KAPSABET HIGH SCHOOL

TRIAL 2 2024

231/1

BIOLOGY

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME…… SIGN……

INDEX NO…… ADM NO……

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(Kenya Certificate of Secondary Education)

IN ST R UC T IO NS TO T HE CA NDID AT E S

- *Write your name and admission number in the spaces provided above*
- *Write the name of your school and the date of examination in the spaces provided above*
- *Answer **ALL** the questions in the spaces provided.*
- *Answers must be written in the spaces provided in the question paper.*
- *Additional papers must not be inserted.*
- ***Candidates should answer the questions in English.***

FOREXAMINER'SUSEONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-31	80	

*Answer**AL L** thequestionsinthespacesprovided.*

1. Two students were observing bacteria using identical microscopes and identical slides. Student A saw 10 bacteria and student B saw 50 bacteria.

a) Suggest a reason why they observed different number of bacteria. **(1 mark)**

.....

.....

b) Which of the following combination would give a wider field of view, eye piece X10 and objective lens X20 or eye piece X10 and objective lens X40? **(1 mark)**

.....

.....

.....

2. The diagram below represents a cell organelle.

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i) Identify the organelle **(1 mark)**

.....

ii) State the function of the organelle **(1 mark)**

.....

3. A plastic bottle full of water was stoppered using a piece of stem obtained from a young herbaceous plant whose epidermis had been peeled off. After 24 hours, it was noted that the stopper closed the container tightly.

a) Why was the epidermis peeled? **(1 mark)**

.....

.....

b) Account for the observation made **(2 marks)**

.....

.....

.....

4. Give the roles of the following in the alimentary canal:

a) Hydrochloric acid in the stomach **(1 mark)**

.....

.....

b) Mucus **(1 mark)**

.....

.....

c) Name the cells that secrete enzyme pepsin and renin in the stomach **(1 mark)**

.....

d) Enzyme enterokinase activates trypsinogen to trypsin. Give the origin of the enzyme **(1 mark)**

.....

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5. Give the roles of the following hormones: **(2 marks)**

i) Secretin

.....

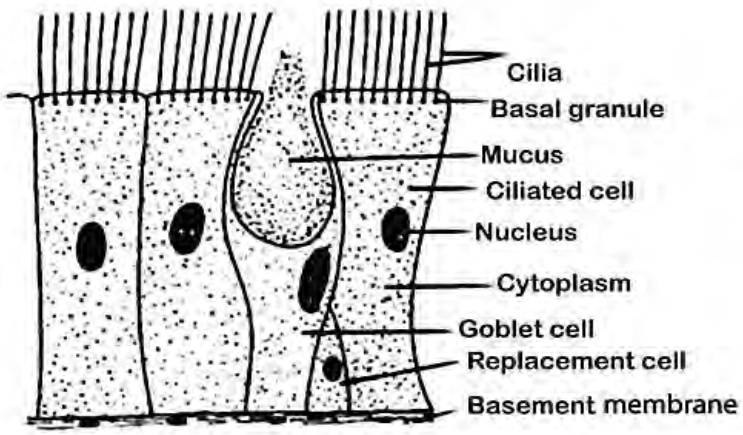
.....

ii) Cholecystokinin

.....

.....

6. The figure below shows some cells that form part of the mammalian respiratory tract.



a) Identify the part of the respiratory tract **(1 mark)**

.....

b) Give the role of the: **(2 marks)**

i) Goblet cell

.....

ii) Cilia

.....

7. Alveoli do not collapse when we breath out. Explain **(1 mark)**

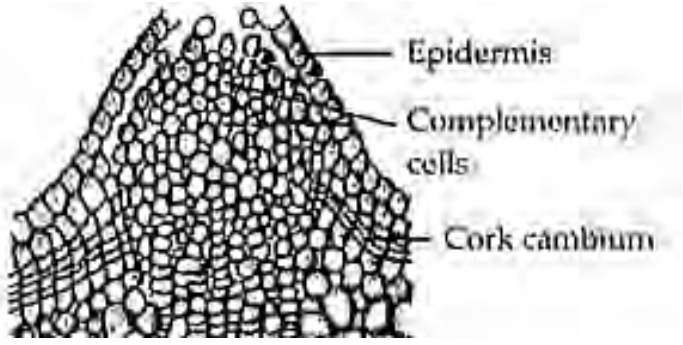
.....

.....

8. Name the site in the human body where parallel flow is operational. **(1 mark)**

.....

9. The diagram below shows the structure of gaseous exchange in a woody plant



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i) Identify the gas that diffuse **(2 marks)**

In _____

Out _____

ii) Give two adaptations of the structure **(2 marks)**

.....

.....

.....

10. Explain how sunken stomata affect the rate of transpiration. **(2 marks)**

.....

.....

.....

11. Give two adaptations of the liver to its functions **(2 marks)**

.....

.....

.....

b) Explain why insulin is not administered orally. **(1 mark)**

.....

.....

12. Give the role of the following hormones in reproduction: **(3 marks)**

a) Prolactin

.....

.....

b) Oxytocin

.....

.....

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c) Relaxin

.....

.....

13. What is blood transfusion? **(1 mark)**

.....

.....

b) state one factor to consider during blood transfusion **(1 mark)**

.....

14. Give reasons for the following:

i) Donated blood should be discarded after 21 days **(1 mark)**

.....

.....

ii) Upon donation, the blood donor is usually given a drink **(1 mark)**

.....

.....

15. A transfusion of Rh+ blood was given to a patient Rh- blood. After a week, a similar transfusion was given to the same patient. What is likely to be the effect of the second transfusion? **(2 marks)**

.....

.....

.....

16. Name the form in which:

i) Carbon (IV) oxide is transported in blood. **(1 mark)**

.....

ii) Give the role of the enzyme found in the red blood cells **(1 mark)**

.....

.....

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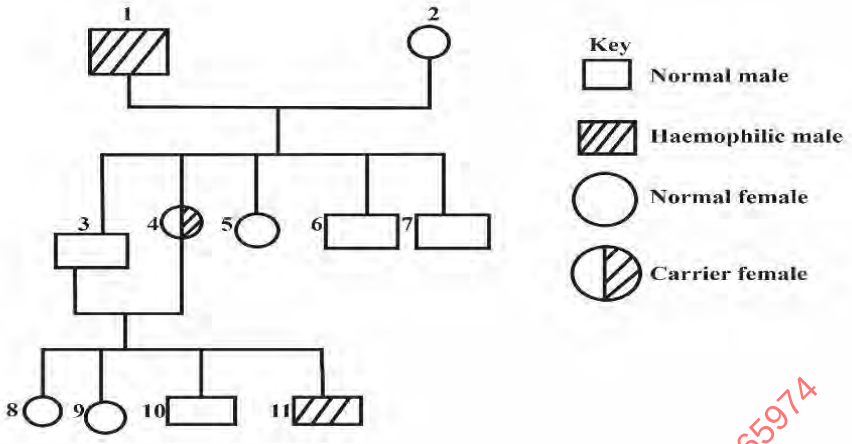
17. Haemophilia is a sex-linked condition. The following pedigree shows a portion of a family in which members are haemophiliac. Use H to represent the gene for haemophilia and h to represent the gene for non-haemophilia.



a) Identify the genotypes of the parents:

1 _____ **2** _____ **(2 marks)**

b) What is the genotype of the offspring 4 **(1 mark)**

.....

c) Explain the prevalence of haemophilia in males compared to females **(2 marks)**

.....

.....

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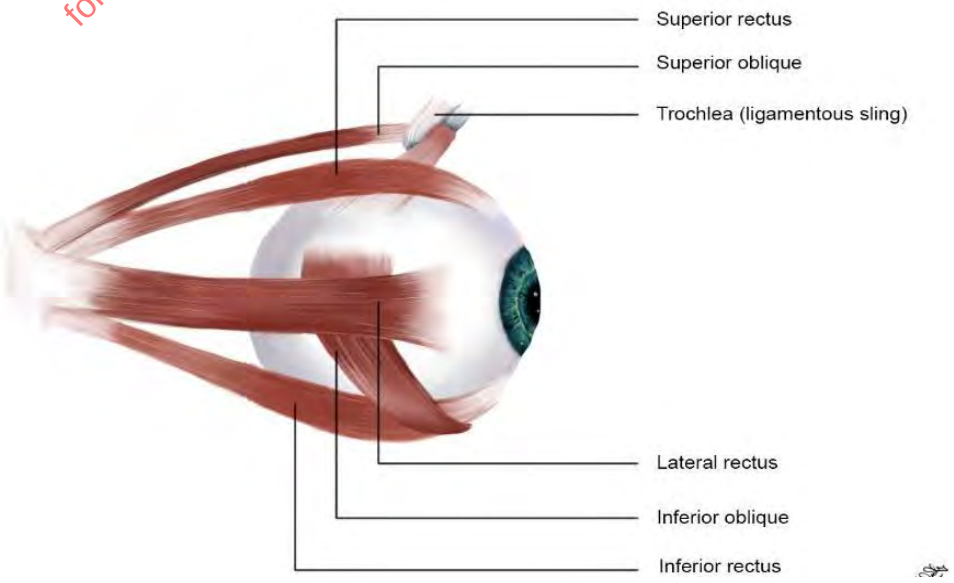
18. The diagram below represents the mammalian eye.



a) Give the role of the muscles: **(3 marks)**

i) Superior and inferior rectus muscles

.....

.....

ii) Lateral rectus muscles

.....

.....

iii) Oblique muscles

.....

.....

b) What is accommodation of the eye? **(1 mark)**

.....

.....

c) Describe accommodation of close objects **(3 marks)**

.....

.....

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19. Give one difference between aerobic and anaerobic respiration **(1 mark)**

.....

.....

b) Give two importance of respiratory quotient **(2 marks)**

.....

.....

.....

20. Explain why there is increased heartbeat during vigorous exercise in man. **(1 mark)**

……

……

21. What is eutrophication? **(1 mark)**

……

……

b) Give two effects of eutrophication. **(2 marks)**

……

……

22.Name the organisms involved in the following processes. **(2 marks)**

i) Nitrification_____

ii) Denitrification _____

23. Give two functions of cerebral spinal fluid **(2 marks)**

……

……

……

24. Which parts of the brain are concerned principally with:

i) controlling body temperature _____ **(1 mark)**

ii) interpreting what is seen _____ **(1 mark)**

25. Name the structure responsible for maintaining posture and balance in the mammalian ear **(1 mark)**

……

26. What is the disadvantage of the eustachian tube? **(1 mark)**

……

……

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27. The diagram below shows the leaves of *Medicago marina* during the day B, and at night A.

a) Name the response_____ **(1 mark)**

b) State the survival value of the response **(2 marks)**

.....

.....

28. Name the cartilage found in between the bones of the vertebral column **(1 mark)**

.....

b) Give two functions of the cartilage named above **(2 marks)**

.....

.....

29. State the type of muscle fiber found in the following regions: **(3 marks)**

a) Stomach _____

b) Aorta _____

c) Left ventricle _____

30. Which part of the flower develops into the following structures after fertilization: **(2 marks)**

a) Seed coat _____

b) Fruit _____

31. What is a reflex arc? **(1 mark)**

.....

.....

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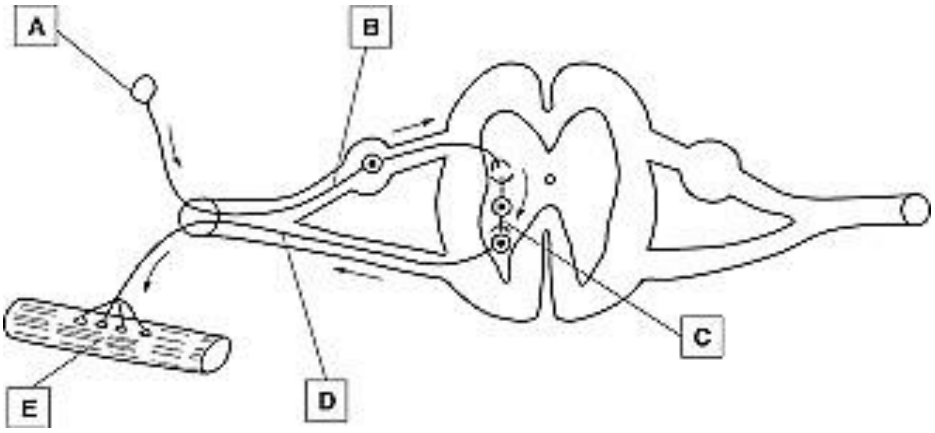
b) The figure below outlines the basic components of a reflex arc in humans



a) Name the type of neurone labeled C **(1 mark)**

.....

b) Name the part of the arc labeled A and E **(2 marks)**

.....

.....

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

231/2

BIOLOGY

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

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INSTRUCTIONSTOCANDIDATES

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

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

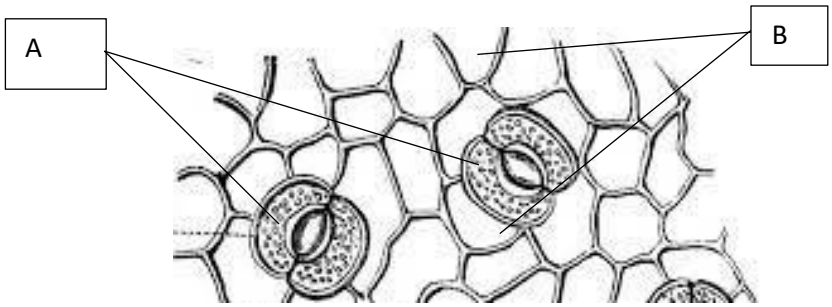
c) *In section **B** answer question **6(compulsory)** and either question 7 or **8** in the spaces provided*

ForExaminer'suseonly

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

SECTIONA(40MARKS)

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



(a) Explain what would happen to the cells labelled a sunny day. **(3marks)**

……

……

……

……

……

(b) State structural differences between cells labelled **A** and **B**. **(3marks)**

……

……

……

……

……

(c) Name the plant hormone that promotes the closure of the stomata. **(1mark)**

……

(d) Name the site where light independent stage occurs. **(1mark)**

……

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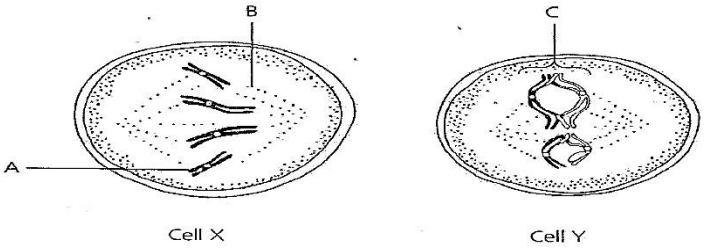
2. The diagram below show two cells, **X** and **Y** from the organism. Study the diagrams and answer the questions that follow.



(a) Name the parts labelled **A**, **B** and **C.** **(3 marks)**

A .....

B .....

C .....

(b)(i) Which cell is dividing by meiosis? **(1 mark)**

.....

(ii) Give **two** reasons for your answer in b ii above. **(2 marks)**

.....

.....

.....

(c) How are frogs adapted to carry out fertilisation? **(2 marks)**

.....

.....

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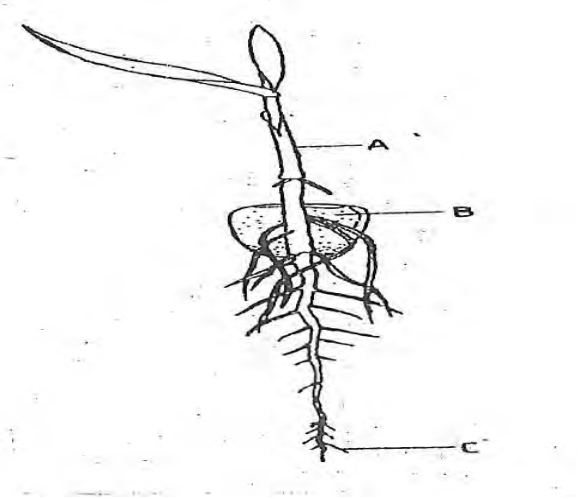
3. The diagram below represents a certain seedling.



(a) Name the parts labelled **A** and **C.** **(2 marks)**

A .....

C .....

(b) State the functions of the parts labelled **A**, **B** and **C**.

A. **(1 mark)**

.....

B. **(2 marks)**

.....

.....

C. **(1mark)**

.....

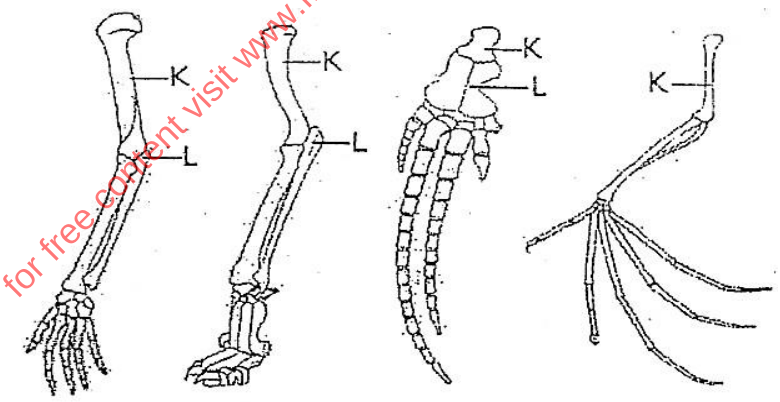
(c) Why is seed dormancy necessary**?** **(2 marks)**

.....

.....

.....

4. Study the diagrams below and answer the questions that follow.



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(a) Explain the type of evolutionary evidence illustrated above**.** **(4 marks)**

.....

.....

.....

.....

.....

.....

(b) Name the parts labelled **K** and **L**. **(2 marks)**

K ……

L ……

(c) Name the joint formed:

(i) At the proximal end of bone **K**. **(1 mark)**

……

(ii) At the distal end of bone **K.** **(1 mark)**

……

5. Afia and Kalisha were carrying out a field activity during Biology lesson. They accidentally injured themselves and they were given First Aid to stop bleeding. Afia stopped bleeding after 10 minutes while Kalisha continued bleeding regardless of further medical attention.

(a)Name the condition that Kalisha was likely suffering from. **(1 mark)**

……

(b) Explain the process that occurred to stop Afia's bleeding. **(3marks)**

……

……

……

……

(c) Kalisha's mother was phenotypically normal for the condition that she was suffering from. Work out a genetic cross between Kalisha's parents **(4marks)**

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SECTION B (40 Marks)

Answer question **6 (Compulsory)** and either question **7** or **8** in the spaces provided after question **8**.

6. An investigation was carried out in a terrestrial ecosystem. The population size and species biomass were determined and recorded as follows.

Species	Population size	Species biomass(tons)
A	1×10^3	1×10^3
B	1×10^3	1×10^{-1}
C	1×10^5	1×10
D	1×10	1×10^4

(a) What is a food chain? **(1 marks)**

……

……

(b) If all the organisms in the table had a feeding relationship, construct a food chain involving all the organisms. **(1 mark)**

……

……

(c) From the food chain, identify the part of the biotic component to which each of the species belongs. **(4 marks)**

A.....

B .....

C .....

D .....

(d) State the effect on the other species if species **C** was removed from the ecosystem **(2 marks)**

A .....

……

B .....

……

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(e) From the data construct in the species below a labelled diagram of:

(i) Pyramid of numbers; **(1 mark)**

(ii) Pyramid of biomass**;** **(1 mark)**

(f) How would you describe the pyramid of numbers? **(3 marks)**

.....

.....

.....

.....

(g) What possible feeding relationship exists for this ecosystem between the species of:

(i) The first and second trophic level; **(1 mark)**

.....

(ii) The second and third trophic level. **(1 mark)**

.....

(h) Explain why water logging of soil may lead to death of plants. **(3 marks)**

.....

.....

.....

.....

(b) State **two** protozoan diseases in man. **(2 marks)**

.....

7. Describe the process of hearing in man. **(20 marks)**

8. (a) Explain how high blood sugar is regulated in the body **(4marks)**

(b) Describe secondary thickening in flowering plants. **(16marks)**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

231/3

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

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Confidentialrequirement:

1. *Specimen **S**- Mango fruit; ripe ones (it is adviced the teacher or technician cut the fruit with a hack-saw to expose the contents in the endocarp.*
2. *Specimen **T**- Bidens pilosa (black jack) fruit*
3. *Substance L – 1 % Starch suspension*
4. *Solution M – 10 % - Diastase enzyme*
5. *Distilled water in a wash bottle*
6. *1 boiling tube*
7. *3 test tubes*
8. *3 labels*
9. *1 visking tubing (10 cm)*
10. *2 pieces of threads*
11. *Iodine solution*
12. *Benedict's solution*
13. *250 ml beaker*
14. *Thermometer*
15. *Means of heating*
16. *Water bath*
17. *Test tube holder*
18. *2 syringes*
19. *10 ml measuring cylinder*

KAPSABET HIGH SCHOOL

TRIAL 2 2024

231/3

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

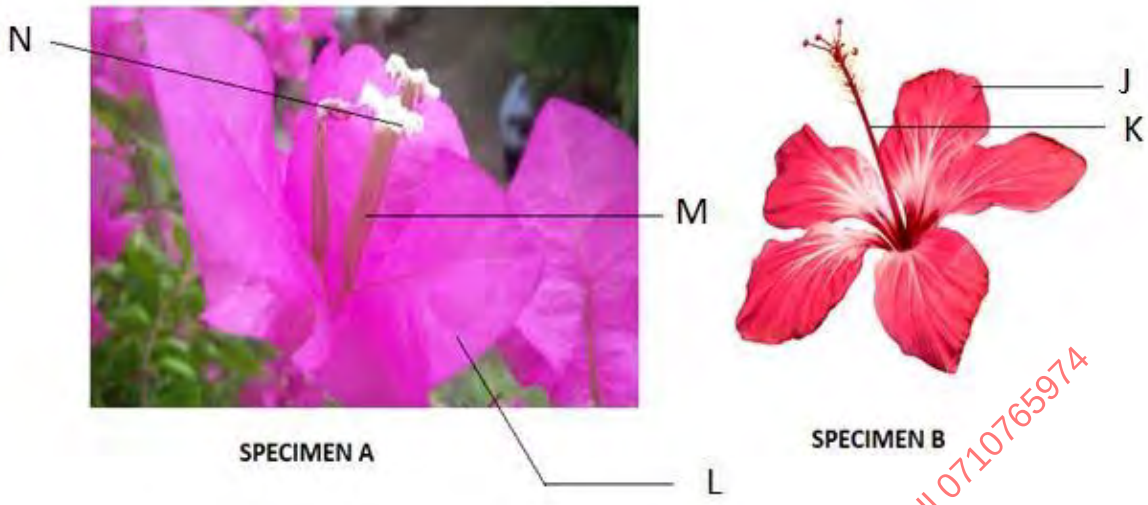
Instructions to Candidates

- *Write your name, class, admission number, school, date and signature in spaces provided above.*
- *Answer **all** questions in the spaces provided below each question.*
- *You are required to take the first 15 minutes of the 1¾ hours allowed for this paper reading through the whole paper before commencing your work.*
- *Additional pages must not be inserted.*
- *Candidates should answer all the questions in English.*

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1	13	
2	14	
3	15	
Total Score	40	

1. You are provided with a photograph of two flowers, **A** and **B**. Observe the photograph carefully to answer the questions that follow.



(a) Identify the parts labelled:

K..... **(1 mark)**

L..... **(1 mark)**

M..... **(1 mark)**

(b) State **two** observable differences between flower **A** and **B**. **(2 marks)**

.....

.....

.....

(c) **i)** Name the agent of pollination in flower **A.** **(1 mark)**

.....

(ii) How is it suited to the agent named in c(i) above? **(1 mark)**

.....

.....

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(d) You are provided with specimen **S** and **T**. Use them to answer the questions that follow.

i) Draw a plan diagram of the cut surface of specimen **S** and label it. **(4 marks)**

ii) With reason, identify the type of fruit **T**:

Identity **(1 mark)**

……

Reason **(1 mark)**

……

……

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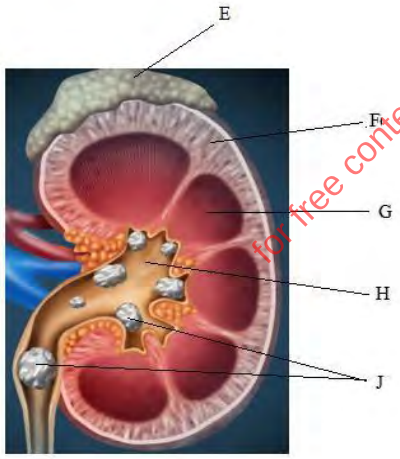
2. The photograph below shows longitudinal section through the kidney of animal **P** and fresh water animal **Q**.



P

Q

Apparatus R

a) Name the parts labelled **F**, **G** and **H**. **(3 marks)**

F……

G……

H……

b) i) Name the nitrogenous waste you would expect organism **P** and **Q** to excrete. **(2 marks)**

P……

Q ……...

ii) Explain your answer for organism **Q** in **(b) (i)** above. **(2 marks)**

……

……

……

……

c) The section of the kidney of organism **P** shows that the organism suffers from a common kidney disease.

i) Name the disease. **(1 mark)**

……

ii) State two control measures for the disease. **(2 marks)**

……

……

d) Explain the role of the part labelled **E** in coordination in animal. **(2 marks)**

……

……

……

e) If the actual size of apparatus **R** is 50 mm, calculate the actual length of organism **Q**. (Show your working). **(2 marks)**

……

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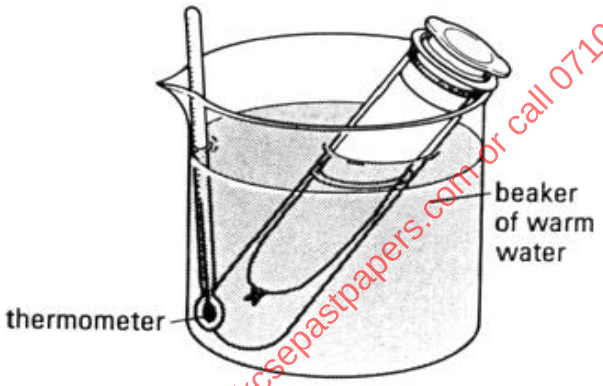
3. You are provided with substance **L**, solution **M**, distilled water, one boiling tube, three test tubes, labels, one visking tubing, pieces of thread, Iodine solution and Benedict's solution.

i) Label the boiling tube **W**. Measure 20 ml of distilled water and put into the boiling tube.

Tie one end of one of the visking tubing with a piece of thread provided. With the help of a syringe, place 3 cm^3 of substance **L** into the visking tubing then add three drops of Iodine solution. Record the observations in the table below. Using another syringe, add 3 cm^3 of solution **M**. Tie the other end of the visking tubing tightly. Ensure there is no leakage on both ends of the visking tubing. Wash the outside of the visking tubing with water. Place the visking tubing upright in boiling tube labelled **W** with the 20 ml of distilled water.



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Set up **K**: visking tubing in water in boiling tube

Immerse the boiling tube in hot water in a beaker maintained at 35 ^0C to 40 ^0C as shown above. Allow the set up to stand in hot water bath for 10 minutes. **<u>Preserve</u> the substance in the boiling tube (outside the visking)**. Record the observations in the table below. **(2 marks)**

Boiling tube	**Observation**	
	After adding Iodine solution	**After 10 minutes in the water bath**
W		

ii) Using the 2 ml of the substance outside the visking tubing test for the food substance using Benedict's solution provided. Record the observations in the table below. **(4 marks)**

Food substance	**Procedure**	**Observations**	**Conclusion**

a. Suggest the identity of:

i) substance **L**. **(1 mark)**

……

ii) substance **M** in human beings. **(1 mark)**

……

b. Name regions in human beings where a similar reaction occurs. **(2 marks)**

……

……

c. Account for the observations made in boiling tube **W** in procedure (i) and (ii) above. **(3 marks)**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

233/1

CHEMISTRY

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

(Kenya Certificate of Secondary Education)

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INSTRUCTIONS TO CANDIDATES

- *Write your name, admission number, class, date and then sign in the spaces provided.*
- *Answer **all** questions in the spaces provided.*
- *KNEC mathematical tables and silent electronic calculators **may** be used for calculations.*
- *All workings **must** be clearly shown where necessary.*

FOR EXAMINERS USE ONLY

Questions	Maximum Score	Students Score
1-28	80	

1. a) Name another gas, which is used together with oxygen in welding. **(1 mark)**

.....

(b). Explain the change in mass that occurs when the following substances are separately heated in open crucibles.

(i) Copper metal. **(1mark)**

.....

.....

(ii) Copper (II) nitrate. **(1mark)**

.....

.....

2. Aluminum metal is a good conductor and is used for overhead cables. State any other two properties that make aluminum suitable for this use. **(2marks)**

.....

.....

3. Give two reasons why helium is used in weather balloons. **(2marks)**

.....

.....

.....

4. Draw two positional isomers of the third member of alkyne series. **(3marks)**

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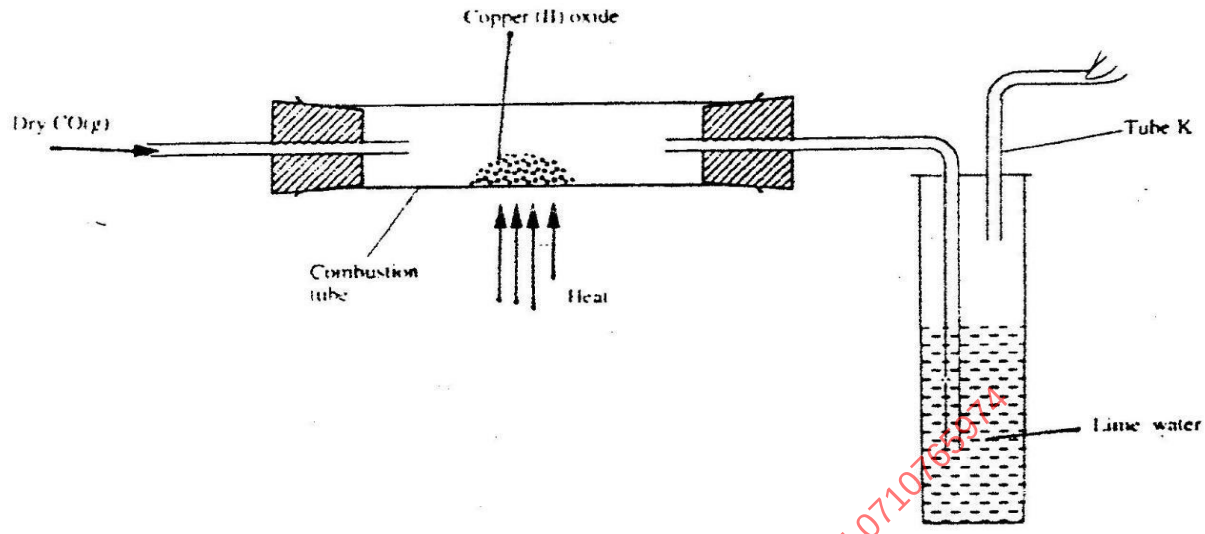
5. The apparatus shown below was used to investigate the effect of carbon (ii) oxide on copper (II) oxide.



a) State the observation that was made in the combustion tube at the end of the experiment.**(1mk)**

……

b) Write an equation for the reaction that took place in the combustion tube **(1mark)**

……

C) Why is it necessary to burn the gas coming out of tube K? **(1mark)**

……

……

6.Give a reason why

(i) Phosphorus is stored under water**.** **(1mark)**

……

……

ii) Chlorine gas is prepared in the fume chamber. **(1mark)**

……

……

iii) Concentrated sulphuric acid is not used to dry ammonia gas**.** **(1mark)**

……

……

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7. A certain matchstick head contains potassium chlorate and Sulphur. On striking, the two substances react to produce Sulphur (iv) oxide and potassium chloride. State the environmental effect of using such matches in large numbers. **(2marks)**

.....

.....

.....

8. When a sample of concentrated sulphuric acid was left in an open beaker in a room for two days, the volume was found to have increased slightly.

a) What property of concentrated sulphuric acid was being investigated. **(1mark)**

.....

b) State one use of concentrated sulphuric acid that depends on the property named above.**(1mark)**

.....

9. The following two tests were carried out on chlorine water contained in two test tubes

a) A piece of colored flower was dropped into the first – tube. Explain why the flower was bleached **(2marks)**

.....

.....

.....

b) The second test- tube was corked and exposed to sunlight after a few days, it was found to contain a gas that rekindled a glowing splint. Write an equation for the reaction which produced the gas. **(1mark)**

.....

.....

10. In the Haber process, the optimum yield of ammonia is obtained when a temperature of 450^0C, a pressure of 200 atmospheres and iron catalysts are used

N_2 (g) + $3H_2$ (g) $\rightleftharpoons$ $2NH_3$ (g); $\Delta H = -92kJ$.

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a) How would the yield of ammonia be affected if the temperature was raised to 600^0C?
Explain. **(2marks)**

……

……

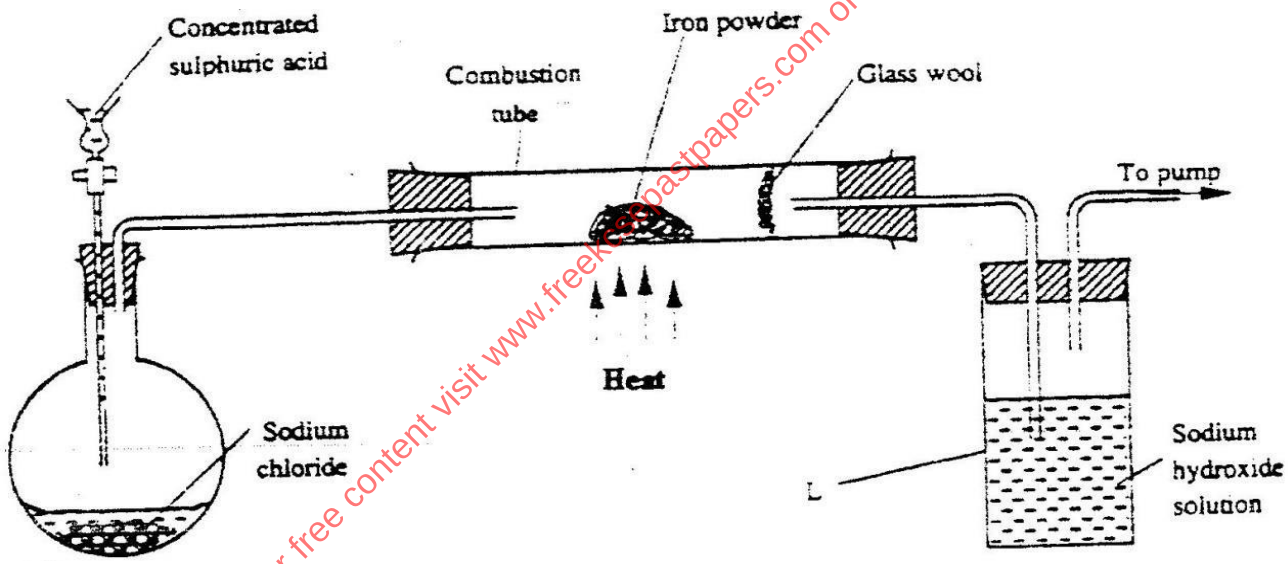
……

b) Give two use of ammonia. **(1mark)**

……

……

11. The set – up below was used to prepare hydrogen chloride gas and react it with iron powder. Study it and answer the questions that follow.



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At the end of the reaction, the iron powder turned into a light green solid.

a) Identify the light green solid. **(1mark)**

……

b) At the beginning of the experiment, the pH of the solution in container L was about 14. At the end, the pH was found to be 2. Explain. **(2marks)**

……

……

……

12. Below is part of the Thorium decay series.

$$^{232}_{90}Th \xrightarrow{(i)} {}^{228}_{88}Ra \xrightarrow{(ii)} {}^{228}_{89}Ac \xrightarrow{(iii)} {}^{228}_{90}Th \xrightarrow{(iv)} {}^{224}_{88}Ra$$

(i) Write an overall nuclear equation for the conversion of Th-232 to Ra-224. **(1mark)**

……

……

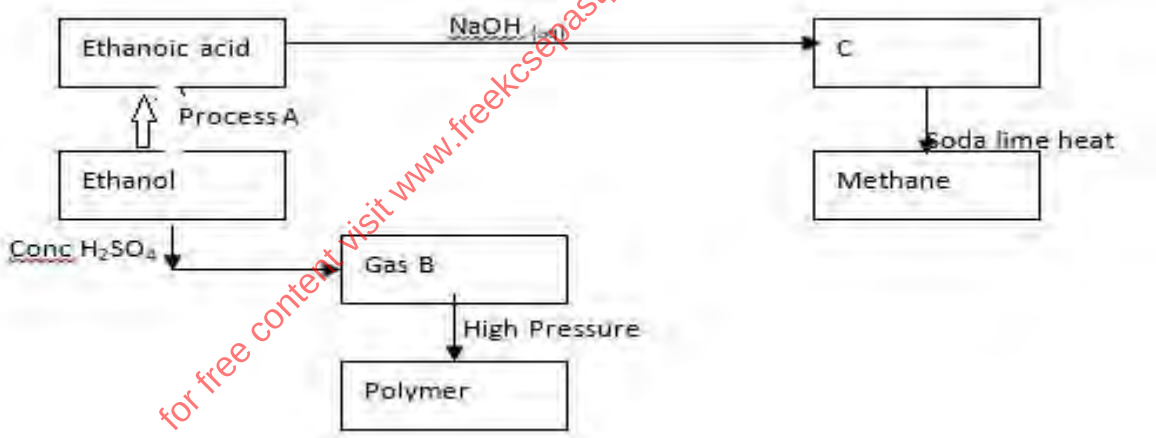
(ii) Give any **two** uses of radio isotopes in medicine. **(2marks)**

……

……

……

13. The flow chart below shows a series of reactions starting with ethanol , Study it and answer the questions that follow.



