PROGRESSIVE STUDENTS FORM FOUR PRE-MOCK 1 EXAMS *(ALL SUBJECTS TESTED)*



PROGRESSIVE STUDENTS FORM FOUR PRE-MOCK 1 EXAMS

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ORDER OF THE 14 SUBJECTS TESTED *(ALPHABETICALLY ARRANGED)*

1. **AGRICULTURE**
2. **BIOLOGY**
3. **BUSINESS STUDIES**
4. **CHEMISTRY**
5. **COMPUTER**
6. **C.R.E**
7. **ENGLISH**
8. **GEOGRAPHY**
9. **HISTORY**
10. **HOMESCIENCE**
11. **I.R.E**
12. **KISWAHILI**
13. **MATHS**
14. **PHYSCIS**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

AGRICULTURE (443/1)

PAPER 1

FORM FOUR (4)

TIME: 2 HOURS

INSTRUCTIONS TO THE CANDIDATES

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

b) This paper consists of **three** sections: -**A, B** and **C.**

c) Answer **all** questions in section **A** and **B** and any two questions in section C

d) All answer must be written in the spaces provided.

e) **This paper consists of 14 printed pages.**

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

g) **Candidates should answer the question in English.**

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAX SCORE	CANDIDATE'S SCORE
A	1-17	30	
B	18-22	20	
C	23-25	40	
TOTAL		90	

SECTION A (30 MARKS)

Answer ALL the questions in the spaces provided.

1. Give **four** factors which characterize large scale farming. ***(2mks)***

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2. Name **four** methods used for clearing land. (2**mks**)

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3. What is the importance of taking a farm inventory? **(1mk)**

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4. State **two** effects of aphids on plants. **(2mks)**

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5. Give **four** reasons why it is undesirable to carry out minimum soil tillage operations before planting. **(2mks)**

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6. Why is it advisable to apply straight nitrogeneous fertilizer to a crop of maize at a height of 30-45 cm? **(2mks)**

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7. List **four** different problems brought by water in the farm. **(2mks)**

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

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9. State **four** management practices carried out on Agroforestry trees from planting to ageing of the same tree. **(2mks)**

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10. List **four** environmental conditions that may lead to low crop yields. **(2mks)**

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11. State **two** activities carried out during hardening-off of tomato plants in the nursery. **(1mk)**

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12. Outline **two** ways through which rain drop erosion initiates the process of soil erosion. **(2mks)**

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13. State **two** reasons for carrying out soil conservation in the farm. **(1mk)**

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14. Name **four** factors that determine the depth of planting seeds in crop production C. **(2mks)**

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15.Give **four** conditions that have led to fragmentation and sub-division of agricultural land in Kenya. **(2mks)**

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16. State **two** advantages of organic farming. **(1mks)**

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17. State **four** advantages of a good crop rotational programmed. **(2mks)**

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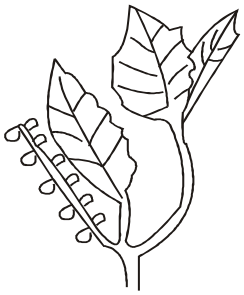
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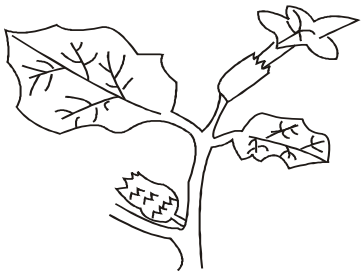
SECTION B (20MARKS)

Answer ALL questions in this section

18. Diagram **X** and **Y** represent two weeds



X



Y

(i) Identify weeds:

X…… **(1mk)**

Y…… **(1mk)**

(ii) Give **two** economic importances of each of the weeds above. **(1mk)**

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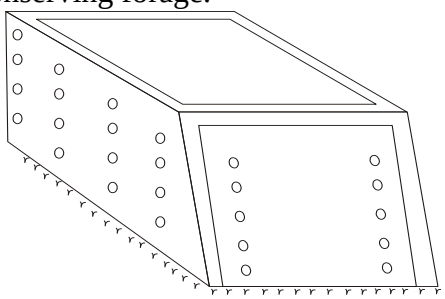
(iii) Name **two** kinds of herbicides used to control the above weeds C. **(1mk)**

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19. The diagram shows a method of conserving forage.



(a) Identify the structure shown above. **(1mk)**

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(b) Outline **two** qualities of a good quality silage. **(2mks)**

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(c) Briefly explain the **two** main categories of silage losses. **(2mks)**

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20. A farmer has a piece of land on which he can produce wheat, maize, and barley.
The yields and selling prices of the three crops as shown below:

Crop	Yield 90 kg bag	Selling price Kshs. Per bag
Maize	2000	750
Wheat	1400	900
Barley	1500	1200

The farmer decides to produce barley. Assuming the cost of producing any of the crops is the same.

(i) Calculate the farmer's opportunity cost. ***Show your working***. **(1½mks)**

(ii) Give reasons for your answer in (i) above. **(½mk)**

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21. Study the illustration below of a tomato fruit and answer the questions that follow



(a) Name the pest labelled **Z**. **(1mk)**

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(b) State **two** characteristics symptoms of attack by the pest named in (a) above. **(2mks)**

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(c) State **two** cultural control measures of the pest named in (a) above. (2**mks**)

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(d) Apart from pest **Z** identified above name ***two*** insect pests of tomatoes. (2**mks**)

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22. ***Describe*** the procedure used during harvesting of sugarcane. **(2mks)**

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SECTION C (40 MARKS)

Answer any TWO questions from this section in the foolscaps provided after question 25.

23.

(a) What are the uses of farm records. **(6mks)**

(b) ***Explain*** the problems farmers face in marketing agricultural produce. **(9mks)**

(c)*Describe* various agencies and institutions involved in the marketing of agriculture produce. **(5mks)**

24.

(a) ***Describe*** the methods used in preparing planting materials in readiness for planting. (8**mks**)

(b) ***Explain*** the factors that may determine spacing of crops in the farm. **(8mks)**

(c) ***Briefly explain*** the *factors* that influence timely planting. **(4mks)**

25.

(a) ***Describe*** the establishment of grass pasture from the time the land is ploughed using a mould board plough to the time the pasture is ready for grazing. **(10mks)**

(b) What are the ***advantages*** of a mixed grass legume pasture over a pure grass pasture? **(10mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

AGRICULTURE (443/2)
PAPER 2
FORM FOUR (4)
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

- *Write your **name, class** and **admission number** in the spaces provided above*
- *This paper consists of three section **A, B** and **C***
- *Answer **all** the questions in section **A** and **B***
- *Answer any **two** questions in section **C.***
- *Answers should be written in the spaces provided in this booklet.*

For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A		30	
B		20	
C		20	
		20	
	TOTAL	90	

SECTION A (30 MARKS)

1. List **three** types of calf pens **(1½mks)**

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2. Name **four** systems of a tractor engine **(2mks)**

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3. Give **two** reasons for using litter in a poultry house **(2mks)**

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4. Name **two** diseases of poultry that are controlled by vaccination **(1mk)**

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5. State **two** factors that could lead to failure to conceive in sows after service **(1mk)**

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6. Give **two** causes of scouring in calves **(2mks)**

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7. State **three** factors that would determine the amount of concentrate fed to dairy cattle **(1½mks)**

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8. Give **three** ways of stimulating milk let down in a dairy cow **(1½mks)**

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9. List **two** equipments used in handling cattle during an Agricultural exhibition **(1mk)**

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10. State **three** signs of anthrax injection disease observed in the carcass of a cattle **(1½mks)**

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11. Give any **two** effects of external parasites that are harmful to livestock **(2mks)**

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12. Name **four** breeds of dairy goats **(2mks)**

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13. Give **one** function of the clutch **(1mk)**

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14. State **two** adjustments that should be carried out on a tractor – mounted mould board plough in preparation for ploughing **(2mks)**

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15. List the methods of selection in livestock **(1½mks)**

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16. Differentiate between active immunity and acquired passive immunity **(2mks)**

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17. Define the following terms as used in livestock breeding **(2mks)**

i) Heterosis

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ii) Epistasis

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18. State **three** signs of heat in Does (Female Rabbits) **(1½mks)**

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19. Give the gestation period of the following: **(1½mks)**

i) Cow ……

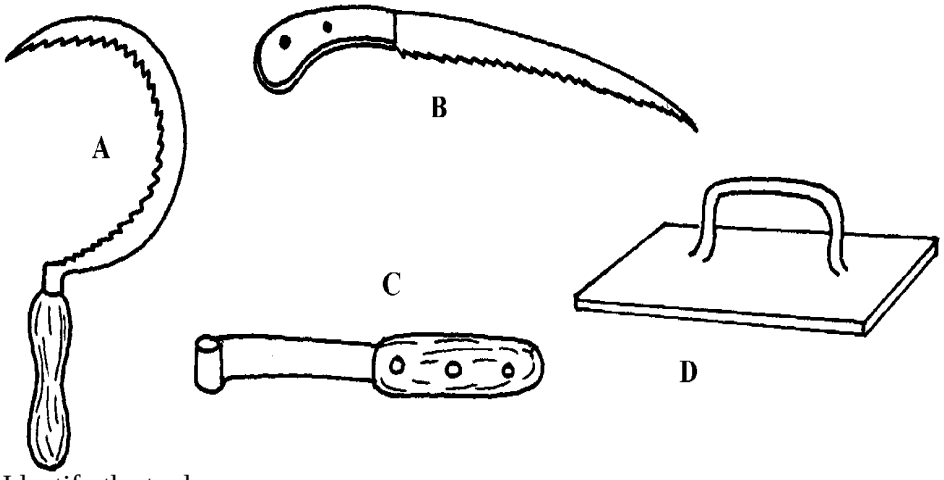
ii) Sow ……

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SECTION B (20 MARKS)

Answer <u>all</u> the questions in this section in the space provided

20. Study the diagram below and answer the questions that follow;



i) Identify the tools **(2mks)**

A……...

B ……..

C ……..

D ……..

ii) Give the use of each of the tools named above **(4mks)**

A……...

B ……..

C ……..

D ……..

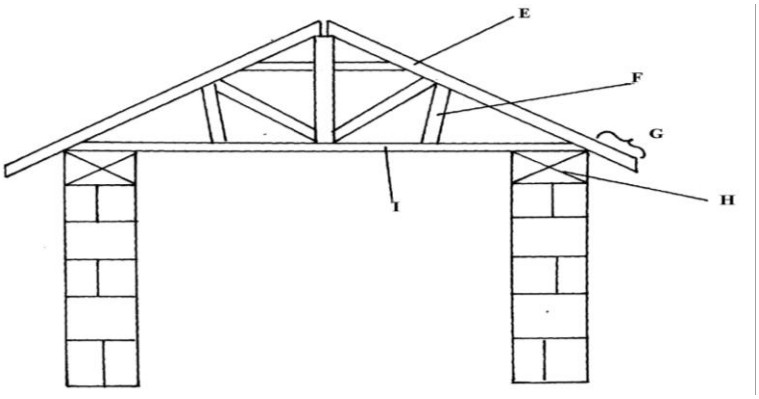
iii) State **two** maintenance practices that should be carried out on tool **D** **(2mks)**

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21. Study the illustration of a farm structure below and answer the questions that follow



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i) Name the parts labeled **(2mks)**

E ……

F ……...

G ……..

H ……..

ii) State the function of the parts labeled

E ……

F ……...

G ……..

H ……..

iii) Name **two** chemicals preservatives used to treat the wooden parts of the structure against insects and fungal damage **(1mk)**

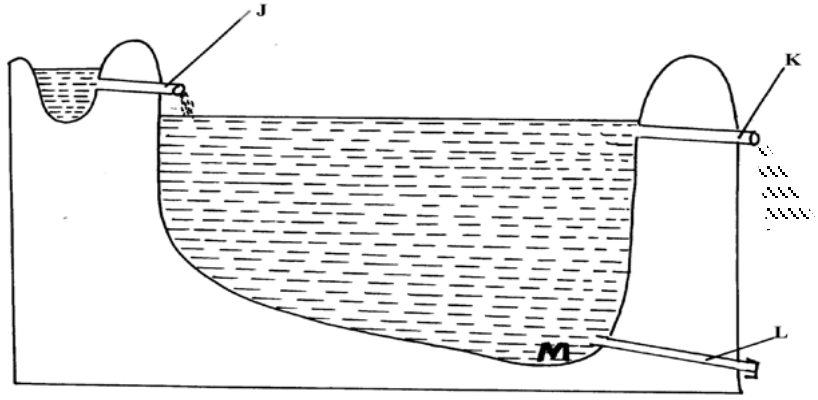
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22. Below is a diagram of a fish pond, study it and answer the questions that follow



i) Label the parts marked **K** and **L** **(1mk)**

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ii) Give a reason why part **M** is usually deeper than the rest of the pond **(1mk)**

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iii) State **three** maintenance practices carried out in the pond **(3mks)**

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23. Outline the procedure followed when hand-spraying cattle to ensure effective use of acaricides to control ticks **(5mks)**

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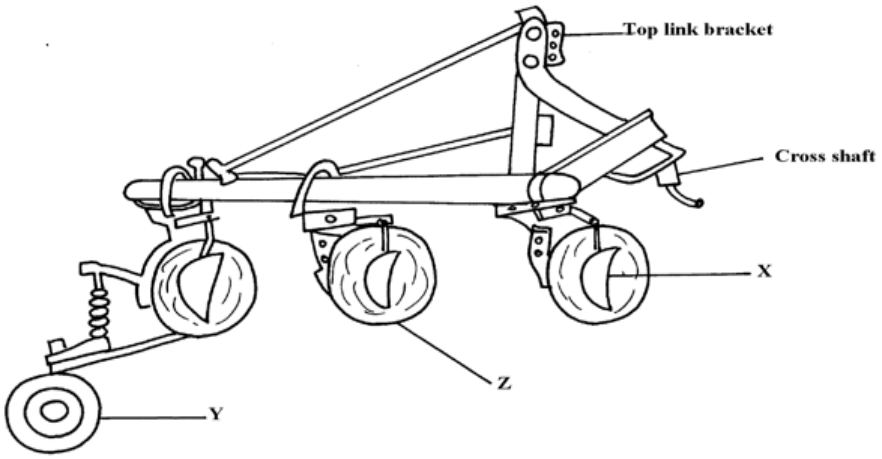
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24. The diagram below illustrates a farm implement. Study it and answer the questions that follow



a) Identify the implement **(½mk)**

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b) Name the parts labeled **X, Y** and **Z** **(1½mks)**

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c) State **three** maintenance practices that are carried out on a disc plough **(3mks)**

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SECTION C (40 MARKS)

Answer <u>any two</u> questions only in the spaces provided after the last question

25.a) Explain **five** factors to consider when siting a fishpond **(8mks)**

b) Explain the measures used to control livestock diseases **(12mks)**

26.a) Describe the operational differences of a disc plough and mould board plough **(10mks)**

b) Explain **six** marketing problems affecting dairy farming in Kenya **(6mks)**

c) State **four** reasons for culling a boar **(4mks)**

27.a) A boar gained 90Kg live weight after eating 360Kg pig finisher meal over a period of time. Calculate the feed conversion ratio **(2mks)**

b) Describe digestion in the four stomachs of the ruminant animal **(14mks)**

c) Give the significance of lubrication system **(4mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

BIOLOGY (231/1)

FORM FOUR (4)

Time: 2 Hours

INSTRUCTIONS

1. All Questions are Compulsory.

2. Write your Answers in the Spaces Provided.

3. Wrong Spelling of Technical Terms shall be Penalized.

Max Score	Student's Score
80	

1. a) Define the term Haemolysis **(1mk)**

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b) State one way of reversing plasmolysis **(1mk)**

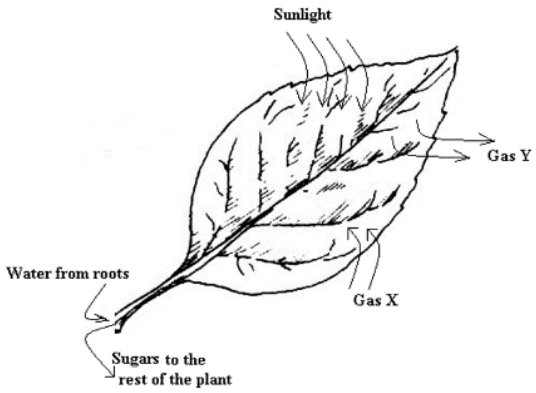
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2. Name the kingdom in which all members: **(2mks)**

a) are Prokaryotic…….

b) Have Cellulose Cell wall ……..



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3.The diagram of a leaf shown below illustrates the photosynthesis process

a) State **TWO** roles of light during this process **(2mks)**

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b) Identify Gas **Y** in case a potted plant was placed in the dark for 2hours **(1mk)**

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4. a) What is an enzyme? **(1mk)**

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b) State **TWO** roles of muscles in the stomach **(2mks)**

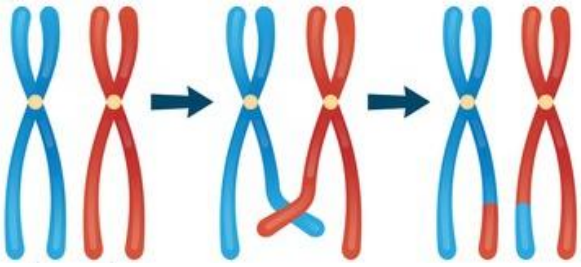
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5. The diagram below is an illustration of changes in chromosomal association



A **B** **C**

a) Which term is used to describe the association of chromosomes as shown in **B** **(1mk)**

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b) Explain how the process labelled **C** benefits the theory of evolution **(3mks)**

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6. a) Name **TWO** chemical forms in which Carbon (IV) oxide is transported by blood **(2mks)**

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b) Explain why increase in Carbon (IV) Oxide in the blood may be fatal **(2mks)**

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7. Explain the importance of Gibberellin during the process of germination **(2mks)**

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8. James observed 10 cells along the diameter of the field of view of a light microscope measuring 3mm. If the actual diameter of a one cell was 0.3micrometers, determine the magnification used to observe the cells. **(3mks)**

9. State the use of the following instruments in ecological studies **(3mks)**



X



Y



Z

a) Y ……

b) Z ……...

c) X ……

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10. a) Name the sub-division of seeded plants that experience double fertilization **(1mk)**

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b) State **FOUR** post-fertilization changes that takes place in a flower **(4mks)**

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11. Differentiate between heterozygous and homozygous genotypes **(2mks)**

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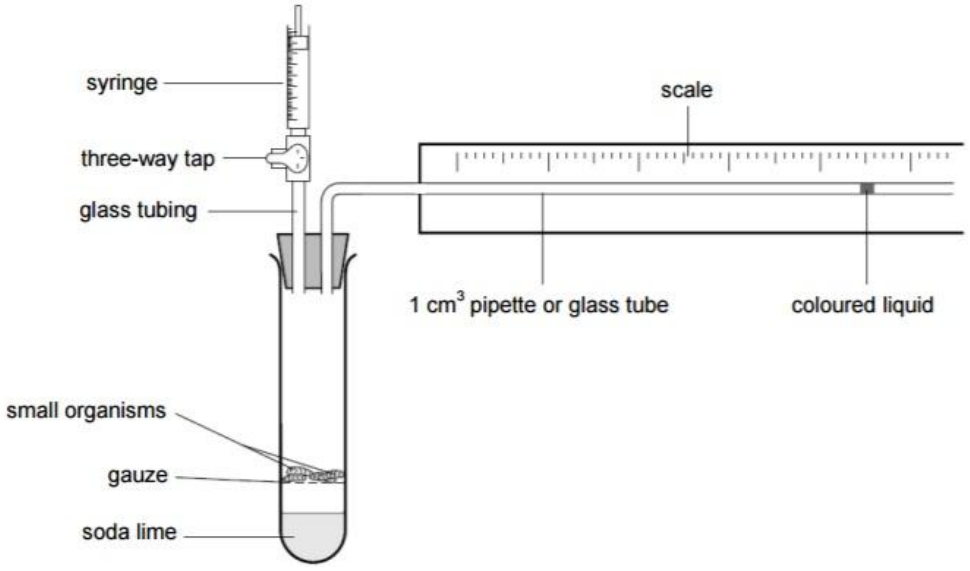
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12. A group of researchers caught **350** fish from a pond, tagged them then released them back to the pond. 24 hours later, **300** fish were caught out of which **150** had tags. Determine the population of fish in the pond. **(3mks)**

13. The set up shown below was used to study a physiological process



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a) What was the use of Soda lime? **(1mk)**

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b) Account for the observation on direction of movement of the coloured water after 1hour **(3mks)**

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14. Explain how the following affect rate of transpiration: **(4mks)**

a) Low humidity

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b) Broad leaf surface

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15. a) Why do herbivores need the following features? **(2mks)**

i) Diastema ……

ii) Long gut ……

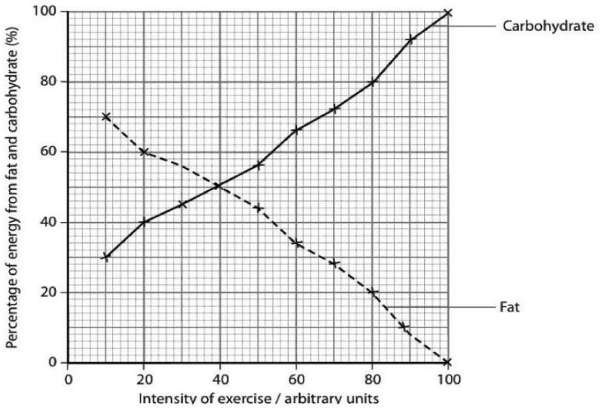
b) Explain how beneficial it is for some herbivores being grazers and others being browsers. **(2mks)**

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16. The graph represented below shows how percentage of energy from carbohydrates and fats in the body of an athlete vary according to the intensity of exercise in the



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a) Account for the change in percentage energy released when the intensity of exercise is at between 40 to 80 arbitrary units **(3mks)**

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b) State **TWO** properties of lipids **(2mks)**

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17. Explain the following observations

a) A person of Blood group **A** cannot receive blood from a person of Blood group **B** **(2mks)**

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b) No Digestion of Starch occurs in the stomach **(2mks)**

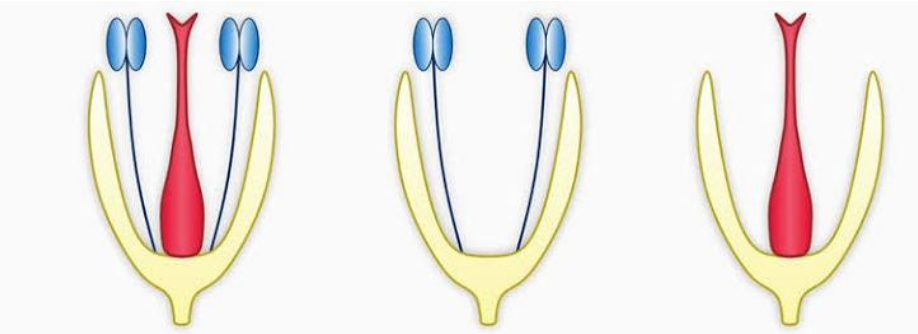
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18. The following are types of flowers illustrated



P **Q** **R**

a) Give the term that is used to identify each of the following flowers as per their sexes

i) P ……..…… **(1mk**

ii) Q ……...……..…..... **(1mk**

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b) Explain the advantage flower **R** has over flower **P** **(2mks)**

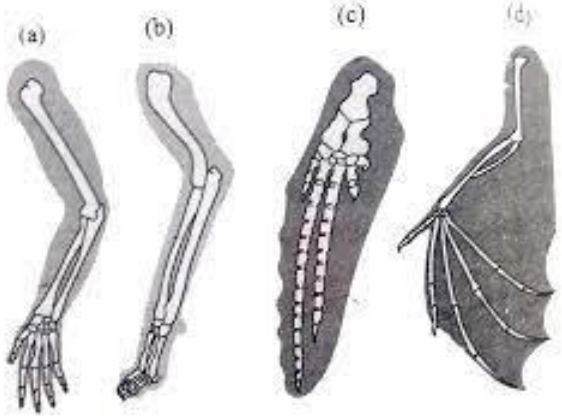
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19. Study the structures shown below and answer questions that follow



a) Name the type of evolution represented above **(1mk)**

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b) How is the type of evolution named in a) above advantageous to organisms **(2mks)**

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20. John and Jane both have normal blood clotting but have a haemophiliac son and two daughters. Using 'h' for the recessive gene, determine the genotypes of their children. **(4mks)**

21. Give the economic importance of the following **(2mks)**

a) Colchicine

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b) Quinine

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22. a) State the differences between herbivores and carnivores in terms of the following dental features **(3mks)**

Dental Feature	Carnivores	Herbivores
Canine		
Carnassial Tooth		
Molar		

23. Name the nutrient important in the following: **(2mks)**

i) Impulse transmission ……..

ii) Haemoglobin formation ……

24. State **TWO** roles of the tongue in digestion process **(2mks)**

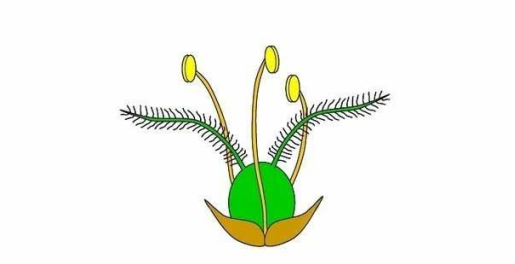
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25. Use the diagram shown to answer questions that follow



State how the following parts adapt the flower above to pollination by wind **(3mks)**

Part	Adaptations
Bracts	
Stigma	
Filament	

END

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

BIOLOGY

PAPER 2 (231/2)

FORM FOUR (4)

Time: 2 Hours

Instructions to candidate

(a) Write your name, school, index number in the space provided at the top of the paper.

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

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

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

(e) In section **B** answer question **6 (compulsory)** and either **question 7 or 8** in the answer booklet provided.

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

(g) Candidates should answer the questions in English.

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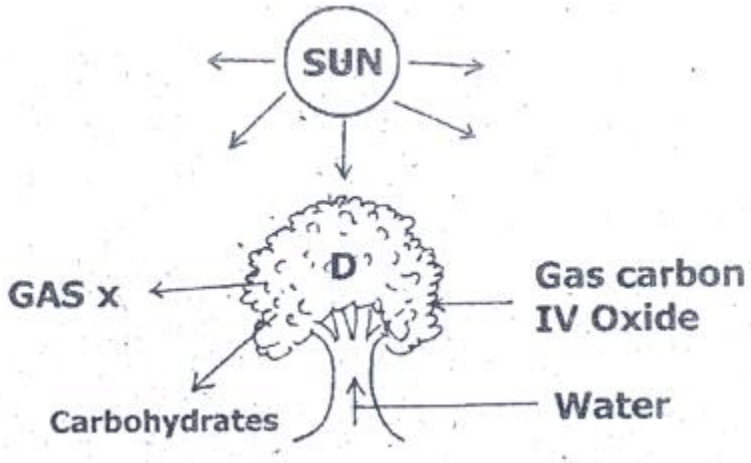
Section	Question	Maximum Score	Candidate's Score
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7	20	
	8	20	
		80	

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SECTION A (40 Marks)

Answer all the questions

1. The diagram below illustrates the first stage in the energy flow in the ecosystem.



a) Identify:

i) Organelle responsible for activity in D**.** **(1mk)**

……

……

ii) Gas x **(1mk)**

……

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

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

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ii) Water **(2mks)**

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

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c) Give two ways in which the carbohydrates produced in the organelles at D is utilized in plants. **(2mks)**

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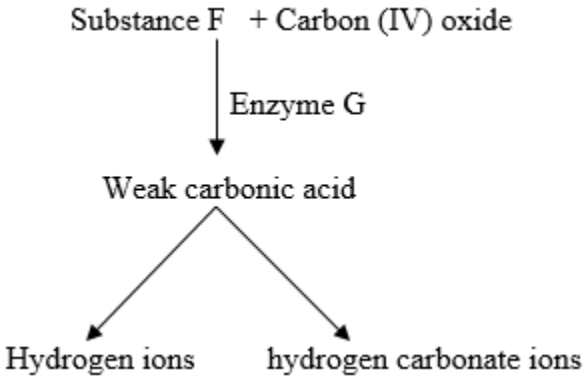
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2. The diagram below illustrates the role played by red blood cells in the transportation of carbon (IV) oxide.



a) Other than the carbon (IV) oxide transportation in the red cells, name the other form of carbon (IV) oxide transportation in humans. **(1mk)**

……

……

……

b) Name substance F. **(1mk)**

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……

c) Name enzyme marked G and state its role in the reaction**.** **(2mks)**

Enzyme ……

Role ……

d) Explain why transportation of carbon (IV) oxide in red blood cells is advantageous. **(2mks)**

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e) Explain the role of calcium ions in blood clotting. **(2mks)**

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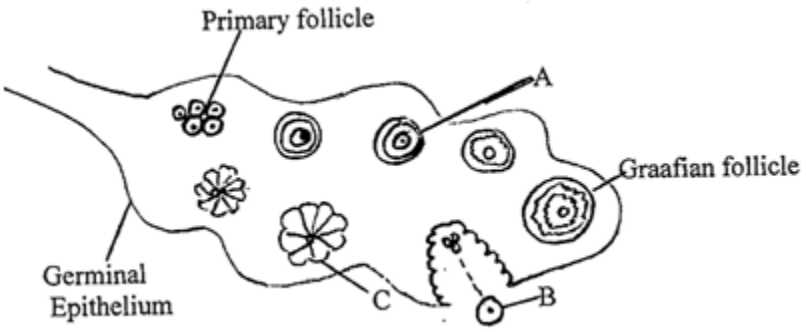
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3. The diagram below shows a section through the human ovary. Study it and answer the questions that follow.



a) Name the part labeled A**.** **(1mk)**

……

……

b(i) Which part of the ovary divides to form the primary follicle**.** **(1mk)**

……

……

(ii) Which type of cell division is responsible for the production of primary follicles? **(1mk)**

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c) Follicle stimulating hormone reaches the ovary so that part A begins to mature.

