FORM 4 END TERM 2 SERIES 1 EXAMS



'an investment of knowledge pays'

For marking schemes,prefer calling Mdm Mariam:0746711892

Other available resources are;

- well summarised primary and secondary notes
- F1-F4 termly exams
- primary exams
- KCSE past papers
- KCPE past papers
- Mocks
- lesson plans
- schemes of work

Note:Exam questions are always free of charge

Marking scheme are not free

NAME……..…….. CLASS…….……

ADM NO……SIGNATURE……

DATE……

FORM 4 END TERM 2 SERIES 1 EXAM

AGRICULTURE

PAPER 1

TIME:2 HOURS

INSTRUCTIONS TO CANDIDATES:

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

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

(c) This paper consists of three sections: A, B and C.

(d) Answer ALL the questions in Section A and B in the space provided.

(e) Answer any two questions in section C in the space provided.

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

g) The paper has 11 printed pages

For Examiners Use Only

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 - 19	30	
B	20 - 25	20	
C	26	20	
	27	20	
	28	20	
	29	20	
TOTAL SCORE		90	

SECTION A: (30 MARKS)

Answer all questions in this section in the spaces provided.

1.(a) State **three** factors that determine the method used to harvest a crop.

(1½ marks)

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(b) Give **four** ways in which cereals are stored in Kenya. **(2 marks)**

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2 .Outline **two** disadvantages of tenancy system in farming. **(1 mark)**

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3. Outline **two** control measures of downy mildew in onions. **(1 mark)**

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4. Name **two** pasture legumes grown in medium altitude zones **.(1 mark)**

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5. Give **two** reasons why root pruning is done in the nursery management in agroforestry.

(1 mark)

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6. (a) Define the term joint products. **(1 mark)**

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(b) Outline **two** examples of joint products in crop production. **(1 mark)**

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7. State two benefits of optimum soil temperature in crop production. **(1mk)**

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8. State four factors which determine the depth of ploughing. **(2mks)**

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9 .Give **two** sub-branches of arable farming. **(1mk)**

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10. Give **two** effects of scarcity in agricultural production. **(1mk)**

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11. State **two** conditions that must exist for a market to be purely competitive**.**

(2mks)

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12. Name **two** types of pests with piercing and sucking mouth parts. **(1mk)**

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13. Give **four** ways in which land reform can be implemented in Kenya. **(2 marks)**

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14. Give four reasons why most farmers don't use green manure in crop production.**(2 marks)**

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15. Name **two** crop production practices carried out after planting to achieve optimum plant population.

(1 mark)

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16. Name ***FOUR*** practices that increase light reaching a crop. **[2marks]**

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17. State **three** functions of the coffee Board of Kenya **(1 ½ mks)**

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18 . Give **four** reasons why it is difficult to control Sodom apple (Solanum incanum**)** in pasture

(2mks)

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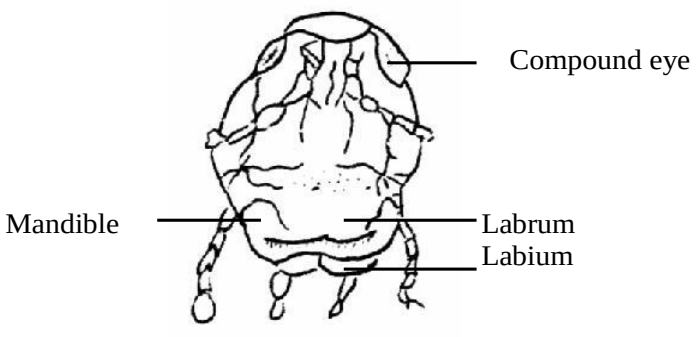
19. State **four** reasons for liming soils **(2 marks)**

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Section b (20marks).

Answer all questions in the spaces provided.

20. Observe the diagram below and answer the questions that follow.



a) Identify the mode of feeding exhibited by a pest having such features**.** **(1 mark)**

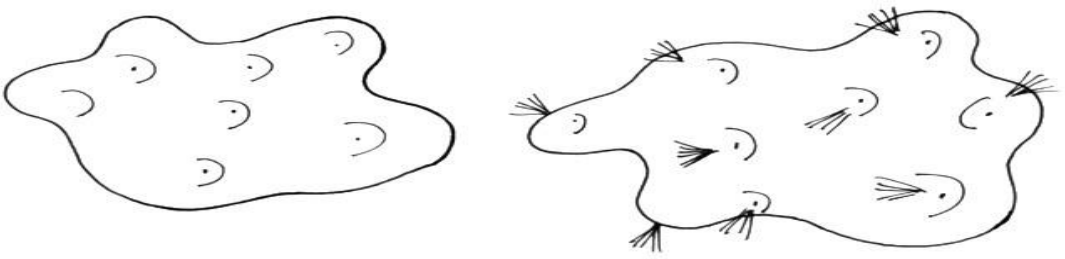
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b) Name any **FOUR** pests with the above feeding habits. **(2 marks)**

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21. Below are two diagrams of Irish potato tubers after being subjected to some conditions before planting.

D1 D2



Before subjecting to the conditions After subjecting the conditions

i) Which process of potato treatment is illustrated above? **(1mk)**

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……

ii) State **two** conditions necessary for the above process **(2mks).**

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iii) Give **two** reasons for carrying out the above practice. **(2mks)**

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22. a) Using the information on the table below answer the questions that follow.

Fertilizer input (units	Maize yield (bags)	Marginal products (bags)
0	50	-
1	62	12
2	66	4

a) The cost of fertilizer is sh.1500 per unit and the price of maize is sh.1200 per bag.

i) At what unit of fertilizer input should the farmer be advised to stop applying any more fertilizer to the maize **?** **(1 mark)**

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

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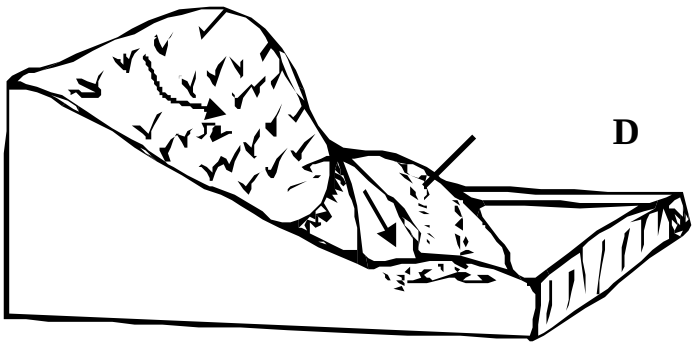
iv) Calculate the marginal return at the point of optimum production. **(1 mark)**

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b) State the law of diminishing return in a production function**.** **(1 mark)**

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23. The diagram below illustrates a physical method that is used to control soil erosion. Study it carefully and answer the questions that follow



a) Name the physical soil erosion control method illustrated by the diagram above **(1 mk)**

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b) Name the part labelled **D** on the diagram **(1 mk)**

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c) State **four** places where water from the structure named in (a) above is discharged **(2 mks)**

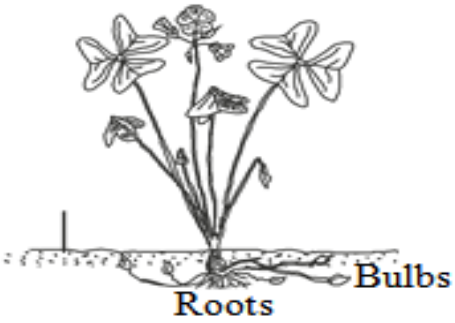
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24. The diagram below illustrate common weeds in arable land. Study them and answer the questions that follow.

C



D



a) Identify the weeds labelled **D** and **C.** **(2 marks)**

C.....

D.....

b) Classify the weed labeled C according to plant morphology. **(1 mark)**

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c) Give one reason why it is difficult to control the weed labeled D. **(1 mark**

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SECTION C (40MARKS)

Answer any two questions.

25 [a] Explain seven ways in which farmers adjust to risks and uncertainties in farming . **[7 marks]**

[b] Explain five qualities of a good farm manager. **[5 marks]**

[c] The following are expenses of Pioneer Farm in the year 2014.

Concentrates shillings 5500

Seeds shillings 4500

Fertilizer shillings 7000

Fuel shillings 2000

Disc harrow shillings 175000

The farmer sold wheat to millers for shillings 120000

Sold cabbages to the market for shillings 40000

Sold milk to school for shillings 30000

Sold poles to a saw mill for shillings 25000

The opening valuation was shillings 150000

The closing valuation was shillings 250000

i) Prepare a profit and loss account for Pioneer farm for the year ending December 2014 **[7 mark)**

ii) Did the farm make a profit or a loss and of how much? **[1 mark]**

27. a) Describe the production of tomatoes under transplanting. **(5mks)**

b) Mention FIVE importance of organic matter in the soil. **(5 marks)**

c) State TEN uses of water in the farm. **(10 marks)**

29 a) Describe five management practices carried out on napier grass to maximize production. **(5mks)**

b) Explain five ways in which draining mashy/land encourage crop growth. **(5mks)**

c) Describe briefly the effects of mass wasting/solifluction. **(5mks)**

d) Explain five ways by which soil looses fertility (5mks)

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NAME……..…….... CLASS……..……

ADM NO……SIGNATURE……

DATE……..

FORM 3 END TERM 2 SERIES 2 EXAMS

FORM 4

AGRICULTURE

PAPEER 2

INSTRUCTIONS TO ALL CANDIDATES

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

1. State **four** signs of good health in a cow. **(2 mks)**

1. ……
2. ……
3. ……
4. ……

a) State **four** dairy cattle breeds reared in Kenya **(2 mks)**

(i) ……
(ii) ……
(iii) ……
(iv) ……

b) State **four** advantages of embryo transplant **(2 mks)**

i) ……

ii) ……

iii) ……

iv) ……

c) List **four** characteristics of a good dairy cow **(2 mks)**

(i) ……

(ii) ……

(iii) ……

(iv) ……

d) Give **two** reasons why honey is harvested in the evening **(1 mk)**

(i) ……

(ii) ……

(iii) ……

(iv) ……..

e) State **two** methods recommended for identifying goats **(1 mk)**

i) ……

ii) ……

f) State **two** advantages of using wood in farm buildings **(1 mk)**

1. ……

2. ……

g) State **four** characteristics of succulent roughage **(2 mks)**

(i) ……

(ii) ……

(iii) ……

(iv) ……..

h) What is the significance of microbial activities in the rumen? **(2 mks)**

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……

i) State **four** factors that affect digestibility in livestock feeds **(2 mks)**

(i) ……

(ii) ……

(iii) ……

(iv) ……

j) Name the tool used for the following functions **(1 mk)**

(a) Holding, tightening and loosening metallic pipes -

(b) Joining two ends of wire by winding it -

k) Name the livestock disease associated with deficiency of the following in the diet **(2 mks)**

(i) Iron -

(ii) Iodine -

(iii) Copper-

(iv) Magnesium -

l) List **two** methods of controlling rinderpest in cattle **(1 mk]**

(i) ……

(ii) ……

m) Name **two** functions of crop in digestive system of chicken**(1 mk)**

(i) ……

(ii) ……

n) State **three** differences between dromedary and bactrian camel**(1 mk)**

(i) ……

(ii) ……

(iii) ……

o) State **two** reasons why maintenance of farm structures is important. **(1 mark)**

i) ……

ii) ……

p) Name **two** kinds of livestock which can be castrated using a rubber ring **(1 mk)**

(i) ……

(ii) ……

q) Name **two** ways of improving milk production in a herd of indigenous dairy goats **(1 mk)**

(i) ……

(ii) ……

r) Outline **four** advantages of Kenya Top Bar Hive over the log hive **(2 mks)**

1. ……

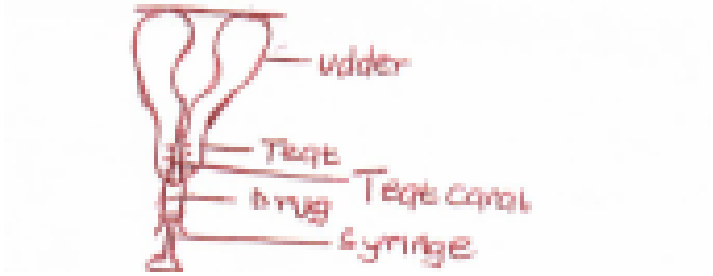
2. ……

3. ……

4. ……

SECTION B – 20 MARKS

s) The diagram below illustrates a routine practice carried out to control a certain livestock disease. Study and answer the questions that follow.



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

……

(b) Name the disease that is controlled by the above practice **(1 mk)**

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(c) State **two** symptoms of the disease controlled by the practice above **(2 mks)**

(i) ……

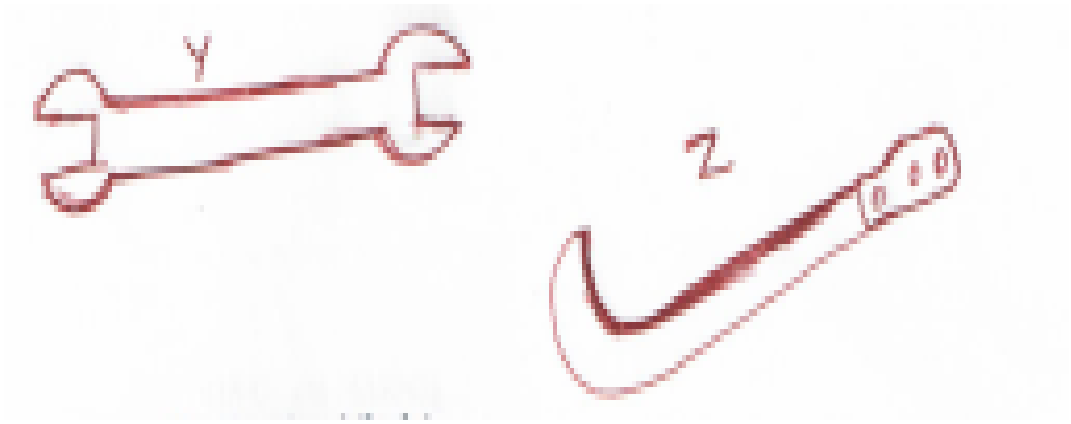
(ii) ……

(d) State **two** predisposing factors of the disease controlled by practice above **(2 mks)**

(i) ……

(ii) ……

t) Study the farm tools below and answer the questions that follow.



(a) Identify each tool **(2 mks)**

……

(b) State the functions of each tool **(2 mks)**

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(c) State **two** maintenances practices carried out on the tool marked **Z.** **(2 mks)**

(i) ……

(ii) ……

u) The diagrams below shows livestock parasites. Examine them and answer the questions that follow. **(2 mks)**



(a) Identify each parasite **(2 mks)**

v) L –

vi) M –

(b) State **two** negative effects on animals caused by each of the parasites **(4 mks)**

L i)……..

ii)……

M

(i) ……

(ii) ……

(c) State **one** method of control for each parasite **(2 mks)**

……..

SECTION C (40 MARKS)

Answer any TWO questions from this section in the answer booklet provided

v) (a) Describe the working principles of a four stroke cycle of a petrol engine **(12 mks)**

(b). State the components of power transmission system and one function of each component **(8 mks)**

w) (a) Discuss Newcastle disease under the following sub headings

(i) Causal organisms **(1 mk)**

(ii) Signs of attack **(7 mks)**

(iii) Control measures **(2 mks)**

(b). Outline the various management practices in a fish pond that ensure maximum yields of fish **(5 mks)**

©State **five** disadvantages of free range system of rearing poultry **(5 mks)**

x) (a) Describe **six** advantages of artificial insemination over natural **(6 mks)**

(b). List **four** types of fences **(4 mks)**

© Describe the advantages of fences **(10 mks)**

NAME……..…….... CLASS……..……

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DATE……

FORM 4 END TERM 2 SERIES 1 EXAMS

231/1
BIOLOGY
PAPER 1
FORM 4
TIME: 2 HOURS

INSTRUCTIONS

ATTEMPT ALL THE QUESTIONS

1. Some form **one** students wanted to collect the following animals for study in the laboratory. State the suitable apparatus they should use.

i) Housefly **(1 mark)**

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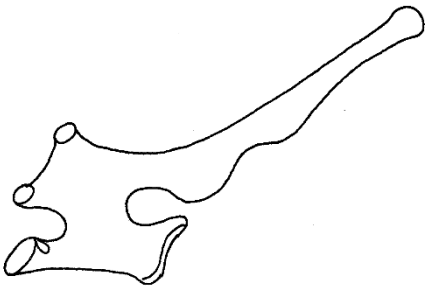
ii) Scorpion **(1 mark)**

……

iii) Ants **(1 mark)**

……

2. The diagram below represents a mammalian vertebra.



(a) Identify the vertebra represented above. **(1mk)**

……

(b) Give a reason for your answer. **(1mk)**

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3. **(a)** Explain the role of oxygen in Active transport **(1mk)**

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(b) Name two processes that depend on Active transport in animals **(2mks)**

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4. Explain how sunken stomata lower the rate of transpiration **(2mks)**

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5. State how xylem vessel is adapted to its function **(3mks)**

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6). a) Define the term immunity. **(1mk)**

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b) Distinguish between natural immunity and acquired immunity. **(1mk)**

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c) Identify one immunizable disease in Kenya. **(1mk)**

……

7. State two adaptations of the alveolus to its functions. **(2mks)**

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……..

8.a)Why may an asthmatic patient produce a wheezing sound during breathing? **(1mk)**

……

(b) What is the significance of the cartilage found in the human trachea being incomplete (c- shaped rings) **(1mk)**

……

9. Define the following terms;

(i) Inter specific competition. **(1mk)**

……

(ii) Carrying capacity **(1mk)**

……

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……....

10. Suggest two methods that can be used to determine the type of food eaten by animals**.(2mks)**

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11. (a) State one significance of genetics counseling **(1mk)**

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(**b**)Part of a strand of DNA molecules was found to have the following sequence A-T-C-G-G-G-A-T-C-T. What is the sequence?

(i) Of the complementary strand? **(1mk)**

……

(ii) On a m- RNA strand copied **(1mk)**

……

12). The paddles of whales and the fins of fish adapt these organisms to aquatic habitats.

a) Name the evolutionary process that may have given rise to these structures. **(1mk)**

……

……

b) What is the name given to such structures? **(1mk)**

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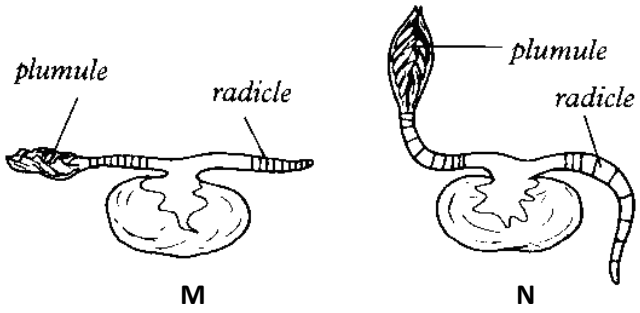
c) Give two examples of vestigial organs in man. **(2mk)**

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13). An experiment was set to investigate a certain aspect of response. A seedling was put on a horizontal position as shown in figure M below. After 24 hours, the set up was as shown in figure N.



