CROSS-COUNTRY 2024 MOCK

KCSE 2024 SERIES 1

ALL SUBJECTS

A Joint Cross-country Examination Trial for KCSE 2024 Candidates amongst selected Top Performing National & Exytra-County Schools in the whole Republic of Kenya.

SUBJECTS TESTED;

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

For Marking Schemes

Mr Isaboke 0746 222 000 / 0742 999 000

MWALIMU CONSULTANCY

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

231/1

BIOLOGY

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 Number in the spaces provided.*

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

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

(d) *Wrong spelling especially of technical terms will be penalized.*

FOR EXAMINER'S USE ONLY.

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-25	80	

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

1. a) Photosynthesis takes place in two stages. Name the part of the chloroplast where the light stage occurs. **(1mark)**

……

b) How is the dark stage dependent on the light stage of photosynthesis **(2marks)**

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2. a) Name the enzyme that speeds up transport of Carbon (IV) Oxide in the red blood cells. **(1 mark)**

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b) Explain the role of haemoglobin in transport of Carbon (IV) Oxide in the body. **(2 marks)**

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3. a) Explain why excessive use of pesticides in the soil lowers concentration of nitrates. **(1 mark)**

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b) It has been observed that 1000 wild animals including giraffes, Lions, zebras and hyenas can occupy 10 acres of land without depletion of the available food. However, 1000 cattle will deplete the available resources in the same piece of land. Explain. **(2 marks)**

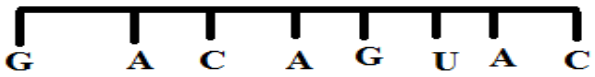
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4. The illustration below represents the base sequence of a section of a nucleic acid.



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a) i) Identify the nucleic acid whose section is represented by the illustration. **(1 mark)**

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ii) Give a reason for your answer in (a) (i). **(1 mark)**

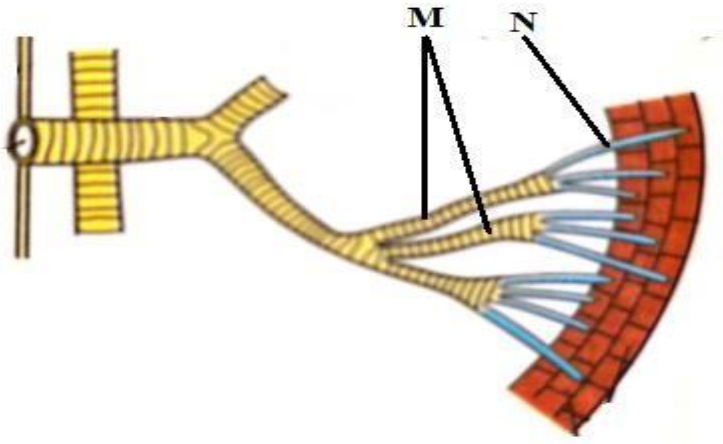
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b) Name the part of the cell where the section of the nucleic acid shown would be used. **(1 mark)**

……

5. The diagram below shows part of the gaseous exchange system of a given animal.



a) What is the importance of the bands of chitin observed in the part labelled M? **(1 mark)**

……

……

b) How is the part labelled N adapted to it`s function. **(2marks)**

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6. The paddles of a whale and the fins of fish are both used for swimming in water.

a) i) Name the evolutionary phenomenon that may have given rise to the two structures. **(1 mark)**

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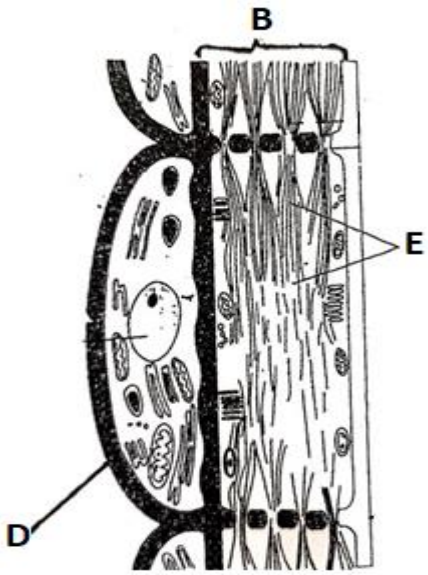
ii) What name is given to such structures? **(1 mark)**

……

b) Give **one** example of a vestigial structure in human beings. **(1 mark)**

……

7. Below is a diagram of a plant tissue. Use it to answer the questions that follow.



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

……

b) Name the specialized cell marked **B**. **(1 mark)**

……

c) Explain how the parts labelled **D** and **E** adapt the tissue to their functions. **(2 marks)**

D .....

.....

E .....

.....

8. State the functions of the following parts of a tooth.

i) Enamel. **(1 mark)**

……

……

ii) Pulp cavity. **(1 mark)**

……

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9. State and explain what happens to the thigh muscles in case of oxygen debt when one is running. **(2marks)**

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10. a) Name the method by which the following excretory products are removed from plants.

i) Excess water..... **(1 mark)**

ii) Carbon (IV) Oxide from respiration..... **(1 mark)**

b) Identify the plant excretory product obtained from raw paw paw fruits and used as a meat tenderizer. **(1 mark)**

……

11. An experiment was carried out to study the effect of pH on hydrolysis of starch by saliva. The results are shown in the table below.

Test tube	pH	Time taken (Min)
1	8	1
2	7	4
3	6.5	12
4	6	10
5	3	

a) At what PH value was hydrolysis of starch most rapid? **(1 mark)**

……

b) What is likely to be the time taken to hydrolyse starch in test tube 5. **(1mark)**

……

c) Starch is hydrolysed by Ptyalin present in the saliva. Explain why the activity of ptyalin stops in the stomach. **(2marks)**

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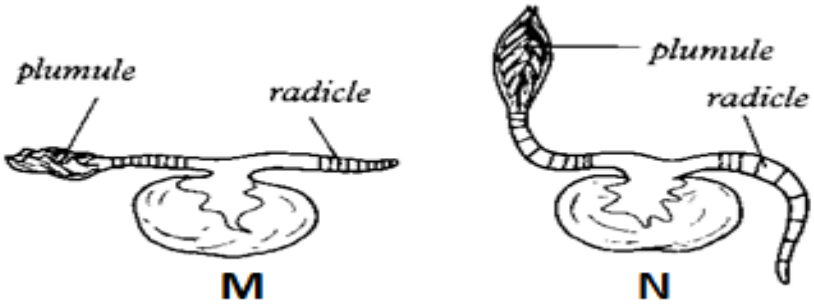
12. Explain how the human sperm cell is structurally adapted to perform its function. **(2marks)**

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13. In an experiment, a seedling was placed in a horizontal position as shown if figure **M** below.After 48 hours, the set up was as shown in figure **N**.



a) Name the response exhibited by the radicle of the seedling. **(1 mark)**

……

b) Explain how the plumule formed a curvature upwards**.** **(3 marks)**

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14. a) If fruit flies with broad abdomens were crossed with those having narrow abdomens, all the offspring in F1 generation had broad abdomens. Using letter **A** to represent the gene for abdomen size, write the genotypes of the parents. **(2 marks)**

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b) In the F2 generation, 150 fruit flies had narrow abdomens. How many fruit flies with broad abdomen were in the same generation? (Show your working) **(2 marks)**

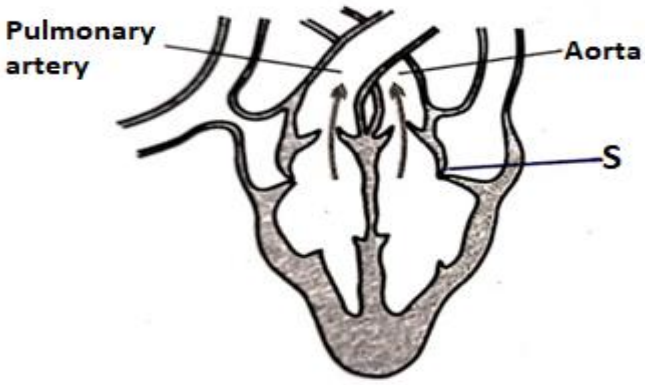
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15. The diagram below shows a state of the mammalian heart during a heartbeat.



a) i) Identify the stage of the heart beat cycle illustrated in the diagram. **(1 mark)**

……

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

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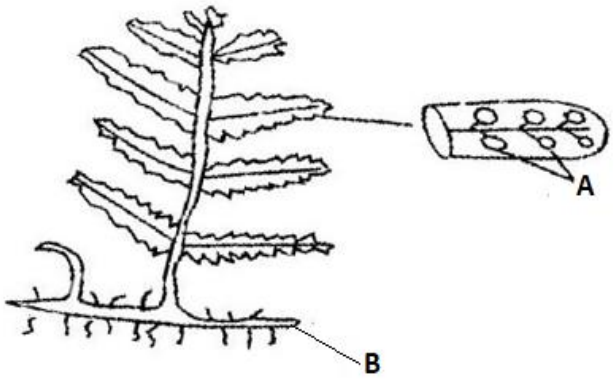
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b) Name the valve labelled **S**. **(1 mark)**

……

16. The diagram below represents a fern plant.



a) To which division does the plant belong? **(1 mark)**

……

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

A……

B……

c) Give **two** differences between a fern plant and a moss plant. **(2 marks)**

Fern plant	Moss plant

17. During germination of seeds, there is production of heat.

a) Name the process that leads to heat production in the seeds. **(1 mark)**

……

b) Describe how heat is produced by germinating seeds. **(3 marks)**

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18. Below are photographs of plants taken at different times of the day.



6:00 am



12:00 pm

a) Give a term used to describe the nature of cells obtained from the plant at:

i) At 6.00am **(1 mark)**

……

ii) At 12.00pm **(1 mark)**

……

b) Explain the significance of drooping of leaves in plants**.** **(2 marks)**

……

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c) Name the tissue that provides support in herbaceous plants. **(1 mark)**

……

19. a) Apart from protection of underlying tissues, give **two** other functions of the mammalian skin.

(2 marks)

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b) Explain what makes the cornified layer of the skin to offer protection against mechanical injury. **(1 mark)**

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20. Name **two** mechanisms that hinder self-fertilization in flowering plants. **(2 marks)**

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21. Explain why growing grass dies a few days after salt is sprinkled on it. **(2 marks)**

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22. List **three** differences between the nervous system and endocrine system. **(3 marks)**

Nervous system	Endocrine system

23. Name the tissue in plants that carries out the following functions:

a) Leads to primary growth. **(1 mark)**

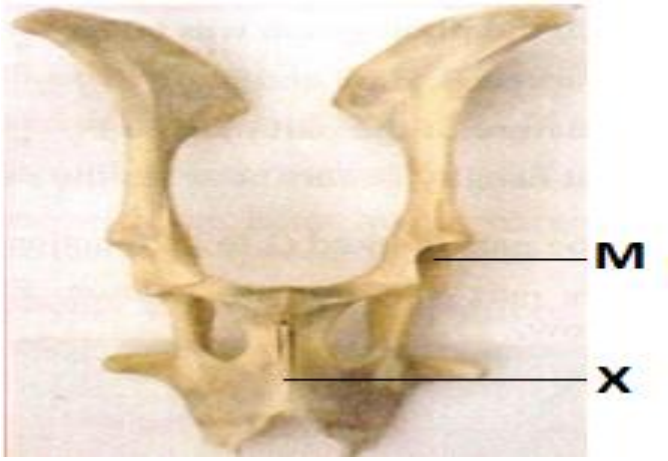
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b) Manufacture of food. **(1 mark)**

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24. The diagram below represents a mammalian bone from the appendicular skeleton.



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

……

b) State the function of the part labelled **M**. **(1 mark)**

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c) Explain how the part labelled **X** is adapted to its function. **(2 marks)**

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25. Give **three** functions of diffusion in living organisms. **(3marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

231/2

BIOLOGY

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 above.*
2. *This paper consists of two sections: **A** and **B**. Answer **ALL** questions in section **A** in the spaces provided. In section B, answer question 6 (compulsory) and either question 7 or 8 in the spaces provided after question 8.*

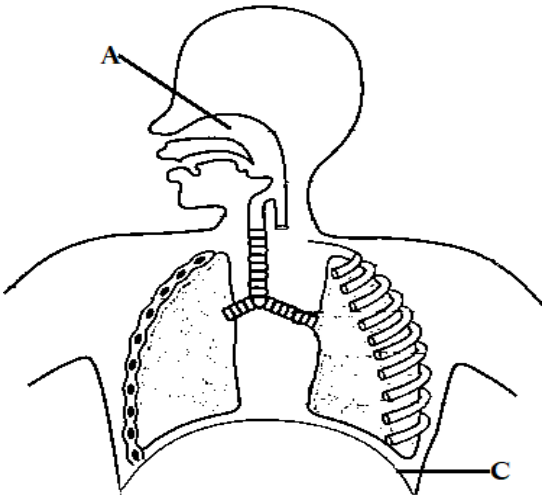
FOR EXAMINERS' USE ONLY

QUESTION	1	2	3	4	5	6	7	8	TOTAL
MAXIMUM SCORE	8	8	8	8	8	20	20	20	80
CANDIDATE'S SCORE									

SECTION A (40MARKS)

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

1. The diagram below represents the human respiratory system.



a) How is structure labelled **A** adapted to its function? **(4 marks)**

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b) What would be the effect of contractions of the muscles of the structure labelled C during breathing in. **(3 marks)**

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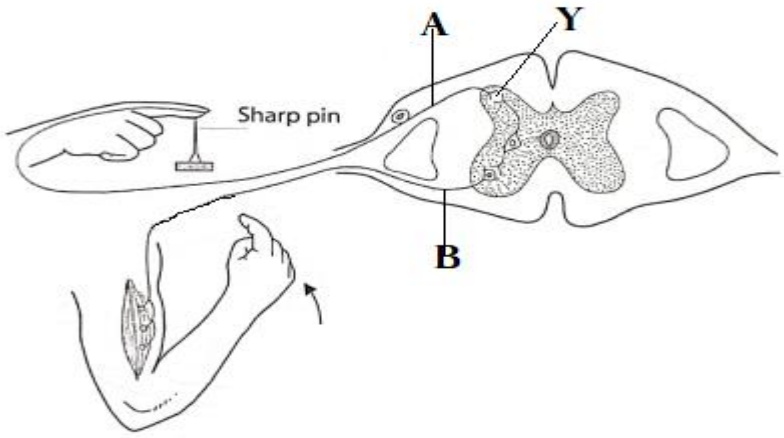
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c) Give the scientific name of the organism that causes whooping cough? **(1 marks)**

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2. The diagram below represents a section of the spinal cord.



a) State ***one*** structural and functional differences between **A** and **B**. **(2 marks)**

Structural

……

……

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Functional

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b) State ***three*** differences between a simple and a conditioned reflex? **(3 marks)**

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c) Explain how an impulse is transmitted across region **Y**? **(3 marks)**

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3. Form 3 students were assigned to study a particular ecosystem around the school.

a) Distinguish between an ecosystem and ecological niche. **(2 marks)**

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b) Name a suitable method they would have used to estimate the population of wild animals. **(1 marks)**

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c) State ***three*** methods which could be used to determine the diet of the wild animals. **(3 marks)**

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d) Name biotic factors that could have regulated the animal population? **(2 marks)**

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4. a) How is sex in humans determined. **(3 marks)**

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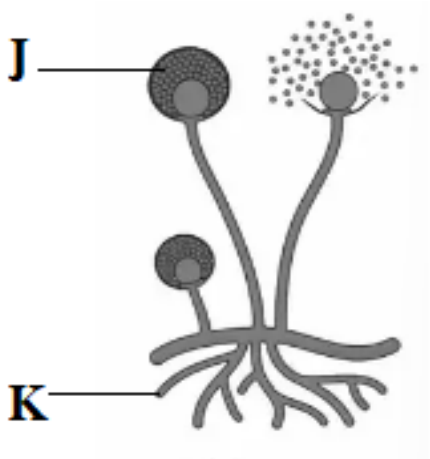
b) In human, hairy ears is controlled by a gene on the Y chromosome. Using letter Y^H to represent the chromosomes carrying the gene for hairy ears, work out a cross between a hairy eared man and his wife. **(4 marks)**

c) Girls will not display hairy ears, explain. **(1 mark)**

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5. The diagram below illustrates the structure of bread mould.



a) State the function of the structure labelled K. **(2 marks)**

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b) Describe the mode of reproduction. **(5 marks)**

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c) State any ***one*** economic importance of members of this kingdom **(1 mark)**

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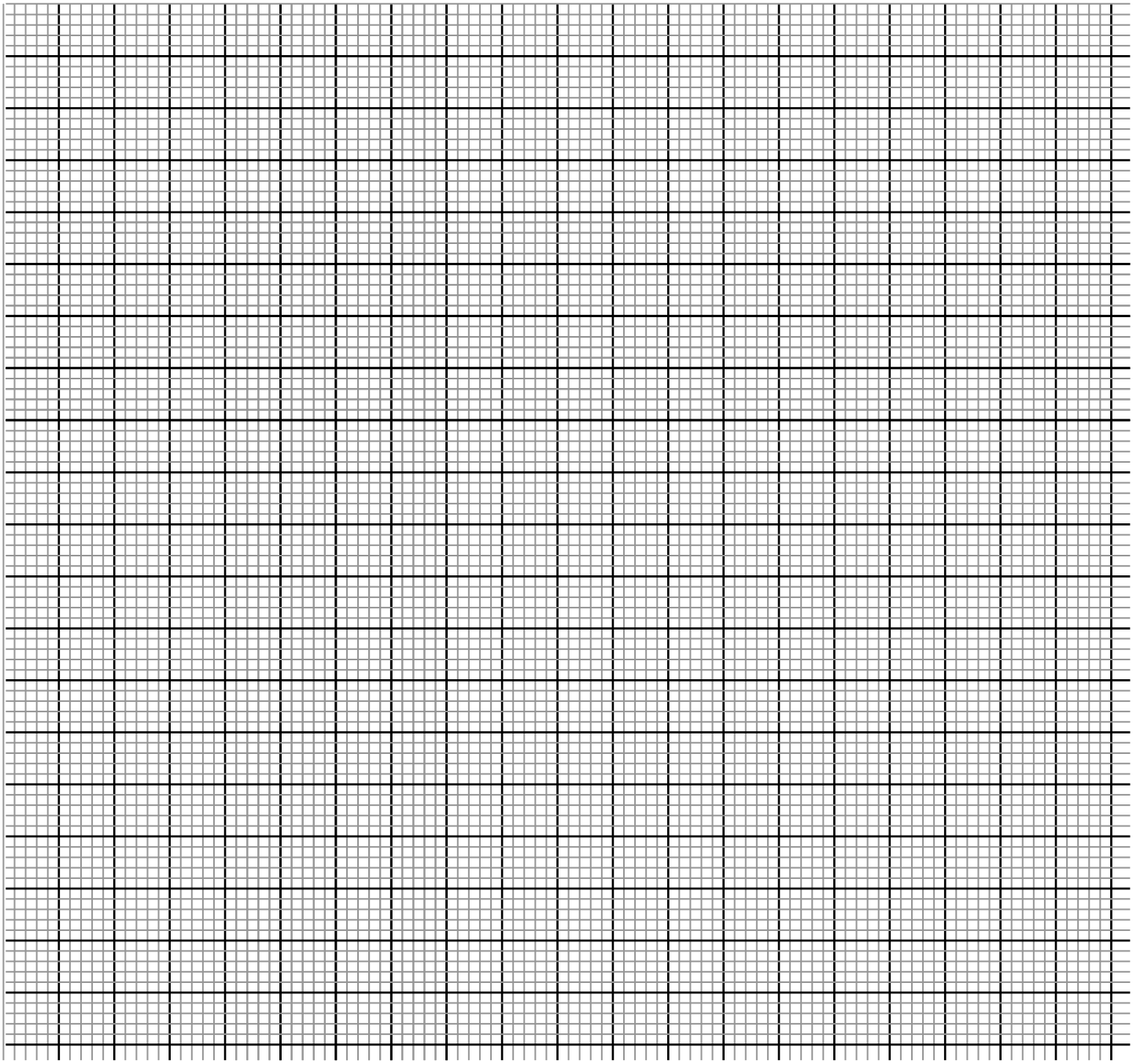
SECTION B

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

6. In an experiment carried out in a tropical country, carbon (IV) oxide concentration was measured around a plant in an open air at two hours in travels for a period of 24 hours. The results were as shown in the table below.

Time	**%of co2 concentration($x10^{-2}$)**
3am	3.40
5am	3.60
7am	3.90
9am	3.20
11am	2.95
1pm	2.90
3pm	2.90
5pm	2.92
7pm	3.02
9pm	3.10
11pm	3.20
1 am	3.30
3 am	3.40

a) Plot a graph of % carbon (IV) oxide concentration against time on the grid provided. **(5 marks)**



b) Calculate the rate of change in CO_2 concentration between 4 a.m. and 7 a.m. **(2 marks)**

c) Give a reason for the change in CO_2 concentration between:-

i) 7 a.m. to 11a.m **(2 marks)**

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ii) 12 noon to 4 p.m. **(2 marks)**

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iii) 5p.m. and 5 a.m. **(3 marks)**

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d) With reasons identify ***three*** environmental factors that are likely to affect the results. **(6 marks)**

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7. Describe how the male reproductive system is adapted to perform its functions. **(20 marks)**

8. Explain the role of the following hormones in growth and development:

(a) (i) Indole acetic acid. **(5 marks)**

(ii) Gibberellin. **(5 marks)**

(iii) Cytokinnin. **(5 marks)**

(b) Describe role of hormones in insect metamorphosis. **(5 marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

231/3

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

CONFIDENTIAL

1. Each candidate should be supplied with the following

(i) 3 test tubes in test tube rack.

(ii) Iodine solution – supplied with a dropper

(iii) Adequate distilled water

(iv) Benedicts solution– supplied with a dropper

(v) Means of heating

(vi) 10% Sodium Hydroxide– supplied with a dropper

(vii) 1% Copper (II) Sulphate– supplied with a dropper

(viii) DCPIP– supplied with a dropper

(ix) $12cm^3$ of solution M in a boiling tube labeled as **solution M solution M is prepared by mixing starch and egg albumen.**

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

231/3

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

- *Write your Name, Class and Adm No. in the spaces provided above*
- *Answer ALL the questions in the spaces provided*
- *You are required to spend the first **15 minutes** of the **1 ¾ hours** reading the whole paper carefully before commencing your work.*
- *Candidates should answer the questions in English*

FOR EXAMINERS USE ONLY

Question	Maximum score	Candidate's score
1	16	
2	11	
3	13	
Total Score	40.	

1. You are provided with a suspension labelled M.

a) Using the reagents provided only, test for the food substances present in the suspension. In the table below, record the food tested, procedure, observation and conclusions. **12 marks.**

Food TEST	Procedure	Observation	Conclusion

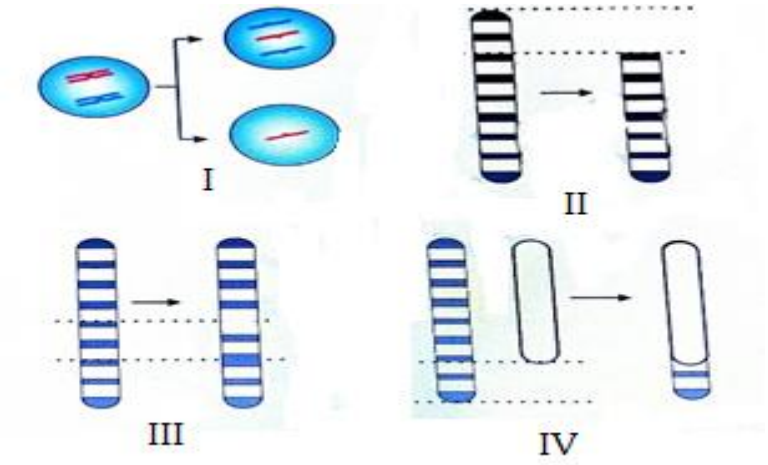
b) Name two enzymes that may be required to digest suspension M in the alimentary canal in human. **(2mark)**

c) State role of the following in the experiment. **(2marks)**

(i) Sodium hydrogen carbonate

(ii) Dilute hydrochloric acid

2. Experimental evidence shows that most mutations results to variations among organisms. The illustrations I, II, III and IV below show different possible types of chromosome mutations. Study them keenly.



a) Identify the types of chromosome mutations illustrated. **(4 marks)**

Illustration	**Name of mutation**
I	
II	
III	
IV	

b) State the effect of the mutation illustrated in III**.** **(1 mark)**

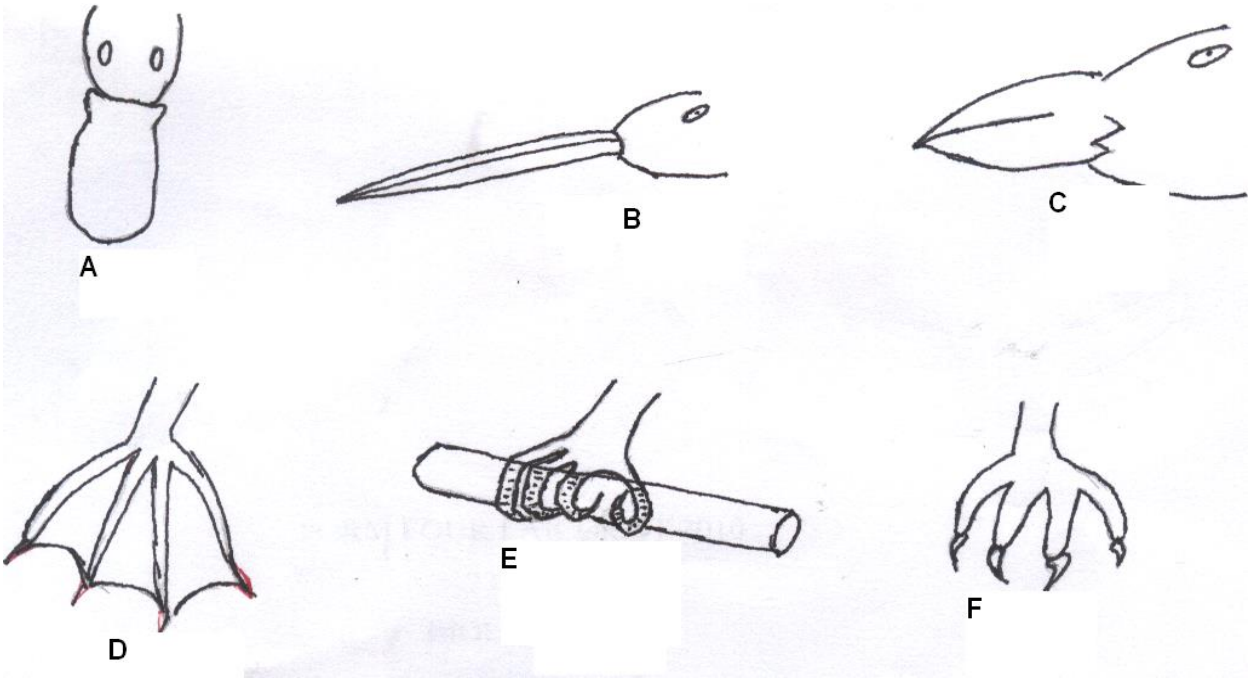
c) In most cases, the mutation in II could be lethal. Explain**.** **(2 marks)**

d) During which stage of mitosis does the mutation in I above occur**?** **(1 mark)**

e) i) Define a **mutation** **(1 mark)**

ii) Give two possible environmental mutagens. **(2marks)**

3. The diagrams below represent body parts of some organisms (animals). Study them and answer the question that follow



a. (i) Suggest the type of food eaten by organisms with the parts labeled **A, B, C and F (4mks)**

	Food	**Reason**
A		
B		
C		
F		

(ii) With reasons, suggest the likely habitat of the organism from which the parts labeled D and E were obtained **(4mks)**

Part	**Habitat**	**Reason**
D		
E		

b. (i) Suggest the type of evolution that is exemplified by the organisms labeled D, E and F. Give reason for your answer.

The type of **evolution** **(2mks)**

Reason

(ii) Suggest the significance of the above named type of evolution for the organism **(1mk)**

c. (i) Explain briefly the meaning of analogous **structures** **(1mk)**

(ii) Give one example of analogous structure **(1mk)**

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

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 number*** *in the spaces provided above.*

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

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

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

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

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

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's score
1-27	80	

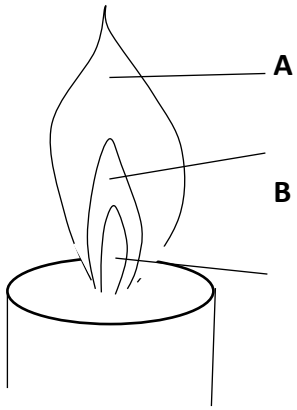
1. State **two** laboratory rules that should be followed to avoid contamination and wastage of chemicals. **(2 marks)**

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2. The figure below shows a flame obtained from a Bunsen burner.



(a) Name the type of flame. **(1 mark)**

……

(b) A matchstick head placed at region C will not ignite. Explain. **(1 mark)**

……

……

(c) Name region **A**. **(1 mark)**

……

3. In the last stage of the Solvay process a mixture of sodium hydrogen carbonate and ammonium chloride is formed.

a) State the method of separation used. **(1 mark)**

……

b) Write an equation showing how lime is slaked. **(1 mark)**

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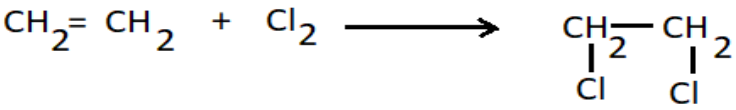
c) Name the by - products recycled in the above process. **(1 mark)**

……

4. The following is a list of bond energies.

Bond	Energy kJ/mol
C – C	348
C = C	612
Cl – Cl	242
C – Cl	338

Calculate the enthalpy change for the following reaction. **(3 marks)**



……

……

……

5. The equation below represents an equilibrium between chromate ions Cr_4O^{2-} and dichromate ions $Cr_2O_7^{2-}$

$$2Cr_4O^{2-}_{(aq)} + 2H^+_{(aq)} \rightleftharpoons Cr_2O_7^{2-}{}_{(aq)} + H_2O_{(l)}$$

Yellow Orange

State what would happen to the position of the equilibrium reaction if dilute sodium hydroxide solution is added to the mixture. Give a reason for your answer**.** **(2 marks)**

……

……

……

6. The table below gives some physical properties of substances D, E and F. Study it and answer the questions that follow;

Substance	M.P (ºC)	Solubility in water	Electrical conductivity	
			Solid	Liquid
D	3700	Insoluble	Non conductor	Non-conductor
E	801	Soluble	Non conductor	Conductor
F	1083	Insoluble	Conducts	Conducts

Identify the substance that has ;

(i) Giant atomic structure **(1 mark)**

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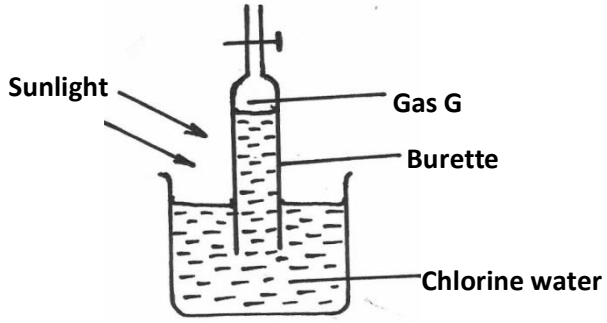
(ii) Giant Ionic structure **(1 mark)**

……

(iii) Metallic bonding **(1 mark)**

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7. An experiment was set up using chlorine water as shown below;



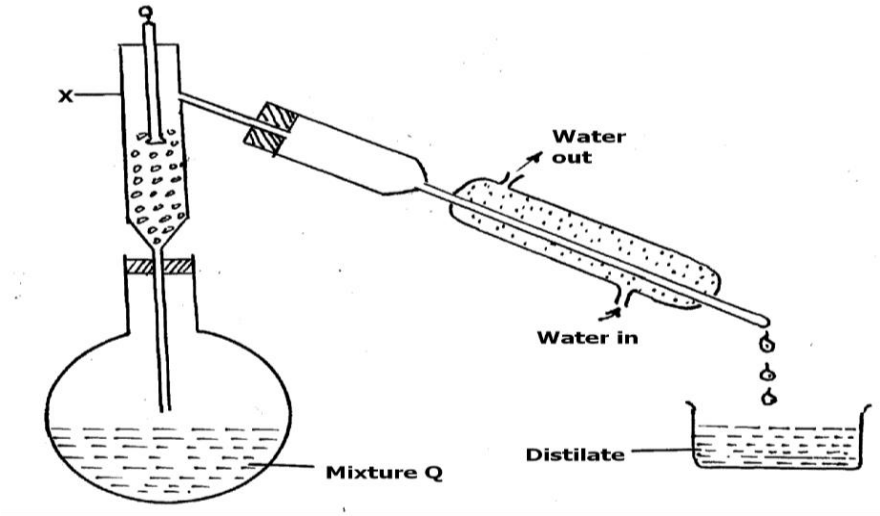
(i) Identify gas G **(1 mark)**

……

(ii) Write an equation for the production of gas G **(1 mark)**

……

8. Study the diagram below and answer the questions that follow. The diagram shows the method of separating components of mixture Q.



(a) Name the part labelled X. **(1mark)**

……

(b) State what would happen if the water inlet and water outlet in the Liebig's condenser is interchanged. **(1mark)**

……

……

9. Element **J** with atomic number 12 and **L** with atomic number 9.

(a) To which chemical family is; **(2 marks)**

J - ……

L - ……

(b) Write the equation for the reaction between **J** and **L**. **(1 mark)**

……

10. Carbon and silicon are group IV elements. At room temperature, carbon (IV) oxide exists as a gas while silicon (IV) oxide exists as a solid. Explain this observation in terms of structure and bonding. **(2 marks)**

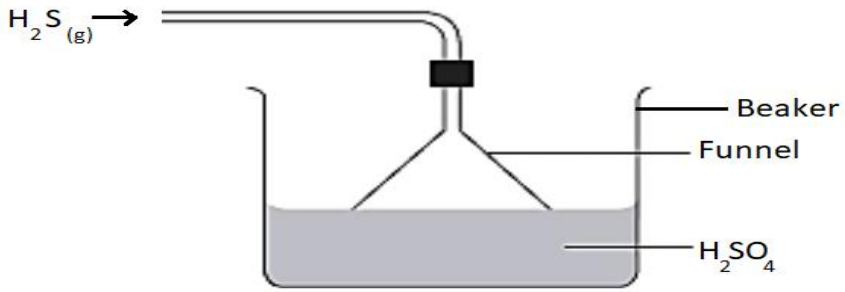
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11. Study the diagram below and answer the questions that follow.



(a) Give the observation made in the beaker. **(1 mark)**

……

……

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

……

……

(c) Give one reason why the gas is directed into the beaker using the inverted funnel as above? **(1 mark)**

……

……

12. a) Define solubility**.** **(1 mark)**

……

……

b) The following results were obtained during an experiment to determine solubility of solid M at 25^0C;

Mass of evaporating dish = 45.0g

Mass of evaporating dish + saturated solution = 59.0g

Mass of evaporating dish + dry solid B = 53.0g

Calculate the solubility of B at 25^0C. **(2 marks)**

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……

13. When a hydrocarbon was completely burnt in oxygen, 4.2g of carbon(IV)oxide and 1.71g of water were formed. Determine the molecular formula of the hydrocarbon given that its relative molecular mass is 42. (H = 1.0, C = 12.0, O = 16.0) **(3 marks)**

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14. A mixture of magnesium powder and lead (II) oxide reacts vigorously to form a white residue when heated, but no reaction is observed when a mixture of magnesium oxide and lead powder is heated.

a) Explain this observation. **(2 marks)**

……

……

……

b) Write a chemical equation for the reaction of magnesium powder and lead (II) oxide **(1 mark)**

……

c) **In** the reaction above, identify:

The reducing **agent** **(1 mark)**

……

The oxidized **species** **(1 mark)**

……

15. During laboratory preparation of ethane gas, solid N was mixed with soda lime and heated .

a) Identify solid N. (1 mark)

……

b) Give one reason why soda lime is preferred to pure sodium hydroxide pellets in this experiment.