(i) Name the first hormone which is secreted by the ovary as a result of arrival of FSH **(1mk)**

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(ii) What is the role of this hormone in the menstrual cycle? **(1mk)**

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d) Structure B leaves the ovary.

(i) Where does structure B enter immediately after leaving the ovary? **(1mk)**

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(ii) Which hormone level peaks just before structure B leaves the ovary? **(1mk)**

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e) State the role of structure C. **(1mk)**

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4. In an investigation, a variety of pea plants grown from seeds with smooth coats crossed with plants grown from seeds with wrinkled coats. All the seeds obtained in the First Filial (F1) generation had smooth seed coats.

a) Using the letter R to represent the gene for smooth seed coat, work out the genotype of the F1 generation. (Show your working.) **(4mks)**

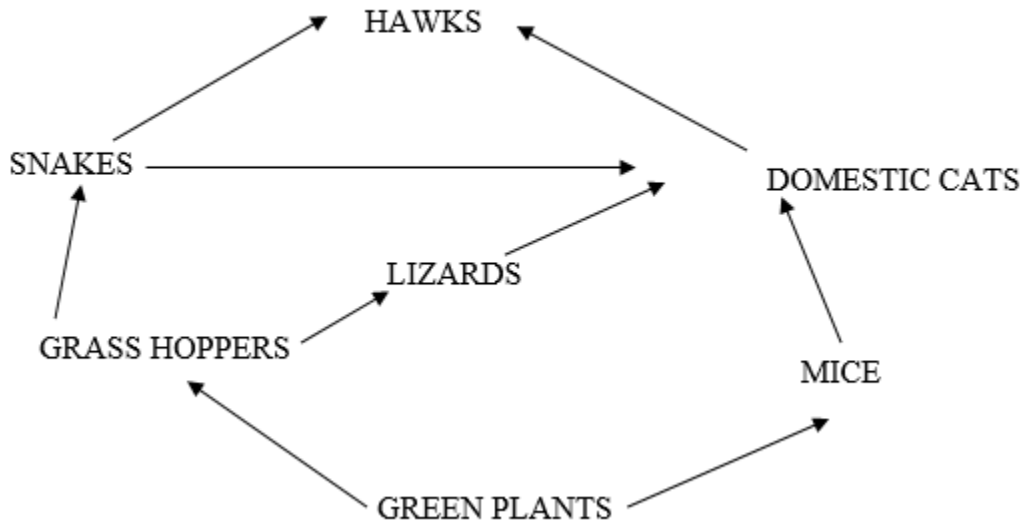
b) If the F1 generation was selfed, determine the phenotypic ratio of the Second Filial (F2) generation. (Show your working**.)** **(2mks)**

c) If the total number of seeds in the F2 generation was 14640, calculate the number of seeds with wrinkled coats. (Show your working.) **(2mks)**

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5. The chart below shows a feeding relationship in a certain ecosystem.

Study it answer the questions



(a)i) Identify this feeding relationship**.** **(1mk)**

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……

(ii) Name the producers in this ecosystem**.** **(1mk)**

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iii) Which organisms have the highest varieties of predators**.** **(1mk)**

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b) Construct two food chains from this ecosystem ending with a tertiary consumer. **(2mks)**

c) Identify three phyla that the consumers in this ecosystem belong to. **(3mks)**

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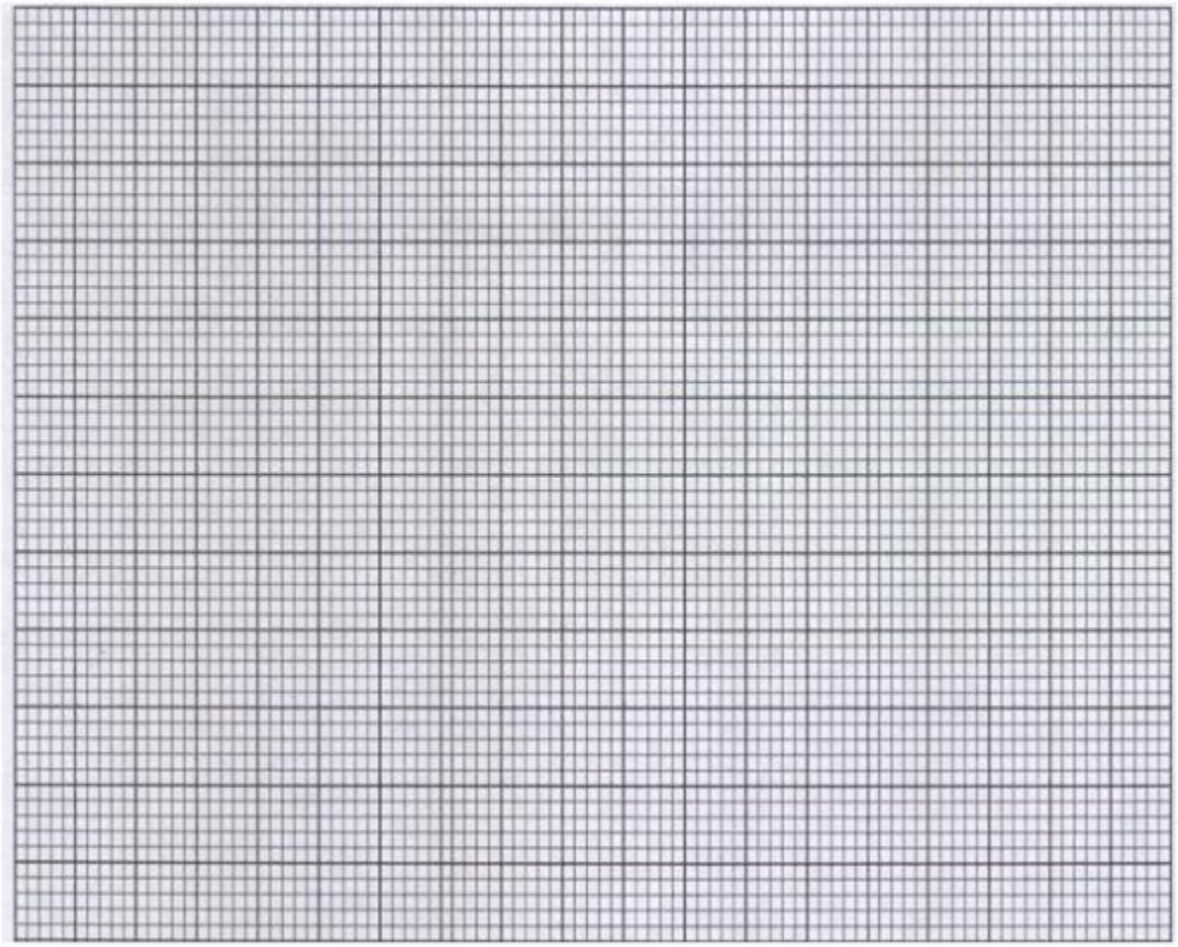
SECTION B (40 Marks)

Answer question 6 (compulsory and either question 7 or 8

6. In an experiment, several cubes of liver of same mass were put in separate test tubes each with equal amount of hydrogen peroxide.
Each test tube was placed in a water bath at various temperatures. The time taken for the hydrogen peroxide to decrease in each test tube was determined and recorded results are shown in table below.

Temperature in ^0C	15	20	25	30	35	40	45	50
Time taken for Hydrogen peroxide to decrease (minutes)	45	30	15	10	4	4	30	57

a) Using appropriate scale, plot a graph of duration of reaction against temperature. **(7mks)**



b) From your graph, determine the optimum temperature for the decomposition of hydrogen peroxide. **(1mk)**

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c) Account for the changes that occur between

(i) 15^0C - 35^0C **(2mks)**

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(ii) 35^0C - 40^0C **(2mks)**

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(iii) 40^0C - 35^0C **(2mks)**

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d) Name the enzyme in the liver that decomposes hydrogen peroxide. **(1mk)**

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e) Other than temperature, state three other factors that affect enzyme controlled reactions. **(3mks)**

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f) Name two types of enzyme inhibitors**.** **(2mks)**

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7.a) Explain how each of the following factors affects the rate of photosynthesis:

i) Temperature **(3mks)**

ii) Chlorophyll concentration. **(2mks)**

b) Describe the process of carbohydrates digestion in human beings. **(15mks)**

8.a) Describe the meaning of the following phrases as explained in the mechanism of Evolution:

(i) "Struggle for existence". **(2mks)**

(ii) "Survival for the fittest". **(2mks)**

b) Describe how comparative Anatomy explains the evidence for organic evolution. **(16mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

BIOLOGY

PAPER 3 PRACTICAL (231/3)

FORM FOUR (4)

Time: 1¾ Hours

INSTRUCTIONS TO CANDIDATES:

(a) Write your **name, index number** and **school** in the spaces provided above.
(b) **Sign** and write the **date** of examination in the spaces provided above.
(c) Answer all the questions in the spaces provided.
(d) You are required to spend the first **15** minutes of the **1¾** hours allowed for
(e) this paper reading the whole paper carefully before commencing your work.
(f) This paper has **three** questions.
(g) Students should check the question paper to ascertain that all the papers are printed as indicated and that no questions are missing.
(h) Candidates should answer the questions in English.

FOR EXAMINER'S USE ONLY:

Question	Maximum Score	Candidate's Score
1	16	
2	12	
3	12	
Total Score	40	

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1. You are provided with specimens **W1, W2, W3** and **W4**. Examine them.

a) Draw and label specimens **W1** in the space provided. **(3mks)**

Magnification **(1mk)**

……

b) Giving reasons, state the agent or method of dispersal of the specimens. **(8mks)**

Specimen	Agent or method of dispersal	Reason (s)
W_1		
W_2		
W_3		
W_4		

c) Open up specimen **W4 to expose the longitudinal section,** State the types of placentation and gynoecium.

(i) Placentation **(1mk)**

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Reason **(1mk)**

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(ii) Gynoecium **(1mk)**

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Reason **(1mk)**

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2. You are provided with specimen labelled K. Using a hand lens examine the specimen.

a) State the phylum to which the specimen belongs. **(1mk)**

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b) Using observable features only, name the class to which the specimen belongs.

(i) Class**……..** **(1mk)**

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

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c) Cut three of specimen K into tiny pieces. Place the pieces into boiling tube. Add 5ml of water. Boil for 5 minutes. Decant the extract into a clean test tube. Using the reagents provided, identify the food substances in the extract. Record the food substances being tested for, procedures, observations and conclusions in the table below. **(8mks)**

Food substance	Procedure	Observations	Conclusion

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3. You are going to investigate the effect of the concentration of sugar solutions on a certain physiological process in a plant tissue.

Step 1 Cut each cylinder to exactly 30mm in length.

Step 2 Put one potato cylinder to each of solutions in test-tube A, B and C

Step 3 Leave the potato cylinders in the test-tubes for 20 minutes.

While you are waiting continue with the other questions.

Step 4 After 20 minutes use forceps to remove the potato cylinder from test-tube A onto the white tile.

Step 5 Measure the length of the potato cylinder from test-tube A and record this measurement in **millimetres**, in the table in, 3(a) below.

Step 6 Repeat steps 4 and 5 for the potato cylinder in test-tube B and C

Work out the change in length for cylinder A, B and C and record in the table, in 3(a) below.

a)

Potato cylinders	Length at the beginning of the experiment	Length at the end of the experiment (in mm)	Change in length (in mm)
In solution A	30mm		
In solution B	30mm		
In test-tube C	30mm		

(3mks)

(i) Explain why it was important that the potato cylinders were all cut to the same length in step 1. **(1mk)**

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(ii) Suggest one improvement that you could make to the method you have used in this investigation. **(1mk)**

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(iii) Describe one precaution you took while preparing the potato cylinders in steps 1-6. **(1mk)**

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(iv) Explain the results obtained in table 3(a) above for cylinder A and B **(3mks)**

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(b) Potato cells contain starch grains. **(2mks)**

(i) State the reagent that would be used to test for the presence of starch and give the result

Reagent **.....**

Result **.....**

(c) Suggest the purpose of cylinder C in the experiment. **(1mk)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

BUSINESS STUDIES (565/1)
FORM FOUR (4)
PAPER 1
Time: 2 *Hours*

ANSWER ALL QUESTIONS.

1. State four banking services offered by Central Bank of Kenya to the Kenyan Government. **(4mks)**

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2. State the term used to each of the following disciplines. **(4mks)**

i) Study of the process and acquiring necessary resources to start and operate a business.

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ii) Study of how human beings strive to satisfy their endless wants using the scarce resources.

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iii) Study of trade and aids to trade.

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iv) Study of the systematic way of recording business activities and using the records for decision making

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3. For each of the following types of accounts, state in the spaces provided whether you debit or credit increase or decrease in the account. **(3mks)**

Type of account	**To increase**	**To decrease**
i)Asset		
ii)Capital		
iii)Liability		

4. Outline four benefits of using social media such a WhatsApp groups for office communication. **(4mks)**

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5. The following balances were extracted from the books of Furaha enterprises on 31st December 2022.

Fixed assest	3,000,000
Current assets	500,000
Creditors	700,000
4 year loan	1,500,000

Calculate the networth of the above business as at 31st Dec 2022. **(4mks)**

6. Highlight four disadvantages of enclosed office plan. **(4mks)**

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7. State four reasons for observing ethical practices in product promotion. **(4mks)**

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8. Outline four reasons why human beings make choices when satisfying their wants. **(4mks)**

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9. State four disadvantages of concentrating industries in one area within a country. **(4mks)**

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10. Highlight four external business environment that may positively affect the operations of a business. **(4mks)**

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11. Bidii ltd had the following book balances as at 31st December 2022

	Shs
Sales	500,000
Stock 1/1/2022	20,000
Returns inwards	5,000
Purchases	300,000
Stock 31/12/2022	40,000
Returns outwards	10,000

Prepare Ahadi Ltd Trading Account for the year ended 31st December 2022. **(5mks)**

12. Outline for reasons why small scale businesses are popular in Kenya. **(4mks)**

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13. State four errors which may affect the agreement of a trial balance totals. **(4mks)**

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14. Highlight four features of a bonded warehouse. **(4mks)**

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15. State the reward for each of the following factors of production. **(4mks)**

Factors of production	Reward
i)Land	
ii)Capital	
iii)Entreprenuership	
iv)Labour	

16. Outline four negative effects of an ageing population in a developing country such as Kenya. **(4mks)**

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17. Highlight four ways in which a government participate in business activities**.** **(4mks)**

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18. Highlight four types of demand **(4mks)**

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19. State four features of an insurable interest. **(4mks)**

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20. Identify the source document into which the information given below would be recorded.(4mks)

Information	Source
i)Money received from a debtor	
ii)Credit purchases	
iii)Increasing amount a debtor is required to pay	
Credit sales	

21. Highlight four characteristics of an entrepreneur. **(4mks)**

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22. Outline four ways through which firms contribute to national income of country**.** **(4mks)**

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23. Highlight four ways a co-operative society may use to raise capital. **(4mks)**

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24. State four ways the central bank of a country may us e to reduce money in circulation within a country.**(4mks)**

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25. The information below relates to R.S LTD

	sh
Sales	20,000
Cost of sales	15,000
Average stock	6,000
Expenses 10% of sales	

Calculate

i) Gross profit markup **(1mk)**

ii) Gross profit margin **(1mk)**

iii) Stock turn over **(1mk)**

iv) Net profit **(1mk)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

BUSINESS STUDIES (565/2)

FORM FOUR (4)

PAPER 2

Time: 2 ½ *Hours*

INSTRUCTIONS TO CANDIDATES

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

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

c) Answer **ANY FIVE** questions from this paper.

FOR EXAMINER'S USE ONLY

Question	Marks
1	
2	
3	
4	
5	
6	
Total	

1.(a) Explain **FIVE** reasons why commercial banks are very important in an economy. **(10mks)**

(b) Abdula, a manufacturer exhibited his goods at a local trade show. However, his sales did not increase significantly thereafter. Outline **five** reasons that may have led to lack of significant sales increase. **(10mks)**

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2.(a) Highlight **four** roles of Nairobi stock exchange as a market for securities. **(8mks)**

(b) On 1st October 2013, Otonglo Traders Had shs.10 000 and shs.40 000 at the bank. During the month, the following transactions took place.

Oct 2	Bought goods worth shs3,100 by cheque
3	Paid motor expenses shs.6,000 in cash
6	Sold goods worth 8,200 cash
10	paid a creditor shs.9,500 by cheque after deducting a 5% cash discount
12	Received a commission of shs.580 directly into the bank account.
14	Shelby, a debtor, settled her account of shs.30,000 by cheque less a 2.5% cash discount
15	The bank deducted shs. 850 from the business account for services rendered
19	The owner took shs.1,500 by cheque for personal use
23	Paid Kiboko traders shs.38,800 by cheque in full settlement of their account less 3% cash discount
24	Withdrew shs.15,000 from bank for business use
26	Received shs.8,200 cash from a debtor in full settlement of a debt of shs.8,500
30	Took all the cash to the bank leaving only shs.1,800 in the cash till

Required:

Prepare a duly balanced three column cash book **(12mks)**

3(a) Outline **FIVE reasons** why a bank may dishonour a cheque. **(10mks)**

(b) Outline **five** differences between perfect competition market and oligopolistic markets. **(10mks)**

4.(a) Explain five ways that the Government as an external business environment factor can influence Business Activities. **(10mks)**

(b) Your school intends to place an order with Elimu Company limited for the supply of some urgently required laboratory equipment.

Explain **five** reasons why it would be advisable for the school to use e-mail instead of telephone when placing the order. **(10mks)**

5.(a) Explain five importance of entrepreneurship to the economy. **(10mks)**

b) The following transactions relates to Kioko Traders for the month of May 2012.

May 2: Sold goods on credit to Asunta sh.24,000 and Janet sh.32,000
May 8: Bought goods on credit from Patel Traders sh.80,000
May 12: Asunta returned goods worth sh.4,000
May 15: Purchased goods on credit from Karoki sh.68,000 and Petero sh.62,100
May 20: Goods worth sh.12,000 were returned to Patel Traders and goods worth sh.6,000 to Karoki
May 23: Goods sold on credit to Asunta sh.16,000, Tom sh.22000 and Joseph sh.26,000
May 27: Goods returned by Janet sh.4,000
May 30: Purchased a motor vehicle on credit worth sh.1,000,000 from General motors

Required: Prepare the relevant journals. **(10mks)**

6.(a) Using a diagram illustrate the effects of a rightward shift in supply curve on equilibrium price and quantity. **(10mks)**

(b) Many youths in Kenya remain unemployed. Explain six measures that can be taken to solve unemployment in Kenya. **(10mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

CHEMISTRY(233/1)

FORM FOUR(4)

Time: 2 Hours

INSTRUCTIONS TO CANDIDATES

- *Write your **Name**, **Index Number** and **School** in the spaces provided above.*
- *Answer **all** the questions in the spaces provided after each question.*
- ***KNEC** Mathematical tables and **silent non-programmable** electronic calculators may be used.*
- ***ALL** working **must** be clearly shown where necessary.*
- *Candidate should **check** the question paper to ascertain that **all** the pages are printed and that no questions are missing.*
- *Candidates* should answer the questions in **English**.

FOR EXAMINER'S USE ONLY

QUESTIONS	MAX SCORE	CANDIDATE'S SCORE
1 – 25	80	

1. (a) What is the meaning of the term homologous series? **(1mk)**

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(b) Describe the procedure of preparing a soapless detergent from dodecene **(4mks)**

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2. State three factors that affect the rate of a chemical reaction**.** **(3mks)**

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3. In an industrial process, ammonia is produced by reacting nitrogen gas and hydrogen gas in the presence of a catalyst.

(a) Sate Le Chatelier's principle. **(1mk)**

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(b) Write the equation for the formation of ammonia gas. **(1mk)**

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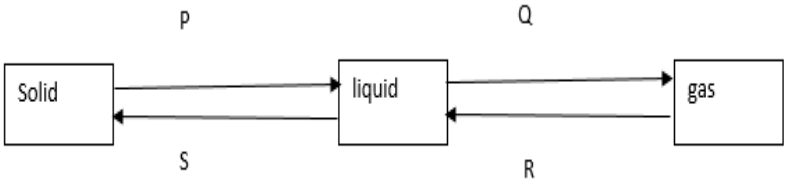
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(c) State how an increase in temperature affects the position of equilibrium. **(1mk)**

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4. The diagram below shows the relationship between the physical states of matter. Study it and answer the questions that follow.



(a) Identify energy changes represented by the letters:

P …… and Q …… **(2mks)**

(b) Explain why there is no change in temperature during each of the processes shown in the diagram. **(2mks)**

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5. State two methods that can be used to determine the purity of a substance. **(2mks)**

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6. The volume of a fixed mass of a gas at a pressure of 550mmHg and 45^{o}C is 220 cm^{3}. What would be the volume of the gas if the pressure and temperature are raised to 700mmHg and 40^{o}C respectively? **(3mks)**

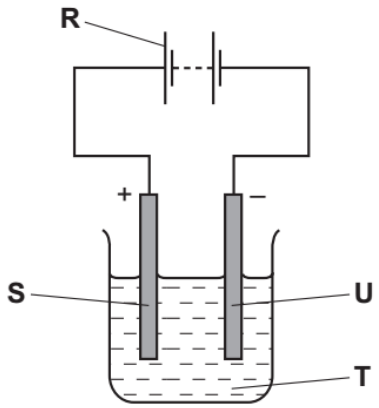
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7. Study the information below and use it to answer the questions that follow.

bond	Bond energy kJ/mol
H-H	435
C-H	413
C-C	346
C=C	611
C≡ C	835

(i) Calculate the energy released during the hydrogenation of prop-1-ene to propane. **(3mks)**

8. The diagram below shows the apparatus used for the electrolysis of molten sodium bromide.



(a) Which letter **R, S, T** or **U** on the diagram represents the cathode? **(1mk)**

……

……

(b) State and explain the observation made at the anode. **(2mks)**

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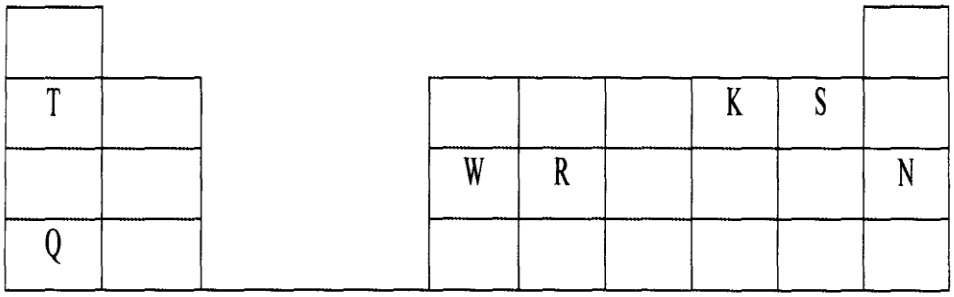
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(c) Which **condition** is missing in the set-up? …… **(1mk)**

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9. The grid below is part of the periodic table. The elements are not represented by their actual symbols. Use the information to answer the questions that follow.



a)(i) Which is the most reactive non — metal? Explain. **(2mks)**

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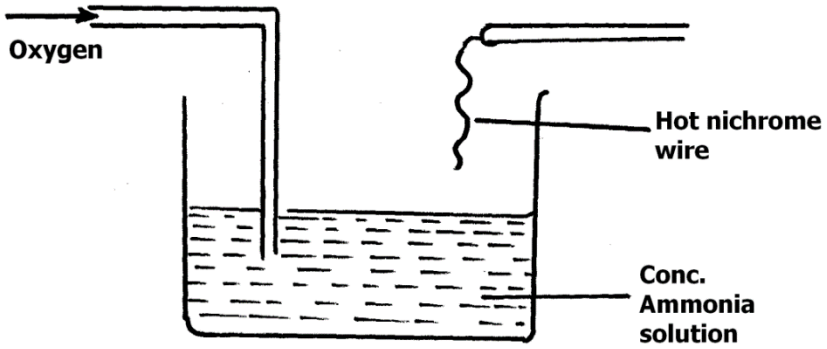
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(ii) Write an equation for the reaction between elements Q and K **(1mk)**

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10. The apparatus below was set – up to show the catalytic oxidation of ammonia. Study the diagram and answer the questions that follow.



a) State what would be observed in the experiment above. Explain. **(2mks)**

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b) Write the equation for the reaction that takes place during oxidation of ammonia. **(1mk)**

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11. A heavy metal **X** was dissolved in dilute nitric acid to form a solution of compound **X(**$NO_3)_2$.
Portions of the resulting solution were treated as follows:

a. To the first portion a solution of dilute hydrochloric acid is added, where a white precipitate **(S)** is formed, which dissolves on warming.

b. The second portion is treated with two drops of 2M Sodium hydroxide solution where a white precipitate **T** is formed. The white precipitate dissolved in excess sodium hydroxide to form a colourless solution.

c. A solution of potassium iodide is added to the third portion where a yellow precipitate **(U)** is formed.

d. When the resulting solution is evaporated to dryness and heated strongly a yellow solid **(V)** is formed and a brown gas (**W)** and a colourless gas **(X)** are formed.

i. Identify the substances X, S, T, U, V, W **(3mks)**

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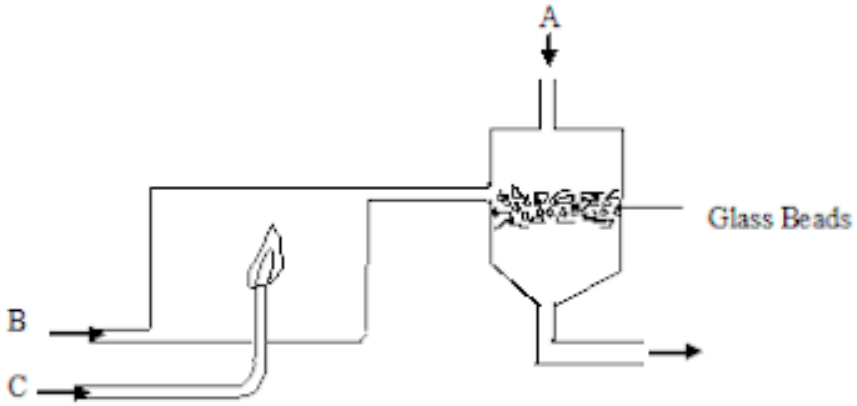
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ii. Write an ionic equation of the reaction that occurs in part (iii) **(1mk)**

.....

.....

12. The diagram below shows industrial manufacture of hydrochloric acid.



a) Name the substance: **(3mks)**

A.....

B.....

C.....

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b) State the function of the glass beads in the above process. **(1mk)**

.....

