FORM FOUR MID TERM ONE

SERIES TWO EXAMS *(11 SUBJECTS TESTED)*



FORM 4 MID TERM 1 SERIES 2 EXAMS

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AGRICULTURE

TIME:2 HOURS

MID-TERM 1 SERIES 2 EXAMS

FORM 4 TERM 1

PAPER ONE

INSTRUCTIONS TO CANDIDATES.

- *Write your name and admission number in the spaces provided.*
- *Answer all questions in the spaces provided.*
- *This question paper consists of three sections A, B and C.*
- *Answer all the questions in sections A and B any two questions from section C.*
- *Answers should be written in the spaces provided.*
- *The paper consists of 11 printed pages*

SECTION A(30mks)*Attempt all the questions in this section.*

1. Give two conditions under which shifting cultivation can be practiced.1mk

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2. Differentiate between apiculture and aquaculture. 1mk

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3. Give four government policies which influence Agricultural production…2mks

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4. State four methods of clearing land. 2mk

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5. State four importance for treating water for domestic use. 2mks

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6. Give four qualities of a fertile soil. 2mks

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7. State four types of farm records… 2mks

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8. Give four role of nitrogen in a plant. 2mks

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9. State four factors which influence the rooting of a cutting . 2mks

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10. Give four reasons for growing seedling in a nursery . 2mks

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11. Name two methods of pruning . 2mks

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12. Give two causes of blossom end rot in tomatoes. 2mks

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13. Define the following terms as used in Agriculture.

i. Land sub-division 1mk

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ii. Land consolidation. 1mk

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14. State four harmful effects of weed. 2mks

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State two categories under which pest can be classified or mode of feeding. 2mks

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15. Name four causes of crop diseases. 2mks

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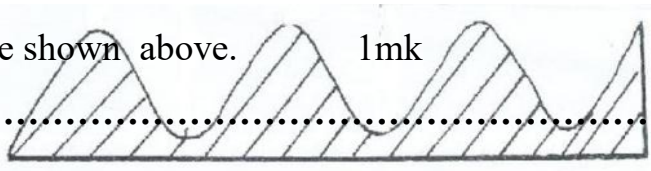
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SECTION B:20mks:Attempt all questions in this section.

16. Below is a diagram of one of the tertially practices that are carried out in land preparation. Study it and answer the questions below



a. Identify the tertially practice shown above. 1mk

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b. Give four reasons for carrying out the above practice. (2mks)

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c. Apart from the above practice name any other two tertiary practices that are carried out in a farm (1mk)

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17. The table below is one of the record that is kept by livestock farmer in the farm

Dam No	Breed	colour	Parents:	sire	Dam
1st Service	2nd service	3rd serivice	4th service	Remarks	No of service
Date of service	Date of service	Date of service	Date of service	Date of service	
Time of service	Time of service	Time of service	Time of service		
A ……..	……. Bull No Breed	Bull No Breed	Bull No Breed		
B……	Result…….				
Expected date of calving					
C……..					
Weight of calf at birth					
Sex of the calf					

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No of calf

a. Identify the type of record. 1mk

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b. Fill in the blank spaces 3mks

A……..

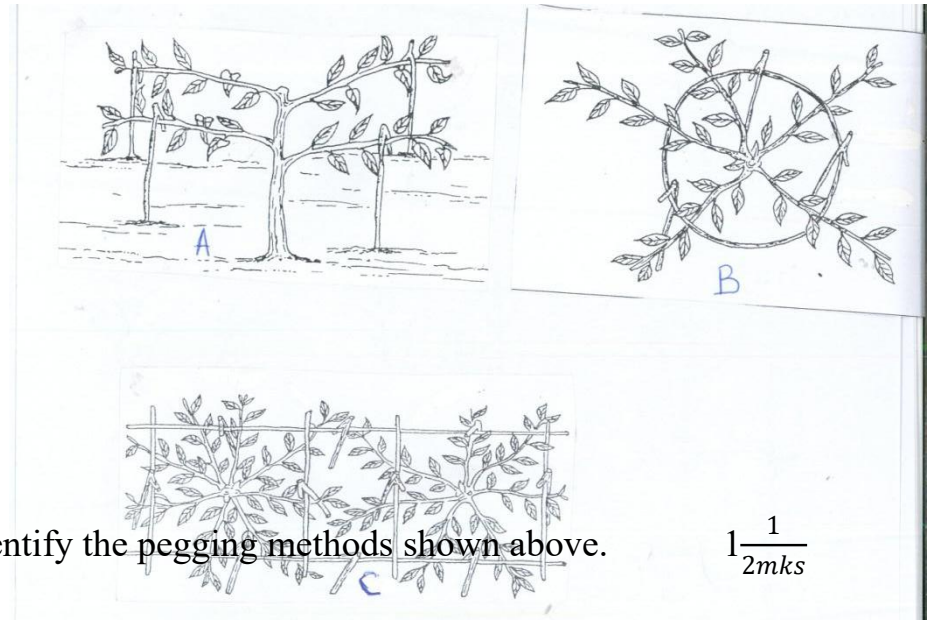
B……..

C……

18. A farmer was advised to apply 150 kg of CAN/ha,while top dressing the maize crop.CAN contains 21% N.Calculate the amount of Nitrogen applied per ha. 4mks

19. Below are various pegging methods of tea. Study them and answer the questions that follows.

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a. Identify the pegging methods shown above. $1\frac{1}{2mks}$

A- ……

B- ……

C- ……..

b. Apart from the above method. Name any other method which is used to bring tea to bearing. 1mk

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c. Give one advantage of using the method given in b above. 1mk

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d. State one reason why the method in (b) above is not commonly used.½mk

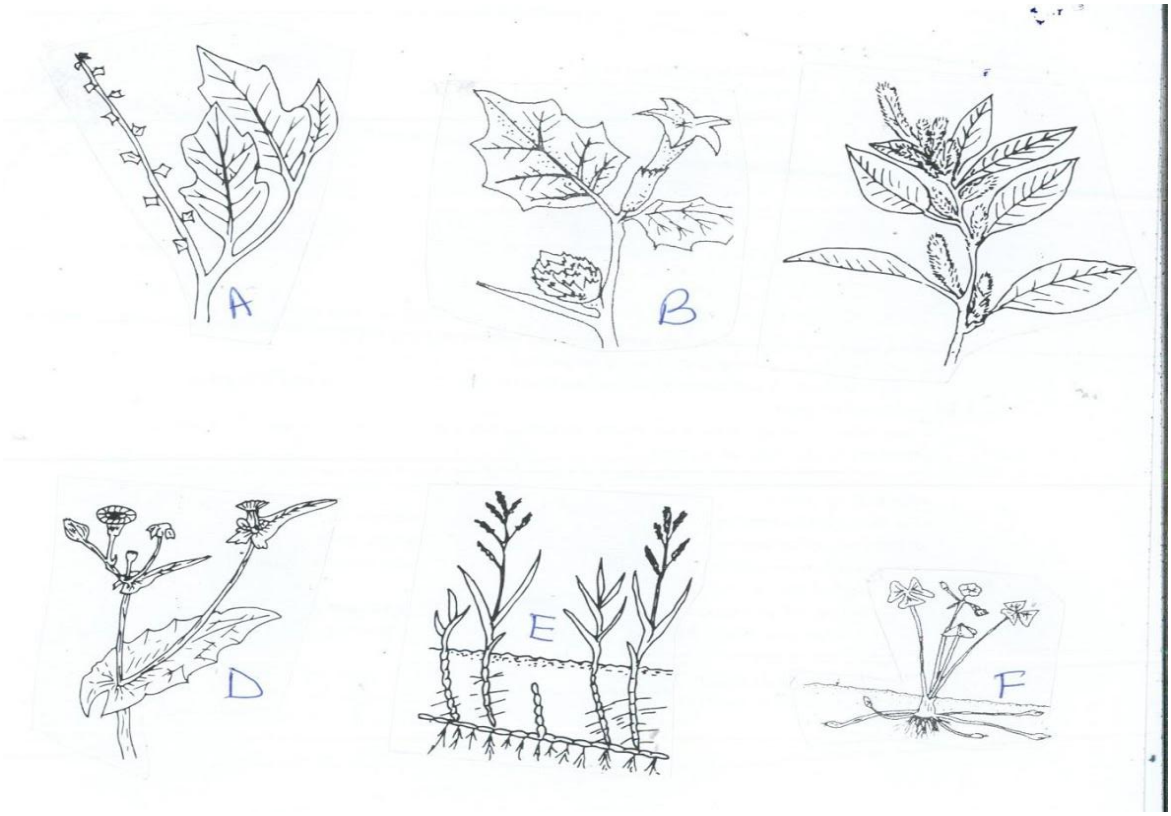
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20. Below are some of the common weeds in Kenya. Study them and answer the questions which follow.

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a. Identify the weeds A,B,C D. 2MKS

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b. What contributes to the competitive ability of weed C 1mk

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c. Why is it difficult to control weed E and weed F. 1mk

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SECTION C(Attempt two questions in this section.(40mks)

21.(a)Describe the advantages of organic farming in Kenya. 5mks

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(b)Explain the overall effects of HIV/AIDS and ill health on Agricultural production.5mks

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(c)Describe five reasons of carrying out minimum tillage in agriculture production.5mks

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(d)Describe the uses of water in a farm . 5mks

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22.(a)Explain five ways of maintaining soil fertility. 5mks

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(b)Explain the factors which affects the spacing of any crop. 5mks

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(c)Describe five management practices carried out in a nursery bed. 5mks

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(d)Describe the field management practices in tomato production.. 5mks

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23.(a)Describe the effects of land consolidation. 6mks

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(b) Explain cultural methods of controlling pests.14mks

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NAME……

ADM NO…… DATE……SIGN……..

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443/2

AGRICULTURE

PAPER 2

TIME:2HOURS

MID-TERM 1 SERIES 2 EXAMS

FORM 4 TERM 1

INSTRUCTIONS TO CANDIDATES:

1. This paper consists of sections A,B,andC

2. Answer all questions in sections A and B

3. Answer any two questions in section C

For Examiners use only

SECTION	QUESTON	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-17	30	
B	18-21	20	
C	22-24	40	

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	TOTAL	90	

Section A (30MKS)

1. Name **four** methods of dehorning in cattle (2mks)

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2. State the function of the following parts of a poultry digestive system(1mk)

Crop-

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Gizzard-

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3. State **two** functions of protein in animal nutrition (1mk)

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4. Name four bacterial diseases 2mks

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5. Name two meat breeds of goat …1mks

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6. Give four characteristics of a large white breed of pig (2mk)

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7. State **four** ways of restraining cattle during routine management(2mks)

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8. What is meant by the following terms as used in livestock health?

(a) Incubation period (1mk)

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(b) Mortality rate (1mk)

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9. Define the following terms as used in livestock rearing……..2mks

(a)pullet

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b.cockrel

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c.piglet

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c.sow

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10. What is creep feeding? (1mk)

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11.State two meat breeds of sheep 2mks

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12. Give microbial activities that takes place in the rumen..2mks

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13. (a) State 2 functions of cobalt in animal's body 1MKS

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(b)Name two classes of feedstuff 1mks

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14. Give 4 mechanical method of tick control 2mks

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15. State structural requirements of a pig house 2mks

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16. State 4 disadvantages of using spray race over cattle dip 2mks

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17. Give the uses of the following farm tools and equipments 2mks

i) strip cup

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ii) milk strainer

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Iii) Hacksaw

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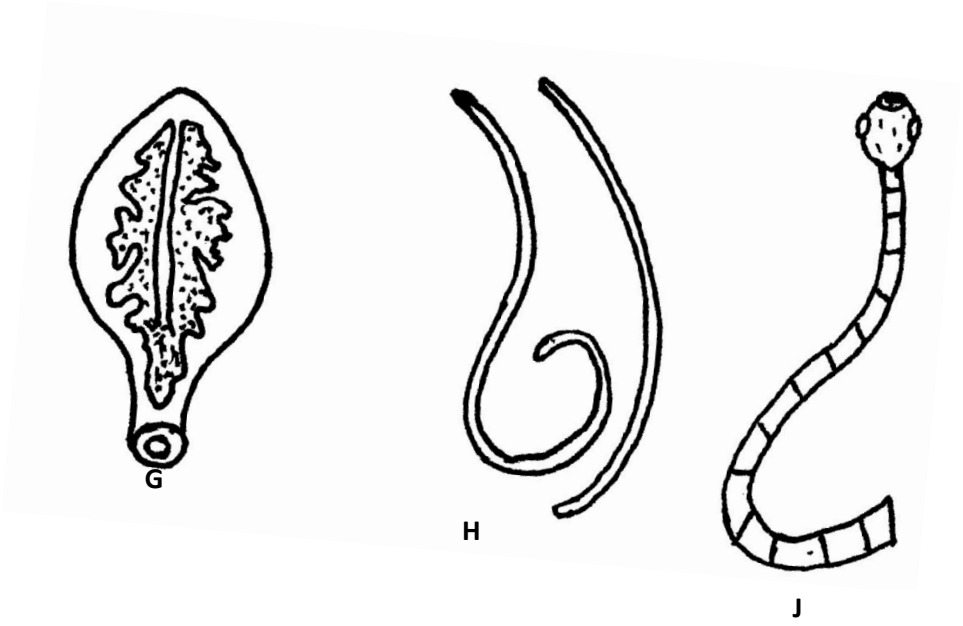
iv) Centre punch

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Section B 20mks

18. Diagram **G**,**H** and **J** illustrates some livestock parasites



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(a) Identify parasites **G,H** and **J** (3 mk

G…….

H…….

J……..

(b) Name the parts of the host body where parasites **G** and **J** are found (1mk)

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(c) Name the intermediate host of parasites **G** and **J** (2mk)

G……

J……

(d) Outline **four** symptoms of attack in livestock by parasite J (2mks)

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19. The diagram below illustrates a hoof of a sheep. Study it carefully and answer the questions that follow



(a) Name the routine management practice that should be carried out on the hoof illustrated above(1mk)

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(b) State **two** reasons for carrying out the management practice in (a) above(2mks)

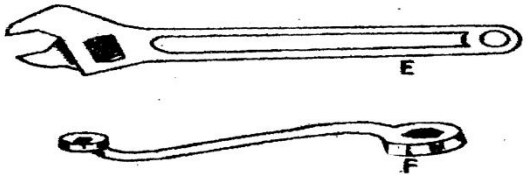
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20. Study the diagrams of workshop tools shown below



(a) Identify the tools labeled **E** and **F** (2mk)

E……

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F.....

(b) What functional advantage does tool **E** have over tool **F?** (1mk)

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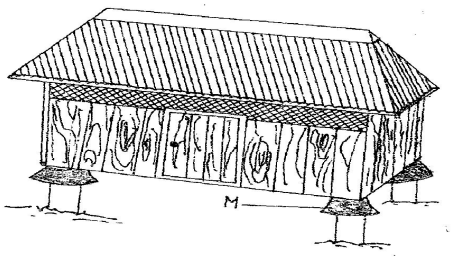
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(c) Below is a diagram of a farm structure for storing grains. Study it carefully and answer the question that follows

(i) Identify the farm structure illustrated above (1mk)

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(ii) State the function of the part labeled **M** (1mk)

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(iii) State **two** maintenance practices that should be carried out on the farm structure illustrated above in readiness for grain storage 2mks

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21.Give four functions of a worker bee 2mks

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Section c (40mks)

Attempt any two questions

22(a) i) Describe seven signs of ill-health in livestock 7mks

(ii) Outline five uses of a crush in livestock rearing 5mks

(b) (i) Name the causal organism of coccidiosis in poultry. (1mk)

(ii) Apart from poultry name two other animals affected by the disease above. (2mks)

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(iii) Give five symptoms of the disease in poultry. (5mks)

23. (a) Describe the procedure of processing honey wax (8mks

(b) Outline FOUR harmful effects of lice in livestock **(** 4MKS **)**

(c) State five advantages of the top bar beehive (5mks)

d). Give three signs of heat in pigs (3mks)

24. A) Explain six advantages of artificial insemination (A.I) in livestock breeding. (6mks)

(b) Give 5 categories of farm tools and equipment (5mks)

c)outline five characteristics corriedale breed of sheep (5mks)

d)discuss 4 practices carried out on fish before preservations. 4mks

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NAME……

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BIOLOGY

MID-TERM 1 SERIES 2 EXAMS

FORM 4 TERM 1

TIME: 2 HOURS

INSTRUCTIONS:

1. Write your Name and Admission number in the spaces provided
2. Answer all the questions in the spaces provided
3. Candidates should check the question paper to ascertain that all the pages are printed and no questions are missing.

1. Give the structure of the cell that perform the following functions.
   a. Synthesis of ribosomes (1 mark)

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b. Regulate exchange of substance in and out of the nucleus. (1 mark)

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c. Breakdown large molecules and destroy worn out organelles (1 mark)

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2. State the name given to the study of:

a. Insect (1 mark)

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b. The cell (1 marks)

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3. a. Name two raw materials for the dark stage process of photosynthesis (2 marks)

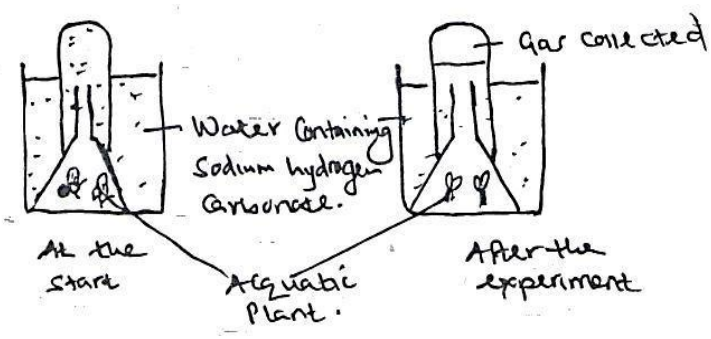
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b. The set up shows an experiment to investigate photosynthesis.

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i) What gas was collected in the test tube? (1 mark)

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4. Give three structural features that reduce water loss from a leaf. (3 marks)

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a. Name the process that involved in the uptake of mineral salts from the soil by the plants. (1 mark)

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b. Explain what you understand by the term diffusion gradient. (1 mark)

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5. a. Define the term enzyme. (1 mark).

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b. Give one factor that affect the rate of enzyme activity. (1 mark)

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6. a. Name one defect of circulatory system in humans. (1 mark)

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b. State three functions of blood other than transport. (3 marks)

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7. State two ways in which floating leaves of aquatic plant are adapted for gaseous exchange(2 marks)

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8. List the changes that takes place during inhalation in the breathing cycle of mammal in the following

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a. Rib cage (2 marks)

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b. Diaphragm (1 mark)

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9. Study the word equation below:

Glucose → Ethanol +Cabon(iv)Oxide

a. Name the process shown in the equation above. (1 mark)

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b. Suggest the organism(s) in which it takes place. (1 mark)

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c. Give one application of the process in industry. (1 mark)

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10. Name the substances that do not undergo digestion but are absorbed directly from the alimentary canal to the blood stream. (2 marks)

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11. Sate one use of each of the following plants excretory products.

a. Tannins (1 mark)

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b. Colchicines (1 mark)

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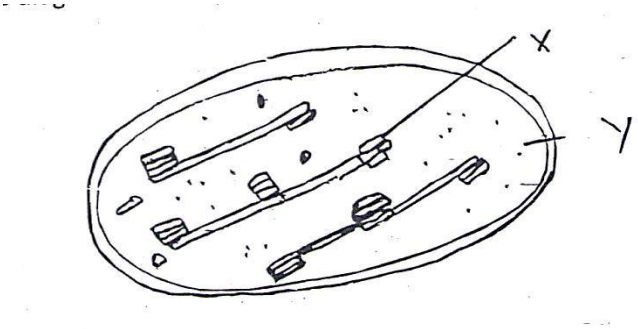
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c. Quinine (1 mark)

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12. The diagram below represent a cell organelle



i. Name the part labeled Y. (1 mark)

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ii. State the function of the part labeled X. (1 mark)

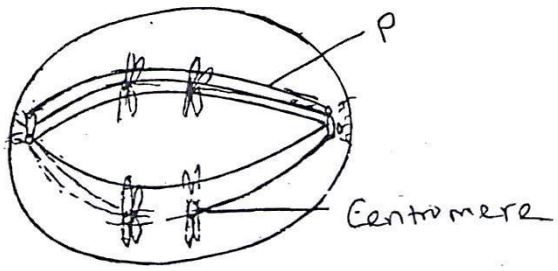
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13. The diagram below represents a stage during cell division.



a. Identify the stage of cell division. (1 mark)

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

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c. Name the structure labeled P. (1 mark)

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14. State the importance of each of the following features of mammalian ileum.

a. Highly coiled. (1 mark)

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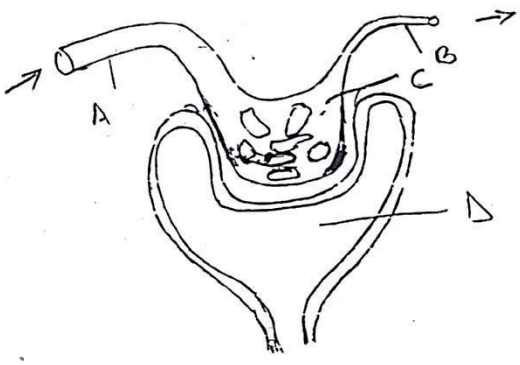
b. Long (1 mark)

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15. The figure below illustrate a part of a kidney nephron.



a. Name the parts labeled A and D (2 marks)

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b. State one observable difference between part A and B. (1 mark)

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c. Name two components found in A but absent in part D. (2 marks)

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16.a. Pregnancy continues if the ovary of an expectant mother is removed after the 4th month. Explain (2 marks)

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b. What is the role of testis in the mammalian reproductive system (2 marks)

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17.a. State three characteristics of monera that are not found in other kingdoms. (3 marks)

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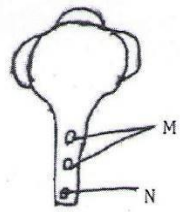
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c. Name the class to which a termite belong. (1 mark)

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18. The diagram below shows a pollen tube as it grows down the style.



a. Name the part labeled M,N (2 marks)

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b. State the functions of the part labeled M . (2 marks)

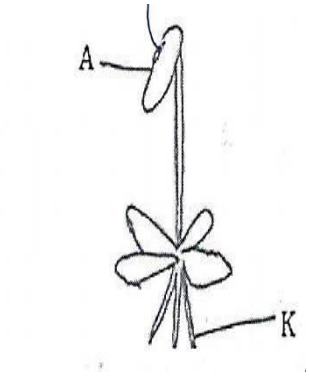
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19. Below is a diagram of moss



a. Classify the moss into kingdom and division (1 mark)

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b. State the function of the part labeled A (1 mark)

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State one function of the part labeled K (1 mark)

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20.a. What is metamorphosis? (1 mark)

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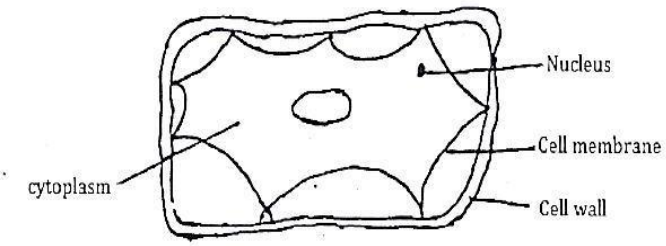
b. What is the biological importance of the larval stage during metamorphosis (2 marks)

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21. A plant stem was put in a solution. After 30 minutes a cell from the stem looked like the one drawn below;



i. State the type of solution the stem was put in (1 mark)

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ii. What term is used to describe the cell (1 mark)

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iii. Explain what happened (2 marks)

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22. a. A student visiting a game park observed an adult elephant flapping its ears twice as much as its calf in order to cool its body when it is hot. Explain.(2 marks)

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b. Explain why some desert animas excrete uric acid rather than ammonia.(2 marks)

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23.a. What is seed dormancy? (1 mark)

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b. Name a growth inhibitor in seed. (1 mark)

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c. Differentiate between hypogeal and epigeal germination in seeds. (2 marks)

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Name the causative agent of the following diseases in man. (1 mark)

a. Candidiasis (1 mark)

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b. Syphilis (1 mark)

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24. To establish the population of tilapia using the capture method, 60 fish were captured and released. In the second capture out of 72 fish, 10 had been marked. Calculate the estimated population of tilapia. (show your working) (2 marks)

NAME……

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MID-TERM 1 SERIES 2 EXAMS

FORM 4 TERM 1

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231/2

BIOLOGY

Paper 2

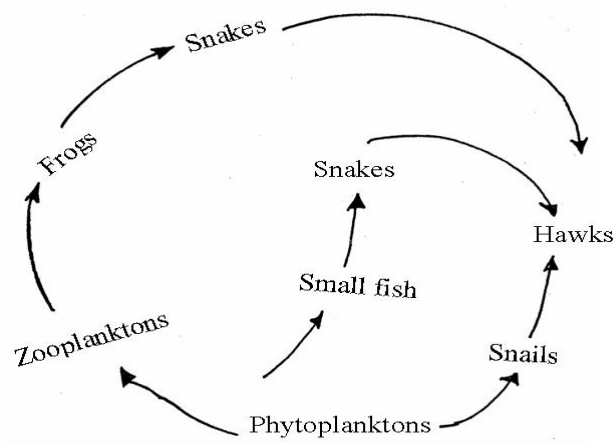
Instructions to candidates

(a) Write your name and admission number in the spaces provided above
(b) Sign and write the date of examination in the spaces provided above
(c) 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 spaces provided after question 8.
(f) This paper consists of 12 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.

SECTION A

1. The diagram below represents a feeding relationship in an ecosystem.

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(a) Name the type of ecosystem represented by the above food web. (1mk)

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(b) Name the organisms in the food web that

(i) Are producers (1mk)

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……

(ii) Occupies the highest trophic level (1mk)

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c)(i) Write a food chain that ends with the hawk as quaternary consumer. (1mk)

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……

ii) State **two** short term effects on the above ecosystem if all the small fish were killed (2mks)

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d) How does oil spills lead to death of fish. (1mk)

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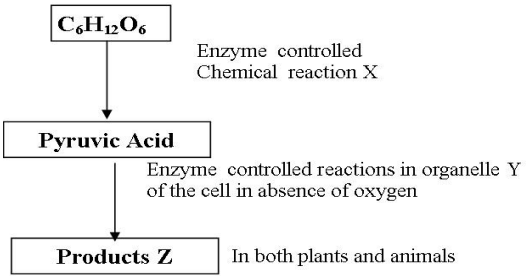
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e) Name **one** other cause of water pollution apart from oil spills. (1mk)

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2. Study the flow chart below of a process that takes place in both plants and animals.



a) Name the above process. (1mk)

……

……

b)(i) In the above process name the chemical reaction represented by X. (1mk)

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(ii) Name the part of the cell where the enzyme controlled reactions in b (i) above takes place. (1mk)

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(c) Name the products Z in

i) Plants (1mk)

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ii) Animals (1mk)

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(d) What would be the fate of pyruvic acid if oxygen supply is availed in the mitochondria of an animal cell (2mks)

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e) What is meant by the term oxygen debt? (1mk)

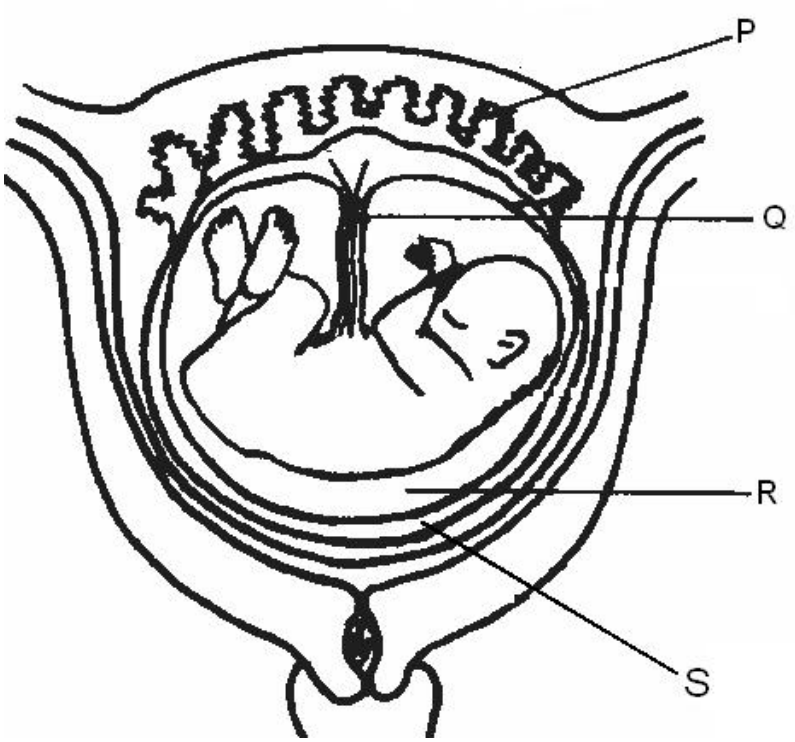
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3. The diagram below represents human foetus in a uterus.

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(a)Name the part labeled S. (1 mk)

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(b) (i) Name the types of blood vessels found in the structure labeled Q. (2mks)

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(ii) State the differences in composition of blood in the vessels named in (b)(i) above

(2mks) ……

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(c) Name two features that enable the structure labeled P carry out its function. (2mks) ……

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(d) State the role of the part labeled R. (1mk)

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4. The table below shows the concentration of sodium and iodine ions in pond water and in the cell sap of water lettuce plant.

	Sodium ion concentration	Iodine ion concentration
Pond water	180	0.4
Cell sap	90	500

a. Giving reasons, name the process through which each of the ions is taken up by the plant.

