TOPGRADE 2024 PREDICTION

KCSE ALL SUBJECTS

This Prediction examination is the outcome of a thorough analytical and systematic approach based on the trends and frequency of testing certain concepts on various subjects.Take Note that Mwalimu Consultancy has provided a critical understanding of areas Predicted in the final KCSE 2024 Examinations.

SUBJECTS PREDICTED;

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

CONFIDENTIAL

For Marking Schemes

Mr Isaboke 0746-222-000 / 0742-999-000

ALL THE BEST IN KCSE!

KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

231/1

BIOLOGY

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. *Write your **name, index number** and the **name** of your school in the spaces provided above.*
2. ***Sign** and **write** the **date** of examination in the spaces provided above.*
3. *Answer **all** questions in this question paper.*

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1-33	80	

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*Answer **all** questions in this question paper.*

1. **a)** Name the antigens that determines human blood groups. **(2mks)**

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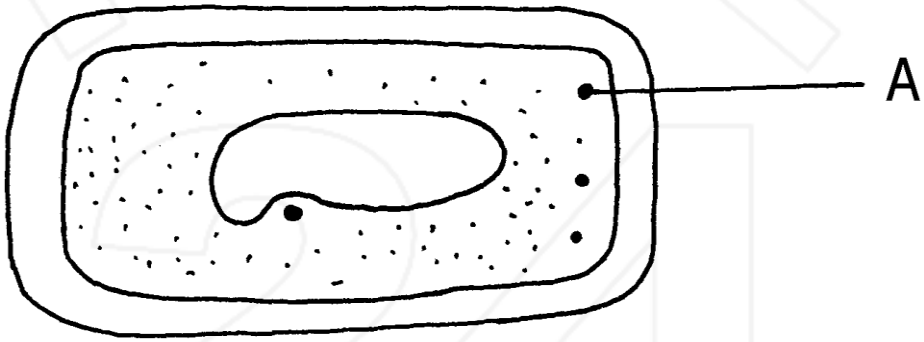
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b) State the adaptation of the red blood cells that make them move in blood capillaries. **(1mk)**

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2. The figure below is a diagram of a cell as seen under the light microscope **(3mks)**



State three structures that show that these is a plant cell. **(3mks)**

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3. Why is it more advantageous to breath through the nose than through the mouth. **(3mks)**

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4. State <u>three</u> characteristics of members of Bryophyta. **(3mks)**

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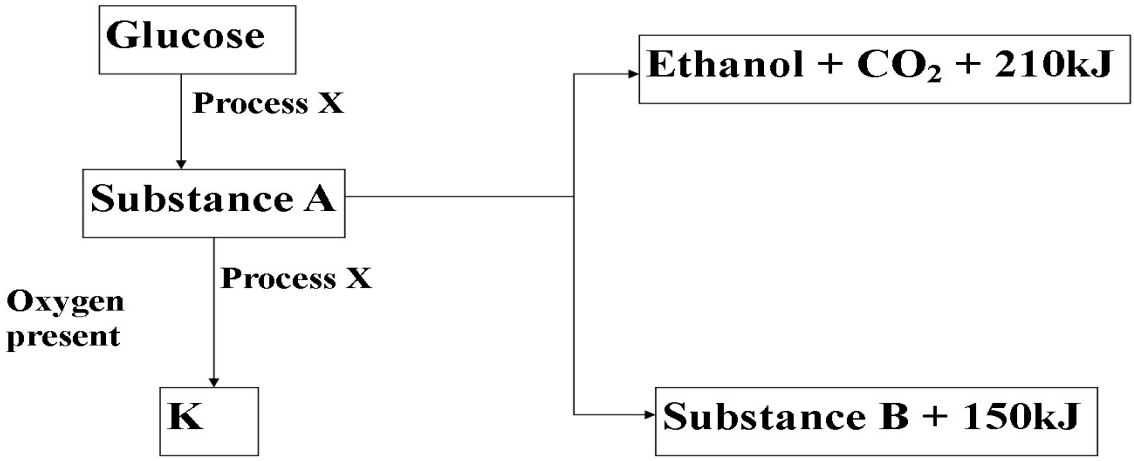
5. State <u>three</u> characteristics of a population **(3mks)**

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6. The diagram below represents a simple respiratory pathway in cells **(2mks)**



a) Name the process marked **X** and **Y** **(2mks)**

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b) Name substances represented by **K.** **(1mk)**

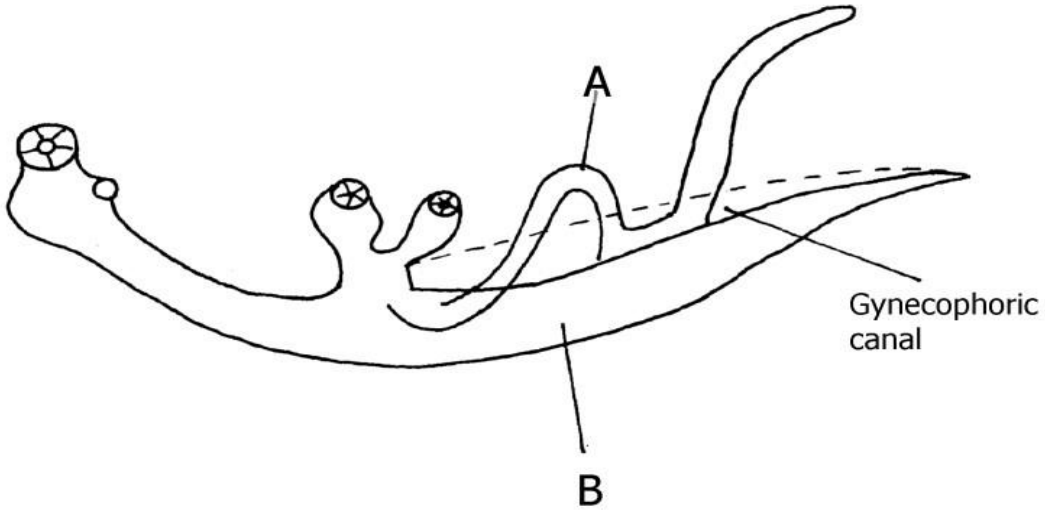
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c) State the name of substance **B.** **(1mk)**

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7. The diagram below shows two organisms of the same species **(2mks)**



a) State the sex of organism **A** and **B.** **(2mks**

……

……

b) Name the disease caused by the above organism. **(1mk)**

……

8. Identify the physiolocal process involved in the following

a) Feeding in venus fly trap(insectivorous plant) **(1mk)**

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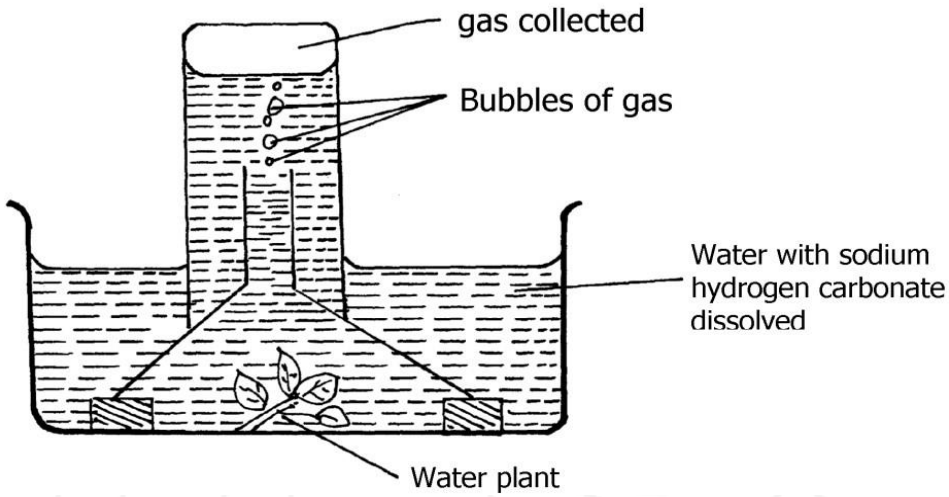
b) Absorption of mineral salts by plant roots. **(1mk)**

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9. An experiment on photosynthesis was set up as shown below **(4mks)**



a) What was the aim of this experiment? **(1mk)**

……

……

b) What gas is produced during this experiment. **(1mk)**

……

……

c) Why was sodium hydrogen carbonate added to water during this experiment **(1mk)**

……

……

10. Distinguish between the following

a) Habitat and ecological niche. **(2mks)**

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b) Intraspecific and interspecific competition . **(2mks)**

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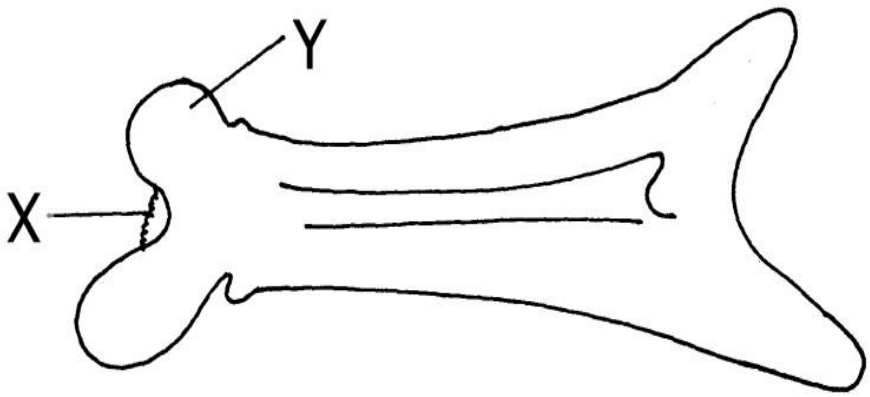
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11. The diagram below represents a mammalian bone. **(1mk)**



i) Name the bone **(1mk)**

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ii) Identify the part labelled X **(1mk)**

……

iii) Name the bone that articulates with the part labelled **Y** **(1mk)**

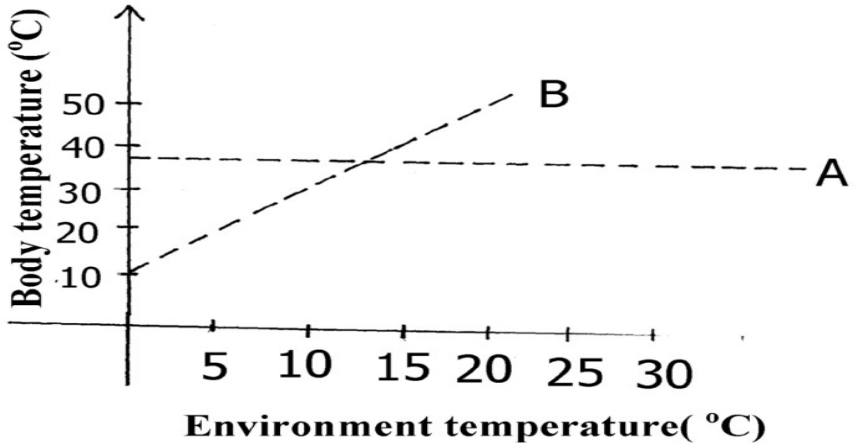
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12. Body temperature of two animals A and B were taken over the increase in environmental temperature. The results are shown in the diagram below.



a) What name is used to describe group of animals represented by

A ..... **(1mk)**

B..... **(1mk)**

b) State <u>two</u> advantages of the group of animals represent by A over that of B. **(2mks)**

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13. Briefly explain how the following affect the rate of transpiration **(2mks)**

i) Sunken stomata **(2mks)**

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ii) Hairy leaves **(2mks)**

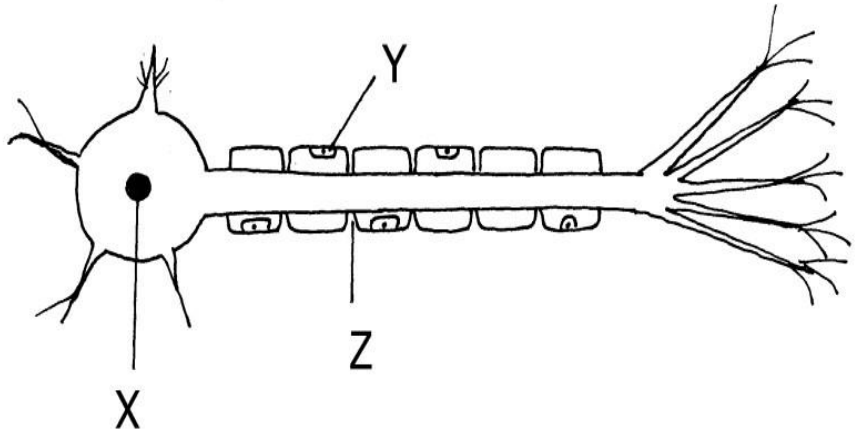
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14. The diagram below shows the structure of a neurone



i) **a)** Identify the type of neurone drawn above **(1mk)**

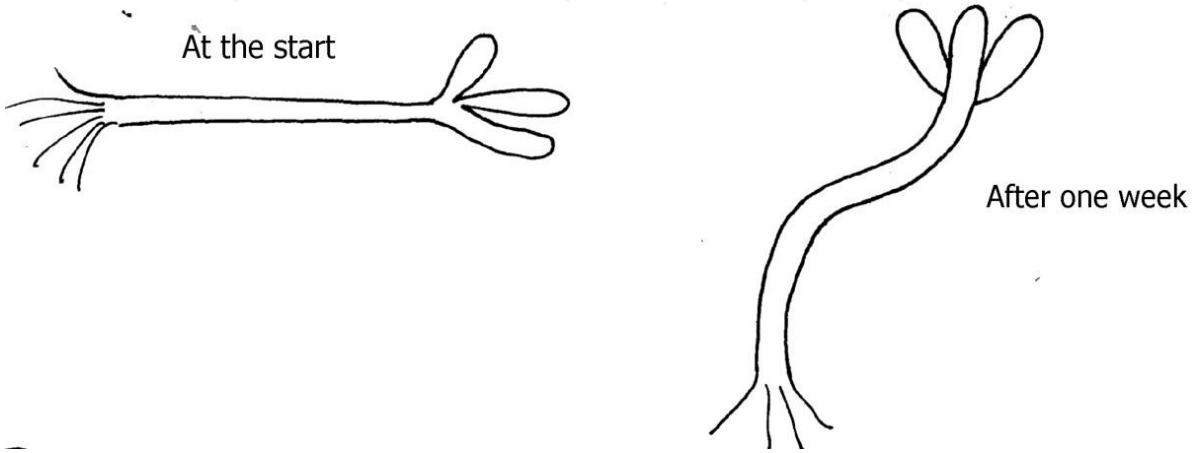
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b) Name the parts labelled **X** and **Y**

X ……

Y ……

15. A form four girl uprooted a young plant and laid it horizontally on the ground. After one week it was observed that the shoot of the same plant had bend upwards while theroot downwards as shown below.



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Account for the observations made. **(3mks)**

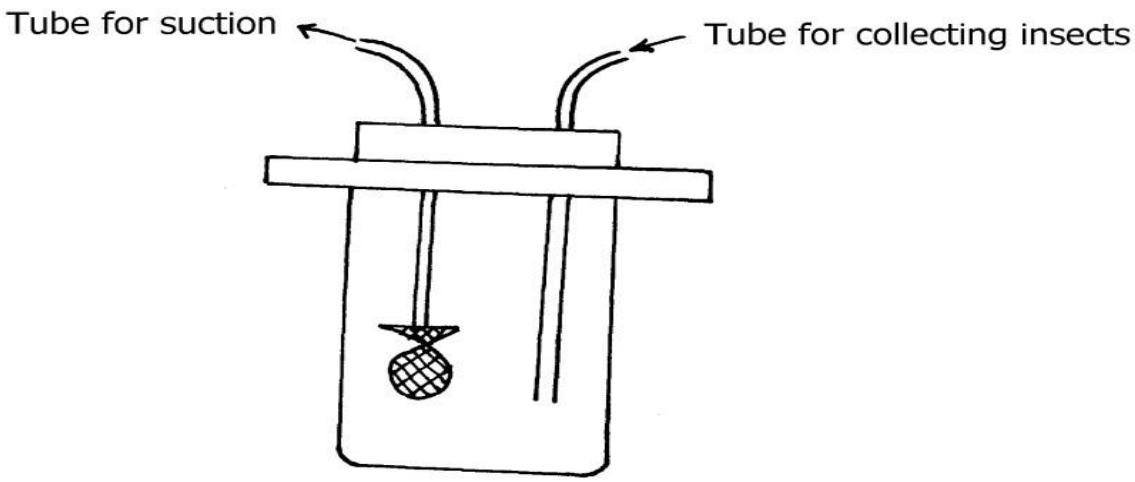
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16. The diagram below shows on apparatus used in collection of specimen



i) Identify the apparatus **(1mk)**

……

ii) State its use **(1mk)**

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17. Give a reason why staining is necessary when preparing specimen for observation under a microscope. **(1mk)**

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18. The scientific name for a domestic cat is ***felis catus***. Outline the rules that were never followed in writing the name **(3mks)**

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19. An organelle magnified 6000 times by an electrons microscope, measured 3mm in diameter. Calculate its real diameter in micro metres. Show your working **(2mks)**

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……

20. What happens when a young herbaceous plant is well watered with strong salt solution. **(2mks)**

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……

21 Name the cell organelles that would be found in abundance in

a) Skeletal muscus **(1mk)**

……

b) Palisade cells **(1mk)**

……

22. State one role of the following elements in the human body. **(1mk)**

a) Iron **(1mk)**

……

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b) Chlorine **(1mk)**

……

23. a) What is mean by the term assimilation. **(1mk)**

……

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b) State **<u>two</u>** ways in which end products of lipids digestion are assimilated. **(2mks)**

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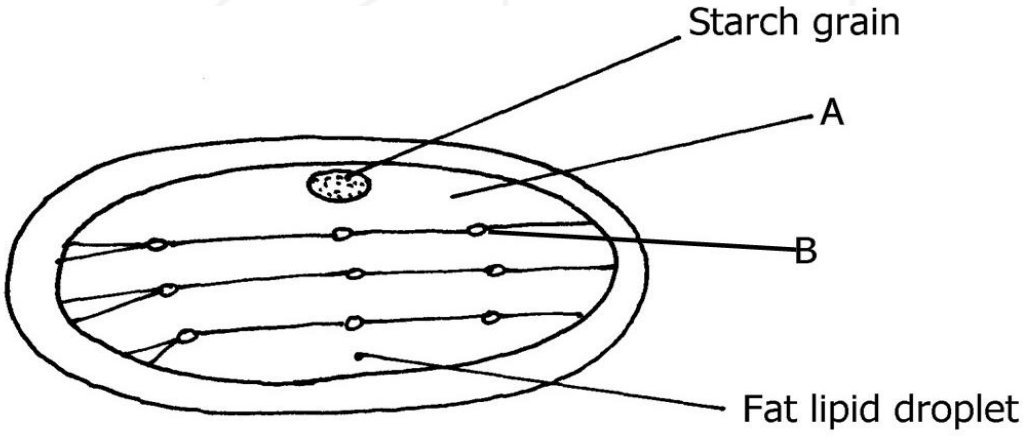
24. Enzyme + substrate <u>enzyme + p</u>roducts from the above equation name <u>two</u> properties of enzymes exhibited in the equation. **(2mks)**

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25. Study the diagram below and answer the questions that follow **(2mks)**



What process takes places in A and B. **(2mks)**

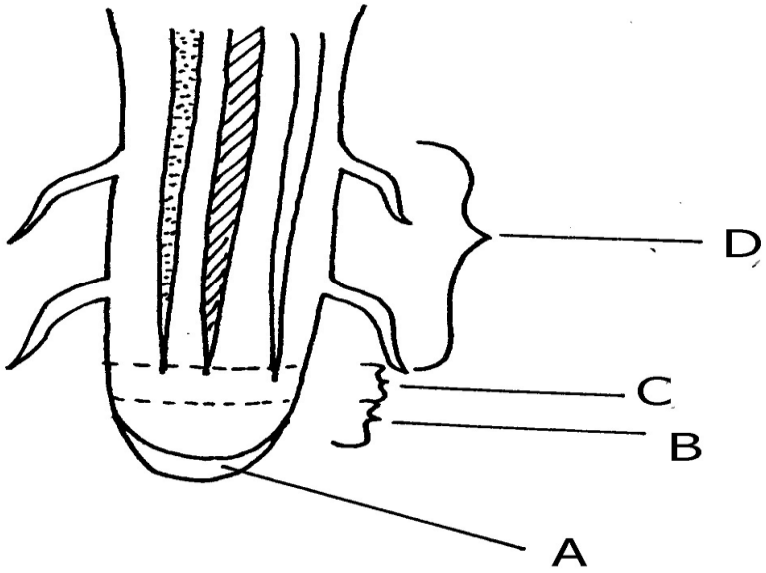
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26. The diagram below represents a section of the dicot root apex. **(2mks)**



a) State the role of the part marked A **(1mk)**

……

b) State <u>three</u> characteristics of the cells found in region B. **(3mks)**

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27. Give **<u>two</u>** adaptations of spiracles to their functions. **(2mks)**

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28. Differentiate between lactic acid fermentation and alcoholic fermentation. **(2mks)**

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29. State <u>two</u> importance of the placenta during pregnancy **(2mks)**

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30. State <u>one</u> function of water in a germinating seed. **(1mk)**

……

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31. Explain the following terms

a) Test cross **(1mk)**

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b) Phenotype **(1mk)**

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32. Haemophilia is a sex – linked disorder caused by a recessive gene located on the X – chromosome. Give the genotype of a make haemophiliac individual. **(1mk)**

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33. Distinguish between divergent and convergent evolution. **(2mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

231/2

BIOLOGY

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

a) *This Paper consists 2 sections A and B.*

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

c) *In section B, answer questions 6 (compulsory) and either questions 7 or 8 in the spaces after questions 8..*

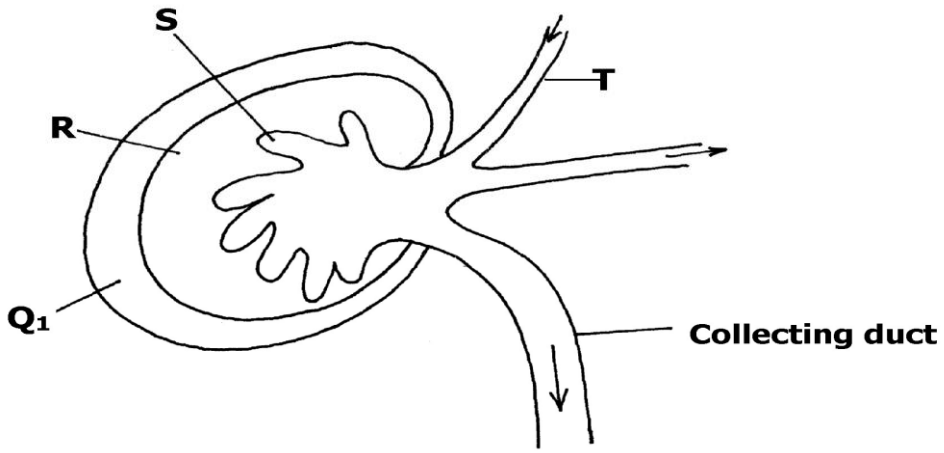
FOR EXAMINERS USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7	20	
	8	20	
	TOTAL SCORE	80	

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SECTION A 40 MARKS

1. The diagram below is a longitudinal section of an organ in mammals



a) Name the organ **(1mk)**

……

b) Identify the parts R and S **(2mks)**

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……

c) i) State two differences in the structure above found in the deserted- rat and fish **(3mks)**

……

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ii) Account for the difference stated above. **(2mks)**

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d) Name the gland associated with the secretion of aldorsterone hormone. **(1mk)**

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2. a) What is the economic importance of anaerobic respiration in industry. **(3mks)**

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b) Explain what happens in the two phases of aerobic respiration. **(5mks)**

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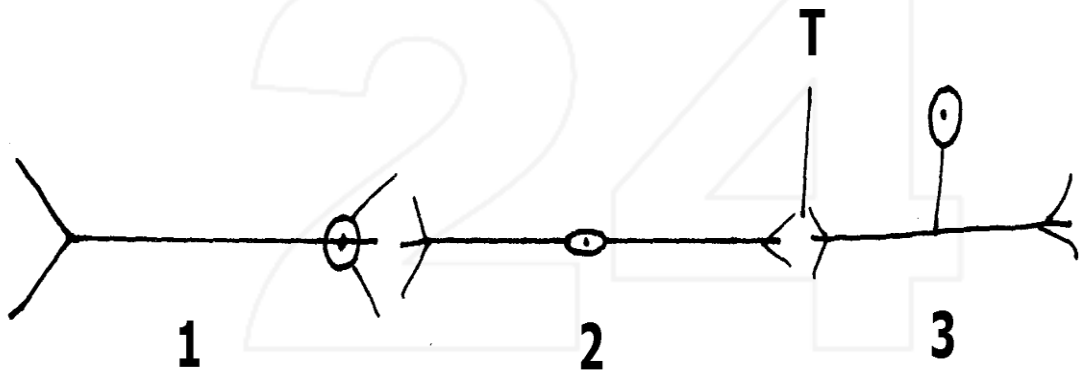
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3. The diagram below shows three different types of neurons along a reflex arc.



a) Identify the Neuron labeled 1,2 and 3. **(3mks)**

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b) Using arrows show the direction of impulse transmission on the diagram. **(1mk)**

c) Name the part where the cell body of neurons 1 and 2 are located. **(2mks)**

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d) Describe the transmission of impulses across the part labeled T.

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4. In an experiment, a variety of garden peas have a smooth seed coat was crossed with a variety with a wrinkled seed coat. All the seeds obtained in the F_1, had a smooth seed coat The F_1 generation was selfed. The total number of F_2 generation was 7324.

a) Using appropriate letter symbols in a punnet square, work out the genotypes of the F1 generation. **(4mks)**

b) From the information above, work out the following for the F_2 generation

(i) Genotypic ratio **(2mks)**

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(ii) Phenotypic ratio **(1mk)**

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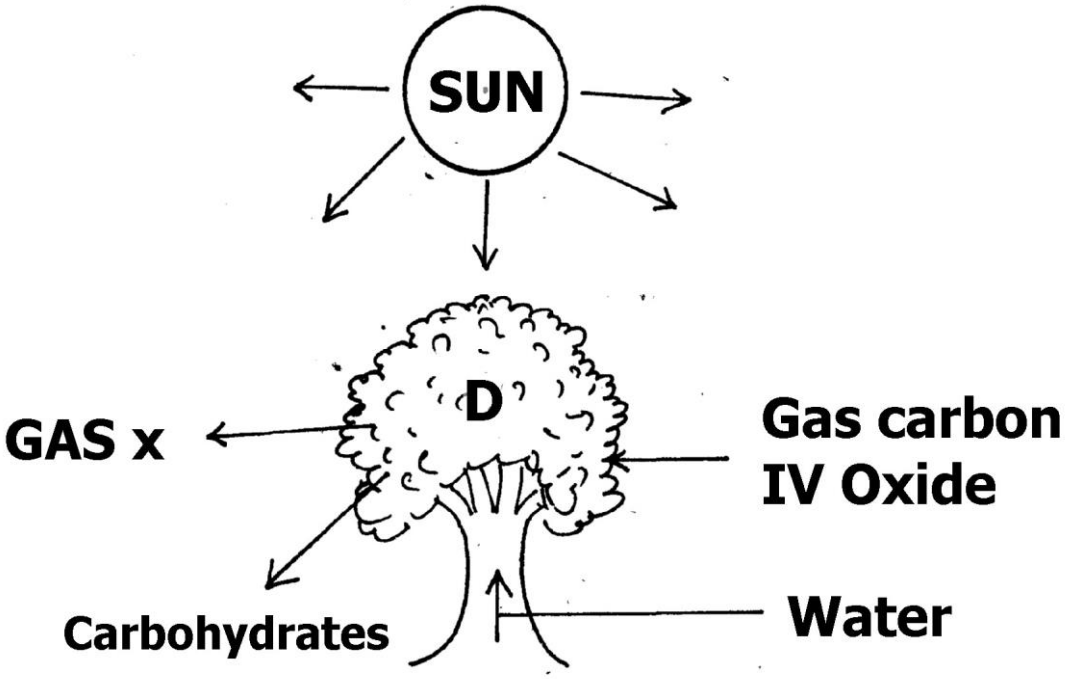
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(iii) Wrinkled number **(1mk)**

……

……

5. The diagram below illustrate the first stage in the energy flow in the ecosystem



a) Identify (i) organelles responsible for activity in D.

(i) in D

(1mk)

……

……

(ii) Gas X **(1mk)**

……

b) Suggest the roles played by each of the following in the process illustrated above.

(i) Light energy **(1mk)**

……

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(ii) Water **(1mk)**

……

……

iii) Carbon (II) oxide **(1mk)**

……

……

c) Give three ways in which the carbohydrates produced in the organelles at D is utilized in the plants. **(3mks)**

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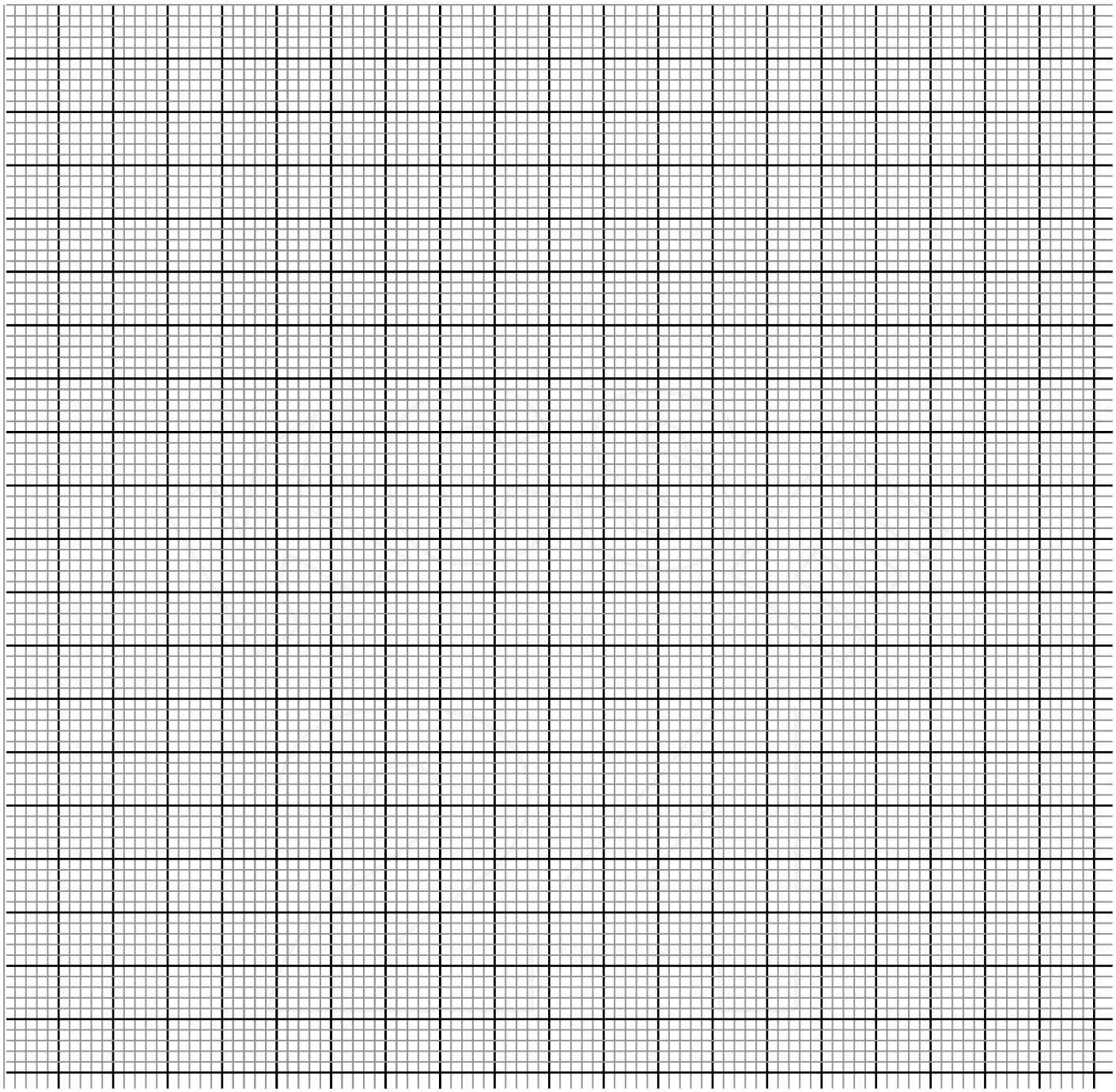
SECTION B: 40 MARKS

6. The following data are results from an observation and measurement of daily growth in an organism over a period of 24 days of its development

a) Using a suitable scale draw graphs of width of head and length of femur against time on the same axis. **(8mks)**

DAY	**WIDTH OF HEAD**	**LENGHT**
	Mm	**Femur (mm)**
1	3.0	7.0
2	3.5	7.5
3	4.0	8.0
4	4.0	8.0
5	4.0	8.0
6	4.0	9.2
7	4.0	10.5
8	4.0	12.0
9	4.7	12.0
10	5.0	12.0
11	5.0	12.0
12	5.0	12.0
13	5.0	12.0
14	5.0	12.0
15	5.0	13.3
16	5.0	14.8
17	5.7	16.4
18	6.4	18.0
19	7.0	18.0
20	7.6	18.0
21	7.6	18.0
22	7.6	18.0
23	7.6	18.0
24.	7.6	18.0

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i) Name the growth pattern represented by the graph. **(1mk)**

……

ii) With reference to your graph, identify the phylum to which the organism belongs. Give reasons for your answer. **(2mks)**

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b) Account for the length of hind femur between

(i) day 3 and day 7 **(2mks)**

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……

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(ii) day 7 and day 10 **(2mks)**

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c) State two hormones involved in the growth pattern represented by the graphs . **(2mks)**

……

……

d) State two advantages of metamorphosis in organisms. **(2mks)**

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7. Explain how the various activities of man have caused air pollution. **(20mks)**

8. **a)** What are enzymes? **(2mks)**

b) State the properties of enzymes **(6mks)**

c) Discuss the factors that affect the rate of enzyme – catalysed reactions **(12mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

231/3

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

SCHOOL…… SIGN……

CONFIDENTIAL INSTRUCTIONS TO SCHOOLS

The information contained in this **KCSE Biology Prediction paper** is to enable the head of the school and the teacher in charge of Biology to make adequate preparations for the **231/3 Biology** Practical examination.

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

REQUIREMENTS

Each KCSE candidate will require;

Confidential

a) Hibiscus flower (labelled P)

b) Maize seedling(germinated for 8-10 days) (labelled Q)

c) Benedict's solution

d) Iodine solution

e) Two tes tubes

f) Test tube holder

g) Labels

h) Means of heating

i) Scalpels

j) Hand lens

k) Distilled water

l) Mortar and pestle

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

231/3

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

FOR EXAMINER'S USE ONLY

- *Write your name, Index Number , class in the spaces provided above*
- *Write the date of examination in the space provided above*
- *Answer ALL the questions*

FOR EXAMINER'S USE ONLY

QUESTION	SCORE	CANDIDATES SCORE
1	12	
2	15	
3	13	
TOTAL	40	

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1. a)You are provided with specimen labelled Q. Remove the endosperm and crush using a motor and pestle. Add distilled water and obtain a solution. Decant the mixture to obtain solution Q1. Using the reagents provided, test the food present in solution Q1. **(8marks)**

Food	Procedure	Observation	Conclusion

b) Account for your observation in (a) above **(3marks)**

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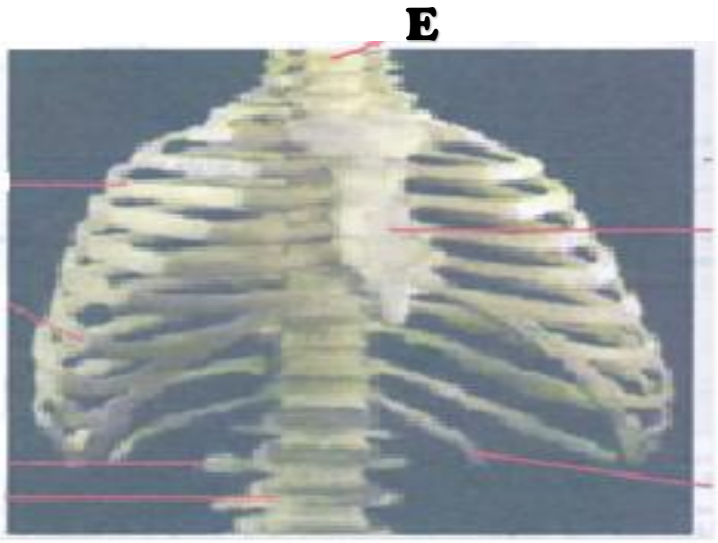
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c) Name the type of germination represented in the specimen above **(1 mark)**

……

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2. a). You are provided with a photograph with part of human skeleton. Use it to answer questions that follow.



i) Name the first vertebra labelled E and state how it is adapted to its function. **(4marks)**

Name……

Adaptations

……

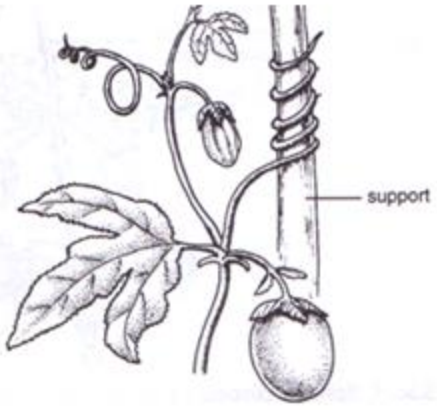
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ii) Name the structure in the skull that articulates with the vertebra E **(1mark)**

……

(iii) Below are two photographs of plants.



M



R

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(a) Identify support structures used by the plants in photographs M and R shown above.

(2marks)

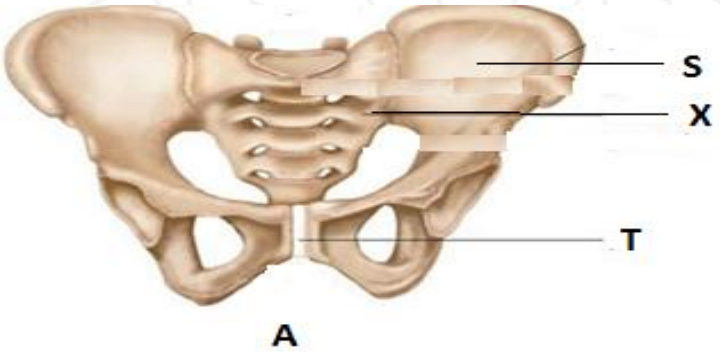
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(b) Other than the structures illustrated above, name any one support structure in herbaceous plants. **(1 mark)**

……

b) The photographs below represent some skeletal materials obtained from a certain mammal. Study them then answer the questions that follow.