(1 mark)

……

……

c) State one use of ethane gas**.** **(1 mark)**

……

……

16. (a) State Graham's law of diffusion. **(1 mark)**

……

……

(b) $20cm^3$ of hydrogen chloride gas diffuses through a porous pot in 20seconds. How long would it take $40cm^3$ of Sulphur (IV) oxide gas to diffuse through the same pot under the same conditions (H =1 Cl = 35.5 S = 32 O =16**)** **(2 marks)**

……

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……

17. a) When gases are required dry, they are collected after passing them through a drying agent. Identify the suitable drying agents for the following gases; **(2 marks)**

GAS	**SUITABLE DRYING AGENT**
Ammonia	
Hydrogen sulphide	

b) State one use of ammonia. **(1 mark)**

……

……

18. Describe how to experimentally separate a mixture of lead(II)chloride and zinc carbonate.

(2 marks)

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19. Using dots(.) and crosses (x) show how magnesium combines with oxygen to form magnesium oxide. (Mg = 12, O = 8) **(2 marks)**

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20. Equal masses of liquid dinitrogen tetraoxide and liquid ammonia are warmed to form gases independently at room temperature and pressure. State and explain the gas which will occupy greater volume. (N = 14, H = 1, O = 16) **(2 marks)**

……

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……

……

21. a) Define allotropy. **(1 mark)**

……

……

b) Name the allotropes of sulphur**.** **(1 mark)**

……

……

c) Which allotrope of carbon conducts electricity**.** **(1 mark)**

……

22. The structures below represent two cleansing agents: U and V

U : $R - COO^- Na^+$

V : $R - OSO_3^- Na^+$

a) Identify the class of cleansing agents to which U belongs. **(1 mark)**

……

b) Which cleansing agent is suitable for use with water which contains Ca^{2+} ions? Explain.

(1mark)

……

……

c) State one disadvantage of usage of compound V**.** **(1 mark)**

……

23. Study the table below showing pH of certain solutions and use it to answer the questions that follow;

SOLUTION	pH
S1	13.0
S2	3.0
S3	7.0
S4	8.5

a) In which of the solutions will phenolphthalein be colourless. **(1 mark)**

……

b) Which of the solutions can be used to relieve heart burn? Explain. **(2 marks)**

……

……

……

24. When excess magnesium powder was added to 100 cm^3 of 0.5M copper(II)sulphate solution, the temperature changed from 25^0C to 31^0C.

a) Apart from the rise in temperature, state two other observations made. **(1 mark)**

……

……

b) Calculate the molar heat of displacement for this reaction. (Density of water 1 g/cm^3, specific heat capacity of water = 4.2J/g/K**)** **(2 marks)**

……

……

……

25. The table below gives some properties of gas W and Y.

Gas	Density	Effect on H_2SO_4	Effect on NaOH
W	Lighter than air	React to form salt	Dissolve without reacting
Y	Heavier than air	Not affected	Not affected

(a) Describe how you would obtain a sample of dry gas Y from the mixture of gas W and Y. **(2 marks)**

……

……

……

(b) Suggest a possible identity of gas W. Give reasons for your answer. **(2 marks)**

……

……

……

26. (a) Using an equation show how an electron can be generated from a neutron. **(1 mark)**

……

……

(b) The table below gives the rate of decay of a radioactive element Z.

Number of days	**Mass in g**
0	48.0
270	1.5

Calculate the half-life of the radioactive element Z. **(2 marks)**

……

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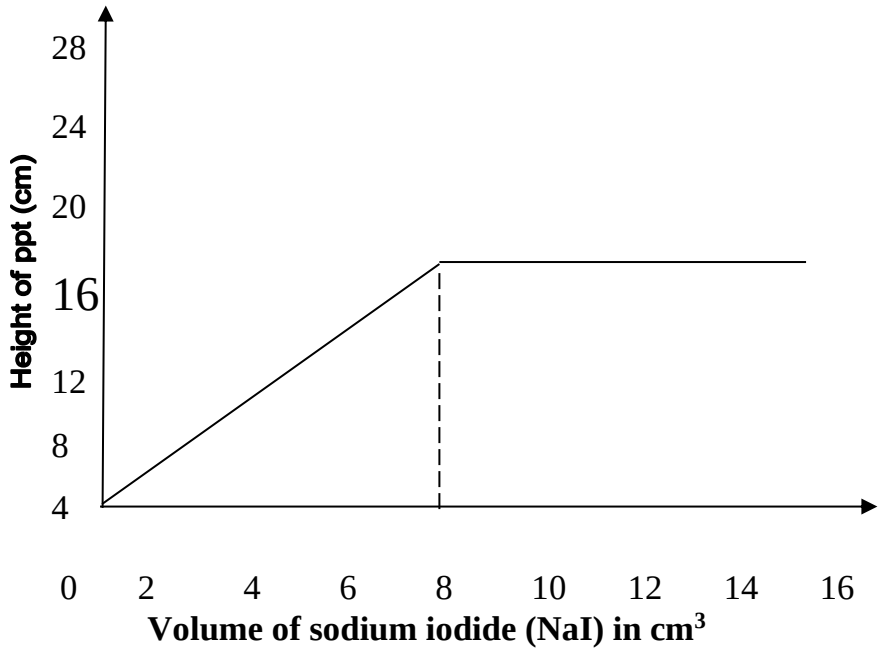
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c) State one application of radioactivity in food industry**.** **(1 marks)**

……

……

27. In an experiment, various volumes of 1M sodium iodide solution were added to the same volume of 1M lead (II) nitrate solution. The heights of the precipitate were measured and plotted against volume of 1M sodium iodide used. The graph below was obtained.



(a) State the observation made when sodium iodide solution is mixed with lead (II) nitrate solution. **(1 mark)**

……

……

(b) What volume of sodium iodide was required to react completely with lead (II) nitrate? Explain. **(1 mark)**

……

……

(c) Explain the shape of the curve. **(1 mark)**

……

……

28. 0.45A of current was passed for 72 minutes during electrolysis of dilute magnesium sulphate solution. Determine the volume of gas produced at the anode**.** (1 F =96 500 coulombs, molar gas volume is 22400 cm^3) **(3 marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

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

3. Answer all the questions in the spaces provided

*4. All working **must** be clearly shown where necessary.*

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's score
1		
2		
3		
4		
5		
6		
7		
TOTAL	80	

1. The grid shown below represents the periodic table. Study it and answer the questions that follow (the letters do not represent actual symbols of the element)

	K							S
G							T	
	H							
L								

a) Which element exists naturally as a; **(2mks)**

i. Diatomic gas

ii. Monoatomic gas

b) Write down the formula for the most stable ion of K and its electronic arrangement. **(1mk)**

c) How do the atomic radii of G and L compare? Explain. **(2mks)**

……

……

……

d) How do the first ionization energies of G and L compare? Explain. **(2mks)**

……

……

……

e) Which two electrons would react most vigorously with each other? **(1mk)**

f) Give an equation for the reaction between the elements you have given in (e) above. **(2mks)**

……

……

g) Which element has the smallest atomic radius? Explain. **(2mks)**

……

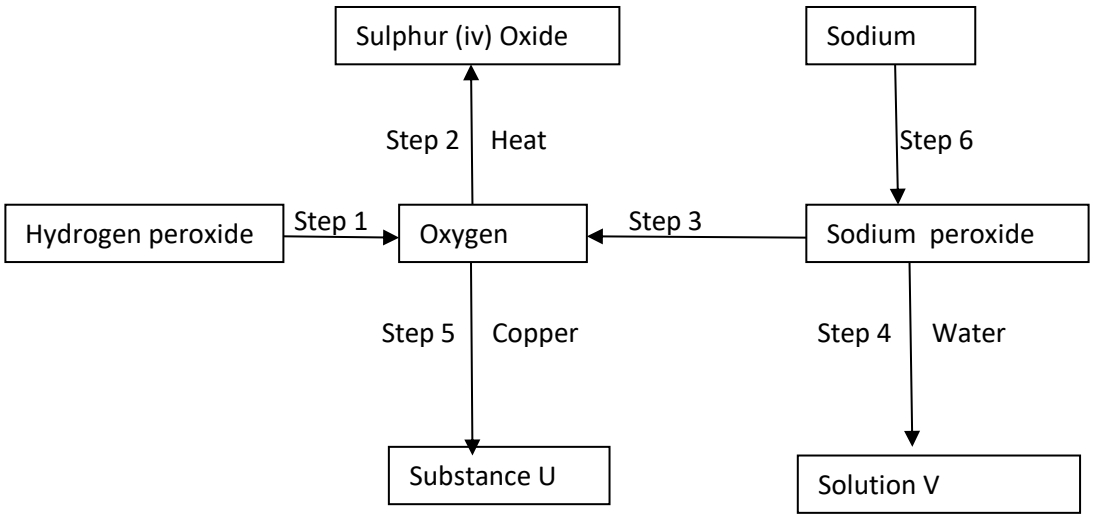
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h) Give the number of valence electrons in; **(2mks)**

i. K

ii. T

2. Study the reaction scheme below and answer the questions that follow.



a) Identify substance U and solution V. **(2mks)**

b) Name the reagents necessary for the reactions in the following steps. **(2mks)**

i. Step 1

ii. Step 2

iii. Step 3

iv. Step 6

c) Give the condition necessary for the reaction in step 5 to take place. **(1mk)**

d) Write equations for the reactions in the following steps. **(3mks)**

i. Step 1

ii. Step 2

iii. Step 5

e) State and explain the observation made in step 5. **(2mks)**

……

……

……

3. The table shows the variation of volumes at different amounts of pressure.

Pressure in atmosphere	10	8	5	2	1
Volume (cm^3)	160	200	320	800	1600
Reciprocal of pressure ($^1/_p$)					

i. Complete the table by determine the reciprocal of pressure. **(2mks)**

ii. Plot a graph of volume against reciprocal of pressure. **(3mks)**

iii. Use the graph to determine the volume of gas P at a pressure of 3.2 atmosphere. **(1mk)**

iv. Calculate the pressure of gas P which has a volume of 5 litres. **(2mks)**

v. A given volume of nitrogen gas requires 68.3 seconds to diffuse through a tinny hole in a chamber. Under the same conditions another unknown gas requires 85.6 seconds for the same volume to diffuse. What is the molecular mass of this gas?(r=14) **(3mks)**

4. In an experiment to determine the molar heat of neutralization of hydrochloric acid with sodium hydroxide, students of Anestar Secondary school reacted $100cm^3$ of 1M hydrochloric acid with $50cm^3$ of 2M sodium hydroxide solution. They obtained the following results.

Initial temperature of acid=25.0^oC

Initial temperature of base = 25.0^oC

Highest temperature reached (acid +alkali mixture) = 34.0^oC

a) Define the term molar heat of neutralization. **(1mk)**

b) Write an ionic equation for the neutralization reaction between hydrochloric acid and sodium hydroxide. **(1mk)**

c) Calculate:

i. The change in temperature($\triangle T$)

ii. The amount of heat produced during the reaction (specific heat capacity = $4.2KJkg^{-1}k^{-}$)

iii. The molar heat of neutralization of sodium hydroxide.

d) Write the thermochemical equation for the reaction. **(1mk)**

e) Draw an energy level diagram for the reaction. **(2mks)**

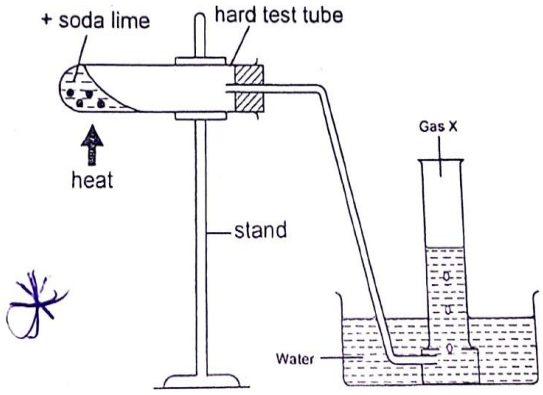
f) Explain why the enthalpy of neutralization of ethanoic acid with sodium hydroxide

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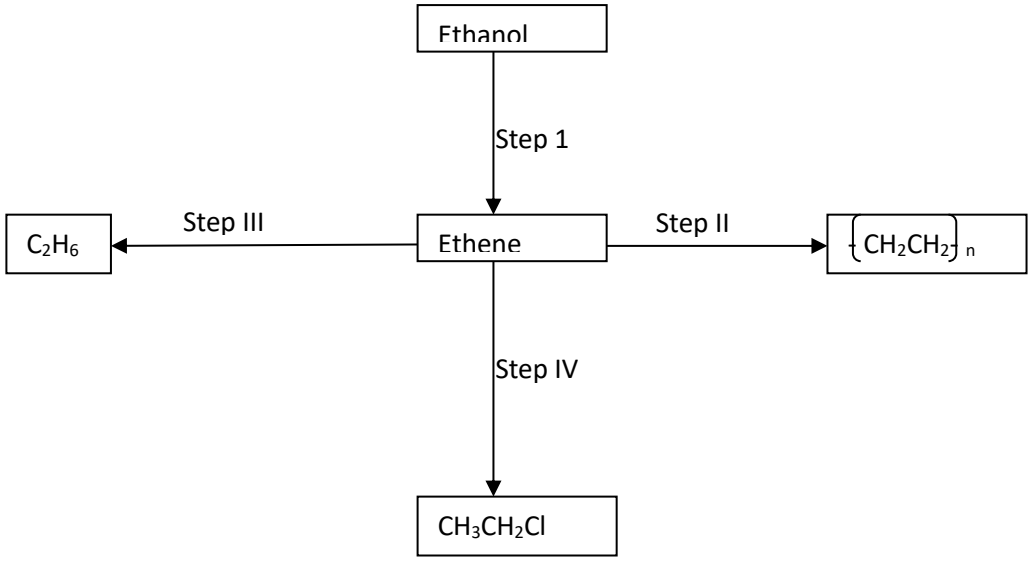
5. a) The diagram below was used to prepare a gas X in the laboratory. Study it answer the questions that follow.



i.Name gas x. **(1mk)**

ii. Write an equation to show the production of gas x. **(1mk)**

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



i.Name the catalyst that is suitable to carry out the reaction in step 1. **(1mk)**

……

ii. Name the process that takes place in step II. **(1mk)**

……

iii. State the conditions necessary for the reaction in step III to occur. **(1mk)**

……

……

iv. Write down the equation for the reaction that takes place in step IV. **(1mk)**

……

c) Other than using burning, describe how you would distinguish between ethane and ethayne.

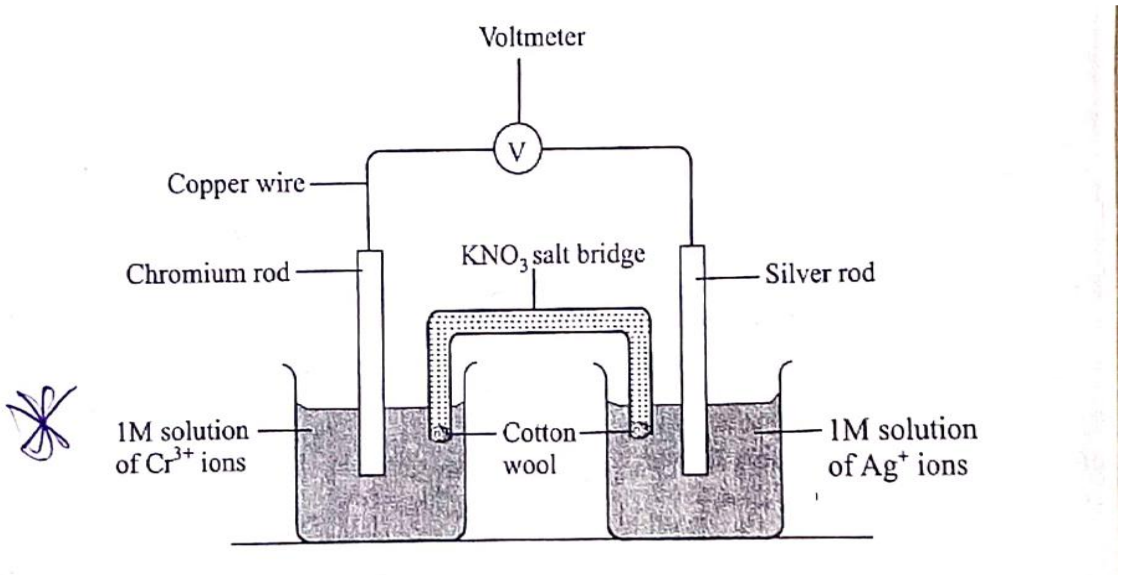
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d) Draw and name all structures of the isomers of the compound with molecular formula C_4H_8. **(3mks)**

6. The diagram below shows a voltaic cell formed between half cells $Cr^{3+}(aq)/Cr(s)$ $E^{\ominus}=+0.80$ Study it and answer the questions that follow.



a) What is the e.m.f of the cell? **(1mk)**

……

……

……

b) State the direction of movement of electrons. **(1mk)**

……

c) Which electrode is the anode? Explain. **(1mk)**

……

……

d) State the half cell in which reduction occurs and give the equation for the reaction. **(2mks)**

……

……

e) What will happen to the electrodes during the operation of the cell? **(2mks)**

……

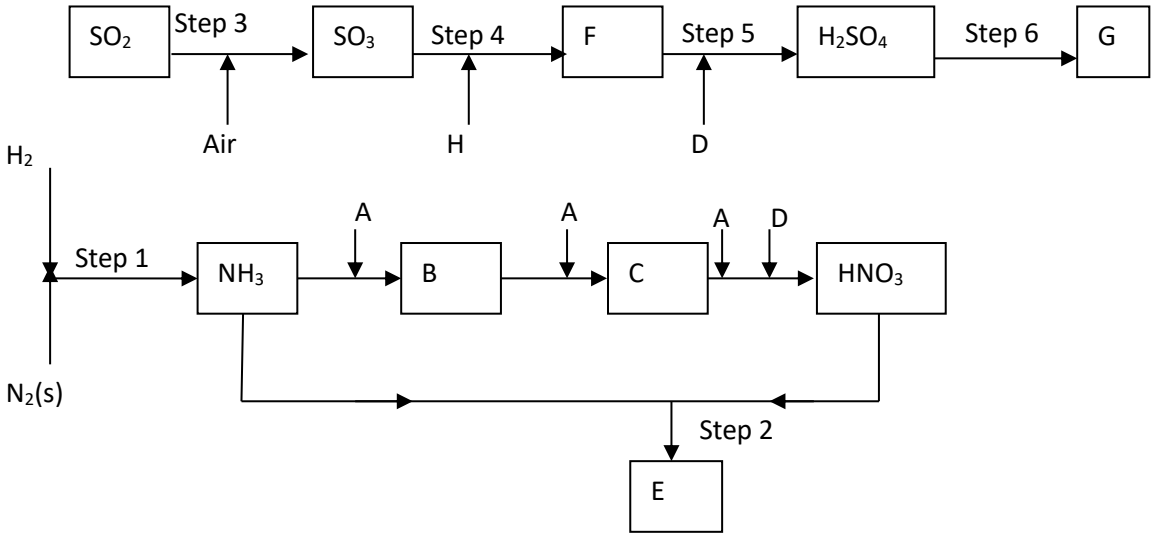
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f) State two function of the salt bridge. **(2mks)**

……

……

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



a) Name substance A,B,D, and F. **(2mks)**

b) Substance E and ammonium sulphate have one common use. State the use. **(1mk)**

c) Name the suitable catalyst in step 3. **(1mk)**

d) Write the chemical equation in step 4. **(1mk)**

e) Identify two gaseous environmental pollutants from the above flow chart. **(1mk)**

f) State the observation when potassium hydroxide is warmed with substance G. **(1mk)**

g) Write a chemical equation where concentrated sulpheric (VI) acid is used as an oxidizing agent. **(2mks)**

h) Write type of reaction is shown in the equation: **(1mk)**

$KNO_3(aq) + H_2SO_4(l) + HNO_3(g)$

i) Carbon (IV) oxide reacts with red hot carbon to produce a colourless gas P. Name gas P and state and explain the precaution you take when preparing this colourless gas P. **(2mks)**

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

233/3

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

SCHOOL…… SIGN……

(Kenya Certificate of Secondary Education)

CONFIDENTIAL INSTRUCTIONS

Instructions to Schools:

The information contained in this paper is to enable the head of the school and the teacher in charge of Chemistry to make adequate preparation for the Chemistry Practical Examination.

NO ONE ELSE should have access to this paper or acquire knowledge of its content. Great care MUST be taken to ensure that the information herein does NOT reach the candidates either directly or indirectly. The teacher in charge of Chemistry should NOT perform any of the experiments in the SAME room as the candidates nor make the results of the experiment available to the candidates of give any information related to the experiments to the candidates. Doing so will constitute an examination irregularity.

REQUIREMENTS FOR CANDIDATES

In addition to fittings, and apparatus found in the chemistry laboratory, each candidate will require:

1. **Solid P** - 4.0 g of accurately weighed ethane-1,2-dioic acid in to stoppered container.
2. 100 cm^3 of **Solution Q** – 0.2M sodium hydroxide solution.
3. About 2g of **Solid T** – a mixture of 1.5 g lead (II) carbonate and 0.5 g copper (II) sulphate.
4. **Liquid U** - 5 ml of ethanol in a stoppered boiling tube.
5. About 0.5g of sodium hydrogen carbonate in a stoppered container.

6. Distilled water in a wash bottle.

7. One 50 cm^3 burette.

8. One 25 cm^3 pipette.

9. One 10 cm^3 measuring cylinder.

10. One empty boiling tube.

11. Six, clean dry test tubes placed in a rack.

12. One thermometer with -10^oC to 110^oC range.

13. One test tube holder.

14. One clean and dry conical flask.

15. A white tile.

16. A watchglass.

ACCESS TO:

1. Phenolphthalein indicator supplied with a dropper.

2. 2M HCl supplied with a dropper.

3. 2M nitric (V) acid supplied with a dropper

4. Aqueous NaOH supplied with a dropper.

5. 2M Ammonia solution supplied with a dropper

6. Source of heat (Bunsen burner).

7. Acidified potassium dichromate (VI) – $K_2Cr_2O_7$.

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

233/3

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTION TO THE CANDIDATES

a) Write your Name and Index Number, Admission Number and Class in the spaces provided at the top of this page.

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

c) KNEC Mathematical tables and silent electronic calculators may be used.

d) All working MUST be clearly shown where necessary.

For Examiner's use only

Questions	Maximum score	Candidate's Score
1	22	
2	12	
3	06	
	40	

1. You are provided with:

- 4.0g of solid P, ethane-1,2-dioic acid with formula **$(COOH)_2.nH_2O$**.
- Solution Q, 0.2 M sodium hydroxide solution.

You are required to determine:

- The solubility of solid P.
- The relative formula mass of the acid **$(COOH)_2.nH_2O$**

Procedure I

(i) Fill the burette with distilled water.

(ii) Place all solid P into a boiling tube.

(iii) Transfer 4.0 cm^3 of distilled water from the burette into the boiling tube containing solid P.

(iv) Heat the mixture gently while stirring with a thermometer until all the solid dissolves.

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

(vi) Record the temperature at which the crystals start to form in **table 1** below.

(vii) Add a further 2 cm^3 of distilled water from the burette into the boiling tube.

(viii) Repeat procedure (iv) to (vii) above and record the temperature crystals form to complete **table 1** below.

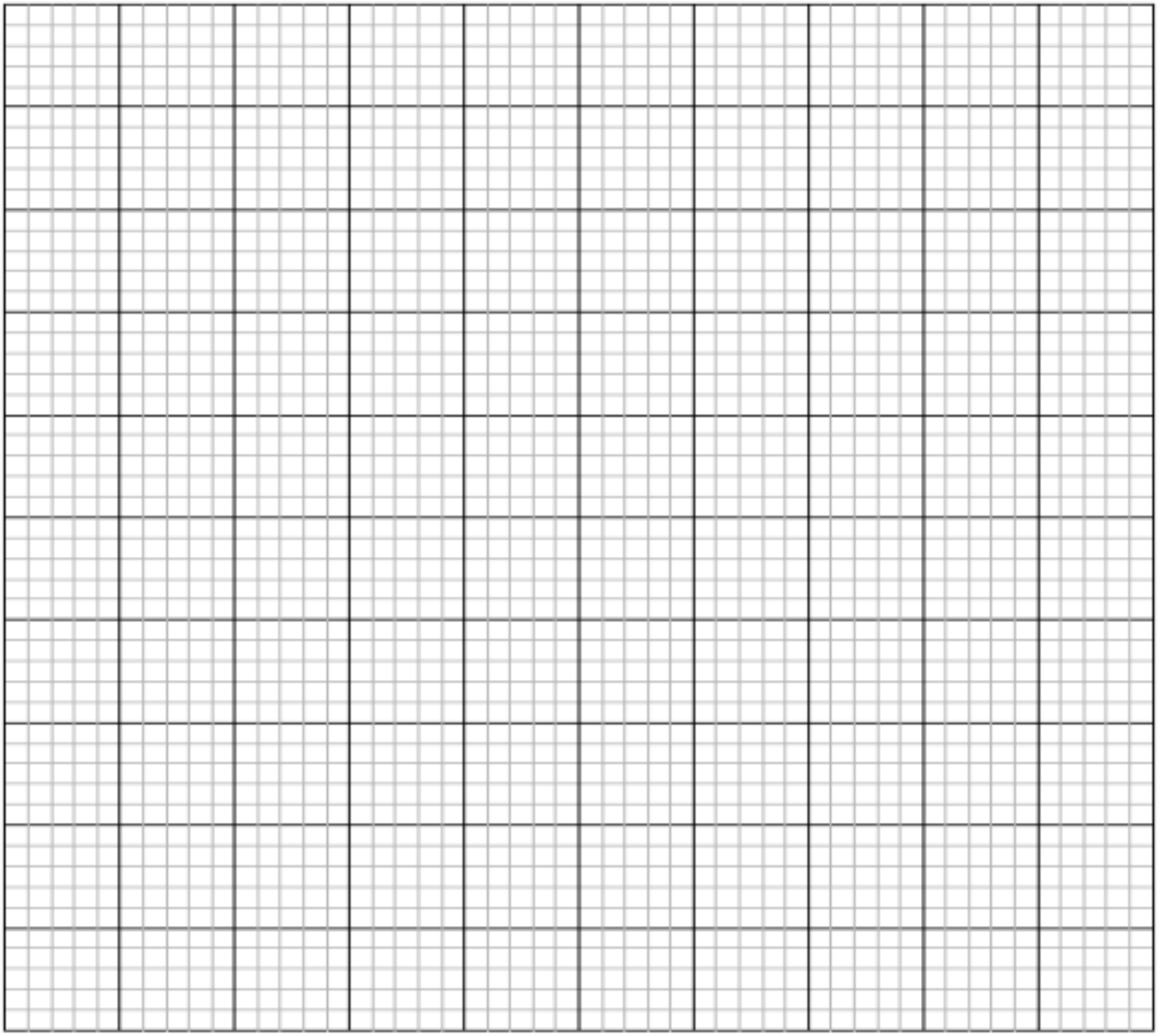
(Preserve the contents of the boiling tube for use in procedure II)

Table 1

Volume of distilled water (cm^3)	**Temperature at which crystals of solid P first appear. (^oC)**	**Solubility of solid P in g/100g of water**
4		
6		
8		
10		
12		

(6 marks)

(a) On the grid below plot a graph of the solubility of solid P against temperature. **(3 marks)**



(b) From your graph determine:

(i) the solubility of solid P at 45^{o}C **(1 mark)**

……

(ii) the temperature at which the solubility of solid P is 55g/100g of water**.** **(1 mark)**

……

(c) How does the solubility of solid P vary with temperature? **(1 mark)**

……

……

Procedure II

(i) Transfer all the contents of the boiling tube from **procedure I** into a clean 250ml volumetric flask. Rinse the boiling tube and transfer the rinsing into the volumetric flask.

(ii) Add distilled water to the mark.

(iii) Label the resulting solution as solution R.

(iv) Fill the burette with solution R.

(v) Pipette 25 cm^3 of solution Q into a clean conical flask. Add 3 drops of phenolphthalein indicator.

(vi) Titrate solution R against solution Q to an accurate end-point.

Record your results in **table 2** below.

Table 2

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

(4 marks)

(a) **Determine** the average volume of **solution R** used. **(1 mark)**

……

……

……

(b) **Calculate**:

(i) The number of **moles** of solution Q used. **(1 mark)**

……

……

……

(ii) Given that solution R is a dibasic acid, calculate the number of moles of **solution R** that reacted.

(1 mark)

……

……

(iii) The **concentration** of **solution R** in moles per litre. **(1 mark)**

……

……

……

(iv) Calculate the formula mass of acid **$(COOH)_2.nH_2O$,** hence find the value of *n*.

(H = 1, O=16, C = 12). **(2 marks)**

……

……

……

……

2. You **are provided** with **solid T,** which is a mixture of two compounds. **Carry out** the tests below. Write **your observations** and **inferences in the spaces** provided.

(a) Place about all **solid T** in a clean dry boiling tube. Add 5 ml of distilled water and shake thoroughly. Filter the mixture and keep both filtrate and residue. Divide the filtrate into three portions.

(i) Add aqueous NaOH dropwise to the first portion until in excess.

Observations	**Inference**
(1 mark)	(1 mark)

(ii) Add aqueous ammonia dropwise to the second portion until in excess.

Observations	**Inference**
(1 mark)	(1 mark)

(b) Rinse the residue with distilled water and transfer it into a clean boiling tube. Add the nitric (V) acid provided dropwise until all the solid dissolves.

Observations	**Inference**
(1 mark)	(1 mark)

(c) Divide the resulting solution into three portions.

(i) Add aqueous NaOH dropwise to the first portion until in excess.

Observations	**Inference**
(1 mark)	(1 mark)

(ii) Add aqueous ammonia dropwise to the second portion until in excess.

Observations	**Inference**
(1 mark)	(1 mark)

(iii) Add 3 drops of HCl to the third portion. Warm the mixture.

Observations	**Inference**
(1 mark)	(1 mark)

3. You are provided with **liquid W**. Carry out the following tests and record your observations and inferences in the spaces provided.

(a) Place five drops of **liquid W** on a clean dry watch glass and ignite it.

Observations	**Inference**
(1 mark)	(1 mark)

(b) Place 2cm^3 of **liquid W** in a clean and dry test tube. Add all the sodium hydrogen carbonate provided.

Observations	**Inference**
(1 mark)	(1 mark)

(c) Place 2 cm^3 of **liquid W** in a clean and dry test tube. Add 1 cm^3 of acidified potassium dichromate (VI) and warm the mixture.

Observations	**Inference**
(1 mark)	(1 mark)

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

232/1

PHYSICS

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Instructions to Candidates

- *Write your name and index number in the spaces provided above.*
- *Sign and write the date of the examination paper. This paper consists of two sections; A and B*
- *Answer **ALL** the questions in the spaces provided in the question paper.*
- *ALL working **MUST** be clearly shown where necessary.*
- *Mathematical tables and silent electronic calculators may be used.* *Use g=10N/Kg*

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	01-09	25	
B	10	11	
	11	11	
	12	06	
	13	07	
	14	11	
	15	09	
TOTAL SCORE		80	

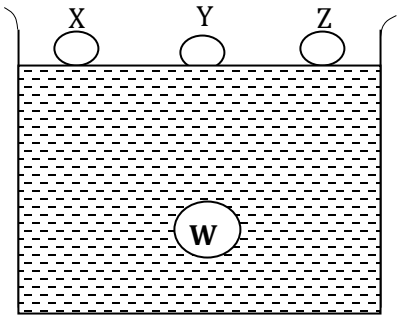
SECTION A: 25 MARKS

1. (a) The vernier calipers shows the reading of 5.38cm. Draw the diagram showing this.

(2 marks)

(b) If the vernier calipers used had an error of 0.05cm, find the actual reading **(1 mark)**

2. Use the surface molecules X, Y, Z and inner molecule W shown below to explain why the surface of a liquid is under tension **(3 marks)**



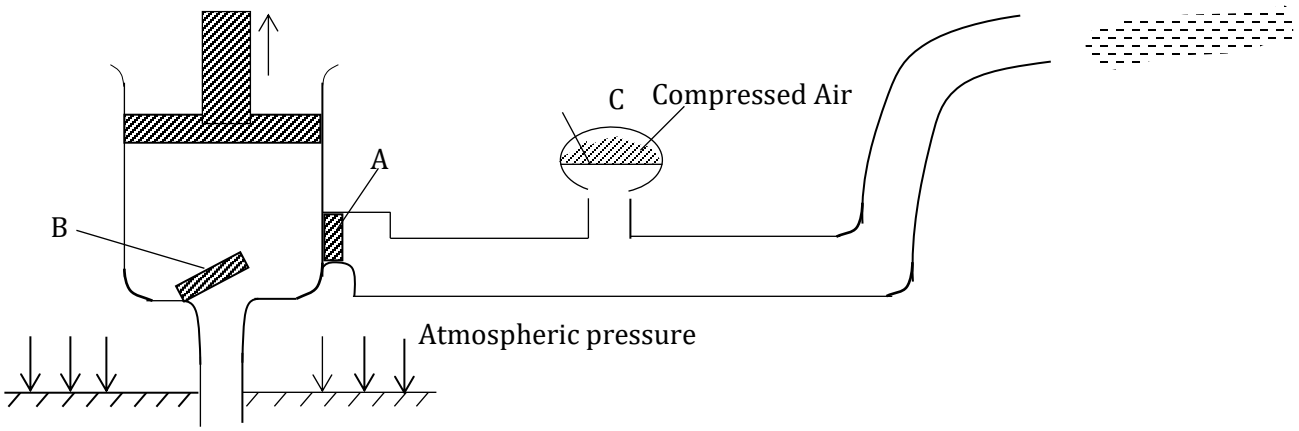
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3. The diagram below shows a force pump used to draw water from a well.



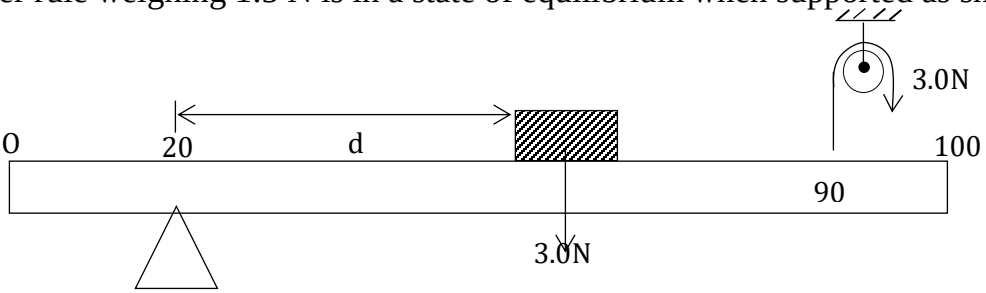
Explain how the continuous flow of water through outlet is achieved **(2marks)**

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……

4. A uniform meter rule weighing 1.5 N is in a state of equilibrium when supported as shown below.



Calculate the distance, d **(3 marks)**

5. Oil flows through a 14cm internal diameter pipe at an average velocity of 10m/s. Find the flow rate in SI unit **(3 marks)**

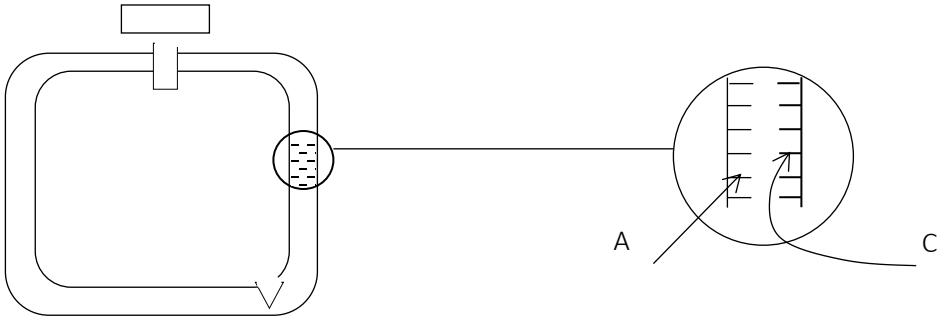
6. (a) State the Newton's second law of motion **(1 mark)**

……

……

(b)A 90kg water skier is being pulled by a speed boat. The force causes her to accelerate at $4m/s^{2}$.
Calculate the accelerating force. **(2 marks)**

7. The diagram below shows a simple diagram of a vacuum flask with an enlarged view of the part in a circle.



(a) What is the material of item labelled A and C? **(1 mark)**

……

……

(b) Explain why A and C is effective in reducing heat transfer. **(2 marks)**

……

……

……

8. (a) State Hooke's law **(1 mark)**

……

……

(b) A mass of 200g is suspended from the lower end of a spring. If the reading when no mass is hanging on the spring is 45.5 cm and the reading after the mass is suspended is 49.5cm. Calculate the spring constant. **(3 marks)**

9. State one assumptions made during determination of the size of oil molecule in the oil drop experiment. **(1 marks)**

SECTION B: 55 MARKS

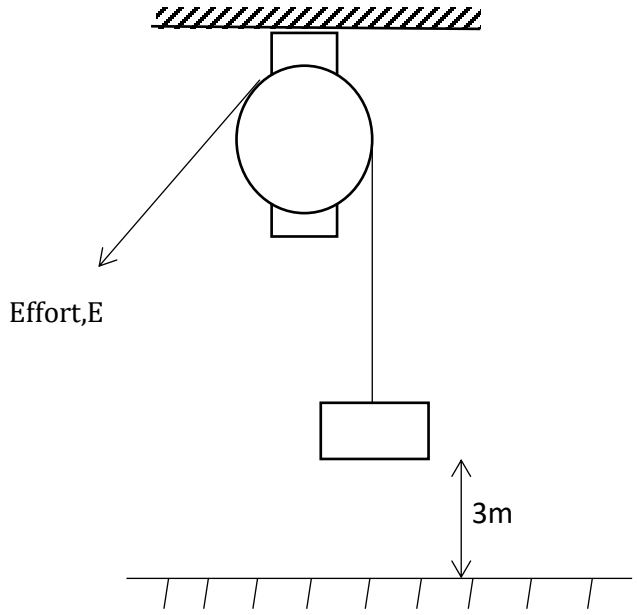
10. (a) Define work and state its SI unit **(2 marks)**

……

……

(b) A force of 15N is applied on a body causing it to move through a distance of 2m on a surface that offers a friction of 5N Determine the useful work done **(3 marks)**

(c)A man uses a pulley shown in the diagram below to lift a load of 100N through a distance of 3m.



