2022 DECEMBER FORM 4

KCSE PREDICTION 1 EXAMS

'an investment of knowledge pays'

They have been well prepared by top experienced examiners in regard to 2022 December KCSE

(PREDICTION 1)

For marking schemes and other similar resources,Call/WhatsApp ;

0746 711 892

N/B:Due to high costs incured
While coming up with this and other similar resources,
Marking schemes are mot free of
charge
Questions are free of charge

The following subjects have been tested;

1.Agriculture 2.Biology 3.Business 4.Chemistry 5.CRE 6.English 7.Geography 8.History 9.Kiswahili 10.Mathematics 11.Physics

Other available resources are;

- F1–F4 termly exams
- KCSE past papers
- KCPE past papers
- Mocks
- Primary a nd secondary well summarised notes
- Lesson plans
- Schemes of work
- Setbook guides,videos and their respective questions

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

AGRICULTURE PAPER 1

Kenya Certificate of Secondary Exams

TIME:2HRS

INSTRUCTIONS TO CANDITATES.

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

*-This paper consists of 3 sections **A, B** and **C** . Answer all the questions in section --A and B in the spaces provided.*

*-Select any **TWO** questions in section **C.***

*-**ALL** answers should be written in spaces provided.*

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
A	1-19	30	
B	20 -22	20	
C	23-25	40	
TOTAL		90	

1. State **f*our*** reasons of planting sweet potatoes on ridges**.** **(2mks)**

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2. ***Differentiate*** between rouging and field hygiene as used in crop production. **(1mk)**

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3. Calculate the amount of N in 670kg of a compound fertilizer 20:15:10. **(2mks)**

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4. State ***four*** natural factors that discourage soil erosion. (**2mks)**

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5. Give ***two*** examples of working capital in bean production**.** **(1mk)**

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6.a)*differentiate* between a delivery note and purchase order documents**.** **(1mk)**

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7.a) state ***four*** factors that are considered when siting a composite pit**.** **(2mks)**

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b) Write down three pieces of information that should be written on the envelope bearing the composite sample being taken to the national laboratories of Kenya.

(1.5mks)

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8. Give ***two*** forms in which credit is offered to farmers**.** **(1mk)**

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9. Why should a farmer understand the lifecycle of parasites**?** **(1mk)**

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10. Give ***four*** diseases which attack tomatoes. **(2mks)**

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11. Give ***four*** factors that affect the selectivity and effectiveness of herbicides.**(2mks)**

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12. What is pricking out? **(1mk)**

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13. State ***two*** physical characteristics used in classifying soil. **(1mk)**

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14. Give ***three*** reasons why the million acre scheme was started. **(1.5mks)**

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15. Name ***four*** micro catchments aimed at conserving soil water around crops **(2mks)**

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16. State ***three*** importances of sub-soiling **(1 1/2 marks)**

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17. Name ***three*** tools a farmer can use to dig a virgin land **(1 1/2marks)**

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18. Give ***two*** forms in which credit is offered to farmers. (**1mk)**

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19. Give ***four*** roles of phosphorus in crops**.** **(2mks)**

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SECTION B (20 MARKS)

20. Study diagram below and answer questions that follow.



(i) Name the farming practice illustrated above**.** **(1mark)**

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(ii) Give the procedure followed to carry out the practice you have named in **(i)** above **(4marks)**

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(iii) state the importance of carrying out the farming practice named above**. (1 mark)**

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21. The diagram below illustrates a method of soil conservation. Study it and answer questions that follow.



(i) Name the method of soil control measure**.** **(1 mark)**

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(ii) in what kind of topography is the above control measure carried out? **(1 mark)**

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(iii)state ***four*** other **biological soil** control measures apart from the one named in (i) above. **(2marks)**

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22. A Farmer has a piece of land on which he grows beans . His farm record on beqan production for nine years is shown below.

YEAR	FERTILIZER APPLIED (100KG BAGS)	TOTAL OUTPUT OF BEANS (90KG BAGS)
2011	0	6
2012	2	12
2013	4	30
2014	6	44
2015	8	54
2016	10	62
2017	12	68
2018	14	68
2019	16	66

a) Using an appropriate scale draw a graph to show the relationship between inputs and outputs.(provide a graph paper) **(5mks)**

b) Calculate the farmers marginal product for the year 2013**.** **(1mk)**

c) From the data given , what rate of fertilizer application would the farmer choose if he wanted to grow maize in 2020**?** **(1mk)**

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d) Give an explanation for your choice above.

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e) Calculate the average product for the year 2015. **(2mks)**

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SECTION C (40 MARKS)

Select any two questions

23. a) Describe the advantages of land consolidation in agriculture production**(7 marks)**

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(b) Discuss ***five*** factors that will influence mass wasting or solifluction. **(5 marks)**

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(c) Discuss ***four*** physical agents of weathering **(8 marks)**

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24. (a) Discuss ***five*** methods of harvesting agro forestry trees. **(10 marks)**

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(b) Explain how old agro forestry with good root characteristics trees can be grafted **(5marks)**

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(c) Discuss ***five*** benefits of weed to the farmers **(5 marks)**

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25. (a) Discuss ***three*** aspects of rainfall that a farmer should consider when deciding on what crop to grow in an area **(6marks)**

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(b) Discuss carrots under the following sub headings

(i) Varieties **(3 marks)**

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(ii) Field management practices **(2 marks)**

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(iii) Harvesting **(2 marks)**

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(c)use the information below to Answer question that follow. Johns farm for the year ended 31st December 2019

Closing valuation	240,000/=
Debts payable	115,000/=
Animal feed purchase	100,000/=
Sale of 2 heifers	180,000/=
Debts receivable	130,000/=
Wages	80,000/=
Opening valuation	220,000/=
Milk sales	62,000/=
Veterinary bills	57,000/=

i) Prepare a profit and loss account of Johns farm. **(5mks)**

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ii) What is the percentage profit or loss made by the farm? **(1mk)**

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iii) of what use the profit and loss account to the farmer? **(1mk)**

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NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

AGRICULTURE PAPER 2

Kenya Certificate of Secondary Exams

TIME:2HRS

INSTRUCTIONS TO CANDIDATES

1. *Write your name and ADM number in the spaces provided above.*
2. *This paper has **THREE** sections: A , B and C*
3. *Answer **ALL** the questions in section A and B and any **TWO** questions in section C*
4. *ALL answers **MUST** be written in the spaces provided.*
5. *Do not remove any pages from this booklet.*
6. *This paper consists of 10 printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

FOR EXAMINER'S USE ONLY

	Questions	Maximum score	Candidate's score
A	**01 - 16**	**30 marks**	
B	**17 - 20**	**20 marks**	
C	**21 - 23**	**40 marks**	
		Total score	

SECTION A (30MARKS)

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

1. a) List ***two*** dairy goat breeds **(1mk)**

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b) Give ***two*** advantages of keeping a Jersey cow instead of a Friesian. (**1mk)**

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2. Give ***two*** importance of keeping health records in a farm. **(1mk)**

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3. a) What is pica as used in livestock production. **(½mk)**

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b) State ***three*** importance of keeping livestock healthy. **(1½mks)**

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4. Name an intermediate host for each of the following parasites.

i) Tapeworm (*Taenia solium*) **(½mk)**

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ii) Liver Fluke (*Fasciola hepatica*) **(½mk)**

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5. a) Name the type of breeding system represented below. **(½mk)**

Ayrshire Sire **x** Boran Dam ⟶ F1 Heifer x Hereford

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b) Outline ***two*** characteristics of livestock that are used in mass selection. **(1mk)**

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6. State ***four*** management practices that would ensure maximum harvest of fish from a fish pond. **(2mks)**

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7. Distinguish between crutching and ringing as used in livestock production. **(1mk)**

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8. Give ***four*** reasons why young Lambs should be docked **(2mks)**

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9. a) State ***three*** disadvantages of natural incubation in poultry production **(1½mks)**

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b) Why is it necessary to supplement domestic poultry diet with grit. **(½mk)**

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10. Name ***four*** properties of a good vaccine **(2mks)**

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11. State ***four*** factors considered when formulating a livestock ration. **(2mks)**

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12. Name ***two*** Larval developmental stages of liver fluke that occur outside the intermediate host. **(1mk)**

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13. List ***four*** methods of preserving fish after harvesting. **(2mks)**

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14. Mention **three** ways that indigenous livestock farmers use to improve their cattle. **(1½mks)**

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15. Differentiate between

i) Gilt and Sow **(1mk)**

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ii) Marking gauge and mortise gauge. **(1mk)**

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16. Outline ***three*** possible causes of damage to the hide of cattle when the animal.

(1½mks)

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17. Highlight ***three*** functions of ventilation in an animal house. **(1½mks)**

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18. State ***four*** factors that determine the power output in an animal**.** **(2mks)**

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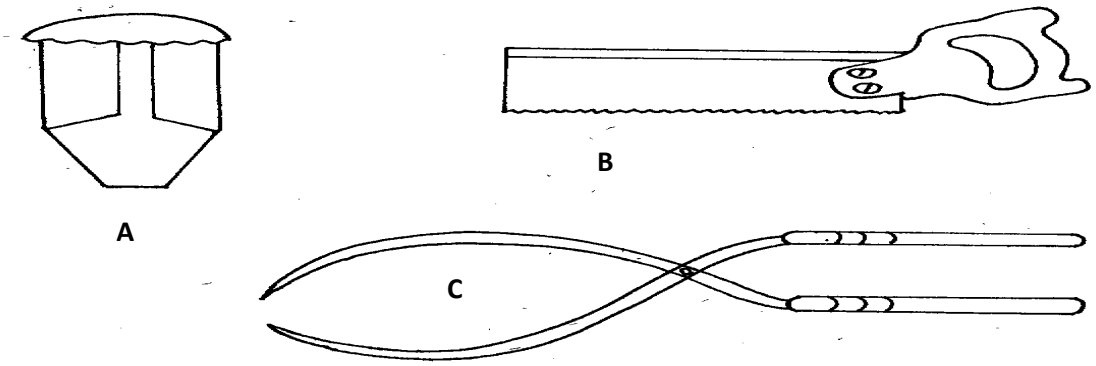
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SECTION B (20MARKS)

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

19. The diagram below represents farm tools.



a) Identify the tools labelled **A** and **B** **(1mk)**

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b) Give ***one*** use of each of the tools mentioned in (i) above **(2mks)**

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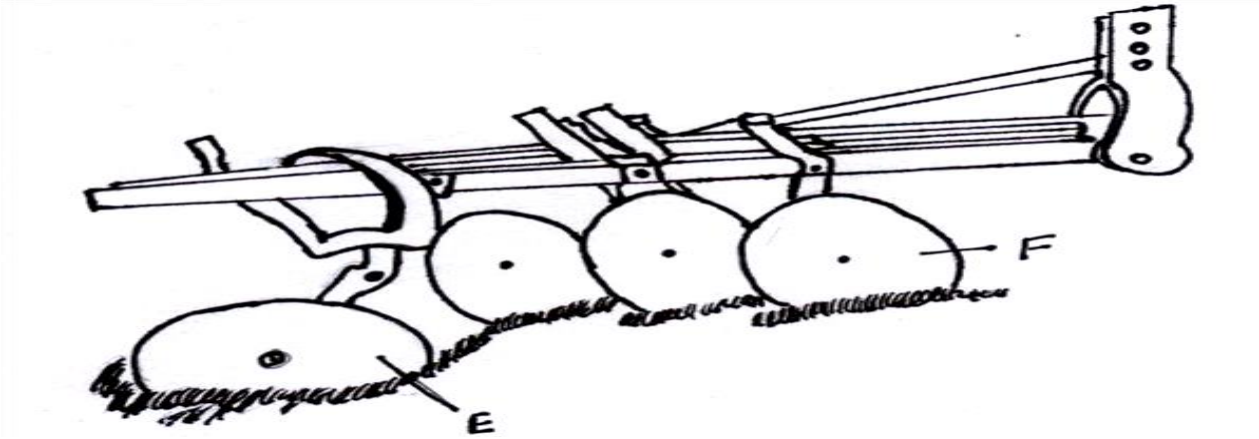
c) Give the ***two*** maintenance practices which should be carried out on tool **C** **(2mks)**

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20. The diagram below represents an implement



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

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b) Name the parts labeled E and F and give one function of each. **(2mks)**

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c) State ***four*** maintenance practices carried out on the implement shown in the diagram. **(2mks)**

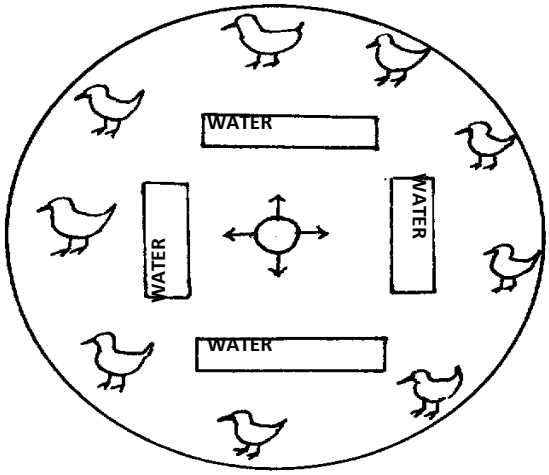
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21. Study the diagram below and answer the questions that follow.



a) Name the structure illustrated above. **(1mk)**

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b) Why should structure be round and not rectangular or square shaped. **(1mk)**

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c) Describe the heat situation in the structure. **(1mk)**

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d) Give ***one*** reason to support your answer in (iii) above. **(1mk)**

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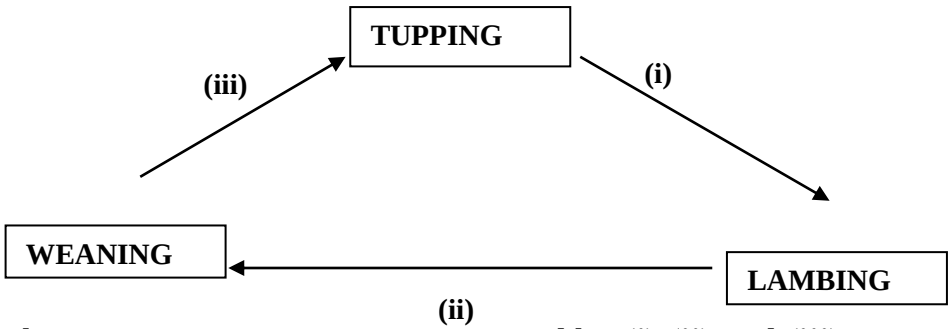
e) Why is saw dust not suitable for use as litter in the structure. **(1mk)**

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22. Below is a breeding cycle of a ewe in relation to the feeding regime accompanying it. Use it to answer the following questions.



a) Name the management practice represented by **(i),(ii)** and **(iii)** **(3mks)**

i)……

ii)……

iii)……

b) Give the importance of practice **(i)** **(3mks)**

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SECTION C (40MARKS)

Answer any two questions from this section in the spaces provided

23. a) Five diseases of internal parasites attack in livestock. **(10mks)**

b) Explain the factors to consider when planning a farm layout. (**10mks)**

24. a) Outline ***ten*** management practices a farmer should carry out to maintain good healthy in a herd of cattle**.** **(10mks)**

b) Discuss the management of layers in a deep litter system. **(10mks)**

25.a) Describe ***five*** design requirement of a calf pen. **(10mks)**

b) Describe Milk Fever disease under the following sub headings.

i) Animals affected **(2mks)**

ii) Symptoms **(5mks)**

iii) Control and treatment **(3mks)**

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NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

BIOLOGY PAPER 1

Kenya Certificate of Secondary Exams

TIME:2HRS

INSTRUCTIONS TO CANDIDATES

- *Write your name and Index Number in the spaces provided above.*
- *Sign and write date of examination in the spaces provided above.*
- *Answer **ALL** questions in the spaces provided.*
- *All workings **MUST** be clearly shown where necessary.*

FOR EXAMINERS USE ONLY.

Question	Maximum Score	Candidates Score
1 – 28	**80**	

1. Name the reagent used for testing presence of **(3 marks)**

(a) Starch

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(b) Reducing sugars

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(c) Vitamin c

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2. State the processes which occur in each of the following organelles. **(2 marks)**

(a) Chloroplast

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(b) Mitochondrion

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(c) Ribosomes

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3. A student observed a specimen through a light microscope. He used the objective lens marked X40.If he indicated the magnification of the image as x 400, what was the eye - piece magnification?
(Show your working). **(3 marks)**

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4. State the function of the following in mammalian trachea. **(3 marks)**

(a) Rings of cartilage

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(b) Mucus

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(c) Cilia

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5. (a) What do you understand by the term biological control? **(1 mark)**

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(b) Explain why all the energy produced by producers does not flow to the tertiary consumers. (2**marks**)

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6. Name any ***three*** forces that maintain the transpiration stream **(3 marks**)

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7. Give the form in which the following gases are transported in blood. **(3 marks**)

(a) Oxygen

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(b) Carbon (IV) oxide

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(c) Carbon (II) oxide

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8. (a) Name the main group of organisms which comprise the Kingdom Monera. **(1mark**)

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(b) State any ***three*** ways in which the organisms named in 8 (a) above affect human lives. **(3marks)**

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(c) State the main characteristics of Monera which distinguish it from all other kingdoms. **(1 mark)**

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9. State ways in which the xylem tissue is adapted to carry out its function**. (3marks**)

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10. Why is it necessary for an athlete to breathe heavily after running? **(2 marks**)

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11. State ways in which the following diseases can be prevented

(a) Typhoid and amoebic dysentery **(2 marks)**

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(b) Malaria **(2 marks**)

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12. What are the ***three*** distinguishing features of phylum Arthropoda? **(3 marks**)

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13.(a) Name the main product of the dark stage of photosynthesis. **(1 mark)**

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(b) What is the role of chlorophyll during photosynthesis (2**mark**)

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14. Name ***three*** mechanisms that prevent self-pollination in flowers that have both male and female parts. **(3 marks)**

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15. State ***three*** applications of anaerobic respiration. **(3 marks)**

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16. What is the significance of highly folded inner membrane of a mitochondrion? **(2 marks)**

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17. Why is it necessary for blood from the gut to pass through the liver before joining general circulation? **(2 marks)**

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18. A person's urine tested positive for reducing sugars.

(a) Name the type of sugar present in the urine. **(1mark)**

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(b) Name the gland and the hormone which failed to control the above condition. **(2marks)**

Gland

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Hormone

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(c) Which disease was the person suffering from? **(1mark**)

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19. State ***two*** roles played by the process of reproduction. (2**marks**)

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20. What is the habitat of the following plants? (3**marks**)

(i) Xerophytes

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(ii) Hydrophytes

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(iii) Halophytes

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21.(a) State ways in which molars are adapted to their functions. **(2marks**)

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(b) Name any ***two*** dental diseases. **(2 marks)**

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22. How is the sperm cell adapted to carry out its function? **(3 marks)**

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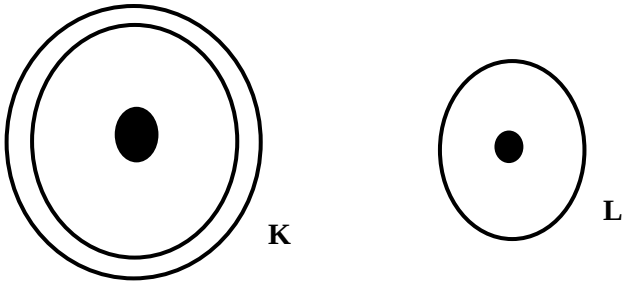
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23. The following are diagrams of two pollen grains.



(a) State ***one*** observable difference between K and L. (1 **mark**)

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(b) State the agent of pollination for each of them. (2 **marks**)

K

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L

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24. How do sunken stomata reduce transpiration? (2**marks**)

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25. Give the classes to which the following animals belong. (3**marks**)

(a) Human being

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(b) House fly

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(c) Spider

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26.(a) State ***one*** event that occurs in prophase of meiosis I which does not occur in prophase of mitosis. **(1 mark)**

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(b) What are the results of the above phenomena? **(2 marks)**

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27. Explain why growing grass die a few days when salt is sprinkled on it. **(3marks)**

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NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

BIOLOGY PAPER 2

Kenya Certificate of Secondary Exams

TIME:2HRS

INSTRUCTIONS TO CANDIDATES

- *Write your name and Index Number in the spaces provided above.*
- *This paper consists of **two** sections. Section **A** and section **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.*
- *This paper consists of 10 Printed pages. Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing*

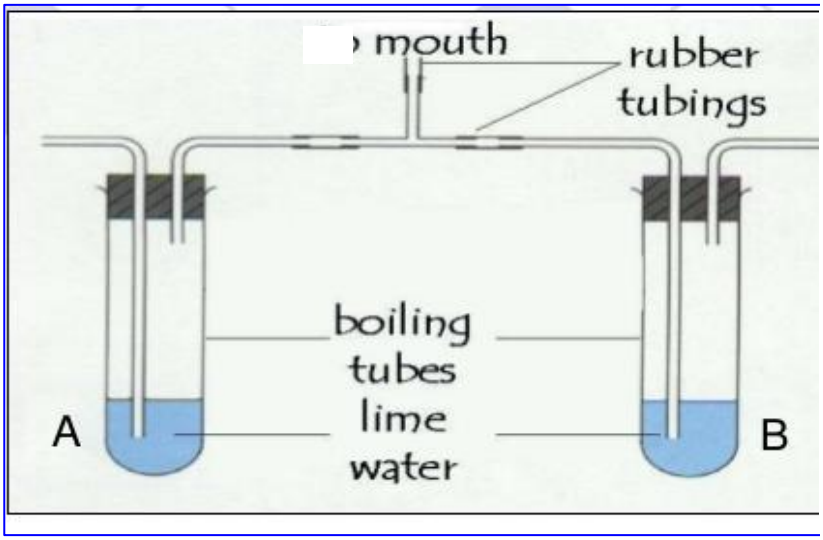
For Examiners use only.

Section	Question	Maximum score	Candidates score
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7	20	
	8	20	
	Total score	80	

SECTION A. 40 MARKS

Answer all the Questions in this section.

1. The diagram below illustrates an experimental set up to compare relative amounts of a gas in inhaled air and exhaled air.



a) On the diagram, show with arrows the direction of movement of inhaled and exhaled air into and out of the mouth**.** **(2mks).**

b) What is the name of the gas being investigated in the experiment **(1mk)**

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c) What will happen to the lime water in**.** **(2mks)**

Boiling tube A?

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Boiling tube **B?**

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d) Explain the observations made in **(c)** above**.** **(3mks).**

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2. A human gene which is Y-linked controls premature baldness. One allele leads to normal hair pattern while the other produces premature baldness

(a) What are alleles? **(1mark)**

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b) If a man with premature baldness marries, work-out the phenotypes of his children. (Use letter **R** to represent gene for premature baldness). **(4 marks)**

c) Explain why this trait is not observed in females **(2marks)**

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d) Give one other trait in man that is Y—linked **(1mark)**

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3. a) What is active transport? **(1mk)**

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(b) State three factors that increase the rate of active transport. **(3mks)**

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(c) Give ***<u>two</u>*** roles of osmosis in animals**.** **(2mk)**

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(d) What would happen if a plant cell is placed in a hypotonic solution. (**2mks)**

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4. The diagram below shows two fused bones of a mammal.



(a) Identify the fused bones. **(1mk)**

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(b) Name:

i) The bone that articulates at the point labelled A**.** **(1mk)**

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ii) The structure labelled B**.** **(1mk)**

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(c) State the type of joint formed at structure **B.** **(1mk)**

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(i) Name: the structure labelled **C** **(1mk)**

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ii) State ***two*** functions of the structure named in d(i) above **(2 mks)**

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(d) i) Name the structure labelled **D** **(1mk)**

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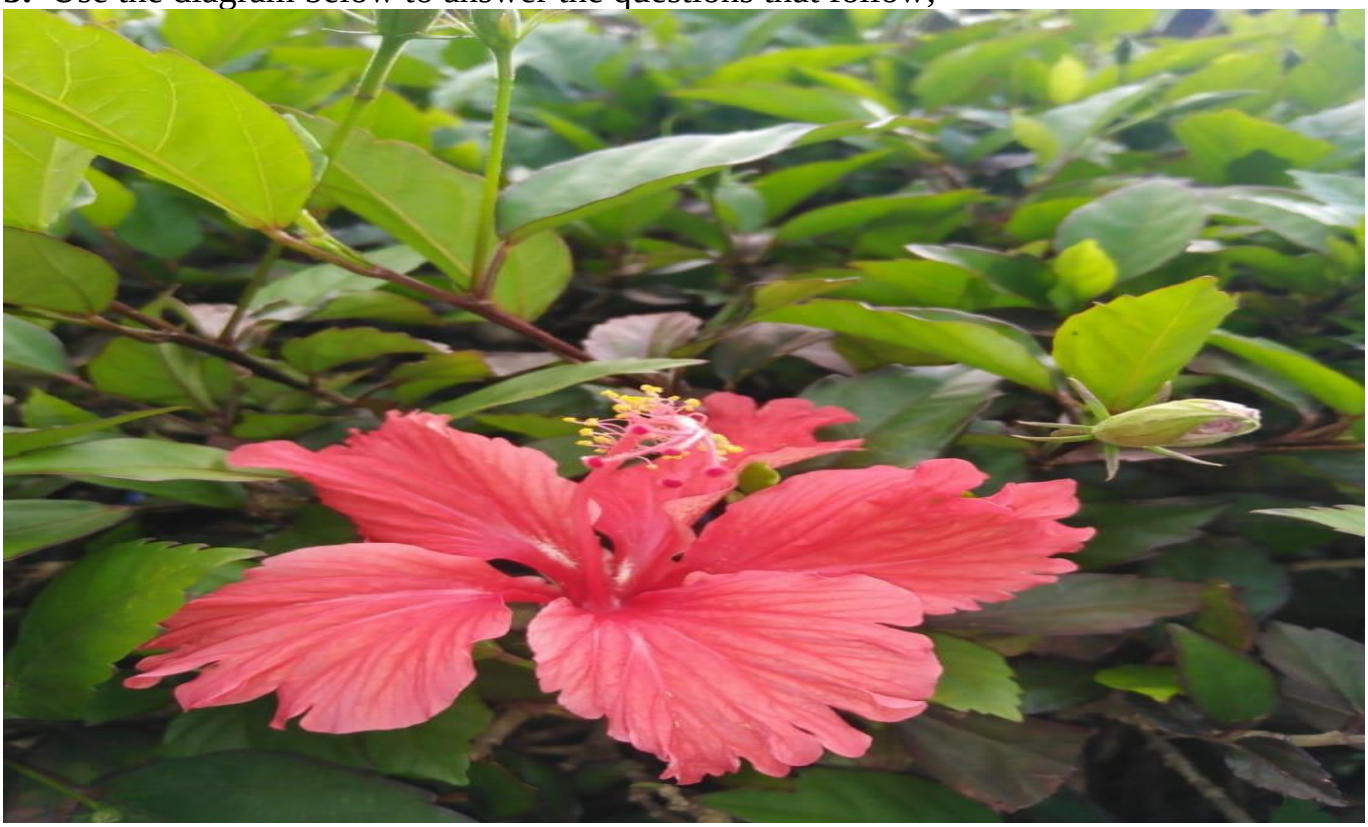
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ii) State what happens to the structure during childbirth. **(1mk)**

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5. Use the diagram below to answer the questions that follow;



(a) Name the class the plant belongs to. **(1mk)**

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(b) Give t***hree*** OBSERVABLE characteristics that place the plant to the class named in (a)above **(3 mks)**

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(c) If a cross section was done on the young stem, draw and label the section observed**.** **(3mks)**

SECTION B (40 MARKS)

Answer question 6 (compulsory) and either 7 or 8

6 .In an ecological study, a grasshopper population and that of crows was estimated in a certain grassland area over a period of one year. The results are as shown in the table below.

Months	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*0*	*N*	*D*
Number of adult grasshoppers x 10_2	*90*	*20*	*11*	*25*	*2500*	*1652*	*120*	*15*	*10*	*35*	*192*	*456*
Number of crows	*4*	*2*	*0*	*1*	*8*	*22*	*7*	*2*	*1*	*1*	*5*	*15*
Amount of rainfall	*20*	*0*	*55*	*350*	*520*	*350*	*12*	*10*	*25*	*190*	*256*	*350*

(a) (i) What is the relationship between the rainfall and grasshopper population? **(1 mark)**

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(ii) Account for the relationship stated in a *(*i) above**.** **(3 marks)**

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(b) Explain the relationship between the grasshopper population and that of the crows**.** **(3 marks)**

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(c) If the data was used in the construction of pyramid of numbers, what would be the trophic of; **(3 marks)**

(i) Grasshoppers

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(ii) Crows

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(iii) The grass in the study area

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(d) If the area studied was one square kilometer, state:

(i) one method that could have been used to estimate the crow population.

(1 mark)

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(ii) ***One*** method that could have been used to estimate the grasshopper population.
(1mark)

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(e) Suggest what would happen f a predator for grasshoppers entered the study area.
(2 marks)

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(f) What is meant by the term carrying capacity**?** **(1 mark*)***

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(g) Why would the carrying capacity of wild animals in a woodland grassland be higher than that of cattle? **(2 marks)**

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(h) What is an ecosystem? **(3 marks)**

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7. Describe how water from the soil reaches the leaves of a tall tree and eventually to the atmosphere. **(20mks)**

8. Explain how the human alimentary canal is adapted to perform its functions.
(20mks).

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NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

BIOLOGY PAPER 3

Kenya Certificate of Secondary Exams

TIME:1 HR 45 MINS

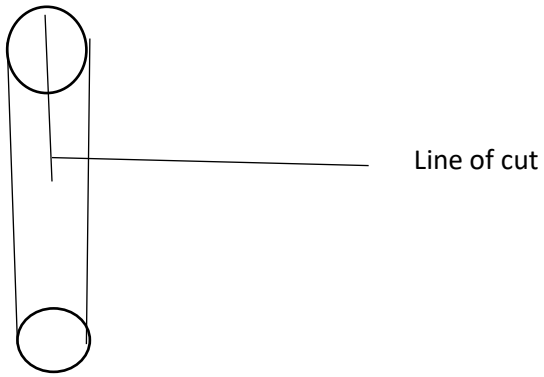
Instructions to Candidates

- ***o*** *Answer* ***ALL*** *the three questions in the spaces provided.*
- *Spend the first 15 minutes of the 1 hour & 45 minutes to read through the paper carefully before commencing your work.*
- *One may be penalized for recording irrelevant information and for incorrect spelling, particularly of technical terms.*
- *Additional pages must not be inserted.*

For Examiner's Use Only

QUESTION	Maximum Score	Candidate's Score
1	12	
2	15	
3	13	

1. You are provided with two pieces of plant material labelled specimen D. using a scalpel cut a longitudinal section half way through the middle of each piece as shown in the diagram below.



Place one piece in solution labelled L_1 and the other piece in the solution labelled L_2. Allow the set up to stand for 30 minutes.

(i) Record your observation **(2 marks)**

L_1.....

L_2.....

(**b)** Examine the pieces.

(i) Record other observations besides those made in **(a)(i)** above. **(3marks)**

L_1.....

L_2.....