M **N**

a) Name the response exhibited. (1mk)

……

b) Explain the curvature of the shoot upwards. **(3mk)**

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14. The following is an equation representing a type of respiration

$C_6H_{12}O_6 \longrightarrow 2C_2H_5OH + 2CO_2 + Energy$

a)Identify the type of respiration. **(1mk)**

……

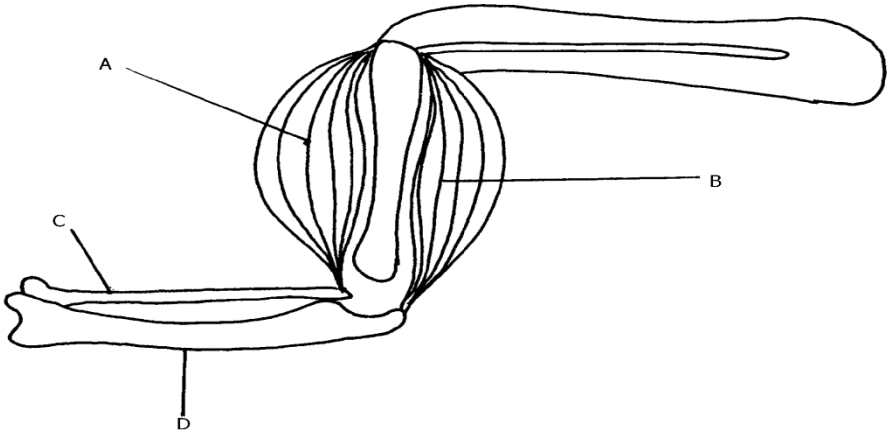
b)Suggest industrial applications of the process shown in the equation above **(2mks)**

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15.



w Name the bones labeled C and D. **(2 mark)**

C-

……

D-

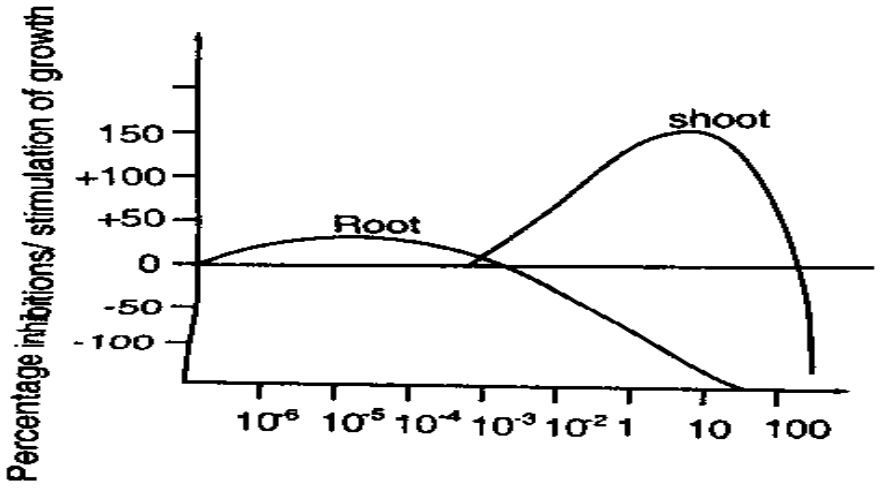
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b) What happens to structure A and B as the arm is straightened **(1 mark)**

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16. Below is a graphical representation of the effects of different concentration of auxins on shoot and root growth. Study it carefully and then answer the questions that follow.

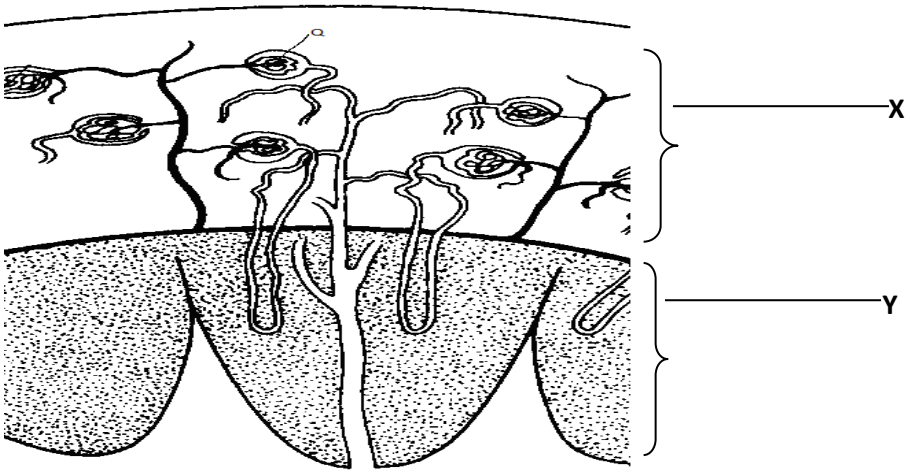


Auxin concentration (ppm)

(a) Identify conclusions that can be drawn from the graph**.** **(3mks)**

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17. The illustration below shows a transverse section through a mammalian kidney.



(a) Name the structures labelled **X** and **Y**.

X ……(1mk)

Y……(1mk)

(b) State the process in **Q** that leads to the formation of glomerular filtrate. **(1mk)**

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18. State **three** differences in composition between umbilical artery and umbilical vein. (3 marks)

Umbilical vein	Umbilical artery

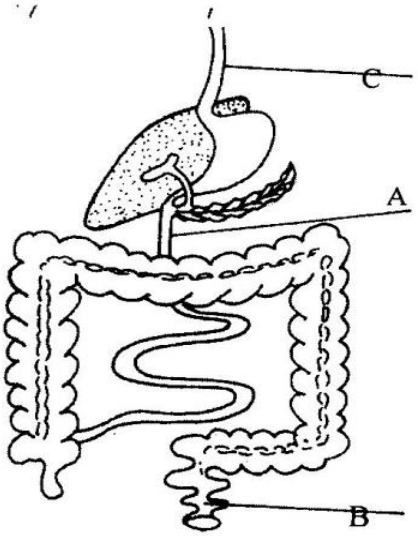
19. (a)What is meant by the term taxonomy? **(1mk)**

……

(b) When are two organisms considered to belong to the same species. **(2mks)**

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20). The diagram below shows part of alimentary canal of a mammal



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

A –……

C –

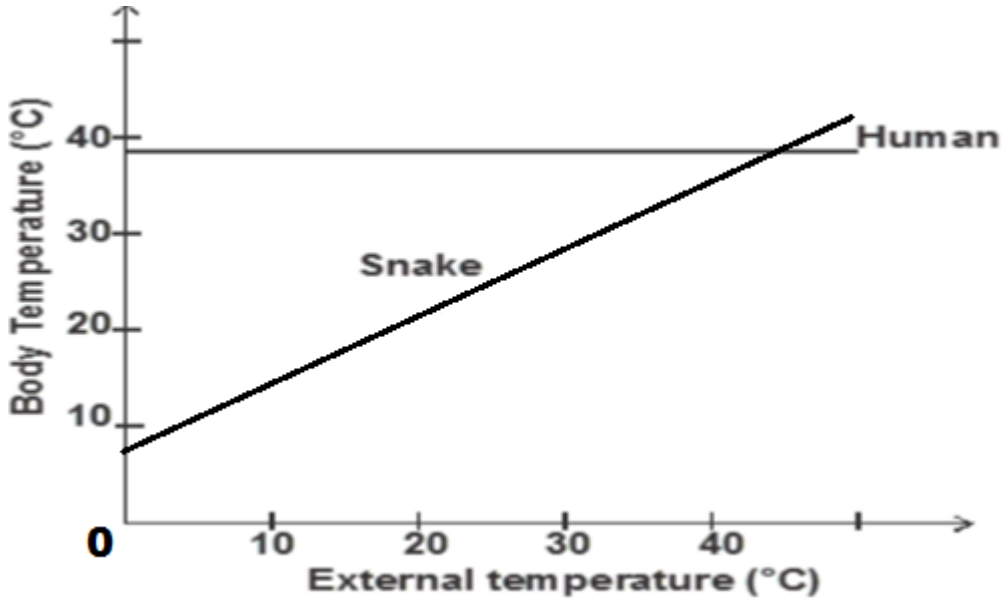
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(ii) State the function of the part labeled B **(1mk)**

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21). The graph below shows the relationship between body temperatures and external temperatures in a human being and a snake. Study it and answer questions that follow.



a)What happens to the temperature of each organism as the external temperature increases. **(2 marks)**

Human

……

Snake

……

b) Humans are described as homoithermic. State the advantage of this condition.**(2marks)**

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22. a) Name two products of light stage during photosynthesis. **(2 marks)**

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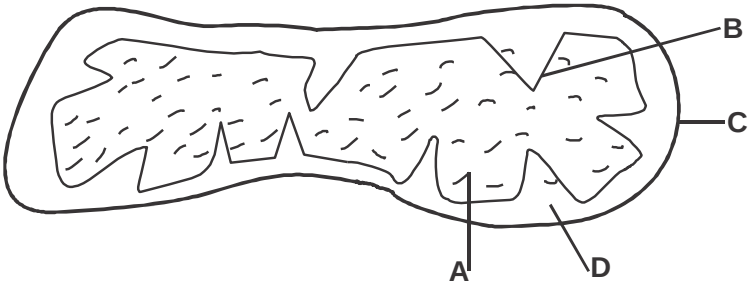
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b) State three differences between light stage and dark stage of photosynthesis. **(3 marks)**

Light	Dark

23.The diagram below represents a cell organelle.



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

……

b) Name the part labelled B **(1 mark)**

……

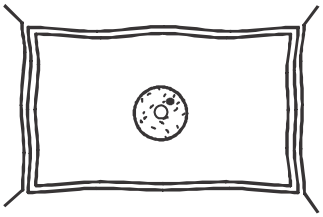
c) State the functions of the part labelled A **(1 mark)**

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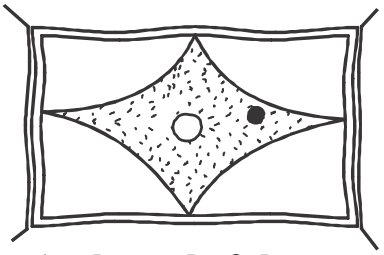
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24 . The diagram below represents a plant cell that was subjected to a certain treatment.



At the start



At the end of the experiment

a) Account for the shape of the cell at the end of the experiment. **(2 marks)**

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……

b) Draw a diagram to illustrate how an animal cell would appear if subjected to the same treatment**.** **(1 marks)**

25a) Give a reason why each of the following steps are followed when preparing cross sections of a leaf for examination under a microscope.

i) Cutting thin sections. **(1 mark)**

……

ii) Placing the sections in water. **(1 mark)**

……

26.a) Name two tissues in plants that provide mechanical support. **(2 marks)**

……

……

b. Name the types of joints formed by each of the following pairs of bones:

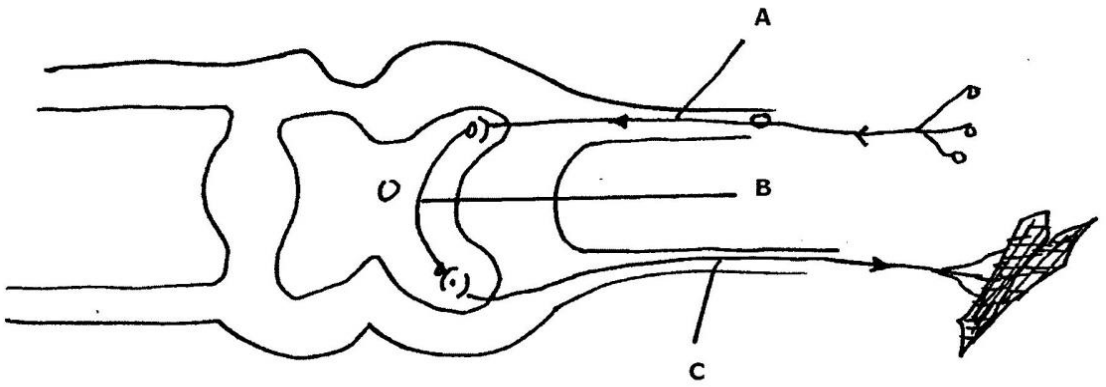
i) Axis and atlas. **(1 mark)**

……

ii)Humerus with clavicle and scapula. **(1mk)**

……

27.) The diagram below represents a simple reflex arc



-p

(a)Name the parts labeled A, B and C (3mks)

A……

B……

C……

(b) What is the role of part A **(1mk)**

……

NAME……..…….. CLASS……..……

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FORM 4 END TERM 2 SERIES 1 EXAMS

231/2
BIOLOGY
PAPER 2 (THEORY)
FORM 4
TIME: 2 HOURS

SECTION A (40 MARKS)

Answer all questions in this section in the spaces provided.

1. **(a)** Name **two** disorders in human caused by gene mutation. **(2 marks)**

……
……
…….

2. Describe the following chromosomal mutations:

a. Inversion **(1 marks)**

……
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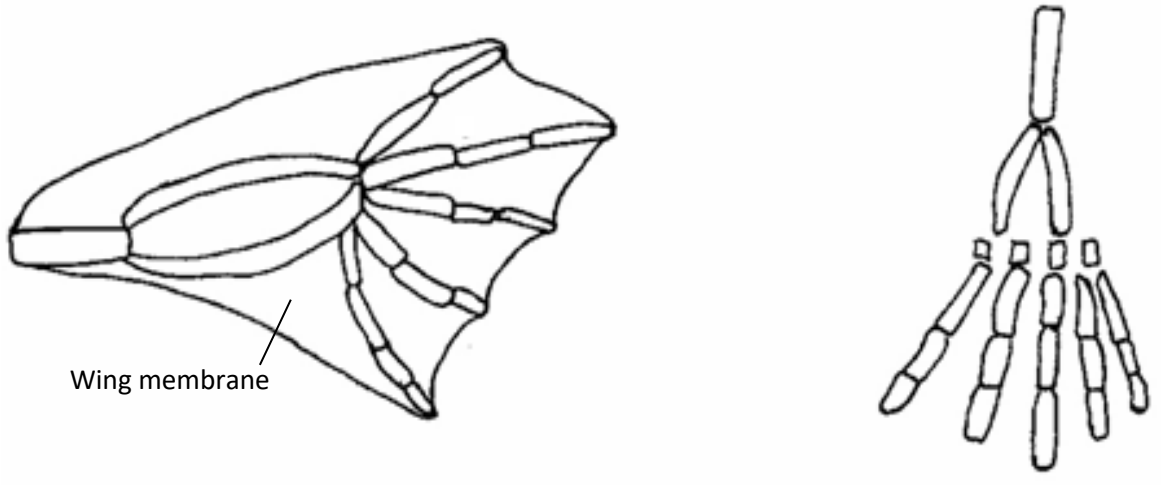
b. Translocation **(1 marks)**

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3. In mice the allele for **black fur** is **dominant** to the allele for **brown fur**. What Percentage of offspring would have brown fur from a cross between heterozygous black mice? Show working. Use letter **B** to represent the allele for **black colour**.
(4 marks)

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4. The diagram **below** shows structures of the bat wing and human arm.



(a)These structures are thought to have same ancestral origin. State **one** structural similarity and **one** adaptational difference between the two.

a) Structural similarity. **(1mk)**

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b) Adaptation difference. **(2mks)**

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(b) Give **two** other examples of structures in nature that show the type of evolution as in **(a)** above. **(2mks)**

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(c) Distinguish between the terms 'chemical evolution' and 'organic evolution'.**(2mks)**

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(d) What is the study of fossils called? **(1mk)**

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3 a) Name the causative agents for the following respiratory diseases.

i) Whooping cough…… **(1 mark)**

ii) Pneumonia…… **(1 mark)**

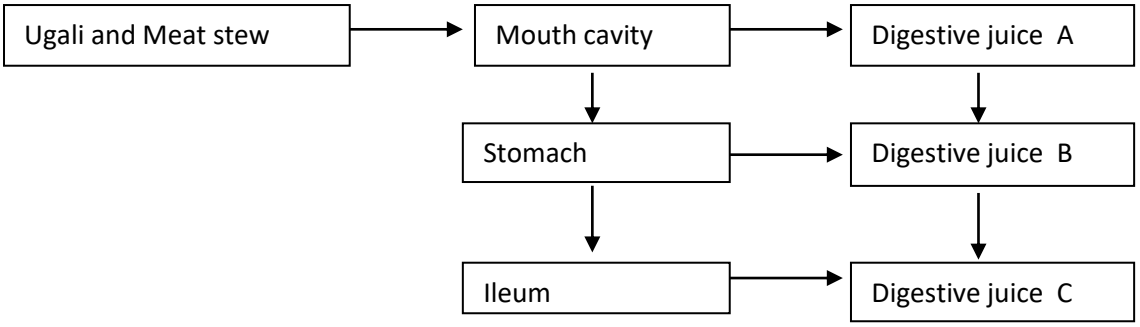
b) Describe how carbon (IV) oxide in the tissues reaches the lungs **(4 marks)**

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c) How are guard cells adapted to their functions**?** **(2mks)**

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4. The flow diagram below represents passage of a meal through the human digestive system. Study the diagram and answer the questions that follow.



(a) Name the physical process that will occur in mouth cavity **(1mark)**

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(b) Name the digestive juices **B** and **C** **(2 marks)**

B……

C……

(c) Explain **two** ways in which the digestive system is protected from corrosive effects of digestive juices. **(2 marks)**

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(d) Name the hormone that stimulate secretion of juice **B**. **(1mark)**

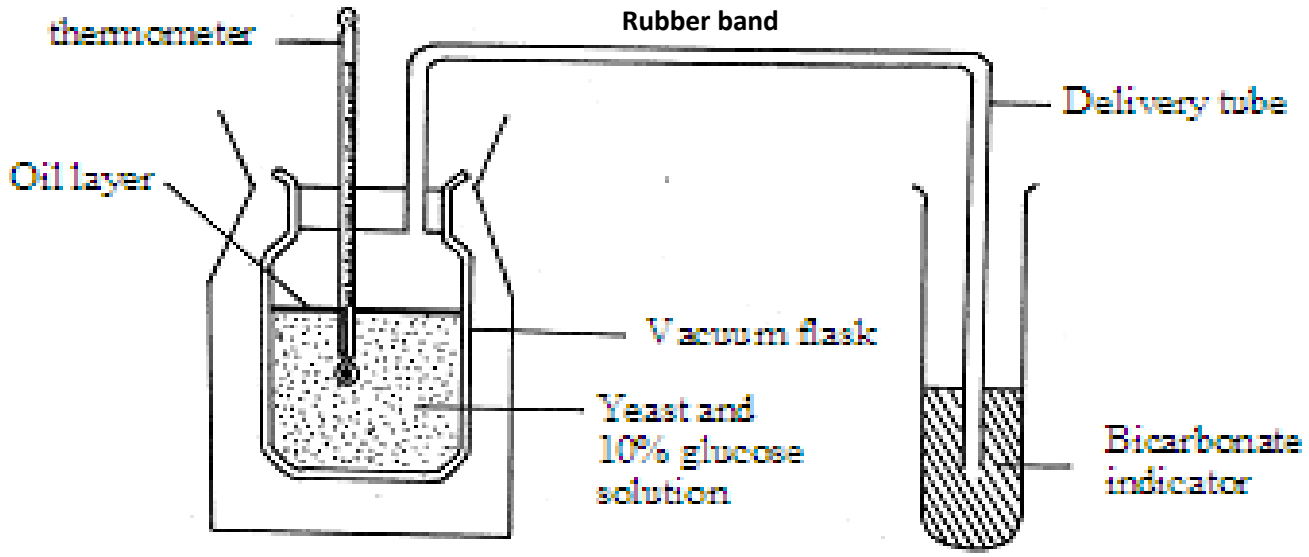
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(e) Identify **two** contents of digestive juice **A** **(2 marks)**

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5. The experiment below was set-up to investigate some physiological processes. The glucose solution was first boiled then cooled. The set-up was left for 24hrs.