(i) If the friction is negligible, what is the value of effort E **(2 marks)**

……

……

……

(ii) Determine the work done in raising the bucket through a height of 3m **(2 marks)**

……

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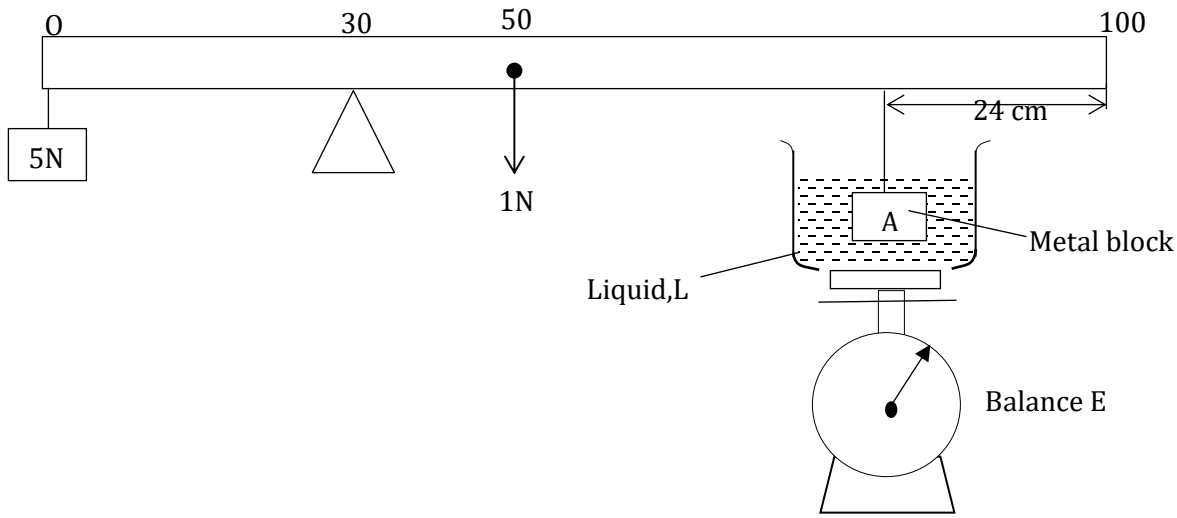
(iii) Determine the work done by the effort,E **(2 marks)**

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……

……

11. The figure below shows a lever arrangement with a uniform meter rule of weight 1N balanced by a knife edge at the 30 cm mark. The 5N weight at 0cm mark balances metal block A of volume 2.8 x 10^{-3} m^3 which has been immersed in liquid L. The weight of the beaker is 2.0N and that of liquid is 3.0N. Balance E reads 15N.



Determine:

(a) The apparent weight of the metal block A **(2 marks)**

(b) Upthrust on the metal block due to the liquid L **(2 marks)**

(c) The density of liquid L **(2 marks)**

(d) The weight of the metal block in air **(2 marks)**

(e) The density of the solid **(2 marks)**

(f) Why does hydrometer have a narrow stem **(1 mark)**

……

……

12.A body is projected horizontally at an initial velocity of 120 m/s from a clift 300m tall.

Calculate;

(a) Time of flight **(2 marks)**

(b) The range **(2 marks)**

(c) Vertical velocity at which the body strikes the ground **(2 marks)**

13.A stone is whirled with uniform speed in a horizontal circle having a radius of 16cm. it takes the stone 12 seconds to describe an arc of length 8cm.

Calculate;

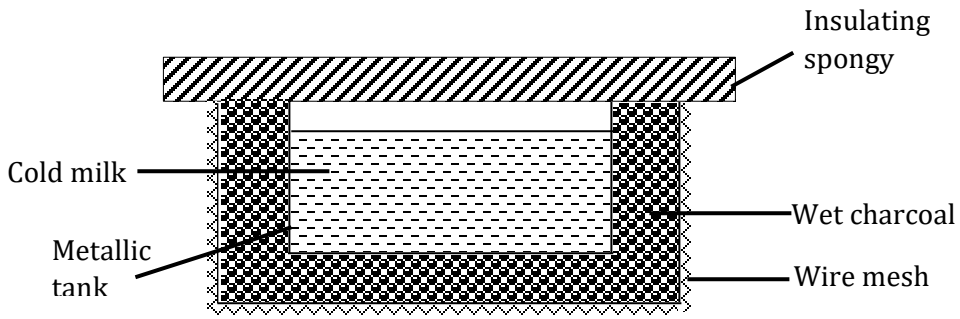
(a) The angular displacement **(2 marks)**

(b) The angular **velocity** **(1 mark)**

(c) The linear velocity of the stone **(2 marks)**

(d) The periodic time **(2 marks)**

14.(a) The diagram below shows a charcoal refrigerator used to cool milk to low temperature.



Explain how the cooling takes place in this refrigerator **(2 marks)**

……

……

……

……

(b) Give a reason why charcoal is suitable for cooling process **(1 mark)**

……

……

(c)(i) Define the term heat capacity and state its SI unit **(2 marks)**

……

……

……

(ii) An electric heater rated 15A, 240V is used to heat 2kg of water from 20°c to 100^0c in 160 seconds. Determine the specific heat capacity of water. **(2 marks)**

……

……

……

……

(iii) Explain why the value calculated in C (ii) an estimate **(2 marks)**

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……

(d) Explain how boiling point of a substance is affected by altitude **(2 marks)**

……

……

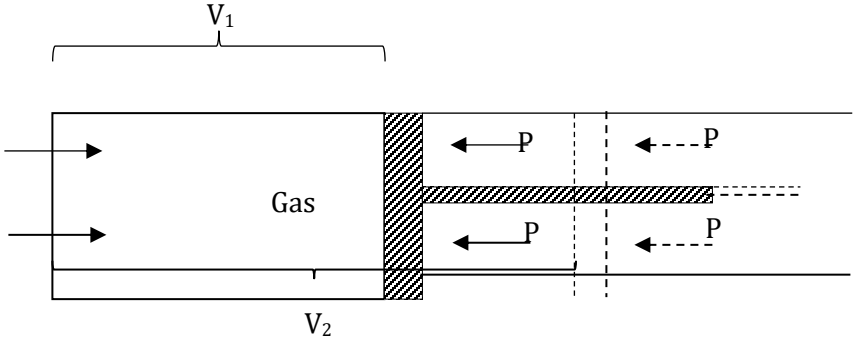
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15.(a) Define absolute zero. **(1 mark)**

……

……

(b) A gas is enclosed inside a cylinder which is fitted with a frictionless piston. Initially, the gas has a volume V_1 and is in equilibrium with an external pressure P. The piston is then pulled backward until the volume becomes V_2 which is twice V_1.



(i) State the change in pressure. **(1 mark)**

……

……

(ii) Explain the change in pressure in (i) **(2 marks)**

……

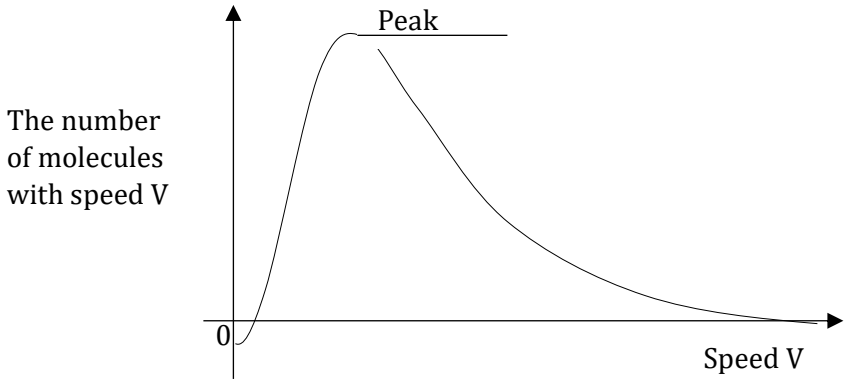
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(iii) State the law that governs the above experiment. **(1 mark)**

……

(c) The graph below shows the distribution of speeds of a gas at a particular temperature



State how the peak of the graph would change if temperature is increased. **(1 mark**

……

……

(d) The volume of a fixed mass of a gas reduced from 500cm^3 to 300cm^3 at constant pressure. The initial temperature was 90k. Determine the final temperature. **(3marks)**

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

232/2

PHYSICS

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

(a) *Write your name, Index number and School in the spaces provided above*
(b) *Sign and write the date of the examination in the spaces provided above*
(c) *This paper consists of two sections; A and B*
(d) *Answer all the questions in section A and B in the spaces provided*
(e) *All workings must be clearly shown in the spaces provided below each question*
(f) *Non programmable silent electronic calculators may be used.*
(g) Candidates should answer the questions in English

FOR EXAMINER'S USE ONLY

Section	Question	Maximum Score	Candidate's Score
A	1 - 13	25	
B	14	11	
	15	10	
	16	12	
	17	10	
	18	12	
Total Score		80	

SECTION A (25marks)

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

1. Figure 1 below shows the set – up for a simple cell.

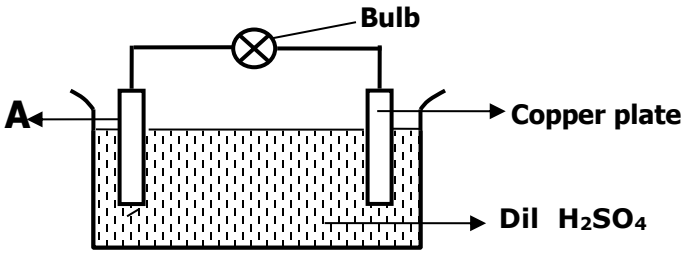


Figure 1.

(i) Explain how electrode **A** becomes **negative** **(1mk)**

……

……

(ii) Explain why the bulb goes off after only a short time. **(1mk)**

……

……

2. a) **Figure 2** shows an object, a screen and light sources X, Y and Z.

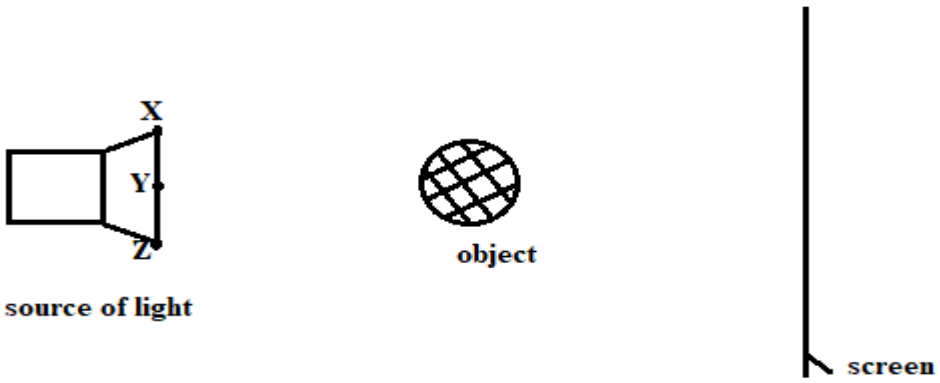


Figure 2.

i) Complete the diagram to show the formation of a shadow **(2mks)**

ii) State one property of the object that makes it possible for its shadow to be formed **(1mk)**

……

……

3. A highly negatively charged rod is gradually brought close to the cap of a positively charged electroscope. It is observed that the leaf collapses initially and then diverges. Explain the observation. **(2mks)**

……

……

……

4. Distinguish between thermionic emission and photoelectric effect. **(1mk)**

……

……

……

5. Explain why mains electricity is transmitted through alternating current and not direct Current **(1mk)**

……

……

6. Figure 3 shows two mirrors inclined at an angle of 30^o to each other. A ray of light is incident on mirrorM_1 as shown

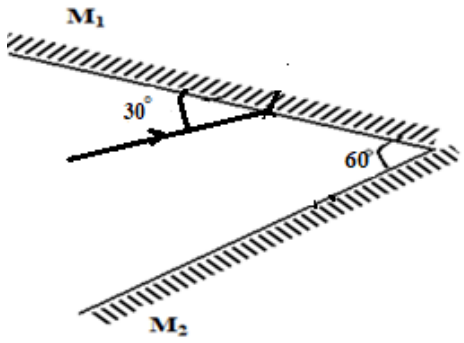


Figure 3.

Sketch the path of the ray to show its reflection **(1mk)**

7. Figure 4 below shows sound waves in air produced by a vibrating tuning fork. R is an air molecule on the path of the waves.

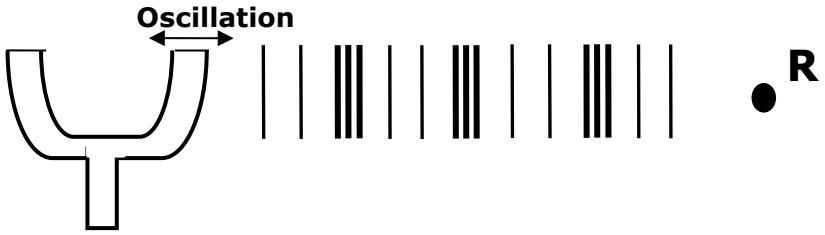


Figure 4.

i) Using a line, indicate on the diagram a distance **d** equal to one wavelength of the wave. **(1mk)**

ii) In the space provided below, show with an arrow the direction of motion of the air molecule **R** as the waves pass. **(1mk)**

8. Figure 5 below shows a bar magnet attracting steel pin as shown

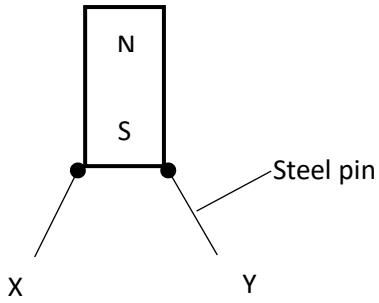


Figure 5

State and explain what would happen when a North pole of a bar magnet is brought near the tips of steel pin X and Y. **(2mks)**

……

……

……

9. Figure 6 below shows a wave profile for a wave whose frequency is 5Hz.

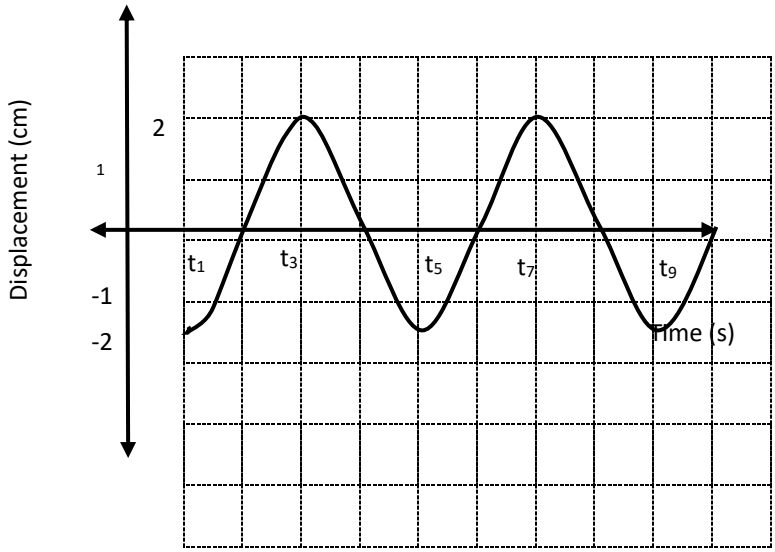


Figure 6

Determine the value of t_8. **(2mks)**

……

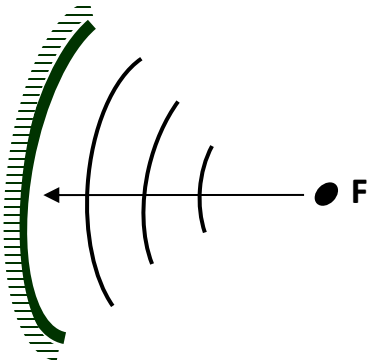
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10. **Figure 7** below shows circular waves originating from the principal focus F of a concave mirror and moving towards the mirror.

Figure 7



Complete the diagram to show the reflected waves. **(1mk)**

11. Two heating coils A and B connected in parallel in a circuit produces power of 36W and 54W respectively. What is the ratio of the resistance of B to that of A **(3mks)**

……

……

……

12. **Figure 8** below shows the path of light through a transparent material placed in air.

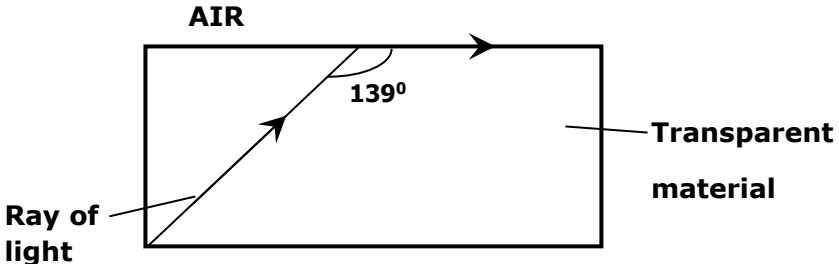


Figure 8.

Calculate the refractive index of the transparent material. **(3mks)**

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13. **Figure 9** below shows an image; I formed by an object placed in front of a ***convex mirror***. On the diagram draw appropriate rays and locate the position of the object. **(2mks)**

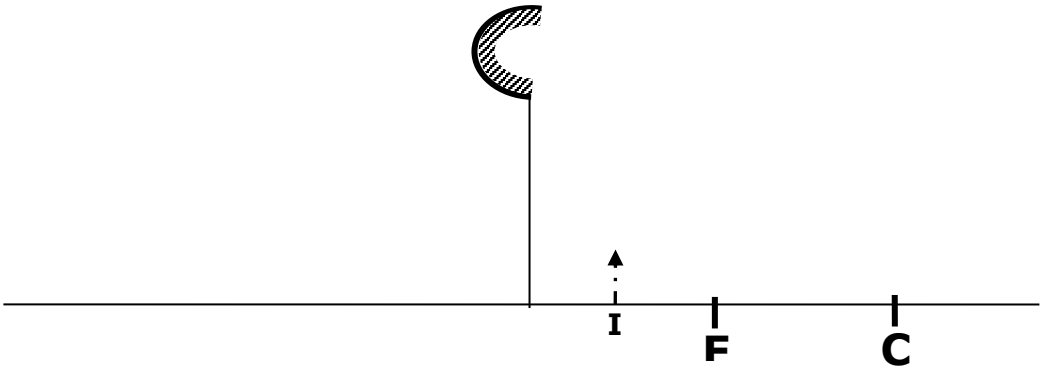


Figure 9.

SECTION B (55 marks)

Answer all the questions in this section in the spaces provided

14(a) **Figure 10** below shows two charged plates close to each other

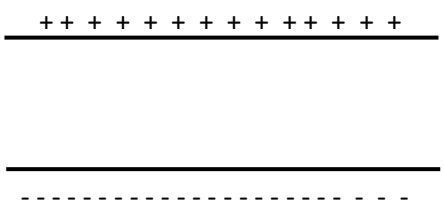


Figure 10.

(i) Complete the diagram to show the electric field patterns between the plates **(1 mark)**

(ii) Without changing the area of overlap, suggest any one way of increasing the charge stored per unit voltage on the plates **(2 mks)**

……

……

……

(b) Figure 11 shows two coils P and Q placed close to each other. When the switch **S** is closed, an e.m.f is induced in coil Q. Similarly, an e.m.f is induced in coil Q when the switch **S** is opened.

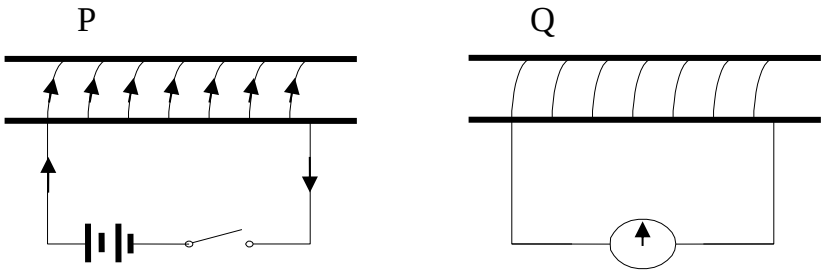


Figure 11.

Explain why the induced current in coil Q is higher when the switch **S** in coil P is opened than when it is closed. **(2 mks)**

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(b) The diagram in **Figure 12** below shows an induction coil used to produce sparks.

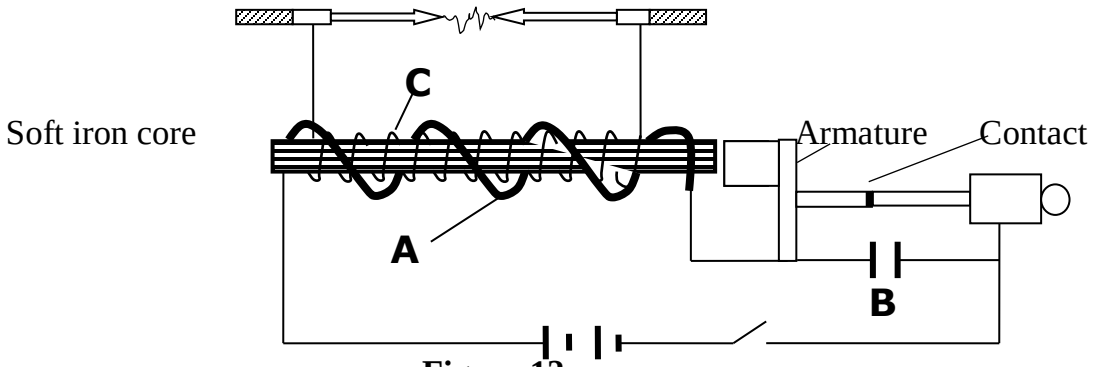


Figure 12.

(i) Name parts labeled **A,** and **C** **(2mks)**

A……

C……

(ii) Briefly explain how the induction coil works. **(3mks)**

……

……

……

……

……

(c) State the function of part B in the diagram. **(1mk)**

……

……

……

15. (a) **Figure 13** below shows a graph of resistance against reciprocal of current. Use it to answer the questions that follow.

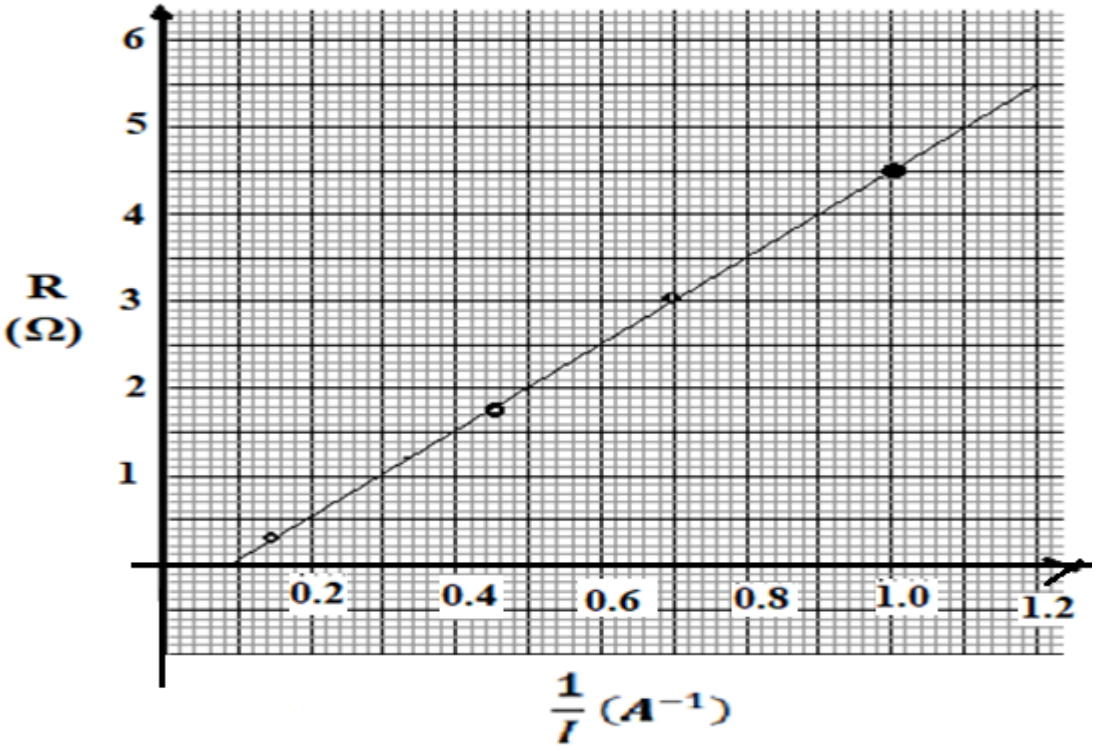


Figure 13

i) Find the internal resistance, r. **(2mks)**

……

……

……

ii) Determine the e.m.f, E of the cell. **(2mks)**

……

……

……

(b) Three resistors of resistance 2 Ω, 3 Ω and 4 Ω, are to be connected to a cell such that they have the least effective resistance.

(i) Draw a circuit to show how they can be connected to achieve this. **(1mk)**

(ii) Determine the least effective resistance of the three resistors. **(2mks)**

……

……

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……

(c) An electric iron rated 240V, 750w is to be connected to a 240v mains supply through a 3A fuse. Determine whether the fuse is suitable or not. **(3mks)**

……

……

……

……

16. (a) (i) Name the metal used to shield X-rays operators from the radiation. Give reasons why it is used. **(2mks)**

……

……

……

(ii)In a television set, magnetic fields are preferred for use as deflection system instead of electric fields. Explain. **(2mks)**

……

……

……

(b) **Figure 14** below show regions of the complete electromagnetic spectrum.

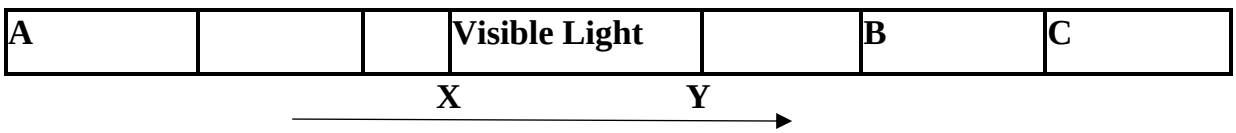


Figure 14. ***Decreasing frequency***

(i) Name the colour of light at X and Y **(2mks)**

X ……

Y ……

(ii) Name a suitable detector for radiation B **(1mk)**

……

(c) A student connected a circuit as shown in **Figure 15** below, hoping to produce a rectified output.

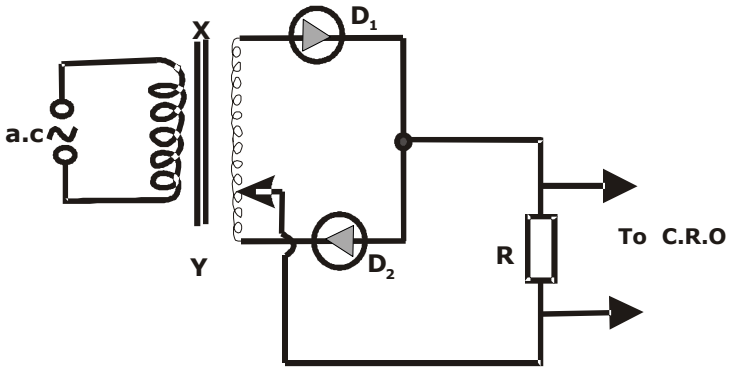


Figure 15.

(i) Sketch the graph of the output on the CRO screen in the space below. **(1mk)**

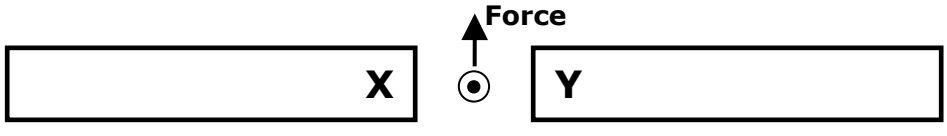
(ii) Explain how this output is produced **(2mks)**

……

……

……

(d) The figure shows a current – carrying conductor in a magnetic field direction of force on the wire is as shown by the arrow.



State the polarities of A and B. **(2mks)**

X ……..

Y. ……

17. (a) A typical nuclear fission reaction in a nuclear reactor is given below.

$$^{235}_{92}U + {}^{1}_{0}n \longrightarrow {}^{148}_{57}La + {}^{85}_{35}Br + x\,{}^{1}_{0}n$$

(i) What is meant by nuclear fusion? **(1mk)**

……

……

(ii) Find the value of x. **(1mk)**

……

……

(iii) How are the neutrons produced used in the reactor? **(1mk)**

……

……

……

(b) **Figure 16** below shows the diagram of a Geiger – Muller tube connected to a power supply and a pulse counter.

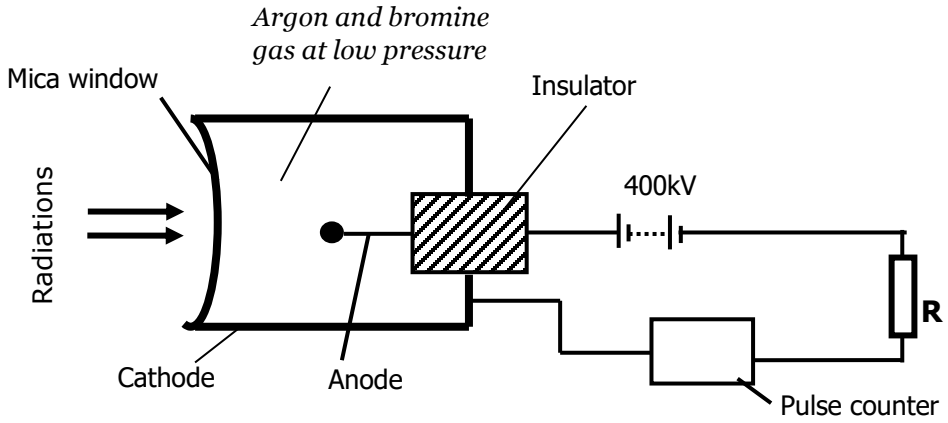


Figure 16

(i) Why should the Argon gas be at low pressure? **(1mk)**

……

……

(ii) State the purpose of the bromine gas in the tube **(1mk)**

……

……

(iii) Suggest one way of increasing the sensitivity of the tube **(1mk)**

……

……

(c) **Figure 17** below shows an arrangement used to investigate photoelectric effect

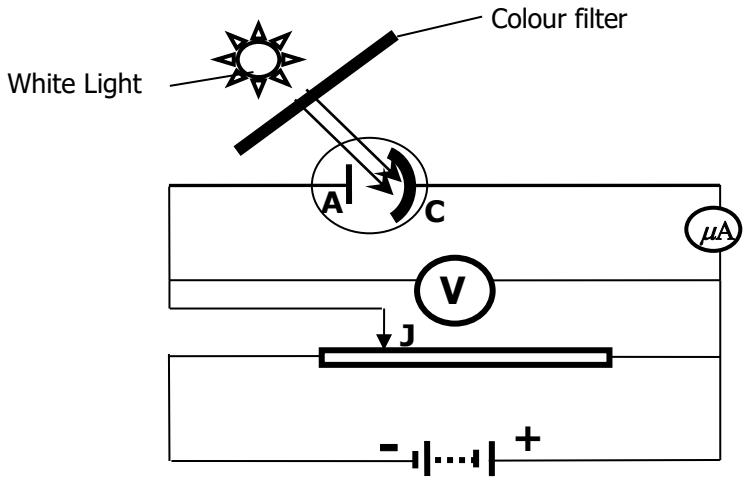


Figure 17

i) What is the purpose of the colour filter? **(1mk)**

……

……

ii) State two measurable quantities in this set up **(2mks)**

……

……

iii) State how the intensity of light affects photo current **(1mk)**

……

……

……

18. (a) Under what conditions does a converging lens form Virtual images **(1 mk)**

……

……

(b) Sketch on a diagram to illustrate how a convex lens is used as a magnifying glass. **3mks)**

(c)The diagram in **Figure 18** below shows a three-pin plug.

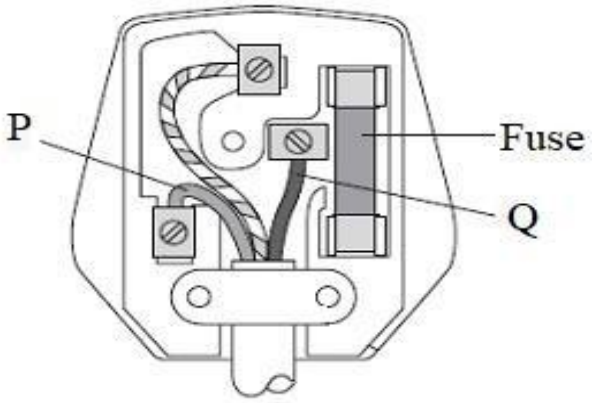


Figure 18.

(i) Name the colour of conductors P and Q **(2 marks)**

P ……

Q ……

(ii) Why is the earth pin longer than the rest in the three-pin plug shown above? **(1 mark)**

……

……

……

(b) **Figure 19** shows the displacement of a practice in progressive wave incident on a boundary between deep and shallow regions.

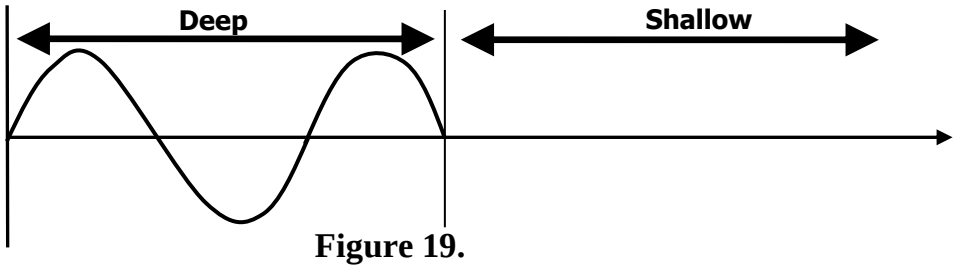


Figure 19.

(i) Complete the diagram to show what is observed after boundary. **(1mk)**

(ii) Explain the observation in (i) above. **(1mk)**

……

……

(c) Concave mirrors are used by dentists to examine teeth. By use of a ray diagram show how this is achieved. **(3 marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

232/3

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

SCHOOL…… SIGN……

(Kenya Certificate of Secondary Education)

CONFIDENTIAL

Question 1

- A carbon resistor labelled X (**10Ω**)
- A carbon resistor labelled Z (**10kΩ**)
- A voltmeter (0 – 5V)
- An ammeter (0 – 1A)
- 5 10Ω carbon resistors (unlabelled)
- Centre zero galvanometer.
- 2 new dry cells - size D
- Cell holder.
- 8 connecting wires at least 4 with crocodile clips at one end.
- Jockey
- A resistance wire labelled AB (A at 0)mounted on mm scale. (diameter 0.29mm)
- A switch.

QUESTION 2

- Metre rule.
- Screen
- Glass beaker (250ml)
- Water
- Plasticine.
- A candle.

- Vernier calipers. (can be shared)
- Micrometer screw gauge (can be shared)
- Boiling tube.
- Test tube.
- Some water in a beaker
- Half metre rule.
- 2 ball bearings. (size ¼'')
- Some sand.
- Spatula
- Complete retort stand.