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13. (a) What do you understand by the term recycling? **(1mk)**

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(b) Describe how a mixture of iron filings and sulphur. **(2mks)**

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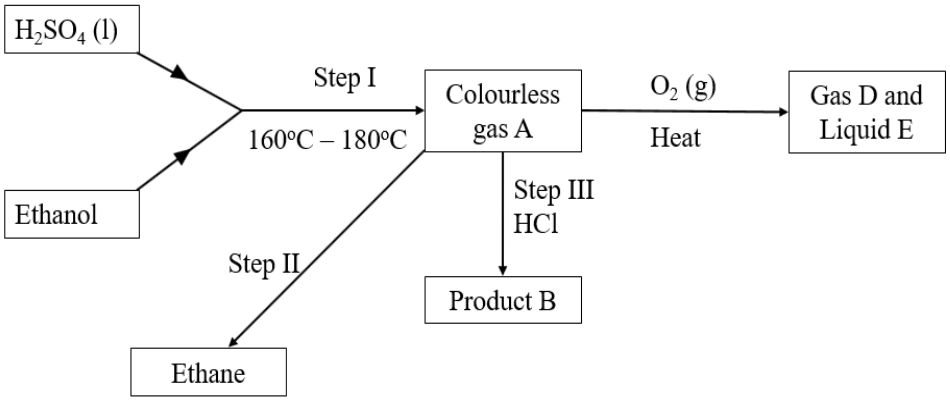
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14. An organic compound **P** contains 68.9% carbon, 13.5% hydrogen and 21.6% oxygen. The relative formula mass of **P** is 74. Determine its molecular formula (C=12, H=1, O=16). **(3mks)**

15. Calculate the molarity of phosphoric (V) acid (H_3PO_4) that is obtained by dissolving 13g of phosphoric (V) acid in 250 cm^3 of solution. (H=1, P=31, O=16). **(2mks)**

16. Study the reaction scheme below and answer the following questions:



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(a) Write the equation for step I. **(1mk)**

.....

.....

(b) What is the name of gas D and Liquid E? **(1mk)**

Gas D……..

Liquid E…….

(c) Name the process taking place in step II. **(1mk)**

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17. State the type of bonding in the following substances: **(2mks)**

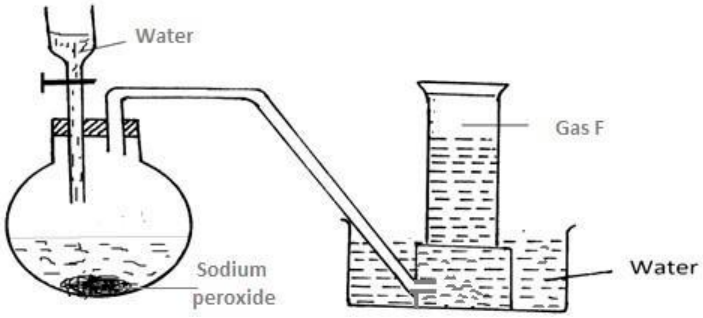
(a) Diamond

……

(b) Copper (I) oxide

……

18. The set-up below was used to collect gas **F** produced by the reaction between sodium peroxide and water



(i) Name gas **F** **(1mk)**

.....

.....

(ii) At the end of the experiment, the solution in the round-bottomed flask was found to be a strong base. Explain why this was a strong base. **(1mk)**

.....

.....

(iii) Which property of gas **F** makes it be collected by the method used in the set-up? **(1mk)**

.....

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(iv) Write the equation for the reaction taking place in the flask. **(1mk)**

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19. (a) Using an equation, explain the observation made when concentrated sulphuric (IV) acid is added to sugar crystals.

(2mks)

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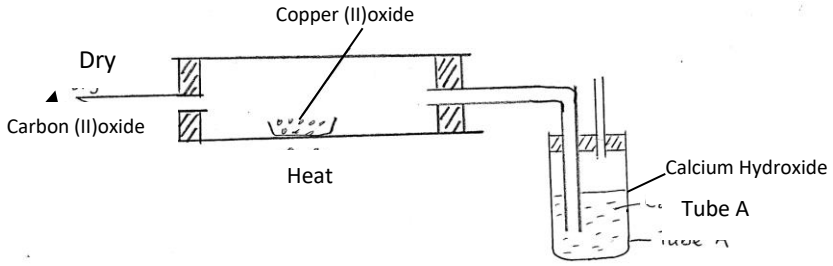
(b) What property is displayed by the acid in (a) above. **(1mk)**

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20. Carbon (II) oxide was passed over heated copper (II) oxide in a combustion tube as shown in the diagram below.



(a) State and explain the observation made in tube A. **(2mks)**

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(b) Write a chemical equation for the reaction that took place in the combustion tube. **(1mk)**

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21. (a) What is isomerism ? **(1mk)**

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(b) Draw and name any **two** isomers of $C_4 H_8$ **(2mks)**

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22. Liquids **A** and **R** are immiscible. (Density of A – 1.6gcm^{-3} and density of R = 1.9gcm^{-3}).

(a) Draw a diagram to illustrate the most suitable method of separation that would be used to separate the two liquids. **(3mks)**

23. Chlorine gas was passed over heated iron wire. On cooling the set-up, a solid X was formed. All the solid X was dissolved in water to form solution X. Sodium hydroxide solution was added to about 2 ml of solution X, little by little until in excess.

(a) Write the equation for the reaction of chlorine and iron. **(1mk)**

.....

.....

(b) Calculate the number of volume of chlorine that reacted with 1.4g of iron. (Fe = 56, Cl = 35.5, Molar gas volume = 24dm^3). **(3mks)**

(c) State the observation that was made when sodium hydroxide was added to solution X drop by drop until in excess. **(1mk)**

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24. Draw a well-labelled diagram to show how nitrogen (I) oxide can be prepared and collected in the laboratory. **(3mks)**

25. Name the two types of bonds within a molecule of ammonia. **(2mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

CHEMISTRY(233/2)

FORM FOUR(4)

Time: 2 Hours

INSTRUCTIONS TO CANDIDATES:

- Answer **all** the questions in the spaces provided.
- Write **your Name** and **Index Number** in the spaces provided above.
- Mathematical tables and electronic calculators may be used for calculations.
- All working **must** be clearly shown where necessary

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QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	12	
2	14	
3	11	
4	12	
5	11	
6	11	
7	09	
Total score	**80**	

1. (a) Give the systematic names of the following compounds;

(i) $CH_2 = \underset{\displaystyle Cl}{\overset{\displaystyle |}{C}} - CH_2CH_3$ **(1mk)**

……

(ii) $CH_3CH_2CH_2\ CH_2C{\equiv}\ CH$ **(1mk)**

……

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(b) State the observations made when propan-2-ol is reacted with;

(i) Acidified potassium manganate (VII) solution **(1mk)**

.....

.....

(ii) sodium metal **(1mk)**

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(c) Ethanol may be obtained from sugarcane and converted to ethene as shown below;

Sugarcane $\xrightarrow{\text{Step I}}$ Ethanol $\xrightarrow{\text{Step II}}$ Ethene

(i) Give the name of the process that takes place in step **I** **(1mk)**

.....

.....

(ii) Name the reagent and condition in step **II** **(2mks)**

Reagent.....

Condition.....

(iii) Give **two** uses of ethanol other than as a solvent. **(2mks)**

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(d) Compounds **P** and **Q** have the same molecular formula $C_4H_8O_2$. Compound **P** liberates Carbon (IV) Oxide on addition of solid sodium hydrogen carbonate while compound **Q** does not. Compound **Q** has a pleasant smell. Draw the possible structures of;

Compound **P** **(1mk)**

Compound **Q** **(1mk)**

(e) Disposal of polymers such as polyethene by burning pollutes the environment.
Explain how this happens. **(2mks)**

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2.(a) (i) Name the **two** crystalline forms of sulphur **(2mks)**

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(ii) Sulphur is extracted from underground deposits through Frasch process. Describe how this process works. **(3mks)**

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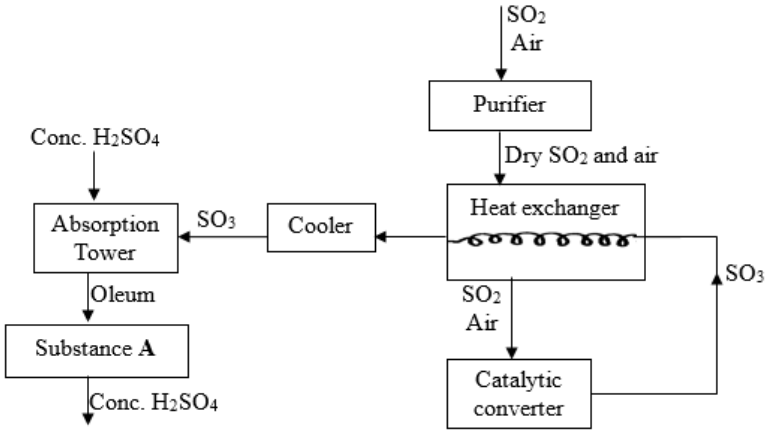
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(b) The scheme below represents the steps followed in the contact process. Study it and answer the questions that follow.



(a) Name substance **A** **(1mk)**

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.....

(b) Name **one** impurity removed by the purifier **(1mk)**

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(c) Give a reason why vanadium (V) oxide is preferred to platinum rhodium in the above process **(1mk)**

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(d) Write down the equation of the reaction taking place in the catalytic converter. **(1mk)**

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(e) Give the role of the heat exchanger **(1mk)**

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(f) When sulphur (VI) oxide is dissolved in water, acid fumes are formed. Explain the effect of exposure to these fumes. **(1mk)**

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(g) (I) Name the main pollutant in the contact process. **(1mk)**

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(II) How can the pollution in (g) (I) above be prevented? **(1mk)**

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(h) Give **two** uses of sulphuric (VI) acid. **(2mks)**

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3. (a) The table below shows some alkaline earth elements and halogens. Use the table to answer the questions that follow.

	Alkaline earth elements			**Halogens**		
Element	**Be**	**Mg**	**Ca**	**F**	**Cl**	**Br**
Atomic radius (nm)	0.089	0.136	0.174	0.064	0.099	0.144
Ionic radius (nm)	0.031	0.065	0.099	0.136	0.181	0.195

(i) Atomic radius increases from **Be** to **Ca** and from **F** to **Br.** Explain **(2mks)**

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(ii) Explain the difference in the atomic and ionic radii of halogens. **(2mks)**

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(iii) Give the formula of the hydrogen carbonate of **Ca** **(1mk)**

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(iv) Give the type bond and structure formed when **Mg** and **Cl** react **(2mks)**

Bond.....

Structure.....

(v) Starting with the least reactive, arrange the halogens in the order of reactivity. **(1mk)**

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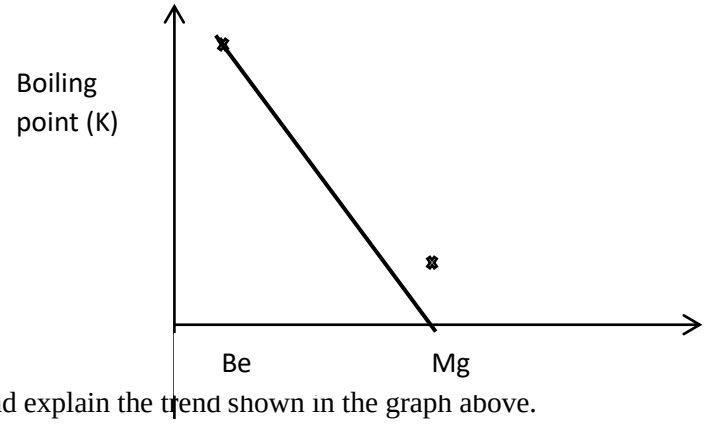
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(vi) Write the equation for the reaction between **Be** and **Cl.** **(1mk)**

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(b) The graph below shows the relationship between the boiling point of beryllium and magnesium.



State and explain the trend shown in the graph above. **(2mks)**

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4. (a)(i) What is fractional crystallization? **(1mk)**

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(ii) The table below shows the solubility of two salts **K** and **L** at variousTemperatures

Salt	**Solubility at** 50 **(ºC)**	**Solubility at** 20 **(ºC)**
K	86 g	31 g
L	18 g	8 g

A mixture of the salts contains 28 g of salt **K** and 17.5 g of salt **L** at 50 ºC. The mixture is cooled to 20 ºC.

(I) State the salt that crystallizes **(1mk)**

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(II) Determine the mass of the salt that crystalizes **(2mks)**

(b)(i) What is hard water? **(1mk)**

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(ii) Give **one** use hard water **(1mk)**

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(iii) Explain how use of sodium carbonate removes water hardness. **(2mks)**

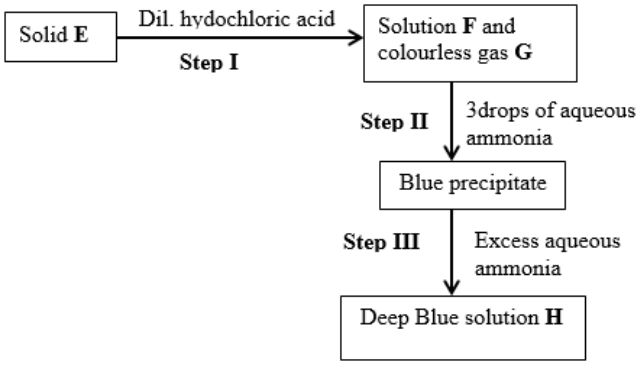
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(c) Study the flow chart below and answer the questions that follow.



(i) identify

I solid **E** **(1mk)**

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II gas **G** **(1mk)**

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(ii) Give the formula of the compound in solution **H** **(1mk)**

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(iii) Write the ionic equation for the reaction in step **II** **(1mk)**

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5(a) What is enthalpy of solution? **(1mk)**

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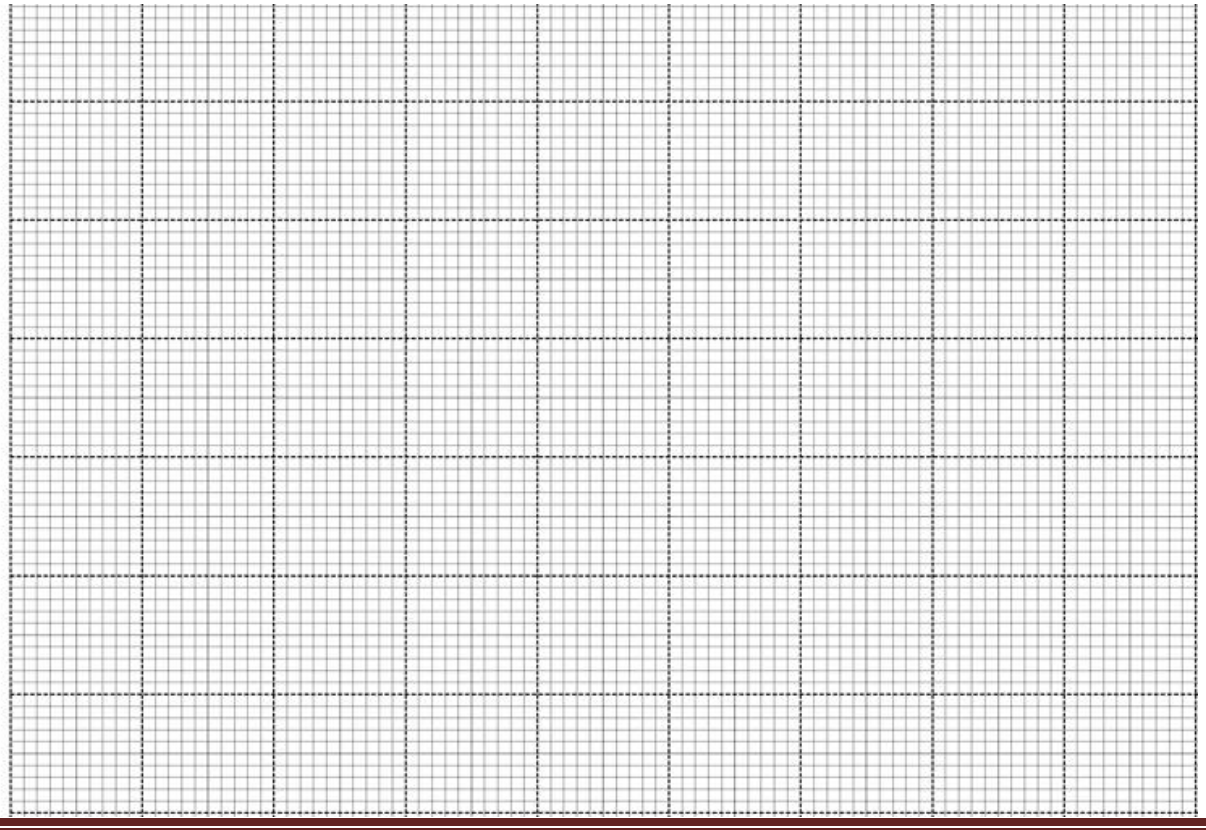
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(b) In an experiment to determine the molar heat of solution of **substance M**, 50.0 cm^3 of water was placed in a plastic beaker. The temperature was measured after every half a minute. At the second minute, 8.2 g of **substance M** was added at once and temperature recorded up to the fourth minute. The table below shows the results obtained.

Time (minutes)	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
Temperature (^oC)	25.0	25.0	25.0	25.0	**X**	17.0	18.0	19.0	20.0

(i) Draw a graph of temperature against time. **(3mks)**



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(ii) Using the graph, determine the temperature change, ΔT **(2mks)**

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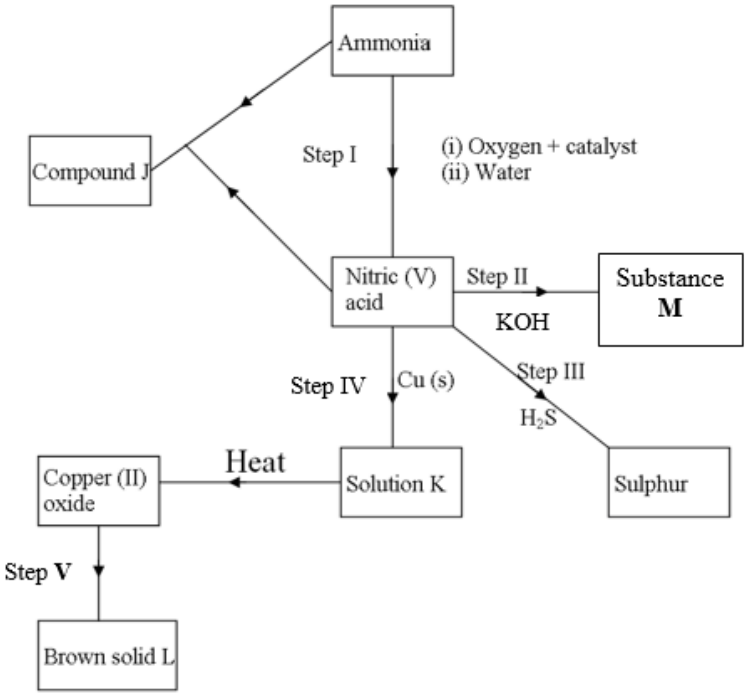
(iii) Calculate the;

I heat change for the reaction **(2mks)**

II molar heat of solution of substance **M**.

(specific heat capacity of solution = $4.2Jg^{-1}K^{-1}$, molar mass of substance **M** =82 **(3mks)**

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



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(i) Name the catalyst used in the conversion of ammonia to nitric (V) acid. **(1mk)**

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

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(iii) Write the equation for the reaction that takes place in step **III**. **(1mk)**

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(iv) Explain why silver cannot be used in step **V**. **(2mks)**

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(v) Give **two** uses of substance **M**. **(2mks)**

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(vi) Calculate the percentage of nitrogen by mass that is present in compound **J**. (N=14, H=1, O=16) **(3mks)**

(vii) Give **one** advantage that urea has over ammonium nitrate as a fertilizer. **(1mk)**

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7(a) state the particle responsible for electric carriage in

(i) aqueous sodium chloride **(1mk)**

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(ii) graphite rod **(1mk)**

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(b) Name the product at the anode when brine is electrolysed using graphite electrodes **(1mk)**

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(c) During electrolysis of aqueous silver nitrate using inert electrodes, a current of 0.75A was passed through the solution for 210 minutes.

I Write the equation at the anode **(1mk)**

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II Determine the mass of the product at the cathode. (Ag=108, 1 Faraday = 96 500 coulombs) **(3mks)**

(d)(i) What is electroplating? **(1mk)**

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(ii) Give **one** importance for the process in d (i) **(1mk)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

CHEMISTRY(233/3)

FORM FOUR(4)

Time: 2 ¼ Hours

Kenya Certificate of Secondary

(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 the spaces provided in the question paper

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

(e) All working **MUST** be clearly shown where necessary

(f) This paper consists of 8 printed pages

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

(h) Candidates should answer the questions in English

For examiners' use only.

FOR EXAMINERS USE ONLY

Question	Maximum score	Candidate's score
1	16	
2	14	
3	10	

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1. You are provided with:

- Anhydrous sodium carbonate, solid Q.
- 0.5M hydrochloric acid, solution R.
- A thermometer

You are required to determine the molar heat of solution of solid Q.

Procedure 1

(a) Place 50 ml of distilled water in a 100ml plastic beaker. Note the temperature of the water and record it in table 1 below.
(b) Add all solid Q to the water in the plastic beaker and stir gently with eh thermometer and record the highest temperature of the solution in table 1 below. Keep the resulting solution for **procedure 2**.

Table 1. **(3mks)**

Highest temperature (T2) ^oC	
Initial temperature (T1) ^oC	
Temperature change (ΔT) ^oC	

i. Calculate the enthalpy change for the reaction. (assume the specific heat capacity of the solution is 4.2 $Jg^{-1}K^{-1}$, density of solution = 1.00 gcm^{-3}) **(2mks)**

Procedure 2

(a) Transfer the contents of the beaker into a 250 ml volumetric flask. Rinse both the beaker and the thermometer with distilled water and add to the volumetric flask. Add more water to make up to the mark. Label this **solution Q**.
(b) Fill the burette with **solution R**.
(c) Pipette 25.0 cm^3 of **solution Q** into the flask. Add 2 drops of methyl orange indicator and titrate with **solution R** from the burette.
(d) Repeat the titration two more times to complete **table 2** below.

Table 2	I	II	II
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution R used, (cm^3)			

(4mks)

Calculate the:

(a) Average volume of solution R used. **(1mk)**

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(b) Number of moles of solution R used. **(2mks)**

(c) Write the equation for the reaction between solution Q and solution R. **(1mk)**

(d) Number of moles of sodium carbonate solution Q used in the titration. **(1mk)**

(e) Number of moles of solid Q used in procedure 1. **(2mks)**

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

2. You are provided with solid D1. Carry out the following tests and write your observations and inferences in the spaces provided.

(a) Place half of solid D1 in a boiling tube. Add about $10cm^3$ of distilled water and shake. Divide the mixture into four portions.

Observations	Inferences
(1mk)	**(1mk)**

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(b) To the first portion, add sodium hydroxide dropwise until in excess.

Observations	Inferences
(1mk)	**(1mk)**

(c) To the second portion, add aqueous ammonia dropwise until in excess.

Observations	Inferences
(1mk)	**(1mk)**

(d) To the third portion, add 3 drops of barium nitrate followed by 2 cm^3 of 2M nitric (V) acid.

Observations	Inferences
(1mk)	**(1mk)**

(e) To the fourth portion, add 1 cm^3 sodium hydroxide followed by aluminium foil and warm the mixture. Test any gases produced using red litmus paper.

Observations	Inferences
(2mk)	**(1mk)**

(f) Place the remaining solid D1 in a test – tube and heat it strongly. Test any gases produced with a burning splint.

Observations	Inferences
(2mk)	**(1mk)**

3. You are provided with solid M1
Carry out the tests below and write your observations and inferences in the spaces provided
a) Place about half of solid M1 in a metallic spatula and burn it in a non-luminous flame.

Observations	Inferences
(1mk)	**(1mk)**

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b. Place the remaining solid M1 in a boiling tube. Add about 6 cm^3 of distilled water and shake the boiling tube. Divide the solution into three portions.

Observations	Inferences
(1mk)	**(1mk)**

c. To the first portion, add 2 drops of bromine water.

Observations	Inferences
(1mk)	**(1mk)**

ii. To the second portion, add all the sodium carbonate. Test for any gases using a burning splint.

Observations	Inferences
(1mk)	**(1mk)**

iii. To the third portion, add 3 drops of acidified potassium dichromate (VI)

Observations	Inferences
(1mk)	**(1mk)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

COMPUTER STUDIES (451/1)

FORM FOUR(4)

Time: 2 ½ Hours

Instructions to candidates

1. This paper consists of TWO sections, A and B
2. Answer all questions in sections A.
3. Answer question 16 and any other THREE questions from section B.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	SCORE
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	
TOTAL MARKS 100		

SECTION A

Answer ALL the Questions in This Section (40 Marks)

1. With reference to cables, list **two** reasons why a keyboard may not function properly. **(2mks)**

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2. Give any **three** advantages of a monitor as an output device. **(3mks)**

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3. Describe any **two** ways of inputting data into a computer. **(4mks)**

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4. Why is it necessary to consider user needs when purchasing a new software. **(1mk)**

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5. Define patch as used in operating system. **(1mk)**

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6. State any **three** ways of identifying an illegal copy of operating system. **(3mks)**

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7. Give any **three** advantages of presenting information using tables. **(3mks)**

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8. Differentiate between the SUM and SUMIF function as used in spreadsheet. **(2mks)**

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9. State any **three** negative moral effects of internet to the society. **(3mks)**

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10. Explain **two** advantages of spreadsheet in government office concerned with carrying out national census.**(4mks)**

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11. State **three** precautions a bank can take to control illegal data alterations. **(3mks)**

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12. List any **three** ways of recovering data lost through accidental erasure. **(3mks)**

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13. Distinguish between sign in and sign up as used in e-mails. **(2mks)**

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14. State any **three** factors to consider before designing a publication. **(3mks)**

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15. Give any **three** benefits of using DTP software in publishing over the word processor. **(3mks)**

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SECTION B

ANSWER QUESTION 16 AND ANY OTHER THREE FROM THIS SECTION. (60 MARKS)

16. a) Differentiate between assembler and compiler. **(2mks)**

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b. Draw an algorithm that accepts two numbers that are greater than zero, The two numbers are multiplied to display a product. If the product is greater than twenty the program should ask for re-input. **(7mks)**

c. Explain how the system would behave if the two numbers entered are 8 and 4. **(2mks)**

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a. Define the following terms as used in programming. **(4mks)**

i.Structured programming

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ii. Tag in web scripting

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iii. Encapsulation

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iv. Syntax

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17. Use the spreadsheet extract below to answer questions that follows.

	A	B	C	D	E	F	G	H	I	J	K
1	**FORM TWO CLASS PERFORMANCE**										
2	**N name**	**Cl class**	**A admno**	**CAT 1**	**CAT 2**	**CAT 3**	**Total**	**Average**	**Score**	**Overall position**	**Remark**
3	M Maina John	E	7984	80	70	59					
4	K Ken Korir	W	7896	75	55	72					
5	Bernard K	E	8092	86	59	75					
6	John Soi	E	7460	80	79	70					

i.Write the function used to assign Bernard position. **(2mks)**

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ii. Write a function in Cell B7, which would be used to count the number of students from "E". **(2mks)**

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iii. Write the function in Cell G7, which would calculate total of totals that are greater than 280. **(2mks)**

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iv. Identify any **Four** formatting features used in Row 2. **(2mks)**

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v.Differentiate between action query and select query. **(2mks)**

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vi. Describe any **two** types of error data that may occur during data collection. **(4mks)**

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vii. Define the term sampling as used in data collection. **(1mk)**

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18. a) State **three** ways in which ICT can improve the access of News in Kenya. **(3mks)**

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b. Explain **two** benefits of training staff using multimedia training package instead of face to face training. **(4mks)**

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c. Houses for sale can be viewed using a Virtual Reality Tour. This allows viewing of the house in three dimension (3D) on a computer screen as they were physically. Explain **two** advantages of Virtual Reality Tour. **(4mks)**

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d. Give **two** reasons why one may need to restart a computer. **(2mks)**

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e. Give **two** benefits of mail merging. **(2mks)**

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19.a .Explain any **three** benefits of using ATMs in banking industry. **(6mks)**

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b. Explain **two** advantages of advertising on web instead of using an advertising brochure. **(4mks)**

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c. Mention any **three** ways of ensuring efficient back up of data. **(3mks)**

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d. Give any **two** benefit of hacking to an organization's computer system. **(2mks)**

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20.a) Mention **three** features used to describe a numbering system. **(3mks)**

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b. Perform the binary arithmetic below. -13 34 + 6 58 using ones compliment. **(5mks)**

c. In a certain coding scheme, letter F is represented as 1101. Represent letter K in the coding scheme. **(2mks)**

d. Explain any **two** reasons why an organization may need information system. **(4mks)**

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e. Define the term system construction. **(1mk)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

COMPUTER STUDIES (451/2)

FORM FOUR(4)

Time: 2 ½ Hours

INSTRUCTIONS TO CANDIDATES

- Write your name and index number in the spaces provided above.
- Sign and write the date of examination in the spaces provided above.
- Write the name and the version of the software used for each questions attempted in the answer sheet
- Answer all the question
- All questions carry equal marks
- Passwords should not be used while saving in the CD/DVD
- All answers must be saved in your CD/DVD
- Make a print out and tie /staple them together
- Hand in all the printout and the CD/DVD

FOR EXAMINERS USE ONLY

QUESTION	MAX SCORE	CANDIDATE SCORE
ONE	50	
TWO	50	
TOTAL	100	

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1. A consultancy firm keeps its details in a computer database. The information below contains details obtained from two tables of the database. Study the tables and answer the questions that follow.