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i) Name:

I. **Process A……** **(1mark)**

II. Substances B and C

B…… **(½mark)**

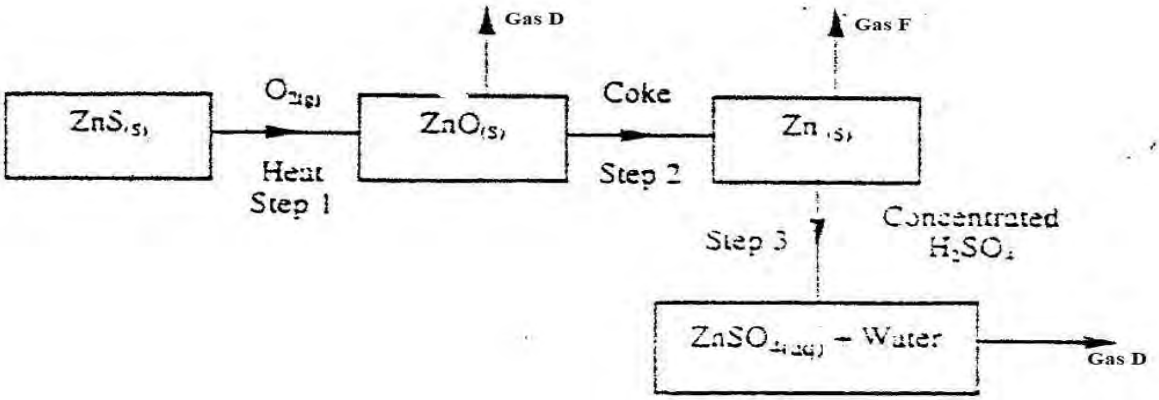
C…… **(½mark)**

ii) Write the equation for the reaction leading to formation of methane. **(1mark)**

……

……

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



a) State the condition necessary for the reaction in step 2 to **occur** **(1mark)**

……

b) Name gases D and F: **(1mark)**

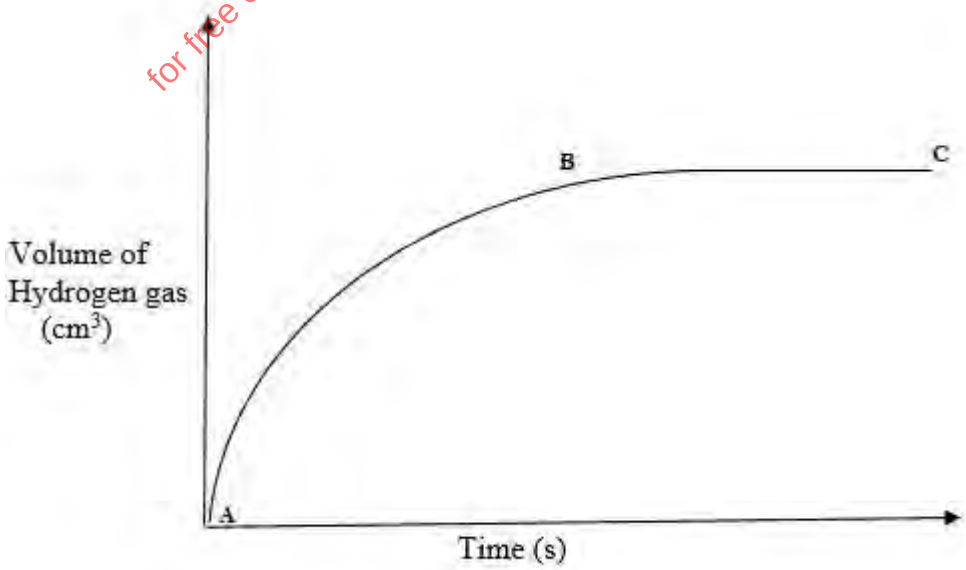
i) Gas D……

Gas F ……

ii) State one use of zinc metal. **(1mark)**

……

15. The reaction between a piece of magnesium ribbon with excess 2M hydrochloric acid was investigated at 25°C by measuring the volume of hydrogen gas produced as the reaction progressed. The sketch below represents the graph that was obtained.



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a) Explain the shape of the curve between B and C. **(1mark)**

……

……

b) Suggest another parameter that can be used to determine the rate of the above reaction **(1mk)**

……

c) On the same diagram, sketch the curve that would be obtained if the experiment is repeated using powdered magnesium metal**.** **(1mark)**

16. Zinc oxide reacts with acids and alkalis.

a) Write the equation for the reaction between zinc oxide and:

i) Dilute sulphuric acid **(1mark)**

……

ii) Sodium hydroxide solution **(1 mark)**

……

b) What property of zinc oxide is shown by the reactions in (a) above? **(1 mark)**

……

17. **0.84 g** of aluminum reacted completely with chlorine gas. Calculate the volume of chlorine gas used (Molar gas volume is 24dm^3, al = 27). **(3 marks)**

……

……

……

……

18. Proper use of soaps in washing hands has proven to control the spread of corona novel virus.

a) Write the formula of the grey insoluble substance left in the washing basin when one uses soap with tap water given that the formula of the soap is $C_{17}H_{35}COONa$. **(1mark)**

……

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b) State two advantages of Soapy detergents over soapless detergents. **(2marks)**

……

……

19. a) Use the information given below to draw a labeled diagram of an electrochemical cell that can be constructed to measure the electromotive force between G and J.

$G2+(aq) + 2e \rightarrow G(s)$; $E^{\theta} = - 0.74$ V

$J2+(aq)+ 2e \rightarrow J(s)$; $E^{\theta} = -0.14$ V **(2marks)**

b) Calculate the E^{θ} value for the cell constructed in (a) above. **(1mark)**

……

……

……

20. a) Sate Le' Chetelier's principle. **(1mark)**

……

……

b) Study the following equilibrium reaction and answer the questions that follow: -

$$\underbrace{HL_{(aq)} + H_2O_{(l)}}_{\text{Red}} \rightleftharpoons \underbrace{H_3O^+(aq)\ L^-(aq)}_{\text{Blue}}$$

Given that in an acid solution, $H_3O^+_{(aq)}$ act in place of hydrogen ions, H^+, according to the equation.

$$\mathbf{H_3O^+_{(aq)} + OH^-_{(aq)} \longrightarrow 2H_2O_{(l)}}$$

Explain what would be observed when potassium hydroxide solution is added to the above equilibrium mixture. **(2marks)**

……

……

……

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21. The table below gives information on four elements K, L, M and N. Study it and answer the questions that follow. The letters do not represent the actual symbols of the elements.

Element	Electron arrangement	Atomic radius (nm)	Ionic radius(nm)
K	2, 8, 2	0.136	0.065
L	2, 8, 7	0.099	0.181
M	2, 8, 8, 1	0.203	0.133
N	2, 8, 8, 2	0.174	0.099

a) Which two elements have similar chemical properties? Explain. **(2marks)**

.....

.....

.....

b) Which element is a non-metal? Explain. **(1mark)**

.....

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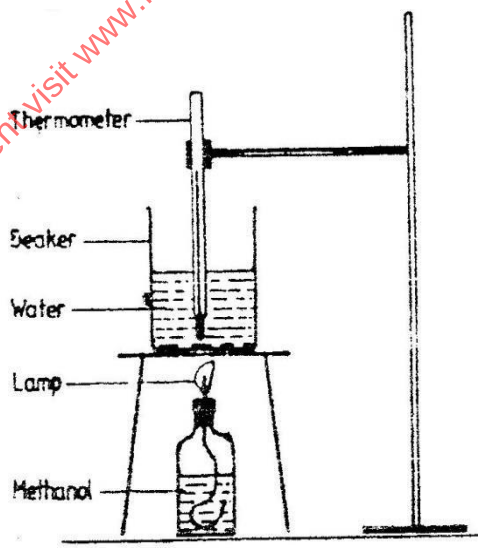
22. In an experiment to determine the heat of combustion of methanol, a student used the set-up below.



Volume of water = 500cm^3

Final temperature of water= 27.0^{0}C

Initial temperature of water = 20.0^{0}C

Final mass of lamp + methanol = 22.11g

Initial mass of lamp+ methanol= 22.98g

Density of water = 1.0g/cm^3

Specific heat capacity = 4.2kJ/g/k

Calculate:

(i) The number of moles of methanol used in this experiment given that the R.F.M is 32.

(1mark)

.....

.....

.....

(ii) The heat of combustion per mole of methanol. **(2mark)**

.....

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.....

23. Using dots (.) and crosses (x) to represent outermost electrons, draw diagrams to show the bonding in, CO_2 and H_3O^+. (Atomic numbers; H = 1.0,C= 14.0, O = 8)

i) CO_2. **(1mark)**

ii) H_3O^+ **(2marks)**

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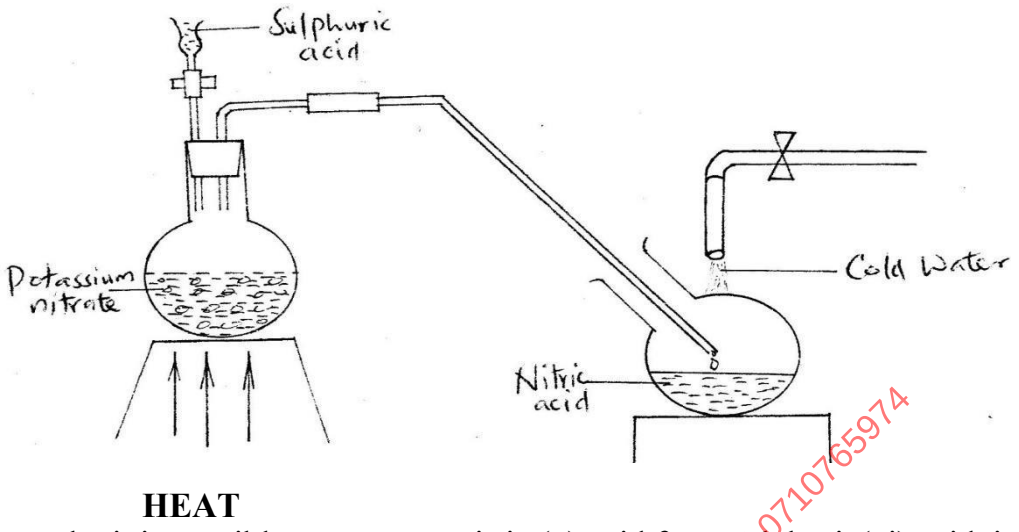
24. The diagram below shows a set- up that was used to prepare and collect a sample of nitric (v) acid



a)Give a reason why it is possible to generate nitric (v) acid from sulphuric(vi) acid in the set – up. **(1mark)**

.....

.....

b) Name another substance that can be used instead of potassium nitrate. **(1mark)**

.....

c) Give two use of nitric (v) acid. **(1mark)**

.....

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25. When a hydrocarbon was completely burnt in oxygen, 4.2g of carbon (IV) oxide and 1.71 g of water were formed. Determine the empirical formula of the hydrocarbon

(H= 1.0 ; C=12.0 ; 0 = 16.0). **(3marks)**

.....

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26. Starting with 50 cm^3 of 2.8M sodium hydroxide describe how a sample of pure sodium sulphate crystals can be prepared. **(3 marks)**

.....

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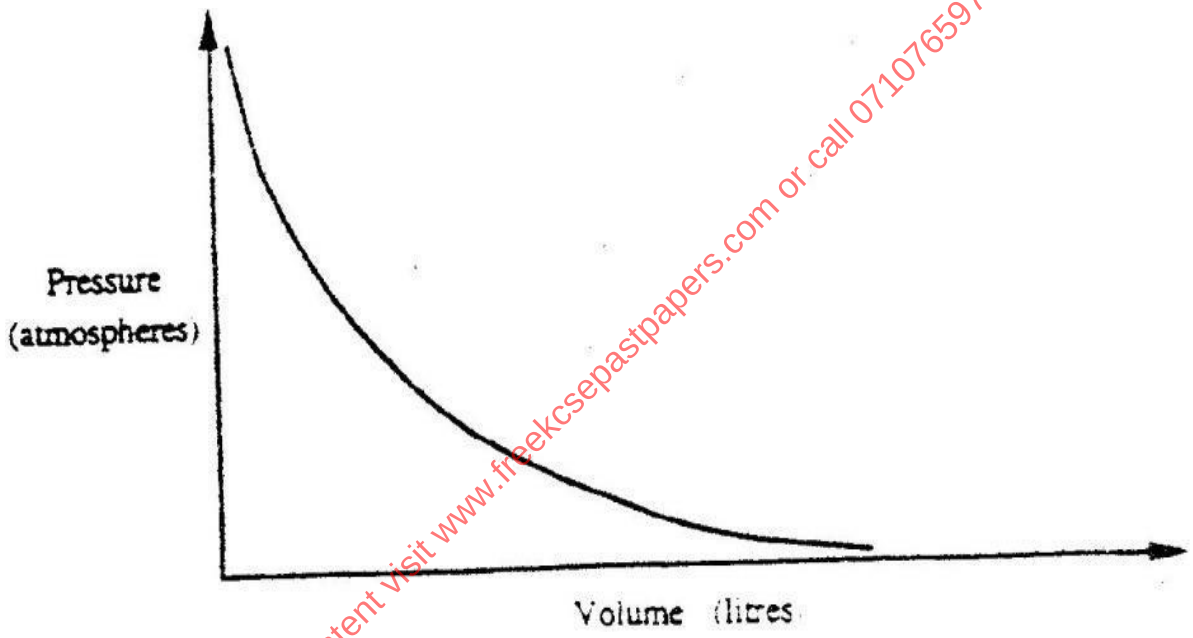
27. The graph below shows the behavior of a fixed mass of a gas at constant temperature.



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a) What is the relationship between the volume and the pressure of the gas? **(1mark)**

.....

.....

b) Three litres of oxygen gas at one atmosphere pressure were compressed to two Atmospheres at constant temperature. Calculate the volume occupied by the oxygen gas. **(2marks)**

.....

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.....

28. Explain the following observations

i) Very little amount of hydrogen gas is collected when dilute sulphuric acid react with calcium metal. **(1mark)**

.....

.....

.....

ii) When hydrogen chloride gas is dissolved in water, the solution turns blue litmus paper to red, while when hydrogen chloride gas is dissolved in methyl benzene; the resulting solution has no effect on the blue litmus paper. **(2marks)**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

233/2

CHEMISTRY

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME.....**SIGN**.....

INDEX NO..... **ADM NO**.....

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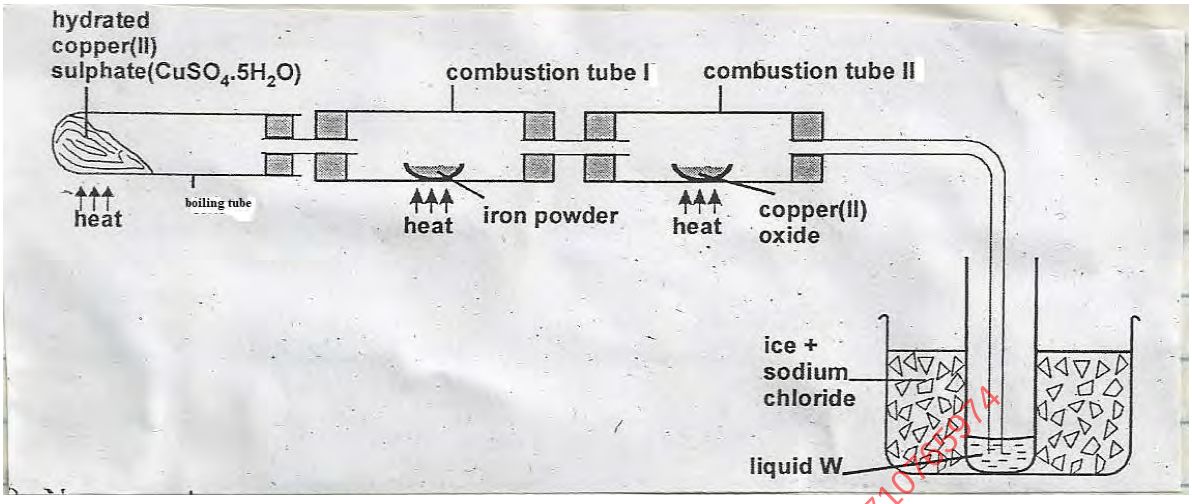
INSTRUCTIONS TO CANDIDATES

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 the spaces provided.*
4. *Mathematical tables and silent electronic calculators may be used.*
5. *All working must be clearly shown where necessary.*

FOREXAMINER'SUSEONLY

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

1. The diagram below shows the apparatus for the preparation of gas A and investigate on its properties. Study it and answer the questions that follow.



a) (i) Name gas A. **(1mark)**

.....

(ii) Suggest the property of gas A under investigation. **(1mark)**

.....

(iii) Write chemical equations for the reactions in the;

Boiling tube **(1 mark)**

.....

Combustion tube I **(1 mark)**

.....

b) State and explain the observation made in

(i) Boiling tube. **(1mark)**

.....

.....

(ii) Combustion tube II. **(1mark)**

.....

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c) What is the use of hydrated copper (II) sulphate in the experiment? **(1mark)**

.....

.....

d) (i) Name one other substance that comes out of tube II. **(1mark)**

.....

(ii) Name liquid W. **(1mark)**

.....

(iii) What is the role of sodium chloride in the ice (freezing mixture). **(1mark)**

.....

.....

(iv) Explain why hydrogen gas has been replaced by helium in filling of aereoplane tyres.

(1mark)

.....

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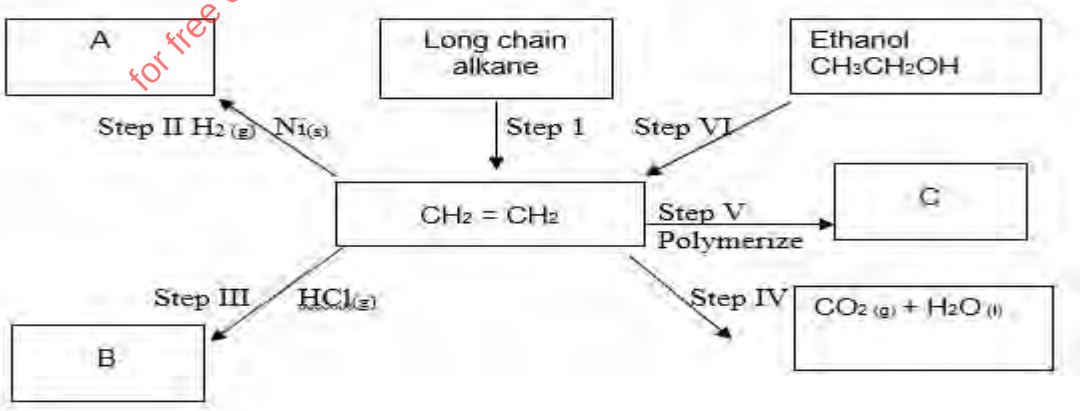
2.(a) Study the flow chart below and answer the questions that follow.



(i) Name the process-taking place in step I. **(1mark)**

.....

Describe a chemical test that can be carried out determine the identity of organic compound A.

(2marks)

……

……

……

Give the name of the following: **(2marks)**

I. A……..

II.B……..

(ii) Give the structural formulae of substance C. **(1mark)**

……

……

……

(iii) Name the type of reaction that occurs in:

I. Step IV . **(2marks)**

……

II. Step VI:

……

(iv) Give the reagent and the condition necessary for step VI**.** **(2marks)**

Reagent……

Condition……

(b) Give the systematic names of the following compounds:

I. $CH_3CHCHCH_2CH_3$ **(1mark)**

……

II.$CHCCH_3$ **(1mark)**

……

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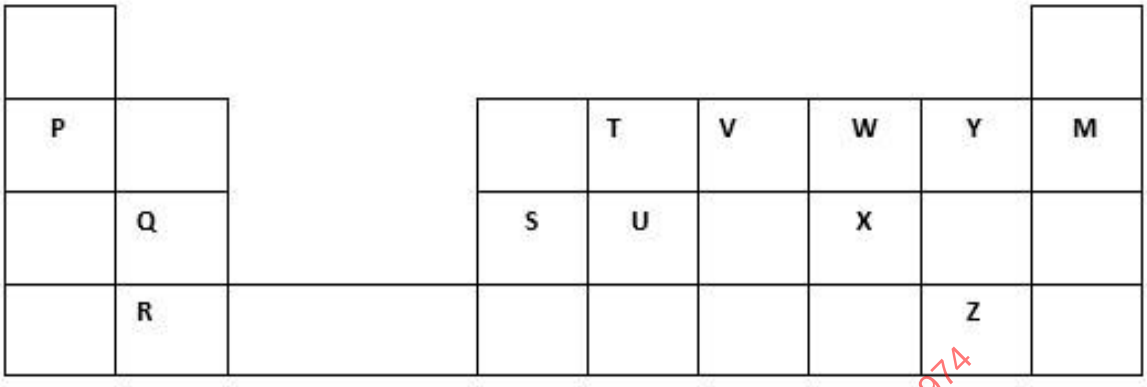
3. The grid below forms part of the periodic table. Study it and answer the questions that follow. The letters do not represent the actual symbols of the elements.



a) Write the general name given to the group where element P belong. **(1mark)**

..... b)

An element N has an atomic number of 15. Write down its electronic arrangement and hence fix it in its right position on the grid above. **(2marks)**

Electronic arrangement

.....

.....

.....

b) Compare the size of the atom of R and that of its ion. Explain your answer. **(2marks)**

.....

.....

.....

c) Give the formula of the compound formed between. **(1mark)**

i. P and W

.....

ii. T and Y

.....

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e) Compare the melting points of element Q and S. Explain. **(2marks)**

.....

.....

.....

.....

f) State the most reactive non-metal from the grid. Give a reason for your answer. **(2marks)**

.....

.....

.....

g) Write chemical equations for the thermal decomposition of nitrates of: **(2marks)**

i) Q

.....

ii) P

.....

4. a) The results below were obtained in an experiment conducted by form three students from **Isaboke secondary school** using magnesium.

- Mass of the crucible + lid = 19.52g
- Mass of the crucible + lid + Magnesium Ribbon = 20.36g
- Mass of the crucible + lid + Magnesium oxide = 20.92g

(i) Use the results to find the percentage mass of Magnesium and Oxygen in magnesium oxide.

(2marks)

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(ii) Determine the empirical formula of magnesium oxide. (Mg=24.0, O=16.0) **(2marks)**

.....

.....

.....

.....

b) Sodium hydroxide pellets were accidentally mixed with sodium chloride. 8.8g of the mixture were dissolved in water to make one litre of solution. $50cm^3$ of the solution was neutralised by $20cm^3$ of 0.25M sulphuric acid.

(i) Write an equation for the reaction that took place. **(1mark)**

.....

(ii) Calculate the:

I. Number of moles of the substance that reacted with sulphuric acid. **(2marks)**

.....

.....

.....

.....

II. Number moles of the substance that would react with sulphuric acid in the one litre solution.

(1mark)

.....

.....

.....

III. The percentage of sodium chloride in the mixture. **(3marks)**

(H=1.0; Na=23.0; Cl=35.5; O=16.0)

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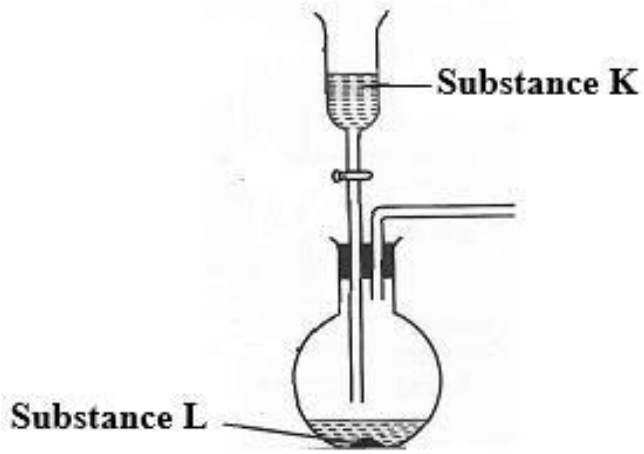
5. The set-up below can be used to generate a gas.



(a) (i) Complete the table below giving the names of substance **K** and **L** if the gases generated are carbon (IV) oxide and carbon (II) oxide. **(2marks)**

Substance	Carbon (IV) oxide	Carbon (II) oxide
K		
L		

(ii) Complete the diagram to show how a sample of carbon (II) oxide can be collected. **(2marks)**

(iii) State two ways that can be used to distinguish carbon (IV) oxide from carbon (II) oxide? **(2marks)**

.....

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(b) (i) In an experiment, carbon (IV) oxide gas was passed over heated charcoal held in a combustion tube. Write a chemical equation for the reaction that took place in the combustion tube. **(1mark)**

.....

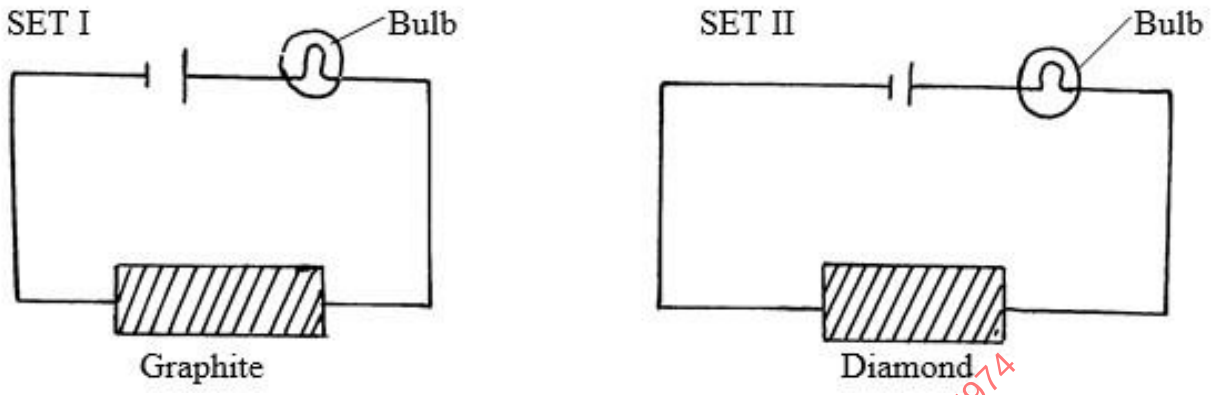
.....

(ii) State one use of carbon (II) oxide. **(1mark)**

.....

.....

(c) The following set ups were used by Form Two students. Study and use them to answer the questions that follow.



State and explain the observations made in set up I and II above. **(3marks)**

……

……

……

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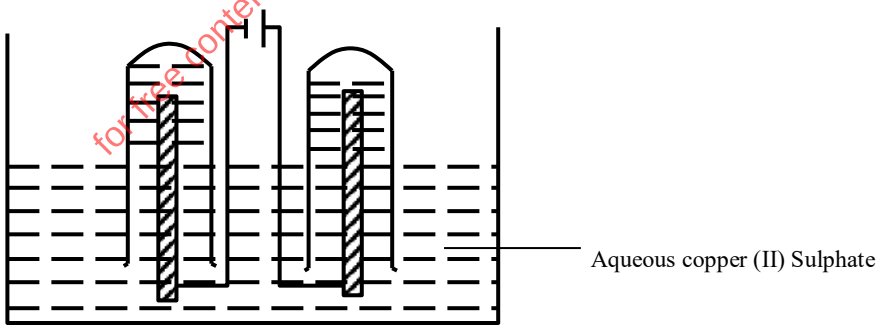
6. a) The set up below was used during electrolysis of aqueous copper (II) sulphate using inert electrodes.



i) Name a suitable pair of electrodes for this experiment. **(1 mark)**

……

ii) Write formula of the anions and cations in the solution. **(1 mark)**

……

……

iii) On the diagram, label the cathode. **(1mark)**

iv) Write ionic equation for the reaction that took place at the anode. **(1 mark)**

.....

v) Explain the observation that occurred to the Copper (II) Sulphate solution during the experiment. **(2 marks)**

.....

.....

.....

vi) During the electrolysis, a current of 2 amperes was passed through the solution for 4 hours. Calculate the volume of the gas produced at the anode. (1 Faraday = 96,500 coulomb. Volume of gas at room temperature = 24,000cm^3). **(3 marks)**

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b) i) Draw a diagram to show how an impure copper lump can be refined through electrolysis. **(2marks)**

ii) State one other application of electrolysis other than the one shown in b (i) above. **(1mark)**

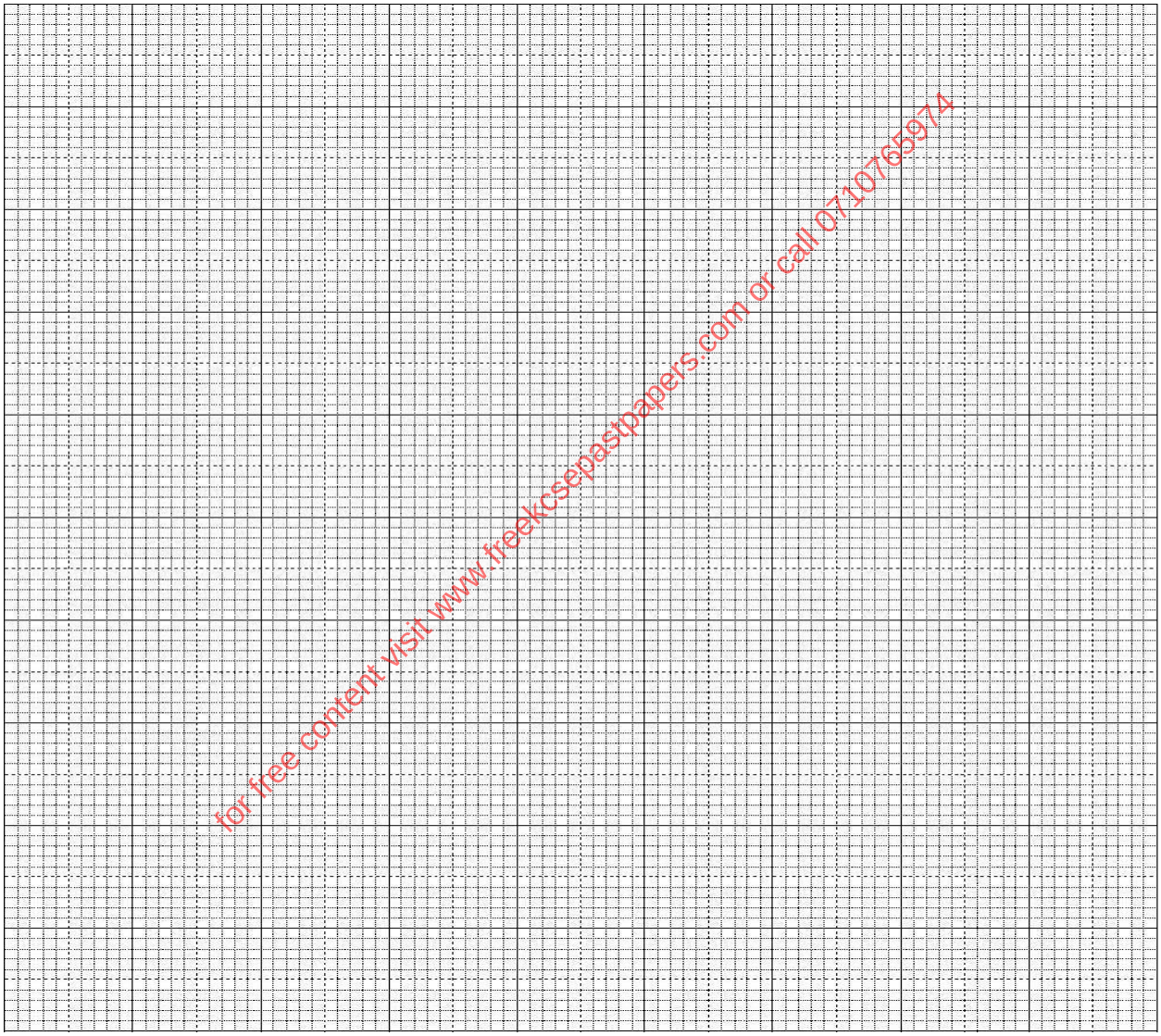
.....

.....

7. (a) The solubilities of potassium nitrate and potassium bromide at different temperatures were determined. The following data was obtained.

Temperature ^0C		0	10	20	30	40	50	60	70	80
Solubility g/100g H_2O	KNO_3	5	15	26	43	61	83	105	135	165
	KBr	50	55	60	65	70	77	85	90	95

(i) Draw solubility curves for both salts on the same axis. **(3marks)**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(ii) What was the solubility of each salt at 65^0C? **(1mark)**

……

……

(iii) 100g of a saturated solution of potassium nitrate at 75^0C was cooled to 25^0C. What mass of the crystals will be formed? **(3marks)**

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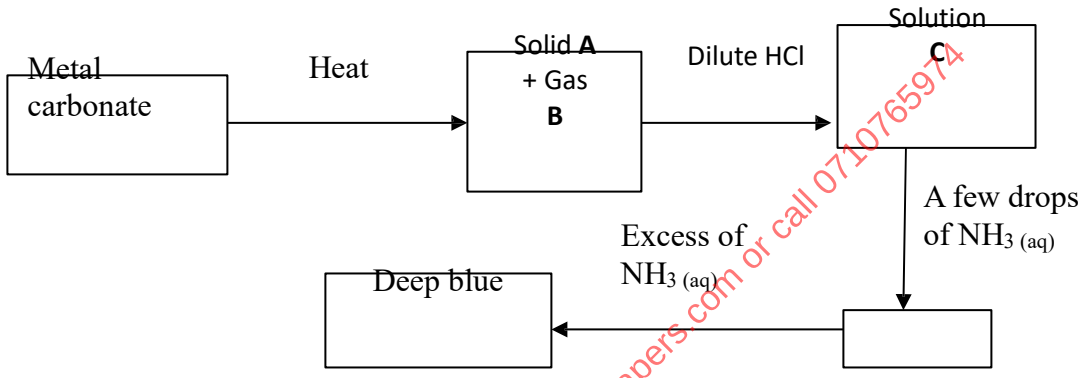
(b) Study the flow chart below and answer the questions that follow



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solution **E** Solid **D**

(i) Write an equation for the formation of solid **A** and gas **B**. **(1mark)**

……

……

(ii) Name;

Solution **C** …… **(1mark)**

Solid D ……. **(1mark)**

(c) Write the formula of the complex ion in solution **E**. **(1mark)**

……

……

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

233/3

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

NAME…… SIGN……

INDEX NO……DATE……..

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PRACTICAL- CONFIDENTIAL

Each student requires:

- 80 cm^3 of solution A prepared by dissolving 4.0g of NaOH in water made upto 1 litre.
- 200cm^3 of solution B which is 0.1M HCL.
- 2.5g of salt mixture prepared by mixing1.5g of sodium carbonate (Anhydrous) and 1.0g of sodium chloride labelled solid C.
- One burette (50ml)
- One 25cm^3 pipette
- Pipette filter
- Complete stand
- Filter paper
- White tile
- 3conical flasks
- 250ml volumetric flask
- Labels (6)
- 500ml distilled water in awash bottle
- 200cm^3 of solution S_3 which is sodium thiosulphate of concentration 0.2M
- 80cm^3 of 2M hydrochloric acid solution
- 100ml empty glass beaker.

- One stop watch/clock
- White piece of paper
- One 50ml measuring cylinder and one 10ml measuring cylinder

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- About 2g of solid D(A mixture of ammonium sulphate and Zinc sulphate in the ratio1:1)
- About 5 cm^3 of liquid E which is absolute ethanol
- Two red and blue litmus paper
- One metallic spatula
- About 1g of solid sodium hydrogen carbonate.
- One boiling tube
- Test-tube holder
- Seven clean dry test-tube

Access to;

✓ Means of heating
✓ Phenolpthalein indicator
✓ Methyl-indicator
✓ Acidified potassium dichromate(vi) solution
✓ 2M nitric (v) acid solution
✓ 2M Barium nitrate solution
✓ 2M ammonia solution
✓ 2M sodium hydroxide solution.
✓ 2M Lead nitrate solution

NB:The solution should be supplied with droppers.

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TRIAL 2 2024

233/3

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

NAME……SIGN……

INDEX NO…… ADM NO……

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INSTRUCTIONS TO CANDIDATES

- *Answer all the questions in this paper in the spaces provided.*
- *You are not allowed to start working with the apparatus for the first 15 minutes of the* $2\frac{1}{4}$ *hours allowed for this paper.*
- *This time is to enable you to read the question paper and make sure you have all the apparatus and chemicals that you may need.*
- *All working* ***must*** *be clearly shown where necessary.*
- *Mathematical tables/electronic calculators may be used.*

FOR EXAMINERS USE ONLY

Question	Maximum score	Candidate's score
1	21	
2	08	
3	11	
Total score	40	

1.

You are provided with;

-Solution A, containing 4.0 gdm^{-3} of sodium hydroxide

- Solution B, hydrochloric acid

- 2.5g of a mixture of two salts, XCl (RFM=58.5) and X_2CO_3 (RFM=106)

You are required to:

i) Standardize solution B, hydrochloric acid.

ii) Determine the percentage composition of XCl salt in the mixture.

PROCEDURE I

1. Fill the burette with solution B
2. Pipette solution A into a clean dry conical flask. Then add 2 -3 drops of phenolphthalein indicator.
3. Titrate solution B against solution A. Record your results in the table below.
4. Repeat the procedure two more times and complete the table 1.

TABLE I

Titration number	1	2	3
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of acid used(cm^3)			

(4marks)

a) Calculate the average volume of solution B used. **(1 mark)**

b) Calculate;

i) Moles of sodium hydroxide that reacted with the acid. (**Na=23.0, O= 16.0, H=1.0) (2marks)**

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ii) Moles of hydrochloric acid in the average volume. **(1 mark)**

iii) Molarity of the acid **(1 mark)**

PROCEDURE II

1. Put about 100cm^3 of water in a 250ml volumetric flask add all solid C, the 2.5g of salt mixture. Shake the mixture to dissolve the solid. Top up the solution to the mark with distilled water, label this solution C.

2. Fill this burette with solution B.

3. Pipette 25cm^3 of solution C and put it into a clean conical flask. Add 3 drops of methyl orange indicator.

4. Titrate solution C with solution B. Record your results in the table below.

5. Repeat the titration two more times and complete the table II.

TABLE II

TITRATION	**1**	**2**	**3**
Final burette reading(cm^3)			
Initial burette reading (cm^3)			
Volume of the solution B used (cm^3)			

(4marks)

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c). Calculate the average volume of solution **B** **(1 mark)**

d). Calculate the number of moles in hydrochloric acid used**.** **(1 mark)**

e) The equation for the reaction of the acid with one of the salts in the mixture is;

$$2\,HCl_{(aq)} + X_2CO_{3(S)} \longrightarrow 2XCl_{(aq)} + CO_2(g) + H_2O_{(l)}$$

Calculate;

i). Moles of X_2CO_3 that reacted with the acid in the experiment. **(1 mark)**

ii) Molarity of X_2CO_3 **(1marks)**

f) Calculate the mass of the salt in gdm^{-3} **(1 mark)**

g) Calculate the percentage of XCl in the mixture. **(3 marks)**

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2. In this experiment you're required to determine the time taken for a precipitate to be formed when S_3 which is sodium thiosulphate solution, reacts with dilute hydrochloric acid.

PROCEDURE

1. Using a measuring cylinder measure $50cm^3$ of S_3 into a 100ml beaker.
2. Make a pencil cross on the white piece of paper so that a beaker is placed on top of the paper, the cross can be seen through the bottom of the beaker.
3. To solution A add $10cm^3$ of 2M hydrochloric acid using 10ml measuring cylinder and at the same time start a stop watch/clock. Swirl the contents of the beaker twice and then place it over the cross on the paper. Look at the cross from above the beaker through the mixture. Stop the watch immediately the precipitate makes the cross invisible. Record the time taken for the cross to become invisible in the table below, rinse the beaker.
4. Repeat the procedure with solutions B, C, D and E as per the table.