(i) Sodium ion. (2mks)

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(ii) Iodine ion. (2 mks)

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(b) The lettuce plant was then treated with a chemical substance that inhibits the synthesis of ATP. Giving reasons, state which ion uptake was affected by the treatment. (2 mks)

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(c) Explain why fresh water fish cannot survive in marine habitat. (2 mks)

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5. The equation bellows shows a chemical reaction that takes place in green plants under certain conditions

Carbon (IV) Oxide + Water ▲ Glucose + X

(a) Name the; (2mks)

(i) Substance represent by

X ……

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(ii) Process represented by the equation

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(b) Other than the reactants, state two conditions necessary for this reaction to occur. (2mks)

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c) Name three types of cells in which the process occurs (3mks)

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d)State one factor that affect the process named in a)(ii) above (1mark)

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SECTION B

5. A group of students carried out a study of the population growth of flour weevils. They put16grams and 64 grams of maize flour into two equal boxes K and L respectively. They then introduced equal numbers of weevils into

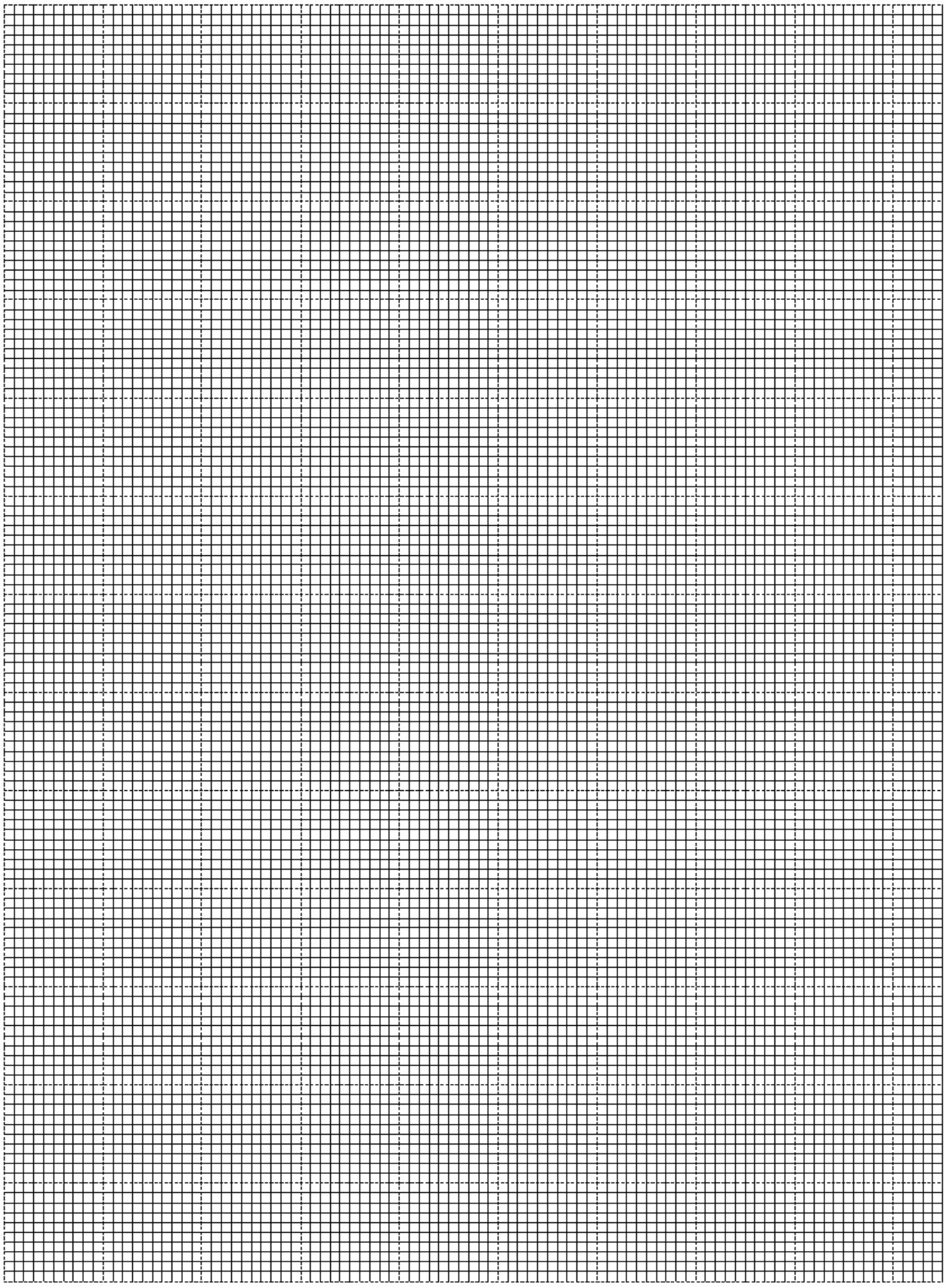
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the boxes. The boxes were kept under similar environmental conditions. The weevils were counted at intervals and the results recorded in the table below.

No. of days after introduction of weevils	Approximate No. of weevils present	
	K	L
0	20	20
5	20	20
40	200	300
60	550	800
80	560	1300
100	650	1750
120	640	1750
135	650	1740
150	645	1748

(a) Using a suitable scale, draw two graphs on the same axes from the results in the table. Plot approximate number of weevils present on the Y – axis. (8mks)

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(b) What were the approximate numbers of weevils present in the two boxes on the 70th day. (2mks)

Number in K

……

……

Number in L

……

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(c) (i)On the what day was the population of weevils in K 580. (1mk)

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(ii) Between which days was the population difference greatest. (1mk)

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(d) Account for the shape of graph L between day 5 and day 100.(4mks)

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(e) State factors that would make the human species assume the graph curve between day 100 and day 150. (4mks)

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7. Describe how the human male reproductive system is adapted to perform its function. (20mks)

8. a)Define transpiration (1mark)

b)Give THREE types transpiration (3mark)

c)Describe EIGHT factors that affect the rate of transpiration (16marks)

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BIOLOGY

PAPER 3 PRACTICAL

TIME: $1^{3}/_{4}$HRS

FORM 4 MID-TERM 1 SERIES 2 EXAMS

Instruction to Candidates

- Write your Name, Adm. No., Class and Date in the spaces provided
- Answer all the questions
- You are required to spend the first 15 minutes of the $1^{3}/_{4}$Hrs allowed for this paper reading the whole paper carefully before commencing your work
- Answers must be written in the spaces provided in the question paper. Additional Pages must not be inserted.

FOR EXAMINER'S USE ONLY

QUESTION	**MAXIMUM SCORE**	**CANDIDATE'S SCORE**
1 2 3	16 8 16	
TOTAL SCORE	**40**	

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1. You are provided with specimen labelled F. Examine the specimen.

a) With reasons state the type of fruit specimen F is. (1mk)

……

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Reason (1mk)

……

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b) Carefully open specimen F to expose it's contents

i) State the type of placentation in the specimen. (1mk)

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ii) Draw and label the opened specimen. (5mks)

iii) Work out your magnification. (2mks)

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c) Remove the seeds and crush them using a mortar and pestle to make a paste. Add alittle water to make about 10ml solution of the paste.

Using the reagents provided test for the food substances present in the juice.

Record the food substances being tested, procedures, observation and conclusion in the table below. (6marks)

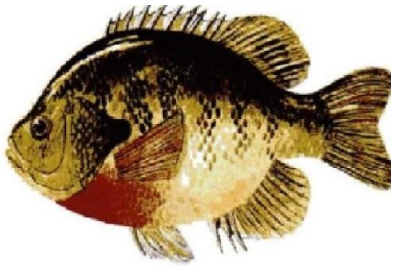
FOOD SUBSTANCE BEING TESTED	ROCEDURE	OBSERVATION	CONCLUSION

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2.Identify the specimens in the photograph using the key and outline the steps followed to identify each specimen. (8mks)



A



B



C



D



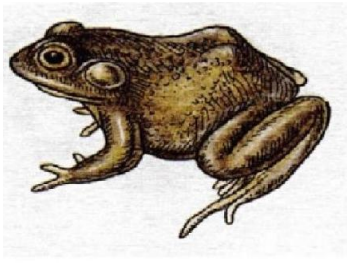
E



F



G



H

1. (a) Animals with a backbone …… Go to 2

(b) Animals without a backbone ……. Go to 5

2. (a) Animals with wings…….... Eagle

(b) Animals without wings …… go to 3

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3.(a) Animals which live in water all the time…… go to 4

(b) Animals which live in water some time…….. Frog

4. (a) Animals with fins …… Fish

(b) Animals without fins …….. Turtle

5. (a) Animals with legs ……. Go to 6

(b) Animals without legs …… go to 7

6. (a) Animals with six legs ……... Butterfly

(b) Animals with eight legs ……. Spider

7. (a) Animals with a shell……. Snail

(b) Animals without a shell…….. go to 8

8. (a) Animals with a jelly-like body …… go to 9

(b) Animals without a jelly-like body ……... Starfish

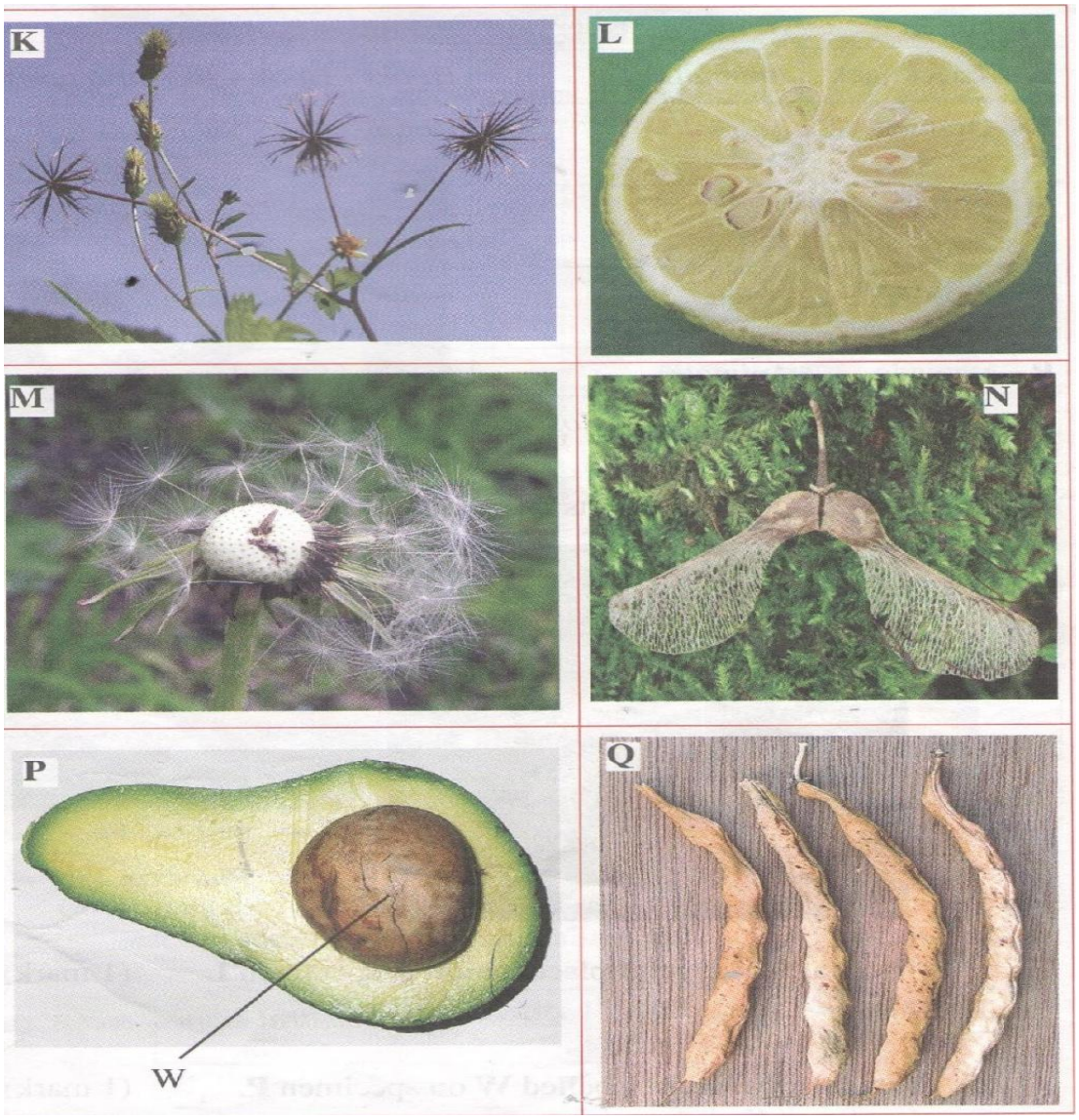
9. (a) Animals with a segmented body …….. Earthworm

(b) Animals without a segmented body ……. Octopus

SPECIMEN	STEP FOLLOWED	IDENTIFY
A		
B		
C		
D		
E		
F		
G		
H		

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3. Below are photographs of specimens obtained from plants. Examine the photographs.



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a) In the table below name the mode of dispersal and the features that adapt the specimens(s) to that mode of dispersal. (12marks)

Specimen	Mode of dispersal	Adaptive feature
K		
L		
M		
N		
P		
Q		

b) i) Label any two parts on specimen (L (on the diagram) (2mks)

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ii) State the type of placentation in specimen L. (1mk)

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c. Name the structure labelled W on specimen P. (1mark)

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NAME…….

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SCHOOL …….

565/1

FORM FOUR

BUSINESS STUDIES 565/1

TIME:2 HOURS

MID-TERM 1 SERIES 2 EXAMS

Instructions to candidates.

- Write your name and admission number in the spaces provided.
- Answer all questions in the spaces provided.
- Answer **all** questions
- Answers must be written in English.
- Avoid one word answers

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Answer all the questions in the spaces provided.

1. State four external factors that may adversely affect the efficient operations of a business enterprise.4 mks

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2. Likoni traders a newly established firm has constructed an office block. Outline four factors that will be considered when deciding on the type of office layout.4mks

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3. State the document used for the following function.4mks
   i. To inform a buyer that his or her account has reduced by a certain amount

   ……

   ……

   ii. To request a supplier to provide a particular service to a customer

   ……

   ……

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iii. To determine the credit worthiness of a customer

……

……..

iv. To show that transport has been hired to deliver specified goods to a particular buyer

……..

……..

4. Classify each of the following accounts in the table below as either real, nominal, or personal 4mks

Account	**classification**
Premises	
Rental income	
Debtor otieno	
Discount allowed	

5. The demand for oranges doubled even if the price of the oranges remained the same over the same period. State four factors that may account for this.4mks

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6. Joshua insured his vehicle against theft, later the vehicle was stolen in a packing bay. Outline the procedure he would follow when making insurance claim for his vehicle. 5mks

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7. Highlight four benefits of transporting oil from Turkana to Mombasa by pipeline. 4mks

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8. List four drawbacks of verbal communication in an organization. 4mks

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9. Identify four ways through which the government encourages establishment of industries throughout the country.4 mks

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10. List four factors that adversely affect the functioning of a warehouse. 4mks

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11. Use the diagram below to answer the questions that follow. 3mks

Price a

b

a

Quantity

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a) Identify the market structure to which the diagram above belongs

……

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b) Curve labeled a-a

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c) Name the part labeled b

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12. Outline four factors that hinder entrepreneurship in Kenya. 4mks

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13. Outline four benefits that Kamau would get for being a member of SACCO.4mks

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14. Kenya is one of the countries experiencing unemployment problems.

Identify four causes of the problem.4mks

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15.Outline four characteristics of direct production4mks

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16.Highlight four reasons why a firm may choose to remain small.4mks

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17.Outline four reasons why ethical practices are necessary in product promotion.4mks

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18. Highlight four factors that may lead to low level of national income.4mks

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19. Outline four reasons that make it difficult to satisfy all our wants.4mks

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20. The following information has been extracted from the books of Akili as at 30th june 2001

Land and building	235,000
Machinery	142,000
Motor vehicle	198,000
Debtors	25,000
Capital	330,000
Creditors	50,000
Bank overdraft	200,000
Net profit for the year	62,000

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From the information above, calculate Akili's drawings for the year.4mks

21.Nyundo had the following assets and liabilities on 1st march 2006.

Capital	120,000
Machinery	80,000
Creditors	10,000
Debtors	20,000
Stock in trade	25,000
Cash at bank	5,000

On 2nd march he had the following transactions;

Purchased goods for 15,000 on credit.

Received a cheque of 10,000 from a debtor.

Sold machinery for 90,000 in cash.

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Prepare his balance sheet on 2nd march, 2006.4mks

22. Mention four purposes of preparing a trial balance.4mks

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23. Outline four factors that may cause the capital of an ongoing business to change. 4mks

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24. Yogen had the following transactions with a creditor, Sulem, 2017

June 1 Balance from May 14,000

2 Bought stock from Sulem on credit Kshs. 80,000

4 Returned faulty goods to Sulem Kshs. 2,000

7 Paid Sulem the debt by cash less 2% discount.

Prepare Sulem's account as it would appear in the books of Yogen. 4mks

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25.In the two column cash book given below, enter the missing figures.4mks

Waria Traders

Two Column Cash Book

For The Month ofJuly, 2008

Date	Details	Cash	Bank	Date	Details	Cash	Bank
2018 May 1			Balance b/d		**M**		
	_____		2018 May 1	Balance b/d		8,200	
	9	Sales	40,000	7	Purchases		6,000
	13	Debtors		10	Creditors		
		11,400					
18	Bank 'c'		**N**				
	_____		18	Cash 'c'		9,200	
20	equipment		19,200	31	Bal. c/d		**P Q**
		38,400	**59,800**			**38,400**	**59,800**

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NAME…….

ADM NO…… DATE…….SIGN……..

SCHOOL …….

565/2

MID-TERM 1 SERIES 2 EXAMS

BUSINESS STUDIES 565/2

TIME:2 ½ HOURS

FORM 4 TERM 1 EXAMS

BUSINESS STUDIES

TIME 2HOURS

Instructions to candidates.

- Write your name and admission number in the spaces provided.
- Answer all questions in the spaces provided.
- Answer **any five** questions
- Answers must be written in English.
- Avoid one word answers

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1. a) Explain five features that differentiate a public company from a public corporation.(10marks)

   b) Jambo Tena enterprises had the following balances in the cash book on 1st November,

   2018. Cash at hand shs. 10,000 and bank shs. 150,000

   2. Bought buildings paying by cheque shs. 50,000
   3. Drew shs. 4,000 from Bank for office use.
   4. Took cash shs. 1,000 for his personal use
   5. Credit sales to Jema traders shs. 5,000
   6. Took all the cash to the bank leaving a balance of only shs. 100

   Required: prepare duly balanced a two column cash book.

2. a) Explain **five** emerging issues in office management. (10marks)

   b) Explain five circumstances under which a partnership may be dissolved (10mks)

3. **a)** Explain five circumstances under which a manufacturer would prefer to sell his products direct to consumers instead of selling through middlemen.(10 marks)

   b) Explain five factors to consider when choosing a method of promoting products.(10 marks)

4. **(a)** In most secondary schools in Kenya, members of staff are accommodated in one large room. Explain **five** disadvantages associated with this kind of arrangement.(10mks)

   (b) Explain Five benefits of warehousing to consumers (10 marks)

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5. **a)**Explain five uses of National Income Statistics (10mks

b) i) Explain four insurance policies that the owner of a supermarket may find useful for the business. 8mks

ii) A farmer's house valued at Ksh. 1,200,000 was insured against fire for ksh. 900,000. Fire occurred and damaged the house causing a loss of ksh. 500,000. Determine the value of compensation due to the farmer. (2mks)

6. a) Highlight **five** factors that may lead to rapid increase in population(10mks)

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NAME……

ADM NO…… DATE…….SIGN……..

SCHOOL …….

Form 4 MID-TERM 1 SERIES 2 EXAMS

233/1

CHEMISTRY

PAPER 1

TIME: 2 Hours

Instructions to Candidates

a) Write your name and admission number in the spaces provided.
b) Answer ALL the questions in the spaces provided.
c) Mathematical tables and silent electronic calculators may be used.
d) All working MUST be clearly shown where necessary.
e) All questions should be answered in English.

For Examiner's Use only

Question	Maximum Score	Candidate's Score
1 – 28	80	

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1. a) What role do the following parts play during fractional distillation of water and ethanol?

   i) The fractionating column. (1mark)

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……

   ii) The glass beads (1mark)

……

……

b)State one application of fractional distillation. (1mark)

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2. Study the table below and answer the questions that follow:-

Ion	Electron Arrangement
R^{2+}	2.8.8
S^{2-}	2.8

a) Write the electron arrangement of each atom.

   R ……. (½ mark)

   S …… (½ mark)

b) Write the formula of the oxide of R and Chloride of S

   Oxide of R (1mark)

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Chloride of S (1mark)

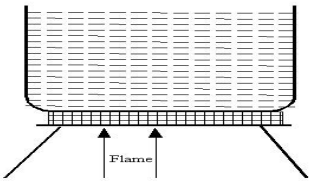
3. When 5.35g of Sodium Nitrate were heated in an open crucible, the mass of oxygen produced was 0.83g. given that the equation for the reaction is:-

$2NaNO_{3(s)} \longrightarrow 2NaNO_{2(s)} + O_{2(g)}$

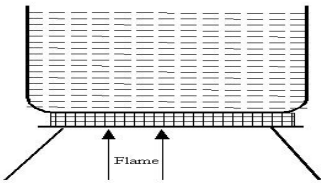
Calculate the percentage of Sodium Nitrate that was converted to sodium nitrite.

(3marks)(Na=23, O=16, N = 14)

4. Equal volumes of water put in $100cm^3$ glass beaker and heated for 5 minutes using Bunsen flames. It was observed that water in beaker A registered higher temperature than beaker B.



Beaker A



Beaker B

a) Name the kind of flame used in beaker; A (1mark)

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b) State the condition under which flame that heated B was produced. (1mark)

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5. Silver chloride can be prepared in the laboratory by the reaction between potassium chloride and silver nitrate.

a) What name is given to this method of reaction? (1mark)

……

……

b) Write an ionic equation for the reaction that occurs. (1mark)

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6. During heating of hydrated copper (II) sulphate crystals, the following readings were obtained:-

   Mass of evaporating dish = 300g

   Mass of evaporating dish + hydrated salt = 305g

   Mass of evaporating dish + dehydrated salt = 303.2g

   Calculate the empirical formula of hydrated copper (II) sulphate.

   (Cu = 64.5, S = 32.0, O= 16.0, H = 1) (3marks)

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7. A seed catalogue that the preferred soil pH range for the growth of different varieties of a crop are as shown in the table.

Type of plant	Preferred pH
A	4.5 – 6.0
B	5.0 – 7.5
C	5.5 – 6.5
D	6.0 – 6.5

a) Which seed variety will grow over the largest pH range. (1mark)

b) What soil pH range will a gardener be able to grow all these crops (1mark)

c) The soil in a garden has a pH of 4.5, which substance can be added to the soil in order to grow plant type D? explain (2marks)

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8. Using dot (.) and cross (x) diagram, show bonding in the compound Ammonium ion (NH^+_4). (N= 14, H = 1)
(2marks)

9.

a) State Graham's Law of diffusion. (1mark)

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……

b) 200cm^3 of oxygen gas take 250seconds to diffuse through a porous plug. Under similar conditions, an equal volume of an unknown gas take 277 seconds to diffuse through the same porous plug. Calculate the relative molecular mass of the unknown gas. (3marks)

c) Give two products formed when a candle burns. (1mark)

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d) From the above products; which elements make up a candle? (1mark)

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10. Explain how the following substances conduct an electric current.

a) Magnesium metal. (1mark)

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b) Molten magnesium chloride (1mark)

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11. The molar mass of a gaseous compound XO_2 is 64 $gmol^{-1}$. A sample of this gas occupied 11.2dm^3 at s.t.p.molar gas volume =22.4dm^3.find

a) The number of moles of this gas. (2marks)

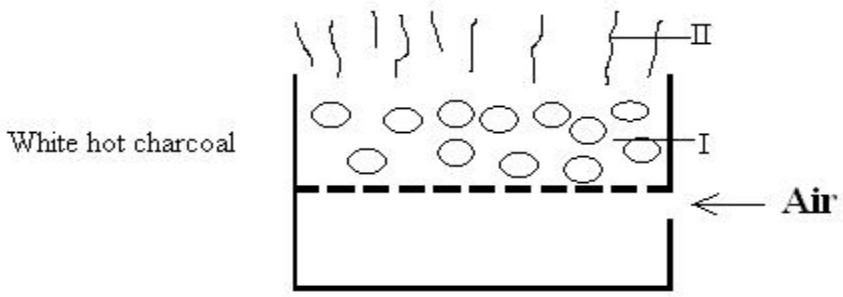
b) The amount in grams that occupied the above volume. (2marks)

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12. Classify the following processes as either chemical or physical. (3marks)

a) Heating copper (II) sulphate crystals	
b) Obtaining kerosene from crude oil	
c) Souring of milk	

13. The diagram below represents a charcoal burner. Study it and answer the questions that follow;



Write equations for the reactions taking place in part I and II.

I (1mark)

……

……

II (1mark)

……

……

14. When a mixture of iron filings and sulphur are heated, a red glow spreads through the mixture and a dark grey solid was formed.

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a) Identify the dark grey solid formed. (1mark)

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……

b) Write a chemical equation in which the dark grey solid is formed. (1mark)

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c) What observation can be made when dark grey solid reacts with dilute hydrochloric acid. (1mark)

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15. The table below shows isotopes and their percentage abundances.

Isotope	A	B	C
Isotope mass	54	56	57
Percentage abundances	6.0	92.0	2.0

Calculate the relative atomic mass of the element with the above isotopes. (3marks)

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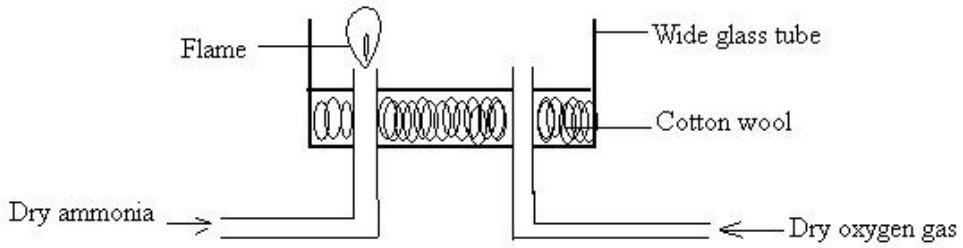
16. Metal R does not react with an oxide of metal S. Metal T reacts with an oxide of metal S. metal Q reacts with an oxide of T. Arrange the metals in increasing order

of reactivity. (2marks)

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……

17. An experiment was set up as shown below.



a) A student passed dry ammonia gas into the glass tube and tried to ignite the gas before allowing oxygen gas. What observation was made? (1mark)

……

……

b) Write the equation for the reaction above (1mark)

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……

18.(a) Complete the table below to show pairs of substances used to prepare oxygen. (2marks)

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Hydrogen peroxide	
ii)	Sodium peroxide

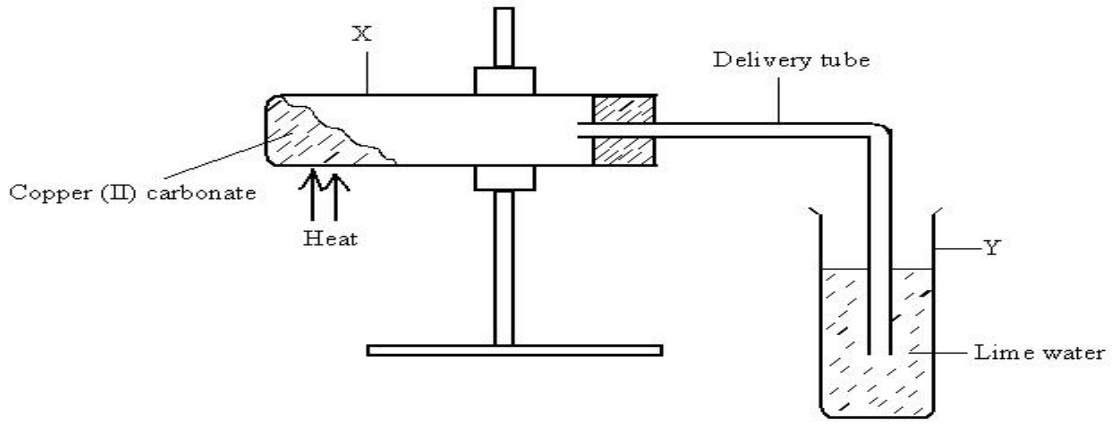
(b)State the importance of oxygen in cutting metals. (1mark)

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19. The diagram below illustrates an experiment set up to investigate the effect of heat on copper (II) carbonate. Study it and answer the questions that follow.



i) Give the expected observation in each test tube.

X (1mark)

……

……

Y (1mark)

……

……

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ii) Write an equation for the change that occurs in tube X (1mark)

……

……

20.

a) State one way in which the strength of a base or an acid can be determined in the laboratory. (1mark)

……

……

b) Give the basicity of the following acids:-

i) Sulphuric (VI) acid. (1mark)

……

……

ii) Phosphoric acid (1mark)

……

……

21. An element X is represented as $_{18}^{40}X$ (X = is not the actual symbol of the element)

a) What is the composition of the nucleus for this element? (2marks)

……

……

b) Give the electronic arrangement of the element. (1mark)

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22. Chlorine gas was bubbled through a solution of potassium iodide in boiling tube.

a) State the observation made. (1mark)

……

……

b) Name the oxidizing agent in this reaction. Explain. (2marks)

……

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23. Name the process which takes place when:-

a) Iodine changes directly from solid to gas (1mark)

……

……

b) Fe^{2+} changes to Fe^{3+} (1mark)

……

……

c) White sugar changes to black solid when mixed with excess concentrated sulphuric acid. (1mark)

……

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24. GSTRU and P belong to the same period in the periodic table. The ions formed by the atoms are as below:-
Q^{2+}, U^{-}, T^{2-}, R^{3+}, P^{+}, S^{3-}

i) Arrange the elements in order of decreasing atomic size. (1mark)

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ii) Suggest a reason why elements P and Q cannot react with each to form a compound. (1mark)

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25. A piece of burning magnesium ribbon was plunged into a gas jar containing sulphur (IV) oxide.

a) What observation was made? (1mark)

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b) Write an equation for the reaction taking place. (1mark)

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c) What property of sulphur (IV) oxide is investigated above. (1mark)

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26.

a) What is paper chromatography? (1mark)

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b) Give two applications of chromatography? (2marks)

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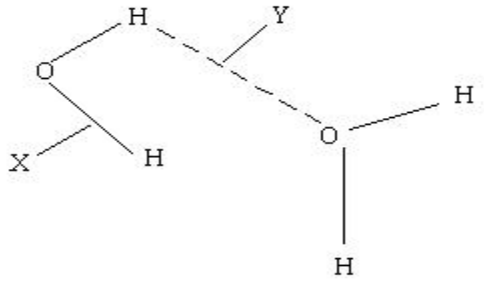
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27. The structure of two molecules of water can be represented as shown below.



Name the type of bonds X and Y (2marks)

X ……..

Y ……..

28. In an experiment 3.36g of iron fillings were added to excess copper (II) sulphate. Calculate the mass of copper that was deposited. (CU= 63.5, Fe = 56) (3mks)

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MID-TERM 1 SERIES 2 EXAMS

FORM 4 TERM 1 EXAMS

CHEMISTRY THEORY

PAPER 2 TIME: 2HRS

INSTRUCTIONS TO CANDIDATES

1. Write your name and admission number in the spaces provided above
2. Electronic calculators may be used.
3. All working must be clearly shown where necessary
4. Answer ALL the questions.

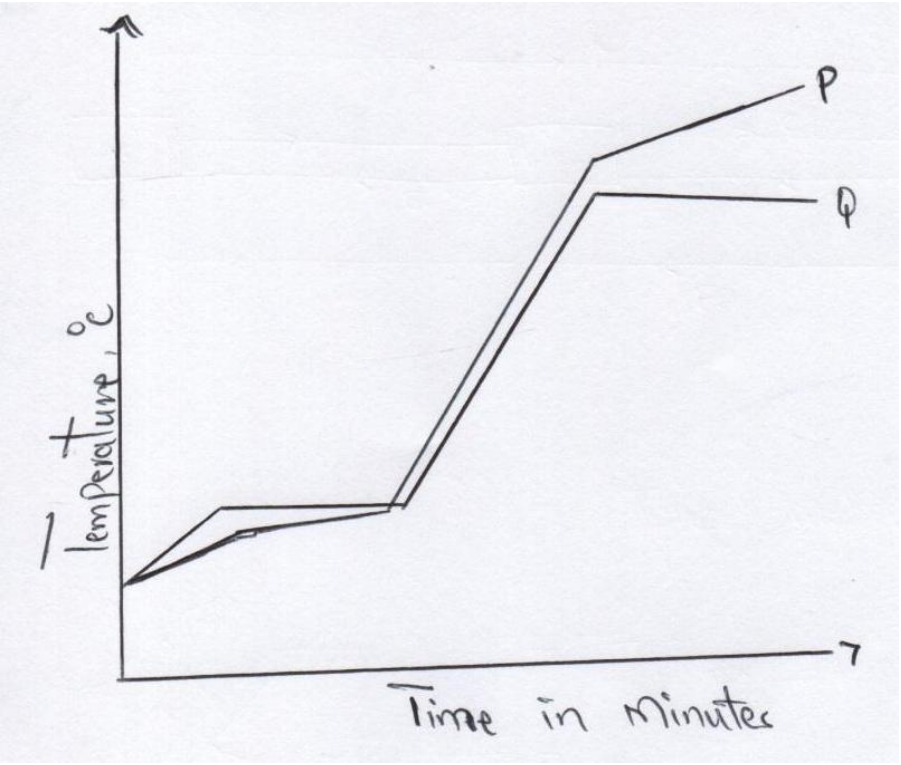
FOR EXAMINERS USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE

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1 2 3 4 5 6 7	9 10 11 12 13 14 15	
	80MARKS	

1. (a) The curves below represent the variation of temperature with time when pure and impure samples of a solid were heated separately.