(a) Suggest two aims of the experiment. **(2mks)**

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(b)(i) State the expected observations after 24 hours. **(2mks)**

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(ii) Explain your observations in a **(i)** above. **(2mk)**

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(iii) Why was glucose solution boiled then cooled? **(1mk)**

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c) Suggest a control for the above experiment **(1mk)**

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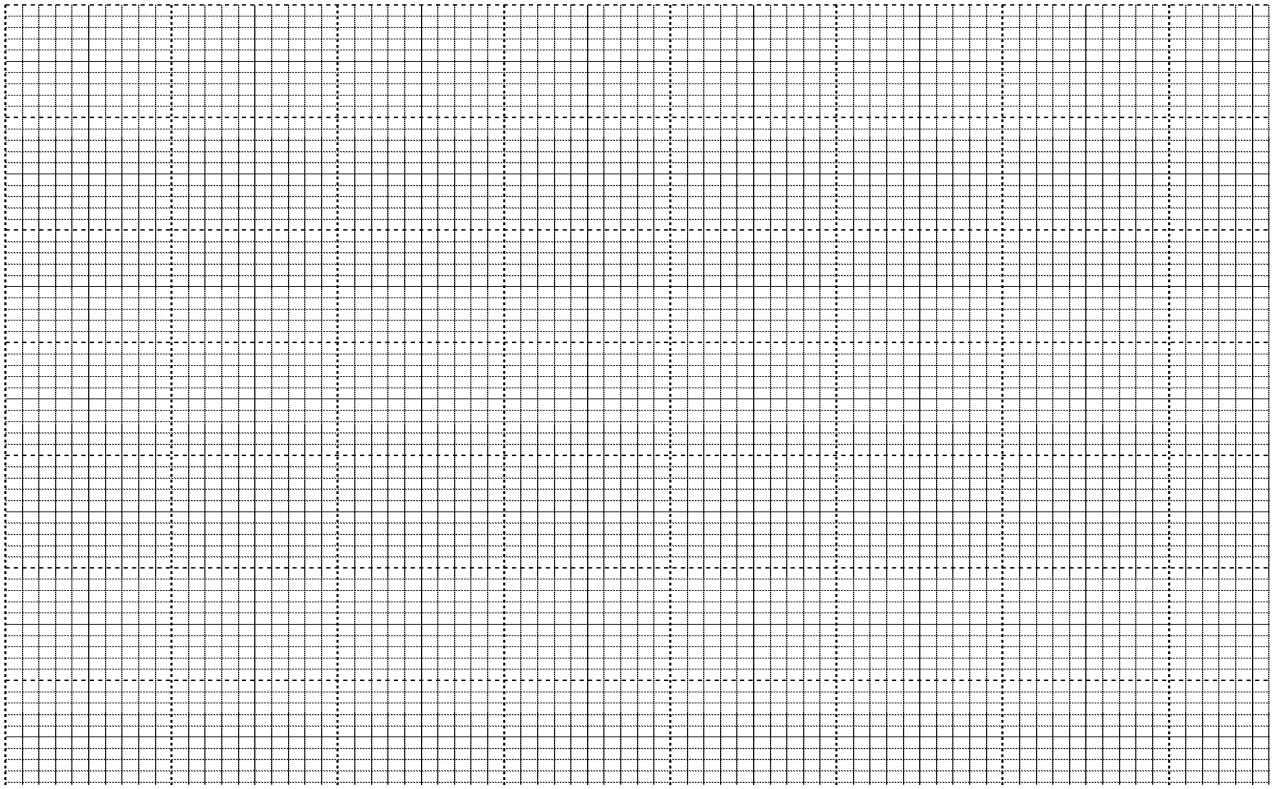
SECTION B (40 MARKS)

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

6. In an experiment, a man drank one litre of water and the volume of urine produced was measured and recorded at an interval of one hour after drinking the water. On the second day, the man repeated the experiment but this time he drank one litre of 1.2% sodium chloride solution. The results are as shown in the table below:

Time (hours)	Volume of urine produced (cm^3) on drinking	
	Water	1.2 % sodium chloride solution
0	80	30
1	50	30
2	350	40
3	540	35
4	30	60
5	100	40
6	50	80
7	70	100

a. On the same axes, plot graphs of urine produced on drinking water and 1.2%sodium chloride solution against time. **(8 marks)**



b. From the graph, determine the volume of urine produced by the man two and a half hours after drinking water. **(1 mark)**

……..

c. Account for the production of urine produced by the man when he drank the litre of **(i)** 1.2% sodium chloride solution. **(3 marks)**

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(ii) Water **(3marks)**

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d. What is diabetes insipidus? **(2 marks)**

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e. Explain why treatment of diabetes mellitus is via injection and not through taking insulin tablets orally. **(2 marks)**

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7. Explain how abiotic factors affect plants in their habitat. **(20 marks)**

8.Describe the structure and function of various parts of the heart **(20 marks)**

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NAME…….…….. CLASS……..……

ADM NO……SIGNATURE……

DATE……

FORM 4 END TERM 2 SERIES 1 EXAMS

231/3
BIOLOGY
PAPER 3

INSTRUCTIONS TO CANDIDATES

1. *Write your **name** and **index number** in the spaces provided above.*
2. ***Sign** and write the **date** of examination in the spaces provided above.*
3. *You are required to spend the first 15 minutes of the 1 ¾ hours allowed for this paper reading the whole paper carefully before commencing your work.*
4. *Answers must be written in the spaces provided in the question paper.*

For Examiner's Use only:-

Question	Maximum Score	Candidate's Score
1	12	
2	14	
3	14	
TOTAL	40	

This paper consists of 4 printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.

1. You are provided with a specimen labeled T which is a fruit. Use it to answer the questions that follow.

a) Make a transverse section of the specimen T. Draw and label at least 3 parts. (Save the specimen for use in question 2) **(5mks)**

b) With reasons, state the identity of fruit T.

Type of fruit**……..(1mk)**

Reason **……..……(1mk)**

c) Suggest the possible agent of dispersal and give **two** reasons

Agent

……(1mk)

Reason

…….

…….

……(2mks)

d) What is the placentation of **T**?

…….(1mk)

e) Specimen T was green in colour before it was treated with a plant hormone.

Suggest the plant hormone.

……(1mk)

2. (a) Crush a piece of the specimen **T** in a test tube using a stirring rod, add some water and shake. Decant into another test tube. Use the reagents available to establish the food substances present in specimen **T** extract by filling in the table below.. 9mks

FOOD	PROCEDURE	OBSERVATIONS	CONCLUSION

(b) Identify one type of organic substance absent in **T.**
…….(**1mk)**

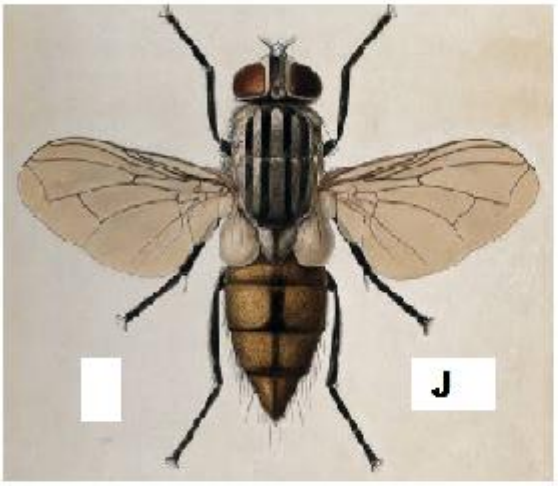
(c) Based on the tests you have carried out above, give one reasons why consuming a lot of **T** may be unsuitable to a diabetic person.

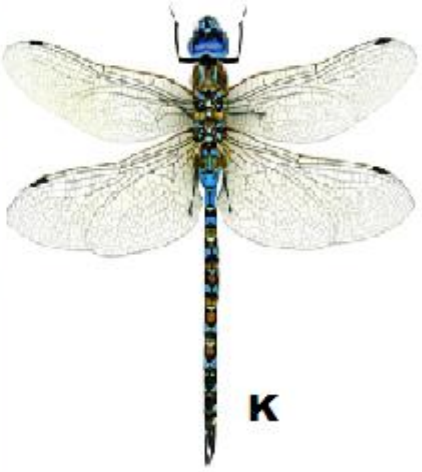
……
……(2mks)

(d) How can you show that somebody is diabetic in the school laboratory? **(2mks)**

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…….

3. Below are photographs of two specimens, J and K. Both of them belong to the same phylum and class. Observe them carefully before you answer the questions that follow.





i) Name the class to which J and K belong and support your answer with two reasons.

Class

…….(1mk)

Reasons **(2mks)**

1. ……

2. ……

ii) Suggest why the circulatory fluid in J and K has no haemoglobin. (**2mks)**

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iii) Observe their wings and suggest the type of evolution that could have taken place to give rise to J and K, and then give a reason for your answer.

Type of evolution **……(1mk)**

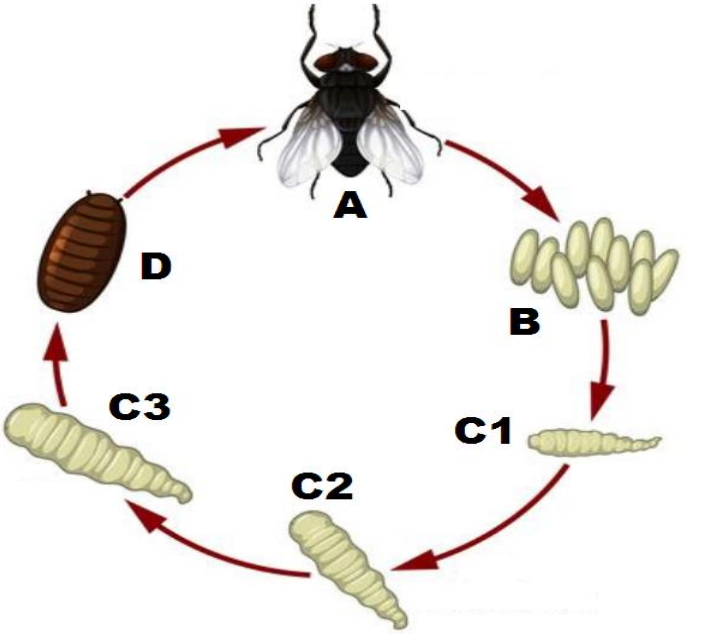
Reason

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……..(2mks)

iv) Below is a diagram showing the life cycle of specimen J.



a) Identify the stage labeled **D.** ……..**(1mk)**

b) Name the hormone responsible for the change from **D** to **A.** (**1mk)**

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c) Explain the differences in the change from **C2** to **C3** and from **C3** to **D**. **4mks**

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NAME……..…….... CLASS……..……

ADM NO……SIGNATURE……

DATE……

FORM 4 END TERM 2 SERIES 1 EXAMS

BUSINESS STUDIES

FORM FOUR

PAPER 1

TIME:2HRS

Instructions to the candidate:

(i) Write your name and index number in the spaces provided above.
(ii) Sign and write date of examination in the spaces provided above.
(iii) Answer all questions.
(iv) All answers should be written in the spaces provided in this booklet.
(v) Candidate should answer questions in English.

TOTAL MARKS

1. Identify the type of wholesalers described in the statements given below**:** **(4 Marks)**

(i) A wholesaler who trades in maize grain only
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(ii) A wholesaler who supplies goods to most of the traders in kitui,mbooni and machakos districts in the eastern part of Kenya
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(iii) A wholesaler who buys tomatoes from farmers in rural areas and sells the same to other wholesalers in urban areas.
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(iv) A wholesaler who trades in a wide variety of human medicine

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2. Outline **four** factors that should be considered before buying office equipment. **(4 Marks)**

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3. Outline **four** malpractices by traders against which consumers may need protection by the government**.** **(4 Marks)**

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4. State **three** features of an insurable interest**.** **(3 Marks)**

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5. Outline **four** ways of reducing the level of unemployment in Kenya**.** **(4 Marks)**

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6. State **four** services offered by a commercial banks to its consumers. **(4 Marks)**

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7. List **four** sources of public finance. **(4 Marks)**

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8. Outline **four** reasons why countries may trade with each other **(4 Marks)**

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9. State **four** reasons why economic development is desirable to a country. **(4 Marks)**

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10. Indicate the rewards associated with each of the factors of production in the table below.
(4 Marks)

	Factor of production	Rewards
(a)	Lake	
(b)	Driver	
(c)	Shareholder	
(d)	Tractor	

11. Outline circumstances under which a co-operative society may be dissolved. **(4 Marks)**

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12. Highlight **four** features of a bonded warehouse. **(4 Marks)**

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13.Outline **four** factors that may be considered when measuring the size of a firm. **(4 Marks)**

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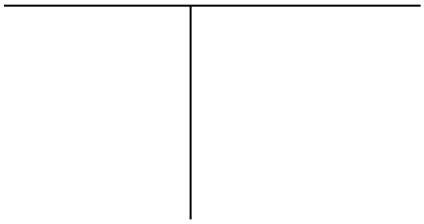
14. The following transactions were extracted from the books of Sarah traders for the month of March 2006.

March 10: Purchased goods on credit worth Ksh 200,000 from salim traders

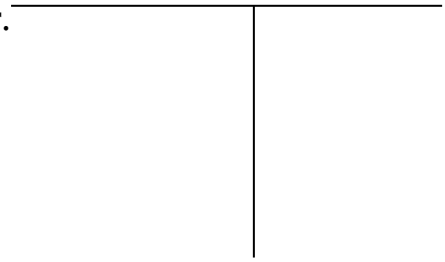
March25: Sold goods on credit worth Ksh 420,000 to shah traders

Record the above transaction in the ledger accounts below **(4 Marks)**

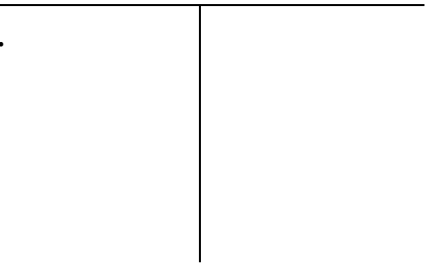
(a) Dr. salim traders account Cr.



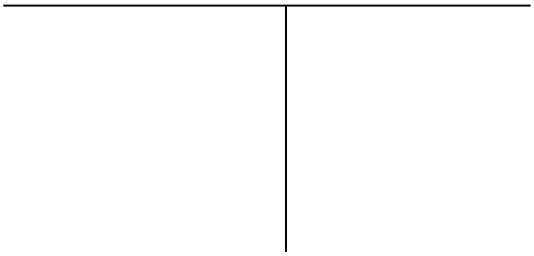
(b) Dr. purchase account Cr.



(c) Dr. shah traders account Cr.



(d) Dr. Sales account



15.On 2nd November 2006 ,Oromo received an invoice for Ksh 12,000.terms of payment were trade discount 5% and cash discount 10%,if payment is made within 30 days. Determine the amount paid if payment was made on 28th November 2006. **(4 Marks)**

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16. The following balances were extracted from the books of Nafula traders as at 31st December 2005.

	Ksh
Current liabilities	150,000
Net profit	50,000
Total assets	500,000
2 years bank loan	100,000

Calculate the rate of return on capital. **(4 Marks)**

17. The information given below was extracted from the books of Amina traders on 31st December 2006

	Ksh
Purchases	260,000
Opening stock	75,000
Carriage on purchases	12,000
Closing stock	27,000

Goods were sold at a mark-up of 25%

Using the information given above ,prepare Amina traders trading account**.** **(4 Marks)**

18 .State **four** benefits that a farmer may get by transporting produce to the market by road.
(4 Marks)

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19. The table given below represents the supply schedule of sukumawiki(kales) for eight weeks in the month of January and February 2009

WEEK	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
QUANTITY (METRIC TONES)	**505**	**485**	**430**	**375**	**340**	**290**	**215**	**195**

Outline **four** causes of the trend in the table **(4 Marks)**

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20. Outline **four** ways in which households contribute to National income of a country.

(4 Marks)

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21. Outline **four** circumstances in which a trader may use oral communication. **(4 Marks)**

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22. Outline **four** reasons why a firm may remain small. **(4 Marks)**

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23.On 1st January 2007,muthonin traders' cash book showed a credit balance of Ksh 150,000 at the bank and a debit balance of ksh.25,250 in hand. During the month, the following transactions took place:

January 5: Made cash sales for Ksh 21,500

January 16: Received a cheque for Ksh 360,000 from a debtor

January 28: Paid a creditor ksh.100,000;partly by cheque of ksh80,000 and the balance in cash.

Prepare a two-column cash book for the month. **(5 Marks)**

24. State **four** benefits that a trader may get by advertising products in a newspaper**.(4 Marks)**

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25. Highlight **four** advantages of an enclosed office layout. **(4 Marks)**

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NAME……..…….... CLASS……..……

ADM NO……SIGNATURE……

DATE……..

FORM 4 END TERM 2 SERIES 1 EXAMS

BUSINESS

PAPER 2

Instructions to candidates:

a) *Write your name and index number in spaces provided above.*
b) *Sign and write the date of the examination in the spaces provided above.*
c) *This paper consists of six questions.*
d) *All questions carry marks.*
e) *Candidates should answer the questions in English.*

For examiner's use only

Question	Maximum score	Candidate's Score
	20	
	20	
	20	
	20	
	20	
	20	
	Total score	

1. (a) Explain five factors that one would consider when evaluating a business opportunity.

(10 Marks)

(b) There has been a decline in demand for leather jackets, explain **five** factors that may have caused this. **(10 Marks)**

2. (a) Explain five barriers to effective communication. **(10 Marks)**

(b) Discuss four disadvantages of localisation of industries. **(10 Marks)**

3. (a) Explain **five** measures that the government of Kenya may use to curb unemployment.

(10 Marks)

(b) Explain **five** reasons why two traders may join their business to form a partnership.

(10 Marks)

4 (a) Explain **five** reasons for filing documents in an office. **(10 Marks)**

(b) On 1st January 2016 jumbo traders had shs 123,500 in cash and shs 225,000 at bank. During the month the following transactions took place.

2nd January: Made cash sales of sh 427,500

5th January: Received a cheque for shs 456,000 from Njogu traders in full settlement of their debt after allowing a 5% cash discount.

15th January: Paid Muhoro traders shs 192,000 in cash after deducting a cash discount of shs 18,000.

20th January: Deposited shs 200,000 from the cash till into the bank.

25th January: Paid in cash shs 100,000 electricity and shs 44,000 for water.