Employee table

EMPLOYEE ID	EMPLOYEE NAME	DEPARTMENT	JOB TITLE	SALARY
7369	Mark Koech	Research	Clerk	48,000
7499	Philip Meme	Sales	Salesman	16,000
7521	Mohamed Ali	Sales	Salesman	12,500
7566	Kennedy Simiyu	Research	Manager	39,750
7698	David Kamau	Operations	Manager	38,500
7782	Titus Ole Simiani	Operations	Manager	34,500
7788	John Onyango	Accounting	Analyst	30,000
7821	Patel Shah	Research	Analyst	25000

Department table

DEPARTMENT CODE	DEPARTMENT NAME	LOCATION
10	Accounting	Nairobi
20	Research	Nakuru
30	Sales	Mombasa
40	Operations	Kisumu

Required

(a) Create a database that can be used to store the above data and save it as ALMAC **(2mks)**

(b) Create employee table and department table, with the fields and correct data type. **(6mks)**

(c) Using appropriate key and foreign keys create a relationship between the two tables.

Enter referential integrity between the tables. **(3mks)**

(d) Validate the primary key entry to exactly four and two character for the employee ID and dept

code fields respectively. **(2mks)**

(e) Create a form for each table and use it to enter records shown in the tables above.

Save the form as employee form and depart form respectively. **(8mks)**

ii) On the Department form add the Delete and Print controls. **(2mks)**

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iii) On the Employee Form add a label Total and calculated control to display the total salary. **(3mks)**

(f) It is required that the dates on when the employees were hired be included in the database. Koech was hired on 10/6/98, Merne in 15/8/96, Muhammed in 16/3/96, Onyango on 9/3/03, the rest were hired on 13/3/04. Insert a new field name it date of hire in the employees table and enter the records.**(5mks)**

(g)(i) Create a query that displays: Name, Job title, location and date of employment for employees who were employed after year 2000. Save the query as LATEST EMPLOYEES. **(5mks)**

(ii) Sort latest employees query in ascending order using the employee's name. **(2mks)**

(h) Create Query named TITLE to display, Employee ID, Department, Job Title and Department Code for employees whose department start with letter "O" and Job title end with letter "R". **(5mrks)**

(i) Create a report that displays the employee name, job title, department name and salary, grouped according to location. Save the report as EMPLOYEES REPORT. **(5mks)**

(j) Print

(i) Employees tables designs

(ii) Department forms

(iii) Latest employees query

(iv) Employees report. **(2mks)**

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2. The following is an extract of soil samples collected from a given agricultural station in kilograms (KG) for a period of 7 months

STATIOM	2000	2001	2002	2003	2004	2005	2006
KWALE	29.4	27.1	14	18	31.5	30	26.5
KEROKA	11.1	14	15.3	16	11.2	8	7.3
KEDOWA	16	15	15.7	16	17	19	22.5
SIMBI	18	24	19	22.5	28	30	33
OSIEKO	22	25.2	26	29	27	31	36

(a) Type the data as it is and save it as KILOGRAMS **(7mks)**

(b)(i) Insert two blank rows at the top of the worksheet and type the heading **"SOIL IN KILOGRAMS (KG**) in the first blank row and merge the two rows. **(3mks)**

(ii) Type the heading "Soil in Tones (KG)" into cell A10 **(lmk)**

(iii) Change the text color for the entire sheet to blue. Boarder double red in colour **(4mks)**

(c) (i) Copy the names of the stations into cells A13 down the column (3mks)

(ii) Copy the years 2000, 2001, 2002…into cells B12 along the row (2mks)

(d) Type 32 and 18 into cells B20 and B22 respectively and use them as cell reference to compute the tones (T) for all the stations for the seven years using the formula T = 32 + 18k where k is the soil samples for the station in KG. **(5mks)**

(e) Convert all the soil values to one decimal place. **(4mks)**

(f)(i) Compute the total and average soil values for each station in both in kilograms (KG) and in Tonnes (T) in column I respectively. **(4mks)**

(ii) Convert the average soil to two decimal places. **(1mk)**

(g) i) In Cell B18 find the station with the highest soil production. **(2mks)**

ii) Copy the formula across to display for the seven years. **(2mks)**

iii) Create a pie chart showing the years and highest soil in Tones (T) showing the percentage and with appropriate title. Put the sheet on its own sheet. **(4mks)**

(h) Copy the Kilograms data into sheet two and filter to display stations with sum greater than 170. **(3mks)**

(i) Print sheet 1 and the pie chart. **(2mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

CHRISTIAN RELIGIOUS EDUCATION (313/1)

FORM FOUR (4)

Time: $2^1/_2$hrs

Instructions:

This paper has SIX questions.

Answer FIVE questions only.

QUESTION	1	2	3	5	6	TOTAL
MARKS	**20**	**20**	**20**	**20**	**20**	**100**

1a) Give reasons why CRE was included in formal curriculum in Kenyan schools **(7mks)**

b)Outline the main issues which human authors of the Bible concerned themselves with **(6mks)**

c) Identify five methods which Churches in Kenya are using to bring people to Gods kingdom **(7mks)**

2a) Describe the call of Abraham **(7mks)**

b) Explain the importance of Gods covenant with Abraham **(6mks)**

c) Mention the relevance of Abraham's promises to Christians today **(7mks)**

3a Give factors that led to Israelites adopting idol worship **(7mks)**

b) Describe the Mt Carmel contest (1Kings 18:19-41) **(8mks)**

c) Identify five Quality of Prophet Elijah that a Christian should have **(5mks)**

4a) Explain how prophetic messages were written **(7mks)**

b) Explain committed by Israel that would be punished by God according to prophet Amos **(7mks)**

c) Explain Six factors that may lead people away from the worship of God today **(6mks)**

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5a) State Six promises that the Israelites made when they renewed their covenant with God during the time of Nehemiah **(6mks)**

b) Identify the final reforms by Nehemiah to restore the worship of God in Judah **(7mks)**

c) State Six lessons leaders can learn from Nehemiah **(7mks)**

6a) Explain why sacrifices were offered in traditional African communities **(5mks)**

b) List Seven duties of diviners in traditional African communities **(7mks)**

c) List eight moral values promoted during funeral ceremonies in traditional African communities **(8mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

CHRISTIAN RELIGIOUS EDUCATION (313/2)

FORM FOUR (4)

Time: $2^{1}/_{2}$hrs

Instructions:

This paper has SIX questions.

Answer FIVE questions only.

QUESTION	1	2	3	5	6	TOTAL
MARKS	20	20	20	20	20	100

1a) Outline Nathan's prophecy about the messiah (2Samuel 7:3-17) **(6mks)**

b) Outline the role of John the Baptist as a link between the Old and the New Testament **(8mks)**

c) State Six ways in which Christians play the role of John the Baptist today **(6mks)**

2a) Describe the healing of the man a paralysed hand in (Luke 6:6-11) **(8mks)**

b) Explain the significance of miracles in the ministry of Jesus **(5mks)**

c) Give six lessons learnt about Jesus from the cure of the paralytic man **(7mks)**

3a) Give the account of healing Bartimaeus the blind beggar. **(7mks)**

b) State eight signs of eschatology taught by Jesus. **(8mks)**

c) How should Christians treat the physically handicapped. **(5mks)**

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

b) Explain how the unity of believers is expressed in the Image of the bride (Revelations 2:1-2.2Corinthians 11:2) **(7mks)**

c) Outline ways in which Christians promote unity in Kenya today **(6mks)**

5a) State seven reasons why Christians condemn gay marriage **(7mks)**

b) Explain Biblical teachings on celibacy as alternative to marriage **(7mks)**

c) Suggest Six measures that Christians take to solve the problem of prostitution in modern society **(6mks)**

6a) State Seven Christian teachings on work **(7mks)**

b) Explain the relationship between work and leisure in the Christian view **(8mks)**

c) Give reasons why some Kenyans are seeking employment outside the country **(5mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

ENGLISH

PAPER 1 (101/1)

FORM FOUR (4)

Time: 2 Hours

Instructions to the candidates

i. Write your name and admission number in the spaces above.

ii. Answer all the questions in the spaces provided.

iii. Check to ascertain that the paper has all questions.

iv. The paper has 7 printed pages.

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1. Functional Writing	20	
2. Cloze Test	10	
3. Oral Skills	30	

1. FUNCTIONAL WRITING (20 MARKS)

You are the head of Human Resource Primeline Insurance Agency. The position of retail manager within the organization has fallen vacant and Mrs Faith Maneno, one of the employees of the company has applied to fill the position. Write a confidential report recommending her for the job. In your report include her academic qualifications, personal attributes, work experience and her ability to communicate effectively.

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2. <u>CLOZE TEST (10MKS)</u>

Eat healthy to care for your kidneys. The kidney**…….. (1)** one of the most vital organs of our bodies that **…… (2)** impaired can affect a person's quality of life, **…… (3)** when no treatment or nutrition intervention is sought.

The **…… (4**) is involved in many functions which include the removal of **……. (5)** waste products from the blood and **……(6)** the amount of fluid in the body. Human beings have two kidneys but can survive with **…….(7)** kidney that is healthy as it is capable of functioning optimally and can rid the body of all **…….(8)** waste products from the body.

Having a**……(9)** lifestyle and eating well will reduce the chances of compromising your kidneys as many kidney conditions are caused by our unhealthy **……(10)** or eating habits.

3. ORAL SKILLS (30 MARKS)

a) Hare, Elephant and Hippo

One day Hare, popularly known as Ogila Nyakarondo, met Elephant on his way to the forest. As Hare is a cunning and clever animal, he wanted to fool Elephant on some issues. He started talking to Elephant; "Elephant my brother, good morning. What is the matter? Why are you walking alone like that my friends.? Why don't you ask me to walk along with you through the forest?"

After they had walked together for some time Hare said, "Elephant my brother, I want to go on a rope–pulling contest with you. I know that I can defeat you miserably, for I am stronger than you." Elephant replied, "iii! Ogila nyakarondo, you are too small to contest with me. You are playing about, my brother. Think twice."

They then planned to go on a contest the next day in the forest, but Elephant went laughing, thinking that Ogila could do nothing to him.The same day Ogila met with Hippo and started talking to him saying, "Hippo my brother, I want you to contest with me one of these days. We shall pull a rope across the forest and see who will be the winner." Hippo said, "Don't play with me, Hare my brother; you are just too small to contest with me.' He made the same plan, just as he had planned with Elephant to pull the rope in the contest across the forest.

The next morning, Hippo and Elephant went to each side of the forest thinking that they were going to contest with Hare. They started pulling the rope, meanwhile, Hare was sitting on a high hill looking at what was happening below. He sang a song to taunt Elephant and Hippo. As he sang, Hippo and Elephant pulled even harder. They pulled and pulled and got very tired. At dusk, they almost fainted and stopped pulling.Hare immediately ran to Elephant and asked, "Am I not great?" Elephant told Hare. "Oh hare my brother, I have agreed that you are great. I have had it tough the whole day."

Hare then ran to Hippo and told him the same thing he had told Elephant. "Hippo wondered at the strength of the Hare and said, Hare my brother I have just realized that you are very strong. You should be made the King of the jungle," Hare went away merrily playing his guitar.

(Adapted from African Oral Literature for schools by Jane Nandwa and Austin Bukenya, Longman Kenya)

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a) (i) If you were to narrate the above narrative, what would you do to prepare the audience to listen effectively **(2mks)**

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(ii) "Hare immediately ran to Elephant and asked, "Am I not great?" how would you say the underlined words to make them effective? **(2mks)**

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(iii) You are among the audience that is listening to the performance of the above narrative. How would you ensure that you enjoy the above story most? **(3mks)**

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b) For each of the following words provide another with the same pronunciation **(5mks)**

(i) Betel _____

(ii) Board _____

(iii)What_____

(iv)Gneiss_____

(v) Arms_____

c) You gave a friend of yours instructions on how to get to your home but he lost his way and ended up in another home almost two kilometres away. Write down three things you may have done that led to your friend losing his way. **(3mks)**

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d) You are part of an audience during the school prize-giving day. Around where you are seated, most of your colleagues are dozing, yawning, passing small notes and whispering to one another. If you are given a chance what advice would you give to your friends to make them better listeners in future? **(3mks)**

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e) You are stranded at a bus stop. You decide to ring your Principal to report that you cannot arrive at school in time for classes. Below is a part of the conversation. Fill in the missing part. **(6mks)**

You:

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(1mk)

School secretary: I'm sorry the Principal is in a meeting and cannot speak to you at the moment.

You:

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(1mk)

School secretary: May I know your class teacher, please?

You:

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(1mk)

School secretary: I am sorry Mrs Mbau is already in class. Could you leave a message?

You:

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(1mk)

School secretary: Oh! Mrs Muli is your house mistress? Just hold on as I connect you to her.

Mrs Muli: Hello. What can I do for you?

You:

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(1mk)

Mrs Muli: Sorry, I'll inform your class teacher about your predicament. Bye for now.

You:

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(1mk)

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f) The following sentences contain a highlighted word. In each sentence underline the part of the word that is stressed to convey the meaning intended. **(4mks)**

i) The county assembly agreed that the country's **pro.duce** will be marketed locally.

ii) The Citizens **re.ject** the proposal to divide them along tribal lines.

iii) Why didn't you **re.cord** the speech for me?

iv) The **sur.vey** revealed that most unemployed youths have a skill that can be gainfully used.

g) You have been appointed to chair a class discussion on Henrik Ibsen's *"A Dolls House*". After the discussion, your classmates comment that you steered the discussion very well. Write down four things you did right. **2Mks**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

ENGLISH
PAPER 2 (101/2)
FORM FOUR (4)
Time: 2 ½ Hours

Instructions to the candidates

i.Write your name and admission number in the spaces above.

ii. Answer all the questions in the spaces provided.

iii. Check to ascertain that the paper has all questions.

iv. The paper has 13 printed pages.

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1.Comprehension Passage	20	
2. Literary Appreciation	25	
3. Oral Literature	20	
4. Grammar	15	

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1. COMPREHENSION PASSAGE (20MARKS)

Read the passage below and answer the questions that follow.

America has a long tradition of creativity. The expression Yankee **ingenuity** is an acknowledgement of this trait present Americans with a novel problem, especially technological and they are likely to come up with the solution sooner rather than later.

That is the positive side. The downside is that in policy matters, Americans sometimes come up with the solutions and then look for personal problems on which to test them. Washington D.C, perhaps more than any other city in the world, has many solutions seeking problems to lock onto.

If the solutions are successful, domestically or internationally, you can expect any amount of excitement and chest thumping, which is another **hallmark** of the American character. Modesty is frowned upon as something for sissies or failures. Countries and peoples are ready paradigm of winners and losers. Woe unto you if you are a 'loser'. You will endure all manner of taunts and putdowns.

To escape this fate, most Americans-including those who are demonstrably poor, call themselves middle class, which probably they are when compared to the poor in other places. But poverty is relative to immediate environment not to some distant places.

One of the more recent American inventions is spinning not as in making clothes (the American textile industry has long being outsourced, notably from China another low wage country),but rather as in using words and other symbols amplified by the media to paint a picture of anything and everything in alight favorable to the presenter's side.

This past week, the world witnessed, yet again, this peculiar American habit of hype and more hype, in this instance, designed to drive the point home that America's declared policy to force-feed democracy to recalcitrant societies has just scored a **humongous** victory. Following the Iraqi elections the turn out in particular, has been hailed as a stunning victory of American policy. Pitted against Iraqi Jihadists who are waging a relentless and ruthless insurgency, a scintilla of validation of America's Iraqi policy was all that was necessary to set off celebratory fireworks.

To those who recount narratives (the spinners), whose job it is to put a bright glass on things a clear picture of winners and losers are the Neanderthals; "thugs and assassins" in the words of the newly sworn in secretary of state Condeleeza Rice-the insurgents who threatened to wreak havoc on election day in Iraq but were thwarted.

The high turnout was read as a violation of many things that were most likely absent from the minds of those Iraqi voters who cast their ballots. Before it was even known whom they had voted for and why, the whole enterprise was turned into cause for chest thumping by some American politicians, prompting John Kerry the loser in the November presidential race, to warn against hyping the Iraqi election.

Who will listen to a loser? This is America! By the time Kerry spoke, the spinning was in full gear. It was another turning point, declared elated talking heads. Never mind that there have been numerous "turning pints" in Iraq's tortured post-invasion experience. The winners were emerging.

A few voices have urged caution but they are drowned out by the self-congratulation that has **engulfed** just about every major media outlet here.

It is reminiscent of the chatter that followed Saddam Hussein's capture. That was another turning point. The irony is that America has been through this before, in a different place, with almost the exact same headlines. In

the late 1967, many American newspapers published flowery and upbeat stories on the elections held in South Vietnam at the height of the war. The turnout was nearly 83% despite Vietcong terror. The election was declared a success and a turning point that would lead to stabilization of the country and eventual defeat of the insurgents. Of course, nothing of the sort happened.

History does not **invariably** repeat itself. Sometimes it does. Whatever one might think of it, history does always serve up many lessons. One of them is that a dose of modesty is always in order when confronted with vast historical forces or when seeking to rearrange complex societies their go hundreds, if not thousands, of years back.

What may look like victory as first sight may turn out to be another opening to a complex and trying situation that control produce winners or losers. It looks like this what is emerging in Iraq. The millions who headed to the polls on the instructions of their electrical leaders (remember Grand Ayatollah Sistani declared it a religious duty to vote? May or may not have had a clear idea of what society were hoping to create. Their leaders probably do.

Iraqis voted and they are justifiably proud of it. However, this should not be made to look like a first in the Islamic world, as it is being painted in the media. Not too long ago, an Islamic party had won a clear and convincing victory in a free and fair election in Algeria. It was never allowed to assume power. The international authorities desisted from calling the denial an affront to democratic practice. The man who cancelled the Algerian election results is feted in the very same quarter that now preach democracy.

Society's broken tyranny, war, fragmentation and other ills are not served by putdowns of important segments within them.

The approach may produce winners in the short term but for more losers in the end. Moreover, here we are talking of those who could lose everything, including their lives, on a mass scale. A little modesty may just be what is needed to get people across the divide talking. After all, in the end, we are all losers.

Questions

a) What is the negative side of America's long tradition of creativity? **(2mks)**

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b) "Woe unto you if you are a loser." What does the author mean by this statement? **(2mks)**

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c) Identify and explain an instance of irony in this passage. **(3mks)**

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d) What is the author's attitude towards the Americans? Give reasons for your answer**.** **(2mks)**

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e) '...and the losers are Neanderthals; …' explain how the Neanderthals became losers according to this passage. **(2mks)**

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f) What according to the passage is referred to as spinning? **(2mks)**

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g) Identify one American policy discussed in this passage. **(2mks)**

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h) Explain the meaning of the following words as used in the passage. (5marks)

i) Ingenuity

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ii) Hallmark

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iii) Engulfed

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iv) Humongous

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v) Invariably

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2. Read the Fathers of Nations excerpt below and answer questions that follow(25 mks)

"Excellent. Keep that mobile phone on at all times, day and night, rain or shine. From now on, I will be calling you often, even unexpectedly, but only through this number. So alwayshave the mobile phone on. Unlike your hotel phone, it is completely secure, which means Ican talk to you on it freely."
"So you will tell me your real name now? "Pastor Chiamaka asked.
"My real name, my real name-why? "shouted the caller, angry all of a sudden.
"Well, 'why' yourself, "Pastor Chiamaka shouted back, also angrily, answering fire with fire."If I don't have your real name, how can I even begin to ask for you were a need to do so to arise?"
'Were a need to do so to arise, I would contact you," the caller told him.
"Ah, you can contact me, but I can't contact you? What is the matter? Are you afraid I mightsurprise you?"
"Shut your mouth!" snapped the caller. "What did you say?" Pastor Chiamaka asked.
"You heard me. Now get this: I want you to obey me, not to argue with me. You will not talkback to me like this
"R-r-right, "Pastor Chiamaka stammered, suddenly tamed. "Y-y-yes, I do."
"Splendid. So, Pastor Chiamaka, let me say what I was going to say if you had let me." Pleased by his quick victory the caller was inching back towards polite speech. "What I wasgoing to say is..."He stopped. Pastor Chiamaka waited.

EXCERPT QUESTIONS

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

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b) Using your knowledge of the rest of the text, explain one instance of irony evident inthis excerpt**. (3mks)**

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c) Apart from irony, identify and illustrate another style used in the excerpt. **(2mks)**

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d) Identify and illustrate two-character traits common to both Pastor Chiamaka and thecaller.**(4mks)**

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e) List the content of the briefcase left by the caller for Pastor Chiamaka. **(4mks)**

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f) Which name did the caller identify himself with to Pastor Chiamaka? **(1mk)**

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g) Rewrite the following sentence in reported speech. **(1mk)**

"so you will tell me your real name now?" Pastor Chiamaka asked.

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h) Who is Pastor Chiamaka? **(2mks)**

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i) Give the meaning of the following words as used in the excerpt. **(4mks)**

(i) Unexpectedly

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(ii) Snapped

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(iii) Tamed

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(iv) Inching:

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3. Read the oral narrative below and answer the questions that follow. 20 MARKS

The Moon, it is said, once sent an insect to men, saying, "Go to men and tell them, 'As I die, and dying live, so you shall also die, and dying live'"

The insect started with the message, but while on his way, was overtaken by hare, who asked, "On what errand are you bound?"

The insect answered, I am sent by the Moon to men, to tell them that as she dies and dying lives, so shall they also die and dying live."
The hare said, "As you are an awkward runner, let me go." With these words he ran off, and when he reached men, said, "I am sent by the Moon to tell you, 'As I die and dying perish, in the same manner you also shall die and come wholly to an end.'"

The hare then returned to the Moon and told her what he had said to men. The Moon reproached him angrily saying, "Do you dare tell the people a thing which I have not said?"

With these words the Moon took up a piece of wood and struck the hare on the nose. Since that day the hare's nose has been slit but men believe what hare had told them.
(Taken from African Folktales; edited by Paul Radin)

a) Classify this oral narrative. Illustrate your answer. **(2mks)**

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b) What evidence is there in the story to show that it is a translation? **(2mks)**

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c) Identify and explain any two features of oral narratives evident in this poem**.** **(4mks)**

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d) Describe the character of men in this narrative. **(2mks)**

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e) What does this story reveal about death? **(2mks)**

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f) How different is the Moon's message from the one delivered by the hare**?** **(2mks)**

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g) Describe one social activity of the society portrayed in the story? **(2mks)**

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h) Describe the tone projected in this narrative? **(2mks)**

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i) Explain the moral of this story. **(2mk)**

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4. GRAMMAR 15MARKS

A. Rewrite the following sentences according to the instructions given after each. **(4mks)**

i.It was difficult but we completed the job. (Begin: Difficult …)

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ii. She said that she had not murdered her. (Use: 'denied')

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iii.I will not at any cost support your evil plans. (Begin: At no cost…)

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iv. They are renovating their house so that they may sell it. (Rewrite using 'with a view')

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B. Fill in the blank spaces with appropriate preposition. **(3mks)**

(i) The accident occurred when the brakes of the car gave **……..**

(ii) Focused students never throw **……** the towel.

(iii) The most wanted criminal turned themselves **……** last night.

C. Use the correct form of the word in brackets to fill in the blank space in each of the following sentences. **(3mks)**

(i) Only the **…….** will live in peace in the new political dispensation. (corrupt)

(ii) The aim of education is to make one**……** (function)

(iii) Their greed for money was**…….** (rival).

D. Choose the correct words from the ones given in the brackets. **(3mks)**

i. She works harder than**…….** (he/him)

ii. Uncle Jeff gave**……..**(my twin sister and I / me and my twin sister) mobile phones on our birthday.

iii. (He/Him)**……..……** being the eldest in the family, has to shoulder all the

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responsibility.

E. Replace the underlined phrasal verbs in the following sentences with one word that has the same meaning. **(2mks)**

(i) The boy <u>pulled out</u> of the marathon race due to fatigue

.....

.....

(ii) The county fire brigade <u>put out</u> the fire after many hours

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

ENGLISH

PAPER 3 (101/3)

FORM FOUR (4)

Time: 2 ½ Hours

Instructions to the candidates

i. Write your name and admission number in the spaces above.

ii. Questions one and two are compulsory.

iii. Choose any one question in question three.

iv. Check to ascertain that the paper has all questions.

v. The paper has 2 printed pages.

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1. Imaginative/Creative Writing	20	
2. Compulsory Set Book Essay	20	
3. Optional Set Book Essay	20	
	60	

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1. Imaginative Composition (COMPULSORY) (20 marks)
Either

a) Write a composition that has the following words: *friends, police, court, jail.*

Or

b) Write a composition on the following statement: "Technological advancement has impacted negatively on the society, especially the youth."

2. Compulsory text *'The Samaritan, by John Lara'* (20mks)

The society in the play, ***The Samaritan, by John Lara***. is made up of individuals who are materialistic and out to enrich themselves at all cost. Justify.

Optional texts

a) The Novel: Kazuo Ishuguro, **an Artist of the Floating World. (20mks)**

War is a social evil that should be avoided at all costs owing to its adverse consequences. Validate the statement referring to Kazuo Ishuguro's novel ***An Artist of the Floating World.***

or

(b) The Short Stories Godwin Shiundu, 'A silent Song and other stories' (20marks)

In a society today, some people who have power end up abusing it " Drawing illustration's from Naquib Mahfouz ***A man of Awesome Powers***, justify the above statement.

or

c) Parliament of owls by Adipo Sidang' (20 marks)

Discuss how Adipo Sidang' has addressed oppression in the play 'Parliament of Owls'.

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

GEOGRAPHY (312/1)

PAPER 1

FORM FOUR (4)

Time: 2 ¾ Hours

Instructions to candidates

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

(b) This paper has **two** sections: **A** and **B**

(c) Answer **all** the questions in section **A**

(d) Answer **question 6** and any other **two** questions from section **B**

(e) All answers must be written in the spaces provided after Question 10.

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

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Section	Questions	Candidate's Score	Maximum Score
A	1 – 5		25
B	6		25
			25
			25
	Total Score		100

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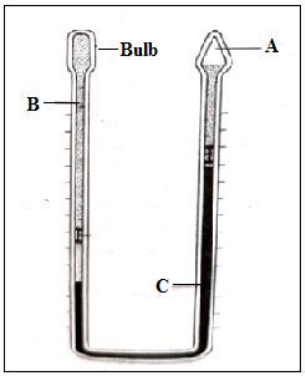
SECTION A

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

1. (a) Name **two** heavenly bodies that form part of solar system. **(2mks)**

(b) State **three** characteristics of planets. **(3mks)**

2. The diagram below shows six's thermometer. Use it to answer question (a).



(a) Identify the parts labeled **A**, **B** and **C**. **(3mks)**

(b) State **two** ways through which latitude influence the temperature of a place. **(2mks)**

3. (a) Give **two** types of magma. **(2mks)**

(b) Name **three** lava plateaus found in Kenya. **(3mks)**

4. (a) Identify **two** lakes formed through erosion process. **(2mks)**

(b) Give **three** reasons why some lakes are salty. **(3mks)**

5. (a) What is weathering? **(2mks)**

(b) State **three** ways through which living organisms cause weathering. **(3mks)**

SECTION B

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

6. Study the map of Kisumu East (1:50,000), sheet 116/2 provided and answer the following questions.

(a) (i) Convert the ratio scale of the map to into a statement scale.

(2mks)

(ii) Give six figure grid reference of the trigonometrical station 1154 SKP 21 in the southern part of the area covered by the map. **(2mks)**

(iii) What is the bearing of Rabuor market from Air photo Principal point in **GR 0986**? **(2mks)**

(iv) What is the length in kilometres of the section of railway line west of the easting 00 to Kisumu station? **(2mks)**

(v) Give **three** drainage features in the area covered by the map. **(3mks)**

(b) Describe the relief of the area covered by the map. **(4mks)**

(c) Citing evidence from the map, give **two** factors that influence cultivation of sugarcane in the area covered by the map. **(4mks)**

(d) Identify **three** social activities carried out within Kisumu municipality. Give evidence. **(6mks)**

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7. (a) (i) Define the term folding. **(2mks)**

(ii) A part from fold mountains, give **three** other features formed through folding. **(3mks)**

(b) The map below shows the distribution of fold mountains in the world.



(i) Name the mountains marked **D** and **E**. **(2mks)**

(ii) Identify the orogenies the mountains marked **F** and **G** were formed. **(2mks)**

(c) With the aid of well labeled diagrams, describe the formation of the following types of folds.

(i) Asymmetrical folds. **(4mks)**

(ii) Overfolds. **(4mks)**

(d) Explain **four** positive influence of folding to human activities. **(8mks)**

8. (a) What is derived vegetation? **(2mks)**

(b) Explain how the following factors influence the distribution of vegetation.