(i) (a)Which curve shows the variation in temperature for the pure solid? Explain. (2mks)

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(ii) State the effect of impurities on the melting and boiling points of a pure substance.

I. Melting points (1 mk)

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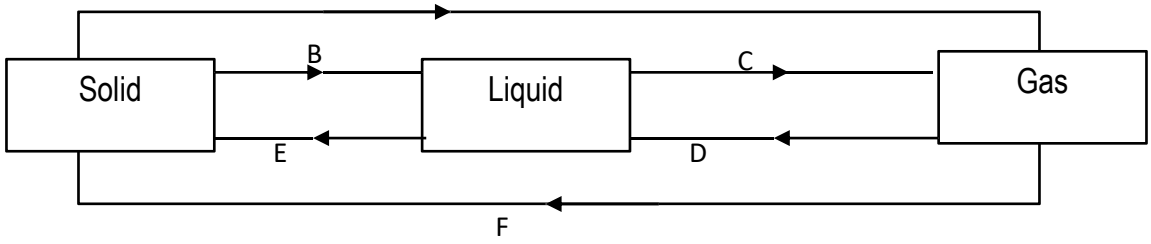
II. Boilling points (1 mk)

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……..……..

(b) The diagram below shows the relationship between the physical states of matter.



i) Identify the processes B and D. (2mks)

B……

D……..

ii) Name process A (1mk)

……

……

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iii) State two substances in chemistry that undergo the process A (1mk)

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iv) Is the process E exothermic or endothermic? Explain (1mk)

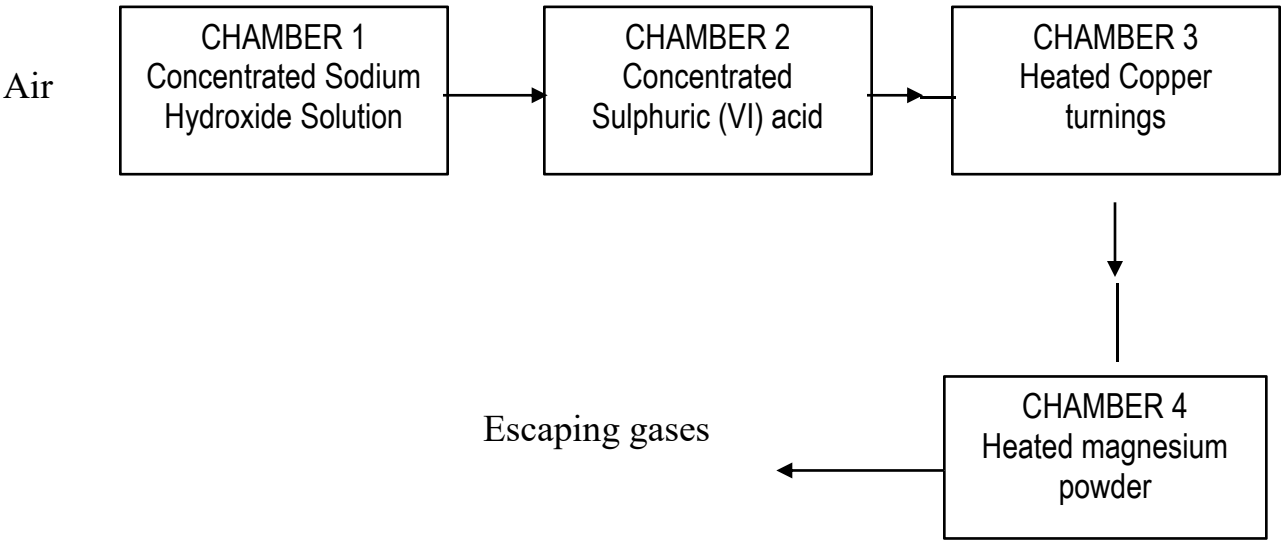
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2.Air was passed through several reagents as shown below



(a) Name the main inactive component of air (1mk)

……

……

(b) Name the components of air that are removed in the following chambers (3mks)

I. Chamber 1

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……

……

II. Chamber 3

……

……

III. Chamber 4

……

……

C) What is the purpose of passing air through concentrated sulphuric (vi) acid. (1mk)

……

……

……

d) Write a chemical equation for thereaction which takes place in :-

I. chamber 1 (1mk)

……

……

II. Chamber4 (1mk)

……

……

e) State and explain the observation made in chamber 3 during reaction (2mks)

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f) Name one gas which escapes from the scheme above (1mk)

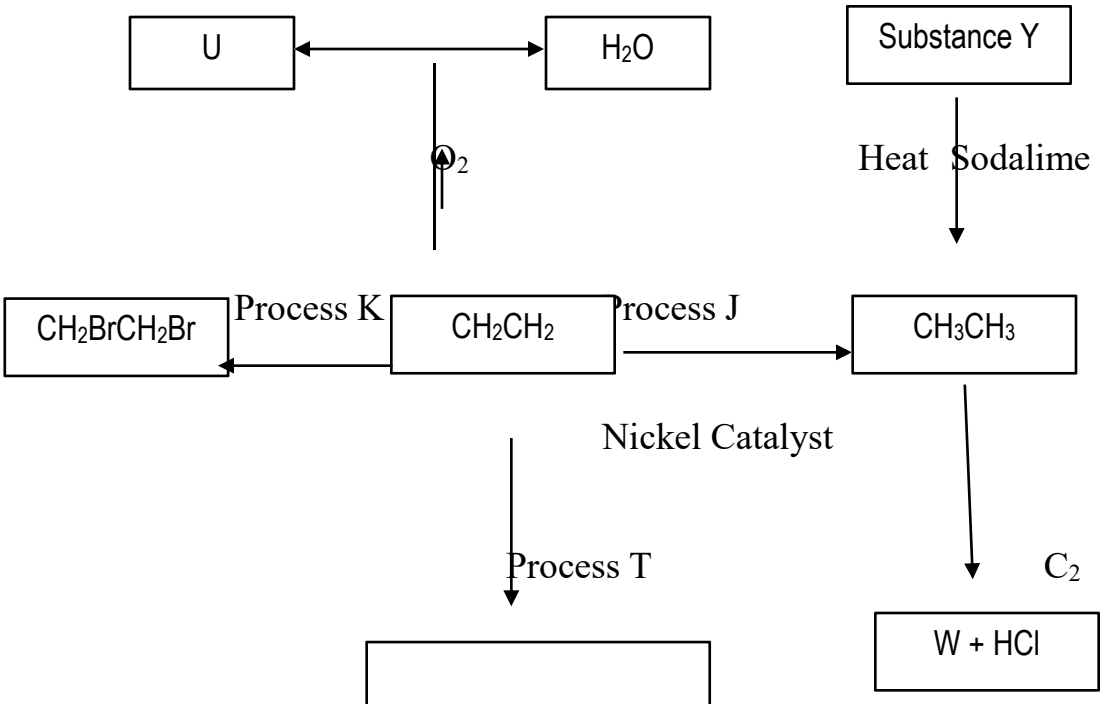
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3. (a) Draw and name two isomers of Pentane()

(B) Study the flow diagram below and then answer the questions that follow.



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(i) (i) Name process J, K and T (3mks)

J- ……..

K- ……

T- ……

(ii) State the reagents necessary for processed J and K (1mk)

……

……

……

(iii) Name substances U, W, S and Y (4mks)

U ……

W ……

S ……..

Y ……..

C) Describe how burning can distinguish CH_2CH_2 from CH_3CH_3 (2mks)

……

……

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4. The grid below shows a part of the periodic table. The letters do not represent the actual symbols. Study it and answer the questions that follow.

C								**T**
						U		
X	**K**		**M**			**Q**	**W**	
	Y					**P**		**Z**
J								

a) Identify the elements in period 1 (1mk)

……

……

b) With a reason, identify the element with the largest atomic radius(2mks)

……

……

……

……

c) Draw the atomic structure of element Q (1mks)

d) Write down the electronic configurations of elements Y and W (2mks)

Y- ……

W- ……

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e) Element G forms an ion G^{3-} and its ionic configuration 2.8.8. indicate its position on the grid above (1mk)

f) Identify an element whose oxide reacts with both acids and alkalis (1mk)

.....

.....

g) i. Write down the chemical formular of the compound formed between elements K and(1mk)

.....

.....

ii. Draw the bonding in the compound formed in (g) (i) above using dots (.) and crosses (x) to represent electrons (1mk)

h) Compare the atomic radius elements X and K. Explain (2mks)

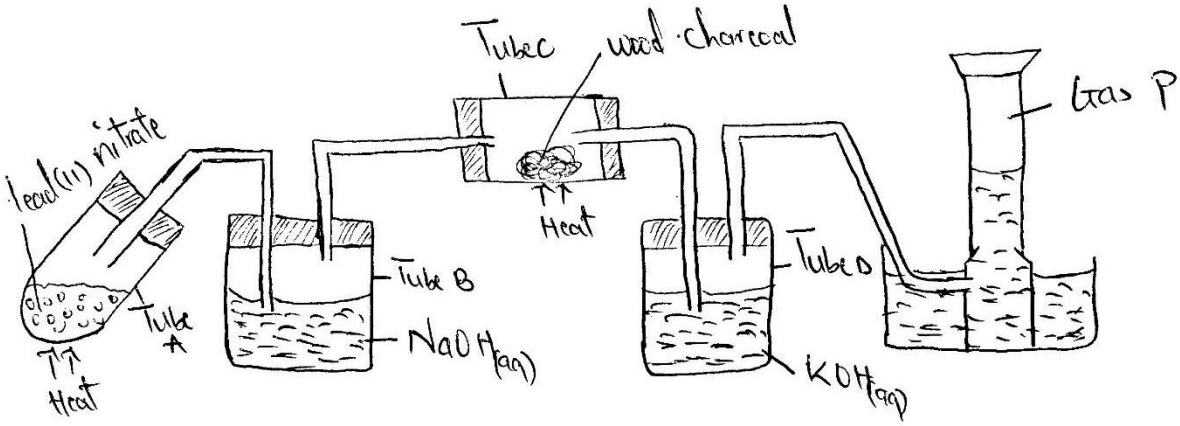
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5 (a) Study the diagram below and answer the questions that follow



i) Write a chemical equation for the reaction in tube A (1mk)

……

……

ii) Name the two salts formed in tube B (1mk)

……

……

……

iii) State the observation made in tube C (1mk)

……

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……

iv) What is the purpose of potassium hydroxide in tube D. (1mk)

……

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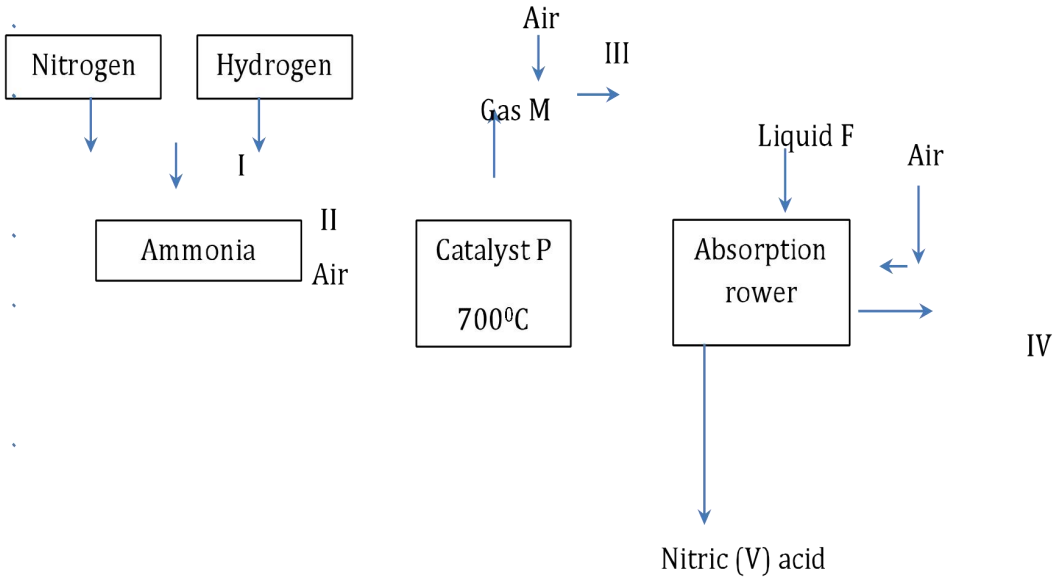
v) Name gas P (1mk)

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(b) The flow chart below shows some industrial processes. Use it to answer the questions that follow

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(i) Give the source of the following raw materials

a) Nitrogen gas (1mk)

.....

.....

b) Hydrogen gas (1 mk)

.....

.....

ii) Name the following substances;

a) Catalyst P (1 mk)

.....

.....

b) Gas M (1 mk)

.....

.....

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c) Liquid F (1 mk)

……

……..

iii)Write the chemical equations for; formation of gas M. (1mk)

……

……..

Iv) The reaction in the absorption tower (1mk)

……

……..

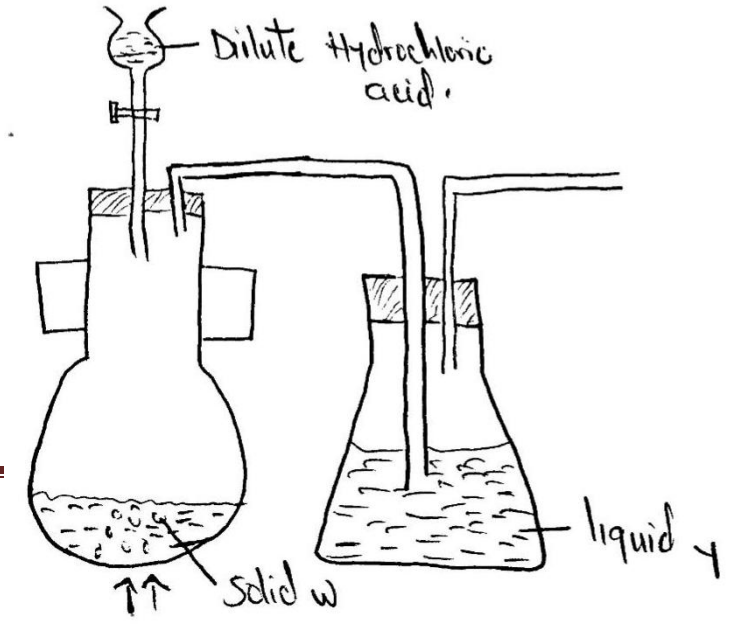
v) State one use of nitric (v) acid (1 mk)

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6. Below is a set of apparatus that was used to obtain a dry sample of sulphur(iv)oxide gas



a) Name;

i) Solid W (1mk)

……

……

(ii)The apparatus containing dilute hydrochloric acid (1mk)

……

……

b) State the role of Liquid Y (1mk)

……

……

C) Complete the diagram to show how the gas could have been collected (1mk)

d) A sample of sulphur(iv)oxide gas was passed through freshly prepared iron(III)sulphate solution. State and explain the observation made (2mks)

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e) 50cm^3 of 2M Hydrochloric acid was used during the above experiment. Determine the volumeof sulphur(iv)oxide gas produced at r.t.p (molar gas volume = 24dm^3) (3mks)

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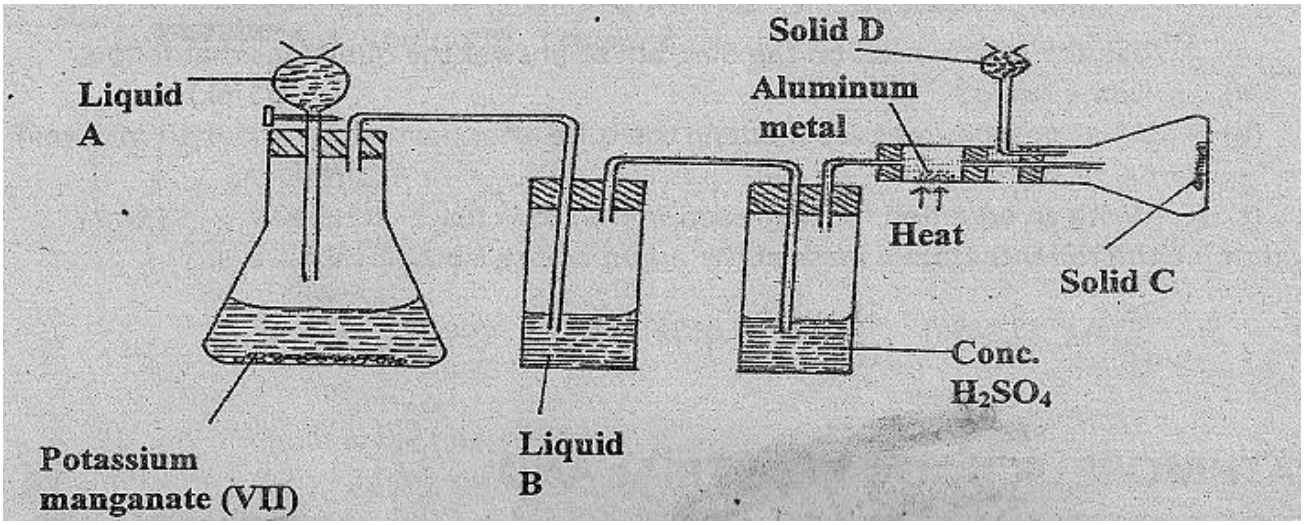
f) Other than manufacture of sulphuric(VI) acid state two other uses of sulphur(IV) oxide. (2mks)

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7. Study the diagram below and answer the questions that follow:



(i) Name Liquids A and B

A(1mk)

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……

……

B(1mk)

……

……

(ii) Solid D can be anhydrous calcium chloride. Suggest another suitable reagent that can be used in place of anhydrous calcium chloride. (1mk)

……

……

(iii) State the role of D suggested in (ii) above. (1mk)

……

……

(iv) write a balanced equation for the reaction in the conical flask (1mk)

……

……

(v) Explain why solid C collects further away from the heated aluminum metal. (1mk)

……

……

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(vi) In the combustion tube above 0.675g of aluminum metal reacted completely with 1800cm^3 of chlorine gas at room temperature. Determine the molecular formula of solid C given that its relative formula mass is 267. (Al = 27, Cl = 35.5, Molar gas volume at r.t.p. = 24.0 litres) (3mks)

b) The reaction between hot concentrated sodium hydroxide and chlorine gas produces sodium chlorate (V) as one of the products

(i) give one use of sodium chlorate(V) (1mk)

……

……

……

(ii) Explain the difference between bleaching by chlorine and by sulphur(IV) oxide gas. (1mks)

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c) A solution of hydrogen chloride in water reacts with zinc carbonate but a solution of the gas in methylbenzene does not. Explain (2mks)

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NAME……

ADM NO…… DATE……..SIGN……..

SCHOOL …….

CHEMISTRY – 233/3

PAPER 3 PRACTICAL

FORM 4 MID-TERM 1 SERIES 2 EXAMS

TIME: 2 ¼ HOURS

INSTRUCTIONS:

a) Write your name, admission number and class.

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b) Answer all the questions in the spaces provided.
c) Spend the first 15 minutes of the 2 ¼ hours to read the questions paper and ensure you have all the chemicals and apparatus that you may need.
d) All working must be clearly be shown where necessary.
e) Mathematical tables and silent calculators may be used
f) Answer all the questions in English language.

For examiner's use only

Questions	Maximum score	Candidates score
1	20	
2	20	
Total	40	

1. You are provided with:-
   a) 2.86g of solid E, Na_2CO_3 x H_2O
   b) Solution W, 0.1M hydrochloric acid

   You are required to-
   a) Prepare a dilute solution of $Na_2CO_3 . XH_2O$
   b) Determine the value of X in $Na_2CO_3 . XH_2O$

Procedure:

Step 1

Place all the solid E in a 250ml volumetric flask. Add about 150ml of distilled water. Shake the mixture well until the solid dissolves. Add distilled water up to mark. Label this solution D.

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Step 11

Using a pipette and pipette filler place 25.0cm^3 of solution D into a conical flask. Add two drops of the indicator provided. Fill the burette with solution W and titrate solution D. with solution W. Record your results in the table below. Repeat the titration two more times and complete the table below.

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

(4mks)

a) Calculate

i) Average volume of solution W used (1mk)

ii) Moles of solution W, hydrochloric acid used. (2mks)

b) The equation for the reaction that took place is:

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$Na_2CO_{3(aq)} + 2HCl_{(aq)} \rightarrow 2\ NaCl_{(aq)} + CO_{2(g)} + H_2O_{(l)}$

Calculate:

i) Moles of solutionD, $Na_2CO_3 . XH_2O$ used (2mks)

ii) Moles of solutionD, $Na_2CO_3 . XH_2O$ in $250cm^3$ of solution (2mks)

iii) Molarity of solutionD, $Na_2CO_3 . XH_2O$ (2mks)

iv) Relative formula mass of $Na_2CO_3 . XH_2O$ (3mks)

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v) The mass in grams of the water of crystallization in a litre of solution Δ (Na= 23, C=12, O = 16, H = 1) (2mks)

vi) The value of X in $Na_2CO_3 . XH_2O$ (2mks)

2. a) You are provided with solid Y. Carry out the tests below and identify the ions.

i) Add all solid Y in a boiling tube. Add about $10cm^3$ of distilled water. Divide the solution into 4 portions.

Observation	Inferences

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(1mk)	(1mk)

ii) To the first portion add three drops of sodium hydroxide then in excess.

Observation	Inferences
(1mk)	(1mk)

iii) To the second portion add three drops of ammonium hydroxide then in excess

Observation	Inferences
(1mk)	(1mk)

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iv) To the third portion add three drops of lead(II) nitrate and warm

Observation	Inferences
(1mk)	(1mk)

v) To the forth portion add three drops of hydrochloric acid.

Observation	Inferences
(1mk)	(1mk)

b) You are providedwith solid X. Carry out the tests below.

i) Scoop half of solid X using a spatula and heat over non-luminous flame.

Observation	Inferences

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(1mk)	(1mk)

ii)Put the remaining solid X in a boiling tube and add about $10cm^3$ of distilled water. Divide the solution into 3 portions.

Observation	Inferences
(1mk)	(1mk)

iii) To the first portion add 3 drops of universal indicator

Observation	Inferences
(1mk)	(1mk)

iv) To the second portion add sodium carbonate provided.

Observation	Inferences

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(1mk)	(1mk)

v) To the third portion add three drops of acidified potassium manganate (VII) solution.

Observation	Inferences
(1mk)	(1mk)

NAME…….

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MID-TERM 1 SERIES 2 EXAMS

FORM 4 TERM 1 EXAMS

C.R.E PP1

TIME: 2½ HOURS

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INSTRUCTIONS TO CANDIDATES

1. ANSWER ANY **FIVE** QUESTIONS IN THE ANSWER SHEETS PROVIDED.

2. ANSWERS **MUST** BE WRITTEN IN ENGLISH LANGUAGE ONLY

ANSWER ONLY FIVE QUESTIONS

1. a) List down six of the Pauline letters (6mks)

   b) Identify eight activities performed by God in the second account of creation Gen2:4-25 (8mks)

   c) How has man failed to take up their responsibility as outlined in the Biblical creation accounts? (6mks)

2. a) Discuss ways in which God rewarded Abraham's faith (7mks)

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b) What conditions did God expect the Israelites to fulfill during the renewal of the covenant? (8mks)

c) State five ways in which Christians show their commitments to God today (5mks)

3. a) Outline the forms of punishment prophesied to Arab and queen Jezebel. (8mks)

   b) Outline the forms of punishment prophesied to Ahab and queen jezebel (8mks)

   c) Why are church leaders rejected today? (5mks)

4. a) Give eight characteristics of false prophets in the old testament (8mks)

   b) What message of hope does prophet Amos give to Israel if they turned back to God? (7mks)

   c) Give six ways in which Christians prepare themselves for the day of the Lord (5mks)

5. a) Describe the religious life of the Jews in exile (7mks)

   b) Identify seven similarities in the life and experience of Nehemiah and Jesus Christ (7mks)

   c) Give six ways in which Christians assist victims of disasters (6mks)

6. a) Give reasons why sacrifices are made in traditional African Society (7mks)

   b) Outline practices which show belief in life after death in traditional African society (8mks)

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c) What are the factors that have promoted changes on African community? (5mks)

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FORM 4 TERM 1 EXAMS

MID-TERM 1 SERIES 2 EXAMS

C.R.E PP2

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TIME : 2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

1. ANSWER ANY **FIVE** QUESTIONS IN THE ANSWER SHEETS PROVIDED.

2. ANSWERS **MUST** BE WRITTEN IN **ENGLISH LANGUAGE** ONLY

ANSWER ONLY FIVE QUESTIONS

1. (a) Outline Jeremiah's Prophecy about the Messiah in reference to (Jeremiah 23: 5-6) (5mks)

(b) . Describe the events that took place after the birth of John the Baptist in (Lk.1:57-67) (8mks)

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(c). Identify six ways in which Christians play the role of John the Baptist today (7mks)

2. (a). Describe the call of the first disciples in (Luke 5: 1-11) (8mks)

(b). Outline Jesus' teachings on the qualities of a true disciple. (7mks)

(c). What are the ways in which church leaders communicate God's message to the people today? (5mks)

3. (a). Narrate the events that took place during the transfiguration of Jesus (7mks)

(b). Discuss the main components of the Lord's Prayer. (8mks)

(c). Give reasons why Christians pray. (5mks)

4. (a). Narrate the parable of the friend at midnight (Lk. 11:5-13) (5mks)

(b). Explain reasons why Jesus used parables. (7mks)

(c). List down the methods the church is using to spread the Gospel. (8mks)

5. (a). Relate Peter's message on the day of Pentecost in Acts 2:1-40 (7mks)

(b). Outline seven characteristics of the fruit of the Holy Spirit. (7mks)

(c). Identify activities of the church that demonstrate that the Holy Spirit is at work amongChristians (6mks)

6. (a). Explain how the unity of believers is expressed in the concept of the bride

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(7mks)

(b). Discuss the causes of disunity in the early church (7mks)

(c). Outline the contribution of women in the church in Kenya today. (6mks)

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MID-TERM 1 SERIES 2 EXAMS

101/1

ENGLISH

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PAPER 1

(FUNCTIONAL SKILLS)

FORM 4 TERM 1 EXAMS

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Write your name and admission number in the spaces provided above
2. Answer **ALL** the questions in this paper in the spaces provided
3. This paper consists of 3 printed pages.
4. Candidates should check to ensure that all pages are printed.

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	10	
3	30	
TOTAL SCORE	60	

1. You are the manager of Quick Safaris Transport Company. Of late you have realized that the workers, mainly drivers and conductors have lost discipline, and this has made the company incur a lot of losses.

a) Write an internal memo to them, warning them of dire consequences if they do not change their behaviour and attitude.
Some of the areas you wish to address are:

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i) Punctuality

ii) Foul language

iii) Lack of courtesy

iv) Police bribery

v) Any other relevant area from your observation **(13 marks)**

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b) Design a Card inviting the workers to a motivational talk with an aim of changing their behaviour and attitude. (7 marks)

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2. CLOZE TEST (10MKS)

Fill in the blank space in the passage with the most appropriate word

The issue of birth certificates as a (1)_____ for registration of candidates has ignited a lot of concern for parents with students sitting for

this year's examinations. Whereas we are concerned about the issue of foreigners in this country. This directive has (2)_____ many parents and students alike unprepared. (3) _____instance, most students sitting in this year's K.C.S.E were born in the late 90s and if they happen not to have even birth certificates, which is (4)_____ likely, it also means that they don't have even their birth notification cards. (5)_____ birth certificates under these circumstances, and within the given time frame, is (6)_____ . The authorities (7)_____with the issuance of these documents (8)_____ process them urgently. (9)_____ is a serious matter. Candidates have been given a very short time to (10) these documents.

Oral Skills (30marks)

3.

a) **Read the poem below and then answer the questions that follow.**

Her lip suckle the nipples

Milk bubbles, foams and ripples

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Little hands up in the air

Catch on the mother's hair

Sweet sensation rises in pressure

Tiny legs kick with pleasure

Sleep comes gently and strong

Sleep whispers softly and long.

(EmusaraOssieEnekase)

i) Identify any two pairs of rhyming words in the poem. (1mk)

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ii) Identify one major sound pattern in the poem. (1mk)

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iii) Give two examples of the above sound pattern. (2mks)

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iv) How would you perform the last two lines of the poem? (3mks)

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b) In the following word clusters, underline the word pronounced differently. (5 mks)

i. floor, flower, flour

ii. toe, two, tow

iii. canal, kernel, colonel

iv. machine, shilling, chores, chef

c) Challenger: Two Europeans peeping through the window.

Response : Mucus

i) Classify the above genre. (1mk)

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ii) Identify and illustrate the most outstanding stylistic device used in the above genre.

(1mk) ……

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iii) Give two functions of the above genre. (2mks)

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d) In the words below, underline the part that should be stressed. (4mk)

i) Suc.cess

ii) ad.vice

iii) Chal.lenge

iv) ob.serve

e) Give a word with a similar pronunciation (4mks)

i) Muscle

ii) Worn

iii) Come

iv) Which

f) **The following is a conversation between a father and his daughter. Read through it.**

DAUGHTER: *(Shortly after having arrived home from school)* Good afternoon, Daddy.

FATHER: *(Sitting complacently in the sofa, reading a newspaper. Looking up……..)*

Good afternoon.*(Resumes reading).*

DAUGHTER: *(Holding out her school report form)* Daddy, I'm excited. My classteacher said

I was the best improved. I was…

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FATHER: Oh, you were? Me, I used to be number one. I was absolutely unbeatable.

DAUGHTER: Chemistry has been a particular headache(*now looking at the report form which she thought her father would wan see),* but this time…

FATHER: *(Stretching his arms, looking preoccupied)* Chemistry for me was particularly easy. I never scored anything less than 90%.

DAUGHTER: Dad, I was going to tell you that this time…

FATHER: *(Absent-mindedly)* By the way, where is your mum?

DAUGHTER: Mum is in the garden picking vegetables. But Dad, you are not listening to my story. I was telling you about Chemistry.

FATHER: You mean you have a story about Chemistry? Chemistry is not about stories. It is a hard science.