A



B

i) Identify fused bone labelled X **(1mark)**

……

ii) Name parts S and T on photograph A and part U on photograph B **(3mrks)**

……

……

iii) Name the type of joint formed at the proximal and distal end of bone B **(2marks)**

Proximal end…..……

Distal end……

iv) Name the type of joint found in structure labelled X **(1mark)**

……

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3. a). You are provided with specimen labelled P. Using a sharp scalpel, cut the specimen longitudinally to obtain two halves. Draw a large well labelled diagram of one of the sections obtained. **(5marks)**

b) i) Identify the agent of pollination of the above specimen **(1mark)**

……

ii) Give three reasons for your answer above **(3 marks)**

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iii) Describe the floral parts of specimen P **(4mark)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

233/1

CHEMISTRY

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

a) *Write your name and index No. in the spaces provided above.*

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

c) *Answer ALL the questions in the spaces provided.*

d) *Mathematical tables and electronic calculators may be used for calculations*

e) *All working must be clearly shown where necessary*

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-30	80	

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Answer ALL the questions in the spaces provided.

1. a) Name the process used to separate two solids both soluble in the same solvent when the Solids are both present in the mixture **(l mk)**

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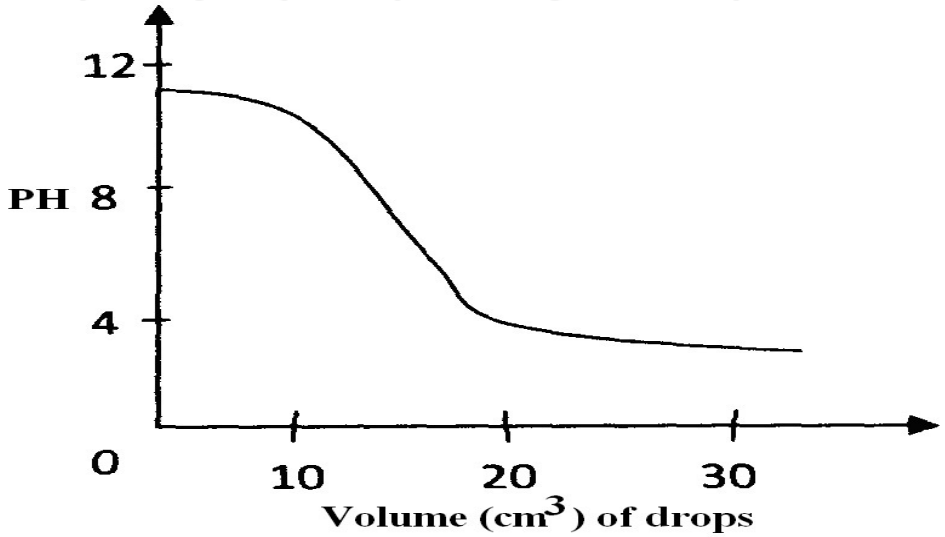
b) Sodium chloride is neither deliquescent nor hygroscopic. Explain why common salt left on a table overnight becomes wet **(2 mks)**

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2. A liquid is added dropwise to 10 cm^3 of house-hold ammonia solution. The pH value is noted after the addition of every 10 drops and plotted on the graph below.



From the evidence of this graph only, what is the nature of the liquid added? Explain you answer **(2mks)**

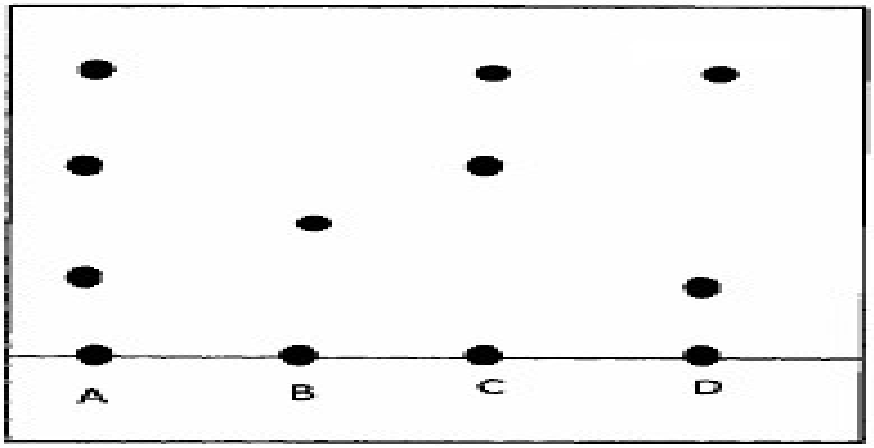
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3. The following chromatogram was obtained in an experiment to investigate the components present in certain dyes.



a). Which two dyes when mixed would produce A? **(lmk)**

……

……

b) Which dye is pure? **(lmk)**

……

c). Indicate on the diagram the probable position of the solvent front. **(lmk)**

4. **a)** The pH of 0.001M solution of hydrochloric acid is about the same as the pH of 0.IM solution of ethanoic (acetic) acid. Explain **(2mks)**

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……

……

b) In a reaction dilute hydrochloric acid was added to a colourless solution, a white precipitate which dissolved on warming was formed. Write an ionic equation for the formation of the white precipitate **(lmk)**

……

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5. Element R has atomic number 8 and mass number 16.

a) Draw the atomic structure of element R **(lmk)**

b) Write is the formula of the ion of element R **(lmk)**

……

c) Explain why R forms a hydroxide with low boiling point **(lmk)**

……

……

6. The following were the results obtained in an experiment to determine solubility of potassium nitrate at room temperature.

Mass of evaporating dish 14.32g

Mass of evaporating dish + solution = 35.70g

Mass of evaporating dish + salt =18.60g

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

……

……

b). Calculate the solubility of potassium nitrate from the specimen results **(2mks)**

……

……

……

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7. a) Write an equation to show how carbon (IV) oxide can be obtained from limestone ($CaCO_3$) by heating **(1 mk)**

……

……

b) Give two properties of Carbon (IV) Oxide that makes it suitable for use in

i) Extinguishing fire **(lmk)**

……

……

ii) Making of Fizzy drinks **(lmk)**

……

……

8. An element X has a Relative atomic mass of 88. When a current of 0.5 amps was passed through the fused chloride of X for 32 minutes 10 seconds, 0.44g of X was deposited at the cathode.

(1F = 96500C).

a) Calculate the number of faradays needed to liberate 1 mole of X **(2mks)**

……

……

……

……

b). Write the formula of the chloride of X **(1 mk)**

……

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9. When a grey powder P, which has no action on cold water, is placed into a salt solution of Q, a brown solid R is deposited. The blue solution of Q, fades giving way to a green solution.

a) Name the type of reaction that takes place **(1 mk)**

……

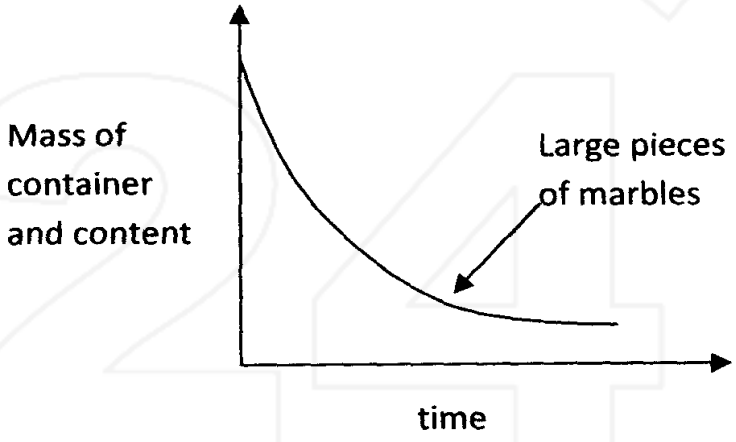
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b) Identify solids P and R **(2mks)**

……

……

10. The diagram below shows effect of surface area on the rate of reaction



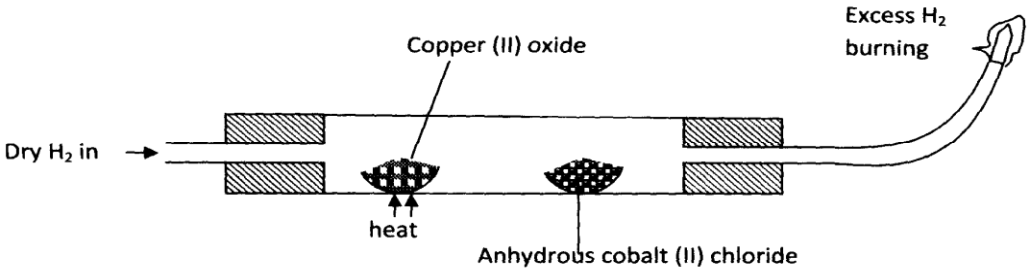
On the same diagram sketch the graph that would be obtained if smaller pieces of marble were used. Explain your answer using the kinetic theory of matter **(2mks)**

……

……

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11. The set-up below was used to investigate the effect of dry hydrogen gas on hot copper (ii) oxide powder.



Explain what is observed in the combustion tube during the experiment **(3mks)**

……

……

……

……

12. Consider the reversible reaction below

$$H_2(g) + I_2(g) \rightleftharpoons 2HI(g) \quad \Delta H = -53KJ$$

Explain how each of the following factors would affect the concentration of hydrogen iodide

a) Increase in temperature **(1 ½ mks)**

……

……

……

b) Adding helium gas **(1 ½ mks)**

……

……

……

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13. You are provided with three black powders known to be copper (ii) oxide, manganese (iv) oxide and iron (ii) sulphide. How would you distinguish between the three using hydrochloric acid only **(3mks)**

……

……

……

……

a) Tap water produces a precipitate with sodium carbonate solution. Explain **(1 mk)**

……

……

b) State one *advantage* and one disadvantage of using the water in (a) above in industry.

i) Advantages **(l mk)**

……

……

ii) Disadvantages **(lmk)**

……

……

14. a) Potassium manganate (VII) reacts with chloride salts to produce chlorine. Both chlorine and potassium manganate (VII) are strong oxidizing agents. Which one of the two is the stronger oxidizing agent? Explain your answer **(2mks)**

……

……

……

……

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b) Chlorine and sulphur (IV) oxide are bleaching agents; explain the difference in their bleaching action **(lmk)**

……

……

15. Calculate the number of molecules of water of crystallization in oxalic acid crystals, $H_2C_2O_4.XH_2O$, from the following data. 5g of the crystals were made up to 250cm^3 of this solution required 15.9cm^3 of 0.5M sodium hydroxide to neutralize it. (H=1, C=12, 0 16, $H_2$0 18) **(3mks)**

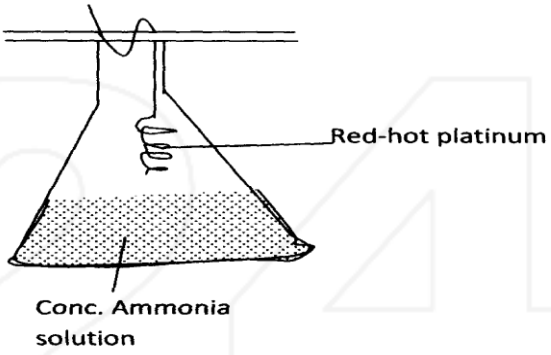
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16. The set-up below shows the catalytic oxidation of ammonia in laboratory



One of the observations made in the tube is that the platinum wire stays red-hot even though it is no longer heated.

a) Explain this observation **(lmk)**

……

……

b) State another observation made in the conical flask **(1 mk)**

……

……

c) Write an equation for the catalytic oxidation of ammonia **(lmk)**

……

……

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17. Two carbon electrodes were placed in a flask containing $50cm^3$ of 0.1 M barium hydroxide solution and connected in series with the 12 volt supply of direct current electricity and a lamp.

1.0M sulphuric acid was slowly run into the solution from a burette until neutralization occurred.

a) What would you see in the flask when the first few drops of acid are added? **(1 mk)**

……

……

b) At the neutrality point, the lamp ceases to glow, explain why? **(1 mk)**

……

……

c) What would you see if more 1.0 M sulphuric acid were now added? **(lmk)**

……

……

18. Use the standard electrode potentials given below to answer the questions that follow.

	E(Volts)
$Ni^{2+}_{(aq)} / Ni_{(s)}$	-0.025
$Zn^{2+}_{(aq)} / Zn_{(s)}$	-0.76
$Cu^{2+}_{(aq)} / Cu_{(s)}$	+0.34
$F_{2(g)} / 2F^{-}_{(aq)}$	+2.85
$Br_{2(aq)} / 2Br^{-}_{(aq)}$	+1.09

a) Which is the weakest reducing agent? **(l mk)**

……

……

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b) Below is the cell representation between the Zinc and Lead half cells.

$$Zn_{(s)} / Zn^{2+}_{(aq)} // Pb^{2+}_{(aq)} / Pb_{(s)}$$
$$KCl$$

i) What is the role of KCl? **(lmk)**

……

……

ii) Explain why the above cell cannot function **(1 mk)**

……

……

……

19. Use the information in the table below to answer the questions that follow

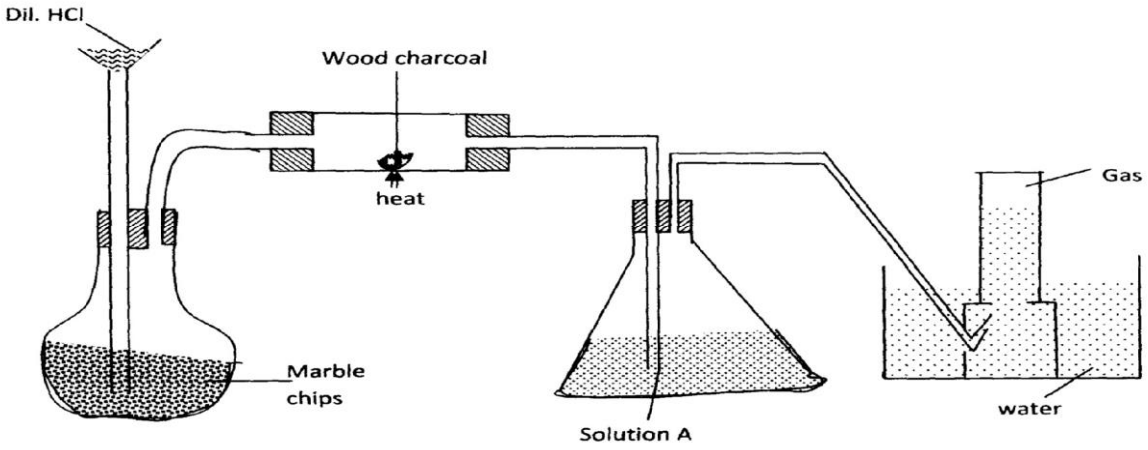
Salt	Lattice energy KJ/Mol	Hydration energy Kj/Mol
KCl	+718	-695
LiCl	+862	-883

If the two salts, Lithium chloride and potassium chloride were dissolved in water separately, which solution will its temperature be above and which solution will its temperature be below room temperature? Explain your answer **(3mks)**

……

……

20. Study the setup below and answer the questions that follow.



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a) What is the role of solution A? **(lmk)**

……

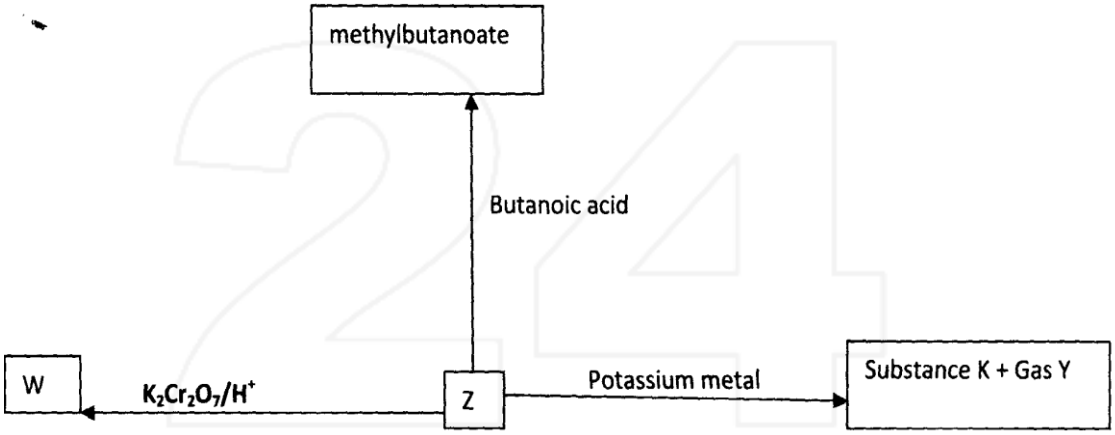
b) Name gas **X** **(lmk)**

……

c) Which property of carbon makes it suitable to be used in the combustion tube above**?(1 mk)**

……

21. Study the flow chart below and use it to answer the questions that follow



Identify substances below **(2mks)**

K……

W……

Y……

Z……

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22. 10g of an organic compound contains carbon, hydrogen and oxygen only produced 14.7g of carbon (iv) oxide and 6.3g of steam when completely burned in excess oxygen. If the relative molecular mass of the compound is 60. Determine the molecular formula of Z (C=12, 0=16, H=1)

(3mks)

……

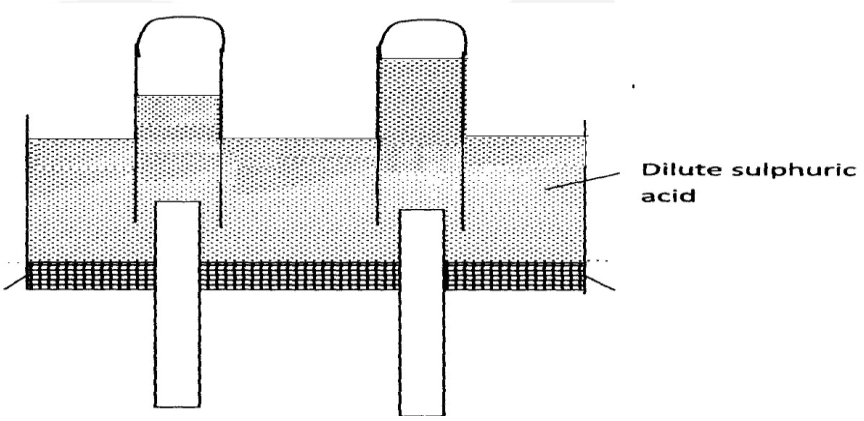
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23. 100cm3 of 2M sulphuric acid was electrolyzed using the set-up represented by the diagram below.



a) Identify the anode and the cathode(label on the diagram) **(1 mk)**

……

What is the effect on the electrolyte by the end of the experiment **(1 mk)**

……

……

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24. study the information in the diagram below and answer the questions that follow.(the letters do not represent the actual symbols of the elements)

Element	Electronic configuration	Ionization energy KJ/Mol
P	2.1	519
Q	2.8.1	494
R	2.8.8.1	418

a). What is the general name given to the group in which elements P,Q and R belong? **(1 mk)**

……

……

b). What is meant by ionization energy? **(1 mk)**

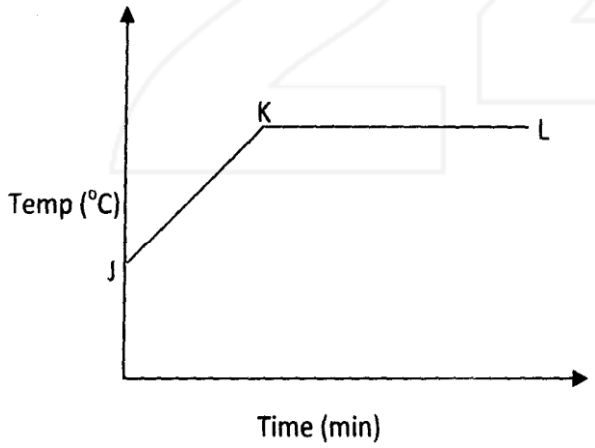
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c). Explain why element P has the highest ionization energy **(1 mk)**

……

25. The graph below shows part of a temperature time curve obtained when solid naphthalene was heated.



Explain what happens to the naphthalene molecules along the curves

a) JK **(1mk)**

……

……

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b) KL **(lmk)**

……

……

26. Oleum ($H_2S_20_7$) is an intermediate product in the industrial manufacture of sulphuric acid.

a). How is Oleum converted to sulphuric acid? **(1 mk)**

……

……

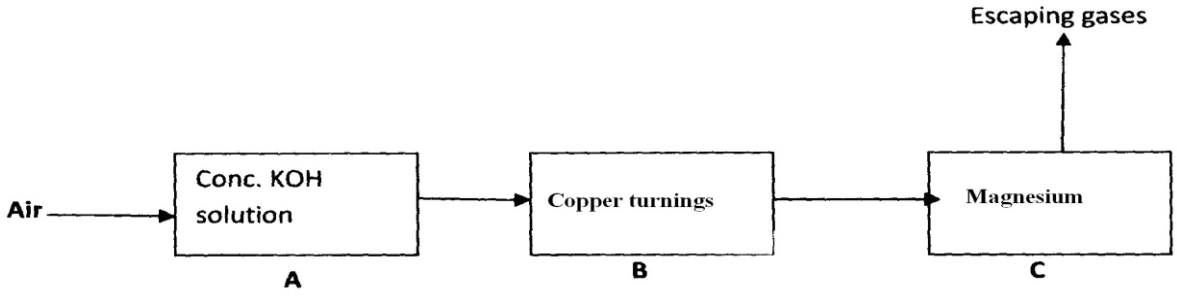
B) Why is the reaction below discouraged **(1 mk)**

SO3(g)+H2O(l) ⟶ H2SO4(al)

……

……

27. Air is passed through several reagents as shown in the flow diagram below



Name one gas which escapes from chamber C. Give a reason for your answer **(3mks)**

……

……

……

……

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28. The table below shows the ions of elements W, X, Y, Z and their electronic configuration

Ion	Electronic configuration
W^-	2.8.8
X^{2+}	2.8.8
Y^{3+}	2.8
Z^{2-}	2.8

a) Which two elements belong to the same period? **(1 mk)**

……

……

b) In which group does ion Y^{3+} belong? **(1 mk)**

……

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

233/2

CHEMISTRY

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. *Answer ALL questions in t his paper in the spaces provided*
2. *Mathematical tables and electronic calculators may be used for calculation*
3. *All working must be clearly shown where necessary*

FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	13	
2	11	
3	12	
4	12	
5	11	
6	14	
7	08	
TOTAL	80	

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Answer ALL questions in t his paper in the spaces provided

1. (a) Study part of the periodic table below. The letters do not represent the actual symbols. Use the letters to answer the questions that follow.

F				**J**	**J**	**K**	**L**	**M**
O	**P**			**R**				

(i) Which one element would form a divalent anion? **(1mark)**

……

……

(ii) Write formula of the compound formed when P reacts with L **(1mark)**

……

……

(iii) Monovalent cataion of X electronic configuration 2.8.8. Identify its position in the periodic table above. **(1mark)**

……

……

(iv) Identify most reactive metallic element **(1mark)**

……

……

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(b) The table shows some properties and electron arrangements of common ions of elements represented by letters Q to X. Study the information provided then answer the questions that follow.

Element	Formula of ion	Ionic electron arrangement	Atomic Radius	Ionic Radius
Q	Q^-	2.8	0.072	0.136
R	R^+	2.8.8	0.231	0.133
S	S3+	2.8	0.143	0.050
T	T2+	2.8.8	0.133	0.074
U	U2+	2.8	0.160	0.064
V	V^+	2.8	0.186	0.095
W	W3-	2.8.8	0.110	0.190
X	X^-	2.8.8	0.099	0.181

(i) Give the atomic numbers of elements T and Q **(2marks)**

T……

Q……

(ii) Select two non-metals that belong to the same period **(1mark)**

……

(iii) Which two elements would react violently with water to produce hydrogen? **(2marks**)

……

……

(c) **(i)** Why is the atomic radius of R larger than its ionic radius? **(2marks)**

……

……

(ii) Element S is suitable for making cooking pans. Explain **(2 marks)**

……

……

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2. (a) Give the names of the following compounds

(i) $CH_3CHCHCH_2CH_3$ **(1mark)**

……

(ii) $CH_3 (CH_2)_2COOH$ **(1mark)**

……

(b) Ethane and ethane react with Bromine according to the equations given below.

(i) C2H6 (g) + Br2 (g) →C2H5Br(l) + HBr(g)

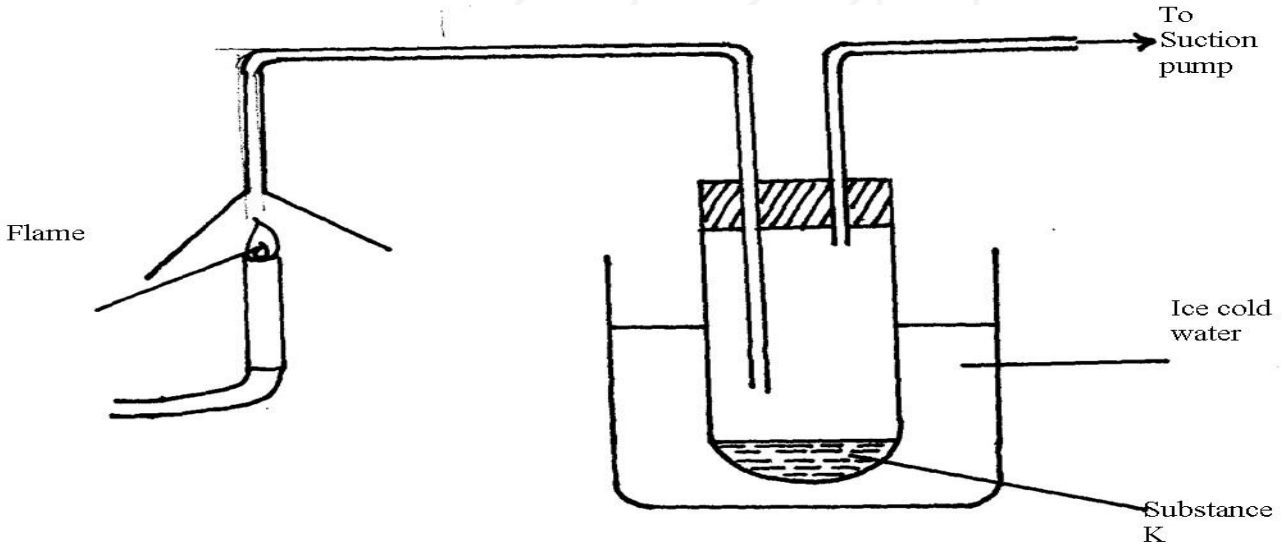
(ii) C2H4 (g) + Br2 (g) →C2H4Br2(l)

Name the type of bromination reacting taking place in (i) and (ii) above **(1mark)**

(i) ……

(ii) ……

(c) Study the diagram below and answer the questions that follow.



(i) Write the equation for the complete combustion of butane

……

……

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(ii) The pH of substance K was found to be less than 7.

Explain the observation **(2marks)**

……

……

……

(d) The polymerization of tetra fluorocarbon (C_2F_4) is similar to that of ethane (C_2H_4)

(i) What is meant by polymerization? **(1mark)**

……

……

(ii) Draw the structural formula of the polymer obtained from monomer C_2H_4 (**1mark)**

(iii) State any two advantages of synthetic polymers over natural polymers. **(2marks)**

……

……

(e) Propanol and ethanoic acid react according to the following equation

$$CH3CH2CH2OH\ (aq) + CH3COOH\ (aq) \rightleftharpoons R\ (aq) + H2O\ (l)$$

Name

(i) Product R **(1mark)**

……

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(ii) The type of reaction that produce R **(1mark)**

……

……

3. Study the standard electrode potential for the half-cells given below and answer the questions that follow. The letters do not represent the actual symbols of the elements

	θ
	E - Volts
N+(aq) + e- →N(s)	-2.92
J+(aq) + e- →J(s)	+0.52
K+(aq) + e- → ½ K2(g)	0.00
½ G2aq) + e- →G-(aq)	+1.36
M2+(aq) + e- →M(s)	-0.44

(i) Identify the strongest oxidizing agent. Give a reason for your answer **(1 ½ marks)**

……

……

(ii) Which two half-cells would produce the highest potential difference when combined?

……

……

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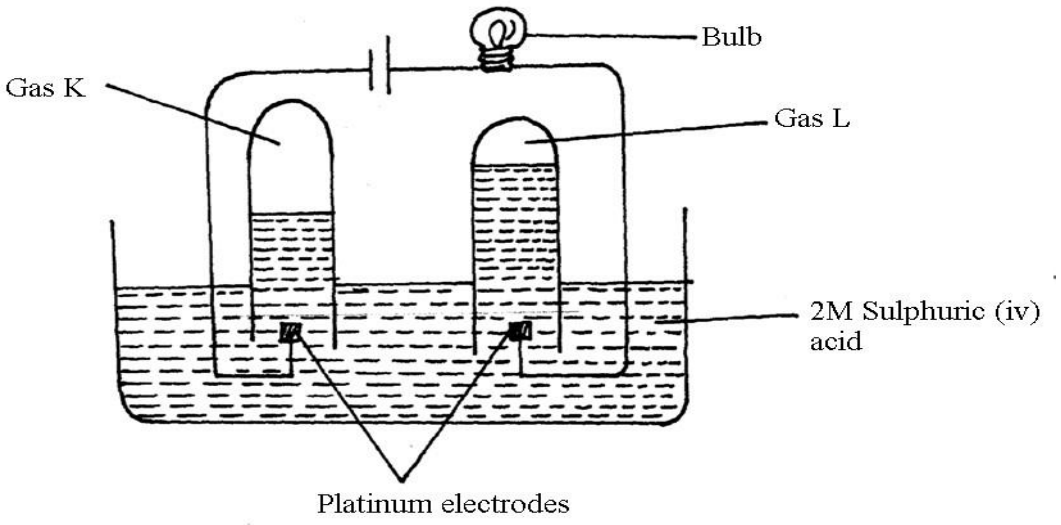
(1mark)

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(iii) Explain whether the reaction represented below can take place **(2marks)**

$M(s) + 2N^{+}(aq) \rightarrow M^{2+}(aq) + 2N(s)$

(b) $100cm^3$ of 2M sulphuric (iv) acid was electrolyzed using the set-up represented diagram below.



(i) Write an equation for the reaction that produces gas L **(1mark)**

……

(ii) Describe how gas K can be identified **(1 ½ mks)**

……

……

……

……

(iii) Explain the differences in;

(I) volume of gases produced at electrodes **(1mark)**

……

……

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(II) Brightness of the bulb if 100cm^3 of 2M ethanoic acid was used in place of 2M sulphuric (iv) acid **(2marks)**

……

……

(c) A current of 0.5A was passed for 2 hours. Calculate the mass of Lead deposited (Pb=207, IF=96500^{0}C) **(2marks)**

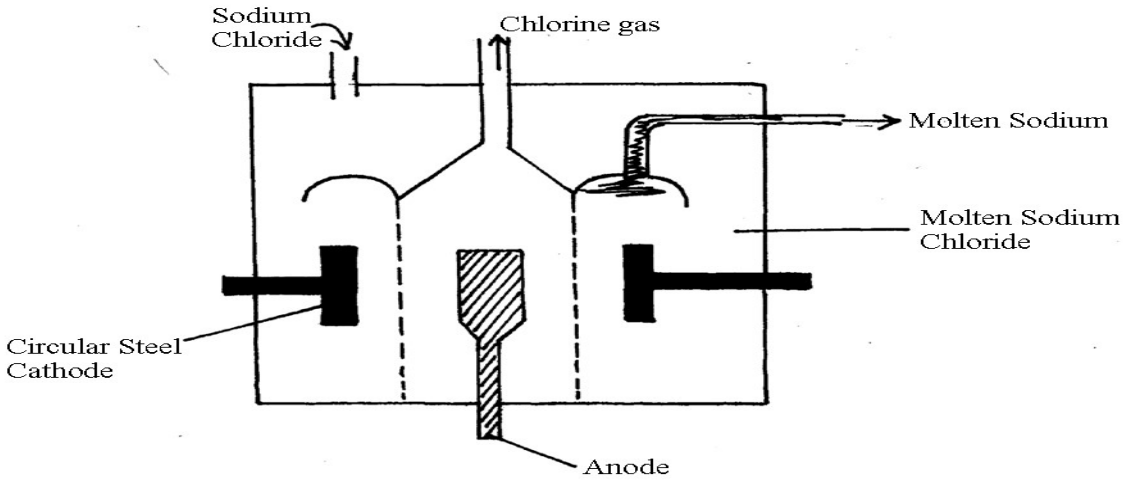
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4. (a) Below is a simplified diagram of a down's cell used in manufacture of Sodium. Study it and answer the questions that follow,



(i) What material is the anode made of?. Give a reason **(2marks)**

……

……

……

……

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(ii) What precaution is taken to prevent chlorine and sodium from recombining **(1mark)**

……

……

(iii) Write an ionic equation for the reaction in which chlorine gas is formed. **(1mark)**

……

(b) In the Down's cell, a certain salt is added to lower the melting point of Sodium chloride from 800^{o}C to 600^{o}C

(i) Name the salt that is added **(1mark)**

……

……

(ii) State why its necessary to lower melting point **(1mark)**

……

……

……

(c) Explain why its not suitable to use aqueous sodium chloride for the manufacture of sodium in the Down's process **(2marks)**

……

……

……

(d) Sodium metal reacts with air to form two oxides. Give the formulae of the two oxides

……

……

……

(2marks)

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(e) State two uses of sodium metal **(2mark)**

……

……

5. (a) Define the standard enthalpy of formation of a substance **(1mark)**

……

……

……

(b) Use the thermo chemical equations below to answer the questions that follow.

1. $C_2H_6 (g) + 7/2\ O_2 (g) \rightarrow 2CO_2 (g) + 3H_2O (g)$ $\Delta H_1 = -1560KJmol^{-1}$
2. $C (graphite) + O_2 (g) \rightarrow CO_2 (g)$ $\Delta H_2 = -394KJmol^{-1}$
3. $H_2 (g) + \frac{1}{2}O_2 (g) \rightarrow H_2O (g)$ $\Delta H_3 = -286KJmol^{-1}$

(i) Name two types of heat changes represented by $^{\Delta}H_3$ **(2marks)**

……

……

……

(ii) Draw an energy level diagram for the reaction represented by equation 1 **(2marks)**

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(iii) Calculate the standard enthalpy of formation of ethane **(2marks)**

……

……

……

(iv) When a sample of ethane was burnt, the heat produced raised the temperature of 500g of water by 21.5k (specific heat capacity of water 4.2 $Jg^{-1}k^{-1}$) Calculate ;

(I) Heat change for the reaction **(2marks)**

……

……

……

(II) Mass of ethane that was burnt (Relative formula mass of ethane = 30) **(1mark)**

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……

6. (a) Define the term solubility **(2marks)**

……

……

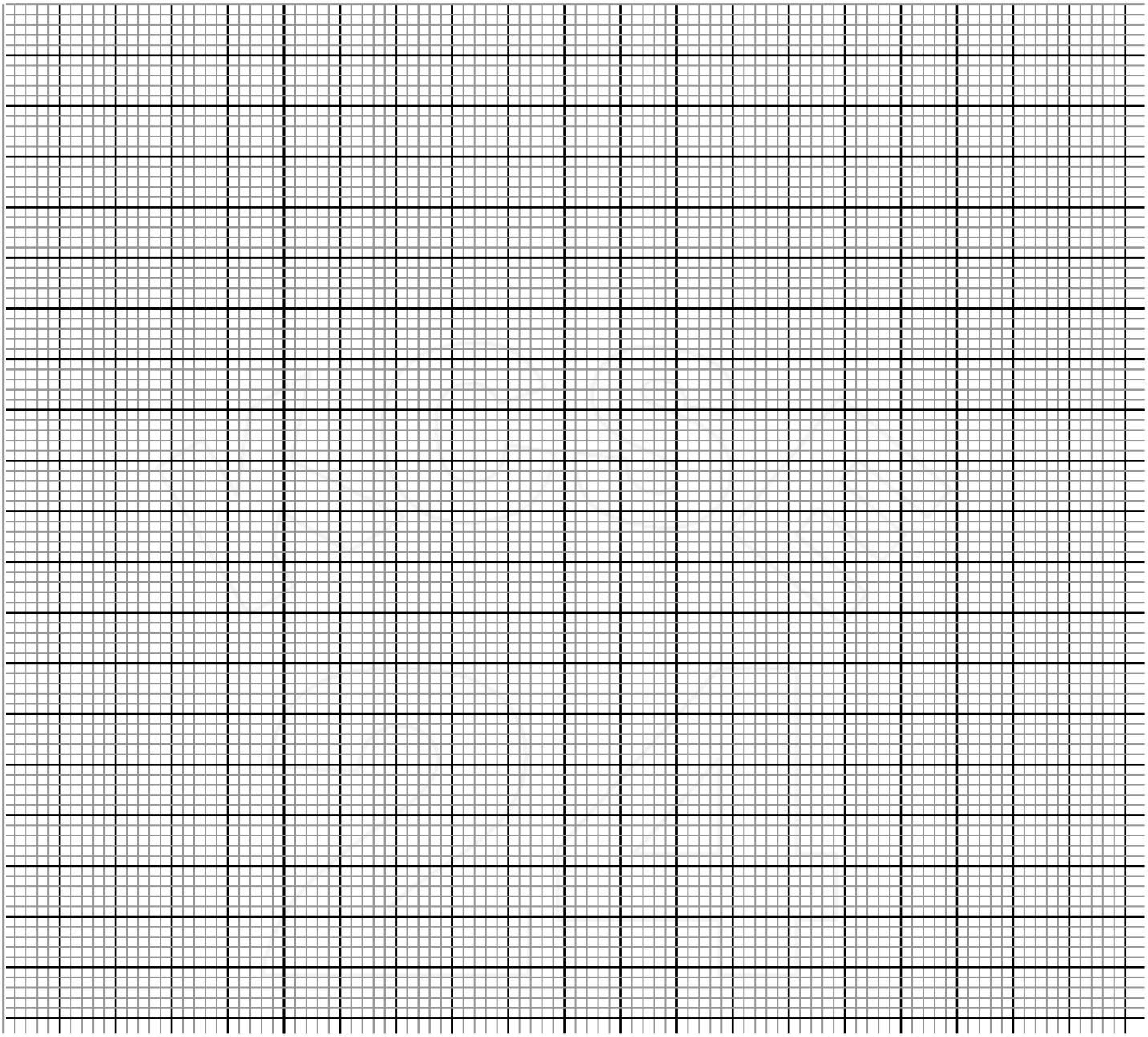
(b)

Mass of $KCl_{(g)}$	20	20	20	20	20	20
Volume of water (cm^3)	40.0	45.0	50.0	55.0	60.0	65.0
Temperature at which crystals first appear (^oC)	77.0	56.0	40.0	26.0	15.0	8.0
Solubility in g per 100g of water						

(i) Complete the table above by calculating the solubility of KCl in grammes per 100g of water **(3marks)**

(ii) Plot the graph of solubility in g/100g of water (y-axis) against temperature (x-axis) **(3marks)**

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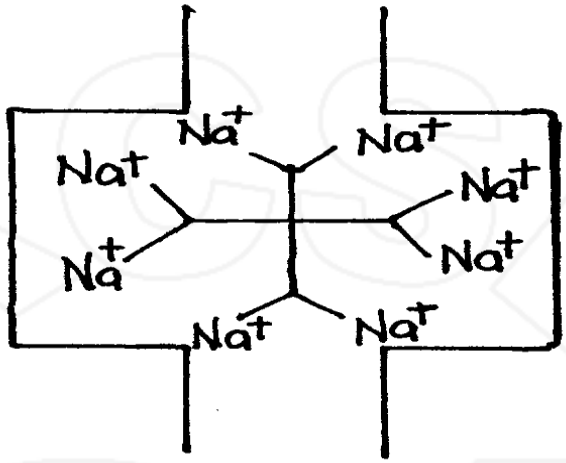
(iii) From your graph determine solubility at 50^{o}C **(1mark)**

(iv) If a saturated solution of potassium chloride is cooled from 70^{o}C to 10^{o}C. What mass of the crystals would be obtained? **(2marks)**

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(v) Calculate the concentration of the saturated solution of 50°C. (K=39.0, Cl = 35.5) **(2mks)**

(c) The set-up below was used to remove hardness in water.