(ii) Account for the observation in **(a) (i)** above. **(5 marks)**

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(ii) Account for the observation in **(b) (i)** above. **(3marks)**

M



N



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2. You are provided with photographs of specimen M and N. Examine them.

a) Identify the bones. **(2marks)**

M

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N

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b)Name the parts labeled X and Y**.** **(2marks)**

X

……

Y

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c) State ***three*** significance of the part labelled **Y.** **(3 marks)**

Y

(i)……

(ii)……..

(iii)……..

d)Calculate the actual size of specimen labelled **M**. (Show your working). **(3marks)**

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e) Name the part of the mammalian body from where the specimens were obtained. **(1mark)**

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f) State with reasons the type of joint formed at the proximal and distal end of **M** **(4marks)**

Proximal end

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Reason

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Distalend

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Reason

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3. a) The photographs below are for specimen labelled P,Q and R.

P



Q



U



R

V

(i) State with a reason the class to which specimens P belongs. **(3 marks)**

P

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Reason

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(ii) What type of germination is exhibited by **Q?** **(2marks)**

Q ……..

Give a reason for your answer.

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(iii) Name the parts labelled **U** and **V** on the photographs above. **(2marks)**

U

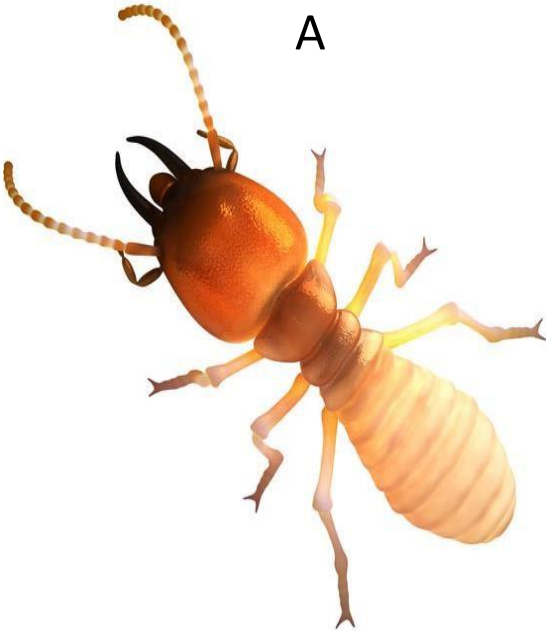
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V

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3. (a) The diagrams below shows the photographs of specimens A and B

A



B



(b) (i) Using observable features only, state the class to which the specimen in photographs **A** belongs. **(1mark)**

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

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(iii) State the habitat in which the specimen in photograph **B** is found. **(1mark)**

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(IV) Identify the stage of development of the specimen in photograph **B.** (**1mark)**

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(v) Give a reason for your answer in **(b)(iv)** above. **(1mark)**

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NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

BUSINESS PAPER 1

Kenya Certificate of Secondary Exams

TIME:2 HRS

INSTRUCTIONS TO CANDIDATES

Answer all the questions in the spaces provided.
*This paper consists of **12** printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing*

FOR EXAMINER'S USE ONLY

Question No	1	2	3	4	5	6	7	8	9	10	11	12	13
Marks													
Question No	14	15	16	17	18	19	20	21	22	23	24	25	
Marks													

1. State the most appropriate document as used in home trade. **(4mks)**

Circumstances	Document
a) A document that contains detailed information of a good stocked by a seller	
b) A document that shows that the amount owed have been reduced by a certain amount	
c) A document that contains all information on all transactions between a buyer and the seller for a certain period of time	
d) Shows that goods have been dispatched by a seller to the buyer.	

2. Highlight ***four*** reasons that compel an insurance company to re-insure**.** **(4mks)**

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3. The following items belong to Mlamba Wholesalers as at 31st Dec 2018

Motor vehicle	75,000
Stock	4,000
Overdraft	11,100
Creditors	5,740
Debtors	6,200
Commission paid	2,000
Cash	10,000
Returns Outwards	3,400
Returns Inwards	1,400

Capital	78,360

Required, draw Mlamba's trial balance as at 31st December 2018. **(5mks)**

4. The bodaboda motorcycles are very popular both in urban and rural environment. Highlight ***four*** disadvantages of this method of transport**.** **(4mks)**

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5. With an aid of a diagram, show what happens to the equilibrium price and quantity when demand increases and quantity supplied remains constant. **(4mks)**

6. Give ***four*** differences between shares and debentures **(4mks)**

Shares	Debentures
a)	

b)	
c)	
d)	

7. National income under expenditure approach in arrived by adding together expenditure on all final goods and services in the economy. List down ***four*** components included in the expenditure approach. **(4mks)**

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8. Kenya's young population has been rising rapidly, highlight ***four*** disadvantages of this increase. **(4mks)**

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9. Given the following transactions of Mwaura's Retailers, identify the journals which the transactions will be recorded. **(4mks)**

a) 1st Jan: Sold a motor car worth kshs.145, 000/- for kshs. 140,000/- to Mwazighe on credit

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b) 2nd May: Cash received from Mwanzi of Kshs. 1,000 receipt no 001.

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c) 6th August: Goods bought on credit worth Kshs. 900 invoice No. 013 from Shah Traders.

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d) 4th February: Credit sales to Ndika Shs 400/-

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10. County Government wants to increase taxes levied on parking. Highlight ***four*** principles that they should consider before taking this move. **(4mks)**

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11. Highlight ***four*** methods government gets involved in business activities. **(4mks)**

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12. Highlight ***four*** costs that intermediaries relieves producers from in the process of distributing goods and services. **(4mks)**

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13. Buketi provided us with the following information.

Sales	200,000
Mark up	¼

Opening stock	30,000
Closing stock	25,000
Expenses	15,250

Calculate

a) Gross profit **(1mk)**

b) Net profit **(1mk)**

c) Rate of stock turnover **(2mks)**

14. If you are asked to head a committee to buy some office equipment, suggest ***four*** factors that you would put into consideration. **(4mks)**

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15. Highlight ***four*** reasons that would make a trader reject payment by cheque. **(4mks)**

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16. State whether the following factors constitute internal or external environment to a business. **(4mks)**

Factor	Environment
a) Shareholders resolutions	
b) Firms physical infrastructure	
c) Currency exchange rate	
d) Cost of finance	

17. State ***four*** features of oligopoly market structure **(4mks)**

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18. The following transactions relate to Kimau traders for the month of January, 2018

4th Jan: Deposited sh 70,000 into business bank account from cash till.

10th Jan: Paid the following bills by cheque:

Electricity	sh 4,000
Insurance	sh 2,000

20th Jan: Paid 10,000 by cheque for repairs

Required: Record the transactions in the relevant ledger accounts **(4mks)**

19. Company X intends to use personal selling as a method of product promotion. State ***four*** disadvantages of using this method. **(4mks)**

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20. The balance sheet of Peken Enterprises as at 31st March , 2017 showed an initial capital of sh 85,000. As at 31st March 2018, the following information about the business was provided.

(i) Additional investment in the business was sh 30,000

(ii) Profit made during the trading period was sh 60,000

(iii) The proprietor made monthly drawings of sh 3,000 from 1st April 2017 to 31st December,2017

Determine the final capital of Peken Entreprises. **(4mks)**

21. State any ***four*** reasons why many businesses shy away from using public warehouse. **(4mks)**

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22. List ***four*** functions of central bank as a banker to government. **(4mks)**

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23. Highlight ***four*** reasons why the government may encourage businesses to be located all over the country. **(4mks)**

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24. Highlight ***four*** services that facilitates communication to take place in Kenya. **(4mks)**

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25. Highlight ***three*** characteristics of human wants **(3mks)**

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NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

BUSINESS PAPER 2

Kenya Certificate of Secondary Exams

TIME:2 HRS

INSTRUCTIONS TO THE CANDIDATES

*-Answer any **FIVE** questions*
-All questions carry equal marks
-All working must be shown

1. **a)** Explain ***five*** causes of unemployment in Kenya. **(10 Marks)**
   b) Explain ***five*** circumstances that would influence a producer to use wholesalers in distributinghis produce. **(10 Marks)**
2. **a)** Explain ***five*** ways in which the insurance industry contributes to the development of Kenya's economy. **(10 Marks)**
   b) Explain ***five*** demerits of government involvement in the running of public corporations. **(10 Marks)**
3. **a)** Explain ***five*** factors that may be considered in determining the appropriate channel fordistributing goods. **(10 Marks)**
   b) Explain ***five*** reasons why business organizations may merge with one another. **(10 Marks)**
4. **a)** Explain ***five*** benefits that a country would get by encouraging investors to locate industries in rural areas. **(10 Marks)**
   b) On 1st May 2010 Musa Traders had sh. 15, 000 cash in hand and Sh. 160, 450 at bank.During the month, the following transactions took place.

May 2	Bought goods for Sh. 5, 400 and paid by cheque.
May 8	Received sh. 7, 200 cash from a debtor
May 15	Paid a creditor Sh. 18, 300 by cheque
May 16	Paid salaries sh 4, 200 in cash
May 18	Sold goods for sh. 9, 200 and was paid by cheque

May 20 Withdrew sh. 30, 000 from bank for office use
May 25 Received sh.8, 000 cash from a debtor
May 28 Paid general expenses sh. 4, 000 cash.
May 29 Deposited sh.10, 000 cash in bank
May 30 Paid for electricity sh. 2, 500 by cheque

Record the above transactions in a two column cash book and balance it off.

(10 Marks)

5. **a)** Explain ***five*** ways which traders can apply to attract more customers. **(10 Marks)**

   b) Explain ***five*** factors that could affect the quantity of cabbages supplied in a Market**.** **(10 Marks)**

6. **a)** Explain ***five*** factors to consider when choosing an appropriate means of transport. **(10 Marks)**

   b) The following balances were extracted from the ledger accounts of Bidii traders for the yearended 31st December 2010.

Capital	940, 000
Bank	100, 000
Accrued expenses	20, 000
Debtors	60, 000
Creditors	60, 000
Stock	100, 000
10 Years Bank loan	200, 000
3 year ICDC loan	100, 000
Vehicle	300, 000
Plant and machinery	200, 000
Land	500, 000
Drawings	40, 000
Cash	20, 000

Using these balances prepare Bidii traders trial balance for that year dully balanced.

(**10 Marks)**

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

CHEMISTRY PAPER 1

Kenya Certificate of Secondary Exams

TIME:2 HRS

INSTRUCTIONS TO CANDIDATES

a) *Write your **NAME** and **INDEX NUMBER** in the space provided above*
b) *Sign and write the date of examination in the spaces providedabove*
c) *Answer **ALL** the questions in the spaces provided*
d) ***ALL** working must be clearly shown where necessary.*
e) *Mathematical tables and silent electronic calculators may be used.*

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's score
1 –31	80	
Total score	80	

1. An element **K** has atomic number 20 while element **M** has atomic number 8.

a) Write the electronic configuration for **K** and **M**

K…….. **(1mark)**

M…….. **(1mark)**

b) Write the symbol of the most stable ion of **K** and **M**

K……..……**(1mark)**

M……..**(1mark)**

2. Molten Lead (II) bromide is electrolyzed using carbon electrodes.Write the half equations of the reactions that occur at the anode and the cathode.

a) Anode (**1mark)**

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b) Cathode (**1mark)**

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3. Explain why the conductivity of metals decreases with increase in temperature.

(2marks)

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4. Three metal oxides **XO, YO,** and **ZO** are heated with powdered metal **Y**. Hot powdered Y will remove oxygen from **XO** but not from **ZO**. Arrange the metals in order of reactivity, starting with the most reactive. (**1mark)**

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5. Some sodium chloride was found to be contaminated with copper(II)oxide. Describe how a sample of sodium chloride can be separated from the mixture.

(2marks)

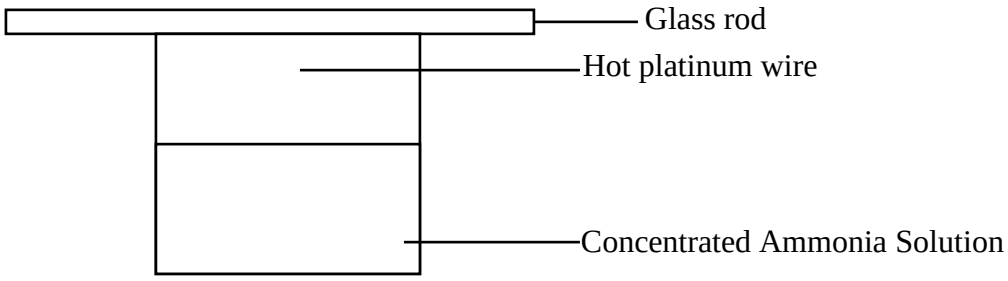
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6. Hot platinum wire was lowered into a flask containing concentrated ammonia solution as shown below.



State and explain the observations made. **(3marks)**

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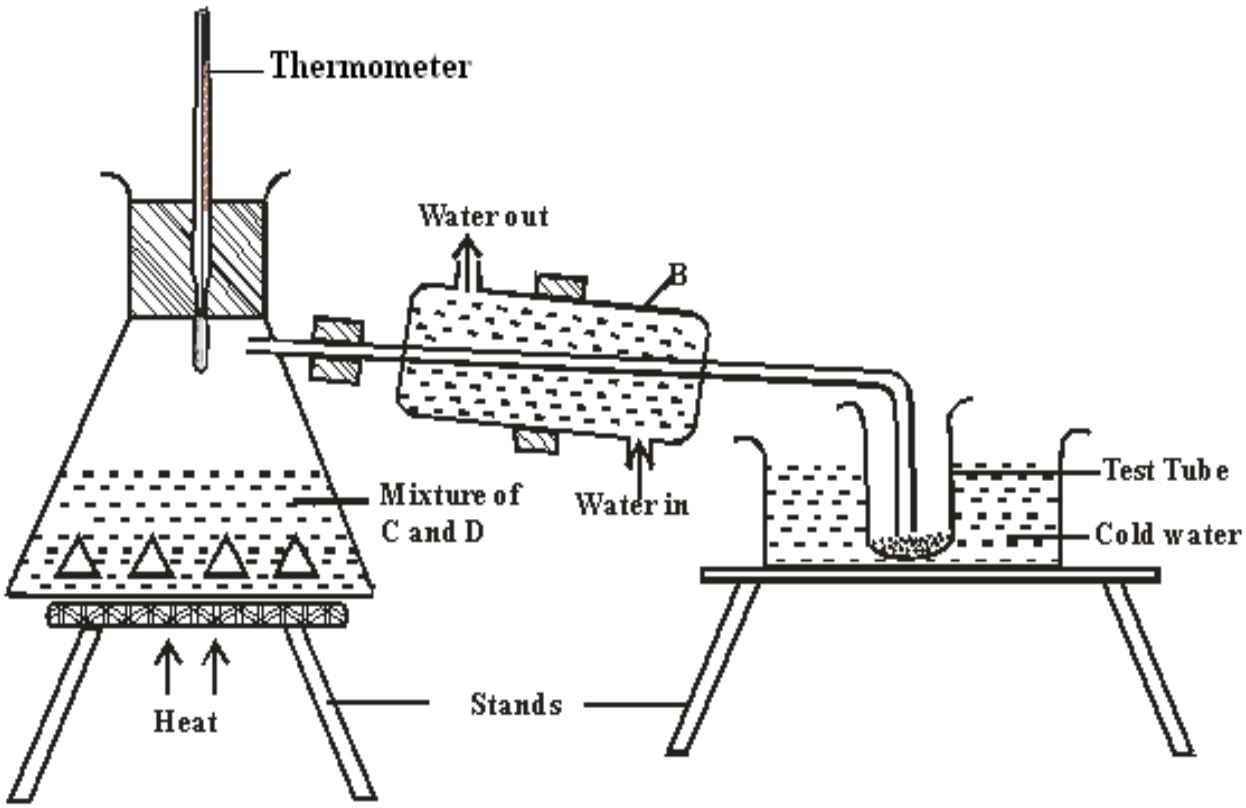
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7. The set up below represents the apparatus that may be used to separate a mixture of two miscible liquids **C** and **D** whose boiling points are 80^0C and 110^0C.



a) Name **B** **(1mark)**

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b) What is the purpose of the thermometer (**1mark)**

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c) Which liquid was collected in the test tube? (**1mark)**

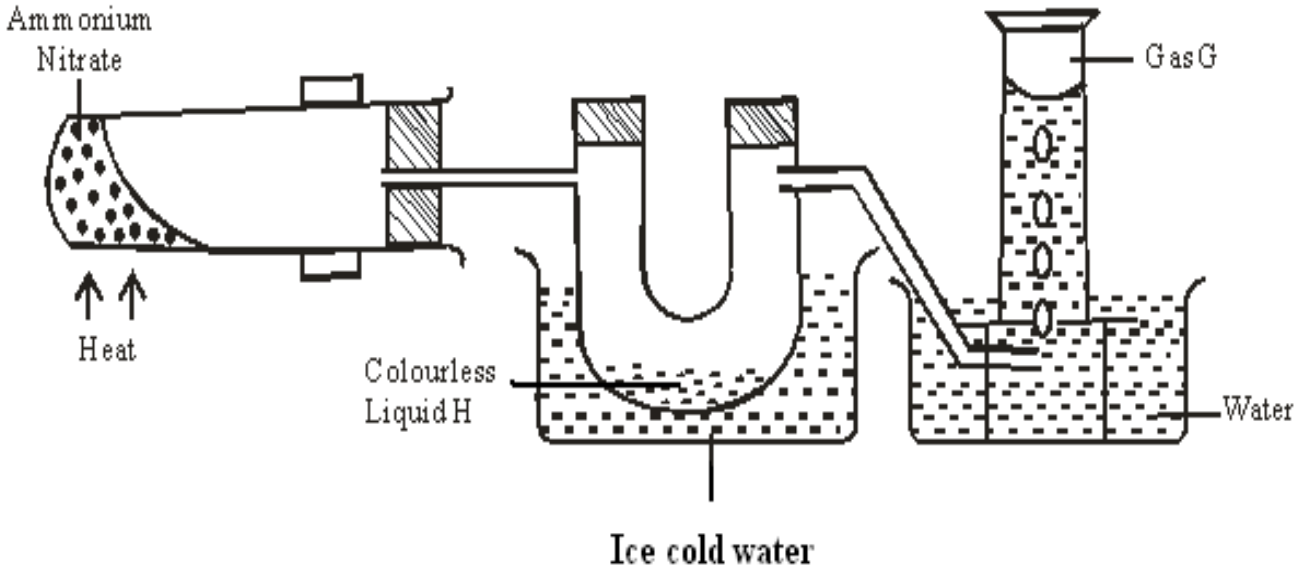
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8. Draw a dot (.) and cross (x) diagram to show bonding in carbon **(II)** oxide.(**2marks)**

9. Ammonium nitrate was gently heated and the products collected as shown in the diagram.



a) Identify:

i. Colourless liquid **H** **(1mark)**

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ii. Gas **G** **(1mark)**

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b) Describe one physical and one chemical test that can be used to identify gas **G.** **(2marks)**

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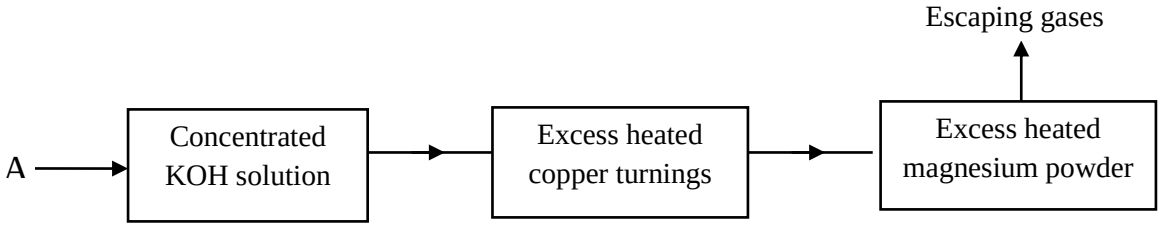
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10. Air was passed through several reagents as shown in the flow chart below.



a) What is the purpose of concentrated potassium hydroxide solution? **(1mark)**

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b) Write an equation for the reaction which takes place in the chamber with magnesium powder. **(1mark)**

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c) Name ***one*** gas which escapes from the chamber containing magnesium powder.

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d) Give a reason for your answer **(2marks)**

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11. Name the following substances.

a) $CH_2\,CH\,CH_2\,CH_3$ (**1mark)**

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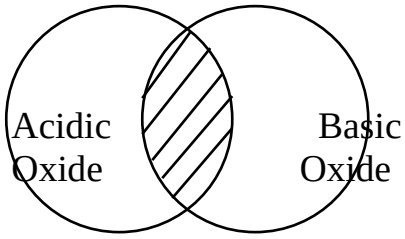
b) $CH_3\,CH\,CH\,CH_2\,CH_3$ (**1mark)**

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12. The diagram below shows the acidic and basic oxides fit into the general family of oxides.



a) State the name given to the type of oxide that would be placed in the shaded area. (**1mark)**

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b) Give the name of any oxide that would be placed in the shaded area. (**1mark)**

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13. Study the information in the table below and answer the questions that follow.The letters do not represent the actual symbols of the elements.

Substance	Solubility in water	Electrical conductivity	
		Solid	Molten
A	Insoluble	Good	Good
B	Soluble	Poor	Good
C	Insoluble	Poor	Poor

i) Which of the substances is highly likely to be sodium chloride? Explain (**2marks)**

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ii) What type of bond exists in substance **A**? (**1mark)**

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iii) State a possible structure in substance **C**? (**1mark)**

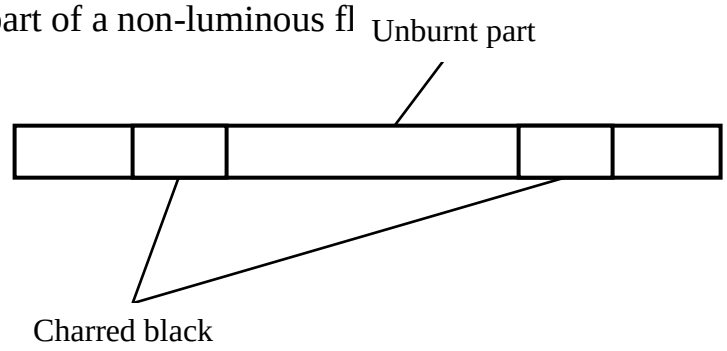
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14. Laboratory results showed the composition of a compound to be 58.81% barium, 13.72%, sulphur and 27.47% Oxygen. Calculate the empirical formula of the compound. Ba=137, S = 32, O = 16. **2marks**

15. The diagram below shows a wooden splint that was placed horizontally across the middle part of a non-luminous fl



a) Explain the observation made **(2marks)**

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b) Explain why non-luminous flame is preferred for heating than the luminous flame. **(2marks)**

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16. 200cm^3 of oxygen gas took 60 seconds to diffuse through a porous plug. Determine the time taken by 300cm^3 of sulphur (IV) oxide to diffuse through the same plug under the same conditions.
(O=16, S = 32) **(3marks)**

17. Explain why?

i) Both methane and diamond are covalently bonded. Methane is a gas but diamond is a solid with very high melting point. **(2marks)**

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ii) Ammonia is dissolved in water using an inverted funnel. **(1mark)**

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18. Explain giving reasons why?

a) Sulphuric acid is not used with marble in the preparation of carbon (IV) oxide **(2marks)**

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b) Water cannot be used to distinguish oil fire. **(1mark)**

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19. A gas occupies $4dm^3$ at -23^0C and 152 mmHg. At what pressure will its volume be halved, if the temperature then is 227^0C.? **(2marks)**

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20.a) Sodium, Magnesium and Aluminium are elements in the periodic table. Explain why aluminium has a higher melting and boiling point than sodium and magnesium. **(2marks)**

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b) The ionization energy of an atom is strongly influenced by three atomic parameters. State ***two*** of these parameters. (**2marks)**

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21. 15cm^3 of a solution containing 2.88g/dm^3 of an alkali XOH completely reacts with 20cm^3 of 0.045M sulphuric acid. Calculate the molarity and relative atomic mass of X present in the alkali. (**3marks)**

22. Describe how a solid sample of calcium sulphate can be prepared using the following reagents; dilute nitric (v)acid, dilute sulphuric (vi) acid and solid calcium carbonate (**4mark)**

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23. Crude oil is the main source of organic compounds such as hydrocarbons. The hydrocarbons in the crude oil have to be separated.

a) Name ***two*** important hydrocarbons obtained from crude oil. (**2marks)**

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b) Give the uses of the two hydrocarbons named in (a) above. (**2marks)**

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24. A hydrocarbon **Q** was found to decolourise potassium manganate (vii) solution. When two moles of **Q** were burnt completely six moles of carbon (iv) oxide and six moles of water were formed.

a) Write the structural formula of **Q.** (**1mark)**

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b) Name the homologous series to which **Q** belongs (**1mark)**

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25. Dilute sulphuric acid was added to a compound **X,** of magnesium. The solid reacted with the acid to form a colourless solution, **Y** and a colourless gas **Z** which formed a white precipitate when bubbled through lime water.

Name:-

(i) Compound **X** (**1mark)**

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(ii) Solution **Y** (**1mark)**

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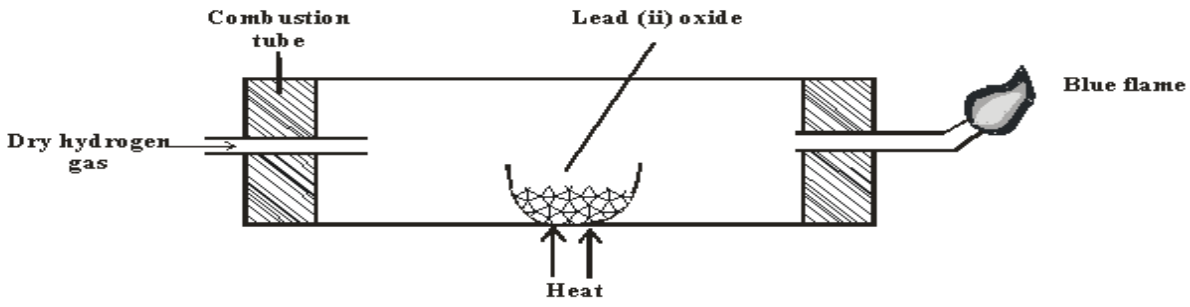
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(iii) Colourless gas **Z** (**1mark)**

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26. When dry hydrogen gas passed over heated Lead (II) oxide in combustion tube, a grey solid was formed.



a) Identify the grey solid. (**1mark)**

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b) Write the equation of the reaction taking place in the combustion tube. (**1mark)**

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c) Write the equation involving the blue flame. (**2marks)**

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27. What do (C F C' S) mean? (**1mark)**

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28.

a) What is meant by the term allotrophy? (**1mark)**

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b) Explain in terms of structure and bonding why graphite is soft with greasy feeling. (**2marks)**

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NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

CHEMISTRY PAPER 2

Kenya Certificate of Secondary Exams

TIME:2 HRS

INSTRUCTIONS TO CANDIDATES

- *Write your name and index number in the spaces provided above.*
- *Sign and write the date of exam in the spaces provided above.*
- *Answer **ALL** the questions in the spaces provided.*
- *Mathematical tables and silent electronic calculators may be used.*
- *All working **MUST** be clearly shown where necessary.*

FOR EXAMINER'S USE ONLY

Questions	Maximum score	Candidates score
1	13	
2	11	
3	13	
4	10	
5	10	
6	12	
7	11	
Total score	**80**	

1. The grid below shows part of the periodic table. Study it and answer the questions that follow. The letters do not represent the true symbols of the elements.

						A		
I	B		C		D		E	
F	G						H	

a) Which element forms an ion of charge - 2? Explain your answer **(2marks)**

……

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……

……

b) What is the nature of the oxide formed by element **C?** **(1mark)**

……

……

c) How does the reactivity of **H** compare with that of **E?** Explain. **(2marks)**

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……

d) Write the chemical equation for the reaction between **B** and chlorine? **(1mark)**

……

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……

e) Explain how the atomic radii of the following compare; **(2marks)**

i) **F** and **G**

……

……

……

ii) **B** and **G**

……

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……

f) The oxides of **B** and **D** are separately dissolved in water. State the effect of each product on litmus paper. **(2marks)**

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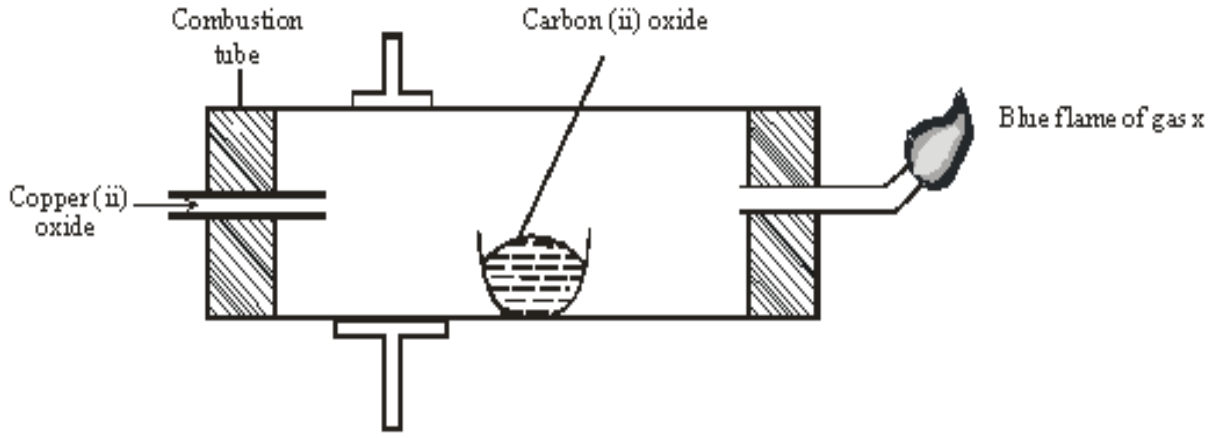
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g) $20cm^3$ of a solution of a hydroxide of I completely neutralizes $17.5cm^3$ of 0.5M sulphuric (VI) acid. Calculate the concentration in moles/litre of solution of the hydroxide of I **(3marks)**

2. The diagram below shows an experiment set-up to investigate a property of carbon (ii) oxide. Study it and answer the questions that follow.



a) Name ***one*** condition that is missing in the set up that must be present if the experiment to proceed. **(1mark)**

……

……

……

b) If the experiment was carried out properly. What observation would be made in the combustion tube? (**1mark)**

……

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……

c) Give an equation for the reaction that occurs in the combustion tube. (**1 ½ mark)**

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……

d) Give an equation for the reaction that takes place as gas x burns. **1 ½ marks**

……

……

……

e) Why is it necessary to burn gas x? (**1mk)**

……

……

……

f) Name the reducing and oxidizing agent. (**2marks)**

(i) Reducing agent

……

……

(ii) Oxidising agent

……

……

g) Identify any other substance that would have the same effect on copper (ii) oxide as carbon (ii) oxide. (**1mark)**

……

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……

h) What would happen if copper(**ii)**oxide was replaced with sodium oxide? Explain (**2mark)**

……

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……

3. a) Sulphur occurs naturally in ***<u>two</u>*** different forms called allotropes;

(i) What are allotropes? **(1mark)**

……

……

(ii) The two allotropes of sulphur are stable at different temperatures, as shown in the equation below.