SOLUTION	Volume of solution S_3 in the beaker(cm^3)	Volume of water added(cm^3)	Volume of 2M HCl	Time taken in seconds
A	50	0	10	
B	40	10	10	
C	30	20	10	
D	20	30	10	
E	10	40	10	

(3 marks)

a) Plot the graph of volume of solution S_3 (y-axis) against time. (3 marks)

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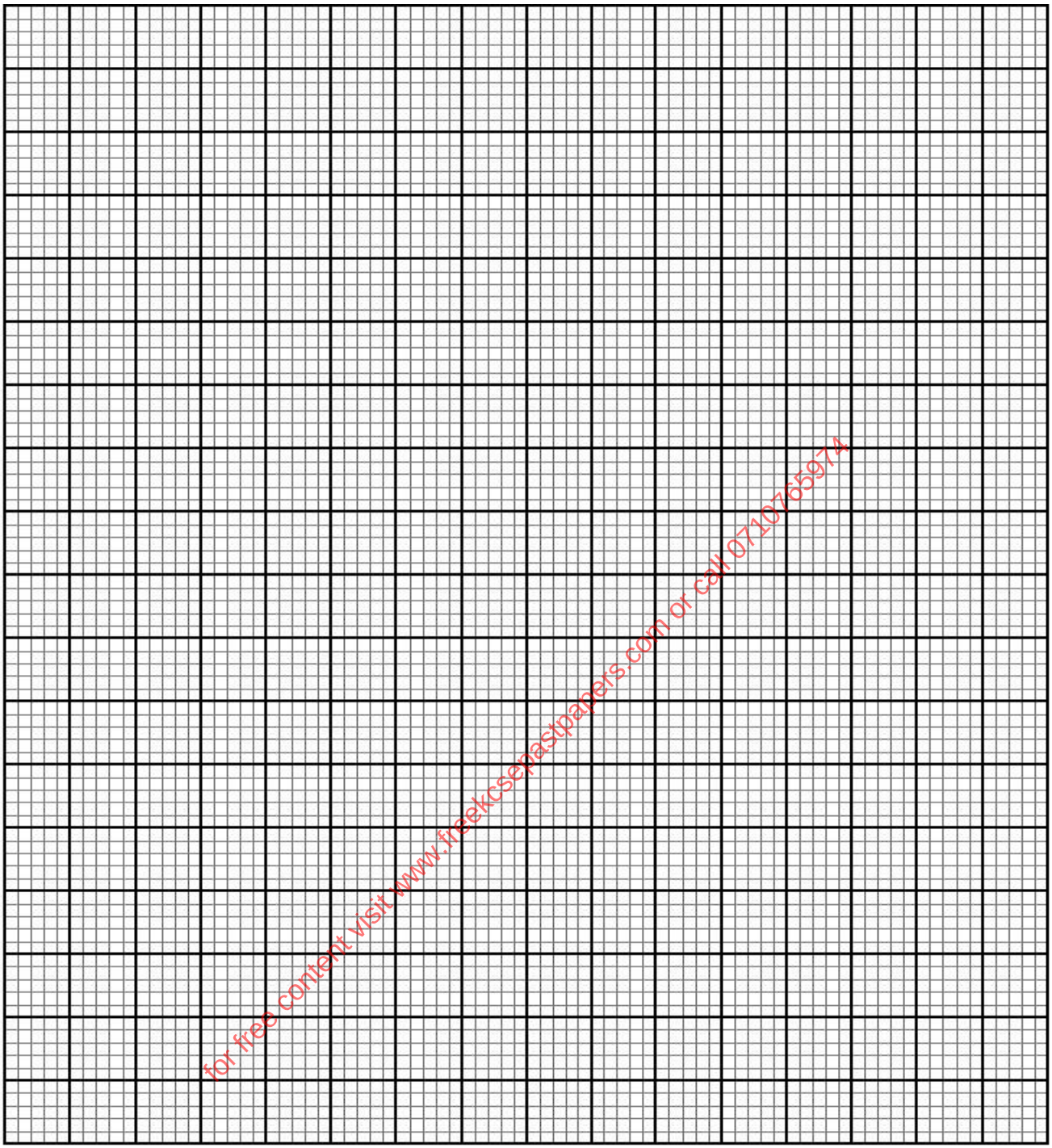
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b)From the graph state the relationship between concentration of the solution S_3 and time **(1mk)**

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c) Calculate the reaction rate in solution C in the table above. **(1mk)**

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3. You are provided with solid D. Carry out the tests shown below on the solid.

a) Heat a spatula end full of solid D in a clean dry test-tube.

Observation	**Inference**
(1mk)	**(½mk)**

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b) Put the remaining solid D in a boiling tube. Add about $10cm^3$ distilled water. Shake the mixture.

Observation	**Inference**
(½mk)	**(1mk)**

c). Divide the resultant mixture in (b) above into 5 portions.

i) In the first portion add 2 cm^3 of lead (ii) nitrate and then warm the mixture

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

ii) To the 2nd portion and dilute nitric acid followed by a few drops of Barium nitrate.

Observation	Inference
(½mk)	**(½mk)**

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iii) To the third portion, add sodium hydroxide solution dropwise until in excess.

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

d). You are provided with liquid E. Carry out the tests shown below and write your observations and inferences in the spaces provided:

i) To about 1cm^3 of liquid E in a test-tube, add about 1cm^3 of distilled water and shake the mixture.

Observation	Inference
(½mk)	**(½mk)**

ii). To about 1cm^3 of liquid E in a test-tube add a small amount of solid sodium hydrogen carbonate.

Observation	Inference
(½mk)	**(½mk)**

iii). To about 2cm^3 of liquid E in a test-tube, add about 1cm^3 of acidified potassium dichromate(vi). Warm the mixture gently and allow it to stand for about one minute.

Observation	Inference
(½mk)	**(½mk)**

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PHYSICS

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……**SIGN**……

INDEX NO…… **ADM NO**……

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INSTRUCTIONS TO CANDIDATES

(a) *Write your name, index number in the spaces provided above.*
(b) *Sign and write the date of the examination in the spaces provided.*
(c) *This paper consists of **TWO** Sections: **A** and **B**.*
(d) *Answer **ALL** the questions in section **A** and **B** in the spaces provided.*
(e) *All working **MUST** be clearly shown.*
(f) *KNEC mathematical tables and silent non-programmable electronic calculators may be used.*
(g) Candidates should answer the questions in English.
Take: ***Acceleration due to gravity,*** g = ◆◆ ◆/◆◆

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Section	Question	Maximum Score	Candidate's Score
A	1 – 12	25	
B	13	11	
	14	9	
	15	9	
	16	14	
	17	12	
	TOTAL SCORE	80	

SECTION A (25 MARKS)

Answer all the questions in this section in the spaces provided.

1. A measuring cylinder calibrated in cm^3, water and a weighing balance were used to find the density of a stone. The arrangement was as shown in **Figure 1**.

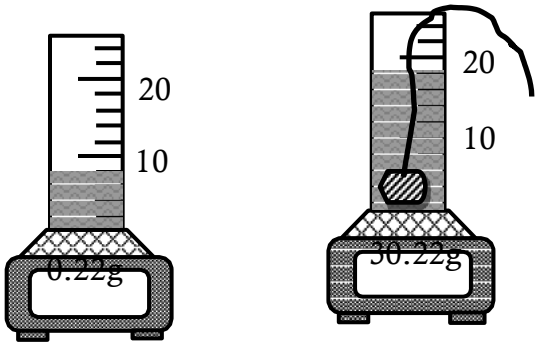

Figure 1

Determine the density of the stone. **(3 marks)**

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2. Give a reason to why the players draw their hands backwards as the ball is caught in cricket.

(1 mark)

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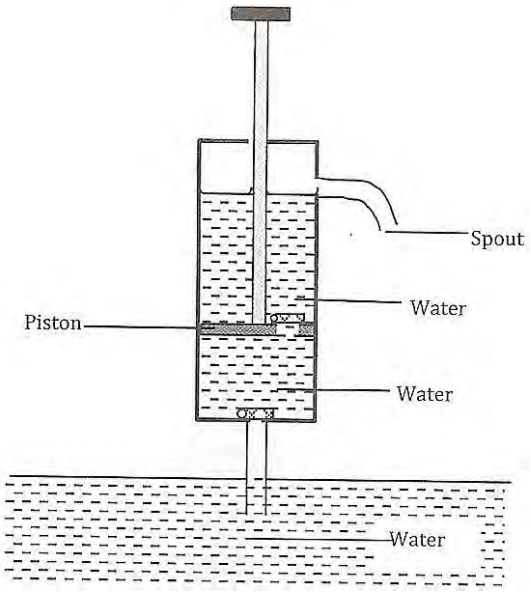
3. Figure 2 shows a lift pump used to draw water from a well.



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(a) Give one limitation of using this type of a pump. **(1 mark)**

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(b) A lift pump can lift water to a maximum height of 10 m. Determine the maximum height to which the pump can raise paraffin. (*Take density of paraffin as 800 kgm^{-3}, density of water as 1000 kgm^{-3} and gravity as 10 N/kg*). **(3 marks)**

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4. **Figure 3** shows a pith ball inside a transparent flask. When a jet of air is blown over the mouth of the flask as shown, the pith ball is observed to rise from the bottom.

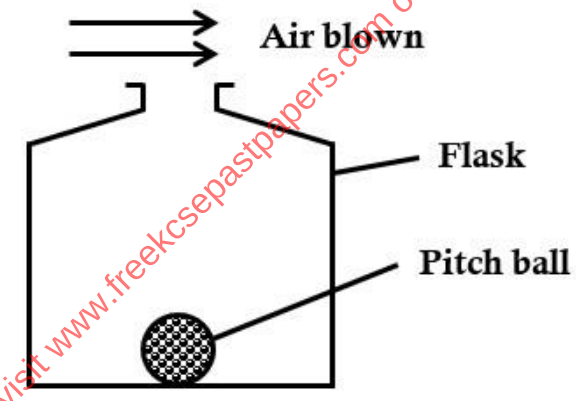

Figure 2

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Explain the observation. **(2 marks)**

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5. A uniform metal strip of mass 450 g and length 100 cm is placed on a pivot and kept in equilibrium by force F as shown in **Figure 4**.

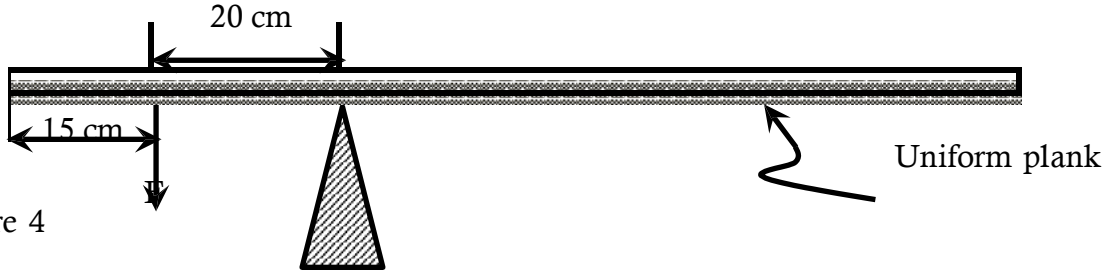

Figure 4

Determine the value of F. **(2 marks)**

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6. Two match sticks are placed on water in a basin a few centimeters apart as shown in **Figure 5**.

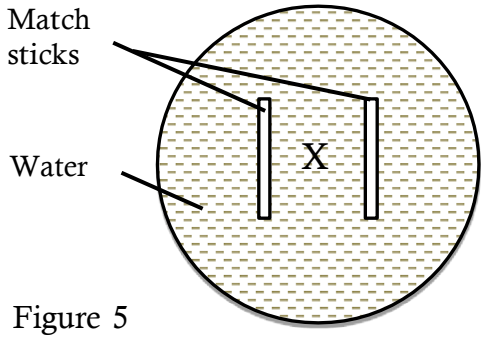

Figure 5

State and explain the observation made when a drop of soap solution is placed at a point marked X between the match sticks. **(2 marks)**

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7. The three springs shown in **Figure 6** are identical and have negligible weight. The extension produced on the system of springs is 25 cm.

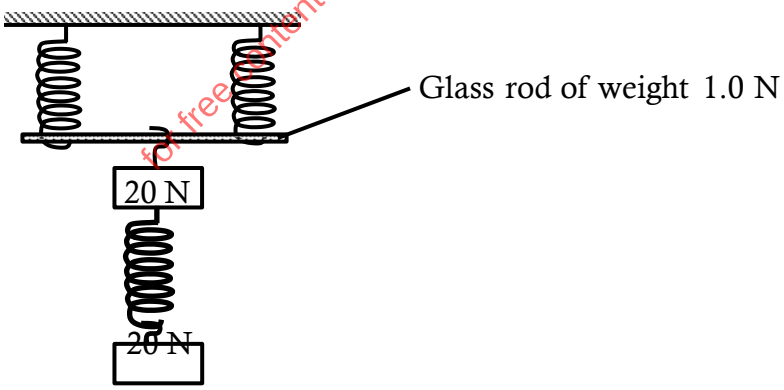

Figure 6

Determine the spring constant of each spring. **(3 marks)**

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8. Figure 7 shows two identical balloons A and B filled with air and their open ends closed tightly. They are put at equal distances from a metallic tank holding hot water. The sides of the tank facing the balloons are painted differently.

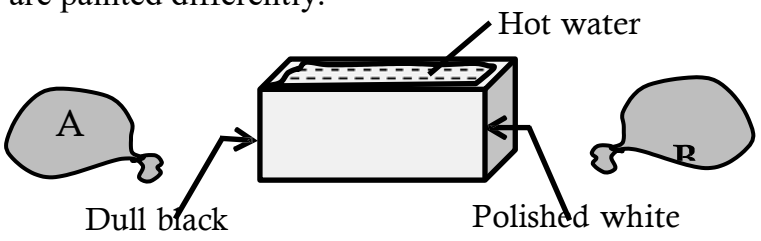

Figure 7

It is observed that balloon A expands more than balloon B. Explain this observation. **(1 mark)**

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9. An oil drop of volume 1.922×10^{-8} $\square^3$ spreads on water surface to form a patch of area 7.069×10^{-2} $\square^2$. Determine the diameter of an oil molecule in the oil drop. **(2 marks)**

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10. **Figure 8** shows apparatus used to study Brownian motion using smoke trapped in a smoke cell.

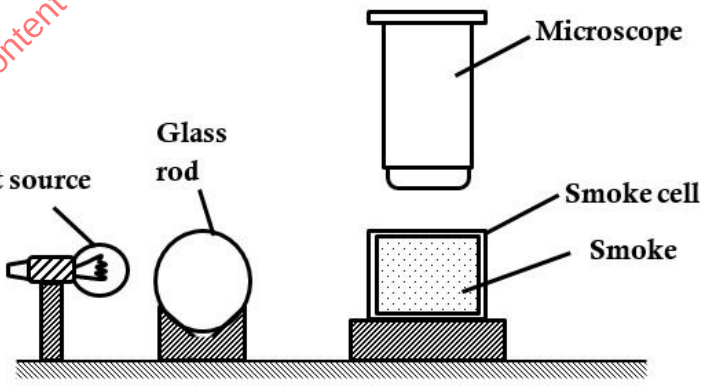

Figure 8

State and explain what is observed when looking at the trapped smoke using the microscope.

(2 marks)

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11. **Figure 9** shows a part of a clinical thermometer.

Figure 9

(a) Name the feature labeled K. **(1 mark)**

.....

(b) State the importance of this feature. **(1 mark)**

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12. **Figure 10** shows a passenger bus with luggage compartment under the seats.

Figure 10

Explain why bus body-builders would prefer to build luggage compartments under the seats rather than on roof racks. **(1 mark)**

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SECTION B (55 MARKS)

Answer all the questions in this section in the spaces provided.

13. (a) The hammer in **Figure 11** is being used to pull out a nail weight) that is stuck into a wooden surface. Take the lengths a = 13.0 cm and b =1.5 cm. (Assume the force (F) applied to the nail is vertical and that F = Friction between the nail and wooden surface which resists the nail from being pulled out).

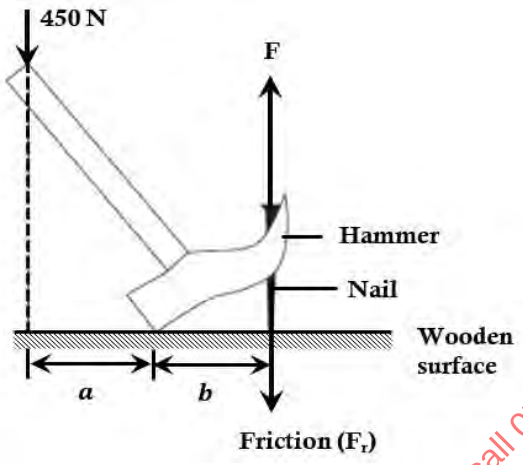

Figure 11

Given that the force applied on the handle is 450 N;

(i) Determine the magnitude of force (F) applied to the nail. **(3 marks)**

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(ii) Determine the mechanical advantage of the hammer. **(2 marks)**

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(iii) Determine the velocity ratio of the hammer. **(2 marks)**

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(iv) Calculate the efficiency of the hammer. **(2 marks)**

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(v) State the assumption made for the value of efficiency in (iv) above to be as it is. **(1 mark)**

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(b) A block and tackle system is made up of three pulley wheels on top and two pulley wheels at the bottom in **Figure 12**.

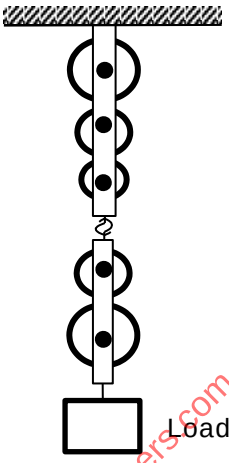

Figure 12

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Complete the diagram by drawing the chain which passes over the wheels and indicate where the effort is applied. **(1 mark)**

14. (a) **Figure 13 (a)** shows a column of air trapped by mercury thread 5cm long in a vertical tube with its mouth facing upwards. The length of the enclosed air column is 10 cm. Given that the atmospheric pressure is 750 mmHg, determine the length of air column, , when the tube is placed vertically but with mouth facing downwards as in **Figure 13 (b)**. **(3 marks)**

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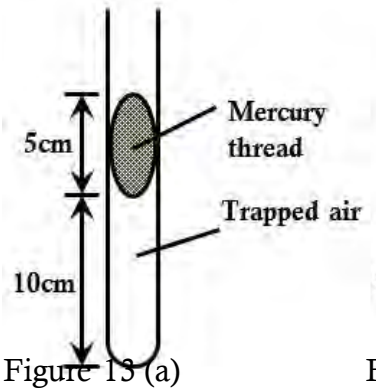

Figure 13 (a)

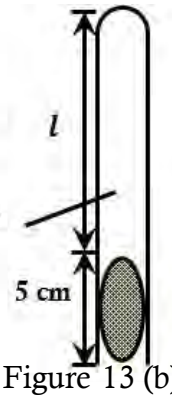

Figure 13 (b)

(b) Figure 14 shows a simple set up for pressure law apparatus.

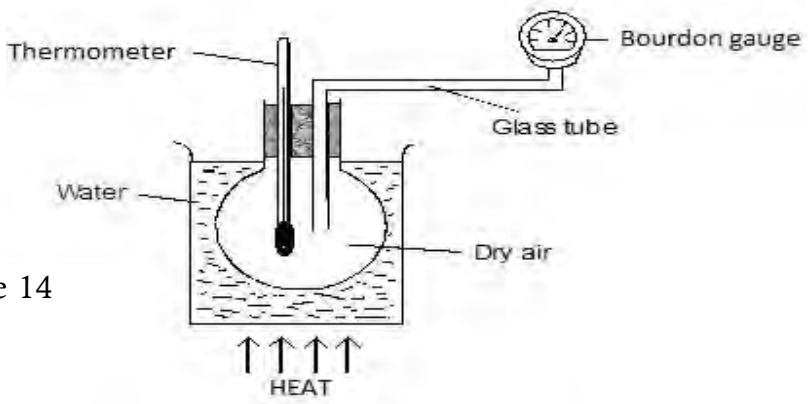

Figure 14

Describe how the apparatus may be used to verify pressure law. Initial reading of pressure and temperatures are recorded. **(3 marks)**

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(c) The graph in **Figure 15** shows the relationship between the pressure and temperature for a fixed mass of an ideal gas at a constant volume.

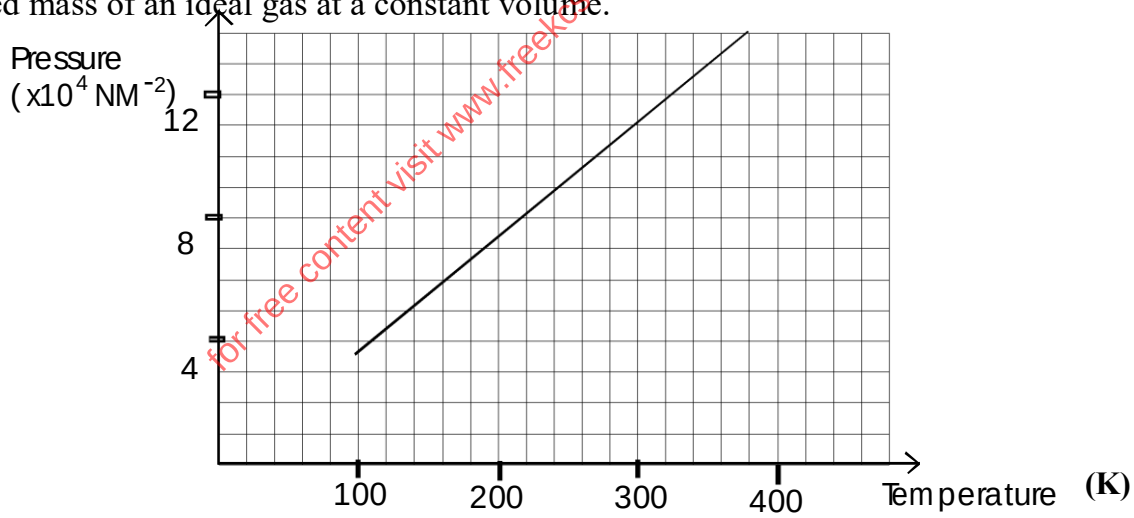

Figure 15

Given that the relationship between pressure, P, and temperature, T in Kelvin is of the form $P =$ ××× where × is constant, determine from the graph, value of ×. **(3 marks)**

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15. (a) State the law of flotation. **(1 mark)**

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(b) **Figure 15** shows a piece of cork held with a light thread attached to the bottom of a beaker. The beaker is filled with water.

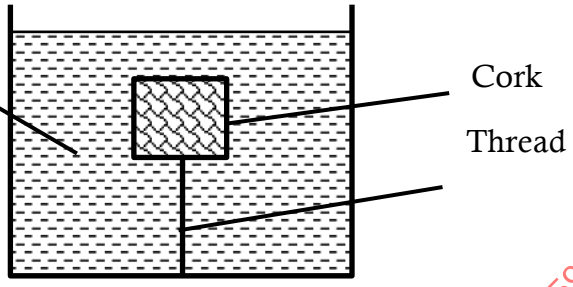

Figure 15

(i) Write an expression showing the relationship between the forces acting on the cork. **(1 mark)**

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(ii) If the thread breaks name another force which will act on the cork. **(1 mark)**

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(c) **Figure 16** shows a metallic rod of length 12 cm and uniform cross-sectional area 8 cm^2 suspended from a spring balance with 8 cm of its length immersed in water. The density of the material is 2.7 g/cm^3 (Take the density of water = 1.0 g/cm^3).

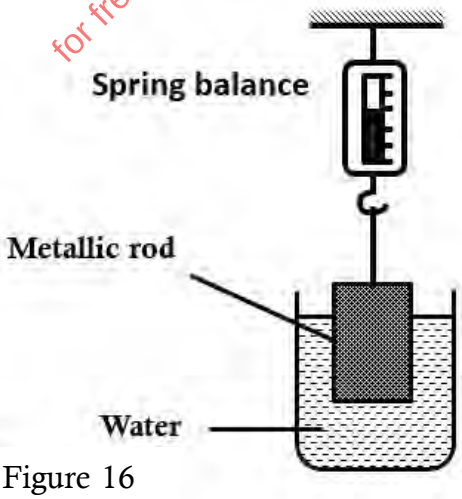

Figure 16

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Determine;

(i) The mass of the metallic rod. **(2 marks)**

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(ii) The up thrust acting on the metallic rod. **(2 marks)**

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(iii) The reading of the spring balance. **(2 marks)**

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16. (a) A force of 100 N acts on a ball of mass 500 g for 0.5 s before the ball rolls down on the horizontal ground.

(i) Calculate the velocity at which the ball set off with. **(2 marks)**

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(ii) If the frictional force between the ball and the ground is 2 N, calculate the distance the ball travels before it comes to a stop. **(3 marks)**

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(b) The world record for men's 100 m sprint stood at 9.58 s as set by Usain Bolt in 2009. If the athlete accelerates to a steady speed in the first 1.5 seconds and he runs at this speed to the finish line, at what steady speed does he run? **(2 marks)**

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(c) An object of mass 200 g is attached to one end of a light inextensible string and whirled in a vertical circle of radius 0.5 m and center O as shown in **Figure 17**.

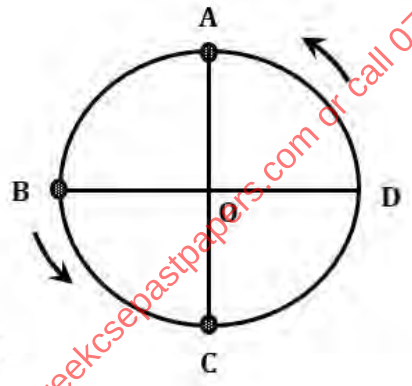

Figure 11

Figure 17

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(i) State two forces acting on the stone as it is whirled in the vertical circle. **(2 marks)**

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(ii) Sketch, on the axes below, a graph of the magnitude of the tension in the string in a complete revolution through point **A**, **B**, **C** and **D**. **(1 mark)**

(iii) If the tension in the string when the object is at the lowest point C is 39 N, calculate the tangential velocity v of the object. **(3 marks)**

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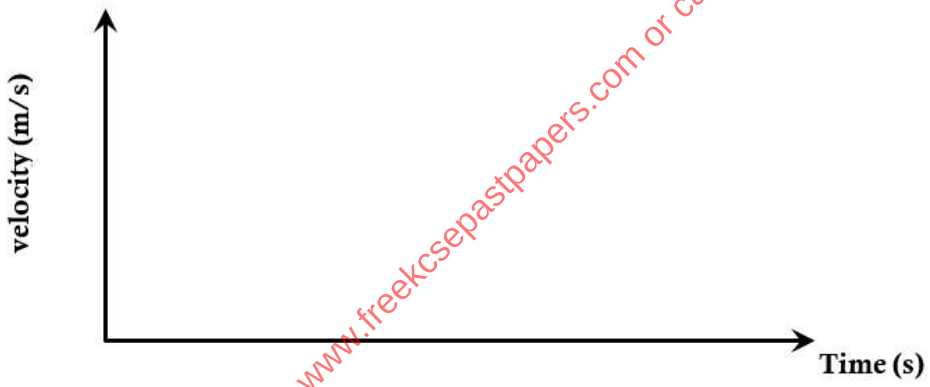
(b) A passenger bus is travelling uniformly at 20 m/s when the driver observes a police roadblock ahead. The driver takes 1.0 s before applying brakes which brings the bus to rest with a uniform retardation of 5.0 m/s 2 . Sketch a velocity-time graph for the bus from the instant the driver notices the roadblock until the bus comes to rest. **(1 mark)**



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17. (a) In an experiment to determine the specific latent heat of vapourization, $\boldsymbol{lv}$, of water, steam of mass 40 g at 100 ℃ is passed into 150 g of water containing 87g of ice at 0 ℃ in a container of heat capacity 4.5 × 102 JK −1 . The temperature of the water rises to 60 ℃. (Take the specific heat capacity of water as $\mathbf{4.2 \times 103\ Jkg\ -1K-1}$and specific latent heat of fusion of ice as $\mathbf{3.4 \times 105\ Jkg\ -1}$). Determine the:

(i) heat lost by steam to condense to water at 100 ℃. **(1 mark)**

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(ii) heat lost by condensed steam to cool to 60 °C. **(2 marks)**

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(iii) heat absorbed by the ice, water and the container. **(3 marks)**

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(iv) specific latent heat of vapourization of water. **(3 marks)**

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(b) Some water in a round-bottomed flask was heated until it started boiling. Heating was stopped and the water stopped boiling. The rubber tube was clipped and the flask turned upside down as shown in **Figure 18.**

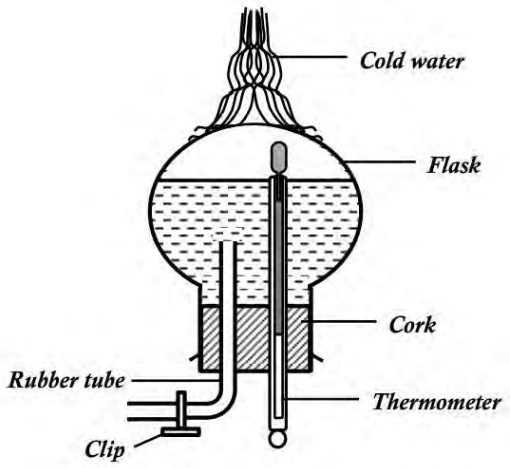

Figure 18

When cold water was poured onto the flask, the water started boiling again.

(i) State the aim of this experiment. **(1 mark)**

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(ii) Explain why water started boiling when cold water was poured onto the flask. **(2 marks)**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

232/2

PHYSICS

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

INSTRUCTIONS

1. *Write your name and your Index number in the spaces provided.*
2. *This paper consists of **two** sections, Section **A** and **B**.*
3. *Answer **ALL** the questions in both section in the spaces provided in this paper.*
4. ***ALL** working must be clearly shown.*
5. *Mathematical tables and electronic calculators **may be** used.*

Take: Planck's constant =$6.6x10^{-34}$ Js

FOREXAMINER'SUSEONLY:

SECTION	QUESTION	MAXIMUM SCORE	STUDENTS SCORE
A	1-12	25	
B	13	11	
	14	09	
	15	15	
	16	10	
	17	10	
	TOTAL	**80**	

*Answer **ALL** the questions*

1. State any 2 ways of in increasing the size of an image formed by a fixed pinhole camera.**(2 mks)**

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2. State 2 advantages of alkaline battery over a lead acid battery. **(2 mks)**

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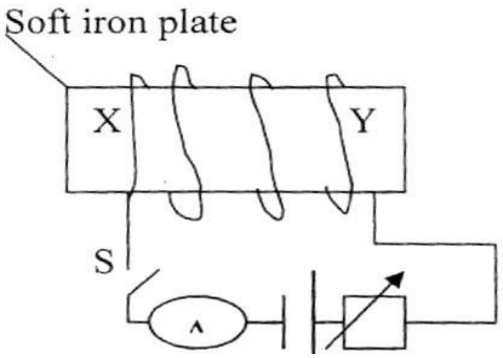
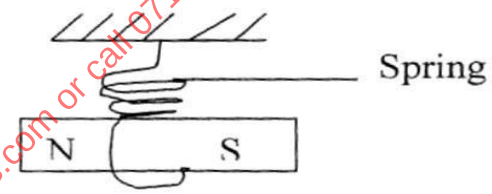
3. The diagrams below show a soft iron plate in a solenoid and a permanent magnet suspended by a spring.





State with reason the behavior of the magnet when the switch S is closed. **(2 mks)**

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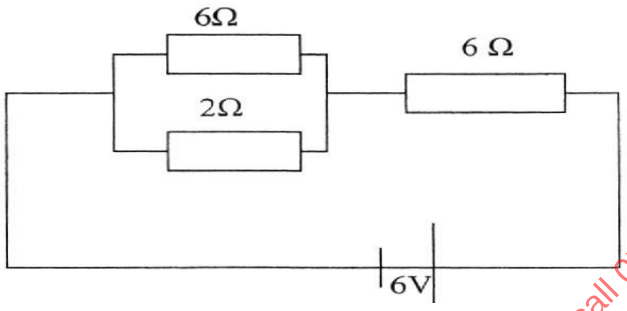
4. A man, standing between 2 parallel vertical walls, claps his hands. He hears the first echo 0.3 seconds later and the next echo after a further 0.2 seconds. If the velocity of sound in air is 300m/h. Calculate the distance between the walls. **(3 mks)**

5. The table below shows an electromagnetic spectrum. Complete the table in the order of increasing wavelength from A- B. **(2 marks)**

A			Visible Light			B

6. The figure below shows a 6V battery connected to an arrangement of resistors.



Determine the current flowing through 2 **Ω** resistor. **(4 marks)**

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7. State difference between semi-conductors and metallic conductors. **(1 mark)**

.....

.....

.....

8. A radioactive sample has a mass of 16g and a half-life of 10 days. How much of the original sample remains after 40 days. **(2 marks)**

9. Negatively charged rod is brought near the cap of a lightly charged electroscope. The leaf divergence first reduces but as the rod comes nearer, it diverges more.

i) State the charge of the electroscope. **(1 mark)**

.....

(ii) Explain the behavior of the leaf above. **(1 mark)**

.....

.....

10. Water waves pass a point in a swimming pool at the rate of 30 crests per 60 seconds. One of the crests was observed to take 2 seconds to travel between 2 points, 6m apart. Determine the wavelength of the water waves. **(2 marks)**

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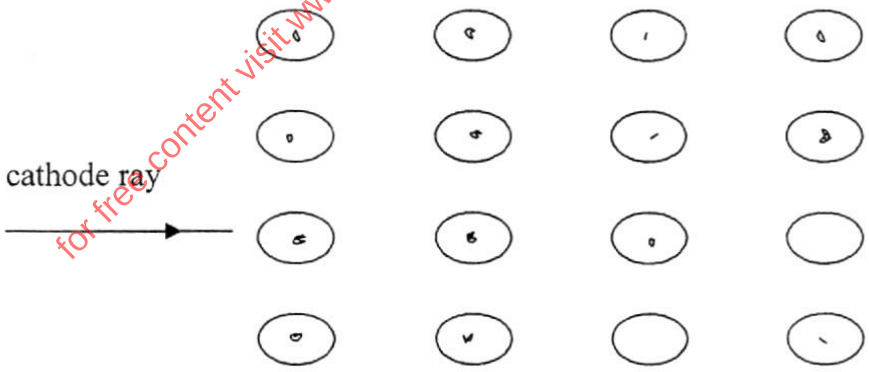
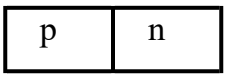
b. The figure below shows a cathode ray beam entering a magnetic field, perpendicular to the plane of the paper complete the diagram to show the path of the beam in the field. **(1 mark)**



11. The diagram below shows a junction diode.



Complete the diagram to show how the diode can be connected in a reverse bias mode. **(1 mark)**

12. An Uranium 236 isotope has a symbol $^{236}_{92}U$ when bombarded by a neutron, it splits to give Substances K and L and 2 neutrons. Calculate the values of a and b in the equation below. (1 mark)

$$^{236}_{92}U + {}^{1}_{1}n \longrightarrow {}^{95}_{56}K + {}^{a}_{b}L + 2\,{}^{1}_{0}n$$

SECTION B 55MKS

13a) Explain why a cathode ray tube is evacuated **(1 mark)**

.....

.....

b) State four properties of cathode rays **(2 marks)**

.....

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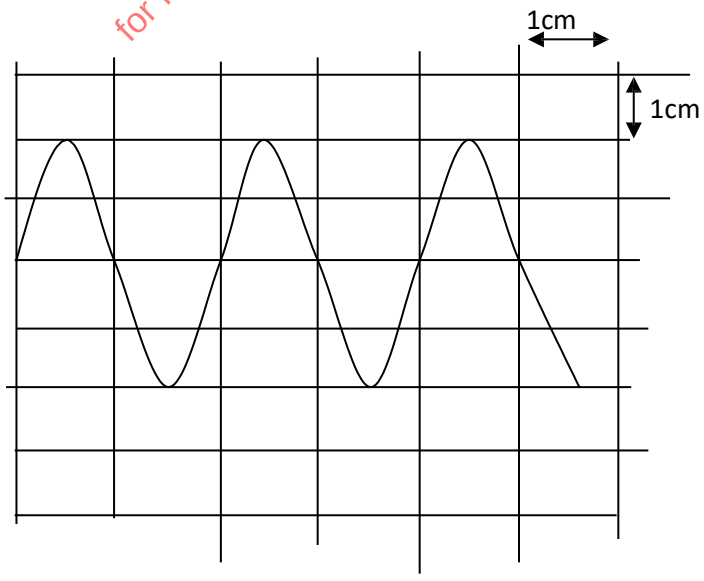
c) The figure shows the waveform displayed on the cathode ray oscilloscope screen when an alternating voltage is applied on the Y-input. The time- base is set at 1ms/cm and the Y-gain at 10v/cm



Calculate;

i. The amplitude of the ac input **voltage** **(2marks)**

ii. The frequency of the ac input voltage signal **(2 marks)**

d) The threshold frequency of sodium is $5.6x10^{14}$Hz .Find

i. Work function of sodium **(2marks)**

ii. The kinetic energy of the ejected electrons when sodium is shone with light of frequency $8.6x10^{14}$ Hz **(2 marks)**

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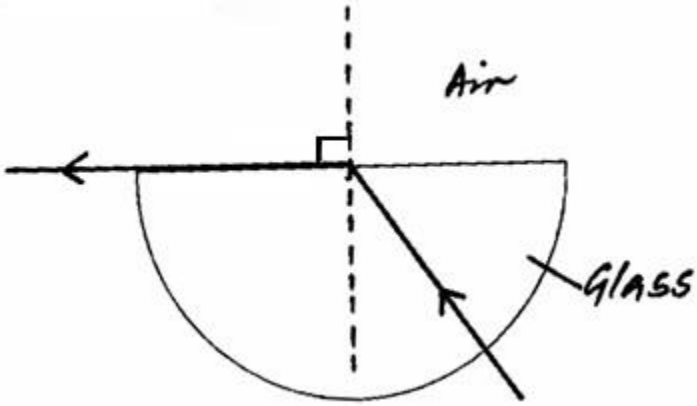
14. State the meaning of the term critical angle as applied in refraction of light. **(1 mark)**

ii) The figure shows a ray of light incident on a glass-air interface.



(i) Show on the diagram the critical angle, **c**. **(1 mark)**

ii) Given that the refractive index of the glass is ${}_a\eta_g$, and that the critical angle **c** = 42°, determine the value of is ${}_a\eta_g$. **(3 marks)**

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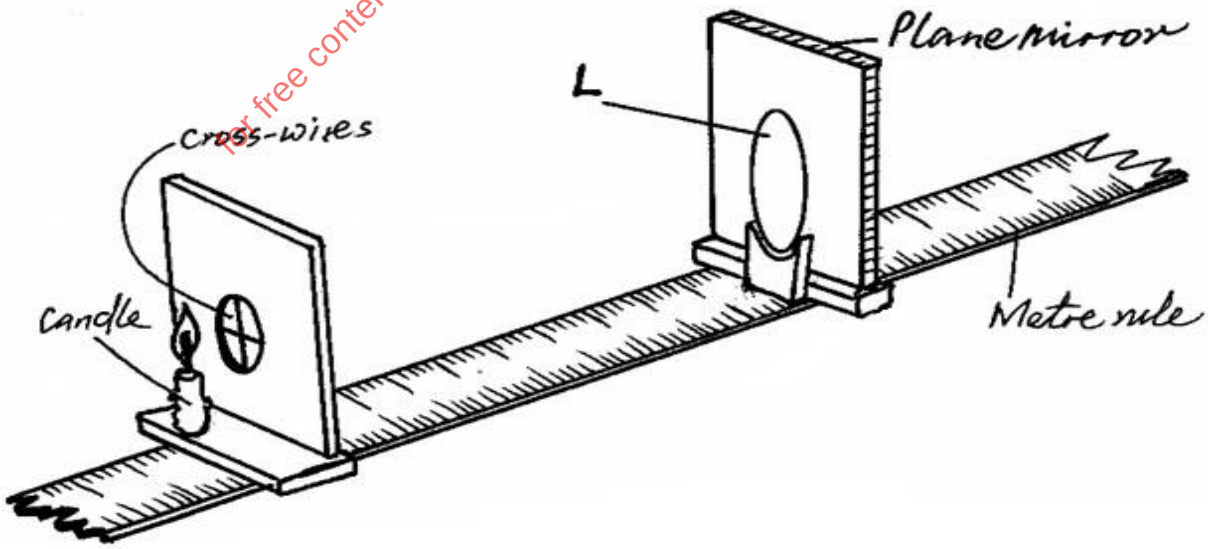
(b) The figure shows an experimental set up consisting of a mounted convex lens **L**, cardboard screen with cross-wires at the centre, a plane mirror, a metre rule and a candle.