27th January: Settled Kogi's account of shs 250,000 by cheque less 4.5% cash discount

30th January: Withdrew shs 150,000 from the bank for private use

31st January: Deposited all the cash into the bank except shs 2,100

Prepare a duly balanced three column cash book. **(10 Marks)**

5. (a) Explain f**ive** legislations which the Kenyan government has put in place to protect consumers. **(10 Marks)**

(b) Explain **five** benefits that a country may get from liberalizing foreign trade. **(10 Marks)**

6. (a) Outline **five** principles of good tax system**.** **(10 Marks)**

(b) The following trial balance was prepared by Meja traders on 31st December 2016

Particulars	Dr(shs)	Cr(shs)
Premises	540,000	
Machinery	200,000	
Furniture	100,000	
Gross profit		220,000
Carriage outwards	8,000	
Salaries	30,000	
Discounts	25,000	32,000
Rent	16,000	
Commission		14,000
Cash in hand	70,000	
Stock	70,000	
Capital		818,000
Debtor	65,000	
Creditor		40,000
	1,124,000	1,124,000

Using the information given above, prepare

a) A profit and loss account **(5 Marks)**

b) A balance sheet **(5 Marks)**

NAME……..……... CLASS……..……

ADM NO……SIGNATURE……

DATE……..

FORM 4 END TERM 2 SERIES 1 EXAMS

CHEMISTRY

PAPER 1

TIME:2HRS

INSTRUCTIONS TO CANDIDATES

3. *Answer **ALL** the questions in the spaces provided.*
4. *Scientific calculators may be used.*

MARKS SCORED	
OUT OF	**80**

1. Name a method or a process that can be used to separate each of the following substances.

(3mks)

(a) A mixture of petrol and diesel.

……

(b) Kerosene and water

……

(c) Food colouring ingredients in a sauce

……

2.The table below shows the formulae of elements P,Q,R and S.(not actual symbols) and their chlorides

Elements	P	Q	R	S
Formulae of chlorides	PCl	QCl_2	RCl_3	SCl_5

(a) State the group in which element Q belong. **(1mk)**

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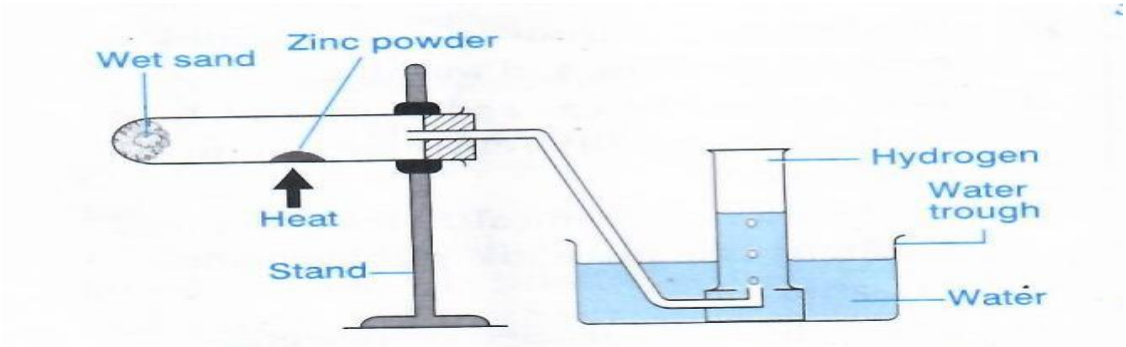
(b) Identify one element which is a non-metal. **(1mk)**

……

(c) Write down the formulae of P oxide. **(1mk)**

……

3. Hydrogen can be prepared by passing steam over heated Zinc powder as shown on the diagram below.



(a) Write down the chemical reaction that produces hydrogen gas. **(1mk)**

……

(b) Explain why hydrogen should be burned if not collected over water. **(1mk)**

……

(c) Give another metal that can be used instead of zinc. **(1mk)**

……

4. A piece of sodium metal was placed in a trough half filled with cold water. State **three observations** that were made. **(3mks)**

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5. When 27.8g of hydrated Aluminum Oxide($Al_2O_3.XH_2O$) was heated to a constant mass,20.6 of Aluminium Oxide was obtained. Determine the value of X.(H=1.0,O=16,Al=27) **(3mks)**

6. (a) State Graham's law of diffusion. **(1mk)**

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(b) Methane diffuses through a porous plug at the rate of $8cm^3S^{-1}$.Calculate the rate at which gas P,with a molecular of 28.44g will diffuse through the same material.(C=12,H=1.0) **(2mks)**

7. Carbon II Oxide gas was passed over heated copper II Oxide in a combustion tube.

(a) State an **observation** that was made in the combustion tube. **(1mk)**

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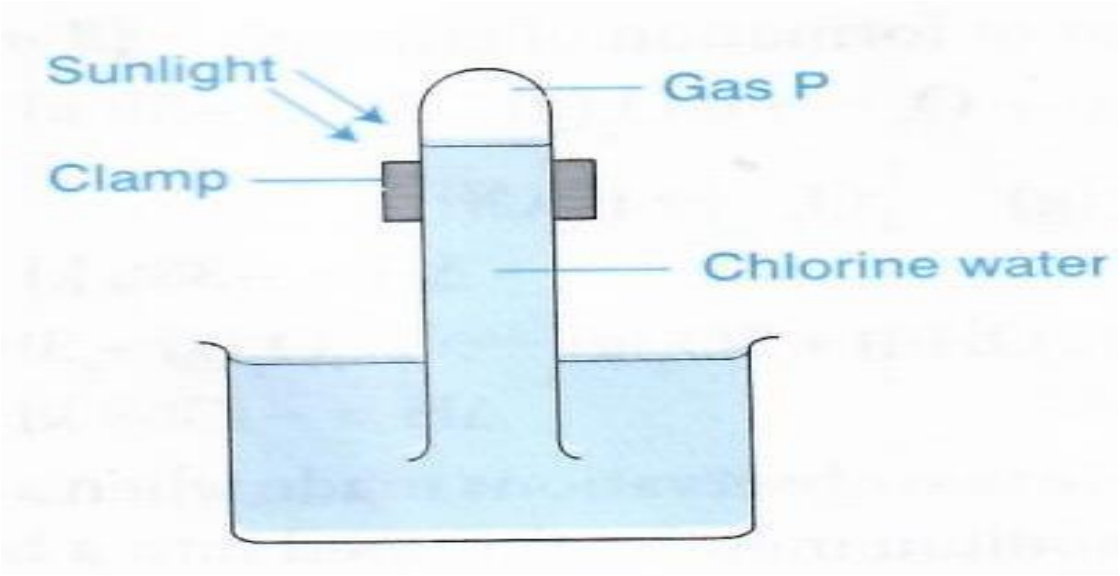
(b) Write an equation for the reaction that's taking place. **(1mk)**

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(c) What characteristic of Carbon II Oxide is demonstrated from the equation? **(1mk)**

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8.The apparatus below is used to investigate the action of sunlight on chlorine water.



(a) Identify the gas labelled P. **(1mk)**

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(b) State and explain the **observation** that would be made if a blue litmus was dipped into the chlorine water. **(2mks)**

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9.Observe the table below and use it to answer the questions that follows.

Element	Sodium	magnesium	Aluminium
Atomic radius(nm)	1.90	1.60	1.32

(a) Explain the trend in the atomic radius across the period. **(2mks)**

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(b) Predict the the P.H of the solution of sodium Oxide. **(1mk)**

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10.18cm^3 of dilute suphuric (vi) acid require 25cm^3 of 0.2M sodium hydroxide solution for complete
neutralization.

(a) Write the equation for the reaction that took place. **(1mk)**

……

(b) Calculate moles of sodium hydroxide required to neutralize the acid. **(1mk)**

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(c) Calculate the concentration of suphuric (vi) acid in $moldm^3$. **(1mk)**

……

11. Excess zinc granules were added to a solution of Copper II sulphate in a beaker and stirred.

(a) Identify the **observation** that was made in the beaker after a while. **(1mk)**

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(b) Giving ***a reason***, identify the ***oxidizing*** species in the reaction. **(2mks)**

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12.Explain why a solution of hydrogen chloride gas in methylbenzene does not conduct electricity while the solution of the same gas in water conducts. **(2mks)**

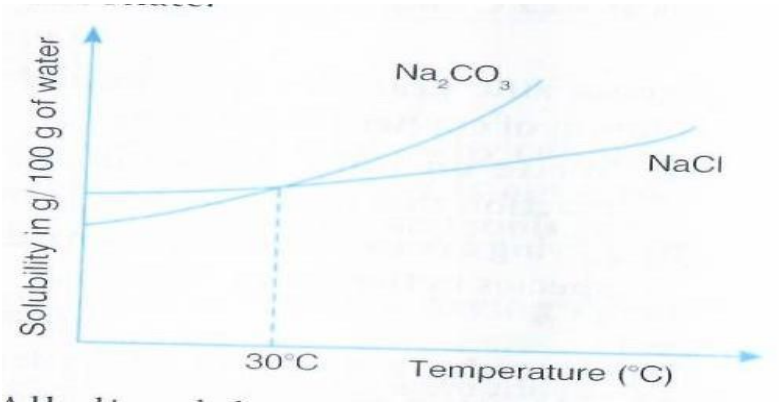
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13.The diagram below shows the solubility curves for sodium chloride and sodium carbonate.



(a) Name a method that can be used to separate the two salts in solution. **(1mk)**

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(b) Identify and explain crystals that would be separated from the solution during;

(i) the day at 40^0c **(1mk)**

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(ii)the night at 20^0c **(1mk)**

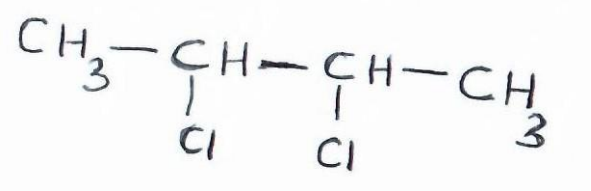
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14.Compound P reacted with chlorine in absence of light to form compound Q.the structural formulae of

compound Q is shown below.



(a)*Name* and give the ***structural formula*** of compound P. **(2mks)**

……

……

……

……

(b) Give the name of compound Q. **(1mk)**

……

15.Two gases,X2 and Y2, react to form a gaseous compound XY_3 according to the following equation.

$X_2 + 3Y_2 \longleftrightarrow 2XY_{3(g)}$ $\Delta H = -44kJ$

(a) Show the reaction on an energy level diagram. **(3mks)**

(b) State one way in which the yield of XY_3 can be increased. **(1mk)**

……

16. Complete the following nuclear equations. **(2mks)**

$^{234}_{90}Th \longrightarrow {}^{234}_{91}p + $ _____

$^{226}_{88}\text{Ra} \longrightarrow {}^{222}_{86}Rn + _____$

17. State what would be ***observed*** if concentrated sulphuric (vi) acid was added to;

(a) Sugar crystals **(1mk)**

……

(b) Copper II sulphate crystals **(1mk)**

……

(c) What property of concentrated suphuric (vi) acid is demonstrated by the two reactions above.

(1mk)

……

18. The P.H values of the following solutions are;1.0,5.0,7.0 and 14.0.Match the PH values with correct solution in the table below. **(2mks)**

Solutions	**P.H values**
Sodium chloride	
Potassium hydroxide	
Hydrochloric acid	
Lemon juice	

Explain the meaning of term ***"liming"*** . **(1mk)**

……

19.A mixture of calcium hydroxide and Ammonium chloride was heated to produce gas **P**.

(a) Identify gas **P.** **(1mk)**

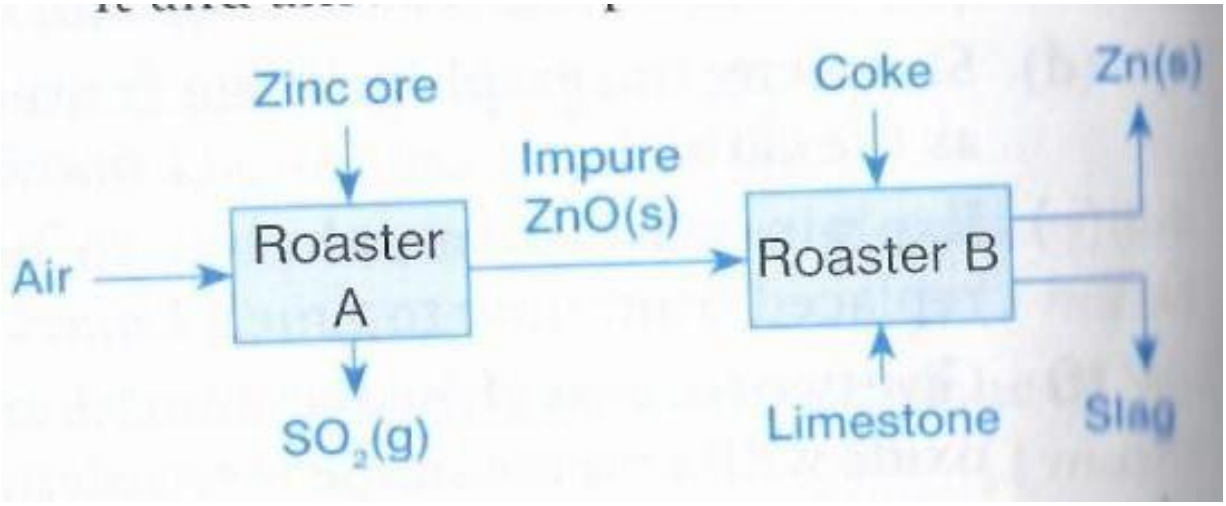
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(b) Write an equation for the reaction that produces gas P. **(1mk)**

……

(c)***Draw*** a diagram to show a method that can be used to collect the gas P. **(1mk)**

20. The flow chart below shows the processes involved in extraction of Zinc metal.Study it and answer the questions that follows.



(a) Name the main ore used in the extraction of Zinc. **(1mk)**

……

(b) What's the function of the limestone in roaster B.? **(1mk)**

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(c)What do we call the process of coating an Iron metal with Zinc? **(1mk)**

……

21.***Explain*** why sea water is not suitable for washing clothes. **(2mks)**

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22(a).A student reacted Lead II carbonate with dilute suphuric (vi) acid in order to prepare Lead II

Sulphate salt.Explain why he was unable to prepare the salt using the above reagents. **(2mks)**

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(b) Give one other reagent he would use in place of Lead II carbonate. **(1mk)**

……

23. What do you understand by the term "Rusting". **(1mk)**

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(b)State ***two*** similarities between rusting and combustion. **(2mks)**

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24.Sodium chloride was accidentally mixed with lead II sulphate.Describe how Sodium chloride crystals
can be obtained. **(2mks)**

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25.Element T whose atomic number is 16 and mass number 32,combines with Oxygen whose atomic
number is 8.

(a) Determine the number of protons and neutrons in element T. **(1mk)**

……

(b) Name the type of bond formed between T and Oxygen. **(1mk)**

……

(c) State the nature of solution formed when Oxide of T is bubbled through water. **(1mk)**

……

26.A piece of burning magnesium is lowered into a gas jar containing carbon (iv) Oxide .***State*** and

Explain the ***observations*** made in the gas jar. **(3mks)**

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27.Students are normally advised to use a non-luminous flame when heating in the laboratory.

(a)How does a Bunsen burner produce a non-luminous flame? **(1mk)**

……

(b)Why is the non-luminous flame preferred over the luminous flame? **(1mk)**

……

……

28.A current of 0.82A was passed through an aqueous solution of a salt of metal P for 5 hours.2.56g of

metal P were deposited.(r.m.m of P=52, 1Faraday=96500C)

(a) Calculate the number of faradays used. **(1mk)**

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……

(b) Determine the ***charge*** on the ion of metal P. **(1mk)**

……

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(c) Write the equation for the formation of ion of P.
(1mk)

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NAME……..…….. CLASS……..……

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FORM 4 END TERM 2 SERIES 1 EXAMS

FORM 4

CHEMISRY

PAPER 2

THEORY

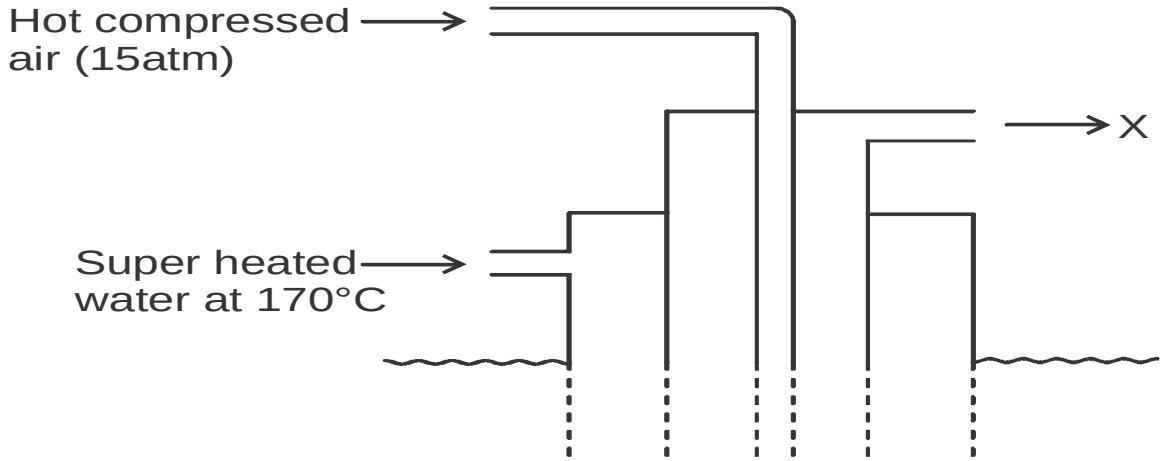
INSTRUCTIONS TO CANDIDATES

1. *Write your name and index number in the spaces provided.*
2. *Answer **ALL** the questions in the spaces provided.*
3. *Electronic calculators and Mathematical tables **may** be used.*
4. *All workings **must** be clearly shown where necessary.*

For Examiner's Use Only

Questions	Maximum Score	Candidates Score
1	16	
2	13	
3	13	
4	11	
5	13	
6	14	
	80	

1. The diagram below shows part of the Frasch process used for extraction of sulphur. Use it to answer the questions that follow.



1. Identify **(1mark)**

X…….....

2. Why is it necessary to use superheated water and hot compressed air in this process

(2mark)

……....