DAUGHTER: It's about my improvement…

FATHER: (*Laughing) Me*, it wasn't a matter of improvement. I was always at the top of the class.

DAUGHTER: Daddy, I give up. You are not listening.

FATHER: *(looking surprised)* Listening? I heard you: you were talking about improvement in Chemistry, weren't you?

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DAUGHTER: Anyway, Dad. Thank you for paying attention. Enjoy your newspaper.

FATHER: Oh, yes I'm reading an interesting story about politics.

Identify six(6) shortcomings in the father's listening skills. **(6mks)**

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101/2

MID-TERM 1 SERIES 2 EXAMS

ENGLISH

Paper 2

(COMPREHENSION, LITERARY APPRECIATION AND GRAMMAR.)

FORM 4 TERM 1 EXAMS

TIME: 2 ½ hours

Instructions to Students

(a) Write your name and admission no. in the space provided.
(b) Sign and write the date of exam in the space provided.
(c) Answer all the questions in this paper.
(d) All your answers must be written in the space provided.

For Examiners use only

1. ***Read the following passage and answer all the questions in the spaces provided.***

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LET US CELEBRATE OUR POPULATION GROWTH.

It has been noted that Kenya is experiencing "phenomenal' growth in population and that this will put a strain on the economy. The general feeling amongst those who see a large population as a problem is that we should put family planning issues back on the national agenda. But does Kenya really have population problem? I do not think so. There is nothing as good as a large population of people within a nation that values human resources and is ready to put them to productive use. Countries that are now registering tremendous economic growth, such as China, India and Brazil, are characterized by among other things, large populations. A country's economic growth is much more by the choices it makes in the utilization of its resources rather than the rate of its population growth.

We can roughly classify countries into three broad categories on the basis of their development and the utilization of their human resources. The first category is that of countries that value, develop and utilize their human resources for economic growth. These countries include China and the countries we now refer to as the Asian tigers, such as Korea, Malaysia, Indonesia and Singapore. These countries have **strategically** utilized their immense human resources for exemplary economic growth. Singapore, for example, is the second most densely populated country in the world after Monaco, yet it has put its entire people to work.

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The second category is that of countries that suffer from lack of human resources because of a dwindling population. These countries include Norway, Holland, Russia and Austria. They are overburdened with an aging population and are unable to excite their people to multiply. Having realized the negative impact of this low population on their economies, these countries are now encouraging their people to get more children by giving lucrative incentives to couples. They have also begun importing manpower.

Third category is that of countries that do not seem to have a progressive policy on the utilization of their human resources. Instead, it appears as if they consider this particular resource an enemy. They are afraid that a large population will impact negatively on their economies. They, therefore, make programmes to reduce population a priority. As a result, these countries operate on the fringes of the world economy, unable to utilize the resources **bequeathed** to them by nature. Unfortunately, many developing countries, including Kenya, fall into this category.

The land mass we call Kenya is capable of supporting well over 200 million people, compared to its current population of about 40 million people. In size, it is 582 367 square kilometers, much bigger than many industrialized nations. It is, for example, far bigger than Israel, which is only 20 072 square kilometers, yet it supports a population of about 7 million people. By world standards, therefore, Kenya is a sparsely populated country. We fight over land in an area hardly a third of the country, where we practice subsistence agriculture and are always at the mercy of the vagaries of nature, yet our contribution to the world economy is marginal.

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We have to confront the real problems we face as a country and not find a **scapegoat** in population growth. Our inability to plan for our people and put resources to proper use in order to industrialize is our biggest undoing. Much of Israel, for example, is actually a reclaimed desert. Kenya, with some little creativity, can reclaim all the arid and semi-arid lands, and support a larger population. In short, we need to rethink our strategies. Other resources that Kenya needs to harness are water and the long hours of sunshine. Flood waters kill our people during rainy seasons as we helplessly watch, instead of using technology to harvest the water and use it to irrigate the arid lands. The sun shines on our heads every day, yet we cannot tap its rays to light up our homes at night or power our vehicles.

The argument that population growth is cancelling out economic growth is flawed. There is little evidence to support the view that small families are the richest. Simply put, we cannot convince the poor that the only way of getting out of poverty is through getting fewer babies. We should direct our energies more at creating wealth rather than pushing the futile agenda of population control to the national limelight.

Questions

1. What is it that will put a strain on the economy? (2mks)

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2. What should be done to curb this problem? (2mks)

3. What determines a country's economic growth? (2mk)

4. Make notes on the classification of countries based on their development and use of human resources. (3mks)

5. What are the resources that Kenya should use properly in order to industrialize. (3 marks)

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6. Flood waters kill our people during rainy seasons as we helplessly watch…
(add a question tag)(1mk)

7. Why do you think the writer compares Kenya and Israel? (2mks)

8. Give **two** examples of 'Asian tigers'. (2mks)

9. Explain the meaning of the following words (3 marks)

(i) **Strategically** -

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(ii) **Scapegoat -**

(iii) **Bequeathed -**

2. Read the excerpt below and then answer the questions that follow.

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 always have 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 was going to say is..."He stopped. Pastor Chiamaka waited.

EXCERPT QUESTIONS

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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 in this 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.Who is Pastor Chiamaka? **(2mks)**

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h) 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. POETRY

Read the poem below and then answer the questions that follow.

Good-Bye

Shirley J. Stankiewicz

(Ode to Alcohol)

The queasy feeling in my stomach

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The pounding in my head
The only thoughts in my mind
Were wishing I was dead

My forehead covered in cold sweats
Body shakes beyond control
The endless aching in my bones
As you consumed my very soul

The minutes turned into hours
The hours turned into days
Suddenly, every moment that I ever lived
Was just a smoke filled haze

As I watched my body waste away
And my life slowly coming to an end
I realized. That I was wrong
You're the devil and not my friend

So, I'm taking back what's left of my life
Not one more second will you dominate
I'll bet the strength that lives in me
You didn't anticipate

Cast you spell on someone else
Find another unsuspecting prey

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I came to live, NOT to die

And my life begins TODAY...

(a) Briefly describe what the poem is about? (4marks)

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(b) The "you" in the poem has greatly wasted the speaker. Identify the ways in which "you" has done this. (4marks)

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(c) What is the tone of the poem? (2 marks)

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(d) Identify and illustrate two stylistic devices evident in the poem. (4 marks)

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(a) "Not one more second will you dominate" (1mark)

Use "any more*"*

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(b) Identify and illustrate **two** character trait of the persona. (4marks)

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(c) Explain the meaning of the following lines as used in the poem. (2marks)

i. And my life slowly coming to an end

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ii. Find another unsuspecting prey

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4. GRAMMAR

(a) **Rewrite the sentence according to the instruction given without changing its meaning.** (3marks)

i. The girl said, "I have done my homework." (***Rewrite without using the speech marks***

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ii. I think Muna is funnier than Amos.(***End: …Muna.)***

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iii. The boys went to play in the field**. (Underline the adverbial)**

(b) Rewrite the following sentences replacing the underlined words with a phrasal verb .(3 marks)

i) It is not good to <u>despise</u> other people.

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ii) I am currently <u>living</u> with my brother in Karen.

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iii) The principal was annoyed with the three boys.

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(c)**Explain the difference in meaning between the sentences that follow. (2marks)**

i) I bought three pens for thirty shillings.

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ii) I bought three pens at thirty shillings.

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(d)***Choose the correct verb from the brackets to complete the following sentences*** (2mks)

(i) Satan, along with his evil followers, _____ (is, are) always searching for new ways to mislead mankind.

(ii) Tea, served with bacon, eggs and sausages, _____ (puts, put) one in a fine mood in the morning.

(e)Use the correct form of the word in brackets to fill in the blank spaces in the sentences (3mks)

i. The audience was offended by the _____ (sense) of the speaker.

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ii. The _____ (acquire) of a university degree is a great milestone to a student.
iii. Everyone should obey the law _____ (regard) of their position in the society.

(f)Fill in the blanks in each of the following sentences with the appropriate article (2mks)

i. _____university is _____ institution of higher learning.
ii. _____desk is a piece of furniture used for writing on.

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MID-TERM 1 SERIES 2 EXAMS

ENGLISH 101/3

FORM 4 TERM 1 EXAMS

PAPER THREE

(CREATIVE COMPOSITIONS AND ESSAYS BASED ON SET TEXTS)

$1\frac{1}{2}$ **HOURS**

INSTRUCTIONS TO CANDIDATES

1. Write your name and admission number in the spaces provided.
2. Answer **THREE** questions only
3. Choose **ONE** question from **Question 1** and **ONE** question from **Question 3**

Question 2 is **compulsory.**

4. Your answers must be written in English.

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1.Imaginative Composition **20 marks**

Either

a) Write a story ending with the following sentence: Truly, to be successful, you must always be humble.

Or

b) Write a story to illustratethe proverb 'Never count your chicks before they hatch'

2.Compulsory Set Text: The Samaritan **20 marks**

"Corruption is an enemy of progress in the society." Making close reference to John Lara's The Samaritan, write an essay in support of this conclusion. **(20mks)**

3.Optional Set Texts

Answer one question only

Either

a) The Short Story: A Silent Songs

Lack of courtesy between the police and civilians leads to lethal conflicts. Justify the validity of this statement using illustrations from Meja Mwangi's Incident in the park. **(20mks)**

OR

b) **Kazuo Ishiguro: Artist of The Floating World.**

The author has been able to effectively employ symbolism to bring out the message of the text. Illustrate the effectiveness of this style in the text An Artist of The floating world by Kazuo Ishiguro **(20mks)**

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MID-TERM 1 SERIES 2 EXAMS

312/1

GEOGRAPHY

PAPER 1

2 ¾ HOURS

FORM 4 TERM 1 EXAMS

INSTRUCTIONS TO CANDIDATES

This paper has two sections Aand B

Answer all questions in section A

In section B answer question 6 and any two questions

All answers must be written in English in the booklet provided

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SECTION A

ANSWER ALL THE QUESTIONS IN THIS SECTION

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

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b)State three effects of earth's revolution (3mks)

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2.a) List two elements of weather(2mks)

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b) Name three processes through which the atmosphere is heated (3mks)

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3a) What is weathering (2mks)

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b) Give three processes of chemical weathering (3mks)

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4a) Name three types of coral reefs (3mks)

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b) What are the benefits of coral reefs in the areas they have developed (2mks)

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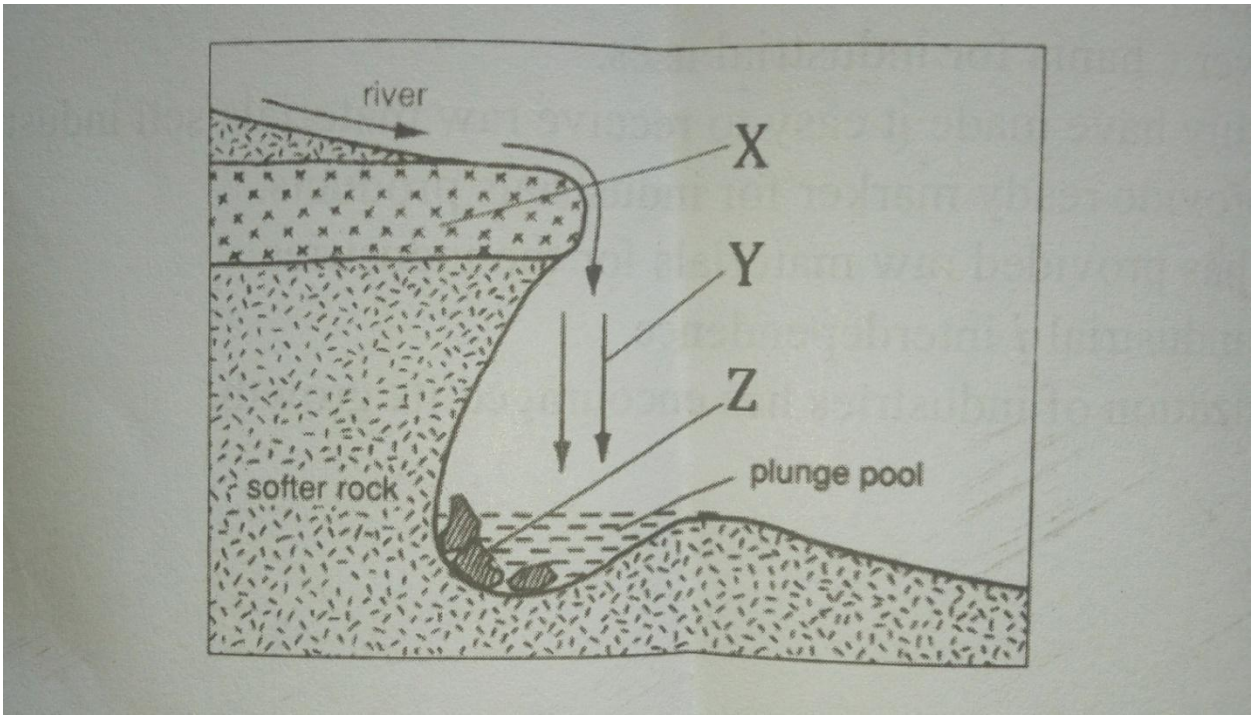
5a) State two factors which influence occurrence of surface run-off (2mks)

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b)The diagram below shows a waterfall. Name the features marked X,Y, and Z (3mks)



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SECTION B

ANSWER QUESTION 6 AND ANY OTHER TWO QUESTIONS FROM THIS SECTION

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6.Study the map of Taita hills(scale 1:50.000) provides and answer questions while follows.

A i) Give the latitudinal position of the South Eastern corner of the map extract (2mks)

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ii)State the four figure grid reference of the school at Mrabenyi (1mk)

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iii)Identify the adjoining sheet number to the S.E of Taita hills (1mk)

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Bi) Measure the length of dry weather road D535 from the junction at grid 4028 to the east of the map (2mks)

ii)Calculate the area enclosed by the railway line to the south Eastern part of the map (2mks)

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Ci)Reduce the square enclosing Easting 37 to 42 and Northing 26 to 31 by 2, on the reduce square indicate the following.

-Ronge forest

-Road D535

-Outcrop rock (5mks)

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ii)Give the new scale of the reduced square (2mks)

Di) Describe the drainage of the area covered by the map (4mks)

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ii)Identify two methods of representing relief used in the map extract (2mks)

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iii)Citing evidence from the map give two economic activities carried out (4mks)

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7ai)What is artesian well? (2mks)

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ii)List four conditions necessary for the formation of an artesian well.(4mks)

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b) With the aid of a well labeled diagram, describe the three zones of underground water(6mks)

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ii)Identify three sources of underground waters (3mks)

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c)Explain three ways in which a Karst landscape would influence human activities (6mks)

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d)Your class intends to carry out a field study on limestone area near your school

i)Name two surfaces features you are likely to identify (2mks)

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ii)State two problems you are likely to identify (2mks)

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8a)i)Define the term glaciation 2mks

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ii)Name three types of glaciers 3mks

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b) Describe how the following features found in upland glaciated landscape are formed

i)U-shaped valley(5mks)

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Pyramidal peak (5mks)

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c)Explain three significance of upland glaciated features to human activities(6mks)

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d)Suppose you were to carry out a field study of a glaciated lowland

i)State two advantages of using oral interview to collect information during the field study(2mks)

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ii)Name two features found in glaciated lowlands that you are likely to study (2mks)

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9ai) Differentiate between a soil profile and soil catena(2mks)

ii)Draw a well labeled diagram of a mature soil profile(4mks)

b i) Other than topography name three factors that influence formation of soil(4mks)

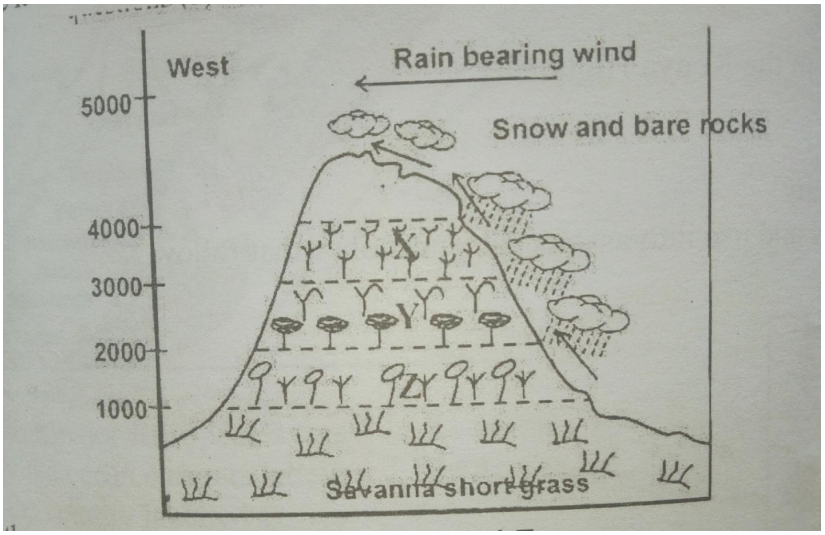
ii)Explain how topography influences formation of soil (3mks)

iii)List three characteristics of desert soils (3mks)

c i) Give three types of soil erosion (3mks

ii)Explain three effects of soil erosion on human activities (6mks)

10 a) The diagram below represents zones of natural vegetation on a mountain within tropical regions, use it to answer questions (a) and (b)



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i)Name the vegetation zones marked X,Y and Z (3MKS)

ii)Give two reasons why the mountain top has no vegetation (2mks)

b) Describe the characteristics of savanna grasslands (4mks)

c) Explain four factors that have led to the decline of natural grassland in Kenya (8mks)

d) You carried out a field study of different tree species

i)Identify three activities you would carry out during the field study(3mks)

ii)How would you identify the different tree species?(3mks)

iii)State two methods you would use to determine the height of the trees (2mks)

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MID-TERM 1 SERIES 2 EXAMS

FORM 4 TERM 1 EXAMS

312/2 GEOGRAPHY

PAPER II

2020 FORM 4 TERM 1 OPENER EXAMS

TIME 2 $^{3}/_{4}$HOURS

INSTRUCTIONS TO CANDIDATES

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

b) Answer ALL the questions in section A. in section B, answer question 6 and any two other questions.

c) All answers must be written in the answer booklet provided.

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SECTION A: 25 MARKS

Answer all the questions

1. (a) Distinguish between forest and forestry. (2 mks)

   (b) State **three** factors favouring growth of Mt. Kenya forest. (3 mks)

2. (a) Name **three** middle east countries that are oil producers. (3 mks)

   (b) Give **three** by products obtained when crude oil is refined. (2 mks)

3. (a) Name **two** counties in Kenya where wheat is grown on large scale. (2 mks)

   (b) Give **three** physical conditions that favor large scale wheat farming in the Prairies provinces of Canada. (3mks)

4. (a). Define the term nomadic pastoralism. (2 mks)

   (b). Give **three** breeds of beef cattle reared in Kenya. (3 mks)

5. (a) A photograph is divided into 3 parts. Name them. (3 mks)

   (b) State **two** limitations of using photographs. (2 mks)

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SECTION B: 75 MARKS.

6. (a). Differentiate between secondary and primary data. (2 marks)

(b). Use the table below to answer the questions that follow.

Number of dairy animals in division X on the Kenyan highlands in 1992.

TYPE	**NUMBER**	
Guernsey	8400	
Ayrshire	7200	
Jersey	10800	
Freshian	16400	
Shahiwal	5200	

(i). Using a scale of 1cm to represent 4000 animals, represent the above data using a divided rectangle. (6mks)

(ii). State **two** advantages of using a divided rectangle to represent data. (2mks)

(iii). Name **three** other ways through which the data above can be statistically presented. (3 mks)

(c). State **three** physical factors that favour dairy farming in the Kenya highlands (3mks)

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(d) (i) Explain **three** ways in which dairy farming in Kenya is different from dairy farming in Denmark. (6mks)

(ii). State **three** by-products of milk. (3 mks)

7. (a) (i) Name **two** indigenous softwood trees in Kenya. (2 mks)

(ii) State **five** factors that favour the development of softwoods in Kenya. (5 mks)

(b) (i) Explain **four** problems experienced in commercial exploitation of tropical rain forests in Africa. (8 mks)

(ii) Give **four** protective roles of forests in a country (4 mks)

(c) Explain **three** problems Canada experiences in exploiting her forests. (6 mks)

8. (a) (i) Name **two** major counties in Kenya known for high maize production. (2 mks)

(ii) What is the importance of maize production to Kenya's economy. (6 mks)

(iii) Name the Board that is known for buying and selling of maize in Kenya. (1 mks)

(b) What are the problems facing the maize farming in Kenya. (8 mks)

(c) Explain **four** physical conditions that favour maize growing in Kenya. (8 mks)

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9. (a) Define the term mineral (2mks)

(b) (i) Name **two** areas in South Africa where diamond is mined. (2mks)

(ii) Give **four** ways in which minerals occur. (4 mks)

(c). (i) Explain **three** negative effects of mining on the environment. (6mks)

(ii) Identify any **two** methods of mining. (2mks)

(iii) Name a port through which minerals in East Africa are exported. (Imk)

(d). Explain **four** ways in which soda ash contributes to the economy of Kenya (8mks)

10. (a) (i) Differentiate between market gardening and floriculture. (2mks)

(ii) State **four** features of horticulture. (4mks)

(b). (i) State **three** physical factors that favour development of horticulture in Kenya. (3mks)

(ii) Explain why horticulture is more developed in Netherlands than in Kenya. (8mks)

(c) State and explain **four** contributions of horticulture to the economy of Kenya. (8mks)

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FORM 4 MID-TERM 1 SERIES 2 EXAMS

311/1

PAPER 1 HISTORY

TIME: 2 ½ HOURS

Instructions to candidates

a) *This paper consists of three sections: A, B and C*

b) *Answer **all** the questions in section A, three questions from section B and two questions from section C.*

c) *Answers to all the questions must be written in the foolscaps provided.*

d) *Candidates should check the question paper to ascertain that no questions are missing.*

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

For Examiner's Use Only

Question	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***	***13***
Marks													

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Question	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*
Marks											

Total Marks | |

SECTION A (25 MARKS)

Answer all the questions in this section.

1. Identify two written sources of information on Kenyan history (2mks)
2. Name two aspects of history that you have studied (2mks)
3. Give the main reason for the migration of Eastern Bantu from Shungwaya (1mk)
4. Identify two functions of the warriors among the Bantu communities in the pre-colonial period (2mks)
5. Identify one reason that can lead to revocation of citizenship by birth in Kenya (1mk)
6. State ways in which the national accord and reconciliation act of 2008 affected the composition of government in Kenya (2mks)
7. Identify two types of democracy (2mks)
8. Give two social factors that led to the scramble and partition of East Africa (2mks)
9. Give two methods which were used by the British to establish their rule in Kenya (2mks)
10. Give the name of the Wanga leader who collaborated with the British (1mk)
11. Who was the British administrator in charge of the Imperial British East African Company (1mk)
12. Give two objectives for establishing colonial health centres (2mks)

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13. Identify the political party formed in 1960 to champion the interest of the minority groups in Kenya (1mk)
14. Name the election body that organizes general elections in Kenya (1mk)
15. Give two types of elections held in Kenya (2mks)
16. Identify the main voting system used in Kenya during elections (1mk)
17. Who is the head of judiciary in Kenya (1mk)

SECTION B (45 MARKS)

Answer any THREE questions from this section

18.a) Give five reasons for the migration of the Luo into Kenya during the 19th century (5mks)

b) Explain five effects of migration and settlement of the Luo into Kenya (10mks)

19.a) State three reasons why Seyyid Said transferred his capital from Muscat to Zanzibar in 1840 (3mks)

b) Explain six factors which contributed to the development of trade between the Kenyan Coast and the outside world in the 16th century (12mks)

20.a) State three powers given to Imperial British East African Company by the British (3mks)

b) Explain the reasons for an end to the Imperial British East African Company rule in 1895 (12mks)

21. a) Give five early political organizations formed in Kenya up to 1939 (5mks)

b) Explain problems experienced by European settlers in Kenya (10mks)

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SECTION C (30 MARKS)

Answer any TWO questions from this section

22.a) Give three levels of conflicts that can be experienced in Kenya (3mks)

b) Explain six factors that promote National Unity in Kenya (12mks)

23.a) State five principles of Democracy (5mks)

b) Explain the process of constitution review (10mks)

24. a) State five functions of returning officers in a general election in Kenya (5mks)

b) Explain five factors which can interfere with free and fair elections in Kenya (10mks)

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HISTORY AND GOVERNMENT PAPER 2

Time 2 ½ Hours

311/2

MID-TERM 1 SERIES 2 EXAMS

FORM 4 TERM 1 EXAMS

Instructions

a) *This paper consists of three sections A, B and C*

b) *Answer <u>All</u> the questions in section A, <u>three</u> questions from section B and <u>two</u> questions from section C .*

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c) *Answer to all the questions MUST be written in the answer booklet provided.*

d) *Candidates should check the question paper to ascertain that no questions are missing.*

e) *Candidates should answer the questions in English*

SECTION A (25 marks)

Answer ALL the questions in this section

1. Identify two branches of history. (2mks)

2. Name two areas in Africa where the remains of Australopithecus were first discovered. (2mks)

3 State one theory that explains how early agriculture developed. (1mk)

4 Identify two methods of irrigation used in the ancient Egypt. (2mks)

5 Identify the main item from North Africa in Trans-saharan trade. (1mk)

6 Give two features of the Roman roads by 300AD. (2mks)

7 State two disadvantages of horn blowing as a means of communication. (2mks)

8 What is the main advantage of a cell phone. (1mk)

9 Identify the main source of energy used in the early stages of industrial Revolution in Europe. (1mk)

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10 Give the name of the scientist who discovered electric magnetic radiation. (1mk)

11 Name two foreign powers that tried to conquer Cairo in the pre-colonial period. (2mks)

12 Identify two social functions of the ancient city of Athens in Greece. (2mks)

13 Identify two European powers that acquired colonies in East Africa. (2mks)

14 Mention one country in Africa that was not colonized by European powers. (1mk)

15 Name the chartered company that administered Zimbabwe during the process of colonization. (1mk)

16 Give one reason why the Burns constitution was rejected by Educated Africans in Ghana. (1mk)

17 Give one political development in south Africa between 1990 and 1994. (1mk)

SECTION B. (45MKS)

Answer three questions from this section

18(a) Give five physical changes which occurred in early human beings as they evolved from ape like creature to modern man. (5mks)

(b) Explain five effects of early agriculture in Mesopotamia. (10mks)

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19(a) Give three methods used to acquire slaves from West Africa during the Trans-Atlantic trade.(3mks)

(b) Explain six factors that led to the decline of the Trans-Atlantic trade (12mks)

20(a) Give three developments that have taken place in road transport system since 1750 AD (3mks)

(b) Explain six ways through which the invention of the railway speeded up industrialization in Europe.(12mks)

21(a) State five causes of the chimurenga War of 1896-1897. (5mks)

(b) Explain five results of the Chimurenga War. (10mks)

SECTION C(30MKS)

Answer TWO questions from this section

22(a) Give three social aspects of the Shona during the pre-colonial period.(3mks)

(b) Describe the political organization of Shona kingdom during the pre-colonial period. (12mks)

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23(a) State the reasons why the British used direct rule to administer Zimbabwe. (3mks)

(b) Explain six reasons for the failure of direct rule in Southern Nigeria. (12mks)

24(a)Mention five factors that facilitated the growth of nationalism in Ghana.(5mks) (b) Explain five reasons why FRELIMO succeeded in its armed struggle against the Portugue(10mks)

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102/1

INSHA

FORM 4 TERM 1 EXAMS

MUDA: SAA 1¾

MID-TERM 1 SERIES 2 EXAMS

MAAGIZO

a. Andika insha mbili.Insha ya kwanza ni ya lazima.
b. Chagua insha nyingine moja kati ya hizo tatu zilizobakia
c. Kila insha isipungue maneno 400
d. Kila insha ina alama 20

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1. Mhariri wa jarida la shule yako ameamua kuchapisha habari kukuhusu.Andika tawasifu juu ya maisha yako tangu utotoni utakayomkabidhi mhariri huyo.

2. Pendekeza njia za kukabiliana na ongezeko la visa vya utovu wa maadili miongoni mwa vijana katika jamii.

3. Andika kisa kinachooana na methali``mchelea mwana kulia hulia mwenyewe''

4. Andika insha itakayokamilika kwa maneno haya.Mshtakiwa alimwangalia hakimu kwa macho ya huruma,kisha akamwangalia mkewe na wanawe akatamani kuwaomba msamaha lakini hukumu ilikuwa imetolewa.

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FORM 4 TERM 1 EXAMS

MID-TERM 1 SERIES 2 EXAMS

KISWAHILI

102/2

MUDA:SAA 2 ½

MAAGIZO

1. Jibu maswali yote
2. Majibu yote yaandikwe kwenye nafasi zilizoachwa kwenye karatasi ya maswali

   Kwa matumizi ya mtahini

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Sehemu	Upeo	Alama
ufahamu	15	
Ufupisho	15	
Matumii ya lugha	0	
Isimu jamii	10	
Jumla	80	

1.UFAHAMU: (Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali.

Gari lake kuukuu lilikuwa linapambana na barabara yenye mashimo yaliyoshiba na kutapika maji ya mvua ambayo sasa ilikuwa inaanza kupusa.Japo daima alipambana na usukani kunako mashimo haya yaliyotosha kuitwa magenge, alishukuru kwa hali hii.Vipi angeweza kulidhibiti gari lake hili kwenye barabara iliyosakafishwa nayo ikahitimu? Magurudumu haya yaliyong'ara kama upara wa shaibu aliyekula chumvi hadi ikamwogopa yangetii uelekezi wake? Mara ngapi gari hili limetaka kumwasi barabarani?Haya yalikuwa baadhi ya maswali yaliyompitikia akilini. Hakujitakilifu kutaka **kuyapa mji** maana mara ile mawazo yake yalitekwa na kubwagwa katika nchi ya mbali – nchi ambayo sasa aliiona kama sinema akilini mwake.

Alipofika nyumbani aliliegesha gari lake na kufululiza ndani. Siku mbili zilikuwa zimepita akiwa pale kazini. Madaktari kama yeye hawakuwa wengi. Alikuwa miongoni mwa madaktari wenye ujuzi katika hospitali hii ya kitaifa.Wenzake

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wengi walikuwa wamehamia ughaibuni walikokwenda kutafuta maisha. Mshahara wao wa mkia wa mbuzi uliwasukuma na kuwatema nje ya nchi yao. Wengi wa waliohamia ng'ambo waliona vigumu kubaki katika ajira ambayo kivuno chake kilishindwa kumvusha mtu hata nusu ya kwanza ya mwezi. Malalamishi ya kulilia ujira wa heshima yaligonga kwenye masikio yaliyotiwa zege. Na kweli wanavyosema, mwenye macho haambiwi tazama.Basi walitazama hapana pale wakaona penye mianya ya matumaini, nao wakaiandama.

Hadi leo hii hamna la mno lililofanyika. Ndiyo maana Daktari Tabibu anarudi nyumbani tangu kuingia kazini hiyo juzi alfajiri. Hafanyi kwa kuwa katosheka, maana pia yeye ana dukuduku. Ana shaka ya mustakabali wake ikiwa mazingira ni haya kumsoza, maana umri nao unazidi kumla. Japo anatia na kutoa, mizani ya hesabu yake imeasi ulinganifu.