Describe how the set-up may be used to determine the focal length, f, of the lens. **(4 marks)**

.....

.....

.....

.....

.....

15.a) State one advantage of high voltage transmission. **(1mark)**

.....

.....

(b) A generator produces 150kw at a voltage of 5kv. The voltage is stepped up to 60kv and transmitted through cables of resistance 15Ω to a step down transformer in a substation. If both transformers are 80% efficient, calculate the:

(i) Current through the transmission cables. **(3marks)**

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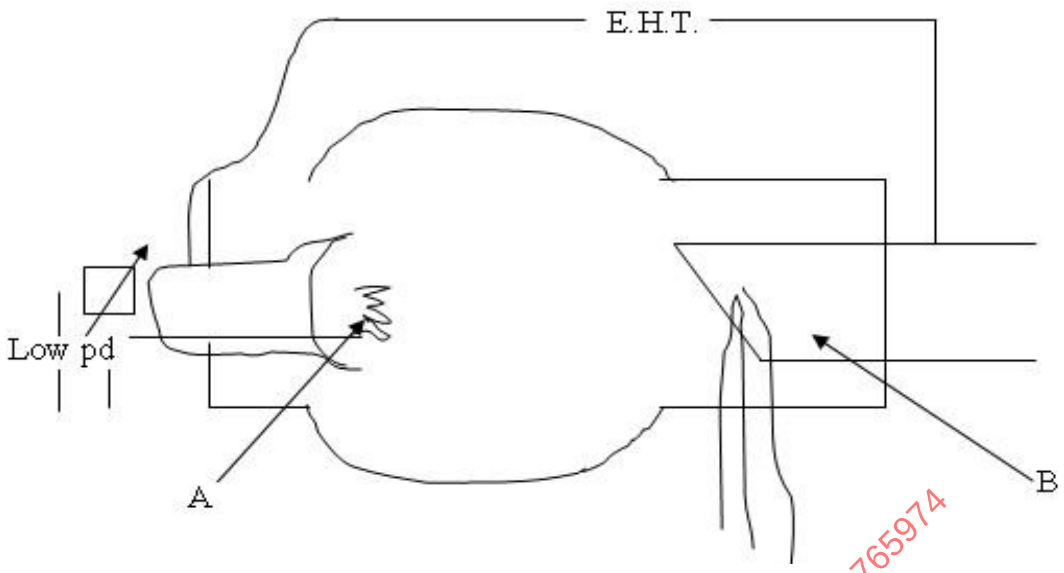
(ii) Power lost during transmission. **(3marks)**

(c) The figure below shows the features of an x ray tube



i)Name the parts labelled A and B. **(2marks)**

……

……

(ii) Explain how change in the potential across PQ change the intensity of the x-rays produced in the tube. **(1marks)**

……

……

(iii) During the operation of the tube, the target becomes very hot. Explain how the heat is caused. **(1mark)**

……

……

……

(iv) What property of lead makes it suitable for use as shielding material? **(1mark)**

……

……

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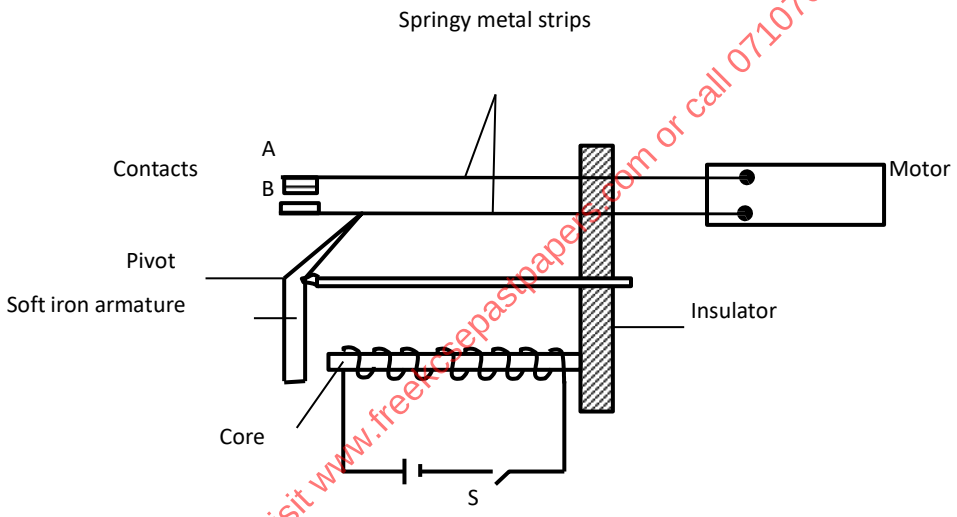
(b) In a certain X ray tube, the electrons are accelerated by a p.d of 12000v. assuming that all the energy goes to produce x rays, determine the frequency of the x rays produced(take planks constant $h=6.62\times10^{-34}$Js, and the charge of an electron $e=1.6\times10^{-19}$ **(3marks)**

16.Figure 8 shows an electromagnetic relay being used to switch an electric motor on and off. The electromagnet consists of a coil of wire wrapped around a core. The motor in figure is switched off.

Figure 8



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(a) Suggest suitable material for the core. **(1mark)**

(b) What happens to the core when switch S is closed**?** **(2marks)**

.....

.....

c) Why do the contacts A and B close when the switch S is closed. **(2marks)**

.....

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.....

(c) When the switch S is opened, what will happen to;

(i) The core **(1mark)**

.....

.....

(ii) Soft iron armature. **(1mark)**

.....

.....

(d) Give **one** other application of an electromagnet. **(1mark)**

.....

(e) State **two** ways in which an electromagnet could be made more powerful. **(2marks)**

.....

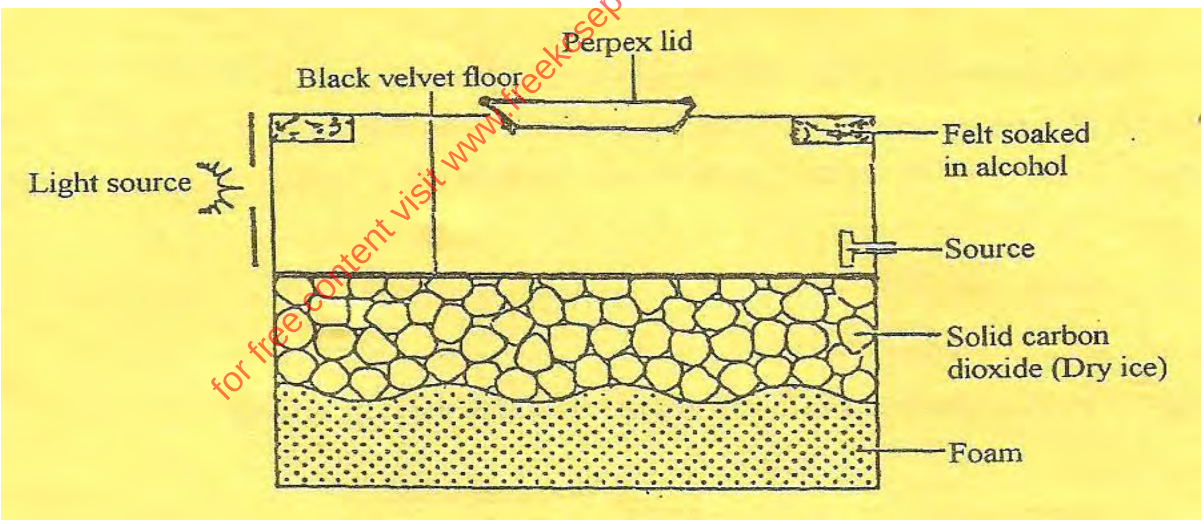
.....

17. Explain why carbon-14 ($^{14}_{6}$) is radioactive while carbon $^{12}_{6}$ is not. **(1 mark)**

.....

.....

(b) The figure below shows features of a diffusion cloud chamber used for detecting radiations from a radioactive source.



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Explain how the chamber works when a radioactive particle is introduced at the source. **(2 mks)**

.....

.....

.....

(c) (i) What is the purpose of solid carbon (iv) oxide. **(1 mark)**

.....

.....

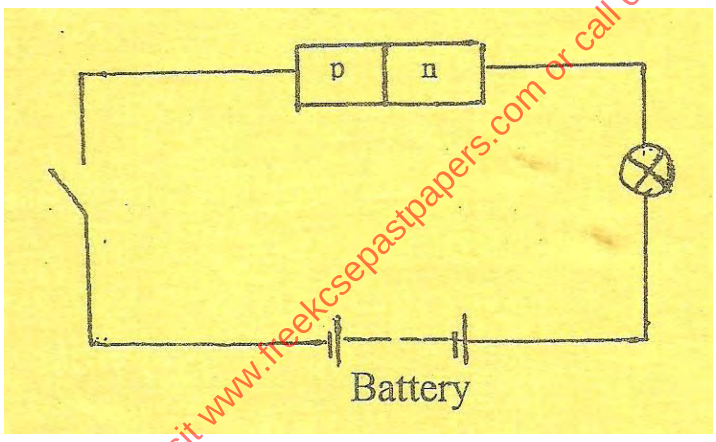
(d) (i) Using a diagram explain how doping produces a p-type semi-conductor. **(3 marks)**

(ii) What is biasing? **(1 mk)**

.....

.....

(iii) The diagram below shows a circuit with a p-n junction and a very low power bulb.



State with reason the observations made on the bulb when the switch is closed. **(2 marks)**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

232/3

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

SCHOOL…… **SIGN**……

(Kenya Certificate of Secondary Education)

CONFIDENTIAL

Each candidate should be provided with the following

QUESTION 1

- Resistance wire fitted on a scale labeled MN (SW 28)
- Switch
- Voltmeter (0-3v) or(0-5v)
- Ammeter (0-2.5A)OR (0-3 A)
- Two dry cells
- Six connecting wires at least 4 with crocodile clips

QUESTION2

- *A concave mirror Focal length 15 cm*
- *Mirror holder.*
- *A screen*
- *A meter rule*
- *A candle*
- *A match box (to be shared)*
- *a boiling tube*
- *a measuring cylinder (50ml)*
- *a half metre rule*
- *water in a beaker about 100ml*
- *a stand complete with boss and clamp*
- *vernier callipers (may be shared)*

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

232/3

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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INSTRUCTIONS TO CANDIDATES:-

- *Write your **name**, **index number** and **school** in the spaces provided above.*
- *Answer **all** the questions in the spaces provided in the question paper*
- *You are supposed to spend the first **15 minutes** of 2 ½ hours reading the whole paper carefully before commencing your work.*
- *Marks are given for a clear record of the observations actually made, their suitability, accuracy and the use of them*
- *Record your observations as soon as you make them.*
- *Mathematical tables, slide rules and silent non-programmable electronic calculators may be used. Take $g = 10ms^{-2}$*

FOREXAMINERS'USEONLY:

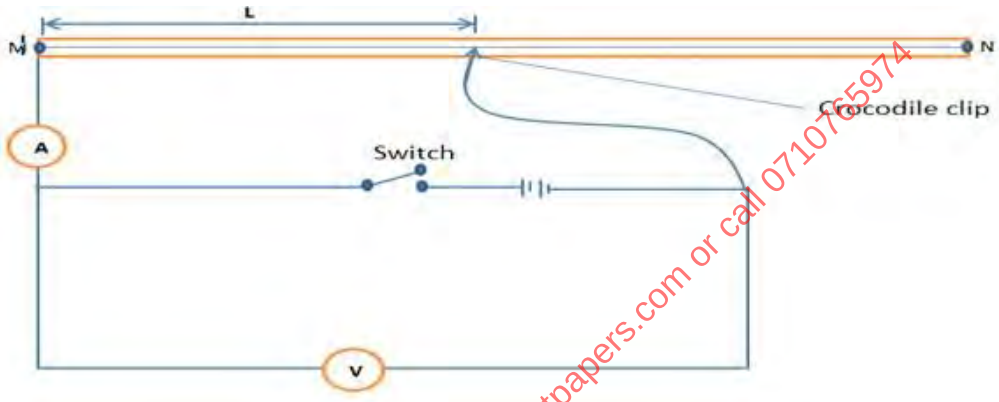
QUESTION	MAXIMUM SCORE	CANDIDATE SCORE
1	20	
2	20	
TOTAL SCORE	**40**	

QUESTION 1

a) You are provided with the following apparatus:

- Resistance wire fitted on a millimeter scale labeled MN
- Switch
- Voltmeter (0-3v) or(0-5v)
- Ammeter (0-2.5) or(0-3)
- Two dry cells
- Six connecting wires

i) Set up the apparatus as shown in the fig 1 below.



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ii) Remove the crocodile clip from the resistance wire MN and close the switch. Record the voltmeter reading.

V_0=……V (1mk)

iii) Attach the crocodile clip to the resistance wire such that L=0.

Read and record the ammeter reading at L=0

I_0=……A (1mk)

iv) Repeat the procedure in (iii) and for L=10cm, 20 cm, 30 cm, 40 cm, 50cm, 60 cm, 70cm and 80 cm and record the voltmeter and ammeter reading in the table below.

v) Complete the table below. **(7marks)**

Length L(cm)	10	20	30	40	50	60	70	80
Current I(A)								
p.d V(V)								
V_0-V								
$\frac{\square}{\square_0 -}$								
$\frac{\square}{I}$ = R (Ω)								

vi) a) Plot the graph of $\frac{\square}{\square 0-\square}$, vertical axis against R **(5marks)**

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b) Determine the slope of the graph **(3marks)**

c) Given that $\frac{\square}{\square 0-\square} = \frac{MR}{5} + d$

Where M and d are constants, Determine the values of M and d from the graph. **(3marks)**

QUESTION 2

PART A

You are provided with the following.

- A concave mirror
- A mirror holder.
- A screen
- A meter rule
- A candle
- A match box (to be shared)

Proceed as follows:

a. i) Using the concave mirror provided focus a sharp image of a distant object (a laboratory window) on the screen. Measure the distance (X) between the mirror and the screen at which a sharp image is obtained repeat this three times, and record your readings in the table**below.3mks**

TRIAL	Distance(X) (cm)
1	
2	
3	

ii) Calculate the average value of X. **(2 marks)**

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iii) What is the physical significance of the result obtained in (ii) above? **(1 mark)**

b) Set up the apparatus as in figure 2 below.

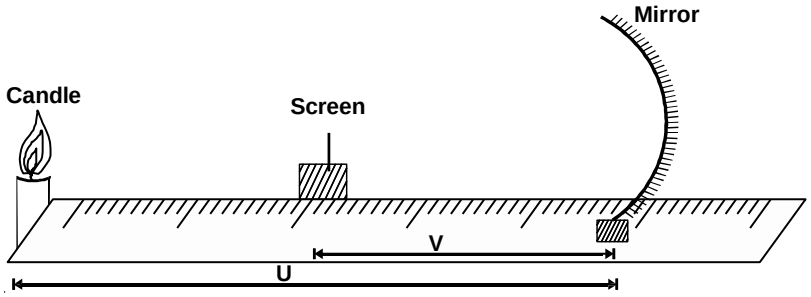

Fig 2

c) Put the object at a distance u = 30cm and from the concave mirror. Adjust the position of the screen until a sharp image is formed on the screen. Record the distance V

d) Repeat procedure (c) above for the distance u = 40cm and record the new distance V, in the table below

e) complete the table below. **3marks**

U(cm)	V (cm) $f = \frac{v}{(m+1)}$	m =V/U	(m + 1)
30			
40			

f) Given that $f = \frac{v}{(m+1)}$, calculate the values of f in each case; **(3 marks)**

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2 PARTB

You are provided with the following :

- a boiling tube
- a measuring cylinder
- a half metre rule
- water in a container
- a stand complete with boss and clamp
- vernier callipers (may be shared)

Proceed as follows:

a) i) Using the vernier callipers measure the internal diameter,(d),of the boiling tube provided

d =..... cm **(1/2 mark)**

ii) Using the half meter rule measure the height of the boiling tube provided

h=……cm **(1/2 mark)**

iii) Calculate the volume of boiling tube **(2marks)**

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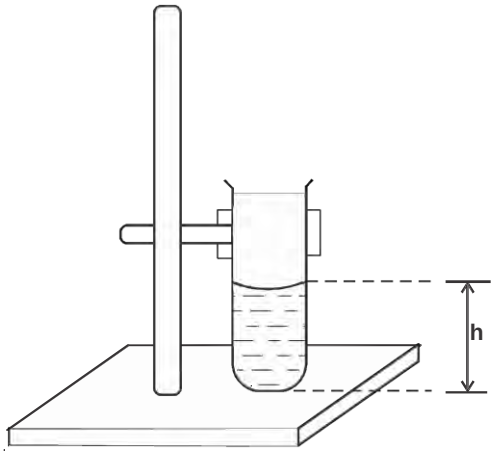
b) i) Clamp the boiling tube vertically as shown in the figure 1 below.



ii. Using the measuring cylinder pour 25cm^3 of water into the boiling tube. Measure and record in the table below the height h, of water in the boiling tube.

iii) Repeat the procedure in b (ii) for other volumes of water, V, shown in the table.

3marks

Volume, **V**, of water (cm^3)	Height, **h**, of water (cm)	S =**V/h**
25		
35		
45		

iv) Calculate the average value of **S** and state what it represents **2marks**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

443/1

AGRICULTURE

PAPER 1

TIME: 2 HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

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

(c) This paper consist of three sections A,B and C.

(d) Answer all the questions in section A and B.

(e) Answer any two questions in section C.

FOR EXAMINER'SUSEONLY

SECTION	MAXIMUM SCORE	CANDIDATES' SCORE
A		
B		
C		

SECTION A.(30 marks)

Answer ALL the questions in this section on the spaces provided.

1. State four factors influencing the choice of farming methods a farmer may use. **(2 marks)**

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……

2. State four advantages of drip irrigation. **(2 marks)**

……

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3. Differentiate between hybrid and composite as used in crop production. **(2 marks)**

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……

4. Highlight two ways of hardening off tomato seedlings before transplanting. **(1 mark)**

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……

……

5. Give a reason as to why a farmer is supposed to observe the following precautions in the farm.

(2 marks)

(a) Always store farm yard manure under a shade.

……

……

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(b) Wear gloves while applying nitrogenous fertilizers.

.....

.....

6. (a) Distinguish between stocking rate and carrying capacity as used in forage production.

(2 marks)

.....

.....

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.....

(b) Give two reasons for conserving forage. **(1 mark)**

.....

.....

7. Outline four ways in which grass help to conserve soil. **(2 marks)**

.....

.....

.....

.....

8. Give two signs of blight in a field of tomatoes. **(1 mark)**

.....

.....

9. State two types of labour records **(1 mark)**

.....

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10. Give two reasons for growing crops under optimum temperature conditions.

(1 mark)

.....

.....

.....

11. Define the law of profit maximization. **(1 mark)**

.....

.....

12. Outline four ways a farmer can improve labour productivity in the farm. **(2 marks)**

.....

.....

.....

.....

13. State two reasons why farmer should be encouraged to practice organic farming. **(1 mark)**

.....

.....

.....

14. State two ways in which crop rotation controls weeds. **(1 mark)**

.....

.....

.....

15. Give two reasons for carrying out each of the following operations in land preparation:

a) rolling; **(1mark)**

.....

.....

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b) leveling. **(1mark)**

.....

.....

.....

16. Why is it advisable to apply straight nitrogenous fertilizer to a crop of maize at a height of 30-45 cm. **(2 marks)**

.....

.....

.....

.....

.....

.....

17. Give four reasons why the use of herbicides is discouraged during land clearing. **(2 marks)**

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18. Give four conditions that have lead to fragmentations and sub-division of agricultural land in Kenya. **(2 marks)**

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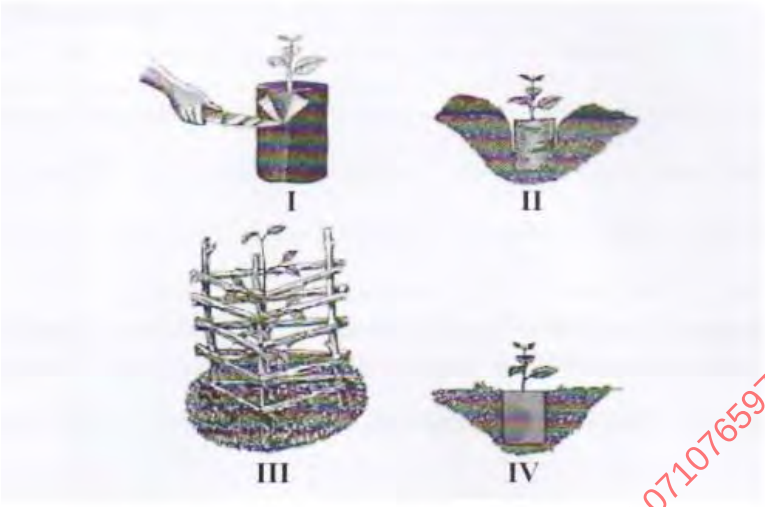
SECTION B. (20 marks)

Answer ALL the questions in this section.

19. The diagram below shows a practice in agroforestry.



(a) Identify the practice. **(1 mark)**

……

(b) State the importance of the activity labelled:

I ……**(1 mark)**

III……**(1 mark)**

IV ……**(1 mark)**

(a) State the main precaution Observed when covering the seedling as illustrated in III. **(l mark)**

……

……

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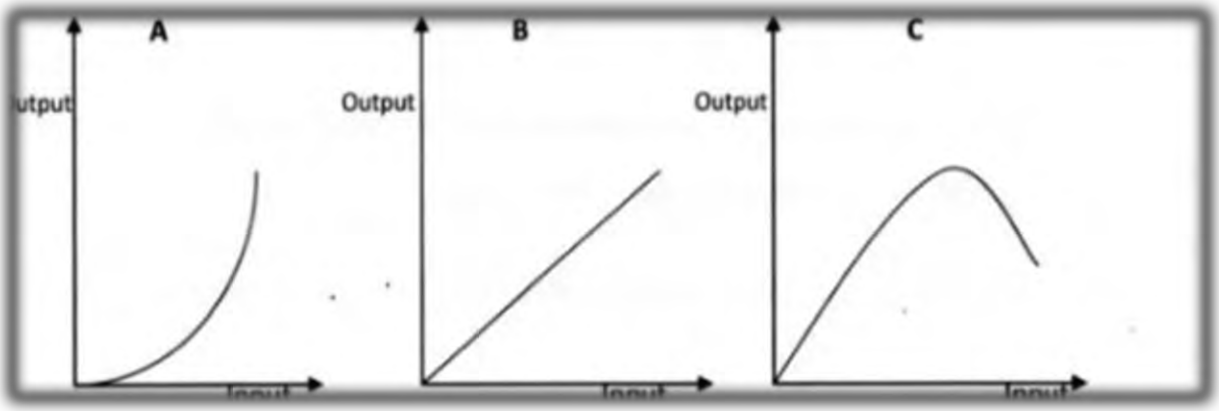
20. The following illustration shows different production function curves in agricultural economics. Study them and answer the questions that follows.



(a) Identify the production function curves labeled A and B.

A…… **(1 mark)**

B……**(1 mark)**

(b) What does the law derived from the production function C states. **(1 mark)**

……

……

……

(c) Which one of the three production curves is rare in Agriculture. **(1 mark)**

……

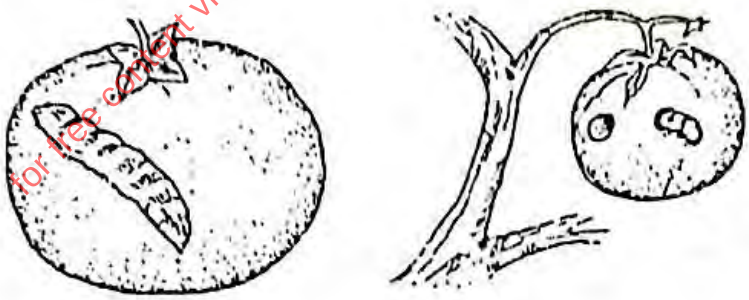
……

(d) Give a reason for your answer in question C above. **(1 mark)**

……

……

21. The diagram below illustrate a tomato fruit infested by a field pest



(a) Identify the pest. **(1 mark)**

……

(b) State two ways in which the pest is economically important. **(2 marks)**

……

……

……

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(c) State two cultural ways of controlling the pest. **(2 marks)**

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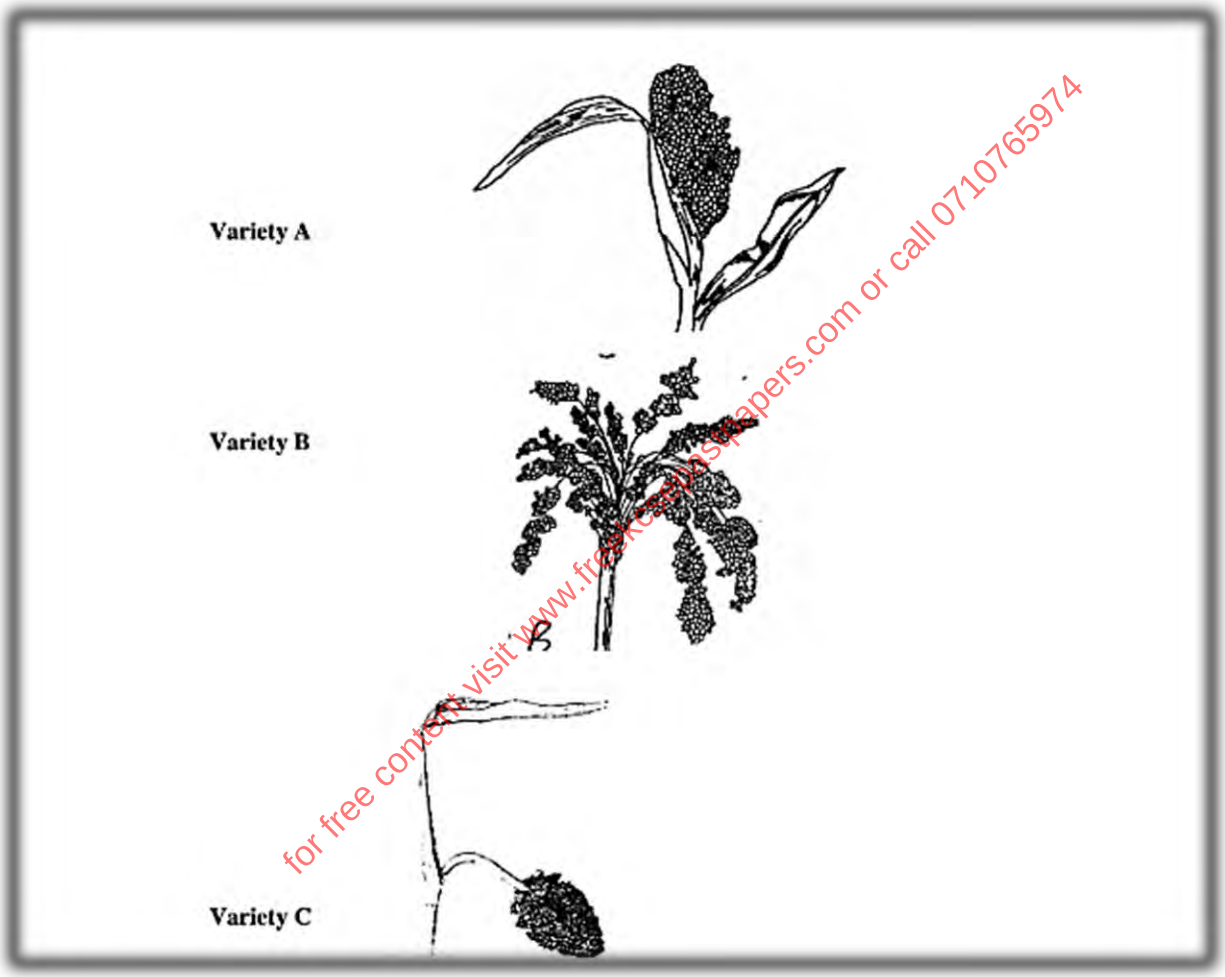
……

……

22. Illustration below shows sorghum varieties A, B and C. Study them and answer the questions that follows.



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(a) (i) Identify varieties A, B and C. **(1 ½ marks)**

A……

B……

C……

(ii) Which of the three varieties is less likely to be destroyed by birds? **(1 mark)**

.....

(iii) State three reasons in (a) (ii) above. **(1 ½ marks)**

.....

.....

.....

(b) Give one example of the pest and disease affecting sorghum respectively. **(2 marks)**

.....

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SECTION C.(40 marks)

Choose ANY TWO questions in this section.

23. (a) State five functions of young farmers clubs in Kenya. **(5 marks)**

(b) Describe the procedure of preparing green manure. **(5 marks)**

(c) Describe various risks and uncertainties in maize crop farming. **(10 marks)**

24. (a) Outline the information contain in a purchase order. **(5 marks)**

(b) Explain ways in which

(i) Government policy improves agricultural production. **(5 marks)**

(ii) Low level of education and technology influences agriculture **(4 marks)**

(b) Describe six cultural methods of controlling crop diseases. **(6 marks)**

25. (a) (i) Describe harvesting of harvesting coffee **(5 marks).**

(ii) Describe the precautions when harvesting cotton **(5 marks)**

(b) Describe the safety measures observed when handling herbicides. **(10 marks)**

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TRIAL 2 2024

443/2

AGRICULTURE

PAPER 2

TIME: 2 HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

INSTRUCTIONS

- *Write down your name and admission number in the spaces provided above*
- *Sign and write the date of examination in the spaces provided above*
- *This paper consists of three sections;* ***A, B*** *and* ***C***
- *Answer ALL the questions in section* ***A*** *and* ***B***
- *Answer any two questions in section* ***C***
- All answers should be written in the spaces provided
- Candidates should check the question paper and ascertain that all the pages are printed as indicated and that no questions are missing.

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Section	Question	Maximum score	Candidate's score
A	1-18	30	
B	19--22	20	
C	23	20	
	24	20	
	25	20	
TOTAL		**90**	

SECTIONA(30MARKS)

1. Name the complementary tool of each of the tools named below **(1mk)**

i) Hand drill

……

ii) Bull ring-……..

2. State **four** factors that influence the respiration rate in livestock. **(2mks)**

……

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3.. List **three** body conformation features of Aberdeen Angus. **(2mks)**

……

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4. Give **four** reasons why honey harvesting at night should be discouraged. **(2mks)**

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5. List **three** problems associated with air cooled tractor engine **($1^{1/2}$mks)**

……

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6. Give **three** reasons why calves should be housed singly **($1^{1/2}$mks)**

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7. Give reasons for the following **($1^{1/2}$mks)**

i) Why feeders in poultry rearing have a rotating bar?

……

……

ii) Why brooders are circular in shape?

……

……

ii) Why the waterers have a pointed top?

……

……

8. State **two** causes of ruminal tympany? **(1mk)**

……

……

9. State **six** factors considered when selecting female rabbits for breeding **(3mks)**

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10. State **four** ways of controlling tsetse flies. **(2mks)**

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11. Give **four** ways of stimulating milk let-down in a dairy cow. **(2mks)**

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12. State **four** disadvantages of natural mating as a method of breeding in dairy cattle management. **(2mks)**

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13. State **two** functions of a queen in a bee colony **(1mk)**

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14. State **four** factors that would determine the amount of concentrate fed to dairy cattle. **(2mks)**

.....

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15. Give **four** causes of scouring in calves. **(2mks)**

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16. Give **four** ways in which disease causing organisms can gain access into a newly born lamb **(2mks)**

……

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17. State **four** conditions that would encourage hens to eat eggs in poultry production **(2mks)**

……

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……

……

18. List **two** equipment used in handling cattle during an agricultural exhibition. **(1mk)**

……

……

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SECTIONB(20marks)

Answerallquestionsinthissection

19 .The diagrams is an illustration of a chick suffering from malnutrition

a) State the causes of the above identified deficiency. **(1mk)**

……

b) A part from the symptom shown above , give four other symptoms shown by the bird **(4mks)**

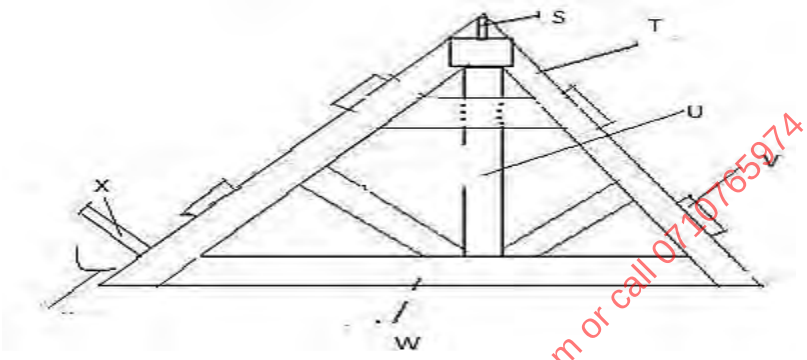
……

……

……

……

20. The diagram is an illustration showing parts of a roof. Study it and answer the questions that follow.



a) Name parts labeled

S……

U……

V……

W……

b) Give the functions of part labeled

X……

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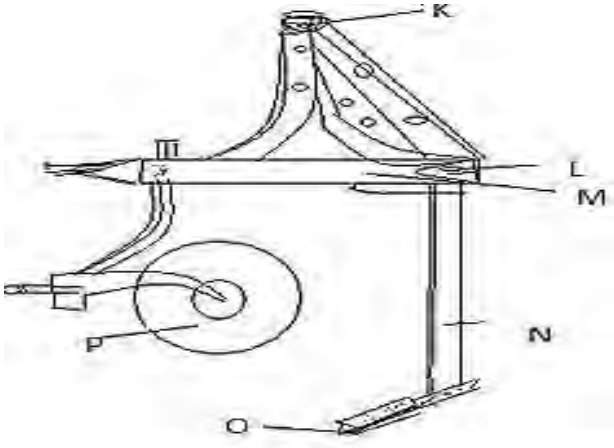
21. Study the diagram below and answer the question that follows



a) Identify the implement shown above **(1mk)**

……

b) Give the functions of parts labeled **(2mks)**

O……

P……

c) Name the method of attachment of the implement you have mentioned above. **(1mk)**

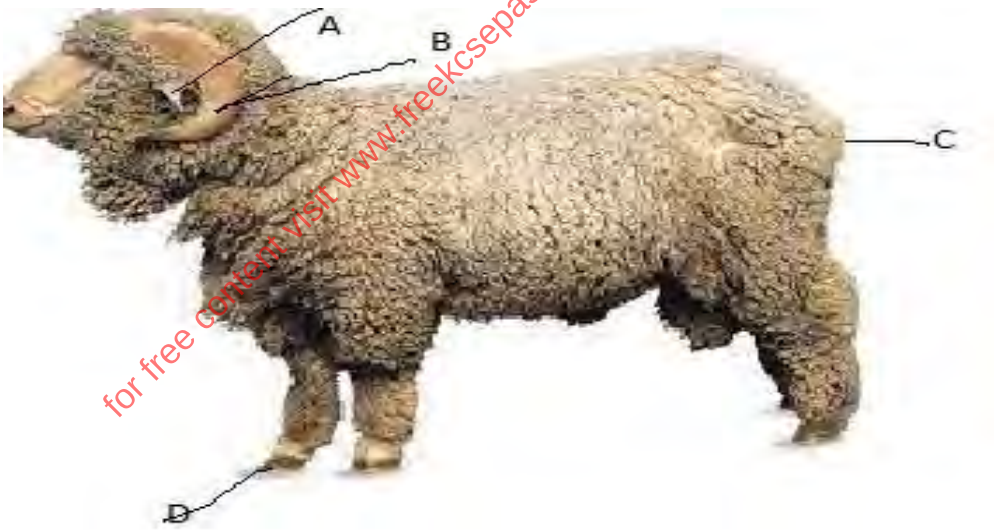
……

d) State the maintenance practice carried out on part labeled O **(1mk)**

……

……

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



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a) Identify the sheep breed illustrated **(1mk)**

……

b) Identify the practice that can be carried out at point labeled **C** and D **(2mks)**

C……

D……

c) Name the practice that should be carried at point **B** at the early stages of development. **(1mk)**

……

d) Identify the practice that can be carried out at point labeled **C** and D **(2mks)**

C……

D……

SECTIONC(40MKS)

Answer any two questions from this section in the spaces provided

23 a) Describe how each stroke in a four-stroke cycle petrol engine operates. **(10mks)**

b) State **six** signs that are likely to be observed when a cow is on heat **(6mks)**

c) State **four** advantages of animal as a source of farm power **(4mks)**

24 a) Discuss Foot and **Mouth** disease under the following headings:

i) Casual organism. **(1mark)** ii)

Animals attacked. **(2marks)** iii)

Symptoms of attack. **(6 marks)** Iv)

Control measures **(4mks)**

b) Describe the **physiological** signs of ill health in an animal **(7mks)**

25 a) Outline the procedure followed when hand spraying cattle to ensure control of ticks.

(10mks)

***b*) Describe** digestion of grass in small intestines of ruminant animals **(5mks)**

c) Describe **five** factors that affect milk composition in dairy farming. **(5mks)**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

565/1

BUSINESS STUDIES

PAPER 1

TIME: 2 HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

INSTRUCTIONS

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

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

c) *Answer all the questions.*

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

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

FOREXAMINER'SUSEONLY

QUESTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MARKS															

16	17	18	19	20	21	22	23	24	25

Answer all the questions.

1. Outline four strategies put in place by the chain stores management so as to easily publicize their business. **(4 marks)**

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2. Apart from memorandum and articles of association, name four other documents required by the registrar of companies during the registration of a public limited company. **(4 marks)**

……

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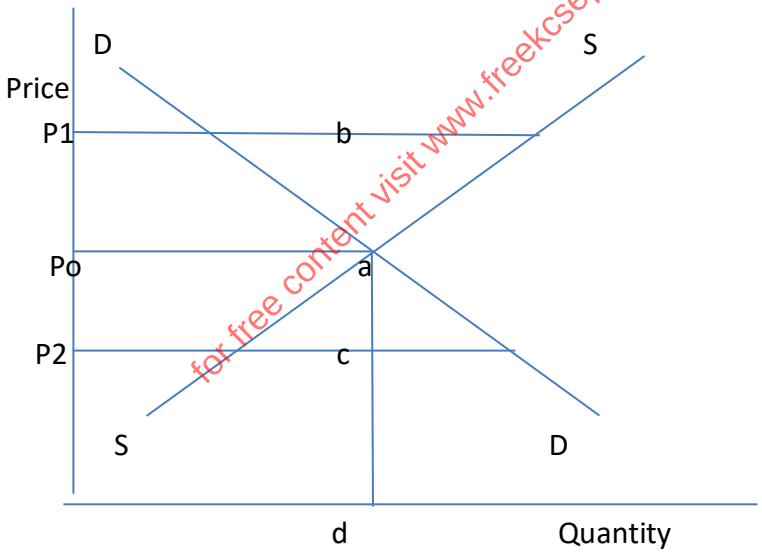
3. Identify the parts labeled a,b,c and d. **(4 marks)**



a……

b……

c……

d……

4. Outline four ways in which commerce satisfies human wants. **(4 marks)**

.....