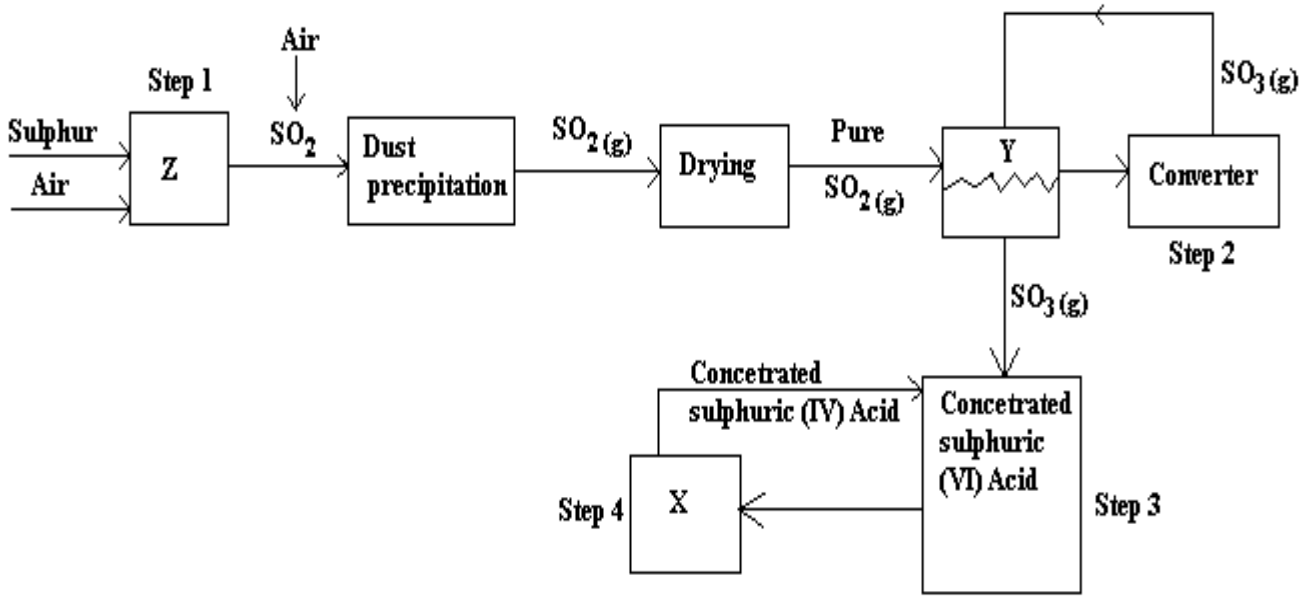
$$\text{Rhombic sulphur} \underset{\text{Below } 95.5^0\text{C}}{\overset{\text{Above } 95.5^0\text{C}}{\rightleftharpoons}} \text{Monoclinic sulphur}$$

Give a name to the temperature 95.5^0C **(1mark)**

……

……

b) Below is a flow chart diagram for the contact process for the manufacture of sulphuric (VI) acid.



(i) Give the name of chambers labeled **(1 ½ mark)**

X

……

……

Y

……

……

Z

……

……

(ii) State the three conditions in the converter. (**1 ½ mark)**

……

……

……

……

(iii) Explain why gases are passed through ; (**2marks)**

I – The dust precipitator and drying power

……

……

……

II- The chamber labeled Y

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……

……..

(iv) Write the balanced equations for the reactions in; (**3marks)**

Step 2:

……

……

Step 3:

……

……..

Step 4:

……

……

c) Calculate the volume of sulphur (VI) oxide gas in litres that would be required to produce 178kg of Oleum in step 3. (Molar gas volume at s.t.p.=22.4l, H=1, O=16, S=32) (**3marks)**

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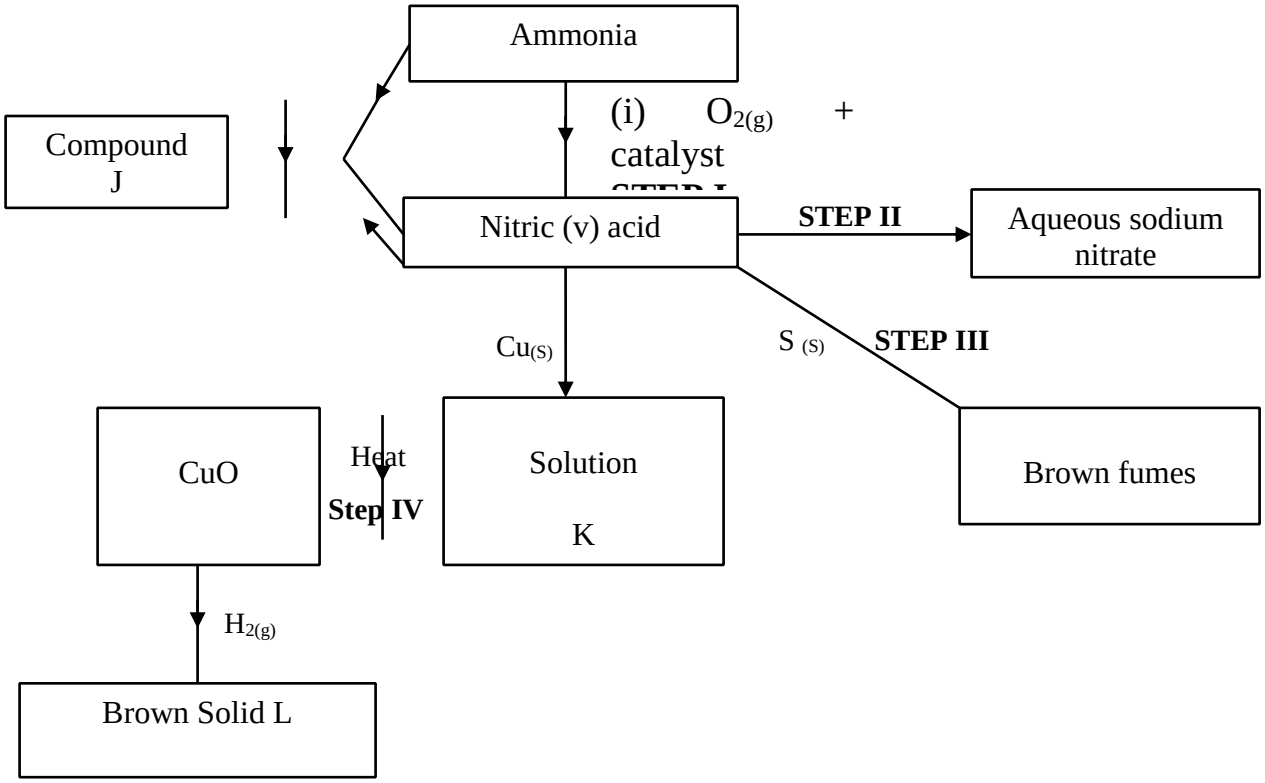
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4. a) The scheme below shows various reactions starting with ammonia. Study it and answer the questions that follow.



(i) List the raw materials used in the manufacturer of ammonia gas. (**1mark)**

……

……

(ii) What catalyst is used in step I? (**1mark)**

……

……

(iii) Write an equation for the reaction that occurs between ammonia and oxygen gas in the presence of a catalyst. (**1mark)**

……

……

(iv) Identify the process is step II? (**1mark)**

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……

(v) Using an appropriate equation, explain how the reaction in step III occurs **(1 mark)**

……

……

(**vi)** What should be added to solution **K** to form solid **L?** **(1 mark)**

……

……

(vi)

(a) I. Write the formula of compound **J.**

……

……

II. Calculate the mass of compound J that would contain 14g of nitrogen. (N=14, O=16, H= 1) **(2marks)**

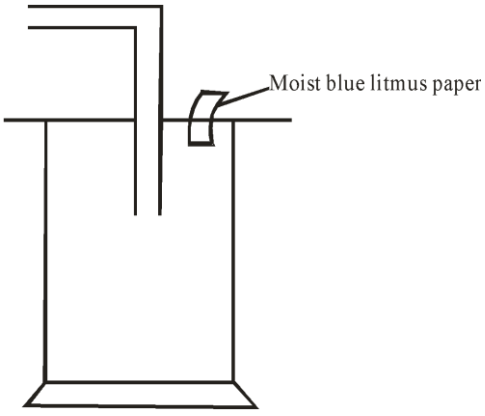
b) Explain the advantage of using ammonium phosphate fertilizer over the other nitrogenous fertilizers. (**1mark)**

……

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……

5. Dry chlorine was collected using the set up below.



a) Name a suitable drying agent for chlorine gas? (**1mark)**

……

……

……

b) State one property of chlorine gas which facilitates this method of collection. (**1mark)**

……

……

……

c) State the observations on the moist blue litmus paper. (**2marks)**

……

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……

d) Chlorine gas was bubbled through distilled water. With aid of an equation show the formation of chlorine water. (**1mark)**

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e) Write the formula of the compounds formed when chlorine gas reacts with warm dry phosphorous. (**2marks)**

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f) Chlorine gas is mixed with moist hydrogen sulphide gas, state and explain the observations (**2marks)**

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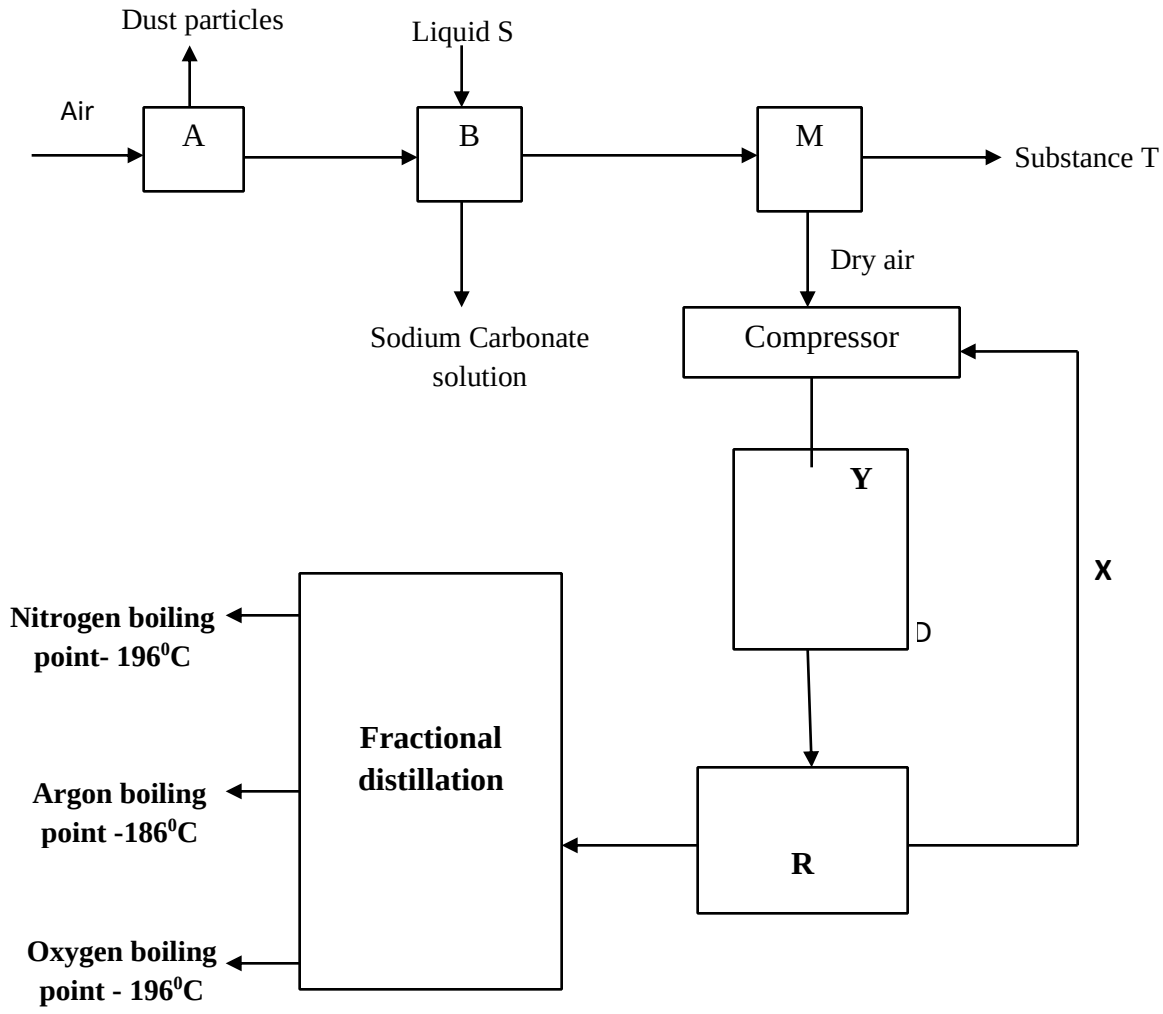
g) Give ***<u>one</u>*** use of chlorine gas. (**1mark)**

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……

……

6. Fractional distillation of air is used in the industrial manufacture of oxygen. The diagram below shows the process.



a) What processes are taking place in chamber A,B,M and D **(2marks)**

A

……

……

B

……

……

M

……

……

D

……

……

b) Name;

(i) Liquid **S**

……

……

(ii) Substance **T**

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……

c) Explain why part **Y** in chamber **D** is curved? (**1mark)**

……

……

……

d) Give ***<u>two</u>*** industrial uses of oxygen gas? (**2marks)**

……

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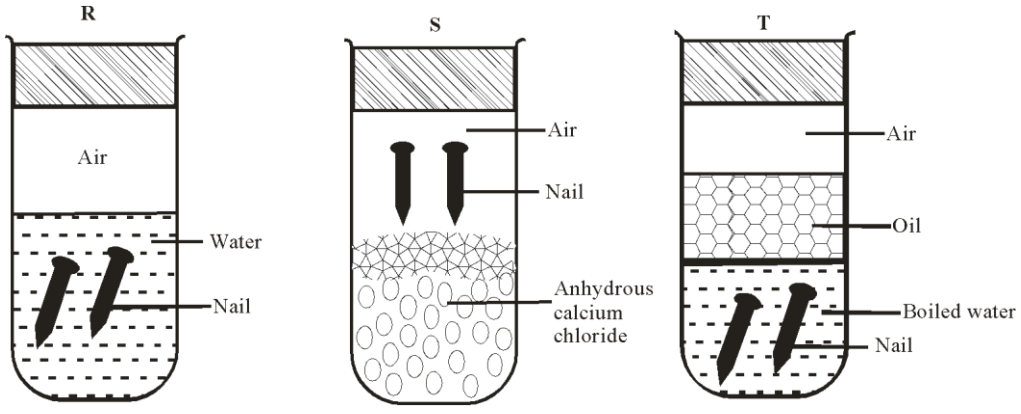
e) In the laboratory preparation of oxygen, manganese (iv) oxide and hydrogen peroxide are used. Write an equation to show how oxygen gas is formed. (**1mark)**

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……

f) An investigation was carried out using the set-up below. Study it and answer the questions that follow.



(i) State and explain what will happen in the three test-tubes **R, S** and **T** after seven days. (**3marks)**

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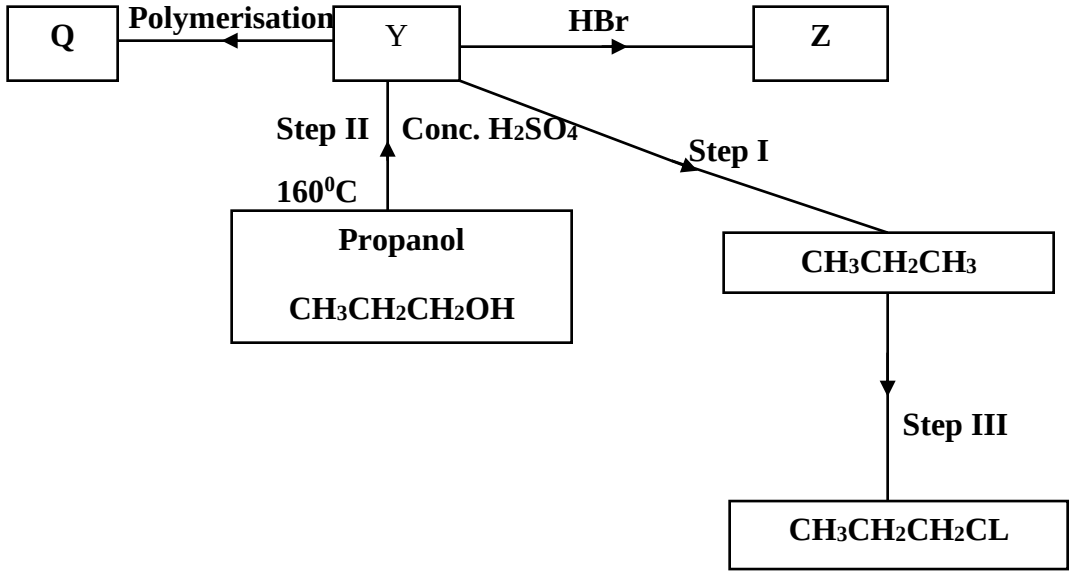
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(ii) Give ***one*** reason why some metals are electroplated. (**1mark)**

……

……

7. Below is a scheme of some reactions of propanol. Study it and answer the questions that follow.



(a) State the reagents and conditions required to effect step **I** (**3marks)**

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……

(b) Draw the structural formulae and name product **Z.** (**1mark)**

……

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(c) Name product **Q** (**1mark)**

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(d) Explain how product **Y** can be distinguished from the product formed after step I has taken place. (**2marks)**

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……

(e) What name is given to the process in Step II and step III (**2marks)**

Step II

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……

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Step **III**

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(f) (i) Define the term hydrocarbon (**1mark)**

……

……

……

(ii) Draw the structure of 1, 2 – dibromopropane (**1mark)**

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

CHEMISTRY PAPER 3

Kenya Certificate of Secondary Exams

TIME: : 2¼HRS

INSTRUCTIONS TO CANDIDATES

- *Write your name and index number in the spaces provided above.*
- *Answer **ALL** the questions in the spaces provided.*
- *You are not allowed to start working with the apparatus for the first 15 minutes of the 2¼ hours allowed time for the paper.*
- *Use the 15 minutes to read through the question paper and note the chemicals you require*
- *Mathematical tables and electronic calculators may be used.*
- *All working **MUST** be clearly shown where necessary.*

FOR EXAMINER'S USE ONLY.

Question	Maximum score	Candidate's score
1	17	
2	8	
3	15	
Total score	40	

1. Solution A is prepared by dissolving 6.3g of the organic acid $H_2C_2O_4.nH_2O$ in water to make a litre of the solution.
Solution B: 0.1M NaOH solution
Phenolphthalein indicator
Clamp and stand
Burette and pipette.
You are required to determine the value of n in the organic acid $H_2C_2O_4.\ nH_2O$

Procedure.

Fill the burette with solution A and adjust the volume to zero mark.
Add 2 to 3 drops of phenolphthalein indicator and titrate solution A against solution B until thecolour just permanently changes. Record your results in the table below. Repeat the procedure two more times to obtain concordant results.

a)

Titration	**1**	**2**	**3**
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution A used (cm^3)			

(4marks)

b) Calculate the average volume of solution A used. (**1mark)**

c) Calculate the moles of sodium hydroxide in the volume of solution B used.
(**2marks)**

d) Given that solution B - Sodium hydroxide and solution A organic acid react in the ration of 2:1, calculate the number of moles of the organic acid –solution A used? (**2marks)**

e) Calculate the moles of organic acid solution A used per litre of solution (**2marks)**

f) Calculate the relative formula masses of the organic acid solution A (**3marks)**

g) Calculate the value of n in $H_2C_2O_4.nH_2O$(H=1, C=12, O=16) (**3marks)**

2. You are provided with CBI. Carry out the test below. Write your observation and inferences in the spaces provided.

a) Using a clean spatula, heat about one third of the solid CBI in a non- luminous Bunsen burner flame.

Observations	Inferences
(1 mark)	**(1 mark)**

b) Put a half spatula endful of CBI in a test tube. Heat gently and then strongly. Test for any gas produced using litmus papers.

Observations	Inferences
(1 mark)	**(1 mark)**

c) Put 2cm^3 of dilute hydrochloric acid into a test tube. Add ¼ endful of CBI into the test tube.
Test for any gas procedure.

Observations	Inferences
(1 mark)	**(1 mark)**

3. You are provided with solid Q, carry out the test below. Record your observations and inferences in the table. Identify any gas (es) evolved.

Place all the solid Q provided into boiling tube and add distilled water until the tube is ¼ full. Divide it into five portions.

a) To the 1st portion add ammonia solution drop wise until excess.

Observations	Inferences
(1 mark)	**(1 mark)**

b) (i) To the 2nd portion add sodium hydroxide solution dropwise until in excess. Keep the resulting
mixture for the next test.

Observations	Inferences
(1 mark)	**(1 mark)**

ii) Warm the preserved mixture from b (i) above

Observations	Inferences
(1 mark)	**(1 mark)**

c) i) To the 3rd portion add silver nitrate solution. Preserve the mixture for the next test.

Observations	Inferences
(1 mark)	**(1 mark)**

ii) To the preserved mixture in c (i) above add diluted nitric acid.

Observations	Inferences
(1 mark)	**(1 mark)**

d) To the 4th portion add dilute Barium nitrate solution followed by dilute nitric acid.

Observations	Inferences
(1 mark)	**(1 mark)**

e) To the 5th portion add 2-3 drops of conc. Nitric acid.
Warm the mixture and allow to cool. Add sodium hydroxide solution dropwise until in excess.

Observations	Inferences
(1 mark)	(1 mark)

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

COMPUTER PAPER 1

Kenya Certificate of Secondary Exams

TIME: : 2 HRS 30 MINS

INSTRUCTIONS TO CANDIDATES

- *This paper consists of TWO sections A and B*
- *Answer all questions in section **A**.*
- *Answer question 16 (Compulsory) and any other **THREE** questions in section **B**.*
- *All answers should be written in the spaces provided in the question paper*

FOR EXAMINER'S USE ONLY.

Section	Question	Candidates Score
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	
Total Score		

SECTION A (40 MARKS)

Answer all questions from this section in the spaces provided

1. List the components of a computer system hardware. **(2 Marks)**

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……

……

2. Describe the term key to storage systems **(1 Mark)**

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……

3. ***One*** classification of software is system software

(a) i. What is meant by system software **(1 Mark)**

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ii. Give ***one*** example of system software. **(1 Mark)**

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……

……

(b) i. Name ***one*** other software classification **(1 Mark)**

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……

ii. Give ***one*** example of this type of software **(1 Mark)**

……

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……

4. a. What do you understand by the term database management system? (DBMS)? **(1 Mark)**

……

……

……

b. Define the following terms as used in a database. **(2 Marks)**

i. Primary Key

……

……

ii. Record

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5. Differentiate between COMports and LPT ports **(2 Marks)**

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6. List **three** factors to consider when deciding on the choice of electronic data processing method **(3 Marks)**

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7. Ventilation is an important practice in the computer lab because it enhances proper circulation of air.
Outline three ways in which air is regulated in the computer room. **(3 Marks)**

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8. What do the following control measures against computer crime involve? **(4 Marks)**

a. Audit trail

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b. Data encryption

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c. Log files

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d. Passwords

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9. ***Highlight*** the use of find and replace features in word processors. **(2 Marks)**

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10. Explain why t***wo's*** complement is preferred to one's complement in computing. **(1 mark)**

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11. Computers have evolved through a number of generations. List any three characteristics of the first generation of computers. **(3 marks)**

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12. List ***four*** formatting techniques used in Ms excel **(2 Marks)**

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13. List ***four*** examples of flat panel displays. **(2 Marks)**

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14. Explain the following terms as used in the word processing. **(4 Marks)**

a. Indenting

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……

b. Alignment

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……

c. Footnote

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……..

d. Endnote

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15. Describe the role of an operating system in

i. Memory management

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……

ii. Job scheduling

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……

iii. Error handling

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……..

iv. Resource control

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……..

SECTION B (60 MARKS)

Answer all questions

16.a. State the ***three*** basic types of program control structures. **(3 Marks)**

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……

b. Draw a flowchart which will simulate the processing of student's report. The simulation should be such that the user repeatedly inputs marks per subject for six subjects using a looping control structure. The computer processes the total marks and mean score of the student.

NOTE:

1. It is assumed that the student does six subjects
2. The output required are: Average score and total marks

c. Differentiate between analogue and digital data. **(2 Marks)**

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d. Outline ***three*** advantages of using computers for data processing over other types of office and business equipment.

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17.a. Convert the following numbers to their decimal equivalent. **(6 Marks)**

i. 11.011_2

……

……

……

ii. 12.15_8

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……

iii. $A3.3/_6$

……

……

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b. Outline ***four*** ways in which data integrity may be maintained. (**4 Marks)**

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c. Explain four advantages of using questionnaires as a fact finding tool. **(4 Marks)**

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d. What is the role of a recycle bin? **(1 Mark)**

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18. a. Masai teacher's college has decided to automate its library for effective services to the students. Identify four methods they are likely to use to gather information during system development. **(4 Marks)**

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b. What do the following terms mean in relation to internet? **(4 Marks)**

i. Downloading

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……

ii. Hyperlink

……

……

iii. Web browsers

……

……

(iv) Internet service providers

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……

c. Differentiate between sorting and filtering as used in electronic spreadsheet program **(2 Marks)**

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d. What do the following terms mean

i. Spam mail

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……..

ii. Disk

……

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iii. Onboard moderm

……

……

……..

e. What does the term WIMP mean as used in computing?

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19.(a) Define a database model **(1Mark)**

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b. List ***four*** advantages of using database systems **(2marks)**

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c. In a database system, data integrity ensures the correctness and completeness of the data in the database. Differentiate the following types of integrity constraints:

i. Validity integrity **(1mark)**

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……..

ii. Entity integrity **(1mark)**

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……

iii. Referential integrity **(1mark)**

……

……

d. Briefly ***describe*** the three database models **(3 Marks)**

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……

e. Using diagrams describe the following three types of relationships. **(3Marks)**

i. One – to – one

ii. One – to – many

iii. Many – to – many

f. File organization refers to the arrangement of records on secondary storage. Briefly describe the following file organization methods. **(3 Marks)**

i. Serial

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……

ii. Sequential

……

……

iii. Random

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……..

20.a. Your School has decided to replace its library control system. The current system was implemented ten years ago but has restricted reporting facilities and has a text – based interface. The school intends to replace the old system with a new computerized system, and is now considering both 'parallel running ' and 'direct changeover'

i. Briefly explain the terms parallel running and direct change over as used in system implementation. **(2 Marks)**

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ii. Give ***two*** disadvantages of direct changeover overparallel running **(1 Marks)**

……

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iii. Identify ***two*** main risks of direct changeover during system implementation **(2 Marks)**

……

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……..

iv. Mention any ***two*** advantages of running both the manual system and the computerized system simultaneously **(2 Marks)**

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b. i. What is a website? **(2 marks)**

……

……

……

ii. Name ***three*** facilities that are needed to connect to the internet. **(3 Marks)**

……

……

……

……..

c. State ***three*** ways students can benefit by having internet in a school **(3 Marks)**

……

……

NAME……..…ADM NO……

SCHOOL……..CLASS…….……

DATE…….……

FORM 4 KCSE PREDICTION 1 EXAMS

COMPUTER PAPER 2

Kenya Certificate of Secondary Exams

TIME: : 2 HRS 30 MINS

INSTRUCTIONS TO CANDIDATES

(a) *Type your name and index number at the top right hand corner of each print out*

(b) *Write your name and index number on the diskette/CD-R provided*

(c) *Write the name and version of software used in each question on the answer sheet*

(d) *Answer **ALL** the questions*

(e) *Passwords **should not be used** while saving in the diskette/CD-R*

(f) *All answers **MUST** be saved in the diskette/CD-R*

(g) *Make print out of answers on the answer sheet provided*

FOR EXAMINER'S USE ONLY

Question	Candidate's score
1	
2	
Total score	

QUESTION ONE

1. (a) Assume you are the Director **AMACO INSURANCE COMPANY LTD** you want to update your customers on the current dues as per the insurance cover each client have. Use mail merge to write an official letter to **FIVE CUSTOMERS** informing them of this. Your letter must meet the following conditions.

i. Must have the header at the top with the company's name as the letter head**(2mks)**

ii. Must have footer at the bottom indicating the current date and time, left aligned. **(2mks)**

iii. The insurance will cover the vehicles and each client due, car number will not be the same. (**2mks)**

iv The address lines will include Title

First name

Last name

Address

Country

Car no plate

Amount due

(14mks)

(b) (i) Prepare the table below in Ms word and then apply formatting as follows and save as MSS **(8 mks)**

MEYSA SYSTEMS AND SERVICES	
Technical information	**Action taken**

Machine description	Problems found		Diagnostic checks	Solutions	
Compaq / evo	hardware	software	Memory video	1	Replacing vga
6522	☐	☐	Faulty component VGA CARD	2	Installing drivers
Desktop	No display		VGA CARD	3	Rebooting system

(iii) Format the table with border line colour red and choose double line **(5mks)**

(iv) Shade the table to tight green colour for the first two rows and light blue shading for therest of the table **(5mks)**

(**c)** Type the paragraph below, save it as computer and apply formatting as stated **(4mks)**

Computer Program is a set of instructions that direct a computer to perform some processing function or combination of functions. For the instructions to be carried out a computer must execute a program, that is, the computer reads the program, and then follows the steps encoded in the program in a precise order until completion. A program can be executed many different times, with each execution yielding a potentially different result depending upon the options and data that the user gives the computer.

(i) The text "computer program" should be the title, change its case to upper case font TREBUCHET MS size 16, colour green **(2mks)**

(ii). Find the word 'instructions' look for its meaning in the computer dictionary and finally replacethe word with new meaning from the dictionary **(3mks)**

(iii). Format the whole paragraph to justified alignment shading colour light green

(3mks)

NAME	BASIC PAY	DEPARTMENT	AGE	STATUS
Peter	15000	Computer	34	Single
John	17000	Computer	44	Married
Kamau	19000	Finance	33	Divorced
Charles	21000	Research	33	Single
Johns	23000	Research	25	Single
Thomas	25000	Computer	26	Married
Ann	27000	Finance	28	Married
Susan	29000	Finance	29	Divorced
Tina	31000	Research	24	Divorced
Andrew	33000	Computer	40	Single
Hardy	35000	Finance	20	Married
Njeri	37000	Finance	43	Single
Kimani	10000	Research	15	Single
Silamtoi	15000	Finance	35	Divorced
Tina	35000	Computer	25	Married
Moses	59000	Research	33	Single
Miriam	70000	Finance	56	Divorced
Maurice	32876	Computer	70	Divorced
Alphie	43876	Research	98	Divorced
Albert	48098	Research.	32	Single
Langat	6500	Computer	12	Single
Phenny	29000	Finance	70	Single
Hilda	32000	Computer	13	Married

2.Create data base called personnel and create a table named department **(5 mks)**

(**b)** Create queries to determine (save each query using the alphabet numbers below)

i. Number of people with basic salary greater than 32,000= **(5 mks)**

ii. Number of people with basic salary less than 45,000= AND come from computerdepartment(5mks)

iii. Names of people who are either married or single. **(4 mks)**

iv. Those whose salary fall between 25,000/= and 50,000= **(3mks)**

v. Those whose name begin with letter M or end in letter S **(3 mks)**

(c) (i) Create a query to compute the new salary if there is an increment of basic pay by 50**%** **(7mks)**

(ii) Filter using query those who earn above 33000/= and aged between 39 and 70 **(5 mks)**

(**d) (i)**Create a form using form wizard using the Departmental table above. **(3mks)**

(ii) Create a form in design view using the departmental table above on the form calculate the total basic salary for the whole table, add current date and time on the form header **(5 mks)**

(iii) Create a report for THE ABOVE table using design view and print. **(5mks)**

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

CRE PAPER 1

Kenya Certificate of Secondary Exams

TIME: : 2 HRS 30 MINS

INSTRUCTIONS TO CANDIDATES

-Answer any five of the given questions.