(i) Identify the above method of removing water hardness **(1mark)**

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……

……

The above system eventually lack the ability to soften hard water. Explain how it can be reactivated. **(1mark)**

……

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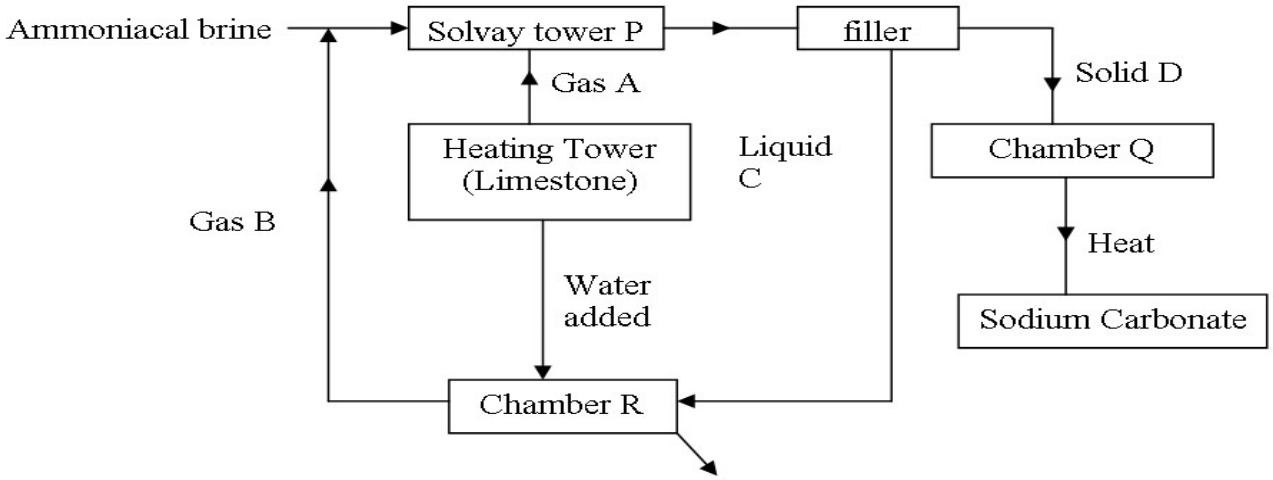
(ii) State any advantage of hard water **(1mark)**

……

……

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7. The scheme below shows the manufacture of sodium carbonate by the Solvay process. Study it and use it to answer the questions that follow.



(a) Name **(i)** gases A and B **(1mark)**

……

……

(b) Name liquid C and Solid D **(1mark)**

……

……

(c) Write equations for the reactions taking place in tower P and chamber R **(2marks)**

……

……

……

(d) Name the product formed in chamber at chamber R and give one of its uses. **(2marks)**

……

……

(c) State two uses of sodium carbonate **(1mark)**

……

……

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

233/3

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

SCHOOL…… SIGN……

CONFIDENTIAL

This document must not be seen by the candidates whatsoever

1) *80cm^3 of 0.5M lead (II) nitrate solution F*
2) *60cm^3 of 1M Potassium Iodide solution*
3) *2g of solid A supplied in a stoppered container*
4) *1g of solid P*
5) *2cm of magnesium ribbon*
6) *Thermometer*
7) *One 250ml glass beaker*
8) *One boiling tube*
9) *One test-tube holder*
10) *One stop watch*
11) *10ml measuring cylinder*
12) *100ml measuring cylinder*
13) *One dropper*
14) *30cm ruler*
15) *10 labels*
16) *Test tube rack*
17) *10 test tubes*
18) *Substance W – calcium chloride*
19) *Distilled water in a wash bottle*
20) *Solution E (aqueous sodium carbonate)*
21) *Tripod stand and wire gauze.*
22) *Substance W I g of calcium chloride supplied in a stoppered container.*

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Access to

- Bunsen burner
- Acidified potassium dichromate (VI)
- Tissue paper
- Ethanol
- 2M ammonia solution
- 2M sodium hydroxide solution
- Bromine water

Notes:

Substance P - maleic acid
Substance A – sodium tetraborate decahydrate (sodium borax)
Substance W – calcium chloride

Preparation of solutions

- Solution E is obtained by dissolving 21.2g of sodium carbonate in 600cm^3 of distilled water and diluting it to 1dm^3 of solution (0.2M Sodium Carbonate)

- Acidified potassium dichromate (VI) is prepared by dissolving 25g of solid $K_2Cr_2O_7$ in 200cm^3 of 2M H_2SO_4 and diluting with distilled water to make one litre of solution.

- Bromine water is done by taking 1cm^3 of bromine liquid and diluting with distilled water to make 100cm^3 of the solution in the fume chamber.

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

233/3

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

a) *Write your name and Index Number in the spaces provided above.*

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

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

d) *All workings must be clearly shown where necessary. Mathematical tables and silent electronic calculators may be used.*

FOR EXAMINERS USE ONLY.

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1	10	
2	13	
3	17	

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Answer all questions in the spaces provided

1. You are provided with:2 g of substance **A** labelled solid **A**

- You are required to determine the **solubility** of substance **A** in water.

Procedure 1

i) Place 200cm^3 of tap water in a 250ml beaker and keep it for use in step (VI)

ii) Place all the substance **A** in a dry boiling tube boiling.

iii) Using a burette measure 10.0cm^3 of distilled water and add to substance **A** in the boiling tube.

iv) While stirring the mixture in the boiling tube with a thermometer, warm the mixture using a Bunsen burner until the temperature rises to **65**℃. Stop warming the mixture.

v) Allow the mixture to **cool** while stirring with the thermometer.

vi) When the temperature drops to **60**℃ , start the stop watch / clock, place the boiling tube in a beaker with tap water prepared in step (i) above.

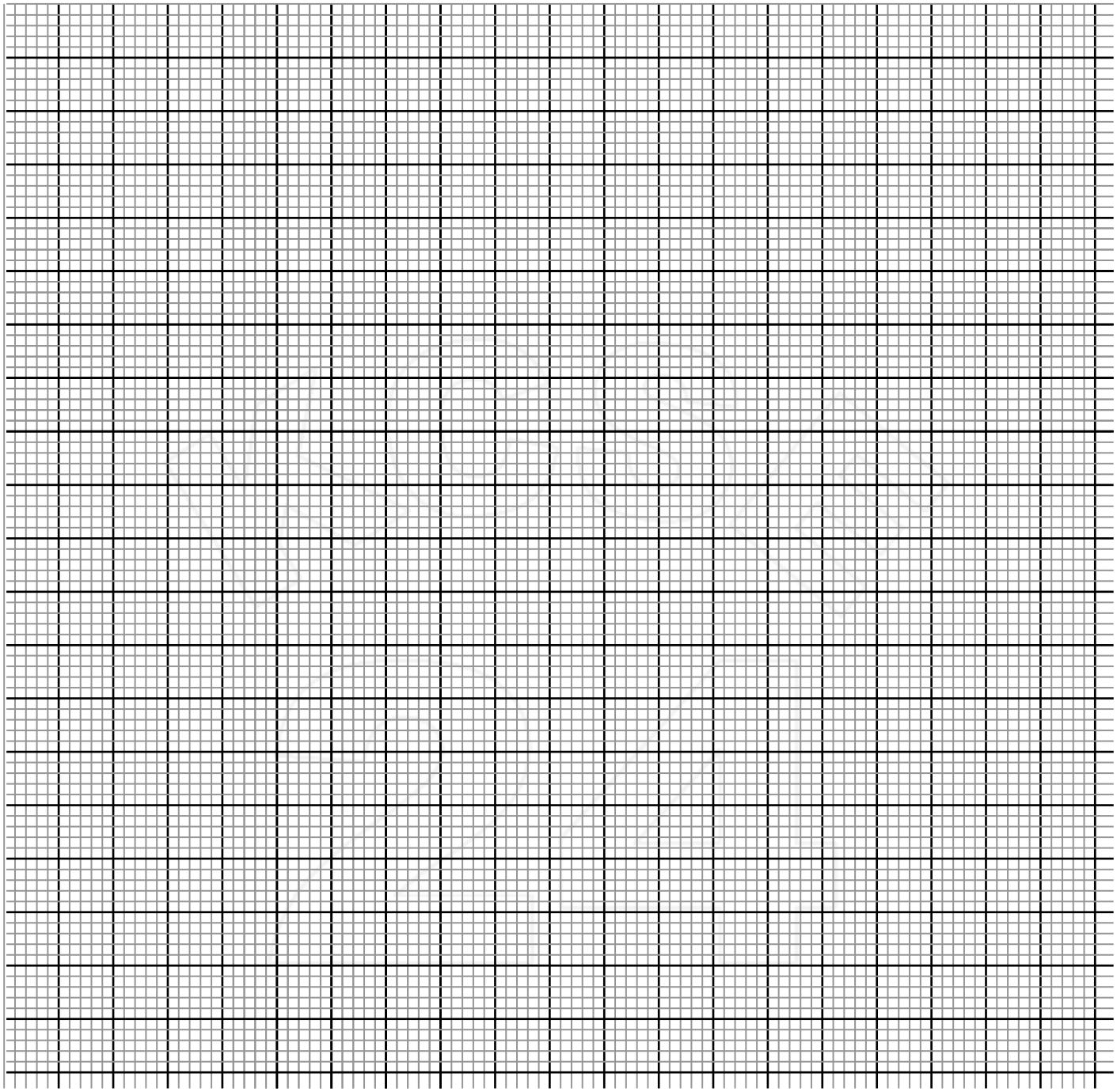
vii) **Co**ntinue stirring and record the temperature of the mixture after two minutes then thereafter record the temperature of the mixture after every one minute interval and complete the table 1. **Table 1.**

Time in minutes	0	2	3	4	5	6	7	8	9	10
Temperature (℃)	60									

(4mks)

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a) On the graph provided, plot a graph of temperature (vertical axis) against time. **(3mks)**



b) Using the graph, determine the temperature (T) when 2.0g of substance A dissolves completely in $10cm^3$ of distilled water. **(1mark)**

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c) Calculate the solubility of substance A in grammes per 100g of water at temperatures (T)

(2mks)

2. You are provided with:

- ***1M Potassium iodide solution***
- ***0.5m Lead (II) nitrate solution***
- ***Ethanol***

You are required to determine the formulae of lead (II) iodide and the equation for the reaction between lead (II) nitrate and potassium iodide.

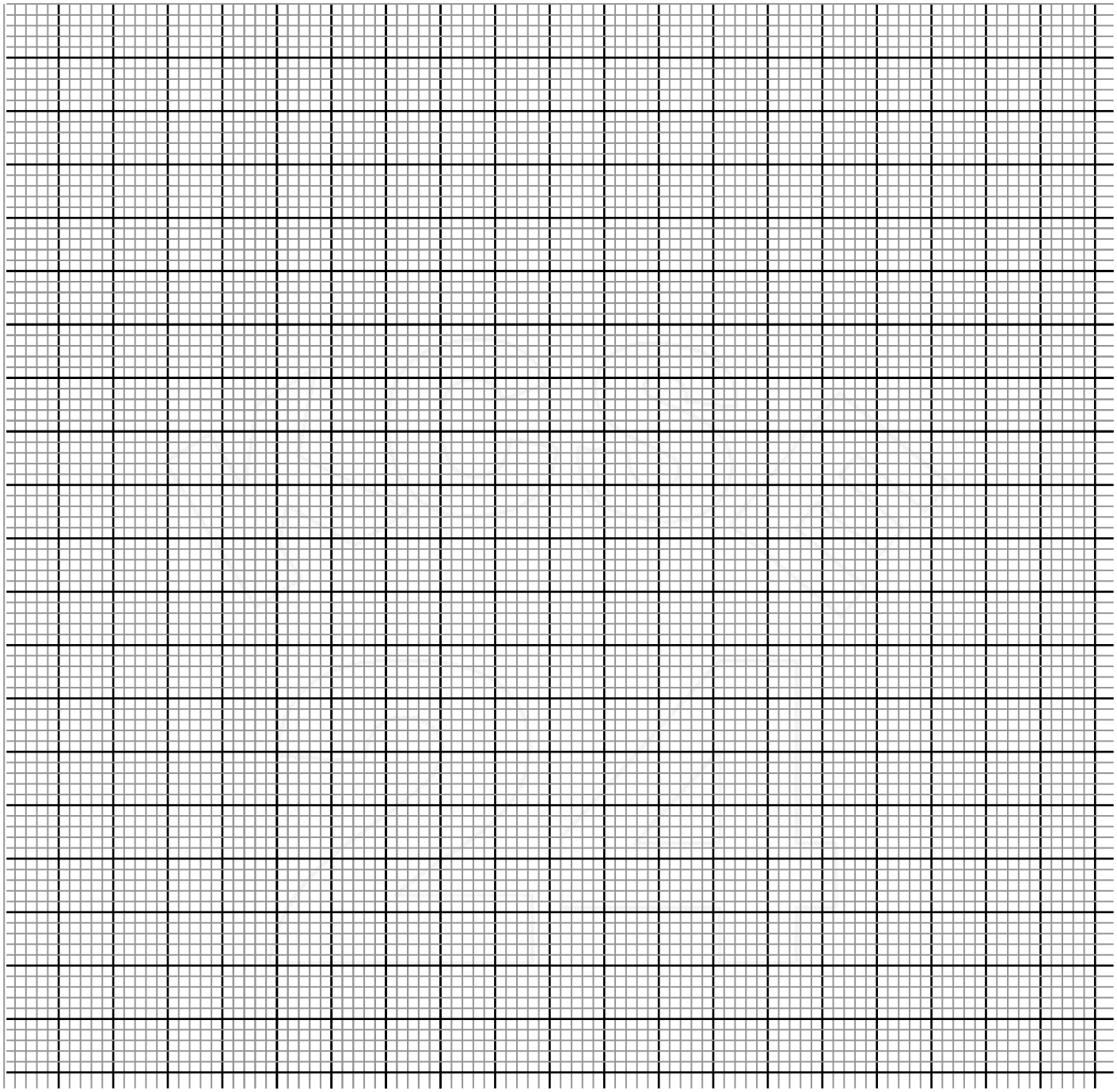
PROCEDURE

Take 5 test tube and label them 1, 2,3,4,5 and 6,7. Using a burette add to separate test tube volumes of aqueous potassium iodide and aqueous lead (II) nitrate as shown in the table below; followed by 3-4 drops of ethanol. Stir and allow to settle. Measure the height of the precipitate in each test tube in mm and record the measurements in the table below.

Test tube no	1	2	3	4	5	6	7	8
Volume of KI(cm^3)	2	3	4	5	6	7	8	9
Volume of $Pb(NO_3)_2$ cm^3	10	9	8	7	6	5	4	3
Height of the precipitate (mm)								

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a) Plot a graph of height of the precipitate against the volume of lead (II) nitrate. **(4mks)**



b) Use your graph to

i) Find the maximum height of the precipitate formed. **(1mk)**

ii) Determine the volume of the 0.5M Pb $(NO_3)_2$ used in b (i) above **(1mk)**

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iii) Determine the volume of 1M Potassium Iodide that completely reacts with 0.5M Pb $(NO_3)_{2\,(aq)}$ Potassium iodide solution. **(2mks)**

iv) Use your answer in b(ii) above to determine the number of moles iodide ions which reacts with one mole of lead (II) ions hence determine the formulae of lead (II) iodide. **(2mks)**

3. You are provided with

- ***Substance W 0.5g***
- ***Sodium hydroxide***
- ***Aqueous ammonia***
- ***Solution F – aqueous lead (II) Nitrate***
- ***Distilled water in wash bottle***
- ***Source of heat***

a) Describe the appearance of substance **W**

b) Add $10cm^3$ water to substance **W**

Observation	Inference
$(^1/_2\,mk)$	$(^1/_2\,mk)$

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c) Substance **W** is suspected to be calcium chloride.
From the reagent provided and results in procedure (b) above select and describe four tests that could be carried out consequently to confirm substance W is calcium chloride. Write the results and expected observation in the spaces provided. **(6mks)**

Test 1	**Expected observation**
(1mk)	**(1mk)**

Test 2	**Expected observation**
(1mk)	**(1mk**

Test 3	**Expected observation**
(1mk)	**(1mk)**

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d) Carry out the tests described in (c) above using substance **W** and record the observations and inferences in the spaces provided.

i) Test 1

Observation	**Inference**
	(1mk)

ii) Test 2

Observation	**Inference**
	(1mk)

iii) Test 3

Observation	**Inference**
	(1mk)

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4. You are provided with substance P.

Carry out the following test and record your observation and inferences in the spaces provided. Use above 2cm^3 of portion of substance P in a test tube for each tests **a**, **b**, **c** and **d**

a) Add about 2 or 3 drops of bromine water.

OBSERVATION	**INFERENCE**
$(^1/_2\, mk)$	$(^1/_2\, mk)$

b) Add about 1cm^3 of acidified potassium dichromate (VI) warm the mixture.

OBSERVATION	**INFERENCE**
(1mk)	**(1mk)**

c) Add about 1cm^3 of solution to E (aqueous sodium carbonate provided)

OBSERVATION	**INFERENCE**
$\mathbf{(\,^1/_2\, mk)}$	$\mathbf{(\,1mk)}$

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d) Add the piece of magnesium ribbon provided

OBSERVATION	**INFERENCE**
($\frac{1}{2}$ **mk)**	**(1mk)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

232/1

PHYSICS

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO THE CANDIDATES:

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

2) *Answer all the questions both in section A and B in the spaces provided below each question*

3) *All workings must be clearly shown; marks may be awarded for correct steps even if the answers are wrong.*

4) *Mathematical tables and silent electronic calculators may be used. Take g = 10m/s^2*

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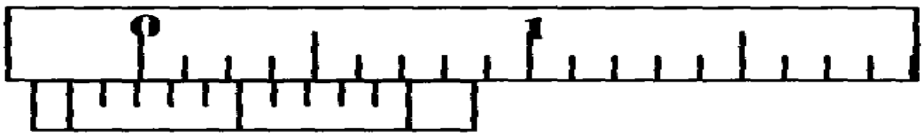
SECTION	QUESTION	MAX SCORE	CANDIDATE'SSCORE
A	1 - 10	25	
B	11	11	
	12	10	
	13	10	
	14	13	
	15	11	
TOTAL		**80**	

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SECTION A(25 MARKS)

Answer questions in this section.

1. The figure below shows part of a vernier callipers when the jaws are closed without an object in between the jaws.



a) State the zero error of the vernier callipers. **(1mk)**

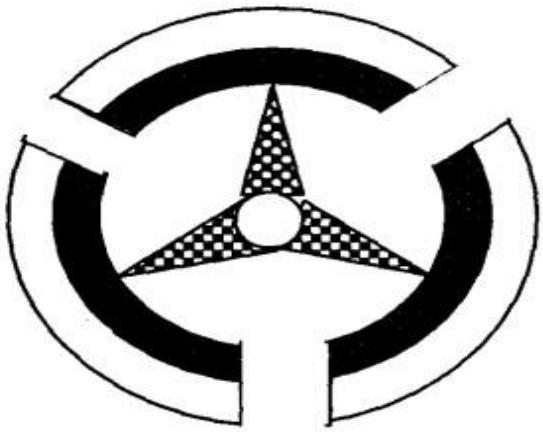
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b) A student used the same vernier calipers to measure the diameter of a test tube of actual diameter 2.15cm. What was the reading shown by the vernier callipers? **(2mks)**

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2. The diagram below shows a bimetallic wheel whose diameter is not affected by changes in temperature. Briefly explain how the diameter of the wheel remains unchanged as the temperature increases. **(3mks)**



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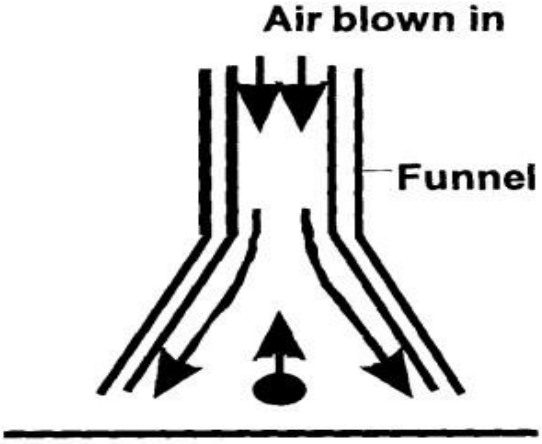
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3. The figure below shows a pith ball being lifted into a funnel end of a blower.



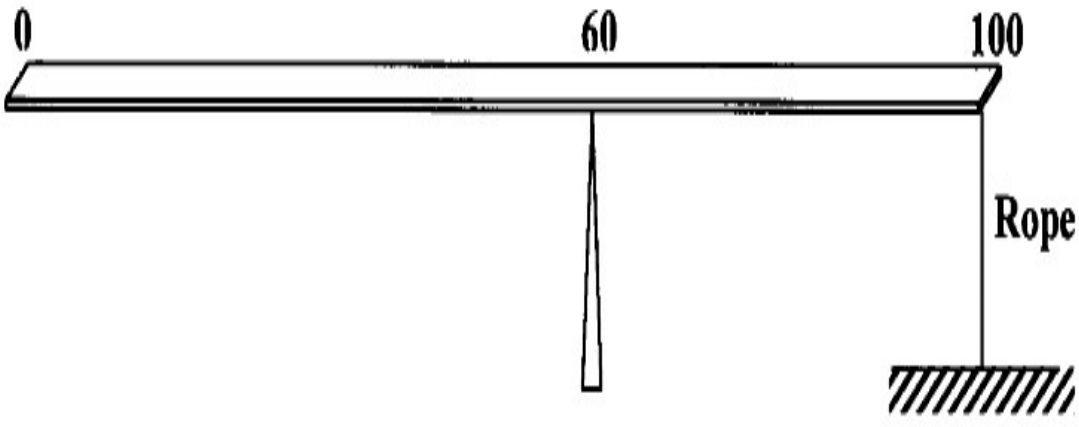
Explain this observation **(2mks)**

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4. A uniform meter rule of mass 40g is pivoted at the 60cm mark and held horizontal with a vertical rope as shown below. Determine the tension in the rope. **(3 mks)**



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5. A uniform mixture consists of $30cm^3$ of water and $40cm^3$ of ethanol. If the densities of water and ethanol are **1 g/cm^3** and **0.85 g/cm^3** respectively. Calculate the density of the mixture. **(3mks)**

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6. Water flows through a narrow pipe of radius 6cm connected to another pipe of radius 9mm. If the speed of water in the narrow pipe is 3mIs, determine the speed of water in the wider section**.** **(3mks)**

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7. State one way of making the surface tension of a liquid stronger. **(1mk)**

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8. A car undergoes uniform retardation from 36km/h covering a distance of 25m. Calculate its deceleration **(2mks)**

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9. A constant mass of hydrogen occupies a volume of 4.0 cm^3 at a pressure of 2.0 x 10^5 Pa and a temperature of 288K. Calculate the volume of this gas at a pressure of 1.6x 10^5 Pa when the temperature is 125K. **(3mks)**

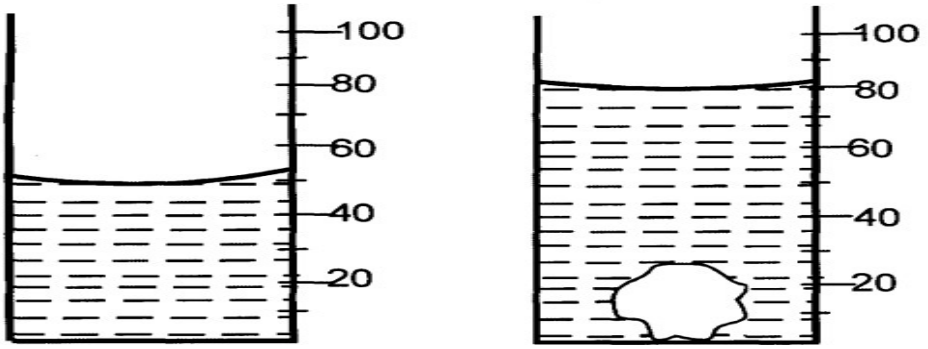
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10. The figure below shows the change in volume of a liquid in a measuring cylinder when an irregular solid is immersed in it.



Given that the mass of the solid is 540g, determine the density of the solid in g/cm^3. **(2 mks)**

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SECTION B (55 MARKS)

Answer ALL questions in this section.

a) A machine is a device that enables work to be done more easily and conveniently. State any two ways in which a machine makes work easier. **(2 marks)**

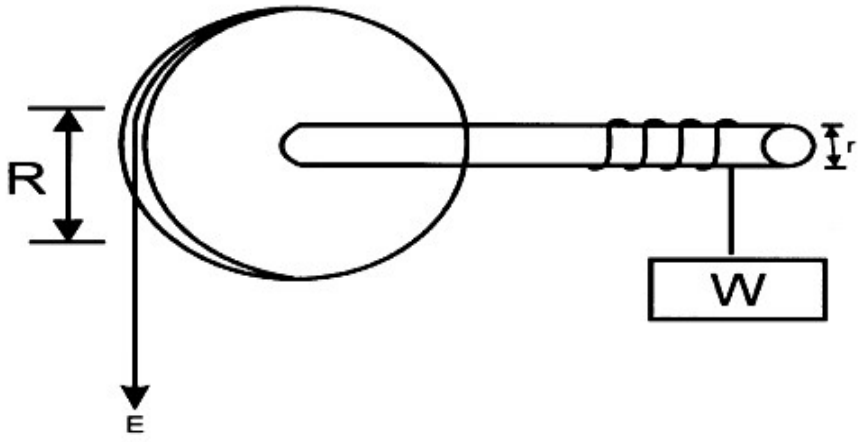
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b) Figure 7 shows a wheel and axle being used to raise a load W by applying an effort E. The radius of the wheel is R and of the axle is r.



i) Show that the velocity ratio (V.R) of this machine is given by $\frac{R}{r}$ **(3 Marks)**

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ii) Given that r = 5cm and R = 50cm, determine the effort required to raise a load of 200N if the efficiency of the machine is 90%. **(3 mks)**

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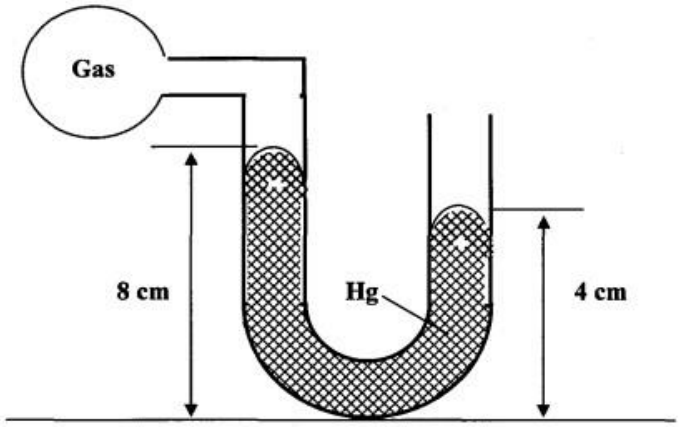
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c) An airtight flask containing a gas is connected to a mercury manometer. The levels of mercury in the two limbs of the manometer are as shown in the diagram below.



Calculate the pressure of the gas (Density of mercury = 1.36×10^4 kg/m^3 and atmospheric pressure = 1.0×10^5 N/m^2) **(3mks)**

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12. a) State the law of flotation. **(1 mk)**

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b) A block of glass of mass 0.25kg floats in mercury of density 1.36×10^4kgm^{-3}. What volume of the glass lies under the surface of mercury? **(3 mks)**

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c) A steady force of 3000N is applied to stop a car of mass 1500Kg moving at a velocity of 40m/s. How long does the vehicle take to stop? **(3 mks)**

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d) A lift car carries 16 passengers of total mass 1200 Kg. Calculate the force exerted on the lift floor when the lift accelerates upwards at 1.5 m/s^2. **(3mks)**

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13. a) Define a radian **(1mk)**

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b) Three masses are placed on a rotating table at distances 6cm, 9cm and 12cm respectively from the centre of rotation. When the frequency of rotation is varied it is noted that each mass slides off at a different frequency of rotation of the table. The table below shows the frequency at which each mass slides off.

Radius, r (cm)	12	9	6
Sliding off frequency (rev/s)	0.5	0.8	1.1

i) State two factors that determine the frequency at which each mass slides off. **(2 marks)**

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ii) Oil is now poured on the table before placing the masses. Explain the effect of this on the frequency at which the mass slides off. **(2 mks)**

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c) A marked point on a rim of a wheel has a linear velocity of 11 .2m/s. If the rim has a radius of 0.8m, calculate;

i) The angular velocity of the point **(3 mks)**

ii) The centripetal acceleration. **(2 mks)**

14. (a) What is meant by specific latent heat of Vaporization? **(1mk)**

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

The following measurements were made:

Mass of calorimeter = 50g

Initial mass of water =70g

Initial temperature of water = 5°C

Final mass of water + Calorimeter + condensed steam = 123g

Final temperature of mixture =30°C

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Specific heat capacity of water = $4200Jkg^{-1}k^{-1}$

Specific heat capacity of copper =$390J\ kg^{-1}k^{-1}$.

Determine the:

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

(ii) Heat gained by water and calorimeter. **(3mks)**

(c) Given that L is the specific latent heat of vaporization of steam

(i) Write an expression for the heat given out by steam. **(1 mk)**

(ii) Determine the value of L **(3mks)**

(d) 500g of water at 20°C is mixed with 200g of water at 55°C Find the final temperature of the mixture. **(3mks)**

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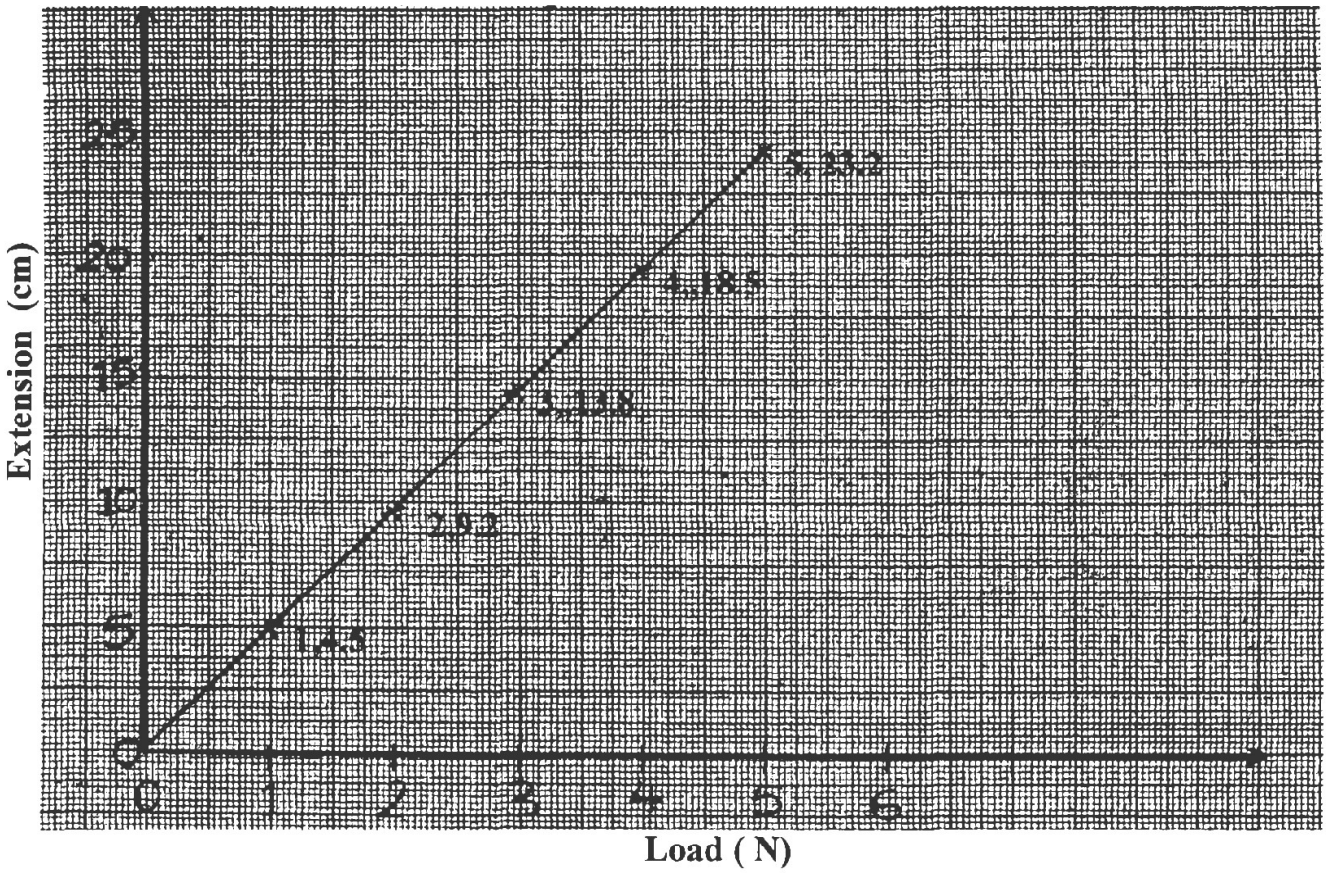
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15. a) State Hooke's law. **(1mk)**

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b) The graph shows how extension of a helical spring varied with load, hanging on it.



Determine from the graph, the proportionality constant of the spring. **(3mks)**

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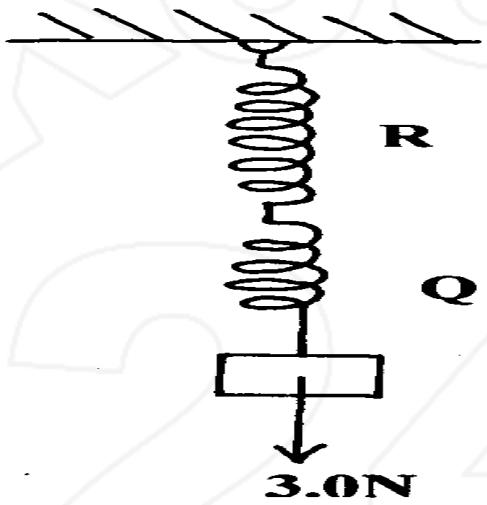
c) State two factors that affect the proportionality constant of a helical spring. **(2mks)**

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d) Two springs **Q** and **R** have proportionality constants $20Nm^{-1}$ and $25Nm^{-1}$ respectively. Q weighs 0.2 N while the weight of R is negligible. The two springs are arranged to support a load of 3.ON as shown in the diagram below.