……

3. State two physical properties of sulphur that makes it possible for it to be extracted by this method **(2marks)**

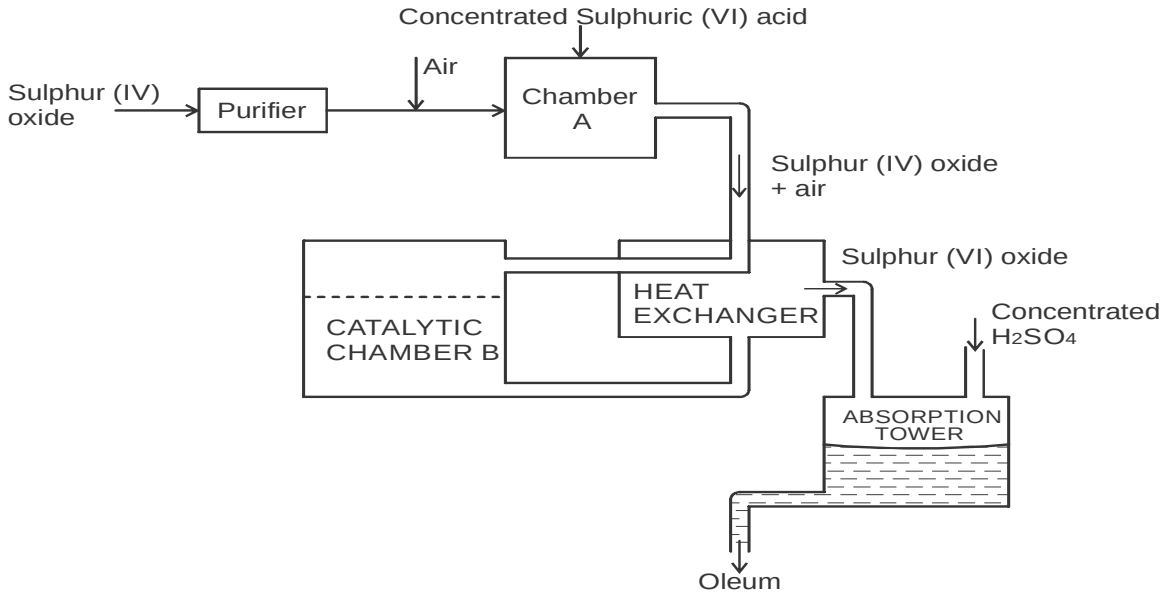
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2.The diagram below shows part of the process in the manufacture of sulphuric (VI) acid. Study it and answer questions that follow



i) Give **two** reasons why air is referred to as a mixture **(2 marks)**

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……

ii) What is the role of concentrated sulphuric (VI) acid in chamber **A** **(1mark)**

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iii) Name **two** catalysts that can be used in the catalytic chamber **B** **(2marks)**

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iv) State **two** roles of the heat exchanger **(2marks)**

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v) Describe the test for a Sulphite anion SO_3^{2-} **(2 mark)**

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vi) Explain the observation made when a few drops of concentrated sulphuric (VI) acid are added to crystal of hydrated copper II sulphate? Explain your answer **(2mks)**

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2. Use the standard electrode potential for elements G,H,J, K and L given below to answer the questions that follow

Half reactions		Electrode potential (volts)
$G^{2+}_{(aq)} + 2e^{-} \rightarrow$	$G_{(s)}$	-2.90
$H^{2+}_{(aq)} + 2e^{-} \rightarrow$	$H_{(s)}$	-2.38
$J^{+}_{(aq)} + e^{-} \rightarrow$	$\frac{1}{2}J_{2(g)}$	0.00
$K^{2+}_{(aq)} + 2e^{-} \rightarrow$	$K_{(s)}$	+0.34
$\frac{1}{2}L_{2(g)} + e^{-} \rightarrow$	$L^{-}_{(aq)}$	+2.87

i) Which element could be hydrogen. Explain **(1mark)**

……

ii) Which two half cell would produce the highest potential difference (e.m.f) when combined

(1mark)

……

iii) In the space provided below construct a well labelled electrochemical cell obtained when G^{2+}/G and K^{2+}/K half cells are combined

iv) Calculate the E^{Θ} value of the electrochemical cell constructed in (iii) above **(2marks)**

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v) It is advisable to store a nitrate solution of K in a container made f H. Explain. **(2marks)**

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b) During electrolysis of aqueous copper (II) sulphate using copper electrodes a current of 0.4 ampheres was passed through the cell for 5 hours

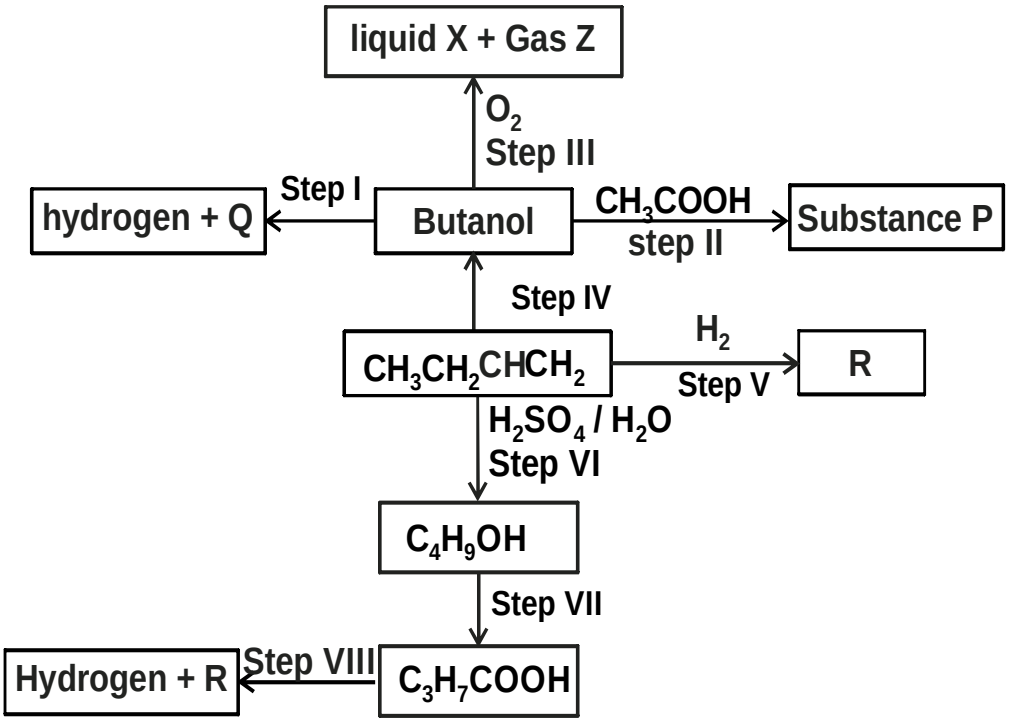
i) Write an ionic equation of the reaction that occurred at the cathode **(1mark)**

.....

ii) Determine the change in mass of the anode which occurred as a result of the electrolysis process (Cu= 63.5 1 Faraday= 96500 coulombs) **(3marks)**

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



i) What is the distinguished physical property of substance P **(1mark)**

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ii) Identify a suitable reagent that can be used in step I . **(1mark)**

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iii) Describe how C_3H_7COOH can be distinguished from C_4H_9OH **(2marks)**

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iv) Write an equation for the reaction that takes place in step III. **(1 mark)**

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.....

v) Name the type of reaction that occurs in steps II and VII. **(2 marks)**

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vi) If 7.4g of butanol completely underwent step III, determine the volume of gas Z produced at STP (MGV = 22.4L , C= 12.0, H=1.0 O=16.0) **(3 marks)**

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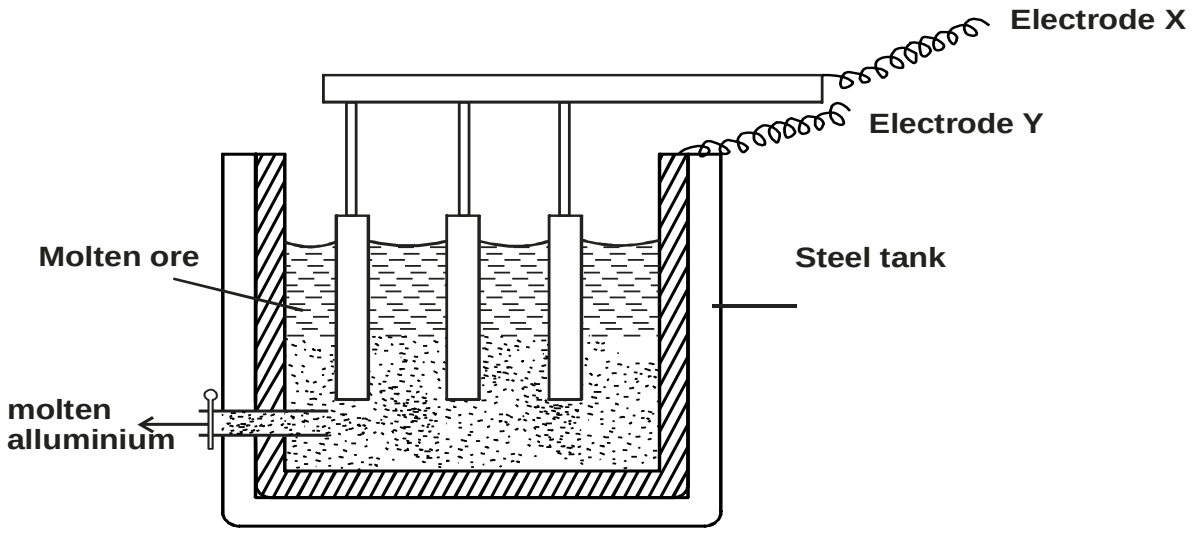
vii) Write an equation for the reaction between R and one mole of fluorine. **(1 mark)**

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viii) Describe a chemical test for liquid X. **(2 marks)**

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4. Aluminium is extracted using the electrolytic cell represented by the diagram below



i) Why is aluminium extracted by electrolytic method? **(1 mark)**

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.....

ii) Name the electrodes labelled **X** and **Y** **(2marks)**

.....

iii) The chief ore from which aluminium is extracted is bauxite.

.....

a)Name **two** main impurities present in bauxite. **(2 marks)**

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b) Aluminium oxide is the main component in bauxite with a melting point of 2015°C but electrolysis of

molten aluminium oxide is carried out at 800°C. Explain how this is achieved. **(2mks)**

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iv) Write the equations for the reaction taking place at the anode. **(1 mark)**

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v) One of the electrodes is replaced periodically. Which one and why? **(2 mark)**

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vi) Duralumin (an alloy of copper, aluminium and magnesium) is preferred to pure aluminium in the construction of aeroplane bodies. Give **one** property of duralumin that is considered.

(1 mark)

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.....

5. The grid below represents part of the periodic table. Study it and answer the questions that follow. The letters do not represent the actual symbols of the elements

C				F	G		I	
						H		K
D	E							
							J	

i) Identify the most reactive non-metal. Explain. **(2 marks)**

.....
.....

ii) What is the name given to the family of elements of which I and J belong? **(1 mark)**

.....

iii) Using dots (•) and crosses (×) to represent electrons, show bonding in the compound formed between **C** and **H.** **(2 marks)**

iv) How does the atomic radius of F compare with that of I. Explain. **(2 marks)**

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.....

b) Study the table below and answer the questions that follow.

Substance	M	N	O	P	Q	R
M.P. °C	801	1356	-101	26	-39	113
B.P °C	1410	2850	-36	154	457	445
Electrical conductivity in solid state	Poor	Poor	Poor	Poor	Good	Poor
Electrical conductivity in molten state	Good	Poor	Poor	Poor	Good	Poor

i) Explain why substance **M** is a good conductor in molten state and not in solid state. **(2marks)**

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.....

ii) What is the most likely structure of substance N. Explain. **(2 marks)**

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.....

iii) Identify, with reasons, a substance that exists as a liquid at room temperature. **(2 marks)**

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6. A piece of marble chip (calcium carbonate) is put in a beaker containing excess of dilute hydrochloric acid which is placed on a reading balance. The mass of the beaker and its contents is recorded every two minutes as shown in the table.

Time (min)	0	2	4	6	8	10	12
Mass (g)	126.4	126.3	126.2	126.1	126.0	126.0	126.0

i) Why is there a continuous loss of mass of the reaction mixture. **(1 mark)**

.....

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

.....

ii) State two different ways by which the reaction could have been made more rapid. **(2 marks)**

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iv) Why does the mass remain constant after 8 minutes **(1 mark)**

.....

v) State the observations that would be made if a few drops of lead II nitrate solution was added to $1cm^3$ of the resulting solution followed by excess ammonia solution. **(2 marks)**

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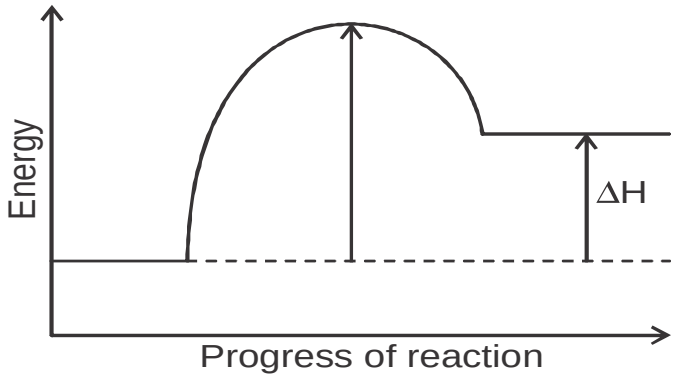
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vi) State one environmental effect that excess carbon (IV) oxide in the air causes. **(1 mark)**

.....

vii) The energy profile for the forward direction of a reversible reaction is shown.



Sketch on the diagram the path for a catalysed reaction. **(2 mark)**

viii) What do you observe when you introduce the following substances in this equation

$2CrO^{2-}_{4(aq)} + 2H^{+}_{(aq)} \rightleftharpoons Cr_2O^{2-}_{7(aq)} + H_2O_{(l)}$ $\Delta H = -477Kj/Mol$

Yellow Orange

i) Dilute hydrochloric acid solution **(2 mark)**

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.....

ii) Increase heat **(2 mark)**

.....

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FORM 4 END TERM 2 SERIES 1 EXAMS

CHRISTIAN RELIGIOUS EDUCATON
PAPER 1

TIME: 2½ HRS.

Instructions to Candidates
Answer any 5 questions

1.a) Why is man considered as the paramount of God's creation? **(8 marks)**

b) Explain God's plan of salvation according to Genesis **3** to **12.** **(6 marks)**

C) State **six** ways in which the teaching of C.R.E. promotes international consciousness. **(6 marks)**

2. a) What are the challenges that Abraham faced after leaving ur of the Chaldeans?. **(7 marks)**

b) Describe the making of the Sinai covenant. **(8 marks)**

c) Give **five** importance of the Ten Commandments Today. **(5 marks)**

3. a) What led to the spread of idolatry in Israel? **(8 marks)**

b) Give **seven** reasons why Elijah faced hostility and danger as a prophet of God.

c) Outline the practices of idolatry in the society today. **(5 marks)**

5. **a).** Mention **six** titles given to the prophets in the old testament **(6mks)**

b). Give eight ways in which the Israelites practiced hypocrisy in religion during the time of prophet Amos **(8mks)**

c). How do Christians fight hypocrisy in the church today. **(6mks)**

5. **a)** Give **six** reasons why Nehemiah was against mixed marriages in Israel. **(6mk**)

b) Identify the conditions the Israelites set during the renewal of the covenant in Nehemiah Chapter 10 **(7mks)**

c) State **seven** ways in which Christians observe the day of worship. **(7mks)**

6.**a)** Mention **Seven** practices that undermines the dignity of women in Traditional African Societies. **(7 marks)**

b) What was the importance of seclusion period after child birth in Traditional African Societies? **(6 marks)**

c) State **seven** factors which have affected the Traditional African Responsibilities towards God, Spirits and Ancestors. **(7 marks)**

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FORM 4 END TERM 2 SERIES 1 EXAMS

FORM 4 CRE

PAPER 2

313/2

TIME:2HRS 30 MINS

INSTRUCTIONS TO CANDIDATES

- ***This paper consists of six questions.***
- ***Answer any five questions.***
- ***Each question carries 20marks.***

1. **(a) Outline** Isaiah's prophecies about the suffering servant in Isaiah 53. **(7mks)**

(b) Describe the birth of John the Baptist in Luke 1:57-66. **(7mks)**

(c) Identify **six** lessons that Christians learn from the lives of Zachariah and Elizabeth. **(6mks)**

2. **(a)** Describe the parable of the Sower. Luke 8:4-8. **(7mks)**

(b) Narrate the miracle of the feeding of the five thousand. Luke 9:10-17**.** **(7mks)**

(c) Identify six virtues that Christians learn from the miracle of the feeding of the five thousand. **(6mks)**

3. **(a)** Describe the healing of the crippled woman on a Sabbath. Luke 13:10-17**.** **(7mks)**

(b) Explain the role of women in passion, death and resurrection of Jesus**.** **(7mks)**

(c) State five lessons Christians learn from the suffering and death of Jesus. **(5mks)**

4. **(a)** State the criteria for discerning the gifts of the Holy spirit. **(7mks)**

   (b) Outlines six ways in which the unity of believers is expressed in the concept of the bride revelation 21:1-2. **(6mks)**

   (c) Give seven ways in which unity is promoted in the church. **(7mks)**

5. **(a)** Identify six reasons why the taking of alcohol as a way of spending leisure time is condemned. **(6mks)**

   (b) Identify seven leisure activities common to both Christianity and traditional African Communities. **(7mks)**

   (c) Outline Christians criteria for evaluating the use of leisure. **(7mks)**

6. **(a)** Outline six teachings of Jesus on wealth. **(6mks)**

   4. Give seven reasons why it is important to have laws in a country. **(7mks)**

   (c) Identify ways in which the church is helping to reduce the rate of crime in Kenya. **(7mks)**

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FORM 4 END TERM 2 SERIES 1 EXAMS

01/1
ENGLISH
PAPER 1
(FUNCTIONAL SKILLS)
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

- *Write your Name and Admission Number in the spaces provided above.*
- *Answer **ALL** the questions in this question paper*
- *All your answers **MUST** be written in the spaces provided*
-

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
Q1	20	
Q2	10	
Q3	30	
Total Score	**60**	

1. Functional writing

You are the captain of your school. The school has not been performing well in academics. The principal requested you to form a committee to investigate the causes behind the dismal

performance. Write a report of your findings and give recommendations. **(20 marks)**

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2. CLOZE TEST (10 MARKS)

Fill in the gaps with the *most appropriate* word

Global warming is the term used to describe a(1)_____ increase in the average temperature of the Earth's atmosphere and its oceans, a change that is believed to be permanently changing the Earth's (2)_____. There is great debate among many people, and sometimes in the news, (3)_____ whether global warming is real. (4) climate scientists looking at the data and facts agree the planet is warming. While many view the (5)_____ of global warming to be more substantial and more rapidly occurring than others do, the scientific consensus on (6)_____ changes related to global warming is that the average temperature of the Earth has risen between 0.4 ^{o}C and 0.8 ^{o}C over the past 100 years. The increased (7)_____ of carbon dioxide released by burning of fossil fuels, land clearing, agriculture and other human activities are believed to be the (8)_____ sources of the global warming thus has occurred over the past 50 years. (9)_____from intergovernmental panel on climate predicted that global temperatures could increase by 1.4 ^{o}C and 5.8 ^{o}C by the year 2100. (10)_____resulting from global warming may include rising sea levels, increase in occurrence of severe weather events.

3. ORAL SKILLS (30 marks)

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

Do not stand at my grave and weep.
I am not there, I do not sleep.
I am a thousand winds that blow.
I am the diamond glints on snow.
I am the sunlight on ripened grain.
I am the gentle autumn rain.

When you awaken in the morning's hush
I am the swift uplifting rush.
Of quiet birds in circled flight.
I am the soft stars that shine at night.
Do not stand at my grave and cry;
I am not there. I did not die.

i) Describe the rhyme scheme. **{3 marks}**

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ii) If you were to recite the poem, how would you say the last two lines of the poem. **{2 marks}**

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iii) In line two, which words would you stress? Explain why. **{3 marks}**

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b) For each of the following words, write another word that is pronounced the same. **{2marks}**

i) bald

ii) board

c) For each of the following words, underline the silent letters. **{2 marks}**

i) Gourmet

ii) sword

e) Tom was called for an IT position in Coca cola Company. During the interview he appeared nervous. He was unable to answer technical questions and did not know much about the company. After one week he got a letter of regret.

i) What tips of interview preparation would you give him. **{4 marks}**

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b) **Read through the conversation below and answer the questions that follow:**

Kiptuiya: There's still some sexism in football. Why can't the Kenya Football Federation let Akinyi play in the premier League?