-All answers must be written in the Answer Booklet provided.

-All questions carry equal marks.

FOR EXAMINERS USE ONLY

NUMBER	1	2	3	4	5	6	TOTAL SCORE
MARKS SCORED							

1. **a)** Give reasons why C.R.E as a subject is incorporated into the curriculum in Kenyan schools today. **(8 Marks)**
   b) ***Explain*** the meaning of the expression, 'the Bible is the Word of God'. **(5 Marks)**
   c) On what occasions do Christians use the Bible? **(7Marks)**

2. **a)** Briefly ***explain*** the significance of the events that took place on the night of the Passover. **(6 Marks)**
   b) What qualities did Moses show during his call? **(9 Marks)**
   c) What lessons do Christians learn from the call of Moses? **(5 Marks)**

3. **a)** Give reasons why the Israelites asked Samuel to appoint a king for them.
(7Marks)
b) Show reasons why Elijah was un-compromising in his attitude to Baal worship.
(8 Marks)
c) Why should Christians fight against the spread of devil worship in the society?
(5 Marks)
4. **a)** What were the characteristics of true prophets in the Old Testament? **(7 Marks)**
b) Give reasons why Amos proclaimed God's judgment on Israel and Judah?
(6 Marks)
c) What lessons do Christians learn from Amos' teachings on judgment? **(7Marks)**

5. **a)** What responses to God's call did Jeremiah exhibit in Jeremiah 4:4 – 19?
(5 Marks)
b) ***Explain*** Jeremiah's teaching on the new covenant. **(6 Marks)**
c) How should a Christian respond when offered a job in a hardship area?
(9 Marks)
6. **a)** Give the roles of ancestors in Traditional African Society. **(9 Marks)**
b) On what occasion were sacrifices offered in Traditional African Society?
(6 Marks)
c) What aspects of traditional religion have been integrated into the Christian faith?
(5 Marks)

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

CRE PAPER 2

Kenya Certificate of Secondary Exams

TIME: : 2 HRS 30 MINS

INSTRUCTIONS TO CANDIDATES

*-Answer **any five** of the given questions.*

*-All answers **must be** written in the Answer Booklet provided.*

-All questions carry equal marks.

FOR EXAMINERS USE ONLY

NUMBER	1	2	3	4	5	6	TOTAL SCORE
MARKS SCORED							

1.a) Give the characteristics of the suffering servant of Yahweh according to prophet Isaiah (Isaiah 53). **(8 Marks)**

b) In what ways did Jesus fulfill prophesies given to King David by Prophet Nathan? **(5 Marks)**

c) What is the relevance of God's promises to David to Christians today? **(5 Marks)**

2. **a)** Mention ways in which John the Baptist prepared the way for the Messiah. **(10 Mark)**
   b) State reasons why Jesus was rejected in Nazareth. **(4 Marks)**
   c) In what ways are church leaders put to test today? **(6 Marks)**
3. **a)** Give examples from the life and Ministry of Jesus which show that He promotedsocial equality. **(8 Marks)**
   b) Explain how the disciples reacted to the use of parables in Jesus' teachings. **(6 Marks)**
   c) What activities does the church engage in to demonstrate love for others? **(6 Marks)**
4. **a)** Relate the message of Peter on the Day of Pentecost. **(10 Marks)**
   b) In what ways did the coming of the Holy Spirit transform the life of Peter on the Day of Pentecost? **(5 Marks)**
   c) What activities of the church in Kenya show that the Holy Spirit is working amongthem? **(5 Marks)**
5. **a)** From the teachings of Jesus, what role would the Holy Spirit play? **(8 Marks)**
   b) Describe the fruits of the Holy Spirit according to Galatians 5: 22 – 26**.(6 Marks)**
   c) In what ways do Christians demonstrate the fruit of generosity? **(6 Marks)**
6. **a)** Explain how the unity of believers is expressed in the symbol of the body of Christ. **(6 Marks)**
   b) State teachings of Peter concerning the people of God. (1st Peter 2:9 - 1 0) **(6 Marks)**
   c) How do churches discipline those who cause disunity in the church today? **(6 Marks)**

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

ENGLISH PAPER 1

Kenya Certificate of Secondary Exams

TIME: : 2 HRS

INSTRUCTIONS TO STUDENTS

1. *Write your name admission number and class in the spaces provided above.*
2. *Answer **all** the questions in this question paper.*
3. *All your answers **must** be written in the spaces provided in this question paper.*
4. ***This paper consists of 8 printed pages.***

For Examiner's use only

Ques.	Max. Score	Student's Score
1	**20**	
2	**10**	
3	**30**	
TOTAL SCORE		

1. FUNCTIONAL WRITING **20 MARKS**

You have been invited by the Form One Coordinator to give a welcome speech to Form One students during their orientation day. Write **a speech** that you are going to give on that day in which the principal and a few teachers will be present. In the speech include the following:

i. Discipline
ii. Academic excellence
iii. Importance of sports and games
iv. Any other relevant information

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2. CLOZE TEST (10 MARKS)

The dictionary defines integrity as 'the state of being completely unified.' When I have integrity, my **1.....**and my deeds match up. I am who I am, no **2.....** where I am or who I am with. Sadly, integrity is a vanishing commodity today. Personal standards are crumbling in a world that has taken to hot pursuit of personal pleasure and short cuts **3.....** success. A person with integrity does not have **4.....** loyalties nor is he or she merely pretending. People with integrity are 'whole' people; they can be identified by **5.....**single-mindedness. They have nothing to hide and nothing to fear. Their lives are open **6.....** They have **7.....**a system of values against **8.....**all their life is judged. Integrity is not what we do so much as who we are. And who we are in 9**.....** determines what we do. Our system of values is so much a part of us that we cannot separate it from **10.....**

3. ORAL SKILLS (30 MARKS)

a) Read the following poem and answer the questions that follow.

When to the sessions of sweet silent thought
I summon up remembrance of things past,
I sigh the lack of many a thing I sought
And with old woes new wail my dear time's waste
Then can I drown an eye, unused to flow,
For previous friends hid in death's dateless night,
And weep afresh love's long since cancelled woe,
And moan the expense of many a vanished sight.
Then can I grieve at grievances foregone,
And heavily from woe to woe tell o'er.
The sad account of fore-bemoaned moan,
Which I now pay as if not paid before.
But if the while I think of thee, dear friend,
All losses are restored and sorrows end.

William Shakespeare

1. Describe the rhyme scheme of the poem above. **(2mks)**

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2. Identify the **most dominant sound pattern** used in this poem. **(2mks)**

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3. Which words would you stress in the last line and why? **(2mks)**

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b) Read the following dialogue between Portia and the principal then answer the questions that follow.

Principal: Welcome Portia, please have a seat.
Portia: (After sitting down) Sir, why did you call me?
Principal: I would like us to have a little chat about...
Portia: I have not done anything wrong; you can even ask Ejidiah, the class prefect I was with her the whole day yesterday.
Principal: Actually, the reason I called you is because...
Portia: Speak louder. I can't hear you.
Principal: (in a louder voice). The reason why I sent for you is because I have just received news from...
Portia: (shouting). Jacky! I knew that fool could not be trusted with a secret. Okay, its true that Ejidiah and I sneaked out of school yesterday but we were hungry, really hungry. All we did was buy a loaf of bread and then came back to school.
Principal: Portia, I wish you could listen to me. The reason why I called you here is because I have received news that you have won an award in the creative writing contest that you entered last year. I have a cheque here for you. However, you have raised a matter that I would love to attend to without further delay. Please go and call Ejidiah. By the time you get back I will have decided on the best punishment for you two.

a) How does the principal establish rapport with the student? **(2mks)**

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b) Prove that Portia is a poor listener. **(2mks)**

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c) What evidence is there in the dialogue to suggest that Portia demonstrates lack of etiquette in her speech**?** **(4mks)**

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d) Pick out the word in which the underlined part is pronounced differently. **(4mks)**

a) Empty free key quay

b) Arch march search monarch

c) shepherd tough phase Physiotherapy

d) Cortege montage siege seizure

e) Read the oral literature item below and answer the questions that follow.

Slipperiness knows no king.

i. Identify an element of musicality contained in the proverb above**. (2mks)**

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ii. Explain how the audience would be involved in reciting this proverb**. (2mks)**

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iii. Cite ***two*** things that would make you know that an audience has understood the proverb cited. **(2mks)**

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f. You are having a group discussion with your colleagues on the set text 'Blossoms of the Savanna.' One of your group mates is contributing to the discussion but you are eager to chip in with something. State any **three cues** that **would tell you that it is your turn to make a contribution. (3mks)**

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g. Imagine you have been invited to give a speech on the topic " Devastating effects of Covid 19." State **three introductory strategies** of your speech. **(3mks)**

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NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

ENGLISH PAPER 2

Kenya Certificate of Secondary Exams

TIME: : 2 HRS

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) *Answer **all** the questions in this paper.*
d) *All your answers must be written in the spaces provided in this question paper.*
e) *This paper consists of **10** printed pages.*
f) *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*
g) *Candidates must answer the questions in English.*

For Examiner's Use Only

Question	Maximum score	Candidates score
1	20	
2	25	
3	20	
4	15	
	Total Score	

COMPREHENSION

Read the passage and answer the questions.

At the start of this week, 1.3 million people had officially died on account of Covid-19 world-wide. According to the World Health Organisation, another 55 million people had contracted the virus. It was a bitter-sweet week as far as efforts to battle the virus are concerned. On one hand was the great news of a second vaccine with a 95 per cent **efficacy** rate. We also saw leading capitals tighten travel, school ban and other containment measures as the second wave of the pandemic batters many regions Locally, the situation seems to mirror the global positions, albeit on a less scale, but the numbers of fatalities and infections are rising. We have lost 1,300 compatriots, with 73,000 more having encountered the virus. A casual glance on our neighbourhoods, social media and obituary pages back this, suggesting the official tally might be conservative due to unreported cases. The occasional infection of a public figure reminding us that we are not out of the woods yet. Medics and scientist continue burning the midnight oil to understand Covid-19 better and its symptoms, or lack of them witnessed in different people.

Though clear patterns of symptoms in fever, fatigue, breathing difficulty and loss of taste and smell were identified early, the last few months have seen some patients report a wide range of unexplained signs like longer infection periods and mental challenges such as anxiety, memory problems even depression. Even more intriguing has been the **asymptomatic** cases and cases of certain people in a family contacting the illness while others remain healthy. Add that to the fact that, Africa appears to suffer disproportionately lower rates of infection and mortality, its dilapidated health systems notwithstanding.

It is going to take time before someone can explain this incongruent picture. What is clear in the interim is that our world has dramatically changed, perhaps for the better. Traditionally, countries have spent **colossal** amounts of money building armies to deter global bullies. Now it appears potential threats to humanity must be re-assessed and budgets adjusted. It might be an unknown virus and not a nuclear bomb that will bring the world to its knees. The most secure nations are likely to be those with highly diversified risk registers and commensurate investment to build capacity to confront such.

The early travel bans and overflowing hospitals in the developed world was another rebuke to developing nations to prioritise health. The fact that some regions have been affected more than others is another sobering lesson. With the 21st century having experienced its fair share of protectionist tendencies and inward-looking policies, the pandemic has highlighted the need for concerted effort to ensure no part of the globe is left behind in modernising its health systems. Who knows, a future pandemic, may see the less affected regions serving as refuge centres and provide manufacturing hubs for drugs.

Perhaps it is time to build longer bridges and not towering walls. The pandemic has shone the spotlight on the place and role of global information systems and co-operation among nations. The future will likely be more secure if pandemics and other threats are reported early and containment measures quickly activated. Covid-19 has painfully reminded us of the dividend of tackling a problem early and at source, before it grows wings.

Questions

1. Why are the efforts to battle the virus bitter-sweet? **(2mks)**

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2. What measures were put in place to contain the 2nd wave of infection? **(2mks)**

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3. Explain these expressions as used in the passage; **(2mks)**

i) … not out of the woods yet

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ii) Burning the midnight oil.

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4. In note form what are the symptoms of Covid-19. **(3mks)**

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5. Identify 2 instances of irony in the passage. **(4mks)**

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6. In about 40 words, summarise the lessons the pandemic has highlighted**. (4mks)**
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Final copy

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7. Explain the meaning of the following words as used in the passage; **(3mks)**

i. Efficacy

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ii. Asymptomatic

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iii. Colossal

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EXCERPT

Read the excerpt below and answer the questions

He was very helpful and he agreed to accompany them to the village where the girl was, and help them rescue her. They were about to give up the rescue mission after several attempts to distract the guards had failed. But the man from Nasila was able to lure the whole team of guards to a beer party at a nearby village, leaving the girl unguarded.

It was then that the rescue team stuck! Amidst screams of terrified women, the barking of fierce dogs, braying donkeys and mowing of cattle, they entered the hut where the weak and sickly girl lay. They carried her and scampered away fast, like men fleeing from a burning village for three kilometres, to the spot where they had left the vehicle. And they were lucky to have escaped, for immediately they put her onto the vehicle and they themselves had jumped into it, the fierce-looking guards arrived, breathless, but fuming furiously and brandishing all sorts of deadly weapons.

On seeing that they had been outsmarted, they resorted to throwing stones at them, but by then the four-wheel drive vehicle had shot past the range of their missiles.

Regrettably, they learnt later that the man who assisted them so much and enabled them to rescue the girl, was speared to death by those thugs who accused him of

tricking them so the girl could be stolen. The girl had, however, arrived safely and she was in fair condition although she was shocked, traumatised and terribly emaciated. She said the girl still found it difficult to walk, for the injuries inflicted to her by the *enkamuratani's olmurunya* had not yet healed.
Minik was thinking of how best to broach the matter in her mind. For a moment she wondered if it was the right time to bring out in the open the matter which she knew would be very painful to the girl who was just recovering from her own trauma. But she knew she could not hide the truth for long. It had to be revealed sooner so that counselling sessions could be put into place soon. Bracing herself appropriately, she quietly and coolly dropped the bombshell.

Questions

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

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2) In which place did the rescue team find the weak and sickly girl**?** **(1mk)**

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3) 'bracing herself appropriately, she quietly and coolly dropped the bombshell.' What was the bombshell? **(2mks)**

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4) Describe the relationship of the man who assisted the rescue team with the weak and sickly girl. **(2mks)**

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5) Discuss ***two*** outstanding themes in the excerpt. **(4mks)**

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6) How is Minik portrayed in this excerpt. **(4mks)**

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7) What is the role of Minik as shown in the rest of the text. **(3mks)**

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8) How has hyperbole been used in the excerpt? **(2mks)**

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9) 'but the man from Nasila was able to lure the whole team of guards to a beer party at a nearby village, leaving the girl unguarded.' Rewrite this sentence beginning with a participle phrase. **(1mk)**

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10) Explain the meaning of the following words as used in the excerpt. **(2mks)**

I. Scampered

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II. Outsmarted

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POETRY (20 MARKS)

Read the poem below and answer the questions that follow

CIVIL WAR

In this land
Graveyards have no markers
For blood flows freely
Into the gutter
Where corpses abide
In restless sleep

In this land
Kinship is long dead
And the insiders prevail
A neighbours hand
In darkness hidden
Stifles yet another victim's light.

In this land
The window blows across the neglected fields
Promising yet another spectacle
Of hollowed eyes and pinched skins
Trudging and falling to the unyielding trains
Of self-destruction

In the air
The whiter dove
Flutter with change
And perhaps

It would be better if this symbol of peace
Were established in the souls of the people
In this land

Questions

a) What is the poem about? **(2mks)**

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b) Who is the persona in this poem? **(2mks)**

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c) Identify any two features of style used in the poem and explain their effectiveness**.** **(6mks)**

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d) Describe the tone of the poem. **(2mks)**

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e) Explain the significance of the last stanza in relation to the title of the poem. **(2mks)**

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f) Give the meaning of the following lines as used in the poem. **(2mks)**

i) kinship is long dead

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ii) stifles yet another victims light.

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g) What is the attitude of the persona towards the subject matter? **(2mks)**

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h) What is the mood of the poem? **(2mks)**

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GRAMMAR (15 marks)

1) Rewrite the sentence below filling in the gap with the correct form of the word in brackets. **(1mk)**

Annah was scolded for the ..... (order) in her room.

2) Punctuate the following sentences appropriately **(1mk)**

In case of any disagreement the teacher said consult the principal

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3) Underline the adjective in the sentence below and state whether it has been used predicatively or attributively. **(1mk)**

Your watch looks expensive

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4) Choose the correct word from those in brackets. **(1mk)**

(All over sudden/ all of a sudden)

.....there was a loud bang on the door.

5) Rewrite the following sentence replacing the underlined idiomatic expression **(1mk)**

Advertising revenue in the new financial year has <u>got off to a flying start.</u>

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6) Rewrite the following sentence using one word to replace underlined **(1mk)**

The workers jobs may be <u>put at risk</u> if you purchase the machine

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7) Supply a question tag to the following statements. **(1mk)**

John hardly ever studies

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8) Explain the ambiguity in this sentence. **(1mk)**

"Did you see the girls with a telescope?"

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9) Combine the following sentence using a participle phrase **(1mk)**

I had seen the photographs of the place. I had no desire to go there.

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10) Replace the phrasal verb underlined in the sentence below with one word that means the same. **(1mk)**

They <u>fell out</u> over the decision and hardly speak to each other anymore.

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11) Rewrite the following sentence according to the instructions. (do not alter the meaning) **(1mk)**

This is the singer. Her songs are beautiful (join into one sentence using a relative pronoun)

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12) Rewrite the following sentence using substitution. **(1mk)**

Neema passed with flying colours. Her sister Kinya passed with flying colours too.

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13) Complete the following sentences with the correct order of adjectives in brackets. **(1mk)**
I used to drive…….. car. (blue, old, German, expensive, saloon)

14) Fill the gaps with a suitable preposition. **(1mk)**
I am vexed…….. her for stealing my books.

15) Fill in the blank spaces with the correct article**.** **(1mk)**
What is…….. ewe?

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

ENGLISH PAPER 3

Kenya Certificate of Secondary Exams

TIME: 2 ½ hours

1.Imaginative Composition (Compulsory)(20 marks)

Either

(a) Write a story to illustrate the saying:
Do not judge a book by its cover.

Or

(b) Write a story ending: I realized that the shortest way home is not always the quickest.

2.Compulsory Set Text (20 marks)

Henrik Ibsen, A Doll's House

'The price of great sacrifice and love in a marriage is the risk it won't be paid.' Using illustrations from Henrik Ibsen's play A Doll's House, write an essay in support of this statement.

3.The Optional Set Texts (20 marks)

Answer any one of the following three questions.

Either

(a) The Short Story

Chris Wanjala (Ed.), *Memories We Lost*

Drawing examples from Rolf Schmid's short story "No Need to Lie' write a composition on the topic: "Living with cancer does not have to be a death sentence."

Or

(b) Drama

David Mulwa, *Inheritance*

Illustrating your answer with examples from 'Inheritence,' write an essay entitled:
'The effects of greed.'

Or

(c) The Novel

John Steinbeck, *The Pearl*

Write an essay supporting the proposition that: 'Juana is the embodiment of reason in Steinbeck's novel, 'The Pearl.'

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

GEOGRAPHY PAPER 1

Kenya Certificate of Secondary Exams

TIME: 2 ¾ HRS

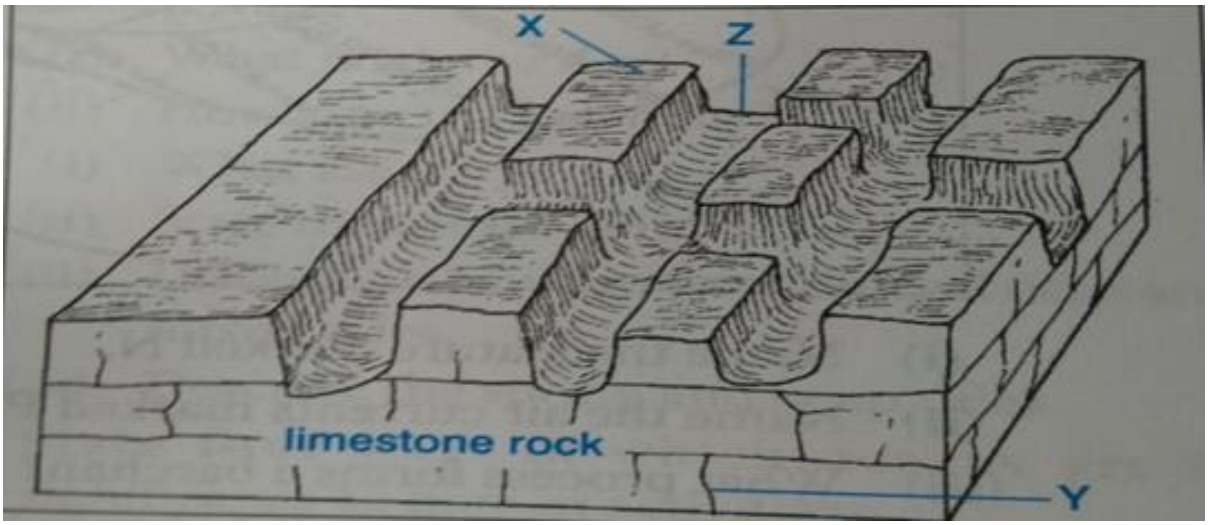
INSTRUCTIONS TO CANDIDATES

1. *Write your name and index number in the spaces provided above.*
2. *This paper has **TWO** sections: A and B.*
3. *Answer **ALL** the questions in section A. In section B answer **QUESTION 6** and any other **TWO** questions from the section.*
4. *ALL answers **MUST** be written in the Answer Booklet provided.*
5. *Do not remove any pages from this booklet.*
6. *This paper consists of 4 printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

SECTION A

Answer all the questions in this section

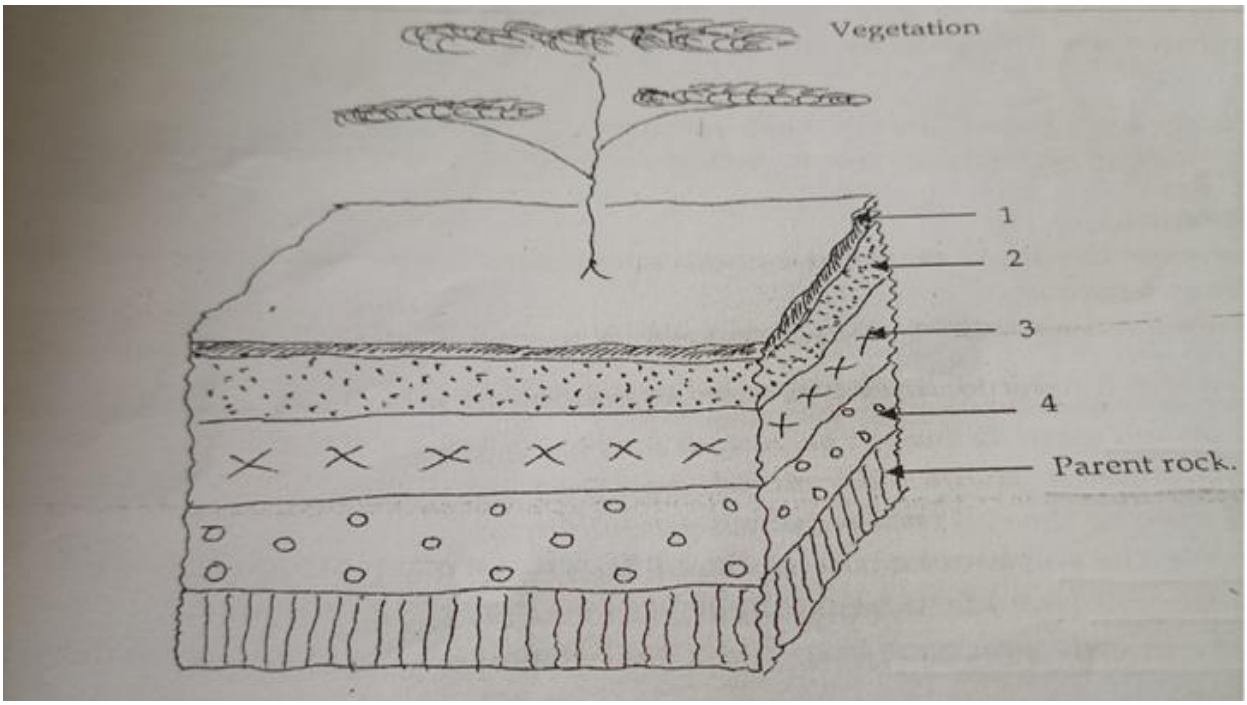
1. **(a)** Explain the relationship between geography and mathematics **(2mks)**
   (b) When the local time is 2:00 p.m. at longitude 45°E , what is the longitude of a place whose local time is 8:00 P.M? **(2mks)**
2. **(a)** Give ***three*** examples of chemically formed sedimentary rocks **(3mks)**
   (b) Describe how coral rocks are formed **(3mks)**
3. **(a)** List ***three*** external land forming processes which leads to formation of Lakes **(3mks)**
   (b) State ***two*** ways in which lakes influence natural environment **(2mks)**
4. (a) The diagram below shows some of the surface features in a Karst scenery .Use it to answer questions (i) below



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

(ii) Name ***two*** other features, which form on the surface of a karst scenery **(2mks)**

5. Study the diagram below showing a soil profile. Use it to answer the questions that Follow



(i) Name the soil layers marked 2, 3 and 4 **(3mks)**

(ii) Give ***two*** factors that influence soil leaching **(2mks)**

SECTION B

Answer question 6 and any other two questions from this section.

6. Study the Map of Yimbo 1: 50,000 (Sheet 115/1) provided and answer the following questions.

a) i) Convert the representative scale given on the map into a statement scale. **(1mk)**

ii) Give the latitude and longitude of the southwest corner of the area covered by the map **(2mks)**

iii) Give the magnetic declination as at January 1970**?** **(1mk)**

b) i) What is the height of Usengi hill? **(1mk)**

ii) What is the bearing of the Air Photo Principal point on grid reference 3274 from the trigonometrical station on grid reference 3980? **(2mks)**

iii) Describe the long profile of River Yala. **(4mks)**

c) i) Using a scale of 1cm to represent 20m draw a cross section along northing 99 between easting 16 and 22 **(3mks)**

ii) On the cross section mark and name the following.

A steep slope **(1mk)**

A seasonal river **(1mk)**

Thicket vegetation**.** **(1mk)**

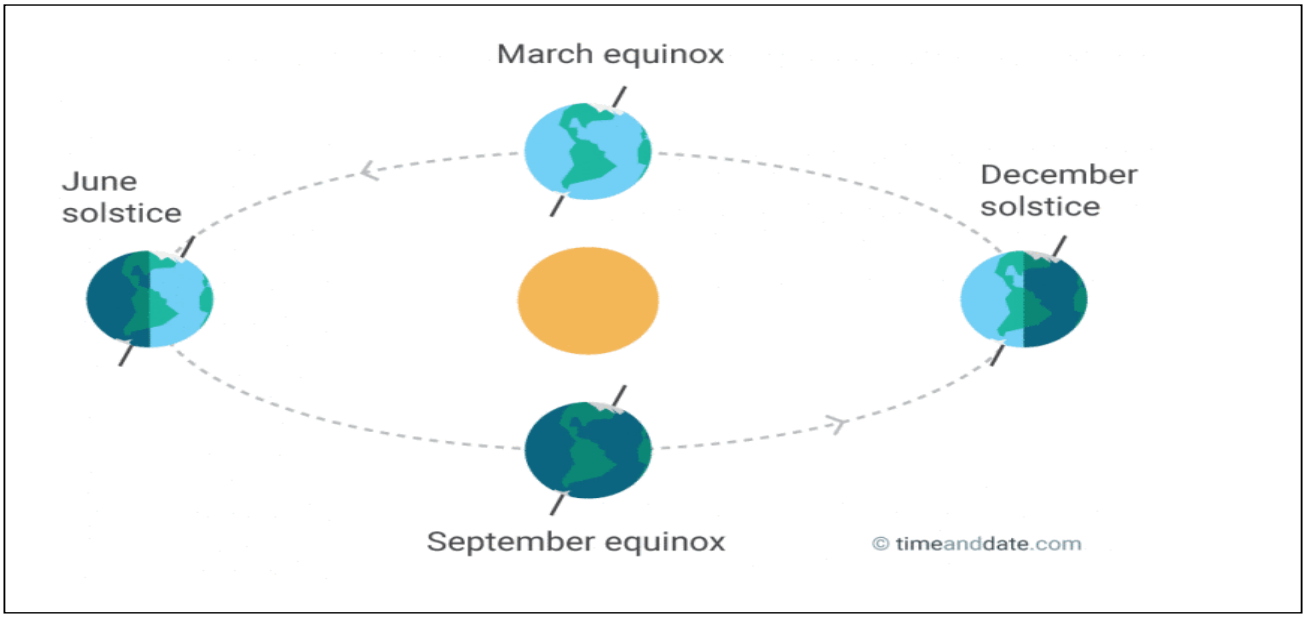
iii) Calculate the gradient between grid reference 160990 and 220990. **(2mks)**

d) Explain ***three*** physical factors that have influenced the distribution of settlements in the area covered by the map. **(6mks)**

7. (a) Other than the sun name two other heavenly bodies that makes up the solar system **(2mks)**

(b) Explain the origin of the earth according to the passing star Theory **(6mks)**

(c) Use the diagram below to answer question (**c) i , ii** and **iii**



(i) Name the solstice marked P. **(1mk)**

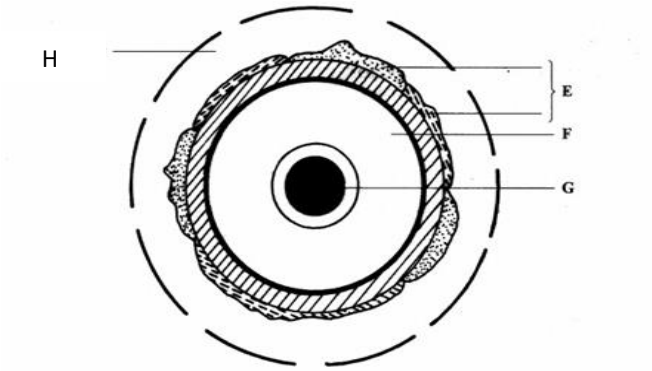
(ii) Identify the season represented in the region marked **Q.** **(1mk)**

(iii) Which date of the year is the sun overhead at **R** **(1mk)**

(d) Give ***three*** reasons why the earth has a spherical shape **(3mks)**

(e) State ***three*** effects of the rotation of the earth on its axis **(3mks)**

(f) The diagram below represents the structure of the earth. Use it to answer question **(g)**



(a) Name :

(i) The layers marked **E, F, G** and **H** **(4mks)**

(ii) State four characteristics of the outer core **(4mks)**

8. a) (i) What is folding? **(2mks)**

(ii) Name ***three*** types of folds. **(3mks)**

(iii) Name ***two*** orogenies known in geological history**.** **(2mks)**

b) (i) Apart from Fold Mountains, name ***two*** other features resulting from folding. **(2mks)**

The following map shows the location of fold mountain ranges of the world.