(i) Winds **(4mks)**

(ii) Rainfall **(4mks)**

(c) (i) A part from forests, give **two** other major vegetation types of the world. **(2mks)**

(ii) Describe the characteristics of tropical rainforests. **(6mks)**

(d) Your class is planning to carry out a field study on vegetation around the school.

(i) Give **three** sources of information you are likely to use before the study. **(3mks)**

(ii) Identify **four** challenges you are likely to encounter during the study. **(4mks)**

9. (a) Differentiate between a river confluence and interfluve. **(2mks)**

(b) Explain **three** types of river erosion. **(6mks)**

(c) (i) A part from waterfalls, give **three** other features of river erosion. **(3mks)**

(ii) State **four** ways through which waterfalls may be formed. **(4mks)**

(d) Describe how the following features are formed.

(i) Flood plain **(5mks)**

(ii) Arcuate delta **(5mks)**

10. (a) Give **four** components of the soil. **(4mks)**

(b) Explain how the following factors influence soil formation.

(i) Living organisms **(4mks)**

(ii) Relief **(4mks)**

(c) Explain **four** causes of soil erosion. **(8mks)**

(d) State **five** significance of soils. **(5mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

GEOGRAPHY (312/2)
PAPER 2
FORM FOUR (4)
Time: 2 ¾ Hours

INSTRUCTIONS:

- Write your name, index number and school
- Answer ALL the questions in section A.
- In Section B answer **question 6** and any other **two**.
- This paper consists of four printed pages. Check to ascertain whether all the pages are printed.

FOR EXAMINERS USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-5	25	
B	6	25	
		25	
		25	
TOTAL SCORE			

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SECTION A

(Answer all questions in this section)

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

(b) State three advantages of using green house in horticulture farming **(3mks)**

2.(a) Name two minerals mined in South Africa **(2mks)**

(b) Give three problems facing mining industry in South Africa **(3mks)**

3.a) State **any two** problems facing wildlife conservation **(2mks)**

b) Give any **three** historical sites at the Kenyan coast that are tourist attractions **(3mks)**

4.(a) State three factors necessary for a land to be reclaimed **(3mks)**

(b) Give three uses of polder land in Netherlands **(3mks)**

5. Give four ways in which Kenya will benefit as a result of oil discovery and exploration in Turkana County **(4mks)**

SECTION B

(Answer Question 6 and ANY OTHER TWO)

6. World Wheat production by region.

Region	**% of Wheat Production**
Asia	35
Europe	22
North America	19
USSR	16
Others	8

a) Draw a Pie Chart to illustrate the information given above. **(5mks)**

b) Name

i) **Two** districts in Kenya where wheat is grown on Commercial Scale. **(2mks)**

ii) **Two** Wheat producing provinces of Canada. **(2mks)**

c) Explain **three** conditions that favour Wheat farming in Kenya. **(6mks)**

d). Explain **five** factors which enable Canada to produce more Wheat than Kenya. **(10mks)**

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7.(a) i) Define the term deforestation. **(2mks)**

(ii) State the causes of deforestation? **(4mks)**

(b) Outline the stages involved in the extraction of timber from natural forests. **(4mks)**

(c) Explain **four** characteristic of the tropical rain forest. **(8mks)**

(d) Describe the ecological uses of forests. **(7mks)**

8.(a) Name **four** ways in which minerals occur. **(4mks)**

(b) State the factors affecting exploitation of minerals. **(5mks)**

(c) i) Name **one** area where gold is mined in South Africa. **(1mk)**

(ii) Describe methods of mining gold in South Africa. **(5mks)**

(d) i) What are the problems of mining in South Africa? **(5mks)**

(ii) In what ways had gold contributed to the economic growth of South Africa. **(5mks)**

9.(a) i) Define the term Nomadic Pastoralism. **(2mks)**

(ii) Name **two** Nomadic Pastoralists Communities in Africa. **(2mks)**

(b) Give **five** factors that have favoured the development of beef farming in Argentina. **(5mks)**

(c) State **six** problems that face Nomadic Pastoralists in Africa. **(6mks)**

(d) Explain **five** changes that are taking place to improve Nomadic Pastoral area in Kenya. **(10mks)**

10.(a) Define the term fisheries. **(1mk)**

(b) (i) State **three** human conditions necessary for fishing. **(3mks)**

(ii) Name **two** examples of anadromous fish. **(2mks)**

(c) Explain how the line-fish method of fishing is used. **(4mks)**

(d) (i) Explain the reasons why the North East Atlantic is extensive and highly developed. **(10mks)**

(ii) State the problems facing fishing in Marine fishing in Kenya. **(5mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

HISTORY AND GOVERNMENT (311/1)

FORM FOUR (4)

Time: : 2 ½ HOURS

PAPER 1

INSTRUCTIONS TO CANDIDATES

a) This paper consists of three sections A, B and C

b) Answer all the questions in section A in the spaces provided, three questions from section B and two questions from section C in the foolscaps given.

FOR EXAMINER'S USE ONLY

Section	Question	Marks
A	1 – 17	25
B		
	18-21	45
C	22-24	30
Total	**100**	

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SECTION A (25 MARKS)

Answer all questions from this section.

1) Identify two ways through which archaeologists obtained information on history Kenya **(2mks)**

2) Name two communities in Kenya who belong to the plain Nilotes **(2mks)**

3) What was the original homeland of the eastern cushites **(1mk)**

4) State two similarities in the political organization of the Ameru and Abagusii of Kenya during the 19th century **(2mks)**

5) Give the main reason why early visitors came to Kenyan coast by 1500 A.D **(1mk)**

6) Name the missionary society that established a home for freed slaves at the coast of Kenya in the 19th century **(1mk)**

7) State two causes of Agiriama resistance to the establishment of British colonial rule in Kenya **(2mks)**

8) Give two reasons why Africans in Kenya moved to owns during the colonial period **(2mks)**

9) State one grievance raised by the Asians in Kenya that was addressed by the Devonshire white paper **(1mk)**

10) State two problems faced by independent schools established by Africans during the colonial period **(2mks)**

11) Identify two ways of becoming a Kenyan citizen **(2mks)**

12) Give one reason why the government of Kenya may limit a person's freedom of speech **(1mk)**

13) Give one way through which parliamentary supremacy in Kenya can be limited **(1mk)**

14) Give one house committee of parliament which deals with government financial matters **(1mk)**

15) State two ways in which the rule of law is applied in Kenya **(2mks)**

16) Who is the head of judiciary in Kenya **(1mk)**

17) Identify one main factor that is addressed in Kenyan budget **(1mk)**

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SECTION B (45MARKS)

Answer three questions.

18.(a) State three way through which communities in Kenya interacted during the pre- colonial period in Kenya **(3mks)**

(b) Describe the social organization of the Agikuyu during the pre-colonial period **(12mks)**

19.(a) Give three reasons why early visitors came to Kenyan coast before 1500A.D (3marks)

(b) Explain six factors that contributed to the development of trade between Kenyan coast and outside world by 1900A.D **(12mks)**

20.(a). Give three economic reasons encouraged the British to colonize Kenya during the 19th century **(3mks)**

(b). Explain why Kenyan communities were defeated by the British during the establishment of colonial rule in Kenya **(12mks)**

21.(a). Outline three major reforms resulted from Lyttelton constitution of 1954 in Kenya **(3mks)**

(b). Explain six ways through which Tom Mboya contributed to the struggle for independence in Kenya **(12mks)**

SECTION C (30 MARKS) Answer TWO questions.

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

(b). Explain the rights of an accused person during trial in a court of law in Kenya **(10mks)**

23.(a) Identify five functions of the traffic police in Kenya **(5mks)**

(b). Describe five measures that have been introduced to improve the work of police in Kenya **(10mks)**

24.(a). State three objectives of devolving the government of Kenya **(3mks)**

(b). Explain six ways in which the county government raises its revenue **(12mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

HISTORY AND GOVERNMENT (311/2)

FORM FOUR (4)

Time: : 2 ½ HOURS

PAPER 2

INSTRUCTIONS TO CANDIDATES

a) This paper consists of three sections A, B and C

b) Answer all the questions in section A in the spaces provided, three questions from section B and two questions from section C in the foolscaps given.

FOR EXAMINER'S USE ONLY

Section	Question	Marks
A	1 – 17	25
B		
	18-21	45
C	22-24	30
Total	100	

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SECTION A (25 MARKS)

Answer all questions from this section.

1. State two common characteristics shared with man and other primates **(2mks)**

2. State one way in which old stone Age people kept their body warm **(1mk)**

3. What was the main source of energy during the early period of industrial revolution in Europe? **(1mk)**

4. Identify two uses of wheel among the Sumerians **(2mks)**

5. Identify one river responsible for early agriculture in Mesopotamia **(1mk)**

6. Give one role played by western Sudan rulers during the Trans-Saharan trade **(1mk)**

7. State two uses of the bicycle **(2mks)**

8. Give one negative impact of scientific inventions on agriculture **(1mk)**

9. State the main factor that influenced the growth of London **(1mk)**

10. State two royal emblems in the Buganda kingdom during the pre-colonial period **(2mks)**

11. Identify two leaders who mobilized communities in Tanganyika for Maji Maji resistance **(2mks)**

12. Give one reasons why the conquest of the Ndebele nation by the British was inevitable **(1mks)**

13. Define African nationalism **(1mk)**

14. State two functions of the Commission of the African Union **(2mks)**

15. State two benefits of international relations in the world **(2mks)**

16. How does a person become a member of the House of Lords in Britain **(1mk)**

17. State two functions of the prime minster in India **(2mks)**

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SECTION B (45 MARKS)

Answer only three questions.

18.(a) State three reasons why early man hunted in groups **(3mks)**

(b) Describe six cultural and economic practices of early man during the middle stone age **(12mks)**

19.(a) State three factors which led to the emergence of trade among communities in Africa **(3mks)**

(b) Discuss six negative impact of modern of communication to the society **(12mks)**

20.(a) Give three economic activities of the Shona empire during the pre-colonial period **(3mks)**

(b) Discuss the social organization of the Asante Empire in the pre-colonial period **(12mks)**

21.(a) Identify three methods used by the Europeans to acquire colonies in Africa **(3mks)**

(b) Explain six results of Buganda collaboration in the 19th century **(12mks)**

SECTION C (30 MARKS)

Answer only TWO questions.

22.(a) State three reasons for the use of direct rule in Zimbabwe **(3mks)**

(b) Compare the British indirect system of administration with the French assimilation and association policy **(12mks)**

23.(a) Identify five organs of the league of nations **(5mks)**

(b) Discuss five effects of the end of the cold war on international relations **(10mks)**

24 (a) Give three reasons why the fifth Pan-Africanism was unique **(3mks)**

(b) Explain six challenges encountered by African Union **(12mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

HOMESCIENCE

PAPER ONE (441/1)

FORM FOUR (4)

Time: 2 ½ Hours

INSTRUCTIONS

- This paper consists of three sections A, B and C.
- Answer **ALL** questions in section A, Question 20 (Compulsory) in B and any **TWO** questions in C.

For Examiners use only.

Section	Question	Maximum Score	Candidates Score
A	1-19	40	
B	20	20	
C		40	
Total		**100 marks**	

Students should check the question paper to ensure that all the

Papers are printed as indicated and no questions are missing.

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SECTION A (40 Marks)

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

1. List **four** types of knives found in the kitchen. **(2mks)**

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2. Outline **four** ways of avoiding accidents in the bathroom**.** **(2mks)**

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3. Suggest **six** uses of carrots in cookery. **(3mks)**

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4. What are the determinants of safe parenthood**?** **(3mks)**

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5. Give **three** advantages of using credit cards. **(3mks)**

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6. State **two** functions of a seam ripper**.** **(2mks)**

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7. Mention the reason for the following practices in cookery**.** **(2mks)**

a. Dipping a hard boiled in cold water.

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b. Soaking dry beans before cooking.

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8. Define ventilation**.** **(1mk)**

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9. State **two** ways in which advertisement may affect a consumer negatively**.** **(2mks)**

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10. Identify **four** types of repairs carried out on clothes. **(2mks)**

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11. Differentiate between chemical and biological raising agents**.** **(2mks)**

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12. Highlight **three** benefits of play to a toddler. **(3mks)**

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13. Highlight **two** points on the care of clothes' wardrobe **(2mks)**

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14. State **two** factors that determine the choice of colour in a room. **(2mks)**

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15. Highlight the importance of a weaning a baby gradually. **(2mks)**

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16. Mention the dangers that may arise from using antiperspirants. **(2mks)**

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17. Give **two** reasons for using floor coverings. **(2mks)**

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18. Define the term 'value' as used in colour. **(1mk)**

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19. Give **two** points to bear in mind when cutting worked buttonholes. **(2mks)**

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SECTION B (20 Marks)

Compulsory question.

Answer question 20 in the space below the questions.

20. You have been requested to carry the following household tasks.

a) Describe how you would launder a loose coloured cotton bathing towel. **(10mks)**

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b) Outline the procedure you would use to thoroughly clean a synthetic school bag. **(10mks)**

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SECTION C (40 Marks)

*Answer any **TWO** questions in the space provided after the questions.*

21. a) Explain **three** factors to consider when caring for a white nylon blouse. **(6mks)**

b) With reasons give **four** precautions to take when bathing a baby**.** **(8mks)**

c) Highlight **six** qualities of a good pit latrine. **(6mks)**

22. a) State **five** qualities of a good disinfectant. **(5mks)**

b) State **five** situations that would require one to wash hands to prevent the spread of diseases. **(5mks)**

c) Give **five** ways of saving energy when performing household tasks. **(5mks)**

d) Give **five** reasons for having a work plan for every homemaker. **(5mks)**

23. a) Explain **five** laundry work processes harmful to woolen fabrics**.** **(5mks)**

b) Give **two** remedies for each of the following machine faults. **(4mks)**

i) Fabric pukering
ii) Needle breaking

c) Mention **five** reasons why a recipe is important in cooking. **(5mks)**

d) Differentiate between**;** **(6mks)**

i) wear and tear,
ii) a casing and a hem,
iii) regenerated and synthetic fabric.

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

HOMESCIENCE

CLOTHING CONSTRUCTION

PRACTICAL PAPER 2 (441/2)

FORM FOUR (4)

Time: 2½ Hours

Instructions

A pattern of a child's dress is provided. You are advised to study the sketches, instruction, and the layout carefully before you begin the test.

Materials provided.

1. Pattern pieces

A. Dress back
B. Dress Front
C. Front Yoke
D. Sleeve
E. Sleeve binding
F. Back Facing
G. Front Facing

2. Plain lightweight cotton fabric 65 cm long by 90 cm wide.

3. Sewing thread to match the fabric.

4. One large envelope.

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THE TEST

Using the material provided, cut out and make the **RIGHT HALF** of a child's dress to show the following processes:

(a) attaching the front yoke to the dress front using an overlaid seam. Neaten **half** of the seam using loop stitches;

(b) joining the shoulder seam using a double stitched seam;

(c) joining the side seam using an open seam;

(d) preparing of the sleeve;

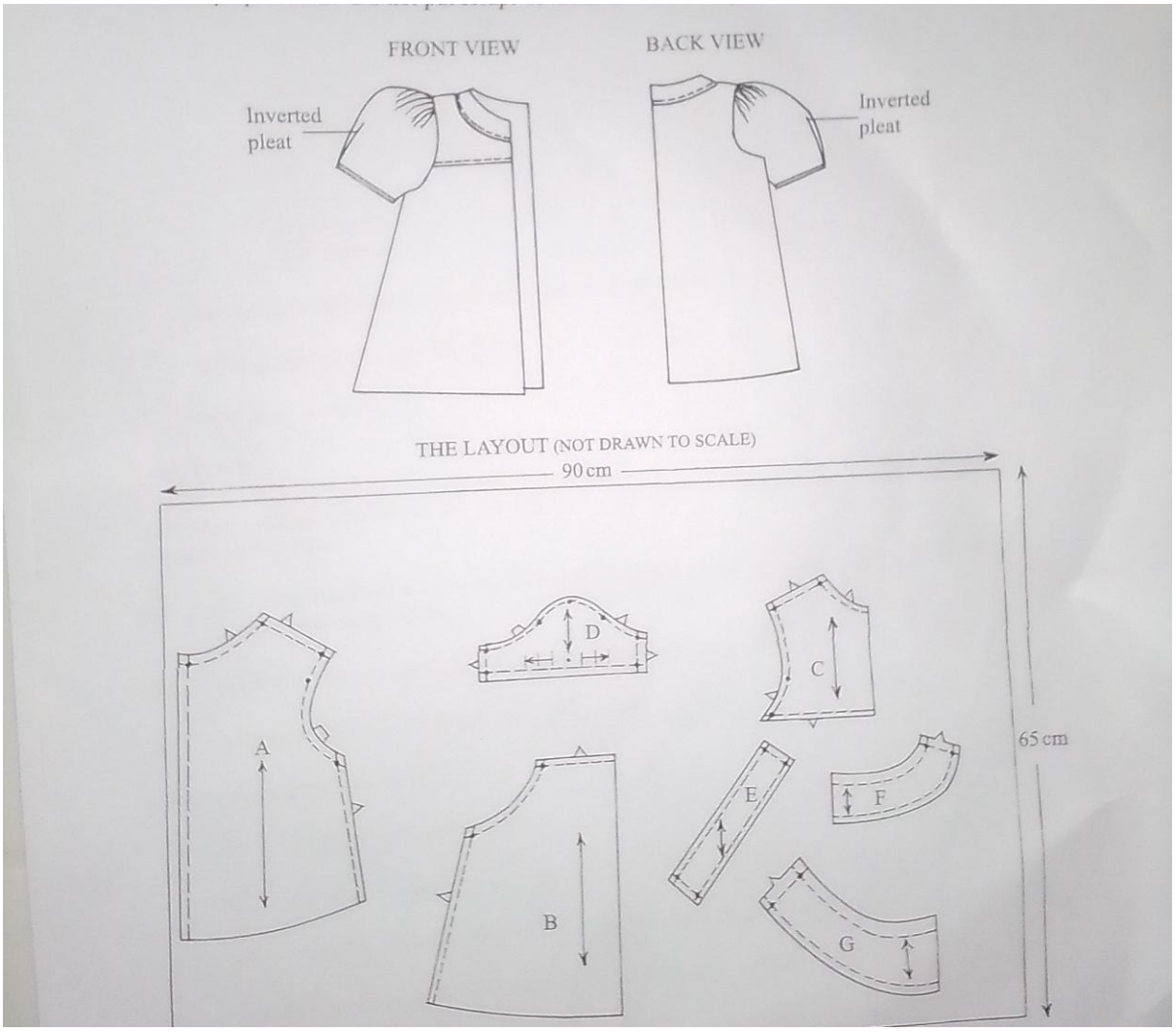
- **(i)** making an inverted pleat
- **(ii)** joining the underarm seam using an open seam
- **(iii)** attaching the binding and holding it using slip hemming (slip hem **half** the binding)

(e) attaching the sleeve onto the garment (do not trim or neaten);

(f) attaching the facing on the neckline.

At the end of the examination, firmly sew your work, on a single fabric, a label bearing your name and index number. Remove needles and pins from your work then fold your work neatly and place it in the envelope provided. Do not put scraps of fabric in the envelope.

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

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SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

HOMESCIENCE

PAPER 3 (441/3)

FORM FOUR (4)

Time: 1 ¾ Hours

PLANNING: 30 minutes

PRACTICAL TEST SESSION: 1 ¼ hours

INSTRUCTIONS TO CANDIDATES

1. Read the test carefully
2. Write your name and admission number on every sheet of paper used
3. Textbooks and recipes may be used during the planning session as reference materials
4. You will be expected to keep your order of work during the practical
5. You are allowed to take away **only** your materials at the end of the planning session
6. You are not allowed to bring additional notes to the practical sessions

THE TEST

You have invited two of your cousins for lunch.

Using the ingredients listed below, prepare, cook, and serve a suitable one course meal for the three of you. Include a nutritional drink.

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Ingredients

Irish potatoes/rice/spaghetti
Onions
Carrots
Tomatoes
Leafy vegetables/cabbage
Beans/Beef
Salt
Oil/cooking fat
Sugar
Spices of choice
Fruits in season

PLANNING SESSION 30 minutes

For each task below use separate sheets of paper and a carbon paper to make duplicate copies then proceed as follows:

1. Identify the dishes and write their recipes.
2. Write your order of work.
3. Make a list of foodstuff and equipment you will require.

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

ISLAMIC RELIGIOUS EDUCATION (314/1)

PAPER 1

FORM FOUR (4)

Time: 2 ½ Hours

INSTRUCTIONS:

1. This paper contains six (6) questions.
2. Answer any FIVE questions
3. Write your answers in the answer sheet provided.
4. All answers must be in English.

1. a) Enumerate ways through which the Qur'an is preserved today. **(8mks)**
b) Explain eight teaching of Suratul Hujurat on Akhlaq. **(8mks)**
c) Discuss four reasons why the Qur'an was standardized during the time of caliph uthman. (R.A) **(4mks)**

2. a) Explain the importance of Narratives in the Qur'an. **(8mks)**
b) Giving explanation to each outline the divisions of the Holy Qur'an **(5mks)**
c) Draw the teachings of Ayatul kursy. **(7mks)**

3. a) Differentiate between Hadith Qudus and Hadith Nabawi. **(8mks)**
b) List the reasons of Al-muwatta by imam malik. **(5mks)**
c) The prophet said "seeking knowledge is obligatory for every Muslim man and woman". What does this Hadith teach us? **(7mks)**

4. a) Explain and describe various performances of salatul musafir. **(6mks)**
b) Outline the properties that are exempted from Zakat. **(6mks)**
c) Explain the significance of the concept of Tawba in Islam. **(8mks)**

5. a) Explain types of Tawaf. **(8mks)**
b) How is the application of Hudud a tool in reduction of the rate of crime in the society? **(7mks)**
c) What are the conditions for use of Ijma as a source of shariah. **(5mks)**

6. a) Explain the various manifestations of shirk al Akbar. **(4mks)**
b) Discuss the significance of the belief in the day of judgment. **(8mks)**
c) Enumerate the functions of an Imam. **(8mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

ISLAMIC RELIGIOUS EDUCATION (314/2)
PAPER 2
FORM FOUR (4)
Time: 2 ½ Hours

INSTRUCTIONS:
1. This paper contains six (6) questions.
2. Answer any FIVE questions
3. Write your answers in the answer sheet provided.
4. All answers must be in English.

1. a) Explain six significance of commanding good and forbidding evil **(6mks)**

b) Discuss seven effects of gambling in the society **(7mks)**

c) How can a Muslim retain Islamic cultural values in today's changing society? **(7mks)**

2. a) State the rights of a Muslim wife. **(8mks)**

b) Give five valid reasons that can make a Muslim wife to ask for *talaq*. **(5mks)**

c) Explain seven effects of *talaq* on children. **(7mks)**

3. a) Identify six forms of child abuse in the society. **(6mks)**

b) State the teachings of Islam on matters of debt. **(7mks)**

c) In what ways has Islam uplifted the status of women in the society? **(7mks)**

4. a) Mention six earliest people to embrace Islam in Makkah. **(7mks)**
b) Highlight seven teachings of the prophet's speech during Hijjatul Widaa (farewell pilgrimage). **(7mks)**
c) State the terms of the Treaty of Hudaybiyya. **(6mks)**

5. a) State five contributions made by Ali to the prophets mission. **(5mks)**
b) Identify five roles of Kabaka Mutesa I in the spread of Islam in Uganda. **(5mks)**
c) Discuss the contributions of Ummayads in Islam. (10mks)

6. a) Discuss Sheikh Alamin Mazrui's contributions in promoting education among Muslims in Kenya. **(6mks)**
b) State the achievements of Uthman Dan Fodio. **(6mks)**
c) Explain four ways in which Muslims in Kenya can help to promote peace. **(8mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

JINA: ……..

SHULE: ……..

TAREHE:…….. NAMBARI YA USAJILI: …… SAHIHI:……

KISWAHILI (102/1)
KIDATO CHA NNE
MUDA: SAA 2

MAAGIZO KWA MTAHINIWA:

Maagizo

1. Andika insha **mbili**. Insha ya kwanza ni ya **lazima**.
2. Kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.
3. Kila insha isipungue maneno **400.**
4. Kila insha ina alama 20.
5. Kila insha **lazima** iandikwe kwa lugha ya **Kiswahili.**
6. Insha zote **sharti** ziandikwe katika nafasi ulizoachiwa kwenye kijitabu hiki cha maswali.
7. **Watahiniwa ni lazima wahakikishe kwamba kurasa zote za karatasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo.**

Kwa matumizi ya mtahini pekee.

Swali	Upeo	Alama
1	20	
2	20	
3	20	
4	20	

SWALI LA LAZIMA

1. Wewe ni mhariri wa Gazeti la Maadili. Andika tahariri kuhusu chanzo na suluhu kwa tatizo la udanganyifu katika mtihani wa kitaifa.

2. Tatizo la uhaba wa maji nchini Kenya linaweza kutatuliwa kwa urahisi. Jadili.

3. Andika insha inayooana na methali *Kuvua numbi si kazi, kazi ni magawiano.*

4. Andika Insha itakayoishia kwa maneno haya
……..Tulishtuka tulipogundua kuwa hakustahili hicho kichapo alichopigwa na umati.

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

JINA: ……..

SHULE: ……..

TAREHE:…….. NAMBARI YA USAJILI: …… SAHIHI:……

KIDATO CHA NNE (4)

KARATASI YA PILI (102/2)

MUDA: SAA 2 ½

Maagizo;

Karatasi hii ina maswali manne

Majibu yote yaandikwe katika nafasi ulizopewa

SEHEMU YA A: UFAHAMU (Alama 15)

Soma kifungu hiki kisha ujibu maswali

“Hamjambo wananchi?Ni fursa kubwa kusimama hapa kwa niaba ya wachukuzi, makuli na wote wanaoonewa.Kilichotuleta hapa ni kufahamishana kwamba tumeamua kugoma kuanzia keshokutwa.Sababu za kugoma sote tunazielewa kwani tumeshaelezeana zamani ; sana ni dharau ,maonevu , kazi tuifanyayo na marupurupu tunayolipwa. Haya yote hayaturidhishi. Mengine mengi mnayaelewa.Mgomo wetu hata kama hautafuzu, utasaidia kuona matokeo kama wasemavyo wahenga gonga gogo usikilize mlio.Hatuna budi kuwajaribu hawa wanaotunyanyasa.Lazima tuwaonyeshe kuwa sisi wanyonge ndio msingi wa pato la nchi hii.Mgomo huu ni mwanzo wa kuwajulisha kwamba wakati wa mtu mweusi kujua haki yake umefika-mwanzo wa kutetea haki zetu.

Bakari aliyabubuja maneno haya yaliomganda ubongoni mwake kutokana na makala moja ya siasa aliyopewa aisome kwa siri na Kumba ,makala ambayo angekamatwa nayo ,leo hii asingekuwa kasimama hapo alipo.Alimeza mate.Haikuwa hotuba maalum ya mwanasiasa ya kushawishi,bali ni maneno yaliokuwa wazi ,yaliotiririka kwa urahisi wa kufahamika.Madhumuni yake yalikuwa dhahiri.Alisikizwa kwa makini.

“Bahati nzuri,”aliendelea,”hapa shamba kumeingia mzozo wa ng’ombe wa kulazimisha wananchi wawapige sindano. Sisi tulio mjini tumesikia kwamba ndugu zetu mnataka kugoma kupeleka ng’ombe wetu wakapigwa sindano kwa sababu wanakufa,”Alisita tena akameza mate.

Mzee Gae alikohoa kwa muda. Alipomaliza, Bakari aliendelea, “Hapana anayetambua faida ya ng’ombe hao kupigwa sindano ,maana ng’ombe wetu wamekuwa wakiugua na kupona wenyewe ;au kama ipo faida yoyote ,hakuna aliyejishughulisha kuwaeleza wafugaji. Na kwa nini wafe?Iwapo ipo sababu ya ng’ombe hao kufa ,hapana aliyekuja kuwaongoza wafugaji basi. Wazungu wanataka kuwapiga ng’ombe sindano tu ; ikiwa watakufa

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au wataokoka si shauri lao.Pia tumejifunza kutoka kwa nchi jirani ,upigaji sindano umeteketeza ng'ombe na watu na wafugaji hawakukaa kimya.Tunakuungeni mkono."Alimeza mate tena ,kisha aliendelea,"Pia hapana asiyeuelewa uovu waliotendewa wakuliama ,wa kuvunjiwa nyumba zao na kunyang'anywa ardhi bora ya kulimia ili kujenga kiwanja cha ndege bila fidia madhubuti. Hatujui ndege zinazoruka na kutua zina manufaa gani kwa mfugaji?