Determine the extension in

i) **Q** **(2mks)**

……

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……

ii) **R** **(2mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

232/2

PHYSICS

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO THE CANDIDATES:

*(a) Write your **name** and **Index No** in the spaces provided above.*
*(b) Write the **stream** in the space provided above.*
*(c) This paper consists of **two** Sections **A** and **B**.*
*(d) Answer **all** the questions in sections **A** and **B** in the spaces provided below each question.*
*(e) All working **must** be clearly shown in the spaces provided below each question.*
*(f) Non-programmable silent electronic calculators and KNEC Mathematical tables **may be** used.*

FOR EXAMINER'S USE ONLY:

Section	Question	Maximum Score	Candidate's Score
A	1 – 12	25	
	13	09	
B	14	12	
	15	12	
	16	09	
	17	07	
	18	06	
Total Score		80	

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SECTION A: 25 MARKS

1) State **one** property of light that a pinhole camera illustrates. **(1 mark)**

……

……

2) It is observed that when a rod A is brought near the cap of a negatively charged electroscope, the divergence of the leaf decreases. State **two** deductions that can be made about rod A from this observation. **(2 marks)**

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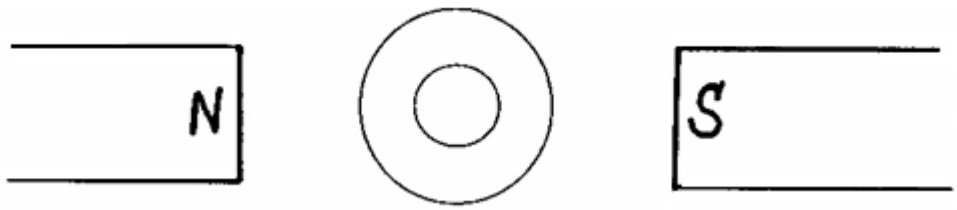
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3) State the purpose of manganese (IV) oxide in a dry cell. **(1 mark)**

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4) A soft iron ring is placed between two poles of a magnet as shown in the figure below.



i. Show on the figure the magnetic field pattern between the poles. **(2 marks)**

ii. State **one** application of soft iron in magnetism. **(1 mark)**

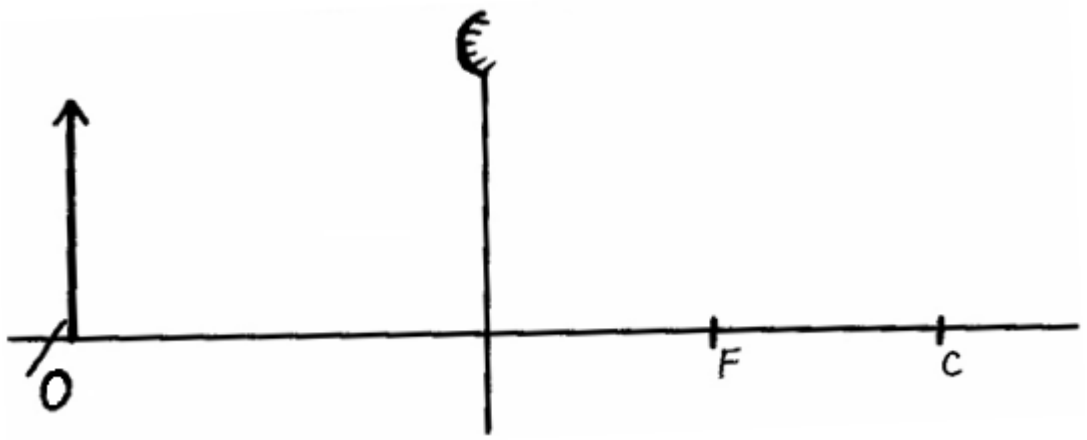
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5) An object O is placed in front of convex mirror as shown in the diagram below.

i. Complete the diagram to locate the position of the image, 1. **(3 marks)**

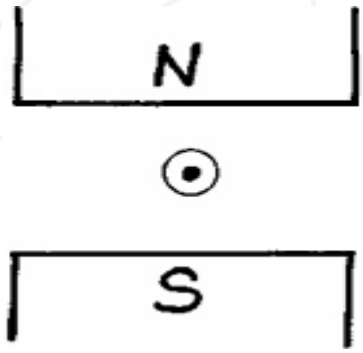


ii. State **one** practical application of a convex mirror. **(1 mark)**

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……

6) The figure below shows a wire carrying current whose direction is out of the paper. The wire is placed in a magnetic field.



i. Indicate on the figure the direction of the force F, acting on the wire. **(1 mark)**

ii. State what would be observed on the wire if the direction of the current is reversed (i.e. into the paper). **(1 mark)**

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7) A cell of internal resistance 0.5Ω is in a circuit containing 10Ω resistor. A current of 2A flows in the circuit, determine the E.M.F of the cell. **(3marks)**

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8) State **one** example of a transverse-progressive wave. **(1 mark)**

……

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9) 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/s, calculate the distance between the walls. **(3 marks)**

10) State:

i. **two** applications of microwaves. **(2 marks)**

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ii. **one** detector of infrared radiation. **(1 mark)**

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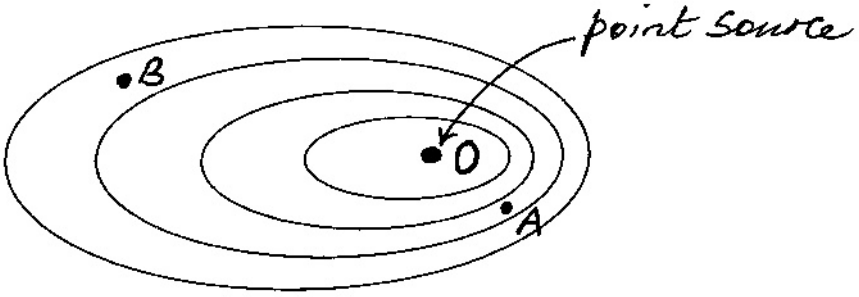
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11) State **one** factor that affects the speed of sound in a solid. **(1 mark)**

……

……

12) The figure shown below illustrates crests of circular water wave-fronts radiating from a point source O in a pond.



i. State how the depth of the pond at **A** compares with that at **B**. **(1 mark)**

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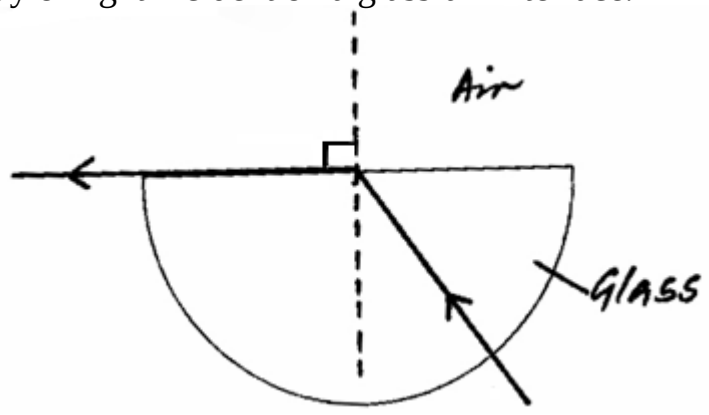
SECTION B: 55 MARKS

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

……

……

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



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

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b. 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)**

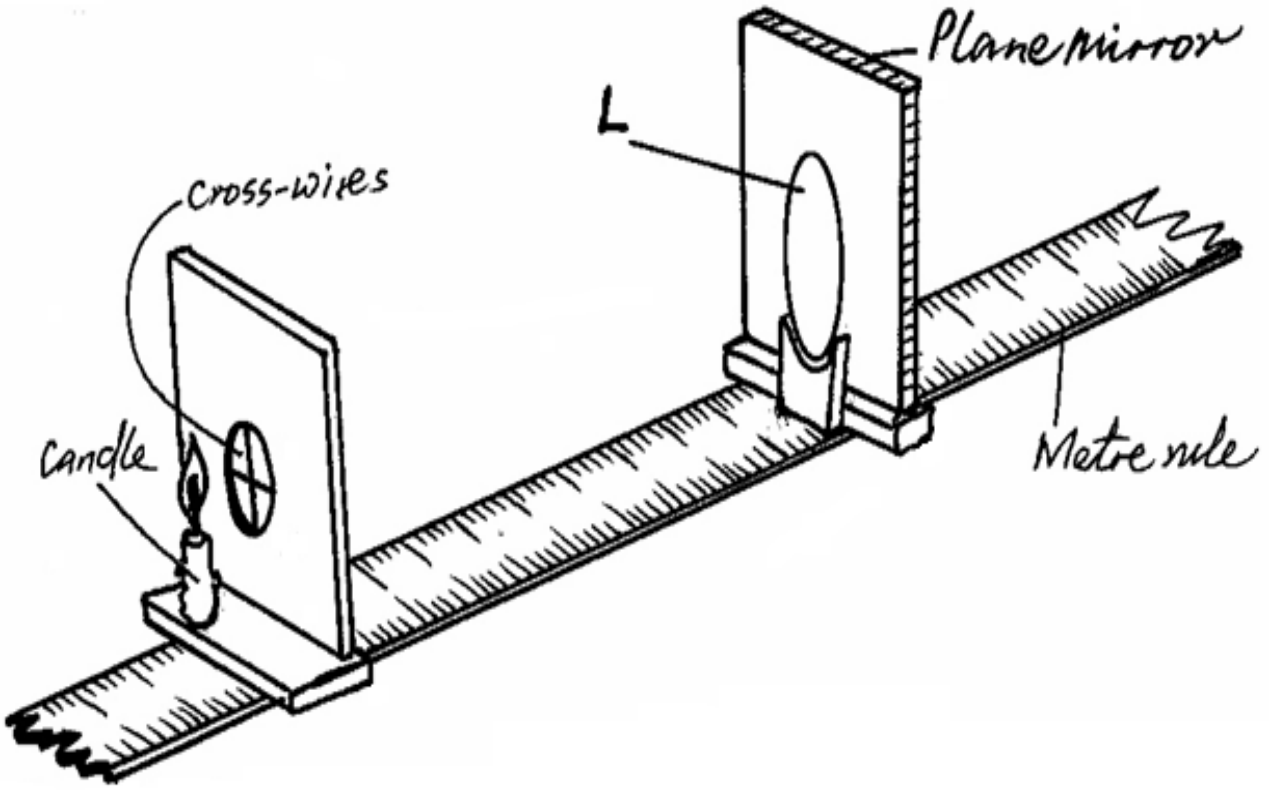
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The figure shows an experimental set up consisting of a mounted convex lens **L**, cardboard screen with cross-wires at the centre, a plane mirror, a metre rule and a candle.



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

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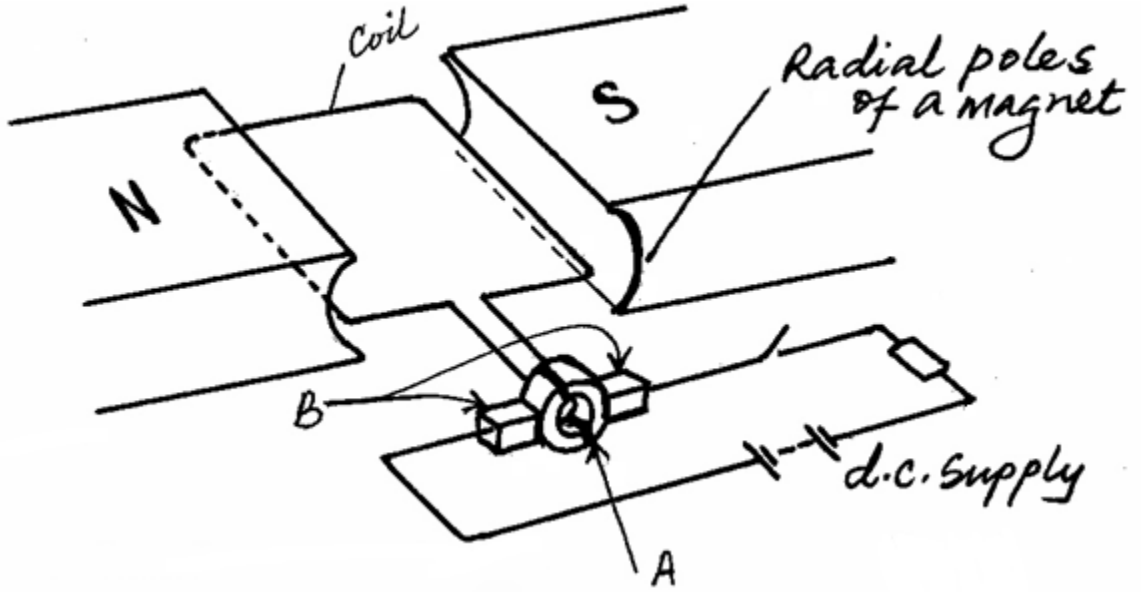
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14) (a) The figure below shows parts of a simple electric motor.



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

i. A

ii. B

(ii) State the function of each of the parts named in part (i) above. **(2 marks)**

A……

……

B ……

……

b. State the advantage of using curved poles of a magnet over plane poles. **(1 mark)**

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c. Explain the significance of copper coil as part of an electric motor. **(2 marks)**

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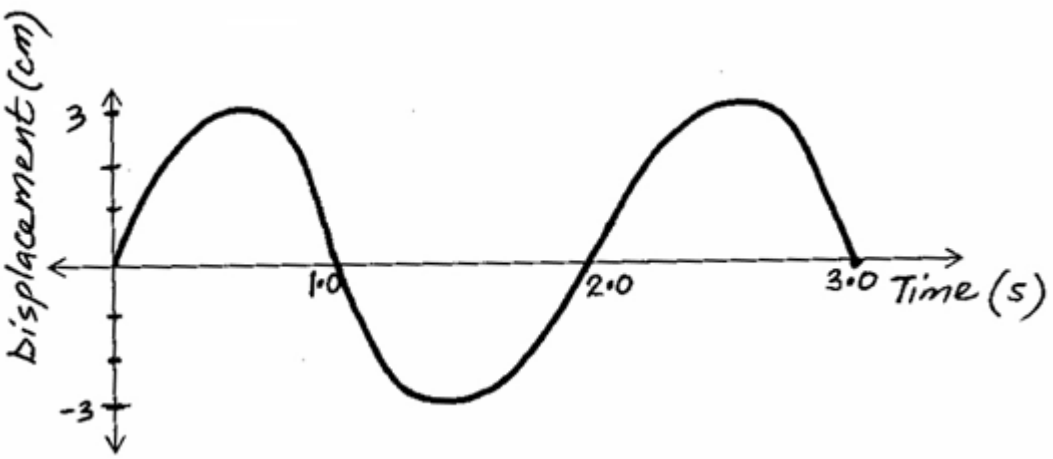
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b). The graph in the figure below shows the displacement of a pendulum bob from its rest position as it varies with time.

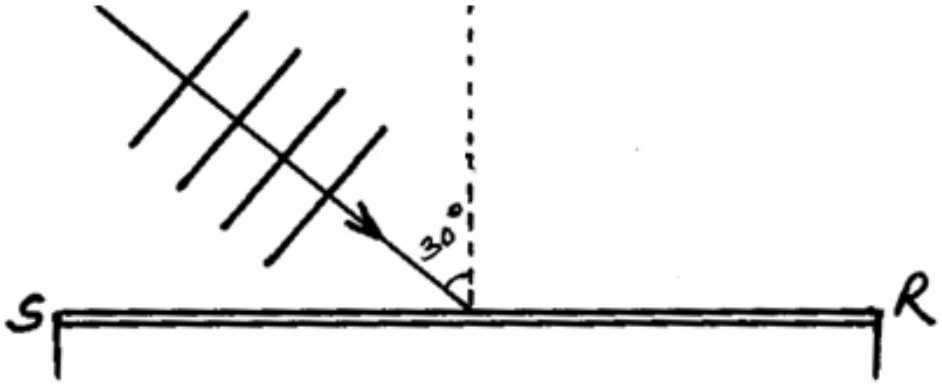


(i) Determine the amplitude of the oscillation. **(1 mark)**

(ii) Determine the time for one complete oscillation. **(1 mark)**

On the same graph, draw a sketch graph which represents a pendulum swinging with half the amplitude and twice the frequency. **(2 marks)**

Plane water wave fronts are incident onto reflector **SR** as shown in the figure below. Show on the diagram the nature and direction of the reflected wave fronts. **(1 mark)**



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15) a) (i) State Ohm's law **(1 mark)**

……

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……

A current of 0.5 A flows through two resistors R_1 and R_2 connected in series to a 10V battery. When R_1 only is connected to the battery, the current flowing through it is 0.8A. Calculate the

i. Value of R_2 **(3 marks)**

ii. Current flowing when R_1 and R_2 are connected in parallel with the same battery. **(2 marks)**

(iii) Recharging is one of the practices of maintenance of accumulators. State one measurement, which need to be taken to help you decide when an accumulator is due for charging **(1 mark)**

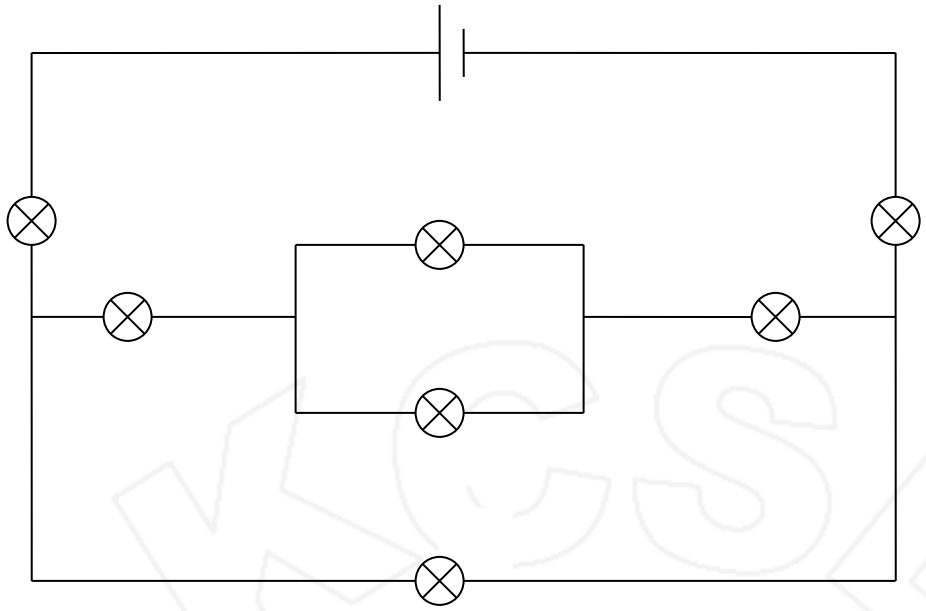
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b. In the circuit diagram A, B, C, D, E, F and G are identical lamps.



Explain which lamps are the brightest and which are the dimmest. **(2 marks)**

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If the circuit breaks between lamps B and F, explain the change of brightness in the other lamps. **(3 marks)**

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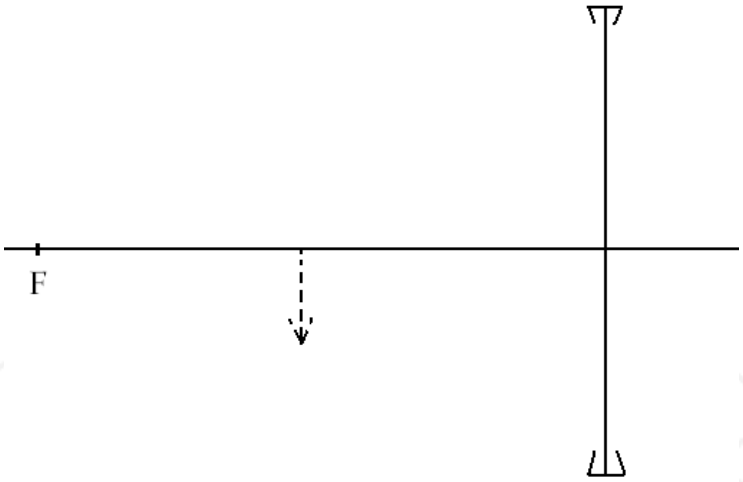
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16) a) Complete the diagram below indicating the rays that will lead to the formation of the image shown below. **(2 marks)**



b).A compound microscope with an objective lens L_o of focal length 1.2cm and an eye piece lens L_e of focal length 2.8cm. An object is placed 1.8cm from the objective lens. The system of lenses produces a final image a distance of 12.0cm from L_e. Determine the distance of separation of lens L_o and L_e. **(4 marks)**

c). An object is placed 12cm from a convex lens and it forms a virtual image 36cm from the lens. Calculate the focal length of the lens. **(3 marks)**

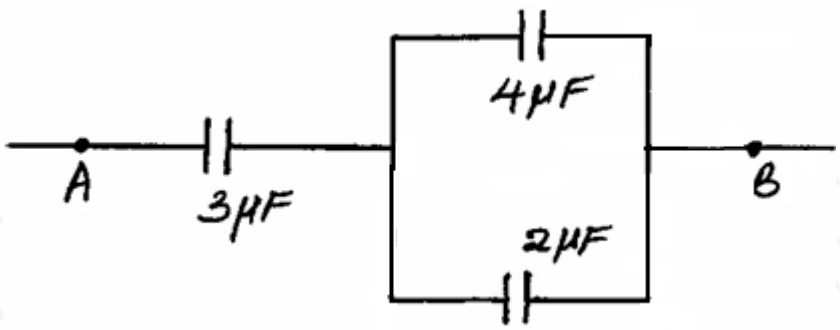
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17) **(a)**State **two** properties of electric field lines. **(2 marks)**

……

……

(b) The figure below shows part of a circuit containing three capacitors.



(i). Calculate the effective capacitance between **A** and **B**. **(3 marks)**

……

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(ii). Given that the potential difference (p.d.) across AB is 10V, determine the total charge flowing through the circuit. **(1 mark)**

……

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State how an increase in thickness affects electrical resistance of a conductor. **(1 mark)**

……

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18) A house has twenty 60 W bulbs, two 1000 W heater and two 500 W security lights. If the appliances are running on 230 V, calculate:

a) the total power in Kw used when all are switched on. **(3 marks)**

b) the total current drawn from the mains supply. **(3 marks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

232/3

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

SCHOOL…… SIGN……

(Kenya Certificate of Secondary Education)

Confidential

The information contained in this **KCSE Physics Prediction paper** is to enable the head of the school and the teacher in charge of Physics to make adequate preparations for the **232/3 Physics** Practical examination.

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

The following apparatus should be provided for the Physics practical paper

Question one

You are provided with the following:

- 2 new dry cells size D
- A cell holder
- A switch
- A millimeter of range 0 to 1 mA
- A capacitor labeled C (2200μF)
- 8 connecting wires; at least four with crocodile clips on one end
- A stopwatch
- A carbon resistor labeled **R (4.7KΩ)**

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Question Two

You are provided with the following;

- a rectangular glass block of dimensions; 9.6cm X 6.0cm X 2.4cm (Tolerance + or – 0.2cm)
- 4 optical pins
- 2 thumb pins
- a soft board
- a plain paper

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

232/3

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

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

b) *You are supposed to spend the first **15 minutes** of the **2 ½ hrs** allowed for this paper reading the whole paper carefully before commencing your work.*

c) *Marks will be given for clear record of the observations actually made, their suitability, accuracy and the use made of them.*

d) *Candidates are advised to record their observations as soon as they are made.*

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

FOR EXAMINERS USE ONLY

QUESTION	MAX. SCORE	CANDIDATES SCORE
1	20	
2	20	
TOTAL	40	

Answer all the questions in the spaces provided

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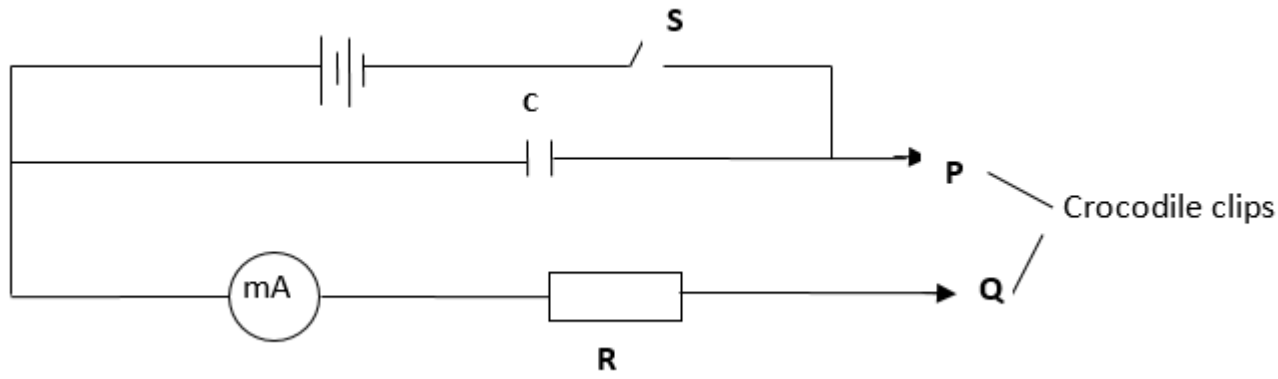
QUESTION ONE

You are provided with the following:

- 2 new dry cells size D
- A cell holder
- A switch
- A millimeter of range 0 to 1 mA
- A capacitor labeled C
- 8 connecting wires; at least four with crocodile clips on one end
- A stopwatch
- A carbon resistor labeled **R**

Proceed as follows

a. Connect the circuit as shown in the **figure 1**below, where **P** and **Q** are crocodile clips.



b. Close the switch **S**

c. Name the process which takes place when the switch **S** is closed

……. **(1 mark)**

d. Connect the crocodile clips P and Q. Observe and record the highest reading of the millimeter $\mathbf{I_o}$

……. **(1 mark)**

e. Open the switch S and at the same time start the stopwatch to measure the time taken for the current to decrease to **four fifth** the value of $\mathbf{I_o}$ i.e. $^{4}/_{5}$ $\mathbf{I_o}$. Record your value in the **table 1**.

f. Close the switch S for a second time and observe the deflection in the millimeter. ***(the pointer should rise back to the same initial value I_o)***

g. Repeat part (b) for other values of current as shown in the **table 1** below. **(8 marks)**

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Current **I** (mA)	$^{4}/_{5}$ $\mathbf{I_o}$	$^{3}/_{4}$ $\mathbf{I_o}$	$^{2}/_{3}$ $\mathbf{I_o}$	$^{1}/_{2}$ $\mathbf{I_o}$	$^{2}/_{5}$ $\mathbf{I_o}$	$^{1}/_{3}$ $\mathbf{I_o}$	$^{1}/_{4}$ $\mathbf{I_o}$
Your calculated fraction of $\mathbf{I_o}$ (mA)							
Time **t** (s)							

h. Plot a graph of Current **I** (y – axis)(mA) against time **t** (s) **(5 marks)**

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i. From your graph, find **W** the value of **I** when **t = 10s**. **(2 marks)**

……

……

……

j. Given that **A = 10W**, determine the value of **A.** **(2 marks)**

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k. Determine the voltage across **R** at **t = 10s** given that R = 4.7kΩ **(1 mark)**

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Question Two

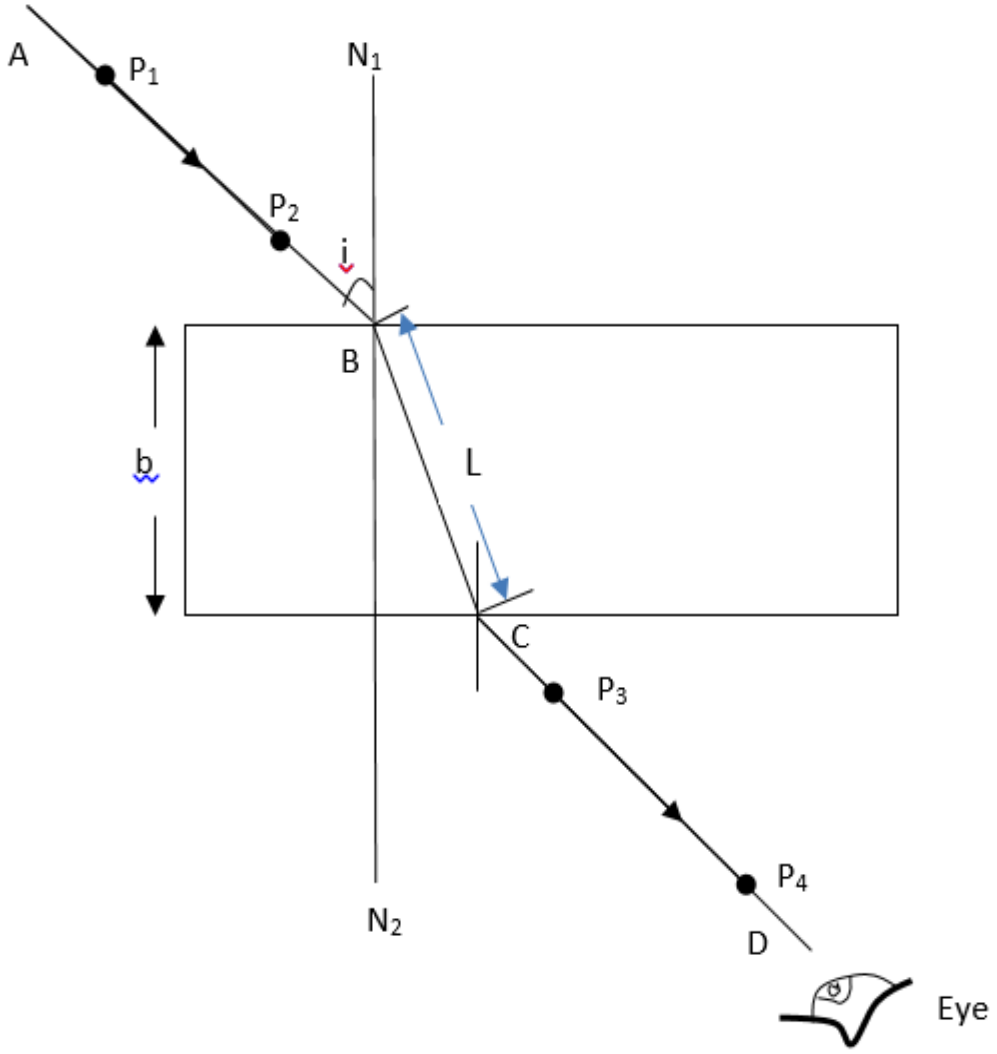
You are provided with the following;

- a rectangular glass block
- 4 optical pins
- 2 thumb pins
- a soft board
- a plain paper

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Proceed as follows:

(a) Place the glass block on the plain paper with one of the largest face upper most. Trace round the glass block using a pencil as shown below.



(b) Remove the glass block and construct a normal at B. Construct an incident ray AB of angle of incidence, i = 20^0.

(c) Measure the breadth **b** of the glass block **(1 mark)**

……

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(c) Replace the glass block and trace the ray ABCD using the optical pins.

(d) Remove the glass block and draw the path of the ray ABCD using a pencil.

(e) Measure the length L and record it in the table below

Angle i^0	L (cm)	L^2 $(cm)^2$	$\frac{1}{L^2}$ (cm^{-2})	$Sin^2 i$
20				
30				
40				
50				
60				
70				

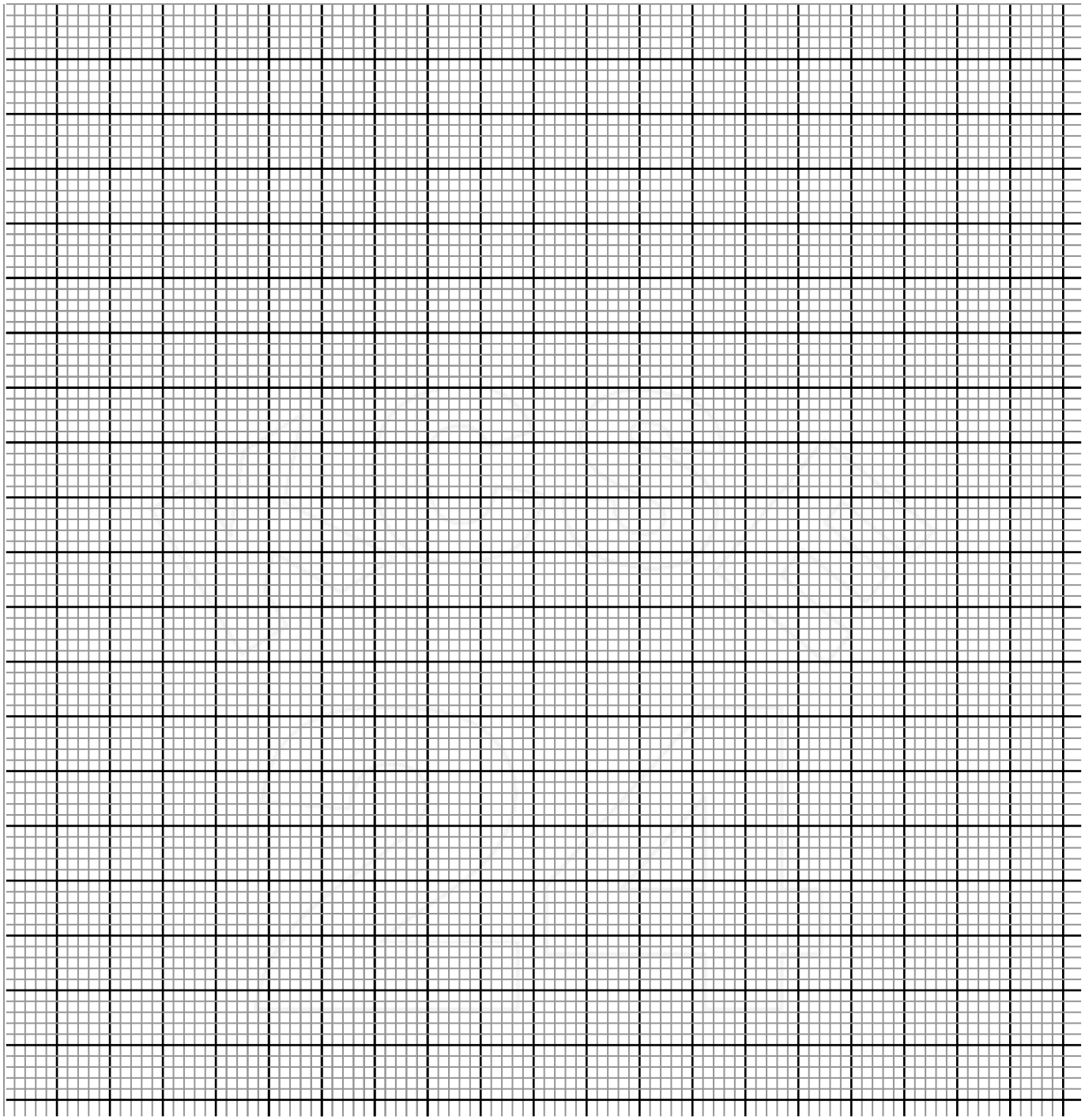
(6 marks)

(f) Repeat the procedure above for the angles of incidence given.

(g) Calculate the values of $\frac{1}{L^2}$ and Sin^2 I; and record in the table above.

(h) Plot a graph of $\frac{1}{L^2}$ (y-axis) against Sin^2i. **(5 marks)**

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(i) Calculate the gradient **S** of the graph **(3 marks)**

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Given that the equation of that graph is; $\frac{1}{L^2} = -\left(\frac{1}{0.1n^2b^2}\right) \text{Sin}^2 i + \frac{1}{b^2}$

(j) Determine the value of ***n*** **(3 marks)**

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(k) Present your work sheet; attached to the exam paper **(2 mark)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

443/1

AGRICULTURE

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

- *Write your name and Index Number in the spaces provided above.*
- *Sign and write the date of examination in the space provided above*
- *This paper consists of THREE section A,B and C.*
- *Answer ALL the questions in section in sections A and B.*
- *Answer any two questions from section C.*

SECTION	QUESTION	MAXIMUM	CANDIDATES SCORE
A	1-19	30	
B	20-26	20	
C	27-29	20	
		20	

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SECTION A (30 MARKS)

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

1. a) State three ways by which agriculture contributes to national development**.(1 ½ mk)**

……

……

……

b) State two effects of high level of Education and technology on agricultural production. **(1mk)**

……

……

2. Name two insect pests that attack sorghum in the field. **(1mk)**

……

……

……

3. State two conditions when opportunity costs are zero. **(1mk)**

……

……

……

4. State four conditions limiting shifting cultivation. **(2mks)**

……

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5 a) State three reasons for practicing grafting in citrus production **(1/ ½ mk)**

……

……

……

b) Give the method used in breaking seed dormancy in the following crop;

i) Calliandra **(½ mk)**

……

……

ii) Rice

……

……

6. Name two ways by which the PH of a soil is raised. **(1mk)**

……

……

……

7. State four reasons why organic matter is necessary in the soil **(2mks)**

……

……

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……

8. State two disadvantages of surface irrigation. **(1mk)**

……

……

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9. State two advantages of mixed pasture. **(1mk)**

……

……

10. Mention four types of soil erosion water. **(1mk)**

……

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……

11. State two conditions for maximum efficiently of herbicides. **(1mk)**

……

……

12. State two functions of polythene sheet when used as mulch material. **(1mk)**

……

……

……

13. State four principals of cooperative societies. In Kenya **(2mk)**

……

……

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14. Differentiate between coppicing and pinching out. **(2mks)**

……

……

……

15. State two sources of nitrogen in the soil for plants. **(1mk)**

……

……

16. Give two benefits of possessing certificate of land ownership. **(1mk)**

……

……

17. State four ways of improving labour efficiency in the farm. **(2mks)**

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18. State any two benefits of minimum tillage. **(2mks)**

……

……

20. Give one reason why each of the following nursery management practices are carried out .

i) Hardening off **(1mk**

……

……

ii) Watering before transporting seedlings from the nursery bed. (**1mk)**

……

……

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iii) Hardening in onions **(1mk)**

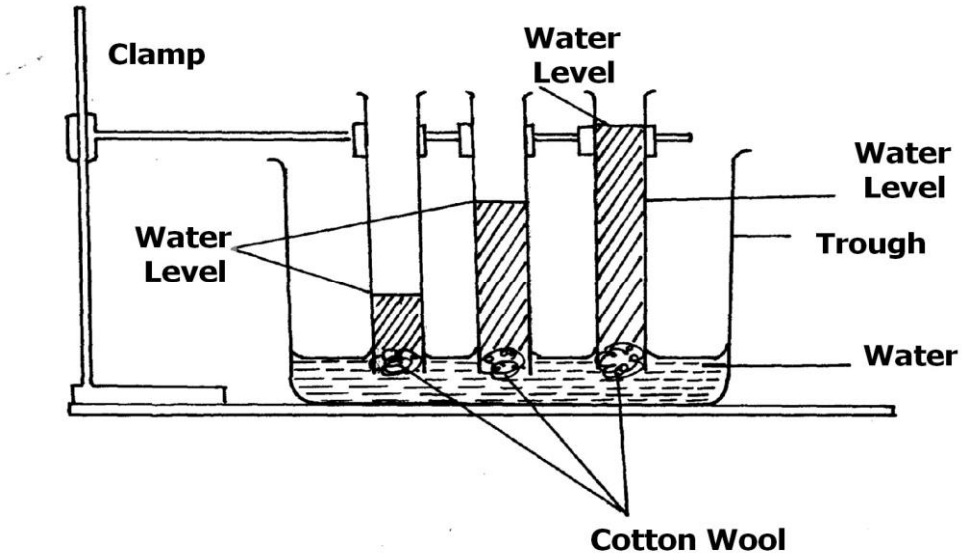
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SECTION B (20MARKS)

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

20. The diagram below shows an experiment set up using soil types A, B and C and observations made after 24 hours.



i) What is the experiment above designed to study? **(½ mk)**

……

ii) Name the three soil types A, B, and C **(1 ½ mk)**

……

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iii) What is the characteristic textures of soil types A and C? **(1mk)**

A

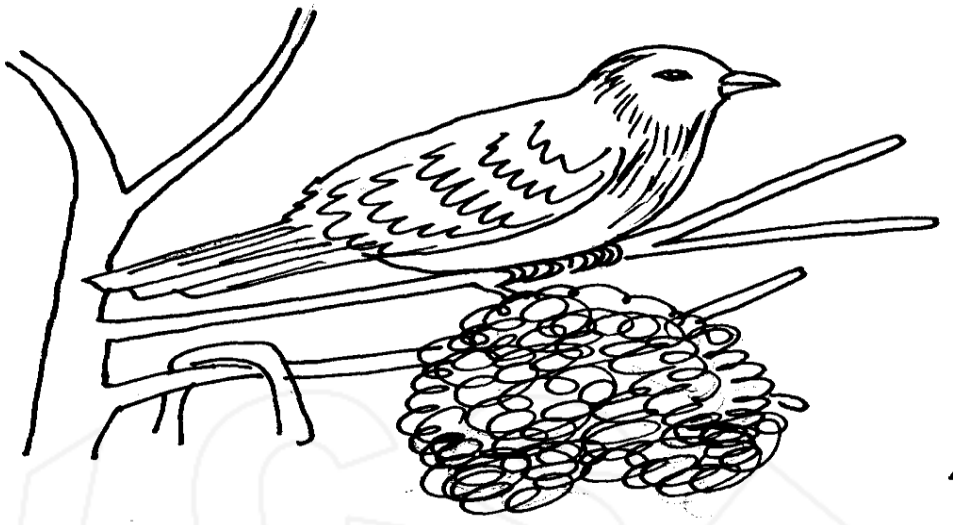
C

iv) State how a farmer would improve the structure of soil type A **(½ mk)**

……

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20. Below is a diagram of a bird which is a crop pest.