(ii) Name the mountain ranges marked **P**,**Q**, **R**, **S** and **T**. **(5mks)**

(iii) With well-labelled diagrams, use the Plate Tectonics theory to explain the formation of Fold Mountains. **(5mks)**

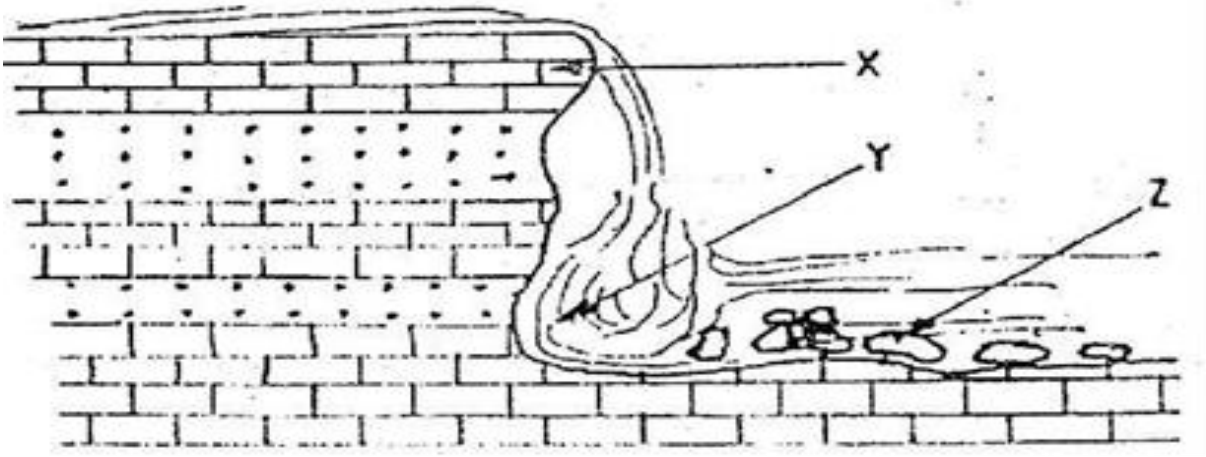
c) Explain ***three*** ways in which folding influence human activities. (**6mks)**

9. a) i) Using a well-labeled diagram, show the main processes of the hydrological cycle**.** **(5mks)**

ii) Differentiate between a watershed and a catchment area. **(2mks)**

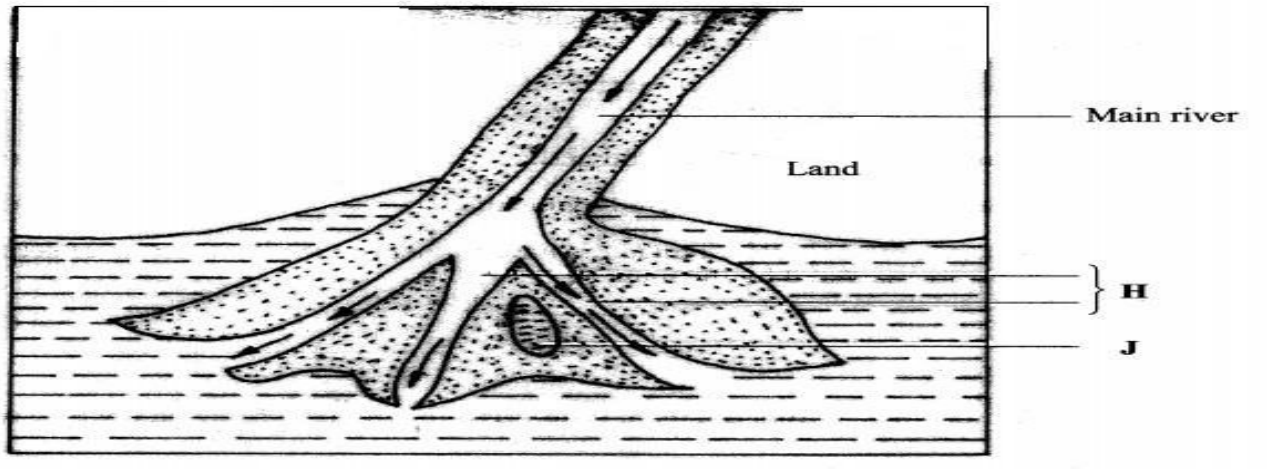
b) i) The diagram below shows a waterfall. Name the features marked **X, Y** and **Z.**

(3mks)



ii) State ***three*** ways in which a waterfall may form. **(3mks)**

b)The diagram below shows a type of a delta. Use it to answer the questions below.



i) Name the type of the delta shown above **(1mk)**

ii) Identify the features marked **H** and **J**. **(2mks)**

iii) Describe the formation of the delta shown above. **(3mks)**

e) You are planning to carry out a field study on the lower course of a river

i) Give ***two*** reasons why you would require a route map **(2mks)**

ii) State ***two*** activities you would carry out to determine why deposition occurs at this stage **(2mks)**

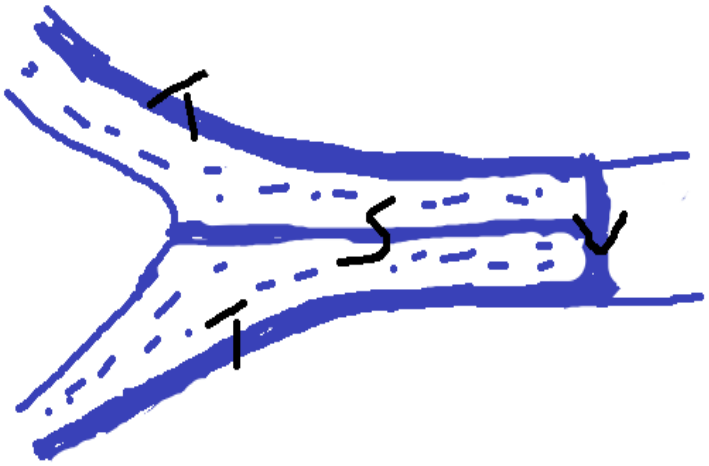
iii) State ***two*** follow- up activities you would be involved in after the field study **(2mks)**

10.a) i) What is an ice sheet? **(2mks)**

ii) Give ***two*** reasons why there are no ice sheets in Kenya. **(2mks)**

b) Describe how a pyramidal peak is formed. (**5mks)**

c) The diagram below shows types of moraines in a valley glacier.



i)Name the type of moraine marked **S, T** and **V**. **(3mks)**

ii) Explain ***three*** effects of glaciated landscape in upland areas on human environment. **(6mks)**

d) Students from a school near Mt. Kenya were planning to carry out a field study on the glaciated features on the mountain.

(i) Give ***three*** reasons why it would be difficult to undertake the field study on glaciated features on the Mountain. **(3mks)**

(ii) Describe how the students would use a photograph of Mt. Kenya to identify the glaciated features on the Mountain**.** **(2mks)**

(iii) Give ***two*** types of glaciers they would identify during your study. **(2mks)**

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

GEOGRAPHY PAPER 2

Kenya Certificate of Secondary Exams

TIME: 2 ¾ HRS

INSTRUCTIONS TO CANDIDATES

- *This paper has **two** sections: **A** and **B**.*
- *Answer **all** the questions in section **A**.*
- *Answer question **6** and any other **two** questions from Section **B**.*
- *Each question in section B must be answered in separate foolscaps.*
- *This paper consists of **6** printed pages.*
- *Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.*

FOR EXAMINERS USER ONLY

QUESTION	A	6	7	8	9	10	TOTAL
MARKS							

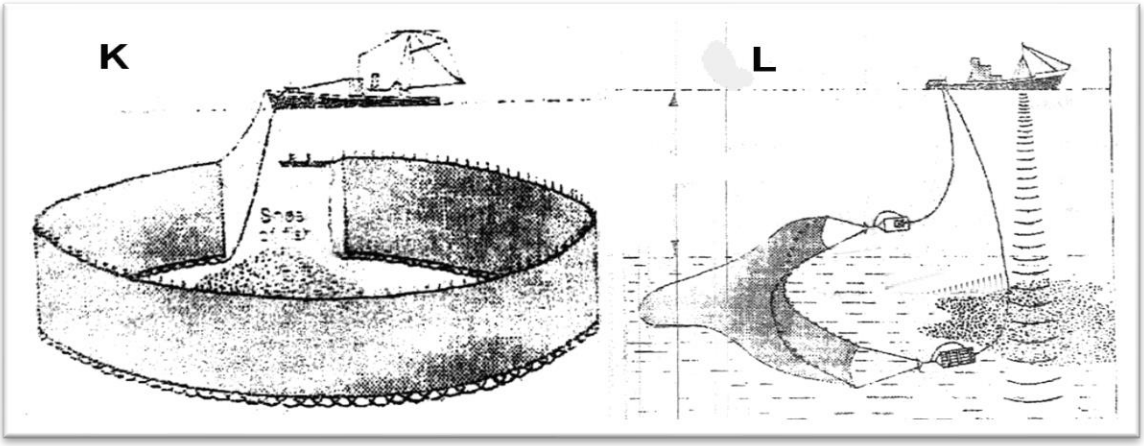
SECTION A

Answer all the questions from this section

1. a) What is Mining**?** **(2mks)**

b) State three ways in which mining derelicts can be reclaimed. **(3mks)**

2. The diagram below represents some commercial fishing methods



a) Name the fishing method marked **K** and **L** (**2mks)**

b) Give ***three*** reasons why marine fishing is not well developed in the Kenyan coast. **(3mks)**

3. a) Name ***three*** marine national parks in Kenya. **(3mks)**

b) Outline ***three*** ways game reserves are of benefit to the communities living near them. **(3mks)**

4.a) Apart from air pollution list three other types of pollution**.** **(3mks)**

b) State two factors which favoured growth of Kisumu as an urban centre. **(2mks)**

5. Highlight four problems that arise from population decline. (**4mks)**

SECTION B

Answer Question 6 and any other Two from this section.

Q6. Use the photograph provided to answer the questions (a)



a) i) Name the activity in the photograph**.** **(1mk)**

ii) Citing evidence, state the time of the day when this photograph was taken. **(2mks)**

b) i) Draw a sketch of the photograph given. On the sketch mark and name the main Features. **(5mks)**

ii) State ***three*** physical conditions that favour the growing of the crop shown in the photograph. **(3mks)**

c) i) Name ***two*** counties in Kenya where Coffee is grown in large scale. **(2mks)**

ii) Describe systematically the processing of Coffee until it is ready for the market. **(6mks)**

d) Explain how Coffee growing in Kenya and Brazil differ under the following sub-headings;

i) Size of land **(2mks)**

ii) Land tenure **(2mks)**

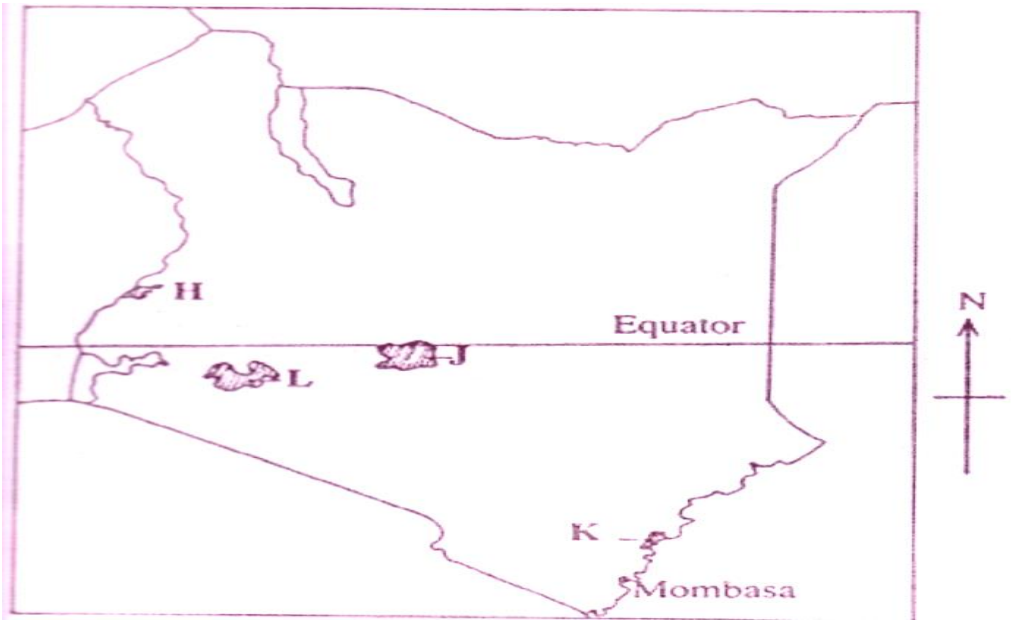
iii) Marketing **(2mks)**

7. (a) (i) Apart from coniferous forest, name two other types of natural forests. **(2mks)**

ii) State ***two*** characteristics of coniferous which favour their exploitation. **(2mks)**

b) Explain three factors that favour the growth of natural forests on the slopes of Mt. Kenya. **(6mks)**

(c) Use the map of Kenya below to answer questions **(i)** and **(ii).**



i) Name the forest reserves marked **H, J** and **K.** **(3mks)**

(ii) Explain ***three*** factors that favour the growth of natural forest in the area marked **L.** **(6mks)**

(d) Explain ***three*** problems facing forestry in Kenya**.** **(6mks)**

8. i) Differentiate between Pelagic fish and Demersal fish. **(2mks)**

ii) Name ***three*** types of pelagic fish. **(3mks)**

b) i) Describe ***three*** conditions for planktons to survive. **(3mks)**

ii) Define Fish farming. **(2mks)**

c) Explain ***four*** reasons why the government of Kenya is encouraging fish farming. **(8mks)**

d) Use the map below to answer question (i) and (ii).



i) Name the fishing ground marked **C.** **(1mk)**

ii) Explain ***three*** physical conditions that have favoured the fishing ground named above. **(6mks)**

9. a) i) Define Biomass. **(2mks)**

ii) Give ***three*** examples of Biomass except Biogas. **(3mks)**

iii) Give ***four*** reasons why the use of Biogas is not widespread. **(4mks)**

b)i) Give ***four*** reasons why Nuclear Power is lacking in developing countries. **(4mks)**

ii) Explain three basic physical requirements of siting a Hydro Electricity project. **(6mks)**

c) You have been asked to carry out a field study in Loyangalani Wind Power Project.

i) How did you prepare for the field study? **(3mks)**

ii) State ***3*** benefits of the project to the surrounding community. **(3mks)**

10. a) i) What is Transport? **(2mks)**

ii) Identify ***three*** modes of transport. **(3mks)**

b) i) Give ***four*** advantages of Standard Gauge Railway (SGR) to Kenya. **(4mks)**

ii) Name ***four*** navigable rivers in Africa. **(4mks)**

c) Explain ***four*** problems facing river transport in Africa. **(8mks)**

d) i) Name ***two*** canals in Africa. **(2mks)**

ii) Define the term Containerisation. **(2mks)**

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

HISTORY PAPER 1

Kenya Certificate of Secondary Exams

TIME 2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

1. *This paper consists of THREE sections: A, B & C.*
2. *Answer ALL the Questions in Section A, THREE Questions from Section B & TWO Questions from Section C.*
3. *Answer ALL the Questions in the Answer BOOKLETS provided*

Candidates should check to ensure that all pages are printed as indicated and no questions are missing.

QUESTION	SCORE	TOTAL
1-17		
18		
19		
20		
21		
22		
23		
24		

SECTION A: 25 MARKS

Answer all the questions in this section

1: Give ***two*** ways in which study of history and government promotes patriotism in learners. **(2 marks)**

2: Identify ***one*** community in Kenya which belongs to the southern Cushitic groups. **(1 mark)**

3: Name ***one*** Bantu community in Kenya whose ancestors settled in Mt. Elgon area before migrating to their present home land. (**1 mark)**

4: Give ***two*** benefits of the Oman rule along the Kenyan coast during the nineteenth century. **(2 marks)**

5: State ***one*** factor that facilitated the spread of Christianity in Kenya during the colonial period. **(1 mark)**

6: Give ***one*** reason why the British allowed the imperial British east African company to administer her possession. **(1 mark)**

7: Identify ***one*** institution that advised the governors in administration in the colonial period. **(1 mark)**

8: Give the ***main*** reason why poll tax was introduced in Kenya during the colonial period**.** **(1 mark)**

9 State ***one*** way in which the colonial government controlled the migration if Africans to urban centres. **(1 mark)**

10: What were the ideological differences between KANU and KADU before independence? **(1 mark)**

11: Highlight ***two*** reforms that resulted from Lyttelton constitution in 1954. **(2 marks)**

12: State ***two*** terms of the Devonshire white paper on the Africans**.** **(2 marks)**

13: State ***two*** provisions of the independence constitution of 1962**.** **(2 marks)**

14: Identify ***one*** function of the correctional service in Kenya**.** **(1 mark)**

15: State ***two*** ways in which the Kenyan constitution promotes national unity. **(2 marks)**

16: State ***two*** functions of the county executive committee. **(2 marks)**

17: State ***two*** types of government expenditure in Kenya. (**2 marks)**

SECTION B (45 MARKS)

Answer any three questions

18. a) State ***five*** reasons for the migration of the Maasai during the pre colonial period. **(5 marks)**

b). Explain ***five*** results of the migration and settlement of the Plain Nilotes into Kenya during the pre-colonial period**.** **(10 marks)**

19. a) State ***five*** factors for the growth of the Kenyan coastal towns by 1700 A.D. **(5 marks)**

b). Explain ***five*** factors that led to the decline of Portuguese rule along the Kenyan

coast. **(10 marks)**

20. a) State ***five*** demands of the Kikuyu Central Association against the colonial government**.** **(5 marks)**

b) Discuss ***five*** factors that favoured the **MAU MAU** fighters in their war against the British**.** **(10 marks)**

21. a) State ***five*** functions of the National land commission as entrenched in the new constitution of Kenya 2010**.** **(5 marks)**

b) Explain ***five*** challenges facing land policies in Kenya since independence. **(10 marks)**

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

HISTORY PAPER 2

Kenya Certificate of Secondary Exams

TIME 2 ½ HOURS

Instructions to students

(a) *This paper consists of three sections;* ***A, B*** *and* ***C.***
(b) *Answer all the question in section A, three questions from section B and two questions from section* ***C.***
(c) *Answers must be written in the spaces provided after Question* ***24****.*
(d) *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*
(e) *Candidates should answer the questions in English.*

For Examiners Use Only

Section	Question	Maximum Score	Candidates Score
A	1-17	25	
B	18-21	45	
C	22-24	30	
Total Score		100	

SECTION A (25 marks)

Answer ALL questions in this section in the space provided after question number 24

1. What is oral tradition as a source of History? **(1 mark)**

2. Give ***one*** characteristics of Homo Erectus**.** **(1 mark)**

3. Give ***two*** ways in which the Agrarian Revolution contributed to European expansion to Africa. **(2 marks)**

4. Identify the ***main*** commodity in the Trans-Atlantic trade. **(1 mark)**

5. Identity ***two*** improvements which were made on macadamized roads in the Nineteenth century. **(2 marks)**

6. Give ***one*** modern means of print media. **(2 marks)**

7. Give the ***main*** use of steam power during the Industrial revolution in Europe. **(1 mark)**

8. Give ***two*** social functions of the ancient city of Athens in Greece**.** **(2 marks)**

9. State ***two*** functions of the Lukiiko in Buganda Kingdom during the 19th Century. **(2 marks)**

10. Identify ***one*** category of human rights**.** **(1 mark)**

11. State ***two*** social factors that led to the scramble for colonies in Africa by European powers. **(2 marks)**

12. ***Mention*** one consequence of the French Assimilation Policy in Senegal **(1 mark)**

13. State ***two*** objectives of the African National Congress in South Africa. **(2 marks)**

14. Give the ***main*** reason why the European countries formed alliances before the outbreak of the first World War**.** **(1 mark)**

15. Name ***two*** principal organs of the United Nations. **(2 marks)**

16.State ***two*** ways in which poverty has undermined economic development in Tanzania since independence**.** **(2 marks)**

17. Identify ***one*** parliamentary duty of the Monarch in Britain. **(1 mark)**

SECTION B (45 marks)

Answer any three questions from this section in the space provided after Question 24.

18.(a) State ***five*** reasons why early people domesticated crops and animals during the Neolithic period (**5 marks)**

(b) Explain ***five*** causes of food shortages in Africa today. **(10 marks)**

19. (a) Identify the ***three*** types of trade**.** **(3 marks**)

(b) ***Describe*** the Organization of the Trans Saharan trade. **(12 marks)**

20. (a) Identify any three economic activities of the Asante people in the pre-colonial period **(3 marks)**

(b) Describe the social organization of the Shona people in the pre-colonial period. **(12 marks)**

21. (a) State ***three*** ways used by nationalists in Ghana to fight for independence.
(3 marks)

(b) Discuss ***six*** factors that led to the development of African Nationalism in Ghana.
(12 marks)

SECTION C (30 marks)

Answer any two questions from this section in the space provided after Question 24.

22 (a) Why did the British use direct rule in Zimbabwe? **(3 marks)**

(b) Explain the effects of British rule in Zimbabwe. **(12 marks)**

23 (a) List ***three*** Europeans Countries that formed the Triple alliance before the outbreak of the First World War**.** **(3 marks)**

(b) Describe ***six*** functions of the General Assembly of the United Nations (U.N)
(12 marks)

24. (**a)** Identify ***three*** circumstances that may make a vice president assume presidency in India **(3 marks)**

(b) Explain ***six*** functions of the president of India**.** **(12 marks)**

SECTION C (30 MARKS)

Answer any two questions

22. a) Give ***three*** rights of an accused person. **(3marks)**

b). Explain **six** importance of human rights. **(12 marks)**

23. a) Identify **three** functions of the Attorney general in Kenya. **(3marks)**

b) Describe the law-making process in the National Assembly**.** **(12marks)**

24. a) State **three** reasons why the government of Kenya prepares a national budget.
(3marks)

b) Explain **six** ways in which the government controls the use of public finances in Kenya**.** **(12 marks)**

JINA……NAMBARI YA UASAJILI……

SHULE…….……..KIDATO……

TAREHE……

FORM 4 KCSE PREDICTION 1 EXAMS

KISWAHILI KARATASI YA 1 (INSHA)

MUDA: SAA 1 ¾

MAAGIZO

a) Andika jina lako na nambari yako ya mtihani katika nafasi ulizoachiwa hapo juu.
b) Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.
c) *Andika insha mbili. Swali la **kwanza** ni la lazima.*
d) *Kisha chagua insha nyingine **moja** kutoka kwa hizo tatu zilizobakia.*
e) *Kila insha isipungue maneno 400.*
f) *Kila insha ina alama 20.*
g) *Kila insha lazima iandikwe kwa lugha ya Kiswahili*

Kwa Matumizi ya Mtahini Pekee

SWALI	UPEO	ALAMA
1	20	
2	20	
Jumla	40	

1. Andika wasifu utakaosoma katika sherehe ya kuadhimishwa kwa siku ya mashujaa katika jimbo lenu kuhusu shujaa unayemuenzi.
2 Mchakato wa kisiasa umeleta madhara mengi nchini. Jadili kauli hii.
3 Andika kisa kitakachodhihirishamaana ya methali ifuatayo: Dudu liumalo silipe kidole.
4 Tunga kisa kinachoanza kwa maneno yafuatayo: ...Nilimtazama kwa muda punde tu aliponikaribia. Nikajisemea kimoyomoyo, Hili haliwezi kukubalika.

JINA……NAMBARI YA UASAJILI……

SHULE…….……..KIDATO……

TAREHE……

FORM 4 KCSE PREDICTION 1 EXAMS

KISWAHILI KARATASI YA 2(LUGHA)

MUDA: SAA 2 ½

MAAGIZO

1. Hii karatasi ina kurasa kumi na moja zilizopigwa chapa.
2. Mtahiniwa anapaswa kukagua hii karatasi ili kuthibitisha kuwa kila ukurasa umepigwa chapa na kuwa hakuna swali linalikosekana
3. Jibu maswali yote.
4. Andika majibu katika nafasi uliyotengewa baada ya kila swali.
5. Majibu yote yaandikwe kwa lugha ya Kiswahili sanifu.

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
1	15	
2	15	
3	40	
4	10	
JUMLA	**80**	

1. UFAHAMU (ALAMA 15)

Soma makala yafuatayo kisha ujibu maswali:

Miaka mingi ya kutawaliwa na wakoloni iliwafanya wananchi wengi kupuuza umaarufu na uadilifu wa lugha ya Kiswahili kama lugha ya taifa kwa manufaa ya kuarifiana habari mbalimbali kwa ufasaha na kuelewana vyema.

Wakoloni pia waliwashawishi wananchi waone, kwamba lugha ya Kiswahili ni kwa ajili ya watu wale wasiokuwa na elimu na kwa wale ambao hawajastaarabika. Kwa wale wenye 'elimu ya wastaarabu,' wakoloni waliwashawishi kuamini kwamba lugha ya kigeni, yaani Kiingereza, ndiyo hasa lugha inayofaa kwa kujieleza na kufahamishana habari.

Kutokana na vikwazo hivi si ajabu kuona hadi hivi sasa, mwananchi halisi akijitwaza kwamba hawezi kujieleza kwa ufasaha au kumpasha mwenzie habari kwa ukamilifu mpaka atumie lugha ya Kiingereza. Hata katika maofisi mengi ya serikali, hadi hii leo, japo imeshapitishwa kwamba Kiswahili ndiyo lugha ya taifa bado utawaona wananchi wengine wanapendelea kuzungumza Kiingereza wao kwa wao, ili wajulikane kwamba wana kisomo na wamestaarabika.

Vikwazo vya namna hii vimewalemea wananchi vile vile kwa upande wa magazeti. Utaona mwananchi ambaye anafahamu Kiingereza kidogo sana, akijinunulia gazeti kubwa la Kiingereza na kuanza kuzurura nalo kutwa nzima bila kuambulia mengi ndani yake. Pia utawasikia wananchi wengi wakijidai kwamba hawataki kusoma magazeti ya Kiswahili kwa sababu inakuwa vigumu kwao kuelewa mambo yaliyomo kama vile ambavyo wangelielewa katika gazeti la Kiingereza.

Mabeberu wameshagundua kwamba tunao upotovu wa aina hiyo, ndipo utaona mara nyingi wanawaletea wananchi magazeti mengi ya Kiingereza, mengine yakiwa na nia ya kuwapotosha wakijua kwamba watayasoma tu, mradi yameandikwa kwa lugha ya Kiingereza.

Mara nyingi taifa fulani la kibeberu likitaka tuchukiane na taifa jingine ambalo ni adui yake kisiasa au kiuchumi, taifa hilo la kibeberu linaandika habari za uchochezi kwenye magazeti yao kwa lugha ya Kiingereza, mambo kuhusu taifa lile adui yake (ambalo si adui yetu).

Magazeti hayo huandikwa kwa lugha nadhifu ya Kiingereza na kuletewa wananchi hapa nchini. Maskini wananchi wengine waliotopea kwa kudhani Kiingereza ndicho lugha nzuri ya Kigazeti , wanayanunua mara moja na kuanza kuyasoma magazeti hayo, na pia kuwapa watoto wao wayasome. Matokeo yake ni kwamba, bila kujitambua, wanajikuta wanayafanya yale mabeberu waliyotarajia wayafanye, yaani wanaanza kuchukiana bure na taifa lile ambalo ni adui wa mabeberu hao, lakini si adui zetu. Madhumuni ya kuandika habari kwenye magazeti, ni kutaka kuwafahamisha wasomaji mambo

yaliyotokea au yatakayotokea siku hata siku, kwa lugha inayofahamika na kueleweka kwa urahisi bila kumtatiza msomaji. Ikiwa basi ndiyo madhumuni, kuna haja gani kutumia lugha ya kigeni ili kuwaelezea wasomaji wako jambo wangaliweza kuelezwa kwa lugha yao wenyewe ambayo wanaielewa vyema.

Mtu aelezeapo jambo kwa maandishi akitumia lugha yake mwenyewe anaielewa vyema na ambayo pia wasomaji wake wataielewa kwa ukamilifu. Kwa ujumla jambo ambalo mwandishi huyo ataliandika kwa lugha ambayo ni ya asili yake ambayo anaielewa vyema, halitamtatiza msomaji wake ambaye pia anaielewa vyema lugha hiyo.

Maswali

a) Eleza mbinu zinazotumiwa na wakoloni kuwafanya wananchi kuidunisha lugha ya Kiswahili **(alama 3)**

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.....

b) Thibitisha kuwepo kwa ukoloni mamboleo katika habari uliyosoma **(alama 4)**

.....

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c) Eleza jinsi wabeberu wanaweza kuzua vurugu katika mataifa mbalimbali **(alama 2)**

.....

.....

.....

4. Taja sababu ambayo imewafanya wananchi wengi kupuuza lugha ya Kiswahili

(alama 1)

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.....

.....

5. Wakoloni wana mtazamo gani kuhusu lugha ya Kiswahili? **(alama 2)**

.....

.....

.....

.....

6. Eleza maana ya maneno yafuatayo kama yalivyotumiwa katika taarifa **(alama 3)**

i. Uadilifu

.....

ii. Akijitwaza

.....

iii. Waliotopea

.....

2. UFUPISHO

Soma kifungu kifuatacho kisha ujibu maswali:

Mirundiko ya taka pamoja na utaratibu usiofaa wa uzoaji wake ni tisho kubwa kwa siha ya umma pamoja na mazingira. Hii ni kwa kuwa taka huwa na makaazi ya wadudu na wanyama waharibifu kama nzi, mbu, kombamwiko na panya ambao hueneza magonjwa na kuharibu vitu vyenye thamani. Maji taka nayo, pamoja na mifuko ya plastiki, huwa mastakimu ya wadudu na virusi vinavyoleta magonjwa mbalimbali. Mifuko ya plastiki ina madhara zaidi kwa kuwa huziba mitaro ya maji na kuzuia upitaji wa maji. Madhara hutokeza wakati mvua za gharika zinaponyesha. Maji hukosa njia yake ya kawaida ambayo huwa imezibwa na mifuko hii. Maji haya husababisha mafuriko ambayo huleta hasara ya mali na wakati mwingine ya uhai. Fauka ya haya, mifuko hii huwasakama tumboni wanyama sio wa nyumbani tu, bali wa porini na majini.