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

232/3

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES:-

- *Write your **name**, **index number** and **school** in the spaces provided above.*
- *Answer all the questions in the spaces provided above.*
- *You are supposed to spend the first 15 minutes of the 2 ½ hours allowed for this paper reading the whole paper carefully before commencing your work*
- *Marks are given for a clear record of the observations actually made their suitability, accuracy and the use made of them.*
- *Candidates are advised to record their observations as soon as they are made.*
- *Non- programmable silent calculators and KNEC Mathematical tables may be used.*

QUESTION	PART	MAXIMUM SCORE	CANDIDATE'S SCORE
1	A	05	
	B	15	
2	A	10	
	B	10	
		40	

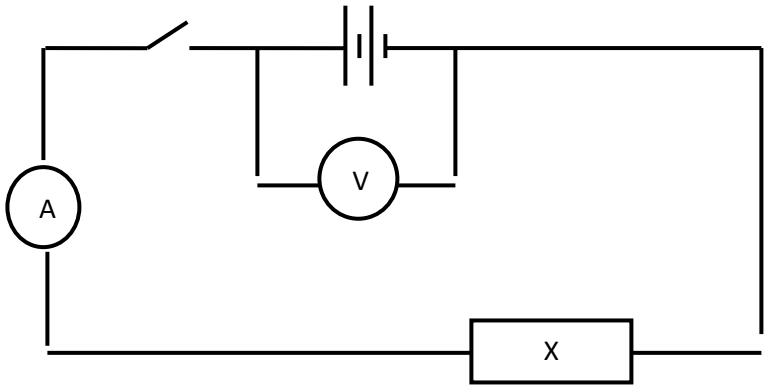
QUESTION 1

You are provided with the following apparatus;

- A carbon resistor labelled X .
- A carbon resistor labelled Z
- A voltmeter (0 – 5V)
- An ammeter (0 – 1A)
- 5 10Ω carbon resistors.
- Centre zero galvanometer.
- 2 new dry cells and cell holder.
- 8 connecting wires at least 4 with crocodile clips at one end.
- Jockey
- A resistance wire labelled AB mounted on mm scale.
- A switch.

PART A

a) Set up the circuit below.



b) Record the voltmeter reading E when the switch is open.

E = …….V **(1mk)**

c) Close the switch and record the voltmeter and Ammeter readings V and I respectively.

V = …….V **(1mk)**

I = ……..A **(1mk)**

d) Account for the difference between E and V. **(1mk)**

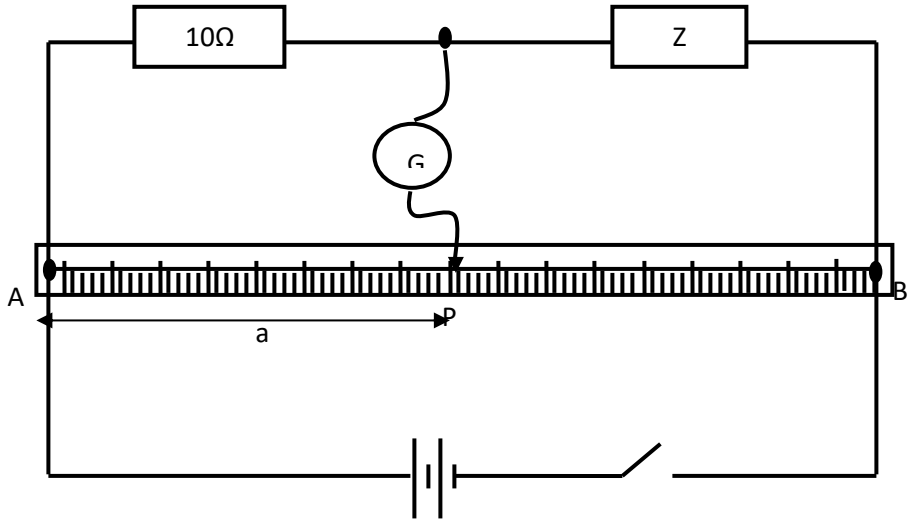
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e) Calculate the resistance R for resistor X. **(1mk)**

PART B

a) Set up the circuit as shown in the figure below.



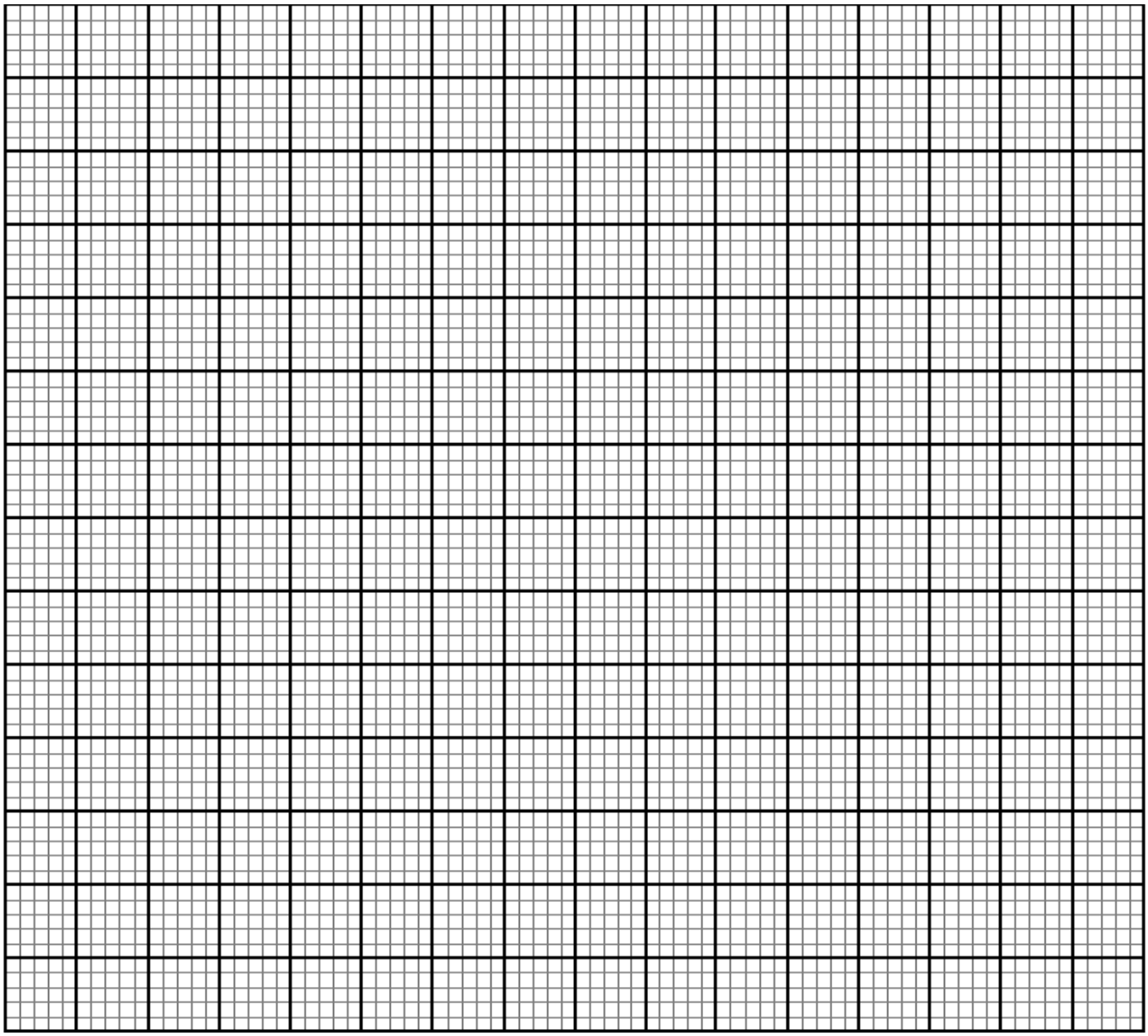
b) Close the switch. Tap the jockey at various points on the wire AB and locate point P at which the galvanometer shows zero deflection. Measure and record in the table below the length a where a = AP.

c) Repeat procedure b) using two 10Ω resistors in series, then three resistors in series, then four resistors in series and five resistors in series.

d) Record your readings in the table below and complete the table where X is the effective resistance for the series combination. **(5mks)**

Number of 10Ω carbon resistors	**One**	**Two**	**Three**	**Four**	**Five**
X (Ω)					
a (cm)					
$^1/_X$ (Ω^{-1})					
$^1/_a$ (cm^{-1})					

e) Plot a graph of $^{1}/_{a}$ **(cm^{-1})** against $^{1}/_{X}$ **(Ω^{-1})** **(5mks)**



f) Determine the slope m of the graph. **(3mks)**

g) Given that $\frac{1}{a} = \frac{R}{K} . \frac{1}{X} + \frac{1}{K}$ where K = 100cm, use the graph to determine R. **(2mks)**

QUESTION B

PART A

You are provided with the following;

- Metre rule.
- Screen
- Glass beaker (250ml)
- Water plasticine.
- A candle.

Proceed as follows;

a) Add a volume V= 200ml of water into the beaker.

b) Measure the value of h, the height of water in the beaker.

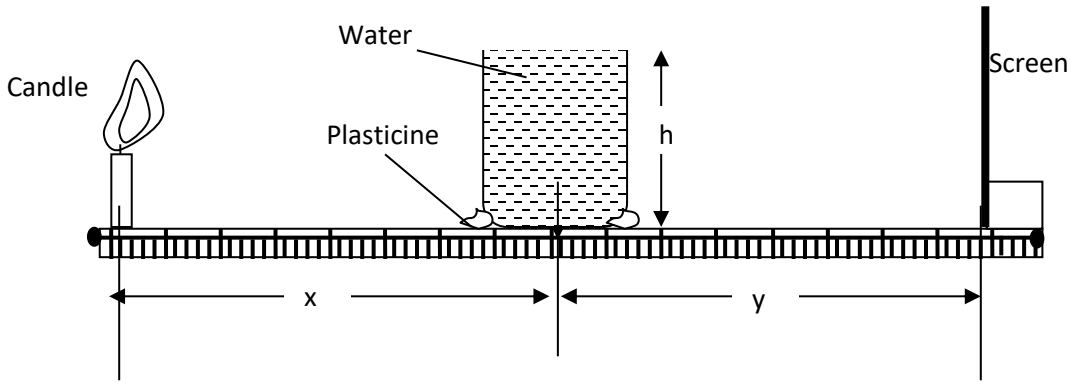
h = ……cm **(1mk)**

c) Calculate the value of internal radius R of the beaker using the formula $\boldsymbol{R = \sqrt{\frac{V}{\pi h}}}$ where $\pi = {}^{22}/_{7}$

(2mks)

R = ……

d) Fill the beaker with water and set the apparatus as shown below.



e) Position the candle which acts as an object above the metre rule and 10R from the centre of the water 'lens'.

f) Measure the object distance x. **(1mk)**

x = ……cm

g) Move the screen towards or away from the water lens to obtain a sharp and focused bright image (line) on the screen.

h) Measure the value of image distance y. **(1mk)**

y = ……..cm

i) Repeat the experiment for the other values of x in the table below and note and record the corresponding values of y. Complete the table.

Beaker position	**10R**	**9R**	**8R**
x			
y			
$S = \frac{xy}{x+y}$			

I. Determine the average value of S. **(2mks)**

II. What does S represent. **(1mk)**

PART B

You are provided with the following;

- Vernier calipers. (can be shared)
- Micrometer screw gauge (can be shared)
- Boiling tube.
- Test tube.
- Some water in a beaker
- Half metre rule.
- 2 ball bearings.
- Some sand.
- Spatula
- Complete retort stand.

i. Measure and record the diameter of one ball bearing using the micrometer screw gauge.

d = ……mm **($^1/_2$mk)**

ii. Determine the volume V of the ball bearing. **(1mk)**

V = ……..cm^3

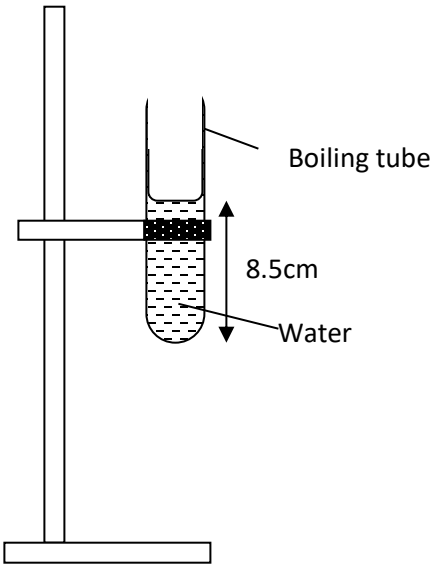
iii. Measure and record the outer diameter D of the test tube using the vernier calipers.

D = …….. **($^1/_2$mk)**

iv. Calculate the cross-sectional area A of the tube. **(1mk)**

A …….cm^2

v. Mount the boiling tube on the clamp as shown below and put some water to a height of about 8.5cm from bottom.



vi. Gently lower the test tube into the water in the boiling tube.

vii. Add some sand into the test tube bit by bit until the test tube floats upright in the water.

viii. Note and record height ho of the water in the boiling tube from the bottom.

ho = ……cm

(1mk)

ix. Gently lower one ball bearing into the test tube and note and record the new level h in the table below.

x. Add the other ball bearing and note and record the corresponding height h.

xi. Compute the values of h- ho and complete the table. **(2mks)**

No. of ball bearings (N)	Height h (cm)	h – ho (cm)
1		
2		

xii. Calculate S the average value of X where $\boldsymbol{X = \frac{h - ho}{N}}$ (1mk)

xiii. *Given that* $\boldsymbol{S = \frac{V\ell s}{A\ell e}}$

where $\underline{\ell}s$ *is the density of steel and* $\underline{\ell}e$ *the density of water, determine the ratio of*

$\boldsymbol{\frac{\ell s}{\ell e}}$ **(2mks)**

xiv. *What is the significance of the ratio* $\boldsymbol{\frac{\ell s}{\ell e}}$ ***(1mk)***

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

443/1

AGRICULTURE

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

(a) Write your name, index number, admission number and class in the spaces provided.

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

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

*(d) Answer any **two** questions in section C.*

(e) Answers should be written in the spaces provided.

For Examiner's Use Only

	Question	Maximum Score	Candidate's Score
A	**1-14**	**30**	
B	**15-18**	**20**	
C	**19-21**	**20**	
		20	
Total score		**90**	

SECTION A. (30 MARKS)

Answer ALL questions in this section in the spaces provided

1. Name **four** classes of livestock farming **(2 marks)**

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2. State **four** advantages of landlordism and tenancy land tenure system. **(2 marks)**

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3. Give **four** methods of harvesting agro forestry trees **(2 marks)**

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4. State **four** characteristics of a good grain store. **(2 marks)**

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5. Give **four** structural soil and water conservation measures. **(2 marks)**

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6. Name **two** types of labour records kept by a farmer. **(1 mark)**

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7. State **four** methods of land acquisition **(2 marks)**

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8. State **four** factors which increases seed rate during planting **(2 marks)**

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9. State **four** importance of growing crops under optimum temperature **(2 marks)**

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10. Name **four** classes of weeds. **(2 marks)**

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11. State **four** factors to consider when siting a nursery bed. **(2 marks)**

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12. State **four** contents of a tomato sales receipt **(2 marks)**

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13. State **four** factors that determine pesticide efficiency. **(2 marks)**

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14. State **four** conditions under which land clearance may be necessary. **(2 marks)**

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15. Name **two** non-competative market system **(2 marks)**

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16. Name **two** methods of soil sampling. **(1 mark)**

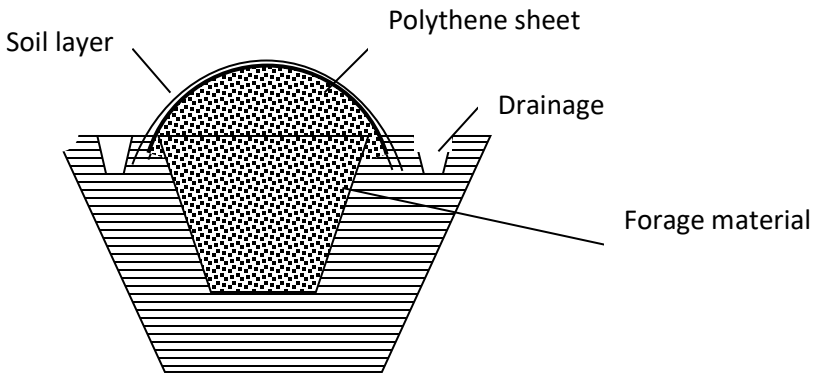
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SECTION B (20MARKS)

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

17. The diagram below shows a method of forage conservation



(i) Name the structure illustrated above **(1 mark)**

……

(ii) Name the form of forage conservation using the above structure. **(1 mark)**

……

(iii) State **two** factors to consider when siting the structure. **(2 marks)**

……

……

(iv) Name other form of forage conservation apart from the one illustrated above**.** **(1 mark)**

……

18. Below is a format of a record kept by a farmer. Use it to answer the questions the follow.

Date	**Disease symptom**	**Animal affected**	**Drug used**	**Cost of treatment**	**Remarks**

(i) Name the type of farm records illustrated above. **(1 mark)**

……

(ii) State two importance of the record to the farmer **(2 marks)**

……

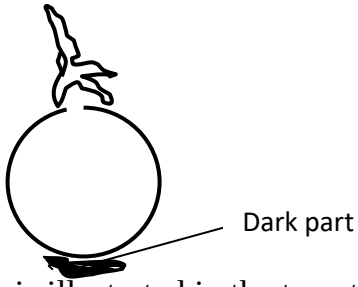
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(iii) Give any two entries on the remark section. **(2 marks)**

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……

19. During harvesting of tomato, a farmer noticed some symptoms at the bottom of the tomato fruit as shown below



(i) Name the disease whose symptom is illustrated in the tomato (diagram) **(1 mark)**

……

(ii) State two causes of the disease in the tomato **(2 marks)**

……

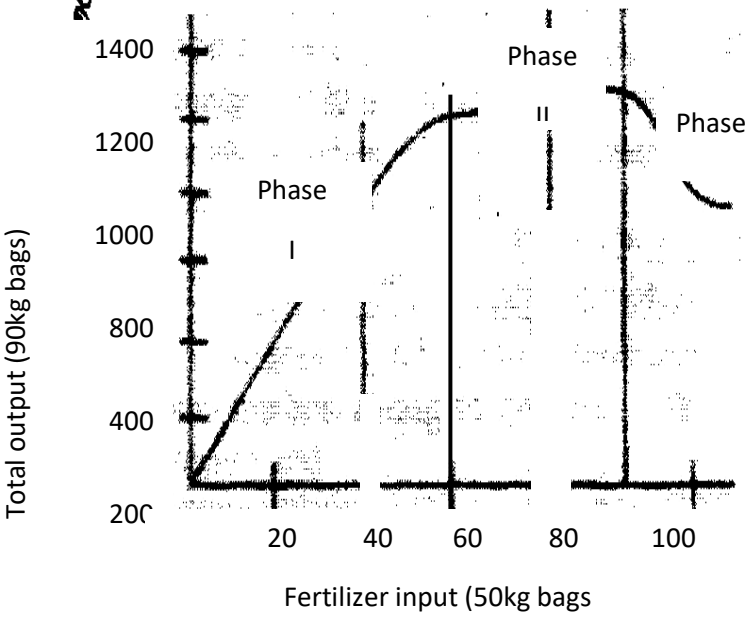
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(iii) State two ways of controlling the disease. **(2 marks)**

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……

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



i) Identify the law represented by the graph. **(1 mark)**

……

ii) State the law. **(1 mark)**

……

iii) Explain how each additional unit of fertilizer input relates to total output of maize in the Phases **II and III.**

Phase II ……..(1 mark)

Phase III ……..……..(1 mark)

iv) State the importance of the law identified in (i) above to a maize farmer**.** **(1 mark)**

……

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SECTION C (40 MARKS)

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

21. i) State five importance of irrigation. **(5 marks)**

ii) State four roles of calcium in crops. **(4 marks)**

iii) State six cultural disease control measures. **(6 marks)**

iv) Describe five factors that may increase the demand of maize in Bondo market. **(5 marks)**

22. i) State five causes of land fragmentation. **(5 marks)**

ii) Describe five ways by which soil looses its fertility. **(5 marks)**

iii) Describe transplanting of tomato seedlings from the nursery bed to a seedbed**. (5 marks)**

iv) Describe the management of agro forestry trees. **(5 marks)**

23. i) Describe five ways by which a farmer can overcome risks and uncertainties in maize production. **(5 marks)**

ii) Describe harvesting and precaution taken during harvesting of tea. **(5 marks)**

iii) State four farming practises which may destroy soil structure. **(4 marks)**

iv) State six importance of crop rotation in a farming business. **(6 marks)**

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

443/2

AGRICULTURE

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INTRODUCTION TO CANDIDATES

- *Write your name and index number, in the spaces provided above.*
- *This paper consists of three sections A, B and C.*
- *Answer all questions in section A and B.*
- *Answer any two questions in section C.*
- *Check and ascertain that all pages are printed*
- *All answer must be in English.*

SECTION	QUESTION	MAX SCORE	CANDIDATES SCORE
A	1 – 22	30	
B	23-26	20	
C		20	
		20	
TOTAL SCORE		90	

SECTION A (30MARKS)

Answer all the questions in this section in the spaces provided

1. Name a breed of camel with two humps **(1/2mks)**

……

2. State **two** types of roughages as used in livestock nutrition **(1mk)**

……

……

3. Give **two** reasons why it is advisable to dehorn cattle **(1mk)**

……

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4. Give **three** properties of clean milk **($1^1/_2$mks)**

……

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5. Name the tool or equipment used to carry out the following routine livestock practices

a) Castration **(1/2mks)**

……

b) Vaccination **(1/2mks)**

……

6. What is the role of iron in livestock nutrition? **(1mk)**

……

……

7. List **two** importance of fish farming in Kenya **(1mk)**

……

……

8. Name **two** hormones that in fluence milk let-down in dairy cattle **(1mk)**

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……

9. Name **two** exotic breeds of dairy goats reared in Kenya **(1mk)**

……

……

10. What is the role of a crop in the digestion system of poultry? **(2mks)**

……

……

11. Name **two** zoonotic diseases of livestock **(1mk)**

……

……

12. Give **four** routine practices carried out during calf rearing **(2mks)**

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13. State **two** factors that determine the amount of water required by an animal **(1mk)**

……

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14. List **three** methods of outbreeding as used in livestock nutrition **($1^1/_2$mks)**

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15. Outline **four** conditions necessary for artificial incubation **(2mks)**

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16. List **three** sources of lipids in livestock diet **($1^1/_2$mks)**

……

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17. Name **two** parasites of bees **(1mk)**

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18. State **four** qualities of an ideal calf pen **(2mks)**

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19. Give **four** reasons why stones are good as construction materials **(2mks)**

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20. Name a disease transmitted by the following vectors **(1mk)**

a) Tsetse fly ……..

b) Brown ear tick ……..

21. List **four** requirements in a deep litter house **(2mks)**

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22. Give **two** causes of soft shells in eggs **(2mks)**

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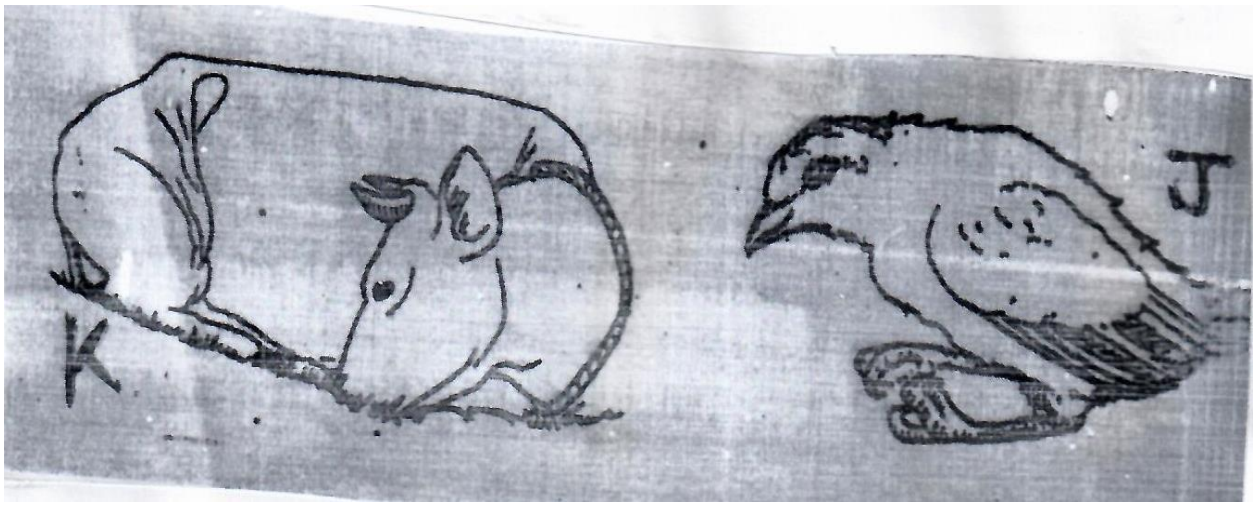
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SECTION B (20MKS)

Answer all questions in this section in the spaces provided

23. Study the diagram and answer questions that follow.



a) Identify the condition or deficiency disease as illustrated in J and K above

J ……(1mk)

K ……(1mk)

b) Name cause of the deficiency condition in

J ……(1mk)

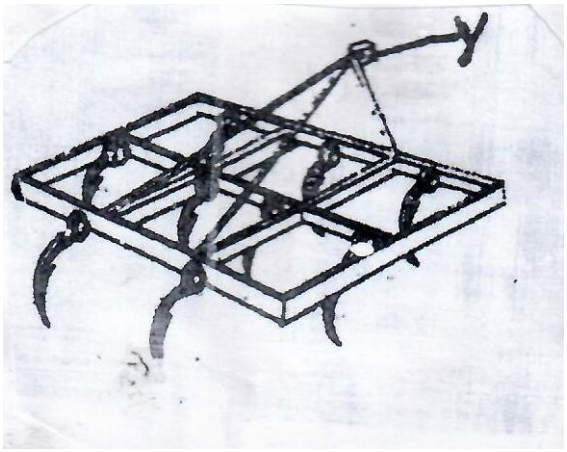
K ……(1mk)

c) Give **one** remedy to control condition K in lactating cows **(1mk)**

……

……

24. Below is a diagram illustrating a farm implement. Study it and answer the questions that follow.



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

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……

b) State:

(i) The role of the part labelled Y **(1mk)**

……

……

(ii) **Three** uses of the implement on the farm **(3mks)**

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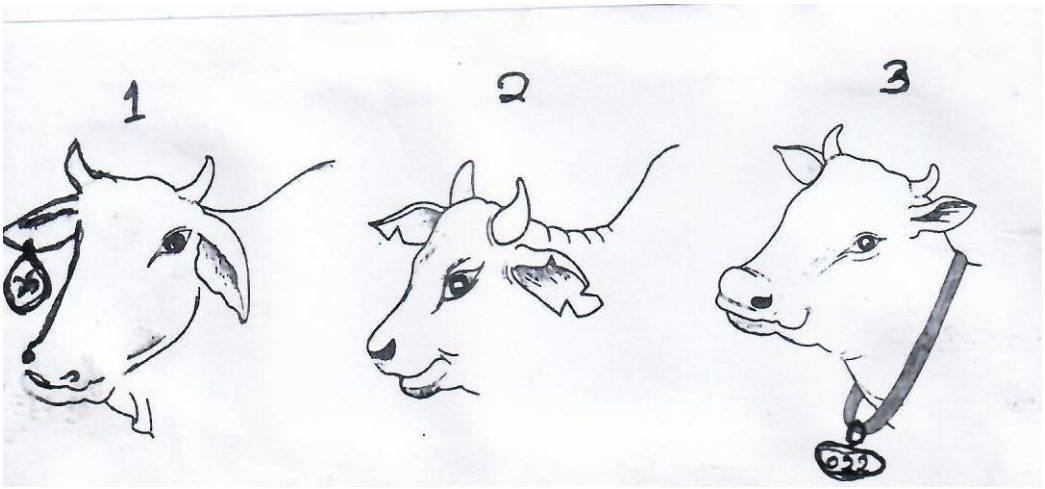
c) List **two** maintenance practices carried out on the implement **(2mks)**

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25. The diagram below represents methods of identifications in livestock. Use them to answer questions that follow.



a) Name the **three** methods shown above **($1^1/_{2mks}$)**

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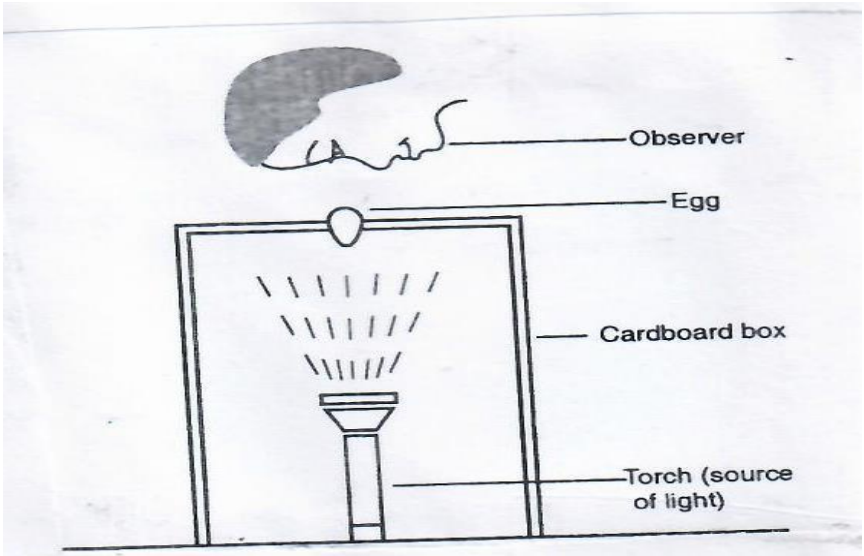
b) State **three** importance of identification method shown above **($1^1/_2$mks)**

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26. The diagram below illustrates a common practice in poultry production



a) Identify the practice **(1mk)**

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b) Give abnormalities of eggs that can be observed using the above illustrated practice **(4mks)**

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SECTION C(40MKS)

(Answer any two questions from this section)

27. a) Discuss causes and control of cannibalism in poultry. **(10mks)**

b) Highlight various measures that famers undertake to control tapeworms **(5mks)**

c) Explain the importance of streaming up in dairy cattle **(5mks)**

28. a) Describe the precautions undertaken while handling farm tools and equipment(**10mks)**

b) Discuss contagious abortion disease under the following sub headings:

(i) Animals attacked **(2mks)**

(ii) Casual organism **(2mks)**

(iii) Symptoms **(2mks)**

(iv) Control measures **(4mks)**

29a) Discuss the structural and functional differences between petrol and diesel engines **(10mks)**

b) Describe general characteristics of indigenous cattle breeds **(5mks)**

c) Outline five general methods of disease control in livestock **(5mks)**

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

565/1

BUSINESS STUDIES

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

Instructions to Candidates

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

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

*c) Answer **ALL** the questions in the spaces provided below each question.*

d) All your answers must be written in English.

For Examiner's Use Only

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

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

TOTAL MARKS

1. Name the **internal environment** described by the following statements. **(4 marks)**

Description	**Type of Internal Environment**
a) Allows duties to be allocated to the right people thus resulting in higher productivity.	
b) Helps the business achieve its objectives e.g. higher production level of goods and services.	
c) Makes employees to acquire norms and code of conduct that is acceptable to all.	
d) Level of knowledge of the entrepreneur	

2. State **four** reasons why choice should be made in satisfying human wants. **(4 marks)**

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3. You have been charged with a duty of preparing an Article of Association for your company. State **four** items that you will include in your Article of Association. **(4 marks)**

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4. State **four** reasons why consumers need protection from unscrupulous traders. **(4 marks)**

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5. Highlight **four** contents of a cover note. **(4 marks)**

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6. State the **books of original** entry in which each of the following transactions would be recorded.

(4 marks)

	Transactions	**Books of original entry**
d)	Bought a machinery on credit	
e)	Received sh. 40,000 from Mweni a debtor	
f)	Sold goods worth sh. 20,000 on credit to Salama	
g)	Returned goods previously bought on credit to Wainaina	

7. The following information relates to commodity 'X'.

Year	**Price (shs)**
2010	450
2014	675

a) Calculate the consumer price index. **(3 marks)**

b) Comment on your answer. **(1 mark)**

……..

8. State **four** benefits that consumers get from warehousing. **(4 marks)**

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9. The following information relates to Kitui Traders for the year 2013.

Turn over	Sh. 270,000
Margin	40%
Rate of turnover	6 times
Expenses	Sh. 40,000

From the information given above, Calculate:-

(a) Net profit. **(2 marks)**

(b) Average stock **(2 marks)**

10. Outline **four** differences between perfect competition and monopoly. **(4 marks)**

Perfect competition	**Monopoly**
(a)	
(b)	
(c)	
(d)	

11. Outline **four** features of an economic union level of economic integration. **(4 marks)**

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12. Highlight **four** monetary tools that may be employed by the government to increase the amount of money in circulation. **(4 marks)**

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13. State **four** ways of creating the utility of goods and services. **(4 marks)**

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14. Outline **four** sources of business idea. **(4 marks)**

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15. State whether the tax described below is **direct** or **indirect** **(4 marks)**

a) Stamp duty ……

b) Wealth tax ……

c) Excise duty ……

d) Value added tax ……

16. Outline **four** current trends in the road transport in Kenya today. **(4 marks)**

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17. State **four** negative implications of production activities on the community. **(4 marks)**

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18. Give any **four** causes of changes in asset stock. **(4 marks)**

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19. State **four** benefits a trader may get by advertising products using posters. **(4 marks)**

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20. Outline **four** goals of development. **(4 marks)**

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21. A business enterprise had a cash balance of 50,000 and overdraft of sh 15,000 on 1st June 2007. The following transactions were conducted.

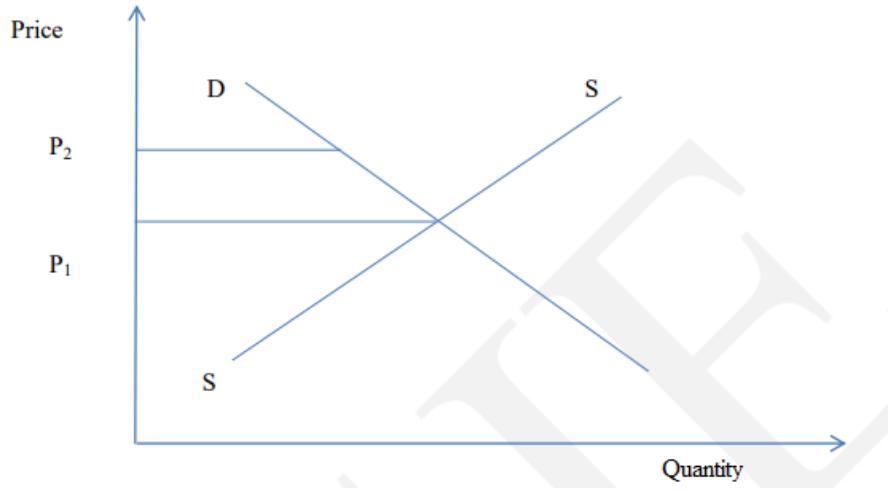
June 2, A debtor paid sh 40,000 by cheques

June 10, The business bought stock sh 10,000 in cash and paid a creditor sh. 5,000 by cheque

June 15, Sold goods sh 30,000 cash.

Required: Prepare a two column cash book. **(4 marks)**

22. The diagram below represents the demand and supply of bananas in the local market.



Highlight **four** consequences of selling the bananas at price P_2. **(4 marks)**

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23. Outline **four** circumstances under which one may use signs in communication. **(4 marks)**

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24. State **four** circumstances under which a business organization may decide to dispose off a machine. **(4 marks)**

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25. Omamo bought goods worth Sh. 100,000 from Jabali Traders on 2nd January 2022. He was given 5% trade discount and a cash discount as follows; 2% if payment is made within 30 days, 5% if payment is made within 15 days and 10% if payment is made within 10 days.

Calculate the amount he will pay after a fortnight. **(4 marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

565/2

BUSINESS STUDIES

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTION TO CANDIDATES

a) *Write your name and stream in the space provided above.*

b) *This paper consists of six questions*

c) *Answer any **five** questions of your choice in the spaces provided.*

d) *All questions carry equal marks*

e) *Students should answer the questions in English.*

For Examiner's Use Only

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

1. a) Kenya experiences frequent increase in prices of essential goods and services.
Explain **five** factors that causes the above trend. **(10 marks)**

b) Highlight **five** benefits of turning a private limited company into public limited company **(10 marks)**

2. a) Explain **five** measures that the government may put in place to reduce the amount of money in circulation **(10 marks)**

b) Explain **five** features of economic resources. **(10 marks)**

3. a) Explain **five** benefits that may accrue to a community involved in home trade **(10 marks)**

b) The following balances were extracted from books pf Victoria's traders for the year end 31/12/2021

	SHS
Rent	48,000
Lighting	7,200
Water	9,220
Salaries	75,000
Commission received	12,370
Discount allowed	4,600
Discount received	8,500
Gross profit	320,000
General expenses	98,000
Stock	25,250
Motor vehicle	2,300,000
Furniture	650,000
Debtors	270,000
Creditors	396,400
Bank	200,000
Cash	50,000
Capital	3,000,000

prepare;

(i) profit and loss account for the year end 31/12/2021 **(5½ marks)**

(ii) balance sheet as at 31/12/2021 **(4½ marks)**

4. a) Explain **five** circumstances under which an insurer may not compensate the insured after the occurrence of the risk **(10marks)**

b) Explain **five** merits of direct taxes **(10 marks)**

5. a) Highlight **five** sales promotional methods which may be used by traders to increase sales volume of their products **(10 marks)**

b) The following transactions relates to Kajembe traders for the month of May 2023.