Ashok: Oh! Come of it Kiptuiya, the KFF has nothing to do with Akinyi's case. She can't play in the premier league because she doesn't belong to any team in the league, pure and simple!

Oliech: But, excuse me, Ashok. Akinyi doesn't belong to a team because KFF wouldn't let her join one moreover.

Ashok: Just a moment, Oliech. You know quite well that the teams in the premier league are men's teams. How were they going to enroll Akinyi?

Kiptuiya: Fair enough, but that's the point I'm making. Why should the teams be exclusively male. Why can't a super player like Akinyi…….

Ashok: Sorry for the interruption, Kiptuiya, but every sport has its rules, and in football there are no provisions for mixed male and female teams.

Oliech; I thought Gor Mahia Football club wanted to …..

Kiptuiya: Why can't they change the outdated rules? Sorry
Oliech, you were saying something.

Oliech: Well, I was just going to say Gor Mahia had wanted to consider Akinyi's application to join them, but the KFF told them to consult FIFA first.

i) Identify words and phrases that point out instances of interruption in the conversation above **(4 marks)**

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ii) Point out **two** reasons why Ashok decides to interrupt Oliech **(2 marks)**

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iii) Outline **four** important conversational conventions that people should observe when having an informal discussion **(4 marks)**

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c) **Consider the situation below and answer the questions that follow;**

A motivational speaker has been invited to your school during a career day. During the talk you realize that some of your classmates are dosing, a few are passing small notes to one another and others are whispering to their friends.

If you are the speaker and noticed the above behavior, what would you do to recapture the attention of the audience? **(4 marks)**

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NAME……..…….... CLASS……..……

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DATE……..

FORM 4 END TERM 2 SERIES 1 EXAMS

101/2

ENGLISH

PAPER 2

(Comprehension, literary Appreciation and Grammar)
TIME:2 ½HOURS

Instructions

a) All questions in this paper are compulsory.
b) Answer ALL questions in the spaces provided.

For Official use only

Question	Maximum Score	Candidate's Score
1	20	
2	25	
3	20	
4	15	
TOTAL	80	

This paper consists of 9 printed pages.
Students should check the question paper to ensure that all pages are Printed as indicated and that no questions are missing.

1. Read the following passage and answer the questions that follow. (20 mks)

Poor generation Z. Amid a time of cultural tumult, today's teens, inheritors of our future challenges, are ever our cultural curiosity. Every few days another article lending another attempt at cultural anthropology of our wayward Tiktok generation pops up. Combed through

with a needle-toothed comb, dissected under a mega-zoom, and surveyed through X-ray glasses, one wouldn't blame them for feeling a bit, eh, under the microscope.

Our collective observations are but an introductory point for subsequent hand-wringing about a generational apocalypse. And there's a lot to be nervous about, at least if the studies and the articles are to be believed: According to various pieces, Gen-Z's are addicted to social media, with short attention spans and severe screen addictions. They're addicted to the dopamine rush from the click-click-click and **instantaneous gratification**. As such, their sleep schedules are messed up and they're sacrificing their social lives for a near perpetual screen-induced zombie-like addictive paralysis.

Thanks to a 24/7-tech-based existence, Gen-Z's don't hang out with their friends. They aren't forming relationships. And, as such, they're afraid of growing up. They're so depressed they're committing suicide in massive numbers. They're more tolerant photogenically but they're the most fragile ideological generation ever recorded. Burrowed behind the safety of their screens, they feel hopeless about their prospects, and as such are the most politically radical generation on record. They feel **disenfranchised** from society even more than their millennial predecessors, and are less trusting and more fearful. They cling to each other for a sense of moral direction, and reject the lessons of their parents. Having never faced "real" hardship, they have a tendency to make mountains out of molehills with a general inability to distinguish things that are truly important from those they merely wish were important. The list goes on.

Generation Z are the guinea pigs showing us both the opportunities and the pitfalls in our social media-based new world order. They're the first ones whose entire existence has been **awash** in this new reality. Their struggles are easier to put in context once you imagine yourself in a body in which the 24/7 social media dopamine world has never not been the order of the day. While Facebook stresses everybody out, it's made abundantly less destructive on the fibers of one's consciousness when you're old enough to remember a time when you could step away and breathe the fresh air. That isn't an option for the Gen-Z's.

Not only does the eternal social media landscape and rat race for instantaneous approval they eternally face breed competitiveness and insecurity – these are reported on extensively – but, perhaps more importantly, it has cultivated an endless relentlessness of interactivity that almost paradoxically has offered them very little sense of agency, autonomy, or ownership in the world. This is an entirely different kind of public square from what we've known in the past. Reddit, for instance, one of the favorite Gen-Z playgrounds, is amazing, connected, fun, and **egalitarian**. With no barrier to entry, anyone can engage on anything, and the scoring of anyone's opinion is governed only by whether their peers agree with it. It truly is a portal to the world, and it's fun to seek the approval of one's peers. But it doesn't build the tactile confidence that used to derive from taking one's place in a public square that carried with it a higher barrier to entry and a greater burden of consequence. There's nothing quite like waiting

your turn to finally get your moment in the spotlight, putting your reputation on the line, stepping up to the microphone, grabbing the sides of the podium, looking directly into the eyes of your audience, speaking calmly and confidently to them with confidence and gravitas, and owning the room to warm smiles, constructive disagreement, authentic learning, and healthy dialogue.

This new egalitarian ease of the internet has drowned out the processes that used to give people their sense of mission, purpose, and accomplishment in life, and it's made it so the rest of us have no idea who to listen to. When everything is accessible, nothing is, because the kinds of efforts it would take to get noticed in the past no longer offer a value-add. And when everybody has a voice, nobody does, because, well, most voices aren't really worth listening to. When the entire world is easy, quick, egalitarian, and faceless, and when reward comes not from a sense of genuine accomplishment but from instantaneous dopamine-fueled peer approval, it also runs the risk of being soulless and leaving people wandering the wilderness for their sense of personal obligation or practical achievement. It leaves many Gen-Z's feeling like they don't have a voice, and like they can't break in in a more meaningful way. All of the things that are harming their prospects are a natural follow-on.

Questions

1. Why are Gen-Z referred to as a cultural curiosity? **(2mks)**

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2. Is there a need to worry about Gen-Z according to the passage**?** **(3mks)**

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3. Why are Gen-Z referred to as guinea pigs? **(3mks)**

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4. Identify an instance of the use of <u>parenthesis.</u> **(1mk)**

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5. What is the tone of the passage? **(3mks)**

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6. Explain the paradox in the last paragraph? **(2mks)**

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7. In note form, state the effects of technology on Gen-Z's interaction with society. **(3mks)**

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

(e) egalitarian

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(f) disenfranchised

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……

(g) awash

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……

2. Read the excerpt below and then respond to the questions that follow.

"What do you mean?" he asked, suddenly sitting up. "I hope you don't imply that our culture comes second. Do you?

" Not really, my husband," she said ruefully, beating a hasty retreat. " Our culture is everything and it rules our lives."

" Good," he said authoritatively. " Now listen, you must immediately start counselling the girls to Understand their roles as potential wives of the men of Nasila. Prepare them to appreciate and accept their future responsibilities as mothers and home builders.

" I'll do that, my husband," she said quietly.

" One other thing," he said evenly. " I'll ask Simiren to request the young teacher called Parmuat, who is of our clan and therefore a brother to the girls, to find time to teach them a few home truths. After that we shall call enkamuratani to play her part before we give them away.

Those were the words, whose utterance she so dreaded.

And once uttered, she knew, the words instantly because an inviolable edict. Now that he had spoken, the pain was already harrowing and the torment in her heart Unbearable. She was torn between her love for her daughters and her dutiful role of a faithful and obedient wife of Ole Kaelo.

But in her culture there was no room for dissent, especially if the subject was in conformity with the culture. Who would side with her if she were to oppose the cultural rituals?

Her only ally would be the woman the elders of Nasila contemptuously called entangoroi or the wasp. Those who honoured her called her Emakererei, for she was said to have attended Makerere University in Uganda, where she obtained her degree in veterinary science. Mama Milanoi knew her well. Her actual names were Minik ene Nkoitoi. Outside Nasila, she was respected and honoured. At thirty, she was already managing an expansive government sheep ranch reputed to hold hundreds of thousands of sheep, about one hundred kilometers away from Nasila. Under her were hundreds of employees who worked at the ranch.

Questions

5. " I'll ask Simiren to request the young teacher called Parmuat, who is of our clan and therefore a brother to the girls…" mention the clan and the sub clan that Parmuat belongs to**. (2mks)**

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6. "What do you mean?" he asked, suddenly sitting up. "I hope you don't imply that our culture comes second. Do you?" What has triggered this reaction from Ole Kaelo? **(2mks)**

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7. Discuss the significance of the dialogue between Mama Milanoi and Ole Kaelo? **(4mks)**

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8. Identify two people who have influenced Ole Kaelo to initiate his daughters and how**.** **(4mks)**

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9. Ole Kaelo appoints Parmuat to educate the girls about their culture. What is the reaction of each of the daughters**?** **(4mks)**

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10. "Her only ally would be the woman the elders of Nasila contemptuously called entangoroi or the wasp" From elsewhere in the text explain why Emakererei was hated. **(2mks)**

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11. Other than dialogue, comment on any other style used in the excerpt. **(2mks)**

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12. Discuss any social concern evident in this excerpt. **(2mks)**

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13. Comment on the character of Mama Milanoi as brought out in the excerpt. **(2mks)**

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14. " I'll do that, my husband," she said quietly. (rewrite in reported speech) **(1mk)**

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3. Read the following poem and answer the questions that follow 20mks

MY FATHER BEGAN AS A GOD

My father began as a god,
full of heroic tales
of days when he was young.
His laws were as immutable
as if brought down from Sinai,
which indeed he thought they were.

He fearlessly lifted me to heaven
by a mere swing to his shoulder,
and made me a godling
by seating me astride
our milch-cow's back, and, too
upon the great white gobbler
of which others went in constant fear.

Strange then how he shrank and shrank
until by my time of adolescence
he had become a foolish small old man
with silly and outmoded views
of life and of morality.

Stranger still
that as I became older
his faults and his intolerances
scaled away into the past,
revealing virtues
such as honesty, generosity, integrity.

Strangest of all
how the deeper he **recedes** into the grave
the more I see myself
as just one more of all the little men

who creep through life
no knee-high to this long-dead god.

(By Ian Mudie)

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

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b)What is the poem about? **(4mks)**

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c)Comment on the suitability of the title of the poem. **(2mks)**

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d)What is the attitude of the persona towards his father? **(3mks)**

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e)Identify any three stylistic devices used in the poem. **(6mks)**

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f)Why do you think the persona feels that his father has shrunk? **(2mks)**

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g) Give the antonym of the word recedes as used in the poem. **(1mk)**

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4. Grammar (15mks)

1. Rewrite the following sentences according to the instructions given after each. Do not change the meaning. **(3mks)**

i) Sharleen said the young girls had stolen her macaroons. (Rewrite beginning with: Sharleen…)

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ii) It required a lot of planning and great courage to introduce free primary education in Kenya. (Begin: The…)

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……

iii) She wondered what her daughters knew about F.G.M. (identify by underlining the noun clause in the given sentence)

2. Filling in the blanks with the correct form of the word given in bracket. (3mks)

(i) Women in most societies strive to fight against **…….** cultures. (patriarchy)

(ii) The issue was **…….** by prejudices. (devil)

(iii) She ran into an old **…….** at the bank. (acquaint)

3. Fill in the blank spaces using the most appropriate pronoun. (3mks)

i. Between you and **……** who is wiser. (1, me)

ii. It was**……** that reported the matter to the area chief. (her, she)

iii. The teacher sent James and **……** to the library. (me,1)

4. Complete the following sentences with the most appropriate phrase to complete the idiom. (3mks)

i) Getting fired turned out to be a blessing **……...……...**

ii) After some reflection, he decided to bite**……...……**

iii)I go out for walks once**……...**

5. **Fill in the blank spaces in each of the following sentences with the most appropriate preposition. (3mks)**

   (i) The president will preside **…….** the function.

   (ii) The exercise was conducted in accordance **……**the regulations.

   (iii) inoculation gives protection **…….** infection.

NAME……..…….... CLASS……..……

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DATE……..

FORM 4 END TERM 2 SERIES 1 EXAMS

ENGLISH

PAPER 3

(Creative composition and essays based on set texts)

Instructions

i) *Answer three questions only.*

ii) *Question one and two are compulsory*

iii) *In question three choose only one of the optional texts you have prepared on.*

iv) *Where a candidate presents work on more than one optional text, only the first one to appear will be marked*

v) *Each of your essays must not exceed 450 words*

vi) *All answers should be written in the answer booklet provided*

For Official use only

Question	Maximum Score	Candidate's Score
1	20	
2	20	
3	20	
TOTAL	60	

This paper consists of 2 printed pages.
Students should check the question paper to ensure that all pages are
Printed as indicated and that no questions are missing.

1. Imaginative Composition. (20 MARKS)

Either

a) Write a composition beginning with the following statement:

"As I got closer to my home that night, I realized that the commotion and noise I had heard on getting off the bus came from my elder brother's house.

b) Write a composition explaining the role of student leaders in a secondary schools.

2. THE COMPULSORY SET TEXT

Henrik Ibsen*: A DOLL'S HOUSE* (20 MARKS).

"Appearance can be misleading." Write an essay to show the validity of this statement drawing illustrations *from Henrik Ibsen's A Doll's House.*

3. OPTIONAL TEXTS

a) Memories we lost and other Stories by Chris Wanjala

Superstition can never solve a problem in life. Justify this statement basing your illustrations using Memories We lost by

b) Inheritance by David Mulwa

Betrayal by leaders makes subjects disillusioned. Discuss this statement.

The pearl by John Steinbeck

c)Social stratification in the society breeds inequality. Write a composition to show the truthfulness of this statement.

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DATE……..

FORM 4 END TERM 2 SERIES 1 EXAMS

GEOGRAPHY

PAPER 312/1.

Time 2.$^{3}/_{4}$Hours.***Instructions to candidates.***

This paper consists of two sections: A and B.

*Answer all questions in section A. In section B, answer question **6** and any other **two**. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing. Candidates should answer the questions in English.*

Section A: Answer all questions in this section. 25 marks.

For Official use only

Section A.

Question	1	2	3	4	5	Total
Score						

Section B

Question	6	7	8	9	10	Total
Score						

Total A	
Total B	
Total	

Section. A.

1. (a). What is faulting? **(2 marks)**

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(b). Name **three** features formed through faulting. (3 marks)

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2. (a). Differentiate between the processes of the formation of plutonic rocks and volcanic rocks. (2 marks)

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(b). For each of the following sedimentary rocks, name the resultant rock that forms after metamorphism. (3 marks).

(i) Sandstone**.** **…….**

(ii) Limestone. **……..**

(iii) Clay. **……**

3. (a) Name **two** types of soil according to texture. (2 marks)

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(b). Give **three** factors that determine the color of soil. (3 marks)

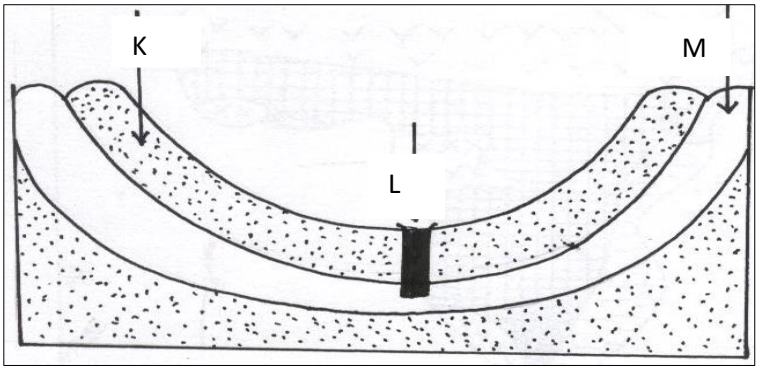
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4.a) State **two** ways in which springs are formed. (2marks)

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b) The diagram below represents an artesian basin. Name the parts marked. K.L.M.

(3marks)



K……

L……

M……..

5. a). Differentiate between the long profile and cross profile of a river. (2 marks)

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b). State **three** factors that influence river discharge. (3 marks)

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Section B. Answer Question Six and any other two.

Study the Map of **Taita Hills 1: 50,000 Kenya** provided to answer the questions that follow.

6. (a) (i). State **two** methods used to show relief in the extract map of Taita Hills.

(2 marks).

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(ii). Identify **three** man made features found in the grid square 4127. **(3 marks)**

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(**b). (i)** What is the highest point of the area covered by the map. Give your answer in centimeters**.** **(2 marks).**

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(ii). Find the bearing of the peak of Mwatunga hill in grid square 3214 from water tank at grid square 2619**.** **(2 marks)**

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(iii) What is the Teita Sisal Estates land registration number**.** **(1 mark).**

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c). Draw a rectangle 16cm by 12 cm to represent the area enclosed by Easting 24 and 40 and Northing 20 and 30**.** **(1 mark).**

On the rectangle mark and name the following features.

1. Mgange Hills
2. All weather road bound surface.
3. Ronge forest
4. A rock out crop
5. River Ruhia**.** **(5 marks.)**

(provide a graph paper)

d)(i) Describe the distribution of settlements in the area covered by the Map**. (5 marks)**

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(ii). Citing evidence from the map give **two** economic activities carried out in the area covered by the map other than sisal farming. **(4 marks).**

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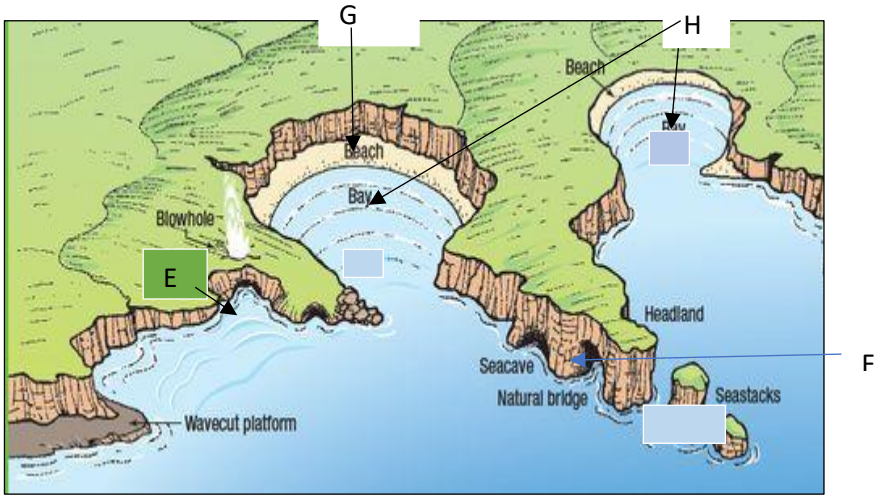
7.(a). (i). State **two** conditions for the submergence of the coast**.** **(2 marks)**

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(ii). Name two features that form as a result of submergence of the coast. **(2 marks).**

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(b). The diagram below represents coastal features. Use it to answer the questions that follow.



5. Name the parts marked E, F, G, H. **(4 marks)**

E……

F ……..