Daktari Tabibu ni mfungwa. Ametekwa na kuzuiwa kwenye kipenda na kuchukia mambo. Ni kama mti uliodumaa. Anatamani barabara nzuri za lami. Anatamani mshahara wa kumwezesha kukidhi mahitaji yake na kutimiza majukumu yake ya kimsingi. Jana amesema na rafiki yake aliye ng'ambo kwa simu ambayo sasa imetulia mkabala naye. Ingawa mwenzake huyu alikuwa mchangamfu na kumdokolea hali ya maisha ya kuridhisha kule ugenini kama vile wanataaluma kuenziwa,yapo vilevile yaliyomtia unyonge mwoyoni. Upweke ndio ulimtia **fukuto** kuu. Licha ya hela zote hizo za kupigiwa mfano, watu hawana muda wa kutembeleana na kujuliana hali au hata kukutana tu mkahawani wakashiriki mlo. Eti ni kila mtu na hamsini zake. Halafu ipo changamoto ya hali ya hewa.Baridi ya ng'ambo haifanyi mzaha katika kumtafuna mtu. Ni hali tofauti na ile aliyoizoea.

Daktari Tabibu alizitia kauli za rafiki yake kwenye mizani ya moyo wake. Akawaza ikiwa kweli si bora kulemazwa na mzizimo ugenini badala ya kuishi

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katika kinamasi cha kuumbuliwa nyumbani. Kisha punde lilimjia wazo la marehemu nyanyake na wengine kama yeye waliofadhili masomo yake kupitia kwa serikali na njia ya kodi. Je si usaliti huu?Vipi aikimbie nchi kabla ya kuihudumia ilhali imemjenga hadi kuwa daktari? Na je wafanyakazi wake wa nyumbani watakwenda wapi? Atawaambiaje kuwa sasa hahitaji huduma zao kwa kuwa anakimbia nchi yake?

Mawazo yake yalikatizwa na simu iliyolia na kumshtua. Alipoitazama aliiona imeng'ara kwa mwangaza ulioweka wazi jina la mpigaji. Alifahamu kuwa leo hii tena dharura nyingine ilikuwa inamwalika hospitalini. Hapo ndipo alipoiinua ile simu tayari kusema na mwenzake upande wa pili.

"Haloo!" sauti nyororo kutoka upande wa pili iliita.

"haloo!"

"Naam!Dharura nyingine tena daktari.Unaombwa kuokoa maisha mengine tena!"

"Haya. Ila mwanzo nitahitaji kujimwagia maji,"na pale pale akaikata ile simu.

Daktari Tabibu aliingia hamamuni huku kajifunga taulo kiunoni tayari kuoga.Aliyafungulia maji lakini ule mfereji uligoma kutapika maji.Ulikuwa umekauka kabisa.Dakrari Tabibu aliduwaa pale.Aliufunga ule mfereji kabla ya kuiaga bafu.

(a) Eleza sababu **nne** zinazowafanya wataalamu kuhamia nchi za nje. (alama 4)

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(b) “Hakuna masika yasiyokuwa na mbu.” Thibitisha kauli hii kwa kurejelea hali ya waliohamia nga’ambo. (alama 3)

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(c) Fafanua athari **tatu** zinazoikumba nchi ya msimulizi kutokana na uhamiaji ng’ambo wa wataalamu.
(alama 3)

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(d) Eleza mchango wa teknolojia kwa kurejelea kifungu. (alama 3)

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(e) Eleza maana za msamiati ufuatao kulingana na taarifa. (alama2)

(i) Kuyapa mji

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(ii) Fukuto

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2 UFUPISHO (Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali.

Wakenya walipoipata katiba mpya waliidhinisha mfumo wa ugatuzi. Katika mfumo huu, mamlaka ya serikali kuu katika uongozi, usimamizi na utumiaji wa rasilimali za nchi hupunguzwa. Kiasi Fulani cha mamlaka hutwaliwa na maeneo ya ugatuzi. Suala hili halikuzingatiwa katika katiba ya awali ambapo mamlaka yote yalikuwa mikononi mwa serikali kuu. Kutokana na upana na wingi wa maeneo, iliiwia vigumu serikali kuu kuhakikisha kwamba kulikuwa na usawa wa kimaendeleo katika sehemu nchini.

Kwa mujibu wa katiba mpya, serikali kuu haina budi kuyasaidia maeneo yote ya ugatuzi ili yaweze kujinyanyua kiuchumi na kuboresha hali za maisha za wakazi wake. Vilevile ni jukumu la kila eneo la ugatuzi kuweka mikakati madhubuti ili kuchunguza na kubainisha rasirimali zote katika maeneo husika. Hili litasaidia kufumba rasilimali ambazo zinaweza kuchangia katika ustawishaji wa maeneo

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haya. Maeneo haya pia yanatakiwa kutafuta mbinu zitakazofanikisha uzalishaji na utumiaji wa rasilimali hizi kwa njia endelevu. Mojawapo ya mbinu hizi ni uongezaji thamani katika rasilimali yoyote inayozalisha kwenye eneo mahususi.

Maeneo mengi ya ugatuzi nchini humu yanategemea kilimo cha ufugaji kama mhimili wa uchumi. Licha ya kuwa nguzo, kilimo hiki hakijawahi kupigiwa darubini vizuri kwa lengo la kukiimarisha ili kiwanufaishe wenyeji kikamilifu. Aghalabu wafugaji wengi huandama mbinu za jadi za ufugaji ambazo haziwahakikishii ongezeko la mapato.Isitoshe, wafugaji hawa wanakabiliwa na tatizo katika soko la mifugo ambapo wengi hupunjwa na matapeli. Pamoja na haya, baadhi ya wakazi huuza mifugo nje ya nchi wakiwa wazimawazima bila kuwazia matokeo ya kitendo hiki. Si ajabu kuwaona ng'ombe, ngamia, mbuzi na kondoo wakipakiwa kwenye malori na kusafirishwa nje ya nchi. Ukweli ni kwamba jambo hili ni hatari sana, si kwa uchumi wa maeneo husika tu, bali pia kwa Kenya kwa jumla. Hii ni kwa kuwa walionunua mifugo wazimawazima wanaweza kuhiari kutowachinja na badala yake kuwatumia kama mbegu kwani baada ya muda huenda wanaonunua mifugo wakijitosheleza na kukosa kununua mifugo wengine. Hali ikiwa hivyo, maeneo yaliyotegemea soko hili huenda yakalipoteza taratibu, na bila shaka kupoteza natija inayotokana na soko lenyewe.

Ili kudhibitisha hali hii, itakuwa bora ikiwa viwanda vya kuchinjia mifugo na kupakia nyama vitajengwa katika maeneo haya ya ugatuzi. Hili litawawezesha wakazi kuuza nyama badala ya kuuza mifugo wazimawazima. Fauka ya hayo maeneo haya yatajikinga dhidi ya kupoteza bidhaa zinazotokana na mifugo. Hizi ni kama vile ngozi, kwato na pembe ambazo bila shaka zina natija kuu. Ngozi kwa mfano, ni bidhaa muhimu sana katikasekta ya utengenezaji wa mavazi na mifuko. Viwanda vinavyotumia ngozi kama malighafi vikijengwa katika maeneo haya, wakazi wake watanufaika si haba. Madhalani, viwanda vya kutengenezea viatu,

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mishipi, mifuko na nguo vikianzishwa,wawekezaji watalazimika kuanzisha viwanda vingine tegemezi. Kathalika, ni dhahiri kwamba bidhaa zinazotokana na ngozi huhitaji kutiwa nakshi. Kuanzishwa kwa viwanda hivi basi kutazua haja ya kuanzishwa kwa viwanda vingine vya kutengeneza rangi, pamoja na maduka ya kuuza bidhaa zenyewe. Isitoshe, gundi ya kugandisha bidhaa hizi itahitajika, hivyo kusababisha haja ya kuanzishwa kwa kiwanda cha gundi. Matokeo ya shughuli hizi zote ni kuzalishwa kwa nafasi anuwaiza kazi kwa wakazi. Hili litakuwa na matokeo zaidi chanya, hususan kwa vijana. Badala ya kushiriki ulevi na burudani zinazowahatarisha, wataweza kujitafutia riziki katika viwanda hivi.

Juu ya hayo, mfumo wa ugatuzi utayaweza maeneo husika kuongeza thamani, utoaji wa huduma za kijamii na kuitawala kulingana na mahitaji ya maeneo haya. Ni muhimu hata hivyo kuzingatia kwamba kila eneo la ugatuzi lina upekee wake, navyo vipaumbele hutofautianakulingana na maeneo. Kuna yale ambayo yatasisitiza usalama, mengine ujezi na uimirishaji wa miundomusingi kama vile barabara, vituo vya afya na hata taasisi za elimu. La muhimu ni wakazi wa maeneo husika kubainisha ni lipi litatekelezwa kwanza.

Kinga na kinga ndipo moto uwakapo. Kufanikiwa kwa mfumo wa ugatuzi kutategemea juhudi za kila mkazi wa eneo husika. Ni muhimu kila mkazi kujiona kuwa mmiliki wa eneo zima la ugatuzi na kuwajibika katika kuliendeleza kwa hali na mali.uwajibikaji huu unajumuisha uteuzi wa viongozi wenye muono mzuri na ambao utawawezesha kuyafikia malengo yao ya kimaendeleo. Hakika, mustakabali na uwepo wa eneo la ugatuzi utakuwa zao la maamuzi ya wanaeneo. Vilevile ufanisi wa maeneo ya ugatuzi utakuwa msingi wa ufanisi wa taifa kwa jumla.

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a) Fupisha ujumbe wa aya tatu za mwanzo kwa maneno 85-90 (alama 8, 1 mtiririko)

Matayarisho:

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Nakala safi:

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b) Kwa kutumia maneno 75-80, bainisha masuala ambayo mwandishi anaibua katika aya tatu za mwisho. (alama7, 1 mtiririko)

Matayarisho:

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Naala safi:

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3.MATUMIZI YA LUGHA (Alama 40)

a) i) Andika tofauti moja kati ya sauti zifuatazo. (al2)

i) |ng'| na |gh| ……

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ii) |v| na |f|

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iii) |r| na |l|

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iv) |m| na |n|

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b) Tunga sentensi mbili kuonyesha matumizi mawili ya kiambishi : o (al 2)

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c) Onyesha miundo miwili ya nomino katika ngeli ya U – ZI (al2)

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d) Andika sentensi ifuatayo katika hali ya ukubwa. (al 2)

Ngoma hizo zao ziliibwa na wezi wale.

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e) Tumia ‘kwa’ katika sentensi kuonyesha :

i) Sehemu ya kitu kizima (al2)

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ii) Namna tendo lilivyofanyika (al2)

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f) Bainisha maana mbili zinazojitokeza katika sentensi ifuatayo (al2)

Bedui

alimrushiatufe.

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g) Andika visawe vya maneno yafuatayo (al2)

i) Doa ……..

ii)Omba ……

h) Tunga sentensi moja kutofautisha maana ya rithi na ridhi (al2)

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i) Bainisha silabi katika neno:

Wanyweshavyo (al1)

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j) Bainisha kiima na chagizo katika sentensi ifuatayo (al2)

Mwenyewe alikipenda kwa dhati.

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k) Andika sentensi ifuatayo katika umoja. (al2)

Mkihifadhi nafaka hizo vizuri maeneo haya yatakuwa na vyakula vya kutosha. ……

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l) Andika neno moja lenye mofimu zifuatazo:

nafsi ya kwanza wingi, wakati uliopita, yambwa, mzizi, kauli ya kutendesha ,kiishio kutenda.(al2)

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m) Changanua sentensi ifuatayo kwa kielelezo cha matawi (al 4)

Lililimwa vizuri sana.

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n) Kanusha sentensi ifuatayo.

Wanafunzi waliingia darasani wakatoa vitabu wakaanza kusoma.(al2)

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o) Nomino zifuatazo zimo katika ngeli gani? (al2)

i) Furaha-

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ii) Nyasi-

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p) Tunga sentensi mbili kuonyesha matumizi mawili tofauti ya nukta pacha. (al2)

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q) Andika sentensi ifuatayo upya ukianzia kwa yambwa tendwa (al2)

Wafugaji waliwakatia ng'ombe wote majani ya mti huo.

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r) Ainisha vishazi katika sentensi ifuatayo (al2)

Ingawa mshahara wake si mkubwa anaikimu familia yake.

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s) Andika kinyume cha sentensi ifuatayo: (al2)

Watoto wameombwa waanike nguo.

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t) i) Eleza maana ya shadda (al1)

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ii)Onyesha panapotokea shadda katika neon:

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mteremko. (al1)

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ISIMU JAMII (ALAMA10)

…….watu wakaunti ya Cheneo wamesahaulika kabisa Ningependa kuelezwa kinaga ubaga kama hawa ni wakenya au la. Order! Order! Mheshimiwa Kega.

i) Hii ni sajili gani? (al2)

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Eleza sifa nane za sajili iliyotajwa. (al 8) ……

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MID-TERM 1 SERIES 2 EXAMS

102/3

KISWAHILI

FASIHI YA KISWAHILI

FORM 4 TERM 1 EXAMS

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MUDA: SAA $2^1/_2$

MAAGIZO:

1.Jibu maswali MANNE Pekee.

2.Swali la kwanza ni la lazima.

3.Maswali mengine yachaguliwe kutoka sehemu zilizobaki.

4.Usijibu maswali mawili kutoka sehemu moja.

5.Kila swali lina alama ishirini

SEHEMU YA A: FASIHI SIMULIZI

1.

a) Taja mifano minane ya vipera vya utanzu wa semi katika fasihi simulizi. **(alama4)**

b) Fafanua sifa zozote tatu za mawaidha katika fasihi simulizi **(alama3)**

c) Eleza umuhimu tatu wa ngomezi. **(alama3)**

d) Eleza istilahi hizi za fasihi simulizi. **(alama3)**

i) Maghani

ii) Mapisi

iii) Misimu/simo

e) Fafanua sifa zozote tatu ambazo mtambaji wa hadithi anastahili kuwa nazo. **(alama3)**

f) Taja methali zozote mbili zilizo na dhana ya tashibihi. **(alama2)**

g) Eleza sifa zozote mbili za nyimbo. **(alama2)**

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SEHEMU YA B: USHAIRI

2.Soma shairi lifuatalo kisha ujibu maswali yanayofuata

Mkata ni mkatika,harithi hatoridhiwa
Sina ninalolishika,wala ninalochukuwa
Mlimwengu kanipoka, hata tone la muruwa!
Mrithi nini wanangu?

Sina ngo'mbe sina mbuzi,sina konde sina buwa
Sina hata makaazi,mupasayo kuyajuwa
Sina mazuri makuzi,jinsi nilivyoachwa
Mrithi nini wanangu?

Sina kazi sina bazi ila wingi wa shakawa
Sina chembe ya majazi mno ni kukamuliwa
Nakwa'cheni upagazi,ngumu kwenu ku'tuwa
Mrithi nini wanangu?

Sina sikuachi jina,mkata hatasifiwa
Hata nifanye la mana,mno mi kulaumiwa
Poleni wangu sana,sana kwenu cha kutowa
Mrithi nini wanangu?

Sina leo sina jana,sina kesho kutwaliwa
Sina zizi sina shina,wala tawi kuchipuwa
Sina wanangu mi sina,sana la kuacha kuraduwa
Mrithi nini wanangu?

Sina utu sina haki,mila yangu meuliwa
Nyuma yangu ili dhiki,na mbele imakaliwa
N'na wana na milik,hadi nitakapofukiwa

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Mrithi nini wanangu?

Sina ila kesho kwenu,wenyewe kulongowa
Muwane kwa nyinyi mbinu,mwende pasi kupumuwa
Leo siyo kesho yenu,kama mutajikamuwa
Mrithi nini wananngu?

MASWALI

a) Taja mambo yoyote mawili ambayo mtunzi angewarithisha wanawe. **(alama2)**

b) Eleza sababu ya mtunzi kutoweza kuwarithisha wanawe. **(alama3)**

c) Andika ubeti wa nne kwa lugha nathari. **(alama4)**

d) Dondoa mifano miwili miwili ya: **(alama2)**

i. Inkisari

ii. Tabdila

i. Chambua shairi hili kwa upande wa:

Dhamira **(alama2)**

Muundo **(alama4)**

e) Eleza maana ya vifungu vifuatavyo kama vilivyotumiwa katika shairi. **(alama3)**

i. Mlimwengu kanipoka

ii. Sina konde sina buwa.

iii. Wingi wa shakawa.

SEHEMU YA: C HADITHI FUPI

Mapambazuko Ya Machweo

3. NDOA ni taasisi iliyokuzwa katika hadithi **fadhila za punda.** Fafanua **(alm20)**

4. "...iwapo penzi hili litatia doa, basi nirudishie mfuko huu kama ishara ya kulitupa penzi langu kama)ongoo na mti wake...

a) Eleza muktadha wa dondoo hili. **(alm4)**

b) Fafanua mbinu mbili ambazo zimetumika katika dondoo hili. **(alm4)**

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c) Eleza sifa sita za msemaji wa maneno haya. **(alm6)**

d) Eleza umuhimu wa msemewa wa hadithi hii katika kujenga ploti. **(alm6)**

SEHEMU YA E: TAMTHILIA

5.Fafanua jalada la tamthilia bembea ya maisha **(alm20)**

6."Lakini nilivyosema, Mungu hamwachi mja wake.."

a) Eleza mutadha wa dondoo hili **(alm4)**

b) Tambua sifa tatu za msemewa **(alm3)**

c) Eleza umuhimu wa msemaji wa maneno haya katika kukuza vipengele vifuatavyo:

i. Ploti **(alm2)**

ii. Maudhui **(alm4)**

d)Kwa kurejelea tamthilia nzima eleza ukweli wa kauli "Mungu hamwaachi mja wake." **(alm7)**

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FORM 4 MID-TERM 1 SERIES 2 EXAMS

MATHEMATICS PAPER 1

TIME: 2½ HRS.

INSTRUCTION TO STUDENTS:

1. *Write your **name**, **admission number** and **class** in the spaces provided above.*
2. *Write the **date** of examination in spaces provided.*
3. *This paper consists of **two** Sections; Section **I** and Section **II**.*

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4. *Answer **ALL** the questions in Section **I** and only **five** questions from Section **II**.*
5. *All answers and working must be written on the question paper in the spaces provided below each question.*
6. *Show all the steps in your calculation, giving your answer at each stage in the spaces provided **below** each question.*
7. *Marks may be given for correct working even if the answer is wrong.*
8. *KNEC Mathematical tables **may be** used, except where stated otherwise.*
9. *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*
10. ***Candidates should answer the questions in English.***

FOR EXAMINER'S USE ONLY

GRAND TOTAL

SECTION 1 (50 marks)

1. Without using a calculator, evaluate. (3mrks)

$$\frac{-8+(-5)\times(-8)-(-6)}{-3+(-8)\div 2\times 4}$$

2. Evaluate without using a calculator (2mrks)

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$$\frac{\left(2\frac{3}{7}-1\ \frac{5}{6}\right)\div\frac{5}{6}}{\frac{2}{3}\ of\ 2\frac{1}{4}-1\frac{1}{7}}$$

3. In fourteen years time, a mother will be twice as old as her son. Four years ago, the sum of their ages was 30 years. Find how old the mother was, when the son was born. (4 mks)

4. A Kenya bank buys and sells foreign currencies as shown below

	Buying (In Kenyan shillings)	Selling (In Kenyan shillings)
1 Hong Kong dollar	9.74	9.77
1 South African rand	12.03	12.11

A tourist arrived in Kenya with 105000 Hong Kong dollars and changed the whole amountto Kenyan shillings. While in Kenya, she spent Kshs. 403,897 and changed the balance to South Africa rand before leaving for South Africa. Calculate the amount, in South African rand that she received. (3 mrks)

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5. a) Using a ruler and a pair of compasses only, construct a quadrilateral PQRS in which PQ= 5cm, PS = 3cm, QR = 4cm, $<PQR = 135°$ and $<SPQ$ is a right angle. (2mrks)

b) The quadrilateral PQRS represents a plot of land drawn to a scale of 1:4000. Determine the actual length of RS in meters. (2mrks)

6. The ratio of goats to cows in a farm is 2:5 while the ratio ofsheeps to cows is 3:4. If there are 15 sheep, how many animals are there in farm farm. (2mrks)

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7. Mr.Maina who deals in electronics sells a radio to a customer at Ksh. 1440 after giving a discount 0f 10% but find that he makes a 20% profit. Find the profit Mr. Maina would make if he does not give a discount. (3mrks)

8. use the reciprocal and square table to evaluate to four significant figure, the expression.(3mrks)

$$\frac{1}{0.03654} - 4.151^2$$

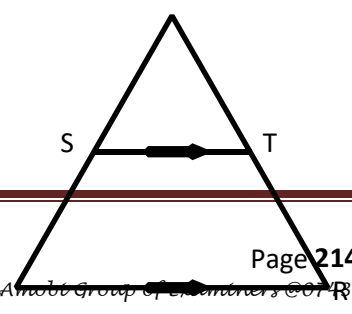
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9. Simplify the following expression completely. (3mrks)

$$\frac{12a^2 - 3b^2}{2a^2 - ab - b^2}$$

10. Given that sin *(x* + 60)° = Cos *(2x)°,* find tan *(x* + 60)°. (3mrks)

11. The figure below shows triangle PQR in which PR = 12 cm, T is a point on PR such that TR = 4cm. line ST is Parallel to QR

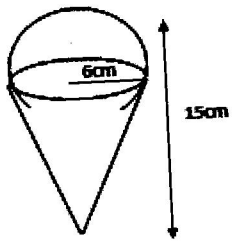


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If the area of triangle PQR is 336 cm^2, find the area of the quadrilateral QRTS.(3mrks)

12. A square brass plate is 2 mm thick and has a mass of 1.05 kg. The density of the brass is 8.4 g/cm^3. Calculate the length of the plate in centimeters (3 mks)

13. The diagram below represent a solid made up of a hemisphere mounted on a cone. The common radius is 6 cm and the height of the solid is 15cm.



Calculate the external surface of the solid (4 Mrks)

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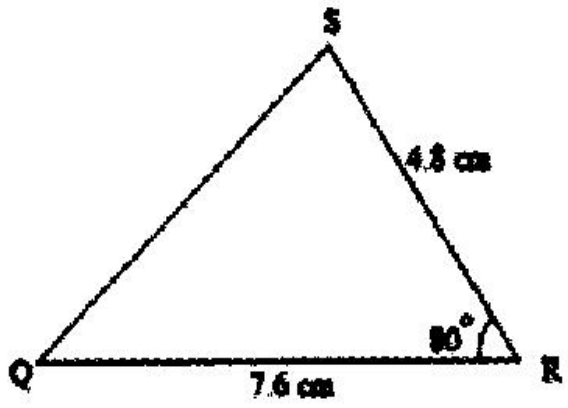
14. Solve the simultaneous inequalities given below and list all the integral values of x (3mks)

$$\frac{3-x}{2} \geq \frac{x+1}{3} \geq \frac{2x+1}{-3}$$

15. A construction company employs technicians and artisans. On a certain 3 technicians and 2 artisans were hired and paid a total of Ksh9000.
On another day the firm hired 4 technicians and one artisan and paid a total of Ksh 9500. Calculate the cost of hiring two technicians and 5 artisans in a day

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16. The figure below is not drawn to scale.



Find correct to 1 decimal place;

(a) Length PQ. (2 mark).

(b) Angle ABC (2 mark)

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SECTION II(50 marks)

CHOOSE ANY FIVE QUESTIONS IN THIS SECTION

17.Two lines L_1: 2y - 3x - 6 = 0 and L_2: 3y+x-20 = 0 intersect at point A.

(a) Find the coordinates of A. (3 Mrks)

(b) A third line L_3 is perpendicular to L_2 at point A. Find the equation of L_3 in the form y = mx +c, where m and c are constants. (3 mark)

(c) Another L_4 is parallel to L_1 and passes through (-1, 3). Find the x and y intercepts of L_4. (4 mark)

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18. Town B is 180km on a bearing 050^0 from town A. Another town C is on a bearing of 110° from town A and on a bearing of 150° from town B. A fourth town D is 240 km on a bearing of 320° from A.Using scale drawing, such that 1cm rep 30km,

(a) Show the relative position of the towns (4 mks)

(b) Using the diagram, find

(i) Distance AC (2 mrks)

(ii) Distance CD (2 mrks)

(iii) Compass bearing of C from D (2 mrks)

19. The table shows the marks obtained by 40 candidates in an examination

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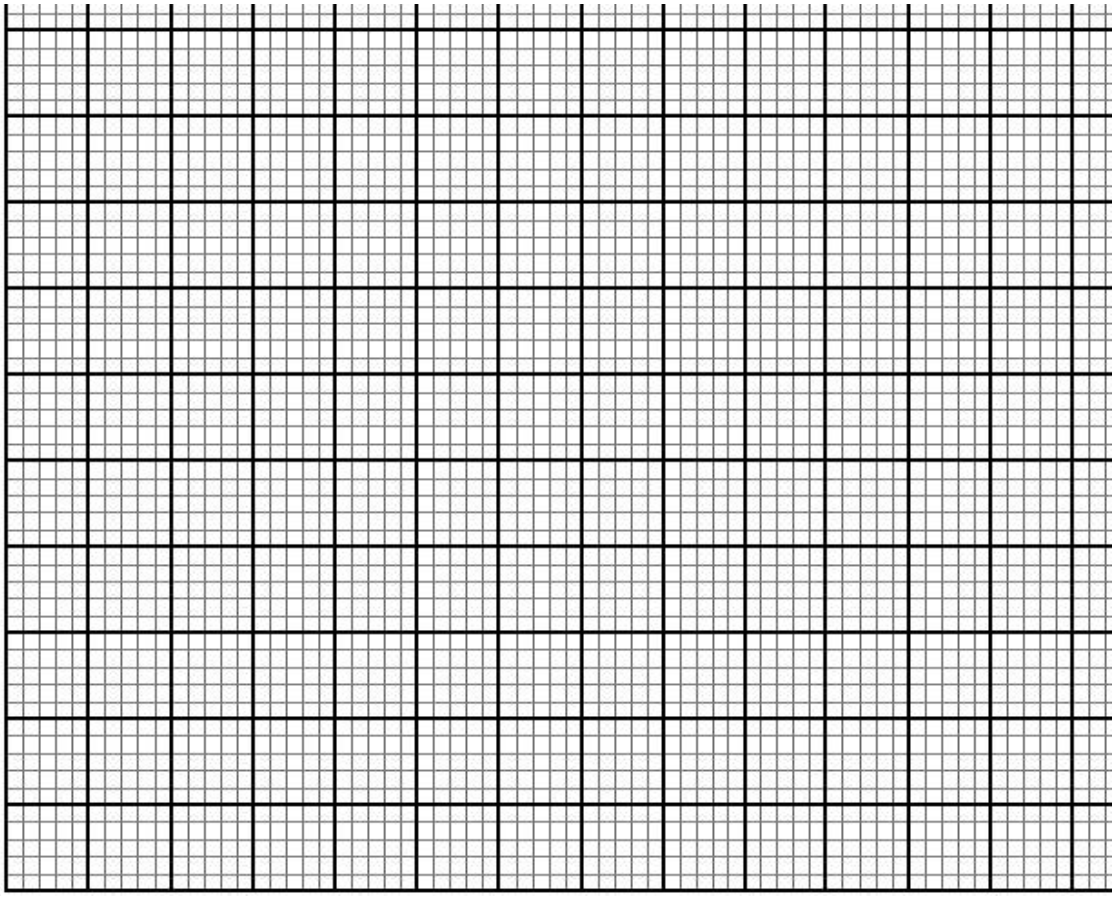
Marks	5-14	15-29	30-34	35-44	45-49
Frequency	2	12	7	15	x

a) Find the value of X (1mk)

b) Calculate the mean mark (2mrks)

c) On the grid provided below draw a histogram to represent the data (4mrks)

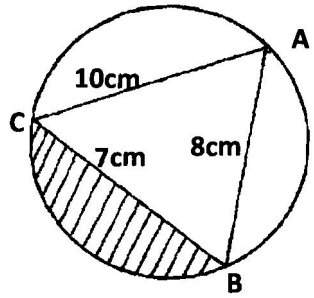
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d) drawing a straight line on the graph above determine the median mark (3mrks)

20. The figure below shows a triangle **ABC** inscribed in a circle. **AC** = 10cm, BC = 7cm and **AB** = 10cm.

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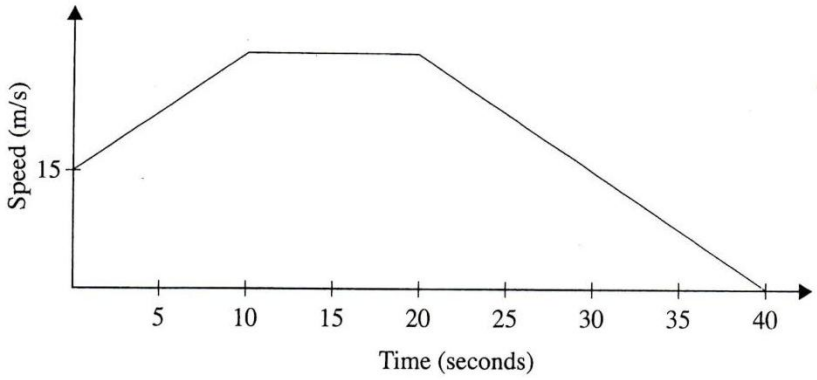
(a) Find the size of angle **BAC**. (3 Mks)

(b) Find the radius of the circle. (2 Mks)

(c) Hence calculate the area of the shaded region. (5 Mks)

21. The figure below represents a speed time graph for a cheetah which covered 825m in 40 seconds.

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(a) State the speed of the cheetah when recording of its motion started (1 mk)

(b) Calculate the maximum speed attained by the cheetah (3mks)

(c) Calculate the acceleration of the cheetah in:

(i) The first 10 seconds (2mks)

(ii) The last 20 seconds (1mk)

(d) Calculate the average speed of the cheetah in first 20 seconds (3mks)

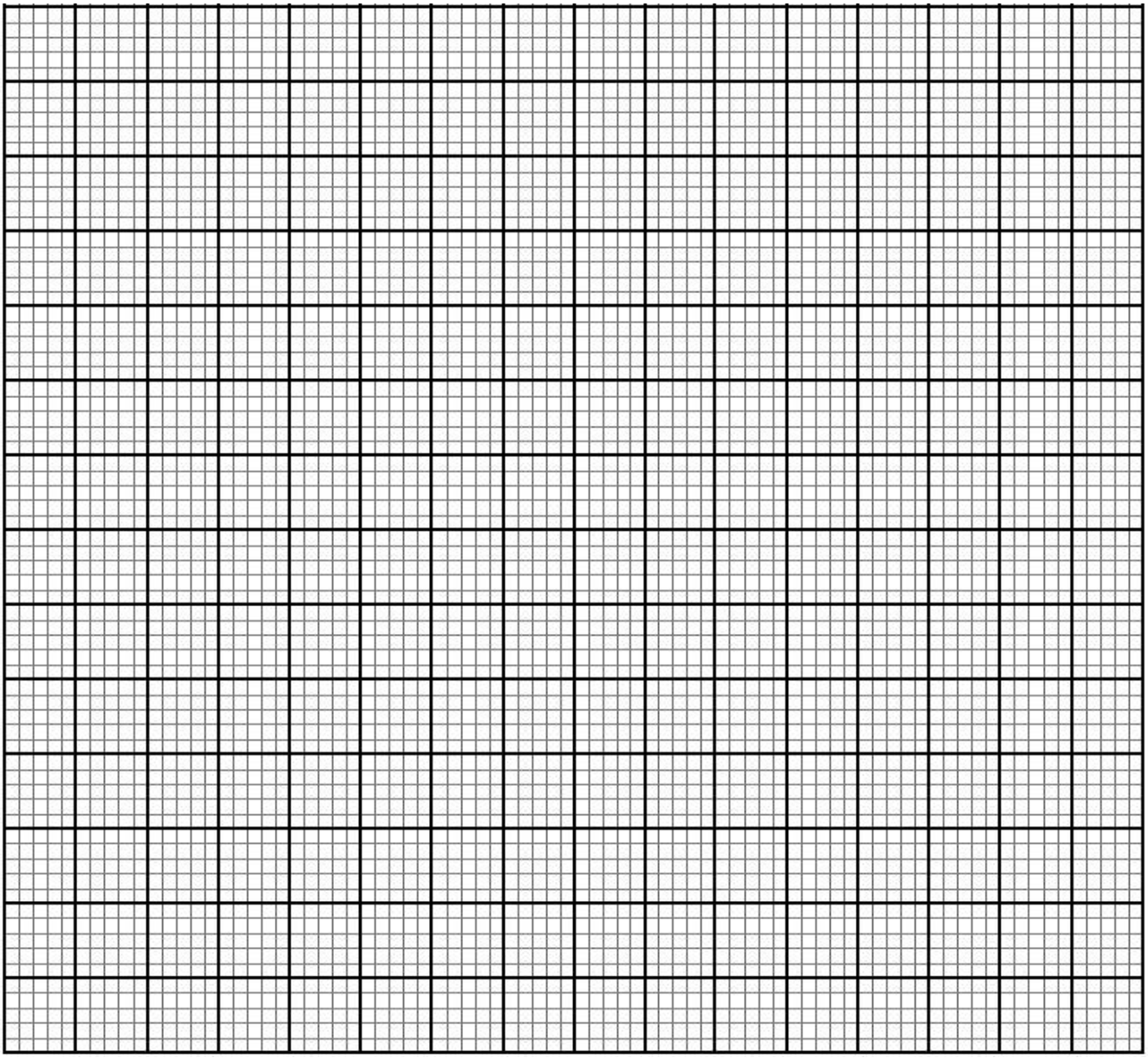
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22. Given the quadratic function $y=3x^2 + 4x - 1$

a) Complete the table below for values of x ranging $-4 \leq x \leq 3$. (2mks)

b) Using the grid provided draw the graph of $y = 3x^2 + 4x - 2$ for $-4 \leq x \leq 3$ (3mks)

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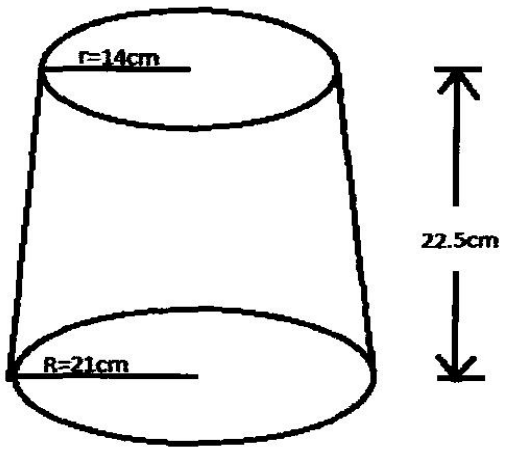
c) Using the graph, find the solution to the equations.

i) $3x^2+4x-2=0$ (2mks)

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ii) $3x^2+7x+2=0$ (3mks)

23. The diagram represents a solid frustum with base radius 21cm and top radius 14cm. The frustum is 22.5cm high and is made of a metal whose density is 3 g/cm3. (Take $\pi=\frac{22}{7}$)



a) Calculate

(i) The volume of the metal in the frustum. (5 marks)

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(ii) The mass of the frustum in kg. (2 marks)

b) The frustum is melted down and recast into a solid cube. In the process 20% of the metal is lost. Calculate to 2 decimal places the length of each side of the cube.
(3 marks)

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24. A saleswoman is paid a commission of 2% on goods sold worth over Ksh 100,000. She is also paid a monthly salary of Ksh 12,000.In a certain month, she sold 360 handbags at Ksh 500 each.

a) Calculate the saleswoman's earnings that month. (3 mks)

b) The following month, the saleswoman's monthly salary was increased by 10%. Her total earnings that month were Ksh 17,600.