Identify the pest. **(½ mk)**

……

State three ways by which the bird causes loss in crops **(1 ½ mks)**

……

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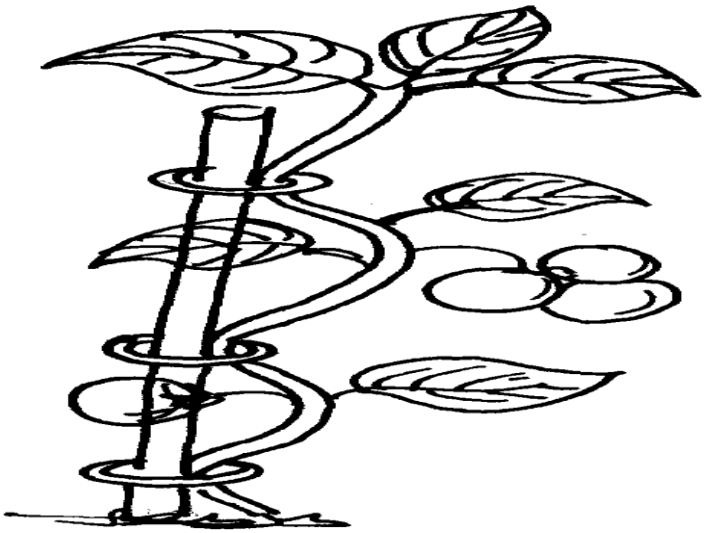
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State TWO methods that can be used in the control of the pest. **(1mk)**

……

……

22. Below is a diagram of a tomato plant.



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i) Identify the practice illustrated **(½ mk)**

……

ii) Describe the procedure followed in spraying the crops with a fungicide in power form, water and a knapsack sprayer. **(1 ½ mks)**

……

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……

iii) Name one fungal diseases that can be controlled in the crop using the procedure above.

(½ mk)

……

……

iv) State two safety measures that shoulder be taken while spraying the crops with a fungicides.

(1mk)

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……

……

23. A farmer can combine dairy meal and home made fees in feeding dairy cattle. Study the table below answer Questions that following.

Dairy meal (kg)	**Home made feed (Kg)**	**Marginal Rate of Substitution**
1	48	O
2	39	V
3	32	7
4	27	W
5	23	4
6	21	X
7	20	1
8	19	Y

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i) Given the information above, Calculate the marginal rate of substitution and give values of V, W, X, and Y. **(2mks)**

……

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ii) Given that the price of dairy meal is Ksh 8.00 per kg. and that of home made feeds is Kshs 2/kg, calculate the least cost contribution. **(1 ½ mks)**

……

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24. Given that at a price of Ksh 2000 per bag 20 bags of maize are demanded but when the price changes to Kshs 1800 /bag, 22 bags are demanded.

Calculated the Elasticity of demand. (Show your working) **(1 ½ mks)**

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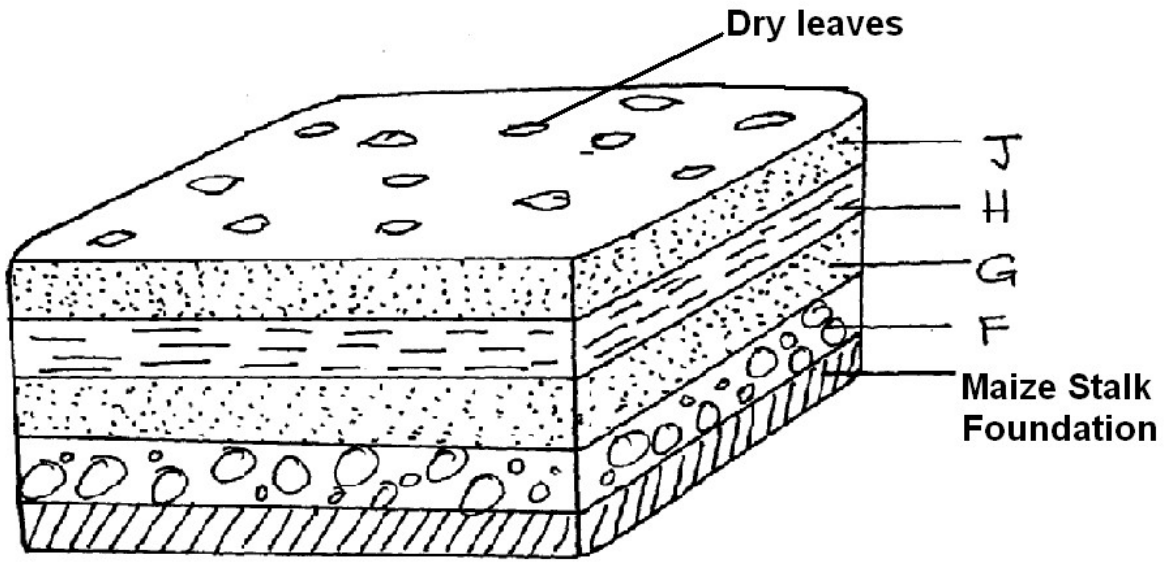
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What type of elasticity of demand is this in 24 (i) above? **(½ mk)**

……

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25. The diagram below is a presentation of a cross section through a compost heap.



i) Name the parts labeled O,F,G,H and J **(2 ½ mks)**

E……...

F……...

G……..

H……

J……

ii) Give importance of the parts labeled J, H and G. **(1 ½ mk)**

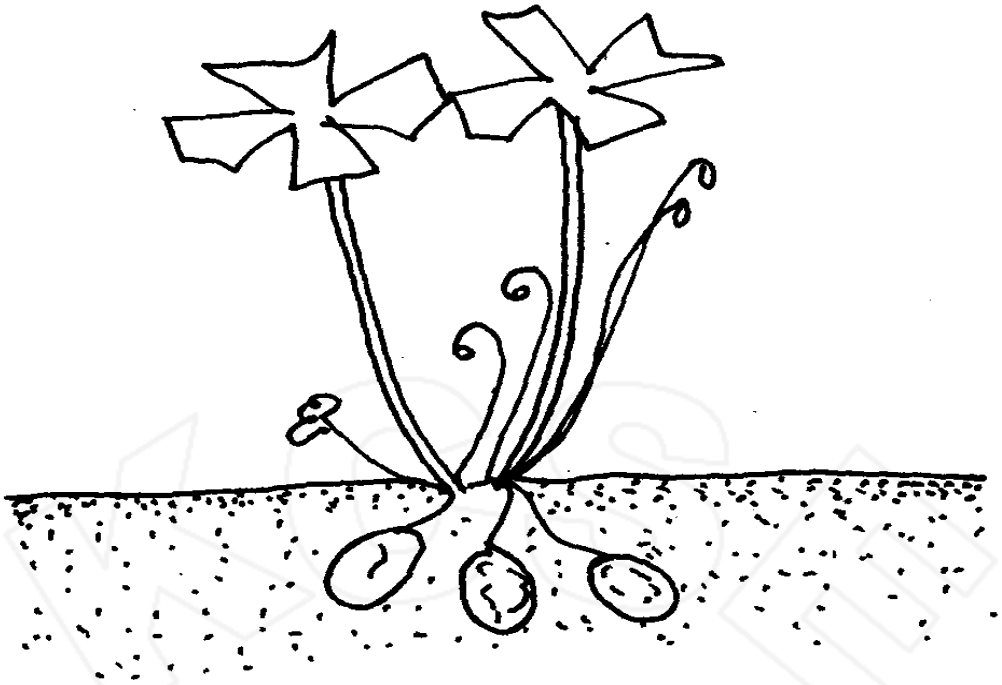
J…….

H…….

G…….

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26. The diagram below illustrates a weed.



i) Identify the weed **(½ mk)**

……

ii) State one competitive ability of the weed illustrate above. **(½ mk)**

……

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SECTION C

Answer any two questions from this section in the spaces provided after question 29.

27.a) Explain five factors that influence soil productivity. **(10mks)**

b) Outline five factors that a farmer would consider before deciding on the type of irrigation in crop production. **(5mks)**

c) Describe five qualities of the mother plant should be considered when selecting vegetative materials for planting. **(5mks)**

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28. a) List seven benefits of using organic mater for mulching. **(7mks)**

b) Describe the field production of Napier grass under the following sub- headings

(i) Planting **(3mks)**

(ii) Fertilizer and manure **(3mks)**

(iii) Utilization **(3mks)**

c) Describe the procedure followed when transplanting tree seedlings from a bare root nursery bed. **(4mks)**

29. a) Explain four agriculture practices which pollute water. **(8mk)**

b) Explain eight factors that determine the spacing of a crop. **(8mks)**

c) State four precautions one should take when harvesting coffee.

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

443/2

AGRICULTURE

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. *Write your name and index number in the spaces provided.*
2. *This paper consists of three sections; A, B and C*
3. *Sign and write the date of examination in the spaces provided above*
4. *Answer all the questions in sections A and B*
5. *Answer any two questions from section C*
6. *Answers should be written in the spaces provided.*

Section	Questions	Maximum Score	Candidate's score
A	1 – 16	30	
B	17 – 19	20	
C		20	
		20	
		90	

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SECTION A

Answer all questions in the space provided.

1. Name four causes of stress in a flock of layers **(2mks)**

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2. State two maintenance practices of a cold chisel **(1mk)**

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3. Suggest two factors that can lead to conception failure after a female cow has been served. **(1mk)**

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4. Give two hormones that influence milk let down **(1mk)**

……

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5. Suggest three factors that make embryo transplant unpopular with many livestock Farmers **(1 ½ mks)**

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6. Give four reasons why boran cattle are more suitable for beef production under Kenya's ranch conditions than exotic beef cattle **(2mks)**

……

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7. State four factors that may lead to culling in dairy cattle **(2mks)**

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8. Give functional difference between the following tools

a) Cross-cut saw and a rip saw **(2mks)**

……

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b) Spirit level and a plumb bob **(2mks)**

……

……

c) Give four importance of breeding records **(2mks)**

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9. Give four control measures of a liver flukes in livestock **(2mks)**

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10. State three factors which influence the variation of the rate of respiration in various farm animals **(1 ½ mk)**

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11. List four non-chemical methods of controlling ticks in cattle **(2mks)**

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12. a) Give two roles of a queen bee in a colony **(1mk)**

……

……

b) Give two signs of parturition in a doe **(1mk)**

……

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13. Differentiate between a roughage and a concentrate feed in livestock production **(2mks)**

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14. Give four reasons why dehorning is done in livestock **(2mks)**

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15. State any four characteristics of the laudrace breed of pigs **(2mks)**

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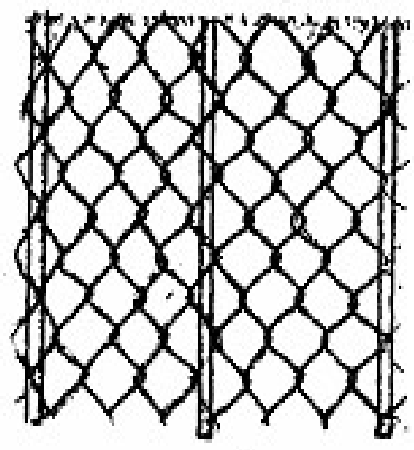
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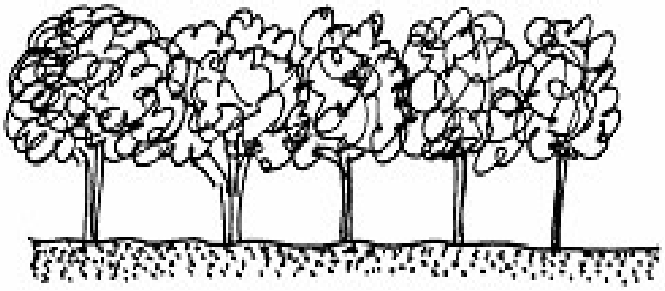
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SECTION B (20 MARKS)

Answer all questions in the space provided.

17. Study the illustration of fences below and answer the questions that follow





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a) Name the type of fences illustrated above **(2mks)**

X……..

Y……..

b) Name the correct tool used in maintenance of fence **(1mk)**

Y

……

c) State three advantages that fence Y may have over fence X **(3mks)**

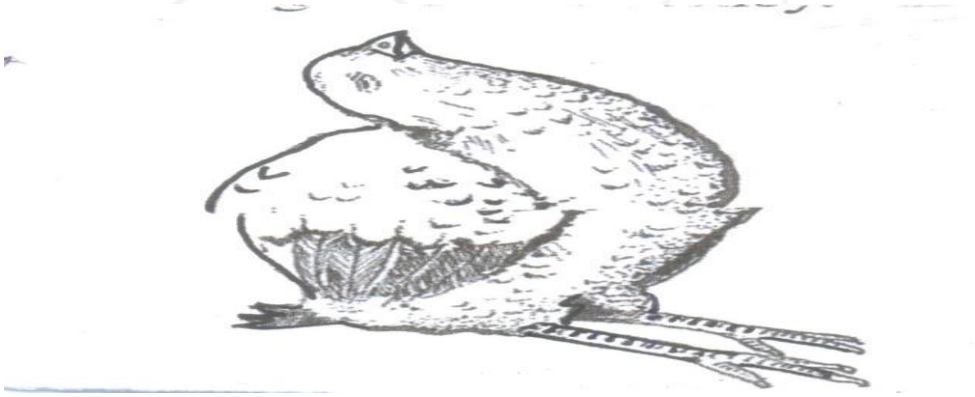
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18. Study the chicken condition illustrated below and answers the questions that follow



a) Identify the deficiency nutrient responsible for the condition above **(1mk)**

……

b) Give four functions of vitamins in livestock production **(2mks)**

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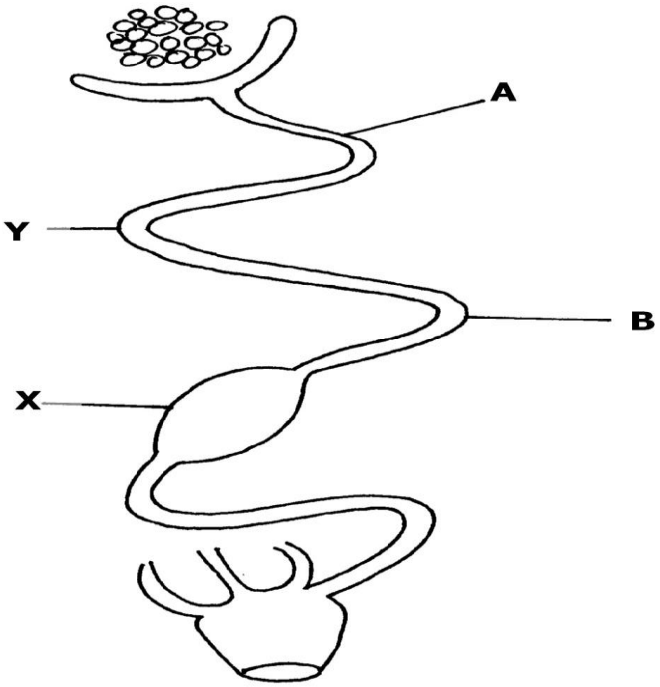
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19. Below is a diagram representing the reproductive system in poultry. Study it and answer the questions.



a) Name the parts labeled **(3mks)**

A……

X……

Y……

b) Name two substances added to the egg at section labeled Y **(1mk)**

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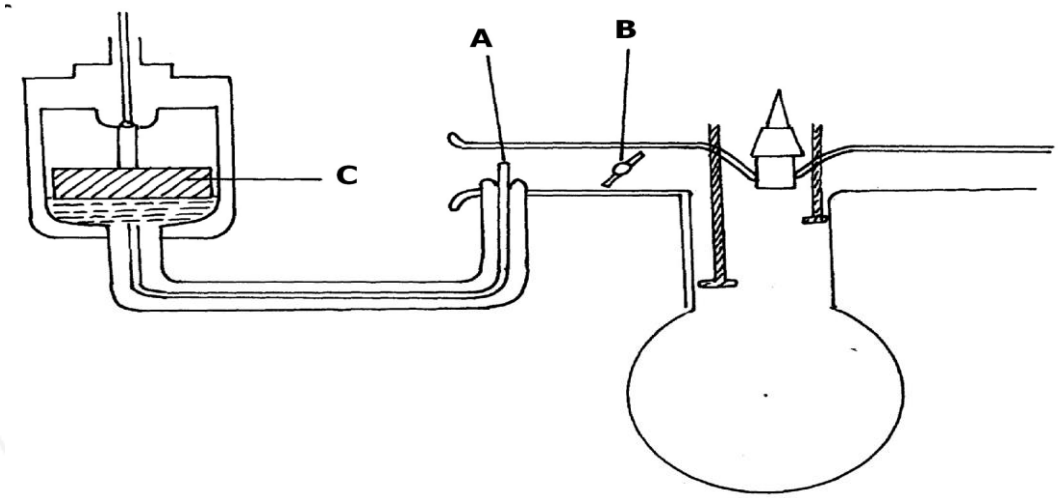
c) How long does it take the egg to stay at section labeled X? **(1mk)**

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20. Study the illustration of a carburetor below and answer the questions



a) Identify the parts labeled **(3mks)**

A……

B……

C……

b) State two functions of the carburetor above **(2mks)**

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c) Identify the type of fuel system above **(1mk)**

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SECTION C

Answer Any two questions in this section

21 a) Discuss East coast Fever disease under the following sub-headings

i) casual organism **(1mk)**

ii) Symptoms of attack **(5mks)**

iii) Control measures **(3mks)**

b) Apart from the disease in (20a) above name other two diseases transmitted by ticks **(2mks)**

c) Describe the life cycle of a three host tick **(8mks)**

22. **a)** Outline the factors to consider when planning for the construction of a poultry house. **(8mks)**

b) State desirable physical characteristics which should be considered when selecting a gilt for breeding **(8mks)**

c) State the factors influencing the choice of building materials **(4mks)**

23. a) State any four causes of overheating in a water cooled engine **(4mks)**

b) Describe the maintenance practices to be carried out in a cooling system of a tractor **(8mks)**

c) Explain the limitations of a tractor power in farm mechanization **(8mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

565/1

BUSINESS STUDIES

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. ***Write your name and index No. in the spaces provided above.***
2. ***Answer all the questions in the spaces provided***

FOR EXAMINER'S USE ONLY

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

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

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1. State the characteristics of human wants that suit the following statement **(4mks)**

Statement	**Characteristics**
a) wants are so many compared to resources b) Once satisfied some wants are left again and again c) satisfaction of a given want gives rise to another e) Everybody needs them in one form or another	

2. Yator and Korir have been trading partners.Yator decided to breakaway from the partnership and commence his own business. State four benefits that he will derive from the undertaking. **(4mks)**

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3. For each of the following accounts title, Indicate whether it is real, nominal or personal **(4mks)**

Account title	**Account type**
a) Waswa, a debtor b) Commission received c) Bank d)Purchases	

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4. Highlight four reasons why a country would like to know the structure of it's population **(4mks)**

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5. Identify four circumstances under which communication may be in effective **(4mks)**

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6. Mention five reasons why M-Pesa is becoming a very popular means of payment in Kenya **(4mks)**

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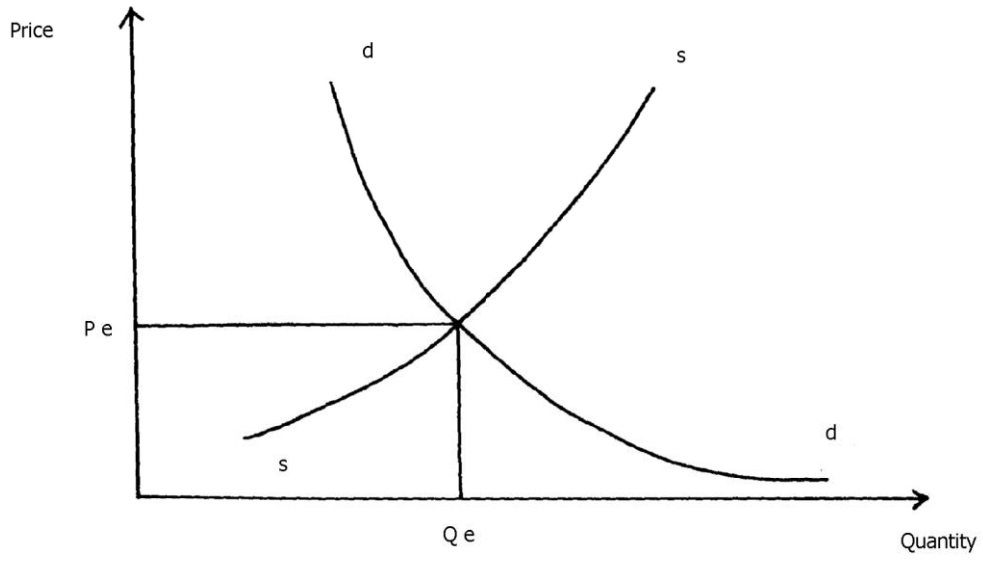
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7. The following diagram shows demands and supply carve of commodity.



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State four things that will happen if the supply of the commodity is increased while demand remains constant **(4mks)**

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8. Highlight four factors that contribute to demand pull inflation **(4mks)**

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9. Ukweli enterprises has a working capital of sh.200,000 and a current ratio of 3:1.Calculate

(i) Current assets **(2mks)**

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(ii) Current liabilities **(2mks)**

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10. Highlight four circumstances under which a manufacturer would prefer to sell his products directly to consumers instead of middlemen

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11. Highlight four uses of national income statistics to any country **(4mks)**

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12. Outline four measures which the government can take to encourage location of firms in an area **(4mks)**

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13. On 1.1.09 the cash book of Kimende traders Cash and Bank balances of sh.3,500 and sh.20,000 respectively. The following transactions took place in the month.

Jan 6, Cash sales sh.12,500

15, Receives a cheque of sh.45,000 from a debtor after deducting a 10% discount.

31, Paid a creditor sh.28,500 after deducting 5%discount

31, Banked all cash leaving a balance of sh.100 in the cash till

Prepare a three column cash book. **(4mks)**

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14. Kenya has been hard hit by H.e.p shortages in the recent past. State four alternative energy sources which should be promoted to meet the following demand **(4mks)**

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15. Outline four circumstances under which a country may engage in trade restriction **(4mks)**

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16. Outline four demerits of an indirect tax **(4mks)**

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17. The following assets and liabilities belong to Mumbi as at 31.21.08

Stock	sh. 90,000
Land	sh. 130,000
Creditors	sh. 65,000

a) Calculate capital **(1mk)**

b) In Jan, 2009 stock costing shy.30,000 was sold for sh.36,000 cash. Prepare a new balance sheet as at 31.1.09**.** **(3mks)**

18. Outline four circumstances under which a trader would use porters to transport goods. **(4mks)**

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19. For each of the following cases, identify the motives for holding money **(4mks)**

Case	Motives
a) To meet daily transport expenses	
b) To meet any unforeseen circumstances	
c) To take advantage of fall in share prices	
d) To pay for any food requirements	

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20. Identify four differences between a supermarket and hypermarket **(4mks)**

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21. Give four instances under which an insurance company may find it necessary to re-insure **(4mks)**

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22. Highlight four reasons why a development plan is important to a country **(4mks)**

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23. Tango limited wishes to promotes its products through advertising. Mention any four ethical issues it must consider before engaging in advertising **(4mks)**

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24. State four uses of business plan **(4mks)**

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25. Highlight four ways in which HIV and AIDS has adversely affected business operations **(4mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

565/2

BUSINESS STUDIES

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. *Answer any five questions*
2. *Write your answer in the answer sheet provided*
3. *All questions carry equal marks*

For examiner's use only

QUESTION	1	2	3	4	5	6
SCORE						

TOTAL	

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QUESTIONS

1. **(a)** Explain **five** ways by which business owner may ensure a condusive environment for this business **(10mks)**

(b) Explain **five** ways by which the central bank may reduce the amount of money in circulation in Kenya **(10mks)**

2. (a) Karemi owns a bakery in Kitale town. Explain **five** ways why he carried out division of labour in the process of baking bread in his factory. **(10mks)**

(b) Describe **five** measures by which the Kenyan government can take to improve on its balance of its payment position **(10mks)**

3. (a) Explain **four** characteristics of an underdeveloped economy. **(8mks)**

(b) The following trial balance belongs to Kipevu trades as at 30th June, 2004

KIPEVU TRADERS
Trial balance as at30th June 2004

	Dr (shs)	Cr (shs)
Stock on 30/6/03	40,000	
Capital		162,300
Purchase and sales	35,000	70,000
Drawings	6,000	
Furniture and fittings	20,000	
Motor vehicles	150,000	12,000
Debtor and creditors	8,000	4,800
Returns	2,000	800
Discount	900	
Wages and salaries	15,000	
Rent	3,500	
Insurance	2,100	
Commission	400	
Bank		3,000
cash	6,000	
	252,900	252,900

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REQUIRED

(i) Prepare a trading profit and loss account

(ii) Prepare a balance sheet as at 30th June 2004 **(12mks)**

4. (a) Jilo company wishes to have its goods distributed all over the country. Advise the company on **five** factors it may consider before choosing the distribution channels **(10mks)**

(b) Kamwaru private company recently joined the Nairobi stock Exchange. Describe **five** benefits of such a decision **(10mks)**

5. (a) Explain **five** factors that may have contributes to the slow pace in the achievement of the East Africa community **(10mks)**

(b) Wako Limited operators as a monopolist. Explain **five** factors that may have made the firm acquire monopoly power**.** **(10mks)**

6. (a) Discuss **five** circumstances under which an insurance contract may be terminated **(10mks)**

(b) Explain **five** problems that consumers may encounter as they try to satisfy their wants **(10mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

313/1

CHRISTIAN RELIGIOUS EDUCATION

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES.

1. *This paper consists of six questions.*

2. *Answer any five questions in the answer booklet provided.*

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

Question	1	2	3	4	5	6
Marks						

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QUESTIONS

1. a) State **Seven** literacy forms used in the writing of the Bible **(7mks)**

b) Name **Eight** Historical books in the Old Testament **(8mks)**

c) With reference to the Genesis stories of creation in Chapter 1 and 2, outline the attributes of God **(5mks)**

2. a) Outline **Six** Abraham's act of faith in God. **(7mks)**

b) Give **Four** differences between the Jewish circumcision practice and the traditional African circumcision**.** **(8mks)**

c) Explain ways in which the Israelites worshipped God in the wilderness **(5mks)**

3. a) State **Seven** reasons against Kingship in Israel **(6mks)**

b) Outline **Seven** achievements of Kin Solomon **(7mks)**

c) State lessons Christians can learn from the work of Prophet Elijah **(6mks)**

4. a) State the similarities between the traditional African prophets and the Old Testament Prophets **(7mks)**

b) Outline the characteristics of Amos' message of judgment to Christians **(6mks)**

c) Explain the teachings of prophet Amos about the day of the Lord. **(7mks)**

5. a) Explain the evils Jeremiah condemned in his Temple sermon **(8mks)**

b) Explain **Four** of Jeremiah symbolic acts related to Hope and restoration**.** **(8mks)**

c) What lessons do Christians learn from the experiences of Nehemiah **(5mks)**

6. a) Outline the importance of Kinship system in Traditional African Society **(7mks)**

b) State the responsibilities of the living to the ancestors in the African Traditional community. **(8mks)**

c) Explain **Five** roles of elders in the traditional African Communities **(5mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

313/2

CHRISTIAN RELIGIOUS EDUCATION

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES.

1. *This paper consists of six questions.*

2. *Answer any Five questions in the answer sheets provided.*

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

Question	1	2	3	4	5	6
Marks						

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Answer any Five questions in the answer sheets provided.

1. a) State the message of Angel Gabriel to Zachariah during the annunciation of the birth of John the Baptist. **(8mks)**

b) Give **Five** similarities between the annunciation of the birth of Jesus and John the Baptist **(5mks)**

c) How do Christians prepare for the coming of the messiah. **(7mks)**

2. a) State **Seven** teachings of John the Baptist about the messiah. **(7mks)**

b) Describe the call of the first disciple in Luke 5 : 1 – 11 **(7mks)**

c) Identity methods used by Jesus to spread the Good news. **(6mks)**

3. a) State the teaching of Jesus on eschatology. Luke 2 : 5 – 38. **(8mks)**

b) Outline **Five** evidence to the resurrection of Jesus. **(5mks)**

c) Explain the importance of the Lords Supper to the Christian today. **(7mks)**

4. a) Describe the unity of believers as a Bride. **(7mks)**

b) Identify the elements of the fruits of the Holy Spirit. **(6mks)**

c) Explain the causes of disunity in the church today. **(7mks)**

5. a) Explain Six Christian teaching on human sexuality. **(6mks)**

b) State reasons why Christians work. **(7mks)**

c) Explain cause of child labour in Kenya today. **(7mks)**

6. a) Explain Jesus teaching on wealth **(7mks)**

b) State Seven rights of employers. **(7mks)**

c) Outline ways in which leisure is misused in the society today. **(6mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

311/1

HISTORY AND GOVERNMENT

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

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

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

(c) *This paper consists of THREE sections A, B and C*

(d) *Answer ALL questions in section A (25 marks)*

(e) *Answer any THREE questions in section B (45 marks)*

(f) *Answer any TWO questions in section C (30 marks)*

FOR EXAMINER'S USE ONLY

SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	25	
B	45	
C	30	
TOTAL SCORE	100	

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SECTION A

Answer ALL questions in this section

1. Identify the **main** pre-historic site in western Kenya **(1mk)**

2. Identify **two** reasons for the migration of the Eastern Cushites into Kenya **(2mks)**

3. Give the **two** socio-economic sub divisions of the Maasai community in pre-colonial Kenya **(2mks)**

4. State **two** factors which facilitated the coming of the early visitors to the Kenyan coast **(2mks)**

5. Give **one** reason which led to the decline of Gedi during the 15th1 century **(1mk)**

6. State the **main** reason why Arabs were hated by the people of the interior parts of Kenya **(1mk)**

7. Give **two** provisions of the Anglo-German treaty of 1886 **(2mks)**

8. Give **two** reasons why Imperial British East African Company (IBEACO.) failed to administer the British East Africa Protectorate **(2mks)**

9. State **one** problem faced by the independent churches and schools during the colonial period **(1mk)**

10. Identify any **two** characteristics of early political movements formed in Kenya before 1939 **(2mks)**

11. **Who** represented Central Kenya in the legislative council in 1957 elections? **(1mk)**

12. State **two** roles played by women in the struggle for independence in Kenya **(2mks)**

13. Identify **one** way through which Islam was spread in Kenya **(1mk)**

14. Give **one** non military function of the Kenyan armed forces **(1mk)**

15. Identify the parliamentary committee that deals with the constitutional affairs in Kenya **(1mk)**

16. Name **two** ex-officio members of the Local Authorities **(2mks)**

17. State the **main** reason for post election violence in Kenya by the end of 2007 **(1mk)**

SECTION B (3OMARKS)

Attempt ANY THREE questions

18. a) Identify **five** impacts of the migration and settlement of the highland Bantus into Kenya **(5mks)**

b) Describe **the political organization** of the mijikenda in the pre-colonial Kenya **(10mks)**

19. a) Give **five** reasons why Seyyid Said transferred his capital from Muscat in Oman to Zanzibar in 1840 **(5mks)**

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b) Describe **five** ways through which Seyyid Said encouraged the development of Plantation Agriculture **(10mks)**

20. a) Give **five** reasons for British occupation of Kenya in the 19th century **(5mks)**

b) Explain **five** results of the Agikuyu mixed reaction to the British invasion of Kenya **(10mks)**

21. a) Outline the **pillars** of Nyayoism **(3mks)**

b) Describe **six** ways in which the spirit of Nyayoism has promoted development in Kenya **(l2mks)**

SECTION C (30MARKS)

Attempt ANY TWO questions

22. (a) Identify **five** ways in which education promotes national unity in Kenya **(5mks)**

(b) What is the **importance** of national integration to the people of Kenya? **(10mks)**

23. a) Give **three** characteristics of human rights **(3mks)**

(b) Explain **six** reasons why respect for human rights is important **(12mks)**

24 a) Identify **five** challenges the government faces in its efforts to raise the government revenue **(5mks)**

b) Explain **five** reasons why the government of Kenya normally prepares a National Budget **(l0mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

311/2

HISTORY AND GOVERNMENT

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO THE CANDIDATES

- *This paper consists of **three sections A, B,** and **C.***
- *Answer **all** questions in **section A**, **three** in **section B** and **two** in **section C**.*
- *All answers must be written in the answer booklet provided*

FOR EXAMINERS' USE ONLY

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

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SECTION A. (25 MARKS)

Answer ALL questions from this section.

1. Name the earliest form of art by early man. **(1 mk)**

2. State the contribution of iron-working to the rise of kingdoms in the pre-colonial period **(2mks)**

3. Name **two** fighting tactics adopted by Samori Toure during the Franco-Madinka war **(2mks)**

4. Identify the first Senegalese to participate in the French chamber of deputies during the pre-colonial period**.** **(1 mk)**

5. State **two** functions of the ancient city of Athens **(2mks)**

6. Define Pan-Africanism. **(lmk)**

7. State **one** way in which France was affected by the Franco-Prussian war of 1871 **(1mk)**

8. State **one** way through which the Europeans maintained peace among themselves during the partition of Africa. **(1 mk)**

9. Name **two** permanent members of the security council of the United Nations. **(2mks)**

10. Identify any **two** types of government. **(2mks)**

11. State **two** demands of the Austrian government towards Bosnia after the assassination of Franz Ferdinand. **(2mks)**

12. Mention **two** factors that make the camel a good pack animal. **(2mks)**

13. State the **main** objective of the Marshall plan after the second world war **(1mk)**

14. Name the body in-charge of election in the United States of America. **(1mk)**

15 State **two** pillars of the two pyramid policy as used in Southern Rhodesia during the colonial period. **(2mks)**

16. Apart from Nelson Mandela name any **two** South African nationalists who were jailed in the Rivonia Trial of 1964 **(2mks)**

SECTION B. (45 MARKS)

Answer ANY THREE questions from this section in the answer booklet provided.