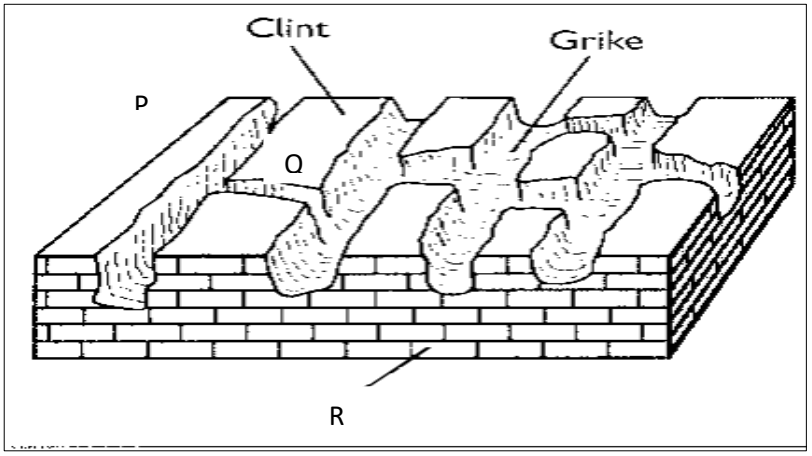
G……..

H…….

(ii). Explain the formation of Wave cut platform. **(6 marks)**

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The diagram below represents a limestone land scape area. Use it to answer the questions that follow.



c) (i). Name the features marked P, Q, and R**.** **(3 marks)**

P……..

Q…….

R. …….

(ii). Describe the how swallow hole is formed in limestone area**.** **(4 marks)**

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d) Students of Sharp Rise secondary school took a field study in a Karst scenery area.

(i) State **four** ways the students would have evaded the problems they encountered while they were in the field**.** **(4 marks)**

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8.a) Explain how the following factors influence climate.

i. Latitudes. **(2marks)**

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(ii). Distance from the sea. **(2marks)**

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b) The table below shows temperatures reading at a weather station.

Day	MON.	TUE.	WED.	THUR.	FRI.	SAT.	SUN
Max ^{o}c	26	25	26	24	27	27	24
Min. ^{o}c	15	17	17	13	19	18	17

Calculate:

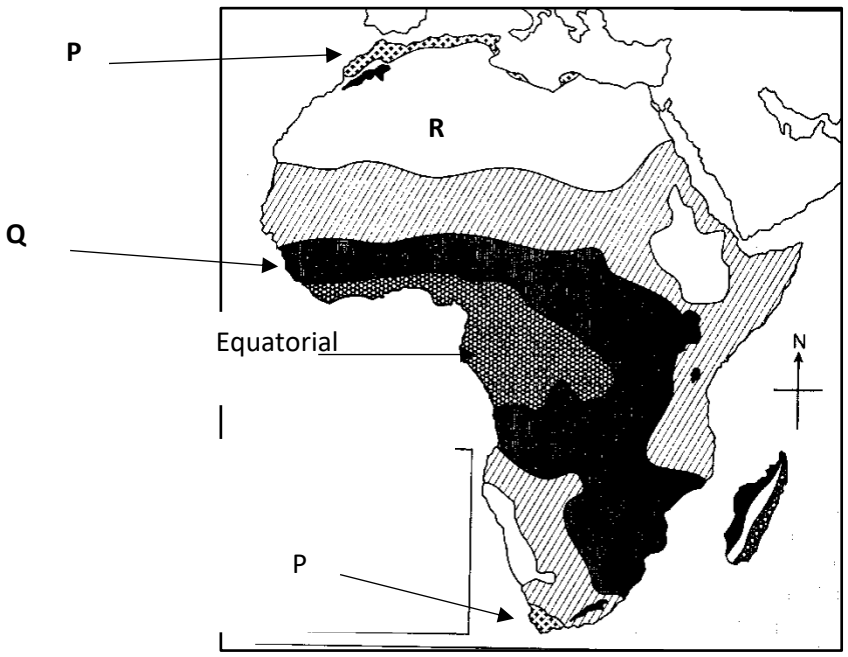
(i) The daily range of temperature for Monday. **(2marks)**

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(ii) The mean temperature for Friday. **(2marks)**

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c) Study the climate map of Africa below and answer the questions that follow.



(i) Name the climatic regions marked P, Q and R. **(3marks)**

P……

Q……

R……

(ii) Describe the characteristics of equatorial climate. **(8marks)**

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(iv) Explain **three** ways in which vegetation adapts to the climatic region marked R. **(6marks)**

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9. a) (i) What is piedmont glacier? **(2mark)**

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(ii) State **two** conditions that favour formation of glaciers. **(2marks)**

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b) Explain the following ways of ice movement.

(i) Basal slip. **(2marks)**

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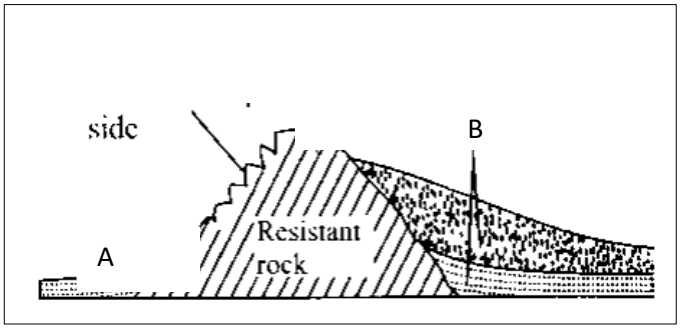
(ii) Plastic flowage. **(2marks)**

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c) Explain **two** factors that determine the speed of ice movement. **(4marks)**

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d) The feature below is from a glaciated landscape. Use it to answer the following question.



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

A……..

B……..

(ii) State **THREE** characteristics of the feature above. **(3marks)**

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(iii) Give **three** features of glacial deposition. **(3marks)**

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(iv) State **five** positive effects of glaciation. (5marks)

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10. (a) (i) Name **three** conditions necessary for wind deposition to take place in hot desert.

(3marks)

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(ii) State three mechanisms of wind transportation in hot deserts. **(3marks)**

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(b) With the aid of labelled diagrams **describe how** the following features are formed.

2. Rock pedestal. **(6marks)**

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3. Zeugen. **(6marks)**

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(c) You are supposed to carry out a field study of a semi- arid area in Kenya:

i. Name **two** Counties which you would visit for your study**.** **(2marks)**

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ii. **What** information would you collect through observation that would indicate that the area is turning into a desert? **(2marks)**

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iii. **State three** measures you would recommend to combat desertification in the area. **(3marks)**

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NAME…….…….. CLASS……..……

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FORM 4 END TERM 2 SERIES 1 EXAMS

FORM FOUR

GEOGRAPHY

PAPER 312/2.

Time 2.$^{3}/_{4}$Hours.

Instructions to candidates.

This paper consists of two sections: A and B.

Answer all questions in section A. In section B, answer question 6 and any other two from section B. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing. Candidates should answer the questions in English.

Section A: Answer all questions in this section. 25 marks.

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Section A.

Question	1	2	3	4	5	Total
Score						

Section B

Question	6	7	8	9	10	Total
Score						

Total A	
Total B	

Total	

1.(a). Give **three** reasons why it is important to study geography. **(3 marks).**

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

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2.(a) Give **two** differences in the functions of New York and Nairobi cities. **(4marks)**

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(b) State one type of human settlement**.** **(1 mark)**

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3. ai). Name **two** exotic softwood trees grown in Kenya. **(2marks)**

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ii) Distinguish between forest management and forest conservation. **(2marks)**

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4. a) State **three** economic factors that influence Agriculture. **(3marks).**

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b). Give **two** characteristics of intensive subsistence Agriculture. **(2 marks).**

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5. a). Name **two** types of solid waste. **(2marks)**

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b). State **three** environmental hazards that affect western Kenya region.

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Section B. Answer Question 6 and any other two.

6. Use the following table to answer the questions that follow.

Value of export crops in Kenya (Kenya shillings in Millions)

Crop	**1999**
Tea	33065
Coffee	12029
Horticulture	17641
Tobacco and products	1554
TOTAL	**64,289**

(a) i) Using a scale of 1 cm to represent Kenya shillings. 5 million, draw a divided rectangle for Kenya's export in 1999. **(9 marks)**

Use a graph paper.

5. Give the meaning of balance of payments. **(1mark)**

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……

6. Balance of trade. **(1mark)**

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5. State **two** objectives of (ECOWAS) Economic Community of West African States. **(2marks)**

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6. Explain **four** ways in which Kenya benefits by being a member of COMESA. **(8marks)**

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(d). State **four** problems associated with international trade. **(4marks)**

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7 (a). (i). What is an Industry? **(2 marks).**

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(ii). Define the term industrial conurbation**.** **(2 marks).**

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(iii) Name **two** major industrial conurbation in the world. **(2 marks).**

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b). Give **three** reasons why some industries are located near the markets of their produce.

(3 marks)

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(c). Explain **three** factors that favored the growth of electronics industry in Japan. **(6 marks)**

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(d). State **five** ways in which the government of Kenya encourage Jua Kali industry**. (5 marks)**

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(e). Students of Faulu Tena Secondary school were planning to carry out a field work in a Jua Kali industries**.**

(i) A part from *Wood carving* state **three other** types of Jua kali industries they intended to visit. **(3 marks).**

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(ii). Identify **two** hinderances the students realized as a major challenge facing the Jua Kali artisans in the industries they visited. **(2 marks)**

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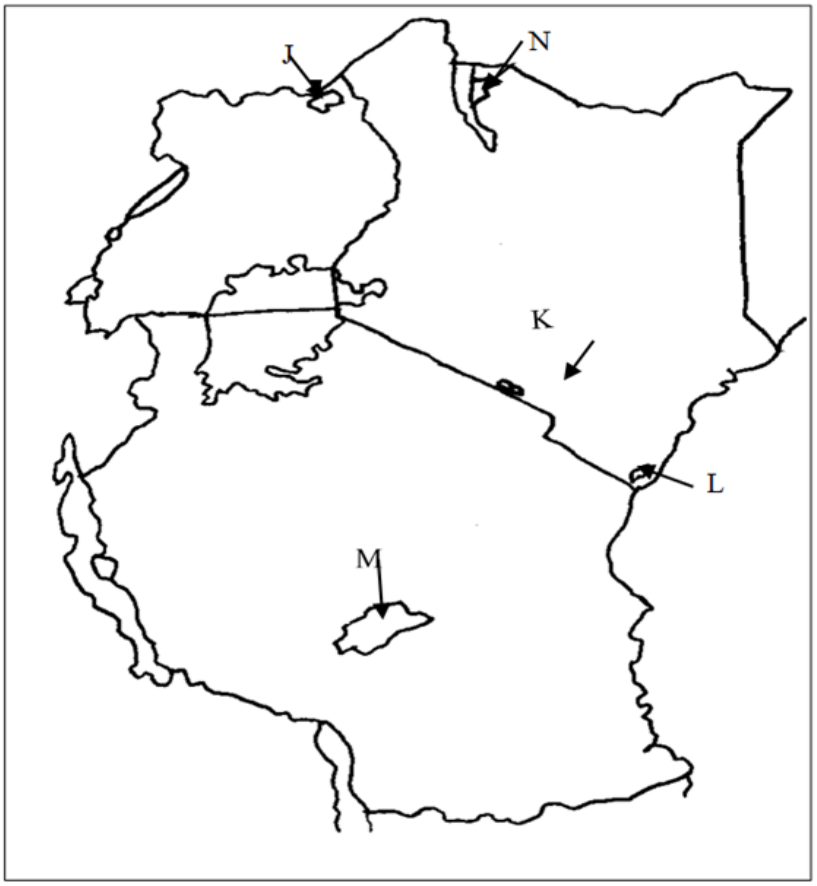
8.(a). State **four** effects of human encroachment into wildlife habitats. **(4 marks)**

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(b). Explain **four** factors why Switzerland receives more visitors than Kenya**.** **(8 marks).**

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(c). Study the map of East Africa Provided to answer the questions that follow.



(i). Name the National Parks marked J, K, M and N. **(4 marks)**

J……..
K……..
M……..
N……..

(ii). Name the Game Reserve marked L**.** **(1 mark)**

L……

(d). Explain **four** measures that Kenya should take in order to attract more tourists. **(8 marks)**

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9. (a) (i) Name **two** sources of energy which are exploited in Kenya**.** **(2 marks)**

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(ii). State **three** reasons why coal reserves in Kenya are not exploited. **(3 marks)**

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b (i). Give **four** disadvantages of using wood fuel as a source of energy in Kenya. **(4 marks)**

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(ii). Apart from the seven Forks project in Kenya name other **three** projects where hydroelectric power is being produced. **(3 marks)**

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c). Explain **four** effects that the increase in oil prices had on the economy of Kenya **(8 marks)**

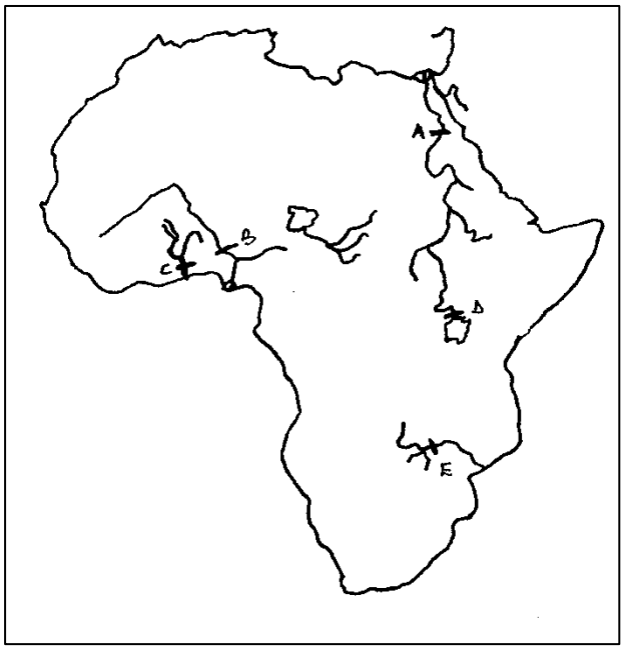
d) Study the Map of Africa provided to answer the question that follows.

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Name the hydroelectric power stations marked **A, B, C, D** and **E**. (**5 marks)**



A…….

B……

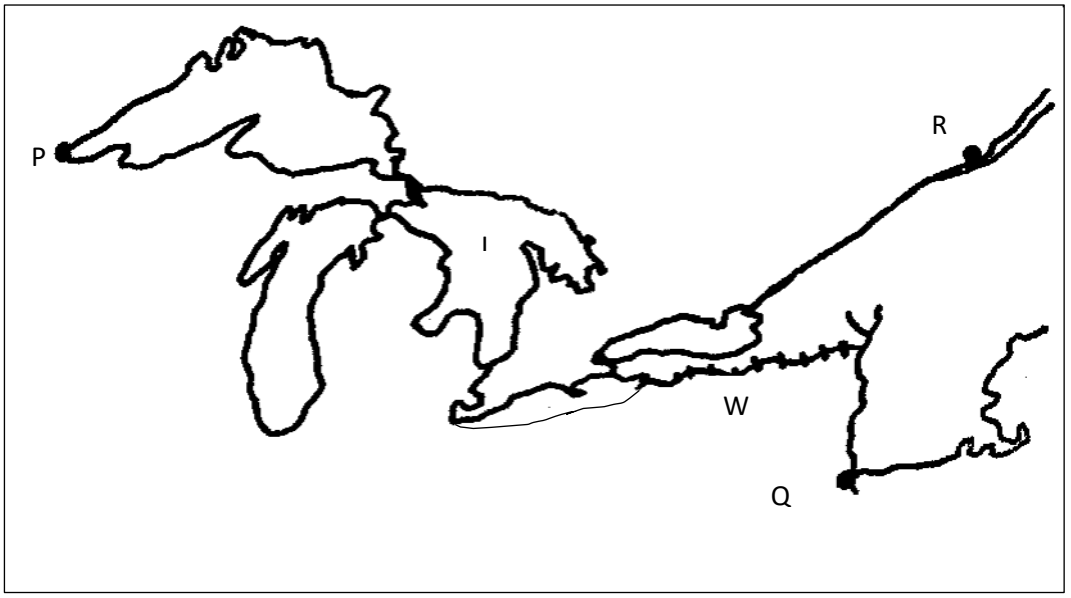
C……....

D…….

E…….

5 x 1 = 5 marks

10. (a). Below is a sketch map showing part of the Great Lakes and St. Lawrence Sea way. Use it to answer the questions that follow.



(i) Name the ports marked

P……..

Q ……

R. …… **(3 marks)**

(ii). The Lake marked **J. …….** **(1 mark)**

(iii). The Canal Marked **W…….** **(1 mark)**

(c) Explain **three** ways in which the great lakes and the St. Lawrence seaway has contributed to the economy of United States and Canada**.** **(6 marks)**

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d(i) Name **four** products transported along the St. Lawrence Sea way. **(4 marks)**

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(ii). Name **two** major canals in Africa. **(2 marks)**

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e(i). What are the problems facing air transport in Kenya**?** **(5 marks.)**

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(ii). State three conditions of roads in Kenya that may lead to motor vehicle accidents.

(3 marks)

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NAME……..…….... CLASS……..……

ADM NO……SIGNATURE……

DATE……

FORM 4 END TERM 2 SERIES 1 EXAMS

HISTORY AND GOVERNMENT

PAPER 1

TIME: 2 ½ Hours

Form Four

Instructions to the candidate

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

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

(iii) *Answers to all the questions must be written in the* ***answer booklet*** *provided*

(iv) *This paper consists of* ***three printed pages****. Candidates should check the question paper to ascertain that* ***all the pages are printed as indicated****, and that no questions are missing*

(v) *Candidates should answer all the questions in* ***English***

Section A (25 marks)

Answer all questions in this section in the answer booklet provided

1. Identify the **main** method used by anthropologists when gathering data on Kenyan communities **(1 mark)**
2. What was the **main** significance of circumcision in some traditional African societies in Kenya? **(1 mark)**
3. Name **one** community in Kenya that belongs to the River- Lake Nilotes **(1 mark)**

4. Identify the town that was established by missionaries in Kenya as a centre for freed slaves during the 19th century**. (1 mark)**
5. Name **two** catholic missionary societies that operated in Kenya in the 19th century **(2 marks)**
6. Identify **two** Kenyan communities that portrayed mixed reaction towards British invasion. **(2 marks)**
7. Name the Nandi Orkoiyot who led the community in resisting imposition of British rule **(1 mark)**
8. What was the **main** method used by Thomas Joseph Mboya in the struggle to protect African rights during the colonial period **(1 mark)**
9. Give **two** reasons why the colonial government brought in Indian coolies for the construction of the Uganda railway**. (2 marks)**
10. Identify the **main** feature of the system of education in Kenya during the colonial period. **(1 mark)**
11. Give the title of the Sessional Paper no.10 of 1965 where African Socialism was articulated as a national philosophy **(1 mark)**
12. Identify **two** types of cases the Judiciary deals with in Kenya. **(2 marks)**
13. State **two** functions of a county Governor in Kenya **(2 marks)**
14. Identify the constitutional account into which revenues raised by the county government are deposited **(1 mark)**
15. State **two** components of the cabinet in Kenya **(2 marks)**
16. Name **two** organs of national security in Kenya **(2marks)**
17. State **two** results of industrial development in Kenya since independence **(2 marks)**

Section B (45 marks)

Answer three questions from this section in the answer booklet provided

18.(a) Mention **five** benefits of Portuguese rule along the East Coast of Africa **(5 marks)**
(b) Describe **five** effects of the long distance trade on the people of Kenya. **(10 marks)**

19.(a) State **five** terms of the Devonshire White Paper of 1923 **(5 marks)**
(b) Describe **five** ways used by the colonial government to secure labour for the settlers in Kenya. **(5 marks)**

20.(a) Give **five** challenges that were experienced by the Kenya African Union (KAU) during the struggle for independence. (5 marks)
(b) Explain **five** constitutional changes which led Kenya to independence between 1954 and 1963. **(10 marks)**

21.(a) State **five** challenges facing land policies in Kenya since independence **(5 marks)**
(b) Explain **five** social effects of national philosophies on development in Kenya **(10mks)**

Section C (30 marks)

Answer two questions from this section in the answer booklet provided

22.(a) Give **five** values of a good Kenyan citizen **(12 marks)**
(b). Explain **five** rights contained in the United Nations Charter on Human Rights which are guaranteed to Kenyans **(10 marks)**

23.(a) State **five** reasons that can lead to the disqualification of a person as a candidate for parliamentary elections in Kenya **(5 marks)**
(b) Describe **five** functions of the President of the Republic of Kenya. **(10 marks)**

24(a) State **three** objectives of devolving the government of Kenya. **(3 marks)**

(b) Explain **six** reasons why it is important for the government to formulate the national budget annually. **(12 marks)**

NAME……..…….. CLASS……..……

ADM NO……SIGNATURE……

DATE……..