Kwa sababu ya hatari zitokanazo na taka, pana haja kutafuta njia na teknolojia ya kuweza kukabiliana na taka ili kuyatunza mazingira na siha ya umma. Njia mojawapo ya kufanya hivi ni kuelimisha na kuhimiza umma kuwa na uangalifu katika matumizi ya bidhaa na rasilmali ili kupunguza uzalishaji wa taka. Matumizi ya bidhaa kwa njia ya ubadhilifu huwa chanzo cha uzalishaji wa taka kwa wingi. Kwa mfano maji ni rasilmali ambayo imeendelea kutumiwa kwa ubadhirifu na hiyo huzalisha maji taka kwa wingi. Rasilmali hii inaweza ikatumiwa kwa uangalifu. Kwa mfano badala ya kutumia bafu ya mnyunyu kuogea, mtu anaweza kutumia maji ya karai.

Watu wengi huchukulia taka kuwa kitu kisicho na manufaa yoyote. Hawajui kuwa kwa kutumia teknolojia endelezi, taka nyingi zinaweza zikageuzwa na kuwa na manufaa mengi. Vijana wadogo sehemu za mashambani wanahitaji pongezi kwa kuwa na utambuzi huu. Wengi kwa kukosa hela za kununua mipira ya viwandani hutumia makaratasi na mifuko ya plastiki kutengeneza mipira wanayoitumia. Hii ni teknolojia endelezi ambapo taka hugeuzwa na kuwa na manufaa.

Baadhi ya wananchi wenye ubunifu nao wameanzisha miradi ya kuzoa takataka kutoka majumbani mwa watu. Hutoza ada fulani ya uzoaji, kisha huzipeleka taka hizi kule zitakakobadilishwa ili ziwe na manufaa. Mifuko na mabaki ya plastiki kama vile matangi, mitungi, sapatu na champali. Taka hizi huwa malighafi ya kutengenezea bidhaa nyingine. Taka za chupa na chuma nazo huuzwa katika viwanda vinavyozigeuza kuwa na manufaa tena. Taka za karatasi hutumiwa kutengenezea bidhaa kama vitabu, katoni, shashi za chooni, magazeti na kadhalika.

Taka zinaweza pia kugeuzwa kuwa zenye faida kwa kuzitumia kufanyia mboji. Ni muhimu kutambua kuwa si kila aina ya taka inaweza kutumiwa hapa. Taka zinazoweza kufanyiwa mboji ni zile ambazo huoza kwa haraka nazo ni kama vile mabaki ya vyakula, mboga na matunda. Kwa sadfa, hizi ndizo taka zinazozalishwa zaidi siku hizi na hasa sehemu za mjini na katika maeneo ya biashara kama mikahawa, hospitali n.k. Mtu akiwa na nafasi anaweza kuchimba shimo ambalo atafukia taka hizi ili kutengeneza mbolea. Hii ni njia isiyodhuru mazingira nayo ina manufaa kemkem. Kwanza, hugeuza taka ambayo inaweza kuwa hatari na kuifanya iwe yenye manufaa. Kwa hivyo, hutatua matatizo ya kiafya yanayoweza kutokana na mirundiko ya taka. Mchanga nao hufaidika kupata virutubishi. Mbolea kama hii inaweza ikatumika kukuzia mboga au maua katika bustani.

Maji taka, hasa yanayotumiwa kuoshea vyombo, nayo yanaweza kutumika kunyunyizia mashamba madogo ya mboga au bustani za maua. Maji taka haya yanahitaji kutayarishiwa njia mahususi ya kuyaelekeza katika mashamba haya baada ya kutumiwa.

Aghalabu watu wengi wana mazoea ya kuchoma taka. Ni kawaida kupata matanuri ya kuchomea taka katika baadhi ya mitaa, shule, hospitali na kadhalika badala ya kupoteza moto bure inawezekana pakawekwa birika kubwa au tangi la chuma ambalo litatumia moto huo kuchemshia maji ambayo yanaweza kutumiwa katika shughuli za nyumbani.

Hata hivyo, ni muhimu kukumbuka kuwa kuna baadhi ya taka ambazo ni hatari na huenda zisigeuzwe ili kutumika kwa njia yenye faida. Taka hizi ni kama vile mikebe au vifaa vingine vyenye kubeba sumu au dawa hatari. Ni bora kuzitupa dawa hizi katika mashimo marefu au vyoo vya mashimo.Kwa vyovyote vile, si jambo muhali kuwa watu popote wanapoishi kulinda siha yao pamoja na kutunza mazingira. Ulinzi na utunzaji huu huhitaji uangalifu mkubwa katika utupaji taka.

MASWALI

(a) Bila kupoteza maana iliyokusudiwa na mwandishi, **fupisha** aya ya kwanza na ya pili.

(Maneno 70) **(alama 7,1 ya mtiririko)**

Matayarisho

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Jibu

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(b) Kwa kuzingatia aya ya 3,4,5,6 na 7 **eleza** mambo muhimu anayoshughulikia mwandishi (maneno 100– 120)
(alama 8,1 ya mtiririko)

Matayarisho

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Jibu

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3.SEHEMU B: SARUFI NA MATUMIZI YA LUGHA (ALAMA 40)

a. Andika neno moja lilo na mpangilio wa sauti zifuatazo: kikwamizo sighuna cha ufizi, irabu ya mbele wastani, nazali ya midomo na irabu ya nyuma wastani. **(alama 2)**

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b. Eleza miundo ya silabi katika neno**: mbilikimo**. **(alama 2)**

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c. Tunga sentensi ya **neno moja** iliyo na vipashio viifuatavyo vya kisarufi: kiima, kiambishi cha wakati ujao, shamirisho kitondo, mzizi, kauli tendea na kiishio. **(alama 3)**

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d. Tunga sentensi moja kudhihirisha matumizi mawili ya kiambishi **i**. **(alama 2)**

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e. "Akisa! Akisa! Mbona huitiki! Njoo hapa upesi!" mama alimwamrisha.**(alama 3)** Andika kwa usemi wa taarifa:

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f. Waumini wa kweli humcha Maulana kila wakati. **(alama 1)**
Anza: Maulana…

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g. Kanusha kwa udogo: Ndovu huyu alimdhuru nguruwe huyo mchafu. **(alama 2)**

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h. Andika kunyume: Shamsi alilewa kisha akaukomea mlango wake usiku**(alama 1)**

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i. Tunga sentensi moja yenye kiwakilishi cha A-unganifu, kitenzi kishirikishi kipungufu na kijalizo. **(alama 3)**

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j. Ziunganishe sentensi zifuatazo kwa kiunganishi cha masharti. **(alama 2)**
Wakulima watapata mazao mazuri. Wakulima watazingatia kilimo cha kisasa.

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k. Tumia neno '**mpaka'** katika sentensi kama: **(alama 3)**

a. Nomino

……...

b.Kihusishi

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c.Kiunganishi

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l. Bainisha aina za vishazi tegemezi katika sentensi ifuatayo: **(alama 2)**
Kipakatalishi kilichonunuliwa jana kitatumiwa inavyotakiwa na mwenyewe.

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m.Ichanganue sentensi ifuatayo kwa visanduku: **(alama 3)**
Matandiko na Sisomi wataketi karibu na daraja.

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n. Jibu kulingana na maagizo:

i. Kwetu kumenyesha mvua usiku kutwa na waongozi wakahairisha mikakati ya kuthibiti mmomonyoko wa udongo. (Sahihisha) **(alama 2)**

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ii. Mwanariadha bora alipewa **<u>zawadi</u>** kisha akaandaliwa **<u>karamu</u>** katika ikulu. (Andika upya ukigeuza maneno yaliyopigiwa mstari kuwa vitenzi). **(alama 2)**

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o. Bainisha shamirisho na chagizo katika sentensi ifuatayo:
Ajuza huyo alijengewa nyumba kwa matofali na mwanawe mara moja.
(alama 2)

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p. Tunasema simile tunapoomba kupishwa, taib tunapo…….. na ……. tunapotaka kitu kinusurike. **(alama 2)**

q. Tunga sentensi moja yenye kirai elezi na kirai kihusishi. **(alama 2)**

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r. Jamala ni kwa hisani, kaba ni kwa …….. na …….. ni kwa mziwanda. **(alama 2)**

s. Iainishe sentensi ifuatayo kwa kuzingatia dhamira. **(alama 1)**
Meza tembe mbili mara tatu kila siku.

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3. SEHEMU D: ISIMUJAMII (ALAMA 10)

a. Fafanua dhana ya wingilugha. **(alama 1)**

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b. Eleza mambo manne yanayosababisha wingilugha. **(alama 4)**

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c. Fafanua sababu tano za watu kuhamisha na kuchanganya msimbo katika mawasiliano. **(alama 5)**

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JINA……NAMBARI YA UASAJILI……

SHULE…….……..KIDATO……

TAREHE……

FORM 4 KCSE PREDICTION 1 EXAMS

KISWAHILI KARATASI YA 3 (FASIHI)

MUDA: SAA 2 ½

MAAGIZO

-Jibu maswali manne pekee.

-Swali la kwanza ni la lazima

-Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki yaani; Riwaya, Hadithi Fupi, Ushairi na Fasihi Simulizi

-Usijibu maswali mawili kutoka sehemu moja.

-Majibu yote yaandikwe kwa lugha ya Kiswahili

Kwa Matumizi ya Mtahini Pekee

Swali	Upeo	Alama
1	20	
2	20	
3	20	
4	20	
	Jumla 80	

LAZIMA SEHEMU YA A: TAMTHILIA P. Kea: Kigogo

1 a. Mmesikia? Hamtatuletea wazimu wenu hapa! Nendeni kama mmekuja kutuhasimu.

i. Eleza muktadha wa maneno**.** **(alama 4)**

ii. Jadili umuhimu wa msemaji kwa hoja nne**.** **(alama 4)**

iii. Fafanua mbinu ya lugha iliyotumika. **(alama 2)**

b. Kenga alichangia pakubwa msiba wa Wanasagamoyo. Thibitisha kwa hoja zozote kumi. **(Alama 10).**

SEHEMU B: RIWAYA Assumpta *Matei*: *Chozi la Heri*

Jibu swali la 2 au 3

2 '…familia yake bado inamiliki mashamba ya michai na mibuni pamoja na mashirika mengi…'

(a) Weka dondoo hili katika muktadha wake. (**alama 4)**

(b) Kwa kurejelea mifano **minane**, eleza umuhimu wa msemaji katika kujenga riwaya hii**.** **(alama 8)**

(c) Jadili kwa hoja **nane** suala la ukoloni mambo leo lilivyoshugulikiwa katika riwaya. **(alama 8)**

Au

3 Tathmini umuhimu wa mbinu zifuatazo katika kuijenga riwaya ya *Chozi la Heri*

i. Nyimbo **(alama 10)**

ii. Barua **(alama 10)**

SEHEMU C: HADITHI FUPI; CHOKOCHO NA D. KAYANDA: *Tumbo Lisiloshiba na Hadithi Nyingine*

Jibu swali la 4 au 5

NDOTO YA MASHAKA

(4)"...dunia imenikunjulia mikono kunifariji baada ya kunicharaza fimbo yake aushi yangu yote."

a) Eleza muktadha wa dondoo hili **(al.4)**

b) Tambua na ueleze mbinu ya lugha iliyotumiwa katika dondoo**.** **(al.2)**

c) Eleza jinsi dunia ilimcharaza fimbo msemaji kwa kutolea hoja kumi na nne. **(al.14)**

AU

(5) Kwa kurejelea hadithi ya Mapenzi ya Kifaurongo, Mame Bakari, Nizikeni Papa Hapa , Mtihani wa Maisha na Mkubwa, eleza changamoto zinazowakumba vijana. **(al.20)**

SEHEMU D: USHAIRI
Jibu swali la 6 au 7

6. SOMA SHAIRI LIFUATALO KISHA UJIBU MASWALI. (alama 20)

Pana haja ya kupima, neno tuzowele –angu
Tusizowee kusema , hili ni teuo langu
Huenda huji mapema , -angu huja kuwa tungu
Ikaja kukusakama, na kukuposha kwa Mungu
Pana haja ya kupima.

Neno huwa ni la kwako, likiwa ndani moyoni
Lakini katu si lako, likishavuka menoni
Kwa hivyo likutokako, liweke kwenye mizani
Linaweza kuwa cheko, ama tusi kwa wendani
Pana haja ya kupima.

Vivyo hivyo kwa lebasi , huwa yako kisutuni
Hivyo nina wasiwasi, wambe yako sebuleni
Itavutiya matusi, ya wenzio insane
Wakakuchoma nafusi, kwa mishale ya lisani
Pana haja ya kupima.

Mwana ujuwe ni wako, punje ukiimezele
Lakini katu si wako, nde ukimuletele
Akiwa yu ndani yako, ni wa duniya vivile
Ukishishilia ni wako, muavye takakuole
Pana haja ya kupima.

Maisha nayo si wako, utabaradi milele
Ungayaishi ja yako, ni tunu ya maumbile
Mgawa si kufu yako, mshindane hili lile
Akupapo akupoko, utaishi palepale
Pana haja ya kupima.

Ni chetu chako si chako, ulimwengu huwa vile
Juhudi zingawa zako, wa kufaidi ni wale
Ikifika siku yako, nyono zikukae mbele
Ulichosema ni chako , huwabakiya wawale
Pana haja ya kupima.

Kaseme na moyo wako , Ubaini haya yale
Ukiambacho ni chako , kisikupe mageule
Kitu utajacho chako , huenda kiwe cha wale

Na usemacho si chako, kiwe chako ndicho kile
Pana haja ya kupima.

MASWALI

a). Eleza dhamira ya shairi hili**.** **(alama 2)**
b) Eleza bahari zozote tatu za shairi hili. **(alama 6)**
c) Andika ubeti wa nne kwa lugha tutumbi. **(alama 4).**
d) Dhihirisha kwa kutoa mifano mitatu matumizi ya uhuru wa mshairi **.** **(alama 3)**
e) Tambua **(alama 2)**
i. Nafsi nenewa
ii. Toni
g) Eleza maana ya maneno haya kama yalivyotumika katika shairi **.** **(alama 2)**
Lebasi
Punje ukiimezele

au

7. SOMA SHAIRI LIFUATALO KISHA UJIBU MASWALI. (alama 20)

1. Nikiwa na njaa na matambara mwilini
Nimehudumika kama hayawani
Kupigwa na kutukanwa
Kimya kama kupita kwa shetani
Nafasi ya kupumzika hakuna
Ya kulala hakuna

2.Ya kuwaza hakuna
Basi kwani hili kufanyika
Ni kosa gani lilotendeka
Lilonileta adhabu hii isomalizika ?

3.Ewe mwewe urukaye juu angani
Wajua lilomo mwangu moyoni
Niambie pale mipunga inapopepea
Ikatema miale ya jua
Mamangu bado angali amesimama akinisubiri?
Je nadhari hujitokeza usoni
Ikielekea huku kizuizini?
Mpenzi mama , nitarudi nyumbani
Nitarudi hata kama ni kifoni
Hata kama maiti imekatikatika
Vipande elfu , elfu kumi

Nitarudi nyumbani

4.Nikipenya kwenye ukuta huu
Nikipitia mwingine kama shetani
Nitarudi mpenzi mama
Hata kama kifoni

Maswali

a. Taja mambo manne anayoyalalamikia mshairi. **(alama 4)**
b. Fafanua dhamira ya shairi hili**.** **(alama 2)**
c. Eleza mbinu nne za kimtindo. **(alama 4)**
d. i. Hili ni shairi la aina gani**?** **(alama 1)**
ii. Thibitisha jibu la i hapo juu. **(alama 4)**
e. Tambua katika shairi ; **(alama 3)**
i. Nafsineni
ii. Nafsi nenewa
iii. Toni
f. Eleza maana ya maneno haya kama yalivyotumiwa katika shairi. **(alama2)**
Hayawani
Nadhari

SEHEMU YA E: FASIHI SIMULIZI (alama 20)

8
i. Fafanua sifa tano za hekaya. **(Alama 5)**
ii. Eleza maana ya; **(alama 5)**
a. Vitanza ndimi.
b. Tahalili
c. Vivugo
d. Matambiko
e. Maapizo
iii. Jadili mifano mitano ya ngomezi za kisasa. **(al 5)**
iv. Eleza kwa hoja tano udhaifu wa hojaji kama njia ya kukusanya Fasihi Simulizi. **(al 5)**

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

MATHEMATICS PAPER 2

Kenya Certificate of Secondary Exams

TIME 2 ½ HOURS

Instructions toCandidates

1. *Write your name, Admission number and class in the spaces provided.*
2. *Sign and write date of the examination in the spaces provided.*
3. *The paper contains TWO sections: Section I and II*
4. *Answer ALL questions in section I and **STRICTLY ANY FIVE** questions from section II.*
5. *All working and answers must be written on the question paper in the spaces provided below each question.*
6. *Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.*
7. *Marks may be awarded for correct working even if the answer is wrong.*
8. *Non-programmable silent electronic calculators and KNEC Mathematical tables may be used except where stated otherwise.*

For Examiner's use only

Section I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL

Section II

GRAND TOTAL

17	18	19	20	21	22	23	24	25	TOTAL

Section I(50 Marks):

Answer ALL questions in the section in the space provided.

1. Evaluate $\frac{-12\ (-3)x4-(-20)}{-\ 6\ x\ 6\ +(-6)}$ **(2 Marks)**

2. Mr. Owino spends $\frac{1}{4}$ of his salary on school fees. He spends $\frac{2}{3}$ of the remainder on food and a fifth of what is left on transport. He saves the balance. In certain month he saved Sh. 3400. What was his salary?

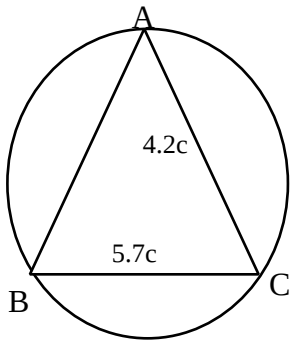
(3 marks)

3. Simplify: **(3 Marks)**

$$\frac{2y^2-3xy-2x^2}{4y^2-x^2}$$

4. Find x if $3^{2x+3}+1=28$ **(2 Marks)**

5. The circle below whose area is 18.05cm^2 circumscribes triangle ABC where AB = 6.3cm, BC = 5.7cm and AC = 4.2cm. Find the area of the shaded part. **(4 Marks)**



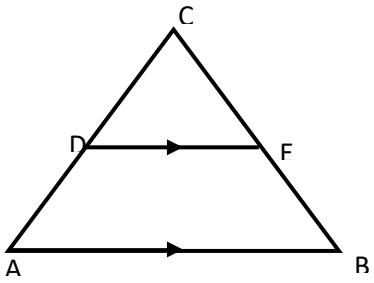
6. A salesman gets a commission of 2.4% on sales up to Sh. 100,000. He gets additional commission of 1.5% on sales above this. Calculate the commission he gets for sales worth Sh. 280,000. **(3 Marks)**

7. A rectangle whose area is 96m^2 is such that its length is 4metres longer than its width.
Find
(a) It dimensions **(2 Marks)**

(b) Its perimeter **(1 Mark)**

8. Give $\sin(90 - a) = \frac{1}{2}$ find without using trigonometric tables the value of cos a .
(2 Marks)

9. In triangle ABC below, AC = BC, AB is parallel to DE, AB = 15cm, DE = 7.5cm and BE = 6cm.



Calculate
(a) Length CE **(2 Marks)**

(b) Area of quadrilateral ABED. **(2 Marks)**

10. A measuring cylinder of base radius 5cm contains water whose level reads 6cm high. A spherical object is immersed in the water and the new level reads 10cm. Calculate the radius of the spherical object **(3 Marks)**

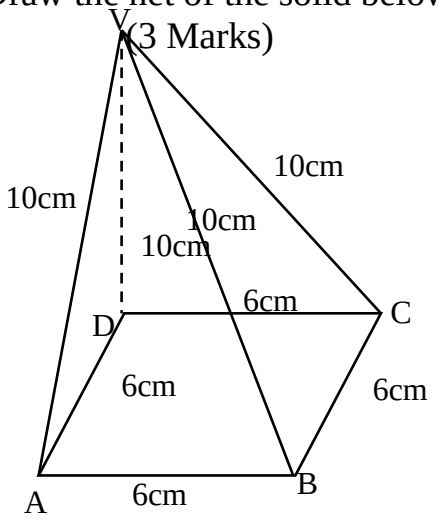
11. Using a ruler and pair of compasses only, construct triangle ABC in which AB = 6cm, BC = 8cm and angle ABC = 45^0. Drop a perpendicular from A to BC to meet line BC at M. Measure AM and AC. **(4 Marks)**

12. In a book store, books packed in cartons are arranged in rows such that there are 50 cartons in the first row, 48 cartons in the next row, 46 in the next and so on.

(a) How many cartons will there be in the 8^{th} row? **(2 Marks)**

(b) If there are 20 rows in total, find the total number of cartons in the book store. **(2 Marks)**

13. Draw the net of the solid below and calculate the total surface area of its faces. (3 Marks)



14. Town X is 20km in a bearing of 060^0 from Y, and Z is 30km in the direction 150^0 from Y. Using the scale 1cm represents 5km, find by scale drawing:

(a) the bearing of Y from Z. **(2 Marks)**
(b) the distance of X from Z. **(2 Marks)**

15. Solve for x in 2^{2x} - 18 x 2^{x} = 40 **(3 Marks)**

16. Oketch sells his car to Jane and makes a profit of 20%. Jane sells the same to Issa at Sh.180, 000, making a loss of 10%. Determine the price at which Oketch bought the car. **(3 Marks)**

Section II (50 Marks):

Answer ANY five questions in this section in the spaces provided.

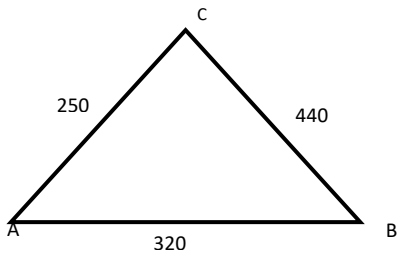
17. The distance between towns A and B is 360km. A minibus left town A at 8.15 a.m. and traveled towards town B at an average speed of 90km/hr. A matatu left town B two and a third hours later on the same day and travelled towards A at average speed of 110km/hr.

(a)(i) At what time did the two vehicles meet? **(4 Marks)**

(ii) How far from A did the two vehicles meet? **(2 Marks)**

(b) A motorist started from his home at 10.30 a.m. on the same day as the matatu and travelled at an average speed of 100km/h. He arrive at B at the same time as the minibus. Calculate the distance from A to his house. **(4 Marks)**

18. Karis owns a farm that is triangular in shape as shown below.



(a) Calculate the size of angle BAC **(2 Marks)**

(b) Find the area of the farm in hectares **(3 Marks)**

(c) Karis wishes to irrigate his farm using a sprinkler machine situated in the farm such that it is equidistant from points A, B and C.

(i) Calculate the distance of the sprinkler from point C. **(2 Marks)**

(ii) The sprinkler rotates in a circular motion so that the maximum point reached by the water jets is the vertices A, B and C. Calculate the area outside his farm that will be irrigated. **(3 Marks)**

19. A ship leaves port M and sails on a bearing of 050^0 heading towards island L. Two Navy destroyers sail from a naval base N to intercept the ship. Destroyer A sails such that it covers the shortest distance possible. Destroyer B sails on a bearing of 20^0 to L. The bearing of N from M is 100^0 and distance
NM = 300KM. Using a scale of 1cm to represent 50km, determine:-

(i) the positions of M, N and L. **(3 Marks)**

(ii) the distance travelled by destroyer A (**3 Marks)**

(iii) the distance travelled by destroyer B. **(2 Marks)**

(iv) the bearing of N from L. **(2 Marks)**

20. A number of people agreed to contribute equally to buy books worth KSh. 1200 for a school library. Five people pulled out and so the others agreed to contribute an extra Shs. 10 each. Their contributions enabled them to buy books worth Shs. 200 more than they originally expected.

(a) If the original numbers of people was x, write an expression of how much each was originally to contribute. **(1 Mark)**

(b) Write down two expressions of how much each contributed after the five people pulled out**.** **(2 Marks)**

(c) Calculate the number of people who made the contribution. **(5 Marks)**

(d) Calculate how much each contributed. **(2 Marks)**

21. Using a ruler and a pair of compasses only, draw a parallelogram ABCD, such that angle DAB = 75^0. Length AB = 6.0cm and BC = 4.0cm.From point D, drop a perpendicular to meet line AB at N. **(7 Marks)**

(i) Measure length DN **(1 Mark)**

(**ii)** Find the area of the parallelogram. **(2 Marks)**

22. The following measurements were recorded in a field book of a farm in metres (xy = 400m)

	Y	
	400	
C60	340	
	300	120D
	240	100E
	220	160F
B100	140	
A120	80	
	x	

(a) Using a scale of 1cm representing 4000cm, draw an accurate map of the farm. **(3 Marks)**

(b) If the farm is on sale at Kshs. 80,000.00 per hectare, find how much it costs. **(7 Marks)**

23. The table shows marks obtained by 100 candidates at Goseta Secondary School in Biology examination.

Marks	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-94
Frequency	6	14	24	14	x	10	6	4

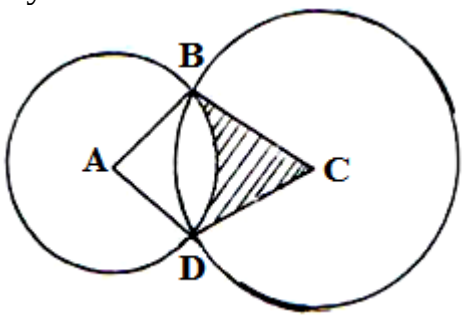
(a) Determine the value of x **(2 Marks)**

(b) State the modal class **(1 Mark)**

(c) Calculate the median mark **(2 Marks)**

(d) Calculate the mean mark (**5 Marks)**

24. In the diagram below, two circles, centres A and C and radii 7cm and 24cm respectively intersect at B and D. AC = 25cm.



(a) Show that angle ABC = 90^0. **(3 Marks)**

(b) Calculate

(i) the size of obtuse angle BAD **(3 Marks)**

(ii) the area of the shaded part **(4 Marks)**

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

MATHEMATICS PAPER 2

Kenya Certificate of Secondary Exams

TIME 2 ½ HOURS

Instructions to Candidates

1. *Write your name, Admission number and class in the spaces provided.*
2. *Sign and write date of the examination in the spaces provided.*
3. *The paper contains **TWO** sections: Section I and II*
4. *Answer **ALL** questions in section I and **STRICTLY ANY FIVE** questions from section **II.***
5. *All working and answers must be written on the question paper in the spaces provided below each question.*
6. *Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.*
7. *Marks may be awarded for correct working even if the answer is wrong.*
8. *Non-programmable silent electronic calculators and KNEC Mathematical tables may be used except where stated otherwise.*

For Examiner's use only

Section I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL

Section II

GRAND TOTAL

17	18	19	20	21	22	23	24	25	TOTAL

Section I(50 Marks):
Answer ALL questions in the section in the space provided.

1. Use logarithm tables correct to 4 significant figures to evaluate. **(3 Marks)**

$$\frac{\sqrt[3]{0.07214 \; x \; 2.037}}{69.8}$$

2. Find the equation of the perpendicular bisector of line PQ where the co-ordinates of **P** and **Q** are P (-2, 8) and Q (4, 7). (**3 Marks)**

3. The surface areas of two spheres are $36cm^2$ and $49cm^2$. If the volume of the smaller sphere is $20.2cm^3$, calculate the volume of the larger one. **(2 Marks)**

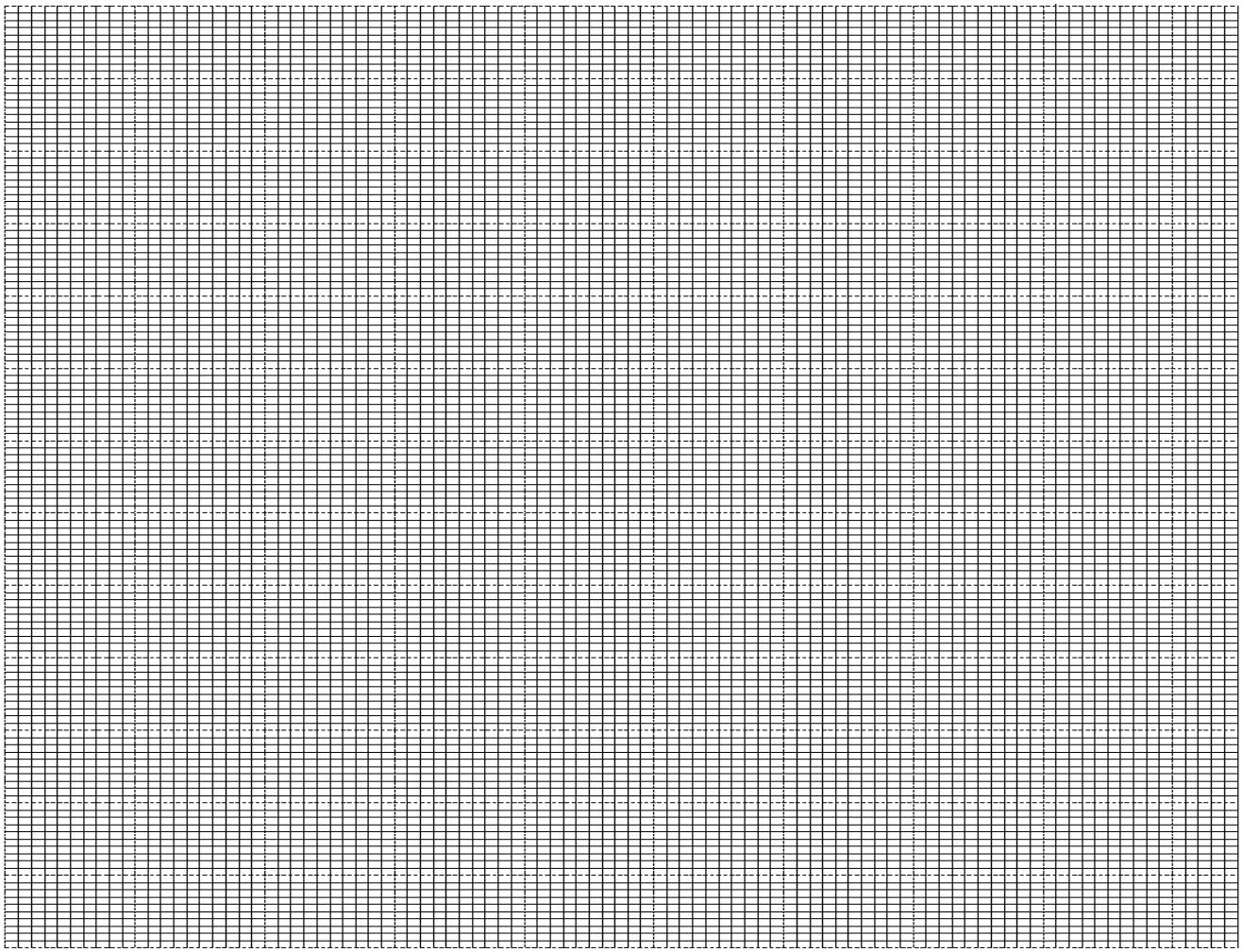
4. The marked price of a shirt is Sh. 800. A customer buys the shirt after being given a discount of 13%. The seller then realizes that he made a profit of 20% on this sale. Find how much the seller had bought
the shirt. **(2 Marks)**

5. In the grid provided below, show the region R that is satisfied by the three inequalities given below.

$Y \leq 6 - x$

$y < x + 4$

$y \geq 2$ **(4 Marks)**



6. The radius of a cone increases in the ratio 4:3 while it's height decreases in the ratio 3:4. Determine the percentage change in the volume of the cone. **(3 Marks)**

7. Solve for x in the equation **(3 Marks)**

$\text{Log}(5x + 75) - 2\,\text{Log}\,3 = \text{Log}(2x - 9)$

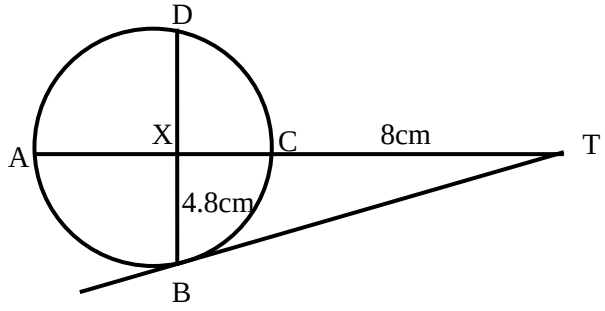
8. Given that $\underset{\sim}{a} = 3\underset{\sim}{i} - 2\underset{\sim}{j} + 3\underset{\sim}{k}$ and $\underset{\sim}{b} = 2\underset{\sim}{i} - 4\underset{\sim}{j} - 3\underset{\sim}{k}$ where $\underset{\sim}{i}$, $\underset{\sim}{j}$ and $\underset{\sim}{k}$ are unit vectors, find $|2\underset{\sim}{a} + 3\underset{\sim}{b}|$ **(3 Marks)**

9. Make x the subject of the formula in

$$a = \left(\frac{bx}{b+x}\right)^{\frac{1}{3}}$$

Hence find the value of x when a = 2 and b = 6. **(4 Marks)**

10. In the figure below, BT is a tangent to the circle at B. AXCT and BXD are straight lines. AX = 6cm,
CT = 8cm, BX = 4.8cm and XD = 5cm. (Figure not drawn to scale)



Find the length of
(a) XC **(2 Marks)**

(b) BT **(2 Marks)**

11. Simplify $\frac{3}{\sqrt{5}-2} + \frac{1}{\sqrt{5}}$ leaving your answer in the form a + b$\sqrt{c}$, where a, b and c are rational numbers.

