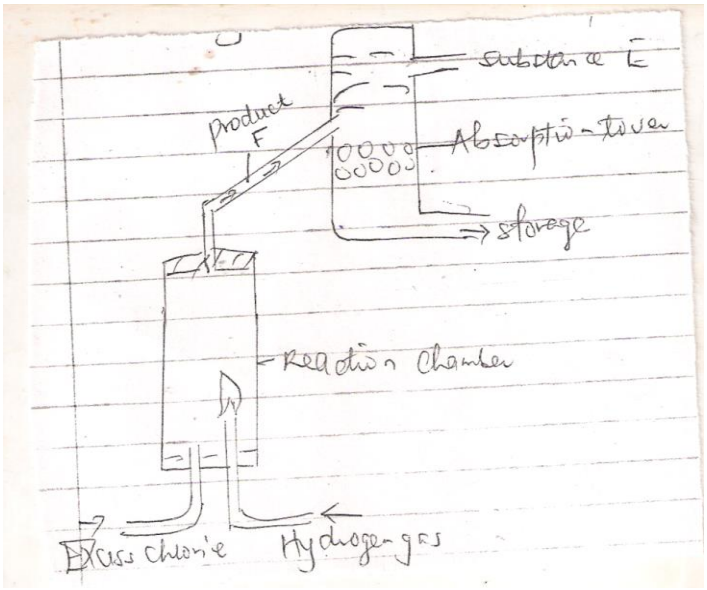
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7. The above diagram shows a set up that can be used for industrial manufacture of hydrochloric acid.Study it and answer the questions that follow.



a. A Name

i. Produce F

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ii. Substance E

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b. Explain are application of hydrochloric acid in textile industry.(1mk)

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c. Hydrochloricb acid was added to iron powder in a test tube and shaken thoroughly to mix to 1cm^3 of the resulting solution ,six drops of acqueous solution of ammonia were added .

i. State the observation made on adding ammonia solution.(2)

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ii. Explain the observation stated above and white an ionic equation for the reaction.(2mks)

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iii. Concentrated hydrochloric is 35% pure with density 1.18g/cm^3.Calculate it's concentration in moles per litre..(3mks)

NAME…….

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INDEX NO…… ADM NO ……. SIGN ……..

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CHEMISTRY

(PRACTICAL) FORM IV

TIME 2 ¼ HRS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

KENYA CERTIFICATE OF SECONDARY EDUCATION

INSTRUCTIONS TO CANDIDATES

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

(b) You are NOT allowed to start working with the apparatus for the first 15 minutes of the 2 ¼ hrs allowed for this paper. This time is to enable you to read the question paper and make sure you have all the chemicals and apparatus that you may need.

(c) All working must be clearly shown where necessary.

FOR EXAMINER'S USE ONLY.

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1	13	
2	13	
3	14	
TOTAL SCORE	**40**	

You are provided with

- Anhydrous sodium carbonate solid x.
- Distilled water.
- 0.2m Hydrochloric acid solution A.

You are required to determine molar heat of solution of solid x.

PROCEDURE I

i. Place 50.0ml of water in 250ml plastic beaker.
ii. Note the temperature of the water and record it in the table I below.
iii. Add all the solid X provided to the water in the beaker, stir gently with the thermometer and record the final temperature of the solution in the table I below. Keep the resulting solution for procedure 2.

TABLE I

Final temperature (^{0}C)	
Initial temperature (^{0}C)	
Change in temperature (^{0}C)	

(2 mks)

(a) What is the enthalpy change for the reaction? (Assume the density of solution is 1g/cm^3, and specific heat capacity is 4.2 Jg^{-1} K^{-1}). (2 mks)

PROCEDURE II

Transfer the contents of the beaker into 250ml volumetric flask. Rinse both the beaker and the thermometer with distilled water and ass this water into the solution in the volumetric flask. Add more water to make up to the mark. Label this solution as solution X. fill the burette with solution A. Using a pipette place 25.0ml of solution X into a conical flask. Add 3 drops of methyl orange indicator and titrate with solution A. record your readings in table II below. Repeat the titration two more times and complete the table.

TABLE II

Experiment			
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution A used (cm^3)			

(3 mks)

(b) Calculate average volume of solution A used. (1 mk)

(c) the number of moles of solution A used. (1 mk)

(d) The number of moles of solution X that reacted with the number of moles of solution A in (c) above. (1 mk)

(e) The number of moles of solid X used in procedure I. (1 mk)

(f) Molar heat of solution of anhydrous sodium carbonate. (2 mks)

2. You are provided with:
- A solution of sodium hydroxide labeled B.
- A solution of sulphuric(vi)acid labeled C.

You are required to determine the concentration of the alkali using the following procedure.

PROCEDURE:

(i) Place $40cm^3$ of sodium hydroxide solution into a 250 ml plastic beaker.
(ii) Measure $60cm^3$ of sulphuric (vi) acid solution.
(iii) Determine the temperature of sodium hydroxide solution at half a minute intervals for two minutes and record it in the table below.
(iv) At 2 ½ minutes, place the $60cm^3$ of solution C into the plastic beaker while stirring and resume taking the temperature in the 3rd minute.

(v) Complete the table below.

Time in minutes	0	½	1	1 ½	2	2 ½	3	3 ½	4
Temperature in ^0C									

Time in minutes	4 ½	5	5 ½	6	6 ½	7
Temperature in ^0C						

(3 mks)

(a) Plot a graph of temperature against time. (3 mks)

(PROVIDE A GRAPH PAPER)

(b) From the graph, determine the highest temperature change. (1 mk)

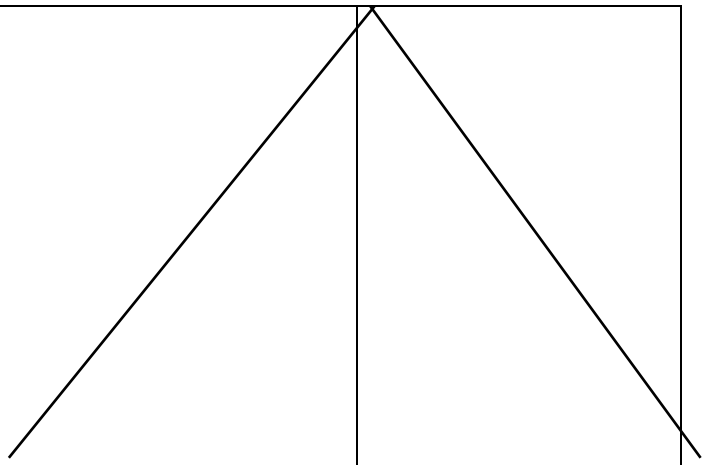
(c) Determine the heat evolved in this experiment (Density of solution = 1 g/cm^3 specific heat capacity of solution = 4.2 Jg^{-1} K^{-1}) (2 mks)

(d) Given that the molar heat of neutralization is 56KJ/mole, determine the number of moles of sodium hydroxide used in the neutralization reaction above. (2 mks)

(e) Determine the molarity of sodium hydroxide. (2 mks)

3. You are provided with solid K. carry out the following tests and write your observations and inferences in the spaces provided.

	TEST	**OBSERVATION**	**INFERENCE**
(a)	Place a spatula full of sample K in a clean dry test tube. Heat gently and then strongly.	(1 mk)	(1 mk)

(b)	Put the remaining solid K in a boiling tube. Add about $8cm^3$ of distilled water. Shake well and divide the solution into 3 portions.		
(i)	To the first portion add 3 drops of sodium hydroxide solution and then excess.	(1 mk)	(1 mk)
(ii)	To the second portion add 3 drops of ammonia solution and then excess.	(1 mk)	(1 mk)
(iii)	To the third portion add 3 drops of Barium nitrate followed by 3 drops of nitric acid.	(1 mk)	(1 mk)

(c)	You are provided with solid P. carry out the tests below and record your observations and inferences.		
(i)	Place half spatula of solid P in a non-luminous flame of a Bunsen burner.	(1 mk)	(1 mk)
(ii)	Dissolve the remaining solid in water and divide into two portions		
(a)	Add 3 drops of universal indicator to the 1st portion and determine the PH of the solution.	(1 mk)	(1 mk)

(b)	To the 2nd portion add a little sodium hydrogen carbonate	(1 mk)	(1 mk)

NAME ……

SCHOOL ……...

ADM NO…….. INDEX NO…… SIGN …….

STREAM ……. DATE ……

COMPUTER STUDIES THEORY

Paper 1

Time: 2 ½ Hours

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

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

Instructions To Candidates

- *This paper consists of two sections A and B.*
- *Answer all question in section A*
- *Question 15 is Compulsory.*
- *Answer any other Three questions from section B*
- *All answers should be answered in the spaces provided on the question paper.*

For Examiner's Use Only

Section	Question	Score
A	**1 - 14**	
B		
Total Score		

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SECTION A (40MKS)

ALL QUESTIONS IN THIS SECTION

1. Give any two differences between fourth and fifth computer generations (2mks)

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2. List three ways in which computers are used in education. (3mks)

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3. a) Define the term booting (Imk)

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b)Explain the difference between cold and warm booting. (2mks)

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4. State the use of

a)Tab key (Imk)

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b) home key (Imk)

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5. Distinguish between

(a) Web master and web designer ((Imk)

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(b) Parallel and serial cables (Imk)

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6 a) Define a computer memory (Imk)

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b) Give three examples of special purpose memories (1 ½ mk)

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c) Explain the difference between logical and physical files (2mks)

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7. Perform the following binary operations giving your answer in decimal

a) 11101.11

11111.11 + (2mks)

b) 1111.11

1101.01 - (2mks)

8. a) What is search engine ? (lmk)

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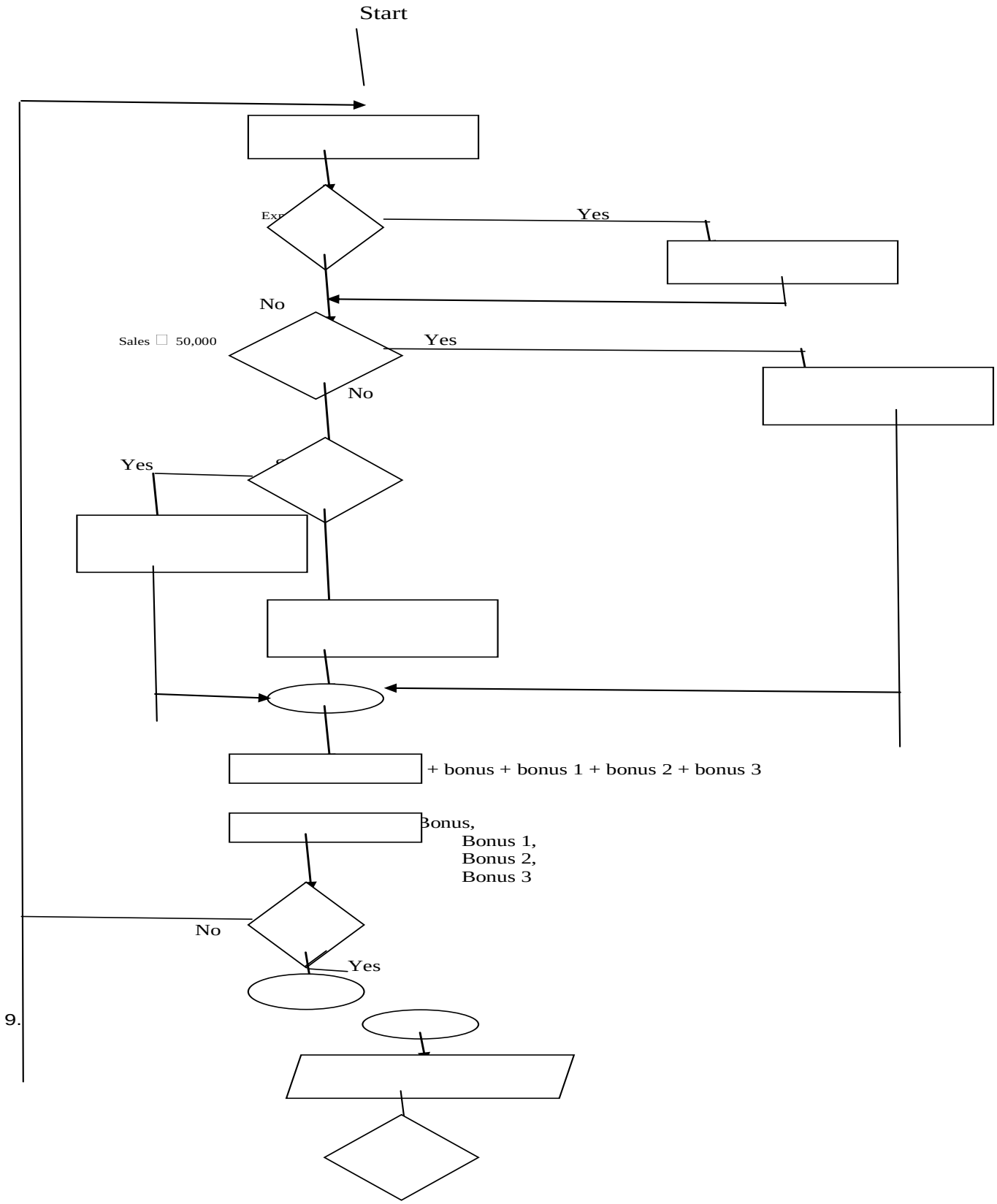
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b) State three examples of search engine (1 ½ mks)

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Start
Yes
No
Sales 50,000
Yes
No
Yes
+ bonus + bonus 1 + bonus 2 + bonus 3
Bonus,
Bonus 1,
Bonus 2,
Bonus 3
No
Yes

9.

9. a), identity the program control structures represented by the flowchart segments above

i. ..... (1 mk)

ii. .....(1 mk)

iii. ..... (1 mk)

b. Differentiate between control structure (i) and (ii) (I mk)

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10. You are provided with the worksheet below study it and answer the questions that follow

	A	B	C	D1
1	Books	Pens	Pencils	
2	200	175	60	
3	375	260	460	
4	450	700	511	
5				

a) If cell Dl represents the total value of books pens and pencils. Determine the formulae for the total value of cell Dl used. (1 mk)

b) If the formula of cell Dl is copied to cell D3. Determine resulting value of cell D3 (lmk)

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c) Give the type of cell referencing that is used in cell D3. (1mk)

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11. State the application areas of

a) CAM (1mk)

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b) CAD (lmk)

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12. E-mail is becoming preferable means of communication these days, give two Advantages of adopting this technology in work place and at home (2mks)

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13 .Give two ways of protecting data in a networked environment. (1mk)

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14. Highlight any four effects of the internet on society today. (4mks)

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SECTION B (60MKS)

ANSWER QUESTION 15 & ANY OTHER THREE QUESTIONS

1 5 a) Define the terms

i) Flowchart (Imk)

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ii Algorithm (Imk)

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iii) Pseudo code (Imk)

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b) The gross salary of employees of Kenya Airways sales agency is based on basic salary and other additional benefits, which is computed as follows: basic salary and other additional benefits, which

i) Employees who have worked for the company for more than five years receive an additional pay of 10% to their basic salary

ii) Monthly salary bonus based on monthly sales of air tickets are rated as shown in the table.

Monthly air tickets sales	Bonus rate (%)
Above 50,000	25
Between 25,000 and 50,000	15
Below 25,000	10

Draw a flowchart for a program that would be used to compute the gross salary then output each employee's basic salary and show all the benefits (9mks).

c) i) What is an array ? (Imk)

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ii) State two properties of an array (2mks)

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16 a) i) What is information system ? (Imk)

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ii)Explain three purpose of information system. (3mks)

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ii) With use of a diagram explain the development of system life cycle (6mk)

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b) i) Define system entropy (Imk)

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ii) State two main factors that may lead to system entropy. (2mks)

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c) Explain why HTML is not a true programming language (2mks)

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17 a) i) Define electronic point of sale terminal? (1mk)

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ii) Explain two advantages of using this system. (2mks)

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iii) Give an application areas of this system. (1mk)

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b) List four elements of a network (2mks)

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c) State three types communication media of the following

i) bounded (1 ½ mks)

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ii) unbounded communication (1 ½ mks)

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d) Explain two advantages and two disadvantages of unbounded communication (4mks)

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e) Give any two communication devices required by a network to be fully operational (2mks)

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18 a) State and explain the role of the following

i) Software engineer (2mks)

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ii) Computer trainer (2mks)

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b) Explain the effect of information communication technology in

i) Job opportunities (3mks)

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ii) Environment (3mks)

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iii) Automated production (3mks)

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c) Distinguish between sequential and indexed sequential as used in file organization (2mks)

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19 a) State the application area of

i) Magnetic ink character recognition (1mk)

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ii) Optical mark reader (Imk)

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b) Define the terms

i) **Byte** **(1 mk)**

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ii) Nibble (Imk)

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c) List any four objects used in the database (2mks)

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d) Explain any two features of word processor (2mks)

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e) Use two's complement method to perform the binary operation below

$37_{10} - 17_{10}$ (3mks)

f) Write the BCD code for 29_{10} (Imk)

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g) What is distributed data processing ? (Imk)

ii) Explain two advantages of distributed data processing in an organization (2mks)

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iii) State one problem of adopting this system in an organization. (1mk)

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NAME ……

SCHOOL ……...

ADM NO…….. INDEX NO…… SIGN …….

STREAM ……. DATE ……

451/2

FORM IV

COMPUTER STUDIES

PRACTICAL Paper 2

Time: 2 ½ Hours

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

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

INSTRUCTIONS TO CANDIDATES:

1. *Type your name and index number at the top right hand corner of each printout.*
2. *Write your name and index number on the diskette*
3. *Write the name and version of the software used for each question in the answer sheet.*
4. *Passwords **should not be used** while saving in the diskette*
5. *Answer all questions*
6. *All questions carry equal marks.*
7. *All answers **must** be saved in your diskette.*
8. *Make a printout of the answers on the answer sheets provided.*
9. *Hand in all the **printouts** and the **diskette.***

TOTAL SCORE

.

Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

1. a. Kibos holding company limited has given you the details below to be used in calculating expenses incurred during two quarters of the year as indicated. Use a spreadsheet package to enter the details, and save your work as Expenses 1 (20 Marks)

	A	B	C	D	E	F	G
1	**KIBOS HOLDINGS COMPANY LIMITED** **P. O. BOX 23625 BOMET**						
2							
3		**First Quarter**	**Second Quarter**				
4		**January**	**February**	**March**	**April**	**May**	**June**
5	Production Cost	15642	14687	18741	19457	15412	15441
6	Transportation	1564	1469	1874	1946	1541	1544
7	Warehousing	1125	1056	1347	1398	1107	1109
8	Promotion	2564	2407	3071	3188	2525	2530
9	Salary	4525	4248	5420	5626	4456	4465

b. (i) Copy the details of kibos holding company limited to sheet 2 of your worksheet (2 marks)

(ii) Add a column called "Total" and calculate the Total production cost of the two Quarters. (4 marks)

(iii) Use relative referencing to calculate the total for the other expenses (4 marks)

c. (i) Calculate the total expenses for each month so as to give the results as "Total expenses" on row 10 (4 marks)

(ii) On the paper provided write the formula used to calculate the expenses

For the month of April (2 marks)

d. (i) Use **absolute referencing** to calculate the cumulative total expenses for the

two quarters in cell H10 (4 marks)

(ii) Write the formula used to get the cumulative total on the paper provided (2 marks)

(iii) Calculate the percentage of total expenses of the respective months and

Display the results on row 11 as "percentage of total expenses" (4 marks)

(iv) Write the formulae used to get the percentage of May (2 marks)

(v) Draw a line graph to illustrate the percentage of the total expenses for the

Six months indicating the months. Save your work as Expenses 2 (11 marks)

(iv) Print Expenses 1 and Expenses 2 (2 marks)

2. Icon Management Training and Consultancy Center have set up a special advertising campaign to market its courses. As a DTP expert, you have been appointed to assist the marketing team in designing a bronchure

A sample brochure is attached to the question paper

The fonts, boarders and graphics used should be relevant to all the publications as may be

available in your software

a. Prepare a publication layout with the following specifications:

i. The paper size should be A4, landscape (2 marks)

ii. Set the margins to be 10mm (0.4 inch) all round (2 marks) iii.
Set the publication to be in three columns of measurements 87mm, 81 mm and 97 mm
respectively (2 marks) iv.
Set space between columns to 6 mm (2 marks) b.

Key in the text as shown in column 1 and 3 of the sample provided and save your work as Sample 1 (8 marks)

c. In column 3(title), format the text as follows:

i. Reverse the title as shown in the sample provided (2 marks)

ii. Bold the mission statement heading (2 marks) iii. Italicize and centre the mission statement (2 marks)

iv. Centre the address at the bottom of column 3 (2 marks)

v. Place a clipart appropriately as shown in column 3 of the sample provided *(if clipart not available, place any other appropriate graphics)* (2 marks) vi. save your work as sample 2 (2 marks)

d. in column 1 (courses), format the text as follows:

i. embolden the main title and the sub titles (2 marks)

ii. underline the main title only as shown in the sample provided (2 marks)

iii. highlight the courses using appropriate bullets (2 marks)

e. insert a column footer using the text *"Registration and enquiries at our head office - ICON Towers. "* In column 1 as shown in the sample provided (2 marks)

f. create the mailing coupon as it appears in column 2 of the sample (2 marks)

g. format the mailing coupon text as follows:

i. Bolden and centre the address, as shown in the sample provided (2 marks)

ii. draw and enter the **"PLACE STAMP HERE"** caption at the top righthand corner of column 2 (2 marks)

iii. save your work as sample 3 (2 marks)

h. Print sample 1, sample 2 and sample 3. (6 marks)

NAME ……

SCHOOL ……...

ADM NO…….. INDEX NO…… SIGN …….

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313/1
C.R.E
PAPER 1
FORM IV
TIME: 2 HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

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

QTN	1	2	3	4	5	TOTAL SCORE
SCORE						

Instructions to the candidates

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

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

*c) The paper consists of **FIVE** questions.*

*d) Answer **ALL** questions in the answer sheets*

*e) Each question carries **20** 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.

1. a) Outline the first account of creation in Genesis 1:1-2:49 (7mks)

b) State **seven** responsibilities given to human beings by God in the genesis stories of creation. (7mks)

c) Outline **six** ways in which Christians care for God's creation today. (6mks)

2. a) Explain the factors that led to the division of Israel after the death of King Solomon. (7mks)

b) Identify **seven** reasons that led to the Mt. Carmel contest. (7mks)

c) State **six** reasons why leaders are rejected in society today. (6mks)

3. a) Mention seven ways in which the old Testament prophets communicated their messages. (7mks)

b) Give **seven** reasons why Israel and Judah would face God's judgement according to prophet Amos. (7mks)

c) State six ways in which modern Christians may invite Gods punishment on them. (6mks)

4. a) Describe the call of prophet Jeremiah. (7mks)

b) Outline **seven** reasons why Jeremiah condemned human sacrifice. (7mks)

c) State **six** ways in which Christians can reduce human suffering. (6mks)

5. a) Identify seven factors that promote harmony and social responsibility in traditional African Community. (7mks)

b) Mention seven factors that influence the naming of children in traditional African society. (7mks)

c) Show how modern trends have affected burial rites in traditional African communities. (6mks)

NAME ……

SCHOOL ……...

ADM NO…….. INDEX NO…… SIGN …….

STREAM ……. DATE ……

313/2
C.R.E
PAPER II
FORM IV
TIME: 2 HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS
PRE-MOCK 4 EXAMS

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

QTN	1	2	3	4	5	TOTAL SCORE
SCORE						

Instructions to candidates

- *Answer **ALL** questions.*
- *Each question should be done on a separate foolscap.*

1. a) Outline Nathan's prophecy concerning the coming of the messiah. (6mks)

b) Describe the birth of John the Baptist according to Luke 1:57-79. (7mks)

c) Give **seven** reasons why Christians sing in church today. (7mks)

2. a) Outline **seven** teachings of Jesus from the sermon on the plain on true discipleship. (7mks)

   b) Using examples give **four** reasons why Jesus faced opposition from the Jewish, religious leaders in Galilee . (8mks)

   c) Outline **Five** ways in which the church leaders are preparing in the society for the second coming of Jesus. (5mks)

3. a) Narrate the parable of the great feast. (7mks)

   b) Identify **seven** teachings of Jesus on eschatology according to Luke 21:5-38.(7mks)

   c) State **six** reasons why Christians celebrate the last supper today. (6mks)

4. a) Give **seven** instructions Paul gave to the church in Corinth on how to use Spiritual gifts. (7mks)

   b) Explain how the unity of believers is expressed in the image of the bride Rev.2:1-2 2 cor11:2. (6mks)

   c) Outline the importance of the Holy Spirit to Christians today. (7mks)

5. a) Outline **seven** moral duties of employers to employees. (7mks)

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

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

NAME ……

SCHOOL ……...

ADM NO…….. INDEX NO…… SIGN …….

STREAM ……. DATE ……

ENGLISH PAPER 1
(Functional skills)
FORM IV
TIME: 2 HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

Instructions to candidates

1. *Write your name and index number in the spaces provided above.*
2. *Sign and write the date of examination in the spaces provided above.*
3. *Answer **all** the questions in this question paper.*
4. *All your answer must be written in the spaces provided in this paper.*
5. *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	10	
3	30	

Total Score

Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

FUNCTIONAL WRITING (20MKS)

1. You are the manager of Quick Safaris Transport Company. Of late you've realized that the workers, mainly drivers and conductors have lost discipline, and this has made the company incur a lot of loss.

   a) Write an internal memo to them, warning them of dire consequences if they do not change their behaviour and attitude.

Some of the areas you wish to address are:

i. Punctuality
ii. Foul language
iii. Lack of courtesy
iv. Policy bribery
v. Any other relevant area from your observation

(13 marks)

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Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

b) Design a Card inviting the workers to a motivational talk with an aim of changing their behaviour and attitude. (7 marks)

2. Read the passage below and fill in each blank space with an appropriate word.

Poaching is increasingly *(1)* _____ a menance, not just in Kenya, (2) _____ also in other parts of the continent, (3) _____ a grave danger to the survival of various animal species particularly the elephant. Whereas, there have been *(4)* _____ to raise awareness about the danger posed by the menance, not enough has been done to *(5)*_____ it out and punish offenders.

As it is, poaching is becoming a crisis, threatening species like elephants, which are hunted *(6)* _____for their ivory, rhinos which are targeted because of their horns and other game like lions.

The Kenya Wildlife Service has been doing well to combat *(7)* _____but it appears that more is needed if the criminals *(8)* _____to be stopped. If the killers have more sophisticated weaponry, then KWS must *(9)* _____ its game or call *(10)* _____the military to assist.

Oral Skills (30 marks)

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

Her lip suckle the nipples
Milk bubbles, foams and ripples
Little hands up in the air
Catch on the mother's hair
Sweet sensation rises in pressure
Tiny legs kick with pleasure
Sleep comes gently and strong
Sleep whispers softly and long.

(Emusara Ossie Enekase)

i. Identify any two pairs of rhyming words in the poem. (1mk)

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Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

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ii. Identify one major sound pattern in the poem. (1mk)

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iii. Give two examples of the above sound pattern. (2mks)

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iv. How would you perform the last two lines of the poem? (3mks)

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b) Suppose you were asked to make a speech at a friend's graduation party. What would you do to capture the audience's attention? (5 mks)

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Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

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c) Challenger: Two Europeans peeping through the window.
Response : Mucus

i. Classify the above genre. (1mk)

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ii. Identify and illustrate the most outstanding stylistic device used in the above genre.(1mk)

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iii. Give two functions of the above genre. (2mks)

i)…….

ii)……

d) In the words below, underline the part that should be stressed.

i. Suc.cess
ii. ad.vice
iii. Chal.lenge
iv. ob.serve (4mk)

e) Give a word with a similar pronounciation (4mks)
i. Muscle
ii. Worn
iii. Come
iv. Which

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f) The following is a conversation between a father and his daughter. Identify six shortcomings in the father's listening skills. (6mks)

DAUGHTER: *(Shortly after having arrived home from school)* Good afternoon, Daddy.

FATHER: *(Sitting complacently in the sofa, reading a newspaper. Looking up…….)* Good afternoon.*(Resumes reading).*

DAUGHTER: *(Holding out her school report form)* Daddy, I'm excited. My classteacher said I was the best improved. I was…

FATHER: Oh, you were? Me, I used to be number one. I was absolutely unbeatable.

DAUGHTER: Chemistry has been a particular headache (*now looking at the report form which she thought her father would wan see),* but this time…

FATHER: *(Stretching his arms, looking preoccupied)* Chemistry for me was particularly easy. I never scored anything less than 90%.

DAUGHTER: Dad, I was going to tell you that this time…

FATHER: *(Absent-mindedly)* By the way, where is your mum?

DAUGHTER: Mum is in the garden pickng vegetables. But Dad, you are not listening to my story. I was telling you about Chemistry.

FATHER: You mean you have a story about Chemistry? Chemistry is not about stories. It is hard science.

DAUGHTER: It's about my improvement…

FATHER: (*Laughing)* Me, it wasn't a matter of improvement. I was always at the top of the class.

DAUGHTER: Daddy, I give up. You are not listening.

FATHER: *(looking surprised)* Listening? I heard you: you were talking about improvement in Chemistry, weren't you?

DAUGHTER: Anyway, Dad. Thank you for paying attention. Enjoy your newspaper.

FATHER: Oh, yes I'm reading an interesting story about politics.

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NAME ……

SCHOOL ……...

ADM NO…….. INDEX NO…… SIGN …….

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AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

ENGLISH
FORM IV
PAPER II

PAPER 101/2 (COMPREHENSION, LITERARY APPRECIATION AND GRAMMAR)

INSTRUCTIONS TO CANDIDATES

1. *Write your name and Index no. in the spaces provided.*
2. *Answer all questions in this question paper.*
3. *All your answers must be written in the spaces provided in this question paper.*
4. *Candidates should check the question paper to ensure that all the papers are printed as indicated and that no questions are missing.*

For examiners use only.

Question	MaximumScore	Candidatescore
1	20	
2	25	
3	20	
4	15	
Total score	80	

QUESTION 1: COMPREHENSION. (20MKS)

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

The question is at least as old as Socrates: If we know what the right thing to do is, why do we not do it? It is an especially acute question when applied to global warming. The science showing that carbon dioxide emissions are already changing the planet's climate, and are likely to have severe effects (melting ice caps, sea-level rise, and species extinction), is compelling and now barely disputed. Almost 90% of Europeans say they recognize climate change as a major issue, and 75% identify fossil fuel emissions as a major cause.

And yet, as was widely discussed at a conference of environmentalists, geologists and writers in May 2006 in Ankelohe, Germany, public understanding has not translated into even the simplest of public actions. Less than 1% of Britons, for example, have switched their home electricity to renewable sources, even though it requires little more than a phone call to one's existing provider. Proportions on the continent are slightly higher, but there is clearly no rush to go green or — shudder — stopdriving cars.

Why such a disconnect between information and action? Part of the problem is that environmental advocates emit mixed messages. In mid-May 2006, Britain's *Guardian* published a front-page story showing that five companies in Britain produce more CO_2 pollution in a year than all the country's motorists combined. That is a strong argument for targeting industries, but the average reader could hardly be blamed for thinking, "Why should I bother to cut down my driving?"

Similarly, not enough thought has been devoted to the best role for government. Climate change is too vast a problem for individuals to solve alone, and some big businesses have an incentive not to solve it. That leaves the government to take the lead, which is tricky, because over-reliance on government can allow individuals to fob off their own responsibilities. What is worse, government power seems to tickle autocratic fantasies. In my experience, environmentalists spend far too much energy advocating hard-line government 'solutions' that do not stand a chance of being enacted. Sure, it might be good for the planet if governments banned the use of sports-utility vehicles or, for that matter, of all fossil fuels. Yet not only is it hard to sell outright prohibitions to voters, but the sad truth is that governments have a woeful record in even the mildest interventions. One of the most significant innovations in the last decade has been Europe's carbon-emission trading scheme: some 12 000 companies, responsible for more than half of the EU's emissions, have been assigned quotas. Companies with unused allowances can sell them; the higher the price, the greater the incentive for firms to cut their use of fossil fuels. The system seemed to work for about a year — but now it turns out that Europe's governments allocated far too many credits, which will likely hinder the program's effectiveness for years.

Perhaps the real reason that well-intentioned consumers do not change is that they do not see any benefit. Climate change may be a frightening, irreversible calamity, but its worst effects will not be felt next week or next year. The planet looks the same regardless of whether we use environmentally friendly technology or we do not care how much CO_2 we emit. But sure as the sun rises and sets every day, if we do not cut down on carbon emissions, then we may not have a planet to hand over to the next generation.

(Adapted from Times, June 5, 2006)

a) According to the passage, what are the effects of global warming? (4 marks)

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b) What, according to the passage, is the main cause of global warming?(3 marks)

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c) How does Britain encourage people to use renewable electricity? (3 marks)

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d) Paraphrase the following sentence: That is a strong argument for targeting industries, but the average reader could hardly be blamed for thinking, 'Why should I bother to cut down my driving?' (4 marks)

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e) What message does the writer communicate in this passage? (2 marks)

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f) Explain the meaning of the following words and expression as used in the passage. (4 marks)

(i) fob off

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……

Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

(ii) incentive

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(iii) calamity

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

You are **mad**!" Resian screamed at him. You are stark mad if you think I am your wife. I can only be your wife over my dead body. Yes, you and my father can kill me and carry my dead body to your **palatial** home."

He was stunned by those harsh words. He winced as if he had been struck. Then already harsh line of his mouth tightened and he stood tense for a moment. Then he relaxed and watched her mockingly. "You can never escape Resian," he repeated quietly, smiling. The very normality of his voice as he spoke those monstrous words was most shocking and disturbing to her. Whether you scream your heart out, or jump into the deep sea, Resian, you are mine. You are my wife from now henceforth"

"I want to go now." Resian announced angrily shuddering with **disgust** and terror.

"You want to go?" he asked, the contemptuous quiet of his voice a menace by itself." Go! You want to be persuaded, coaxed and **pampered** to marry Oloisudori Lonkiyaa? Sorry I will not do that! If you want to go, please yourself. You may opt to go, but when you are mine, you will do as I please. No one plays games with Oloisudori. Ask your father, he will tell you."

"Stop it! Stop it! Resian screamed excruciatingly pained by the disdainful remarks of Oloisudori. Putting her hands over her ears, she made a dash for the door. He made no effort to stop her but she flung it open and turned to glare at him with tearful eyes

You are mad! She screamed again sobbingly. "You are stark mad! You hear me? You are nothing but ol-ushuushi." She walked away and as she did so, she heard his soft laughter behind her.

1. Say what happens before this excerpt. (3mks)

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2. How is Oloisudori portrayed in this excerpt? (4mks)

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3. Describe the feeling of Resian in this excerpt (3mks)

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4. From other areas of the novel, state other crimes that are practiced by Oloisudori.(3mks).

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5. How does the writer utilize irony in this excerpt? (3mks)

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6. “You are my wife from now henceforth” Rewrite in the reported speech. (2mks)

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7. Explain the meaning of the following words (4mks)

a) Pampered

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b) Disgust

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c) Mad

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d) Palatial

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7. What happens immediately after this extract? (3mks)

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QUESTION 3: LITERARY APPRECIATED. (20MKS)

03. Read the poem below and then answer the questions that follow.

No coffin, no grave by fared Angira

He was buried without a coffin
without a grave
the scavengers performed the post-mortem
in the open mortuary
without sterilized knives
in front of the night club

stuttering rifles put up
the gun salute of the day
that was a state burial anyway
the car knelt
the red plate wept, wrapped itself in blood its
master's

the diary revealed to the sea
the rain anchored there at last
isn't our flag red, black and white?
so he wrapped himself well

who could signal yellow
when we had to leave politics to the experts
and brood on books
brood on hunger
and schoolgirls
grumble under the black pot
sleep under torn mosquito net
and let lice lick our intestines
the lord of the bar, money speaks madam
woman magnet, money speaks madam
we only cover the stinking darkness of the cave of our mouths
and ask our father who is in hell to judge him
the quick and the good.

well, his diary, submarine of the Third World
War
showed he wished
to be buried in a gold-laden coffin
like a VIP
under the jacaranda tree beside his palace
a shelter for his grave
and much beer for the funeral party

anyway one noisy pupil suggested we bring
tractors and plough the land.