.....

.....

.....

5. State the purpose of the following terms as used in insurance:

i. With average clause. **(1 mark)**

.....

.....

ii. Grace period**.** **(1 mark)**

.....

.....

iii. Assignment. **(1 mark)**

.....

.....

iv. Nomination. **(1 mark)**

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6. From the following statements, identify the suitable characteristic of an entrepreneur**. (4 Marks)**

Statement	Characteristic
a) Entrepreneurs are achievers who work towards set goals.	
b) Entrepreneurs can sense opportunities in the future by observing world trends.	
c) Entrepreneurs are commited to their work	
d) Entrepreneurs do not give up easily	

7. Analyze the following document issued by Maalim traders.

MAALIM TRADERS

P.O BOX 00134 M,
NAIROBI.

02ND,JULY, 2023

DEBIT
MURIFE LIMITED
P.O BOX 987T
KISUMU

Terms: 17/20, 11/30 & N/30 on Furniture only

Quantity		Rate Shs	Shillings
60	Dinning tables Mvuli	4000	240,000
4	Beds	2000	8000
50	Coffee Tables	1000	50,000
	Less trade discount 10% on totals		
4	Floor carpets	2500	10,000
	Less 10% trade discount		
	Carriage		7500
E&OE			TOTALS

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a) i. Identify the above document. **(1 Mark)**

……

b) State the meaning of:

i) E&OE **(1 Mark)**

……

……

c) Calculate the amount paid for the goods, if the debtor paid on 24th, July, 2023. **(2 marks)**

8. State the meaning of the following in relation to international trade: **(4 marks)**

i. F.O.Q

……

……

ii. FRANCO

……

……

iii. Letter of Hypothecation

……

……

iv. Closed indent

……

……

9. Given below is a cashbook extract from the books of Kanja

Date	Details	Folio	Disount Allowed	Cash	Bank
1/06/08	Bal.	B/d		11,000	60,000
5/06/08	Furniture				10,000
24/06/08	Cash	C			75,000
29/06/08	Ndereba		6000	114,000	
30/06/08	Wairimu		4000		16,000

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In relation to the entries appearing in the cashbook extract, state the transactions that took place on each of the following dates: **(4 marks)**

a) 05th, June, 2008

……

b) 24th, June, 2008

……

c) 29th, June, 2008

……

d) 30th, June, 2008

……

10. Identify any four units of carriage that can be used to transport containers. **(4 marks)**

……

……

……

……

11. Identify the type of error made in recording each of the following transactions in the table below: **(4 marks)**

Transaction	Type of Error
a) The amount in an invoice for goods purchased was recorded in the books as KES 8,000 instead of KES 800	
b) Purchase of office machine was debited to the purchases account.	
c) Despite agreement of the trial balance, sales and purchases had been overstated by KES 6,000 in each case.	
d) A cheque for KES 110,000 was recieved from Amwoka, debited in his account and credited in the bank account.	

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12. State four ways in which employees may contribute to the success of an organization.

(4 marks)

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13. For each of the following transactions, state the source document and the book of original entry in which the transactions would be recorded. (4 marks)

TRANSACTION	SOURCE DOCUMENT	BOOK OF ORIGINAL ENTRY
a) Goods worth 760,000 which had been bought from Andika wholesalers ,in cash, were found defective and were returned.		
b) Stock of goods worth 138,000 was sold to Juma on credit.		
c) Paid Creditor Masafu 980,000 shillings cash		
d) Bought machinery worth 800,000 on credit		

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14. Kenya's total Budget for the 2023/2024 financial year is KES 3.68 trillion shillings. The budget deficit is 718 Billion out of which 586.5 Billion will be sourced locally and the rest externally. Advice the Kenyan government on various local and external sources it should turn to in order to finance her deficit budget. **(4 marks)**

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15. State four positive effects of inflation to an economy. **(4 marks)**

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16. Name the forms of economic integration described by each of the following situations: **(4 marks)**

a) Free trade exists between member countries but common external tarrifs are levied on non-member states…….

b) Has policies of freedom of movement among member states……..

c) Members abolish tariffs, quotas and any other barriers when trading amongst themselves but each country sets independent barriers for trade with non-member states…….

d) Member states establish common infrastructure and institutions among themselves……...

17. Outline any four ways in which the government may use to entice foreign investors to the country. . **(4 marks)**

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18. Outline four differences between savings account and fixed deposit accounts. **(4 marks)**

SAVINGS ACCOUNT	FIXED DEPOSIT ACCOUNT

19. The following information was extracted from the national income statistics of country Z:

Income from land lease and commercial buildings 980,000
Depreciation on capital goods 197,623
Income to entrepreneurs 763,041
Value of exports to Europe 479,109
Income from loans 896,534
Income from labor 814,276
Value of imports 584,298

Determine:

a) Gross Domestic Product **(1 mark)**

b) Net Domestic **Product** **(1 mark) c)**

Gross National product **(1 mark) d)**

Net National Product **(1 mark)**

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20. Outline four circumstances under which sign language can be the most appropriate means of communication. **(4 marks)**

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21. State four ways in which consumers may protect themselves from exploitation against unscrupulous traders. **(4 marks)**

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22. Name four types of oligopoly markets other than duopoly. **(4 marks)**

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23. List any four details that are contained in a cheque. **(4 marks)**

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24. The following information Elimu traders for the year 2022:

Turnover 270,000

Mark up 20%

Rate of Stock turnover 6 times

Closing Stock 25,986

Required:

a) Gross Profit. **(1 mark)**

b) Cost of goods sold. **(1 mark)**

c) Opening Stock. **(2 marks)**

25. Outline four disadvantages of personal selling. **(4 marks)**

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KAPSABET HIGH SCHOOL

565/2

BUSINESS STUDIES

PAPER 2

TIME: 2½ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

INSTRUCTIONS

a) *Write your name and index number in the spaces provided above.*
b) *Sign and write the date of the examination in the spaces provided above.*
c) *This paper consists of six questions*
d) *Answer any five questions in the spaces provided after question 6.*
e) *All questions carry the same marks*
f) *Non-programmable silent electronic calculators may be used.*
g) *Candidates should answer questions in English*
h) *All workings MUST be clearly shown*

ForExaminer'sUseOnly

Question	Maximum Score	Candidate's Score
	20	
	20	
	20	
	20	
	20	
Total Score	100	

Answer any five questions in the spaces provided

1. a) Every business aims to succeed in today's dynamic and competitive marketplace. Explain five causes of business success. **(10 mks)**

b) The supply curve of a product registered a positive shift even though its price remained constant. Explain five causes that may have led to this shift. **(10 mks)**

2. a) Indirect production enables people to produce in excess for sale. Outline four reasons why this type of production is important in an economy. **(8 mks)**

b) Below are the balances of Kirwa Enterprises as at 1st January 2024.

Furniture	960,000
Cash	200,000
Mukora (Creditor)	270,000

The following transactions took place during the month of April 2024.

2/01/24; Kirwa sold his own furniture for Ksh 300,000 and received payment in cash which he invested in his business.

05/01/24; He purchased goods for Ksh 100,000 on credit from Mukora

06/01/24; He returned goods worth Ksh 13,000 to Mukora after they were found to be defective.

07/01/24: He took away goods worth Ksh.8,000 to pay her maid.

08/01/24: Sold goods worth Ksh 50,000 for Ksh 40,000 receiving partial payment of Ksh 20,000 in cash and the balance to be paid later.

Required:

The balance sheet as at 8th January 2024 after the above transactions in order of permanency clearly showing the workings. **(10 mks)**

3. a) There is a deliberate effort by firms to shift towards making payments through paperless money. Highlight five reasons for this trend. **(10 mks)**

b) Kaka Mwema owns a shipping company with a fleet of 62 ships. He intends to insure them against various perils associated with sea transport. Advise him on any five policies he can take to insure his ships against. **(10 mks)**

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4. a) The following information relates to KK Enterprises for the year ended 31st December 2023.

KK Enterprises

Trial Balance

As at 31st Dec 2023

Item	Dr	Cr
Premises	5,000,000	
Furniture	1,875,000	
Capital		6,125,000
Net profit		62,500
Stock	125,000	
Debtors	250,000	
Drawings	75,000	
10-year Bank Loan		2,375,000
Bank	1,212,500	
Cash	450,000	
Creditors		425,000
	8,987,500	8,987,500

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Calculate

i) Capital Invested **(2 mk)**

ii) Borrowed capital **(1 mk)**

iii) Working Capital **(2 mks)**

iv) Capital employed **(2 mks)**

v) Rate of return on capital employed **(3 mks)**

b) Draw five differences between a Co-operative society and a Public limited company. **(10 mks)**

5. a) Explain five reasons for the popularity of using internet in product promotion. **(10 mks)**

b) Explain five negative effects of unemployment. **(10 mks)**

6. a) The following trial balance was extracted from the books of Rift valley traders as at 31/12/2023

	Dr. (Shs.)	Cr. (Shs.)
Purchases and Sales	275,000	390,000
Debtors	47,000	
Rent		30,000
Returns	10,000	6,000
Carriage on purchases	16,000	
Bad debts	13,000	
Advertising	10,000	
Stationery	12,000	
Motor van	450,000	
Freehold property	180,000	
Bank		210,000
Interest	10,000	
Discounts	5,000	13,000
Drawings	25,000	
Creditors		52,000
Cash at hand	290,000	
Electricity	9000	
Stock 1-1-2023	30,000	
Capital		689,000
	1,390,000	1,390,000

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Additionalinformation:

(i) Stock 31-12-2023 Sh.50, 000

(ii) Carriage on sales Sh. 8,000

Required:

Prepare a trading, profit and loss account **(10 mks)**

b) Explain 5 measures a country may adopt to correct a balance of payment deficit **(10 mks)**

KAPSABET HIGH SCHOOL

TRIAL 2 2024

313/1
CRE
PAPER 1
TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

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(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

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

b) *Write the date of examination and sign in the spaces provided above.*

c) *This paper consists of **six** questions.*

d) *Answer any **five** questions in the answer booklet provided.*

FOREXAMINER'SUSEONLY

Question	1	2	3	4	5	6	TOTAL SCORE
Candidates Score							

Answer any five questions in the answer booklet provided.

1. (a) Explain how the learning of Christian Religious Education promotes the goal of National unity. **(7marks)**

(b) List **five** major prophetic books in the Old Testament. **(5 marks)**

(c) Give reasons why reading the Bible is important to Christians today. **(8 marks)**

2. (a) Narrate the incident when Abraham was willing to sacrifice his son Isaac (Gen 22:1-19) **(7 marks)**

(b) State **seven** similarities between the Jewish and traditional African practice of circumcision **(7 marks)**

(c) Identify **six** lessons Christians learn from the incident Abraham was willing to sacrifice his son Isaac. **(6 marks)**

3. (a)Identify **eight** ways through which Samuel promoted the worship of Yahweh in Israel. **(8 marks)**

(b) From the story of Naboth's vine yard explain the commandments which king Ahab and Queen Jezebel broke. **(7mks)**

(c) State **six** challenges church leaders in Kenya face while carrying out their work. **(6 marks)**

4. (a) State **six** differences between true and false prophets in Israel. **(6 marks)**

(b) Outline the teachings of prophet Amos on the day of the Lord. **(7 marks)**

(c) Give **seven** ways through which Christians can avoid God's punishment. **(7 marks)**

5. a) Outline **seven** challenges Nehemiah encountered in rebuilding the wall of Jerusalem. **(7 marks)**

(b) State the promises the Israelites made when they renewed their covenant with God during the time of Nehemiah (Neh 10:28-38). **(7marks)**

(c) Identify **six** causes of power struggle in the church in Kenya today. **(6marks)**

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6. (a) List **six** places in which sacrifices are carried out in traditional African communities.

(6marks)

(b) Outline the role of healers in traditional African communities. **(7marks)**

(c) State **seven** roles of the community in the upbringing of children in traditional African community **(7marks)**

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KAPSABET HIGH SCHOOL

313/2

CHRISTIAN RELIGIOUS EDUCATION

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

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(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

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

b) *Write the date of examination and sign in the spaces provided above.*

c) *This paper consists of* ***six*** *questions.*

d) *Answer any* ***five*** *questions in the answer booklet provided.*

FOREXAMINER'SUSEONLY

Question	1	2	3	4	5	6	TOTAL SCORE
Candidates Score							

Answer any five questions in the answer booklet provided.

1. (a)Outline the psalmist prophecy about the future Messiah.(Psalms 41;9 ,110; 1-2) **(6 marks)**

(b) Describe the activities that took place during the dedication of Jesus in the temple **(Luke 2:22-40)** **(8mks)**

(c) Give **six** reasons why Christian dedicate their children to God today **(6mks)**

2. a). Describe the baptism of Jesus in river Jordan by John the Baptist in Luke 3:21-22 (6Marks)

(b) Outline what Jesus said about John the Baptist to his disciples **(7mks)**

(c) Identify **six** importance of transfiguration of Jesus to Christians today **(6mks)**

3. (a)Identify **seven** teachings that Jesus made to the guests at the Pharisee's house **(Luke 14:15-24)** **(7mks)**

(b) Describe the parable of the shrewd manager Luke 16:1-15 **(7marks)**

(c) State **six** reasons why the disciples found it difficult to believe that Jesus had resurrected **(6mks)**

4. (a)Explain the teachings of Peter concerning the people of God **(1 Peter 2:9-10) (7mks)**

(b) Identify **seven** ways Christians can identify those who are led by the Holy Spirit **(7mks)**

(c) State **seven** ways through which Christians in Kenya demonstrate New Testament teaching on unity **(6mks)**

5. (a) Outline the Christian teaching on marriage **(7mks)**

(b) Identify **seven** causes of Pre-marital sex among the youth **(7mks)**

(c) Identify **six** ways in which the church is helping to solve the problem of domestic violence in Kenya today **(6mks)**

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6. (a) Outline **seven** teachings of Jesus on wealth**.** **(7marks)**

(b) Identify **seven** ways the church is using to eradicate poverty in the society today **(7mks)**

(c) Give reasons why Christians should not involve themselves in gambling**.** **(6 Marks)**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

311/1

HISTORY AND GOVERNMENT

PAPER 1

TIME: 2½ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES.

i *Write your Name, Admission number and stream.*

ii *Answer ALL questions in the answer sheets provided.*

iii *Answer ALL questions in section A, Three questions in the section B and Two questions in section C.*

iv *Candidates should answer the questions in English.*

FOR EXAMINERS USE ONLY

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

SECTIONA(25MARKS)

Answer all questions in this section in the spaces provided.

1. Identify the branch of history which deals with the systems of administration. **(1 mark)**

2. State one theory which explains the origin of man. **(1mark)**

3. State two economic activities of the early inhabitants of Kenya. **(2 marks)**

4. Give two cultural aspects which Bantus borrowed from the Cushites. **(2marks)**

5. Give the main reason for the coming of the Portuguese to the Kenyan coast in the 15th century. **(1 mark)**

6. Give one political factor that cause conflict in Kenya. **(1 mark)**

7. Give the main disadvantage of democracy. **(1 mark)**

8. State two roles played by the Kenyan constitution in governing the country. **(2 marks)**

9. State two reasons why the British government used company rule to administer Kenya.**(2 mks)**

10. Give two examples of communities which collaborated and also resisted against the British. **(2marks)**

11. State two reasons why Africans were put in reserves during the colonial period **(2marks)**

12. Name two independent African churches which emerged during the colonial period in Kenya **(2 marks)**

13. State one political role played by missionaries in Kenya during the colonial period. **(1 mark)**

14. Identify one subordinate court in Kenya **(1 mark)**

15. Why is mob justice illegal in Kenya. **(1 mark)**

16. Outline the composition of the county assembly in Kenya. **(2 mark)**

17. State one component of the national and county government budget in Kenya **(1 mark)**

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SECTIONB(45MARKS)

Answer any three questions from this section.

18. a) Identify five communities which fall under the Highland Nilotes **(5 marks)**

b) Explain the results of the migration of Highland Nilotes into Kenya **(10 marks)**

19. a) Identify five factors that contributed to the growth and development of towns along the Kenyan coast by 1500AD **(5 marks)**

b) Explain five effects of Seyyid Said's transfer of his capital from Muscat to Zanzibar **(10 marks)**

20. a) State three ways in which the world wars led to the growth of nationalism in Kenya. **(3 marks)**

b) Describe the roles played by trade unions in the struggle for independence in Kenya **(12 marks)**

21. a) state three challenges facing preservation of cultural heritage in Kenya. **(3 marks)**

b) Describe the challenges facing the education sector in Kenya **(12 marks)**

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SECTIONC(30MARKS)

Answeranytwoquestionsfromthissection

22. a) State three functions of the chief justice in Kenya. **(3 marks)**

b) Explain the problems facing the judiciary in Kenya. **(12 marks)**

23. a) What five situations can make a registered voter in Kenya to be denied the right to vote **(5 marks)**

b) Explain five functions of the speaker of the National Assembly. **(10 marks)**

24. a) Give five objectives of devolution of government. **(5 marks)**

b) Explain five challenges that are likely to be faced by the county governments. **(10 marks)**

KAPSABET HIGH SCHOOL

TRIAL 2 2024

311/2

HISTORY AND GOVERNMENT

PAPER 2

TIME: 2½ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES.

i *Write your Name, Admission number and stream.*

ii *Answer ALL questions in the answer sheets provided.*

iii *Answer ALL questions in section A, Three questions in the section B and Two questions in section C.*

iv *Candidates should answer the questions in English.*

FOR EXAMINERS USE ONLY

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

SECTION A (25 marks)

Answer all questions from this section.

1. Identify two branches of history **(2 Marks)**

2. Give the main reliable source of pre-historic information. **(1 Mark)**

3. Which among the earliest crops to be domesticated by man originated from Africa**?** **(1 Mark)**

4. State one way in which the Agrarian Revolution contributed to the development of industries in Britain **(1 Mark)**

5. Name two European nations which participated in the Trans-Atlantic trade. **(2 Marks)**

6. Identify one example of the oldest newspapers in the world. **(1 Mark)**

7. Give two advantages of electronic mail as a means of communication. **(2 Marks)**

8. State two negative effects of scientific inventions on industry. **(2 Marks)**

9. Identify the main factor that promoted unity among the Shona community during the 19th century. **(1 Mark)**

10. Identify one military tactic employed by Samore Toure against the French colonial rule in West Africa. **(1 Mark)**

11. Give two main methods used by the Europeans to acquire colonies in Africa. **(2 Marks)**

12. State one economic reason which prompted USA to join the 1st World War on the side of the Allies. **(1 Mark)**

13. Name the United Nations organization agency that is tasked with promoting workers welfare. **(1 Mark)**

14. State two objectives of the non-aligned movement. **(2 Marks)**

15. Name two principal organs of the Economic Community of West African States **(ECOWAS).** **(2 Mark)**

16. Name the political party that led Tanzania to independence in 1961. **(1 Mark)**

17. State two functions of the civil service in India. **(2 Marks)**

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SECTIONB(45MARKS)

Answer any three questions from this section.

18. a) State three uses of tools by man during the Stone Age period. **(3 Marks)**

b) Explain six ways in which climatic and environmental changes influenced man's evolution. **(12Marks)**

19. a) State five characteristics of local trade. **(5 Marks)**

b) Describe five effects of the Trans-Saharan trade on West African communities. **(10 Marks)**

20 a) State five reforms introduced by Lord Rechenberg after the Maji-Maji rebellion **(5 Marks)**

b) Explain five results of African collaboration with the Europeans in the 19th century **(10 Marks)**

21 a) State five methods used by nationalists in South Africa during the struggle for independence **(5 Marks)**

b) Explain five challenges faced by nationalists during the struggle for majority rule in South Africa. **(10 Marks)**

SECTIONC(45MARKS)

Answer any three questions from this section.

22.a) State five functions of the Lukiiko in the Buganda kingdom in the pre-colonial period. **(5 Marks)**

b) Describe the social organization of the Asante kingdom in the 19th century. **(10 Marks)**

23. a) Give three reasons why there was military stalemate in the western front during the 1st World War. **(3 Marks)**

b) Explain six challenges faced by the pan African movement. **(12 Marks)**

24. a) State five features of the state governments in the united states of America. **(3 Marks)**

b) Explain five functions of the British Monarch. **(12 Marks**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

312/1

GEOGRAPHY

PAPER 1

TIME: 2¾ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

INSTRUCTIONSTOCANDIDATES

(a) *This paper has two Sections A and B.*

(b) *Answer all the questions in Section A.*

(c) *In Section B, answer question 6 and any other two questions from Section B.*

(d) *All answers must be written in the foolscaps provided.*

FOREXAMINER'SUSEONLY

SECTION	Questions	Maximum Score	CANDIDATE'S SCORE
A	1-5	25	
B	6	25	
		25	
		25	
	Total Score	100%	

SECTIONA

Answerallquestionsinthissection.

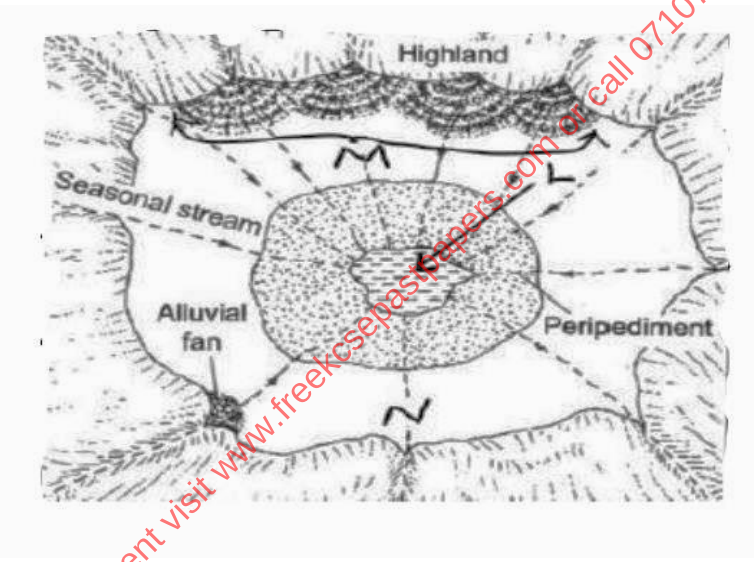
1. (a) What is the relationship between geography and civil engineering **(2mks)**

(b)State **three** ways in which the study of geography leads to development career **(3mks)**

2. a) Define the term atmosphere **(2mks)**

b) Outline **three** isothermal layers of the atmosphere **(3mks)**

3. a) The diagram below shows an in land drainage features in an arid area. Use it to answer the questions that follow.



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i.Name the feature shown above **(1mk)**

ii. Identify the parts marked L, M and N **(2mks)**

iii. What is an inselberg **(2mks)**

4. a) Name **two** areas in the world where ice sheet exists today. **(2mks)**

b) State **three** processes in which ice moves. **(3mks)**

5. a) Name **three** types of folds. **(3mks)**

b) Give **two** factors that influence on the landforms that form as a result of folding. **(2mks)**

SECTIONB

Answer question 6 and any other two questions from this section

6. Study the map of Kisumu East, 1:50,000(sheet 116/2) provided and answer the following questions.

a) i) Give the information obtained from the title of the Map **(2mks)**

ii) Give the longitudinal extent of the area covered by the map **(1mk)**

iii) Identify natural features in grid square 0686 **(2mks)**

b) i) Give the six figure grid reference the Air Photo point found at North Earth part of the **plantation** **(2mks)**

ii) I dentify the highest point in the area covered by the map **(1mk)**

iii) Calculate the area enclosed by the regional boundary to the north west of the area covered by the **map** **(2mks)**

c) i) Using a vertical scale of 1cm represents 20m, draw across-section from Grid 950950 to 020940**.** **(4mks)**

ii) On it, mark and label the following.

(i) Dry weather road **(1mk)**

(ii) All weather bound surface **(1mk)**

(iii) River Kibos **(1mk)**

ii) Calculate the gradient of the cross-section **(2mks)**

d) Explain **Three** ways in which relief has influenced the distribution of settlement in the area covered in the **map** **(6mks)**

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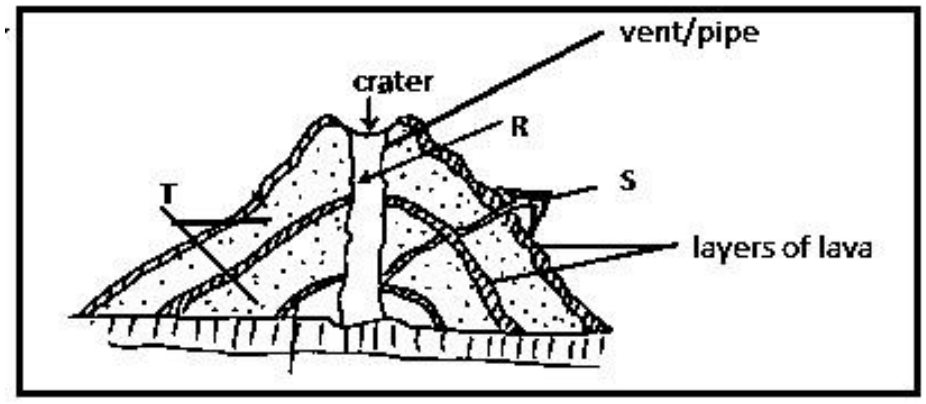
7. a) Differentiate between magma and lava **(2mks)**

b) The diagram below represents an extrusive volcanic feature. Use it to answer the questions that follow.



i.Identify the features above **(1mk)**

ii.Name the parts marked R, S, T **(3mks)**

c) Describe the formation of hot springs **(6mks)**

d) Giving examples, explain the three types of volcanoes **(6mks)**

e) State Seven negative effects of Vulcanicity to the environment **(7mks)**

8. a) i. What is a metamorphic rock? **(2mks)**

ii. Name two types of rocks found in the Lake Victoria region **(2mks)**

iii. Differentiate between plutonic and hypabyssal rocks. **(2mks)**

b) i. Describe any two ways through which sedimentary rocks are formed. (4mks)

ii) State three sources of sedimentary rocks **(3mks)**

d) Explain the following characteristics of rocks

(i) Cleavage **(2mks)**

(ii) Lustre **(2mks)**

(iii)Texture **(2mks)**

e) You carried out a field study on rocks around your school compound

i.State how you prepared for the study. **(2mks)**

ii. Which problems did you encounter during the study **(2mks)**

iii. State **Two** follow-up activities you engaged yourself in after the study. **(2mks)**

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9. a) i) Name two types of tides. **(2 mks)**

ii) .State two causes of vertical movement of ocean water **(2mks)**

b) i). Explain how wave erosion by compressed air action takes place **(3mks)**

ii). Using well labelled diagrams, explain the formation of a cliff. **(6mks)**

c) i) Give Three conditions necessary for the formation of a beach **(3mks)**

ii) With an aid of a well labelled diagram, explain the formation of a bay bar **(5mks)**

d) Students from Kala School, went for a field study on coastal features along the Kenyan coast.

i) State two methods they used to collect data. **(2mks)**

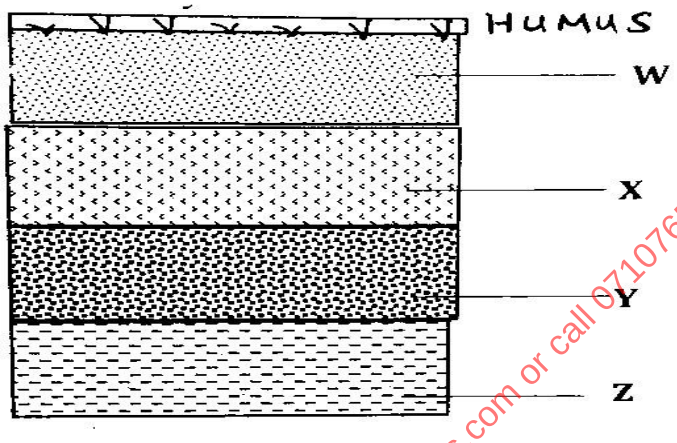
ii) Give two economic benefits of coral rocks they identified. **(2mks)**

10. a) i. Define soil Catena. **(2mks)**

ii. Give three types of soil degeneration. **(3mks)**

b) Differentiate between mineralization and humification in soil formation. **(2mks)**

c) The diagram below represents a well-developed soil profile. Use it to answer questions i, ii and iii below



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i) Name the parts marked W, X, Y and Z. **(4mks)**

ii) Explain how the following factors may have influenced the formation of the soil above:

- Parent rock **(4mks)**
- Time **(2mks)**

iii) Give four ways in which humus contributes to the quality of soils. **(4mks)**

d). State four negative effects of soil erosion. **(4mks)**

KAPSABET HIGH SCHOOL

312/2

GEOGRAPHY

PAPER 2

TIME: 2¾ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

(Kenya Certificate of Secondary Education)

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INSTRUCTIONSTOCANDIDATES

(a) *This paper has* ***two*** *Sections* ***A*** *and* ***B****.*

(b) *Answer all the questions in Section* ***A****.*

(c) *In Section* ***B****, answer question* ***6*** *and any other* ***two*** *questions from Section* ***B****.*

(d) *All answers must be written in the foolscaps provided.*

FOREXAMINER'SUSEONLY

SECTION	Questions	Maximum Score	SCORE
A	1-5	25	
B	6	25	
		25	
		25	
	Total Score	100%	

SECTIONA:

AnswerAL L questionsinthissection

1a) Identify **two** ways in which Geography is related to demography. **(2mks)**

b) State **three** significance of studying Geography**.** **(3mks)**

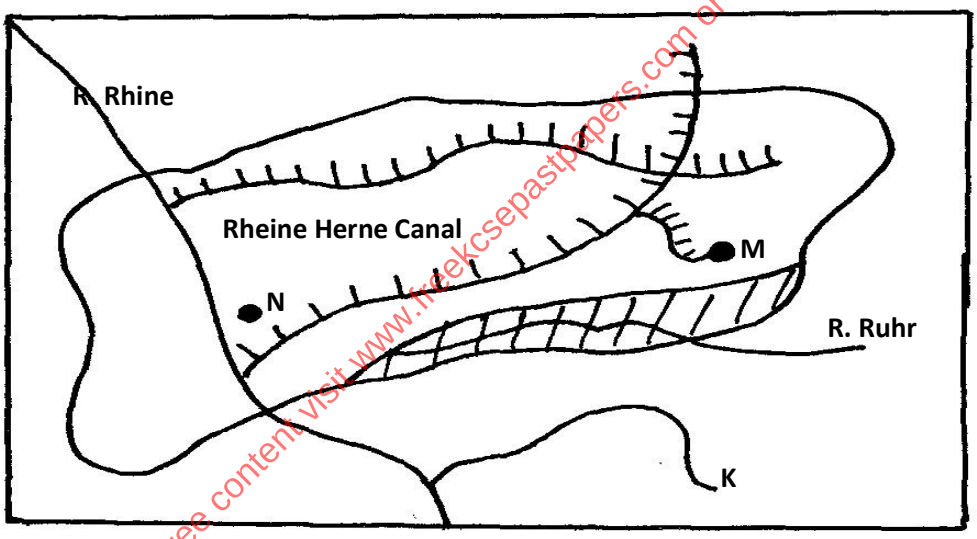
2a) What is a forest? **(2mks)**

b) Give **three** reasons why the Kenyan government is encouraging afforestation Programme. **(3mks)**

3a) Apart from the sun, name **two** other renewable sources of electricity. **(2mks)**

b) Give **three** disadvantages of using solar energy. **(3mks)**

4. Use the map of the Ruhr Industrial Zone below to answer question that follow.



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a) i) Identify and name:

- The town marked **M** **(1mk)**
- The river marked **K** **(1mk)**

b) State **three** physical factors that influenced the location of the iron and steel industry in the Ruhr Region of Germany **(3mks)**

5. a) Define the term regional trade **(2mks)**

b) State **three** challenges facing Common Market of Eastern and Southern Africa (COMESA) **(3mks)**

SECTIONB:(75MARKS)

Answerquestion**6**andanyother**two**questionsfromthissection.

6. The table below shows agricultural crops produced in Kenya in the year 2015 to 2018. Use it to answer question (a).

Crops	***Amount in metric tonnes***			
	2015	***2016***	***2017***	***2018***
Tea	240,000	314,000	399,000	405,000
Coffee	98,000	54,000	42,000	55,000
Wheat	70,000	37,000	54,000	66,000

a) i) Using a scale of 1cm to represent 50,000 metric tonnes, draw a comparative bar graph to represent the data above. **(8mks)**

ii) State **two** disadvantages of using comparative bar graphs to present data **(2mks)**

b) Explain **three** physical conditions that favour tea growing in the Kenyan highlands **(6mks)**

c) i) Describe the stages involved in the processing of tea from processing to marketing **(6mks)**

ii) State **three** problems facing small scale tea farmers in Kenya. **(3mks)**

7. a) i) Name **three** ways in which minerals occur within the Earth's crust. **(3mks)**

ii) Identify the main minerals mined in the following areas of East Africa.

- Mwadui. **(1mk)**
- Kariandusi. **(1mk)**
- Bamburi. **(1mk)**

b) i) Apart from shaft method of mining give two types of underground mining**.** **(2mks)**

ii) Describe the deep shaft method of mining. **(6mks)**

c) Give **three** reasons why Kenya imports her oil in crude form **(3mks)**

d) Explain **four** ways in which mining contributes to the economy of Kenya. **(8mks)**

8a) i) Define dairy farming **(2mks)**

ii) Name **three** exotic dairy breeds reared in Kenya. **(3mks)**

b) Explain **three** reasons why dairy farming is least developed in Northern Kenya. **(6mks)**

c) Compare dairy farming in Kenya and Denmark under the following sub-headings:

- Breeds **(2mks)**
- Processing of **milk** **(2mks)**

d) Explain **three** measures the government of Kenya has undertaken to improve small dairy farming **(6mks)**

e) Give **four** benefits of dairy farming to the economy of Denmark. **(4mks)**

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9 a) i) Apart from draining swamps, name **three** other methods used to reclaim land in Kenya. **(3mks)**

ii) Identify **two** examples of swampy areas that have been reclaimed in Kenya. **(2mks)**

b) Give **four** physical factors that influenced the location of Mwea-Tebere irrigation scheme. **(4mks)**

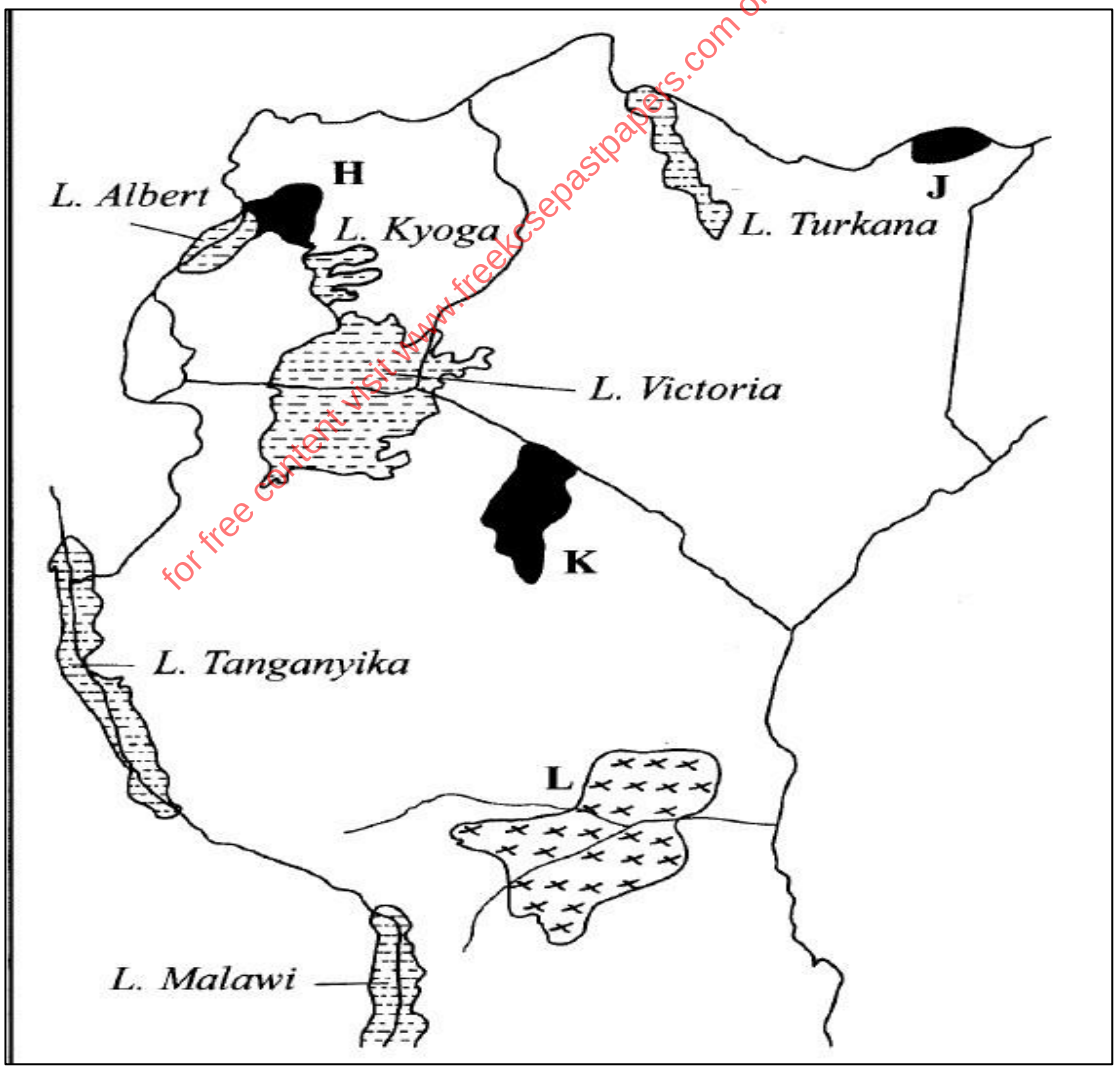
c) i) List **three** crops grown in the Mwea-Tebere irrigation scheme. **(4mks)**

ii) State **four** problems experienced by farmers in Mwea-Tebere irrigation schemes. **(4mks)**

d) Explain **four** differences between land reclamation in Kenya and Netherlands. **(8mks)**

10. a) i) What is a sanctuary. **(2mks)**

ii) The map below shows the major game reserves and national parks in East Africa.



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Name the;

- National Parks marked **H, J** and **K**. **(3mks)**
- Game reserve marked **L.** **(1mk)**

b) Explain how the following factors affect wildlife industry in Kenya.

i) Poaching. **(2mks)**

ii) Drought. **(2mks)**

c) i) Give **four** factors that hinder domestic tourism in Kenya. **(4mks)**

ii) State **three** benefits of ecotourism in Kenya**.** **(3mks)**

d) Explain **four** similarities between tourism in Kenya and Switzerland. **(8mks)**

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KAPSABET HIGH SCHOOL

101/1

ENGLISH

PAPER 1

(Functional Writing, Close Text and Oral Skills)

TIME: 2 HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

(Kenya Certificate of Secondary Education)

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INSTRUCTIONSTOCANDIDATES

- *Write your name and index number in the spaces provided.*
- *Answer **ALL** the questions in this question paper.*
- *All your answers must be written in the spaces provided in this question paper.*

For Examiners Use Only

Question	Maximum Score	Candidates Score
1	20	
2	10	
3	30	
Total Score		

FUNCTIONALWRITING(20MKS)

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

Write a Curriculum Vitae (CV) that you would use to apply for the job.