Kwa haya machache yatosha kuonyesha ya kwamba wakulima nao wanastahili kuunga mkono kwa kutoleta mazao yao mjini.Tunajua mabwana wakubwa hawawezi kuishi bila chakula,"Bakari aliimaliza maneno yake bila kutarajiwa.

"Sisi wakulima tulikutana tukashauriana na kuamua tusipeleke mazao yetu mjini"alidakia Hassan.

Kumba aliwaeleza wazi wakulima na wafugaji umuhimu wa mgomo huo , wajibu wao na hatari yake.Aliwafafanulia luwa mapambano hayo yalikuwa ni baina ya wenye silaha na walio mikono mitupu na ushindi wao uliegemea sana ushirikiano wao.

Maswali

a) Sababu za migomo zilikuwa zipi? **(alm4)**

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b) Je,mgomo huu uliwahusu kina nani? **(alm2)**

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c) Wagomaji hawakuwa na matumaini ya kupata ushindi.Thibitisha**.** **(alm2)**

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d) Kulingana na taarifa ,lengo la mgomo lilikuwa lipi? **(alm2)**

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e) Wakulima walitendewa maovu.Elezea**.** **(alm2)**

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f) Eleza maana ya maneno haya kama yalivyotumiwa katika kifungu; **(alm3)**

i) Tunakuungeni mkono.

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ii) Wakapigwe sindano

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iii) Fidia

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SEHEMU YA B; MUHTASARI (Alama 15)

Soma taarifa kisha ujibu maswali;

Nidhamu kwa vijana ni tadbiri ambayo tangu zamani imekuwa ikipigiwa upatu sana.Maisha yanazidi kubadilika ,vijana wanasoma na kuona mengi yakibadilisha mazingira yao kila wakati na hata wanakutana na wenzao kutoka pande zote za ulimwengu basi wanafaa kudhibitiwa .Bila ya kufanya hivyo wataharibika sana.

Wengine kwa uhayawani wao huchukulia kuwa wazazi walio nayo ni ovyo .Wanadai kuwa wao hawakuomba kuzaliwa na wazazi kama hao.Wengine huwaibia wazazi wao au hata kuwapangia wezi.Wengine huwashika wazazi kabari na kuwatishia na kifo.Isitoshe, kuna wale wanaopigana na wazazi wao. Ama kweli dunia hii imekwisha aisee! Badala ya mshikamano wa bega kwa bega na wazazi , imekuwa ni kutoelewana na kuzozana.

Kuzaliwa kwa watoto na wazazi wa aina fulani ama wazazi kuzaa watoto wa aina fulani ni majaliwa ya Mwenyezi Mungu .Hakuna mzazi anayeketi na kuomba azae mtoto atakayemsubu mbele ya watu.Ni mzazi gani atakayeomba mtoto asiye na shukrani wa kumshikia panga?Abadani! Humpati mzazi kama huyo.

Wanapokanywa vijana juu ya mienendo yao ya kutembea na marafiki wabaya ,wao hufura kama andazi lililoumuliwa kwa hamira nyingi.Hawatulii na kusikiliza mawaidha ila wao hujikinga tu katika dhania kuwa marafiki wao ndio bora kabisa kuliko wazazi wao.Wao husahau kuwa damu ni nzito kuliko maji.Mambo wanayoyakamia kuyafanya yanapotumbukia nyongo ,hapo ndipo wanaketi chini na kushika tama.Wakati mwingine ubishi wao huwazushia makuu yanayowakalifu maishani mwao huku marafiki waliowaingiza gizani kuwatoroka.

Mara nyingi mzazi huwa hana kinyongo na mwanawe.Mtoto wake anapokuwa na shida,mzazi hujikokota hadi aliko mwanawe asikilize shida zake na kujaribu juu chini kumsaidia.Mzazi hamsuti wala kumkumbusha kuhusu ubishi wake wa awali ingawa anajua ukweli kuwa asiyesikia la mkuu huvunjika guu.

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Jambo linalowachoma moyo wazazi wengi ni kuwa watoto wengi wa siku hizi hawawazi watakavyowasidia wazazi wao au watakavyowaridhisha!Badala yake,wanapoteza muda mwingi kusugua bongo zao wakitafuta njia za kuwachafua roho wazazi wao.Badala ya kujiuliza "Nina lipi linalowapendeza wazazi wangu?",wengi wao hujiuliza "Mbona leo sijatenda jambo la kumwuudhi mzazi wangu?"Wahenga walisema 'ujana ni tembo la mnazi' na ni kweli kabisa ujana hulipua akili za wana hawa.Badala ya kutenda yenye jaza, wao hutenda ya kufurahia ya tandabelua.Badala ya kuona kuwa kuna wakubwa wanaopaswa kuwaheshimu, ni kama wakajizaa wao na ndio wanaopaswa kusujudiwa na kupigiwa magoti.Hupenda kuzuzuka na huwa wepesi wa kuzuzuliwa na hao vinyago na vigezo wenzao.

Kila wakati msamiati wao ni ,"Nipe!Sijafanya makosa!Hamnipendi! Stasoma!"na kujifanya wajasiri na werevu kuliko wazazi.Badala ya kutumia maneno yenye nyama ya ulimi, wao ni kufuka kama chungu cha pure kilichocholewa moto mwingi. Kwa nini watoto hawa wasibadilishe msamiati na kutumia maneno kama 'chukua baba na mama,samahani mama au baba, ahsante kwa yote mnayonifanyia, nitasoma kwa bidii na kadhalika?'Unyeyekevu, heshima, shukrani, usaidizi, wema na kuwa na uelewa wa hali za wazazi ,utaweza kuwafanya wazazi kuwatendea wana wao kila jambo waliwezalo kwa mioyo mikunjufu.Maneno matamu humtoa nyoka pangoni.Ukali wowote unaofikiriwa uko kwa wazazi hautakuwepo tena. Suluhu itapatikana katika kila tatizo na wazazi na watoto wao wataishi kwa Amani.

Maswali

a) Kwa nini mwandishi anasema kuwa vijana wa siku hizi wamekosa adabu na heshima? (maneno 40-45)**(alm10)**

Matayarisho

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JIBU

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b) Fafanua umuhimu wa nidhamu kwa vijana (maneno 20-30) (alama 5)

Matayarisho

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Jibu

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SEHEMU YA C; MATUMIZI YA LUGHA (Alama 40)

1. Kwa nini sauti /y/ na /w/ zinaitwa nusu irabu? **(alm2)**

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2. Toa maifano ya silabi ambayo ni konsonanti pekee**.** **(alm2)**

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3. Tunga sentensi kuonyesha matumizi ya mkwaju (/) kama zilivyoangaziwa; **(alm2)**

a) kuonyesha ‘au’

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b) katika uandishi wa tarehe

.....

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4. Andika sentensi hii kwa wingi

Pendekezo la mwanahabari huyo litaandikwa kwenye tangazo. **(alm1)**

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5. Ondoa kivumishi kilichoka katika sentensi hii na utumie kiashiria cha kuthibitisha cha karibu.

Mchezaji mwingine anaingia uwanjani. **(alm2)**

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6. Kanusha sentensi hii **(alm2)**

Kula kwake kumehujumiwa na ugonjwa huo.

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7. Tumia kihusishi hiki katika sentensi

Mkabala na **(alm2)**

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8. Tumia vishale kuainisha sentenzi hii **(alm4)**

Mwanamume mwanajeshi alifika jana jioni.

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9. Andika upya sentensi hii ukizingatia kinyume cha neno lililopigiwa mstari **(alm1)**

Mwana **<u>aliyekufa</u>** ni wa nyanya.

10. Tunga sentensi moja kuonyesha maana ya maneno haya;

Twaza, tweza

11. Ainisha viambishi awali, mzizi na viambishi tamati katika neno hili **(alm3)**

Walichezana

12. Tumia kiwalishi cha pekee –ingine kuandika upya sentensi hii **(alm2)**

Watoto watatu warefu wameingia ofisini.

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13. Unganisha sentensi hizi ukitukia kiunganishi ingawa. **(alm2)**

Alienda kwake mapema sana.

Bado hakumkuta.

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14. Tunga sentensi yenye mpangilio huu wa maneno. **(alm2)**

T+T+T+T+T+E

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15. Eleza sifa moja ya nomino katika ngeli ya LI-YA **(alm1)**

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16. Unda vitenzi kutokana na vivumishi hivi; **(alm2)**

a) Nadhifu

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b) msomi

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17. Huku ukitoa mifano tofautisha kati ya mofimu huru na mofimu tegemezi **(alm4)**

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18. Onyesha chagizo katika sentensi hii**.** **(alm2)**

Rehema alimpikia chakula haraka zaidi.

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19. Tunga sentensi uktumia labda kuleta maana zifuatazo. **(alm2)**

a) Yawezekana

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.....

b) Pengine

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.....

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D. ISIMUJAMII (alama 10)

Taja dhima ya lugha . **(alm10).**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

JINA: ……..

SHULE: ……..

TAREHE:…….. NAMBARI YA USAJILI: …… SAHIHI:……

KISWAHILI (102/3)

KIDATO CHA NNE

MUDA: SAA 2.30

Maagizo

(i) Andika jina lako, nambari ya usajili, mkondo, sahihi na tarehe katika nafasi ulizoachiwa hapo juu.

(ii) Jibu maswali manne pekee.

(iii) Swali la kwanza ni la lazima.

(iv) Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki Riwaya, Tamthilia na Fasihi Simulizi.

(v) Usijibu maswali mawili kutoka sehemu moja.

(vi) Maswali *yote ni sharti yaandikwe kwa lugha ya Kiswahili.*

Kwa matumizi ya mtahini pekee

SWALI	UPEO	ALAMA
1	20	
2	20	
3	20	
4	20	
JUMLA	80	

.

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SEHEMU YA A ;
SWALI LA LAZIMA-FASIHI SIMULIZI

1.

a) Fafanua maana ya lakabu **(alm2)**
b) Sifa za lakabu ni zipi **(alm5)**
c) Kwa nini lakabu ni muhimu katika jamii? **(alm3)**
d) Jadili manufaa ya utafiti katika fasihi simulizi. **(alm10)**

Hadithi fupi

Mapambazuko ya machweo na Hadithi nyingine

2. Eleza nafasi ya vijana na wazee katika hadithi ya Mapambazuko ya machweo. **(alm20)**
Nafasi ya vijana

AU

3. 'Sasa ni saa ngapi? Si wajua mtoto angali anakusubiri? Mtoto analala!'

a) Eleza muktadha wa dondoo hili **(alm4)**
b) Bainisha mtindo katika dondoo hili **(alm3)**
c) Eleza umuhimu wa msemaji katika kuendeleza maudhui katika hadithi ya Harubu ya maisha. **(alm10)**
d) Kwa hoja tatu, eleza umuhimu wa msimulizi katika kuendeleza hadithi ya mzimu wa kipwerere **(alm3)**

TAMTHILIA YA BEMBEA YA MAISHA NA TIMOTHY AREGE

4. "…haikuwa mara moja mnavyofikiria. Ilianza pale chuoni. Wenzangu walinipa mvinyo kunirai kuonja ulevi."

a) Eleza maudhui manne yanayojidokeza katika dondoo hili. **(alm4)**
b) Eleza athari za mhusika anayerejelewa kujitosa katika suala linalooredheshwa kwenye dondoo. **(alm6)**
c) Kwa kurejelewa mifano tano katika tamthilia ya Bembea ya maisha, eleza tofauti iliopo katika maisha ya ndoa ya zamani na sasa **(alm10)**

AU

5. Jadili sababu kumi zilizompeleka mwandishi T. Arege kuandika Tamthilia hii. **(alm20)**

RIWAYA YA NGUU ZA JADI NA PROFESA CLARA MOMANYI

6. "Samahani… Nina shida kidogo. Ninaomba usaidizi. Sikuwa nikilipa ushuru katika biashara zangu. Sasa wanataka kuzifunga na kunipeleka kotini."

a) Eleza muktadha wa dondoo **(alm4)**
b) Bainisha toni katika dondoo hili **(alm2)**
c) Msemaji wa maneno haya na wengine ni adui ya wananchi wa Matuo. Eleza ukweli wa kauli hili. **(alm14)**

AU

7. Matumizi mabaya ya mamlaka ni tatizo sugu sana katika mataifa mengi ya Afrika yanayoendelea kiuchumi. Kwa kutolea hoja mwafaka, tetea ukweli wa kauli kwa mujibu wa riwaya ya nguu za jadi. **(alm20)**

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8. Soma shairi lifuatalo kisha ujibu maswali.

Jiulize ni kwa nini, uanzapo kuongea
Sana sana makundini, watu hukuondokea
Ndugu ujitathmini, hakika umepotea
Sisi twakuombea, mwenye damu ya kunguni!

Mwenye damu ya kunguni, nayo lugha ya ajuza
Wengi hawamtamani, maneno yake yaliza
Yeye ana walakini, dosari kuliko pweza
Kama wewe umefunza, sote hutuona duni!

Sote hutuona duni, na hilo tumezowea
Kazi zetu zote guni, yeye tu amebobea
Umewachokoza mbuni, mateke anapokea
Sisi twakuombea, upae hadi hewani!

Upae hadi hewani, ujione kama bingwa
Mewashinda gazetini, wandishi kwako wapingwa
Yeye kwetu mpinzani, metia mipaka tingwa
Twakuombea mtafiti, hesabu hadi mizani!

Hesabu hadi mizani, utunge kwa kukosoa
U hodari hesabuni, nasi tushakuzoea
We nduli kwa majirani, na waja mekutegea
Kurekebisha hujui, ywatanika peupeni!

Ywatanika peupeni, ywajisifu mjuaji
Amezidi zetu mboni, na amevijunjia mji
Twamwachia waamuzi, kesi wasome majaji
Sisi twakuombea, sirekebike kidogo!

a) Eleza ujumbe unaojitokeza katika shairi hili **(alm6)**
b) Tambua miundo wa shairi hili **(alm4)**
c) Tambua bahari ya shairi hili kwa kuzingatia mpangilio wa maneno. **(alm2)**
d) Andika ubeti wa tatu kwa lugha nathani **(alm4)**
e) Tambua aina tatu za takriri zinazojitokeza **(alm3)**
f) Onyesha toni ya shairi hili **(alm1)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

MATHEMATICS (121/1)

PAPER 1

FORM FOUR (4)

Time: 2 ½ Hours

INSTRUCTIONS TO CANDIDATES

(a) Write your name and index number in the spaces provided at the top of this page.

(b) Write your school name, sign and write the date of the examination in the spaces provided above.

(c) This paper consists of **Two** sections: **Section I** and **Section II**

(d) Answer **ALL** questions in Section I and **any five questions** from Section II

(e) Show all the steps in your calculations, giving your answers at each stage in the spaces provided below each question.

(f) Marks may be given for correct working even if the answer is wrong.

(g) Non-Programmable silent electronic calculators and KNEC Mathematical Tables may be used.

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

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

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SECTION I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total

SECTION II

17	18	19	20	21	22	23	24	Total		Grand Total	

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SECTION I (50 Marks)

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

1. Find the value of $1.\dot{5}\dot{7} - 0.\dot{4}\dot{2}$ leaving the answer as a mixed fraction in simplified form. **(3mks)**

2. Oscar refuels his car every two days; Morris refuels his car after every four days while Millicent refuels her car after every ten days. If the all refueled their cars on 20th March, on which date will they refuel their cars together again? **(3mks)**

3. Use logarithms only to evaluate, correct to 4 decimal places: **(4mks)**

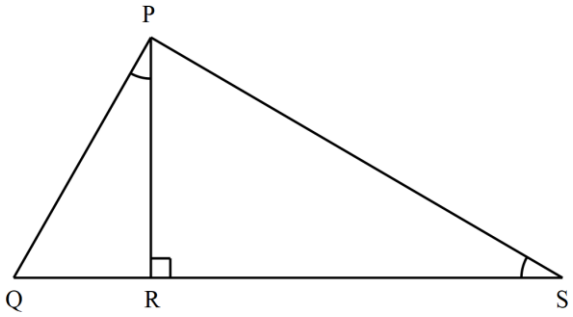
$$\left(\frac{12.78 \sin 33.45^0}{(9.063)^2}\right)^{\frac{1}{3}}$$

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4. Without using a calculator, evaluate leaving the answer as a fraction in the simplest form. **(3mks)**

$$\frac{2\frac{1}{4}+\frac{3}{5}\div\frac{5}{6}\text{ of }2\frac{2}{5}}{1\frac{7}{10}}$$

5. In the figure below angles QPR and PSR are equal. Angle PRS is a right angle. The ratio of the PR:QR=4:3



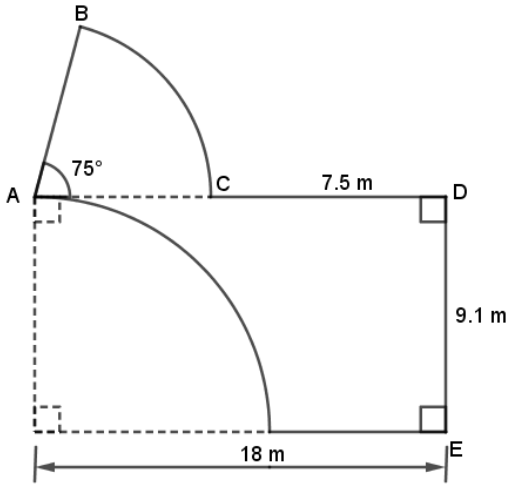
Given that the area of triangle PQR is 24 cm^2, find the area of triangle PRS. **(3mks)**

6. A suit whose marked price is sh. 8,000 is sold to customer after allowing him a discount of 13%. If the trader makes a profit of 20%, find how much the trader paid for the suit. **(3mks)**

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7. Evans is a salesperson with Ajab Millers. He is paid on monthly basis as the agreement; basic pay of Ksh. 20,000, a commission of 2% for goods sold up to a maximum of Ksh. 200,000 and a commission of 4% for goods sold over Ksh. 200,000 in that month. In January 2023, he sold goods worth Ksh. 600,000. Calculate his total pay that month. **(3mks)**

8. The figure below shows a flower garden with the dimensions shown.



Calculate the perimeter of the garden **(3mks)**

9. The GCD of three numbers is 30 and their LCM is 900. Two of the numbers are 60 and 150. By expressing the GCD, LCM and the two numbers as products of their prime factors, determine the least possible value of the third number. **(3mks)**

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10. Solve for x in the equation **(3mks)**

$$\frac{27^x \times 9^{2x}}{\left(\frac{1}{3}\right)^x} = 81$$

11. The sum of interior angles of two regular polygons of sides; n and $n+2$ are in the ratio 3:4. Calculate the value of n hence find the size of each exterior angle of the polygon with n sides. **(4mks)**

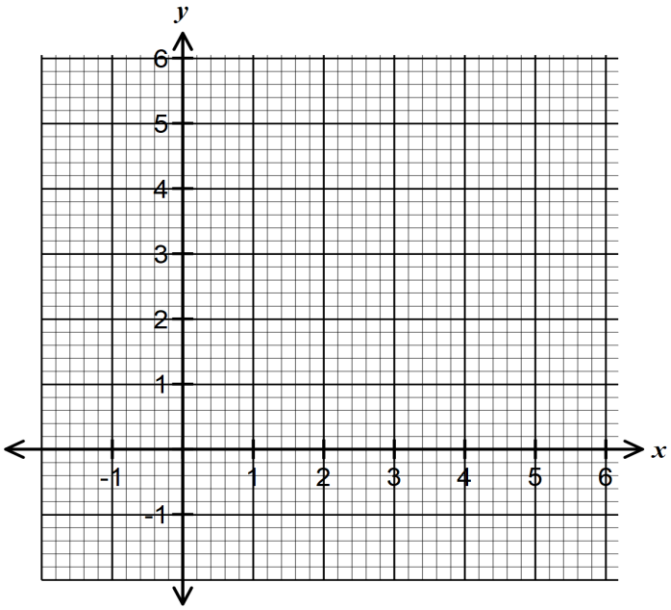
12. Simplify the expression: **(3mks)**

$$\frac{(x+1)(4a^2 - ax)}{x^2 - 4ax - 4a + x}$$

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13. The sum of two consecutive even numbers is 270. Find the numbers. **(2mks)**

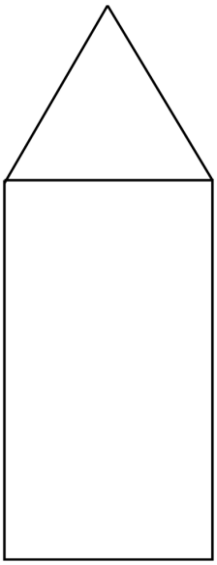
14. On the grid provided below, draw and label the region R satisfied by the following inequalities:
$L_{1;} x \geq -1$, $L_2; 3y - x \geq -5$ and $L_3; 3x + 5y < 15$ **(3mks)**



15. In a theatre group, the ratio of males to females is 2:3. On one Tuesday training, ten males members were absent and six new female members joined the group as guests for the day. If on this day the ratio of males to females was 1:3, how many regular members does the group have? **(3mks)**

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16. The figure below shows part of the net of a triangular prism whose cross-section is an equilateral triangle.



Complete the net of the solid. **(4mks)**

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SECTION II (50 Marks)

*Answer **any five** questions in this section.*

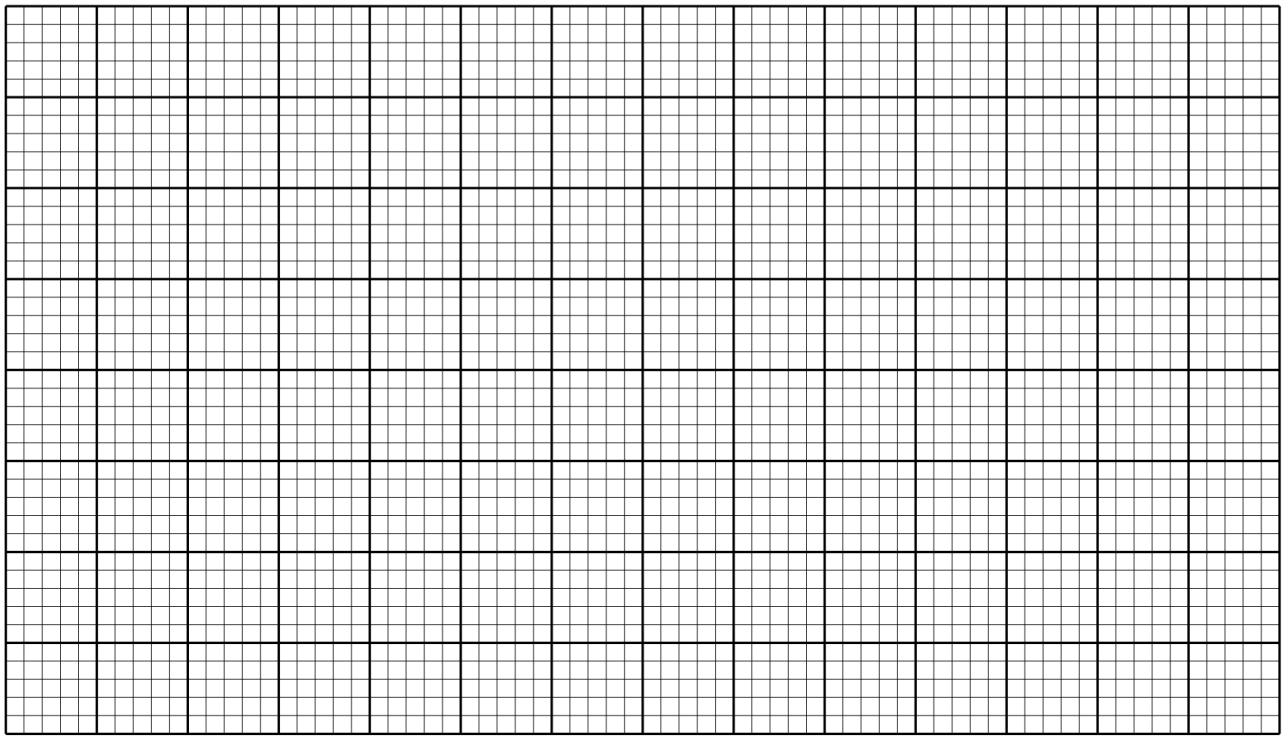
17. The table below shows the wages in US dollars earned by technical developers in an ICT firm

nt (USD)	10 – 14	15 – 24	25 – 29	30 – 44	45 – 64
er of workers	6	16	a	9	5

(a) Given that the mean wage is $27\frac{11}{16}$ USD, find the value of a. **(4mks)**

(b) Find the median class and its frequency. **(2mks)**

(c) On the grid provided, draw a histogram to represent the information. **(4mks)**



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18. A composite solid comprises of a frustum of a cone mounted on a hemisphere such that the diameters of the hemisphere and the bottom of the frustum both measure 30 cm. The entire solid has a vertical height of 60 cm. The radius of the top of the frustum if 10 cm.