(*From Poems from East Africa, D. Cook andD. Rubadiri (Eds,): East African EducationalPublishers)*

(a) Briefly explain what this poem is about.(3 marks)

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(b) Explain the use of onomatopoeia in the poem.(2 marks)

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(c) Identify and explain the tone of the poem.(4 marks)

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(d) Comment on the central theme of the poem.(3 marks)

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(e) Explain the meaning of the following lines:

(i) who could signal yellow(2 marks)

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(ii) submarine of the Third World War

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(f) How else can people bring change in society without assassinating politicians? (2mks)

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(g) Explain the meaning of the following word as used in the poem

i. Anchored (1mk)

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ii. Brood (1mk)

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QUESTION 4: GRAMMAR **(15 MARKS)**

A. **Complete the following sentences by choosing the appropriate expressions tofill the gaps**. (3mks)

(1) Although Nduati is a great friend of mine. I _____ him on a few important issues. (differ to, differ with)

(2) As good citizens, we must all pay our taxes _____ the policy. (in accordance to, in accordance with)

(3) She chose her career _____ (independent of, independent to)

B. ***Rewrite the sentences below according to the instructions given after each***. (3mks)

(1) My father would not allow us to attend night parties under any circumstances.
(Begin: Under no circumstances …….)

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(2) Strangers should not be allowed into the compound without the security officer's permission. (Begin: On no account……..)

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(3) The plane had just taken off when one of the passengers began to scream.
(Begin: Scarcely …….)

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Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

C. ***Rewrite the following sentences avoiding repetition.*** (3mks)

(1) Always be frank and open with your friends. When you are frank and open to your friends, you will win your friends trust and confidence.

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(2) Some of the questions are difficult, so find the easier questions and do the easier questions first.

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(3) Help yourself to some oranges. These oranges are sweet but those oranges are sweeter.

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D. Combine each of the following pairs of sentences into one sentence by making one of them a relative clause.

(1) Naliaka joined our school this term. She is very good at grammar.

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(2) The elephant is a very big animal. It is also very strong.

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……

(3) The generator had been on the whole night. It broke down in the morning.

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Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

E. ***<u>Add an appropriate question tag to each of the following statements.</u>***(3mks)

(1) They aren't serious.

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(2) He bought a new house last month.

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(3) They won't shut up.

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(4) Let us go.

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(5) He hasn't been here before.

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(6) You live in an apartment.

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NAME ……

SCHOOL ……...

ADM NO…….. INDEX NO…… SIGN …….

STREAM ……. DATE ……

FORM IV

ENGLISH

(Creative Composition and

Essays based on set texts)

PAPER III

TIME: 2 ½ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

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

ENGLISH PAPER III

2½ HRS

INSTRUCTIONS

- *Answer three Questions only*
- *Each essay must not exceed 450 words*
- *Question one and two are compulsory.*
- *In question three choose only one of the optional texts you have prepared on.*

TORAL SCORE

Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

1. (a) Write a composition beginning with the following words; I walked into the

Courtroom that sunny afternoon…….

Or

(b) Write a composition based on the proverb.
You never miss the water till the well runs dry. (20marks)

2. **The Compulsory Set Text** (20 marks)

Henry Ole Kulet: *Blossoms of the Savannah*

Referring to Resian in *Blossoms of the Savannah*, illustrate how courage and will power can lead to success
.

3. **Optional Set Text**

Answer any one of the following questions.

Either

a) **The Short Story**

Chris Wanjala (Ed.), *Memories We Lost and Other Stories*

Using illustrations from the story *Memories We Lost*, discuss incidences the narrator's sister is attacked by the 'thing'. (20 mks)

Or

b) **The Play**

David Mulwa: Inheritance

``When dictatorship becomes a fact, revolution becomes a right'' Basing your argument on Inheritance by David Mulwa, validate the truth of this statement

Or

c) **The Novel**

John Steinbeck, *The Pearl*

Wealth is not a source of happiness" Drawing illustrations from John Steinbecks. "The pearl" How true is this statement.

NAME ……

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GEOGRAPHY

FORM IV

PAPER I

TIME: 2 $^{1}/_{2}$ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS
PRE-MOCK 4 EXAMS

INSTRUCTIONS TO CANDIDATES

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

(b) Answer all questions in section A.

(c) Answer questions 6 and other two questions from section B.

(d) Answer must be written in the answer booklet provided.

(e) This paper consists of 4 printed pages.

(f) Candidates must check the question paper to certain that all pages are printed as indicated and no questions are missing

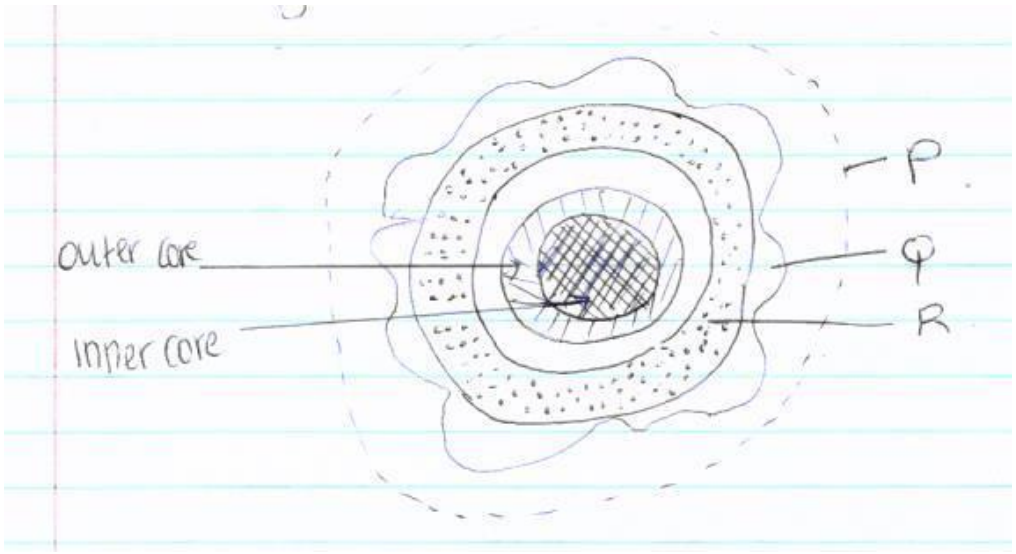
TOTAL SCORE

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SECTION A

ANSWER ALL THE QUESTIONS IN THIS SECTION

1. The diagram below the structure of the earth.



(a)Name the parts marked P, Q and R. (3mks)

(b) Name the minerals that make up SIAL (2mks)

2. (a) State the plate tectonic theory (2mks)

(b)List THREE types of boundaries associated with plate tectonic movement. (3mks)

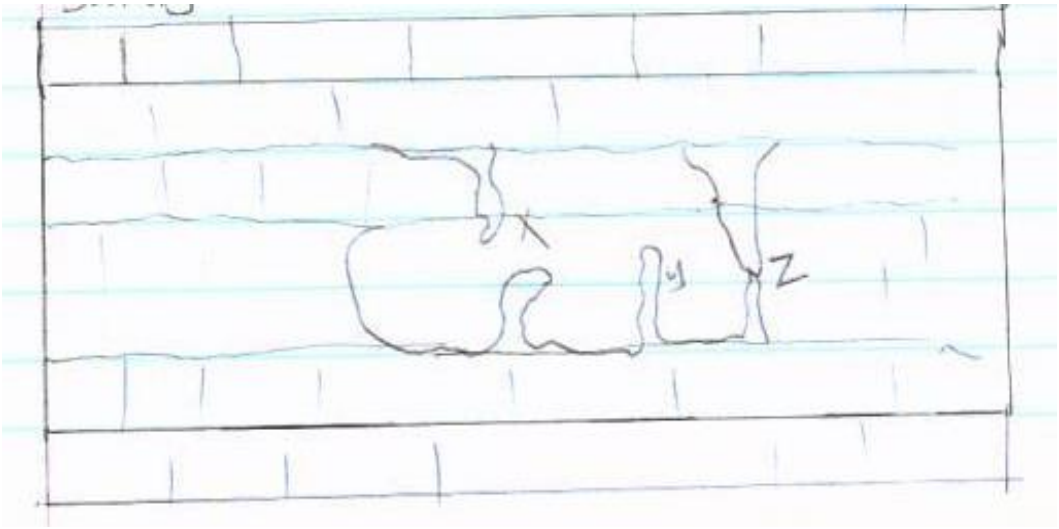
3(a) what is a Stevenson screen (2mks)

(b)State THREE essential features of a Stevenson screen (3mks)

4(a) Differentiate between weathering and mass wasting (2mks)

(b)State THREE effects of soil creep on the earth surface (3mks)

5(a) The diagram below shows some features found in Karst Scenery.



(a)Name the features marked X, Y and Z (3mks)

(b) State TWO ways in which lakes influence the natural environment (2mks)

SECTION B

ANSWER QUESTION 6 AND ANY OTHER TWO QUESTIONS FROM THIS SECTION

6. Study the map of MIGWANI (1:50,000) sheet 151/1 provided and answer the following questions

(a (i)Give the latitudinal extent of the area covered by the map (2mks)

(ii)What is the magnetic variation of the map (1mk?)

(iii)Convert the ratio scale of the map into statements scale (2mks)

(b)Citing evidence from the map give THREE economic activities carried out in the area covered by the map. (6mks)

(c) Explain how relief has influenced the distribution of settlement in the area covered by the map (4mks)

(d) (i)Using a vertical scale of 1cm to represent 100metres, draw a cross-section along the line marked J-K (4mks)

(ii)On it mark and label the following

-Footpath (1mk)

-Road (1mk)

- Water pipeline (1mk)

-steep slope (1mk)

(iii)Calculate the vertical exaggeration of the cross-section (2mks)

7(a) (i) what is a river divide (1mk)

(ii)Describe THREE ways by which a river transport its load (6mks)

(b)Describe the characteristics of a river on its old stage (7mks)

(c) Describe each of the following drainage system and patterns

(i) Superimposed drainage system (3mks)

(ii)Centripetal drainage pattern (2mks)

(d)You have planned to carry out a field study of a river in its youthful stage.

(i)State TWO ways in which you would prepare for the study (2mks)

(ii)Name TWO features you are likely to study (2mks)

(iii)List TWO problems you are likely to experience during the study (2mks)

8(a) List FOUR processes through which coasts are eroded (4mks)

(b)Using well-labeled diagram, explain how each of the following features is formed

(i)A spit (4mks)

(ii)A blow hole (2mks)

(iii)A toll (5mks)

(c) Some students carried out a field study on the coastal features found along the coast.

(i)List THREE features formed as a result of coastal emergence that they are likely to have studied (3mks)

(ii)State THREE methods that student may have used to record their data (3mks)

(iii)Describe TWO ways in which features resulting from coastal emergence are of significance to Kenya (2mks)

9(a) (i)Distinguish between Orogenic And Epeirogenic earth movement(2mks)

(ii)Describe how convectional currents cause earth movements (5mks)

(b)Explain THREE factors that determine the type of features resulting from earth movements (6mks)

(c) Describe the types of boundaries created as a result of earth movement (6mks)

(d)A form two class conducted a field study in an area that had undergone earth movement

(i)Give TWO examples of transform faults they would have observed (2mks)

(ii)Name TWO oceanic plate they would have observed (2mks)

(iii)Give the main reason why the interview method was not the appropriate method collecting the data (2mks)

10 (a)(i)Apart from fold mountains name THREE other features resulting from folding (3mks)

(ii)Identify FOUR examples of Fold Mountains outside Africa (4mks)

(b)Explain TWO major factors that influence folding (4mks)

(c) Describe the formation of Fold Mountains using the contraction theory (6mks)

(d)Explain the effects of folding on the following

Agriculture(2mks)

tourism (2mks)

mining (2mks

Transport (2mks)

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312/2
GEOGRAPHY
FORM IV
PAPER II
2 ¾ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS
PRE-MOCK 4 EXAMS

INSTRUCTIONS TO STUDENTS

i) *This paper has two sections: A and B.*

ii) *Answer all questions in section A.*

iii) *Answer question **6** and any other **two** questions from section B.*

iv) *All answers must be written in the answer booklet provided.*

v) *This paper consists of 3 printed pages and 10 questions*

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

vii) *Answer the questions in English.*

TOTAL SCORE

SECTION A.

ANSWER *ALL* THE QUESTIONS IN THIS SECTION.

1. a) What is Forestry? (2mks)
   b) Name five exotic species of trees planted in Kenya (5mks)

2. State four factors favouring the growth of forests on Mt. Kenya (4mks)

3. Give four reasons why afforestation is being encouraged in Kenya (4mks)

4. What is a polder? (2mks)

5. Describe the stages involved in reclamation of a polder (8mks)

SECTION B
Answer question 6 and any other two questions in this section

6. The table below shows the number of tourists who visited Kenya from 2010 to 2012. Use it to answer question 6(a)

COUNTRY	NUMBER OF TOURISTS
Canada	90,000
Germany	150,000
Italy	60,000
U.S.A	100,000
France	110,000
TOTAL	510,000

   a) i) Apart from pie charts, name two other statistical methods that can be used to represent the data in the table (2mks)
      ii) Using a radius of 5cm, draw a pie chart to represent the data in the table above. Show your calculations (10mks)
   b) State the advantage of using the data in a pie chart (3mks)
   c) State five steps taken by Kenyan government to promote wildlife resources (10mks)

7. a) What do you understand by these terms?
      i) Land reclamation (2mks)
      ii) Land rehabilitation (2mks)
   b) State five methods used in land reclamation and rehabilitation in Kenya (5mks)
   c) i) Explain four factors that led to the establishment of Perkerra Irrigation Scheme(8mks)
      ii) Apart from Perkerra, name two other large Irrigation schemes in Kenya (2mks)

d) You intend to carry out a field study on Irrigation farming in Perkerra Irrigation Scheme. Give six reasons why you need a pre-visit or reconnaissance for the study(6mks)

8. a) Name the major cocoa growing areas in Ghana (3mks)
b) Identify five conditions suitable for the cultivation of cocoa in Ghana (5mks)
c) Outline the stages in the processing of cocoa (7mks)
d) You intend to carry out a field study in a dairy farm near your school.
i) Identify two characteristics of a good hypothesis for the study (2mks)
ii) State four advantages of using the interview method to collect data during the study (4mks)
iii) Give four problems you are likely to encounter as you collect the data (4mks)

9. a) Differentiate between fishing and fisheries (4mks)
b) Use four methods used to preserve fish (4mks)
c) Identify four Traditional methods of catching fish (4mks)
d) Give four reasons why Norway is a great fishing nation (8mks)
e) Identify five measures the Government of Kenya is undertaking to encourage fish culture (5mks)

10. a) i) What is wildlife? (2mks)
ii) Give five reasons why it is necessary to conserve wildlife in Kenya (5mks)
b) Explain four ways in which Human activities are a threat to wildlife (8mks)
c) You intend to carry out a field study of a National park in your local area.
i) Which animals are you likely to see in the National park? (3mks)
ii) State three items you would include in the work schedule (3mks)
iii) Give four advantages of studying wildlife through fieldwork (4mks)

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311
HISTORY AND GOVERNMENT
FORM IV
PAPER 1
TIME: 2 $^{1}/_{2}$ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

INSTRUCTIONS TO STUDENTS

a) *This paper consists of Three sections: A, B and C.*
b) *Answer all the questions in section A.*
c) *Answer **three** questions from section B and two others from section C.*
d) *All answers must be written in the answer booklet provided.*
e) *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing*

TOTAL SCORE

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SECTION A (25MARKS)

Answer all questions in this section

1. Identify one branch in the study of History and Government of Kenya (1mk)
2. What was the main economic activity of the Cushites in the pre-colonial period? (1mk)
3. State two similarities in the political organization of the Ameru and Abagusii in Kenya during the 19th century (2mks)
4. Identify one way in which the Monsoon winds led to the development of trade between the Kenyan coast and the outside world (1mk)
5. State two functions of Fort Jesus during the Portuguese rule along the Kenyan coast (2mks)
6. Define the term dual citizenship (1mk)
7. Give two categories of human rights (2mks)
8. Give two rules that govern the concept of National justice (2mks)
9. State two terms of Anglo-German-Agreement of 1886 (2mks)
10. Give one reason why the British colonial government encouraged white settlers to come to Kenya (1mk)
11. What was the main reason for the formation of Ukamba Members Association? (1mk)
12. Why was the nomination of Eliud Mathu to the Legco important? (1mk)
13. Name two chambers of parliament under the new constitution (2mks)
14. Name one branch of the police service in Kenya (1mk)
15. Name one superior court in Kenya (1mk)
16. Identify one circumstance that would make a county governor to be removed from office (1mk)
17. State the main function of the National Security Council (1mk)

SECTION B

Answer any three questions from this section

18. a) Why did the Highland Nilotes migrate from their original homeland during the pre-colonial period? (5mks)
    b) Explain five results of the migration and settlement of the Highland Nilotes in Kenya (10mks)

19. a) Give three reasons for the coming of European Christian missionaries to Kenya in the 19th century (3mks)
    b) Explain six factors that hindered the work of early Christian missionaries in Kenya (12mks)

20. a) What were the reasons for construction of the Kenya – Uganda railway? (3mks)
    b) Explain 6 effects of the construction of Kenya – Uganda railway (12mks)

21. a) Why were Africans opposed to the British colonial rule between 1920 – 1939? (5mks)
    b) Explain five methods used by African Nationalists in Kenya in their struggle for independence (10mks)

SECTION C

Answer any two questions from this section

22. a) State three factors that have undermined natural unity in Kenya since independence (5mks)
    b) Explain five challenges facing the correctional services in Kenya today (10mks)

23. a) Identify three groups of Kenya Defence Forces (KDF) (3mks)
    b) Explain 6 functions of the Kenya Defence Forces (12mks)

24. a) Name five survival rights of a child (5mks)
    b) Describe five features of the Independence constitution (10mks)

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312/2
HISTORY AND GOVERNMENT
FORM IV
PAPER II
TIME: 2 $^{1}/_{2}$ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS
PRE-MOCK 4 EXAMS

INSTRUCTIONS CANDIDATES.

a. *This paper consists of three sections: A, B and C.*
b. *Answer all the questions in section A, three questions from section B and two questions from section C.*
c. *Answers to all the questions must be written in the answer booklet provided.*
d. *Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.*
e. *Candidates should answer the questions in English.*

TOTAL SCORE

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SECTION A

1. State two disadvantages of oral traditions as a source of History and Government.(2mks)

2. State two circumstances that forced man to start growing crops.(2mks)

3. State the main mode of transport used during the trans – Saharan trade.(1mks)

4. What was the contribution of Alexander Graham Bell in Science.(1mk)
5. Identify the form of writing that developed in Egypt as result of development of agriculture.(1mk)
6. State the main factor that led to emergence of Cairo as an Urban Centres (1mk)
7. Identify one factor that hinder industrialization in third world countries.(1mk)
8. Give two reasons why indirect rule was unsuccessful in Southern Nigeria .(2mks)(1x2)=2mks
9. State two strategic reasons for the scramble and partition of Africa.(2mks)
10. Give two resolution of the Berlin conference of 1884 to 1885(2mks)
11. Give two reasons why the league of nations was formed in 1919(2mks)
12. State one major event that led to the First World War.(1mk)
13. Identify two structural defects of the organization of African Unity(OAU) that have undermined its activities since 1963(2mks)
14. Give two reasons why united states of America (U.S.A) did not join the First World war until 1917.(2mks)
15. State one use of steel(1mk)
16. What is the main role of the International Criminal Court?(1mk)
17. Give the main principle that guides non-aligned movement.(1mk)

SECTION B(45 MKS)

Answer any three questions from this section in sheet provided.