(3 Marks)

12. A quantity y varies partly as another quantity x and partly as the square of x. When x = 20, y = 45 and when x = 24, y = 60.

(a) Express y in terms of x **(3 Marks)**

(b) Find x when y = 75 **(1 Mark)**

13. Expand $(a - x)^6$ upto the term in$(x)^3$. Use your expansion to estimate the value of $(2.99)^6$ to 3 decimal places. **(4 Marks)**

14. A pipe 3.0m long was cut into three pieces. The first piece and the second one were measured as 1.3m and 0.94m respectively. Find the limits within which the length of the third piece lies. **(3 Marks)**

15. A coffee blender has two brands of coffee, Tamu and Chungu. A kilogram of Tamu costs Sh. 70 while a kilogram of Chungu costs Shs. 64. In what ratio should he mix the two brands to make a blend which costs Shs. 68 per kilogram? **(2 Marks)**

16. Find the centre and radius of a circle whose equation is $x^2 + y^2 + 8x + y^2 - 2y - 1 = 0$ **(3 Marks)**

SECTION II (50 Marks):

Answer ANY FIVE questions in this section in the spaces provided.

17. In a Science class $\frac{2}{3}$ of the class are boys and the rest are girls. 80% of the boys and 90% of the girls are right handed. The probability that the right handed student will break a test tube in any session is $\frac{1}{10}$ and that for the left handed student is $\frac{3}{10}$, regardless of whether boy or girl.

(a) Draw a tree diagram to represent this information. **(2 Marks)**

(b) Using the tree diagram drawn, find the probability that:

(i) A student chosen at random from the class is left handed **(2 Marks)**

(ii) A test tube is broken by a left handed student. **(2 Marks)**

(iii) A test tube is broken by a right handed student. **(2 Marks)**

(iv) A test tube is not broken in any session **(3 Marks)**

18. Matrix P is given by $\begin{pmatrix} 4 & 7 \\ 5 & 8 \end{pmatrix}$

(a) Find P^{-1} **(2 Marks)**

(b) Two institutions, Katulani High School and Nthia High School purchased beans at Sh. b per bag and maize at Sh. m per bag. Katulani purchased 8 bags of beans and 14 bags of maize for KSh. 47,600. Nthia purchased 10 bags of beans and 16 bags of maize for KSh. 57,400.

(i) Form a matrix equation to represent the information above. **(2 Marks)**

(ii) Use matrix P^{-1} to find the prices of one bag of each item. **(3 Marks)**

(c) The price of beans later went up by 5% and that of maize remained constant. Katulani bought the same quality of beans but spent the same total of money as before on the two items. State the new ratio of beans to maize. **(3 Marks)**

19. James' earning are as follows:-

Basic salary Sh. 38,000 p.m
House allowance Sh. 14,000 p.m
Travelling allowance Sh. 8,500 p.m
Medical allowance Sh. 3,300
The table for the taxable income is as shown below.

Income tax in K£ p.a		Tax in Sh. per pound
1	600	2
6001	12000	3
12001	18000	4
1001	24000	5
24001	30000	6
30001	36000	7
36001	42000	8
42001	48000	9
Over 48000		10

(a) Calculate James' taxable income in K£ p.a. **(2 Marks)**

(b) Calculate James's P.A.YE if he is entitled to a tax relief of Sh. 18000 p.a. **(4 Marks)**

(c) James is also deducted the following per month:-

NHIF	Sh. 320
Pension scheme	Sh. 1000
Co-operative shares	Sh. 2000
Loan repayment	Sh. 5000
Interest on loan	Sh. 500

(i) Calculate James' total deduction per month in KSh. **(2 Marks)**

(ii) Calculate his net salary per month **(2 Marks)**

20. Three consecutive terms of a geometric progression are 3^{2x+1}, 9^{x} and 81 respectively.

(a) Calculate the value of x **(3 Marks)**

(b) Find the common ratio of the series. **(1 Mark)**

(c) Calculate the sum of the first 4 terms of this series. **(3 Marks)**

(d) Given that the fifth and the seventh terms of the G.P form the first two consecutive terms of an arithmetic sequence, calculate the sum of the first 20 terms of the sequence. **(3 Marks)**

21. A tank has two inlet taps P and Q and an outlet tap R. When empty, the tank can be filled by tap P alone in $4\frac{1}{2}$ hour or by tap Q alone in 3 hours. When full, the tap can be emptied in 2 hours by tap R.

(a) The tank is initially empty. Find how long it would take to fill up the tank

(i) If tap R is closed and taps P and Q are opened at the same time. **(2 Marks)**

(ii) If all the three taps are opened at the same time. **(2 Marks)**

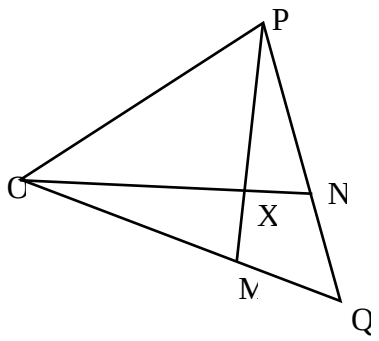
(b) The tank is initially empty and the three taps are opened as follows:-

P at 8.00 a.m.
Q at 8.45 a.m
R at 9.00 a.m

(i) Find the fraction of the tank that would be filled by 9.00 a.m **(3 Marks)**

(ii) Find the time the tank would be fully filled up **(3 Marks)**

22. In the figure below M and N are points on OQ and QP such that OM:MQ = 2:3 and QN : NP = 2:1. ON and PM intersect at X.



(a) Given that OP = p and OQ = q. Express in terms of p and q

(i) ON **(2 Marks)**

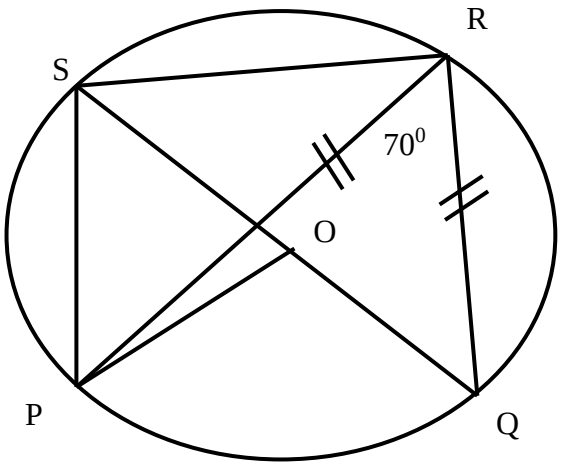
(ii) PM **(2 Marks)**

(b) Given that OX = hON and PX = kPM where h and k are scalars,

(i) Determine the values of h and k. **(5 Marks)**

(ii) Determine ratio in which **X** divides **PM.** **(1 Mark)**

23. The figure below shows a circle centre O, PQRS is a cyclic quadrilateral and QOS is a straight line.



Giving reasons for your answers, find the size of

(a) Angle **PRS** **(2 Marks)**

(b) Angle **POQ** **(2 Marks)**

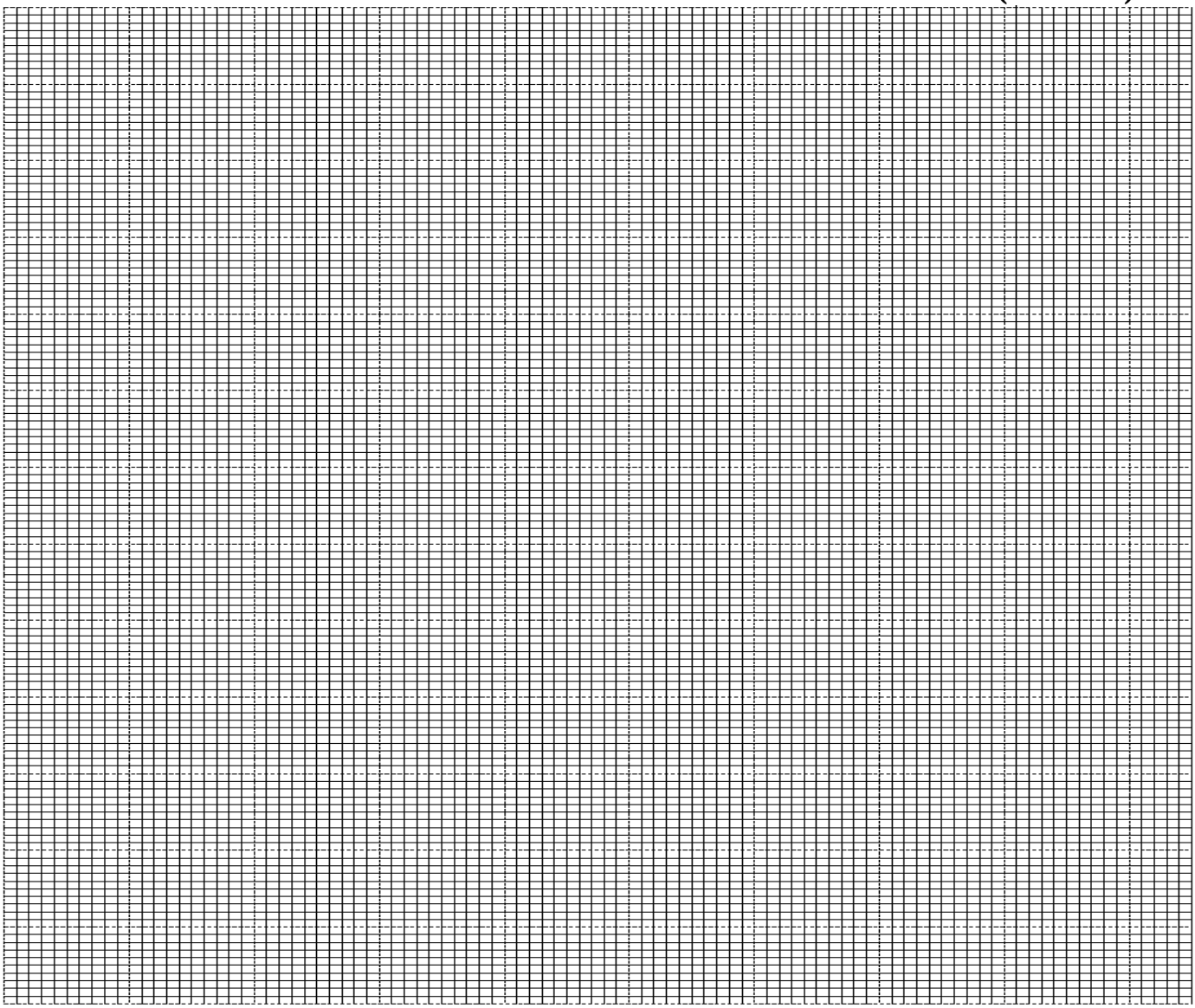
(c) Angle **QSR** **(3 Marks)**

(d) Reflex angle **POS** **(3 Marks)**

24.(a) Complete the table below for $y = x^3 + 4x^2 – 5x - 5$ **(2 Marks)**

x	-5	-4	-3	-2	-1	0	1	2
$y = x^3 + 4x^2 – 5x - 5$			19			-5		

(b) On the grid provided, draw the graph of $y = x^3 + 4x^2 – 5x – 5$ for $-5 \leq x \leq 2$ **(3 Marks)**



(c) (i) Use the graph to solve the equation $x^3 + 4x^2 – 5x – 5 = 0$ **(2 Marks)**

(ii) By drawing a suitable straight line on the graph, solve the equation **(3 Marks)**
$x^3 + 4x^2 – 5x – 5 = -4x - 1$

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

PHYSICS PAPER 1

Kenya Certificate of Secondary Exams

TIME 2 HOURS

INSTRUCTIONS

-Write your name and admission number in the space provided

-Sign and write the date of the examination in the space provided above

-This paper consists of two sections A and B.

-Answer all the questions in the spaces provided.

-All workings must be clearly shown.

-Mathematical tables and silent electronic calculators may be used.

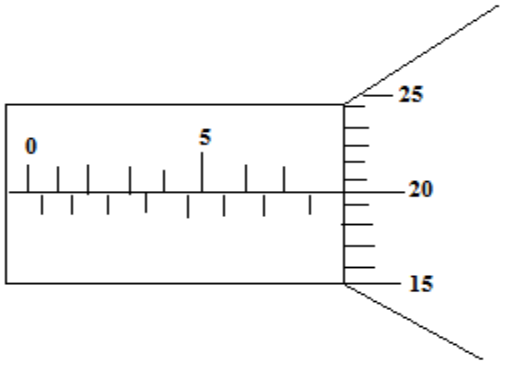
For examiner's use only

SECTION	QUESTION		TOTAL MARKS	CANDIDATE'S SCORE
A	1-13		25	
B	14		14	
	15		10	
	16		11	
	17		10	
	18		10	
			GRAND TOTAL	80 MARKS

SECTION A (25 MARKS)

Answer all questions

1. The figure below shows a micrometer screw gauge. What is the reading shown on the figure. **(2 marks)**



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2. State pressure law. **(1 mark)**

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3. State ***two*** factors that affect stability of a body. **(2 marks)**

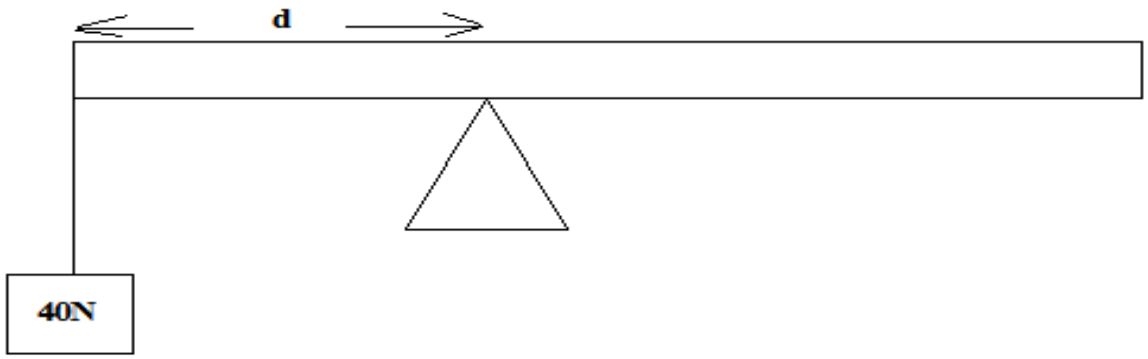
i)……

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ii)……

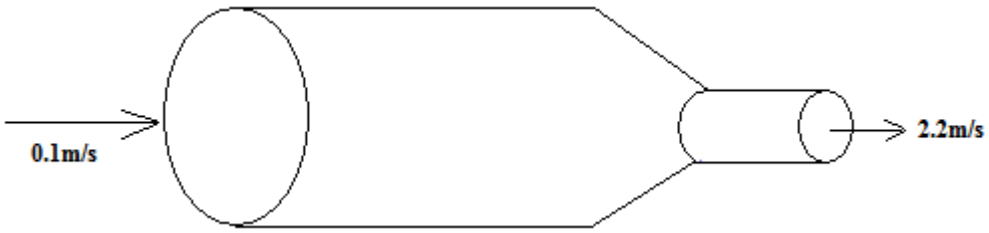
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4. The diagram below shows a uniform wooden plank of length 4m and weight 10N. The plank is held at equilibrium by a weight of 40N placed at one end as shown below.



Determine the distance ***d.*** **(3 marks)**

5. Figure below shows a non-viscous fluid that is not compressible moving through a pipe of varied cross-sectional area.



If the area of the narrow region is $0.05m^2$, calculate diameter of the wider region.
(3 marks)

6. State **one** use of thermal expansion. **(1 mark)**

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7. State ***two*** factors that affect melting point of a substance. **(2 marks)**

i)……..

ii)……..

8. A body is projected vertically upwards from the top of a building. If it lands on the base of the building. Sketch the velocity-time graph for motion. **(2 marks)**

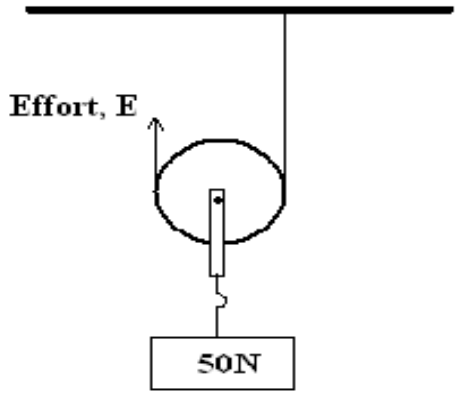
9. State a reason why transfer by radiation is faster than by conduction. **(1 mark)**

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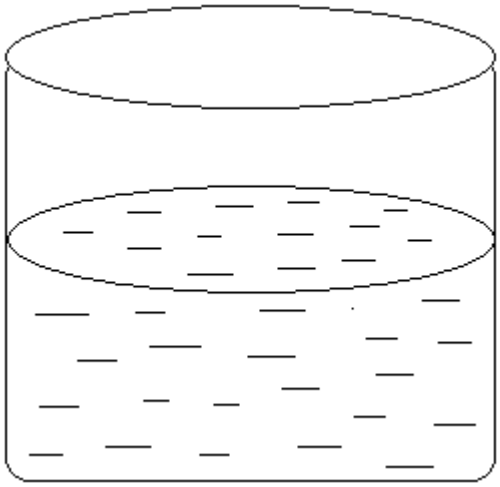
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10. The pulley system in the figure below supports a load of 50N.



Given that the efficiency of the system is 80% calculate the effort, E. **(3 marks)**

11. The figure below shows a glass container with cross-section area of $50cm^2$.



When a wooden block of mass 120g is immersed into the water it floats while fully submerged and the water level rises by 4cm, determine the density of the water.
(3 marks)

12. Define the term momentum. **(1 mark)**

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13. What is a pitch of a screw. **(1 mark)**

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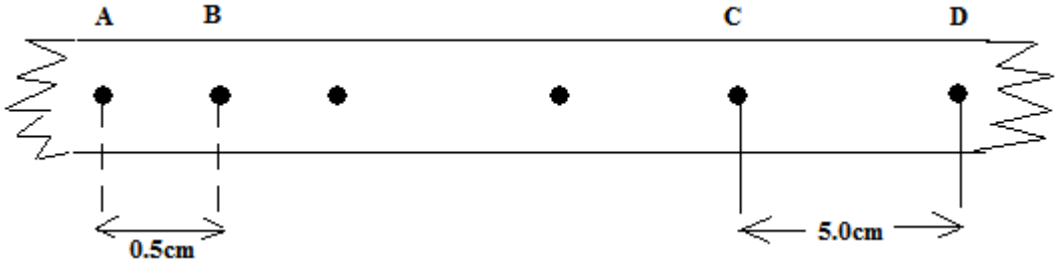
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SECTION B

Answet all questions

14. The figure below shows the motion of a trolley on ticker timer. The ticker has a frequency of 100Hz.

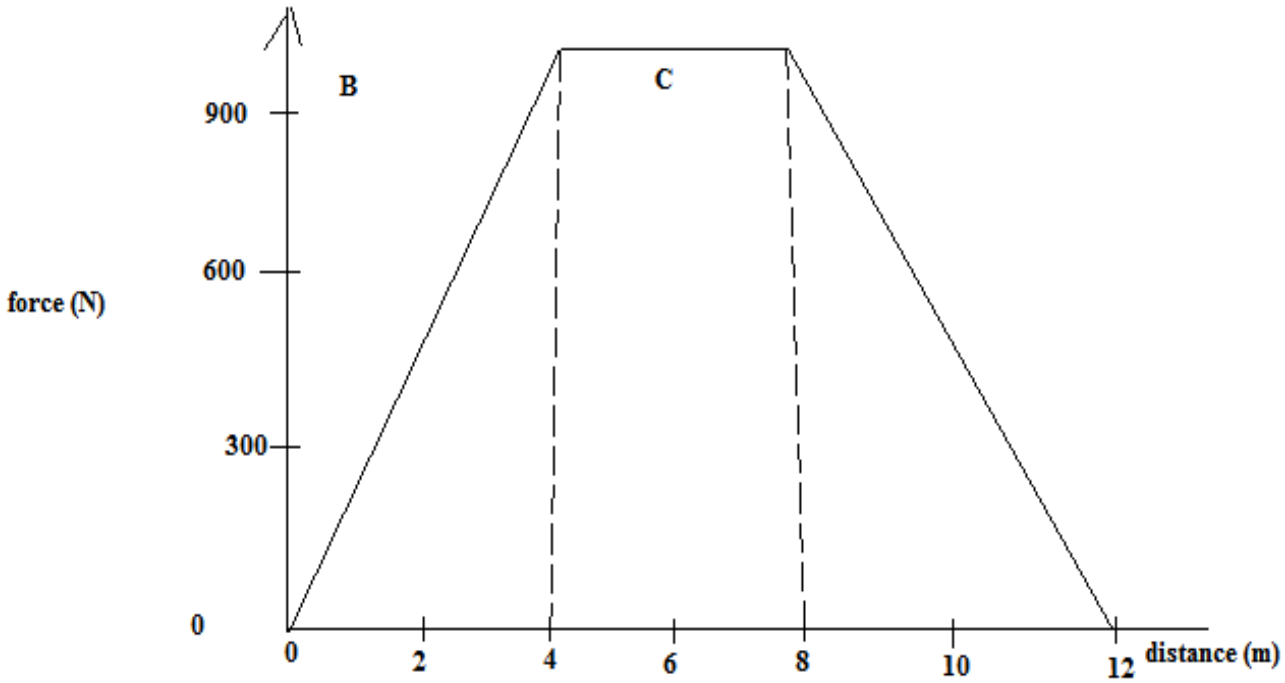


a) i) Calculate the initial velocity between **A** and **B.** **(3 marks)**

ii) Calculate the final velocity between **C** and **D.** **(3 marks)**

iii) Calculate the acceleration of the trolley during the motion. **(3 marks)**

b)Figure below shows a force-distance graph for a car being towed on a level ground.

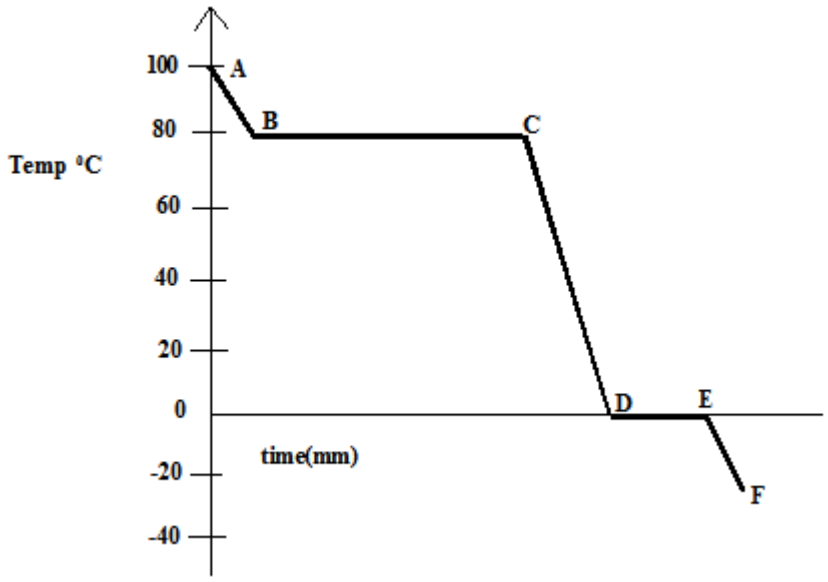


i) Calculate the total work done. **(3 marks)**

ii) If the velocity just before reaching point C is 0.6m/s. Calculate the power developed by the engine at this point. **(2 marks)**

15. a) A metal ball of mass 100g is dipped into boiling water at 100^0C and then placed in a calorimeter containing 80g of water at 20^0C. After stirring, the temperature of the mixture stabilizes at 23.4^0C. Ignoring the heat gained by the calorimeter, determine the specific heat capacity of the metal. (Specific heat capacity of water = 4200j/Kg K). **(4 marks)**

b) The cooling curve below is for a pure substance.



i) What is the melting point of the substance. **(1 mark)**

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ii) State ***two*** factors that affect boiling point of a substance. **(2 mks)**

i) ……..……..

ii)……..……..……

iii) At what part of the curve is the substance. **(3 marks)**

Solid only?

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Liquid only?

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Solid and Liquid?

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16. a) State Newton's second law of linear motion. **(1 mark)**

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b) The legal speed limit on motorways is approximately 30m/s. In an incident on a motorway, a car of mass 900kg leaves a skid mark 75m long when stopping. The maximum deceleration of the car when skidding is approximately $10m/s^2$.

i)Show that before the incidence, the car must have been travelling above the legal speed limit**.** **(3 marks)**

ii) Calculate for this skid, the maximum average braking force between each of the four tyres and the road. **(3 marks)**

iii) When the motorway is wet, the braking force provided by each wheel is reduced to 50% of the calculated in (ii) above. What is the effect of this reduced breaking force on stopping distance, explain your answer. Assume that the speed of the car before breaking is the same in both cases. **(2 marks)**

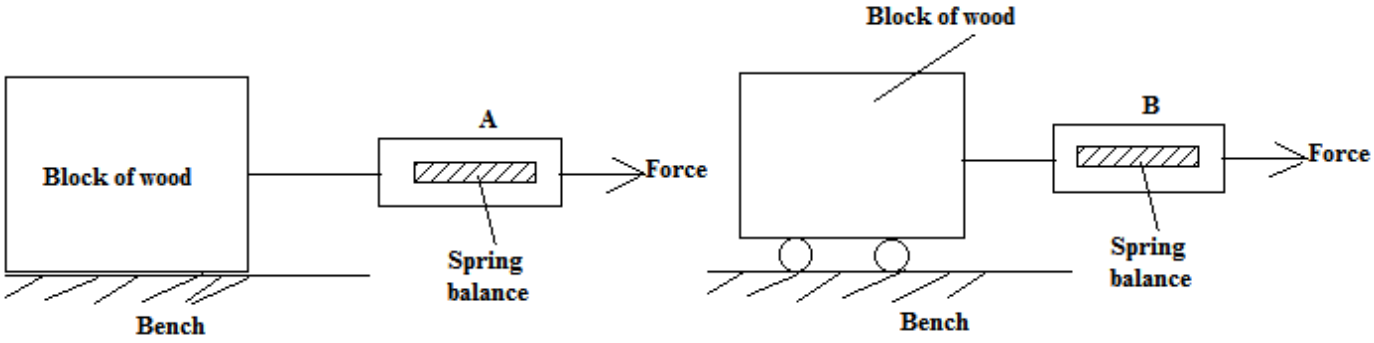
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c) A student carried out an experiment to measure static friction using identical wooden blocks arranged as shown in the figure.



State and explain which spring balance will indicate a smaller reading when the block just starts to move. **(2 marks)**

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17. a) Give a reason why people experience nose bleeding when they climb tall mountains. **(1 mark)**

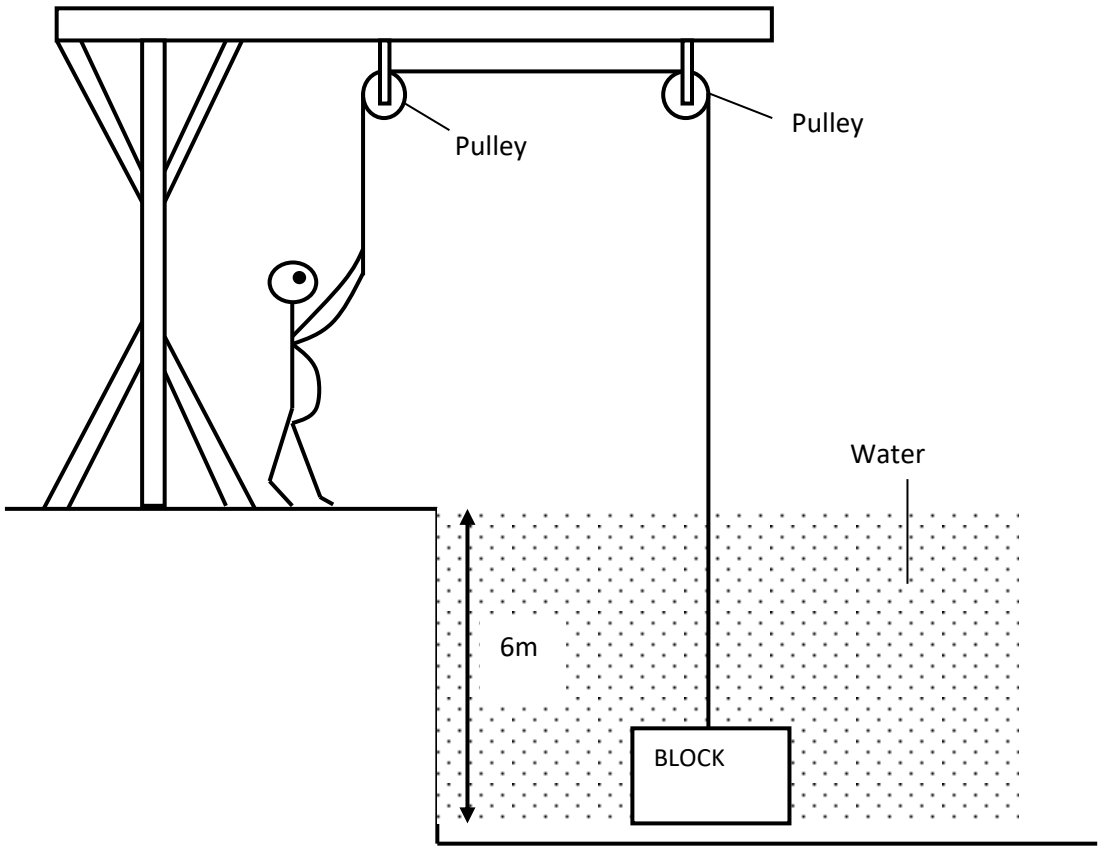
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b) The diagram shows a person raising a concrete block from a river bed by using two pulleys.