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CLOZETEXT(10MKS)

The recruitment of nurses by high income countries from poorer nations is "out of control", _____to the head of one of the world's biggest nursing groups. _____ comments came as BBC is finding evidence of how Ghana's health _____ is struggling due to the "brain-drain". Many specialist nurses have _____ the West African country _____ better paid jobs overseas. In 2022, more than 1,200 Ghanaian nurses joined the UK's nursing register. This comes as the National Health Service (NHC) increasingly relies on staff from non-EU countries to fill vacancies. _____ the UK says active recruitment in Ghana is not allowed, social media means nurses _____easily see the vacancies available in NHS trusts. _____ can then apply for those jobs directly. Ghana's dire economic situation acts as a big push factor. The head of nursing in Greater Accra Regional Hospital told the BBC her Intensive Care Unit alone has _____ 20 nurses to the Uk and US in the last six months- with grave _____.

ORALSKILLS(30MKS)

A. Readtheoralsongbelowandanswerthequestionsthatfollow

I have ploughed and I have sweated,
And now I am enjoying my crops, my friends.
Like the bushbuck which uses its tail to push rice-plants
Into its mouth
As a sign of its contentment
Good farming wins respect, my friends.
Where I drink beer now
I drink to my heart's contentment
When I eat my food
I eat with a settled heart
Like our little friend the fish Which
makes white soup for us Which
plays in its pool all day Without
anything to trouble its heart. A
farmer is a king
Even the wizard pays homage to you

Farming brings honour, my friends:
You need not trail your feet to beg at the homes of junior men
You see me in my prosperity today
Because during the rains I am the friend of the mud:

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Rather, I attack the soil with my special friend, the hoe.
Fancy not cultivating!
Fancy not hoeing!
Fancy not cultivating!
Take the little hoe and break the soil!

QUESTIONS

i). If you were to perform the above song before an audience, how would you attract the attention of the audience before your performance? **(3 mks)**

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ii) Identify features in the above song that would make the performance easy. **(2 mks)**

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iii) Which two techniques would you employ to make your performance interesting**?** **(4 mks)**

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iv) Which words would you stress in line 17 and why? **(2 mks)**

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B. Indicate the intonation that would be used in the following sentences (3 mks)

i). Do you mind a cup of coffee? _____

ii). How awesome that sounds! _____

iii). How old are you? _____

C. You are the chairperson of the students' council in your school. The students are complaining about the school menu and they have given you proposals of what they would love to see included or removed in the menu. They request you to present their grievances to the principal. What skills would you put in place to ensure a successful outcome. **(4 mks)**

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D.(i) You have been requested to give a speech on "Academic Excellence" to the Form Threes in your school following your consistent stellar performance. How would you prepare for the speech? **(4 mks)**

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E. Your Friend John calls you sounding very excited. He tells you that he has been invited for a job interview at Safaricom for the position of an IT Specialist. He asks you for some tips on how he could successfully prepare for the interview. What are the tips that you will share with him?**4mk**

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F. Identify the word which is odd according to the pronunciation of the underlined sound **(4 mks)**

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i) <u>A</u>ugust	l<u>a</u>w	<u>au</u>nt
ii) M<u>o</u>nkey	st<u>o</u>mach	d<u>o</u>nkey
iii)G<u>o</u>	s<u>o</u>	s<u>a</u>w
iv) Res<u>u</u>lt	s<u>o</u>me	res<u>o</u>rt

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KAPSABET HIGH SCHOOL

101/2

ENGLISH

PAPER 2

(Comprehensive, Literary Appreciation and Grammar)

TIME: 2½ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

(Kenya Certificate of Secondary Education)

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INSTRUCTIONSTOCANDIDATES

- *Write your name and index number in the spaces provided.*
- *Answer **ALL** the questions in this question paper.*
- *All your answers must be written in the spaces provided in this question paper.*

ForExaminersUseOnly

Question	Maximum score	Student's score
1	20	
2	25	
3	20	
4	15	
Total score	80	

1. Readthefollowingpassageandanswerthequestionsthatfollow.

Everyone has struggled with lack of confidence at one time or another. More so, confidence that may have been built over the years may be lost when we face new challenges, make mistakes, fall or receive criticism. It is probable that one of the most common wishes for many people is to feel more confident in various spheres of life. Building confidence must be something you want for yourself and not just for appearance's sake. Confidence is beneficial in business, at the work place, in your social life, and even in your interpersonal relationships. It can make the difference between success and failure in business, getting a promotion or a pay rise, meeting someone interesting at a party, and even successfully disciplining your children when you become a parent.

Some people have a higher level of confidence than others, but this should not discourage those who lack it. Like many things in life, confidence can be learned and even perfected. Most people have areas in their lives where they could be more confident and thus have better results. There are various practical ways about building confidence. However, these are not necessarily quick fixes or overnight solutions. Building confidence should happen gradually over a period of time.

Spending time thinking about how little confidence you have is not helpful and will only discourage you more. It may be easier said than done, but working on something and getting it done is a useful confidence builder. Stop relying on your feelings and spring into action. Dale Carnegie, a famous American writer, once said that, 'Inaction **breeds** doubt and fear. Action breeds confidence and courage. If you want to conquer fear, do not sit at home and think about it. Go out and get busy.'

Facing your fears is another confidence builder. Begin by recognizing that many fears are based on misjudgements and wrong perceptions. Yes, even your memory about something may be skewed and inaccurate, making you believe something that is actually not true. You should learn to develop a healthy curiosity filled with anticipation and enthusiasm about various situations and tasks you have been fearful of. With time, it will enable you to be more open to experience and put less focus on your fear.

Lack of preparation is a big source of low self-confidence. You have no idea what to expect, and this makes you fear the unknown. You are not sure what you are afraid of. Most of the times, low self-confidence can be solved by adequate preparation. Be aware what to expect and how to deal with whatever is at a hand.

Confidence does not really come assured of success. It also comes from knowing that failure is not the end of the world. Failure never feels good, but it gives us valuable lessons, if we are keen enough to learn. Failure makes us stronger. Again, remember that not everyone is busy monitoring your every success or failure. They are too **preoccupied** with their own issues. Therefore, do not spend too much time thinking what people will say about your failure.

Despite being aware of what makes you lack confidence and how to build it, confidence will not always come naturally. Sometimes, you have to '**fake it till you make it.**' You may have to face intimidating situations head on while telling yourself that you are ready for them, even when you know that you do not feel that way. This may go a long way in helping you to actually feel confident. Interestingly, the people who may regard you as more confident than you could also be using this technique. Also, consider your strengths and recognize the fact that just like everyone else, you have something to offer.

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QUESTIONS.

a. Why does the author say that we should build our confidence? **(3 marks)**

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b. Why should one not compare themselves with others? **(2 marks)**

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c. How does developing a healthy curiosity enable you to develop confidence? **(2 marks)**

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d. Make notes on the practical ways in which one can build their confidence. **(4 marks)**

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e. What is the author's attitude towards the subject matter? **(3 marks)**

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f. Like many things in life, confidence can be learned and even perfected. (Rewrite the sentence beginning: Confidence …) **(1 mark)**

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g. How does the writer reassure those who lack confidence? **(2 marks)**

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h. Explain the meaning of the following expressions as used in the excerpt. **(3 marks)**

1. Breeds _____
2. Preoccupied _____
3. Fake it till you make it _____

2. Read the excerpt below and answer the questions that follow.

First, there was a loud crash. Some moving object had hit another moving object. A trailerhooked to a truck negotiating a turn at a roundabout had broken free, spun outward, and ended up on top of a minibus in an adjacent lane. The drivers of both vehicles had then runaway. They had done so to avoid mob justice.

Now the passengers in the unlucky minibus were struggling to get out, except for one—a woman trapped in a seat. A man had seen her on his way out. He tried to go back in and get her out, but all doors had jammed. He pulled a mobile phone out of his pocket and called themystical number — 999 — to report distress and request help. The hour was ten in the morning.

Onlookers started arriving. First, they only gawked, fascinated by the spectacle of a trailer sitting on top of a minibus. Goodness, how did it get there! Later, their attention moved downto the woman trapped inside the minibus. "Look," said one onlooker. A beautiful girl was trapped in her seat. She was still conscious. "She is fine, then," said another onlooker. "Come on," said the first onlooker. "A heavy trailer is sitting on her minibus, so how can she be fine?" When the onlookers became a crowd, they tried to push the trailer off the minibus.

They failed. Then a big van appeared...

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QUESTIONS

a) Put this extract in its immediate context. **(4 marks)**

.....

.....

.....

.....

.....

.....

b) Give the character traits of the following:

i) The man

ii) The onlookers

iii) The drivers **(6 marks)**

c) From elsewhere in the novel, how does conflict arise between Kimani and Asiya overthe death of their daughter? **(4 marks)**

.....

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.....

d) How is dialogue significant in this excerpt**?** **(4 marks)**

.....

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.....

e) Explain one stylistic device used in the extract. **(2 marks)**

.....

.....

.....

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f) "The hour was ten in the morning." Rewrite this statement beginning with **(1 mark)**

.....

g) Explain the meanings of the following words as used in the excerpt. **(3 marks)**

i) Gawked

ii) Fascinated

iii) Conscious

3. *Readtheoralpoembelowandanswerthequestionsthatfollow.*

Weakened and weeping, I remain among the ruins.
Weakened and weeping, I remain amid trackless plains.
Tell me, what is this place where I remain?
By my father's name, with whom do I remain?
They dwindle, the people, the unworthy ones stay on.
They dwindle, the people, unworthy one stay on.
They dwindle, the people, with whom do we remain?
Weakened and weeping, I remain among the ruins.
When the sun has sunk under the earth
I go to the door,
I go stealthily and on tiptoe:
I imagine he is coming,
I imagine he comes carefree from the hunt.
They die, do the people, with whom do we remain? They die, do the people, we remain among the ruins. They die, do the people, we remain amid trackless plains.

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a) Classify the above oral poem giving reason**.** **(2 marks)**

.....

.....

b) Who is the persona in this oral poem? **(2 marks)**

.....

.....

c) Identify and illustrate one function of the above oral poem. **(2 marks)**

.....

.....

.....

d) Identify, illustrate and state the effectiveness of any two features of style used in this oral poem. **(6 marks)**

.....

.....

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.....

e) Describe the tone of the oral poem. **(3 marks)**

.....

.....

.....

.....

f) Give two ways in which the anxiety of the singer is brought out. **(2 marks)**

.....

.....

.....

.....

g) Identify and illustrate one economic activity in this oral poem. **(2 marks)**

.....

.....

.....

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h) Explain the meaning of the following words as used in the oral poem. **(2 marks)**

i) Dwindle _____

ii) Stealthily_____

4.

a. *Rewrite the following sentences according to the instructions given after each.* ***(4 marks)***

i. My aunt was sick for a month. Her personal physician advised her to take some time off her busy engagements. (Begin using: Having…)

……

……

ii. It started to drizzle as soon as we started our exams. (Begin: Hardly…)

……

……

iii.'Why do you always come late to work?' the supervisor asked Waridi. 'This is no longer acceptable.' (Rewrite in indirect speech)

……

……

iv. This is the girl. Her project is thriving. (Join into one sentence using a relative pronoun)

……

……

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b. Complete the following sentences with the correct preposition. **(3 marks)**

i. Young one, get _____ the wet all immediately.

ii. The telephone is _____ the window.

iii. Students are normally given a certificate _____ completion of the course.

b. Fillintheblankspaceswiththecorrectformofthewordinbrackets. (4marks)

i. This equipment has _____ idle since the company closed. (lay)

ii. Have you _____ out the washing? (hang)

iii. Do not wait for the bus, it comes to town very _____(regular).

iv. The kitchen staff was accused of _____by the caterers. (subordinate)

c. Complete the sentences below with the correct collective noun. (3 marks)

i. The _____ of quails flew away.

ii. A _____ of peacocks is beautiful to watch.

iii. A _____of monkeys can be destructive.

d. Complete the following sentences using an appropriate question tag. (1 mark)

i. Please smile, _____?

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THE END

KAPSABET HIGH SCHOOL

101/3

ENGLISH

PAPER 3

(Creative Composition and Essays Based on Set Texts)

TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

(Kenya Certificate of Secondary Education)

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InstructionstoCandidates

- *Write your **name and index number** in the spaces provided above.*
- ***Sign** and write the **date** of examination in the spaces provided above.*
- *Answer **THREE** questions **ONLY.***
- *Questions **one** and **two** are compulsory*
- *Select **one** question from Question 3.*
- *Each of your essay must not exceed **450** words*

Examiner'sUseOnly:

Question	Maximum Score	Candidate's Score
1	**20**	
2	**20**	
3	**20**	
TOTAL	**60**	

A nswer three questions only

1. Imaginative Composition (Compulsory) **(20 marks)**

Either

a) Write a composition ending:

…..that it is never too late to begin again.

Or

b) Write a composition to illustrate the saying, " Still waters run deep."

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

John Lara, The Samaritan

Corruption Molds suspicious leaders who will always work towards escaping punishment rather than working towards the progress of their nations. Using illustrations from **The Samaritan by John Lara**, write a composition.

3. **Optional Set Texts** **(20 marks)**

Answer any one of the following three questions. Either;

(a) The Short Story

Leonard Kibera, A Silent Song

In the face of hopelessness, what matters is the imagined freedom of our souls from this world of suffering. Using illustrations from the short story, " A Silent Song " by Leonard Kibera, write an essay in support of this statement.

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(b) The Play; Adipo Sidang, Parliament of Owls

Whether our deeds are good or terrible, life has a way of rewarding us for them. Provide evidence for this claim by using **Adipo Sidang's play Parliament of Owls**.

(c) The Novel; **Kazuo Ishiguro, An Artist of the Floating World**

The desire to pass family values and reputation from one generation to another can result in disagreements. Drawing illustrations from Kazuo Ishiguro's novel, An Artist of the Floating World, write an essay to justify this assertion.

KAPSABET HIGH SCHOOL

MFULULIZO WA PILI

102/1

KISWAHILI

KARATASI YA 1

INSHA

MUDA: SAA 1¾

JINA.....

SHULE..... **SAHIHI**.....

NAMBARI YA USAJILI..... **MKONDO**.....

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Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO

(a) *Andika jina lako na nambari ya mtihani katika nafasi ulizoachiwa hapo juu.*

(b) *Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.*

(c) *Andika insha **mbili**. Insha ya kwanza ni ya **lazima.***

(d) *Kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.*

(e) *Kila insha isipungue maneno **400**.*

(f) *Kila insha ina alama 20.*

(g) *Kila insha **lazima** iandikwe kwa lugha ya Kiswahili.*

(h) *Insha zote **sharti** ziandikwe katika nafasi ulizoachiwa katika kijitabu hiki cha maswali.*

KWAMATUMIZIYAMTAHINIPEKEE

SWALI	UPEO	ALAMA
1	20	
	20	
JUMLA	40	

MASWALI

1. Wewe ni kiranja anayehusika na masomo katika Shule ya Angaza. Mwalimu mkuu amekuchagua wewe kuwa katibu wa jopo la watu watano. Mmetakiwa kuchunguza visababishi vya matokeo mabaya katika mitihani ya kitaifa kisha kutoa mapendekezo. Andaa ripoti yenu.

2. Jadili umuhimu wa sheria za shule kwa mwanafunzi.

3. Tunga kisa kitakachoafiki maana ya methali ifuatayo: Kidole kimoja hakivunji chawa.

4. Tunga kisa kitakachomalizikia kwa maneno yafuatayo: Hapo ndipo nilipotambua kuwa kama masuala yao hayatashughulikiwa kwa dhati, vijana ni bomu ambalo liko tayari kulipuka wakati wowote.

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HUU NI UKURASA WA MWISHO ULIOPIGWA CHAPA

KAPSABET HIGH SCHOOL

MFULULIZO WA
PILI

102/2

KISWAHILI

KARATASI YA 2

LUGHA

MUDA: SAA 2½

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JINA.....

SHULE..... **SAHIHI**.....

NAMBARI YA USAJILI..... **MKONDO**.....

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

Maagizo

i. *Andika jina lako na nambari yako katika nafasi ulizoachiwa hapo juu.*

ii. *Weka sahihi yako na tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.*

iii. *Jibu maswali yote*

iv. *Majibu yote yaandikwe katika nafasi ulizoachiwa katika kijitabu cha maswali.*

v. *Majibu yote lazima yaandikwe kwa lugha ya Kiswahili*

KwaMatumiziYaMtahiniPekee:

Swali	Upeo	Alama
1	15	
2	15	
3	40	

4	10	
Jumla	80	

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1. UFAHAMU **(Alama 15)**

Somamakalayafuatayokishaujibumaswali.

Ufisadi ni uhalifu unaohusu kuzitumia njia za ulaghai kujipatia pesa, mali au vitu hasa vya umma. Nchini Kenya ufisadi hujitokeza kwa njia mbalimbali na kila mojawapo ina athari zake. Kwa mfano, kuna maafisa wa serikali wajipatiao pesa kwa kuuza stakabadhi za serikali kama vile pasi, vyeti vya kuzaliwa, vyeti vya kumiliki mashamba, vitambulisho na nyinginezo kwa raia. Kuna hatari kubwa kwa sababu watu wasio raia wa Kenya wameweza kusajiliwa kama Wakenya na kuendeleza uhalifu kama ugaidi, wizi na ulanguzi wa dawa za kulevya.

Wengine hujipatia vibali vya kufanya kazi na kuajiriwa kazi ambazo zingefanywa na Wakenya. Hii imechangia ongezeko la uhaba wa kazi nchini. Watumishi wengine wa umma huuza mali ya serikali kama vile magari, nyumba na ardhi na kufutika pesa za mauzo mifukoni mwao. Wengine wao hujinyakulia na kufanya vitu hivyo kuwa mali yao. Ufisadi wa aina hii umegharimu serikali kiasi kikubwa cha fedha. Serikali imelazimika kununulia maafisa wake magari baada ya muda mfupi, kulipia wafanyikazi wake kodi za nyumba na kukosa viwanja vya upanuzi na ujenzi wa shule, hospitali, vituo vya polisi na taasisi zingine maalumu.

Baadhi ya wataalamu kama madaktari huiba dawa kutoka hospitali za umma na kupeleka vituo vyao vya afya. Pia hutumia wakati wao mwingi katika kazi zao za kibinafsi na kuwaacha wagonjwa katika hospitali za umma wakihangaika. Sio madaktari tu, kuna masoroveya, wahandisi, mawakili, walimu na mahasibu ambao hukwepa majukumu yao serikalini na kufanya kazi za kibinafsi. Wengine wasio wataalamu huendesha biashara za aina tofauti, huku wanaendelea kupokea mishahara.

Wanafunzi wanaotaka kujiunga na vyuo na shule bora za umma na hawakuhitimu wakati mwingine hulazimika kusalimu amri na kutoa hongo hili wapate nafasi za kusoma. Kiasi cha pesa kinachohitajika huwa kikubwa hivi kwamba ni wachache humudu hizo rushwa. Wale wasiojimudu kifedha hubaki wakilia ngoa. Kuna wazazi ambao hutumia vyeo vyao na 'undugu' kupata nafasi zilizotajwa, jambo ambalo huwanyima wanafunzi werevu kutoka jamii maskini nafasi ya kupata elimu. Matokeo huwa ni kuelimisha watu wasiostahili na ambao mwishowe hawaziwezi kazi wanazosomea wakihitimu na kuanza kuhudumia jamii.

Ufisadi umekita mizizi na kushamiri katika sekta za umma na za kibinafsi kwa upande wa kuajiri wafanyakazi. Ni vigumu kupata kazi ikiwa hujui mtu mkubwa katika shirika linalohusika au uzunguke mbuyu. Matokeo ni kuajiri wafanyakazi wasiohitimu na wasiowajibika kazini.

Vyeo na madaraka katika baadhi ya mashirika hutolewa kwa njia ya mapendeleo na ufisadi. Kwa hivyo, wafanyakazi wenye bidii hufa moyo kwa sababu hawasaidiwi ipasavyo. Badala yake wale wasio na bidii hupandishwa vyeo na kuwaacha palepale.

Hata hivyo, mbio za sakafuni huishia ukingoni. Serikali imetangaza vita dhidi ya ufisadi. Tayari tume kadhaa zimebuniwa kuchunguza visa vya ufisadi uliotekelezwa hapo mbeleni. Mojawapo ya tume hizo ni Tume ya kuchunguza Kashfa ya "Goldenberg" ambapo pesa za umma ziliporwa na mashirika ya watu binafsi. Watakaopatikana na hatia ya kushiriki ufisadi huo watahitajika kurudisha pesa hizo. Serikali pia imeunda kamati ya kupokea malalamiko kutoka kwa wananchi waliohasiriwa na mawakili walaghai ambao hupokea ridhaa kwa niaba ya wateja wao na kukosa

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kuwalipa au kuwatetea mahakamani ilhali wamekwishalipwa. Ni matumaini yetu kuwa ulaghai huu utaangamizwa kabisa kwani hakuna refu lisilokuwa na ncha.

Maswali

a) Eleza aina nne za ufisadi zilizotajwa katika kifungu ulichosoma. **(alama 4)**

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.....

b) Kulingana na kifungu ulichosoma,ufisadi umeathiri nchi yetu kwa njia gani ? (**alama 2)**

.....

.....

.....

c) Serikali inafanya jitihada gani ili kukomesha ufisadi ? **(alama 3)**

.....

.....

.....

.....

d) Kwa maoni yako, unafikiri ufisadi husababishwa na nini **?** **(alama 3)**

.....

.....

.....

.....

e) Eleza maana ya msamiati ufuatao kama ulivyotumiwa kifunguni: **(alama 3)**

i) shamiri……..……

ii) waliohasiriwa……..……

iii) wakilia ngoa……..……

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2. UFUPISHO (alama 15)

Soma taarifa ifuatayo kisha ujibu maswali.

Katika siku za hivi karibuni, kumekuwa na malalamiko magazetini kuhusu tatizo Ia ajali za barabarani ambalo ni dhahiri kuwa sasa limekuwa donda sugu. Janga hili kubwa ni tishio sio tu kwa maisha na mali ya Wakenya bali pia kwa maendeleo ya uchumi wa taifa, hivyo linahitaji kutafutiwa ufumbuzi wa haraka. Ninaomba nitoe mapendekezo yangu kuhusu mikakati inayoweza kuchukuliwa ili kuepuka ama kukomesha matukio ya mara kwa mara ya ajali za barabarani.

Ongezeko Ia matukio ya ajali za barabarani zinazosababisha kuteketea kwa maisha, kwanza kabisa linatokana na uvunjaji wa sheria za usalama barabarani na ukosefu wa uangalifu miongoni mwa baadhi ya madereva. Hata hivyo, abiria nao wanachangia kusababisha ajali hizo. Inasikitisha kuona kuwa baadhi ya abiria wanakubali kupakizwa kupita kiasi kwenye magari mithili ya mapakacha ya machungwa kama kwamba wanalazimishwa kuyapanda kwa mtutu wa bunduki. Si ajabu vilevile kuona kuwa magari yanapopelekwa kwa mwendo wa kasi wa kupindukia, abiria wanakaa kimya kama kondoo wa kafara ama wanashangilia madereva hao. Ni ukweli usiopingika kuwa iwapo gari lililo katika kasi kubwa litakumbwa na hitilafu ni vigumu kwa dereva kulimudu na kulidhibiti gari hilo. Litakuwa ni janibo la busara iwapo magari yote ya abiria yatafungiwa vifaa vya kudhibiti kasi. Abiria na wananchi kwa jumla wana jukumu Ia kukemea na kuwakataza madereva wasiojali maisha ama kuwashitaki kwa vyombo vya dola. Aidha, ninapendekeza kuwa madereva wanaotiwa hatiani kwa makosa ya kuvunja sheria za usalama barabarani bila simile waadhibiwe vikali na ikibidi wapokonywe leseni zao.

Licha ya hayo, inapasa halmashauri inayohusika na utoaji wa leseni nchini, ihakikishe kuwa madereva wote wana leseni halali kwa mujibu wa sheria na kwamba siku zote utaratibu wa kusitoa leseni unazingatiwa kwa dhati. Mathalani, kabla ya kutolewa kwa leseni ihakikishwe kuwa kuna uthibitisho wa chuo cha udereva na hali kadhalika wa askari wa usalama barabarani kuhusu umahiri wa dereva anapoomba leseni. Kwa utaratibu kama huu hapana shaka kuwa vitendo vya kughushi leseni za bandia vitapungua na ajali zinazosababishwa na madereva wasio na ujuzi hazitakuwepo kabisa. Mkakati mwingine ni kutoa mafunzo ya uhakika kwa madereva. Aidha vyuo hivyo vinavyotoa mafunzo ya udereva viwe vinakaguliwa mara kwa mara na maofisa wa Baraza Ia Kitaifa Ia Usalama barabarani kwa lengo Ia kuhakikisha kuwa mtaala rasmi wa mafunzo unatumiwa.

Serikali kwa upande wake haina budi kutupia macho ukarabati wa barabara. Kwa hivi sasa, barabara ziko katika hali ya kusikitisha. Ubovu wa barabara, udhaifu wa kingo za madaraja na ukosefu wa taa za kuongozea magari kwenye makutano ya barabara ni chanzo kinginecho cha ajali barabarani. Ni jukumu la Wizara ya Ujenzi kujenga utamaduni wa kukarabati miundo mbinu kwa kufanya matengenezo ya mara kwa mara ya barabara. Chambilecho wahenga, usipoziba ufa utajenga ukuta.

Hata ingawa hatua hizi ni njia madhubuti za kukabiliana na tatizo Ia ajali za barabarani, itakuwa ndoto kuzikomesha iwapo utekelezaji wa sheria za usalama barabarani utakuwa wa kutetereka. Sharti pawepo askari wa usalama barabarani iii kusaidia katika matumizi mazuri ya barabara,

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kuyakagua magari na leseni za madereva na vilevile kuwaffingulia mashtaka mahakamani wale wanaobainika kuzivunja sheria za usalama barabarani.

Tatizo la ajali za barabarani si jambo la kufumbia macho. Kinga ni bora kuliko tiba. Ninayo imani kuwa iwapo wananchi wataungana na serikali katika kuchukua hatua thabiti ili kupunguza ajali barabarani, maisha hayataendelea kuteketea ila yataokolewa.

Maswali

a) Ajali barabarani ni mwiba wa kujidunga. Thibitisha kwa kurejelea taarifa.

(maneno 40) **(Alama 6,1)**

Nakala Chafu

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Majibu

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b) Kwa maneno yako mwenyewe, bainisha mambo muhimu yanayozungumziwa kwenye aya ya **3, 4 na 5** **(maneno 90)** **(alama 7,1)**

Nakala chafu

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Majibu

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3. MATUMIZI YA LUGHA (ALAMA 40)

(a) Tunga neno moja lenye konsonanti mbili ambazo hujulikana kama nusu irabu. **(al. 1)**

……

(b) Tunga sentensi ukitumia neno “kijana” kama ; **(al. 2)**

(i) Nomino ……

(ii) Kivumishi ……

(c) Tunga neno lenye irabu zenye sifa zifuatazo. **(al. 2)**

(i) chini, kati, tandazwa……

(ii) nyuma, kati, viringwa……

(d) Andika sentensi yakinishi kutokana na hii. **(al. 1)**

Chakula hakipikiki vizuri

……

(e) Tumia vitenzi vifuatavyo vya silabi moja kutunga sentensi katika kauli ya kutendewa. **(al.2)**

(i)-ja……

(ii)-la ……

(f) Andika katika kinyume; Msichana yule mfupi ameingia darasani. **(alama 1)**

……

(g) Andika ukubwa wa sentensi hii katika wingi. **(al. 1)**

Kitabu kiliibwa na mwizi.

……

(h) Tunga sentensi kubainisha; **(al. 1)**

Chagizo cha mahali

……

……

(i) Andika kwa msemo halisi. **(al. 2)**

Mwanahamisi alisema kuwa angeenda Mombasa siku ambayo ingefuata.

……

……

(j) Akifisha sentensi hii ilete maana mbili tofauti. **(al. 2)**

Baba Maria anakuja.

……

……

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(k) Changanua sentensi ifuatayo kwa jedwali. **(al. 4)**

Mtoto mjeuri ambaye alituzwa leo asubuhi amesafiri.

(l) Ainisha virai vilivyopigiwa mstari katika sentensi ifuatayo. **(alama 2)**

WatotowaJuma wamegongwa nagari.

……

……

(m) Tunga sentensi moja kubainisha matumizi ya 'po' ya wakati maalum. **(al 1)**

……

……

(n) Eleza matumizi ya NI katika sentensi hii. **(al 1)**

Nitakulimia shamba lako ila hutanilipa.

……

……

(o) Unda nomino kutokana na kiarifa vifuatacho. **(al.1)**

Fa ..……

(p) Tunga sentensi inayodhihirisha wakati uliopita hali timilifu. **(al 1)**

……

……

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(q). Ainisha mofimu katika neno **lililong'oleka** **(al.3)**

(r) Tunga sentensi ukitumia kisawe cha neno **tabibu**. **(al.1)**

……

(s) Tia shadda kwenye maneno haya; i. minyoo……ii. Mbuyu…**……..** **(al 1)**

(t) Tunga sentensi yenye muundo ufuatao : **(al. 2)**

KN(W+V)+KT(t+N+H+N)

..……

.(u) Nomino zifuatazo zimo katika ngeli gani? **(al. 2)**

(i) uwele..……

(ii) petroli..……

(v) Mwanadamu yeyote anafaa kufanya juhudi wakati anapopewa msaada wa awali ili msaada huo ukifika mwisho ajiweze.Andika methali inayoafiki maelezo haya. **(al.1)**

..……

(w) Tumia kishazi kitegemezi katika sentensi kama kiima**.** **(al.1)**

..……

(x) Kwa kuzingatia dhamira, ainisha sentensi zifuatazo. **(al. 2)**

i. Meza tembe mbili mara tatu! ..…….

ii. Wanafunzi watasafiri leo jioni. ..……

(y) Ainisha silabi katika neno **Machweo.** **(al 2)**

4. **ISIMUJAMII** (alama 10)

a. Jadili jinsi mambo yafuatayo yanavyodhibiti mitindo ya lugha. **(al. 5)**

cheo cha mtu:

……

……

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Umri

……

……

Idadi ya lugha azijuazo mtu:

……

……

Mada

……

……

Njia za mawasiliano:

……

……

(b) Fafanua wajibu wa Kiswahili **kimataifa** **(al. 5)**

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KAPSABET HIGH SCHOOL

JARIBIO LA PILI
2024

102/3

KISWAHILI

KARATASI YA 3

FASIHI

MUDA: SAA 2½

JINA.....

SHULE..... **SAHIHI**.....

NAMBARI YA USAJILI..... **MKONDO**.....

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Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

Maagizo

(a) Andika jina lako na nambari yako ya mtihani katika nafasi ulizoachiwa hapo juu.
(b) Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.
(c) Jibu maswali manne pekee.
*(d) Swali la **kwanza** ni la lazima.*
(e) Maswali hayo mengine yachaguliwe kutoka sehemu nne zilizobaki: yaani; Riwaya, Ushairi na Fasihi simulizi
(f) Majibu yote lazima yaandikwe kwa lugha ya Kiswahili.
(g) Majibu yote sharti yaandikwe kwenye nafasi ulizoachiwa katika kijitabu hiki cha maswali.

Kwa matumizi ya mtahini pekee

SWALI	1	2	3	4	5	6	7	8	JUMLA
ALAMA									
UPEO	20	20	20	20	20	20	20	20	80

SEHEMUYAA:FASIHISIMULIZI

1. Soma kifungu kifuatacho kisha ujibu maswali

Mfalme ana watoto wawili wa kiume na anataka mmoja wao amrithi. Kwa sababu hataki kupendelea yeyote, anawapa changamoto ya kukimbia hadi mji wa mbali kwa farasi wao. Yule ambaye farasi wake atafika mwisho ndiye atakayemrithi. Ndugu hawa wanazembea jangwani kwa siku kadha kwa sababu kila mmoja anataka kufika wa mwisho. Hatimaye wanakutana na mzee mwenye busara ambaye anawapa wosia. Wanapanda farasi upesi na kutoka mbio ili wafike kwenye mji wa mbali walioagizwa na baba yao. Je, Mzee mwenye busara aliwaambia nini?

a) i) Tambua kijipera **(alama 1)**

ii) Taja sifa za kijipera hiki **(alama 4)**

iii) Wewe ni mmoja wanaowasilishiwa kipera hiki. Taja mambo Matano utakayoyafanya ufanikishe uwasilishaji huu**.** **(alama 5)**

b) Soma utungo ufuatao kisha hujibu maswali yanayofuata

Mtoto ni kito mzigo mzito

i) Tambua kijitanzu **(alama 1)**

ii) Eleza manufaa ya kukirithisha kijitanzu hiki kwa vizazi vijavyo **(alama 4)**

iii) Kipera hiki kinaendelea kudidimia katika jamii yako eleza mbinu tano utakazotumia kukidmisha katika jamii yako**.** **(alama 5)**

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SEHEMUB:Tamthilia –BEMBEAYAMAISHA- *Tim o thy* Arege

Jibu swali la 2 au 3.

2. Maisha ya sasa hayana fundi. Yanamwendesha kila mtu kama tawi lililosukumwa hadi likang'oka kutoka taagani na kupeperushwa na upepo….Ulimwengu wa sasa haubagui. Wadogo kwa wakubwa…..

a) Eleza mkutadha wa nukuu **(alama 4)**

b) Changanua vipengele vitano vya kimtindo katika nukuu **(alama 5)**

c) Fafanua mbinu nne za kutambua hulka za **mneneji** **(alama 4)**

d) 'Maisha ya sasa hayana fundi.' Fafanua mbinu ishi wanazotumia wahusika tamthiliani kukabiliana na hali zao. **(alama 7)**

3. (a) Changanua mtindo katika kifungu kifuatacho. **(alama 4)**

Naam, bembea! Hata bembea ikiwa ya kamba au chuma hatimaye hulika. Wanasema papo kwa papo kamba hukata jiwe. Bembea inapolika na kukatika haiwi mwisho wa mchezo. Huungwanamchezo kuanzatena.

(b) Eleza toni katika dondoo hili. **(alama 2)**

(c)Jadili umuhimu wa mandhari katika tamthilia hii **(alama 6)**

(d) (i) Fafanua kinaya katika kauli iliyopigiwa mstari **(alama 1)**

(ii) Dhihirisha kinaya katika kauli iliyopigiwa mstari kwa kurejelea tamthilia (**alama 7)**

SEHEMUYAC:RIWAYA–ClaraMomanyi*Ng uu za Ja d i .*

Jibu swali la 4 au 5.

4. Fafanua jinsi Mbwashu anajenga maudhui ya ufisadi. **(aL20)**

5. *"Daima mtu yule hunichukiza."*

a. Weka dondoo hili katika muktadha wake. **(al.4)**

b. Fafanua umuhimu wa msemaji wa maneno haya katika kujenga maudhuiriwayani. **(al.12)**

c. Eleza sifa nne za mtu anayerejelewa **(al.4)**

SEHEMUD:USHAIRI

Jibu swali la 6 au la 7

6. Soma shairi hili kisha ujibu maswali yafuatayo;

Wangu niliyekupenda, leo nitakufukuza
Kuishi umenishinda, wanileta mayaza
Ola vile nimekonda, jasadi nimepooza
Uwache kuniumiza,ni heri mwana kunenda

Ulikuwa wangu nyonda, huba nikaikoleza
Kukupenda kama tunda, embe lenye uliwaza
Ukajigeuza punda, teke umenicharaza
Uwache kuniumiza, ni heri mwana kunenda

Nimekonda kama ngonda, mwandani wanilemaza
Sautiyo ya kinanda, sitaki kusikiliza
Sikutaki bora kwenda, muhibu wanishangaza
Uwache kuniumiza, ni heri mwana kunenda

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Mengi ulionitenda, si madogo yakupuza
Nalikupa kila gwanda, uvae na kupendeza
Ulikula na kuwanda, kadiri ulivyoweza
Uwache kuniumiza, ni heri mwana kunenda.

Kinyume ulipokwenda, nilidhani kuteleza
Na wewe hukujilinda, nyendo mbaya kupunguza
Cha kuvunda kisha vunda, hata ukikifukiza
Uwache kuniumiza, ni heri mwana kunenda

Mja wewe wanishinda, kwa tama wachukiza
Kila kitu unadanda, kingawa cha kuumiza
Huwi ndani ya kibanda, huishi kujitembeza
Uwache kuniumiza, ni heri mwana kunenda

MASWALI

a) Tambua na uthibitishe nafsi neni katika shairi **(alama 2)**
b) Fafanua umuhimu wa kipokeo cha shairi hili **(alama 1)**
c) Eleza sifa za kiarudhi katika ubeti wa **tatu** **(alama 4)**
d) Taja methali inayodokezwa katika ubeti wa **tano** wa shairi hili **(alama 1)**
e) Eleza maudhui ya ubeti wa **sita** wa shairi hili. **(alama 2)**
f) Ni jambo lipi zuri ambalo mshairi atalikosa? **(alama 1)**
g) Andika ubeti wa **pili** wa shairi hili katika lugha nathari **(alama 4)**
h) Fafanua mbinu alizotumia mshairi kutimiza mahitaji ya kiarudhi **(alama 2)**
i) Tambua aina tatu za urudiaji katika shairi **(alama 3)**

7. ***Soma shairi lifuatalo kisha ujibu maswali.***

Pana haja ya kupima, neno tuzowele -angu
Tusizowee kusema, hili ni teuo langu
Huenda huji mapema, -angu huja kuwa tungu
Ikaja kukusakama, na kukuposha kwa Mungu
Pana haja ya kupima.

Neno huwa ni la kwako, likiwa ndani moyoni
Lakini katu si lako, likishavuka menoni
Kwa hivyo likutokako, liweke kwenye mizani
Linaweza kuwa cheko, ama tusi kwa wendani
Pana haja ya kupima.

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Vivyo hivyo kwa lebasi, huwa yako kisutuni
Hivyo nina wasiwasi, wambe yako sebuleni
Itavutiya matusi, ya wenzio insani
Wakakuchoma nafusi, kwa mishale ya lisani
Pana haja ya kupima.

Mwana ujuwe ni wako, punje ukiimezele
Lakini katu si wako, nde ukimletele
Akiwa yu ndani yako, ni wa duniya vivile
Ukishishila ni wako, muavye tukakuole
Pana haja ya kupima.

Maisha nayo si yako, utabaradi milele
Ungayaishi ja yako, ni tunu ya maumbile
Mgawa si kufu yako, mshindane hili lile
Akupapo akupako, utaishi pale pale
Pana haja ya kupima.

Ni chetu, chako si chako, ulimwengu huwa vile
Juhudi zingawa zako, wa kufaidi ni wale
Ikifika siku yako, nyono zikukae mbele
Ulichosema ni chako, huwabakiya wawale
Pana haja ya kupima.

Kaseme na moyo wako, ubaini haya yale
Ukuambacho ni chako, kisikupe mageule
Kitu utajacho chako, huenda kiwe cha wale
Na usemacho si chako, kiwe chako ndicho kile
Pana haja ya kupima.