18. a)State five impacts of early agriculture in Mesopotamia.(5mks)
    b). Explain the effects of food shortages in third world countries(10mks)

19. a)Sate five roles of Tuaregs in Trans-Saharan trade?(5mks)
    b) Explain five social effects of Trans-Saharan trade on the people of western Sudan?(2mks)

20. a)Give the factors that led to the rise of the Baganda Kingdom.(5mks)
    b)Describe the political organization of the Asante?(10mks)2x5=10mks

21. a.State five factors which made the Lozi to collaborate with the British (5mks).
    b.Explain five reforms introduced by the German administration in Tanganyika after the MajiMaji rebellion.(10mks)

SECTION C(30MKS)

22. a)State five reasons why the British used indirect rule to administer Northern Nigeria(5mks)
    b.Why did the French system of assimilation fail(10mks)

23. a)Give five functions of the security council of the united Nations Organization.(UNO) (5mks)
    b)Describe five benefits for being a member of the common wealth of nations(10mks)

24. a)Give reasons for the formation of Non-Aligned Movement? (5mks)
    b)Explain five effects of the cold war?(10mks)

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KISWAHILI KIDATO CHA NNE
102/1
KISWAHILI KARTASI YA KWANZA INSHA

MUDA 1 ¾.

MAAGIZO

Andika Insha mbili. Swali la **Kwanza** ni la **LAZIMA**

Chagua Insha ya pili kutoka kwa maswali yaliyosalia.

Kila insha isipungue maneno 400.

Kila insha itatuzwa (alama 20)

MASWALI

1. Wewe ni katibu wa vijana katika kijii chako. Andika kumbukumbu za mkutano wenu uliojadili matatizo yanayowakumba vijana.

2. Muungano wa Afrika Mashariki una manufaa mengi. Fafanua.

3. Andika insha inayodhibitisha methali hii…..Pilipili usioila yakuashiani?

4. Andika insha inayomalizia na sentensi hii…….. hili lilikuwa jambo la ajabu ambalo sikuwa nimelishuhudia maishani mwangu.

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PRE-MOCK 4 EXAMS

HATI YA KUHITIMU ELIMU YA SEKONDARI

KIDATO CHA NNE MUHULA WA PILI

KARTASI YA PILI

MAAGIZO

Andika jina na nambari yako kwenye nafasi ulizoachiwa hapo juu.
Tia sahihi yako kisha uandike tarehe ya mtihani.
Jibu maswali yote
Andika majibu yako katika nafasi zilizoachwa wazi.
Majibu yako yaandikwe kwa lugha ya Kiswahili

SWALI	ALAMA	TUZO
1	15	
2	15	
3	40	
4	10	
JUMLA	80	

KWA MATUMIZI YA MTAHINI PEKEE

1. **UFAHAMU: (alama 15)**

Soma taarifa ifuatayo kisha ujibu maswali

Mageuzi yanayotarajiwa katika idara ya polisi nchini yameanza **kubisha hodi** baada ya kuzinduliwa kwa mtaala mpya wa kutoa mafunzo kwa maafisa wa polisi.

Mtaala huo uliozinduliwa rasmi na Waziri wa Usalama wa ndani Prof. George Saitoti Jumatatu iliyopita, unalenga kuimarisha utendakazi katika kikosi ambacho kwa muda mrefu kimelaumiwa kwa kukolewa ufisadi na uvunjaji wa haki za kimsingi.

Akihutubu katika hafla ya kuzindua mtaala huo iliyofanyika katika makao makuu ya shirika la ndege nchini mtaani Embakasi, Nairobi, Jumatatu iliyopita, Waziri Saitoti alisema, kuzinduliwa kwa mtaala huo kuliashiria mwanzo wa mageuzi makubwa yanayonuiwa kukipatia kikosi hicho sura mpya.

"Nyakati zimebadilika na tutawapa maafisa wa polisi mafunzo mapya. Tunataka kuunda kikosi imara chenye nidhamu na kinachoheshimu haki za kibindamu. Tunataka kuwa na kikosi kinachoakisi sura ya karne hii na kinachoafikia hadhi ya kimataifa," Waziri Saitoti alisema.

Mtaala huo mpya wa kutoa mafunzo kwa maafisa wa polisi ni matunda ya jopo lililoteuliwa na Rais mwaka wa 2003 kutathmini mageuzi katika kikosi hicho. Uliandaliwa na taasisi ya elimu nchini ikishirikiana na wanafunzi kutoka chuo cha mafunzo ya polisi cha Kiganjo kwa usaidizi wa wataalamu wa masuala ya usalama kutoka Uswizi.

Chini ya mtaala huo, maafisa wa polisi watapokea mafunzo kwa kipindi cha kati ya miezi 15 na 21 kinyume cha awali ilipowachukua miezi 9 tu kukamilisha mafunzo.

Aidha, alama za kujiunga na kikosi hicho zimeongezwa. Katika mtaala huo, wanaonuia kujiunga na idara ya polisi wa kawaida, kitengo cha G.S.U au polisi wa utawala ni lazima wawe wamepata alama ya C katika mtihani wa K.C.S.E na itawachukua miezi 15 kukamilisha mafunzo ikiwa ni pamoja na miezi 3 ya kujifahamisha na huduma ya kikosi.

Hii ni tofauti na awali ambapo alama ya kujiunga na kikosi cha polisi ilikuwa ni D katika mtihani wa KCSE. Mtaala mpya unasema ni sharti asilimia 10 ya makurutu wawe na digrii kutoka chuo kikuu na watapokea mafunzo kwa miezi na kuhitimu cheo cha Naibu wa Inspekta wa Polisi.

Kuanzia sasa, ni sharti usawa wa kijinsia uzingatiwe kikamilifu katika uajiri wa maafisa wa polisi. Wachanganuzi wa masuala ya usalama wanasema ukizingatiwa ipasavyo, mtaala huo utasaidia kuunda msingi dhabiti wa kikosi imara ambacho Wakenya wamekuwa wakihitaji.

Maswali

1. a) Ni dalili ipi inayoonyesha mwanzo wa mageuzi? (al.1)

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b) Mtaala mpya unalenga nini? (al.4)

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c) Eleza lawama zinazoelekezewa kikosi cha polisi (al.2)

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d) Kwa mujibu wa taarifa eleza mageuzi matatu yaliyofanywa katika kikosi cha polisi (al.3)

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e) Taja makundi mawili yaliyohusika katika kuandaa mtalaa mpya (al.2)

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f) Eleza maana ya maneno haya kama yalivyotumika katika kifungu (al.3)

i) Kubisha hodi

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ii) Kukolewa

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iii) Makurutu

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2. <u>UFUPISHO</u> (alama 15)

Soma makala haya kisha ujibu maswali yanayofuata

Mwezi jana serikali ya kitaifa na zile za kaunti ziliwasilisha makadirio yao ya bajeti, miezi miwili kabla ya mwaka wa kifedha kuisha kama zinavyohitajika na katiba. Serikali hizo zilieleza jinsi zinavyonuia kutumia mabilioni ya pesa kufadhili shughuli za mwaka ujao wa kifedha wa 2013/2014.

Serikali ya Rais Uhuru Kenyatta ilisema itatumia shilingi 1.6 trilioni kufadhili maendeleo na shughuli za sekta na idara zake tofauti. Makadirio haya yaliwasilishwa na kiongozi wa walio wengi bungeni, Bw. Aden Duale. Hata hivyo yalikosa kueleza jambo moja muhimu – jinsi kitita hicho kitakavyopatikana. Nasema hivi kwa sababu kuna habari ambazo zimenipa tumbojoto na wasiwasi mkubwa. Imebainika kuwa kufikia mwishoni mwa

Machi mwaka huu, Kenya ilikuwa inadaiwa shilingi 1.8 trilioni na wafadhili wa humu nchini wa kigeni. Kama habari hizi hazijakushtua sitakulaumu kwa sababu huenda ukuwa hujui ukubwa wa kiasi cha fedha. Ili uweze kuelewa, nitazigawanya fedha hizi miongoni mwa Wakenya milioni 40 ili tujue kila mkenya anadaiwa kiasi gani. Kila Mkenya nchini, wakiwemo watoto na wazee wakongwe, anadaiwa shilingi 45,000! Hivyo basi ili deni hili liweze kulipwa, kila Mkenya atalazimika kutoa kiasi hicho cha fedha.

Ni deni ambalo Rais Uhuru Kenyatta alirithi kitoka kwa mtangulizi wake, Rais Mwai Kibaki ambaye utawala wake ulivunja rekodi ya kukopa. Wahenga hawakukosea dawa ya deni

ni kulipa. Deni hili linapaswa kimkosesha usingizi Rais Kenyatta ambaye anapaswa kutafuta njia za kulilipa bila kuathiri uchumi, maendeleo na utekelezaji wa ahadi nyingi alizowapatia Wakenya wakati wa kampeni.

Hili halitafanyika kama Serikali itatenga fedha nyingi kuwalipa maafisa wake mishahara na marupurupu minono pamoja na kuwapa mabilioni ya pesa kununulia magari ya kifahari. Pengine Rais hajafahamiswa kuwa mwaka ujao wa kifedha serikali itajipata pabaya kwani Halmashauri ya Ukusanyaji Ushuru nchini (KRA), haitaweza kukusanya kiwango kilichowekwa na serikali baada ya shughuli ya ukusanyaji ushuru kutatizwa na hofu iliyotanda wakati wa uchaguzi mkuu.

KRA ilikuwa imekusanya shilingi 560 bilioni kufikia mwishoni mwa Machi ilhali ilikuwa imeagizwa kukusanya. Baada yake zimeomba serikali kuu ujaze pengo hilo au zipewe idhini ya kukopa.

Rais Kenyatta hana budi kuchukua hatua za dharura kuhakikisha kuwa wakenya hawataendelea kuandamwa na madeni maishani mwao.

(imenukuliwa kutoka Taifa Leo – Mei 9, 2013)

a) Kwa maneno yasiyozidi 70, fupishsa aya za kwanza nne. (al.9)

Nakala ya matayarisho

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Nakala safi

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b) Kwa nini serikali haitaweza kulipa madeni yake. (maneno 40-50) (al.6)

Nakala ya matayarisho

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Nakala safi

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3. <u>SARUFI NA MATUMIZI YA LUGHA</u> (alama 40)

a) Tambua sauti.

Kipasuo ghuna cha kaakaa laini (al.1)

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b) Unda neno lenye muundo ufuatao wa sauti (al.1)

KKKKI

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c) Eleza maana ya istilahi zifuatazo za sauti (al.4)

i) Kiimbo

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ii) Konsonanti mwambatano

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d) Tunga sentensi moja ukitumia neno –zuri kama kiwakilishi, kivumishi na kielezi(al.3)

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e) Eleza tofauti kati ya sentensi hizi (al.2)

Ningesoma kwa bidii ningepita mtihani.

Ningalisoma kwa bidii ningalipita mtihani

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f) Tunga sentensi moja sahihi itakayotumia vitenzi vifuatavyo (al.3)
-wahi, -enda, -ona

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g) Huku ukitumia mifano mwafaka, tofautisha silabi wazi na silabi funge (al.2)

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h) Andika sentensi ifuatayo katika hali ya yakinishi (al.2)
Wanafunzi wasiposoma kwa bidii hawatapita mtihani

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i) Bainisha vishazi katika sentensi ifuatayo (al.2)
Gaidi aliyelipua guruneti ile ametiwa mbaroni

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j) Andika katika msemo wa taarifa: (al.2)

"Wakazi wa eneo hili ni wafugaji stadi wa sungura" Kakangu aliniambia.

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k) Bainisha aina za virai katika sentensi ifuatayo (al.3)

Sheria hizo mpya zilitundikwa juu ya ukuta usiku wa manane.

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l) Unda nomino kutokana na vitenzi vifuatavyo (al.2)

i) Sali

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ii) La

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m) Changanua sentensi ifuatayo kwa njia ya vielezo matawi (al.4)
Jengo lijengwalo kwenye msingi thabiti hudumu sana.

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n) Andika katika kauli ya kutendesha (al.2)
Amani alikunywa pombe mpaka akalewa sana

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o) Andika kwa udogo (al.2)
Njia iendayo mbinguni ni nyembamba

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p) Neno changa lina maana ya kutoa kitu au fedha ili kukusanya kwa makusudi fulani. Eleza maana zingine mbili (al.2)

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q) Taja nahau zingine mbili sawa na “Enda ahera” (al.2)

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r) Andika kwa wingi (al.1)

Zigo la kuliwa halilemei

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4. <u>ISIMU JAMII</u> (alama 10)

Soma kifungu kifuatacho halafu ujibu maswali.

"Naona "Horsepower" mwenyewe ndiye atakayepiga, atakayecheza foul hiyo. Wachezaji wa……"

i) Tambua sajili inayorejelewa (al.2)

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ii) Tambua sifa zinazobainisha sajili rejelewa (al.8)

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NAME ……

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102/3

KISWAHILI

Karatasi ya III

Kidato cha IV

Muda: Saa 2½

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

The Kenya Certificate of Secondary Examination

MAAGIZO

- Jibu maswali manne pekee
- Swali la kwanza ni la lazima
- Maswali hayo mengine matatu yachaguliwe kutoka sehemu zilizobaki – Riwaya,Tamthilia, Hadithi fupi au Fasihi Simulizi
- Usijibu maswali mawili kutoka sehemu moja
- Kila swali lina alama 20
- Majibu yote yaandikwe kwa lugha ya Kiswahili
- Watahiniwa wahakikishe kuwa kurasa zote zimepigwa chapa sawasawa na maswali yote yamo

ALAMA JUMLA

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SEHEMU YA A: USHAIRI

LAZIMA

1. ***Soma shairi hili kisha ujibu maswali yanayofuata.***

Tunda ni kuliangua, chungwa liloninginia,

Tunda pia kuchumia, mbuga sima yowelea,

Jinginelo lipo?

Tunda kivuno shambani, lima kisha palilia,

Tunda vinono nyumbani, kwa jasho shughulikia

Jinginelo lipo?

Tunda tokeo la kazi, na ujira jipatia,

Tunda matokeo wazi, jitihada jifanyia,

Jinginelo lipo?

Tunda pia ni kizazi, wana hao niliozaa,

Tunda tama ya ulezi, wana wataponifaa,

Jinginelo lipo?

Tunda letu la uhuru, minyororo jikongoa,

Tunda sote kuwa huru, na mazao furahia,

Jinginelo lipo?

Tunda ni wetu uchumi, na chumo kujichumia,

Tunda mwenzangu huchumi, ukaweza kwendelea

Jinginelo lipo?

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Tunda bora utu mwema, yako roho kuilisha,

Tunda la roho nasema, mja kumkamilisha,

Jinginelo lipo?

Maswali

(a) Shairi hili lina bahari kadha zitaje na ueleze. (alama 4)

(b) Eleza vina na mizani ya ubeti wa sita na saba. (alama 4)

(c) Andika ubeti wa pili kwa lugha ya nathari. (alama 4)

(d) Taja mbinu ya lugha iliyotumika katika shairi hili. (alama 2)

(e) Taja maana ya 'tunda' kama ilivyotumika katika shairi. (alama 3)

(f) Eleza maana ya maneno haya kama ilivyotumika katika shairi. (alama 3)

(i) Kuliangua

(ii) Palilia

(iii) Kujichumia.

SEHEMU YA B: FASIHI SIMULIZI

2. Soma kifungu kifuatacho kisha ujibu maswali

Sungura alivyokwepa kuliwa na samba

Wanyama wa pori waliamua siku moja kumtuma mnyama mmoja kila siku alikoishi simba kama chakula. Siku moja ilikuwa zamu ya sungura kwenda huko. Sungura alikuwa mjanja sana. Alipanga mpango mzuri wa kumwangamiza simba.

Alienda alikoishi simba muda mrefu baada ya muda wa chakula wa simba. Alimkuta simba akiwa na hasira kubwa sana.

``Kwa nini umechelewa jinsi hii?`` aliuliza kwa hasira.

'Bwana wee,`` alisema sungura kwa sauti ya upole.

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``Nilichelewa kwa sababu simba mwingine alinikimbiza. Nilitaabika sana kabla ya kupata upenyu wa kutoroka.``

``Simba mwingine? Je, katika pori hili?`` aliuliza samba.

``Ndiyo bwana mkubwa. Najua anakoishi. Tuandamane nikakuonyeshe,`` alisema sungura.

Simba alijitayarisha kuandamana na sungura. Sungura aliongoza njia hadi walipofika mahali palipokuwa na kisima kikubwa. Sungura alimgeukia na kusema, ``Anaishi hapa. Tafadhali njoo umuone!``

Simba alisogea ulipokuwa ukingo wa kile kisima. Aliyatupa macho huko na kukiona kivuli chake. Alidhani kuwa huyo alikuwa simba mwingine. Kwa hasira kubwa alifungua kinywa na kunguruma. Alimwona huyo simba mwingine akikenulia meno. Simba hakuweza kusubiri, alijitosa kisimani apambane na simba huyo. Huo ulikuwa mwisho wake. Sungura aliondoka akicheka akifurahi kuwa sasa wanyama hawataliwa tena na simba.