May 1: Balance brought down cash shs.16,500 and Bank shs.19,847
May 2: Sold goods worth shs.1,348 to Paul and received a radio in exchange.
May 5: Paid transport by cheque shs.2,000
May 6: Issued a cheque to Sakwa traders settling an invoice for shs.10,000 deducting 2% cash discount.
May 10: Transfer shs.15,000 from cash till to bank.
May 12: Sold goods for cash shs.12,000 less 2% cash discount.
May 13: Sold goods to Onyango on credit worth shs.15,000
May 14: The owner of the business withdrew shs.3,000 in cash to buy a present for the daughter.
May 16: Received a cheque from Kuria shs.2,500 less 5% cash discount.
May 22: Bought furniture from Wako traders in credit worth shs.16,500 and cash discount of 10% if payment is made within 2 weeks.
May 24: Withdrew cash from bank for office use shs.8,000
May 26: The owner brought into the business shs.9,000 cash.
May 27: Issued a cheque to Wako traders for amount due.
May 28: Sold goods to Kuria worth shs.5,000 for shs.3,800 and received a cheque.
May 30: Banked all cash and remained with shs.1000 in the cash till.

Required: Prepare Kajembe Traders three column cash book for the month of may 2023. **(10 marks)**

6. a) Highlight **five** factors that may negatively affect the demand for a product in the market. **(10 marks)**

b) Discuss **five** reasons why less developed countries are reluctant in implementing free trade agreement. **(10 marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

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

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

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

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

(d) *Answer **any five** questions in the spaces provided at the end of question 6.*

(e) *Do not remove any page from this booklet.*

(f)*Answer completely the questions chosen. No blank spaces to be left.*

FOR EXAMINERS USE ONLY

Questions						**Candidates Total Score**
Candidate's score						

1. (a) State **seven** reasons why the Bible is called the word of God. **(7 marks)**

(b) Outline the translation of the Bible from the original languages to the present local languages. **(7 marks)**

(c) Identify **six** ways in which the Bible is misused in Kenya today. **(6 marks)**

2. (a) Outline the background to the call of Abraham. **(8 marks)**

(b) Give instructions given to Abraham by God concerning the Jewish circumcision. **(6 marks)**

(c) Explain **six** reasons why circumcision was important to the Jews. **(6 marks)**

3. (a) Give **seven** reasons why Prophet Samuel was against kingship in Israel. **(7 marks)**

(b) Describe Mount Carmel contest between Prophet Elijah and prophets of Baal. **(7 marks)**

(c) Identify lessons learnt about the nature of God from the contest at Mount Carmel. **(6 marks)**

4. (a) Give ways in which prophetic messages were written. **(6 marks)**

(b) Explain **four** visions of prophet Amos. **(8 marks)**

(c) Identify ways in which God speaks to Christians today. **(6 marks)**

5. (a) Explain **four** promises that the Israelites made when they renewed their covenant with God during the time of Nehemiah. **(8 marks)**

(b) Identify final reforms carried out by Nehemiah to restore the worship of God in Judah. **(5 marks)**

(c) Give **seven** reasons why Nehemiah carried out the reforms. **(7 marks)**

6. (a) Outline **seven** methods used in choosing marriage partner in Traditional African Community. **(7 marks)**

(b) Explain the African understanding of hierarchy of beings. **(7 marks)**

(c) Outline **six** moral values acquired during initiation in African Traditional Community. **(6 marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

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

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

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

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

(d) *Answer **any five** questions in the spaces provided at the end of question 6.*

(e) *Do not remove any page from this booklet.*

(f)*Answer completely the questions chosen. No blank spaces to be left.*

FOR EXAMINERS USE ONLY

Questions						**Candidates Total Score**
Candidate's score						

1. a) Outline the events that took place during the dedication of Jesus in the temple as recorded in Luke 2:22-40. **(7 marks)**

b) Identify **six** virtues a Christian can acquire from the incident when Jesus accompanied his parents to the temple at the age of twelve **(6 marks)**

c) Give **seven** reasons why children should take part in church activities. **(7 marks)**

,

2. a) Describe the healing of the Gerasene demoniac in Luke8:26-39 **(8 marks)**

b) Give **six** reasons why Jesus healed the sick **(6 marks)**

c) Identify ways in which Christians can settle disagreements among themselves **(6 marks)**

3. a) Outline **eight** events that took place during the crucifixion of Jesus.(Luke 23:26-43) **(8 mrks)**

b) Identify **six** ways in which Joseph of Arimathea acknowledged the Lordship of Jesus**. (6 marks)**

c) What lessons do Christians learn from Jesus answer to the Sadducees question on resurrection Luke 20:27-40 **(6 marks)**

4. a) Explain how the unity of believers is expressed in the body of Christ **(8 marks)**

b) How was the life of Peter transformed on the day of Pentecost? **(6 marks)**

c) Explain **six** ways in which the gifts of the Holy Spirit are abused in the church toda**y. (6 marks)**

5. a) State **seven** similarities in the traditional African and Christian view on work**. (7 marks)**

b) State the Christian teaching on human sexuality **(7 marks)**

c) State **six** virtues that are related to various types of work **(6 marks)**

6. a) Identify **seven** ways Christians spread the gospel using the print media **(7 marks)**

b) Give **seven** reasons why Christians are opposed to deforestation **(7 marks)**

c) How can Christians help to protect the environment? **(6 marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

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.

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

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

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

iv *Candidates should answer the questions in English.*

FOR EXAMINERS USE ONLY

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

SECTION A-25 MARKS

Answer all questions from this section

1. Identify the branch of History that deals with the leadership in Kenya **(1mk)**

2. Name the archaeological site in Kenya in which the remains of Kenyapithecus were discovered. **(1mk)**

3. Give two economic ways in which the Kenyan communities interacted in pre-colonial period **.(2mks)**

4. Name two sub-sections of the Maasai community in Kenya in the pre-colonial period. **(2mks)**

5. Identify the main feature of the system of education in Kenya during the colonial period**.(1mk)**

6. Define the term "citizenship" **(1mk)**

7. Give the main reason for the formation of the Kenyan African Democratic Union (KADU**)(1mk)**

8. Mention any two ways through which one can become a member of the National Assembly in Kenya. **(2mks)**

9. Identify the head of the Judiciary in Kenya. **(1mk)**

10. Give the main reason why the British used indirect rule in some parts of Kenya **(1mk)**

11. Name the body that made laws in Kenya during the colonial period. **(1mk)**

12. Outline two problems experienced by political associations in Kenya up to 1939 **(2mks)**

13. Name the first national philosophy in Kenya at independence. **(1mk)**

14. Identify two voting systems that have been used in Kenya since independence. **(2mk)**

15. Identify two types of ownership of land as spelt out in the Kenyan constitution **(2mks)**

16. State two ways through which the savings and Credit co-operative societies in Kenya benefit their members. **(2mks)**

17. Identify two examples of recurrent expenditure in Kenya. **(2mks)**

SECTION B (45MKS)

Answer any THREE questions from this section.

18. (a) Name five Eastern Bantu communities which settled in Kenya during the pre-colonial period **(5mks)**

(b) Describe five socio-political effects of the migration and settlement of the plain Nilotes during the pre-colonial period **(10mks)**

19. (a) State five reasons for the Portuguese success to conquer the Kenyan coast **(5mks)**

(b) Explain five factors that made the Akamba to participate in the long distance trade **(10mks)**

20. (a) Give five reasons for the construction of the Uganda railway **(5mks)**

(b) Explain five ways in which the colonial government promoted settler farming in Kenya **(10mks)**

21. (a) State five factors that facilitated Mau Mau movement in Kenya **(5mks)**

(b) Explain five roles played by the trade unions in the struggle for independence in Kenya **(10mks**

SECTION C (30mks)

Answer any two questions from this section

22. (a) State three types of issues that can cause a conflict **(3mks)**

(b) Explain any six peaceful methods of conflict resolutions **(12mks)**

23. (a) List three members that compose the cabinet in Kenya **(3mks)**

(b) Explain six reason that may lead to a presidential by-election in Kenya **(12mks)**

24. (a) Give five factors to consider when changing county boundaries in Kenya **(5mks)**

(b) Explain five challenges faced by the county governments in Kenya **(10mks)**

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

311/2

HISTORY AND GOVERNMENT

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES.

- ***i*** *Write your Name, Admission number and stream.*
- ***ii*** *Answer ALL questions in the answer sheets provided.*
- ***iii*** *Answer ALL questions in section A, Three questions in the section B and Two questions in section C.*
- ***iv*** *Candidates should answer the questions in English.*

FOR EXAMINERS USE ONLY

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

SECTION A-25 MARKS

Answer all questions from this section

1. Define the term monarchical government. **(1 mark)**

2. Identify **two** physical features of *Dryopithecus africanus*. **(2 marks)**

3. State **one** contribution of John Deere in the field of Agriculture. **(1 mark)**

4. Mention **two** urban centres that emerged as result of early agriculture in Mesopotamia. **(2 marks)**

5. Give the main item of trade from North Africa during the Trans – Saharan trade. **(1 mark)**

6. Name **two** titles used to refer to the Swahili officials in the administration of German in Tanganyika. **(2 marks)**

7. Give **one** function of the Emirs during the British indirect rule in Nigeria. **(1 mark)**

8. Identify **two** characteristics of the French policy of assimilation. **(2 marks)**

9. Mention **one** type of spirit in the Shona kingdom in the 19^{th} century. **(1 mark)**

10. Give **two** duties of Lukiiko in the Buganda Kingdom. **(2 marks)**

11. Give **two** Nations which belonged to the triple Entente during the First World War. **(2 marks)**

12. State **two** functions of the International Court of Justice (ICJ) as an organ of the League of Nations. **(2 marks)**

13. Name the European power that colonized the Democratic Republic of Congo**.** **(1 mark)**

14. Identify the name of the Military wing of the African National Congress (ANC) formed in South Africa. **(1 mark)**

15. Identify the immediate cause of the First World War. **(1 mark)**

16. State **two** economic blocks formed during cold war. **(2 marks)**

17. State the **main** objective of Economic Community of West African states (ECOWAS). **(1 mark)**

SECTION B: (45 MARKS)

*Answer any **three** questions from this section in the space provided at the end of question 24.*

18. (a) Give **five** ways in which the development of the upright posture improved the early man's way of life. **(5 marks)**

(b) Explain **five** aspects of culture of man that had their origin during the late Stone Age Period. **(10 marks)**

19. (a) Outline **five** roles of the Tuaregs during Trans – Saharan Trade. **(5 marks)**

(b) Explain **five** factors for the decline of Trans – Atlantic trade. **(10 marks)**

20. (a) Outline **five** methods which were used by Europeans to acquire colonies in Africa.

(5 marks)

(b) Explain **five** reasons why Africans were defeated during the Maji Maji rebellion in Tanganyika.

(10 marks)

21. (a) Outline **five** ways in which Julius Nyerere promoted education in Tanzania**. (5 marks)**

(b) Describe **five** political reforms introduced by Mobuth Sese Seko in DRC. **(10 marks)**

SECTION C: (30 MARKS)

*Answer any **two** questions from this section in the space provided at the end of question 24.*

22. (a) State **three** political factors for the growth of the Shona Kingdom in the 19th century.

(3 marks)

(b) Describe the social organization of the Asante Kingdom. **(12 marks)**

23. (a) Give **three** characteristics of common wealth member states. **(3 marks)**

(b) Explain **six** political effects of the Second World War. **(12 marks)**

24. (a) List any of the **three** official languages used in the United Nations Organization (UNO).

(3 marks)

(b) Explain **six** challenges facing the United Nations Organization (UNO). **(12 marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

312/1

GEOGRAPHY

PAPER 1

TIME: 2½ 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 questions in section **A**.*

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

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

FOR EXAMINER'SUSE ONLY

SECTION A

QUESTION	1	2	3	4	5
SCORE					

SUB-TOTAL = ☐

SECTION B

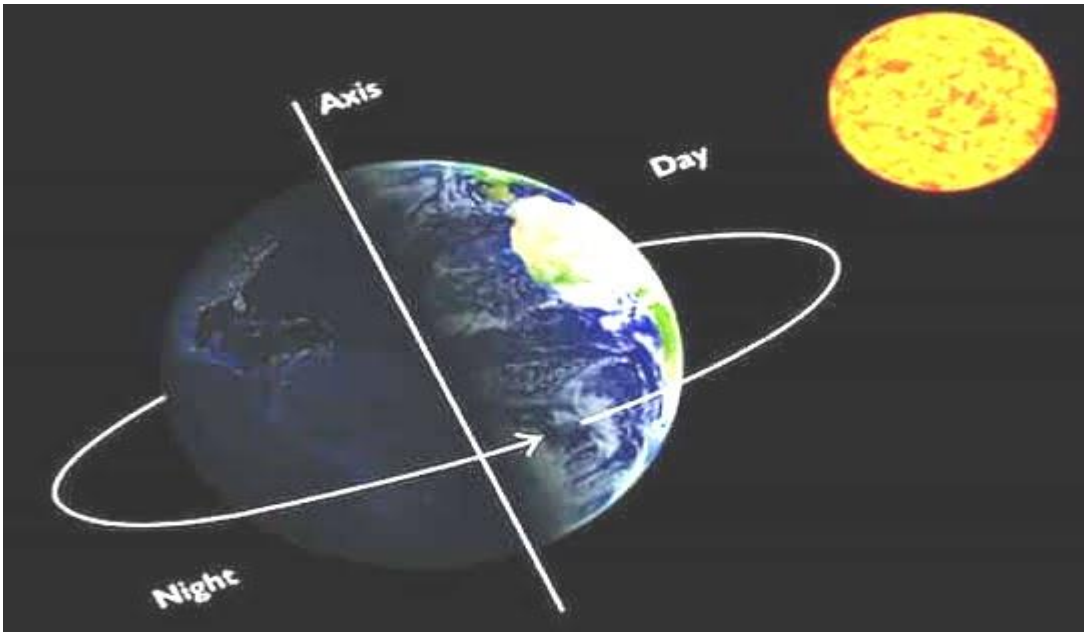
QUESTION	6	7	8	9	10
SCORE					

SUB-TOTAL = ☐

GRAND TOTAL = ☐

SECTION A (25 Marks)

1. The diagram below represents movement of the earth. Use it to answer the following questions.

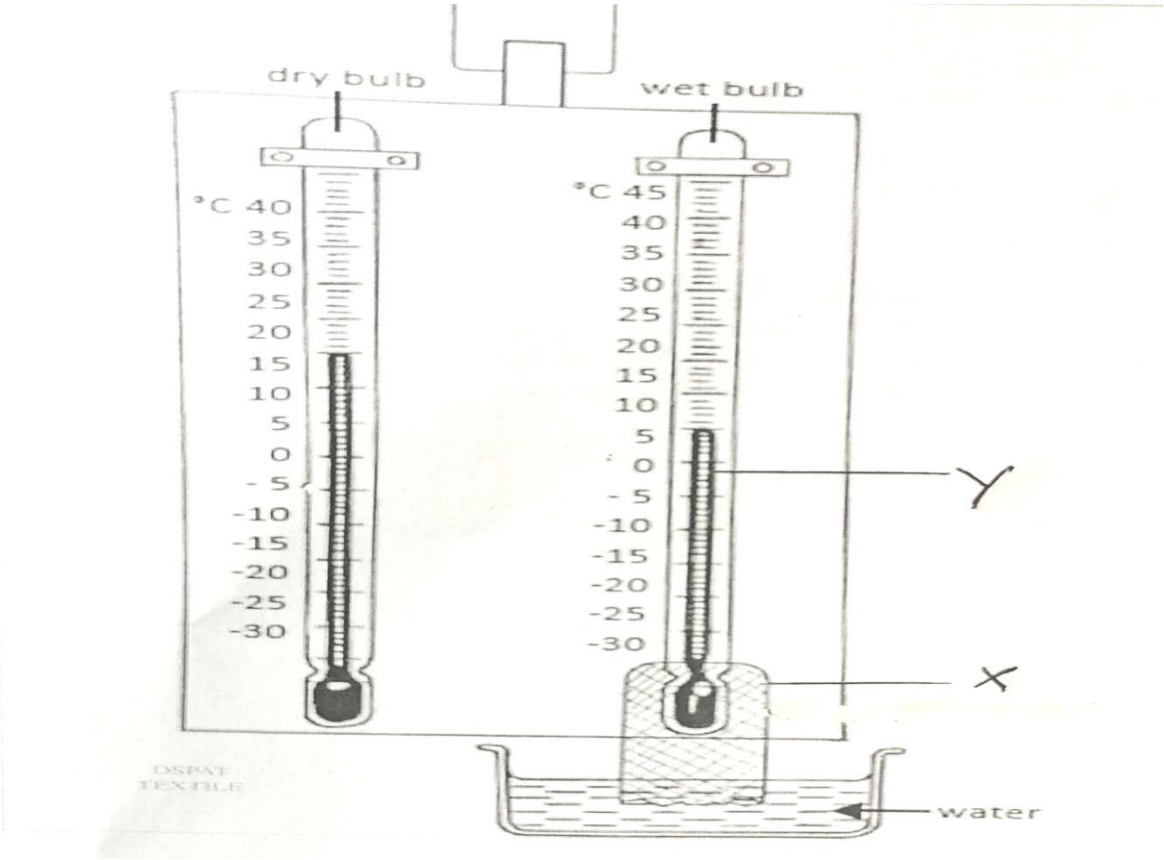


a. i. Identify the type of movement **(1mk)**

ii. Describe how the above movement causes day and night **(2mks)**

b. State three proofs that the shape of the earth is spherical **(3mks)**

2. The diagram below shows a simple hygrometer. Use it to answer questions.



(a) Identify the parts labelled X and **Y.** **(2mks)**

(b) Outline the steps followed when measuring humidity using hygrometer **(3mks)**

3. (a) Differentiate between intensity of an earthquake and magnitude of an earthquake **(2mks)**

(b)Name three major zones of the world. **(3mks)**

4. (a) Name two lakes in East Africa which were formed as a result of crustal down warping **(2mks)**

(b)State three reasons why some lakes are salty. **(3mks)**

5. (a) List two types of **dunes** **(2mks)**

(b)Identify two processes through which wind transports materials in arid areas. **(2mks)**

SECTION B. (75 Marks)

Answer question 6 (compulsory) and any other two questions from this section.

6. Study the map of Mumias (1:50,000) sheet 101/2 provided and answer the following questions.

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

ii) Give the six figure grid reference of TingoloSchool. **(2marks)**

iii) What is the bearing of Air Photo Principal Point 92/KE/4 157 from Indangalasia school. . **(2marks)**

iv) What is the length in Kilometres of the All Weather loose surface road from Ka to Petros in theEastern part covered by the map? **(2maarks)**

v) Give three relief features found in the area covered by the map. **(3marks)**

b) Describe the drainage of the area covered by the map. **(6marks)**

c) Draw a rectangle measuring 12cm by 8cm to represent the area to the North of Northing 40 and East of Easting 61. **(1mark)**

On the rectangle, mark and name:

- All Weather Loose surface road. **(1mark)**
- River Nzoia. **(1mark)**
- Mwira School. **(1mark**)

d) Citing evidence from the map, give two economic activities carried out in the area covered by the map. **(4marks)**

7. (a) Differentiate between the process of formation of plutonic and volcanic rocks. (2mks)

(b)i. For each of the following sedimentary rocks, name the resultant rocks that forms after metamorphism.

- Sand stone **(1mk)**
- Limestone **(1mk)**

- Clay **(1mk)**

ii. Describe the process of formation of the following type of sedimentary rocks.

- Mechanically formed **(4mks)**
- Organically formed (**4mks)**

(c) Explain the significance of rocks to the economy of Kenya under the following

i. Tourism

ii. Emergy

iii. Water

(d) You are planning to carry out a field study on rocks within the local enevironment.

i. List three methods you would use to record data. **(3mks)**

ii. State three problems you are likely to encounter **(3mks)**

8. (a) i. Apart from fold mountains , name three other features resulting from folding (3mks)

ii.In which countries are the following fold mountains found.

- Andes
- Cape ranges
- Atlas

(b) The map below shows the location of some fold mountain ranges.

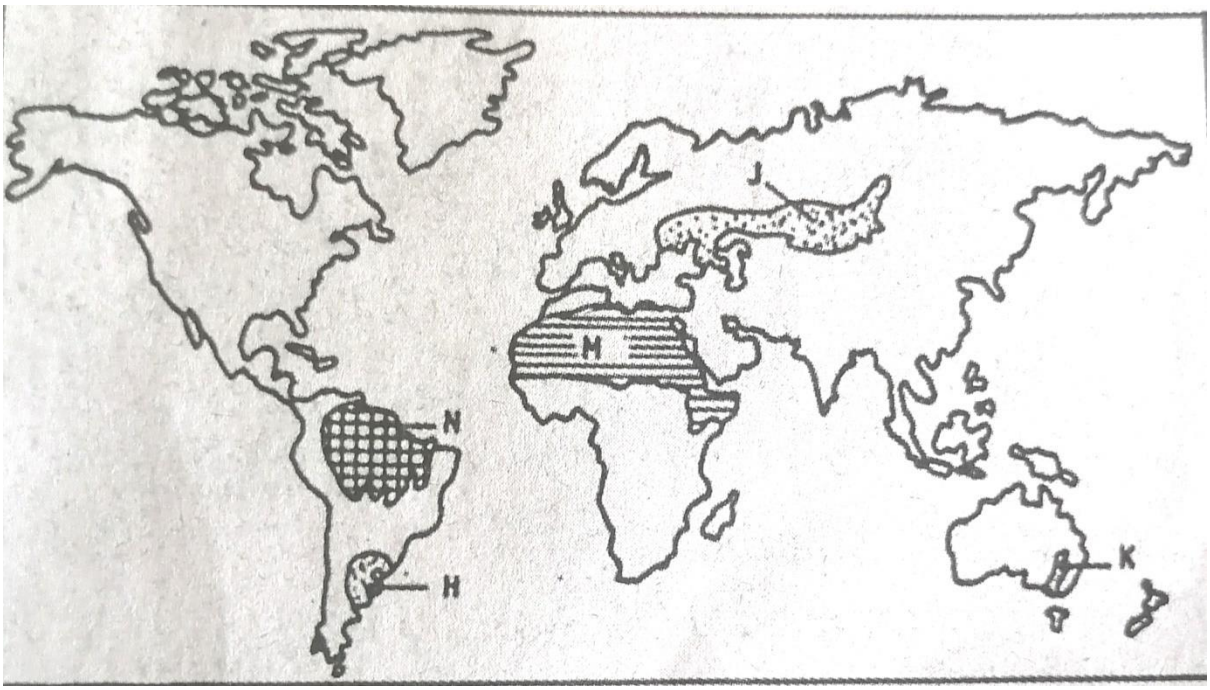


i. Identify the orogenies during which the the mountains marked P, Q, R, S were formed. **(4mks)**

(c) With the aid of a well labelled diagram, describe how the fold mountains were formed **(10mks)**

(d) State five significance of fold mountains to human activities **(5mks)**

9. The map below shows some vegetation regions of the world. Use it to answer questions a to c.



a) Name the temperate grasslands marked H,J and K**.** **(3mks)**

b) Describe the characteristics of the natural vegetation found in the shaded area marked N**. (6mks)**

c) i. Explain four ways in which the vegetation found in the area marked M adapts to the environmental conditions of the region **(8mks)**

ii. Give two reasons why Tundra region has scattered vegetation **(2mks)**

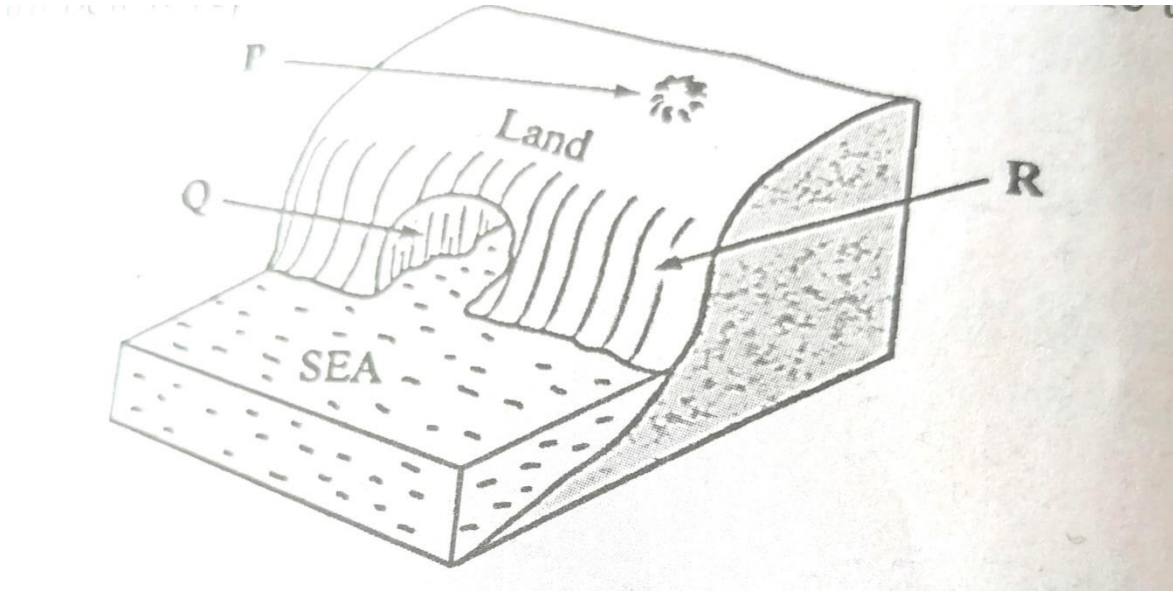
(d)You are required to carry out field study of the vegetation within the local environment.

i. Apart from identifying the different types of plants, state three other activities you will carry out during the field study. **(3mks)**

ii. How will you identify the different types of plants (**3mks)**

10. (a) i. Differentiate between a barrier reef and a fringing reef **(2mks)**

ii.The diagram below represents some coastal features . Name the features marked P, Q,R



(3mks)

iii. State two conditions necessary for the formation of a beach **(2mks)**

(b). With the aid of a well labelled diagram, describe the process through which a stack is formed **(8mks)**

(c) i.State four conditions that favour the growth of corals**. (4mks)**

ii. Explain three ways in which coral contributes to the economic development of Kenya **(6mks)**

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

312/2

GEOGRAPHY

PAPER 2

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

Instructions to the candidates

a) Write your name and index number in the spaces provided above
b) Sign and write the date of examination in the spaces provided above
c) This paper consists of two sections; A and B
d) Answer ALL questions in section A.
e) Answer question 6 and any other two questions from section B
f) Answers MUST be written in the spaces provided at the end of question 10

FOR EXAMINER'S USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 - 5	25	
B	6	25	
		25	
		25	
TOTAL SCORE			

SECTION A

Answer All the questions in this section

1. a). Define the term Forestry **(2marks)**

b). Give the reason why softwood forests in the Kenya Highlands mature faster than those in Canada. **(2marks)**

c). Name the tree species that grows on the saline coastal waters **(1mark)**

2. a). Identify **two** methods that are used to drain swamps in Kenya **(2marks)**

b). Give **three** benefits of draining Yala swamp to the local community **(3marks)**

3. a). Define the term green energy **(2marks)**

b). Name **three** sources of Green Energy **(3marks)**

4. a). Name **two** rivers in Africa, that are navigable **(2marks)**

b). State **three** factors that have hindered river transport in Africa **(3marks)**

5. a). Name **two** deciduous fruits grown in Kenya **(1mark)**

b). State **three** reasons why horticulture farming is concentrate near Naivasha **(3marks)**

SECTION B

Answer question 6 and two other questions from this section

6. Use the following table to answer questions 6(a) (i) and (ii)

Number of dairy animals in division x in the Kenyan highlands in 1982

BREED	NUMBER
Gursey	8442
Ayshire	7345
Jersey	10,830
Fresian	14,360
Sahiwal	4,270

a). (i) Using a scale of 1cm to represent 4000 animals represent the above data using a simple divided rectangle **(8marks)**

(ii). Give **three** advantages of using divided rectangles to represent data **(3marks)**

(iii). State **three** advantages of using artificial insemination in cattle breeding **(3marks)**

b). Give **three** characteristics of each of the following types of farming.

(i) Subsistence farming **(3marks)**

(ii) Extensive farming **(3marks)**

c). State **five** human factors that favour beef farming in Argentina **(5marks)**

7.(a) (i) Differentiate the term veins from Lodes in mining **(2marks)**

(ii) State the reason why mining is called a Robber Industry **(2marks)**

(b) (i) Fill in the table below on Kenyan minerals(in your answer booklet)

Mineral	Where mined	Mining method used
God		
Limestone		
Petroleum/ Oil		

(2marks)

(2marks)

(2marks)

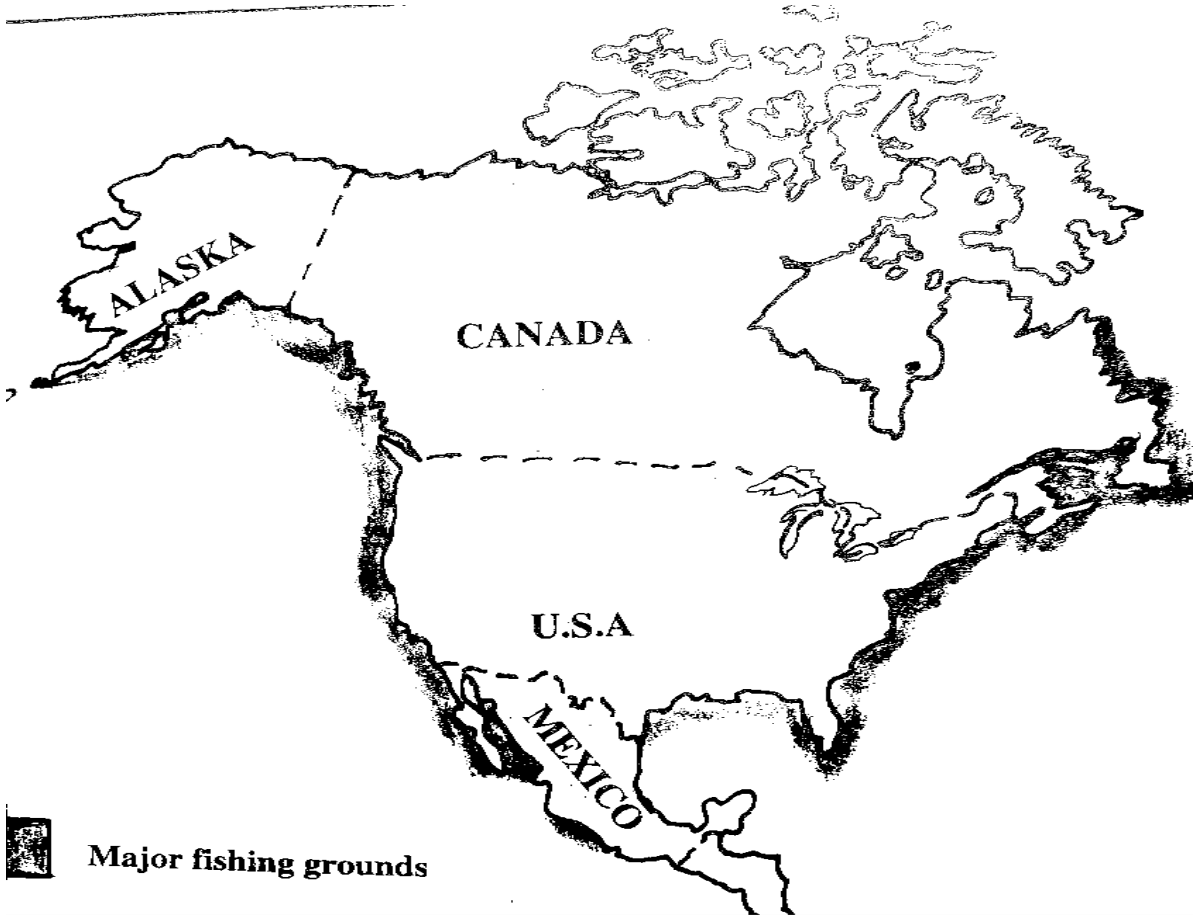
(ii) Describe how Trona is mined in Lake Magadi **(4marks)**

(iii) State **four** ways in which Trona mining has promoted the growth of Magadi Town in Turkana County

(c).(i) Name **two** provinces in South Africa where Gold is mined **(2marks)**

(ii) State **five** problems facing Gold mining in South Africa **(5marks)**

8. (a). Use the map of North America below to answer question (a)(i) and (ii)



(i) Name the fishing grounds marked **M** and **N** **(2marks)**

(ii) From the map identify the physical factor favouring fishing in the two named grounds **(1mark)**

(iii) State **three** measures taken to conserve the Salmon fish in the fishing ground mark M from depletion **(3marks)**

(b).(i). Name **three** main fish landing beaches on Kenya's Lake Victoria **(3marks)**

(ii). Explain **four** factors favouring fishing in Lake Victoria **(8marks)**

(c). (i). What is fish farming **(2marks)**

(ii). Apart from the Tilapia, name **two** main types of fish reared in fish farms in Kenya **(2marks)**

(iii). State **four** reasons why Tilapia is more popular in fish farming in East Africa **(4marks)**

9. (a)(i) Distinguish between balance of trade and balance of payment **(2marks)**

(ii). If Kenya imported electronics and automobiles worth Ksh. Ksh. 200,002,987/=, medical services worth Ksh. 185,876,440/= in the year 2000, while their exports the same year were agriculture, Ksh. 189,000,657/= and education Ksh. 150,012,230/=. Calculate Kenya's balance of trade in that year. **(2marks)**

(b). (i). List **three** major exports from Kenya to the European Union **(3marks)**

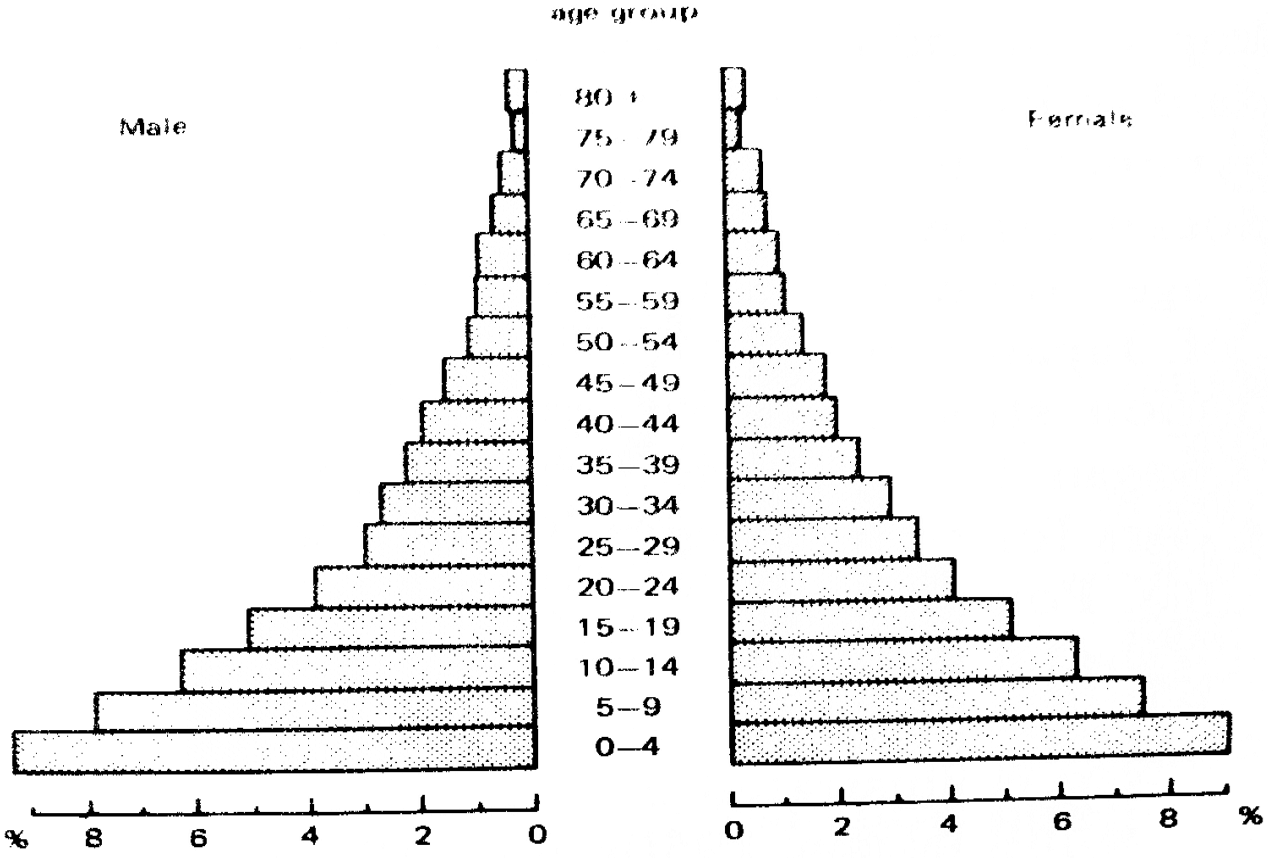
(ii). Give **four** reasons why Southern African Development Co-operation (SADC) was formed. **(4marks)**

(c).(i). Explain the following trade restrictions terms

- Tarifs **(2marks)**
- Quotas **(2marks)**
- Trade agreements **(2marks)**
- Total bans **(2marks)**

(ii). Explain **three** factors which negatively impact on Kenya's International trade **(6marks)**

10.(a)(i). Identify the statistical diagram below **(1mark)**



(ii). Name **three** types of information that may be derived from the above statistical diagram **(3marks)**

(iii). Give **three** factors that influence population growth **(3marks)**

(b).(i). Explain **four** possible reasons for the sudden rise of population in North Eastern Kenya **(8marks)**

(ii). State **three** negative effects of a high population growth on the natural environment **(3marks)**

(c). (i). Name **three** other types of internal migration other than Rural to urban **(3marks)**

(ii). State **five** measures taken by the Government to curb rural to urban migration **(4marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

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

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

(b) *This paper has **three** sections: **1, 2** and **3.***

(c) *Answer **ALL** questions in this paper.*

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1	20	
2	10	
3	30	
Total	60	

Q1. FUNCTIONAL WRITING

(20 Marks)

You are the secretary of Debating Club in your school; recently the club held a meeting and the following issues were discussed;

- Election of officials
- Income generating activities in the club
- Preparation for the great debate.