Calculate:

i) The total amount of money received from the sales of handbags that month. (5 mks)

ii) The number of handbags sold that month. (2 Mks)

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FORM 4 MID-TERM 1 SERIES 2 EXAMS

121/2

MATHEMATICS PAPER 2

TIME: 2½ HRS.

INSTRUCTION TO STUDENTS:

1. *Write your **name**, **admission number** and **class** in the spaces provided above.*
2. *Write the **date** of examination in spaces provided.*
3. *This paper consists of **two** Sections; Section **I** and Section **II**.*
4. *Answer **ALL** the questions in Section **I** and only **five** questions from Section **II**.*
5. *All answers and working must be written on the question paper in the spaces provided below each question.*
6. *Show all the steps in your calculation, giving your answer at each stage in the spaces provided **below** each question.*
7. *Marks may be given for correct working even if the answer is wrong.*
8. *KNEC Mathematical tables **may be** used, except where stated otherwise.*
9. *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*
10. ***Candidates should answer the questions in English.***

FOR EXAMINER'S USE ONLY:

SECTION I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL

17	18	19	20	21	22	23	24	TOTAL

SECTION II **GRAND TOTAL**

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SECTION

1. Use logarithms to evaluate.

$$\frac{4.497\ x\ \sqrt{0.3673}}{1-cos\ cos\ 81.53°}$$ 3mks

2. The sum of the fifth and sixth term of an AP is 30.If the third term is 5.Find the first term. 3mks

3. Make K the subject of the formula and simplify. 3mks

$$t = \frac{2y+1}{\sqrt{2ky+k}}$$

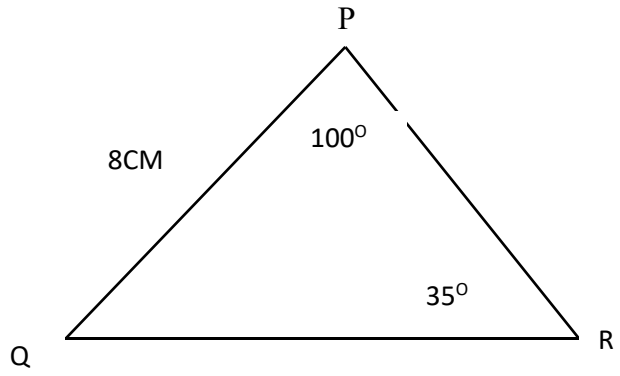
4. Solve for x

$2 - (log\ log\ X\ )^2 = 3\ log\ log\ X$ 3mks

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5. The sides of a triangle were measured and recorded as 4cm,6.2cm and 9.50cm.Calculate the percentage error in its perimeter correct to 2 decimal places. 3mks

6. The figure below shows a triangle PQR in which PQ=8cm and angle QPR=100^0 and angle PQR=35^0.Calculate to 2 decimal places the length of QR and hence the area of triangle PQR to2 decimal places. 3mks

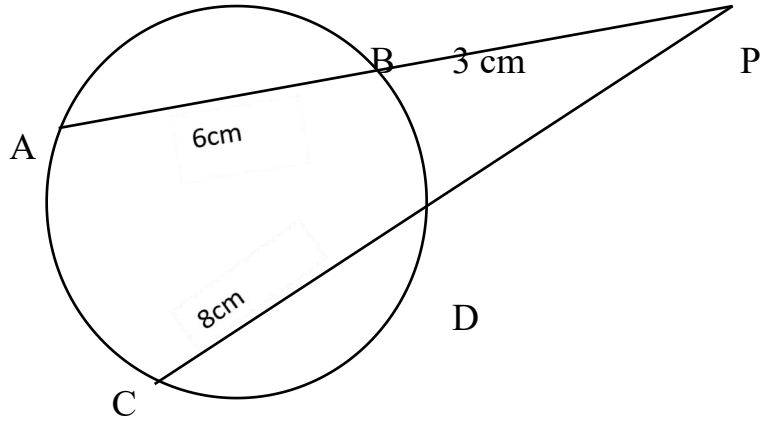


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7. (a) Expand $(1-2x)^6$ up to term in x^3. 2mks

(b) Use the expansion above to evaluate $(1.02)^6$ correct to 4 decimal places. 2mks

8. Find the length of DP in the figure. 3mks



9. Given the matrix $(5-x\ 2\ 3x\ 4)$ has no inverse, find the value of x. 2mks

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10. Without using a calculator solve $\frac{\sqrt{252}+\sqrt{72}}{\sqrt{32}+\sqrt{28}}$ leaving your answer in the form $a\sqrt{b+c}$ where a,b and c are integers. 4mks

11. Find the radius as the center of a circle whose equation is

$3x^2 + 3y^2 + 18y - 12x - 9=0$ 3mks

12. A new laptop depreciates at 8% per annum in the first year and 12% per year in the second year. If its value at the end of the second year was sh.121,440, calculate its original value. 3mks

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13. Given that C varies partly as A and partly as the square of A and that C=20 when A=2 and C=21 when A=3,determine the value of C when A=4. 3mks

14. The size of an interior angle of a regular polygon is 6 ½ times that of its exterior angle determine the number of sides of the polygon. (3 mks)

15. Given that the ration x:y=2:3 find the ratio (5x-2y):(x+y). 3mks

16. Kiprono buys tea costing sh 112 per kilogram and sh.132 per kilogram and mixes them, then sells the mixture at sh.150 per kilogram .If he is making a profit of 25% in each kilogram of the mixture ,determine the ratio in which he mixes the tea. 4mks

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SECTION II(ANSWER ONLY FIVE QUESTIONS)

17. Mrs.Langat ,primary school head teacher earns a basic salary of sh.38,300 house allowance of sh.12,000 and radical ,allowance of sh.3,600 every month. She claims a family relief of sh.1172 and insurance relief of 10% of the premium paid. Using tax rates table below.

Taxable income £(p.a)	**Tax (ksh /£)**
1-8800	2
8801-16800	3
16801-24800	5
24801-36800	7
36801-48800	9
Over 48800	10

a. Calculate Mrs.Langats annual taxable income in Kenya pound per annum.
2mks

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b. Tax due evenly month from Mrs.Langat. 4mks

c. If the following deductions are made every month from her salary,

w.c p.s 2 % of basic salary

life insurance premium of sh.4600

sacco van repayment of sh.14,200

Calculate

i. the total deductions. 2mks

ii. Her net pay for very month. 2mk

18. A bag contains 5 red balls, 3 blue balls and 4 yellow balls. Two balls are drawn at random one after the other without replacement.

a. Draw a tree diagram to illustrate his pickings. 2mks

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b. Calculate the probability that

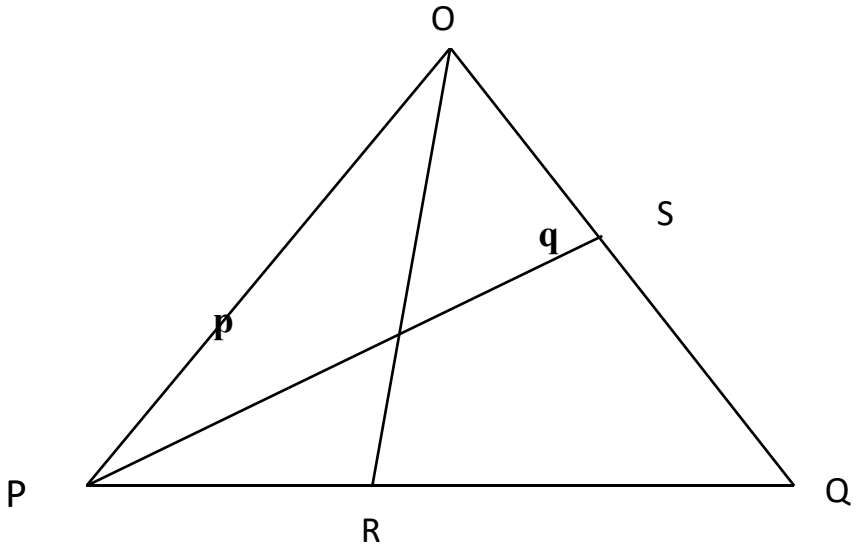
i. Both balls picked were red. 2mks

ii. Both balls picked were of the same colour. 3mks

iii. There was no red ball from the two balls picked. 3mks

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19. In the triangle given below $\overrightarrow{OP}$= **p** and $\overrightarrow{OQ}$= **q**.R is a point on $\overrightarrow{PQ}$ such that PR:RQ = 1 : 3 and that 5OS= 2OQ.PS and OR intersect at T.



a. Express in terms of **p** and **q**.

i. $OS \rightarrow$ 1mk

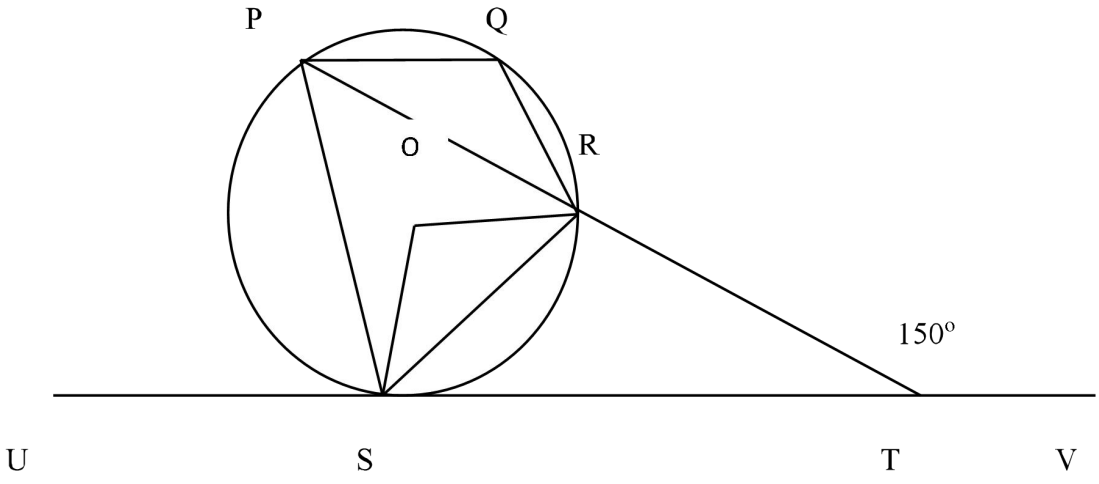
ii. $PQ \rightarrow$ 1mk

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b. Given that **OT**=h $\underline{O}$ R and **PT** = k**PS**, determine the values of h and k.

6mks

20. In the figure below,P,Q,R and S are points on the circle centre O. PRT and USTV are straight lines.Line UV is a tangent to the circle at S. $< RST = 50^0$ and $< RTV = 150^0$.



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a. Calculate the size of

i. $<$ ORS 2mks\

ii. $< USP$ 1mk

iii. $<$ PQR 2mks

b. Given that RT=7cm and ST=9cm,calculate to 3 significant figures

i. Length of the line PR 2mks

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ii. The radius of the circle. 3mks

21. The product of the first three terms of geometric progression is 64.If the first term is a and the common ratio is r;

a. Express r in terms of a 3mks

b. Given that the sum of the three terms is 14

i. Find the values of a and r ,hence write down two possible sequences each upto 4^{th} term. 5mks

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ii. Find the sum of the first 5 terms of each sequences. 2mks

22. A water vendor has a tank of capacity18,9000 litres.The tank is being filled with water from two pipes A and B which are closed immediately when the tank is full.Water flows at the rate 150,000cm^3/minute through pipe B.

a. If the tank is empty ,and the two pipes are opened at the same time,calculate the time it takes to fill the tank. 5mks

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b. On a certain day the vendor opened the two pipes A and B to fill the empty tank.After 25 minutes he opened the outlet tap to supply water to his customer at average rate of 20 litres per minute. Calculate the time it took to fill the tank on that day. 5mks

23. Three variables p, q and r are such that p varies directly as q and inversely as the square of r.

(a) When p=9, q12 and r = 2.

Find p when q= 15 and r =5 (4mks)

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(b) Express q in terms of p and r. (1mks)

(c) If p is increased by 10% and r is decreased by 10%, find;

(i) A simplified expression for the change in q in terms of p and r (3mks)

(ii) The percentage change in q. (2mks)

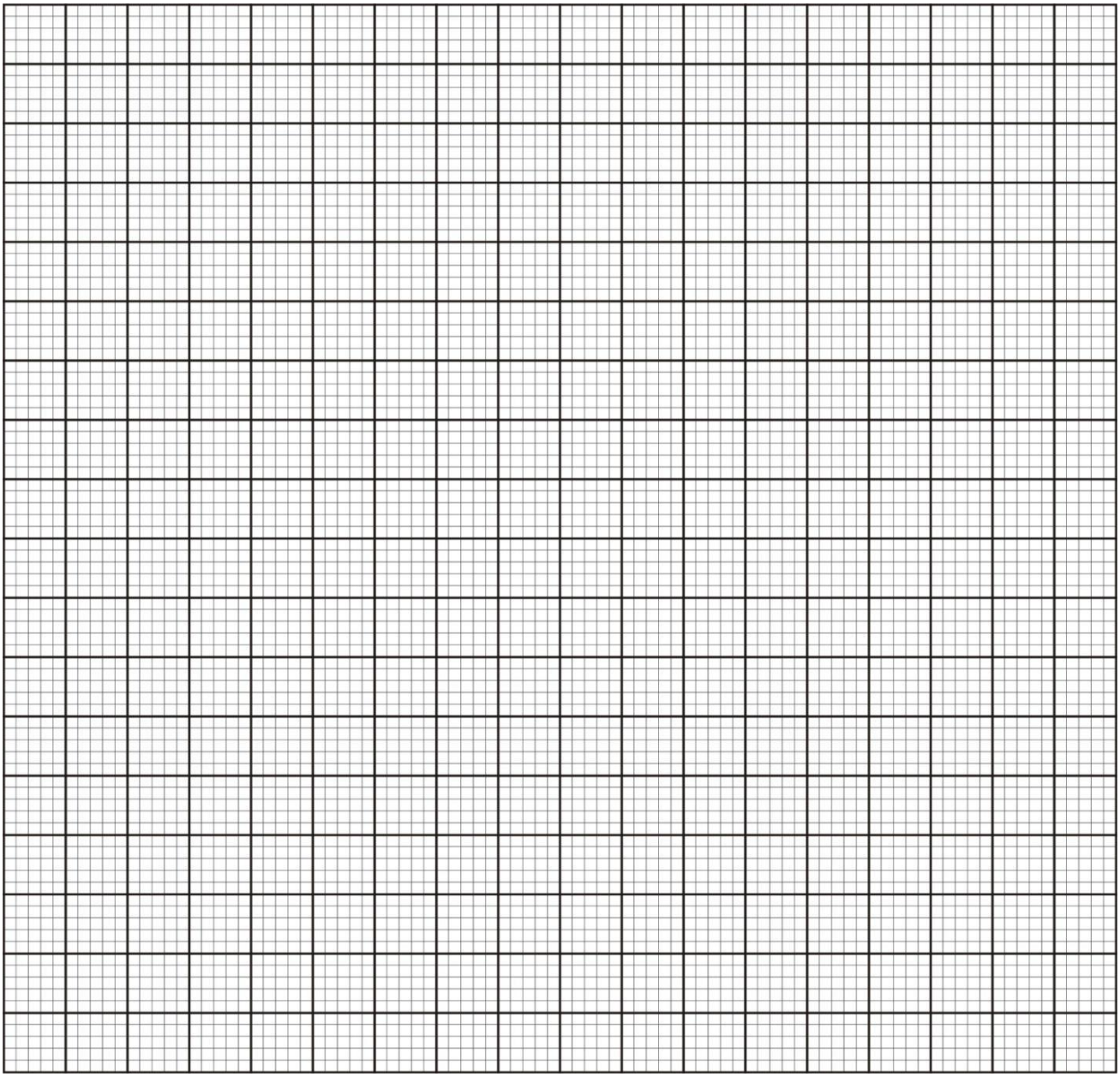
24. The table below shows some values of the curve y = 2cos x and y= 3 sin x.

a. Complete the table for values y=2cosx and y=3 sin x, correct to 1 decimal places. 3mks

x	0	30^0	60^0	90^0	120^0	150^o	180^0	210^0	240^0	270^0	300^0	330^0	360^0
y=2cos x	2		1	0			-1.7	-1.7	-1		1	1.7	2
y=3sn x	0	1.5		3	2.6				-2.6			-1.5	0

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On the grid provided draw the graphs of $y=2\cos x$ and $y= 3\sin x$ for $0^0 \leq x \leq 360^0$ on the same axis. 5mks



a. Use the graph to find the values of x when $2\cos x - 3\sin x=0$. 2mks

b. Use the graph to find the values of y when $2\cos x = 3\sin x$. 1mk

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FORM 4 MID-TERM 1 SERIES 2 EXAMS

232/1 PHYSICS

PAPER 1

TIME: 2 HRS

INSTRUCTION TO CANDIDATES:

1. Write your name and Admission number in the spaces provided.
2. Answer all the questions in the spaces provided.
3. Mathematical tables and electronic calculators may be used.
4. All workings must be clearly shown where necessary.

FOR EXAMINERS USE ONLY:

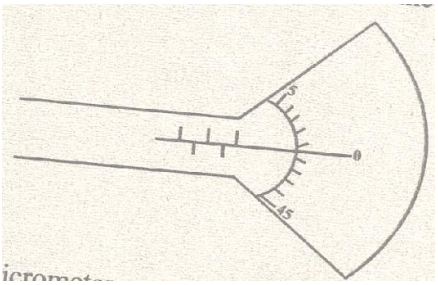
SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1 – 14	25	
	15	13	
B	16	11	
	17	9	
	18	13	
	19	10	
TOTAL		**80**	

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SECTION A (25 marks)

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

Figure below shows part of a micrometer screw gauge. Use the information and the figure to answer questions 1 and 2.



1. State the pitch of the micrometer screw gauge. (1mk)

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2. State one limitation of the micrometer screw gauge. (1mk)

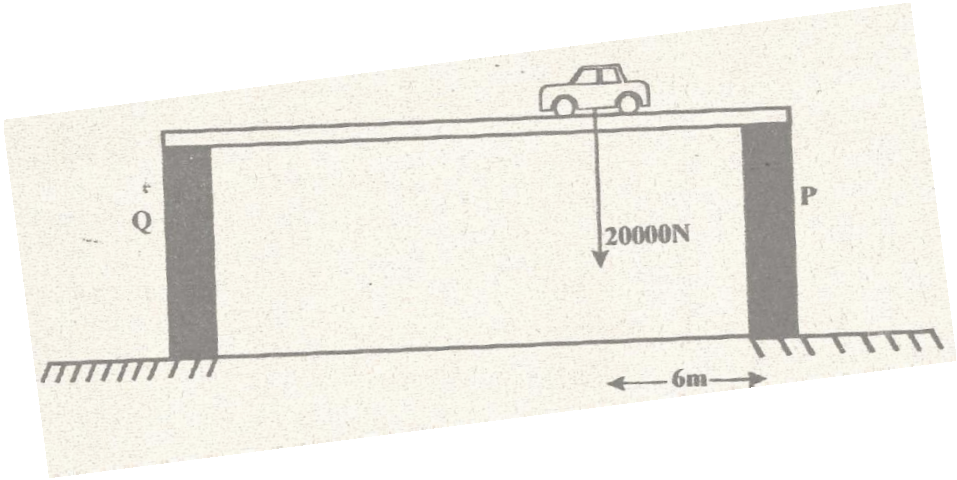
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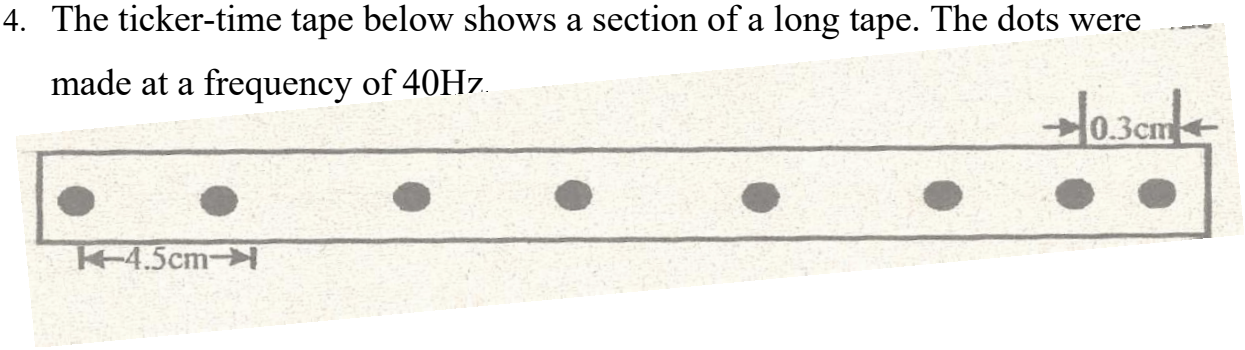
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3. A lorry of weight 20000N is brought to rest on a uniform bridge, by applying brakes, as shown in the figure below. The weight of the bridge is 60000N and is 20m long. It is supported at P and Q. calculate the reactions at P and Q. (3mks)

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4. The ticker-time tape below shows a section of a long tape. The dots were made at a frequency of 40Hz.



Determine the acceleration of the trolley pulling the tape 3mks.

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5. State and explain any changes observed in a Brownian motion, when the temperature of the air in the smoke cell is increased. (2mks)

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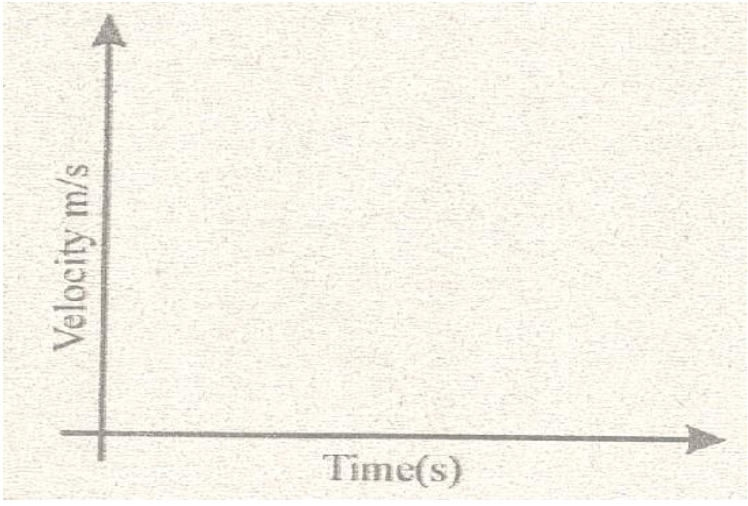
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6. A wooden block of mass 2kg is placed on a horizontal surface. A horizontal force of 14N is exerted on it which makes it to accelerate at $5ms^{-1}$.

Find the frictional force acting between the surfaces. (3mks)

7. Sketch a velocity time graph for a body thrown vertically upwards to a maximum height. (1mk)

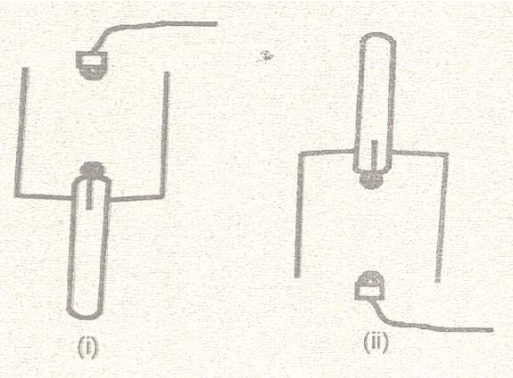


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8. Lycopodium is lightly sprinkled on a clean water surface in a large tray. A red hot needle is plunged into the centre of the water surface. State and explain the observation made. (2mks)

9. A tight rope walker carries a pole to maintain stability. Explain how he uses it to achieve it. (1mk)

10. Figure below shows two set-ups by a student using identical lamps and thermometers.



In which set up is thermometer reading a higher temperature, if the lamps are switched on for some duration? Explain (2mks)

……

……

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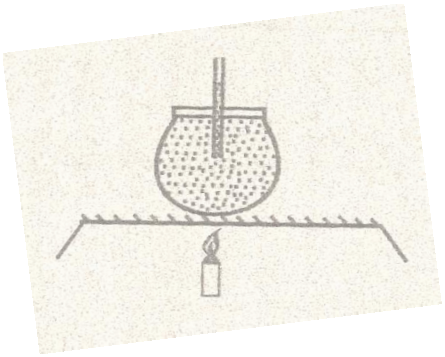
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11. The system in the figure below is a set-up which can be used to illustrate expansion of liquids.



State one way of modifying the apparatus so that the rise in level for a particular temperature is higher. (1mk)

……

……

……

12. A heavy log lying on the ground requires more energy to start moving than the same log which is already in motion. Explain why. (1mk)

……

……

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13. State the reason why the speed of water at a wider section of a river is lower than at a narrower section. (1mk)

……

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14. A hole is made at the middle of a tall jar container and water is poured into it to the level shown. See figure below.

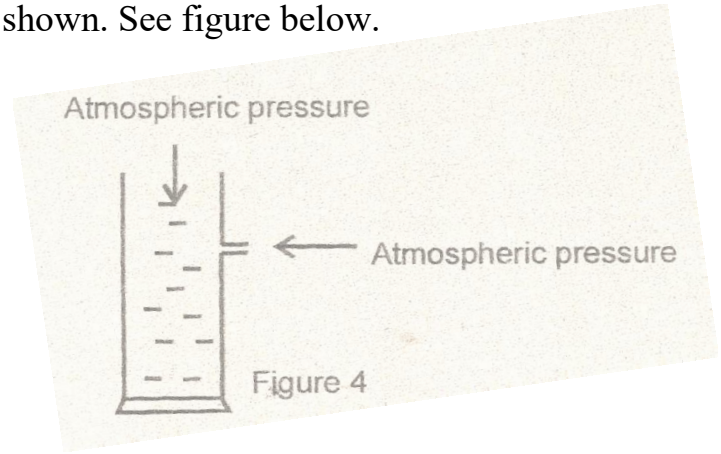


Figure 4

i) Explain why water comes out of the hole, yet the atmosphere pressure acting in the directions shown are equal in magnitude. (2mks)

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ii) What would be observed if the container was filled with water and the top lid closed tightly? (1mk)

……

……

SECTION B (55 MARKS)

15. a) A circuit consists of a battery, a metal wire, an ammeter and a switch connected in series. The switch is closed and the ammeter reading noted. The metal wire is now heated.