Maswali

a) i) Andika aina ya hadithi hii (Alama 2)

ii) Taja sifa tatu za kutambulisha aina hii ya hadithi (Alama 3)

iii) Fafanua umuhimu wa aina hii ya hadithi kwa jamii (Alama 3)

b) Kwa kutoa mifano taja aina mbili ya fomyula ya: (Alama 4)

i) Kuanza hadithi

ii) Kumalizia hadithi

c) Eleza sifa nne za mtambaji bora katika fasihi simulizi (Alama 4)

d) Tofautisha kati ya vipera viwili vya fasihi simulizi.

i) Mighani na maghani (Alama 2)

ii) Lakabu na misimu (Alama 2)

SEHEMU YA C:

RIWAYA: CHOZI LA HERI:ASSUMPTA K.MATEI

3. Maovu yametamalaki katika jamii ya Riwaya ya Chozi la Heri, tetea kauli hii kwa kutolea hoja kumi (alama 20)

4. Auntie Sauna alishikwa na polisi "

a. Liweke dondoo hili katika muktadha wake (alama 4)

b. Huku ukitoa mifano, fafanua sifa tatu za msemaji (alama 6)

c. Taja mbinu iliyotumika katika dondoo hii (alama 2)

d. Ni kwa nini Auntie Sauna alishikwa na polisi? Elezea kikamilifu (alama 8)

SEHEMU YA D:

TAMTHILIA : KIGOGO: PAULINE KEA

5. Ami? Tangu lini ukawa ami yangu? **(ALAMA 20)**

a) Eleza muktadha wa dondoo. (alama2)
b) Taja mbinu iliyotumika katika dondoo hili. (alama2)
c) Eleza sifa za Msemaji (alama8)
d) Bainisha maudhui ya nafasi ya mwanamke ukizingatia mhusika huyu. (alama8)

6. Eleza jinsi mbinu zifuatazo zilivyotumika katika Tamthlia hii. (alama 20)

a) Kinaya
b) Majazi

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SEHEMU YA E: TUMBO LISILOSHIBA NA HADITHI ZINGINE

HADITHI FUPI: ALIFA CHOKOCHO NA DUMU KAYANDA

SHIBE INATUMALIZA

7. "Ndugu yangu kula kunatumaliza"

"Kunatumaliza au tunakumaliza"

(a) Eleza muktadha wa dondoo hili. (alama 4)

(b) Fafanua maana ya kitamthali katika kauli 'kula tunakumaliza' (alam 10)

(c) Kwa mujibu wa hadithi hii, ni kwa namna gani wasemaji wanadai kula kunawamaliza?

(alama 6)

AU

8. (a) "Mame Bakari"

Kwa mujibu wa hadithi hii, ubahaimu anaotendewa mwanamke unakuwa na athari mbaya kwake. Onyesha kwa mifano mwafaka. (alama 10)

(b) "Masharti ya Kisasa"

"…mapenzi ni mateso,ni utumwa, ni ukandamizaji , ni ushabiki usio na maana."

Thibitisha ukweli wa kauli hii kama unavyojitokeza kwenye hadithi.(alama 10)

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NAME ……

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ADM NO…….. INDEX NO…… SIGN …….

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MATHEMATICS

PAPER I

TIME:2HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

FORM FOUR MATHEMATICS

INSTRUCTIONS TO CANDIDATES

i. Write your name and Index number in the spaces provided above.
ii. This paper consists of two sections: Section I and Section II.
iii. *Answer all questions in* ***Section I*** *and only Five questions from* ***Section II.***
iv. Show all the steps in your calculations giving your answer at each stage in the spaces provided below each question.
v. Non-programmable silent electronic calculators and KNEC mathematical tables may be used.

For Examiner's 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	

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SECTION I (50 MKS)

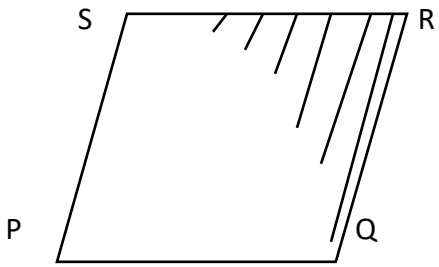
ATTEMPT ALL QUESTIONS.

1. Use tables of reciprocal only to evaluate $\frac{1}{0.325}$ hence evaluate : $\sqrt[3]{\frac{0.000125}{0.325}}$ (3mks)

2. Two boys and a girl shared some money. The elder got **4/9** of it, the younger boy got **2/5** of the remainder and the girl got the rest. Find the percentage share of the younger boy to the girls share.(3mks)

3. Annette has some money in two denominations only. Fifty shillings notes and twenty shilling coins. She has three times as many fifty shilling notes as twenty shilling coins. If altogether she has sh. 3,400, find the number of fifty shilling notes and 20 shilling coin. (3mks)

4. The figure below shows a rhombus PQRS with PQ= 9cm and ‹SPQ=60^0 . SXQ is a circular arc, centre P.



Calculate the area of the shaded region correct to two decimal places (Take Pie= 22⁄7) (4mks)

5. Solve the equation $2x^2 + 3x=5$ by completing the square method (3mks)

6. Simplify the expression $\frac{3x^2 – 4xy^2 + y}{9x^2 — y^2}$ (3mks)

7. Solve the equation $\mathbf{8x^2 + 2x - 3 = 0}$ hence solve the equation $\mathbf{8Cos^2y + 2Cosy - 3 = 0}$ For the range $0^0 < y < 180^0$ (4mks)

8. Show that the points P(3,4), Q(4,3) and R(1,6) are collinear. (3mks)

9. Solve the inequalities $x \leq 2x + 7 \leq \frac{1}{3}x + 14$ hence represent the solution on a number line. (3mks)

10. The mean of five numbers is 20. The mean of the first three numbers is 16. The fifth number is greater than the fourth by 8. Find the fifth number.
(3mks)

11. The volume of two similar solid spheres are $4752cm^3$ and $1408cm^3$. If the surface area of the small sphere is $352cm^2$, find the surface area of the larger sphere. (3mks)

12. Solve for x in the equation $\frac{1}{2}\log_2 81 + \log_2(x - x/3) = 1$ (3mks)

13. A farmer has a piece of land measuring 840m by 396m. He divides it into square plots of equal size. Find the maximum area of one plot. (3mks)

14. a) find the inverse of the matrix $\begin{matrix} 4 & 3 \\ 3 & 5 \end{matrix}$ (1mk)

b) Hence solve the simultaneous equation using the matrix method (2mks)

$4x + 3y = 6$

$3x + 5y + 5$

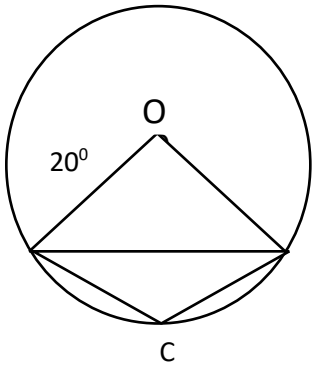
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15. In the figure below O is the centre of the circle and <OAB=20^0. Find;

a) <AOB (1mk)

b) <ACB (2mks)

A



16. Each interior angle of a regular polygon is 120^0 larger than the exterior angle. How many sides has the polygon? (3mks)

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SECTION II (50MKS)
Choose any five questions

17. Three business partners, Bela Joan and Trinity contributed Kshs 112,000, Ksh,128,000 and ksh,210,000 respectively to start a business. They agreed to share their profit as follows:

30% to be shared equally
30% to be shared in the ratio of their contributions
40% to be retained for running the business.

If at the end of the year, the business realized a profit of ksh 1.35 Million. Calculate:

a) The amount of money retained for the running of the business at the end of the year. (1mk)

b) The difference between the amounts received by Trinity and Bela (6mks)

c) Express Joan's share as a percentage of the total amount of money shared between the three partners. (3mks)

18. Complete the table below for the function $y=x^3 + 6x^2 + 8x$ for $-5 \leq x \leq 1$ (3mks)

X	-5	-4	-3	-2	-1	0	1
X^3	-125	-64			-1	0	8
$6X^2$			54		6	0	
8X	-40		-24	-16		0	8
Y		0	3			0	15

a) Draw the graph of the function $y=x^3 + 6x^2 + 8x$ for $-5 \leq x \leq 1$ (3mks)
(use a scale of 1cm to represent 1 unit on the x-axis . 1cm to represent 5 units on the y-axis)

(PROVIDE A GRAPH PAPER)

b) Hence use your graph to estimate the roots of the equation
$X^3 + 5x^2 + 4x = -x^2 - 3x - 1$ (4mks)

19. Three islands P,Q,R and S are on an ocean such that island Q is 400Km on a bearing of 030^0 from island P. island R is 520Km and a bearing of 120^0 from island Q. A port S is sighted 750Km due South of island Q.

a) Taking a scale of 1cm to represent 100Km, give a scale drawing showing the relative positions of P,Q,R and S.
(4mks)

Use the scale drawing to:

b) Find the bearing of:

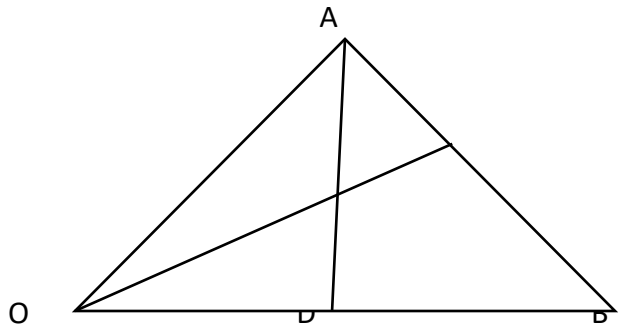
i. Island R from island P (1mk)

ii. Port S from island R (1mk)

c) Find the distance between island P and R (2mks)

d) A warship T is such that it is equidistant from the islands P,S and R. by construction locate the position of T. (2mks)

20. In the figure below, E is the midpoint of AB, OD:DB=@:3 and f is the point of intersection of OE and AD.



Given OA= a and OB= B

a) Express in terms of a and b

i. AD (1mk)

ii. OE 2(mks)

b) Given that AF= sAD and OF= tOE find the values of s and t (5mks)

c) Show that E,F and O are collinear (2mks)

21. A bag contains 5 red, 4 white and 3 blue beads . two beads are selected at random one after another.

a) Draw a tree diagram and show the probability space. (2mks)

b) From the tree diagram, find the probability that;

i. The last bead selected is red (3mks)

ii. The beads selected were of the same colour (2mks)

iii. At least one of the selected beads is blue. 3(mks)

22. The table below shows how income tax was charged on income earned in a certain year.

Taxable income per year(Kenyan pounds	Rate shilling per K£
1-3630	2
3631- 7260	3
7261 -10890	4
10891 - 14520	5

Mr. Gideon is an employee of a certain company and earns a salary of ksh.15,200 per month. He is housed by the company and pas a nominal rent of Ksh. 1050 per month. He is married and is entitled to a family relief of ksh. 450 per month.

i. Calculate his taxable income in K£ p.a (2mks)

ii. Calculate his gross tax per month. (4mks)

iii. Calculate his net tax per month (2mks)

iv. Calculate his net salary per month (2mks)

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23. The table below shows the distribution of mathematics marks of form 4 candindates in Mavoko Secondary school.

Marks	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
F	4	7	12	9	15	23	21	5	4

Use the above date to calculate:

a) Mean using assumed mean of 65 (3mks)

b) Median (3mks)

c) Standard deviation (4mks)

24. Coast bus left Nairobi at 8.00am and travelled towards Mombasa at an average speed of 80Km/hr. At 8.30am, Lamu bus left Mombasa towards Nairobi at an average speed of 120 km per hour. Given that the distance between Nairobi and Mombasa is 400Km.: determine:

    i. The time Lamu bus arrived in Nairobi. (2mks)

    ii. The time the two buses met. (4mks)

    iii. The distance from Nairobi to the point where the two buses met. (2mks)

    iv. How far coast bus is from Mombasa when Lamu bus arrives in Nairobi (3mks)

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AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

FORM FOUR MATHEMATICS

MATHEMATICS
FORM IV
Paper II 2 ½ Hours

Instructions to candidates

1. *Write your **name, index number** and **class** in the spaces provided above.*
2. *Write the date of examination in the spaces provided above.*
3. *The paper contains two sections: **Section I** and **Section II**.*
4. *Answer **All** the questions in **section I** and **strictly any five** questions **from Section II.***
5. *All answers and working must be written on the question paper in the spaces provided below each question.*
6. *Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.*
7. *Marks may be given for correct working even if the answer is wrong.*
8. *Non-programmable silent electronic calculators and **KNEC** mathematical tables may be used, unless stated otherwise*

For Examiner's use only.

Section I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**Total**

Section II

17	18	19	20	21	22	23	24	**Total**

TOTAL SCORE

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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 question(s) are missing

SECTION A (50 MARKS)

Answer all the questions in this section

1. Use logarithm table to evaluate. 4 mks

$$\sqrt[3]{\frac{0.52 \times 0.312}{2.12^2}}$$

2. 200 cm^3 of acid is mixed with 300 cm^3 of alcohol. If the densities of acid and alcohol are 1.08g/cm^3 and 0.8 g/cm^3 respectively, calculate the density of the mixture. 3 mks

3. The coordinates of P and Q are P(5, 1) and Q(11, 4) point M divides line PQ in the ratio 2 : 1. Find the magnitude of vector OM. (3 marks)

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4. The table below shows income tax rates in a certain year.

Monthly income in Ksh	Tax rate in each Ksh
1 – 9680	10%
9681 – 18800	15%
18801 – 27920	20%
27921 – 37040	25%
Over 37040	30%

In that year, a monthly personal tax relief of Ksh. 1056 was allowed. Calculate the monthly income tax paid by an employee who earned a monthly salary of Ksh 32500. (4 mks)

5. Make w the subject of the formulae. 3mks

$$2x = \sqrt{\frac{2w + 8}{3w - 5}}$$

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6. A line passes through points (2, 5) and has a gradient of 2.
   (a) Determine its equation in the form $y = mx + c$. 2mks

   (b) Find the angle it makes with x-axis. 1mk

7. A quantity **P** is partly constant and partly varies as the cube of **Q**. When **Q**=1, **P**=23 and when **Q** =2, **P**= 44. Find the value of **P** when **Q** = 5. 3mks

8. The vertices of a triangle are A(1, 2) , B(3, 5) and C(4, 1). The co-ordinates of C' the image of C under a translation vector T are (6, -2).
   (a) Determine the translation vector T. 1mk

(b) Find the co-ordinates of A' and B' under the translation vector T. 2mks

9. (a) Expand $(1 - x)^4$ using the binomial expansion. 1mk

Use the first three terms of the expansion in (a) above to find the value of $(0.98)^4$ correct to nearest hundredth. 2mks

10. Find the centre and radius of a circle with equation:
$|^2 + y^2 - 6| + 8y - 11 = 0$ (3mks)

11. Two grades of coffee one costing sh.42 per kilogram and the other costing sh.47 per kilogram are to be mixed in order to produce a blend worth sh.46 per kilogram in what proportion should they be mixed.
(3mks)

12. Pipe A can fill an empty water tank in 3 hours while pipe B can fill the same tank in 5 hours. While the tank can be emptied by pipe C in 15 hours. Pipe A and B are opened at the same time when the tank is empty. If one hour later pipe C is also opened. Find the total time taken to fill the tank.
4 mks.

13. Simplify the expression: 3mks.

$$\frac{9t^2 - 25a^2}{6t^2 + 19at + 15a^2}$$

14. A business bought 300 kg of tomatoes at Ksh. 30 per kg. He lost 20% due to waste. If he has to make a profit 20%, at how much per kilogram should he sell the tomatoes.
3mks.

15. Evaluate without using a Mathematical table or a calculator.

$Log_6\ 216 + [Log\ 42 - Log\ 6] \div Log\ 49$ (2mks

16. Given that the ratio $x : y = 2 : 3$, find the ratio $(5x - 2y) : (x + y)$ (3 mk)

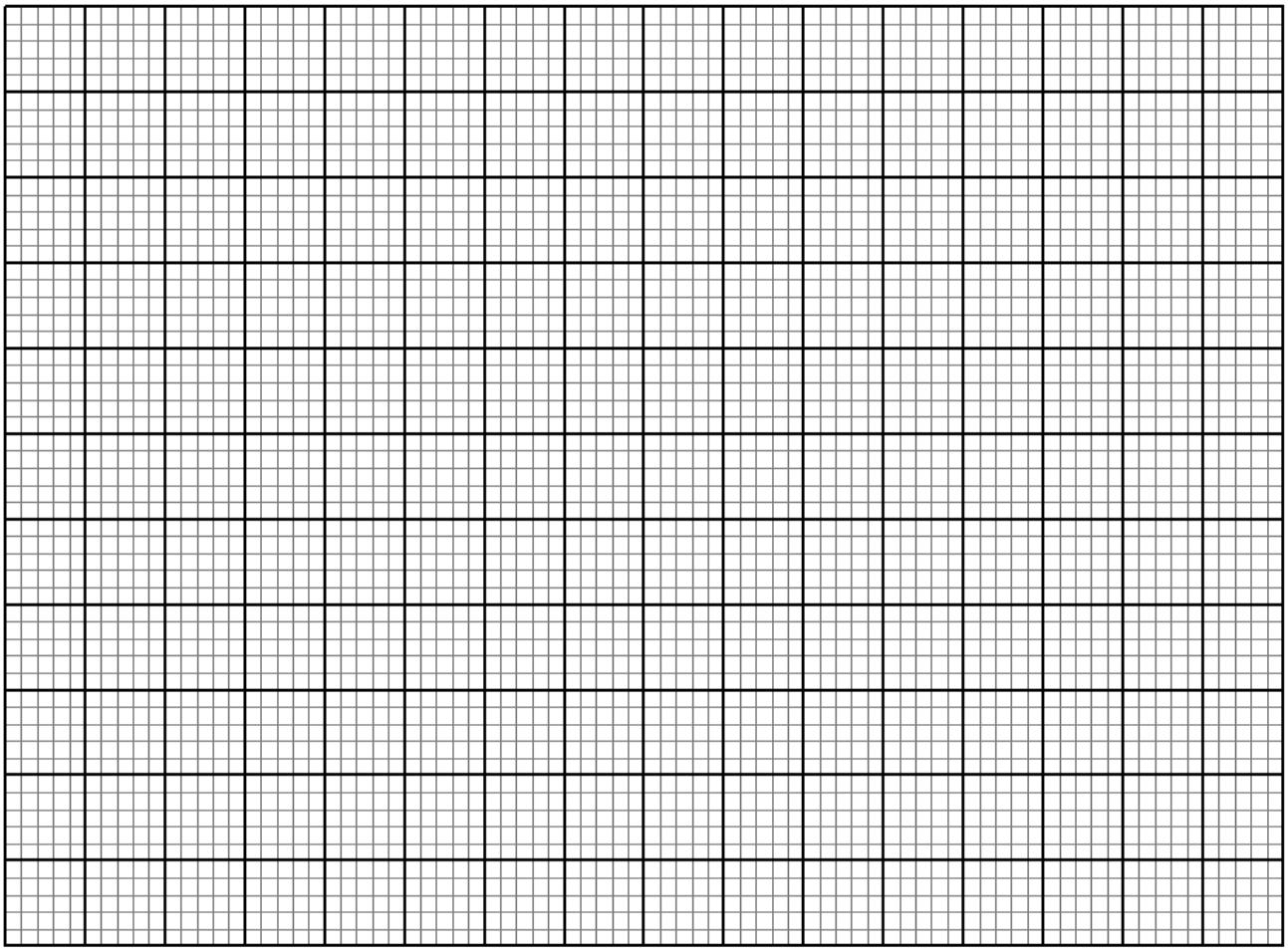
SECTION II (50mks)

Answer only *five* questions in this section in the spaces provide

17. Draw the graph of $y = x^3 + 2x^2 - 5x - 8$ for values of x in the range $-4 \leq x \leq 3$ 5mks

x	-4	-3	-2	-1	0	1	2	3
x^3	-64							27
$2x^2$								
$-5x$								
-8								
y	-20							

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(a) By drawing suitable straight line on the same axis, solve the equations.