In the meeting, 8 members were present, 3 including the vice chairperson sent apologies and the whereabouts of 2 members were unknown. The club patron also attended the meeting. Apart from the main issues, members raised two issues from the previous meeting. Write down the minutes of the meeting.

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Q2. CLOZE TEST

Fill in each of the blank spaces in the following passage with the most appropriate word.

(10 marks)

Four weeks to the Africities Summit, **(1)** …… the host city of Kisumu is bristling **(2)** …… excitement and anticipation, with good reason. **(3)** ……10,000 visitors are expected to converge on the lakeside city, drawn **(4)** ……all over the world by a continental summit that happens once every three **(5)** ……About 5,000 of them will be foreign delegates keen to join in a discourse that African cities and how they evolving into a truly unpredictable**(6)** …… The other 4000 will be exhibitors at a gigantic exhibitions centre and service providers to ensure that the **(7)** …… do not lack anything.

Many have been skeptical **(8)** …… Kisumu could handle such a large influx of people even if it is the third largest city in the country. Well, the city is well-prepared in all aspects. It has been for a while. Significant investments have been made in infrastructure and **(9)** ……. is still going on to complete roads around and near the Mamboleo ASK Showground where the event will be held. The major streets are spruced up, as they have been for many months, thanks to the work done **(10)**……. the County Government of Kisumu.

3. ORAL SKILLS **(30 Marks)**

A. Read the following poem and then answer the questions that follow. **(8marks)**

<u>The Bride.</u>

Why do you wear that dress so white?
Why do you wear that veil so light?
Why do your young eyes shine so bright?
Is it your wedding?

I wear dress and veil to show
That gladly to my love I go
My young eyes shine because I know
It is my wedding.

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

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(ii) Using illustrations show how rhythm has been achieved in the poem**.** **(2marks)**

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(iii) What intonation would you use in reading line 3 stanza one in this poem? Give reason. **(2marks)**

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

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B. In each of the following sets of words, identify the odd one out in pronunciation**.** **(3marks)**

(i) Get Gait Gate …….

(ii) Air Hair Heir ……..

(iii) Course Cause Coarse ……..

C. A guest speaker is giving a speech on prevention of drug and substance abuse amongst the youth. You find it necessary to interrupt before he finishes his speech.

(i) Give two instances that may force you to interrupt. (**2 marks)**

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(ii) Identify any expressions you would use to interrupt politely. **(2marks)**

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D. During one of the English group discussion you realize that most members did not benefit from it. Explain three ways in which you can create orderliness in a discussion so as to benefit all group members. **(6 marks)**

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E. Indicate the appropriate intonation at the end of each of the sentences below**.** **(4marks)**

i) Have you ever been to Got Ramogi?

……..

ii) Who do you think you are?

……..

iii) I saw him along Bondo-Usenge road.

……..

iv) That was a superb goal!

……

F. Consider the following conversation between a father and his son taking place in the fathers study and use it to answer the questions that follow.

Son: Can I come in?

Father: Yes son, what can I do for you?

Son: I want to go dance at Kings Club. There is this Rhumba artist performing there and all my friends are going and of course I need money.

Father: You should first ask for permission.

Son: But you are not going to refuse, are you? I told you all my friends are going.

Father: You are blackmailing me, and for that reason, I'll not allow you…….

Son: Dad, you are insensitive, all my friends are going.

Father: Stop it and get out of my sight please.

i) How best should the son have begun this conversation? **(2marks)**

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ii) Identify three other shortcomings in the son's negotiation skills. **(3marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

101/2

ENGLISH

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO THE CANDIDATES

- *Write your **name**, Index **number** and the name of your **school** in the spaces provided above.*
- ***Sign** and write **date** of examination in the spaces provided above.*
- *Answer **all the questions** in this question paper.*
- *All your answers **must** be written in the spaces provided in this question paper.*

For Examiner's Use Only:

	QUESTIONS	TOTAL MARKS	SCORES
1	Comprehension	20	
2	Literary appreciation	25	
3	Poem	20	
4	Grammar	15	
	TOTAL	80	

1. COMPREHENSION

Read the following passage then answer the questions thereafter.

It is a matter of time before more ex-convicts are offloaded back into communities as authorities try to decongest prisons whose populations are above the recommended capacity.

Subject to the advice and recommendations of the power of Mercy advisory Committee (POMAC), about 900 "reformed" hardcore convicts will be released.

This will be in addition to 3,908 petty offenders released since June 1, through a presidential pardon.

The release of the huge number of prisoners comes at a time when police officers are grappling with insecurity challenges. When not on standby to deal with incidents of electoral violence, the cops have to keep tabs on criminal's gangs that have resurfaced ahead of the General election.

Already these vicious gangs have wreaked havoc in Onganta Rongai, Mombasa and Nakuru where cops are struggling to tame them. The presence of ex-convicts among communities is, therefore, likely to make a bad situation worse. From previous experience, some of pardoned prisoners find engaging in violent robbery, burglary, motor vehicle or livestock theft irresistible.

Cops generally fear the next lot of ex-convicts coming out of prisons will relapse into crime, making their work more difficult. "Our worry is that many of them will go back into crime, this is not farfetched but a common trend based on past experiences. Once these guys are set free, the impact will be instant with crimes shooting up" says a senior police officer, who spoke to the media, representing the views of some of his colleagues.

But police spokesman Bruno Shiosso says there is no cause for alarm since officers are trained on how to deal with lawbreakers, and that ex-convicts are no exception when it comes to enforcing law and order. He said they are certain that prisons authorities will only let out those who proved beyond doubt that they have reformed and become responsible citizens.

"But for those who think they will go baaack to crime, we shall deal with them within the realms of the law, "noted Shioso.

The police fear is understandable since recently, a former convict bludgeoned his mother to death in Riagicheru Village of Kirinyaga County. Barely days after being released from jail last month Ephantus Kiura shocked locals when he allegedly killed Grace Muthoni Ndambiri on June 12 by hitting the elderly woman with a blunt object.

Kiura had been imprisoned at the Gathigiriri Prison by a court in Mwea for torching his 76-year old mother's house. Upon earning freedom through a presidential pardon, the man brutally killed his mother. He was among the 3,908 petty offenders released from prison in a decongestion programme.

Kiura was a beneficiary of the community service order. However, he never waited to serve the noncustodial sentence and is now staring at life behind bars for the alleged murder. Petty offenders put on this form of light punishment are required to perform a specified number of hours of unpaid work in the community. This, however, does not apply to prisoners serving jail for capital offences.

Authorities admit that it is often difficult to ascertain the prisoners who correctly merit release. Some of those who make it to the freedom list either fake having reformed or bribe prison officials-ultimately leading to the wrong individuals being reintegrated back into communities. Though

stake holders have no right prescription for selecting the right convicts for pardon, the general feeling is that more general feeling is that more attention should be put on rehabilitation of inmates to achieve the desired change.

"Prisons have turned into containment facilities as opposed to rehabilitation centres where inmates and convicts are turned into responsible citizens" states Ambrose Ngare, a former prisons boss.

According to Ngare, now executive director of Africa Institute of Criminology, a non-governmental organization dealing in restorative justice, it is pointless releasing prisoners without first endeavouring to reconcile them with the victims they wronged.

Questions (20 mks)

1. What is the main reason the advisory committee gives for the release of convicts? **(1 mk)**

……

……

2. Give the main concerns of the police officers in connection to the release of the ex-convicts.

(2 mks)

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3. State the crimes the offenders have been accused of engaging in. **(3 mks)**

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4. Give the total number of ex-convicts the police officers expects in the communities. **(1 mk)**

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5. In about 55 words, chronologically summarise the criminal life of Ephantus Kiura. **(5 mks)**

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6. Cops generally fear the next lot of ex-convicts will relapse into crime. Identify the phrasal quantifier in the sentence. **(1 mk)**

……

7. Identify the attitude of the <u>public</u> towards the released ex-convicts. **(3 mks)**

……

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8. What does the writer mean by **(2 mks)**

'Prisons have turned into containment facilities as opposed to rehabilitation centres'

……

……

……

9. Give the meaning of the following words. **(2 mks)**

i) grappling ……

ii) right prescription …….

2. EXCERPT **(25 MARKS)**

"Tad," said the cranky passenger as he was settling down in economy class, in a seat next to Dr Afolabi's. "Tad Longway," he added. His voice, deep, lingered on like the boom of a big drum. He held out a card.

Dr Afolabi took it. It said the man was a Director of Special Projects at the Agency for Governance and Development in Africa. "Pleased to meet you, Mr Longway," Dr Afolabi said. "My name is Abiola Afolabi. I teach at the University of Ibadan, Nigeria."

"You gave an excellent keynote address the other day, Dr Afolabi," said the cranky passenger. Sparks of earnestness were crossing his eyes, both crystal-green like toy marbles, confirming the compliment was sincere. "Your keynote address at the Foundation for Democratic rule, I mean. It was brilliant."

"I'm glad you liked it, Mr Longway," Dr Afolabi said. His voice had become warm. "You were there, then, Mr Longway?"

"Yes, but back in the last row. As a mere spectator, I did not want to be obtrusive. Anyway, you were superb, Dr Afolabi. If you don't mind by adding this, I was more impressed by the points that the audience raised afterwards, during the question –and–answer period."

Dr Afolabi felt the praise he had just heard turn into reproach. "So what were those points, Mr Longway?" he asked. His voice was less warm.

"Remember the guy from Grassroots International: short fellow, round of body and outspoken of manner? What was his name? It's on the tip on my tongue."

"You must mean the fire-eater who kept accusing me of looking for answers where I shouldn't even look," Dr Afolabi said.

"Exactly, that's our man. Yes, I thought he was right on point, Dr Afolabi. He too was unhappy with the present state."

"Wait, the present state of what?"

"Africa."

"I don't understand."

"No problem: I'll spell it out for you. You see, Dr Afolabi, Africa, in its present state, has two new arrivals: corruption and impunity. The first is a crime the second protects from punishment, the second is another crime the first rewards with kickbacks. That is Africa in its present state. Now can it change?"

"Tell me. *Can it?"*

"Well, let's ask the Law of Will."

"What?"

"Unless there is will to change, there will be no change.'

QUESTIONS

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

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b) Discuss one character trait of Dr Afolabi and two of Tad Longway. **(6 marks)**

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c) Highlight and illustrate two themes evident in this passage. **(4 marks)**

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d) Identify and illustrate two stylistic devices evident in this passag**e.** **(4marks)**

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e) (i) Unless there is will to change, there will be no change. (Rewrite using "if") **(1 mark)**

……

(ii)It's on the tip of my tongue. (Rewrite beginning: "On…") **(1 mark)**

……

f) Explain the meaning of the following words and expressions as used in the excerpt. (5 marks)

a) Cranky

b) Keynote address

c) Obtrusive

d) On the tip of my tongue

e) Kickbacks

3. **Read the poem below and answer questions that follow:**

I AM TIRED OF TALKING IN METAPHORS

I will talk plainly,
Because I am moved to abandon riddles,
I will tell you of how
We held our heads in our hands
Because the owl hooted all night
And the dogs howled as if mourning
We waited the bad news
We received it.
Our mother blinded in one eye
Crippled in the right leg
Because she did not vote
For her husband's candidate

I will remind you
Of when the peeled plantains
Stood upright in the cooking pot
We slaughtered a cock,
Anticipating an important visitor
We got her:
Our daughter – piece of flesh in a sack
Our present from her husband

No! I will not use metaphors
I will just talk to you:

I do not fight to take your place
Or to constantly wave my fist in you face
I refuse to argue about

Your “manly pact”
with my father
You’ re buying me for a bag of potatoes
And pepper
All I want
Is for you to stop denying me
My presence needs no metaphors

I am here
Just as you are
I am not a machine
To dismantle whenever you whim
I demand my human dignity

Questions

a) Who is the persona in this poem? **(2 mks)**

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b) What are the thematic concerns of the poem. **(4 mks)**

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c) Explain the speaker’s attitude towards the subject matter. **(3 mks)**

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d) Give a character trait of the speaker. **(2 mks)**

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……

e) Discuss two elements of tradition highlighted in the poem. **(4 mks)**

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f) Identity two features of style used in the poem. **(4 mks)**

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g) Our mother blinded in one eye. Crippled in the right leg. (Join using a conjunction) **(1mk)**

……

4. **GRAMMAR (15 MKS)**

a) Give the meaning of the idiomatic expression used in the following sentences. (3 mks)

i) The long-awaited guests arrived at the <u>eleventh hour.</u>

……

……

ii) After thorough revision of the text the teacher told the students' <u>the ball is in your court</u>.'

……

……

iii) After being arrested the thief <u>spilt the beans</u> about their spoil.

……

……

b) Rewrite the following sentences according to the instructions given after each. (3 mks)

i) Njoki did not know it was a dangerous vocation. (Rewrite using……how…..)

……

ii) Someone saw Kirimi leaving the plane in Khartoum. (Begine: Kirimi…….)

……

iii) She opened the window and a bat flew out. (End in: a bat)

……

c) **Complete the following sentences using the appropriate form of the word given in brackets.**

i) Sophie's mother …….of her wearing very tight clothes in church. (approve)

ii) His …….cost him his job. (efficient)

iii) The …….of the traveller's was hindered by the poor roads. (mobile)

d) Replace the underlined word with the gender neutral word.

i) The <u>foreman</u> arrived late and delayed the construction.

……

ii) The <u>housegirl</u> died in the inferno.

……

e) Explain the two different meanings in each of the following sentences. (4 mks)

i) The students will read the books in the library.

……

……

……

ii) The man looked at the cow with one eye.

……

……

……

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

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 THE CANDIDATES

- *Answer three questions only*
- *In question three choose only one of the optional set texts you have prepared on.*
- *Where a candidate presents work on more than one optional text, only the first one to appear will be marked.*
- *Each of your essays must not exceed 450 words.*
- *All answers to be written in the answer booklet provided.*

For Examiner's Use Only

	QUESTIONS	TOTAL MARKS	SCORES
1	Imaginative writing	20	
2	Compulsory set text	20	
3	Optional set text	20	
	TOTAL	60	

Answer three questions only

1. IMAGINATIVE COMPOSITION (COMPULSORY) (20 MARKS)

EITHER

a) Write a composition beginning with the following words

I woke up on Christmas day feeling excited.

OR

b) Write a composition on the negative effect of social media and explain how the youth can avoid its negative aspects.

2. PLAY, THE SAMARITAN By John Lara (20 MARKS)

a) Bad leaders will not escape punishment due to their evil deeds. Using illustrations from John Lara's The Samaritan, write an essay to support this statement.

b) Standing firm in doing what is right yields good results. Using Nicole, in John Lara's, The Samaritan, write an essay in support of this statement.

3. EITHER

a) The short story (A Silent Song and Other Stories)

I. Some people can misuse the power in their hands and en up regretting when they lose it. With close reference to Naguib Mahfouz's story A Man of Awesome Power write an essay to justify this statement. **(20 marks)**

OR

II. Drawing illustrations from Meja Mwangi's, An Incident in the Park, write an essay to discuss the problems of urbanization. **(20 marks**)

OR

b) Drama –Adipo Sidang'-Parliament of Owls.

Choices have consequences. With relevant examples from Sidang's Parliament of Owls, discuss the validity of this statement**.** **(20 marks)**

OR

c) The novel-Kazuo Ishiguro. An Artist of the Floating World

War causes many negative results. Drawing examples from Ishiguro's An Artist of The Floating World, write an essay to show the truth of this statement. **(20 marks)**

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

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 jina lako na nambari yako katika nafasi ulizoachiwa hapo juu.*

b) *Andika insha **mbili**. Insha ya **kwanza** ni ya **lazima.***

c) *Kisha chagua insha nyingine moja kati ya tatu zilizobakia.*

d) *Kila insha isipungue maneno **400***

e) *Kila insha ina alama **20***

f) *Kila insha **lazima** iandikwe kwa lugha ya Kiswahili.*

KWA MATUMIZI YA MTAHINI PEKEE

Swali	Upeo	Alama
1	20	
	20	
Jumla	40	

MASWALI

LAZIMA

1. Wewe ni Mkurugenzi mkuu wa kampuni ya Tia Fora. Wateja wa kampuni yako wamekuwa wakilalamikia huduma duni kutoka kwa kampuni yako. Imebainika kuwa wafanyakazi katika kampuni yako wanahusika katika hulka hizi duni. Andika arifa/memo ukiwaonya dhidi ya jambo hili.

2. Jadili jinsi wanafunzi wanavyoweza kuimarisha matokeo katika masomo ya sayansi.

3. Tunga kisa kitakachodhihirisha maana ya methali: Mchimba kisima huingia mwenyewe.

4. Andika kisa kitakachoanza kwa maneno haya: Niliyafuta machozi. Uchungu uliokuwa moyoni uliyeyuka ghafla,tabasamu ikanivaa,nikawa tayari kukabiliana na hali yangu mpya liwe liwalo…..

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

102/2

KISWAHILI

KARATASI YA 2

LUGHA

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

Maagizo

(a)Andika jina na nambari yako ya mtihani katika nafasi ulizoachiwa hapo juu.

(b)Tia sahihi yako kisha uandike tarehe ya mtihani.

(c) Jibu maswali yote.

KWA MATUMIZI YA MTAHINI PEKEE

Swali	Upeo	Alama
1	15	
2	15	
3	40	
4	10	
	80	

1 *Soma dayolojia ifuatayyo kisha ujibu maswali yanayofuata.*

(Bw. Akot na Bi Khadija wamekaa katika sebule ya mkahawa wakiendesha dayolojia kuhusu uwajibikaji wa viongozi waliochaguliwa)

Bw. Akot: Bibiye, yasikitisha sana kuona kuwa viongozi tunaowachagua hawaonyeshi hata chembe moja ya kuwajibika.

Bi Khadija: Ah! Ndio sasa unayafahamu hayo? Wanapotuomba kura hudai kuwa ni watumishi wetu. Pindi wachaguliwapo, utumwa unawagura na wanajitwika joho la ubwana. Lakini usisahau kuwa hali hii si ya hapa nchini tu bali ni ya bara zima la Afrika.

Bw. Akot:Ingawa ni tatizo la bara zima, hapa kwetu limekithiri mizizi. Hawa viongozi wetu wamezidi. Kila baada ya miaka mitano sisi wananchi huenda kupiga kura. Huwa na matarajio makubwa kuwa tunaowachagua watayajali na kuyashughulikia maslahi yetu. Wanatufanya tuamini haya katika kipindi cha kampeni. Ukiwasikia katika majukwaa ya kuomba kura wanavyotongoa lugha na kutoa msururu wa ahadi, utafikiri maisha yetu, yahe, yataimarika mara tu tutakapowachagua. Ole wetu! Ukiamini haya, wajihadaa. Zote hizi ni ahadi za upepo zinazopeperushwa na hewa pindi wanapopata ushidi.

Bi Khadija: Kumbuka kuwa lawama zote haziwaendei viongozi hawa tu. Hata sisi raia twapaswa kulaumiwa. Baadhi yetu ni viongozi wazuri lakini tunaogopa kujitosa kwenye siasa.

Bw. Akot: Kwa nini tulaumiwe ilhali si sisi tunaoupata uhondo wa uongozi?

Bi. **Khadija**: Hapo ndipo lawama zinapojia. Sisi raia twapaswa kulaumiwa kwa sababu ya kuwaamini viongozi zaidi kupita mipaka. Sisi tunawaachia majukumu yote watuongoze mithili ya ng'ombe anayeongozwa na mchinjaji. Badala ya kutumia nafasi zilizoko za kuwaandama ili wawajibike, sisi raia hubaki tukilia tu. Hatujui kuwa tuna njia za kulazimisha viongozi wetu kuwajibika!

Bw. **Akot:** Tutawezaje kutekeleza hayo ilhali tunapowachugua wanatuambaa kama wagonjwa wa ukoma? Muda wa kuwapata ni baada ya miaka mitano wanapokuja kutuomba tuwapigie kura tena.

Bi. **Khadija**: Tusikate tama. Wakati huo ndio mwafaka kwetu kutumia kiboko tulichonacho kuwaadhibu wale ambao hawakutekeleza wajibu wao. Tunapaswa kutumia wakati huo kuwapiga kalamu walioshindwa kutekeleza majukumu yao. Kisha tusikomee hapo. Tunapaswa kuwachuja kwa makini viongozi tunaowachagua. Hatupaswi kukubali kuhadaiwa

kwa porojo na ahadi zisizotimia. Ili kutekeleza haya ni muhimu kujua wajibu wa kila kiongozi anayechaguliwa.

Hii ndiyo sababu wengi wetu raia huhadaika kwa urahisi wakati wanowania viti vya uwakilishi wanapotoa ahadi za kutujengea mbinu msingi kama shule, barabara na hospitali. Huu huwa uongo mtupu. Ujenzi wa mambo haya ni wetu raia kupitia kwa serikali. Ujenzi huu hutekelezwa kutoka kwa pesa tunazozitoa kama kodi. Jukumu la wabunge ni kuhakikisha wanapigania ujenzi huu utekelezwe katika maeneo wanayoyawakilisha. Ahadi hizi za uongo hazipaswi kuwa kigezo chetu cha kuwateua.

Bw. Akot: Lakini ukumbuke kuwa wanaotaka kuchaguliwa hutujia kwa hila nyingi.

Bw. Khadija: Hayo sipingi. Umma unapong'amua kuwa wanaotaka kuchaguliwa hutumia hila, unapaswa kukaa ange na kuzitambua hila hizo na kuzipiga vita. Tatizo letu kubwa sisi tunaowachagua ni kutojua wajibu wetu.Pili, wengi wetu huwa wasakatonge na tunaporushiwa vihela kidogo kama chambo, tunakimbia kuziuza haki zetu na za watoto wetu. Kwa njia hii, tunawachagua viongozi wasiotujali na wanaotupotezea wakati pamoja na kuyahatarisha maisha yetu na ya watoto wetu.

Bw. Akot: Wengi wao hubadilika na kuanza kutubeza kuwa sisi ni wahuni, wavivu na watu wasiostaarabika. Wengine hujilimbikizia mashangingi yanayomeza mafuta kama sijui nini. Juu ya haya hutembea na misururu ya magari na makundi ya wapambe na walinzi. Baadhi yao wamehamia kwenye makasri makubwa yenye vyumba sita vya kulala na vidimbwi vya kuogelea. Yote haya kwa gharama ya yule mpigakura mlalahoi.

Bw. **Khadija**: Mwenzangu, usisahau kuwa mimi na wewe tuna wajibu wa kuwaelimisha wenzetu kuhusu wajibu wao katika uchaguzi wa viongozi.

Bw. **Akot**: Ninakubaliana nawe kabisa. Naomba tushikane bega kwa bega ili tutoke katika giza hili.

MASWALI

(a) Ni kwa namna gani viongozi waliochaguliwa hawaonyeshi chembe ya kuwajibika? **(ala 1)**

……

……

(b) Eleza mchango wa wapiga kura katika hali ya uongozi nchini mwao. **(alama 4)**

……

……

……

……

……

(c) Eleza maoni ya Bi. Khadija katika kufanikisha uongozi bora **(alama 4)**

……

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……

……

(d) Bainisha mbinu wanazotumia viongozi ili kufanikisha ushindi wao kulingana na kifungu **(alama 3)**

……

……

……

……

(e) Andika maana ya maneno yafuatayo kama yalivyotumiwa kwenye kifungu**. (alama 2)**

(i) Limekithiri mizizi

_____

(ii) Wasakatonge

_____

2 UFUPISHO (alama 15)

CHIMBUKO LA KISWAHILI

Kiswahili ni lugha ambayo huzungumzwa na takriban watu milioni mia moja kote ulimwenguni. Pia, ni lugha ya saba ulimwenguni na ya pili barani Afrika kwa kuwa na wazungumzaji wengi. Asili ya lugha hii imetafitiwa na wanaisimu na wanahistoria. Kuna maoni aina tatu kuhusu asili na chimbuko la Kiswahili. Baadhi ya watu kama F. Johnson, C. Meinhof, Akofu Steere, W.E. Taylor, G.W.Broomfield, W.H.Whitely na wengineo wameshikilia kuwa Kiswahili ni lugha mseto. Wasomi hawa wanadai kuwa Kiswahili kimetokana na maingiliano ya lugha za Kibantu na lugha za kigeni kama vile Kiajemi, Kiarabu na Kihindi. Wanaoshikilia wazo hili husema kuwa Kiswahili kilizuka ili kufanikisha mawasiliano katika shughuli za kibiashara. Wao wanasisitiza kuwa Kiswahili hakikuwepo kabla ya kuja kwa wageni.

Kuna madai pia kuwa Kiswahili ni lahaja ya Kiarabu. Dhana hii inapotosha kwa sababu inaonyesha kuwa kabla ya kuja kwa wageni kwenye upwa wa Afrika Mashariki hapkuwa na Kiswahili. Wazo hili si sahihi kwa sababu hakuna lahaja ya aina hii huko Uarabuni. Pili Waarabu pia walienda Afrika Magharibi kupitia Afrika Kaskazini, mbona lahaja ya namna hii haikuzuka huko?

Maoni ya mwisho ni kuwa, Kiswahili ni mojawapo ya lugha za Kiafrika yenye asili ya kibantu kama vile Kihaya, Kikuyu, Kiyao, Kimeru na Kigiriama. Lugha hii ya Kibantu iliweza kukopa maneno ya kigeni kutoka kwa lugha za Kiarabu, Kiingereza, Kijerumani, Kihindi, miongoni mwa zingine. Ukopaji huu ulitokana na maingiliano ya jamii hizi kupitia kwa biashara na utawala.

Maoni yanayoshikiliwa sasa ni kuwa Kiswahili ni lugha ya Kiafrika yenye asili ya Kibantu. Ithibati ya kutosha imetolewa kupitia kwa utafiti wa Kiisimu, Fasihi Simulizi na Historia (mapisi).

Uchunguzi wa isimu historia na isimu linganishi uliofanywa na M Guthrie mwaka wa 1948 unaonyesha kuwa Kiswahili kina uhusiano na lugha zingine za Kibantu hasa tunapotazama mashina ya maneno mengi kutoka lugha mbalimbali za Kibantu. Maneno ya asili kama vile kichwa, mkono, maji, njia na majina ya wanyama katika lugha hizi yanahusiana, na hivyo kubainisha kuwa yalitoka kitovu kimoja.

Baada ya Wabantu kufanya makazi katika sehemu ya Mto Tana walishambuliwa na Wagalla. Baada ya mashambulizi haya Wabantu walitawanyika na kuanza makazi mapya kuanzia sehemu ya Modagishu upande wa kaskazini, hadi sehemu ya Mto Pangani, upande wa kusini. Baadhi yao walivuka Bahari ya Hindi na kwenda kufanya maskani yao katika visiwa vya Unguja. Pembe za Ngazija. Katika maeneo haya waliendelea kuzungumza lugha zao za Kibantu, lakini kutegemea wakati na umbali kati yao, tofauti za kimatamshi na msamiati zilizuka. Tofauti hizi zilisababisha kuwepo kwa lahaja mbalimbali za Kiswahili. Miongoni mwa lahaja hizi ni Kiamu, Kipate, Kingare, Kimvita,Kivumba, Kingazija, Kinzwani, Kipemba, Kiunguja, Kitumbatu, Kibajuni, Kisiu miomgoni mwa zingine.

Jambo lingine ni kuwa Kiswahili kina irabu tano kama zilivyo lugha nyingi za Kibantu. Irabu hizi ni a, e,i,o, na u. Hali kadhalika muundo wa msamiati wa Kiswahili kimsingi huchukua konsonanti –irabu - konsonanti –irabu. Kwa mfano; kigoda, maji, baba. Hata hivyo konsonanti mbili au tatu zinaweza kufuatana. Kwa mfano **nyw**ele, **pw**ani, **ngw**ena, **afy**a na mengine mengi.

Mpangilio wa nomino za Kiswahili huleta uwiano wa kisarufi na huitwa ngeli za nomino. Hujitokeza katika lugha zingine za Kibantu. Mfano wa mpangilio wa nomino hizi ni ngeli ya **KI-VI, U-I, A-WA, LI-YA**. Nomino hizi zinapotumiwa katika lugha ya Kiswahili huwa na uwiano na vitenzi. Jambo hili pia hujitokeza katika lugha zingine za Kibantu, na kudhihirisha kuwa Kiswahili ni mojawapo ya lugha za Kibantu.

Katika maoni ya fasihi simulizi, asili ya Kiswahili ni Kingozi. Mashairi ya Hamziya yaliyoandikwa katika karne ya 18 yaliandikwa kwa Kiongozi. Kiongozi kilikuwa kikizungumzwa sehemu iliyoitwa Ushwahili upande wa visiwa vya Magunyoni(Pate, Lamu, Faza) hadi bara kupakana na Mto Tana

Asili ya neno '*Kiswahili*' inasemekana ilitoka na kijana wa Kingozi aliyeulizwa na wageni (wasafiri wa Kiarabu) kuwa wao ni kina nani? Akajibu kuwa "*Sisi ni Wa-ziwa hili*." Yaani wenyeji wa ziwa hili. Kutegemea wakati na matamshi, jina hili lilibadilika na kuwa Waswahili

(a) Eleza ujumbe unajitokeza katika aya za kwanza tatu (Maneno 90, alama 9, 1 ya mtiririko)

Nakala chafu

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Nakala safi

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(b) Thibitisha kuwa Kiswahili ni lugha ya Kiafrika yenye asili ya kibantu. (Maneno 60. Alama 4,1 ya mtiririko)

Nakala chafu

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Nakala safi

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3. MATUMIZI YA LUGHA (ALAMA 40)

(a) Ni sauti gani haifai kuwa miongoni mwa hizi. Toa sababu **(alama 2)**

i. /ng'/ /g/ /t/ /k/

ii. /s/ /v/ /ch/ /sh/

(b) Andika neno lenye muundo ufuatao **(alama 1)**

Nazali ya ufizi, kipasuo ghuna cha kaakaa laini, irabu ya juu nyuma, irabu ya nyuma wastani.

_____

(c) Ainisha mofimu katika neno walionana **(alama 3)**

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(d) Eleza maana ya mzizi wa neno **(alama 2)**

_____

_____

(e) Nyambua vitenzi vifuatavyo katika kauli zilizo kwenye mabano. **(alama 2)**

i. nywa (kutendwa) _____

ii. fa(kutendwa) _____

(f) Eleza matumizi ya maneno yaliyopigiwa mstari katika jozi ya sentensi hizi: (alama 2)

<u>Huyu</u> ni mkufunzi msomi.

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Mkufunzi <u>huyu</u> ni msomi sana

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(g) Ziandike upya sentensi zifuatazo kwa kufuata maagizo kwenye parandesi **(alama 6)**

(i) Niliwaeleza wazazi wetu kwa dhati.Walikuwa wamepigwa mafamba hadi hawakuamini niliyosema. (**Anza:** Wazazi…)

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_____

(ii)Watoto wanaovaa nguo fupi fupi siku hizi wamethiriwa na tabia za kigeni. (Anza kwa: Nguo fupi…)

_____

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(iii) Mtaalamu alituambia kwamba kusoma kwa mapana kungepalilia ubunifu wa wanafunzi wale wetu. (Andike kwa usemi halisi).

_____

_____

(h) Alama ya kiulizo hutumiwa katika sentensi ambayo ni swali. Eleza matumizi mengine ya alama hii. **(alama 1)**

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_____

(i) Tunga sentensi mbili kuonyesha matumizi mawili ya kiambishi 'O' **(alama 2)**

_____

_____

(j) Ichanganue sentensi ifuatayo kwa kielelezo cha visanduku **(alama 3)**

Marekebisho ambayo yamefanywa yanavutia sana.

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(k) Geuza sentensi ifuatayo iwe kwa wingi **(alama 2)**

Mwanzi alioupanda karibu na mto umeshikana ukawa msitu mkubwa.

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(l) Ashua ni mwanafunzi aliye na matatizo ya kibanafsi katika masomo yake. Licha ya yeye ni mwanafunzi bora shuleni. Hakuna anayeelewa changamoto zake kwa kuwa ameziweka siri. Huenda akasitisha masomo ikiwa hatapata msaada. Ni methali gani inayoweza kumfaa Ashua? **(alama 1)**

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(m) Tunga sentensi moja itakayotofautisha maana ya *baa* na *paa*. ***(*alama 2)**

_____

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_____

(n) Tambua aina za virai katika sentensi hii **(alama 2)**

Wanafunzi wote walizawidiwa na Rais.

_____

_____

(o) Kanusha sentensi ifuatayo **(alama 2)**

Ukimwona Bakari umwambeia nitamtembelea kesho.

_____

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(p) Tunga sentensi itakayodhihirisha shamirisho kitondo na chagizo **(alama 2)**

_____

_____

(q) Iandike sentensi ifuatayo katika kinyume cha maneno yaliyopigiwa mstari. **(alama 2)**

Onyango <u>alihama</u> Kilifi baada ya <u>kuchimba</u> makaburi.

_____

_____

(r) Yakinisha sentensi ifuatayo katika nafsi ya pili umoja **(alama 1)**

Hataenda shuleni kesho

_____

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(s) Andika maana ya misemo ifuatayo **(alama 2)**

fanya inda_____

Changa bia_____

4. ISIMUJAMII (ALAMA 10)

Umealikwa kama mshauri nasaha katika shule moja ya upili inayokumbwa na tatizo la mihadarati miongoni mwa wanafunzi. Andika sifa kumi za lugha utakazozingatia ili kufaulisha uwasilishaji wako.

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

102/3

KISWAHILI

KARATASI YA 3

FASIHI

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO:

a) Jibu maswali manne pekee.

b) Swali la kwanza ni la lazima.

c) Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki; yaani; Riwaya,Ushairi, Hadithi Fupi na Fasihi Simulizi.

d) Usijibu maswali mawili kutoka sehemu moja.

e) Majibu yote lazima yaandikwe kwa lugha ya Kiswahili

KWA MATUMIZI YA MTAHINI PEKEE.

Swali	Upeo	Alama
1	20	
	20	
	20	
	20	
Jumla	80	

SEHEMU A: TAMTHILIA: *Bembea ya Maisha* - T. Arege (ALAMA 20)

1. "Siwezi kuendelea kuishi hivi. Sasa nimekata shauri. Pombe! Umenichezesha kama mwanasesere kwa muda mrefu. Umeninyima fursa ya kuielewa familia yangu. Hapana! … Lazima nimshukuru kwa vitendo kwa jinsi alivyojitolea kuijenga familia yetu…kwa heri pombe. Buriani."

a) Weka dondoo hili katika muktadha wake**.** **(alama 4)**

b) Eleza vipengele vinne vya kimtindo alivyotumia msemaji kufanikisha uwasilishaji wa ujumbe. **(alama. 4)**

c) Fafanua changamoto ya asasi ya ndoa kwa kuangazia ndoa zilizo katika tamthilia ya *Bembea ya Maisha*. **(alama 4)**

d)"...Wakati mwingine mwindaji huwa mwindwa. Hata kijijini wanaishi watu. Watu hao hawakumbwi na dhiki kiasi hiki. Ya nini kung'ang'ana kuyatafuta maisha kama kwamba hayapiti? Maisha ni mshumaa uso mkesha! Ukijiachia sana peupe hata upepo unaweza kuuzima kabla ya kulika hadi nchani."