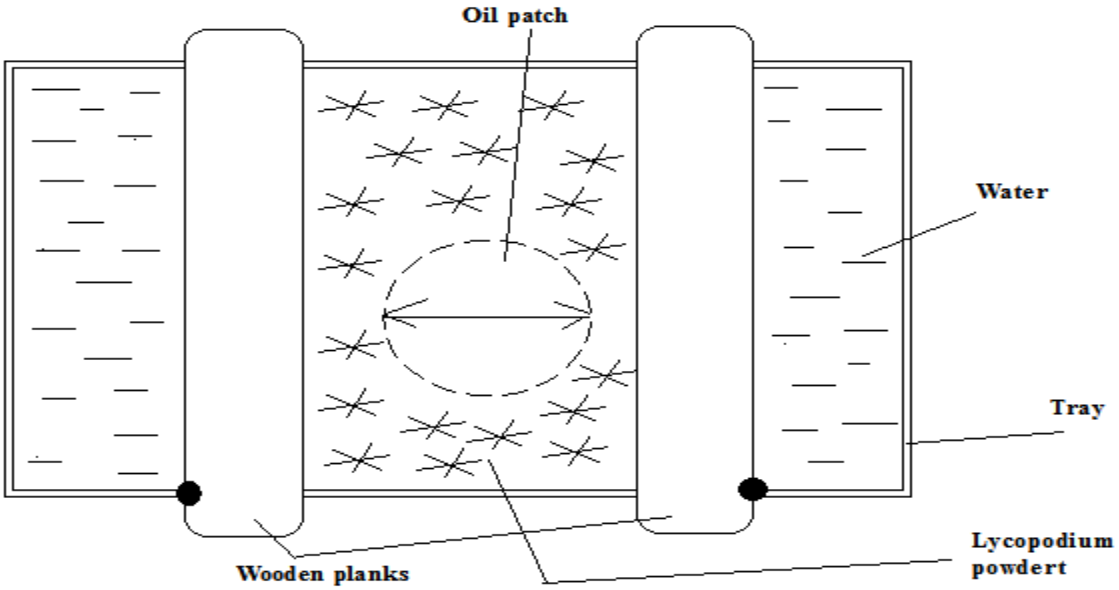
As shown in the diagram, the top of the block is 6.0m below the water surface. The density of water is 1000kg/m^3 and the acceleration of free fall is 10m/s^2. Calculate the water pressure acting on the top of the block. **(3 marks)**

b) The block is raised through water. At one part, the water pressure acting on the top of the block 4.5 x 10^4 pa. The area of the top of the block is 0.015m^2. Calculate the downward force exerted by the water on top of the block.

(3 marks)

d) When the block is clear of the water, it is raised a further 4.0m. The weight of the block is 550N. Calculate the work on the block as it is raised the 4.0m through air.
(3 marks)

18. The figure below shows part of an experiment set up to estimate the diameter of an oil molecule.



i) Describe how the oil patch is formed. **(2 marks)**

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ii) What is the role of the Lycopodiumpowder. **(1 mark)**

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b)An oil drop of average diameter 0.7mm spreads out into a roughly circular patch of diameter 73.5cm on the surface of water in a trough.

i)Calculate volume of the drop in mm^3. Take ($\pi = {}^{22}/_{7}$) **(3 marks)**

ii) Calculate the area of the patch in mm^3. **(2 marks)**

iii) Calculate the thickness of the oil molecule and express your answer in standard form. **(2 marks)**

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

PHYSICS PAPER 2

Kenya Certificate of Secondary Exams

TIME 2 HOURS

INSTRUCTIONS

-Write your name and admission number in the space provided
-Sign and write the date of the examination in the space provided above
-This paper consists of two sections A and B.
-Answer all the questions in the spaces provided.
-All working must be clearly shown.
-Mathematical tables and electronic calculators may be used.

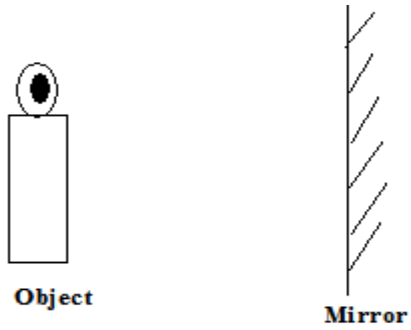
For examiner's use only

SECTION	QUESTION	TOTAL MARKS	CANDIDATE'S SCORE
A	1-13	25	
B	14	11	
	15	13	
	16	11	
	17	10	
	18	10	
		GRAND TOTAL	80 MARKS

SECTION A (25 Marks)

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

1. Locate the position of the image of the object placed in front of a plane mirror shown below. **(2 mks)**



2. Show the magnetic field pattern of the current carrying conductors shown below. **(2 mks)**



3. State ***two*** factors that determine the strength of an electromagnet. **(2 mks)**

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4. State ***two*** advantages of using a convex mirror as a driving mirror. **(2 mks)**

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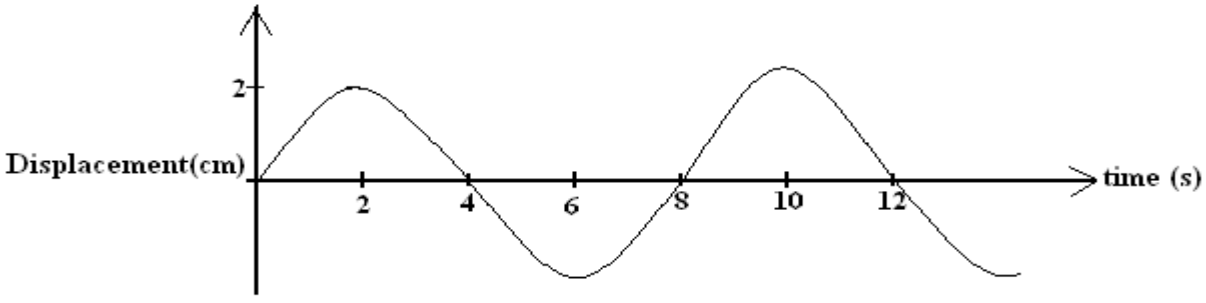
5. State ***two*** factors that affects the resistivity of an electrical conductor. **(2 mks)**

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6. The figure below shows a wave in progress.
Determine the



a) Amplitude **(1 mark)**

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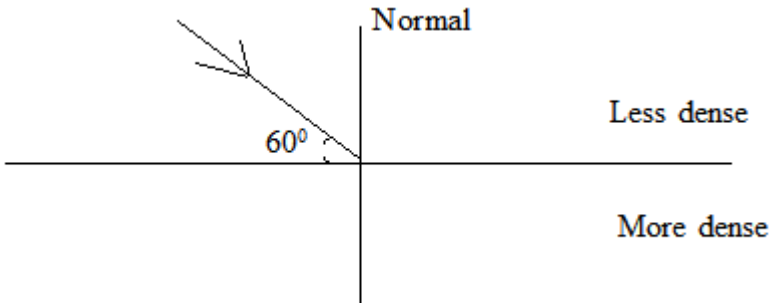
b) Frequency **(2 marks)**

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7. The figure below shows light travelling from less dense to more dense medium.



a) Show the direction of the refracted ray. **(1 mark)**

b)If the refractive index of the more dense medium is 1.4, calculate the angle of refraction. **(3 marks)**

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8. A current ,I, flowing through a wire of resistance ,R, is increased by seven times.

Determine the factor by which the rate of heat production was increased.

(3 marks)

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9. The wavelength of a radio wave is 1km. Determine its frequency if the speed in $3 \times 10^8 ms^{-1}$ **(2 marks)**

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10. State ***two*** uses of gold leaf electroscope. **(2 marks)**

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11. Give a reason why soft iron is used as a core of the coil of an electric bell**.(1 mark)**

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12.State ***two*** differences between pinhole camera and the human eye. (**2 marks)**

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13.State ***two*** types of waves. **(2 marks)**

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SECTION B (55 MARKS)

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

14.a) Define the following terms.

i) Capacitor **(1 mark)**

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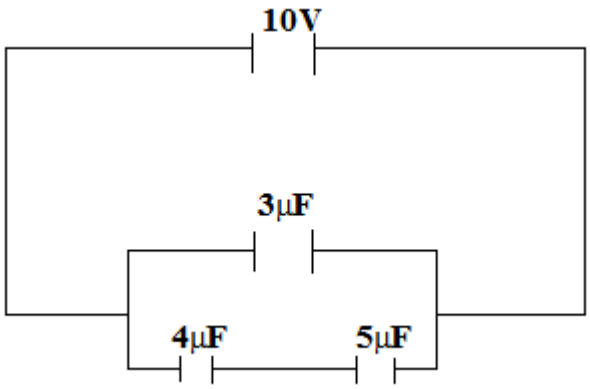
ii) Capacitance **(1 mark)**

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b) Three capacitors are connected to a 10v battery.



Calculate

i) the effective capacitance **(3 marks)**

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ii) the total charge **(3 marks)**

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c) State ***three*** factors that determine the capacitance of a capacitor. **(3 marks)**

i) ……

ii) ……

iii)……

15.a) Define a resistor. **(1 mark)**

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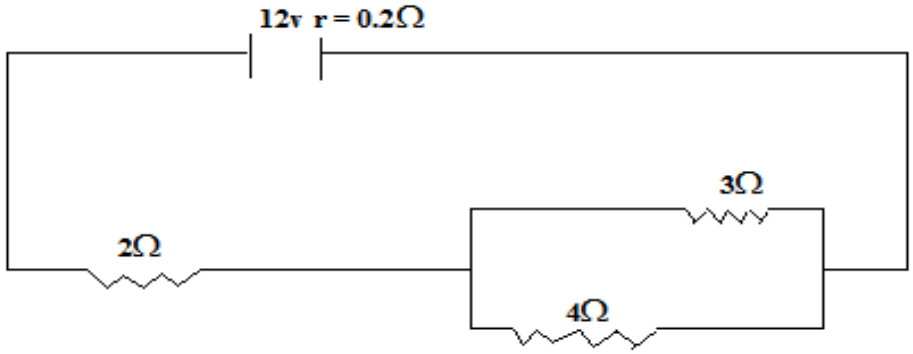
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b) The figure below shows three resistors connected to 12v supply of internal resistance of 0.2□.



Calculate

i) the effective resistance. **(3 marks)**

ii) the total current in the circuit. **(2 marks)**

iii) the current through the 4□ □resistance. **(3 marks)**

c) If the current flows for 2 minutes calculate the total energy dissiparted**.(2 marks)**

d) State ***two*** applications of resistors in real life situation. **(2 marks)**

(i) ……

(ii) ……

16.a) Explain briefly how a material acquires a positive charge. **(3 marks)**

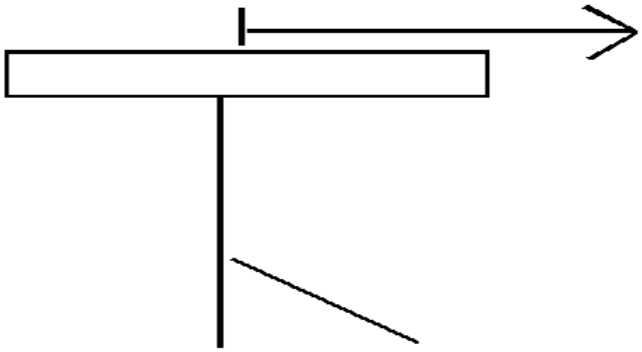
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b) A steel pin is placed on the cap of a highly charge electroscope.



State and explain the observation that will be made on the gold leaf. **(2 marks)**

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c) State a reason why a candle flame is blown away when a highly charged metal is brought close to it**.** **(2 marks)**

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d) Explain briefly why it is not advisable to take shelter on a tree when it is raining. **(2 marks)**

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e) State ***two*** dangers of electrostatic charges. **(2 marks)**

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17.a) State ***two*** methods of magnetisation. **(2 marks)**

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b) Why is repulsion the surest way of identifying a magnet. (**2 marks)**

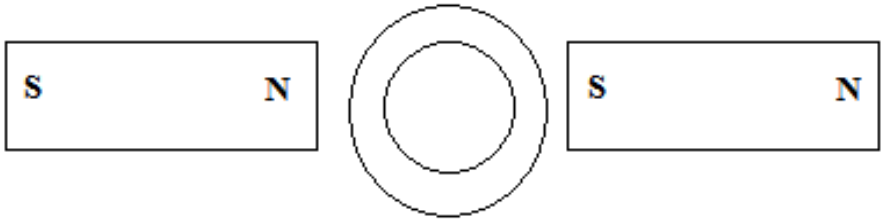
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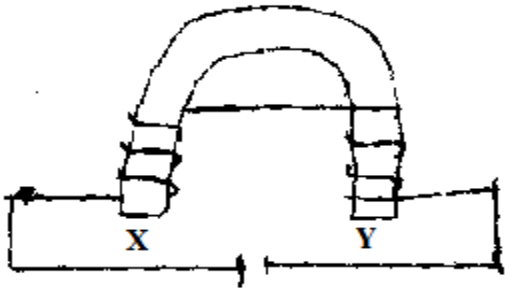
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c) Complete the diagram below to show the magnetic field patterns. **(2 marks)**



d) i) The figure below in a U-shaped iron core. Indicate the polarity at **X** and **Y.**
(2 marks)



ii) State ***two*** applications of such an electromagnet. **(2 marks)**

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18.a) A pin is placed at the bottom of a beaker containing a transparent liquid. When viewed from the top
the pin appears nearer the surface than it actually is. Explain the observation.
(2 marks)

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b) The table below shows the results obtained from such an experiment.

Apparent depth (cm)	2.21	3.68	5.15	6.62	8.09
Real depth cm	3.0	5.0	7.0	9.0	11.0

i) Plot a graph of real depth against apparent depth. **(5 marks)**
(provide a graph paper)

NAME……ADM NO……

SCHOOL……..CLASS……

DATE……

FORM 4 KCSE PREDICTION 1 EXAMS

PHYSICS PAPER 3

Kenya Certificate of Secondary Exams

TIME 2 HOURS

INSTRUCTIONS

-Answer all the questions in this paper
-You are supposed to spend the first 15 minutes of the 2 ¼hours allowed for this paper -
-reading the whole paper carefully before starting your work.
-Marks are given for clear record of the observations made, their suitability and -
accuracy and the use made of them.
-Candidates are advised to record observations as soon as they are made
-Mathematical table and electronic calculators may be used.

For Examiner's use only

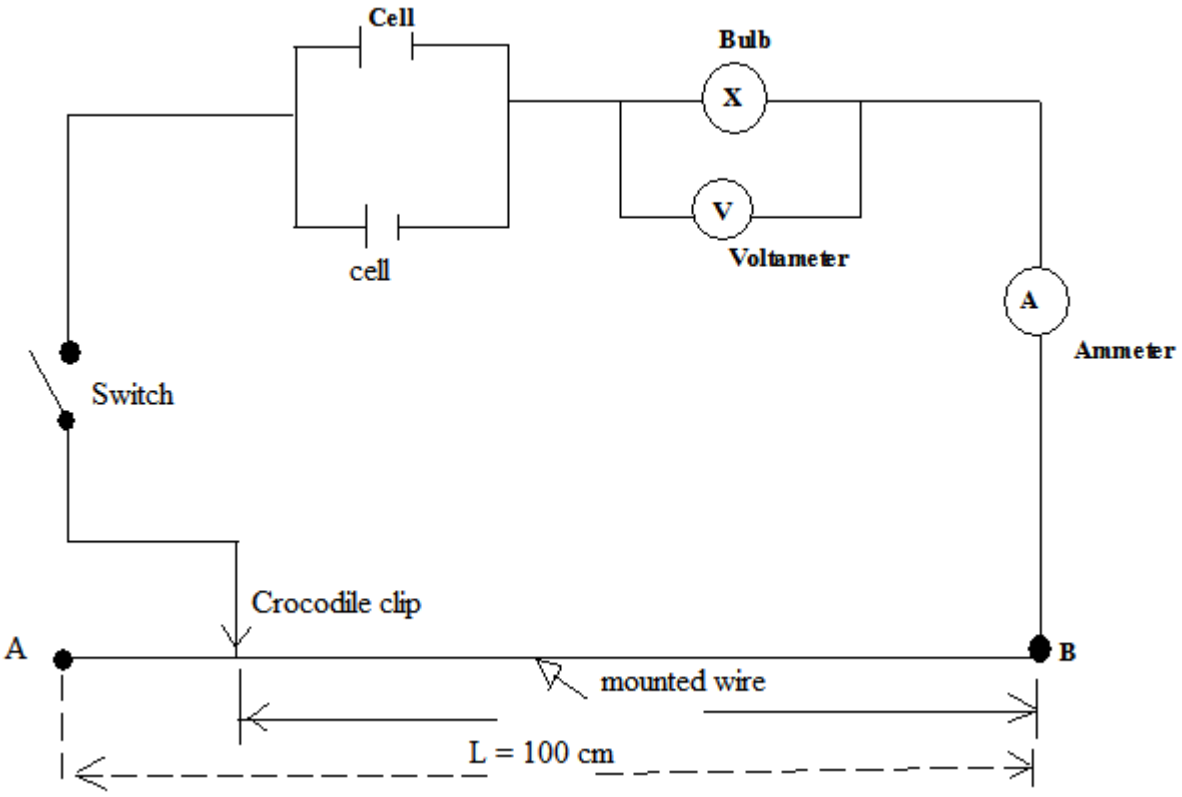
QUESTION	TOTAL MARKS	CANDIDATE'S SCORE
1	20	
2	20	
	GRAND TOTAL	80 MARKS

Question 1

You are provided with the following apparatus

- Two dry cells
- A cell holder
- A bulb
- A voltameter
- An ammeter
- A switch
- Amounted resistance wire labelled AB

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



b) With the crocodile clip at A (ie L = 100cm) take the voltameter reading (V) and the ammeter reading (I). Record V and I in the table below.

Length l(cm)	100	80	60	40	20	0
Voltage (V)						
Current I						

(A)						

(7 marks)

c) Repeat the procedure in (b) above for the lengths shown and complete the table above.

d) State the changes you observe on the bulb as L decrease from A. **(2 marks)**

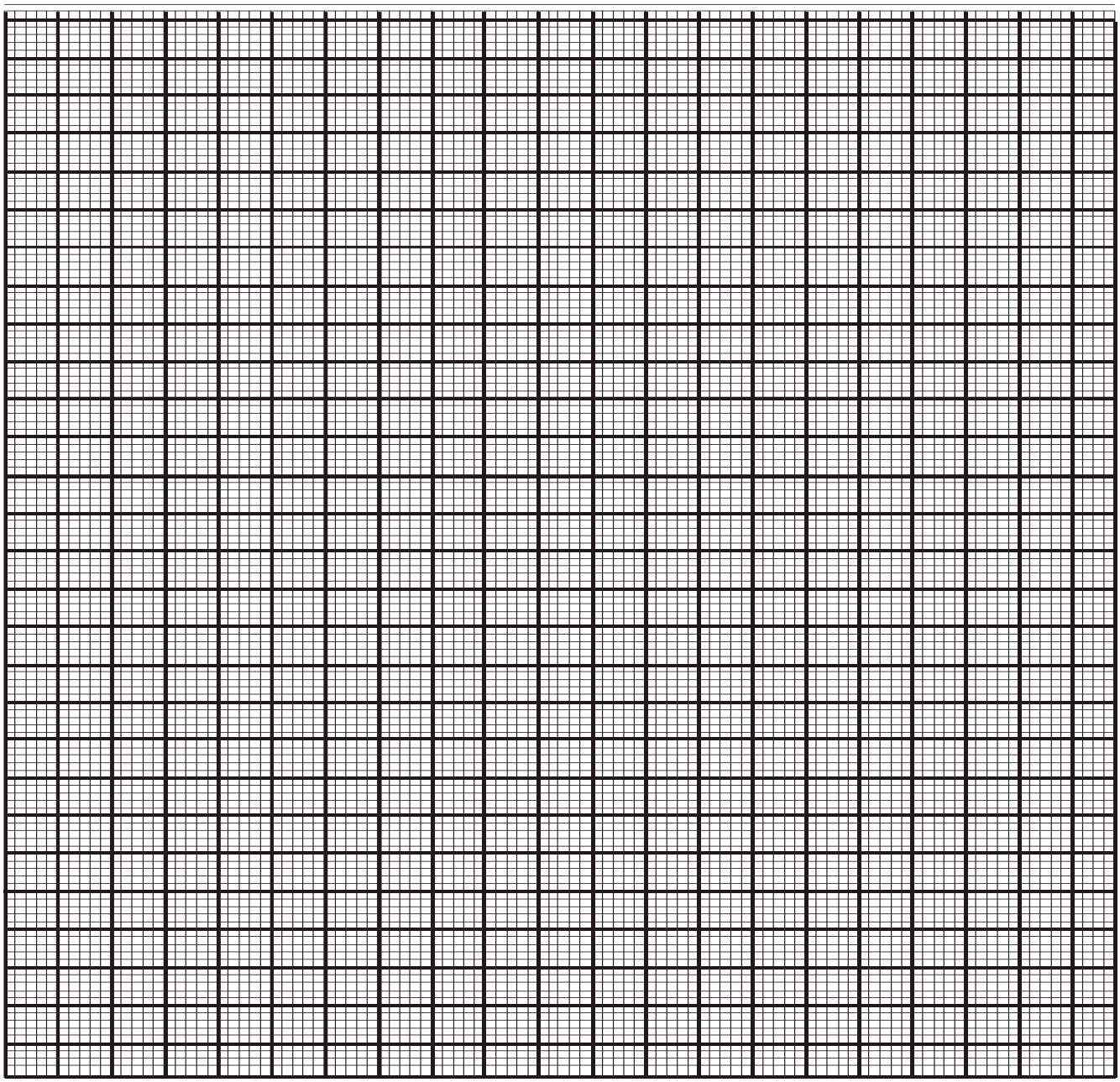
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e) Plot a graph of voltage against length (cm) **(5 marks)**



f) What physical quantity does the slope of the graph represent at any given point. **(2 marks)**

g) From your graph determine the value of voltage at length L = 70cm. **(2 marks)**

h) Use your graph to describe how the physical quantity in (e) above is affected as the current increases. Explain why. **(2 marks)**

Question 2

You are provided with the following apparatus

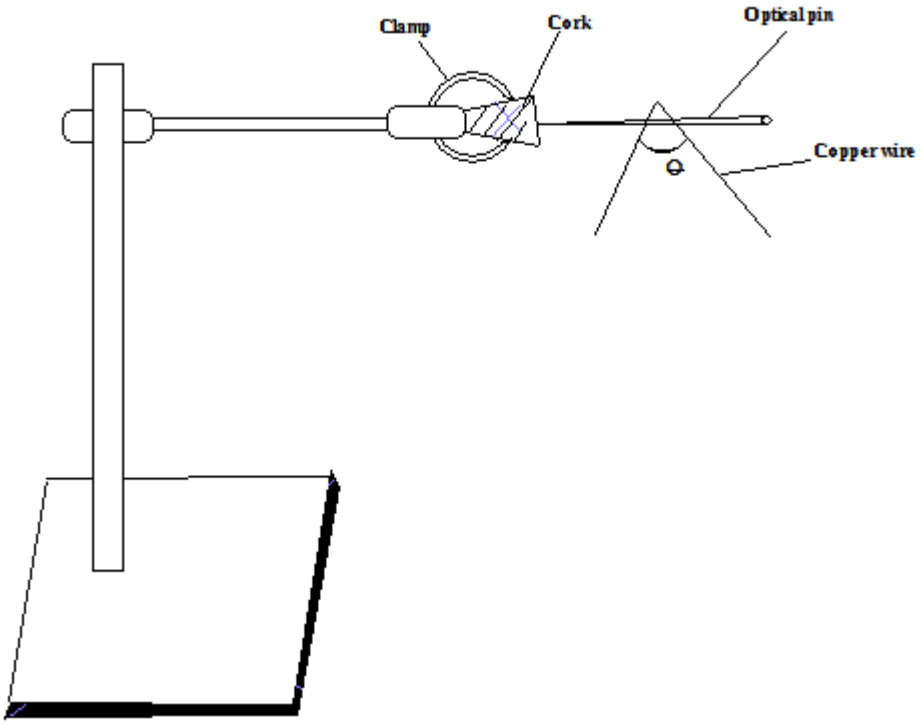
- A complete stand
- Copper wire (wire length about 30cm)
- A stop watch
- A protractor
- A meter rule
- Corked optical pin

Procedure

a) Measure the length L of the copper wire.

L = ……..……m **(1 mark)**

b) Bend the wire to form an angle Θ of 60^0, suspend it from the corked optical pin as shown in the diagram below.



c) Give it a small displacement so that it oscillates about a point on the pin. Measure the time, t(s) for 10 oscillations of the wire.
t = ……**(s)** **(1 mark)**

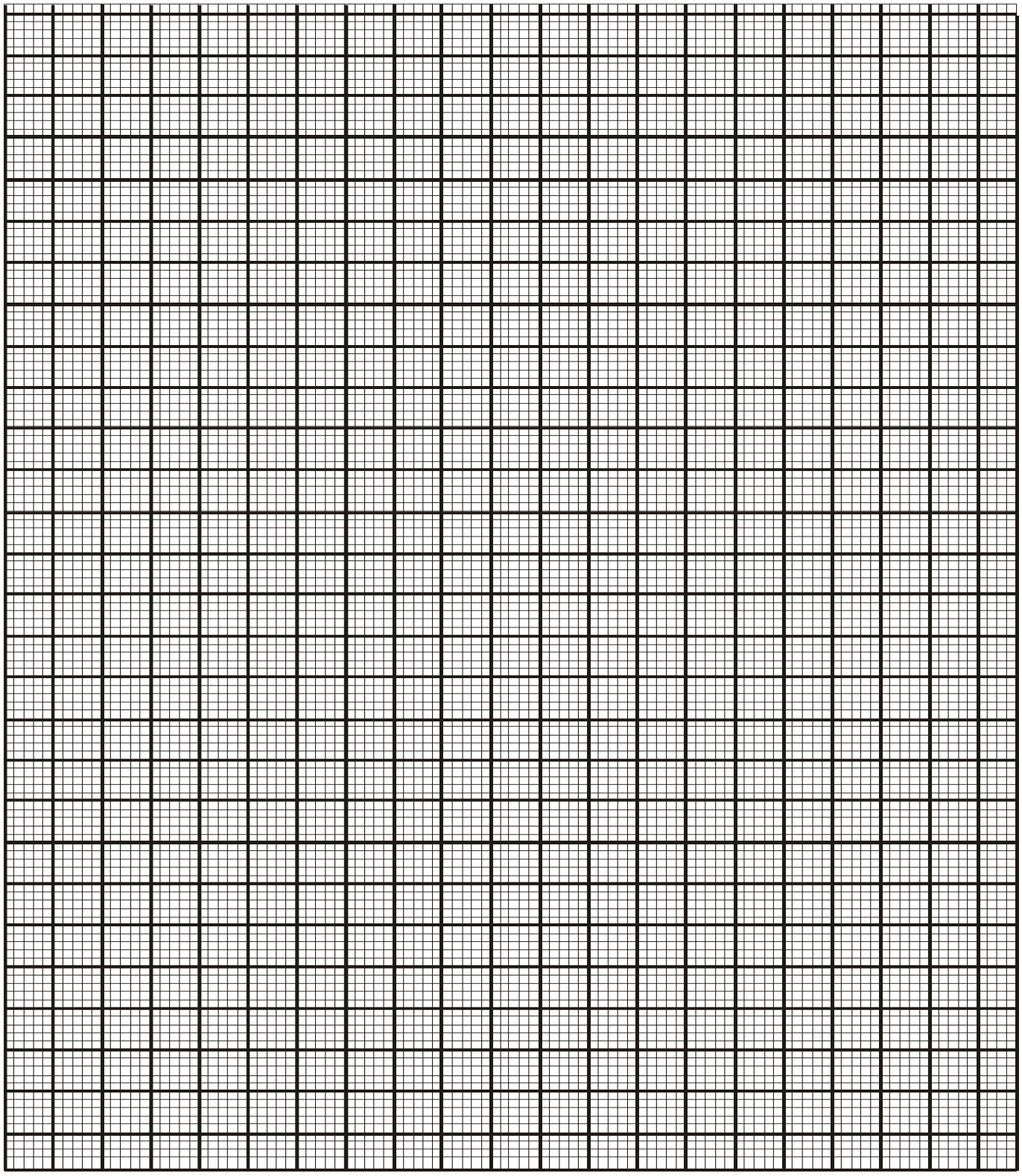
d) Repeat the procedure (b) above for the values of $\Theta = 70^0, 80^0, 90^0, 100^0, 110^0$.

e) Record and complete the results in the table below.

Θ (^{0})	60	70	80	90	100	110
Cos $^1/_2\Theta$						
Time for 10 oscillations, t (s)						
Periodic time T (s)						
T^2 (s^2)						
$^1/_{T^2}$ (s^{-2})						

(7 marks)

f) On the grid provided, plot a graph of $^1/_{T^2}$ (s^2) against Cos$^1/_2\Theta$. **(5 marks)**



g) Determine the slope. **(3 marks)**

h) Given that the graph is related by the equation $^{1}/_{T}{}^{2} = \frac{8\pi^2 L}{g} \text{Cos } {}^{1}/_{2}\Theta$, determine the value of constant g. **(3 marks)**

'an investment of knowledge pays

The following KASNEB notes are available;

- ATD
- CPA
- CS
- CIFA

Call Mdm.Mariam:0746711892 to acquire them





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Other available resources are;

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- F1-F4 termly exams
- primary exams
- KCSE past papers
- KCPE past papers
- Mocks
- lesson plans
- schemes of work

Note:Exam questions are always free of charge

Marking scheme are not free