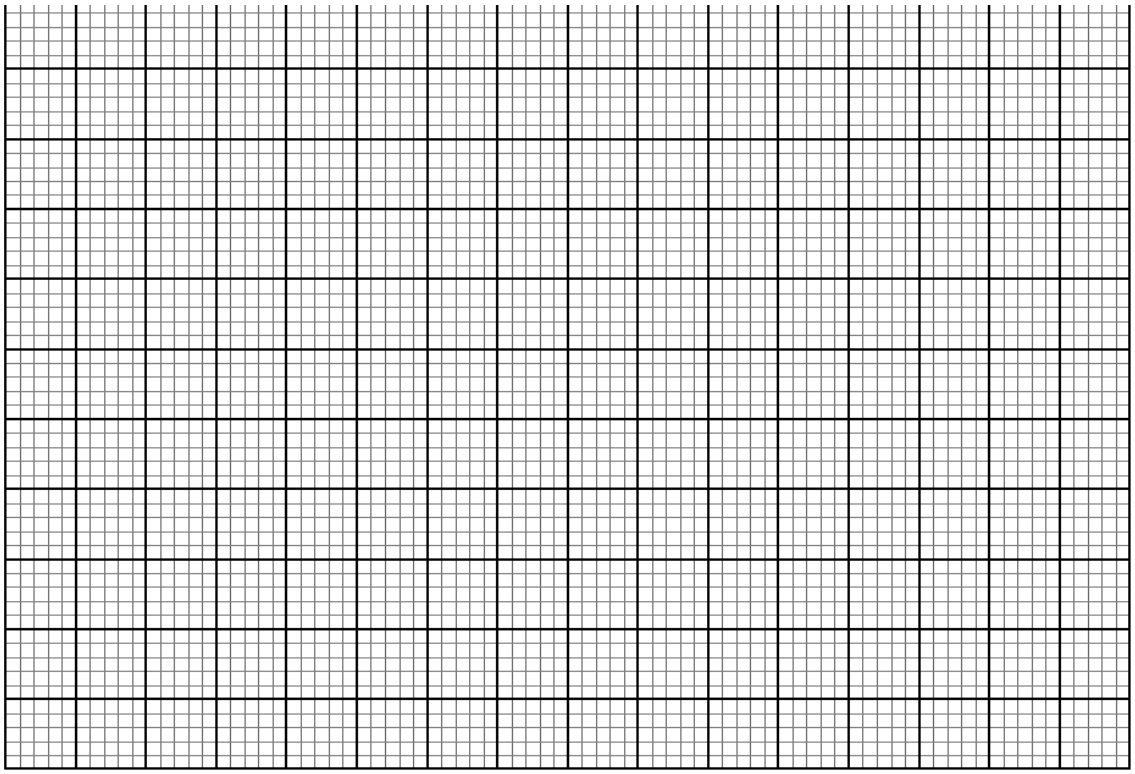
i) $x^3 + 2x^2 - 5x - 8 = 0$ 1mks

ii) $x^3 + 2x^2 - 5x - 7 = 0$ 2mks

iii) $3 + 3x - 2x^2 - x^3 = 0$ 2mks

18. A transformation represented by the matrix $\begin{pmatrix} 2 & 1 \\ 1 & -2 \end{pmatrix}$ maps the points A(0, 0), B(2, 0), C(2, 3) and D(0, 3) of the quad ABCD onto $A^1B^1C^1D^1$ respectively.

a) Draw the quadrilateral ABCD and its image $A^1B^1C^1D^1$. (3mks)

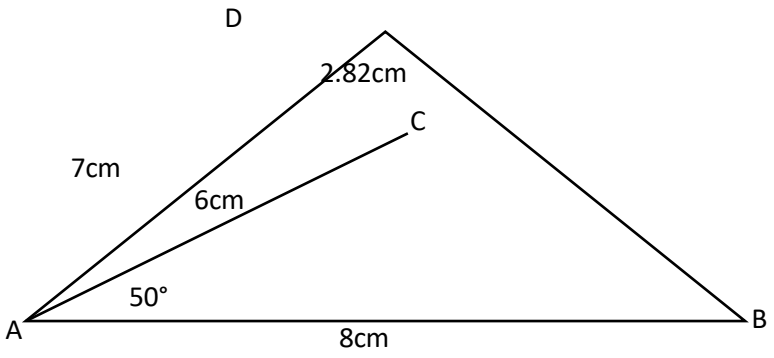


b) Hence or otherwise determine the area of $A^1B^1C^1D^1$. (2mks)

c) Another transformation $\begin{pmatrix} 0 & -1 \\ -1 & 0 \end{pmatrix}$ maps $A^1B^1C^1D^1$ onto $A^{11}B^{11}C^{11}D^{11}$.
Draw the image $A^{11}B^{11}C^{11}D^{11}$. (2mks)

d) Determine the single matrix which maps $A^{11}B^{11}C^{11}D^{11}$ back to ABCD. (3mks)

19. In the figure **below** (not drawn to scale) AB = 8cm, AC = 6cm, AD = 7cm, CD = 2.82cm and
angle CAB = 50°.



Calculate (to 2d.p.)
(a) the length BC. (3 marks)

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(b) the size of angle ABC. (3 marks)

(c) size of angle CAD. (3 marks)

(d) Calculate the area of triangle ACD. (2 marks)

20. Three variables P, Q and R are such that P varies directly as Q and inversely as the square of R.

a) When P = 18, Q = 24 and R = 4.
Find P when Q = 30 and R = 10. (3mks)

(b) Express P in terms of Q and R. (1mk)

(c) If Q is increased by 20% and R is decreased by 10% find:

(i) A simplified expression for the change in P in terms of Q and R. (3mks)

(ii) The percentage change in P. (3mks)

21. A surveyor recorded the following information in his field book after taking measurement in metres of a plot.

	To E	
	1000	
	880	320 to D
720 to F	640	
	480	600 to C
240 to G	400	
	200	400 to B
	From A	

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(a) Sketch the layout of the plot. 4 mks.

(b) Calculate the area of the plot in hectares. 6mks

22. A line L passes through points (-2, 3) and (-1,6) and is perpendicular to a line P at (-1,6).

a) Find the equation of L. (2 mks)

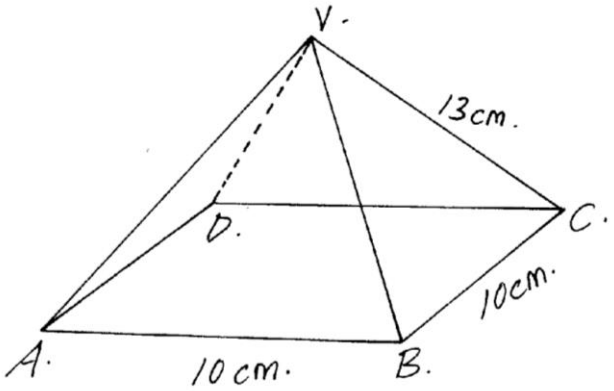
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b) Find the equation of P in the form ax + by = c, where a, b and c are constant.
(2 mks)

c) Given that another line Q is parallel to L and passes through point (1,2) find the x and y intercepts of Q.
(3 mks)

d) Find the point of intersection of lines P and Q.
(3 mks)

23. The figure below shows a square ABCD point V is vertically above middle of the base ABCD. AB = 10cm and VC = 13cm.



Find;

(a) the length of diagonal AC (2mks)

(b) the height of the pyramid (2mks)

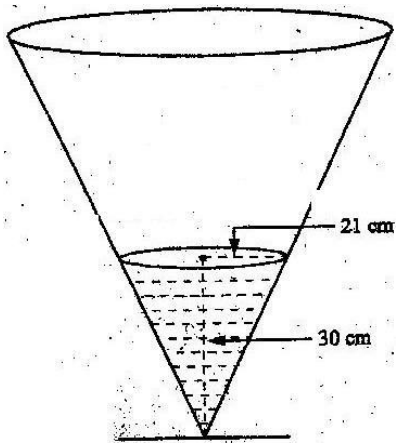
(c) the acute angle between VB and base ABCD. (2mks)

d) the acute angle between BVA and ABCD. (2mks)

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e) the angle between AVB and DVC. (2mks)

24. The diagram below represents a conical vessel which stands vertically. The which stands vertically,. The vessels contains water to a depth of 30cm. The radius of the surface in the vessel is 21cm. (Take π=22/7).



a) Calculate the volume of the water in the vessels in cm^3 3mks

b) When a metal sphere is completely submerged in the water, the level of the water in the vessels rises by 6cm.
Calculate:
(i) The radius of the new water surface in the vessel; (2mks)

(ii) The volume of the metal sphere in cm^3 (3mks)

(iii) The radius of the sphere. (3mks)

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232/1
PHYSICS
FORM IV
PAPER I
TIME: 2 HOURS

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PRE-MOCK 4 EXAMS

INSTRUCTIONS TO STUDENTS

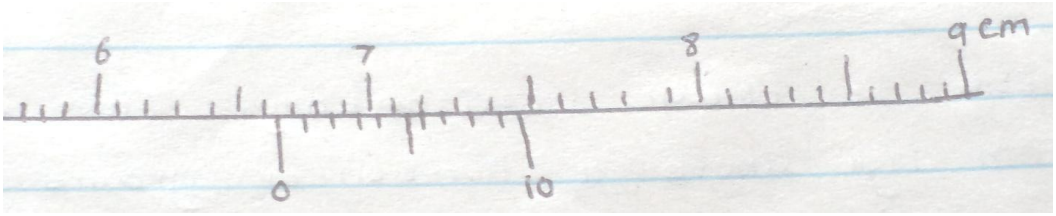
- *Write your name and index number in the spaces provided above*
- *Sign and write the date of the examination in the spaces provided*
- *Attempt **ALL** questions in sections A and B.*
- *All your answers must be written in the spaces provided in this question paper.*
- *All working must be clearly shown*
- *Non programmable silent electronic calculators and KNEC mathematics table may be used except where stated otherwise*

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Section	Maximum Score	Candidates' Score
A	45	
B	55	
	100	

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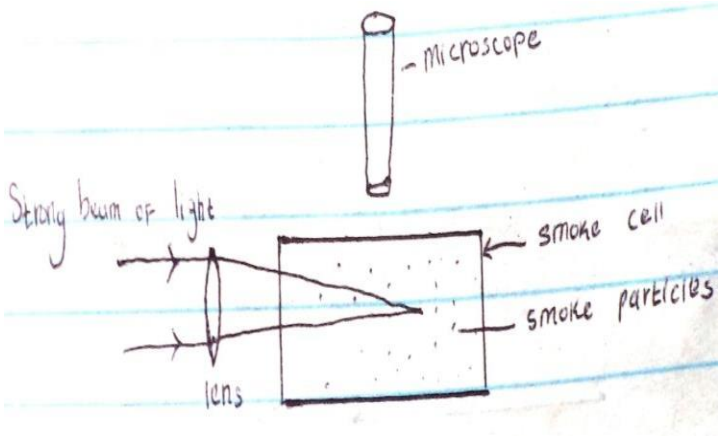
1. What is the reading of the vernier eallipers shown in the diagram below if it has a positive error of 0.02cm? (3mks)



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2. The figure below shows apparatus used to observe behavior of smoke particles in a smoke cell.



a) State a reason why smoke particles are used in the experiment. (1mk)

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b) State the observation made. (1mk)

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c) What would happen if temperature was lowered? (1mk)

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3. Explain why fish can survive under water when the surface is already frozen. (1mk)

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4. State one way on which the stability of a can be increased. (1mk)

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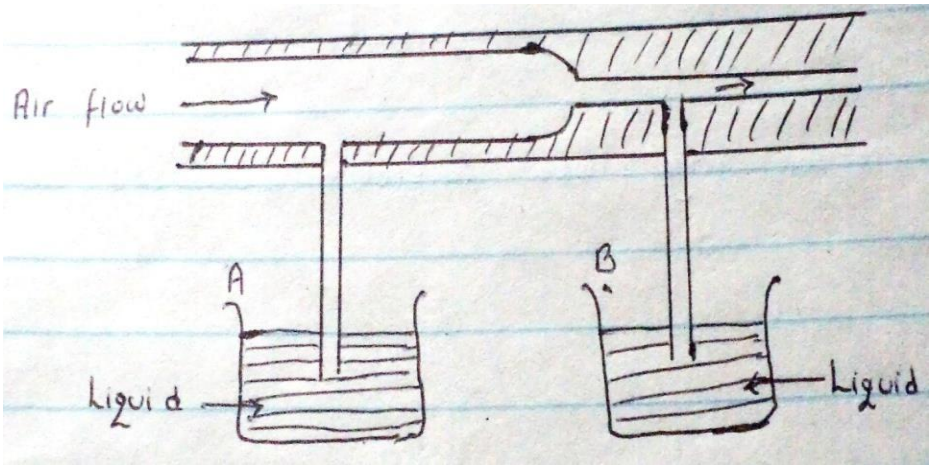
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5. A stone is thrown horizontally from a building that is 50m high above a horizontal ground. The stone hits the ground at a point, which is 65m from the foot of the building. Calculate the initial horizontal velocity of the stone. ($g=10ms^{-2}$) (3mks)

6. The figure below shows air flowing through a pipe of non-uniform cross-sectional area .Two pipes A and B are dipped into liquids as shown below.



a. Indicate the levels of the liquids in pipe A and B. (1mk)

b. Explain your answer in (a) above. (1mk)

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7. When a mercury thermometer is used to measure the temperature of hot water, it is observed that the mercury level first drops before beginning to rise. Explain (2mks)

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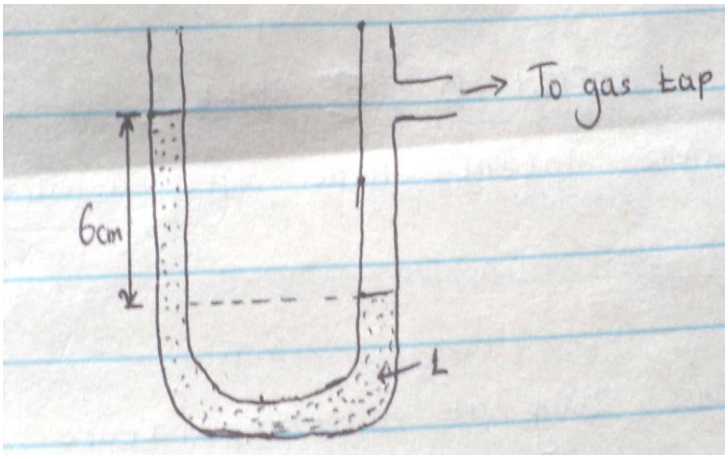
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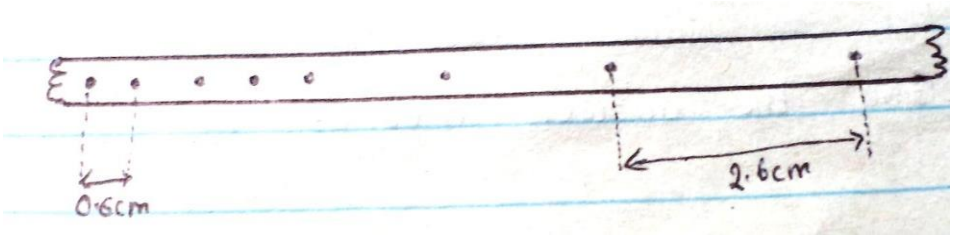
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8. Figure below shows a u-tube manometer containing a liquid L. One end connectected to a gas tap.

Given that the atmosphere pressure is 1.0×10^5pa, determinate the pressure of the gas (density of liquid L is 900kg/m^3, g=10N/kg) (2mks)



9. The figure below represents part of a tape pulled through a ticker-timer by trolley moving down an inclined plane. If the frequency of the ticker-timer is 50Hz, calculate the acceleration of the trolley. (3mks)



10. Explain why a glass container with thick glass walls is more likely to crack than one with a thin wall when a very hot liquid is poured into it. (2mks)

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11. Find the amount of work in stretching a sprig constant 25N/M when its lenghth is increased from 0.1m to 0.2m. (3mks)

SECTION B (55MARKS)

12. A) Define specific latent heat of fusion of a substance. (1mk)

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b) Water of mass 200g at a temperature of 60^0c is put in a well lagged copper calorimeter of mass of 80g. A piece of ice at 0^0 c and mass 20g is placed in the calorimeter and the mixture stirred gently until all the ice melts. The final temperatures, T of the mixture are then measured. Determine:

i) The heat absorbed by melting ice at 0^0c. (2mk)

ii) The heat absorbed by melted ice (water) to rise to temperature. T (Give the answer in terms of T (2mks)

iii) The heat lost by warm water and the calorimeter. (2mks) (Give the answer interms of T)

iii) The heat lost by the calorimeter (2mks) (Give the in terms of T)

IV) The final temperature T of the mixture. (Specific latent heat of fusion of ice=334,000 Jkg^{-} specific heat of water =4200Jkg^{-1}, specific heat capacity of copper =900$Jkg^{-1}k^{-}$) (3mks)

13. A ball bearing x is dropped vertically downwards from the edge of the table and it takes 0.5s to hit the floor below. Another ball bearing Y leaves the odge of the table horizontally with a velocity of 5$ms^{-}1$ find :
    a) The horizontal distance travelled by Y before hitting the floor. (2mks)

b) The vertical distance of the table top above the floor level. (2mks)

c) A bullet mass of 22g travelling horizontal with a velocity of $300ms^{-1}$ strikes a block of wood of mass 1978g which rests on a rough horizontal surface. After impact the bullet and the block move together and come to rest when the block has travelled a distance of 5M. Calculate :

i) The velocity of bullet and wood after impact. (2mk)

ii) The force of friction between wood and surface. (2mks)

(d)A car starts from rest and accelerates uniformly at $2m/s^2$ for 5 seconds before accelerating again at 2.5 m/s^2 for 2 more seconds. The car is then brought to rest in another 2 seconds.

i) Sketch a velocity time graph for this motion. (2mks)

ii) From the graph, calculate the total distance travelled. (2mks)

14. A) State two important factors to be considered when selecting the banking angles of a road.

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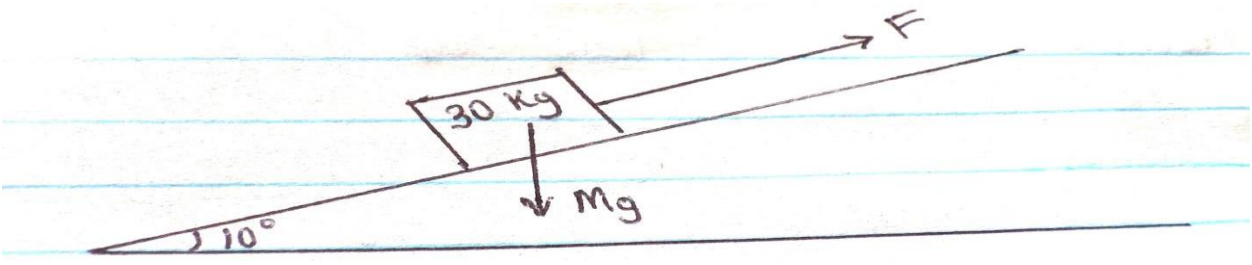
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b) A ball of mass 2kg is whirled at the end of a string in a horizontal circular path at a speed of $5m/s^{-1}$. If the string is 2.0m long find,

i) Angular velocity of the stone? (3mks)

ii. The tension of the string.