(a) Calculate the volume of the solid correct to two decimal places. Use $\pi = \frac{22}{7}$. **(7mks)**

(b) The solid is melted and recast into cubes of side 16 cm. How many such cubes are realized? **(3mks)**

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19. Two lines $L_1: 2y - 3x - 6 = 0$ and $L_2 = 3y + x = 20$ intersect at a point M

(a) Find the coordinates of M. **(3mks)**

(b) A third line L_3 is perpendicular to L_2 at M. Find the equation of L_2 in the form $y = mx + c$ where m and c are constants **(3mks)**

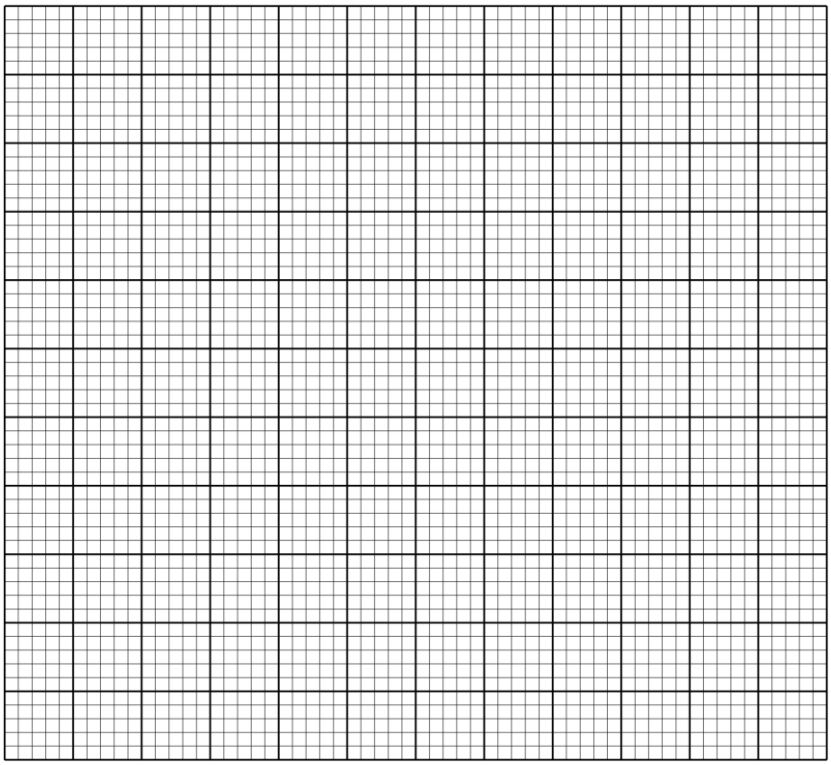
(c) Another line L_4 is parallel to L_1 and passes through $(-1, 3)$. Determine the x and y intercepts of L_4 **(4mks)**

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20. (a) Complete the table below for the function $y = 2x^2 + 5x - 12$ for $-6 \leq x \leq 3$. **(2mks)**

x	-6	-5	-4	-3	-2	-1	0	1	2	3
y				-9			-12			

(b) On the grid provided, draw the graph of $y = 2x^2 + 5x - 12$ for $-6 \leq x \leq 3$ **(3mks)**



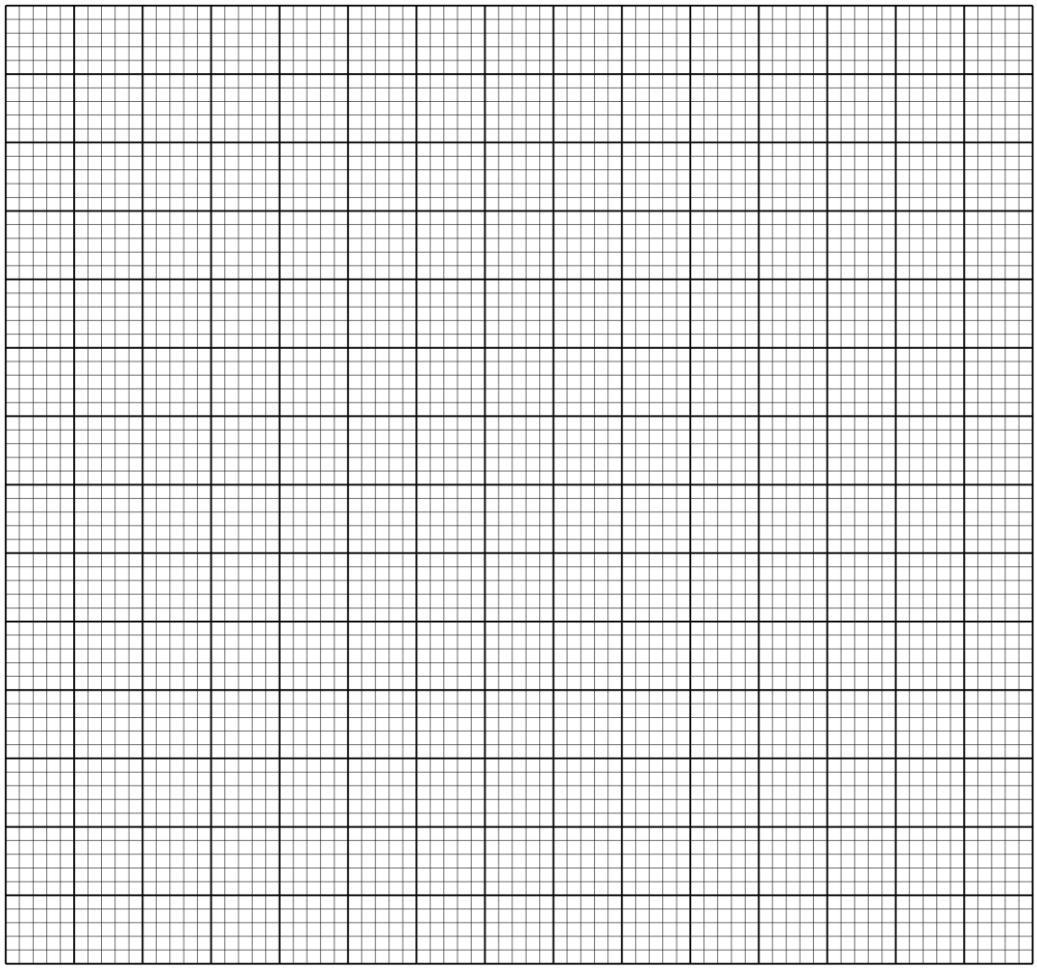
(c)Use the graph in (b) above to find the roots to the equation $2x^2 + 5x - 12 = 0$ **(2mks)**

(d) By drawing a suitable line on the same axes as the graph in (b), solve the equation $x^2 + x - 6 = 0$ **(3mks)**

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21. On the grid provided,

(a) Draw ΔPQR in which P(2, 3), Q(1, 2) and R(4, 1). On the same axes, draw $\Delta P''Q''R''$ such that $P''(-2, 3)$, $Q''(-1, 2)$ and $R''(-4, 1)$. **(2mks)**



(b) On the same axes, draw $\Delta P'Q'R'$, the image of ΔPQR under a reflection in the line $y + x = 0$. **(2mks)**

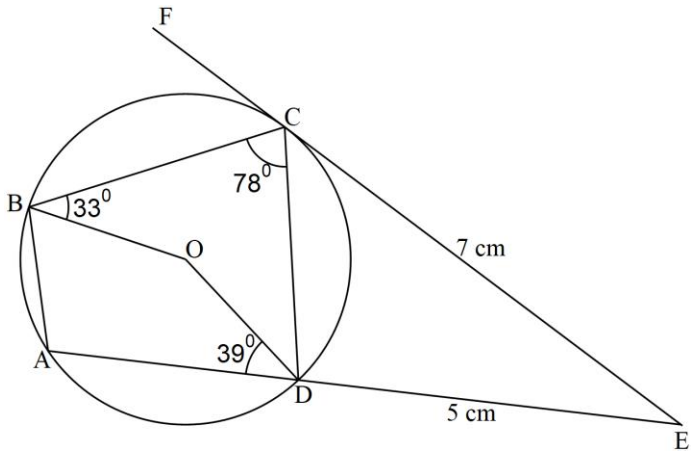
(c) Describe fully, a single transformation that maps $\Delta P'Q'R'$ onto $\Delta P''Q''R''$. **(2mks)**

(d) Draw $\Delta P'''Q'''R'''$ such that it can be mapped onto ΔPQR by a rotation of -90^0 about (0, 0) and state its coordinates. **(3mks)**

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(e) State the type of congruency between $P'Q'R'$ and $\Delta P'''Q'''R'''$. **(1mk)**

22. In the figure below, O is the centre of the circle, $\angle ADO=39^0$, $\angle OBC=33^0$ and $\angle ECD=45^0$. EC is a tangent to the circle at C.



(a) Calculate, giving reasons

(i) $\angle CDE$ **(2mks)**

(ii) $\angle DEC$ **(2mks)**

(iii) Reflex $\angle BOD$ **(2mks)**

(b) Given that EC=7 cm and DE = 5 cm, calculate the length of AD correct to 4 significant figures. **(4mks)**

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23. The distance between two towns A and B is 760 km. A bus left A at 0815 hours and traveled towards B at an average speed of 90 km/h. At 1035 hours and on the same day, a car left B and traveled towards A at an average speed of 110 km/h

(a) Calculate:

(i) the time of the day the two vehicles met; **(4mks)**

(ii) the distance from A to the meeting point. **(3mks)**

(b) A motorist started at her home at 1030 hours on the same day and traveled at an average speed of 120 km/h. She arrived in B at the same time as the bus. Calculate the distance from her home to B. **(3mks)**

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24. Mama Moraa, a cereals trader deals in two types of beans, Wairimu and Yellow Green. Wairimu costs Ksh. 4,000 per bag while Yellow Green costs Ksh. 3,500 per bag.

(a) She mixes 30 bags of Wairimu with 50 bags of Yellow Green. If she sells the mixture at a profit of 20%, calculate the selling price of one bag of the mixture. **(4mks)**

(b) She now mixes Wairimu with Yellow Green in the ratio a: b respectively. If the cost of the mixture is Ksh. 3,835 per bag, find the ratio a: b **(4mks)**

(c) Mama Moraa then mixes one bag of the mixture in part (a) with one bag of the mixture in part (b) above. Calculate the ratio of Yellow Green to Wairimu in this mixture. **(2mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

MATHEMATICS (121/2)

PAPER 2

FORM FOUR (4)

Time: 2 ½ Hours

INSTRUCTIONS TO CANDIDATES

(a) Write your name and index number in the spaces provided at the top of this page.

(b) Write your school name, sign and write the date of the examination in the spaces provided above.

(c) This paper consists of **Two** sections: **Section I** and **Section II**

(d) Answer **ALL** questions in Section I and **any five questions** from Section II

(e) Show all the steps in your calculations, giving your answers at each stage in the spaces provided below each question.

(f) Marks may be given for correct working even if the answer is wrong.

(g) Non-Programmable silent electronic calculators and KNEC Mathematical Tables may be used.

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

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

For Examiners' Use Only

SECTION I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total

SECTION II

17	18	19	20	21	22	23	24	Total		Grand Total	

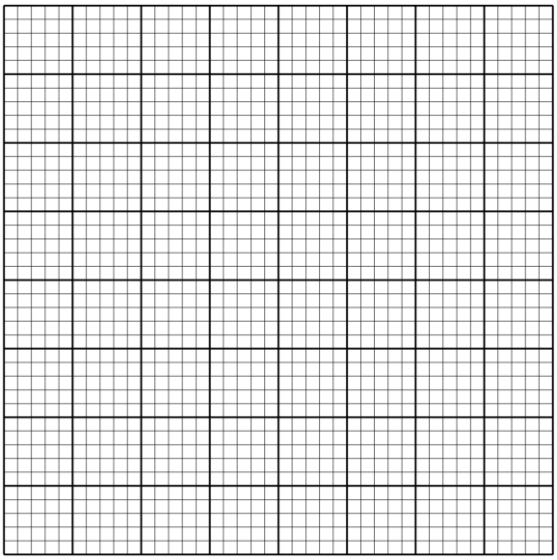
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SECTION I (50 Marks)

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

1. A picture frame is rectangular in shape with dimensions 10 cm by 14 cm. Calculate the maximum percentage error in the area of the frame. **(3mks)**

2. On the grid provided below, draw the circle whose equation is $2x^2 + 2y^2 + 8x - 10 = 0$. **(4mks)**



3. Without using a mathematical table or a calculator, find the values of a, b and c given that: **(3mks)**

$$\frac{\tan 60^0}{1 - \cos 30^0} = a + b\sqrt{c}$$

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4. Without using mathematical tables or a calculator, evaluate: **(3mks)**

$$2\log_3 9 - \frac{1}{2}\log_3 144 + \log_3 972$$

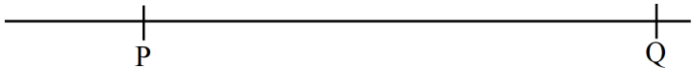
5. Make A the subject of the formula **(3mks)**

$$T = \frac{2m}{n}\sqrt{\frac{L - A^2}{3k}}$$

6. Expand $(1 - 2x)^7$ in ascending powers of x up to the term in x^4. Hence use your expansion to find the value of $(0.98)^7$. **(3mks)**

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7. The line PQ below is part of a triangle PQR in which $\angle QPR = 75^0$ and PR=5.5 cm.

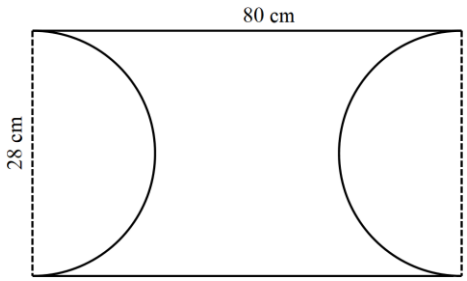


Using a ruler and a pair of compasses only;

(a) complete triangle PQR. **(1mk)**

(b) determine the shortest distance from R to PQ. **(1mk)**

8. The figure below shows cross-section of a steel beam used in a construction site.



Calculate the volume of the beam if it is 1.8 m long. Use $\pi = \frac{22}{7}$ **(3mks)**

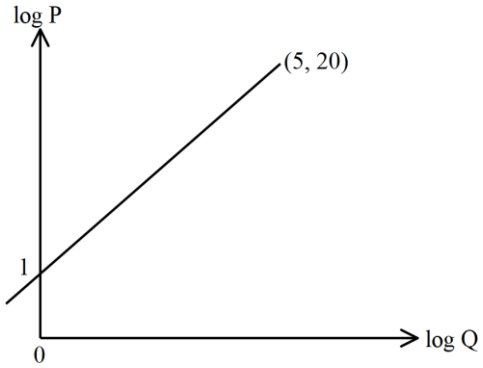
9. Given that $\mathbf{p} = 2\mathbf{i} - 3\mathbf{j} + \mathbf{k}$ and $\mathbf{q} = 3\mathbf{i} - 4\mathbf{j} - 3\mathbf{k}$, a point R divides the line PQ externally in the ratio of 4: 1. Find the coordinates of R. **(3mks)**

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10. Find the obtuse angle made by the line $3x + 4y = 12$ and the $x -$ axis, correct to 1 decimal place. **(3mks)**

11. In a transformation, an object with area 9 square units is mapped onto its image whose area is 54 square units. Given that the transformation matrix is $\begin{pmatrix} x & x-1 \\ 2 & 4 \end{pmatrix}$. Find the value of x. **(3mks)**

12. The figure below shows the graph of $\log \mathrm{P}$ against $\log \mathrm{Q}$.



Given that $\mathrm{P} = a\mathrm{Q}^n$, find the values of a and n. **(3mks)**

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13. Five geometrical sets and three mathematical tables cost sh. 2,816 while three geometrical sets and five mathematical tables cost sh. 3,360. Use the matrix method to determine the cost of each item. **(4mks)**

14. The length of an arc of a circle is $\frac{1}{5}$ of its circumference. If the area of the circle is 346.5 cm^2, find the area of the sector enclosed by this arc. **(3mks)**

15. Rose a branding machine on hire purchase. The cash price of the branding machine is Kshs. 750,000. She pays a deposit of Kshs. 275,000 and followed by 15 monthly installments of Kshs. 55,000 each. Calculate the monthly rate at which compound interest was charged. **(4mks)**

16. Jose had 200 buckets of water each having a mass of 20 kg. After one week, due to evaporation, the mass decreased in the ratio 29: 32. Calculate the total mass lost to evaporation. **(3mks)**

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SECTION II (50 Marks)

*Answer **any five** questions in this section.*

17. The table below shows the income tax rates for a certain year.

Taxable pay per month (Kshs)	Tax rate (%)
1 – 9,680	10%
9,681 – 18,800	15%
18,801 – 27,920	20%
27,921 – 37,040	25%
37041 – and above	30%

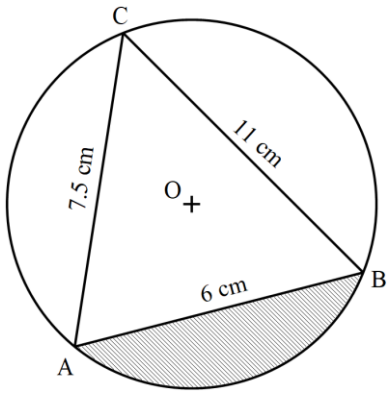
That year Marylinnet paid net tax of Kshs. 4,312 per month. Her total monthly taxable allowances amounted to Kshs.15,220 and he was entitled to a monthly relief of Ksh. 1,062. Every month the following deductions were made; NHIF – Kshs.320, Union dues – Ksh.200, Co-operative shares – Ksh. 500.
Calculate:

(a) Marylinnet's monthly basic salary in Kshs. **(7mks)**

(b) Her monthly net salary in Kshs. **(3mks)**

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18. In the figure below, ABC is a triangle in which AB = 6 cm, BC = 11 cm and AC = 7 cm (not drawn to scale). The circle centre O passes through A, B and C.



Calculate correct to 1 decimal place

(a) angle ACB **(3mks)**

(b) radius of the circle. **(2mks)**

(c) shaded area. **(5mks)**

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19. (a) Given the series $2 + 4 + 8 + 16 + \cdots + 16384$

(i) Identify the type of series. **(2mks)**

(ii) Find the number of terms in the series **(3mks)**

(iii) Calculate the sum terms in the series **(2mks)**

(b) Given that the sum of the first n terms of the sequence $3 + 7 + 11 + 15 + \ ...$ is 820, find the last term of the sequence **(3mks)**

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20. The table below shows the distribution of marks scored by 110 students in a test.

Marks	11 – 20	21 – 30	31 – 40	41 – 50	51 – 60	61 – 70	71 – 80	81 – 90
No. of Students	7	$a + 3$	12	$2a + 13$	37	11	6	3

(a) Find the value of a. **(1mk)**

(b) Using $d = \frac{x-45.5}{10}$, calculate, to 4 significant figures;

(i) The mean mark. **(4mks)**

(ii) The standard deviation. **(3mks)**

(c) If 60% of the students passed, calculate the pass mark. **(2mks)**

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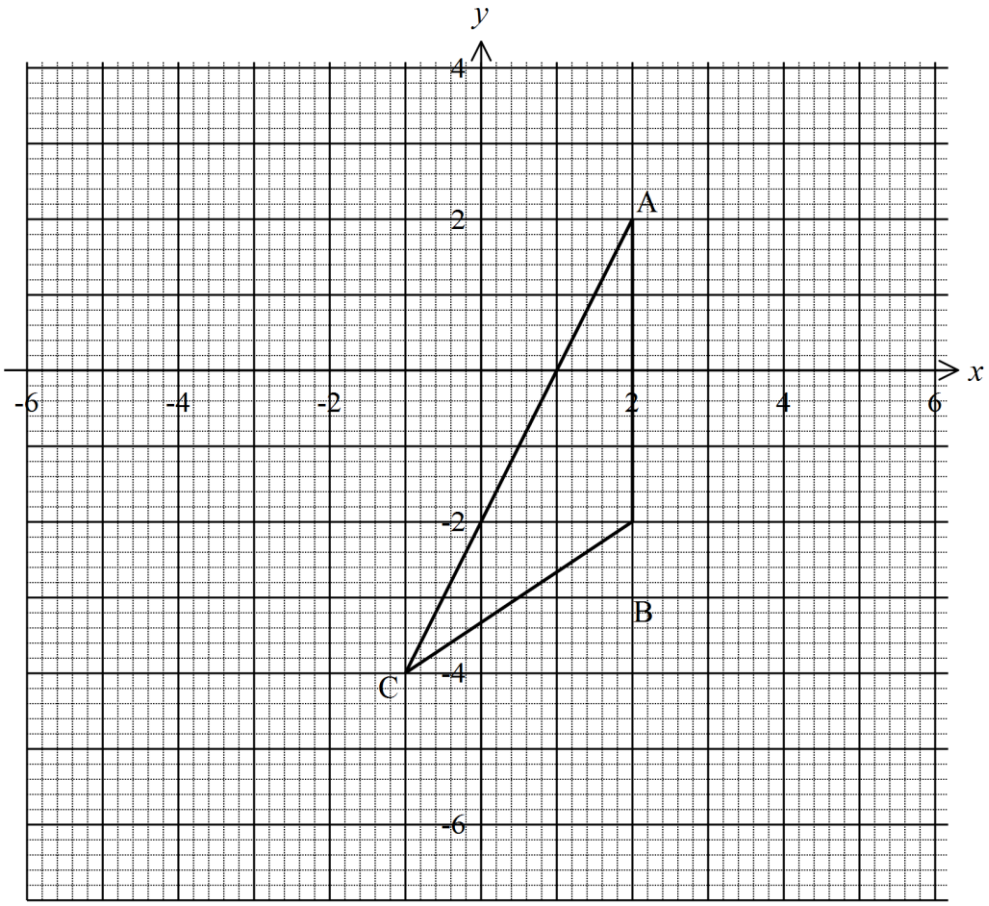
21. A water vendor has a tank of capacity 18900 litres. The tank is being filled from two pipes A and B that are closed immediately the tank is full. Water flows at the rate of 150,000 cm^3 per minute and 120,000 cm^3 per minute from pipes A and B respectively.

(a) Calculate the time it takes to fill the tank if both taps A and B are opened at the same time in hours. **(4mks)**

(b) On a particular day the vendor started refilling the empty tank using taps A and B but was forced to start serving his clients after 25 minutes of filling. Given that the draining tap C supply 20 litres per minute to the clients, determine the exact time of the day the tank was filled assuming that the clients supply was continuous from 11.15 a.m. **(6mks)**

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22. The vertices of a triangle ABC are $A(2,2)$, $B(2,-2)$ and $C(-1,-4)$ as shown in the figure below.



(a) If the vertex $B(2,-2)$ is mapped onto $B'(5,-2)$ by a shear with x – axis invariant.

(i) Find the matrix that represents the shear in (a) (i) above. **(2mks)**

(ii) Draw triangle $A'B'C'$, the image of triangle ABC, under the shear. **(3mks)**

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(b) A transformation matrix $\mathbf{T} = \begin{pmatrix} 0 & 1 \\ 1 & 1.5 \end{pmatrix}$ maps triangle $A'B'C'$ onto $A''B''C''$. Draw triangle $A''B''C''$.

(2mks)

(c) A transformation matrix $\mathbf{U}$ maps triangle $A''B''C''$ onto triangle ABC

(i) Determine the transformation matrix $\mathbf{U}$. **(2mks)**

(ii) Describe the transformation represented by $\mathbf{U}$. **(1mk)**

23. The probability of Patrick passing his exam is 0.8 that of James is 0.6 while that of Linda is 0.2.

(a) Draw a tree diagram to represent the above information **(2mks)**

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(b) Use your tree diagram to find the probability that;

(i) Exactly two students pass in the exam **(2mks)**

(ii) At most two students pass the exam **(2mks)**

(iii) Only one student passes the exam **(2mks)**

(iv) At least one passes in the exam **(2mks)**

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24. A triangle OPQ is such that $\mathbf{OP} = 3\mathbf{OS}$ and $3\mathbf{OR} = \mathbf{OQ}$. T is a point on QS sch that $4\mathbf{QT} = 3\mathbf{QS}$. Given that $\mathbf{OP} = \mathbf{p}$ and $\mathbf{OQ} = \mathbf{q}$,

(a) Express the following vectors in terms of p and q

(i) SR **(1mk)**

(ii) QS **(1mk)**

(iii)PT **(2mks)**

(iv)TR **(3mks)**

(b) Show that the points P, T and R are collinear. **(3mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

PHYSICS (232/1)
FORM FOUR (4)
PAPER 1
Time: 2 *Hours*

Instructions to candidates

- This paper consists of two sections ***A*** and ***B***.
- Answer **all** the questions in the two sections in the spaces provided after each question.
- All working **must** be clearly shown.
- Electronic calculators and mathematical tables may be used.
- All numerical answers **should be expressed** in the **decimal** notations.
- You may use 'gravitational acceleration, g, as $10m/s^2$

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SECTION	QUESTION	MAX MARKS	CANDIDATE'S SCORE
A	1 – 13	25	
B	14	12	
	15	11	
	16	10	
	17	12	
	18	10	
	TOTAL	80	

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SECTION A (25 MARKS)

1.A form one student measured the length of a wire four times using a metre-rule and obtained the following readings: 10.2 cm, 10.3cm, 10.1cm and 10.0 cm. determine the length the student should record **(2mks)**

2.The figure 1 below shows a reading of micrometer screw gauge with a positive zero error of 0.06mm.

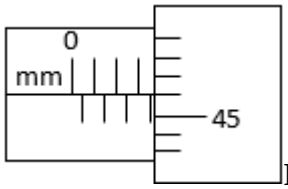


Figure 1

State the actual reading of the micrometer screw gauge **(2mks)**

3.It is not correct to quote weight of an object in kilogram. Explain **(1mk)**

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4.Figure 2 shows a section of a curved surface ABCD. Point A is higher than point B while BCD is horizontal. Part ABC is smooth while CD is rough. A mass M is released from rest at A and moves towards D.

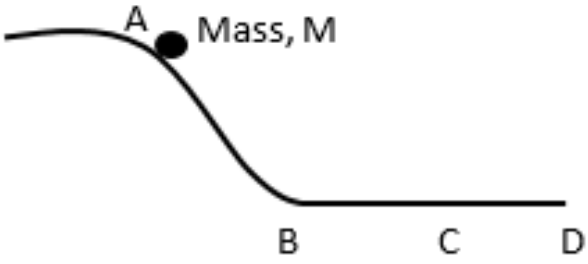


Figure 2

State the changes in velocity of M between:

i.BC **(1mk)**

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ii.CD **(1mk)**

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5.A student wearing sharp pointed heeled shoes is likely to damage soft wooden floor. Explain. **(2mks)**

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6.Figure 3, shows the arrangement of molecules in the three states of matter

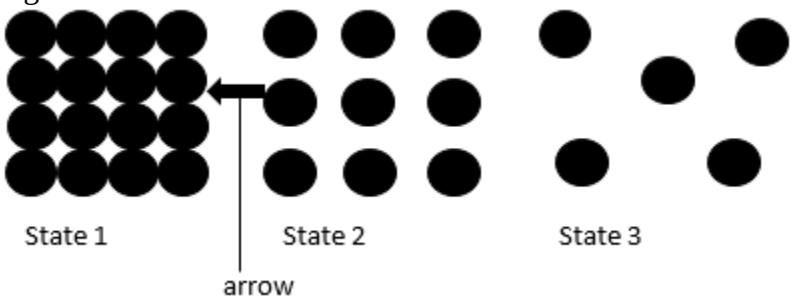


Figure 3

a) Name the process represented by the arrow **(1mk)**

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b) State the reason for the arrangement of molecules in state 3 **(1mk)**

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7.Figure 4 shows a uniform metal rod balanced at its centre by different forces.

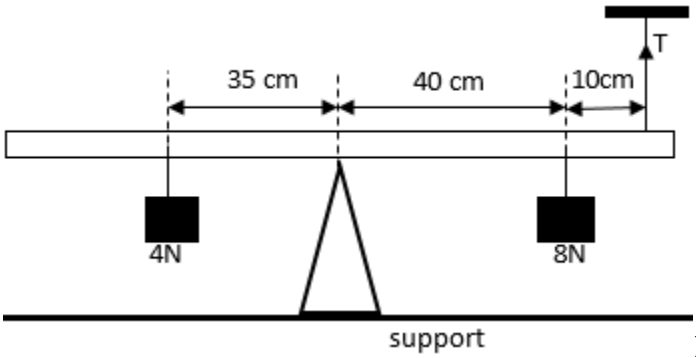


Figure 4

Determine the value of T (3marks)

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8. A balloon is filled with hydrogen gas and then released into the air. It is observed that as it rises up into the air, it expands. Explain. **(2mks)**

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9. A person carrying a heavy luggage using one hand leans is body away from the luggage. Give a reason for this. **(1mk)**

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10. Figure 5 shows a glass tube with water and fitted with two identical thermometers A and B. it is heated as shown.

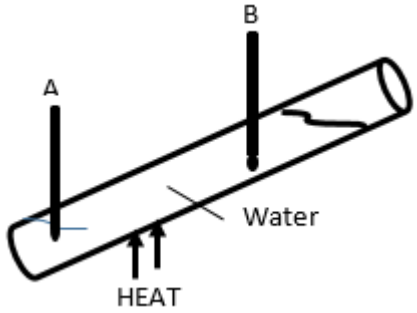


Figure 5

State and explain which of the two thermometers shows a higher reading **(2mks)**

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11. Mechanics is one of the branches of physics. State what it deals with **(1mk)**

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12. Figure 6 shows parts A, B and C of a non-uniform glass tube

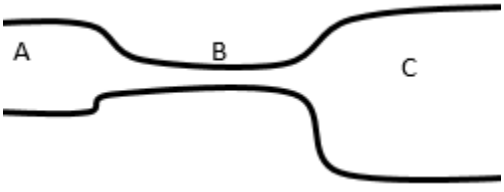


Figure 6

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State with reason the part of the tube where the pressure will be lowest when air is blown through the tube from A to C **(2mks)**

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13. In an experiment to determine the density of a liquid R, a student obtained the following data:

Mass of an empty density bottle = 55.0 g
Mass of the density bottle + water = 80.0 g
Mass of the density bottle + liquid R = 70.0 g

Determine the density of liquid, R (density of water is 1000 kg/m^3) **(3mks)**

SECTION B (55 MARKS)

14.

a) Define the following terms:

i. Displacement **(1mk)**

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ii. Acceleration **(1mk)**

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b) A tape attached to an accelerating trolley passes through a ticker timer that makes dots on it at a frequency of 50 Hz. The ticker timer makes 10 dots on a 10 cm long tape such that; the distance, a, between the first two dots is 0.5 cm and the distance b, between the last two dots is 1.5 cm. Determine the velocity of the trolley at:

i.Distance, a **(3mks)**

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ii. Distance, b **(2mks)**

c) Determine the acceleration of the trolley **(3mks)**

d) State and explain what would be observed on the spacing of the dots on the tape when the trolley is made to move on a horizontal surface **(2mks)**

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15.

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

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b) Figure 7 shows two solids A and B made of the same material and immersed in water.

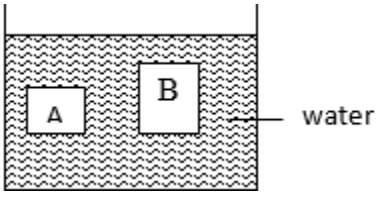


Figure 7

State and explain which of the two containers experience greater upthrust **(2mks)**

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c) Solid A weighs 12 N in air and 2N in water, 4N in another liquid. Determine the density of the other liquid **(3mks)**

d) Figure 8 shows two identical wooden blocks each of mass 0.2 kg suspended in water by two strings M and N.

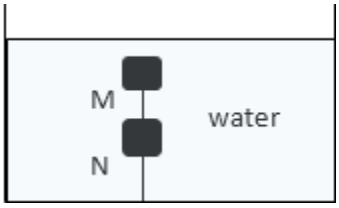


Figure 8

Given that the upthrust on each block is 3.2 N, determine the tension in string:

i.M **(2mks)**

ii.N **(2mks)**

e) State any one application of hydrometers **(1mk)**

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16.

a) When a bus goes round a bend on a flat road, it experiences centripetal force. State what provides this centripetal force. **(1mk)**

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b) State the purpose of banking roads at bends **(1mk)**

c) A student whirls a stone of mass 0.2 kg tied to a string of length 0.4 m in a vertical plane at a constant speed of 2 revolutions per second. (acceleration due to gravity is $10m/s^2$).

i.State two forces acting on the stone when it is at its highest point **(2mks)**

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ii. Determine the angular velocity of the stone **(3mks)**

iii.Determine the tension in the string when the stone is at the highest point **(3mks)**

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17.

a) Figure 9 shows a graph of pressure against temperature for a fixed mass of gas at constant volume.