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a) State the observation made on the ammeter reading and give a reason for your answer (2mks)

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……
……

b) State the purpose of a fuse in a circuit. (1mk)

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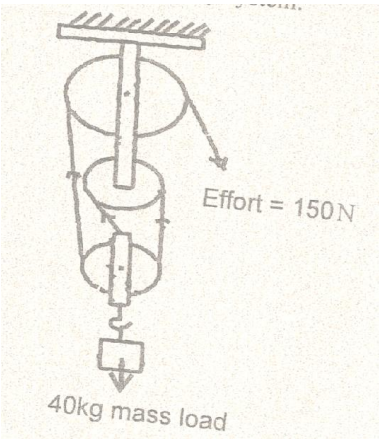
c) An electric heater is made of wire of resistance 100Ω and 2400 V mains supply. Determine

i) Power rating of the heater (3mks)

ii) Current flowing in the circuit (3mks)

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16. a) The figure below shows a pulley system.



i) What is the velocity ratio of the system? (1mk)

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ii) Calculate the efficiency of the system. (3mks)

iii) Give one reason why efficiency is not 100%. (1mk)

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b) Light helical spring obeying Hooke's Law was attached to a fixed support. When a 5N load was hung on it, the length of the spring was 160mm. when a 10N load was hung on it the length became 200mm. determine

i. The length of the spring with no load. (3mks)

ii. The length of the spring with 8N. (3mks)

17. a) Sketch a vernier callipers scale reading 3.89cm. (2 marks)

b) In an experiment to estimate the diameter of an oil molecule, an oil drop of diameter 0.05cm spread over a circular patch whose diameter is 20cm.

Determine:

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(i) The volume of the oil drop. (2 marks)

(ii) The area of the patch covered by the oil. (2 marks)

(iii) The diameter of oil molecule. (3 marks)

(iv) State one assumption made in (b) above. (1 mark)

(v) Three possible sources of error in this experiment. (2 marks)

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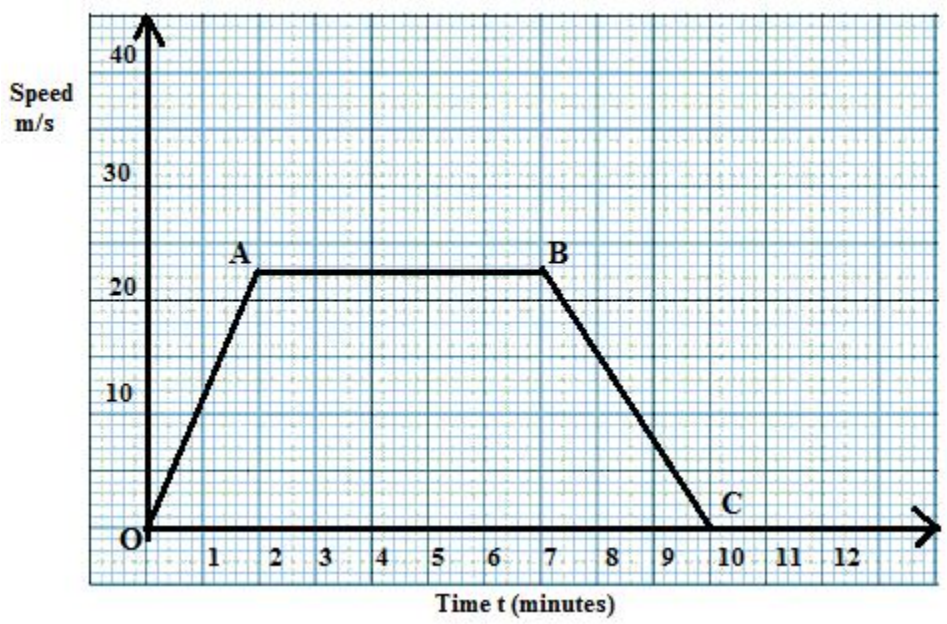
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18. The speed of a train, hauled by a locomotive varies as shown below as it travels between two stations along a straight horizontal track.



Use the graph to determine

(i) The maximum speed of the train. (1 mark)

(ii) The acceleration of the train during the first 2 minutes of the journey. (2 marks)

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(iii) The time during which the train is slowing down. (2 marks)

(iv) The total distance in metres between the two stations. (4 marks)

(v) The average speed in m/s of the train. (3 marks)

19. a) Explain how a person is able to draw milk from a glass using a straw.(2mks)

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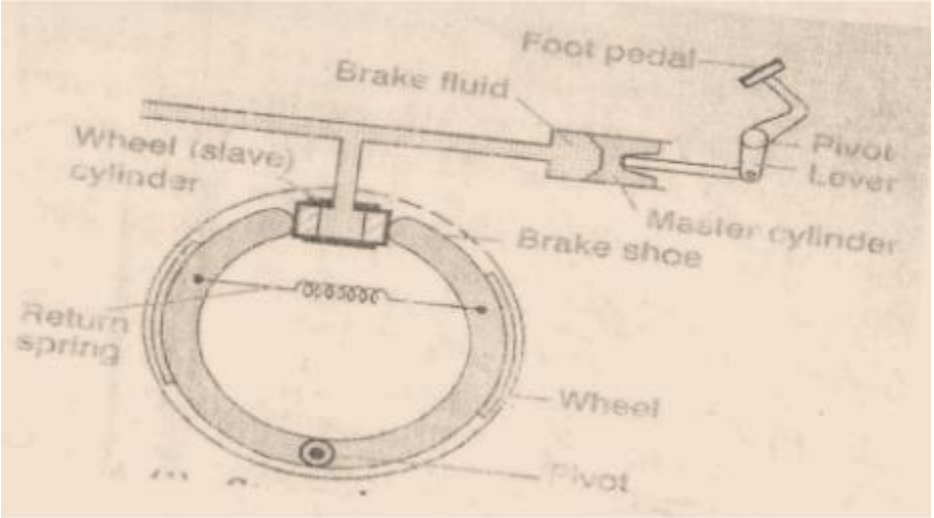
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b) The following diagram shows a simplified hydraulic breaking system of a car.

i) State the property of the liquid (oil) that makes it more suitable for use as a brake fluid than a gas. (1mk)

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ii) Explain how the system works, starting from when the driver presses the foot pedal. (4mks)

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iii) Why would the system not function properly if air leaked into the cylinder? (1mk)

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(c) A hydraulic jack has a piston (large piston) diameter of 0.32m while its plunger (small piston) has a diameter of 0.052m. A force of 500N is exerted on the plunger. Determine the upward force in the large piston. (3mks0

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MID-TERM 1 SERIES 2 EXAMS

PHYSICS Paper 2 (THEORY)

Time: 2 Hours

FORM 4 TERM 1 EXAMS

INSTRUCTIONS TO CANDIDATES:-

- *Write your name, Admission number and class in the spaces provided above.*
- *This paper consists of two sections; A and B*
- *Answer all the questions in section A and B in the spaces provided*
- *All working must be clearly shown.*
- *Mathematical tables and electronic calculators may be used*
- *This paper consists of 10 printed pages. Candidates should check to ascertain that all pages areprinted as indicated and that no questions are missing.*
- *Candidates should answer the questions in English.*
- *Take g=10N/kg*

For Examiner's Use Only:

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Section	Question	Maximum Score	Candidate's Score
A	1 – 12	25	
B	13	10	
	14	12	
	15	12	
	16	8	
	17	4	
	18	9	
Total Score		80	

SECTION A (25MARKS)*Answer all the questions*

1. Figure1 below shows two mirrors M1 and M2 are inclined at right angles to each other.

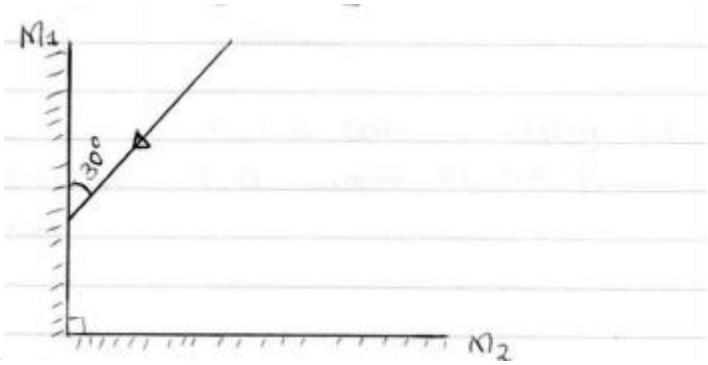


Fig 1

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Trace the reflection of the ray through the two mirrors and find the angle between the incident ray and reflected ray of mirror M_2. (2mks)

2. State the reasons why a convex mirror is preferred over a plane mirror for use as a driving mirror. (1mk)

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3. A current of 0.5A flows in a circuit. Determine the quantity of charge that crosses a point in 4 minutes through the circuit. (2mks)

4. A radio station broadcasts on a wavelength of 150m at a frequency of 200 kHz. Calculate the velocity of the radio waves. (2mks)

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5. The internal resistance of the cell in the figure below is 0.5 Ω.

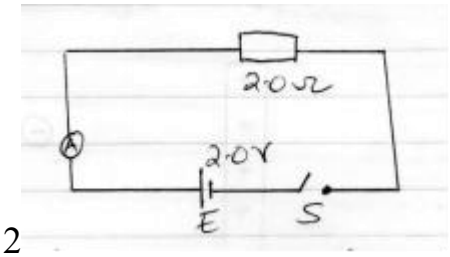


Fig 2

Determine the ammeter reading when the switch S is closed. (2mks)

6. A man standing 400 away from a wall bangs two pieces of wood together and hears an echo 2.5 seconds later. Determine the speed of sound in air at that place. (2mks)

7. State the property of light associated with formation of shadows.(1 mark)

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8. In the circuit diagram shown in figure 3 the lamps are identical and cells are also identical.

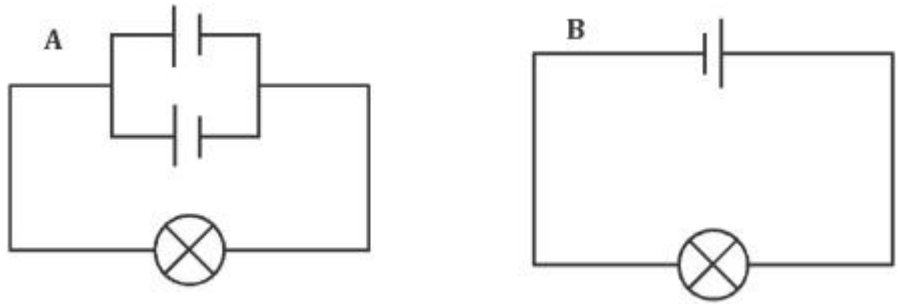


Fig 3

State with a reason, in which circuit the lamp will be lit for a longer period.(2 marks)

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9. Explain in terms of domain theory, what happens when a bar magnet is placed in a solenoid in which an alternating current flows. (2 marks)

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10. Use appropriate rays to complete the ray diagram in figure 4 and state the position of the object formed. (3 marks)

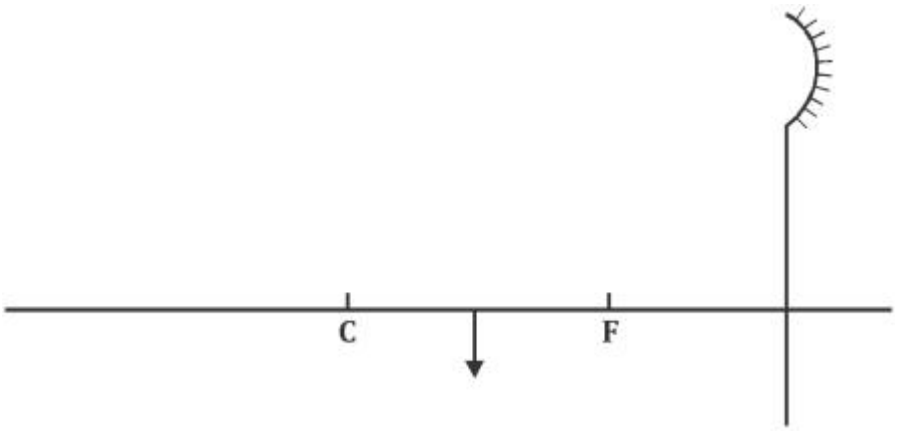
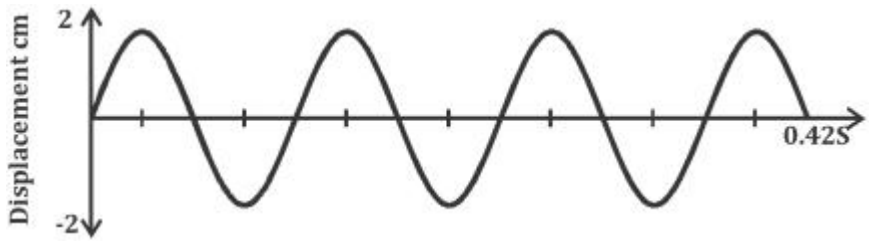


Fig 4

11. Figure 5.0 shows a transverse wave.

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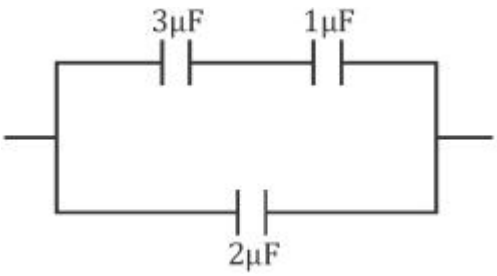


a) Calculate the frequency of the wave. (2 marks)

b) Sketch another wave on the same diagram that has double the frequency and half the amplitude and label it as M. (1 mark)

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12. The figure 6.0 below shows a network of capacitors.



Determine the combined capacitance of the network. (2 marks)

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SECTION B(55MARKS)

13. The figure below shows a ray of green light through a prism. The speed of green light in the prism is 2.0 x 10^8m/s

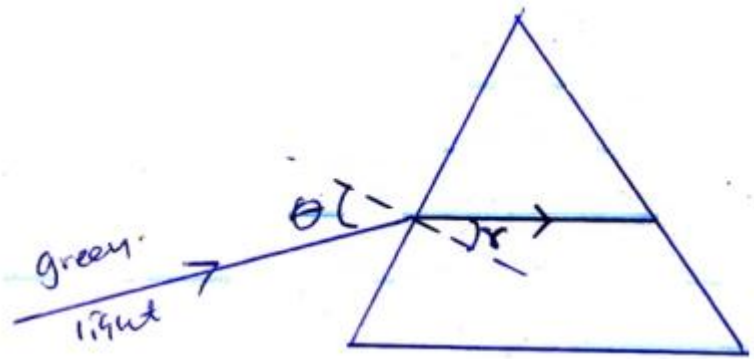


Fig 7

i. Determine the refractive index of the prism material(speed of light in air = 3.0 x 10^8m/s (3mks)

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ii. Given the r ==23.2^0, determine the angle Θ (3mks)

b) i) The diagram below show two prisms

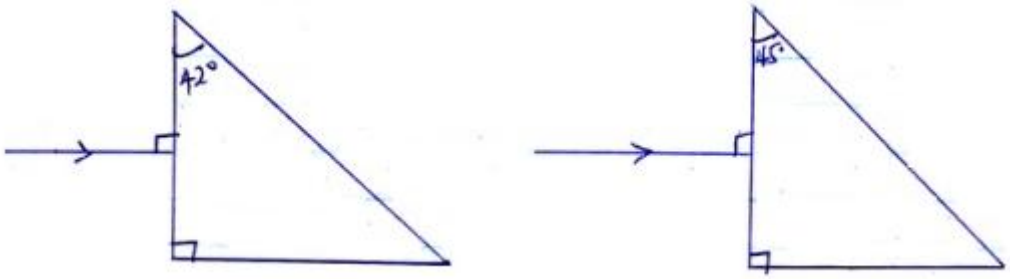


Fig 8

Given that the critical angle of the glass in both prisms is 42^0 sketch the paths of the two rays in each prism indicating all the angles. (2mks)

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ii) Give two application of total internal reflection (2mks)

14.a) What is meant by the term capacitance? (1mk)

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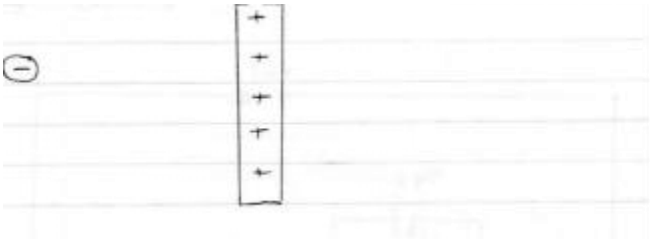
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b) The figure below shows a point placed near a positively charged rod.

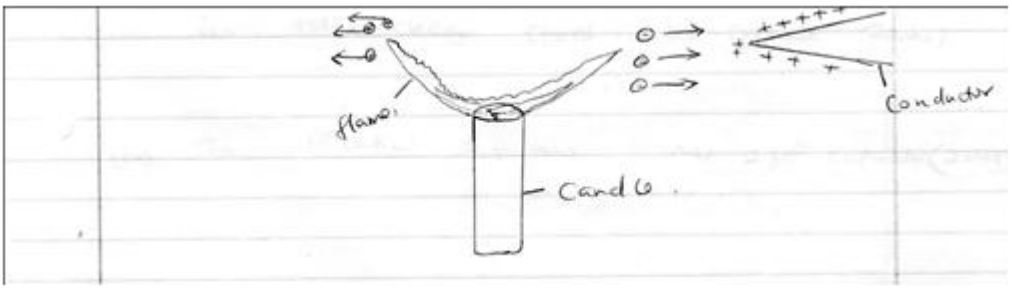
Draw on the diagram the resulting electric field patterns. (1mk)

Fig 9



c) When a positively charged conductor is brought close to a candle, the flame is diverted as shown in the figure below. Explain this observation. (2mks)

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d) The figure below shows three capacitors of capacitance 3μF, 2μF, and 6μF. Connected to a 12v supply circuit.

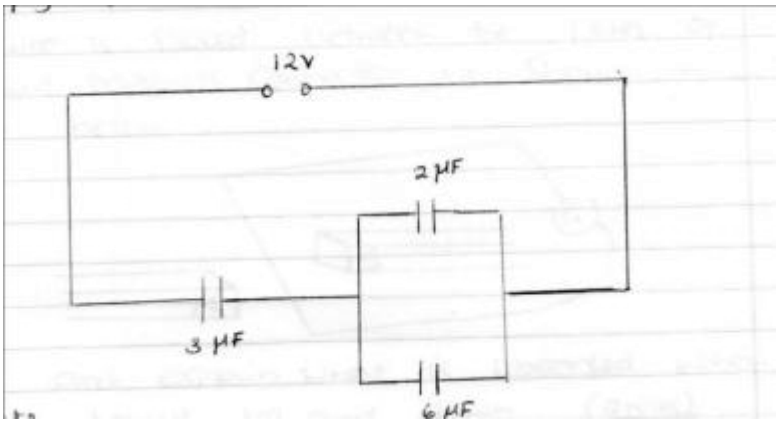


Fig 11

Calculate:

i) The total capacitance of the circuit. (3mks)

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ii) The total charge stored in the circuit. (3mks)

iii) The potential differences across 2μF capacitor. (2mks)

15. **(a)** Explain how sound reaches our ears. (2 marks)

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(b) State two characteristics of sound waves. (2 marks)

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(c) Wambua strikes a steel super bridge with a hammer. If the speed of sound in steel is 5,200 m/s, determine the time taken for the sound to reach another Samuel 2.6 km far off the bridge with his ear on the rail. (2 marks)

(d) A boy whistles once at a distance 250 m from a vertical cliff. If the temperature in the surrounding is 5^0C .If the speed of sound = (331.5m/s at 0^0c) the speed in air increases at about 0.6 m/s per ^{0}C,

(i) Determine the distance travelled by sound. (2 marks)

(ii) Determine the speed travelled at 5^0C. (2 marks)

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(iii) Calculate the time taken for the boy to hear the echo. (2 marks)

16. a) Define electric current (1mks)

b. The figure below shows an electric circuit with two bulbs B_1 and B_2 which are identical.

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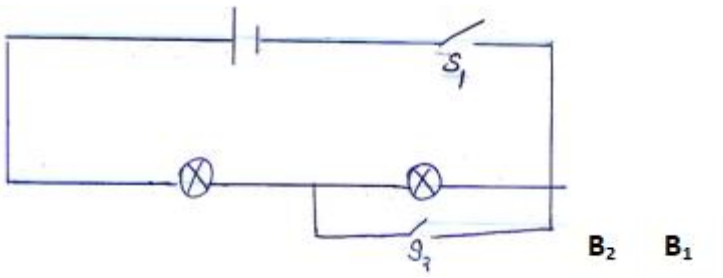


Fig 12

Explain what happens to the bulbs when

i. S_1 only is closed (2mks)

ii. S_1 and S_2 are closed (2mks)

b. The figure below shows an electric circuit. Use the circuit to determine the current supplied by the battery (3mks)

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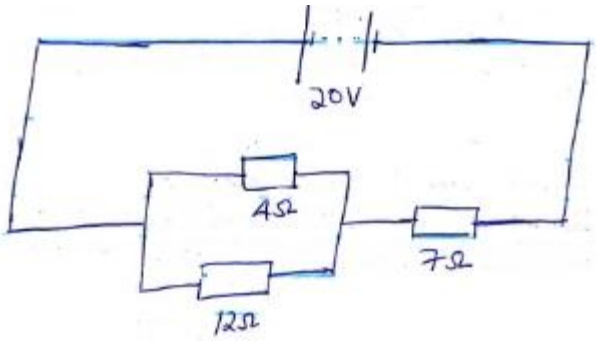


Fig 13

17.a) Figure 14 below shows a series of wave fronts one wavelength apart approaching a gap between barriers in ripple tank.

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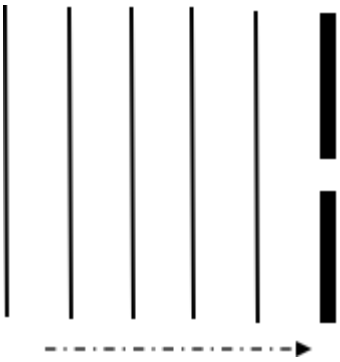


Figure 14

On the same diagram, show what happens when the waves pass through the gap.

(1 mark)

b) Some plane water waves were produced in a ripple tank. They pass from a region of deep water into a region of shallow water. Figure 15.0 shows what the waves look like from above.

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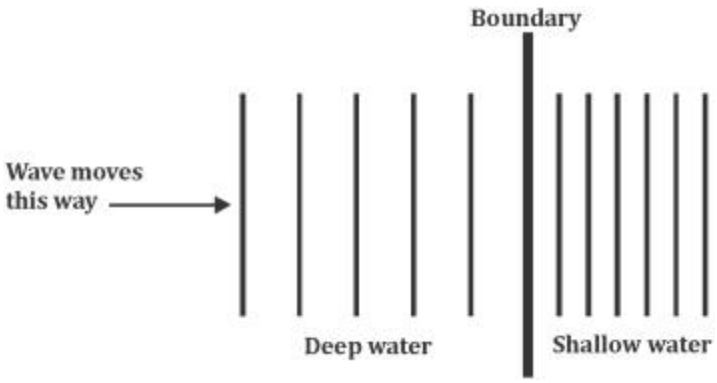


Fig 15

State what happens at the boundary to

i) the frequency of the waves (1 mark)

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ii) the speed of the waves (1 mark)

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iii) the wavelength of the waves (1 mark)

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18.(a)State **three** factors that affect the strength of an electromagnet. (3marks)

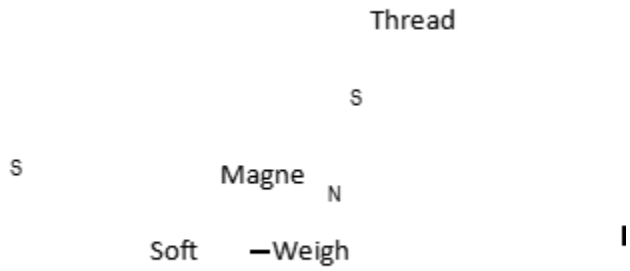
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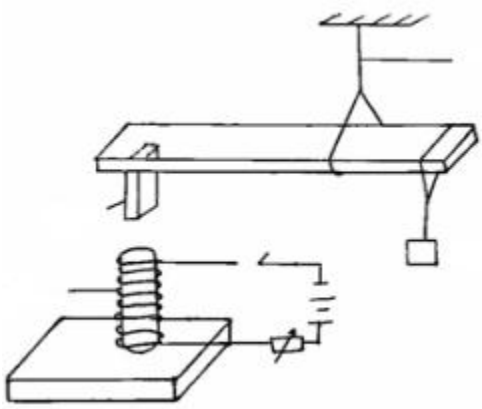
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(b) In the set up **below**, the suspended metre rule is in equilibrium balanced by the magnet and the weight shown. The iron core is fixed to the bench:



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Fig 16

(i) State and explain the effect on the metre rule when the switch S, is closed.(2marks)

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(ii) What would be the effect of reversing the battery terminals? (1mark)

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(c) The figure **below** shows two parallel current carrying conductors **A** and **B** placed close to each other. The direction of the current is into the plane of the paper.



On the same figure;

(i) Sketch the magnetic field pattern. (1mark)

(ii) Indicate the force F due to the current on each conductor. (1mark)

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FORM 4 PHYSICS PP.3 (PRACTICAL)

TIME: 2 ½ HOURS

MID-TERM 1 SERIES 2 EXAMS

INSTRUCTIONS TO CANDIDATES;

1. ***Write your name and admission number in the spaces provided.***
2. ***Answer all questions in the questions in the spaces provided.***
3. ***All working must be clearly shown where necessary.***
4. ***Non- programmable silent electronic calculator may be used***
5. ***Candidates should check the question paper to ascertain that all pages are printed as indicated and that no question is missing.***

Question	Maximum score	Candidate's score
1	20	

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2	**20**	
Total	**40**	

Question 1

You are provided with the following apparatus

- A rectangular glass block
- Four optical pins
- Four office pins
- A plain white sheet of paper
- A soft board

Proceed as follows

a) Fix the plain sheet of paper on the soft board using the four office pins

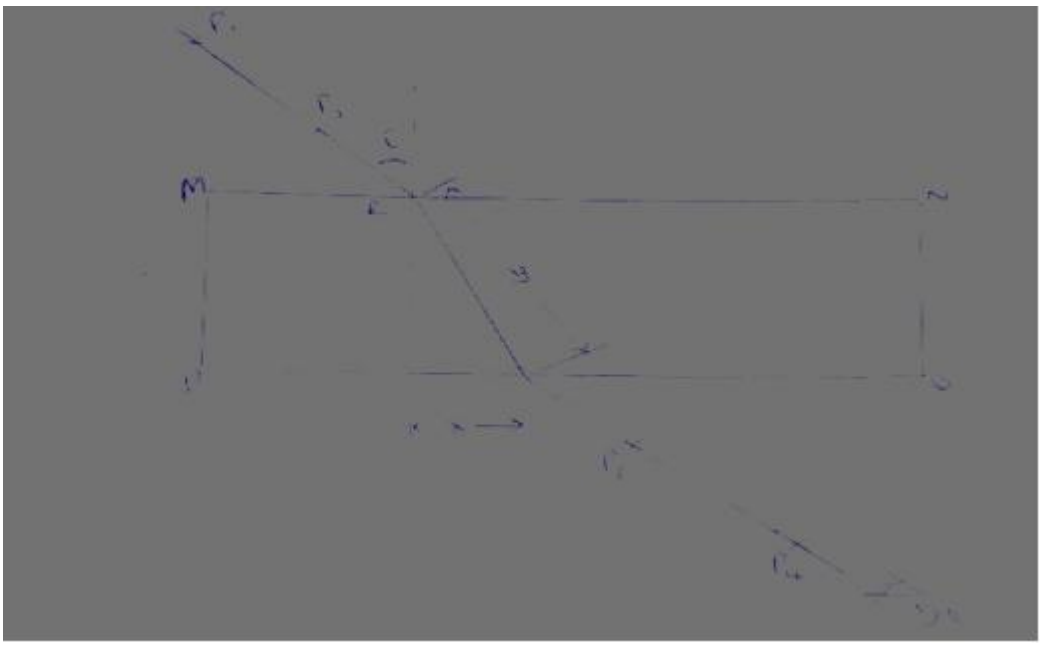
b) Place the glass block on the plain sheet of paper and trace its outline. Remove the glass block and mark the outline MNOP.

c) Mark a point R on MN such that MR is a quarter of MN. Construct a perpendicular through R one edge MN through to edge PO

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d) Draw line AR such that angle i = 10^o and replace the glass block.

e) Fix pins P1 and P2 along AR and while viewing through the glass block from the opposite facing PO stick two other pins P3 and P4 in line with the image of P1 and P2. Remove the glass block and draw-line through P3 and P4 to meet PO at S. Join S to R (see figure below)



f) Measure and record distance x and y on the table below

g) Repeat procedure (a) to (f) for values. Values of angle i = 20^o, 30^o, 40^o, 50^o, 60^o and 70^o and complete the table (8mks)

Angle i	X (cm)	Y (cm)	x/y	Sin i
10^o				

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20^o				
30^o				
40^o				
50^o				
60^o				
70^o				

a) On the grid provided plot a graph of sin i against x/y (5mks)

PROVIDE A GRAPH PAPER

ii) Determine the slope, n, of the graph (2mks)

Part B

You are provided with

- A cell and cell holder

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- Switch

- A 10Ω carbon resistor labeled R

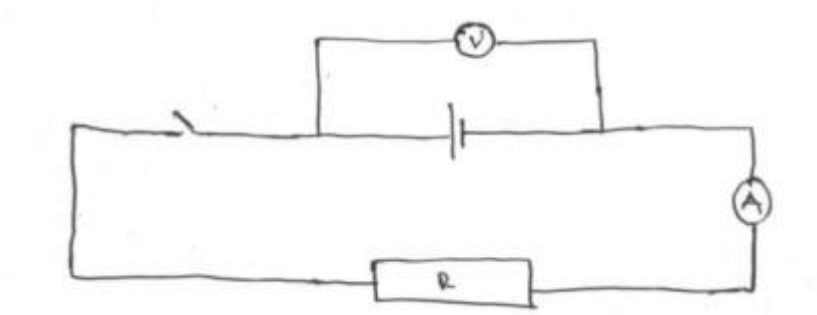
- Six connecting wires, two with a crocodile clip on one end

- An ammeter 0-1 A

- A voltmeter (0-5V) or (0-3V)

Procedure

a) Set up the apparatus as shown below



Record the reading E of the voltmeter

E = …….volts (1mk)

b) Close the switch and record the reading V of the voltmeter and I the reading of the ammeter

V…….. volts (1mk)

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I……..Amperes (1mk)

c) Given that E=V+Ir, determine the value of r (2mks)

Question 2

You are provided with the following

- Water in a beaker

- Complete retort stand

- Two clamps

- 100ml measuring cylinder

- Boiling tube

- Cotton thread

- Meter rule

- Beam balance (can be shared)

- Vernier calipers (can be shared

Proceed as follows

i) a) Using the Vernier calipers, measure the internal diameter of the boiling tube
D=……. (1mk)

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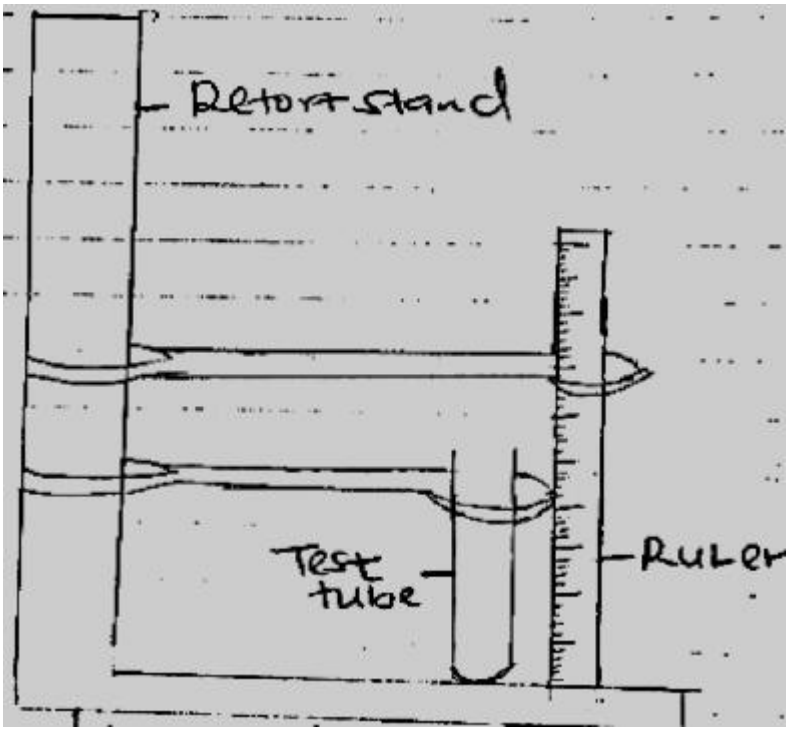
b) Measure the length H, of the boiling tube

H=…….cm (1mk)

ii) Measure the mass of the boiling tube using the beam balance

M=…….g (1mk)

iii) Clamp the boiling tube vertically with its base resting on a flat surface as shown, Use the second clamp to clamp the meter rule beside the boiling tube.



iv) Measure 10ml of water and pour into the boiling tube. Measure the height h, of the water. Keep adding water in small amounts in the boiling tube and complete the table below

VOLUME IN CM^3/ML	**HEIGHT H(CM)**
10	

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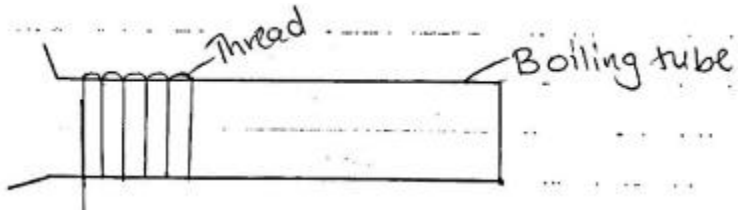
20	
35	
45	
50	
65	

(3mks)

v) On the grid provided, plot a graph of volume V(cm^3) of water (y-axis) against height h (cm) (5mks)

vi) From the graph determine the slope, (3mks)

vii) Wind the cotton thread ten times round the boiling tube, pushing the windings very close together, the turns should not overlap on each other.