17. a). State **FIVE** reasons behind the success of early Egyptian agriculture. **(5mks)**

b). Explain **FIVE** ways archeologists and paleontologists discover a historical site. **(10mks)**

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18. a). Mention **THREE** impact of industrial revolution on urbanization. **(3mks)**

b). Explain the social and economic factors that led to the decline of Tran-Saharan trade by the end of I 5th century **(12mks)**

19. a). Give **THREE** limitation of using cell phones **(3mks)**

b). Explain **SIX** social effects of Tele communication today. **(12mks)**

20. a). State **THREE** reasons that made the Lozi to collaborate with the British. **(3mks)**

b). Explain **SIX** reforms made by the German's administration after the Majimaji rebellion in the Southern Tanganyika. **(12mks)**

SECTION C (30 MARKS)

Answer ANY TWO questions from this section

21.a). Give **FIVE** factors that led to the growth of Asante kingdom during the pre-colonial period. **(5mks)**

b). Describe the social organization of the Asante during the pie-colonial period. **(10mks)**

22.a). State **THREE** reasons for the collapse of the league of nations **(3mks)**

b). Explain **SIX** political results of the Second World War. **(12mks)**

23.a). State **FIVE** importance of Federal government in the United States of America. **(5 mks)**

b). Explain **FIVE** political challenges facing the democratic republic of Congo since independence. **(l0mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

312/1

GEOGRAPHY

PAPER 1

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

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

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

c) *Answer question **6** and any other **two** questions from Section **B**.*

d) *Each question in section B must be answered in separate foolscaps.*

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

QUESTION	A	6	7	8	9	10	TOTAL
MARKS							

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SECTION A

*Answer **all** the questions in this section.*

1. Explain two relationships between geography and physics **(4mks)**

2. a) What is the difference between a meteor and meteorite **(2mks)**

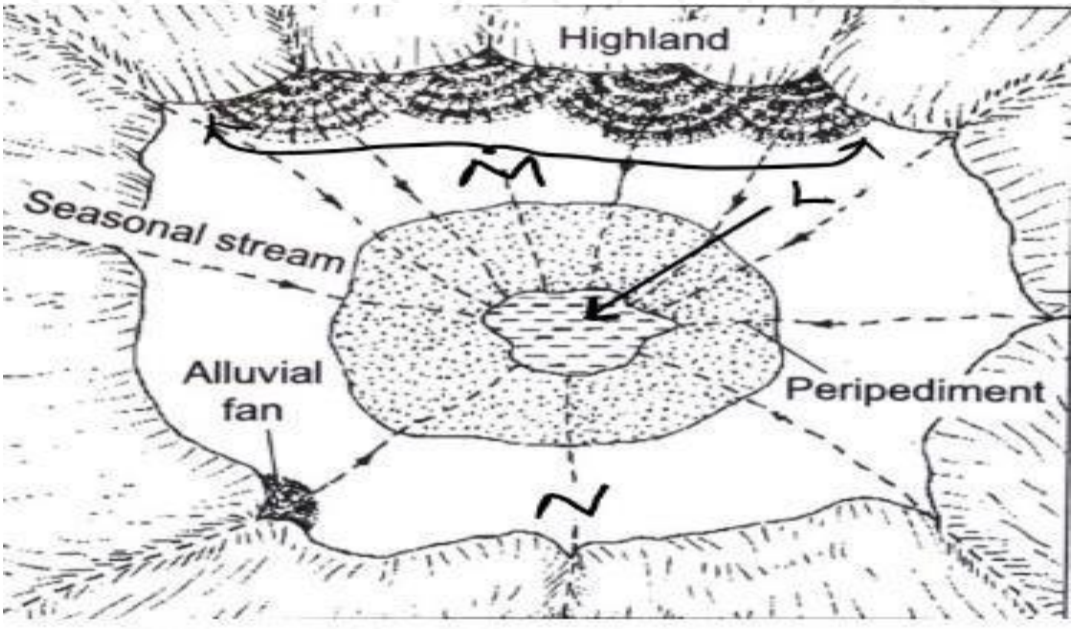
b) State four effects of the rotation of light on its own axis **(4mks)**

3.

a) What is atmospheric pressure **(2mks)**

b) Identify three factors that influence atmospheric pressure on the surface of the earth **(3mks)**

4. The diagram below shows some features found in a desert landscape. Use it to answer the questions that follow.



a) Identify the landscape shown in the diagram **(2mks)**

b) Name the features marked L M and N **(3mks)**

5.

a) Name two types of ice masses found on mountains in east Africa **(2mks)**

b) State three distinct characteristics of pyramidal peaks **(3mks)**

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SECTION B (75mks)

Any question 6 and ANY OTHER TWO questions in this section)

6. Study the map of **Kisumu East 1: 50,000 (Sheet 116/2)** provided to answer questions that follow.

(a) i) Convert the map scale into a statement scale. **(2 marks)**

ii) Identify two methods that have been used to represent relief on the map**.** **(2 marks)**

iii) Name two drainage features found in grid square 0384. **(2 marks)**

(b) Give the six figure grid reference of the Air Photo Principal point to the East of Obumba School. **(2 marks)**

(c) Describe the relief of the area covered by the map. **(5 marks)**

(d) i) Citing evidence, name three social services offered in the area covered by the map. **(6 marks)**

ii)Explain three factors that may have influenced the distribution of settlements in the area. **(6 marks)**

7a)

i) What is a rock? **(2mks)**

ii) State any three characteristics of minerals **(3mks)**

b) Explain three classification of mechanically formed sedimentary rocks and to each give an example. **(6mks)**

Ci) State two changes that occur in the sedimentary rocks when they are subjected to intense heat and pressure. **(3mks)**

ii) Outline any three differences between plutonic and volcanic rocks **(3mks)**

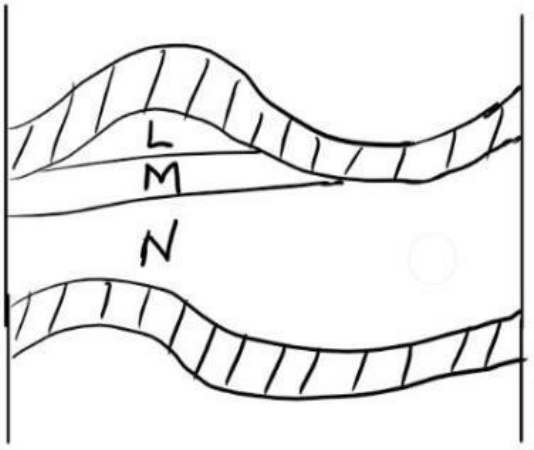
d) Name the type of rocks which results from metamorphism of;

i. Granite **(1mk)**

ii. Clay **(1mk)**

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e) The diagram below shows the occurrence of petroleum in the earth`s use it to answer the following questions.



i) Name the substances in the areas labelled L, M and N **(3mks)**

ii) Give three by products obtained when crude oil is refined **(3mks)**

8) a)

i) What are faults? **(2mks)**

ii) Identify any three major faulted areas of the world **(3mks)**

b)

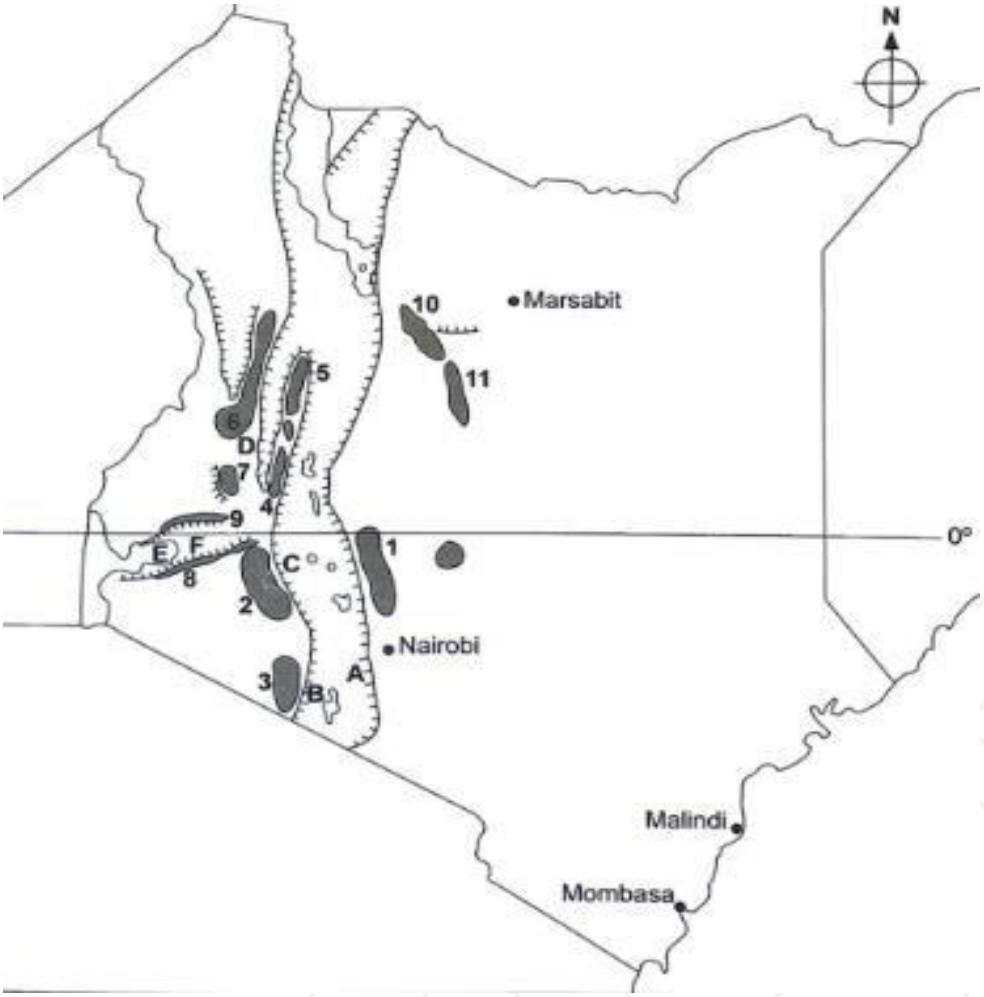
i) other than the reverse fault, name two other types of faults **(2mks)**

ii) With the aid of a well labelled diagram, describe how a reverse fault is formed. (5mks)

c)

i) Use the map of Kenya below to answer the following questions;

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Name the escarpments labelled A to D **(4mks)**

ii) Apart from the rift valley, identify any other 3 features resulting from faulting **(3mks)**

d) Explain three ways in which faulting can influence drainage **(6mks)**

9) a)

i) Distinguish between an ocean and a sea **(2mks)**

ii) State four sources of ocean salinity **(4mks)**

c) with well labelled diagrams, explain how the following wave erosional features are formed **(10mks)**

i) Cliff

ii) Geo

d) You are planning to carry out a field study on the depositional features along the coast of Kenya

i) Give three types of submerged highland coasts you **identified** **(3mks)**

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ii) State three objectives you would formulate for the study **(3mks)**

iii) Give three methods you would use to record the information collected **(3mks)**

10) The map below shows the location of some mountain ranges.



a) Name the ranges marked P, Q, R, S **(4mks)**

b)

i) Apart from fold mountains, name two other features resulting from folding **(2mks)**

ii) Explain how the following theories led to the formation of fold mountains

a. Contraction theory **(3mks)**

b. The convectional current theory **(3mks)**

c) Explain four **negative** effects of fold mountains on human activities **(8mks)**

d) Students are planning to carry out a field study on landforms

i) State three ways in which the students would prepare themselves for the study**.** **(3mks)**

ii) Name two follow up activities they conducted after the **study** **(2mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

312/2

GEOGRAPHY

PAPER 2

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

a) *This paper has **two** sections. **A** and **B.***

b) *Answer **ALL** the questions in section A. In section B answer question **6** and **any** other **two** questions.*

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

FOR EXAMINER'S USE ONLY

SECTION	QUESTION	MAXIMUM MARKS	CANDIDATE'S SCORE
A	1 – 5	25	
B	6-10	75	
Total Score		**100**	

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SECTION A (25 marks)

Answer ALL the question in this section

1. (a) Give **three** reasons why road transport is used more than air transport in East Africa. **(3marks)**

(b) In what **two** ways does Kenya benefit from air links with the rest of the world **(2marks)**

(a) Name **two** conditions that are necessary for the formation of petroleum **(2marks)**

(b) List **three** ways in which open-cast mining effects the environment **(3marks)**

2. (a) State **two** human activities that may lead to soil erosion **(2marks)**

(b) Give **three** reasons why it is necessary for Kenya to conserve her environment **(3marks)**

3. (a) State **three** conditions necessary for the growing of Cocoa. **(3marks)**

(b) Give **three** economic problems experienced in Cocoa farming in Ghana. **(3marks)**

4. (a) What is urbanization? **(1mark)**

(b) State **three** factors which have led to the development of Mombasa as a major sea port in the region **(3marks)**

SECTION B

Answer question 6 and ANY other TWO questions from this section

6. The table below shows horticultural crops production in Kenya in the Year 2021

Crop	Quantity in Tonnes
Flowers	52,500
Oranges	32,600
Tomatoes Carrots	30,300
	25,400

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(a) **(i)** Draw a divided rectangle 15cm long to represent horticultural crop production in Kenya in the year 2021 using the data above. **(8marks)**

(ii) Calculate the range of the above data. **(2marks)**

(iii) What is the percentage of the horticultural crop with the highest tonnage**?** **(3marks)**

(b) **(i)** State **three** advantages of using divided rectangles to represent geographical data **(3mks)**

(ii) State **two** disadvantages of using a divided rectangle **(2marks)**

(c) **(i)** Explain **four** problems facing horticultural farming in Kenya **(8marks)**

7. **(a)** Name **four** sources of electric power other than water **(4marks)**

(b) List **five** factors that favour the location of a Hydro-electric power plant. **(5marks)**

(c) Explain **five** ways in which Kenya has benefited from the development of the seven forks hydroelectric power scheme. **(10marks)**

(d) Explain **three** problems Kenya experiences as a result of over-dependence on petroleum **(6mks)**

8. **(a)** (i) What is Industrialization? **(1mark)**

(ii) Name a town in Kenya where each of the following Industries are located

- Oil refining **(1mark)**
- Paper manufacturing **(1mark)**
- Motor vehicle assembly **(1mark)**

(b) Explain **five** factors which influence the location of iron and steel industry in the Ruhr region of Germany **(10marks)**

(c) **(i)** Other than iron and steel, name **three** industries located in the Ruhr region of Germany. **(3 marks)**

(ii) Explain **four** ways in which Kenya has benefited by assembling Motor vehicle locally **(8marks)**

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9. (a) (i) Define International trade **(2marks)**

(ii) Name **three** major imports from Europe to Kenya **(3marks)**

(b) State **four** factors that influence external trade in Kenya. **(4marks)**

(c) Explain **four** ways through which Kenya will benefit from the renewed East Africa Co-operation. **(8marks)**

(d) Explain **four** negative effects of international trade. **(8marks)**

10.(a) Explain what is meant by overpopulation **(2 marks)**

(b) How does Kenya's population differ from that of Sweden **(4 marks)**

(c) Explain **four** factors that influence population distribution in Kenya **(8 marks)**

(d) (i) Apart from rural-rural migration, list **three** other types of migration in Kenya **(3marks)**

(ii) Explain **four** causes of rural-rural migration in Kenya **(8 marks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

101/1

ENGLISH

PAPER 1(Functional Skills)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

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

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM MARKS	CANDIDATE'S SCORE
1	20	
2	10	
3	30	
	Total Score	

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1. Functional skills (20mks)

The Independent Electoral and Boundaries commission (IEBC) has advertised for recruitment of qualified people who would like to become Registration clerks during the 2022 Repeat Elections and by-elections.You did your Kenya Certificate of Secondary Education (K.C.S.E) in 2022 and you are interested in the vacancies.

(a) Write an application letter in response to the above advertisement. **(10mks)**

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(b) Attach your comprehensive and appropriate curriculum vitae (C.V) to accompany your application letter for the recruitment **(10Mks)**

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2. Close Test (10mks)

Read the passage below and fill in the blanks with the most appropriate word.

E- learning represents a wide range of _____(1) activities and technologies,including distance education _____(2) training, web-based training, internet –based _____(3) course-ware delivery and on-line learning and _____(4). It represents the total integration of _____(5), instructor - led,and real time training in human_____(6) and environment. Knowledge will no longer need to be _____(7)from the shelf of the training _____(8),brushed off the folded dog –ears_____(9)

and reviewed E-learning is immediate and provides up-to – date_____(10)

3. ORAL SKILLS (30 MKS)

A In the following sentences, the speaker made errors. Rewrite the sentences correctly replacing the underlined words and expressions with appropriate ones to communicate the intended meaning. **(5mks)**

(i) I am sorry to say , Sir Anthony, that my affluence over my niece is very small.

……

(ii) An usher will sew you to your sheet.

……

(iii) You have hissed all my mystery lessons.

……

(iv) He is the very pineapple of eloquence.

……

(v) She loves to pedal gently round on a well – boiled icicle

……

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B Supply homophones to the following words. **(5mks)**

(i) Maize
(ii) Symbol
(iii) Wretch
(iv) Fowl
(v) But
(vi) Isle
(vii) Ail
(viii) Beer
(ix) Medal
(x) Prophet

C Read the poem below and answer the question that follow **(6mks)**

ANDRE

I had a dream last night , I dreamed
I had to pick a mother out.
I had to choose a father too.
At first, I wondered what to do,
There were so many there, it seemed,
Short and tall and thin and stout.
But just before I sprang awake,
I knew what parents I would take.

And this surprised and made me glad:
They were the ones I always had!

Describe the rhyme scheme of the above poem. **(2mks)**

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What makes the above poem easy to remember? **(2mks)**

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……

Which words will you stress in line 7, and why? **(2mks)**

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D Mary applied for a secretarial job advertised in one of the local daily newspapers and was short listed for an interview. How is she expected to behave during the interview? **(6mks)**

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E The underlined words in the following sentences are spoken with emphasis. Explain the difference in meaning brought about by this. **(3mks)**

(i) Naomi Wanjiku won the <u>London</u> marathon.

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……

(ii) Naomi Wanjiku won the London <u>marathon</u>.

……

……

(iii) Naomi Wanjiku <u>won</u> the London marathon

……

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F Underline the silent letters in the following words **(2mks)**

(i) Mortgage

(ii) Paradigm

(iii) Phlegm

(iv) Comb

G Below is a telephone conversation between friends. Fill in the missing parts **(3mks)**

Lucy: Hello, may I talk to Judy please?

Judy**:**……

……

Lucy: Oh, how are you? How have been?

Judy**:**……

……

Lucy: I am very sorry ,when was the accident?

Judy**:**……

……

Lucy: Good to hear that your injuries were not too serious. You will pull through.

Judy: Thank you.

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

101/2

ENGLISH

PAPER 2

(Comprehension, Literary appreciation and Grammar)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES:-

a) Write your **Name, Admission number** and **Class** in the spaces provided above.
b) **Sign** and write the **date** of examination in the spaces provided above.
c) Answer **all** questions in this question paper.

FOR EXAMINER'S USE ONLY:

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	**20**	
2	**10**	
3	**30**	
TOTAL SCORE	**60**	

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QUESTION 1: COMPREHENSION. **(20MKS)**

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

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

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

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

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

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about a year — but now it turns out that Europe's governments allocated far too many credits, which will likely hinder the program's effectiveness for years.

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

(Adapted from Times, June 5, 2006)

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

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

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

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

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

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

(i) fob off
(ii) incentive
(iii) calamity
(iv) go-green

2. Read the following excerpt and answer the questions that follow

"Mother thinks that's big-big enough. Are you ready for tomorrow?"
"As ready as I ever will be, I guess, mother." He went and sat beside her."And do you still think the summit will adopt Way Omega?"
"Only twelve hours to go before we find out."
"Sorry. Is it just me or has it actually got colder over the past two days? You don't sound soupbeat today as you did two days ago."
"Only twelve hours. We can wait."
"By the way, guess who I ran into downstairs? Someone by the name of Longway. I wastracking down a man they call their guide and thought this fellow might be him. Do youknow him?"
Dr Abiola did not answer.
"Well, do you know Mr Longway or not?"

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"Yes, Ms McKenzie, I do. You might as well knqw this now: I am their guide."

What

"Promise you will keep that to yourself, okay?""I promise."

"Apart from Mr Longway, whom you know, there are four other people I'm working with onthe periphery. Instead of adopting Way Omega, this group wants the summit to adopt Path Alpha.

"It wants the summit to adopt what instead?"

"Path Alpha - it's a rival to Way Omega. The trouble there is that Path Alpha isn't even on thesummit's agenda."

"So, Mr Longway and company want me to help them put it there."

"Wait a minute. Only two days ago you said you were to help heads of state adopt Way Omega. Now you ay other people want you to help them adopt Path Alpha, a rival to WayOmega. What's going on here?"

"Here is what's going on. I came to advocate for Way Omega, and I will."In doing that I'll draw on other alternatives, including Path Alpha."

"You will? Then remind me: /AVfiy did I promise to keep your identity to myself?" "Because I'm hiding from Way Omega my links to Path Alpha. Look. Some heads of state —not all, but some — believe I should be focusing exclusively on Way Omega. If they heard about my links to Path Alpha, they would demand my scalp.

QUESTIONS

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

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(b) Identify and illustrate two-character traits of Abiola and one character trait of FionaMcKenzie in the excerpt. **(6 marks)**

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(c) Discuss two themes evident in the excerpt. **(4 marks)**

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(d) **(i)** Instead of adopting Way Omega, the group wants the summit to adopt PathAlpha.***(Replace "instead" with a complex preposition)***. **(1 mark)**

(ii) Wait a minute. ***(Add a suitable question tag)***

iii) So, Mr Longway and company want me to help them put it there.***(Report)***

(e) Pick and illustrate two stylistic devices used by the author in the excerpt. **(4 marks)**

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(f) Explain the meaning of the following words and phrases used in the excerpt. **(4marks)**

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QUESTION 3: LITERARY APPRECIATED. **(20MKS)**

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

No coffin, no grave by fared Angira

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

Stuttering rifles put up
The gun salute of the day
That was a state burial anyway
The car knelt
The red plate wept, wrapped itself in blood its
Master's

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

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

Well, his diary, submarine of the Third World
War
Showed he wished

To be buried in a gold-laden coffin
Like a VIP
under the jacaranda tree beside his palace

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A shelter for his grave
And much beer for the funeral party

Anyway one noisy pupil suggested we bring
Tractors and plough the land.

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

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

……
……
……
……

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

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……

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

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……
……

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

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……

……

(e)Explain the meaning of the following lines:

(i) who could signal yellow **(4 marks)**

……

……

(ii) submarine of the Third World War

……

……

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

……

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……

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

i. Anchored **(1mk)**

ii. Brood **(1mk)**

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

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

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

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

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

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

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

……

……

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

……

……

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

……

……

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

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

……

……

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

……

……

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

……

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

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

……

……

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

……

……

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

……

……

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

(1) They aren't serious.

(2) He bought a new house last month.

(3) They won't shut up.

(4) Let us go.

(5) He hasn't been here before.

(6) You live in an apartment.

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

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)

INSTRUCTIONS TO CANDIDATES

- ***a)*** *. write your name, index number and the name of your school in the spaces provided*
- ***b)*** *. Answer any 3 questions*
- ***c)*** *. Question one and two are compulsory*
- ***d)*** *. Choose one question in question 3*
- ***e)*** *. Each essay must not exceed 450 words*

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	20	
3	20	
TOTAL SCORE	60	

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Answer ***three*** *questions only*

1. Imaginative Composition (Compulsory) **(20 marks)**

Either

(a) Write a story ending

……it was the most traumatic day I have ever had.

(b) Write a composition explaining how the emergence of religious cults in Kenya can be fought by both the government and the society.

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

John Lara, *The Samaritan*

The term "dirty game" has long been applied to politics. Provide evidence to support the assertion made, citing **The Samaritan by John Lara.**

3. The Optional Set Texts **(20 marks)**

The short story

Godwin siundu, *A Silent Song and Other Stories*

Life for people living with disabilities may be made better if they are accorded all the support they may need. Referring to the short story "A Silent Song" by Leonard Kibera, write an essay to show how the lives of people living with disabilities can be made worthwhile.

Or

(a) The Play

Adipo Sidang, *Parliament of Owl*

"*Life is full of ironies."* Using illustrations from ***Parliament of Owls,*** by **Adipo Sidang**, write an essay to justify this statement.

Or

(b) The novel

Kazuo Ishiguro, *An Artist of the Floating World*

War causes untold suffering to the people. Using illustrations from the novel 'An Artist of the Floating World' by Kazuo Ishiguro, discuss this statement.

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

102/1

KISWAHILI

KARATASI YA 1 (INSHA)

MUDA: SAA 1¾

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

Maagizo

(a) *Andika insha* ***mbili****.*

(b) *Insha ya kwanza ni ya* ***lazima*** *kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia*

(c) *Kila insha isipungue maneno* ***400***

(d) *Kila insha ni alama 20*

(e) *Kila insha* ***lazima*** *iandikwe kwa lugha ya Kiswahili*

Kwa matumizi ya mtahini pekee

Swali	Upeo	Alama
1	20	
	20	
Jumla	40	

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1. Wewe umemaliza chuo kikuu hivi majuzi. Huku ukiambatanisha wasifukazi, andika barua ya kuomba kazi katika kampuni ya maji ya Nzoia kama mhasibu.

2. Technolojia mpya ya habari na mawasiliano(TECHNOHAMA) imeleta manufaa mengi nchini.
Jadili.

3. Mchuma janga hula na wa kwao.

4. Andika insha itakayomalizikia kwa maneno haya :

..kila aliyesikia habari hizi shuleni mwetu alifurahi na kushangilia kwa vifijo na nderemo kwani ushindi huo ulikuwa umengojewa kwa muda wa miaka mingi.

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

102/2

KISWAHILI

KARATASI YA 2 (LUGHA)

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

Karatasi ya 2

(Ufahamu, Ufupisho, Matumizi ya lugha na Isimu jamii)

MUDA: SAA 2 ½

Maagizo

1. *Jibu maswali yote*
2. *Majibu yako yaandikwe katika nafasi zilizoachwa katika kijitabu hiki cha maswali.*
3.

Swali	**Alama**	**Tuzo**
1	15	
2	15	
3	40	
4	10	
Jumla	80	

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SEHEMU YA A :UFAHAMU (Alama 15)

Soma kifungu hiki kasha ujibu maswali.

Binadamu heshi kuwa na falsafa zinazojiri akilini mwake. Amejichanjia kijisayari chake na kufikirika mfano wa Mirihi katika falaki yake ya maisha. Ni sayari ndogo ambayo imejitenga na sayari nyingine kama vile kausi.

Mirihi kuna viumbe mauluti vyenye mitindo ya kustaajabisha. Tofauti na Kausi ambayo ambako mabinti huwa na urembo wa kiasilia, wanamirihi ni "warembo" mithili ya walioanguliwa ja vifaranga. Viganja vyao na nyuso zao huwa zimekandwa kwa mafuta ya zebaki zikawa nyororo japo wengi huwa mithili ya suriama. Wasalaminiapo na Wanakausi mikwaruzo yao huwachipua ngozi kwa kazi ya sulubu waifanyayo shambani. Fauka ya uchotara huo, wamefungasha kiasi huku wamejisetiri kwa vijisuruali na vijisketi ambavyo vimewabana kana kwamba vimeundwa kwa vitambaa vya mikononi na kutafuta misaada kutoka kwa majirani kuvivua na kuvivaa

Wanakausi waliovalia nguo zinazowafika kwenye visigino, huchushwa mno na hivi vijiguo vinavyowasetiri hadi kwenye sisemi vilegesambwa, ukipenda magotini, bali kwenye mapaja. Ni kweli kwamba waso haya wana mji wao. Wanapondatia hasa kwenye hafla za maziko au arusi katika sayari ya Kausi Wanakausi hujibana pembeni kujionea malimweng ulimwenguni. Minong'onezo ndio itajaa hewani " ni yakini Pemba ndiko kwenye nguo na wenda uchi wapo"

Katika hafla hizo, wale mabinti wazuri wa Mirihi hubeba **vibogoshi** ambamo mara kwa mara hutoa vidubwasha vidogo vidogo na kuendelea kujipodoa huku shughuli zinapoendelea. Pengine huenda umesahau kuwa katika mipango na makadirio ya matumizi ya hafla hiyo marejeleo yanayokaririwa huwa

"…wajua watu wa Mirihi hawapendi….."

Mabinti wazuri wa Mirihi kila mmoja huwa amejibebea mwavuli na kujizuia mvua au jua huku amekumbatia maji ya chupa ya kutoka kwenye ya Mirihi.

Wanakausi walalahoi huwa wakikata kiu yao rahisi kutoka kwenye mapipa yaliyojazwa maji au kwenye mifereji waliyobahatika kuwekewa na wizara ya maji, kwa kutumia viganja vya mikono. Mabwana wa Mirihi hawana haja na miavuli, wao huwa watu wenye zao. Huvalia kofia nene zinazoonekana kama somberero. Watembeapo huning'iniza funguo za magari ya kifahari katika mkono wa kushoto na simu ya rununu katika mkono wa kulia

Hapa na pale watakuwa wakiwasiliana kwa simu zao na pia kupiga gumzo na maghulumu wa Kausi ambao kwa kawaida watakuwa wakiwarai Wanamirihi,"**Utaniacha hivyo"**

Baada ya hafla, mlo ambao huwa Wanamirihi hupakukuliwa huku Mabwanamirihi wakidakia wasichelewe, mabintimirihi wakinyofoa kwa mikono au kung'ofoa kwa midomo yao myekundu na Wanakuasi wakichungulia kwa mbali wakisubiri nafasi yao itimie.

Ghafla mawingu yataanza kutanda upande wa mashariki na mambo sasa yatachukua mkondo mpya. Wanamirihi mchakamchaka huengaenga, mbio kwenye magari yao. Lakini kuna wale ambao hawana magari ya kukimbilia. Kawaida yao huwaita Wanamirihi wenzao faraghani "Baba fulani umejaza?"

Wengine hubaki kusema, "Uenda basi letu likaniacha, tutaonana nikija wikendi."

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Hali iwapo mwanana, Wanakausi watakuwa sasa ndio wakati wa kujitambulisha na wengine kuyajaza magari ya Wanamirihi ya kifahari kwa maembe, avokado, ndizi na makochokocho ya vitu vya shambani. Baada ya miezi kadha, Wanakausi wachache watawazuru Wanamirihi kuwapa shukurani katika kijisayari chao cha Mirihi.

Hapo sasa watavumbua jibu la kitendawili watakapokumbana na Bintimirihi amebeba kijikaratasi cha nailoni kimejazwa embe dondo moja, sukuma wiki, bila kusahau kisehemu cha nyama alichopimiwa cha shilingi kumi. Kwa kuwa atapata malazi kwake atamshauri, "…..pengine unionyeshe bucheri tununue nyama…tupitie dukani tununue……" hapo kwake Malaika atakuwa ameshuka kutoka Kausi hadi Mirihi.

Lakini wengine ni wale ambao pindi tu utakapowasalimia watakukwa na "zamu ya usiku siku hiyo." Wanaovalia somerero watamlaki Mwanakausi kwa mlahaka wa kifalme ili akastaajabie vitu kama **Majirafu,** mazulia, makochi, taja nitaje.

Yule wa awali atalala usiku huo usingizi mnono usio na bugudha na kwenye kochi huku akihimiria kurauka mapema asikutwe na waliolala nyuma ya pazia. Hisia za Mwanakausi zitamrudisha katika tamthilia ya Wole Soyinka "Masaibu ya ndugu Jero kuwa "vidole vyote havikuumbwa sawa." Mirihi ni sayari iliyosheheni watu na viatu, kumbe Kausi ni shamba la paukwa na pakawa la Edeni. Tafakari haya.

Maswali

1. Andika anwani mwafaka ya taarifa hii **(Alama 2)**

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2. Eleza tofauti kati ya wanawake wa Mirihi na wale wa Kausi. **(Alama 2)**

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3. "Mabwana wa Mirihi ni watu wenye zao". Thibitisha. **(Alama 3)**

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4. Ni dhahiri kuwa Mirihi ni sayari yenye watu na viatu. Nini maana ya viatu. Je, kuna viatu hapa? Thibitisha. **(Alama 3)**

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5. Mwandishi anamaanisha nini anaposema "Utaniacha hivyo?" **(Alama 2)**

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6. Eleza maana ya: **(Alama 2)**

i) Jirafu

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ii) Vibogoshi

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SEHEMU YA B:UFUPISHO **(Alama 15)**

Katiba mpya imeipa lugha ya Kiswahili hadhi nyingine kuifanya kuwa lugha rasmi kando na kuwa ni lugha ya taifa. Mabadilliko haya muhimu yana changamoto kadhaa:

Kwanza kabisa lugha ya Kiswahili sasa itashindania nafasi sawa na ile ya kiingereza katika shughuli za kikazi. Swala hapa linahusu majukumu ambayo lugha hizi zitatekeleza. Je, lugha hizi zitatumika mtawalia katika shughuli za kikazi au zitatengewa majukumu maalum?

Lugha ya kswahili itachukua nafasi ipi? Kiingereza kitaachiwa nani tukizingatia kuwa kwa muda mrefu lugha ya kiingereza ndio imekuwa lugha tawala katika mazingira haya? Je, wananchi wataweza kufanya maombi ya kazi kwa lugha ya Kiswahili kando na kuendesha mawasiliano ya

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kiofisi kwa lugha hii. Kwa kifupi ili kusitokee mgongano wa matumizi ya lugha hizi mbili ni muhimu sana kwa watungasera kueleza kinagaubaga mawanda ya matumizi ya lugha hizi mbili katiaka mazingira ya kikazi.

Changamoto jingine na muhimu ni kiwango cha maandalizi ya wananchi katika kuyapokea mabadiliko haya. Kwanza, wananchi wanafaa wafahamishwe kuhusu haki yao ya kutumia lugha hii katika mazingira ya kazi. Si ajabu kuwa wengi wao hawana habari kuhusu mabadiliko haya ya kisera. Watumishi wa umma nao wanastahili kupewa mafunzo maalum kuhusu mbinu za mawasiliano katika kiswahilli waendeshe shughuli zao vizuri.

Kwa upande mwingine, vyuo vikuu pamoja na taasisi nyingine za mafunzo zinastahili kutoa kkozi ya lazima katika lugha ya Kiswahili kwa wanafunzi wanaojiunga nazo ili kuwaandaa kwa mahitaji haya mapya ya kikatiba. Kadhalika, serikali inastahili kuwandaa wataalamu zaidi wa lugha ya Kiswahili ambao watahuusika katika kuwafunza wanaohusika na utekelazaji sera.

Kuna haja pia ya wataalamu wa lugha kuandika vitabu zaidi kwa lugha ya Kiswahili ambavyo vitatoa mafunzo kuhusu mbinu mbalimbali za mawasiliano. Shughuli hii iambatane na ile ya kutafsiri vitabu vilivyoandikwa kwa lugha zingine kwa ile ya Kiswahili.

Kwa muda mrefu sasa, kumekuwa na tatizo la mtazamo hasa miongoni mwa wananchi kwa lugha ya Kiswahili. Baadhi ya wananchi wamekuwa na sababu zao za kutoitumia lugha hii wakishikilia kuwa lugha yenyewe ni ngumu.

Aidha, wananchi wengi wamekuwa na uzoefu wa kuzungumza lugha ya kiingereza au lugha nyingine za kigeni huku wakitoa nafasi finyu kwa lugha ya Kiswahili. Serikali inastahili kutafuta njia ya kuwahimiza wananchi wote kuionea fahari lugha ya kiswahiili, waipende na kuielewa vizuri.

Ni muhimu kufanywe kila juhudi kuhakikisha kuwa wananchi wanatumia Kiswahili sanifu ili wasije wakakivuruga kwa kukiendeleza visivyo au kwa kukiharibu kwa kijilugha cha sheng au kw alugha za kienyeji.

Vile vile ni muhimu wananchi watambue kuwa nchi yetu ya Kenya ndiyo kitovu cha lugha hii na hivyo basi wafanye kila juhudi kuitumia ipasavyo ili tusionekane kuwa watumwa katika lugha yetu asili. Tunahitaji viongozi vielezo nchini ambao wanazungumza Kiswahili sanifu kwa madoido na ufasha sio tu katika ulingo wa kisiasa bali pia katika nyanja nyingine za maisha.

Kwa hivyo, viongozi wetu wajiepushe na matumizi ya Kiswahili chapwa ili wananchi wahimizike kuzungumza Kiswahili kwa ufasaha. Ingekuwa hata bora ikiwa wangepewa kipaumbele katika kupokea mafunzo kabambe katika lugha hii. Pengine tungejifunza mengi kutoka nchi jirani ya Tanzania ambayo kwa kiasi kikubwa ilifaulu kurasmisha Kiswahili na kuleta umoja wa kitaifa.

Maswali

a) Eleza changamoto zinazoikumba lugha ya Kiswahili(Maneno 80) **(Alama8)**

Maandalizi

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Jibu

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b) Fupisha aya ya mwisho (Maneno 25)

Maandalizi

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Jibu

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SEHEMU YA C: MATUMIZI YA LUGHA **(Alama 40)**

a) Taja sauti mbili ambazo ni vipasuo vya mdomo **(Alama 2)**

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b) Tunga sentensi ya neno moja yenye sehemu zifuatazo **(Alama 3)**

i) Ngeli ii) Wakati

iii) Kirejeshi iv) Mzizi

v) Kauli vi) Kiishio

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c) Taja ngeli za majina yafuatayo **(Alama 2)**

i) Uga

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ii) Kiroboto

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d) Tunga sentensi ukitumia viwakilishi vifuatvyo: (Alama 2)

i) Kiwakilishi nafsi kiambata

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ii) Kiwakilishi ngeli

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e) Andika kwa kinyume **(Alama 1)**

Kijakazi aliangika vyombo vya tajiri wake.

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f) Unda nomino dhahania kutokana na vitenzi hivi: **(Alama 2)**

i) Cheza ii) Pika

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g) Tunga sentensi sahihi kukbainisha tofauti kati ya maneno haya: **(Alama 2)**

i) Jua ii) Juha

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h) Andika katika ukubwa. **(Alama 1)**

Sungura ambaye alikatwa mkia aliingia nyumbani.

……

i) Tambua shamirisho na chagizo katika sentensi hii. **(Alama 2)**

Alipiga teke mpira ukaruka juu juu zaidi.

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j) Changanua sentensi ifuatayo kwa njia ya matawi. **(Alama 4)**

Mto ule uliofurika jana umezoa taka nyingi.

k) Kanusha. **(Alama 1)**

Jembe hilo ndilo nitumialo kulima shamba langu.

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l) Tambua aina za vishazi katika sentensi ifuatayo: **(Alama 2)**

Mtoto mwenye bidii hufanya vyema.

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m) Nyambua vitenzi vifuatavyo katika kauli zilizo kwenye mabano. **(Alama 2)**

i) Tua (Tendama)

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ii) Fumba (Tendata)

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n) Eleza matumizi mawili ya ritifaa na utolee mifano kwa kila moja. **(Alama 2)**

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o) Andika katika usemi wa taarifa. **(Alama 2)**

"Nitakuja kesho asubuhi. Inshallah!" Bakari alisema.

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p) Eleza maana mbili inayotokana na sentensi hii. **(Alama 2)**

Aliletewa ng'ombe na mtoto wake.

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q) Yakinisha. **(Alama 2)**

Asiposhiba hatafunguliwa.

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r) Tunga sentensi ukitumia vivumishi vifuatavyo: **(Alama 2)**

i) ‘a’ unganifu

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ii) Amba-rejeshi

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s) Sahihisha sentensi hii kwa njia tatu. (Alama 3)

Hapa ndipo alikofia.

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t) Iweke sentensi ifuatayo katika wakati uliopita hali timilifu. **(Alama 1)**

Aliomba msamaha kwa kuchelewa.

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SEHEMU YA D: ISIMU JAMII (Alama 10)

a) Eleza sababu nne zinazowafanya watu kubadili msimbo. **(Alama 4)**

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b) Mazungumzo ya mahakamani husheheni sifa zipi? **(Alama 6)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

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KISWAHILI

KARATASI YA 3 (FASIHI)

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO

a) *Andika jina lako na nambari ya utahini katika nafasi ulizoachiwa hapo juu.*
b) *Jibu maswali manne pekee.*
c) *Swali la kwanza ni la lazima.*
d) *Maswali hayo mengine matatu yachaguliwe kutoka sehemu zilizobaki ; yaani,* ***Tamthilia, Hadithi Fupi, Riwaya na Ushairi.***
e) *Usijibu maswali mawili kutoka sehemu moja.*
f) *Majibu yote lazima yaandikwe kwa lugha ya Kiswahili*

KWA MATUMIZI YA MTAHINI PEKEE.

Swali	Upeo	Alama
1	20	
	20	
	20	
	20	
	Jumla	

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SEHEMU YA A: TAMTHILIA

T.M Arege: Bembea ya Maisha

1.LAZIMA

(a) Tumbo lenyewe limeshafanya mazoea. Ardhi hiyo ya kulimwa na kuzalisha chakula iko wapi? Hata ingekuwepo mvua yenyewe imefanya ugeni. Imeadimika afadhali wali wa daku. Sasa ni wakati wa kujifunga masombo…

i) Eleza muktadha wa dondoo hili**.** **(alama 4)**

ii) Fafanua sifa za msemaji wa maneno haya. **(alama 2)**

iii) Eleza vipengele **vinne** vya kimtindo vinavyobainika katika dondoo hili. **(alama 4)**

(b) Eleza jinsi maudhui ya **uwajibikaji** yanavyojitokeza katika tamthilia ya Bembea ya Maisha. **(alama 10)**

SEHEMU B: RIWAYA Clara Momanyi: Nguu za Jadi

Jibu swali la 2 au la 3

2 *"Ile ilikuwa kesi ya mwisho aliyokata. -Alinyanganywa leseni ya uanasheria, akashushwa madaraka."*

a. Eleza muktadha wa dondoo hili_ **(al.4)**

b. Tambua maudhui yanayojitokeza dondoo hili_ **a1.8)**

c. Fafanua umuhimu wa mandhari ya dondoo hili_ **(al.8)**

3. Eleza jinsi Mrima amejenga maudhui riwayani. **a1.20)**

SEHEMU YA C: USHAIRI

Jibu swali la 4 au la 5

4. Soma shairi lifuatalo kisha ujibu maswali.

Mtu ni afiya yake, ndio uzima wa mtu,
Mtu ni kuwa na chake, hakuwi ela kwa kitu,
Mtu ni bahati yake, kupendekeza kwa watu,
Mtu si fakhari kwake, kuitwa nyama ya mwitu.

Mtu ni ulimi wake, kunena vyema na watu,
Mtu ni kijungu chake, kuweka mawe matatu,
Mtu ni mwenda kwa lake, mtoshwa na kila kitu,
Mtu si uzuri kwake, kuitwa nyama ya mwitu.

Mtu ni mwenye nadhari, apimaye kila kitu,
Mtu ni moyo hariri, mwenye imani na watu,
Mtu ni alo na ari, shika sana mwana kwetu,
Mtu si yake fakhari, kuitwa nyama ya mwitu.

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Mtu ni mkono wazi, mtasada kuna watu,
Mtu ni mwenye maozi, ku oneya kila kitu,
Mtu ni alo tulizi, asopenda utukutu,
Mtu si jambo pendezi, kuitwa nyama ya mwitu.

Mtu ni mwenye ahadi, ndio u'ngwana na utu,
Mtu ni alo baridi, mbe mbelezi wa watu,
Mtu ni moyo asadi, aso onewa na mtu,
Mtu si yake ifadi, kuitwa nyama ya mwitu.
Mtu niliyo yanena, pima sana ewe mtu,
Mtu si kujatukana, kukirihi nyoyo watu,
Mtu nakupa maana, wende nyendo za kiutu,
Mtu si uzuri sana, kuitwa nyama ya mwitu.

Maswali

(a) Jadili ujumbe wa mshairi. (**alama 2)**

(b) Ainisha shairi kutegema: (**alama 2)**

i) Mpangilio wa maneno.
ii) Vina.
iii) Idadi ya mishororo.
iv) Idadi ya vipande.