Eleza umuhimu wa msemaji katika kuendeleza ploti ya tamthilia hii. (alama 8)

SEHEMU B: RIWAYA, - Clara Momanyi; Nguu za Jadi.

Jibu swali la 2 au la 3

2.“Samahani… Nina shida kidogo. Ninaomba usaidizi. Sikuwa nikilipa ushuru katika biashara zangu. Sasa wanataka kuzifunga na kunipeleka kotini."

a) Eleza muktadha wa dondoo **(alama 4)**

b) Bainisha toni katika dondoo hili **(alama 2)**

c) Msemaji wa maneno haya na wengine ni adui ya wananchi wa Matuo. Eleza ukweli wa kauli hili. **(alama 14)**

AU

3.Matumizi mabaya ya mamlaka ni tatizo sugu sana katika mataifa mengi ya Afrika yanayoendelea kiuchumi. Kwa kutolea hoja mwafaka, tetea ukweli wa kauli kwa mujibu wa riwaya ya nguu za jadi. **(alama 20)**

SEHEMU C: USHAIRI

4. ***Soma shairi lifuatalo kisha ujibu maswali.***

Timothy Arege – Mwili

Leo kitaka nifike, natamani, ila wauma mwili
Kwa kazi nihusike, samahani, unahili kimwili
Napenda nihesabike. makundini, ila huwezi mwili.

Vitisho pamwe kelele, ninavicha, kwa nafsi na mwili
Ila ugonjwa utimile, umechacha, na kuudhili mwili
Msikose simile, magalacha, si gurudumu mwili.

Vingekuwepo viraka, kuutia, ngeushuruti mwili
Kifundi kuvipachika, kuingia, hata kuridhi mwili
Upya ukaungilika, kuvutia, roho na wake mwili.

Lakini kamwe haiwi, kuvipata, vipande vyake mwili
Sihofu kupata mawi, sitajuta, kupigania mwili
Hata kufutwa sikawi, nitakita, kidete nao mwili

Kazi ninaithamani, ni hakika, akilini na mwili
Ila kamwe siamini, kusagika, damu jasho na mwili
Uwele hususani, kioneka, nguvu hitishi mwili

Maswali

a) Fafanua mambo ambayo mtunzi anasisitiza katika shairi hili. **(alama 8)**
b) Bainisha mbinu nne ambazo mtunzi ametumia kutosheleza mahitaji ya kiarudhi katika shairi. **(alama 4)**
c) Eleza toni ya shairi. **(alama 2)**
d) Tambua nafsi nenewa na nafsi neni katika shairi hili **(alama 2)**
e) Bainisha bahari ya shairi hili kwa kurejelea vipande. (**alama 1)**
f) Andika ubeti wa mwisho kwa lugha nathari. **(alama 3**

5. Soma shairi lifuatalo kisha ujibu maswali.

KAMA SODOMA!
Miji yetu kwa yakini, kidogo kama Sodoma!
Haihitaji makini, kwa mwenye macho mazima
Utaona walakini, mradi ukitizama
Wanazini hadharani, wana kwa watu wazima
Yafanana na Sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Wanazini hadharani, wana kwa watu wazima
Wanatafuna maini, vijana na kina mama
Hawana haya nyusoni, wameharamisha wema
Yafanana na Sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Hawana haya nyusoni, wameharamisha wema
Baba na binti ndani, wanacheza lelemama
Marijali wa mbioni, kujipagaza umama
Yafanana na Sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Marijali wa mbioni, kujipagaza umama
Wameikataa dini, toka tumboni mwa mama
Wadai wataliani, watajirisha mapema
Yafanana na sodoma, mji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Wadai ufirauni, watajirisha mapema
Hivyo mambo ya kigeni, yametunukiwa dhima
Uwaonapo fuoni, nusu uchi wa mnyama
Yafanana na Sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Uwaonapo fuoni, nusu uchi wa mnyama
Watu hawana imani, umezidi uhasama
Na viongozi wa dini, kuabudu darahima
Yafanana na Sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Na viongozi wa dini, kuabudu darahima
Wamekeuka yamini, kati yao na Rahima
Wamemuasi Manani, na kusahau kiyama
Yafanana na sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Wamemuasi manani, na kusahau kiyama
Ya Illahi tuauni, tuwe watu maamuma
Tukue katika dini, siku zetu za uzima
Yafanana na Sodoma, miji yetu kwa yakini.

MASWALI

(a) Bainisha bahari ya shairi hili ukijikita katika ruwaza zifuatazo **(alama 3)**

i) Mishororo

ii) Maneno

iii) Vina

(b) Eleza muundo wa shairi hili **(alama 4)**

(c) Bainisha mbinu zifuatazo za kimtindo katika shairi hili **(alama3)**

i) Tashbihi

ii) Taswira

iii) Tasfida

(d) Eleza toni ya shairi hili **(alama1)**

(e) Bainisha nafsi nenewa katika shairi hili **(alama 1)**

(f) Fafanua dhamira ya mtunzi wa shairi hili **(alama 2)**

(g) fafanua ujumbe wa shairi hili **(alama 4)**

(h) Fafanua maana ya maneno haya kama yalivyotumiwa na mshairi **(alama 2)**

i) Manani

ii) Marijali

SEHEMU YA D: Hadithi Fupi – Mapambazuko ya Machweo na Hadithi Nyingine – Dw Lutomia

6. "Poko! Ukiumwa na nyuki haina haja ya kujitwika jukumu la kuharibu mizinga yote ya asali. Hujui faida ya nyuki ulimwenguni? Uliamua kuharibu asali ya nchi. Jadili maudhui ya ukiukaji wa haki za watoto katika hadithi ya ;

i. Mapambazuko ya Machweo **(alama 10)**

ii. Sabina **(alama 10)**

7. Siku moja alipokataa katakata kuandamana na mumewe, jungu lilifoka. "Wewe mke sampuli gani usiyetaka kumuunga mkono mmeo?" Haya kaa nyumbani. Kula na kulala tu, hujui jingine. Ona umbo lako sasa, kama nguruwe. Si mke mrembo niliyeoa! Wanawake ni wengi…"

a) Eleza muktadha wa dondoo hili. **(alama 4)**

c) Bainisha vipengele vinne vya kimtindo katika dondoo hili **(alama 4)**

e) Fafanua nafasi ya mwanamke katika hadithi hii. **(alama 12)**

SEHEMU E: FASIHI SIMULIZI

8. Soma kifungu hiki kisha ujibu maswali

Hapo zamani za kale, Nyani na Mamba walikuwa marafiki wa kufa kuzikana. Watoto wao walipendana na kufaana kama ndugu wa toka nitoke. Familia ya Mamba aliishi mtoni nayo ya Nyani aliishi katika msitu uliokuwa maili thelathini kutoka mtoni. Kila mara marafiki hawa walitembeleana na kusaidiana kwa hali na mali. Kwa vile Mamba alikuwa mvuvi mashuhuri, aliweza kumwauni Nyani na aila yake kwa samaki wa aina mbalimbali. Nyani naye alimpelekea Mamba matunda na nafaka kutoka shambani mwake.

Urafiki wao ulikita mizizi na kunawiri zaidi wakati Mamba alipokuja kwa Nyani kumposea mwanawe binti. Ukwe uliutilia viungo uhusiano wa Nyani na Mamba wakawa wanagandana kama kupe na mkia wa ng'ombe. Wakatenda mengi pamoja. Wakazungumza ya kupwa na ya kujaa. Hakuna hata mmoja wao aliyeutilia shaka uaminifu wa mwenzake. Wake zao nao walifuata kaida ya maji kufuata mkondo. Walikuwa masahibu wa chanda na pete.

Msimu mmoja wa mapukutiko ulishuhudia mabadiliko ya kudumu katika maisha ya Nyani na Mamba. Wakati huo, bahari ilichafuka si haba. Kazi ya Mamba ya uvuvi ikaanza kukabiliwa na majabali ya kila aina. Kila mara Mamba alipokwenda uvuvini, alirudi akichekelewa na nyavu zake. Hakuambulia chochote. Njaa ilianza kubisha hodi katika familia ya Mamba. Hali hii ilitishia kuutia ufa urafiki kati ya Mamba na Nyani. Mamba alivamiwa na pepo ambaye hata yeye alishindwa kumfahamu. Kila mara alipomwona. Nyani au watoto wake alitamani kumdakia na kumla mzima mzima. Kadiri alivyojaribu kujiasa dhidi ya fikira hii mbovu ndivyo moyo wake ulivyoendelea kumshauri, "Una njaa bwana, familia yako itaangamia. Je huoni rafiki yako na familia yake wanaweza kuwa kitoweo? Utaendelea kula wishwa hadi lini? Mbona huyo Nyani ambaye anajiita rafiki yako sasa amekata guu humu? Mbona haji tena kukutazama? Hata karafuu alizokuwa akikuletea ameacha kuleta. "Mamba akaanza kumshuku rafiki yake na akasadiki kuwa Nyani alikuwa mla naye tu.

Usiku mmoja baada ya kula mate na kujilaza kitandani mwake akihesabu nyota, wazo lilimjia. Alikata shauri kumlaghai rafiki yake wa miaka mingi ili apate kujiokoa yeye na familia yake kutoka katika kinamasi cha njaa. Asubuhi yake alikwenda kwa Nyani akiwa amejiinamia kwa jitimai. Alisema, "Rafiki yangu, jana tulipoagana nilipata tanzia. Mjumbe kutoka kijijini aliniarifu kuwa baba yangu ni mgonjwa mahututi. Alisema kwamba baba ananitaka nyumbani upesi," Habari hizi zilimtia Nyani majonzi makuu. Alimwahidi Mamba kwamba wangeandamana pamoja. Kwa vile Nyani hangeweza kutembea majini, ilibidi abebwe na Mamba. Alipatwa na kichefuchefu na manyezi kila alipotazama bahari iliyojitandaza mbele yao kwa mbwembwe. Hata hivyo, Mamba alimhakikishia kuwa wangefika salama. Naye kwa Imani iliyotokana na urafiki na mazoea ya miaka mingi, alitulia.

Safari ilikuwa ndefu na yenye machovu yaliyomfanya Nyani kulala mgongoni mwa Mamba. Walipofika kwenye vina vya maji, Mamba aliamua kumpasulia mbarika Nyani. "Rafiki yangu, nimekuwa nikidhani wewe ni rafiki wa dhati, kumbe uzuri wako wa mkakasi? Mimi na wanangu tumetafunwa na njaa kwa miezi kadha sasa huku maghala yako yakishiba na kutapika chakula. Hujadiriki hata siku moja kuja kujua kama nimepata hata senti moja ya kusagia mkunguni. Jana usiku nilipokuwa nikiwazia hali yangu, nilioteshwa katika ndoto kwamba kama ningepata moyo

wako na kuula, basi hali ya uhitaji ingeniishia. Moyo wangu unaniuma sana kukufanyia tendo hili, hata hivyo lisilo budi hutendwa."

Nyani alipigwa na butwaa nusura moyo wenyewe ujikabidhi kwa Mamba. Hata hivyo, akili yake nyepesi ilifanya kazi. Alimwambia Mamba,"Ndugu yangu, pole sana ikiwa umekuwa unadhani sikujali. Kwa kweli, hata ungeniomba moyo wangu siku hizo ningekupa tu. Unajua tena sisi Nyani, Tumbili na Kima tuna mioyo mingi. Hata hivyo, nasikitika kuwa Mungu alituambia kuwa daima mioyo yetu itakaa mitini. Basi ndugu mpenzi, badala ya kuendelea na safari hii, turudi pale mtini nikupe moyo wangu pamoja na mitatu ya wanangu kusudi uwalishe wanao na mkeo."

Mamba akaingia mtegoni. Wakarudi hadi ufuoni. Kwa vile Mamba hakuweza kutoka majini, alibaki ufuoni akimngojea rafiki yake amletee mioyo.

Mamba alitunga macho yake kwenye ujia alioufuata Nyani akiomba pasitokee lolote la kumchelewesha Nyani. Matumbo yalimnguruma kwa njaa. Roho ikampapa kwa tumaini. Alingoja, akangoja, akangoja... wiki, mwezi, mwaka... Nyani hakurudi. Mamba akajua amepwaguliwa na Nyani. Akaapa kumtafuta kwa udi na ambari. Huo ukawa mwisho wa urafiki kati ya Nyani na Mamba. ***Hadithi yangu inaishia hapo.***

Maswali

a) Tambua kipera cha utungo huu. Thibitisha. **(alama 2)**

b) Fafanua mbinu sita za kimtindo alizotumia mtambaji wa utungo huu. **(alama 6)**

c) Jadili shughuli za kiuchumi na shughuli za kijamii katika jamii hii. **(alama 4)**

d) Umepewa jukumu la kutamba ngano hii. Fafanua mambo manane muhimu utakayozingatia ili kufanikisha uwasilishaji wako. **(alama 8)**

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

121/1

MATHEMATICS

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Instructions to candidates

1. *Write your name, index number, school and stream in the spaces provided above.*
2. *This paper contains two sections: **Section I** and **Section II**. Attempt **all** the questions in **section I** and **strictly any five** questions **from Section II.***
3. *All answers and working must be written on the question paper in the spaces provided below eachquestion.*
4. *Show all the steps in your calculations, giving your answers at each stage in the spaces below eachquestion.*
5. *Marks may be given for correct working even if the answer is wrong.*
6. *Non-programmable silent electronic calculators and **KNEC** mathematical tables may be used, exceptwhere stated otherwise.*
7. *Answer the questions in English*

FOR OFFICIAL USE ONLY:

SECTION I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**Total**

SECTION II

17	18	19	20	21	22	23	24	**Total**

GRAND TOTAL

SECTION I: (50 MARKS)

Attempt all questions in the spaces provided

1. An irregular 6 sided polygon has two of its interior angles equal to 2x each, three angles equal to x each and one side equal to 20^o

Calculate the value of x **(3marks)**

2. The diagonals of a parallelogram are 20cm and 28.8cm. The acute angle between the diagonals is 62^o. Calculate the area of the parallelogram. **(3marks)**

3. A mobile phone seller gets a commission of shs 250 on every mobile phone that he sells. In a given month he got 33,000 shillings.

a. How many phones did he sell that month **(1mark)**

b. If this commission is 2% what is the sale price of each mobile phone. **(2marks)**

4. Given that Sin x=3/4, without using tables or calculators, find.

a. Cos x^o **(2marks)**

b. Tan $(90-x)^o$ **(1mark)**

5. Solve the simultaneous equation

$2\log y = \log 2 + \log t$

$2^y = 4^t$ **(4marks)**

6. Evaluate without using tables or a calculator

$100^{-1.5} \times 32^{0.2}$ **(3marks)**

7. The angle subtended by the major arc at the center of the circle O is twice the angle substended by the minor arc at the center. If the radius of the circle is 3.5cm. Find the length of the minor arc. **(3marks)**

8. Two trains T_1 and T_2 travelling in the opposite directions on a parallel tracks are just beginning to pass one another. Train T_1 is 72m long and is travelling at 108km/hr. Train T_2 is 78m long and is travelling at 72km/hr. Find the time in seconds the two trains take to completely pass one another **(3marks)**

9. The angle of depression of a chick from the hawk on top of a vertical tree 8m tall is 28^o. On seeing the hawk, the chick moves directly towards the base of the tree to a point P such that the angle of elevation of the hawk from P is 32^o. Calculate the distance moved by the chick.

(4marks)

10. Find a 2 x 2 matrix m such that **(3marks)**

$$\begin{pmatrix} 1 & 3 \\ 2 & -1 \end{pmatrix} m + \begin{pmatrix} 4 & -6 \\ 2 & 0 \end{pmatrix} = \begin{pmatrix} 1 & 7 \\ 3 & -2 \end{pmatrix}$$

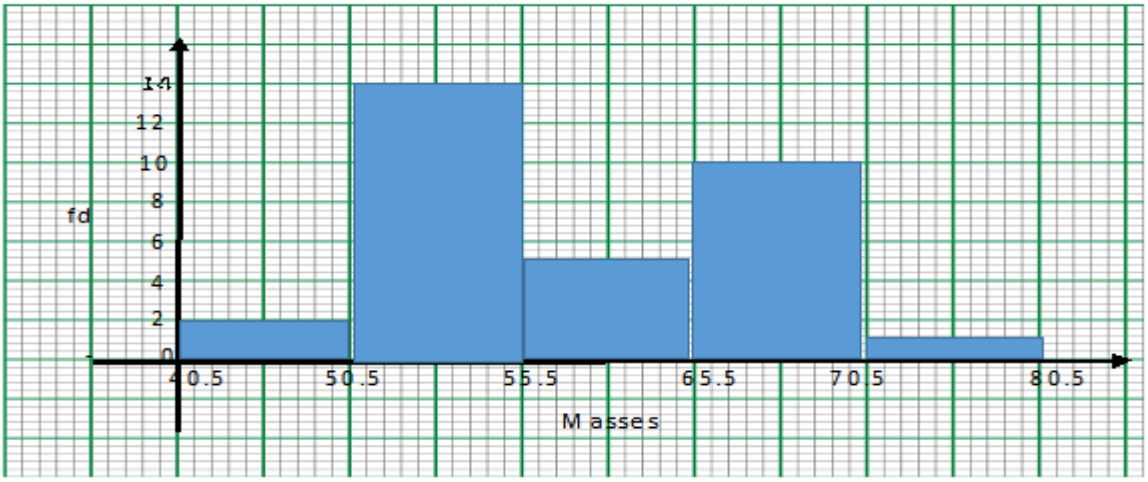
11. Given that a=1.2, b =0.02 and c =0.2 Express ac +b in the form $^m/_n$ where m and n are integers **(3mark)**

12. The line passing through the point P(-1,3w) and Q(w,3) is parallel to another line whose equation is 2y -3x =9 .

Write down the co-ordinates of P and Q **(3marks)**

13. A certain volume of solution has a mass of 2.2kg with density of 0.8g/cm^3. Calculate the volume of the solution in liters **(3marks)**

14. The graph below shows frequency densities for the masses of same 200 students selected from a class. Use it to answer the questions that follows.



(a) Complete the frequency distribution table below. **(2 marks)**

Mass in kg					
frequency					

(b) State the modal frequency **(1mark)**

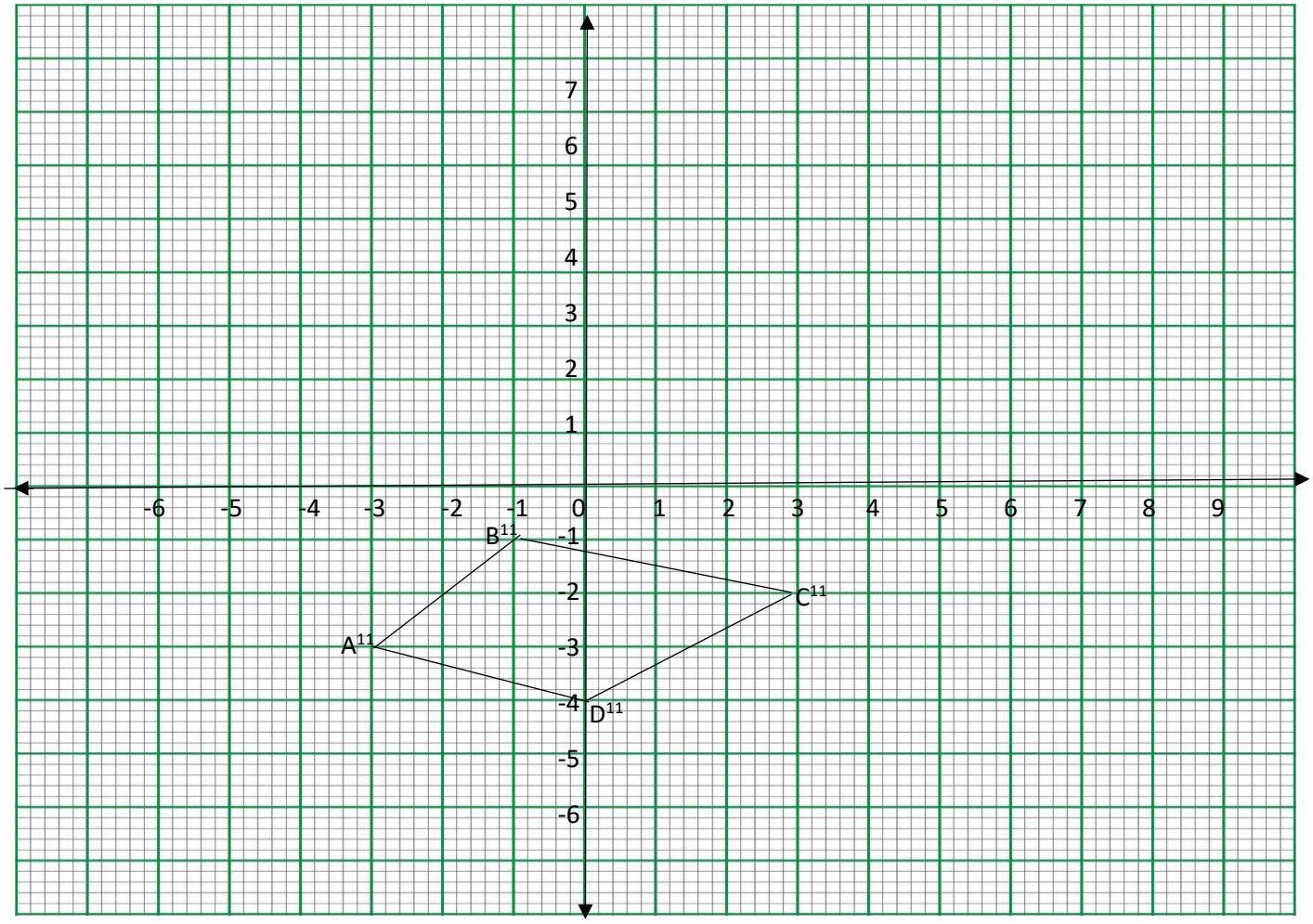
15. Calculate the area bounded by the curve $y=x^2$, the line $y= -1$ and the lines $x=0$ and $x=3$ using trapezoidal rule with 7 ordinates (correct to 3 d p) **(3marks)**

16. Mutai imports rice from United States at the initial cost of 500 US dollars per tonnes. He then pays 20% of this amount as shopping costs and 10% of the same amount as custom duty. When the rice reaches Mombasa he has to pay 6% of the initial cost to transport it to Nairobi. Given that on the day of this transaction the exchange rate was 1 us dollar =kshs 76.60. calculate the total cost of importing one tonne of rice up to Nairobi in Kenya shillings**.** **(3mks)**

SECTION II (50 MARKS)

Answer only 5 questions from this section.

17. (a) On the Cartesian plane given below, draw the quadrilateral ABCD with vertices A(6,6),



B(2,2) C(4,-6) and D(8,0). **(1mrk)**

a. Draw the image $A^1B^1C^1D^1$ of ABCD under an enlargement scale factor ½, center origin. State the coordinates of $A^1B^1C^1D^1$ **(3mrks)**

b. Describe the transformation that maps $A^1B^1C^1D^1$ onto the given image $A^{11}B^{11}C^{11}D^{11}$ **(2mark)**

c. Rotate $A^{11}B^{11}C^{11}D^{11}$ about center (-2,-1) through a positive quarter turn to get $A^{111}B^{111}C^{111}$ D^{111}. State the co-ordinates of $\mathbf{A^{111}B^{111}C^{111}D^{111}}$ **(3marks)**

d. State a pair of quadrilaterals that are oppositely congruent. **(1mark)**

18. On a certain day, Mwema bought plates worth Kshs 1200. On another day, Mrs. Mwema spent the same amount of money but bought the plates at a discount of 20% per plate.

a. If Mwema bought a plate at Kshs x, write down a simplified expression for the total number of plates bought by the two people **(3marks)**

b. If Mrs. Mwema bought 6 plates more that her husband, find how much each spent on a plate. **(5marks)**

c. Find the total number of plates bought by the family **(2marks)**

19. (a) Using a ruler and a pair of compasses only, construct triangle ABC such that lines AB=5.5cm, BC=4.8cm and AC =6.8cm, Construct circle passing through vertices A, B and C **(6 marks)**

a. Measure the radius of the circle **(1mark)**

b. Measure the angle substended at the center of the circle by chord AC **(1mark)**

c. Hence calculate the area of the triangle AOC **(2marks)**

20. A particle P moves in a straight line such that t seconds after passing a fixed point Q , its velocity is given by the equation $2t^2 - 10t + 12$

Find

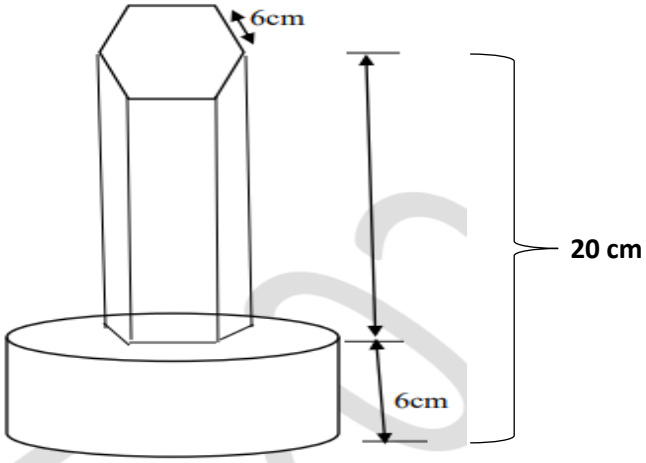
a. The values of t when P is instantaneously at rest. **(2marks)**

b. An expression for the distance moved by P after t seconds. **(2marks)**

c. The total distance travelled by P in the first 3 seconds after passing point Q **(2marks)**

d. The distance of P from Q when acceleration is zero. **(4marks)**

21. The figure below shows a model of a pillar to be constructed at the Canterbury. The model consists of a circular base of diameter 21cm and a uniform hexagon stand of sides 6cm and height 20cm.

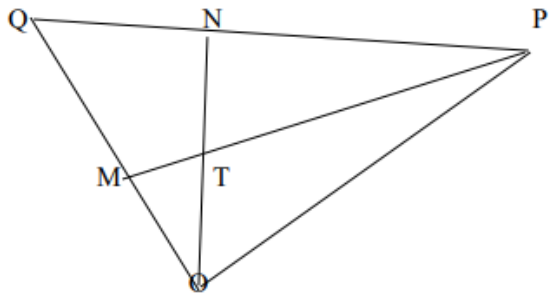


a. Calculate the cross-sectional area of the hexagon to 2dp. **(3marks)**

b. Calculate the total volume of the model to 2dp. **(3marks)**

c. If the height of the red pillar is 52m and the constructor uses two bags of cement for every $500m^3$ of the construction. Calculate the least number of bags of cement required **(4marks)**

22. The diagram below shows a triangle OPQ in which QN: NP=1:2, OT: TN=3:2 and M is the mid-point of OQ.



(a) Given that OP=**P** and OQ =**q**. Express the following vectors inters of **p** and **q**

(i) PQ **(1mark)**

(ii) ON **(2marks)**

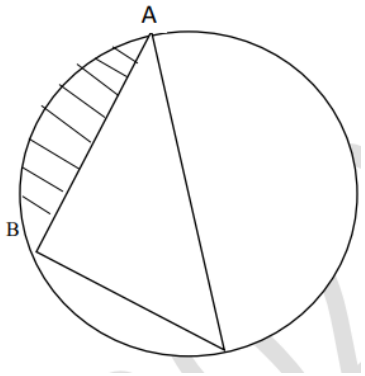
(iii) PT **(2marks)**

(iv) PM **(1mark)**

(b) (i) Show that points P,T and M are collinear **(3marks)**

(ii) Determine the ratio MT ; TP **(1mark)**

23. The diagram below shows a triangle ABC Circumscribed in a circle with AB=12cm BC=12cm, BC=15cm and AC=14cm



Calculate to 4 significant figures

(a) The angle ACB **(3marks)**

(b) The radius of the circle **(3marks)**

(c) The area of the shaded region **(4marks)**

24. If Nick gives a quarter of the money he owns to Tom, Tom will have twice as much as Nick. If Tom gives q shillings to Nick, then Nick will have thrice as much as Tom. Taking the initial amount owned by Nick and Tom to be x and y respectively;

a. Express y and q in terms of x **(7marks)**

b. Given that Nick's initial amount was Kshs 40,000. calculate the value of q **(1mark)**

c. The initial amount owned by Tom **(2marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

121/2

MATHEMATICS

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTION TO CANDIDATES

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

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

*c) The paper consists of **two** sections. **Section I** and **Section II.***

*d) Answer **ALL** the questions in Section I and any **FIVE** questions in Section II.*

e) Show all the steps in your calculations, giving your answer at each stage in the spaces provided below each question.

f) Marks may be given for correct working even if the answer is wrong.

g) Non-programmable silent electronic calculators and KNEC Mathematical tables may be used except where stated otherwise.

h) Candidates should answer the questions in English.

FOR EXAMINER'S USE

SECTION I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**Total**

SECTION II

17	18	19	20	21	22	23	24	**Total**

Grand Total

SECTION 1 (50 MARKS)

Answer all questions in this section

1. Solve the equation $\frac{1}{3}(2x+1)+\frac{1}{4}(5x-1)=\frac{1}{2}$ **(3mks)**

2. a). Expand $(1-2x)^4$ **(1mk)**

b). Use your expansion to find the value of $(0.96)^4$ correct to 4 s.f **(2mks)**

3. The expression $1+\frac{x}{2}$ is taken as an approximation for $\sqrt{1+x}$. Find the percentage error in doing so if x = 0.44 **(3mks)**

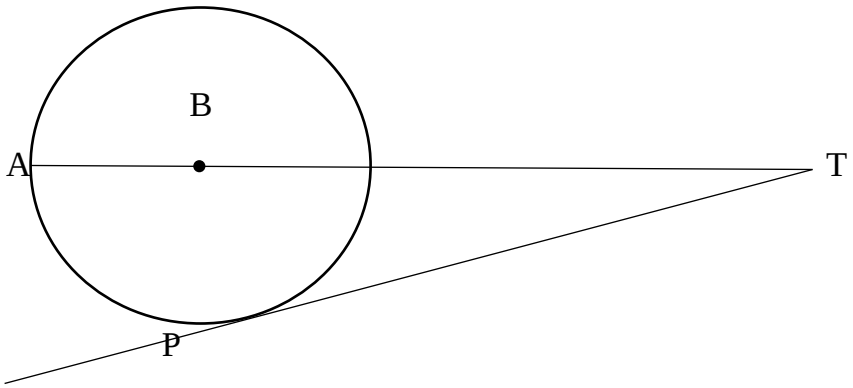
4. Solve for x in the equation $\log_8(x+6) - \log_8(x-3) = \frac{2}{3}$ **(4mks)**

5. Make p the subject if the formula **(3mks)**

$$\sqrt{E + x} = x + \frac{p^2 - 3u}{y - 3xp^2}$$

6. An auto spare dealer sells two types of lubricants, A and B in his shop. While purchasing, type A cost sh40 per 100ml tin and type be B cost sh.60 per 100ml tin. He has Shs 15,000 to spend on both types of lubricants. Type A should not be less than 3 litres while type B should be atleast a litre . He buys x tins of type A and Y tins of type B. Write down three inequalities which represent the above information. **(3mks)**

7. In the figure below PT is a tangent to the circle at P and AT passes through the centre of the circle.



If PT =9cm and AT=12cm, find the- radius of the circle correct to 1 d.p. **(3mks)**

8. Find the radius and the centre of the circle whose equation is **(3mks)**

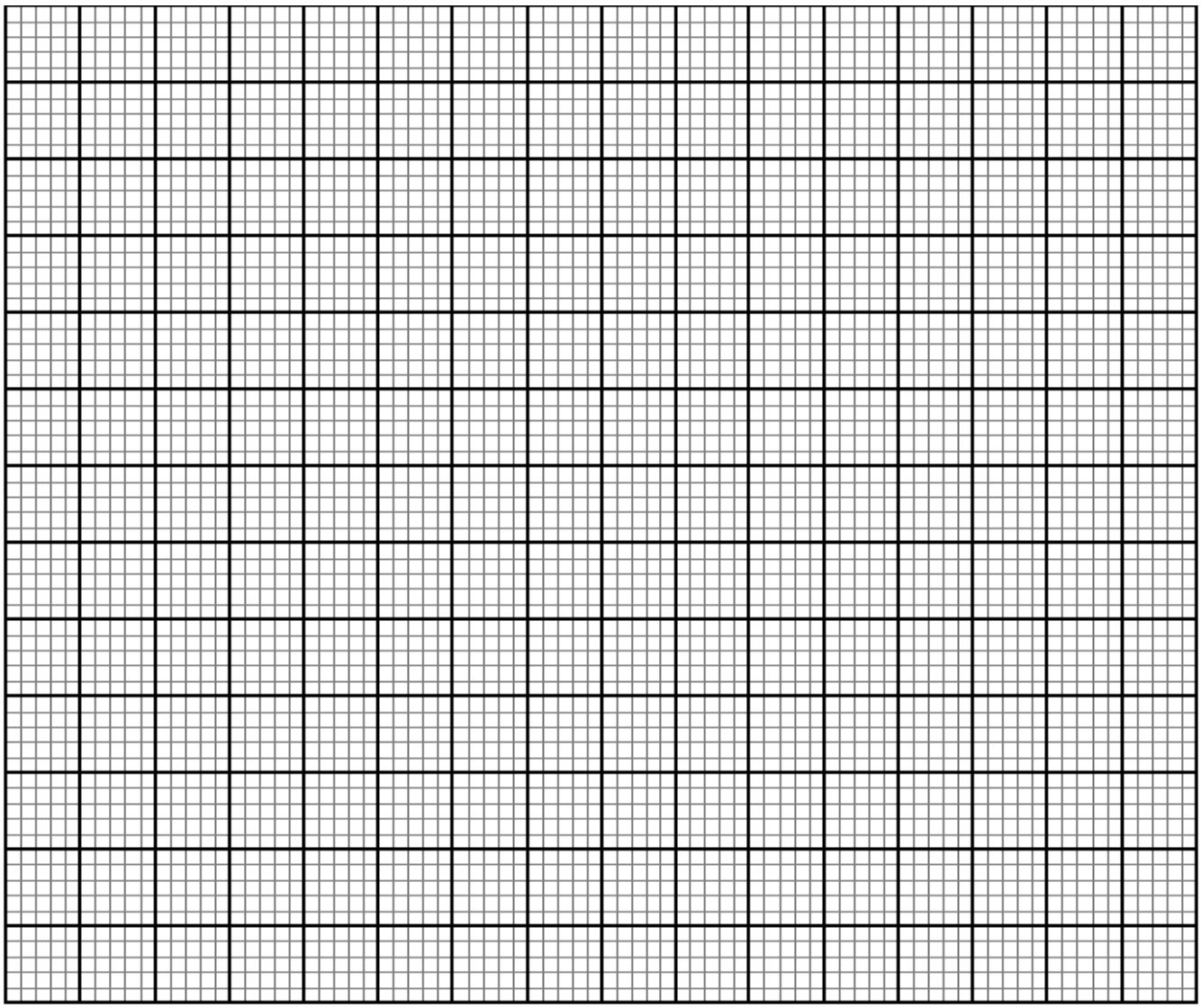
$3x^2 + 3y^2 - 6x + 3 + 12y = 0$

9. Without using a calculator or mathematical tables express $\frac{\sqrt{3}}{1-\cos 30^0}$ in surd form and simplify **(3mks)**

10. The table below represents the mass and volume of a liquid measured at room, temperature.

Mass (g)	8	10	20	21	30	37	52	55	70
Volume (cm^3)	10	13	20	29	35	43	60	63	70

a). By plotting the points and drawing the line of best fit, estimate the density to the liquid. **(2mks)**



b). Determine the equation of your graph. **(2mks)**

11. The population of two towns Kathwana and Siakago for three years was as follow.

	1st year	2nd year	3rd year
Kathwana	40,000	48,000	56,000
Siakago	40,000	48,000	57,600

Calculate the difference in population of the two after six years. **(3mks)**

12. Solve for $\propto$ in the equation $6\sin^2\propto - \cos\propto - 5 = 0$ **(3mks)**

For $\Theta \leq \propto \leq 300^o$

13. Arabic coffee costing sh90 per kilogram is mixed with rubusta coffee costing sh.75 per kilogram in the ration 2:3. Calculate the selling price of the mixture per kilogram if a profit of 15% if to be realized to the nearest shilling. **(3mks)**