15. The figure below shows a block of mass 30.0kg being pulled up a slope by a force F at a constant speed. The friction force on the block is 200 N.



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A) I) on the same figure above name and indicate the other forces acting on the block.(2mks)

II) Determine the force acting on the block down the slopes. (2mks)

iii) Determine the value of F (2mks)

B. On reaching the top of the slopes. The block is left to run freely down the slopes.

i) Which of the force previously acting on the block would then act in the opposite direction?(1mk)

II) Determine the acceleration of the block down the slope. (2mks)

III) What is the effect of increasing the angle of the slopes on your answer in (ii) above? (1mk)

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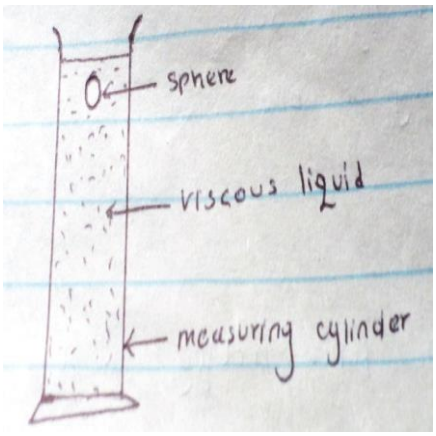
16. A) i) State Newton's second law of motion. (1mk)

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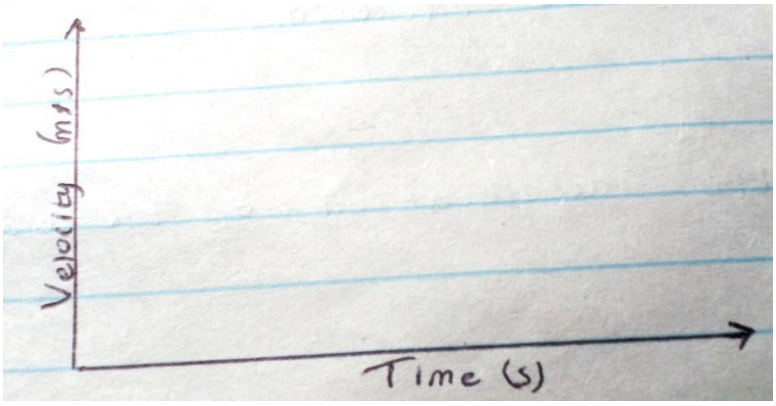
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ii) The figure below shows a sphere moving in a viscous liquid in a tall measuring cylinder.



Show on the diagram the force acting on the sphere. (3mks)

iii) Sketch on the Cartesian plane below a graph of the variation of velocity with time until the ball attains terminal velocity.



b) i. State Boyle's law. (1mk)

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ii. What is the absolute zero temperature? (1mk)

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iii). A bicycle pump with the exit hole closed contains 80cm of air at 760 mmHg pressure and a temperature of 10c. When the air was compressed to 38cm under a pressure of 1700mmHg pressure, its temperature rises. Calculate the rise in temperature. (2mks)

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232/2
PHYSICS
FORM IV
PAPER II
2 HOURS

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INSTRUCTIONS TO STUDENTS

- *Write your name and index number in the spaces provided above*
- *Sign and write the date of the examination in the spaces provided*
- *Attempt **ALL** questions in sections A and B.*
- *All your answers must be written in the spaces provided in this question paper.*
- *All working must be clearly shown*
- *Non programmable silent electronic calculators and KNEC mathematics table may be used except where stated otherwise*

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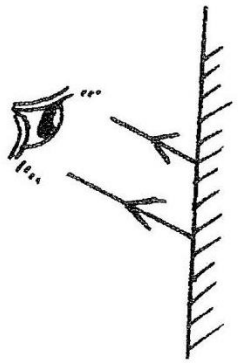
Section	Maximum Score	Candidates' Score
A	50	
B	50	
	100	

SECTION A (50 MARKS)

SECTION A: 25 marks

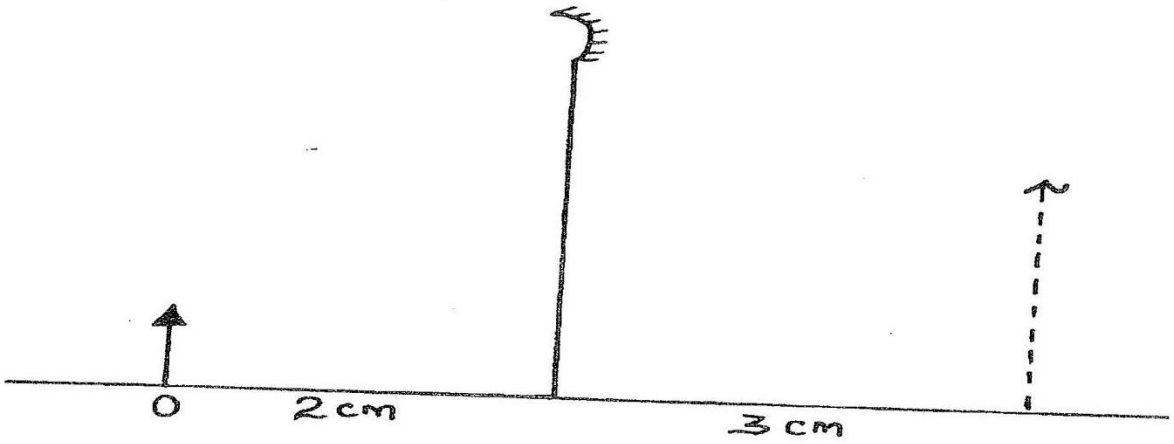
*Answer **all** questions in this section in the spaces provided .*

1. Figure 1 below shows reflected rays from a plane mirror.



By ray construction, show the position of the image and the object. (1 mark)

2. Figure 2 represents an object O and the image I formed by a concave mirror.



By suitable rays, determine the focal length of the mirror. (2 marks)

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3. Two leaders A and B are rated as shown on the table belwo

	Heater A	**Heater B**
Resistance, ohms	RA	RB
Power, watts	W	3W
Voltage, volts	N	¼

Determine the ratio R_A: R_B (3 marks)

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4. **The figure** below shows the path of light through a transparent material placed in air.

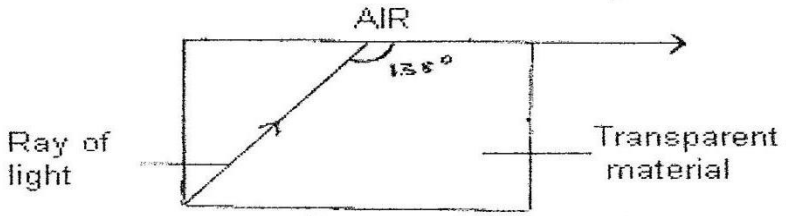


Fig.2

Calculate the refractive index of the transparent material. (3 marks)

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5. **Figure 4** below shows a highly charged needle bought near a candle flame



Fig.4

Explain why the flame burns in the direction shown (2 marks)

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6. Explain with an aid of a diagram why to a diver under water, most of the surface looks slivery. Bubbles of air rising from the diver look slivery. (2 marks)

7. Explain why soft iron keepers are suitable for storing magnets (2 marks)

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8. State **two** quantities that are used to determine whether accumulator require recharging or not.

(2 marks)

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9. Figure shows arrangement of three capacities of 10μF, 2μF and 5μF.

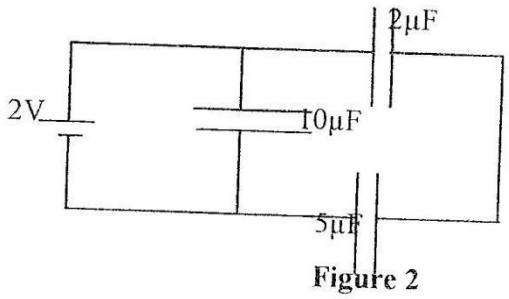


Figure 2

Figure 1

Determine the effective capacitance. (3 marks)

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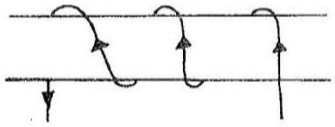
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10. Sketch the magnetic field for a conductor shown in the figure below. (2 marks)



11. In a pin – hole camera, what is the effect of making the pin – hole small but square in shape?

(1 mark)

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12. An electric heater is rated 3KW what is the electrical energy in kWh (Kilo watt-hours) consumed by the heater when used on a 240V supply for 180 minutes? (1 mark)

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13. Briefly explain why in domestic wiring all the lamps in the house are connected in parallel

(1 mark)

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SECTION B: 55 marks

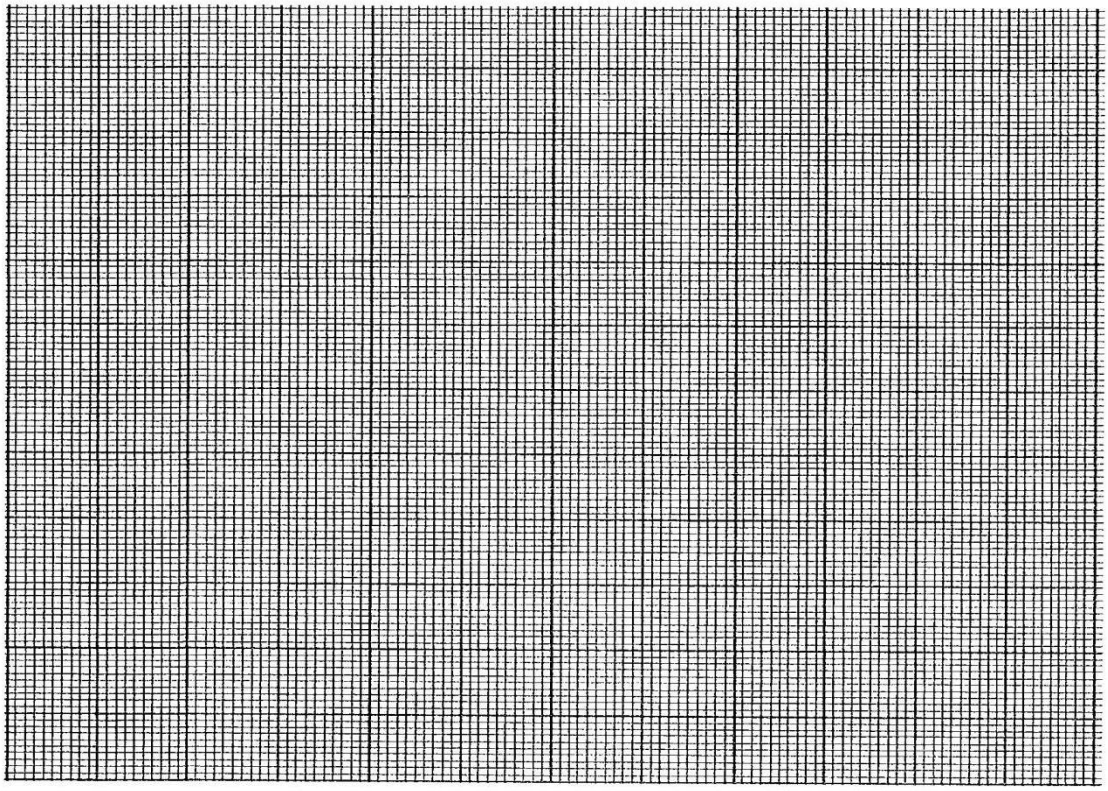
*Answer **all** questions in this section.*

14. (a) In an experiment with capacitor the charge stored was measured for different values of charging potential difference and the following results were obtained.

Charge stored (uc)	7.5	30	60	75	90
Potential difference (v)	1.0	4.0	8.0	10.0	12.0

(i) Plot a graph of charge stored (y-axis) against potential difference on the grid provided.

(4 marks)



(ii) Use the graph to determine the capacitance of the capacitor. (2 marks)

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(b) Resistors of 2Ω and 3Ω are connected in series with a cell and voltmeter connected across the 3Ω resistor reads 1V, but this increases to 1.2V when an extra 2Ω resistor is connected in parallel with the first 2Ω resistor, calculate the e.m.f and the internal resistance of the cell.

(4 marks)

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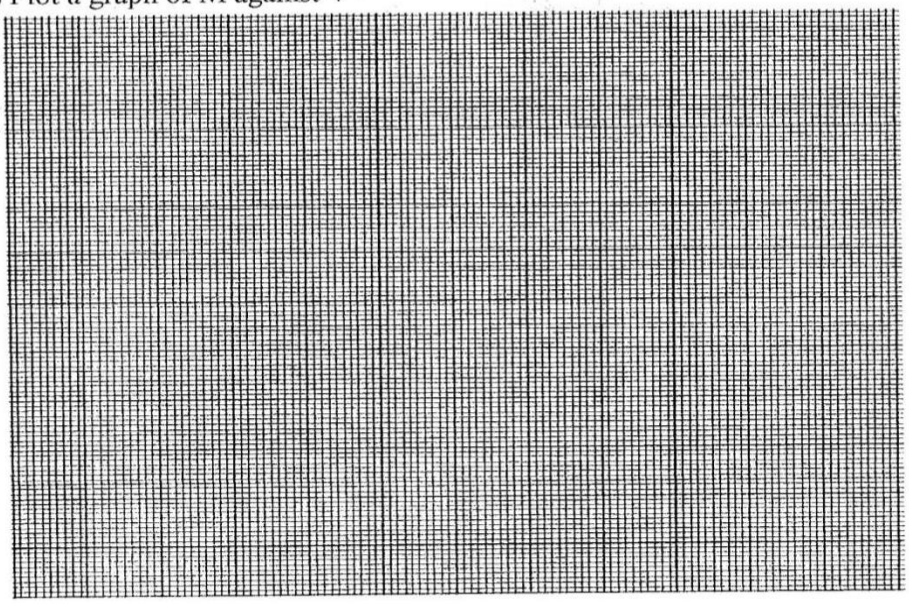
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15. (i) The following data was collected to find the focal length of a convex lens.

Image distance, v	13.3	15.0	16.7	20.0	30.0
Magnification, M	0.3	0.5	0.7	1.0	2.0

(a) Plot a graph of M against V (5marks)



(b) Use your graph to find the focal length of the lens (3 marks)

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(c) Find the power of the lens (2 m arks)

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(d) State 4 similarities between the eye and the lens camera (4 marks)

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(e) What is long sightedness? (1 mark)

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16. State **two** differences between sound waves and electromagnetic waves (2 marks)

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(b) **Figure** below shows a waveform of a wave moving at velocity of 2m/s.

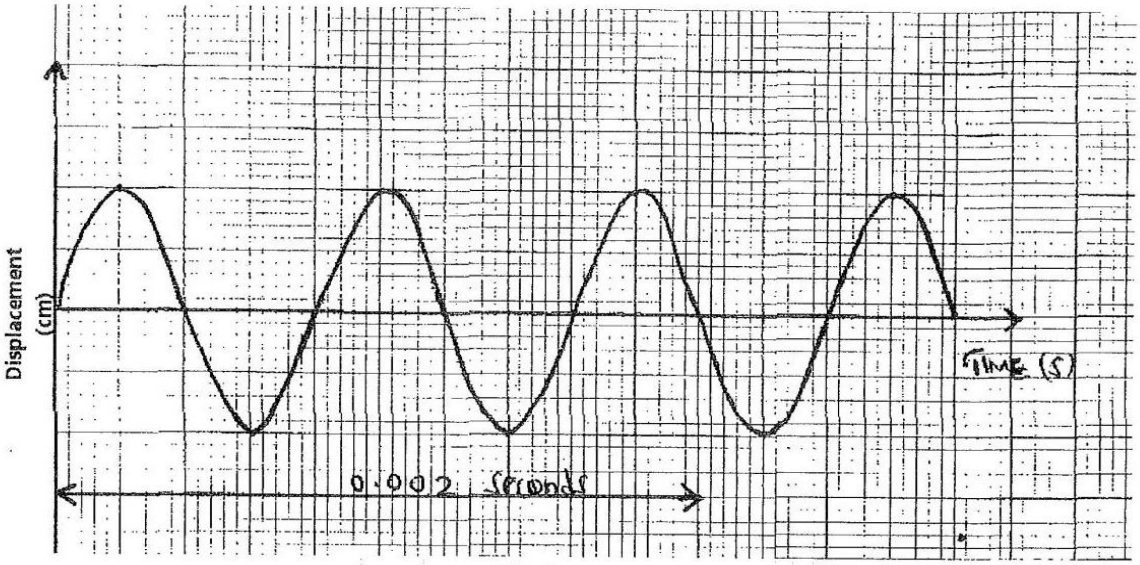


Fig.8

Determine:

(i) The periodic time (T) (2 marks)

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(ii) The wavelength (λ) (3 marks)

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(c) A fathometer produces sound in a ship and receives two echo's where there is a raised sea bed one after 2.5 seconds and the other after 3.0 seconds. Find the height of the raised sea bank if the velocity of sound in water is 1460m/s. (3 marks)

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17. A 10 μf capacitor is charged to a potential difference of 300V and isolated. It is then connected in parallel to a 5 μF capacitor. Find the resultant potential difference. (3 marks)

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(b) The energy stored before connection. (3 marks)

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(c) The energy in the **two** capacitors after connection. (3 marks)

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18. (A) State any one properties of magnetic flux lines. (1 mark)

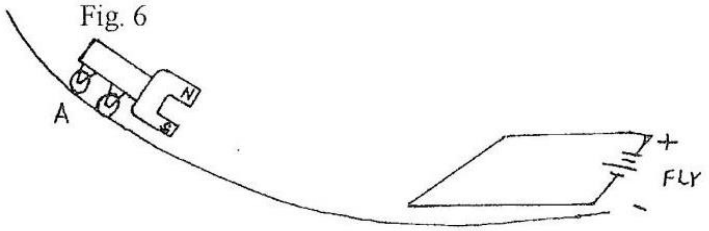
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(b) A model railway truck has a magnet attached to it as shown in fig 6 below, not to scale. It is free to run on rails from a higher level A to a lower level B. At B, a thick loop of copper wire is placed horizontally across the track so that the magnet straddles the wire when the truck is at B. A large electric current passes through the wire, which is connected to a battery.
The truck is released from A and it rebounds without physical contact when reaching B.