(Maanga ya Ushairi na Diwani ya Mjileo* - Henry Indindi*)

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Maswali

(a) Pendekeza anwani inayoafiki shairi hili. **(al 1)**
(b) Eleza dhamira ya shairi. **(al 2)**
(c) Fafanua maudhui yoyote matatu yanayojitokeza katika shairi. **(al 3)**
(d) Ainisha mkondo wa shairi hili. **(al 4)**
(e) Tambua nafsi nenewa katika shairi. **(al 1)**
(f) Toa toni ya shairi. **(al 1)**
(g) Andika ubeti wa nne kwa lugha ya kiriwaya. **(al 4)**

(h) Dhihirisha mtunzi huyu alivyofanikiwa kutumia uhuru wake. **(al 2)**

(i) Toa maana za maneno haya yalivyotumiwa katika shairi. **(al 2)**

(i) lebasi

(ii) punje ukiimezele

SEHEMUE:HadithiFupi–MapambazukoyaMachweo

8. ***(a) Mzimu wa kipwerere-Yussuf Shoka***

"Siku iliyofuata, majira ya magharibi pevu, nilifika pale mzimuni. Kama ilivyo ada yangu, nilivaa guo jeupe lililonifunika gubigubi kama maiti. nikaangalia huku na huko, sikuona mtu. Hapo nikasogea karibu zaidi na ule mzimu. Nilipofika nikauimba ule wimbo wote. Nilipomaliza tu nikajitoma kichakani mle bila hofu wala kimeme…nilichokiona humo, sikuamini macho yangu! Mlendaniyamzimumlikuwanamakandanamakashayatumbaku,ungawakilevinabangi kwenye marobota.Kulikuwanamapipayachang'aanatemboyamnazi. Humo pia, mlikuwa na kitanda cha besera kilichotandikwa vizuri. Juu ya kitanda hicho, palitupiwatupiwa asumini na maua ya mlangilangi.."

a)Eleza aina nne za taswira katika kifungu hiki**.** **(al 4)**

b)Ukirejelea hadithi ya***" Mzimu wa Kipwerere***," Fafanua jinsi imani katika mambo ya kichawi yamejikita katika jamii**.** **(al 6)**

(b)**Mapambazuko ya Machweo** –Clara Momanyi

Onyesha vile **Jua la Macheo** linawabishia wahusika mbalimbali katika **Machweo** yao **(al 10)**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

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MATHEMATICS

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

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Instructionstocandidates

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

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

*(c) The paper contains **TWO** Sections: **Section I** and **Section II.***

*(d) Answer **ALL** the questions in Section I and **only five** questions from **Section II**.*

(e) All answers and working must be written on the question paper in the spaces provided below each question.

*(f) **Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.***

(g) Marks may be given for correct working even if the answer is wrong.

*(h) **Non-programmable** silent electronic calculators and KNEC Mathematical tables may be used except where stated otherwise.*

ForExaminer'sUseOnly

SECTIONI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**TOTAL**

SECTIONII

17	18	19	20	21	22	23	24	**TOTAL**

GRAND TOTAL

SECTION I (50 marks)

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

1. Express $3.\dot{7}\dot{5}$ in the form $a\frac{b}{c}$ hence find the absolute value in $\frac{b}{c}-a$. **(3 marks)**

2. Find the values of p and q

$P^2 \times q^3 = 3087$ **(2 marks)**

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3. A *forex* bureau in Nairobi buys and sells selected foreign currencies at the rates given in the table below.

Currency	**Buying (Ksh)**	**Selling (Ksh)**
1 *South African Rand*	7.00	7.70
1 *United Arab Emirates Dirham*	36.14	37.50

A tourist arrived in Kenya from South Africa with 8546000 South African Rand. He converted the whole amount to Kenya shillings through an agent at a commission 2%. While in Kenya, he spent $\frac{1}{4}$ of this money and changed the balance to UAE Dirham. Calculate the amount of UAE Dirham that he received. **(4 marks)**

4. A rectangular garage measures $13.2\ \text{m}$ long by $6\ \text{m}$ wide. The garage is to be covered by square concrete slabs leaving a margin of $\frac{1}{5}\ \text{m}$. Calculate the minimum number of square slabs required to cover the garage. **(4 marks)**

5. Use logarithms correct to 4 decimal place to evaluate

$$\sqrt[3]{\frac{68.37\sin 53.4^0}{39.4^2}}$$

(4 marks)

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6. Given that $\dfrac{\sin(2a+20)^0}{\cos\left(\frac{1}{2}a-60\right)^0} = \tan 45^0$, find the value of a **(3 marks)**

7. The position vector of **P** and **Q** are $\mathbf{OP} = -5\mathbf{i} + 4.5\mathbf{j}$ and $\mathbf{OQ} = 3\mathbf{i} - 1.5\mathbf{j}$.

Evaluate $\left|\overrightarrow{\mathbf{PQ}}\right|$ **(3 marks)**

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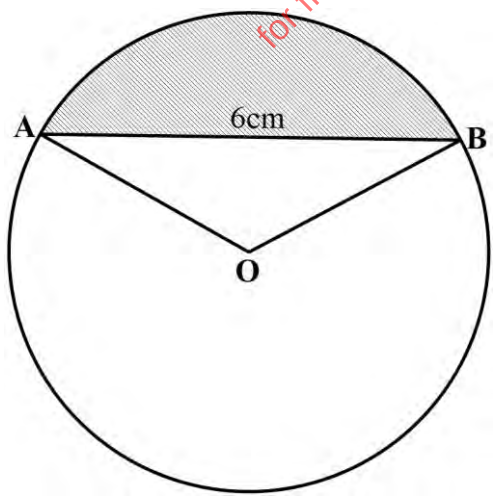
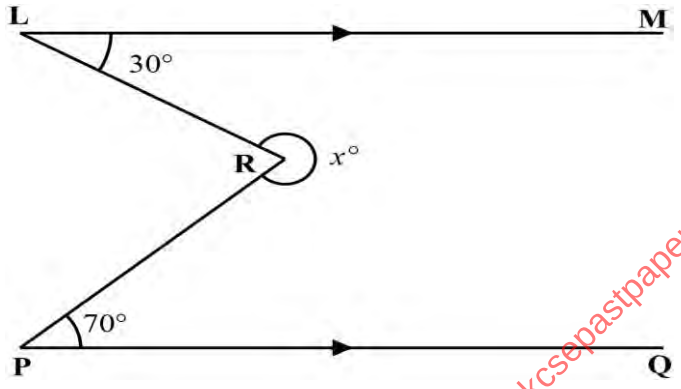
8. The figure below shows a circle centre O radius $3\sqrt{2}$ cm. Given that the length of chord AB = 6 cm , calculate the area of the shade region leaving your answer in terms of π. **(4 marks)**



9. Expand and simplify:

$(3p-2q)^2-(3p+2q)^2$ **(2 marks)**

10. On the figure below (**not drawn to scale**), LM is parallel to PQ. Angle $MLR = 30^0$ and angle $RPQ = 70^0$. Find the value of x. **(2 marks)**



11. Using a ruler and a pair of compasses only, construct a parallelogram ABCD in which AB = 7.2 cm, BC = 4.5 cm and angle DAB = 105^0. Drop a perpendicular from D to BA produced at M. Measure the length of DM. **(3 marks)**

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12. Given that $a = -2$, $b = 5$ and $c = -1$, evaluate $\dfrac{4a^3 + 5b - c}{\frac{1}{3}(c^2 - a^2)}$ **(3 marks)**

13. In a 4×100 m Relay Heat, Omanyala, Kiviasi, Imeta and Mukamba took 9.68 seconds, 9.72 seconds, 9.88 seconds and 9.77 seconds respectively. If an average of 0.65 seconds is spent on each baton exchange, calculate the time they completed the race if the race started at 11: 59 : 32 am

(3 marks)

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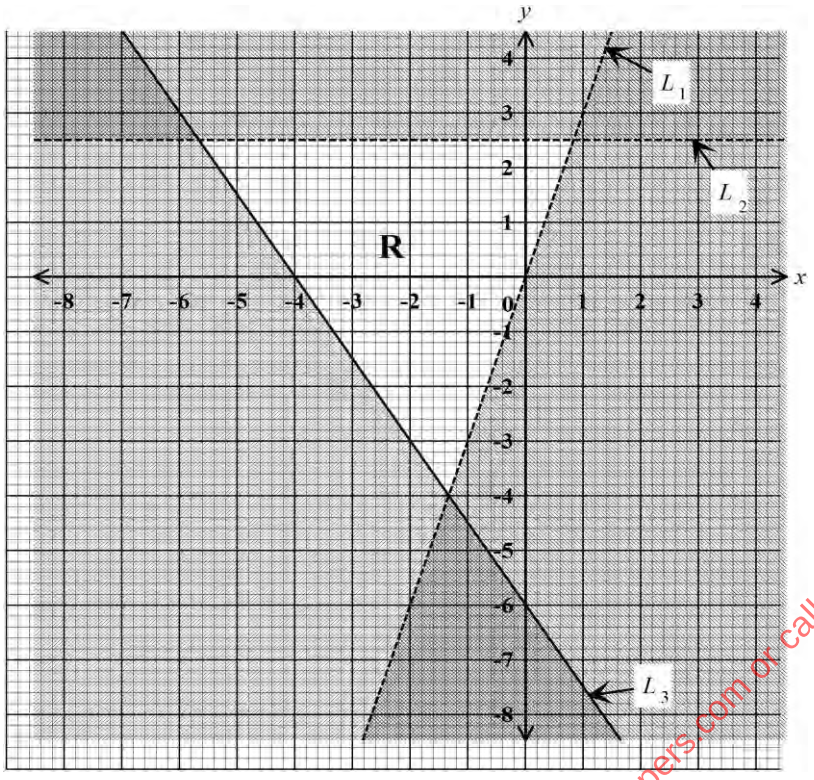
14. Form the three inequalities that satisfy the given region **R** **(3 marks)**



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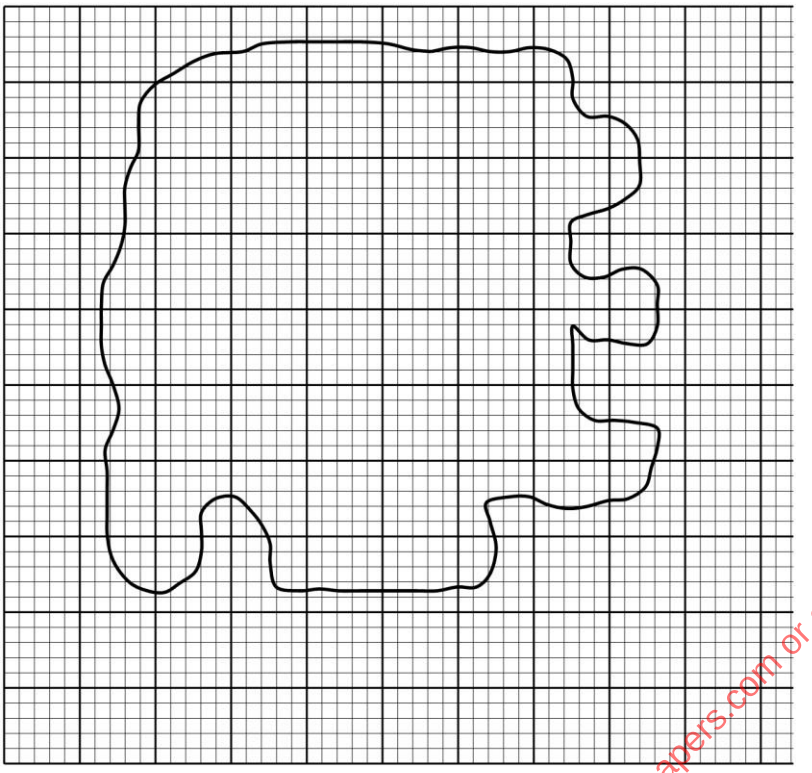
15. Points $X(-4,1)$ and $Y(-2,-2)$ are mapped onto $X'(2,11)$ and $Y'(8,2)$ by enlargement. Find the scale factor and the centre of enlargement. **(4 marks)**

16. The figure below shows a forest sanctuary drawn on a square grid of side 1 cm .



(a) Calculate the area of the forest in cm^2 **(2 marks)**

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(b) Given that the forest sanctuary covers an area of 6960000 ares . Determine the linear scale used as ratio**.** **(2 marks)**

SECTION II (50 marks)

*Answer **only five** questions in this section in the spaces provided.*

17. In a mathematics test, 48 students scored the following marks:

89	75	56	90	68	74	85	69
70	86	55	87	75	83	70	90
88	75	96	84	71	71	90	74
87	84	58	43	65	70	98	93
62	86	56	64	80	73	69	59
74	56	60	80	84	89	63	40

(a) Using a class width of 10 and starting with the smallest mark recorded, make a frequency distribution table for the data. **(2 marks)**

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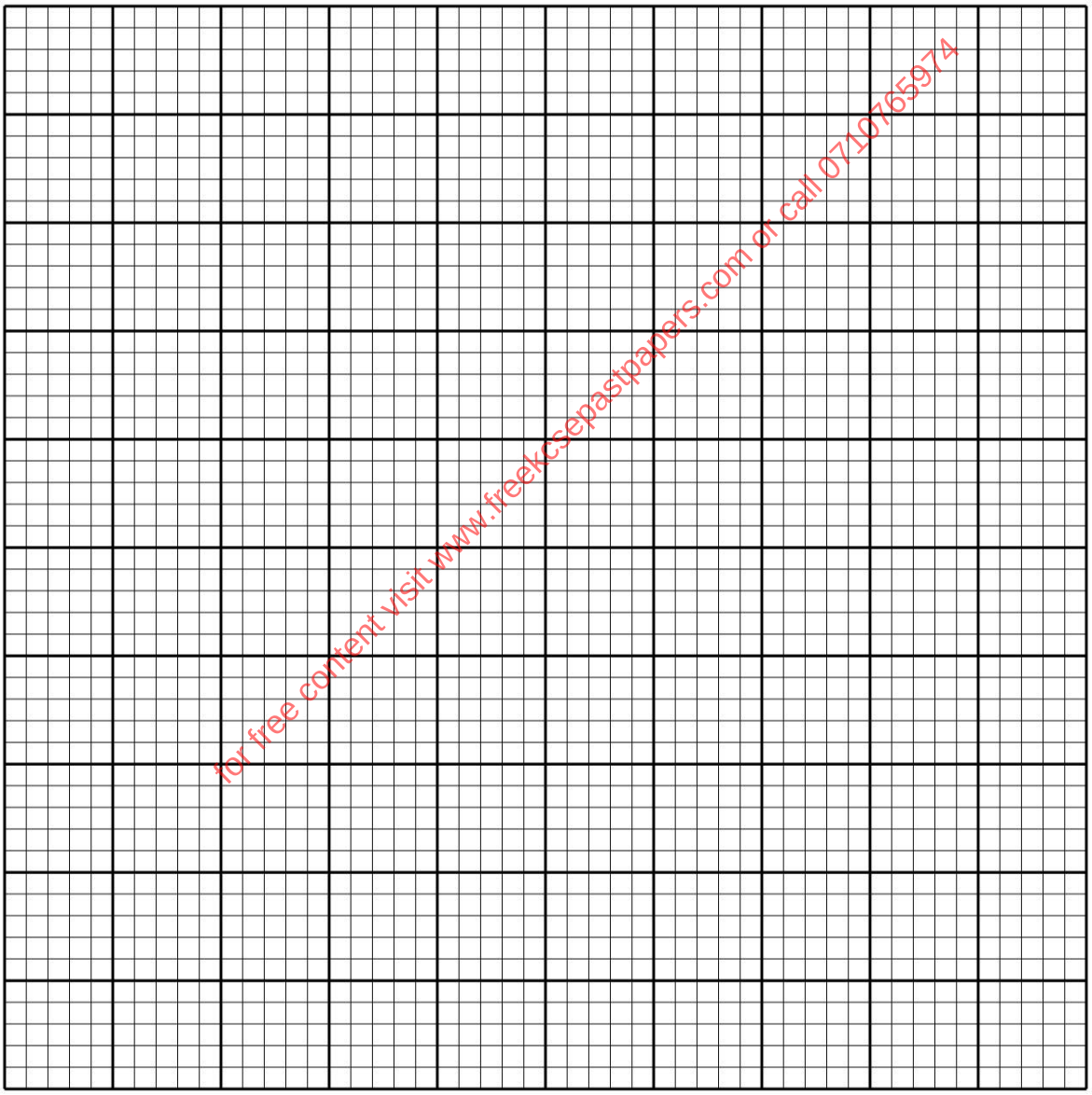
(b) State the modal **frequency** **(1 mark)**

(c) Using the frequency distribution table in (a) above, calculate:

(i) the mean mark. **(3 marks)**

(ii) the median mark, correct to 2 decimal places **(2 marks)**

(d) On the grid provided, draw a frequency polygon to represent the above data. **(2 marks)**



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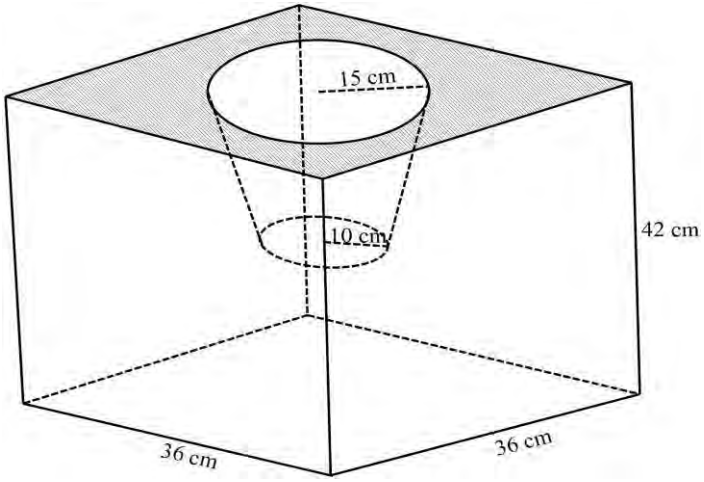
18. The figure below is a solid cuboid with a square base of 36 cm and a height of 42 cm . A conical frustum with a vertical height of 12 cm is drilled. The top and the bottom radii of the frustum is 15 cm and 10 cm respectively. (Use $\pi = 3.142$)



a) Calculate the slant height of the frustum. **(2 marks)**

b) Calculate:

(i) The total surface area of the solid. **(5 marks)**

(ii) The volume of the solid**.** **(3 marks)**

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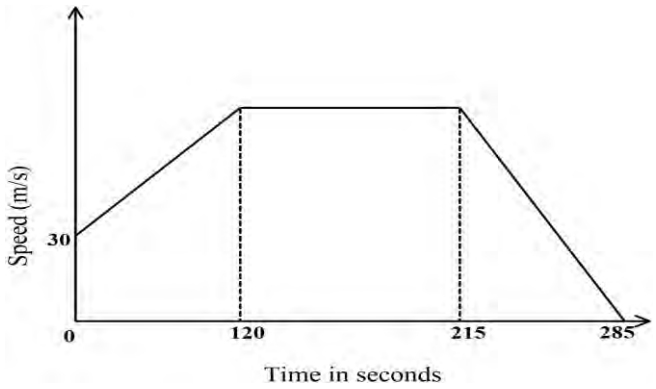
19. (a)The diagram below represents a speed time graph for a train travelling between two station.



If the distance between two stations is 16050 m, calculate:

(i) the maximum speed attained by the **train** **(3 marks)**

(ii) the distance traveled the last 14 seconds **(2 marks)**

(b) Two towns Nairobi and Kapenguria are 409 km apart. An express bus travelling at an average speed of 60 **km/h** left Nairobi for Kapenguria at 11.25 **a.m** . A car left Kapenguria on the same day for Nairobi at 12.55 **p.m** and met with the bus at 3.07 **p.m** .

(i) Determine the average speed of the car. **(3 marks)**

(ii) Nakuru town lies 160 **km** from Nairobi. How far from Nakuru did the two vehicles meet?

(2 marks)

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20. A line $\mathbf{L}_1$ Passes through points $(-3,2)$ and $(-1,6)$.

(a) Find its equation leaving your answer in the form $y = mx + c$. **(2 marks)**

(b) Find the equation of line $\mathbf{L}_2$ which is a perpendicular bisector of line $\mathbf{L}_1$. Leave your answer in the form $ax + by = c$ where a, b and c are integers. **(3 marks)**

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(c) Line $\mathbf{L}_3$ is parallel to line $\mathbf{L}_1$ and passes through point $(6,5)$. Given that $\mathbf{L}_3$ intersects line $\mathbf{L}_2$ at point $\mathbf{Q}$, find the equation of $\mathbf{L}_3$ in the form $ax + by + c = 0$ where a, b and c are integers **(2 marks)**

(d) Find the coordinates of Q **(2 marks)**

(e) Calculate the acute angle in which line $\mathbf{L}_3$ makes with $x - axis$ correct to 1 decimal place **(1 mark)**

21. (a)Given that matrix $\mathbf{A} = \begin{pmatrix} 5 & 8 \\ 5 & 6 \end{pmatrix}$, find $\mathbf{A}^{-1}$ **(2 marks)**

(b) Maya bought 25 kgs of sugar and 40 kgs of rice for Ksh. 11400 from a wholesale. Wanjiku bought twice the amount of sugar Maya bought and 60 kgs of rice from the same wholesale and spent Ksh. 8200 more than Maya. Taking x to represent the price of one kg of sugar and y to represent the price of one kg of rice:

(i) Form two simplified equations representing the above information. **(1 mark)**

(ii)Use matrix method to determine the price of each item. **(4 marks)**

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(c) The following month, the price of sugar increased in the ratio $5:4$ while that of rice increased by 25% . Use matrix method to determine Maya's expenditure for this month if she bought the same quantities of sugar and rice. **(2 marks)**

(d) Hence find the percentage increase on Maya's expenditure. **(1 mark)**

22. Four booster stations P, Q, R and S of a Telkom company are located in different parts of Lodwar county. Booster Q is 56 km on a bearing of 315^0 from booster P while booster R is 84 km directly south of Q. Given that booster S is on a bearing of 062^0 from R and directly East of P.

(a) Draw a scale diagram to represent the relative positions of the boosters. (1 cm rep 10 km)

(4 marks)

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(b) Using the scale diagram in (a) above; find the bearing and the distance of S from Q. **(2 marks)**

(c) Another booster T is to be installed at a point equidistance from P and S and directly East of Q locate the position of booster T. **(2 marks)**

(d) Find the bearing and distance of Booster P from T **(2 marks)**

23. (a) In the beginning of the year 2020 , the size of Chalbi desert in Marsabit was approximately 75800 ha. The county government supported a tree planting exercise whose target was to reduce the size of the desert by 3.5% p.a. Determine the size of the desert at the end of the year 2025 to the nearest hectares. **(3 marks)**

(b) In the beginning of the year 2020 , the forest cover in Baringo county was approximately 45000 ha. The county government supported a tree planting exercise aimed at increasing the forest cover by 2% every 3 months. Determine the size of the forest cover to the nearest hectares by the end of the year 2025 **(3 marks)**

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(c) Find the number of years at which the forest cover in Baringo county will be equivalent to Chalbi desert in the year 2025 rounded off to the nearest 100 ha in (a) above**.** **(4 marks)**

24. $y = 2x^3 + px + d$ is the equation of a curve that passes through (0, –15) and its gradient at $x = 2$ is 22.5.

a) Determine the values of p and d **(3 marks)**

(b) Determine the turning points and hence the nature of each stationary point. **(5 marks)**

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b) Sketch the curve **(2 marks)**

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TRIAL 2 2024

101/2

MATHEMATICS

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

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Instructionstocandidates

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

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

*(c) The paper contains **TWO** Sections: **Section I** and **Section II.***

*(d) Answer **ALL** the questions in Section I and **only five** questions from **Section II**.*

(e) All answers and working must be written on the question paper in the spaces provided below each question.

*(f) **Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.***

(g) Marks may be given for correct working even if the answer is wrong.

*(h) **Non-programmable** silent electronic calculators and KNEC Mathematical tables may be used except where stated otherwise.*

ForExaminer'sUseOnly

SECTIONI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**TOTAL**

SECTIONII

17	18	19	20	21	22	23	24	**TOTAL**

GRAND TOTAL

SECTION I (50 marks)

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

1. Simplify without using mathematical tables or calculator. **(4mks)**

$$\frac{2(\log_{10} 2.5 + \log_{10} 40)}{3\log_{10}0.05 + 2\log_{10}2 - \log_{10}0.5}$$

2. Simplify $\frac{\frac{2}{\sqrt{5}} - \frac{\overline{2}}{}}{\frac{}{2+\sqrt{5}} \quad \frac{}{2-\sqrt{5}}}$ and express your answer in the form $a+b\sqrt{c}$ where a, b and c are constants. **(3mks)**

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3. A wedding committee did a budget for a wedding ceremony as follows:

Food: Ksh. 58,205

Chairs:Ksh. 11,950

Entertainment: 8,453

The sum of the budget was done by first rounding each figure to 3 significant figures.

a) Determine the sum of the **budget** **(2mks)**

b) Determine the percentage error in this sum of the budget **(2mks)**

4. Solve the equation $4\sin^2\theta + 4\cos\theta = 5$ for $0^0 \leq \theta \leq 360^0$ **(3mks)**

5. a) Expand $(1-\theta)^4$ using the binomial **expansion** **(1mk)**

b). Use the first three terms of the expansion in (a) above to find the value of $(0.998)^4$
Correct to the nearest hundredth **(3mks)**

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6. Make w the subject of the formula **(3mks)**

$P=\sqrt{\frac{\square^2}{\square^2-\square^2}}$

7. Given that $y = 3 \sin (\frac{1}{2} x + 60)^0$ find, amplitude, period and the phase angle of the function.

(3mks)

8. A ship sails due North from latitude 20^0 S for a distance of 1440nm. Find the latitude of the point it reaches **(2mks)**

9. The equation of a circle is given by $3x^2+3y^2+3x+42y+30=0$. Determine the radius and the coordinates of the centre circle. **(3mks)**

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10. a) i) Draw a straight line MN such that MN=7cm **(1mk)**

ii) Construct the locus P such that < MPN=90^0 **(1mk)**

b) On the locus of P in (a) above, mark point T such that T is equidistant from M and N. **(2mks)**

11. The table below shows tax table for monthly income

Monthly taxable income in Ksh.	**Tax rate % in each shilling**
0- 9680	10
9681- 18800	15
18801-27920	20

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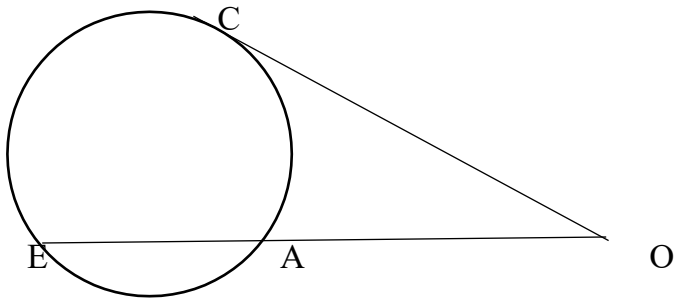
In a certain month, Kamau's tax was sh. 3336. Determine his income during that month. **(3mks)**

12. In the figure below OC is the tangent to the circle. If OE=8cm and OC=6cm, find EA. **(2mks)**



13. Evaluate $\int_1^4 (3x^2 + 1)dx$ **(3mks)**

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14. Liquid P contains 30% of water while liquid Q contains 48% of water. In what ratio should P and Q be mixed so that the mixture contains 42% of water**?** **(3mks)**

15. The probability that it is rainy in the morning is 0.6. The probability that John carries an umbrella while going to work is 0.4. Find the probability that

i) It is not rainy and John does not carry an umbrella. **(2mks)**

ii) It is rainy and John carries an umbrella **(1mk)**

16. Solve the simultaneous equations

$x-2y=1$, $x^2+y^2=29$ **(3mks)**

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SECTION II (50 MARKS) (Answer five questions in this section)

17. The first three consecutive terms of a geometric progression are 3^{2x+1}, 9^x and 81 respectively

a) Calculate the value of x **(3mks)**

b) Find the common ratio of the **series** **(2mks)**

c) Calculate the sum of the first ten terms of this series **(2mks)**

d) Given that the fifth and the seventh terms of this Geometrical Progression form the first two consecutive terms of an arithmetic sequence calculate the sum of the first 20 terms of the arithmetic sequence. **(3mks)**

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18. In an experiment, the length of 100 rats were measured to the nearest 0.1cm and the frequency tabulated as follows:

Length in *(cm)*	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64
Frequency	1	4	x	20	25	26	7	1	1

a) Find the value of x **(2mks)**

b) Calculate the mean length using assumed mean of 42 **(4mks)**

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c) Calculate the standard deviation **(4mks)**

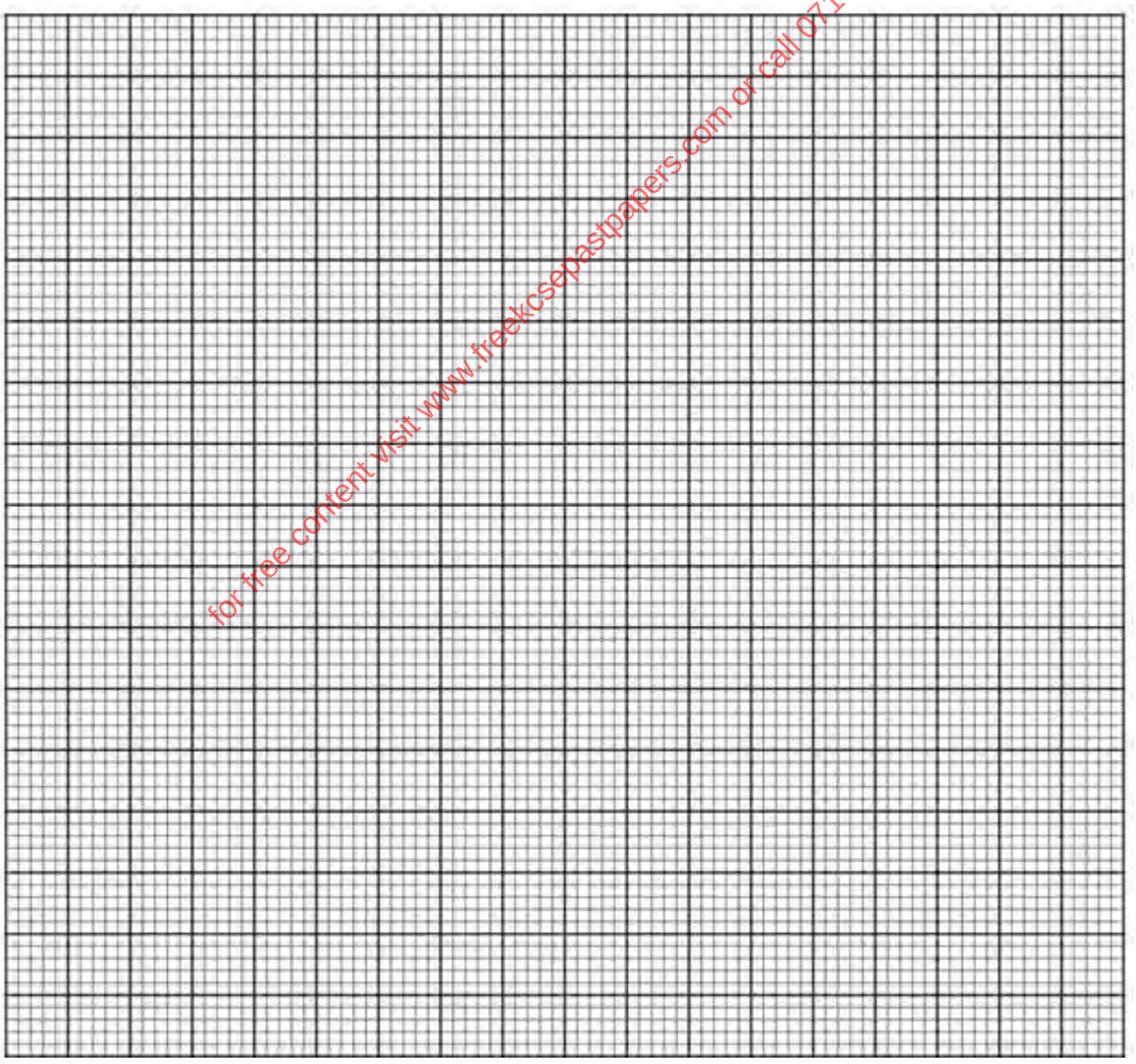
19. Complete the table below for the function

$y=x^3+6x^2+\mathbf{8x}$ **(2mks)**

X	-5	-4	-3	-2	-1	0	1
x^3	-125	-64		-8	-1	0	1
$6x^2$		96	54		6	0	6
$8x$	-40		-24	-16		0	8
Y			3	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 2 big squares to represent 1 unit on the x-axis and 1big square to represent 2 units on the y-axis)



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b) Use your graph to estimate the roots of the equations

i. $x^3+6x^2+8x=0$ **(1mk)**

ii. $x^3+5x^2+4x=-x^2-3x-1$ **(2mks)**

c) Find the values of x which will satisfy the inequality $\boldsymbol{x^3+6x^2+8x>1}$ **(2mks)**

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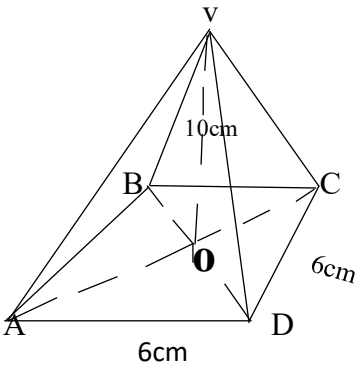
20. The figure below is a square based pyramid ABCDV with AD=DC=6cm. VO=10cm



a) State the projection of VA on the base ABCD **(1mk)**

b) Find:

i. The length of VA **(3mks)**

ii. The angle between the planes VA and ABCD **(2mks)**

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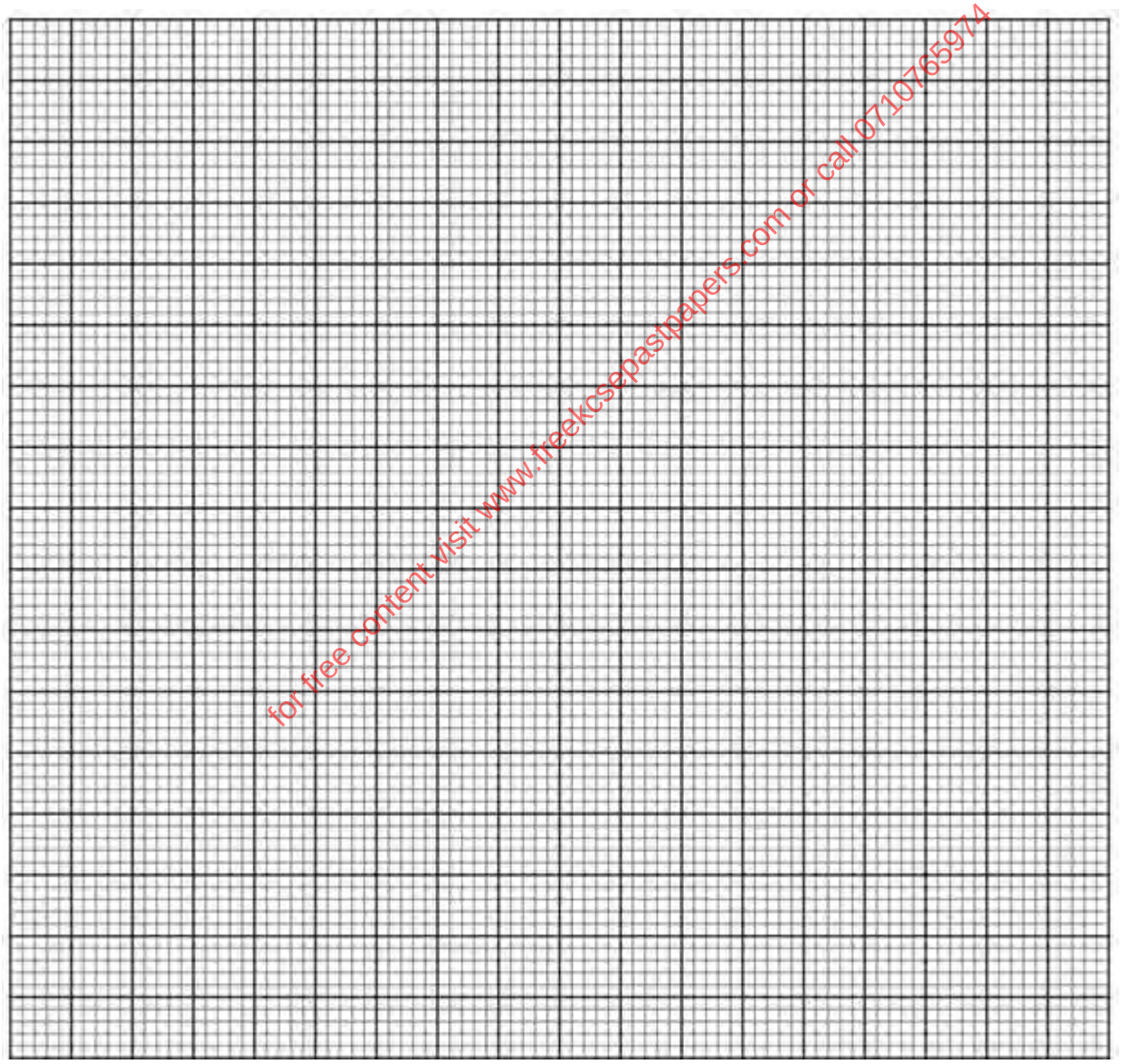
iii. The angle between the planes VDC and ABCD **(2mks)**

iv. The volume of the pyramid **(2mks)**

21. The points A (0,0), B (-3,1), C (1,3) and (4,2) are the vertices of a parallelogram ABCD.

a) $A^{/}B^{/}C^{/}D^{/}$ is the image of ABCD under the matrix of transformation $\begin{bmatrix} -2 & 0 \\ 0 & -2 \end{bmatrix}$

Draw ABCD and $A^{/}B^{/}C^{/}D^{/}$ on the grid. Write down the coordinates of $A^{/}B^{/}C^{/}D^{/}$ **(3mks)**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b) The points $A^{//}(0,0)$ $B^{//}(-6,2)$ $C^{//}(2,6)$ and $D^{//}(8,4)$ are the vertices of $A^{//}B^{//}C^{//}D^{//}$ the image of ABCD under a certain transformation. Draw $A^{//}B^{//}C^{//}D^{//}$ on the same grid as ABCD. Describe this transformation fully. **(3mks)**

c) A single transformation T maps $A^{/}B^{/}C^{/}D^{/}$ on to $A^{//}B^{//}C^{//}D^{//}$. Determine the matrix of T **(4mks)**

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22. A sum of money is deposited in a bank that pays simple interest at a rate r. After 3 years the total amount of money in the account is Ksh. 358,400. The interest earned each year is Ksh. 12,800.

a) Calculate: i) The amount of money which was deposited**.** **(2mks)**

ii) The rate of interest r. **(2mks)**

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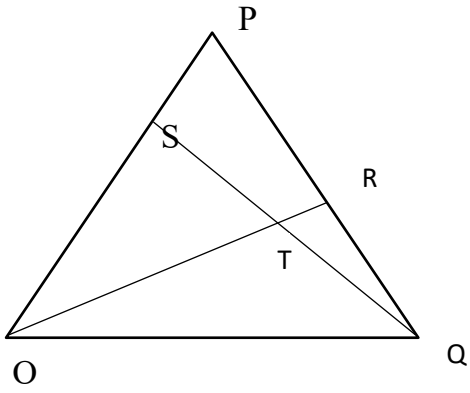
b) A computer whose marked price is Ksh. 40,000 is sold at ksh. 56,000 on hire purchase terms.