14. The gradient of a curve at any point is given by 2x-1. Given that the curve passes through point (1,5). Find the equation of the curve. **3mks)**

15. a). Given that AB=6cm. Construct locus of P such that <APB = 90^{o}. **(2mks)**

b). Hence determine the area enclosed by the locus of P. **(2mks)**

16. Given the vectors $\mathbf{a} = 3\mathbf{j} + 2\mathbf{k}$ and $\mathbf{b} = 4\mathbf{i} - 7\mathbf{k}$

Find $\mathbf{p}$ if $\mathbf{p} = 3\mathbf{a} - \mathbf{b}$ **(2mks)**

SECTION II (50 MARKS)

Answer any five questions from this section

17. Three consecutive terms of aGP are (x+2), (x-2), and (x-5). Find:-

a). The value of x. **(3mks)**

b). The common ratio **(1mk)**

c). Given that x+2 is the third term of the G.P

Find;

i). The first term giving your answer as a mixed fraction. **(3mks)**

ii). the sum of the first six terms correct to 2 d.p **(3mks)**

18. A form 1 stream at Butere mixed day secondary school has 15 boys and 25 girls. The probability of a girl reaching form 4 is $\frac{2}{5}$ and that of a boy is $\frac{3}{5}$. If a girl reaches form 4 then probability that she gets employed is $\frac{2}{3}$ while the probability that a girl gets employed without reaching form 4 is $\frac{1}{3}$. If a boy reaches form 4 the probability that he gets employed is ¾ while the probability that a boy gets employed without reaching form 4 is $\frac{1}{4}$

a). Draw a tree diagram to illustrate the above information. **(2mks)**

b). Using your tree diagram, determine:-

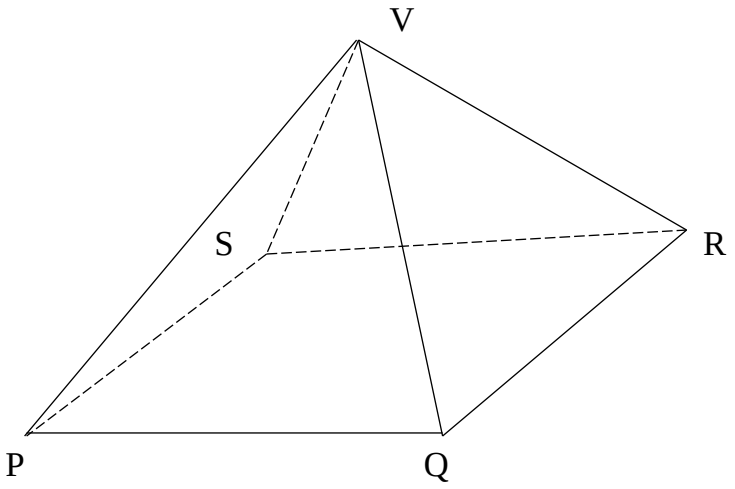
i) the probability that a girl gets employment. **(2mks)**

ii). the probability any child who has been to school gets employed. **(2mks)**

iii). the probability that a boy fails to get employment. **(2mks)**

iv). The probability that anybody who has studied upto form 4 fails to get employment. **(2mks)**

19. The diagram below shows a right pyramid VPQRS with V as the vertex and rectangular base PQRS. PQ=3cm, QR=4cm and the height of the pyramids is 6cm. M and N are the mid-points of PQ and QR respectively.



a). Calculate

i). the length PV **(3mks)**

ii). the angle between face VPQ and the base PQRS **(2mks)**

b). i). the slant height VM and VN. **(2mks)**

ii). the surface area of the pyramid. (3mks)

20. Two towns A and B lie on the same parallel of latitude 60^{o}N. If the longitude of A and B are 42^{o}W and 29^{o}E respectively.

a). Find the distance between A and B in nautical miles along the parallel of latitude. **(2mks)**

b). Find the local time at A if at B is 1.00.p.m. **(2mks)**

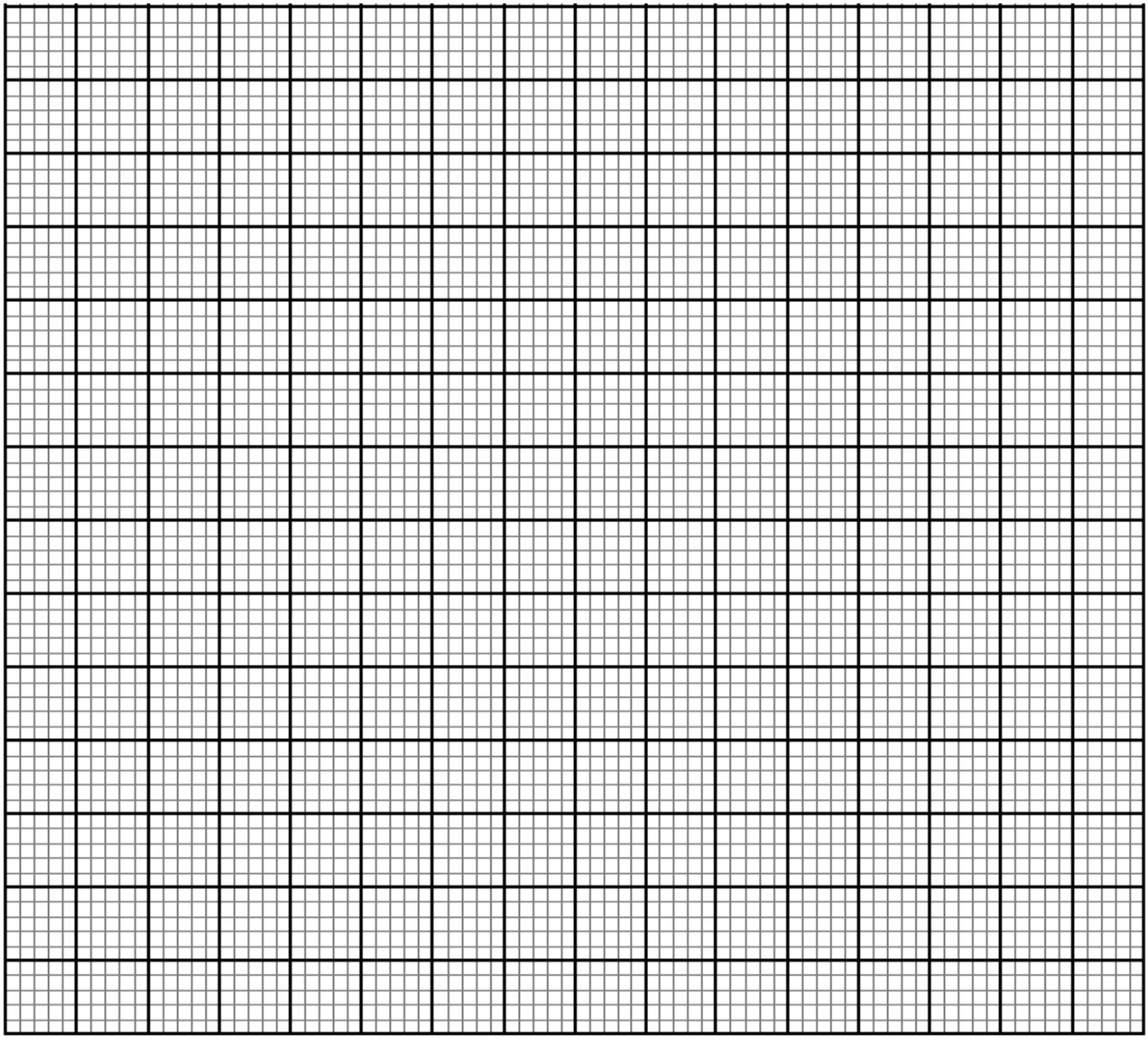
c). Find the distance between A and B in kilometre (Take $\pi = \frac{22}{7}$ and R=6370km) **(2mks)**

d). if C is another town due south of A and 1001km away from A, find the co-ordinate of C. **(4mks)**

21. The table below shows marks scored by students in a mathematics test.

Marks	30-39	40-49	50-59	60-69	70-79	80-89	90-99
No of students	2	3	8	12	15	6	4

a). Draw a cumulative frequency curve to represent the information. (4mks)



b). Use you graph to find:-

i). The median mark (1mk)

ii). The quartile deviation **(3mks)**

iii. the pass mark if 60% of the students passed. **(2mks)**

22. The initial velocity of a particle was 1m/s and it acceleration is given by (2-t) m/s^2 every second after the start.

a). i). Determine the equation representing its velocity. **(2mks)**

ii). Find the velocity of the particle during the third second. **(2mks)**

b). i). Find the equation representing its distance t seconds after the start. **(2mks)**

ii). What was the distance covered by the particle during the first three seconds. **(2mks)**

c). Determine the time when the particle was momentarily at rest. **(2mks)**

23. a). using trapezoidal rule estimate the area bounded by the curve $y=3x^2 - 2$ and the lines x = -4, x=4 and x-axis using 8 trapezia **(4mks)**

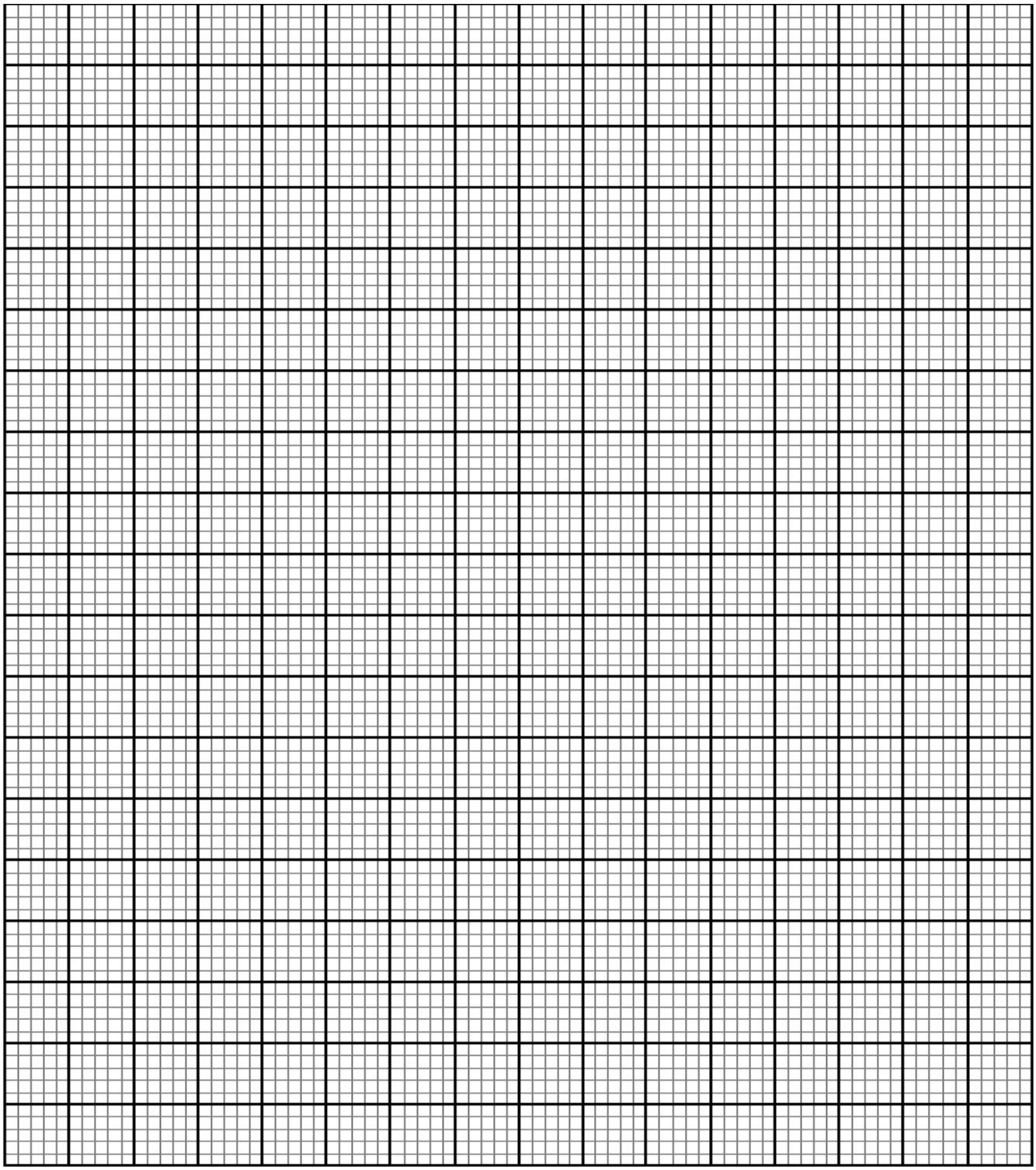
b). Find the actual area bounded by the curve $y=3x^2 -2$ and the lines x= -4, x=4 and x-axis. **(3mks)**

c). Calculate the percentage error when trapezoidal rule is used. **(3mks)**

24. The vertices of triangle PQR are P(1,1), Q(4,1) and R(5,4). A transformation represented by a matrix $T = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$ maps triangle PQR onto triangle $P^IQ^IR^I$.

A second transformation represented by $U = \begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}$ maps triangle $P^IQ^IR^I$ onto triangle $P^{II}Q^{II}R^{II}$

a). On the same axis draw the three triangles PQR, $P^IQ^IR^I$ and $P^{II}Q^{II}R^{II}$ and state the co-ordinated of triangle $P^IQ^IR^I$ and $P^{II}Q^{II}R^{II}$. **(6mks)**



b). Describe a single transformation which maps triangle PQR onto triangle $P^{II}Q^{II}R^{II}$ and find its…..matrix. **(4mks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

451/1

COMPUTER STUDIES

PAPER 1

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.*
- *All answers should be written in the spaces provided on the question paper.*

For Examiners Use Only

Section	Questions	Candidates Score
A	1-15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

1. Give **two** reasons why smaller computers like Laptops tend to be more expensive than Desktop computers. **(2 marks)**

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2. a). State **two** keyboard keys that work in a state of On/Off switches in **operation** **(1 mark)**

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b). State **four** factors you would consider when choosing a secondary storage device **(2 marks)**

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3. i) What is distributed data processing? **(1 mark)**

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ii) Outline **two** advantages of distributed data processing in an organization **(2marks)**

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4. Differentiate between graphic-based and layout based desktop publishing software **(2 marks)**

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5. (a) Write the following acronyms in full as used in operating systems.

(i) GUI **(½ mark)**

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(ii) WIMP **(½ mark)**

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(b) State **two** factors considered when choosing an operating system for use in a computer**.(2 mks)**

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6. a) Define the term audit trail **(1 mark)**

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b) List any **three** ways of recovering data lost through accidental erasure. **(3marks)**

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7. State **three** functions of an email software. **(3marks)**

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8. Name **two** responsibilities that are carried out by a computer programmer **(2 marks)**

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9. State **three** ways in which ICT can improve the access of News in Kenya. **(3marks)**

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10. Give **three** reasons why people prefer in-house developed application programs to general-purpose application packages. **(3marks)**

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11. State any **two** negative impacts of ICT on the environment **(2 marks)**

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12. Highlight **three** reasons why most network technicians prefer using command line operating systems to configure networking equipment. **(3 marks)**

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13. A computer teacher wants to minimize illegal entry of people to a computer laboratory. Explain **three** measures which have to be put in place in order to curb this illegal entry. **(3 mks)**

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14. Outline **two** benefits of mail merging. **(2 marks)**

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15. Without proper marketing, a business cannot survive in a competitive environment hence computers are being used in a number of ways to enhance marketing. List any **two** ways of ensuring this is effected. **(2 marks)**

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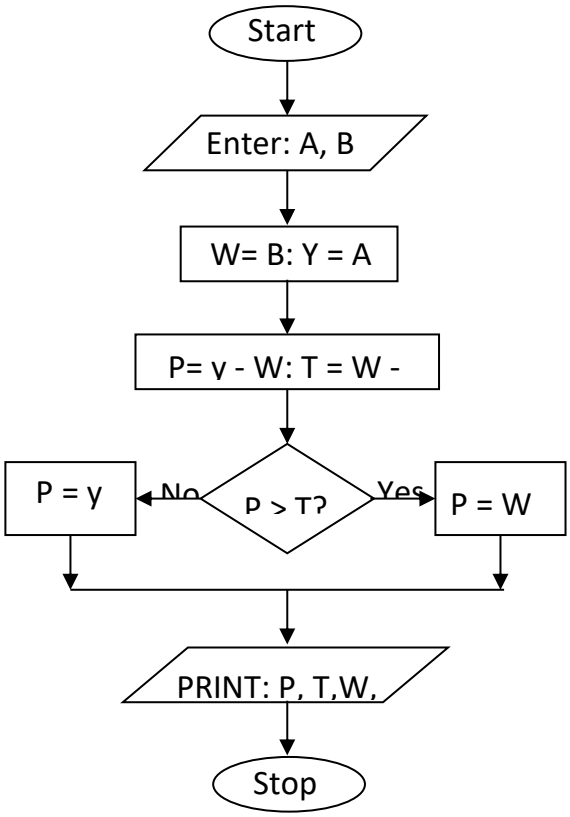
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SECTION B: (60 MARKS)

Answer question 16 (compulsory) and any other THREE questions from this section.

16. (a) Study the flowchart **below** and answer the questions that follow.



(i) State the name of the control structure shown in the flowchart. **(1 mark)**

……

(ii) Assuming the user keys in 12 and 19 when prompted to enter the values for B and A respectively, determine the printed values of P, T, W and y. **(4 marks)**

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(iii) Write the pseudo code that would be used in place of the flowchart. **(6 marks)**

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(b) What is the difference between looping and selection? **(2 marks)**

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c) State any **two** advantages of low level languages**.** **(2 marks)**

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17.

a) The following are some of the phases in the systems development life cycle (SDLC): system analysis, system design, system implementation, system review and maintenance. State **four** activities that are carried out during the system implementation phase **(4 marks)**

b) Give **three** reasons why system maintenance phase is necessary in SDLC **(3 marks)**

c) State **two** instances where observation is not a viable method of gathering information during system analysis stage (**2 marks)**

d) Various considerations should be made during input and output design. State **two** considerations for each case (**4 marks)**

e) List **two** sources of computer viruses **(2 marks)**

18. a) Use twos complement to perform the following arithmetic operations

i) 15_{10}- 12_{10} **(4marks)**

ii) 10111_2-1011_2 **(4marks)**

b) 1011_2 is a ones complement binary representation of a number using four bits work out the likely positive equivalent in base 10. (**2marks)**

c) Convert the decimal fraction 10.375_{10} to its binary equivalent. **(4marks)**

d) Assuming the existence of base six, list the numbers that would be used in the number system. **(1mark)**

19. a) i)Write the acronym DBMS in full. **(1mark)**

(ii) State any **three** functions of a DBMS. **(3marks)**

b) Indicate the type of cell reference depicted by the following. **(3marks)**

i) H5……

ii) H $ 5……..……..

iii) H5……..……..

c) Mr. Maanzo is a teacher at Soyet High school and wishes to use Spreadsheet to process the marks obtained by his students during the term. The worksheet below shows the details used.

A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**
1	**NAME**	**CAT-1**	**CAT-2**	**CATTOTAL**	**EXAM**	**TOTAL**	**GRADE**	**PST**
2	Susan Muani	14	06		56			
3	Peter Kwena	13	08		34			
4	Mary Ann	10	04		59			
5	Paul Njeru	11	07		57			
6	Janet Frida	06	09		48			
7	Justin Gerard	08	07		50			

NB:CAT -1 and CAT -2 are out of 15 marks each and EXAM is out of 70 marks

(i) **Write** a function that displays "PASSED" when the total marks is >60 otherwise display "FAIL". **(2marks)**

(ii) **Write** a function that assigns Paul P positions according to the total marks. **(2marks)**

d) Use illustrations to explain **two** text alignment features used in electronic word processors **(4 mks)**

20. a) Match the following statements with repeater, router or a bridge. **(2 marks)**

	STATEMENT	DEVICE
	Operates at data link layer	
	Determine the best path for data to follow	
	Regenerates signals	
	Forwards everything which it doesn't recognize	

b) Discuss two disadvantages of wireless networks. **(4 marks).**

c) Write the following abbreviations in full. **(2 marks)**

i. F.T.P

ii. H.T.T.P

d) With the aid of a diagram, discuss Hybrid topology. **(3 marks)**

e) State **two** advantages of using fiber optic cables. **(2 marks)**

(d) Explain the meaning of the following terms as used in signal transmission. **(2 marks)**

i. Attenuation

ii. Noise

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

451/2

COMPUTER STUDIES

PAPER 2

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 medium provided.

(c) Write the name and version of the software used for each question attempted in the answer sheet provided.

(d) Answer all the 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 your CD/Removable storage medium.

(h) Make a printout of the answers on the answer sheet.

(i) Arrange your printouts and tie/staple them together.

(j) Hand in all the printouts and the CD/Removable storage medium used.

(m)Candidates should answer the questions in English

Question One

The data in the tables below were extracted from Bondo Sub county Games Management system.

Table 1: TEAMS TABLE

Team Code	Team Name	Address	Tel. No.	Reg. Fee
01	Majiwa High School	Box 0012	021542148	5,000
02	Maranda High School	Box 2454	025485267	3,500
03	Usenge High School	Box 458	025478756	4,700
04	Akoko Mixed Secondary	Box 635	032547855	2,400
05	Kipasi Secondary School	Box 2446	032458754	1,200
06	Kapiyo Secondary School	Box 6589	015487564	1,400
07	Nyang'oma Boys	Box 1254	031204543	5,000

Table 2: RESULTS TABLE

Team Code	Games Won	Games Lost	Games Draw
01	12	2	2
02	10	3	3
03	4	8	3
04	9	3	4
05	7	3	5
06	7	6	4
07	5	9	2

(a) Create a database named **Football** to store the data above**.**

(12marks)

(b) Format the *Reg. Fee* field as follows:

(i) To display the entries with the prefix: "KSh."Correct to two decimal places. **(2marks)**

(ii) Restrict entries to positive values only and should return an error message "*Error: enter positive values only*" if an out of range value is entered. **(2marks)**

(c) Validate Team Code to 2 characters only. **(2marks)**

(d) Create a suitable table relationship between the tables. **(3marks)**

(e) Design a form for each table and use it to enter the data into the tables. **(9marks)**

(f) Create a query named **TotalGamesQuery** to display the fields: Team Code, Team Name and Total games played**.** **(4 marks)**

(g) Create a query to show the team name and total points. (**Note: A Win in a game earns team 3 points, a draw 1 point and a loss 0**). The query should show the 3 best teams based on the total points. Save the query as **BestTeamsQuery**. **(5 marks)**

(h) Create a report named **RegReport** to display the Team Name, Address, Reg. Fee. The report should show the total registration fee collected from all teams. **(5marks)**

(i) Sort the records to show the team that has paid the highest amount of registration fee first. **(2 marks)**

(ii) Title the report as "*income from registration*". **(2 marks)**

(i) Print each of the following: **(2marks)**

(i) Teams table and Results table

(ii) TotalGamesQuery and BestTeamsQuery RegReport.

Question Two

(a) Type the following passage using a word processing package and save as **Networking**. Answer the questions that follow. (25marks)

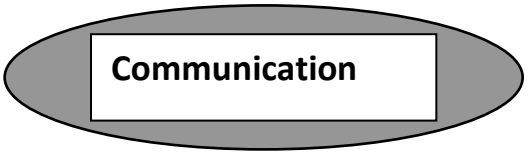
COMPUTER NETWORK

A Computer network is a group of computers and other devices connected together by a suitable media.

Advantages of computer Networks

1. Multiple users can communicate, exchange and share information

2. Resource sharing including program, data base, hardware etc. is possible



3 y definition communications refers to the transfer of information from one place to another between two individuals using agreed symbols, signs or even human behavior such as nodding. Exchange of information relies on a communication system to convert, amplify and send signal through a common medium. Message, Sender, Medium and Receiver are the essential components of communication systems. If a system is extended by cascading more communication systems, it is called networked systems.

In case communication involves the sending of information over a significant distance, it must use telecommunications as an aid. By definition, telecommunications refers to the transmission of information between distant locations by some electromagnetic means.

Data communications is defined as the interchange and processing of encoded (digital that is, 1s and 0s) information between distant locations using telecommunications.

Data communications is regarded as the collection and distribution of the electronic representation of information which can be text, voice, graphics or image, from and to remote computing facilities. As information can only be carried to the remote site provided that the information carrier supports that particular type of data transmission, information may undergo data conversion processes if the nature of data signal is incompatible with the characteristics of the signal carrier.

Communication networks are usually defined by their size and complexity. We can distinguish four main types:

- ***Local area networks (LAN).*** These networks connect computer equipment and other terminals distributed in a localized area, e.g. a university campus, factory, office. The connection is usually a cable or fibre, and the extent of the cable defines the LAN.
- ***Metropolitan area networks (MAN).*** These networks are used to interconnect LANs that are spread around, say, a town or city. This kind of network is a high speed network using optical fibre connections.

Classification of communication networks

- ***Wide area networks (WAN).*** These networks connect computers and other terminals over large distances. They often require multiple communication connections, including microwave radio links and satellite.

COMPARISON AMONG DIFFERENT TOPOLOGIES

Below are the advantages and disadvantages of various LAN topologies.

Type	Advantage	Disadvantage
Star	Simple and easy to identify fault	Failure of central node causes disaster
Irregular (Mesh)	mmunity to bottleneck and failure problems	Expensive to provide an alternative routing
Bus	Simple to control traffic flow	Only a single communications channel is required to service all the nodes
Ring	Simple to implement	One channel is required to service al

TRANSMISSION MEDIA

Transmission can be by cable or wireless methods. There are 3 common types of cable:

- **Twisted pair,**
- **Co-axial**
- **Fiber optic.**

Wireless transmission includes:

- Microwave transmission.
- Satellite transmission.
- Radio waves transmission.
- Infrared transmission.

TWISTED PAIR

Consists of two insulated copper wires arranged in a regular spiral pattern to minimize the electromagnetic interference between adjacent pairs

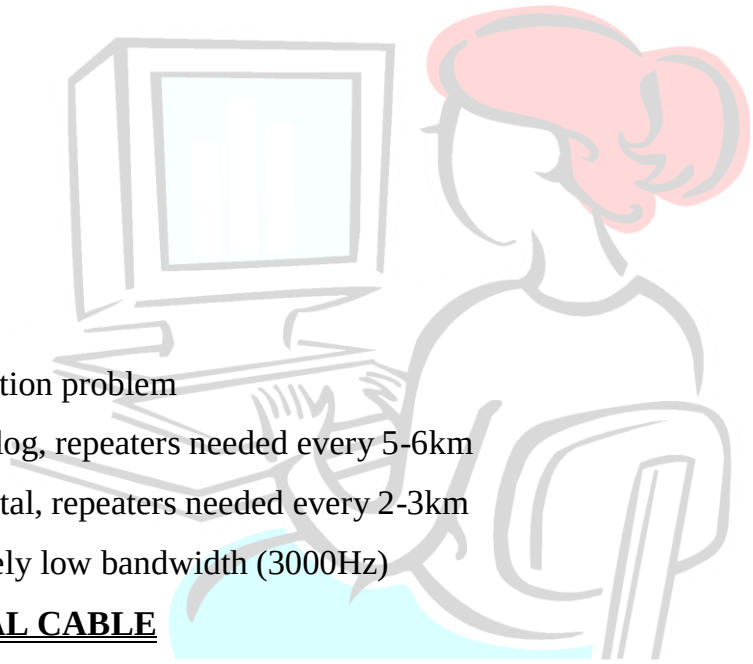
Often used at customer facilities and also over distances to carry voice as well as data communications.

TWISTED PAIR ADVANTAGES

- Inexpensive and readily available
- Flexible and lightweight
- Easy to work with and install

TWISTED PAIR DISADVANTAGES

- Susceptibility to interference and noise



- Attenuation problem
- For analog, repeaters needed every 5-6km
- For digital, repeaters needed every 2-3km
- Relatively low bandwidth (3000Hz)

CO-AXIAL CABLE

- Used for cable television, LANs, telephony
- Has an inner conductor surrounded by a braided mesh
- Both conductors share a common center axial, hence the term “co-axial”

CO-AXIAL ADVANTAGES

Higher bandwidth

- 400 to 600Mhz
- Up to 10,800 voice conversations
- Can be tapped easily (pros and cons)
- Much less susceptible to interference than twisted pair

CO-AXIAL DISADVANTAGES

- High attenuation rate makes it expensive over long distance
- Bulky
- Greater capacity (bandwidth of up to 2 Gbps)
- Smaller size and lighter weight
- Lower attenuation
- Immunity to environmental interference

- Highly secure due to tap difficulty and lack of signal radiation

FIBER OPTIC CABLE

- Relatively new transmission medium used by telephone companies in place of long-distance trunk lines
- Also used by private companies in implementing local data communications networks
- Require a light source with injection laser diode (ILD) or light-emitting diodes (LED)

ADVANTAGES OF FIBER OPTIC

- Greater capacity (bandwidth of up to 2 Gbps)
- Smaller size and lighter weight
- Lower attenuation
- Immunity to environmental interference
- Highly secure due to tap difficulty and lack of signal radiation

DISADVANGES OF FIBER OPTIC

- Expensive over short distance
- Requires highly skilled installers
- Adding additional nodes is difficult

(B) Required:

(i) Open a new document then copy and paste the content of Networking on the new document **(2marks)**

(ii) Save the new document as **Networking Edited.** **(2marks)**

(iii) Change the title Computer Network as follows. **(4marks)**

Alignment – Centre

Font Size – 23

Font colour - Red

Font type –Elephant

Kerning -12 point

Spacing –Expanded

Scale- 100%

Position- Raised

(iv) Convert the paragraphs immediately under **Communications** into a hanging indent**.(2marks)**

(v) Insert your name into the passage as a footer and Index number at the Header. **(4 marks)**

(vi) Convert the paragraph under Classification **of communication networks** to two columns and justify them. **(4 marks)**

(vii) Insert Water mark a cross the page the page " **COMPUTER NETWORKING** " **(2marks)**

(viii) Change the Drop cap lines to two. **(1mark)**

(ix) Insert page border using the following setting. **(2marks)**

Border – Shadow

Border – Three line

Colour - Orange

(x) Print the document networking and Networking Edited. **(2marks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

441/1

HOME SCIENCE

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

- 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 – 20	40 MARKS	
B	21	20 MARKS	
C	23 – 24	40 MARKS	
TOTAL			

SECTION A (40 MARKS) (Answer ALL questions)

1. Name ***four*** types of scissors. **(2mks)**

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2. Give ***four*** vaccines administered to a child through injection. **(2mks)**

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3. Give ***two*** roles of the shank in garment construction. **(2mks)**

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4. Outline ***four*** methods of seam finishes. **(2mks)**

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5. Give ***two*** reasons why food is fortified. **(1mk)**

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6. Give ***four*** functions of Thiamine in the body. **(2mks)**

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7. Give ***two*** reasons why nylon is commonly used for making brushes. **(2mks)**

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8. Mention ***two*** uses of asbestos as a fibre. **(2mks)**

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9. Mention ***three*** results of burning test carried out on polyester. **(3mks)**

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10. Differentiate between a cess pool and a soak pit. **(2mks)**

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11. Mention ***two*** functions of a fish slice in cookery. **(1mk)**

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12. State ***three*** characteristics of a well made dart. **(3mks)**

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13. Give ***two*** examples of builders added to detergents during manufacture. **(1mk)**

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14. Give ***two*** reasons for using each of the following laundry agents. **(2mks)**

i) Bleach

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ii) Starch

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15. Name any ***six*** types of sleeves. **(3mks)**

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16. Give ***two*** rules for patching. **(2mks)**

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17. Mention ***four*** ways a consumer can overcome inflation as a problem. **(2mks)**

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18. Mention ***two*** points to observe when taking body measurements. **(2mks)**

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19. Give ***two*** limitations of dry cleaning **(1mk)**

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……

20. Differentiate between monochromatic and analogous colour schemes. **(2mks)**

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……

SECTION B (COMPULSORY) (20 MARKS)

21. You are involved in doing some household chores over the weekend. Give the procedure you would use to:-

a) Thorough clean a refrigerator **(7mks)**

b) Launder a nylon night dress. **(7mks)**

c) Clean a plastic greasy plate. **(5mks)**

from this section)

22. (a) State and explain ***four*** advantages of using left over foods. **(8mks)**

(b) State ***five*** factors to consider when working button holes. **(4mks)**

(c) Explain ***four*** reasons that have led to the spread of diseases associated with lifestyle. **(8mks)**

23. (a) Explain the following common problems in pregnancy **(8mks)**

(i) Varicose veins

(ii) Oedema

(iii) Constipation

(iv) Backache

(b) Describe the working of gathers by hands (include diagrams) **(8mks)**

(c) State ***four*** principles of food preservation. **(4mks)**

24. (a) Discuss ***four*** reasons why a mother may be forced to stop breast-feeding. (8mks)

(b) Mention ***four*** factors to consider when choosing a washing machine. **(4mks)**

(c) Describe the preparation of a shirt collar **(8mks)**

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KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

441/2

HOME SCIENCE

PAPER 2

TIME: 2½ HOURS

SCHOOL…… SIGN……

(Kenya Certificate of Secondary Education)

HOMESCIENCE (CLOTHING CONSTRUCTION)

CONFIDENTIAL INSTRUCTIONS

Provide Plain light weight fabric 70cm long by 90cm wide.

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

441/2

HOME SCIENCE

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

HOMESCIENCE (CLOTHING CONSTRUCTION)

A pattern of a girl's dress is provided. You are advised to study the sketches instructions and layout carefully before you begin the test.

Materials provided.

1. Pattern pieces

A. Bodice front

B. Bodice back

C. Skirt front

D. Skirt back

E. Sleeve

F. Collar

G. Cut out a crossway strip measuring 18cm long by 4cm wide.2. Plain light weight fabric 70cm long by 90cm wide.

3. Cotton sewing thread to match the fabric.

THE TEST

Using the materials provided cut out and make the left side of the girl's dress to show the following processes

(a) Making of the dart at the front bodice. **(6 mks)**

(b) Making of a shoulder seam using a double stitched seam. **(8 mks)**

(c) Making of the side seam on bodice and skirt using an open seam. **(13 mks)**

(d) Attaching of the bodice pieces to the skirt pieces using a plain seam and neatening half of the back using loop stitches. **(10 mks)**

(e) Preparation of the collar. **(4 mks)**

(f) Attaching of the collar using a crossway strip.. **(13 mks)**

(g) Making of an under arm seam using an open seam. **(6 mks**

(h) Preparation and attachment of the sleeve. Do not trim or neaten the seam allowance. **(8 ½ mks)**

OMIT

The management of the lower hem of the skirt and the sleeve

KCSE 2024 CROSS-COUNTRY MOCK

JOINT SERIES 1

441/3

HOME SCIENCE

PAPER 3

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

441/3 – HOME SCIENCE - Paper 3
(Food and Nutrition)

Practical session: 1¼ hours

Planning test session: 30 minutes

INSTRUCTIONS TO CANDIDATES

a) Read the test carefully.
b) Write your name and index number on every sheet of paper used.
c) Textbooks and recipes may be used during the planning session as reference materials.
d) You will be expected to keep to your order of work during the practical session.
e) You are only allowed to take away your reference materials at the end of the planning session.
f) You are not allowed to bring additional notes to the practical session.

THE TEST

You are intending to visit your elder sister during the holiday

Using the ingredients listed below prepare, cook and serve one course meal and nutritious drink for both of you.

Ingredients

- Potatoes /rice / maize flour
- Green grams / beef / beans
- Green leafy vegetables / cabbage
- Carrots
- Tomatoes
- Green pepper
- Onions
- Salt
- Sugar
- Spices
- Cooking oil / fat
- Fruits in season
- Milk

PLANNING SESSION: 30 MINUTES

Use separate sheets of paper for each task listed below and use carbon paper to make duplicate copies then proceed as follows;

(i) Identify the dishes and write down their recipes

(ii) Write down your order of work

(iii) Make a list of food stuffs and equipments you will require

THE END

FOR THE FOLLOWING;

- ✓ ONLINE TUITION
- ✓ REVISION NOTES
- ✓ SCHEMES OF WORK
- ✓ SETBOOKS VIDEOS
- ✓ TERMLY EXAMS
- ✓ QUICK REVISION KITS
- ✓ KCSE TOPICALS
- ✓ KCSE PREMOCKS
- ✓ TOP SCHOOLS PREMOCKS
- ✓ JOINT PREMOCKS
- ✓ KCSE MOCKS
- ✓ TOP SCHOOLS MOCKS
- ✓ JOINT MOCKS
- ✓ KCSE POSTMOCKS
- ✓ TOP SCHOOLS PREDICTIONS
- ✓ KCSE PREDICTIONS
- ✓ KCSE REVEALED SETS

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