Fig. 6



(i) Explain why the truck rebounds in this manner. (2 marks)

B

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(ii) Describe its subsequent motion. (2 marks)

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(i) What would be the effect of increasing the current through the wire, Explain (2 marks)

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(ii) What would be the effect of increasing the load in the truck ? Explain (2 marks)

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(v) What would be the effect of reversing the holes of the magnet? Explain. (2 marks)

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NAME ……

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AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 4 EXAMS

Kenya Certificate of Secondary Education

PHYSICS
PAPER 3
PRACTICAL
TIME: 2 ½HOURS

INSTRUCTIONS TO CANDIDATES

- Write **your name** and **index number** in the spaces provided
- Answer **ALL** the questions in the spaces provided in the question paper.
- You are supposed to spend the first 15 minutes of the 2 $^{1}/_{2}$ hours allowed for this paper reading the whole paper carefully before commencing your work.
- Marks are given for clear record of observations made, their suitability, accuracy and the use made of them.
- Candidates are advised to record their observations as soon as they are made.
- **Non-programmable** silent electronic calculators and KNEC mathematical table may be used.
- This paper consists of 7 printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1	**24**	
2	**16**	
TOTAL	**40**	

QUESTION 1 (PART A)

You are provided with the following apparatus:

- A rectangular glass block.
- Four optical pins.
- A soft board.
- A protractor.
- 30cm ruler.
- 2 white plain papers.
- A plane mirror.
- A vernier calipers (to be shared)

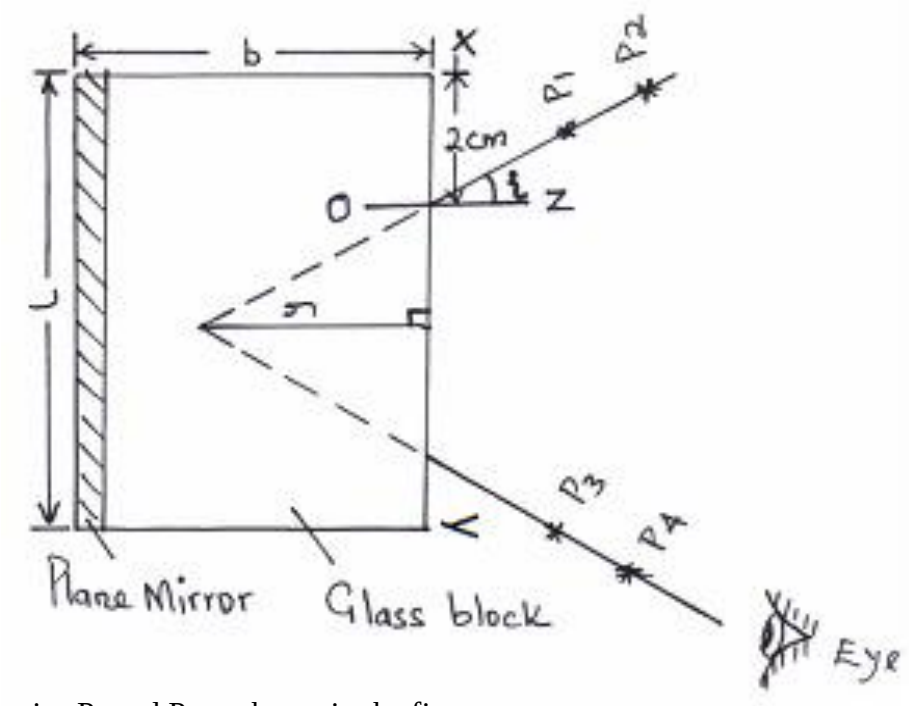
PROCEDURE

(a) Trace the outline of the glass block on the white paper.

(b) Draw a normal ON, 2cm from point X on side XY.

(c) Measure an angle (i) 10º from the normal.

(d) Place back the glass block on the outline and fix a plane mirror vertically along the length of the glass block on the opposite side of XY using a cello tape as shown in the figure below.



(e) Fix two pins P_1 and P_2 as shown in the figure.

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(f) By observing image of P_1 and P_2, locate two pins P_3 and P_4 such that they appear to be in line with images of P_1 and P_2.

(g) Remove the pins and the block. Join P_3P_4 and produce the line to meet line P_1P_2 produced

(h) Measure the perpendicular distance y.

(i) Repeat the same for angles of 15º, 20º, 25º, 30º, 35º and 40º and record the results in table 2 below.

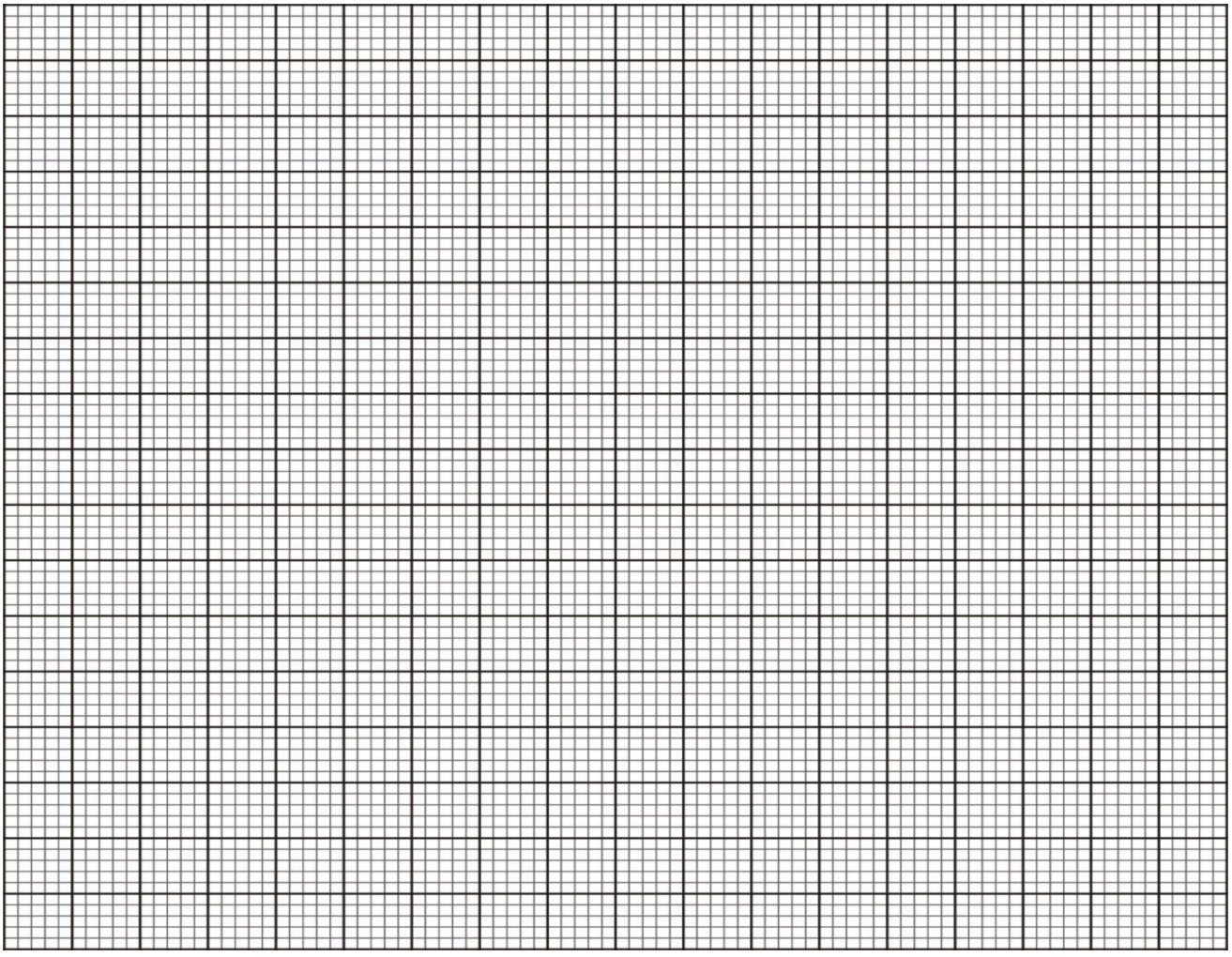
(<u>NB</u>: The paper work must be submitted together with the question paper).

Table 2

Angle i	10º	15º	20º	25º	30º	35º	40º
y(cm)							

(7marks)

(j) Plot a graph of y(cm) against angle i. (5marks)



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i) Use the graph to determine y_o the value of y when i = 0^o

y_o = …… cm (1mark)

ii) Measure and record the breadth (b) of the glass block

b = ……. Cm (1mark)

(ii) Determine the value of η given that

$$\eta = \frac{b}{y_O}$$ (2marks)

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PART B

You are provided with the following:-

- A boiling tube.
- Some dry sand.
- A liquid in a measuring cylinder labelled L.
- Half metre rule.
- A vernier calipers (to be shared).
- A weighing machine (to be shared).
- Tissue paper.
- A measuring cylinder.

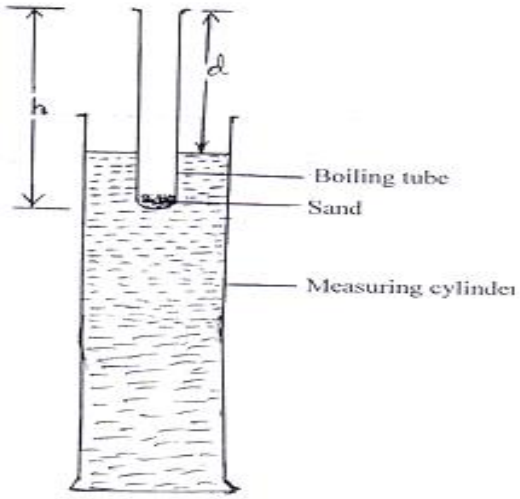
Proceed as follows:

a) Measure the length of the boiling tube.

h = ……. cm (1mark)

b) Put a little amount of sand in the boiling tube and place it in the measuring cylinder which is almost filled with liquid L. Add sand, little by little until the tube floats upright as shown in figure below.

Fig.1



Measure the length, d, of the boiling tube which is above the liquid using half metre rule

d = …… cm (1mark)

c).Determine the length, t, of the boiling tube which is immersed in the liquid using half metre rule

t = …….. cm (1mark)

d) Remove the boiling tube from the measuring cylinder, wipe it dry (on the outside) and measure its mass, m, including the sand inside.

m = …….. g (1mark)

e) Measure the external diameter, D, of the boiling tube.

D = …….. cm (1mark)

f) Determine the external radius, R.

R = …… cm (1mark)

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g) Using the formula $m = 12\rho\pi R^2$, determine ρ for the liquid. (2marks)

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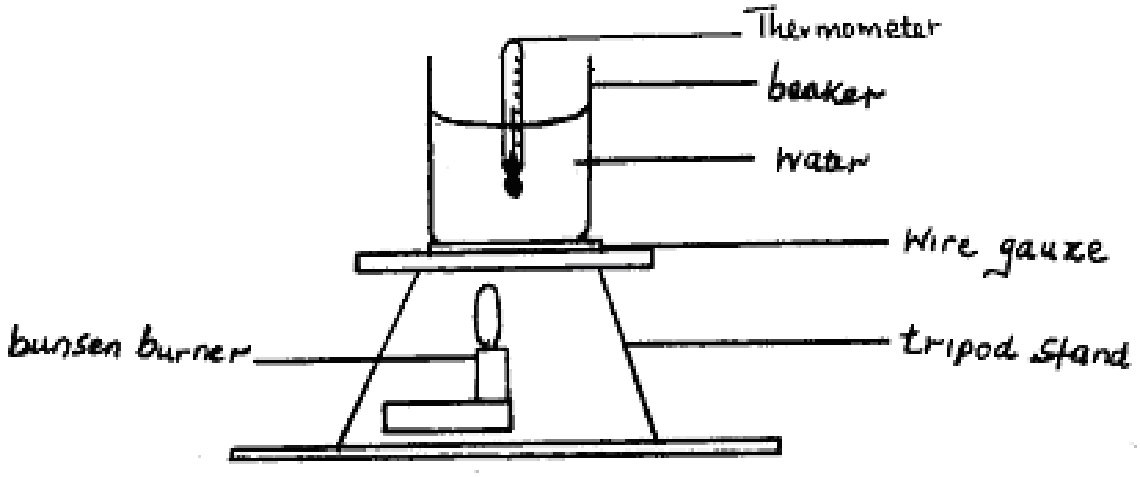
Question 2

You are provided with the following:-

- A 250ml glass beaker.
- A Bunsen burner.
- A thermometer.
- A stopwatch.
- A Tripod stand and a wire qauze.
- A measuring cylinder 100ml.
- Water.

Procedure

Set the apparatus as shown in figure below.



(a) Measure $100cm^3$ of water and pour it into the beaker. Take the initial temperature of the water.

T_o =…… ^oC. (1mark)

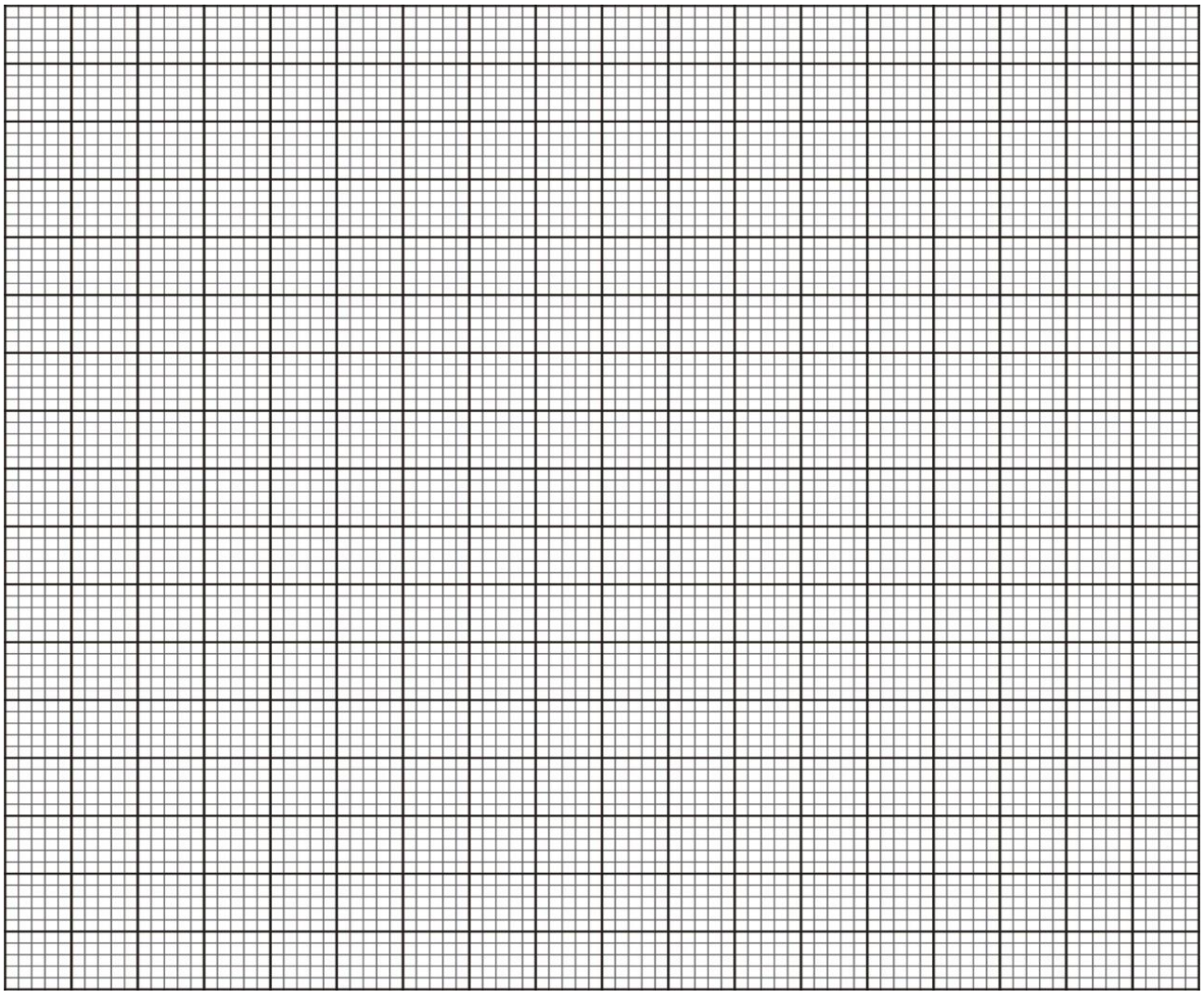
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Now heat the water to a temperature of 75ºC. Switch off the gas tap and place a thermometer into the beaker and start the stopwatch when the temperature is 65ºC. Take the temperature TºC of water every two minutes. Record your results in the table 3 below. (7marks)

Table 3

Time, t(minutes)	2	4	6	8	10	12	14
Temperature, T(ºC)							
$(T - T_o)$ (ºC)							
Log $(T - T_o)$							

(b) Plot a graph of Log $(T - T_o)$ against Time (t). (4marks)



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(c) From the graph find the value of Q given that $Q = \log (T - T_o)$ when $t = 0$. (1mark)

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(d) Determine P, where P is the antilog of Q. (1mark)

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(e) Calculate the temperature of the surrounding T_S using expression $P = 65 - T_S$. (2marks)

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