i) James bought the computer on hire purchase terms. He paid a deposit of 25% of the hire purchase price and cleared the balance by equal monthly instalments of ksh. 2625. Calculate the number of instalments. **(3mks)**

ii) Had James bought the computer on cash price he would have been allowed a discount of 12.5% on the marked price. Calculate the difference between the cash price and the hire purchase price and express it as a percentage of the cash price. **(3mks)**

23. In the figure below OPQ is a triangle in which $\overrightarrow{OS} = \frac{3}{4}\overrightarrow{OP}$ and PR: RQ= 2:1. Lines OR and SQ meet at T.



a) Given that $\overrightarrow{OP} = \mathbf{p}$ and $\overrightarrow{OQ} = \mathbf{q}$. Express the following vectors in terms of p and q:

i. $\overrightarrow{PQ}$ **(1mk)**

ii. $\overrightarrow{OR}$ **(2mks)**

iii. $\overrightarrow{SQ}$ **(2mks)**

b) Given that $\overrightarrow{ST} = m\overrightarrow{SQ}$ and $\overrightarrow{OT} = n\overrightarrow{OR}$ where m and n are consonants, determine the values of m and n **(4mks)**

c) Find the ratio of ST:TQ **(1mk)**

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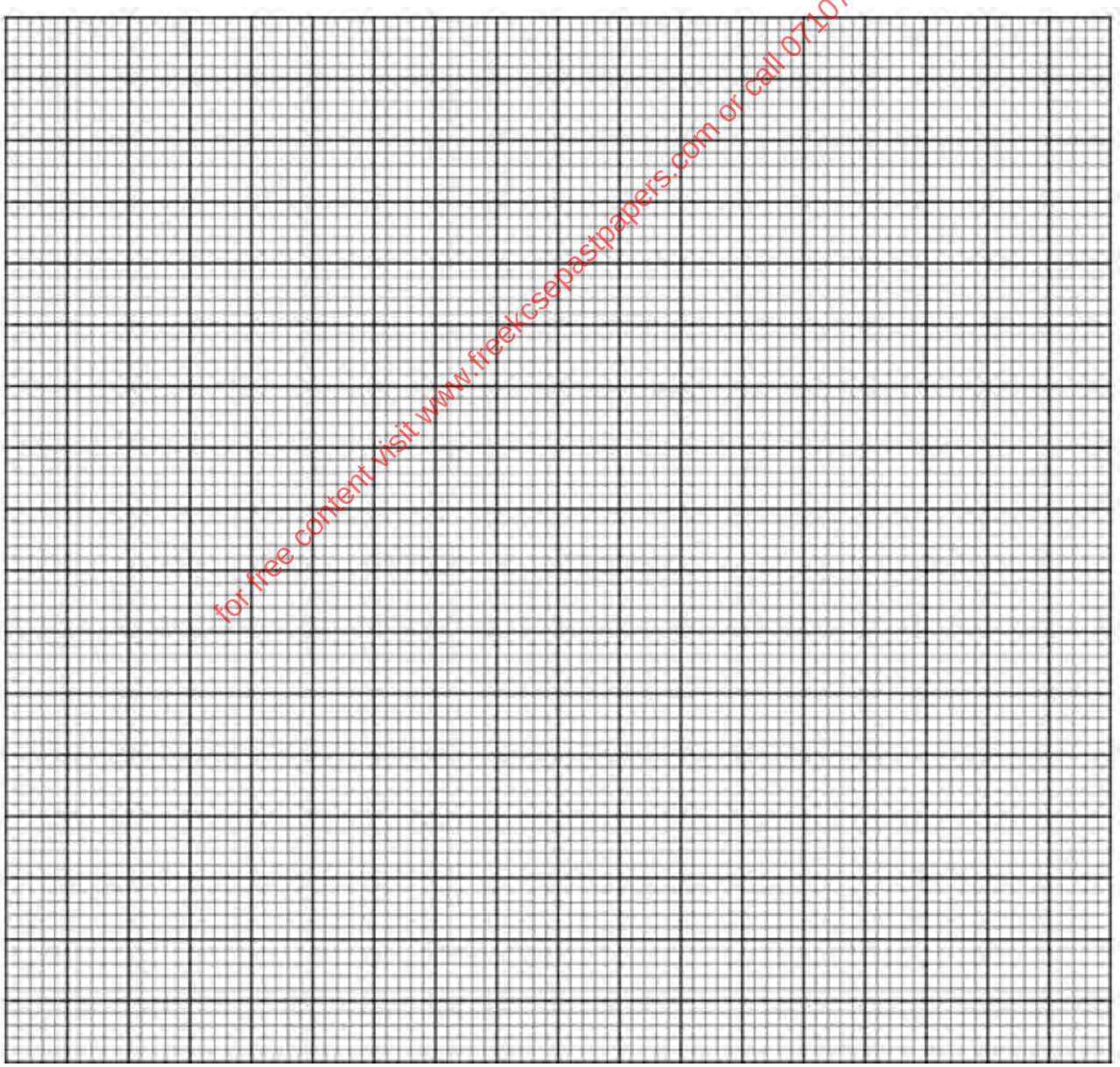
24. During installation of electricity bulbs in street lighting a dealer is required to supply two types of bulbs A and B. The total number of bulbs should not be more than 400. He must supply more of type A than of type B and type A should not be more than 300 and type B should not be less than 80.

a) By letting the number of type A bulbs to be x and the number of type B bulbs to be y, write all the inequalities representing the above information. **(3mks)**

b) On the grid provided draw all the **inequalities** **(4mks)**



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c) If type A bulbs cost sh.450 per piece and type B cost sh.350 per piece and that the higher the cost the higher the profit:

i. Use your graph to determine the number in each type of bulb that he should supply to maximize the profit**.** **(1mk)**

ii. Calculate the maximum cost of lighting the street **(2mks)**

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KAPSABET HIGH SCHOOL

451/1

COMPUTER STUDIES

PAPER 1 (THEORY)

TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

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(Kenya Certificate of Secondary Education)

Instructions to Candidates

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

(b) *This Paper consists of **two** sections **A** and **B**.*

(c) *Answer **all** the questions in **section A**.*

(d) *Answer **question 16** and any other **three** questions from section **B**.*

(e) ***All** answers should be written in the spaces provided.*

FOREXAMINER'SUSEONLY

Section	Questions	Candidate's score
A	1-15	
B	16	

	TOTAL SCORE	

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SECTION A: (40 MARKS)

Answer ALL questions in this section

1. Name any **two** computing devices developed during pre-electronic age. **(2marks)**

……

……

2. Several items of data are input to a computer using direct data entry methods. Write down the most appropriate input device to input each item of data.

a) Data written in special ink at the bottom of bank cheques. **(1mark)**

……

b) Information on the label of a supermarket product. **(1mark)**

……

c) Shaded in boxes on a student's examination answer sheet. **(1mark)**

……

d) Debit card details input at an **ATM.** **(1mark)**

……

3. Differentiate between a monitor and a printer in terms of information output. **(2marks)**

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4. Kilimambogo has decided to create a new file using an application program. He added content in the file. Identify the type of storage device that he was using while creating the file. **(1mark)**

……

5. Kilimambogo decided to save the file after adding content. Identify the type of storage device he used. **(1mark)**

……

6. Describe **three** types of computer buses **(3marks)**

……

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7. Describe the following concepts as used in applications.

➢ Automatic recalculation. **(2marks)**

……

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……

➢ What if analysis. **(2marks)**

……

……

……

8. Password is a secret code for protecting systems against unauthorized access. State **three** features of a password. **(3marks)**

……

……

……

9. Explain the following terminologies used in an e-mail software.

(i) CC **(2marks)**

……

……..…

(ii) BCC **(2marks)**

……

……

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10. Identify the data processing modes that are used in performing the following activities:

(i) Processing examination marks for students in a school. **(1mark)**

.....

(ii) Booking a bus ticket using computing device and choosing a specific seat. **(1mark)**

.....

(iii) Buying of data bundles using a software that provides the user with immediate response to enable the user to decide and make a selection for the next input**.** **(1mark)**

.....

11. Name **three** types of non-printing guides in DTP. **(3marks)**

.....

.....

.....

12. State **two** advantages of USB ports over COM ports. **(2marks)**

.....

.....

13. A supermarket decided to computerize their system. State **three** benefits that the supermarket would realize by doing this. **(3marks)**

.....

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14. Kimani wanted to buy an application software, he was advised to buy an integrated package. What is meant by the term integrated software. **(2marks)**

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15. Explain **three** benefits that Kimani would experience by using an integrated software other than the single package. **(3marks)**

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SECTION B: (60 MARKS)

Answer Question 16 and any other three questions from this section

16. (a) Explain the term structured programming as used in program development. **(2marks)**

(b) Name the stage of program development in which: **(4marks)**

(i). A flowchart would be drawn.

(ii). The programmer would check whether the program does as required.

(iii). User guide would be written.

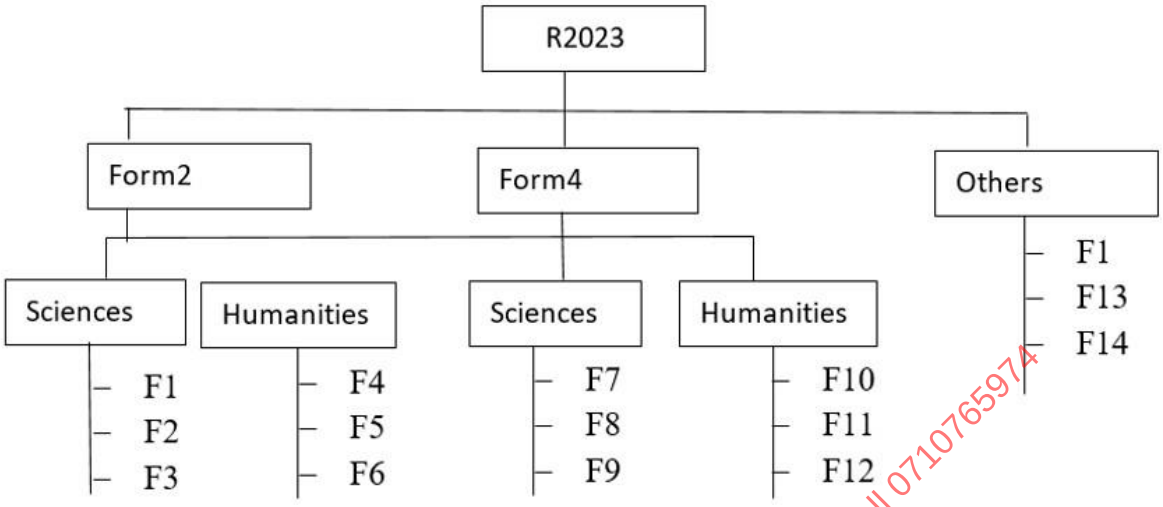
(iv). The requirement specification would be written.

(c) State **two** function of an assembler. **(2marks)**

(d) To qualify to play in football tournament, a student must be aged between 13 and 18, the system automatically checks a player's age once their names and date of birth have been provided. 11 participants were evaluated and their qualification status displayed alongside their name and age. Draw a flowchart that would be used to create the program. **(7 marks)**

17. a) . State **three** ways in which an operating system performs error handling in a computer system. **(3marks)**

b). An operating system organizes files in directories as shown in the chart below. Study it and answer the questions that follow.



(i) Write the name of this file structure? **(1mark)**

(ii) Explain what would happen if an attempt is made to delete **Form4** while **F10** in **Humanities** is opened. **(2marks)**

(iii) Write the path of the **F6**. **(2marks)**

(c) Describe **three** activities that are performed in the maintenance phase during system development. **(6 marks)**

(d) State **one** role of an information system analyst. **(1mark)**

18. (a) What is meant by the term data communication? **(1mark)**

(b) Describe **three** data communication elements **(3marks)**

(c) State the meanings of the following network and internet terms: **(5marks)**

i.Protocol

ii. Client

iii. Server

iv. Home page

v.DTE

(c) With aid of a diagram, describe the star network topology **(6marks)**

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19 (a) Define each of the following computer terminologies **(2marks)**

a. Nibble

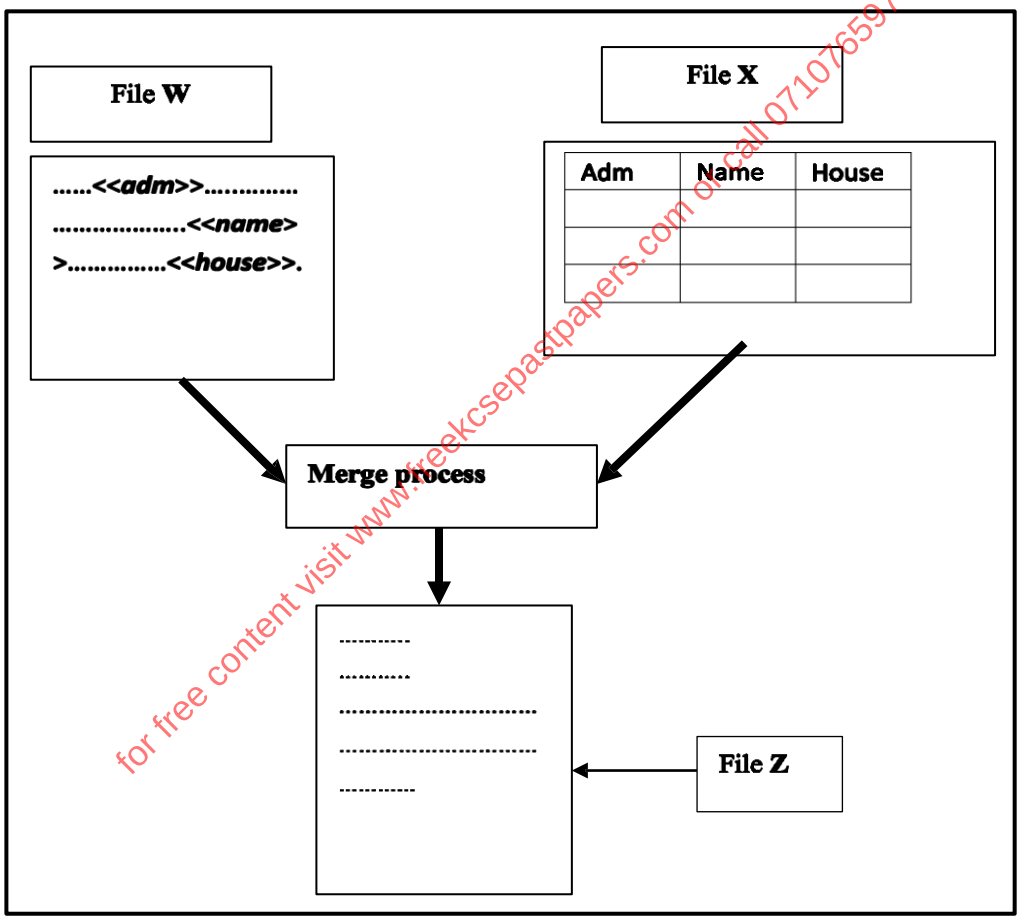
b. Byte

(b) State **three** ways of reducing Repetitive Strain Injuries when using computers. **(3marks)**

(c) Using twos compliment, perform the following binary arithmetic leaving your answer in decimal notation.

$1101_2 - 100101_2$ **(6 marks)**

(d) The diagram below shows how mail merging is done in word processing. Use it to answer the questions below.



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Identify the files labeled: **(3marks)**

(i) W ……

(ii) X ……..

(iii) Z ……..

(e) Name the terminology used to refer to items enclosed in << >> symbols in file **W**. **(1mark)**

20. (a) Explain **three** components of an Expert System. **(6marks)**

(b) The following is an extract from a database obtained from a National organization. Use the table to answer questions which follow:

S/NO	EMPLOYMENT ID	NAME	AGE	DEPARTMENT	SALARY(SH)	STATUS
001	EMP01	Lucy	40	Secretary	40,000	Married
002	EMP02	Agnes	45	Cook	20,000	Single
003	EMP03	Peter	30	Messenger	15,000	Married
004	EMP04	Joel	35	Account	50,000	Married
005	EMP05	Abdi	20	Sales	45,000	Single
006	EMP06	Baraka	25	Security	10,000	Single

(i.) Which field could best fit to be a primary key? **(1mark)**

(ii) Explain your answer in (i). **(2marks)**

(iii)Describe how they would extract all the details of those who are 30 years and above and are married. **(3 marks)**

(c) State **three** area where virtual reality can be applied. **(3marks)**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

451/2

COMPUTER STUDIES

PAPER 2 (PRACTICAL)

TIME: 2½ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

(Kenya Certificate of Secondary Education)

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INSTRUCTIONSTOCANDIDATES

(a) Type your name and index number at the top right hand corner of each print out

(b) Write your name and index number on the CD-R / CD-RW provided

(c) Write the name and version of software used in each question on the answer sheet

(d) Answer **ALL** the questions

(e) Passwords **should not be used** while saving in the CD-R

(f) All answers **MUST** be saved in the CD-R / CD-RW

(g) Make print out of answers on the answer sheet provided

FOREXAMINER'SUSEONLY

Question	Candidate's Score
1	
2	

Total Score	

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1. The Judiciary Service Commission would like to conduct interviews on different shortlisted applicants.

Required.

(a) (i) Create the main document below as it appears and save it as **JLetter.** **(21 marks)**

JUDICIARY SERVICE COMMISSION,
P.O. BOX PRIVATE BAG-00100,
NAIROBI.
10th October,2023.
<<First Name>> <<Second Name>>,
<<Postal Address>>,
<<City>>.
Dear <<Salutation>>,

RE: INVITATION TO AN INTERVIEW

This is to let you know that you have been shortlisted for an interview scheduled on <<date of visit>> at <<venue>> from <<Time>> for the <<Title>> position.

Please come with your:
(a) Original Identity Card
(b) Original Academic Certificates
(c) EACC Compliance Certificate
(d) Certificate of Good Conduct
(e) HELB Clearance Certificate
(f) KRA Compliance Certificate

A successful candidate will be entitled to the salary scales as shown in the table below:

TITLE	JOB GROUP	BASIC SALARY(KSH)
ICT OFFICE	TS III	102,050
CLERK	TS I	63,480
ACCOUNTANT	TS IV	90,345
TOTAL		255,875

We look forward to your attendance.

Yours sincerely

Chris Nyachoti.

Director

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(ii) Proofread the document **(2 marks)**

(iii) Format 1.5 Line spacing in the body section **(2 marks)**

(b) Create a Data source below for the candidates and save it as **JRecipients** **(15 marks)**

First Name	Second Name	Postal Address	City	Salutation	Date Of Visit	Time	Venue	Title
Charles	Omukuba	P.O BOX 12	Busia	Sir	3rd November, 2023	11:00 am	Golf Club Hotel	ICT Officer
Grace	Kith	P.O BOX 102	Nairobi	Madam	2nd November, 2023	8:00 am	Serena Hotel	Clerk
John	Pilau	P.O BOX 38	Mombasa	Sir	4th November, 2023	9:00 am	Intercontinental hotel	Accountant
Peter	Gakere	P.O BOX 25	Laikipia	Sir	4th November, 2023	9:00 am	Intercontinental hotel	Accountant
Antony	Kipchoge	P.O BOX 57	Bomet	Sir	3rd November, 2023	11:00 am	Golf Club Hotel	ICT Officer
Gladys	Mutua	P.O BOX 27	Machakos	Madam	3rd November, 2023	11:00 am	Golf Club Hotel	ICT Officer
Gilbert	Muriithi	P.O BOX 18	Meru	Sir	2nd November, 2023	8:00 am	Serena Hotel	Clerk
Janet	Kati	P.O BOX 42	Turkana	Madam	4th November, 2023	9:00 am	Intercontinental hotel	Accountant

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(c) Using mail merging, create a merged document and save it as **JSC_Merged.(4 marks)**

(d) Print the following documents

(e) **JLetter** **(2 marks)**

(f)**JRecipients** **(2 marks)**

(g) **Kith's and Kipchoge's letters only** **(2 marks)**

2. a) The MBORANU Hospital in your county would like to computerize their operations. They have consulted you to create a database and save it as **MBORANU Hospital.** **(2 marks)**

b) Create the two tables below with the shown fields. **(10 marks)**

(i) PatientsDetails Table

Field Name	**Data Type**	**Field Size**
PNO	Text	3
Patient Name	Text	30
Age	Number	Long integer
Residence	Text	15
City	Text	10
Gender	Text	2

(ii)MedicalRecords Table

Field name	**Data type**	**Field size**
PNO	Text	3
Doctor	Text	30
Diagnosis	Text	50
Treatment	Text	50
Bill Amount	currency	
Amount Paid	currency	

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c) Set the Primary Key for each table **(2 marks)**

d) Using the appropriate fields create a relationship between the two tables. **(4 marks)**

e) Create forms for each table and save them appropriately. Use them to enter records into the respective table. **(10 marks)**

PatientsDetails Table

PNO	Patient Name	Age	Estate	City	Gender
001	John Kimanzi	19	Kinoo	Kiambu	M
002	Jane Wanjiru	37	Siaya	Kisumu	F
003	Jack Omondi	32	Mathare	Nairobi	M
004	Mary Kimani	42	Buruburu	Nairobi	F
005	Grace Banda	36	Donholm	Nairobi	F
006	Aaron Odhe	30	Mamba	Mombasa	M
007	Mary Otieno	29	Matuu	Kitui	F
008	Shah Vadgama	34	Parklands	Nairobi	M

MedicalRecords Table

PNO	Doctor	Diagnosis	Treatment	Bill	Amount Paid
003	Isaac Omondi	Malaria	Quinine	500	500
006	Grace Achuman	Depression	Antidepressants	2500	2000
004	Francis Kimani	Headache	Paracetamol	200	200
002	Alex Kioko	Appendicitis	Operation	10000	2000

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f) Create a query to display:

i. All patients whose names end with letter **"i"**. Save the query as **Iquery** **(3 marks)**

ii. All patients whose age is above **30** and come from **Nairobi City.** Save the query as **Agequery** **(3 marks)**

g) Create a query to compute the balance of the bill amount and save it as **Balquery**(4 marks)

h) Create a report with the title "**2023 MBORANU PATIENTS REPORT**" used to display **PNO, Patient Name, Age, Doctor, Diagnosis, Treatment and Bill.** Save the report as **patients report** **(6 marks)**

i) Print

i. Patients_Details table **(2 marks)**

ii. Age query **(2 marks)**

iii. Patients report **(2 marks)**

KAPSABET HIGH SCHOOL

441/1

HOME SCIENCE

PAPER 1 (THEORY)

TIME: 2½ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

INSTRUCTIONSTOCANDIDATES

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

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

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

d). Answer ALL the questions in Sections A and B and any two questions from Section C.

e). Candidates should answer the questions in English

Forexaminer'suseonly

Section	Question	Maximum score	Candidates score.
A	1 – 19	40	
B	20	20	
C	21– 23	20	

		20	
TOTAL SCORE		**100**	

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SECTIONA(40MARKS)

Answerallthequestionsinthissectioninthespacesprovided

1. Write down the meaning of the following terms used in weaning ; **(2mks)**

a) Basic mix

……

……

b) Multi mix

……

……

2. Distinguish between a cesspool and a soak pit **(2mks)**

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3. Frozen foods should be thawed completely before cooking, why? **(1mks)**

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……

4. Give FOUR examples of builders added to soaps and soapless detergents during manufacture **(2mks)**

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5. State THREE principles you would observe when removing stains from a table cloth. **(3mks)**

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6. Give THREE Methods of transferring pattern Markings on a fabric **(3mks)**

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7. Identify 3 topics studied in the area of Home Management **(3mks)**

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8. Give four qualities of a good laundry soap**.** **(2mks)**

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9. State TWO ways of ensuring that a bedridden patient does not suffer from bed sores **(2mks)**

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10. Suggest two reasons why button shanks are important in a garment **(2mks)**

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11. Name TWO agencies that deal with consumer protection in Kenya **(1mks)**

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12. List 4 Stitches used to finish hems **(2mks)**

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13. Give FOUR advantages of blanching vegetables **(2mks)**

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14. State TWO points to consider when choosing pegs **(2mks)**

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15. Identify 3 ways of finishing sleeves other than using cuffs **(3mks)**

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16. Describe sponging in relation to treatment of clothes in laundry work **(2mks)**

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17. Give the importance of the following processes in clothing construction; **(2mks)**

a) Layering

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b) Tacking

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18. Describe giving an example, the meaning of a monochromatic colour scheme **(2mks)**

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……

19. Give two reasons for using machine fell seam on children's garments **(2mks)**

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SECTIONB(20MARKS)-COMPULSORY

20. Your mother has asked you to help with a few cleaning jobs in the house.

a) Launder a loose multiple coloured towel **(8mks)**

b) Outline the procedure you would use to clean a neglected plastic kitchen bin **(7mks)**

c) Clean a stainless steel sink **(5mks)**

SECTIONC(40MARKS)

Answeranytwoquestionsfromthissectioninthespacesprovided

21. a) Explain four factors that may affect normal foetal development **(8mks)**

b) State FIVE reasons why it would not be advisable to buy a washing machine on hire purchase **(5mks)**

c) State FOUR qualities of a good disinfectant **(4mks)**

d) Give THREE ways of meeting the emotional needs of a patient recuperating at home **(3mks)**

22. **a)** State FIVE disadvantages of Rechauffe dishes **(5mks)**

b) Explain how the following factors contribute to successful meal planning; **(6mks)**

i) Nutritional balance

ii) Texture

iii) Individual requirement

c) Give FOUR reasons for including fruit salad in a meal **(4mks)**

d) State FIVE qualities of a well-made cuff **(5mks)**

23. **a)** Outline on how to make a double stitched /machine fell seam**.** **(6mks)**

b) Describe THREE ways in which a facing can be used to create a decorative effect. **(6mks)**

c) Explain FOUR reasons for using care labelling codes on garments **(4mks)**

d) Differentiate between; **(4mks)**

i) Regenerated and synthetic fibres

ii) Wear and tear

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KAPSABET HIGH SCHOOL

441/2

HOME SCIENCE

PAPER 2*(CLOTHING CONSTRUCTION)*

TIME: 2½ HOURS

SCHOOL…… SIGN……

(Kenya Certificate of Secondary Education)

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441/2

CLOTHING & TEXTILES

Paper 2

Time: 2½ Hours

CONFIDENTIAL

1. *Light weight cotton fabric 70cm by 65cm.*
2. *Cotton sewing thread to match the colour of fabric.*
3. *Elastic cord 18cm long by ½ cm wide.*
4. *A4 envelope.*

KAPSABET HIGH SCHOOL

TRIAL 2 2024

441/2

HOME SCIENCE

PAPER 2 ***(CLOTHING CONSTRUCTION)***

TIME: 2½ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

(Kenya Certificate of Secondary Education)

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HOMESCIENCE

(CLOTHING CONSTRUCTION & TEXTILES)

441/2

Paper 2

(PRACTICAL)

INSTRUCTIONS TO CANDIDATES

1. This paper consist of 3 printed pages
2. Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing

A pattern of a blouse has been provided. You are adviced to study the questions, the patterns Q the layout before you begin the test.

Materials provided;

1. Pattern pieces.

A - Front bodice

B - Back bodice

C - Front yoke.

D - Sleeve

E - Collar

F - Grossway strip

2. Light weight cotton fabric of 70 by 65 cm.

3. Cotton sewing thread to match the fabric.

4. Elastic cord 18cm long ½ cm wide.

5. Envelop A4.

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THE TEST

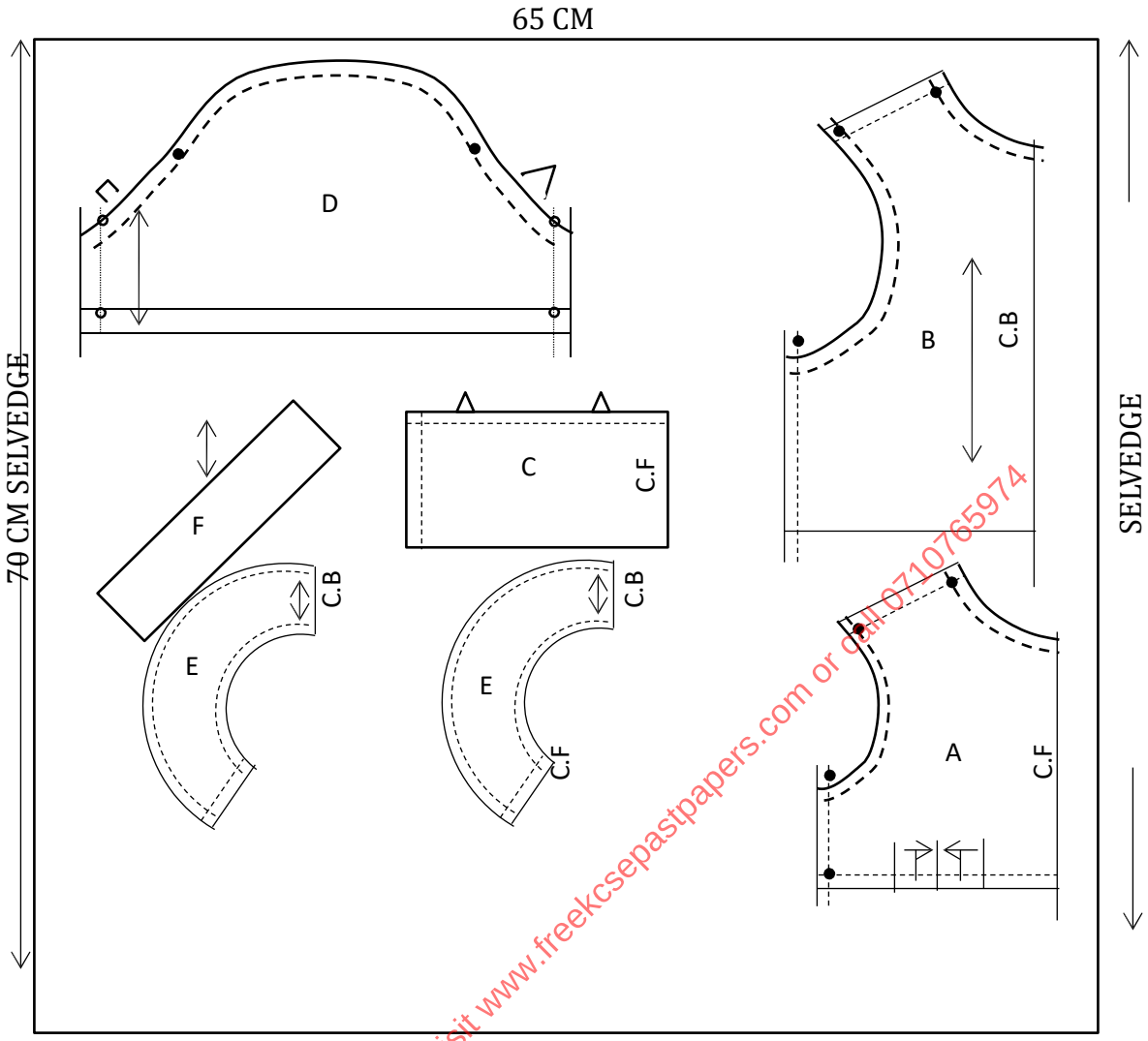
Using the materials provided, cut out and make the left half of the blouse to show the following;

1. Cutting out. **(15½ marks)**
2. Working of the inverted pleat on the front bodice. **(3 marks)**
3. Joining the front bodice to the yoke using an overlaid seam. **(10 marks)**
4. Joining the front bodice to the back bodice at the shoulder using an open seam. **(6½ marks)**
5. Working the side seam using double stitched seam. **(7½ marks)**
6. Preparation and attachment of uninterfaced collar using a crossway strip. **(16 marks)**
7. Working of the sleeve to include;
   (a) Control of fullness at the crown. **(2 marks)**
   (b) Joining of the underarm seam using a French seam. **(6½ marks)**
   (c) Attachment of the sleeve. **(4 marks)**

(d) Working of elastic casing at the lower edge of the sleeve and inserting the elastic cord. Don't seal the opening used to insert the cord. **(10 marks)**

8. Presentation. **(6 marks)**

LAYOUT (NOT DRAWN TO SCALE)



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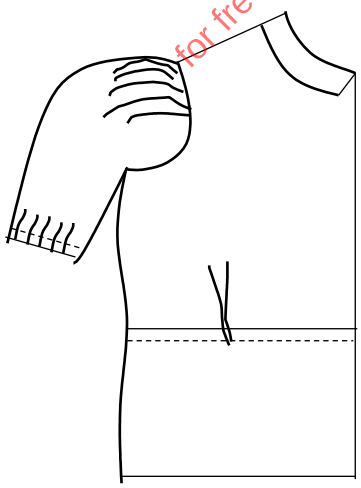
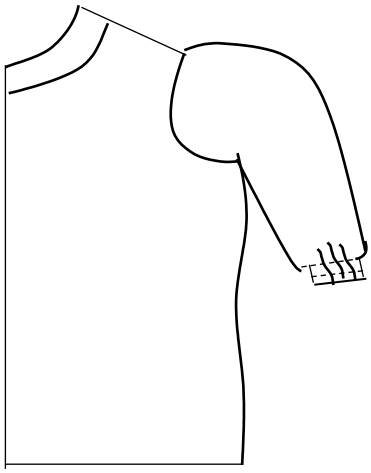
VIEWS

FRONT



BACK



KAPSABET HIGH SCHOOL

TRIAL 2 2024

441/2

HOME SCIENCE

PAPER 2 *(*FOODS AND NUTRITION*)* **TIME: 2½ HOURS**

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

(Kenya Certificate of Secondary Education)

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INSTRUCTIONS TO CANDIDATES

PLANNING SESSION; 30 MINUTES

PRACTICAL TEST SESSION; 1 HR 15 MINS

a) Read the test carefully

b) Text books and recipes may be used during the planning session as reference materials

c) You will be expected to keep to your order of work during the practical session

d) You are only allowed to take away your reference material at the end of the planning session

e) You are not allowed to bring additional notes to the practical session

TEST

You intend to hold a party for your sister on her graduation day. Using all the ingredients listed below, prepare, cook and present a suitable two dish meal for her and her friend.

Include a nutritious drink.

Ingredients:

Salt

Beef / Chicken

Garlic

Fat / Oil

Sugar

Rice

Pilau mix

Fruits in season

Peas / French beans

Carrots

Ginger

Tomatoes

Onions

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PLANNING SESSION – 30 minutes

For each task listed below, use separate pieces of paper and make duplicate copies using carbon paper then proceed as follows:

1. Identify the dishes and write down the recipes;
2. Write down your order of work;
3. Make a list of foodstuff and equipment you will require.

KAPSABET HIGH SCHOOL

TRIAL 2 2024

314/1

ISLAMIC RELIGIOUS EDUCATION

PAPER 1

TIME: 2½ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

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(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

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

b) *Write the date of examination and sign in the spaces provided above.*

c) *This paper consists of **six** questions.*

d) *Answer any **five** questions in the answer booklet provided.*

FOREXAMINER'SUSEONLY

Question	1	2	3	4	5	6	TOTAL SCORE
Candidates Score							

*Answer any **five** questions in the answer booklet provided.*

1. a. Highlight the distinctive features of the Madinan *Surahs*. **(6marks)**

b. State social vices that a believer should shun from according to *Surah Al-Hujurat*.

(8marks)

c. Outline the benefits of compilation of the Quran during *Khalifa* Abu-Bakr's reign.

(6marks)

2. a. State the conditions to be fulfilled by a translator of the Quran. **(6marks)**

b. Discuss the lessons a Muslim should learn and practice from last three verses of *Surah Al-Baqarah* Q2:284-286. **6marks)**

c. Outline the factors that facilitated the ease in the standardization of the Quran during *khalifa* Uthman's period. **(8marks)**

3. a. Give ***six*** reasons why some people fabricated Hadith. **(6marks)**

b. Explain why the period of Tabii Tabiin is regarded as the "Golden period" of the growth and development of Hadith. **(6marks)**

c. The Prophet (P.B.U.H) said "…*As fire destroys fuel so does envy destroy virtues."*(Bukhari) In the light of this hadith, identify ways in which Muslims can avoid envy.

(8marks)

4. a. Show the similarities in the revealed scriptures. **(6marks)** .

b. Describe the stages of life after death in the correct order of stag according to Islam.

(8marks)

c. Explain the significance in the belief in *Qadar* in the life of a Muslim. **(6marks)**

5. a. Outline the contributions of Imam Malik as a jurist in the field of *fiqh*. **(6marks)**

b. Highlight the conditions for use of *Ijma* as a source of *Shariah*. **(6marks)**

c. Discuss why it would be a challenge to apply Islamic Law in Kenya. **(8marks)**

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6. a. Differentiate between *Jumaa* and *Idd ul Fitr* prayer. **(8marks)**

b. Describe the correct order of the obligatory acts of Hajj. **(7marks)**

c. Outline ***five*** conditions of performance of *Ibadat* (acts of worship). **5marks**

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KAPSABET HIGH SCHOOL

TRIAL 2 2024

314/1

ISLAMIC RELIGIOUS EDUCATION

PAPER 1

TIME: 2½ HOURS

NAME.....

SCHOOL..... **SIGN**.....

INDEX NO..... **ADM NO**.....

(Kenya Certificate of Secondary Education)

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INSTRUCTIONS TO CANDIDATES

- ***e)*** *Write your name, school and index number in the spaces provided above.*
- ***f)*** *Write the date of examination and sign in the spaces provided above.*
- ***g)*** *This paper consists of **six** questions.*
- ***h)*** *Answer any **five** questions in the answer booklet provided.*

FOREXAMINER'SUSEONLY

Question	1	2	3	4	5	6	TOTAL SCORE
Candidates Score							

*Answer any **five** questions in the answer booklet provided.*

1. a) State the effects of homosexuality in the society. **(5marks)**

b) Discuss the rationale of Islamic manners of eating. **(8marks)**

c) Highlight the benefits of exercising contentment *(Qanaa)*. **(7marks)**

2. a) Give ***six*** social benefit of the law of inheritance in Islam. **(6marks)**

b) Suggest ways in which Muslims can help prevent child abuse. **(8marks)**

c) Explain the importance of having written agreements and contracts in business transactions. **(6marks)**

3. a) Suggest ***seven*** ways a Muslim can use to prevent corruption. **(7marks)**

b) Explain the reasons why Muslim countries promote peace with other nations. **(8marks)**

c) State ***five*** rights of a wife in Islam. **(5marks)**

4. a) Discuss the impact of the Treaty of Hudaibiyya to the Prophet's mission. **(8marks)**

b) Highlight the achievements of Khalifa Abubakr (r.a) during his caliphate. **(6marks)**

c) Outline ***six*** challenges faced by early scholars to reform the society. **(6marks)**

5. a) Give ***five*** factors that facilitated the spread of Islam in Buganda in the 19th Century. **(5marks)**

b) Describe the relationship of Ali bin Abi Talib to the Prophet (p.b.u.h). **7marks)**

c) Discuss the contribution of Maamun Al-Rashid as an Abbasid Caliph. **(8marks)**

6. a) Highlight the challenges faced by *Sheikh* Hassan Al-Banna. **(5marks)**

b) Outline ***five*** contributions of Abu Ali Ibn Sina to philosophy. **(5marks)**

c) Although Islam was the first foreign religion to arrive in the East Coast Africa it took a long time to spread into the interior of East Africa. Give reasons for the above situation. **(10marks)**

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