(c)Eleza mbinu **nne** za kimtindo ambazo zimetumiwa**.** **(alama 4)**

d) Thibitisha matumizi ya uhuru wa kishairi. **(alama 3)**

(e) Andika ubeti wa pili kwa lugha tutumbi. (**alama 4)**

(f) Fafanua nafsi-neni na nafsi-nenewa katika shairi hili. (**alama 2)**

(g) Kwa kutolea mifano, eleza aina **tatu** za urudiaji zinazojitokeza kwenye shairi hili. **(alama 3)**

5.Soma shairi lifuatalo kisha ujibu maswali.

Nikiwa na njaa na matambara mwilini,
Nimehudumika kama hayawani,
Kupigwa na kutukanwa,
Kimya kama kupita kwa shetani,
Nafasi ya kupumzika hakuna,
Ya kulala hakuna,
Ya kuwaza hakuna,
Basi kwani hili kufanyika,
Ni kosa gani lilotendeka,
Lilonileta adhabu hii isomalilizika?

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Ewe mwewe urukaye juu angani,
Wajua lililomo mwangu moyoni,
Niambie pale mipunga inapopepea,
Ikatema miale ya jua,
Mamangu bado angali amesimama akisubiri?
Je nadhari hujitokeza usoni,
Ikielekea huku kizuizini?

Mpenzi mama, nitarudi nyumbani,
Nitarudi hata kama ni kifoni,
Hata kama maiti yangu imekatikakatika,
Vipande elfu, elfu kumi, Nitarudi nyumbani,
Nikipenya kwenye ukuta huu, Nikipitia mwingine kama shetani,
Nitarudi mpenzi mama…Hata kama kifoni!

Maswali

(a) Lipe shairi hili kichwa mwafaka. **(alama 1)**

(b) Tambua **nafsi-neni** katika shairi hili. **(alama 2)**

(c) Eleza toni **mbili** zinazojitokeza katika shairi hili. **(alama 2)**

(d) Eleza mambo **manne** ambayo mshairi analalamikia. **(alama 4)**

(e) Fafanua **dhamira** katika shairi hili. **(alama 2)**

(f) Thibitisha kuwa hili ni **shairi huru**. **(alama 2)**

(g) Taja na ufafanue sifa **mbili** za nafsi neni. **(alama 2)**

(h) Fafanua mbinu **tatu** za kimtindo zilizotumika katika ubeti wa tatu. **(alama 3)**

(i) Eleza maana ya maneno yafuatayo kama yalivyotumiwa katika shairi hili. **(alama 2)**

i) Hayawani
ii) Nadhari

SEHEMU D: HADITHI FUPI

D.W Lutomia na P. Muthama(wah): Mapambazuko ya Machweo na Hadithi nyingine

Jibu swali la 6 au la 7

D.W Lutomia: Msiba wa kujitakia

6 (a) "Wetu ni wetu, hata akiwa mbaya…ni wetu."

(i) Eleza muktadha wa dondoo hili. **(alama 4)**

(ii) Eleza sifa za huyu anayeshikilia msimamo wa "mtu wetu". **(alama 2)**

(iii) Eleza mbinu **mbili** za kimtindo zinazojitokeza kwenye dondoo hili. **(alama 4)**

(iv) Kwa kurejelea hadithi "Msiba wa Kujitakia", eleza misimamo mbalimbali ya mwandishi. **(alama 10)**

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R.Wangari: Fadhila za Punda

7. (a) Changanua mtindo katika kifungu kifuatacho. **(alama 10)**

Alasiri ile, baada ya ibada mbili, mhubiri akawa hoi kwa **mavune**. Akatamani kufika nyumbani apumzike, kazi ya kuwalisha kondoo wa Mungu si kazi rahisi. Wamefika nusu safari, bintiye katulia kama maji mtungini. Akimtazama kipembe, anamkumbusha marehemu mkewe.Miaka mitatu sasa na dhiki ya kuondokewa haijamwisha. Alihisi ukiwa, akatamani mwenziye.Sasa kazi kukilea kitoto chao, kibinti hiki kilicho mlanda mamake kama shilingi kwa ya pili. Nyumba ilijaa kicheko alipokuwa hai mamake Lilia. Kama si bintiye ambaye ulimi wake hautulii, **kihoro** kingemvamia labda hata kumvuta kuelekea kaburini. Lakini Lilia, malaika wake, hampi utulivu wa kuwaza sana kuhusu upweke wake. Ilimshangaza sasa kuwa kanyamaza vile. Kumbe kwa muda tu!

(b) Kwa kutolea mifano mwafaka eleza jinsi hadithi "Kila Mchezea Wembe" ilivyotumia kinaya kufanikisha ujumbe wake. **(alama 10)**

SEHEMU E: FASIHI SIMULIZI

8(a) **Soma kifungu kifuatacho kisha ujibu maswali.**

Ikiwa kweli wewe ni mkaza mwanangu,
Nami ndimi nilompa uhai mwana unoringia,
Anokufanya upite ukinitemea mate,
Chakula kuninyima, wajukuu kunikataza ushirika,
Mungu na waone chozi langu, wasikie kilio changu,
Mizimu nawaone uchungu wangu, radhi zao wasiwahi kukupa,
Laana wakumiminie, uje kulizwa mara mia na wanao,
Usiwahi kufurahia hata siku moja pato lao,
Watalokupa likuletee simanzi badala ya furaha,
Wakaza wanao wasikuuguze katika utu uzima wako!

(i) Tambua aina ya mazungumzo haya na utoe sababu. **(alama 2)**

(ii) Eleza sifa **mbili** za nafsi nenewa. **(alama 2)**

(iii) Taja na ueleze sifa **nne** za kipera hiki cha fasihi simulizi. **(alama 4)**

(iv) Unanuia kutumia mbinu ya maandishi kuhifadhi kipera hiki cha fasihi simulizi. Eleza faida na hasara za kutumia mbinu hii. **(alama 6)**

(b) Eleza faida tatu na hasara tatu za miviga . **(alama 6)**

HUU NDIO UKURASA WA MWISHO ULIOPIGWA CHAPA.

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

121/1

MATHEMATICS

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO THE CANDIDATES

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

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

(c) The paper contains **TWO** sections: Section **I** and II.

(d) Answer **ALL** the questions in section **I** and **FIVE** questions in section **II** in the spaces provided below each question.

FOR EXAMINERS USE ONLY. SECTIONI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL

SECTION II

17	18	19	20	21	22	23	24	TOTAL

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SECTION I 50 MARKS

Answer All The Questions In This Section.

1. Evaluate without using mathematical tables

$$\frac{1.9\times0.032}{20\times0.0038}$$ **(3mks)**

2. Use tables of reciprocals only to find the value of

$$5\ -\ \frac{14}{0.0829}\ \frac{}{0.581}$$ **(3mks)**

3. You are given that $\cos\theta=\frac{8}{10}$. Without using mathematical tables express in fraction form the value of

(a) $\sin\theta$

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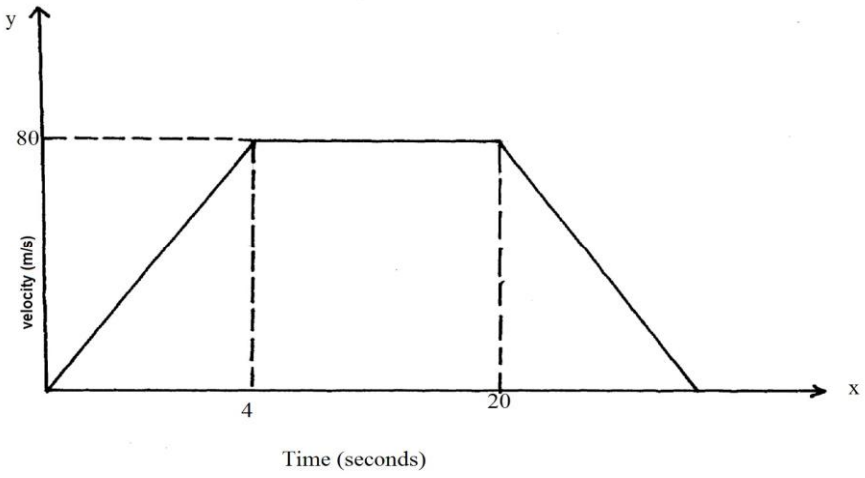
(b) tan $(90 - \theta)$ **(3mks)**

4. An open right circular cone has radius of 5cm and aperpendicular height of 12cm .Calculate the surface area of the cone.(Take $\pi$to be 3.14) **(3mks)**

5. Nyongesa spends a total of sh.970 on buying 3 text books and 5 pens. If he had bought 2 text books and 5 pens he would have saved sh.90. Find the cost of one text book**.** **(3mks)**

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6. The figure below is a velocity –time graph for a car



(a) Find the total distance traveled by the car? **(2mks)**

(b) Calculate the deceleration of the car. **(2mks)**

7. Three towns are situated in such a way that town B is 40km due south of town A and town C is 30 km due East of town B.

(a) Draw a sketch diagram showing the position of town A.B and C. **(1mk)**

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(b) From your sketch, calculate:

(i) Distance AC **(1mk)**

(ii) T o the nearest degree the bearing of town A from town C. **(2mks)**

8. A Kenyan tourist left Germany for Kenya through Switzerland. While in Switzerland he bought a watch worth 52 Deutche marts. Find the value of the watch in;

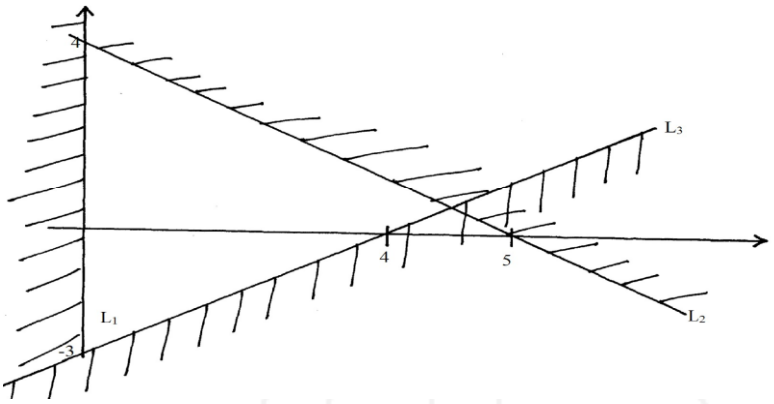
(a) Swiss Franca **(2mks)**

(b) Kenya shillings using the exchange rates below,

1 swiss Franc = 1.28 DM and 1 Swiss Franc = 45.21 Kenya shillings

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9. Find the inequalities that defines the region R shown in the figure below **(4mks)**

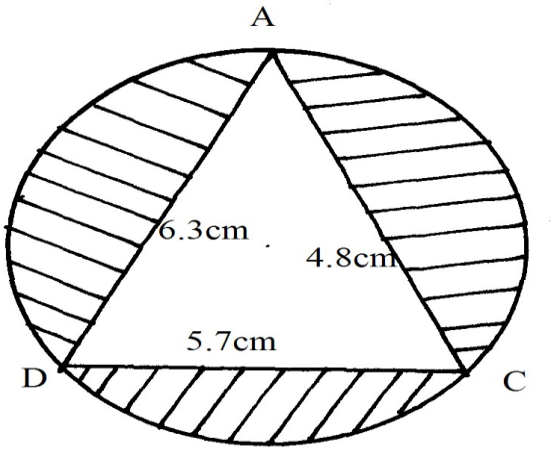


10. Form the quadratic equation whose roots are $x=-\frac{5}{3}$ and $x=1$ **(2mks)**

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11. ABCD is a circle quadrilateral and AB is a diameter. Angle ADC=117^0. Giving reasons for each step, calculate the value of angle BAC. **(3mks)**

12. The circle below whose area is 18.05cm^2 circumscribes a triangle ABC where AB=6.3cm, BC =5.7cm and AC =4.8cm. Find the area of the shaded part. **(3mks)**



13. Solve for x in the equation

$9^{(x-1)} \times 3^{(2x+1)} = 243$ **(3mks)**

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14. A form IV maths teacher originally worked out the mean mark of her 30 students to be 41. After the correction of the test, she added some marks of the test, she added some marks to Njoki, Chelimo and Nafula in the ratio 2:3:4,if the new mean mark for the class is 42.5 determine how many more marks Nafula was added than Chelimo. **(3mks)**

15. The volumes of two similar solid cylinders are 4752 cm^3 and 1408 cm^3.If the area of the curved surface of the smaller cylinder is 352 cm^2, find the area of the curved surface of the larger cylinder **(2mks)**

16. The line which joins the point A (3, K) and B (-2, 5) is parallel to the line whose equation is 5y+2x-7=0. Find the value of K. **(3mks)**

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SECTION II (50 MARKS)

Attempt only FIVE questions in this section

17. A newly built classroom measuring 6m long 4.5m wide and 3.2 m high is to be cemented on the floor and all inside walls. The classroom has one door measuring 1.85m by 80cm by 80cm and four windows measuring 1.5m by 70cm each.Cementing materials cost 500 per square meter while labour costs 20% of the cost of cementing materials.

Calculate:

(a) To one decimal place, the total surface are to be cemented **(5mks)**

(b) The cost of cementing materials **(2mks)**

(c) The total cost of cementing the classroom **(3mks)**

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18. If $x^2+y^2=29$ and $x+y=3$

(a) Determine the values of

(i) $x^2+2xy+y^2$ **(2mks)**

(ii) $2xy$ **(2mks)**

(iii) $x^2-2xy+y^2$ **(2mks)**

(iv) $x-y$ **(2mks)**

(b) Find the value of x and y **(2mks)**

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19. A country bus left town A at 11.45 am and traveled towards town B at an average speed of 60km/h.A matatu left town B at 1.15 pm. On the same day and traveled towards town A along the same road at an average speed of 90km/h. the distance between the two towns is 540km. Determine

(a) The time of day when the two vehicles met **(4mks)**

(b) How far from town A they met **(2mks)**

(c) How far outside town B the bus was when the matatu reached town A **(4mks)**

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20. The table below shows the names of 200 persons measured to the nearest kg

Mass (kg)	40-49	50-59	60-69	70-79	80-89	90-99	100-109
No. of persons	9	27	70	50	26	12	6

(a) Calculate the mean mass **(5mks)**

(b) Calculate the median mass **(5mks)**

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21.(a) Complete the table below by filling in the blank spaces

X^0	0	30	60	90	120	150	180	210	240	270	300	330	360
Cos x	1.00		0.5			-0.87		-0.87					
2 cos ½ x	2.00	1.93				0.52			-1.00				-2.00

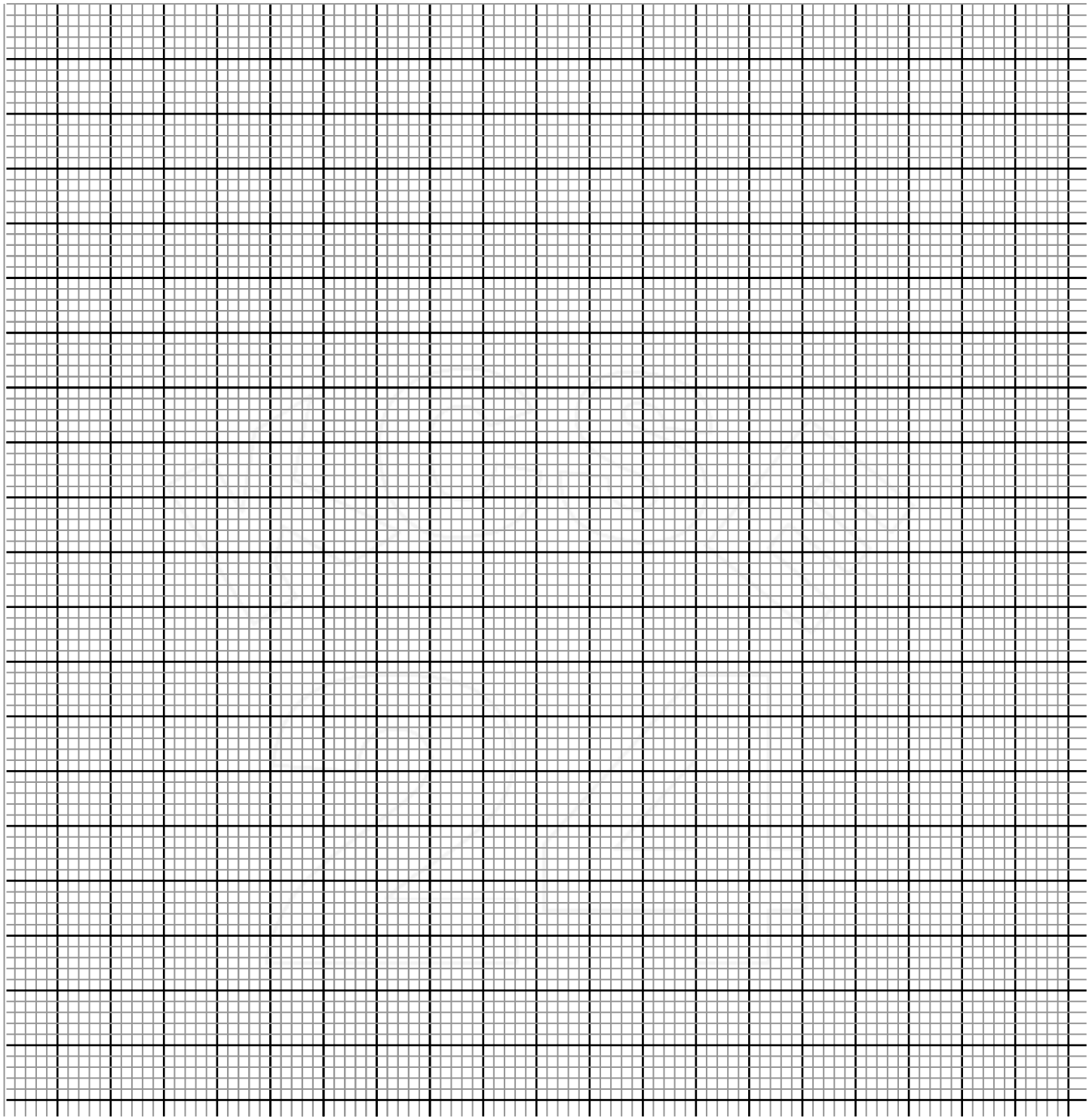
Using the scale km to represent 300 on the horizontal axis and 4cm represent 1 unit on the vertical axis, draw on the grid provided the graphs of y=cos x and y=2 cos ½ x **(4mks)**

(b) Find the period and amplitude of y=2 cos ½ x **(2mks)**

(c) Describe the transformation that maps the graph of y=cos x on the graph of y=2 cos ½ x

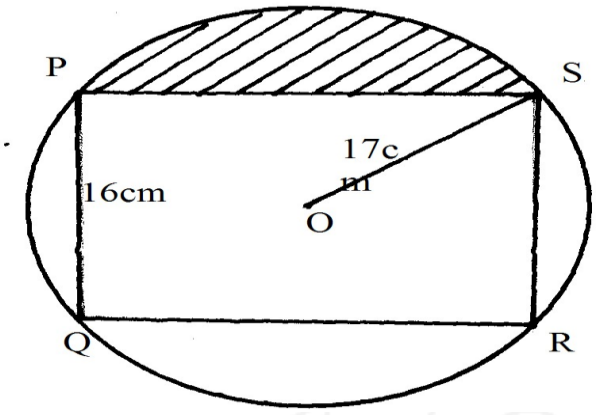
(2mks)

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22. The figure below represent a rectangle PQRS inscribed in a circle centre O and radius 17cm. PQ =16cm.



Calculate

(a) The length PS of the rectangle **(2mks)**

(b) The angle ROS **(4mks)**

(c) The area of the shaded region **(4mks)**

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23.(a) (i) Complete the table below for the function

$Y=x^3+x^2-2x$ **(2mks)**

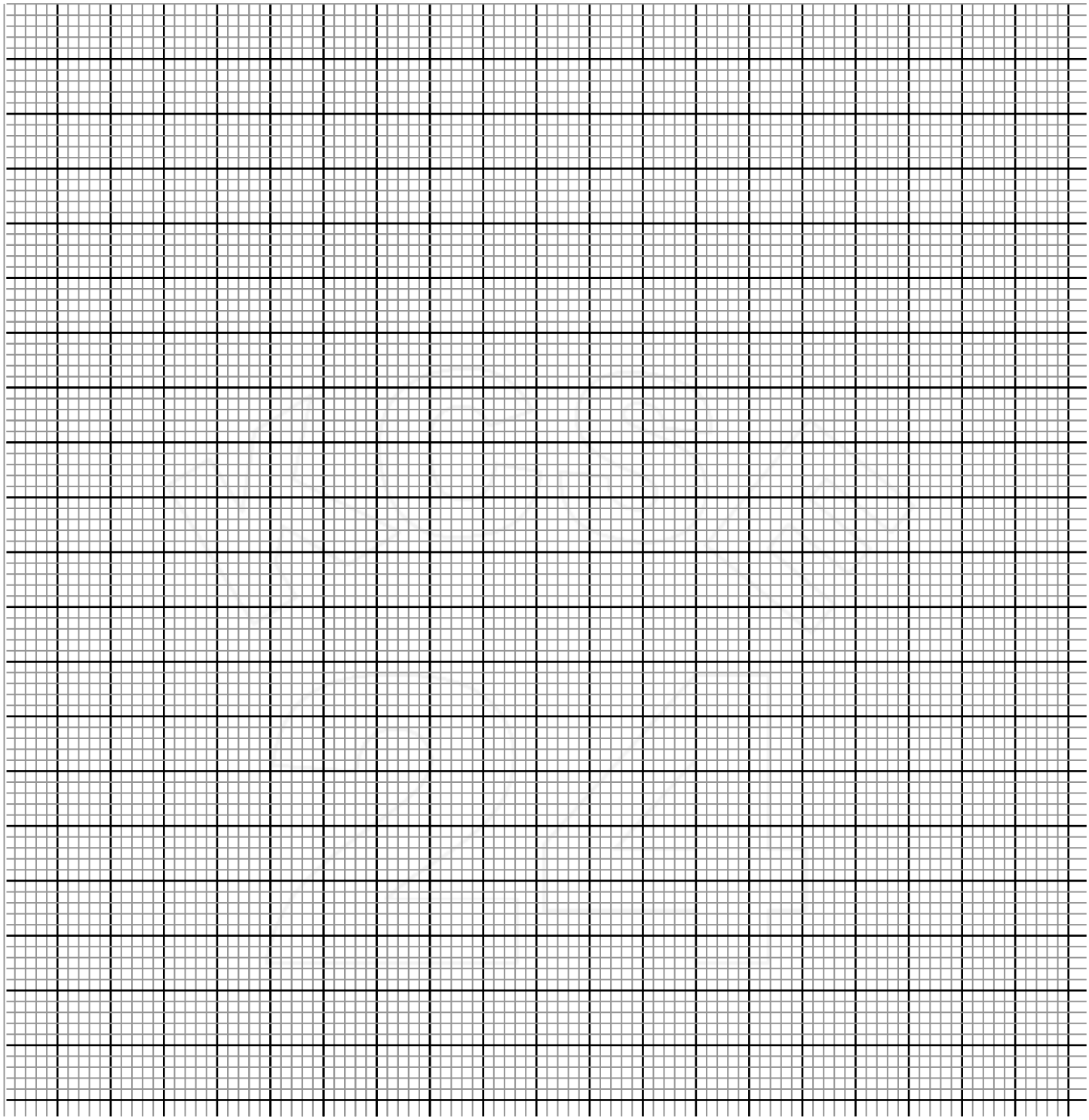
X	-3	-2	-1	0	1	2	2.5
-2x	6	4	2	0	-2	-4	-5
X^2	9	4	1	0	1	4	6.25
X^3	-27	-8	-1	0	1	8	15.625
$Y=x^3+x^2-2x$							

(ii) On the grid provided, draw the graph of $y=x^3+x^2-2x$ for the values of x in the interval $-3\leq x\therefore\leq 2.5$ **(4mks)**

(iii) State the range of negative value of x for which y is also negative **(1mk)**

(b) Find the coordinates of two points on the curve other than (0,0) at which x-coordinate and y-coordinate are equal**.** **(3mks)**

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24. Use a ruler ad a compass only for all constructions in this section.

(a) Construct a triangle XYZ in which XY =6cm YZ =5cm and angle XYZ=120^0. **(2mks)**

(b) Measure XZ and angle YXZ. **(4mks)**

(c) Construct the perpendicular bisector of XZ and let it meet XZ at M **(1mk)**

(d) Locate a point W on the opposite side of XZ as Y and that XW =ZW and YW=9cm and hence complete triangle XZW. **(3mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

121/2

MATHEMATICS

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

- *Write your name and Admission number in the spaces provided at the top of this page.*
- *This paper consists of two sections: Section I and Section II.*
- *Answer **ALL** questions from section I and **ANY FIVE** from section II*
- *All answers and workings must be written on the question paper in the spaces provided below each question.*

FOR EXAMINERS USE ONLY. SECTIONI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL

SECTION II

17	18	19	20	21	22	23	24	TOTAL

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SECTION I 50 MARKS

1. Solve for x in the equation $-2x^2 + x + 36 = 0$ using completing the square method

(3mks)

2. Simplify by rationalizing the denominator in $\frac{4-\sqrt{2}}{3+\sqrt{2}}$ leaving your answer an the form $a+b\sqrt{c}$ where a,b and c are integers. **(3mks)**

3. Find the value of x in the equation $\cos(3x-180^o) = \frac{\sqrt{3}}{2}$ in the range listed below.

$0^o \leq x \leq 360^o$ **(3mks)**

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4. Draw a line AB=4cm, P is a variable point in the plane of the paper, above AB, such that angle $ABC = 60^0$ and the area of triangle APB= $6cm^2$. Using a ruler and a pair of compasses only find the locus of P. **(3mks)**

5. Expand and simplify the binomial$\left(2 + \frac{3}{x}\right)^5$. Hence use the first four terms of your expansion to find the value of $(2.5)^5$ **(3mks)**

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6. The length and breadth of a rectangular floor garden were measured and found to be 4.1m and 2.2m respectively. Find the percentage error in its area. **(3mks)**

7. Solve for x in the equation $3(logx)^2 - logx^5 + 2 = 0$ **(3mks)**

8. Make ***s*** the subject of the formulae in the following; $sa = \sqrt{\frac{s^2 + q}{t^2}}$ **(3mks)**

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9. Each member of a class take one and only one of the three foreign languages: French, German and Spanish. 15 pupils take French, 9 take German and 6 take Spanish. Two pupils are chosen at random. Represent the information in a tree diagram hence find the probability that both pupils take different subjects**.** **(3mks)**

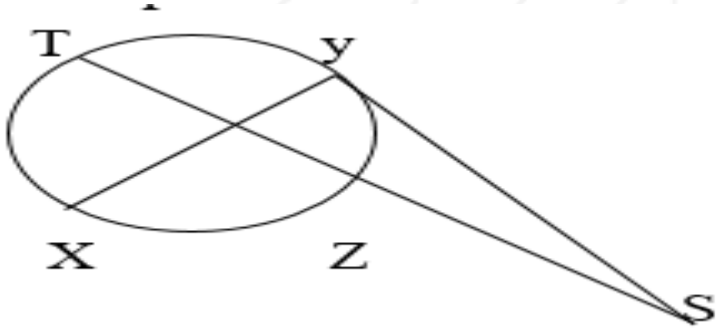
10. The amount of oil used by a ship travelling at a uniform speed varies jointly with the distance and the square of the speed. If the ship uses 200 barrels of oil in travelling 200 miles at 36 mile per hour, determine how many barrels of oil are used when the ship travels 360 miles at 18 miles per. **(3mks)**

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11. Use logarithms to evaluate**:** **(4mks)**

$$\sqrt[3]{\frac{45.3 \times 0.00697}{0.534}}$$

12. The figure below shows a circle of diameter XY. Chord TZ intersects XY at C. A tangent to the circle at Y meets TZ produced at S.



Given that TC = 14 cm, CY = 4 cm and YS = 7.5 cm. calculate the length of :

a) CS **(1mk)**

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b) XC **(2mks)**

13. Determine the values of x for which the matrix $\begin{pmatrix} 2x & x^2 \\ 2 & 1 \end{pmatrix}$ has no inverse **(3mks)**

14. Mr. Kimbo, a local retailer bought imported rice at sh. 56 per kilogram and local rice at sh. 48 per kilogram. He wants to mix the two types of rice so as to make a profit of 20%. If he sold the mixture at sh.120 per 2 kilogram packet, find the ratio the two types of rice was mixed. **(3mks)**

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15. The sixth term of a geometric progression is 16 and the third term is 2. Determine the common ratio and the first term. **(3mks)**

16. The equation of a circle is given by $x^2 + 4x + y^2 - 2y - 4 = 0$. Determine the centre and radius of the circle. **(3mks)**

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SECTION II

(Answer ANY FIVE questions in the spaces provided)

17. The table alongside shows the rates of taxation in a certain year.

Income in $K£p.a$	Rate (Sh. Per $K£$)
$1-3900$	2
$3901-7800$	3
$7801-11700$	4
$11701-15600$	5
$15600-19500$	7
$Above\ 19500$	9

In that year Mr. Kariuki at teacher at Kangaru High School was earning a basic salary of Ksh. 27 000 per month. In addition he was entitled to other taxable allowances totalling to 11 000 per month and a personal relief of Ksh 1056 per month. He lives in teachers' quarters where he is paying a nominal rent of Ksh. 3 500 per month.

(a) Calculate how much income tax Mr. Kariuki is paid per month. **(4 marks)**

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(b) Mr. Kariuki's other deductions per month were co-operative society contribution of sh 2500 and loan repayment of sh. 3000, calculate his net salary per month. **(3 marks)**

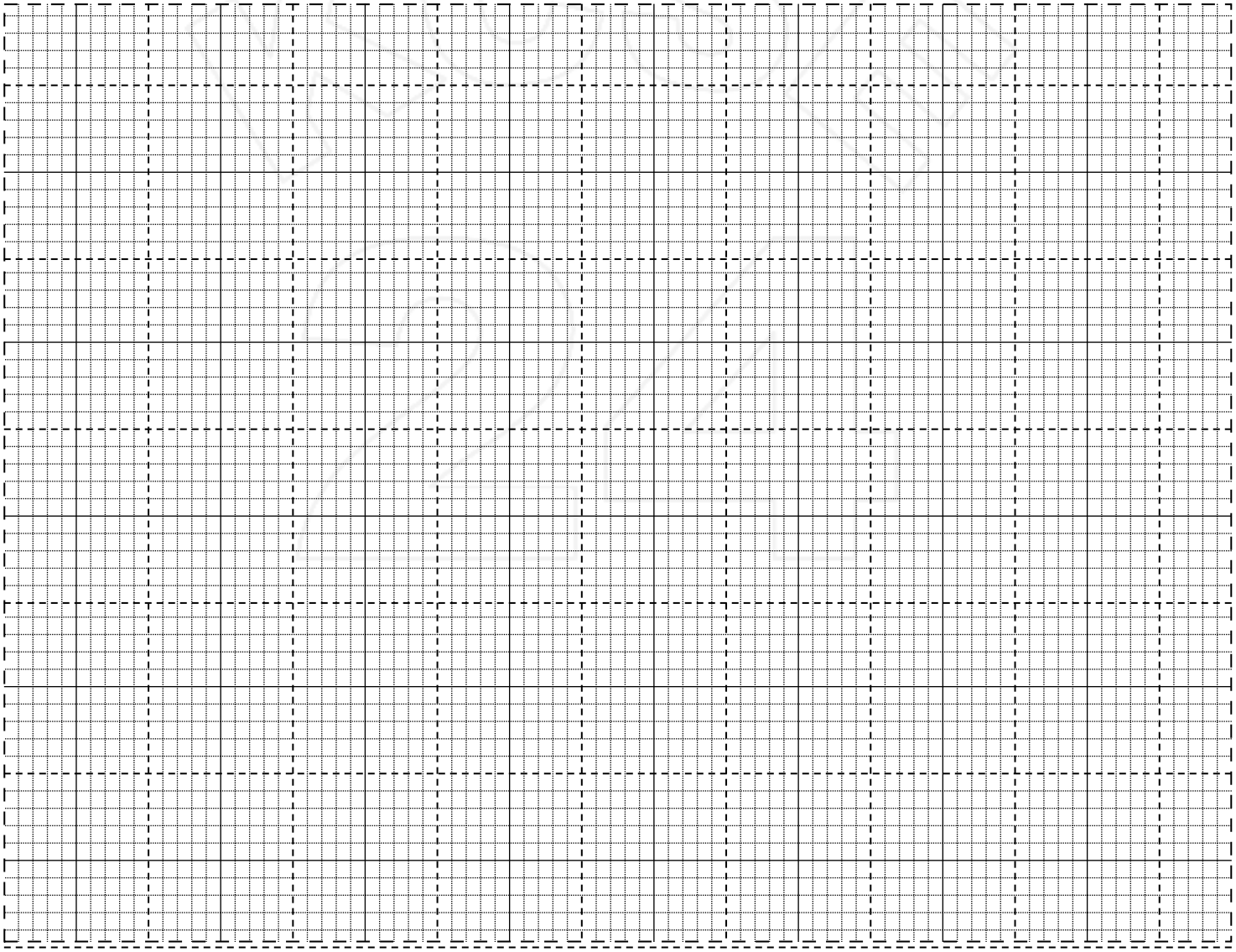
(c) Later the same year Mr. Kariuki was transferred to another school where he earned hardship allowance equivalent to 30% of his basic salary. On top of the deduction in (b) above, he also had a deduction of sh 2700 per month to KCT. Calculate the percentage change in his net salary per month **(3 marks)**

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18. Given that $y=2x^{o}+\cos \frac{1}{2} x^{o}$, complete the table below for the missing values of y, correct to 1 decimal place (2mks)

X^{o}	0^{o}	30^{o}	60^{o}	90^{o}	120^{o}	150^{o}	180^{o}	210^{o}	240^{o}	270^{o}	300^{o}	330^{o}	360^{o}
$Y=\sin 2x+\cos \frac{1}{2} x$	1.0	1.8			-0.4	-0.6			0.4	-0.7			-1.0

(b) On the grid provide below, draw the graph of $y=\sin 2x^{o}+\cos \frac{1}{2} x^{o}$ for $0 \leq x \leq 360^{o}$ Take the scale 1cm for 30^{o} on the x-axis. 2 cm for 0.5 units on the y –axis. **(4mks)**



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(c) Use the graph to estimate

(i) The minimum value of y **(1mk)**

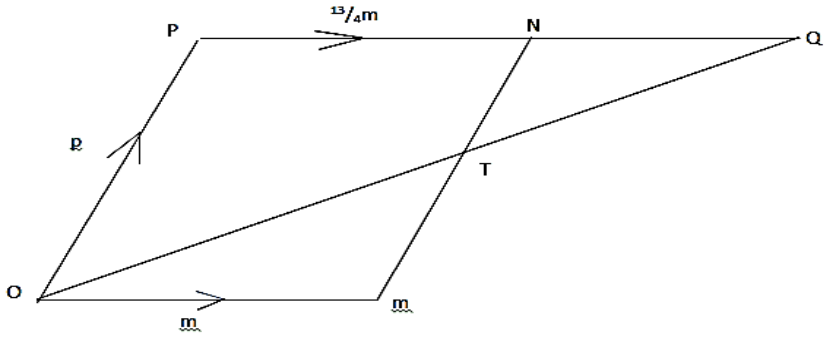
(ii) The value of $\boldsymbol{x}$ for which

$\frac{1}{2}\sin 2x + \frac{1}{2}\cos\frac{1}{2}x \geq 0.25$ **(3mks)**

KCSE 24

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19. Quadrilateral **OMNP** is such that **OM** $= \boldsymbol{m}$, $\boldsymbol{OP} = \boldsymbol{p}$ and **PN** = $\frac{13}{4}\boldsymbol{m}$. **PN** is produced to Q such that **PN**: **PQ** = 13:15. T is a point on **MN** such that **MN** = 3**TN**



(a) Express in terms of ***m*** and ***p***

(i) **OT** **(2mks)**

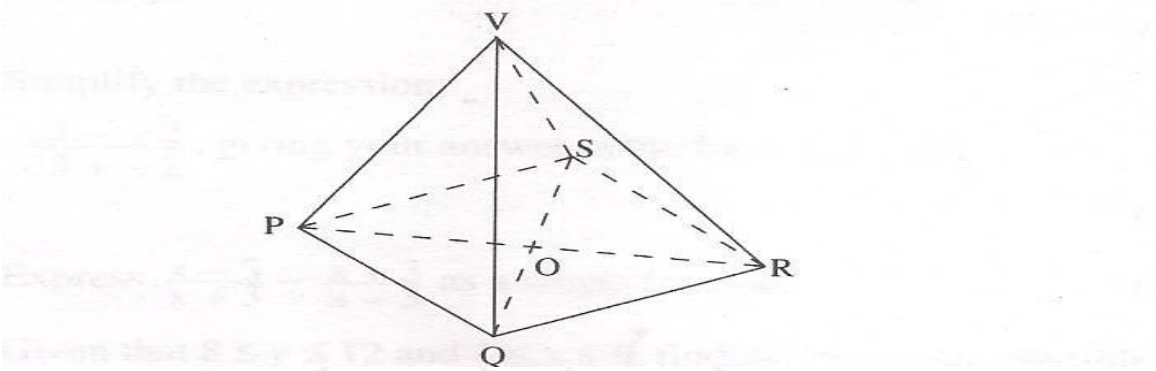
(ii) PQ **(2mks)**

(iii) OQ **(2mks)**

(b) Show that O, T and Q are collinear. **(4mks)**

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20. The figure below represents a right pyramid on a square base PQRS of side 12 cm. O is the centre of the base and VO = 14 cm.



Calculate;

(a) The length of VP to 1 decimal place **(3 marks)**

(b) The angle which VP makes with the base PQRS **(2 marks)**

(c) The surface area of the pyramid to 1 decimal place **(3 marks)**

(d) The volume of the pyramid **(2 marks)**

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21. The table shows the goods (P) produced by a certain factory in time (t) since 2010 is believed to obey a law of the form $P=kA^t$ where k and A are constants and t is time in years.