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Unwind the thread and measure the length L of the thread.

L…… (cm) (1mk)

viii) Calculate the volume V of the glass material which the boiling tube is made of, given that

$V=h\ [2\pi r^2/2500-5]$

V= ……. (2mks)

ix) Calculate the density d in kg/m^3, of the glass material of the boiling tube.



b

i) State the property of the liquid (oil) that makes it more suitable for use as a brake fluid than a gas. (1mk)

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……
……

ii) Explain how the system works, starting from when the driver presses the foot pedal. (4mks)

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iii) Why would the system not function properly if air leaked into the cylinder? (1mk)

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(c) A hydraulic jack has a piston (large piston) diameter of 0.32m while its plunger (small piston) has a diameter of 0.052m. A force of 500N is exerted on the plunger. Determine the upward force in the large piston. (3mks0

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MID-TERM 1 SERIES 2 EXAMS

PHYSICS Paper 2 (THEORY)

Time: 2 Hours

FORM 4 TERM 1 EXAMS

INSTRUCTIONS TO CANDIDATES:-

- *Write your name, Admission number and class in the spaces provided above.*
- *This paper consists of two sections; A and B*
- *Answer all the questions in section A and B in the spaces provided*
- *All working must be clearly shown.*
- *Mathematical tables and electronic calculators may be used*
- *This paper consists of 10 printed pages. Candidates should check to ascertain that all pages areprinted as indicated and that no questions are missing.*
- *Candidates should answer the questions in English.*
- *Take g=10N/kg*

For Examiner's Use Only:

Section	Question	Maximum Score	Candidate's Score
A	1 – 12	25	
B	13	10	
	14	12	
	15	12	
	16	8	
	17	4	
	18	9	
Total Score		80	

SECTION A (25MARKS)*Answer all the questions*

1. Figure1 below shows two mirrors M1 and M2 are inclined at right angles to each other.

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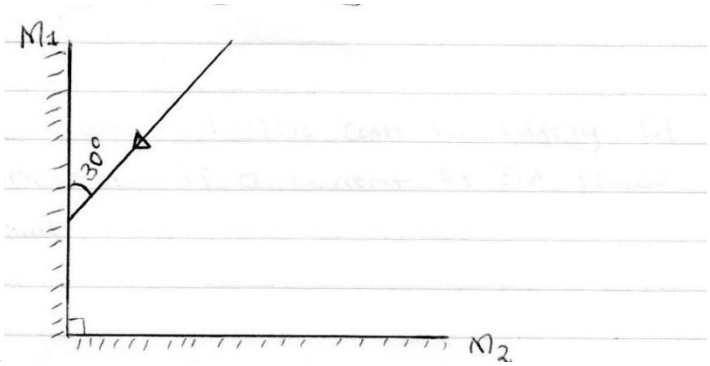


Fig 1

Trace the reflection of the ray through the two mirrors and find the angle between the incident ray and reflected ray of mirror M_2. (2mks)

2. State the reasons why a convex mirror is preferred over a plane mirror for use as a driving mirror. (1mk)

……

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3. A current of 0.5A flows in a circuit. Determine the quantity of charge that crosses a point in 4 minutes through the circuit. (2mks)

4. A radio station broadcasts on a wavelength of 150m at a frequency of 200 kHz. Calculate the velocity of the radio waves. (2mks)

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5. The internal resistance of the cell in the figure below is 0.5 Ω.

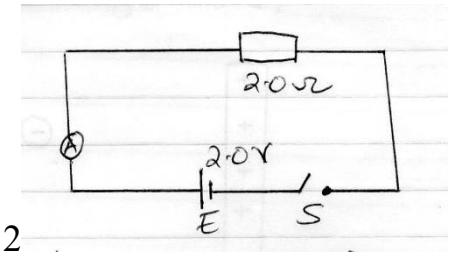


Fig 2

Determine the ammeter reading when the switch S is closed. (2mks)

6. A man standing 400 away from a wall bangs two pieces of wood together and hears an echo 2.5 seconds later. Determine the speed of sound in air at that place. (2mks)

7. State the property of light associated with formation of shadows. (1 mark)

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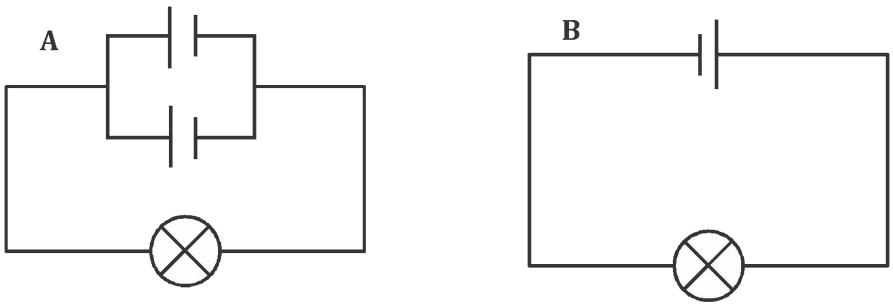
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8. In the circuit diagram shown in figure 3 the lamps are identical and cells are also identical.

Fig 3



State with a reason, in which circuit the lamp will be lit for a longer period.(2 marks)

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9. Explain in terms of domain theory, what happens when a bar magnet is placed in a solenoid in which an alternating current flows. (2 marks)

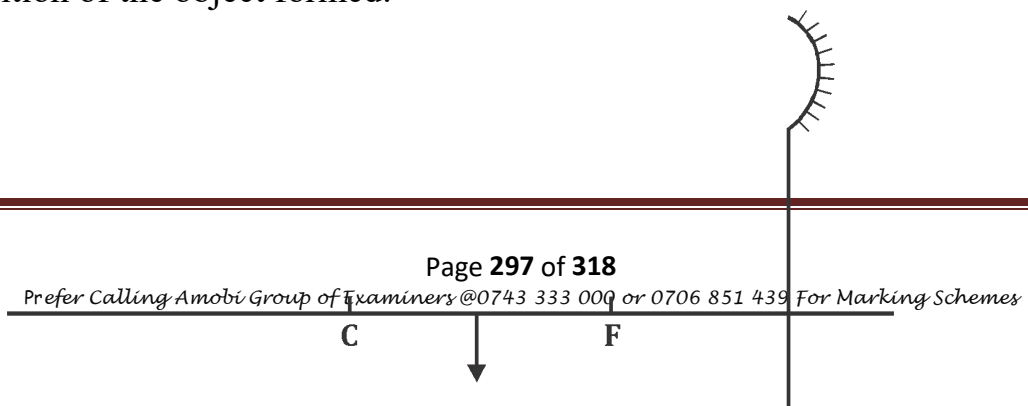
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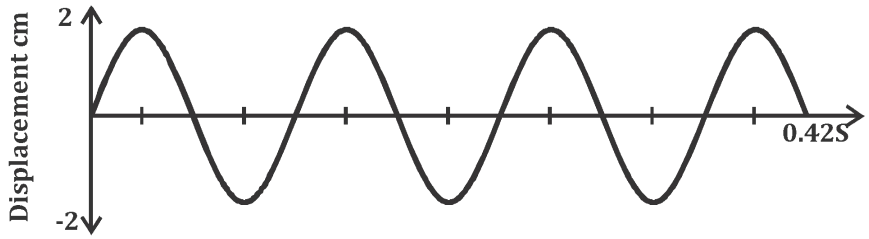
10. Use appropriate rays to complete the ray diagram in figure 4 and state the position of the object formed. (3 marks)



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Fig 4

11. Figure 5.0 shows a transverse wave.

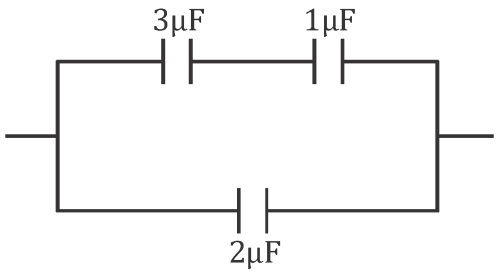


a) Calculate the frequency of the wave. (2 marks)

b) Sketch another wave on the same diagram that has double the frequency and half the amplitude and label it as M. (1 mark)

12. The figure 6.0 below shows a network of capacitors.

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Determine the combined capacitance of the network. (2 marks)

SECTION B(55MARKS)

13. The figure below shows a ray of green light through a prism. The speed of green light in the prism is 2.0 x 10^8m/s

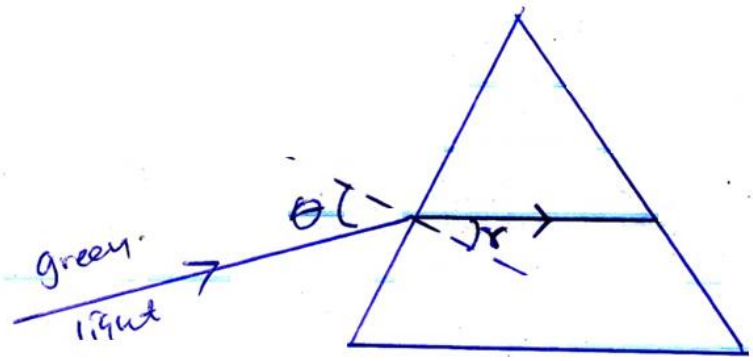


Fig 7

i. Determine the refractive index of the prism material(speed of light in air = 3.0 x 10^8m/s (3mks)

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ii. Given the r ==23.2^0, determine the angle Θ (3mks)

b) i) The diagram below show two prisms

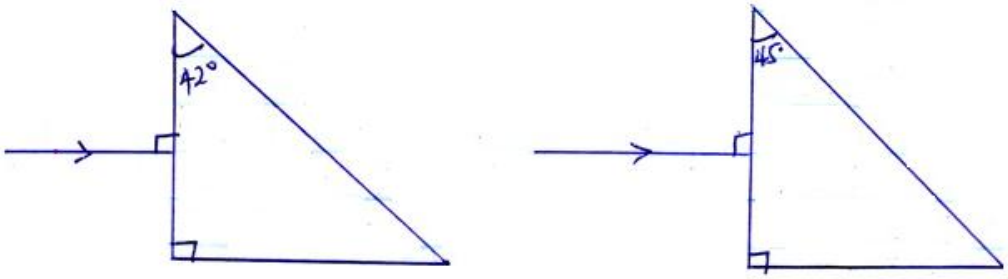


Fig 8

Given that the critical angle of the glass in both prisms is 42^0 sketch the paths of the two rays in each prism indicating all the angles. (2mks)

ii) Give two application of total internal reflection (2mks)

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14.a) What is meant by the term capacitance? (1mk)

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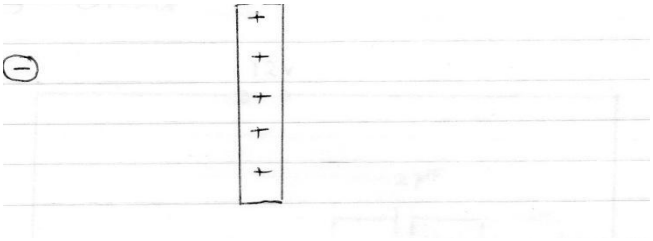
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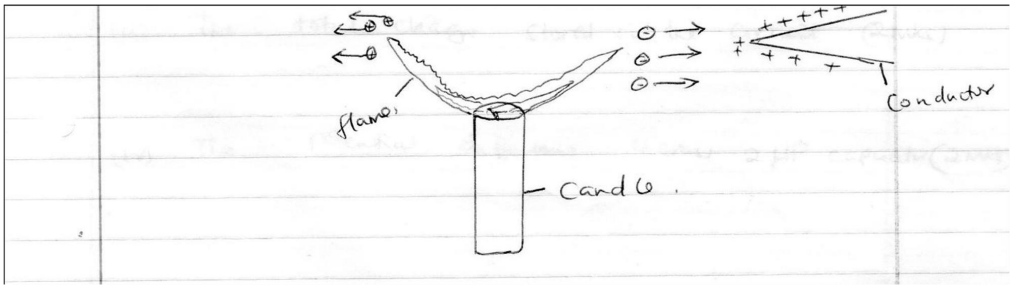
b) The figure below shows a point placed near a positively charged rod.

Draw on the diagram the resulting electric field patterns. (1mk)

Fig 9



c) When a positively charged conductor is brought close to a candle, the flame is diverted as shown in the figure below. Explain this observation. (2mks)



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d) The figure below shows three capacitors of capacitance 3μF, 2μF, and 6μF. Connected to a 12v supply circuit.

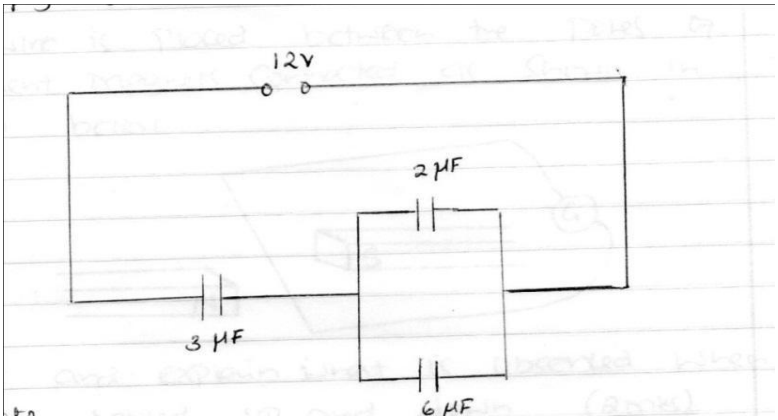


Fig 11

Calculate:

i) The total capacitance of the circuit. (3mks)

ii) The total charge stored in the circuit. (3mks)

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iii) The potential differences across 2μF capacitor. (2mks)

15. **(a)** Explain how sound reaches our ears. (2 marks)

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(b) State two characteristics of sound waves. (2 marks)

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(c) Wambua strikes a steel super bridge with a hammer. If the speed of sound in steel is 5,200 m/s, determine the time taken for the sound to reach another Samuel 2.6 km far off the bridge with his ear on the rail. (2 marks)

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(d) A boy whistles once at a distance 250 m from a vertical cliff. If the temperature in the surrounding is 5^0C .If the speed of sound = (331.5m/s at 0^0c) the speed in air increases at about 0.6 m/s per ^{0}C,

(i) Determine the distance travelled by sound. (2 marks)

(ii) Determine the speed travelled at 5^0C. (2 marks)

(iii) Calculate the time taken for the boy to hear the echo. (2 marks)

16. a) Define electric current (1mks)

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b. The figure below shows an electric circuit with two bulbs B_1 and B_2 which are identical.

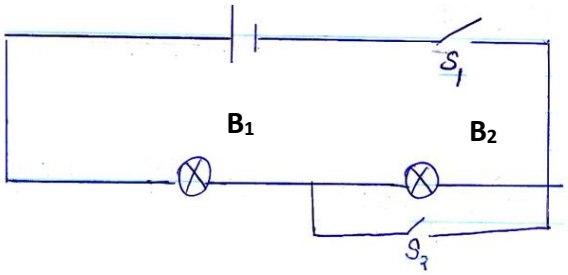


Fig 12

Explain what happens to the bulbs when

i. S_1 only is closed (2mks)

ii. S_1 and S_2 are closed (2mks)

b. The figure below shows an electric circuit. Use the circuit to determine the current supplied by the battery (3mks)

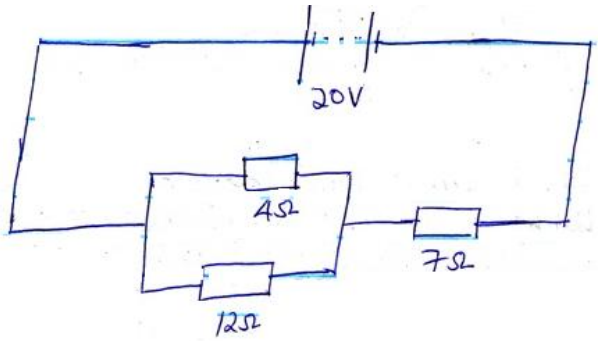


Fig 13

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17.a) Figure 14 below shows a series of wave fronts one wavelength apart approaching a gap between barriers in ripple tank.

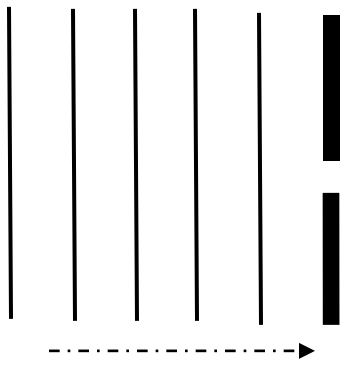


Figure 14

On the same diagram, show what happens when the waves pass through the gap. (1 mark)

b) Some plane water waves were produced in a ripple tank. They pass from a region of deep water into a region of shallow water. Figure 15.0 shows what the waves look like from above.

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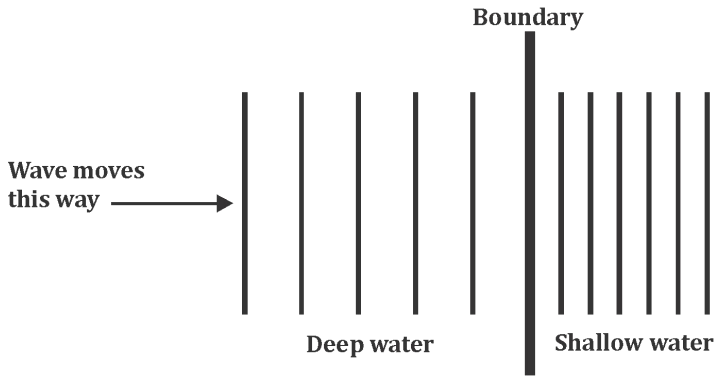


Fig 15

State what happens at the boundary to

i) the frequency of the waves (1 mark)

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ii) the speed of the waves (1 mark)

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iii) the wavelength of the waves (1 mark)

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18.(a)State **three** factors that affect the strength of an electromagnet. (3marks)

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(b) In the set up **below**, the suspended metre rule is in equilibrium balanced by the magnet and the weight shown. The iron core is fixed to the bench:

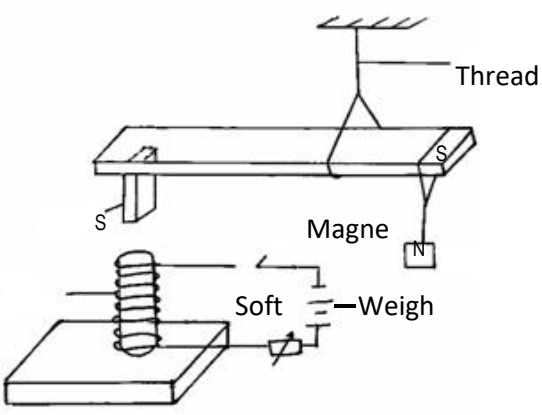


Fig 16

(i) State and explain the effect on the metre rule when the switch S, is closed.(2marks)

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(ii) What would be the effect of reversing the battery terminals? (1mark)

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(c) The figure **below** shows two parallel current carrying conductors **A** and **B** placed close to each other. The direction of the current is into the plane of the paper.



On the same figure;

(i) Sketch the magnetic field pattern. (1mark)

(ii) Indicate the force F due to the current on each conductor. (1mark)

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FORM 4 PHYSICS PP.3 (PRACTICAL)

TIME: 2 ½ HOURS

MID-TERM 1 SERIES 2 EXAMS

INSTRUCTIONS TO CANDIDATES;

1. ***Write your name and admission number in the spaces provided.***
2. ***Answer all questions in the questions in the spaces provided.***
3. ***All working must be clearly shown where necessary.***
4. ***Non- programmable silent electronic calculator may be used***
5. ***Candidates should check the question paper to ascertain that all pages are printed as indicated and that no question is missing.***

Question	Maximum score	Candidate's score
1	20	
2	20	
Total	40	

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Question 1

You are provided with the following apparatus

- A rectangular glass block
- Four optical pins
- Four office pins
- A plain white sheet of paper
- A soft board

Proceed as follows

a) Fix the plain sheet of paper on the soft board using the four office pins

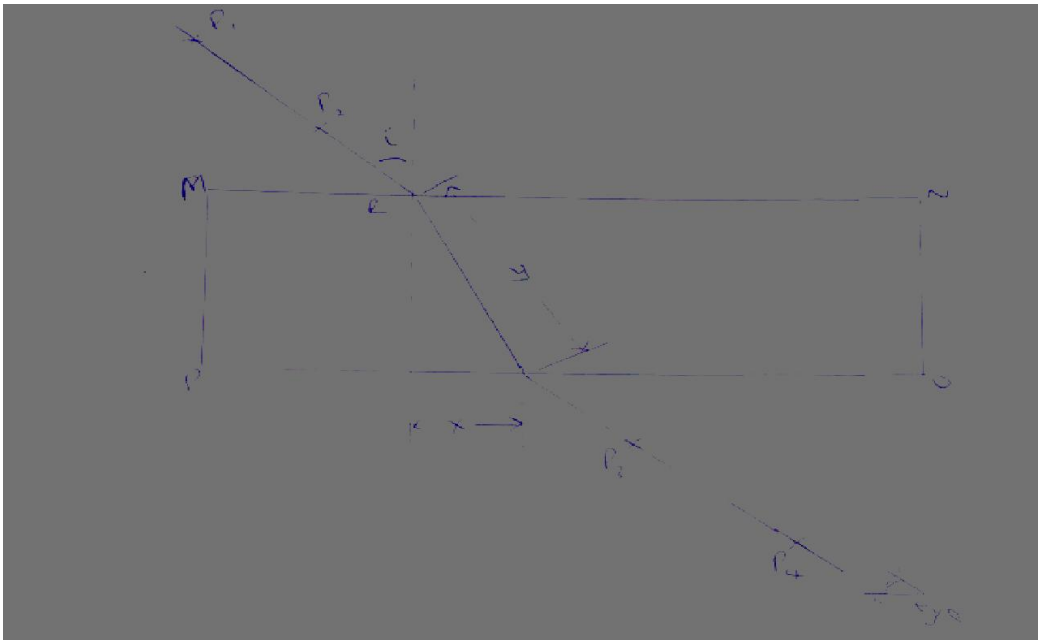
b) Place the glass block on the plain sheet of paper and trace its outline. Remove the glass block and mark the outline MNOP.

c) Mark a point R on MN such that MR is a quarter of MN. Construct a perpendicular through R one edge MN through to edge PO

d) Draw line AR such that angle i = 10^{o} and replace the glass block.

e) Fix pins P1 and P2 along AR and while viewing through the glass block from the opposite facing PO stick two other pins P3 and P4 in line with the image of P1 and P2. Remove the glass block and draw-line through P3 and P4 to meet PO at S. Join S to R (see figure below)

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f) Measure and record distance x and y on the table below

g) Repeat procedure (a) to (f) for values. Values of angle i = 20^o, 30^o, 40^o, 50^o, 60^o and 70^o and complete the table (8mks)

Angle i	X (cm)	Y (cm)	x/y	Sin i
10^o				
20^o				
30^o				
40^o				
50^o				
60^o				
70^o				

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i) On the grid provided plot a graph of sin i against x/y (5mks)

PROVIDE A GRAPH PAPER

ii) Determine the slope, n, of the graph (2mks)

Part B

You are provided with

- A cell and cell holder

- Switch

- A 10Ω carbon resistor labeled R

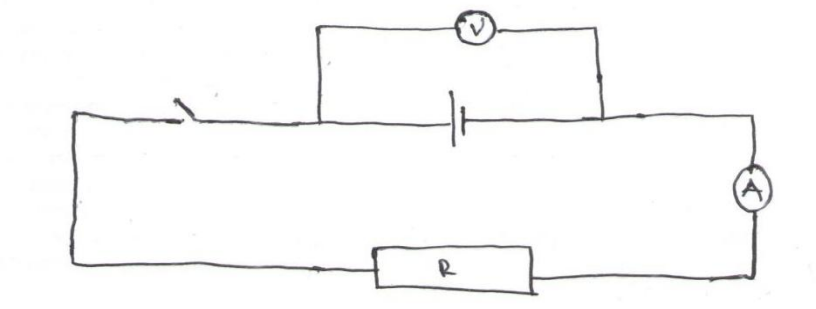
- Six connecting wires, two with a crocodile clip on one end

- An ammeter 0-1 A

- A voltmeter (0-5V) or (0-3V)

Procedure

a) Set up the apparatus as shown below



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Record the reading E of the voltmeter

E = …….volts (1mk)

b) Close the switch and record the reading V of the voltmeter and I the reading of the ammeter

V…….. volts (1mk)

I……..Amperes (1mk)

c) Given that E=V+Ir, determine the value of r (2mks)

Question 2

You are provided with the following

- Water in a beaker
- Complete retort stand
- Two clamps
- 100ml measuring cylinder
- Boiling tube
- Cotton thread
- Meter rule
- Beam balance (can be shared)
- Vernier calipers (can be shared

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Proceed as follows

i) a) Using the Vernier calipers, measure the internal diameter of the boiling tube

D=…… (1mk)

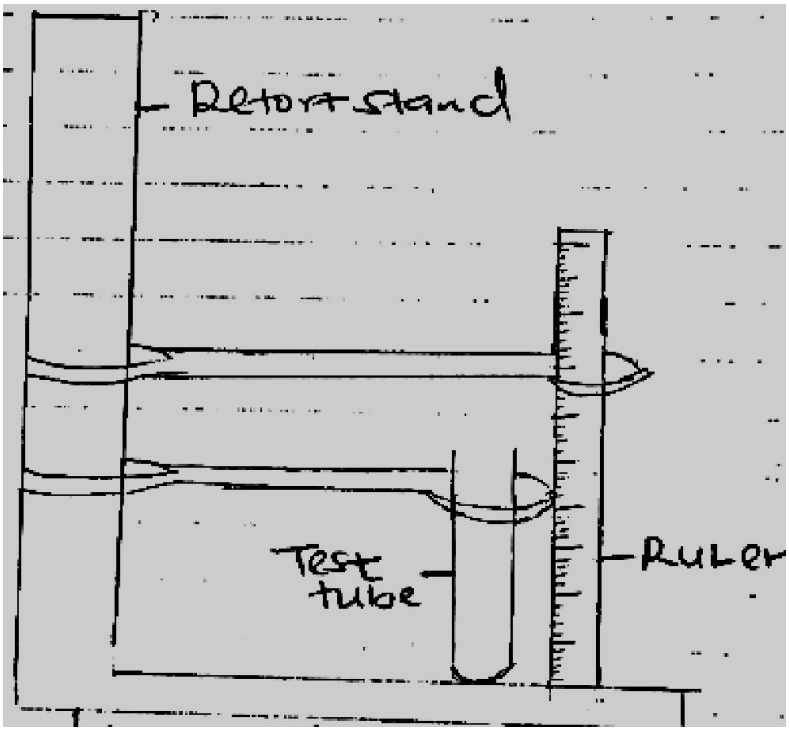
b) Measure the length H, of the boiling tube

H=…….cm (1mk)

ii) Measure the mass of the boiling tube using the beam balance

M=…….g (1mk)

iii) Clamp the boiling tube vertically with its base resting on a flat surface as shown, Use the second clamp to clamp the meter rule beside the boiling tube.



iv) Measure 10ml of water and pour into the boiling tube. Measure the height h, of the water. Keep adding water in small amounts in the boiling tube and complete the table below

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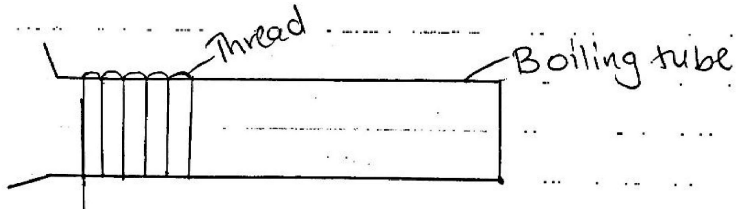
VOLUME IN CM^3/ML	HEIGHT H(CM)
10	
20	
35	
45	
50	
65	

(3mks)

v) On the grid provided, plot a graph of volume V(cm^3) of water (y-axis) against height h (cm) (5mks)

vi) From the graph determine the slope, (3mks)

vii) Wind the cotton thread ten times round the boiling tube, pushing the windings very close together, the turns should not overlap on each other.



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Unwind the thread and measure the length L of the thread.

L…… (cm) (1mk)

viii) Calculate the volume V of the glass material which the boiling tube is made of, given that

$V=h\,[2L^2/2500-5]$

V= ……. (2mks)

ix) Calculate the density d in kg/m^3, of the glass material of the boiling tube.

d=……..... (3mks)

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- 70 Biology Graphical/Essays Qsns
- 70 Biology Pictorial Practical Qsns
- Poetry & Ushairi Qsns.... e.t.c