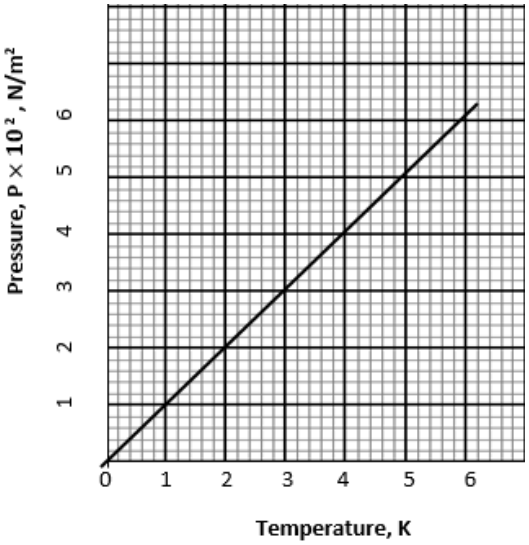


Figure 9

From the graph, determine the values of n and C given that: $P = nT + C$; where n and C are constants **(4mks)**

b) It is not possible to obtain a zero pressure of gas in a real gas situation. Explain **(2mks)**

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c) A fixed mass of a gas occupies $1.5 \times 10^{-3} m^3$ at a pressure of 760mmHg and a temperature of 273K. determine the volume the gas will occupy at a temperature of 290K and a pressure of 720mmHg **(3mks)**

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d) State any three assumptions made in the kinetic theory of gases **(3mks)**

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18.

a) State two differences between boiling and evaporation **(2mks)**

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b) State two ways in which heat loss by conduction is minimized in a vacuum flask **(2mks)**

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c) In a certain experiment, 50 g of dry steam at 100 ^{0}C was directed into some crushed ice at 0 ^{0}C. (latent heat of vaporization of water is 2.26×10^6J/kg, latent heat of fusion of ice is 3.34×10^5J/kg and specific heat capacity of water is 4200J/kgK). Determine the:

i. Quantity of heat lost by steam to change to water at 100 ^{0}C **(2mks)**

ii. Quantity of heat lost by water formed to cool to 0 ^{0}C **(2mks)**

iii. Mass of ice melted at 0 ^{0}C **(2mks)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME: ……..

SCHOOL: ……..

DATE:…….. ADM NO: …… SIGNATURE:……

PHYSICS (232/2)

FORM FOUR (4)

PAPER 2

Time: 2 *Hours*

Instructions to Candidates

- Write your name, admission number, class and signature in the spaces provided at the top of the page. This paper consists of two sections: **A** and **B.**
- Answer **ALL** the questions in the spaces provided.
- Mathematical tables and electronic calculator may be used.
- All working MUST be clearly shown.
- This paper consists of **13** printed pages.
- Candidates should answer the questions in English and check to ensure that no question(s) is missing.

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SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 12	25	
B	13	11	
	14	15	
	15	11	
	16	8	
	17	10	
TOTAL SCORE		**80**	

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SECTION A: 25 MARKS

Answer all questions in this section

1. **Figure 1** shows two mirrors inclined at an angle of 30º to each other. A ray of light is incident on one mirror as shown

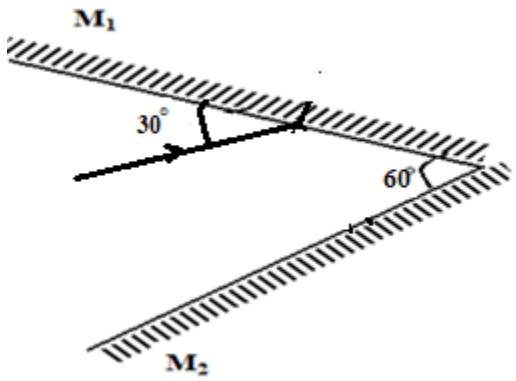


Figure 10

Sketch the path of the ray to show its reflection on the two mirrors **(2mks)**

2. **Figure 2** shows the path of a ray of light CB passing from glass to air.

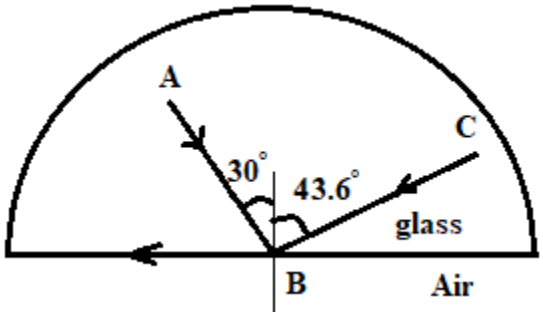


Figure 11

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Complete the diagram to show the path of the ray of light AB after it emerges from the glass showing the angle calculated. **(3mks)**

3. **Figure 3** shows water waves moving towards barrier.



Figure 12

i) State the property of wave under investigation. **(1mk)**

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ii) Show the emergence of the reflected wave after passing the opening **(1mk)**

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iii) State why passing of light through narrow opening is a very rare phenomenon **(1mk)**

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4. **Figure 4** shows an object in front of a concave mirror and its image.

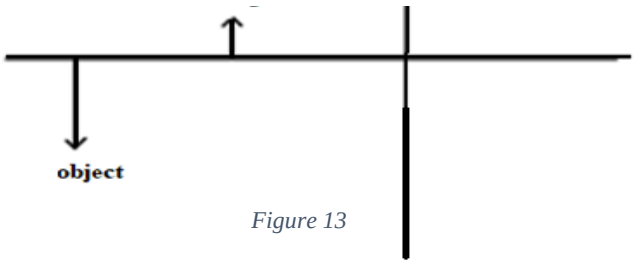


Figure 13

Locate position of its principal focus and label it as F **(2mks)**

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5. **Figure 5** shows a wave profile.

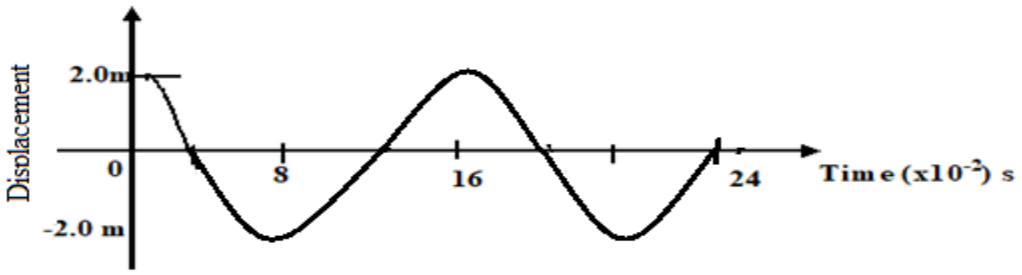


Figure 14

Determine the frequency of the wave **(3mks)**

6. **Figure 6** shows a bar of soft iron placed near a magnet.



Figure 15

On the same diagram, sketch the magnetic field pattern due to the set up **(2mks)**

7. State two uses of a charged gold leaf electroscope**.** **(2mks)**

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8. State two physical quantities that can be measured to determine whether a secondary chemical accumulator requires to be charged**.** **(2mks)**

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9. Explain why the walls of studios are padded with woolen materials**.** **(1mk)**

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10. State one similarity between the working of the human eye and the lens of a camera. **(1mk)**

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11. Give any two ways of increasing the capacitance of a parallel plate capacitor **(2mks)**

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12. Three resistors of 3 Ω, 6 Ω and 9 Ω are connected in parallel. Determine the total resistance. **(2mks)**

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SECTION B. (55 MARKS)

Answer all questions in this section

13. a) **Figure 7** shows an object, a screen and light sources X, Y and Z.

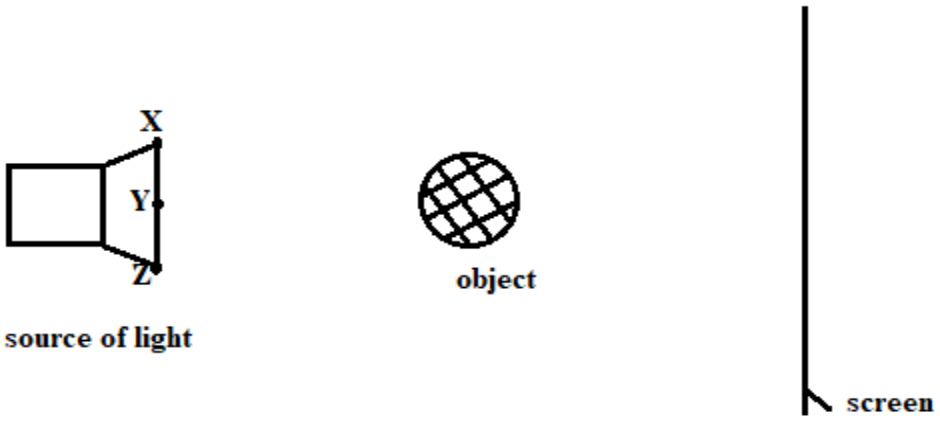


Figure 16

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

ii) Explain why it is impossible to obtain a sharp-edged shadow of the object **(1mk)**

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

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b) (i) The length of a pinhole camera is 20cm. Determine the height of a sloppy building 300m away from a pinhole camera which forms an image 2.5cm high on the screen of the camera. **(3mks)**

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(ii) A student decided to use a nail to make the hole of the camera mentioned above. State two possible characteristics of the image formed **(2mks)**

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c) Give two differences between the images formed by the pin-hole camera and the plane mirror **(2mks)**

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14. a) What is meant by the term electromotive force of a cell? **(1mk)**

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b) Battery of e.m.f. 12 V supplies a current of 10 A flows through it for 5 minutes. Determine the amount of electrical energy produced. **(2mks)**

c) **Figure 8** shows a graph of resistance against reciprocal of current. Use it to answer the questions that follow.

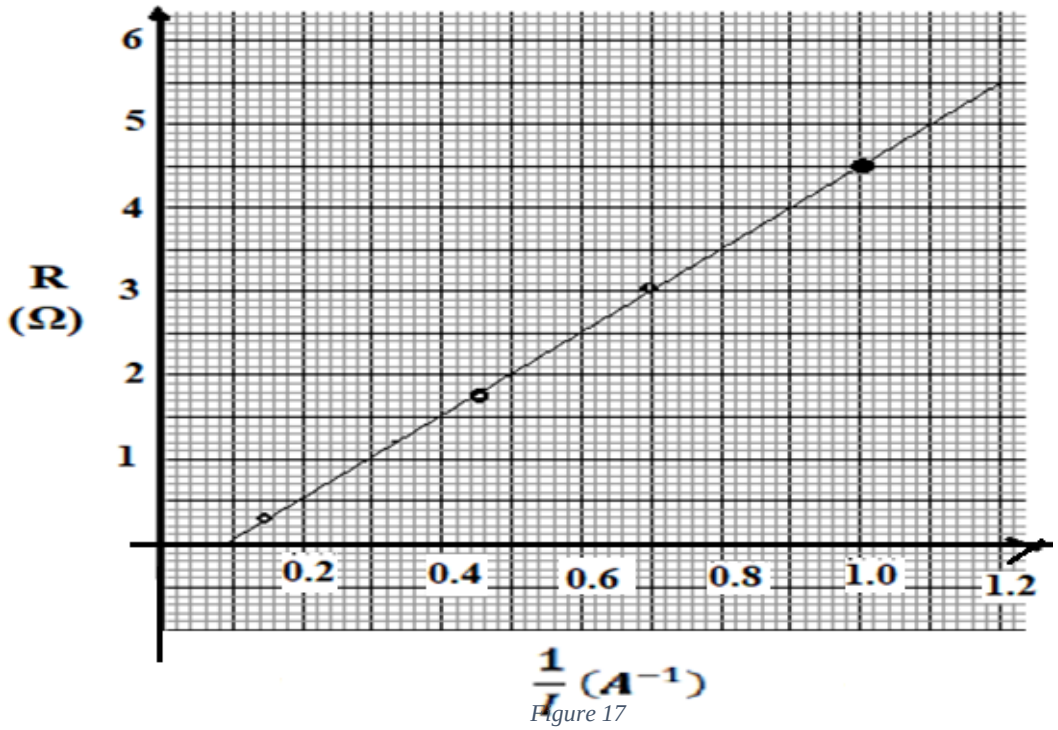


Figure 17

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

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

iii) Draw a circuit diagram to show the set-up used to generate the above graph **(2mks)**

d) i) Draw a circuit diagram to show how a 12V battery may be used to operate efficiently 3 headlamp bulbs each marked 6V, 24W. **(2mks)**

ii) Calculate the current supplied by the battery in (d) above. **(2mks)**

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iii) Calculate the total effective resistance of the bulbs in (i) above. **(2mks)**

15. **a)** State the meaning of the term principal focus as applied in lenses **(1mk)**

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b) A real object of height 1 cm placed 50mm from a converging lens forms a virtual image 100mm from the lens. Determine the following;

I. Focal length of the lens **(3mks)**

II. The magnification **(2mks)**

c) State two optical instruments that produce a magnified real image using a convex lens **(2mks)**

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d) The diagram below shows a compound microscope with objective and eyepiece of principal foci Fo and Fe respectively. Complete the ray diagram to illustrate how the eye sees the final image. **(3mks)**

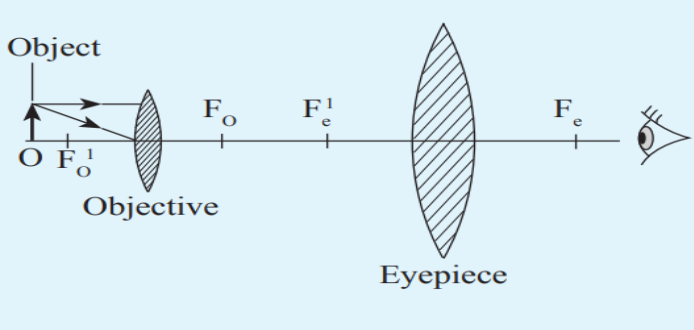


Figure 18

16. a) State Flemings left hand rule **(1mk)**

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b) A small electromagnet for lifting and releasing a small steel ball is made in the laboratory as shown in figure 10 below

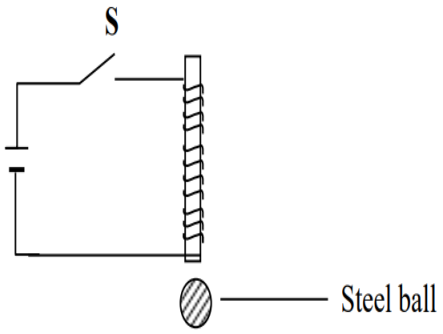


Figure 19

i) Explain why soft iron is better material to be used for the core than steel. **(1mk)**

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ii) In order to lift a slightly larger ball, it is necessary to make a stronger electromagnet. State two ways in which electromagnet can be made more powerful**.** **(2mks)**

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c) The figure 11 below illustrates a circuit diagram of an electric bell.

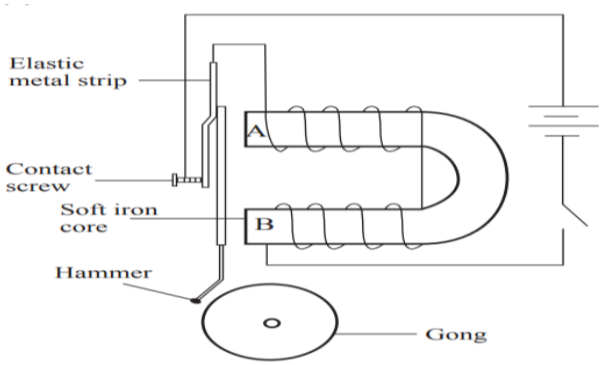


Figure 20

Explain how the bell works**.** **(4mks)**

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17. a) A spoon partly submerged in a glass of water appears bent. Explain. **(1mk)**

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b) A coin is placed at the bottom of a tall gas jar. When the jar is filled with paraffin to a depth of 32.4 cm, the coin is apparently seen displaced 9.9 cm from the bottom. What is the refractive index of paraffin? **(3mks)**

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c) State two conditions necessary for total internal reflection **(2mks)**

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d) The speed of light in air is 3.0 x 108 m/s. What is the speed of light in glass?
Take refractive index of glass = 1.5 **(3mks)**

e) State the laws of refraction **(1mk)**

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PROGRESSIVE STUDENTS FORM 4 PRE-MOCK 1 EXAMS

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PHYSICS (232/3)

FORM FOUR (4)

PAPER 3

Time: 2 *Hours*

INSTRUCTIONS:

- Answer all the questions in this paper.
- You are supposed to spend the first 15 minutes of the $2\frac{1}{2}$ hours 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.
- **The earth's gravitational pull, $g = 10Nkg^{-1}$**

For Examiner's use only:

QUESTION	TOTAL MARKS	CANDIDATE'S SCORE
1	20	
2	20	
GRAND TOTAL	40	

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QUESTION ONE

You are provided with the following:

- An -ammeter (range: 0-1A)
- Voltmeter (0-1V)
- A wire mounted on a mm scale
- A switch
- A long wire with a crocodile clip at one end. (to be used as a jockey)
- New size 'D' dry-cell and cell-holder
- A micro-metre screw-gauge (maybe shared)
- Eight connecting wires (two with crocodile clips at one end)

Proceed as follows:

a) Measure the diameter, d of the mounted wire **(1mk)**

d = **.....mm** d = **..... m**

b) Determine the cross-sectional area, A of the mounted wire **(2mks)**

c) Now set-up the apparatus as shown in the figure below:

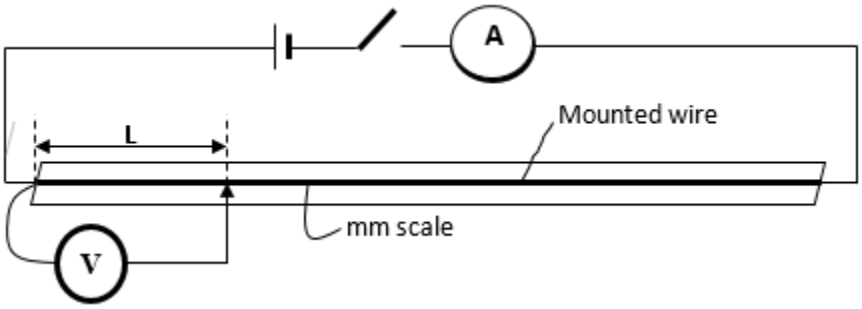


Figure 21

d) Close the switch and tap the mounted wire with the crocodile clip as shown in the figure 1, above. Ensure the both meters show positive deflection. Open the switch.

e) Tap the wire at L = 20 cm. close the switch so that you read and record the ammeter and volt-meter readings.

f) Repeat the procedure above for other values of L shown in the table 1 below and complete the table.

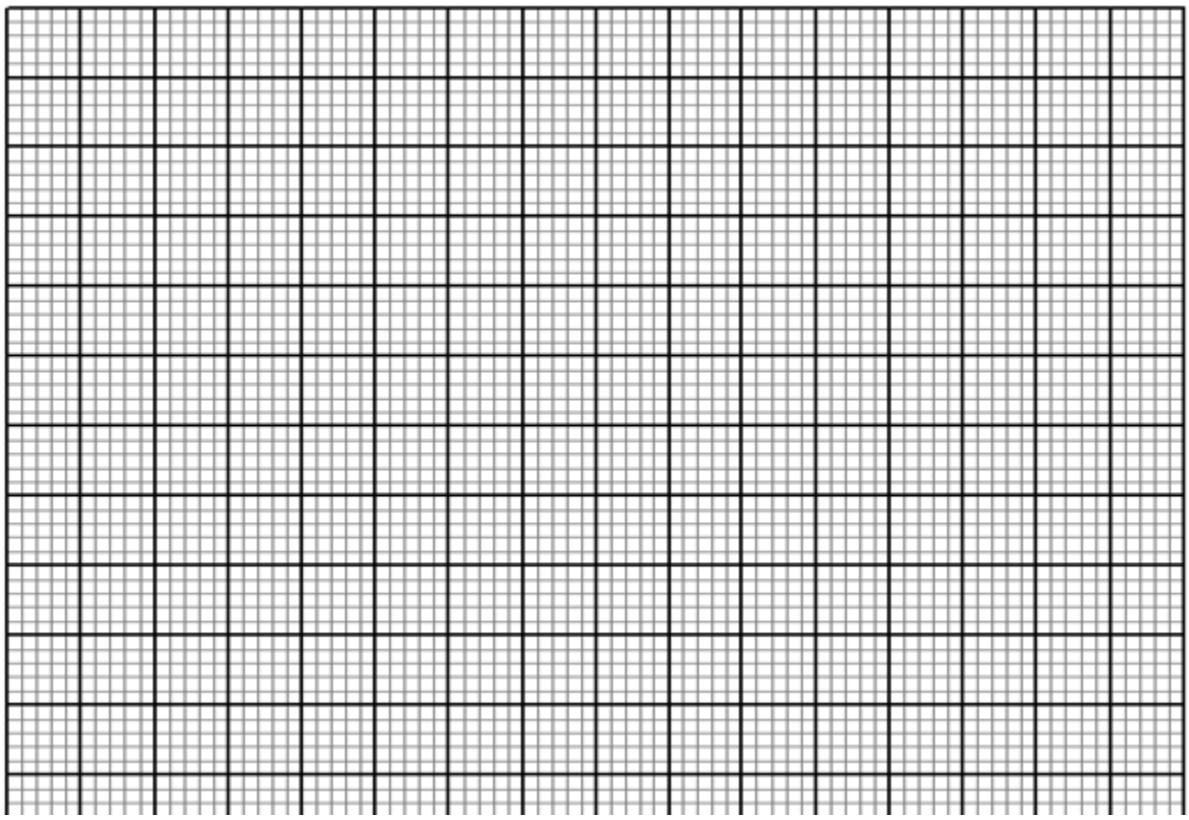
(7mks)

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Table 1

L (cm)	L (m)	Voltage, V	Current, I (A)	$\boldsymbol{R = \frac{V}{I}}$
20				
30				
40				
50				
60				
70				

g) Plot a graph of R (y-axis) against L in metres **(5mks)**



h) Determine the slope, S of the graph **(3mks)**

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i) Given that $R = \frac{\rho L}{A}$, determine the constant, ρ **(2mks)**

QUESTION TWO

You are provided with the following apparatus:

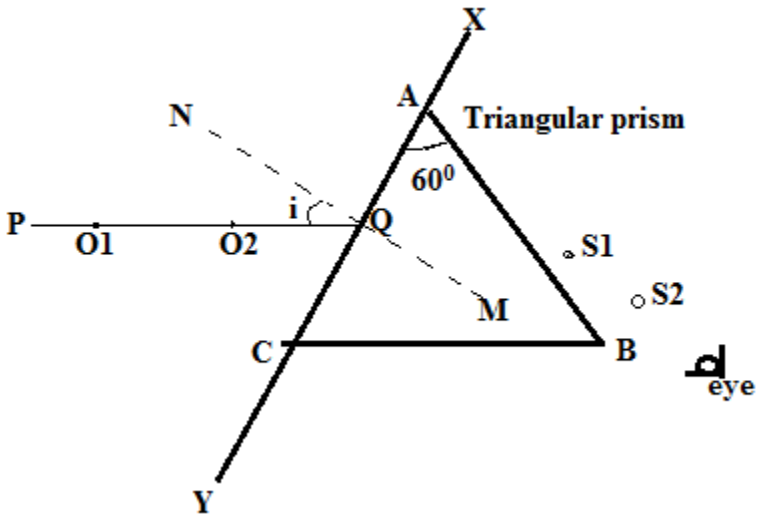
- ✓ A soft board,
- ✓ an equilateral glass prism,
- ✓ 4 optical pins and 4 drawing pins,
- ✓ plain white paper

Proceed as follows:

a. On a plain white paper draw a line XY and mark its midpoint Q. At Q draw a normal NQM at right angles to XY. Draw a line PQ such that the angle of incidence, i, (PQN) is 25^0 (figure below). Fix the paper on the soft-board with the drawing pins.

b. Place the triangular prism vertically with the triangular base down, on the paper such that the midpoint of the edge CA of the prism coincides with the midpoint, Q, of the line XY, as shown. Draw the outline CAB of the prism.

(The plain paper to be collected with the answer sheet) **(3marks)**



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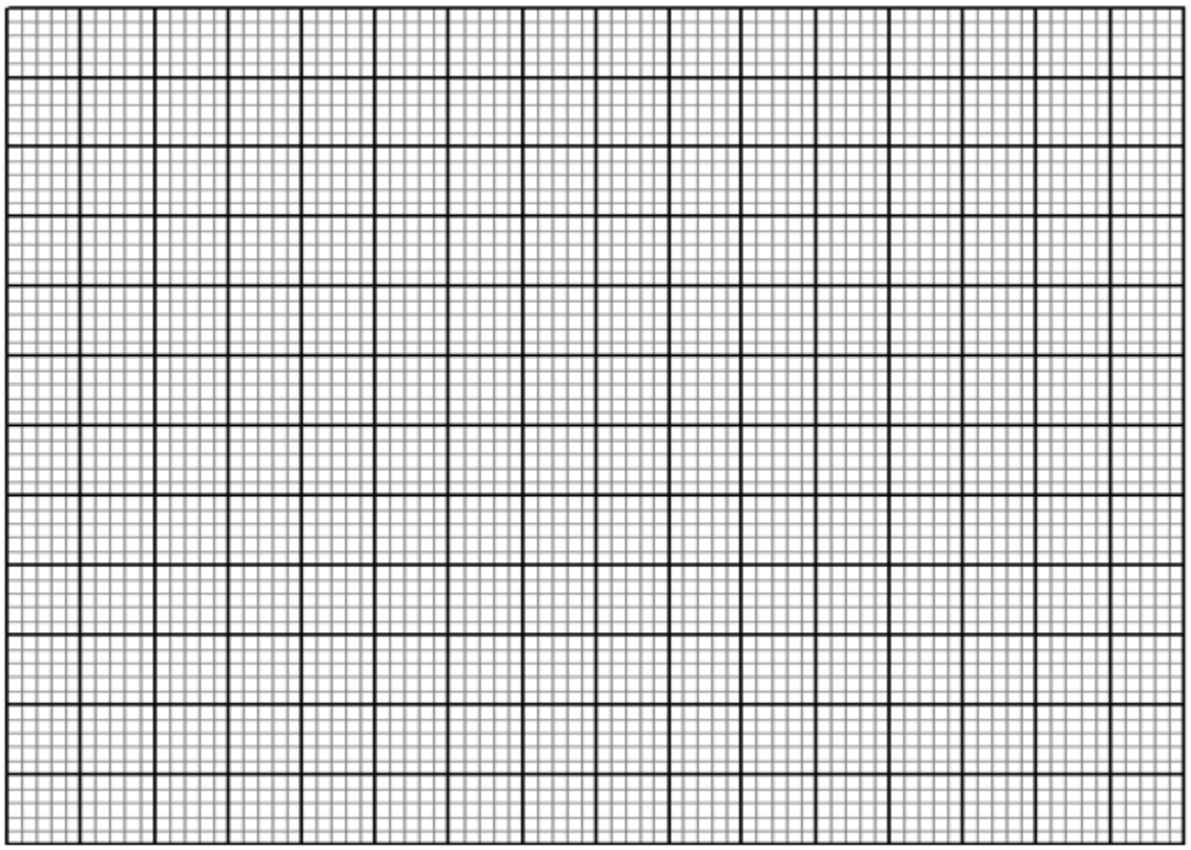
c. Stick two pins, O1 and O2 (object pins), on the line PQ vertically into the soft-board, about 5cm apart. View from the side AB of the prism and look for the images of the pins O1 and O2, as shown in the figure. Keeping the eye along the plane of the paper, fix two pins S1 and S2 (search pins), one after the other between your eye and the prism so that S1 and S2 and the images of O1 and O2, seen through the prism, appear one behind the other in a straight line. Mark the positions of the four pins and remove the pins, the prism and the paper.

d. Draw a line joining the points S1 and S2 to meet the line AB at R. Draw the line QR. Measure the angle of refraction, r (MQR). Record the values of the angles i and r in the table below.

e. Repeat the experiment for the other values of i. and entre your results in the table 2 below. Complete the table. **(6mks)**

i (^{0})	r (^{0})	Sin i	Sin r	$\frac{\sin i}{\sin r}$
25				
30				
35				
40				
45				

f. Plot a graph of $\sin i$ *against* $\sin r$ **(5mks)**



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g. Determine the slope of the graph **(3mks)**

h. Calculate the $\cap_{av}$ the average value of $\frac{\sin i}{\sin r}$ **(2mks)**

i. Comment on the significance of the slope of the graph **(1mk)**

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