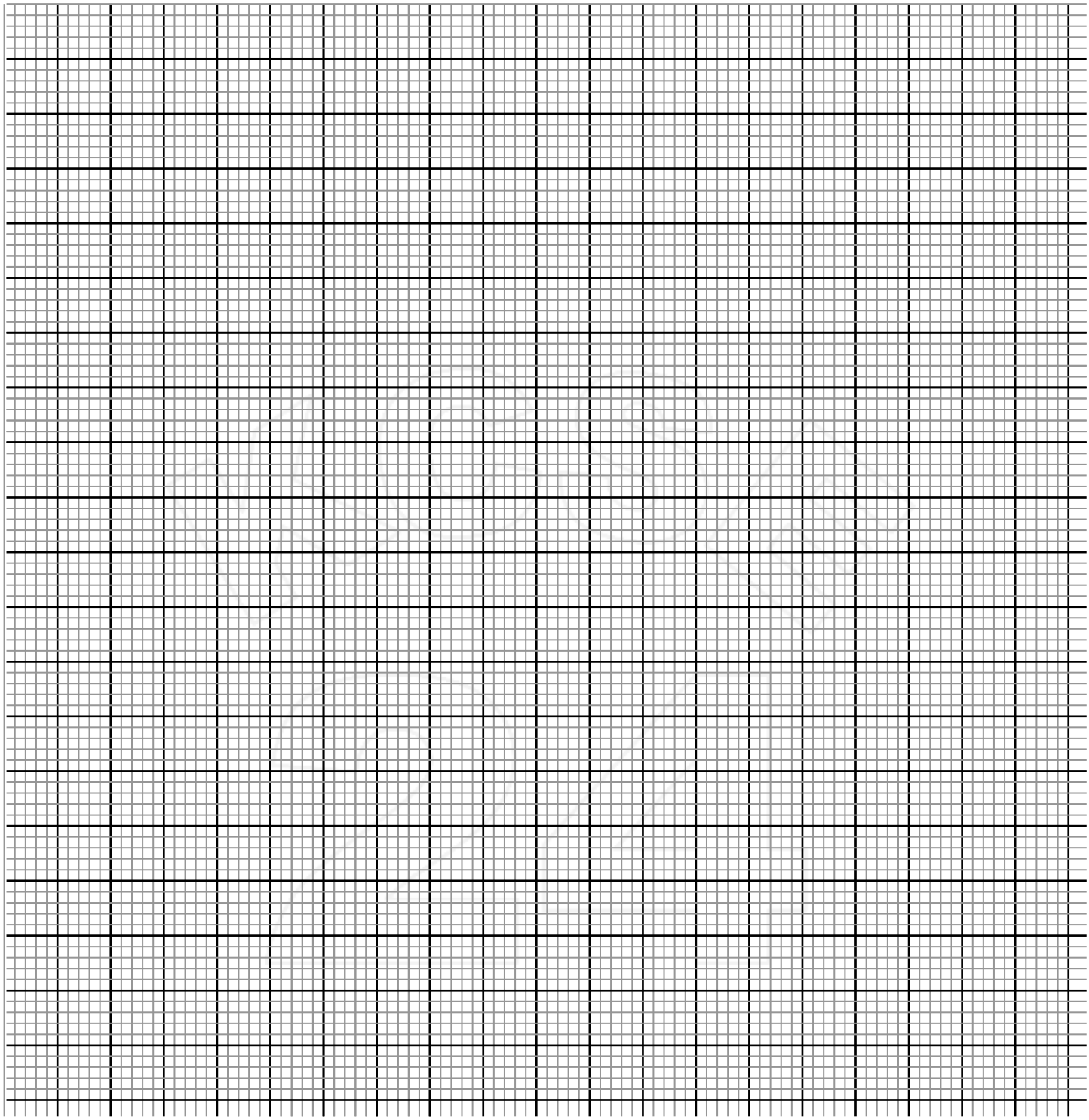
t	2010	2011	2012	2013	2014	2015	2016
P	5000	6080	7400	9010	10960	13330	16200

a) Express the law $P=kA^t$ where k and A are constants and t is time in years in the linear form $y = mx + c$ and fill the table appropriately. (**3mks)**

b) Plot a suitable straight line graph

(**4mks)**

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c) Use the graph above to find the values of A and k**.** **(3mks)**

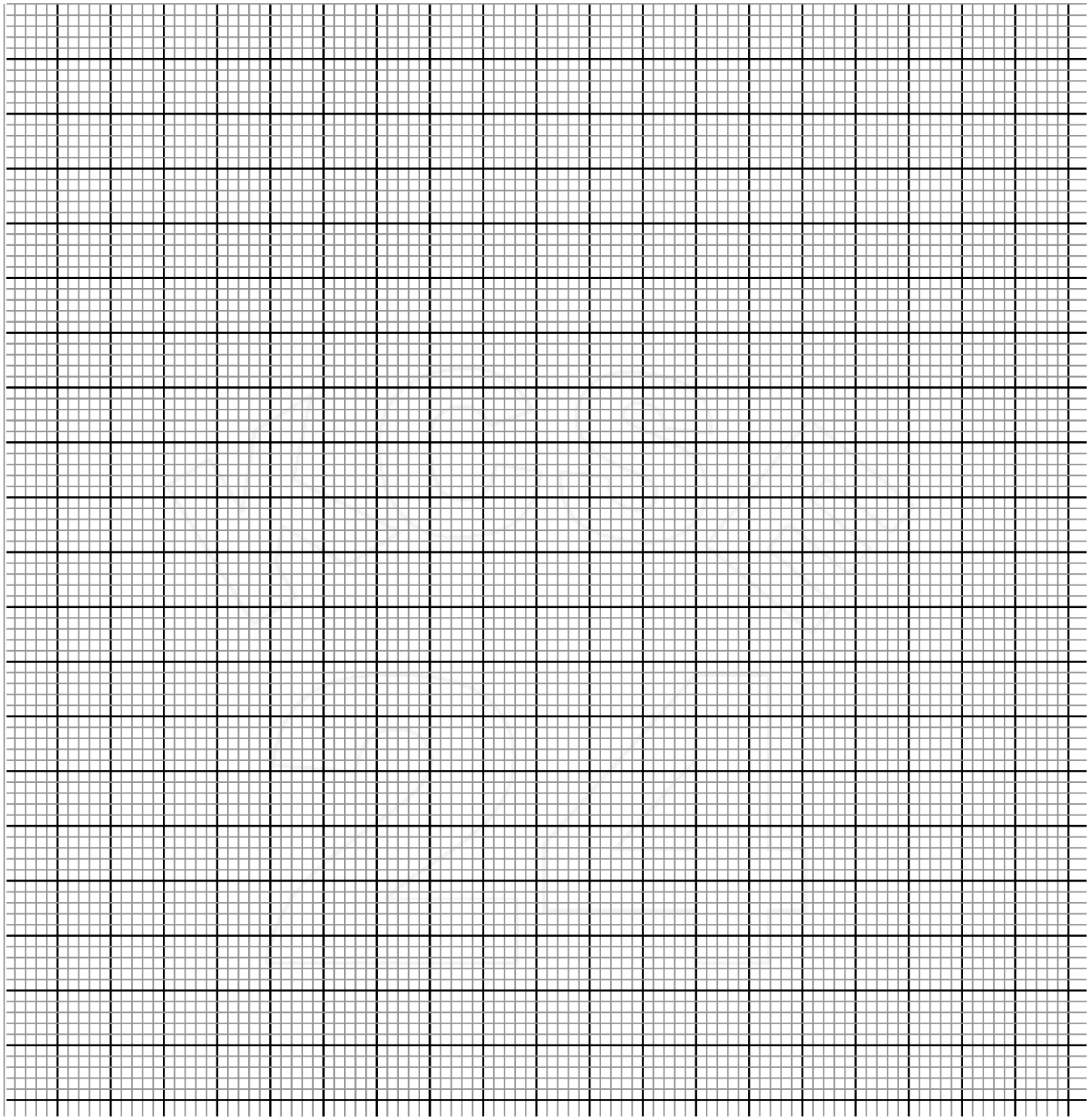
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22. A small scale farmer wishes to buy some sheep and goats for rearing. A sheep costs sh.400 and a goat costs sh.300. The farmer has enough space for only 20 animals and may spend at most sh.6800. The number of goats should not exceed twice the number of sheep.

a) By letting x and y to represent the number of sheep and goats he can buy respectively, write down all inequalities from the above information. **(4mks)**

b) Represent the inequalities on the grid provided**.** **(4mks)**

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c) From your graph; find the maximum number of animals he can buy at the lowest cost. **(2mks)**

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23. (a) An aeroplane flies from town $A(20^0N, 60^0N)$ to town$B(20^0N, 20^0E)$. (Taking R= 6400km, $\pi = 3.142$)If it then flies due north from town B to town C, 420km away, calculate correct to the nearest degree, the latitude of town C. **(3mks)**

(b) Calculate the shortest distance in km between towns $P(60^0N, 40^0W)$ and $Q(60^0N, 30^0E)$ giving your answer to 2 decimal places **(2mks)**

(c) The local time at town $T(33^0N, 15^0W)$ is 1045hours. What is the local time at $Q(50^0N, 30^0E)$? **(2mks)**

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24. Use Trapezoidal rule to find the area between the curve. $y = x^2 + 4x + 4$, the x-axis and the ordinates $x = -2$ and $x = 1$ (Use 7 ordinates)

a) Complete the table correct to 2 d.p. **(2mks)**

x	-2	-1.5	-1	-0.5	0	0.5	1
y							

b) Find the area enclosed by the curve, the x-axis, lines $x = -2$ and $x = 1$. **(3mks)**

c) Use integration to find the exact area and hence find the percentage error in your approximation. **(5mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

451/1

COMPUTER STUDIES

PAPER 1 (THEORY)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTION TO CANDIDATES

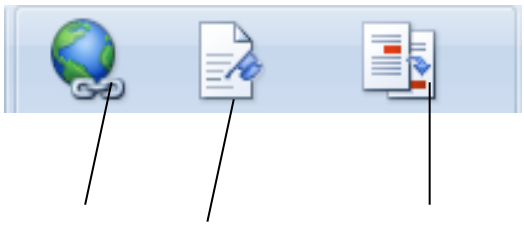
- Write your name and index number in the spaces provided above
- *This paper consists of **two** sections **A** and **B**.*
- *Answer **ALL**questions in section **A**.*
- *Answer question 16 and any other THREE questions from section B.*

FOR EXAMINERS USE ONLY

Section	Questions	Candidates Score
A	1-15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

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1. Name the parts labeled in the diagram below of a page layout properties **[3 marks]**



i ii iii

i- _____

ii- _____

Iii-_____

2. Explain briefly how an uninterruptible power supply (UPS) may help to protect a computer system and its data. **[1 mark]**

_____

_____

_____

_____

3. How is data verification different from data validation? **[1 mark]**

_____

_____

_____

_____

Give one example of data validation technique **[1 mark]**

_____

___

Give one example of data verification technique **[1 mark]**

_____

___

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4. What kind of program is normally contained in a ROM chip and Explain briefly the main purpose of such a program. **[2 marks]**

_____

_____

_____

_____

5. Distinguish between system software and application software. **[2 mark]**

_____

_____

_____

_____

6. Give the similarities between optical mark readers and optical character readers**. [2 marks]**

_____

_____

_____

_____

7. In word processing, distinguish between text insertion and overtyping. **[2 marks]**

_____

_____

_____

_____

8. Explain, using examples where appropriate, the meaning of these computer terms.

(i) interrupt **[2 Marks]**

_____

_____

_____

_____

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(ii) buffer **[2 Marks]**

_____

_____

_____

_____

9. Explain the following spreadsheet concepts:

(i) Automatic Recalculation. **[1 mark]**

_____

_____

(ii)What if analysis **[1 mark]**

_____

_____

10. Explain briefly why the advancement of computer technology has caused environmental hazards. **[2 marks]**

_____

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_____

(i)What is telecommuting? **[1 mark]**

_____

_____

(ii)State **four** benefits of telecommuting. **[2 marks]**

_____

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_____

(ii)How is e-commerce different from e-business? **[1 mark]**

_____

_____

_____

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11. (i)What is a coprocessor? **[1 mark]**

_____

_____

_____

(ii)How does parallel processing work? **[1 mark]**

_____

_____

_____

(iii)What is pipelining? **[1 mark]**

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_____

12. (i)What is a driver program? **[1 mark]**

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_____

_____

13. (ii). Give **one** example of hardware device that may serve more than one purpose (e.g., input and output). **[2 marks]**

_____

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14. (i)How is a patent different from a trademark? **[2 marks]**

_____

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(ii)What is the difference between unauthorized access and unauthorized use? **[*2 marks]***

_____

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15. (i)What is a workstation? **[½ mark]**

_____

_____

_____

_____

(ii)What is a server? **[½ mark]**

_____

_____

_____

_____

SECTION B

Answer question 16 (compulsory) and any other three questions from this section

16. (a) Explain the three control structures in programming **[3 Marks]**

(i)_____

_____

(ii)_____

_____

(iii)_____

_____

(b)State and describe three types of error can occur in programming **[3 Marks]**

(i)_____

_____

(ii)_____

_____

(iii)_____

_____

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(c)(i) State **two** differences between a compiler and an interpreter **[2 marks]**

_____

_____

_____

_____

_____

_____

_____

(ii)Give **one** advantage of compliers over interpreters **[1 mark]**

_____

_____

_____

(iii)Give **one** advantage of interpreters over compliers **[1 mark]**

_____

_____

_____

(d) Draw the corresponding flowchart for the pseudo code below. **[4 marks]**

Assign 0 to A,

Repeat adding 1 to A,

Until A is greater than or equal to 5,

Print A.

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17. (a) How is peer-to-peer network different from client/server network, considering how programs, data and information are stored? **[2 marks]**

_____

_____

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_____

(b) (i) Give **three** advantages of optical fibers over twisted-pair wires and coaxial cables. **[3 marks]**

_____

_____

_____

_____

(ii) Suggest **two** disadvantages of optical fibers. **[1 mark]**

_____

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_____

(c) (i)Compare asynchronous and synchronous transmission. **[1 mark]**

asynchronous	**synchronous**

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(ii) Give one disadvantage of the c(i) above **[1 mark]**

asynchronous	synchronous

(d) (i) Compare the following Ring ,star and bus network topologies. **[1 ½ marks]**

Bus NetWork	Ring NetWork	Star Network

(ii)Give one **disadvantage** of each **[1 ½ marks]**

Bus NetWork	Ring NetWork	Star Network

(iii)Draw a diagram t represent the ring ,star and bus topologies **[1 ½ marks]**

Bus NetWork	Ring NetWork	Star Network

(e) (i) Explain the term upload **[½ mark]**

_____

_____

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(ii)If a 56K modem is operating at full speed, how long does it take to download a 1-MBfile?

[2 marks]

18. (a).Describe the role of the systems analyst. **[2 marks]**

_____

_____

_____

(b).Describe 2 techniques used by the systems analyst in requirements specification.**[2 marks]**

_____

_____

_____

_____

(b).In the software development process, what happens at the analysis stage? **[1 Mark]**

_____

_____

(c) Describe fully what is meant by the term *top-down design*? **[3 Marks]**

_____

_____

_____

_____

(d) The process of developing such software is an iterative process. What does *iterative* mean?

[1 Mark]

_____

_____

(e)(i) What are CASE tools? **[1 Mark]**

_____

_____

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(ii)What is the purpose of CASE tools**?** **[1 Mark]**

(iii) What does *CASE* stand for? **[1 Mark]**

_____

_____

(f) Identify ant two activities within the design stage of the software development process. **[3Marks]**

_____

_____

19 (a).Describe four functions of a single user operating system. **[4 Marks]**

_____

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(b) Explain the need for an operating system to have a command language interpreter. **[1Mark]**

_____

_____

(c) Give 4 examples of the many processes which can be initiated by a user and which are then carried out by the operating system. **[4 Marks]**

_____

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_____

(d) What happens if a command entered by the user is not recognized by the operating system? **[1 Mark]**

_____

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(e)Describe an advantage and a disadvantage to storing the operating system in RAM rather than in ROM? **[2 Marks]**

_____

_____

_____

_____

(g) Describe three features that a **networkoperatingsystem** must have that a single user operating system does not need. **[3 Marks]**

_____

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20. (a) Explain two reasons why computers use the binary system? **[2 Marks]**

_____

_____

_____

_____

(b)What is meant by the term *word* in the phrase *16-bit word computer***?** **[1 Mark]**

_____

_____

(c) What is the decimal value of the largest integer that can be represented by a byte in a computer which deals only with positive numbers? **[1 Mark]**

_____

_____

_____

(d)What does the acronym ASCII stand for and what is ASCII? **[2 Marks]**

_____

_____

_____

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(e) Complete the following table and note that no marks will be awarded for answers with missing or unclear working. **[6 Marks]**

BIN	**DEC**	**HEX**
	45	
		B6
11001		

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

451/2

COMPUTER STUDIES

PAPER 2 (PRACTICAL)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

- ***a)*** *Indicate your name and index number at the top right hand corner of each printout*
- ***b)*** *Write your name and index number on the CD/Removable storage media provided*
- ***c)*** *Write the name and version of software used for each question attempted in the answer sheet provided*
- ***d)*** *Answer all questions*
- ***e)*** *All questions carry equal marks*
- ***f)*** *Passwords should not be used while saving in the CD/Removable storage medium*
- ***g)*** *All answers must be saved in the CD/Removable storage medium*
- ***h)*** *Make printout of the answers on the answer sheet*
- ***i)*** *Arrange your printout and ties/staple them together*
- ***j)*** *Hand in all printouts and the CD/Removable storage medium used*
- ***k)*** *This paper consists of four printed pages*
- ***l)*** *Candidates should check the question paper to ascertain all the pages are printed as indicated and that no question is missing*
- ***m)*** *Candidates should answer the questions in English*
- ***n)*** *ALL Data for currency data type should be formatted to Kenya Shillings*
- ***o)*** *All the system Date and Time should be set to correct Kenya time and Date settings*

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QUESTION ONE

a) The data below shows a spreadsheet for loan applicants from a youth fund from a certain county.

MEMBER NO	NAME	DATE OF BIRTH	DATE OF APPLICATION	GENDER	AGE	AMOUNT APPLIED
A001	ABC	1/3/1992	1/1/2016	M		Ksh 200,000.00
B001	CDE	2/6/1999	3/1/2016	F		Ksh 600,000.00
C008	FGH	5/6/1992	3/1/2016	M		Ksh 400,000.00
K001	JKL	2/7/1990	7/1/2016	F		Ksh 700,000.00
S007	MNO	2/9/1960	7/1/2016	M		Ksh 600,000.00
Z006	KRS	4/8/1992	2/2/2016	M		Ksh 500,000.00
A008	TUV	4/8/1960	3/2/2016	M		Ksh 700,000.00
B005	CED	2/6/1995	5/2/2016	F		Ksh 600,000.00
C011	HGF	5/6/1990	10/2/2016	M		Ksh 400,000.00
K012	LKJ	2/7/1970	6/1/2016	M		Ksh 700,000.00
S019	NOM	2/9/1991	4/6/2016	M		Ksh 600,000.00

Type the data as shown in the spreadsheet above name the worksheet as Original save the workbook as application. **(14 Marks)**

(b) Copy the worksheet named original above to another worksheet in the same workbook and name it as Evaluation.

(i) Fill the column for the (AGE) which is the difference between DATE OF APPLICATION and DATE OF BIRTH in years to the nearest whole number. **(6 Marks)**

(ii) Create a validation in the DATE OF APPLICATION such that it should be after DATE OF BIRTH. **(2 Marks)**

(iii) Format all columns having currency Data type to Kenya shilling. **(2 Marks)**

(iv) Create the columns COMMENT and AMT AWARDED.

The COMMENT is based on the following

- I f the gender is male and the age by the data of applicable is greater than 30 years the COMMENT is INELIGIBLE otherwise ELIGIBLE.

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- Amount awarded if a person is eligible if 80% of the amount applied.

(v) Fill in the two columns for the AMOUNT AWARDED and COMMENT using the formula. If an

applicant is INELIGIBLE the amount awarded is left blank**.** **(10 Marks)**

(c) Copy the worksheet named Evaluation above to another worksheet in the same workbook and name it as final.

(i) Filter out data in the final in the final worksheet leaving out those who have been awarded a loan. **(2 Marks)**

(ii) Create a table showing the total amount awarded to all Males and total awarded to Females and total for both male and females. In the sample table below fill in the values using conditional if statement . **(6 Marks)**

	AMOUNT(Ksh)
MALE	
FEMALE	
Total	

(iii) Draw a pie chart representing the total amount for males awarded and females warded **(2 Marks)**

(d) Print the following: **(4 Marks)**

(i) Original worksheet

(ii) Evaluate worksheet

(iii) Final worksheet

(iv) The pie chart

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QUESTION TWO

The table below an extract of a manual data structure system used by a librarian of a particular school

ADMNO	S_NAME	CLASS	BOOK_NO	TITLE	BORROW TYPE	DATE_BORROWED	DATE_RETURNED
123	MIKE	1A	B001	COMPTER STUDIES BK 1	SHORT	2-1-2016	12-1-2016
456	JOHN	1B	A002	COMPREHENSIVE ENG BK 1	LONG	1-2-2016	17-1-2016
789	ADREW	1C	B003	KIE MATHEMATICS BK 1	LONG	1-3-2016	14-3-2016
987	JAMES	2A	D004	LONGHORN GEOGRAPHY BK2	SHORT	1-4-2016	8-4-2016
654	JACOB	2B	K005	KISWAHILI SHAIRI BK2	SHORT	1-5-2016	9-5-2016
321	NANCY	2C	B006	MATHEMATICS BK2	SHORT	2-3-2016	10-3-2016
879	MARY	3A	C005	HISTORY BK3	LONG	2-4-2016	17-4-2016
564	MERCY	3B	K009	FOUNDATION CHEMISTRY BK 1	LONG	2-5-2016	14-5-2016
213	PETER	3C	H001	KISWAHILI LUGHA BK 2	LONG	1-4-2016	18-4-2016
123	MIKE	1A	K005	KISWAHILI SHAIRI BK2	SHORT	1-5-2016	19-5-2016
456	JOHN	1B	B006	MATHEMATICS BK2	SHORT	1-4-2016	5-4-2016
789	ADREW	1C	C005	HISTORY BK3	SHORT	1-4-2016	7-4-2016
987	JAMES	2A	K009	FOUNDATION CHEMISTRY BK 1	LONG	1-5-2016	8-5-2016
654	JACOB	2B	H001	KISWAHILI LUGHA BK 2	LONG	1-4-2016	22-4-2016

The library charges 2 shillings per every book borrowed per day, if the book is not returned in time it attracts a penalty of 5 Shilling per day. The short loan is a maximum of seven days while the long loan is 14 days

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a) From the table above create a database called library.

(i) Create THREE tables Student(ADMNO as primary key) and Book(BOOK_NO as primary key) and Borrow(Borrow_id as primary key which is auto number). **(6 Marks)**

(ii) Create relationship between the three tables **(2 Marks)**

(iii) Fill in the data in the three tables **(15 Marks)**

b) Create a the following queries

(i) Query named chargesqry for all charges for books on short loan the query should have the following fields(ADMNO,S_NAME,BOOK_NO,TITLE,BORROW TYPE,DATE_BORROWED,DATE_RETURNED,NO_OF_DAYS_BORROWED,NORMAL_CHARGE,PENALTY_CHARGE,TOTAL_CHARGE**)** **(10 Marks)**

(ii) Query named shortchargesqry for all charges for books on short loan the query should have the following fields(ADMNO,S_NAME,BOOK_NO,TITLE,BORROW TYPE,DATE_BORROWED,DATE_RETURNED,NO_OF_DAYS_BORROWED,TOTAL_CHARGE) **(2 Marks)**

(iii) Query named longchargesqry for all charges for books on long loan the query should have the following fields(ADMNO,S_NAME,BOOK_NO,TITLE,BORROW TYPE,DATE_BORROWED,DATE_RETURNED,NO_OF_DAYS_BORROWED,TOTAL_CHARGE) **(2 Marks)**

(iv) Create a report showing the total amount which the library has earned between any two dates on short loan save it as shortbetweendatesrpt format the currency data type to Kenya shillings **(6 Marks)**

(v) Create a report showing the total charged to a student for both long and short loan borrowing in one report save it as studentchrgrpt format the currency data type to Kenya shillings **(4 Marks)**

c) Print the following **(4 Marks)**

(i) All tables with data

(ii) Both query with data

(iii) Shortbetweendatesrpt

(iv) studentchrgrpt

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

441/1

HOME SCIENCE

PAPER 1 (THEORY)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS

- *This paper contains 3 sections: A, B and C*
- *Answer all questions in section A and B and any two questions from section C*

FOR EXAMINER'S USE ONLY

SECTIONS	QUESTION	MAX. SCORE	ACTUAL SCORE
A	1 – 21	40 MARKS	
B	22	20 MARKS	
C	23 – 25	40 MARKS	

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SECTION A (40 MARKS)

1. Define the following terms as used in home science. **(2mks)**

(a) Accessories

……

……

(b) Haberdashery

……

……

2. State **two** reasons for using fabric conditioner in laundry. **(2mks)**

……

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3. Mention **two** ways of meeting social needs of a pregnant woman **(2mks)**

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4. Explain giving an example, the meaning of a monochromatic colour scheme. **(2mks)**

……

……

5. State **two** points to consider when choosing a laundry brush. **(2mks)**

……

……

6. Give **two** conditions necessary for steam to act as a raising agent **(2mks)**

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7. Identify **three** methods of finishing the edges of sleeves other than using a cuff (**3mks)**

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8. Identify **two** ways of preventing umbilical cord infection at birth. **(2mks)**

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9. State **two** reasons why foods are fortified **(2mks)**

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10. State **two** safety precautions to be exercised when handling calabastres **(2mks)**

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11. Give **two** reasons why a kitchen should be well lit. **(2mks)**

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12. Outline **three** qualities of a well made sleeve **(3mks)**

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13. Give **two** reasons for an open and coarse texture in creamed cake mixtures. **(2mks)**

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14. What is the role of VCT in safe parenting. **(2mks)**

……

……

15. Give **three** methods used to attach collars to the neck line. **(3mks)**

……

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16. State the use of a water seal in a kitchen sink **(1mk)**

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17. What is simmering? **(1mk)**

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18. Give **two** reasons why plastics are becoming more popular in homes today. **(1mk)**

……

……

19. Name **four** improvised cleaning materials **(2mks)**

……

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……

20. Choose a suitable **one** course meal for an invalid. **(2mks)**

……

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SECTION B (20 MARKS) COMPULSORY

22. You have been asked to stay at home and carry out some household chores.

(a) Describe how you will thoroughly clean a hurricane lamp to be used in the evening **(9mks)**

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(b) Describe how you will wash a nylon petticoat for your younger sister. **(6mks)**

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(c) Describe how you will thoroughly clean a chopping board. **(5mks)**

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SECTION C (40 MARKS) Answer any two questions in this section

23. (a) Give the functions of the following parts of a sewing machine **(5mks)**

(i) Stop motion screw

(ii) Balance wheel

(iii) Feed dog

(iv) Bobbin case

(v) Slide plate

(b) Explain **four** factors that influence consumer buying. **(8mks)**

(c) Discuss **three** reasons why the use of charcoal should be minimized.

(d) What is food fortification? **(1mk)**

24. (a) Suggest **five** sanitary practices that 2 to 5 year old child should be taught. **(5mks)**

(b) Explain **five** reasons for coating food before deep frying **(10mks)**

(c) State **five** points to consider when preparing and cooking green vegetable **(5mks)**

25. (a) List any **five** effects of moist yeast on starch **(5mks)**

(b) Give **four** limitations of complementary feeding **(4mks)**

(c) Which **five** preparations will you carry out once fabric before cutting. **(5mks)**

(d) By use of three well labeled diagrams describe how you will make an overlaid seam **(7mks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

441/2

HOME SCIENCE

PAPER 2 (PRACTICAL)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(CLOTHING CONSTRUCTION)

A pattern of a child's dress is provided. You are advised to study the sketches, instruction and the layout carefully before you begin the test

MATERIAL PROVIDED

1. Patter pieces
    A. Dress front
    B. Dress back
    C. Sleeve
    D. Sleeve binding and ties
    E. Sleeve opening
    F. Collar
    G. Front neck facing
    H. Back neck facing
2. Plain light weight cotton fabric 80 cm by 90 cm wide
3. Sewing thread to match the fabric
4. One large envelope

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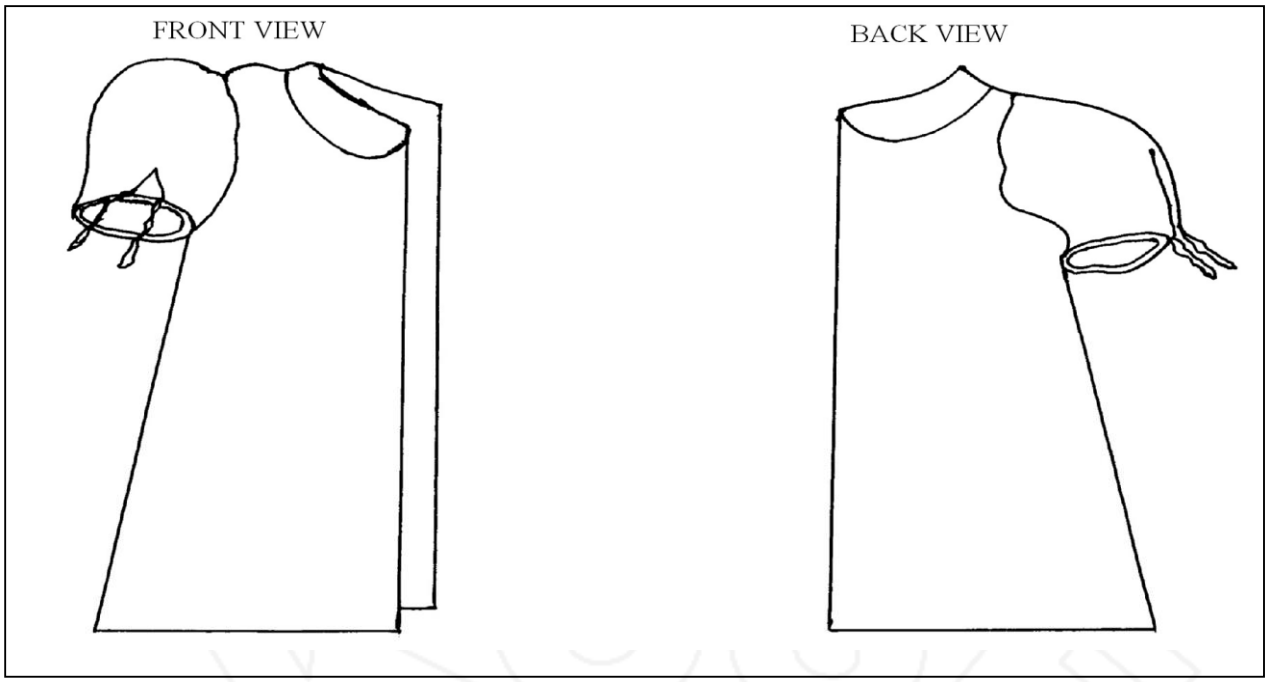
THE TEST

Using the material provided, cut out and make the LEFT HALF of a child's dress to show the following processes;

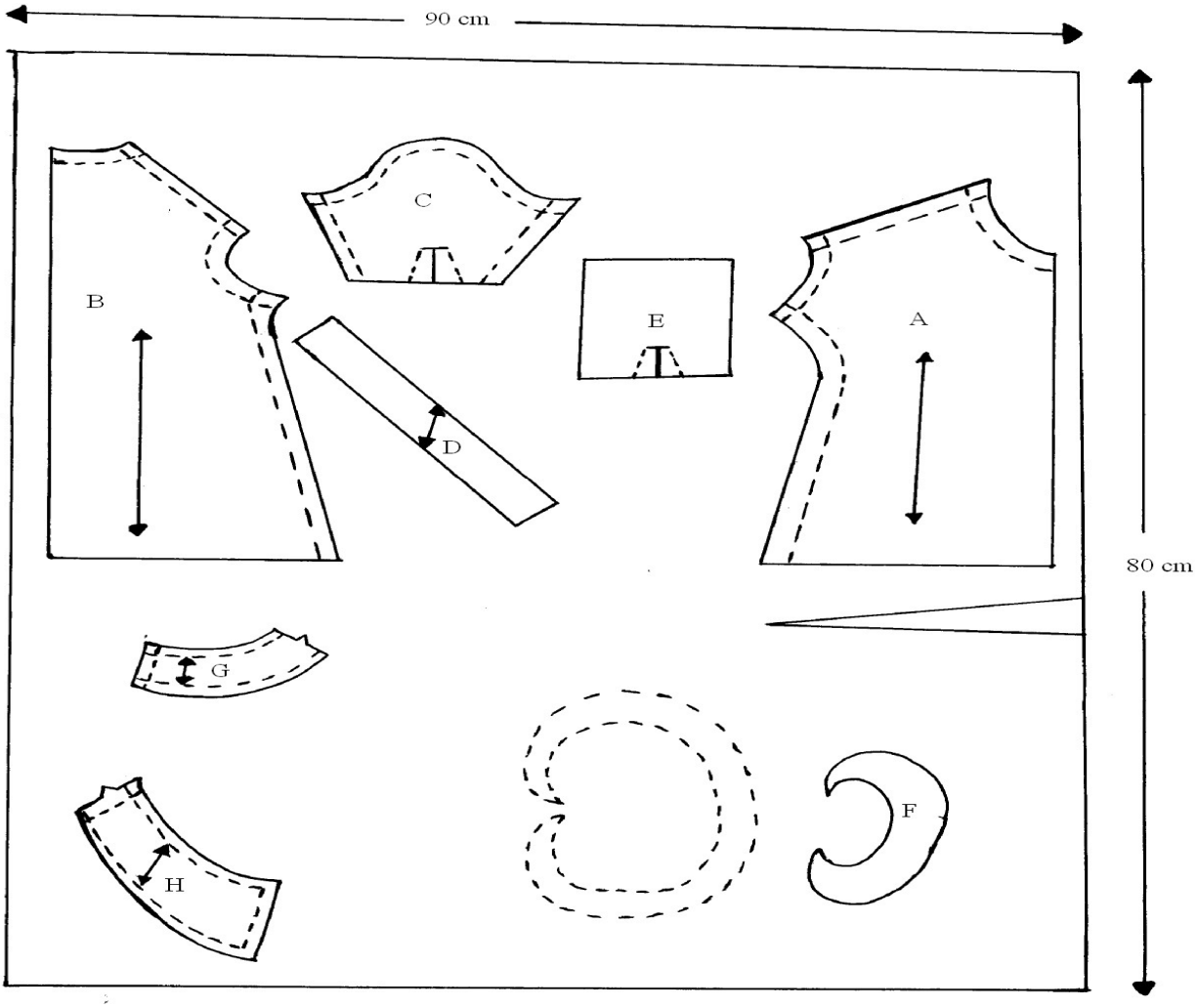
a) Joining of the shoulder seam using a double stitched seam
b) Joining of side seam using a French seam
c) Joining off the front and back neck facing and neatening the free edge
d) Preparation and attachment of an interfaced collar using the facings
e) Preparation of the sleeve:
    i) Making the opening
    ii) Joining of the veteran seam using a French seam
    iii) Attaching the binding and holding it using normal hemming(hem half the binding)
f) Attaching the sleeve onto the garment
g) Neatening half the armhole by overcastting.

At the end of the examination, firmly sew J on your work on a single fabric, a label bearing your name and index number. Remove needles and pins from your work then fold neatly and place it in the envelope provided. Do not pit scraps of fabric in the envelope.

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THE LAYOUT NOT DRAWN TO SCALE



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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

314/1

ISLAMIC RELIGIOUS EDUCATION

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

Instructions to candidates

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

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

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

(d) Answer any five questions on a separate answer sheet.

(e) Candidates should answer the questions in English.

FOR EXAMINER'S USE ONLY

QUESTION	1	2	3	4	5	6	TOTAL SCORE
CANDIDATE'S SCORE							

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1. (a) Explain SEVEN reasons why the Quran was revealed in portions**.** **(7 Marks)**

(b) Discuss the role of Angel Jibril in the revelation of the Quran**.** **(8 Marks)**

(c) State FIVE benefits for the introduction of diacritical marks in the Quran**.** **(5 Marks)**

2. (a) Explain the teachings of *Surah Asr***.** **(5 Marks)**

(b) Discuss the vices condemned in *Surah Hujra't*. **(8 Marks)**

(c) Identify the features of the *'Madani Surahs'***.** **(7 Marks)**

3. (a) The Prophet (saw) is reported to have said*: "...Do not envy one another..."* Based on the above Hadith, explain how Muslims can reduce the effects of envy in the society. **(7 Marks)**

(b) Discuss the rules Imam Bukhari formulated in the collection and recording of the Hadith. **(8 Marks)**

(c) Give the themes mentioned in *'al-Muwatta'* of *Imam Malik*. **(5 Marks)**

4. (a) Explain the *'Ahka'm Shariah'* which a *'Mukallaf'* is obliged to observe**.** **(8 Marks)**

(b) Discuss the rules of evidence that must be presented in the ruling of 'Theft'**(7 Marks)**

(c) Mention FIVE forms of punishment in *'Ta'zeer'* in Islamic penal code. **(5 Marks)**

5. (a) Describe the contribution of Imam *Ahmad ibn Hambal* in *Fiqh***.** **(5 Marks)**

(b) Explain the rights of the people in Islam. **(8 Marks)**

(c) Outline the importance of *'Shaha'dah'* to the Muslims**.** **(7 Marks)**

6. (a) Discuss the THREE types of *'SHIRK'* in Islam**.** **(9 Marks)**

(b) Explain the qualities of an Imam according to the *Shiah doctrine*. **(6 Marks)**

(c) State the stages people will undergo during *'Qiyamah'* after the second trumpet. **(5 Marks)**

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KCSE 2024 TOPGRADE PREDICTION

(CONFIDENTIAL EXAM)

314/2

ISLAMIC RELIGIOUS EDUCATION

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

Instructions to candidates

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

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

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

(d) Answer any five questions on a separate answer sheet.

(e) Candidates should answer the questions in English.

FOR EXAMINER'S USE ONLY

QUESTION	1	2	3	4	5	6	CANDIDATE'S TOTAL SCORE
CANDIDATE'S SCORE							

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1. (a) Identify problems faced by families living with HIV/AIDS? **(6 marks)**

(b) Discuss Islamic teachings on a muslim home? **(8 marks)**

(c) Name some prohibited foods and drinks in Islam? **(6 marks)**

2. (a) State the rules observed in eddah? **(5 marks)**

(b) Explain the types of talaq? **(9 marks)**

(c) Outline the teachings on the treatment of the disabled? **(6marks)**

3. (a) State how Islam encourages chastity? **(6 marks)**

(b) Discuss how a muslim can show respect for life today? **(14 marks)**

4. (a) List the significance of the medina constitution? **(5 marks)**

(b) Explain the contribution of Ali bin Abi Twalib during the prophet' p.b.u.h time? (10 marks)

(c) Give the lessons learnt in the migration to Abysinia? **(5 marks)**

5. (a) Give reasons why the coastal people were against the Portuguese? **(5 marks)**

(b) Explain the roles of the city states in East Africa? (10 marks)

(c) What facilitated the spread of Islam in East Africa? **(5 marks)**

6. (a) Outline the achievements of the Umayad dynasty? **(6 marks)**

(b) Give a brief biography of Uthman Dan Fodio? **(14 marks)**

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POLITE NOTE:

TO ALL KCSE 2024 CANDIDATES;

Incase a Significant Number of these Questions Appear in KCSE Exam, Don't panic!

TAKE IT EASY

FOR MARKING SCHEMES CONTACT

0746 222 000

0742 999 000

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