FORM 4 END TERM 2 SERIES 1 EXAMS

HISTORY AND GOVERNMENT

PAPER 2

TIME: 2 ½ Hours

Instructions to the candidates

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

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

(iii) *Answers to all the questions must be written in the **answer booklet** provided*

(iv) *This paper consists of **three printed pages**. Candidates should check the question paper to ascertain that **all the pages are printed as indicated**, and that no questions are missing*

(v) *Candidates should answer all the questions in **English***

Section A (25 marks)

Answer all questions in this section in the answer booklet provided

1. Identify **two** objects used by archeologists to reconstruct the activities of the people who lived in pre-historic times. **(2 marks)**
2. State **two** economic activities of early man during the Stone Age period. **(2marks)**
3. Name **one** town that developed as a result of early agriculture in Egypt. **(1mark)**
4. Which country pioneered space exploration? (**1mark)**
6. State **two** types of signals used in early communication. **2marks**
7. Give **one** symbol of unity in the Shona Kingdom in the 19th century **(1 mark)**
8. List **two** traces of artifacts that indicate that Meroe was an ancient urban center. **(2marks)**
9. Identify **two** countries that were colonized by Britain in order to protect thewaters of the Nile.**(2marks)**
10. Name the peace treaty signed between Samori Toure and the French in 1886. **(1 mark)**

11. State **two** reasons why Kabaka Mutesa welcomed Christian missionaries to Buganda. **(2 marks)**

12. Highlight **one** principle of African socialism as laid down in the Arusha declaration of 1967**. (1 mark)**

13. Name the political party that led Ghana to independence from Britain in 1957. **(1 mark)**

14. Name **two** nations that were declared as mandated territories after the Versailles Peace Treaty of 1919. **(2 marks)**

15. Which policy was adopted by the Allied powers in order to avoid another world war **(1 mark)**

16. Identify **one** superpower that was involved in the Cold War **(1 mark)**

17. State **two** characteristics of the Commonwealth member states **(2 marks)**

18. Identify the **main** factor that led to the failure of the French policy of Assimilation in Senegal. **(1 mark**)

Section B (45 marks)

Answer three questions from this section in the answer booklet provided

19. (a) Give **three** factors that favoured early agriculture in Mesopotamia **(3 marks)**

(b). Explain **six** cultural practices of early man during the late Stone Age.

(12 marks)

20.(a) Name **three** kingdoms in West Africa that contributed to the development of Tran Saharan trade**. (3 marks)**

(b) Explain **six** factors that led to the decline of the Trans-Atlantic Trade

(12 marks)

a) (a)State **five** characteristics of the industrial revolution in Europe **(5 marks)**

(b) Explain **five** reasons why Britain pioneered the industrial revolution. **(10 marks)**

4. (a) State **five** terms of the Berlin Conference for 1884- 1885 **(5 marks)**

(b) Explain **five** negative effects of European partition of Africa **(10 marks)**

Section C (30 marks)

Answer two questions from this section in the answer booklet provided

5. (a) Give **five** reasons why Pan African Movement was not established in African continent before 1945 **(5 marks)**

(b) Explain **five** challenges facing the New East African Community since its inception in 2001. **(10 marks)**

6. (a) Give **three** political changes introduced by Mobutu Sese Seko which led to dictatorship in the Democratic Republic of Congo **(3 marks)**

(b). Explain **six** economic challenges which Tanzania has faced since independence**(12 marks)**

7. (a) Identify **five** organs of the United Nations. **(5 marks)**

(b) Discuss **five** socio-economic achievements of the United Nations **(10marks**)

JINA…….…….. KIDATO…...…….……

NAMBARI YA USAJILI……SAHIHI…….……

TAREHE……

FORM 4 END TERM 2 SERIES 1 EXAMS

KISWAHILI
KARATASI 1
KIDATO CHA NNE
MUDA: $1\frac{3}{4}$

JARIBIO LA JULAI 2019 KIDATO CHA NNE.

MAAGIZO.

- ***a. Andika insha mbili. Insha ya kwanza ni ya lazima.***
- ***b. Kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.***
- ***c. Kila insha ina alama ishirini.***
- ***d. Kila insha isipungue maneno 400***
- ***e. Kila insha lazima iandikwe kwa lugha ya Kiswahili.***
- ***f. Insha zote sharti ziandikwe katika kijitabu cha majibu ulichopewa***
- g. ***Watahiniwa ni lazima waangalie kama kurasa zote za karatasi hii zimepigwa chapa sawasawa nakuwa maswali yote yamo***

1. Lazima

Wewe ni miongoni mwa wanahabari wanaomhoji Inspekta Jenerali wa Polisi katika ofisi yake. Andika mahojiano yenu juu ya hatua ambazo zimechukuliwa kuimarisha viwango vya usalama nchini.

2. Jadili umuhimu wa michezo kwa wanafunzi wa shule za sekondari nchini Kenya.

3. Andika insha itakayothibitisha ukweli wa methali hii.

Mwenda tezi na omo marejeo ni ngamani.

4. Andika kisa kitakachomalizikia kwa maneno haya: ... ilinichukua muda mrefu mno kuyaamini yaliyonifika.

JINA…….…….. KIDATO…..…….……

NAMBARI YA USAJILI……SAHIHI…….……

TAREHE……

FORM 4 END TERM 2 SERIES 1 EXAMS

KISWAHILI LUGHA

KARATASI YA PILI

MUDA: SAA 2 ½

JARIBIO LA KIDATO CHA NNE

Maagizo

(a) Andika jina lako na nambari yako ya mtihani katika nafasi ulizoachiwa hapo juu.
(b) Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.
(c) Jibu maswali yote.
(d) Majibu yako yote yaandikwe katika nafasi ulizoachiwa katika kijitabu hiki cha maswali.
(e) Majibu yote lazima yaandikwe kwa lugha ya Kiswahili.
(f) Usitoe ukurasa wowote kutoka kwenye kijitabu hiki.
(g) Karatasi hii ina kurasa 12 zilizopigwa chapa.
(h) Watahiniwa ni lazima wahakikishe kwamba kurasa zote za karatasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo.

Kwa matumizi ya mtahini pekee.

Swali	Upeo	Alama
1	15	
2	15	
3	40	
4	10	
Jumla	80	

1. **UFAHAMU:**(Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali.

Meli alipokivuka kizingiti cha lango la shule ya kitaifa ya Tungambele alikuwa na azma ya kusoma kwa bidii ili kuinukia kuwa kijana wa kutegemewa na jamii yake. Alikuwa kalelewa katika familia yenye pato wastani. Akasoma kwa juhudi za wazazi wake hadi darasa la nane alipokwangura alama za kumwezesha kujiunga na shule hii ya kifahari. Meli alijua kwamba alikuwa mwanagenzi, si katika masomo ya shule ya upili tu, bali pia katika maisha ya jijini ambamo shule hii ilipatikana. Kwa kweli hii ndiyo ilikuwa mara yake ya kwanza kutia guu kwenye jiji hili ambalo habari zake akizisoma, ama katika magazeti machache yaliyowahi kufika kijijini, au kupitia somo la Elimujamii. Hata hivyo, Meli hakuwa mtu wa kuogopa au kunywea machoni mwa changamoto. Alijiambia kwamba kwa vyovyote vile atapambana na maisha haya mapya.

Saa mbili kamili asubuhi ilimpata Meli kapiga foleni katika afisi ya kuwasajili wanafunzi wageni. Wasiwasi wa aina fulani ulianza kumnyemelea alipotazama hapa na pale bila kuona dalili ya mja yeyote aliyemfahamu. Alijihisi kama yule kuku mgeni ambaye mwalimu wake alishinda kuwaambia kuwa hakosi kamba mguuni. Hata hivyo aliupiga moyo wake konde na kujiambia kuwa kuja kwake hapa kulitokana na juhudi zake mwenyewe na katu hatauruhusu ugeni wa mazingira kuifisha ari yake ya masomo.

Usajili ulikamilika, naye Meli na wenzake wakajitosa katika ushindani wa kimasomo jinsi waogeleaji wajitumbukizapo kidimbwini wakapiga mbizi, baadhi wakiambulia ushindi na wengine wakifedheheka kwa kushindwa. Meli na wenzake walibainikiwa kwamba wote walikuwa mabingwa kutoka majimbo na wilaya zao. Ilimbidi kila mmoja wao kujikakamua zaidi ili kuelea katika bahari hii ya ushindani. Muhula wa kwanza ulishuhudia kishindo cha Meli kubwagwa chini na majabali wenzake. Alijipata miongoni mwa wanafunzi kumi wa mwisho; au kama alivyozoea **kuwatania** wenzake katika shule ya msingi, “wanafunzi kumi bora kuanzia mwisho”! Hili lilimwatua moyo Meli na kumfanya kutahayari. Alifika kwao amejiinamia kama kondoo aliyeumia malishoni. Akawataka wazazi wake wambadilishie shule lakini wakakataa.

Muhula wa pili na wa tatu mambo yalikuwa yaleyale. Meli akahisi kama askarijeshi aliyeshindwa kabisa kutambua mbinu za kuwavizia maadui. Akaona kwamba njia ya pekee ni kujiunga na wenzake kama yeye katika vitendo vya utundu kama vile kuvuruga masomo kwa kupiga kelele darasani, kupiga soga bwenini na hata kuvuta sigara. Mwanzoni alichukia vitendo hivi lakini alimeza mrututu akisema kwamba ndiyo njia ya pekee ya **kujipurukusha** na aibu. Wazazi wa Meli hawakusita kutambua mabadiliko katika hulka ya mwanao. Wakajaribu kumshika sikio nyumbani lakini akawa hasikii la mwadhini wala la mteka maji msikitini. Wakawahusisha wataalamu wa ushauri nasaha ambao waliwaambia kuwa Meli hakuwa na tatizo lolote la kuyadumu masomo. Kile alichokosa ni kujiamini tu.

Wazazi wa Meli waliona kuwa ni muhimu kuwahusisha walimu katika kutatua tatizo la mwanao. Mwanzo wa muhula wa pili uliwapata wazazi hawa afisini mwa naibu wa mwalimu mkuu. Mazungumzo kati ya wazazi, naibu wa mwalimu mkuu na mwalimu wa darasa la Meli yalidhihirisha kwamba walimu walikuwa wamemuasa Meli kuhusu kujiingiza katika makundi yasiyomfaidi lakini rai zao ziliingia katika masikio yaliyotiwa nta. Aliyopenda Zaidi Meli ni shughuli zilizomtoa nje ya shule kama vile tamasha za mziki, ukariri wa mashairi na drama. Mazungumzo yalibainisha kwamba Meli alihitaji ushauri na uelekezaji Zaidi kutoka kwa mtaalamu wa nasaha pale shuleni.

Meli alianza vikao na mtaalamu huyu ambaye pia alimpendekezea Meli ushauri zaidi kutoka kwa washauri marika. Hili lilimchangamsha zaidi Meli kwani aliwaona hawa kama wenzake waliojua changamoto zake. Juhudi za mtaalamu wa nasaha na washauri marika zilifua dafu. Mwisho wa kidato cha pili ulishuhudia mabadiliko makuu katika hulka na utendaji kimasomo wa Meli. Aliukata kabisa uhusiano wake na marafiki waliompotosha na kuanza kuandamana na wanafunzi waliotia juhudi masomoni. Polepole alama zake ziliimarika. Matokeo ya mtihani wa kidato cha nne yalimweka kwenye safu ya wanafunzi bora zaidi nchini.

i. "Wanafunzi wawapo shuleni hukumbana na changamoto nyingi". Thibitisha ukweli wa kauli hii kwa kurejelea hoja <u>sita</u> kutoka kwenye taarifa. **.(alama 6)**

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ii. Eleza mchango wa washikadau mbalimbali katika kumsaidia Meli kupata ufanisi masomoni.
(alama 4)

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iii. Bainisha mbinu **tatu** za lugha ambazo msimulizi anatumia katika kuwasilisha ujumbe wake katika kifungu. **(alama 3)**

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iv. i. Andika kisawe cha '**kijipurukusha'** kwa mujibu wa taarifa **(alama 1)**

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ii. Andika maana ya '**kuwatania'** kulingana na taarifa. **(alama 1)**

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2 UFUPISHO: (Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali.

Mfumo wa elimu nchini unatilia mkazo mafunzo mengine ambayo, japo yamo nje ya masomo ya kawaida, yanahusiana na kwenda sambamba na masomo hayo ya kawaida. Vyama vya wanafunzi shuleni vinachangia pakubwa kupitisha mafunzo haya ya ziada.

Vyama vya wanafunzi hutofautiana kulingana na majukumu. Mathalani, vipo vyama vya kidini, vya kitaaluma na vya michezo. Pia, kuna vyama vya kijamii kama vile Chama cha kupambana na matumizi mabaya ya dawa na vya kiuchumi kama vile chama cha Wakulima Chipukizi.

Inadhihirika kwamba vyama vya wanafunzi <u>vina manufaa ya kuhusudiwa</u>. Hii ndiyo sababu shuleni, kila mwanafunzi anahimizwa kujiunga na angaa vyama viwili. Vyama vya wanafunzi huwasaidia kukuza vipawa na kuimarisha stadi za kujieleza. Haya hufikiwa kupitia kwa shughuli za vyama kama vile ukariri wa mashairi mijadala, utegaji na uteguaji wa vitendawili, chemsha bongo na ulumbi. Aidha, vyama hivi huhimiza utangamano miongoni mwa

wanachama kwani wao hujiona kuwa watu wenye mwelekeo mmoja. Vilevile utangamano wa kitaifa na kimataifa hujengeka.

Mwanafunzi ambaye amejiunga na vyama vya wanafunzi huweza kukabiliana na changamoto za maisha kuliko yule ambaye hajawahi kujiunga na chama chochote. Katika vyama hivi, wanafunzi hufunzana mikakati na maarifa ya kutatua matatizo na mbinu za kuepuka mitego ya ujana. Kupitia kwa ushauri wa marika kwa mfano, mwanafunzi hushauriwa kuhusu masuala kama vile uteuzi wa marafiki, kuratibu muda, kujikubali na kuwakubali wenzake.

Halikadhalika, mwanafunzi hujifunza maadili ya kijamii na kidini. Kupitia kwa vyama vya kidini na vinginevyo, yeye hujifunza kujistahi na kuwa na stahamala ya kidini, kiitikadi na kikabila. Kadhalika, majukumu ambayo mwanafunzi huenda akapewa hupalilia uwajibikaji, uaminifu na kipawa cha uongozi. Hata anapohitimu masomo yake, mwanafunzi huyu huendeleza sifa hizi.

Vijana wana nafasi kubwa katika kukabiliana na maovu ya kijamii kwani wao ndio wengi Zaidi. Kupitia kwa vyama hivi, wanafunzi wanaweza kuwahamasisha wenza dhidi ya tabia hasi kama vile kushiriki mapenzi kiholela, ulanguzi wa dawa za kulevya na kujiingiza katika burudani zisizofaa. Pia, shughuli na miradi ya vyama hivi huwawezesha wanafunzi kutumia nishati zao kwa njia ya kujinufaisha na kuepuka maovu. Kwa mfano, wanaweza kwenda kukwea milima, kufanya matembezi ya kukusanya pesa za kuwafadhili wahitaji, kuendeleza shughuli za kunadhifisha mazingira na kutembelea vituo vya mayatima na wazee.

Kushiriki katika vyama vya michezo hakumwezeshi mwanafunzi kuimarisha afya na kujenga misuli tu, bali pia huweza kuwa msingi wa kupata chanzo cha riziki baadaye. Wapo wachezaji maarufu ambao walitambua na kuviendeleza vipawa vyao kupitia kwa vyama aina hii, na hivi sasa wana uwezo wa kuyaendesha maisha yao na ya familia zao.

Ifahamike kuwa vyama vya wanafunzi vinapaswa kuwa msingi wa mshikamano na maridhiano. Visitumiwe kama vyombo vya kuwagawa wanafunzi kitabaka. Mwanafunzi hana budi kusawazisha muda anaotumia. Atenge muda wa shughuli za vyama na wa kudurusu masomo yake.

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a) Fupisha ujumbe wa aya tano za kwanza kwa maneno 80 (alama9,1 ya utiririko)

Matayarisho

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Nakala Safi

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b) Fafanua masuala ambayo mwandisi anaibua katika aya tatu za mwisho (maneno 60).
(alama 6, 1 ya mtiririko)

Matayarisho

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Nakala Safi

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d) MATUMIZI YA LUGHA: (Alama 40)

1. Andika sauti zenye sifa zifuatazo: **(alama2)**

7. nazali ya kaakaa gumu……...
8. kikwamizo ghuna cha kaakaa laini……...
9. irabu ya mbele, wastani……..
10. kiyeyusho cha midomo……

2. Bainisha silabi katika neno: wachangamshwavyo**.** **(alama 1)**

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3. Andika upya sentensi ifuatayo kwa kubadilisha nomino zilizopigiwa mstari kuwa vitenzi.

Wachezaji wote watafanyiwa <u>ukaguzi</u> ili kupata <u>suluhu</u> ya matatizo hayo.

(alama 2)

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4. Andika sentensi ifuatavyo katika umoja.

Tukishiriki katika maigizo hayo vizuri tutaweza kujishindia tuzo.

(alama 2)

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5. Andika neno **moja** lenye viambajengo vifuatavyo**:** **(alama 2)**
nafsi ya kwanza wingi, wakati uliopita,yambwa, mzizi, kauli tendesha,kauli tenda

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6. Tunga sentensi kuonyesha matumizi yafuatayo ya neno: ni **(alama 2)**

7. kitenzi

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8. kiwakilishi

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7. Tunga sentensi yenye kishazi kirejeshi ambacho ni kivumishi. **(alama 2)**

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8. Andika sentensi ifuatayo katika hali ya ukubwa.
Nyundo hizo zimetupwa mbali na jumba lile. **(alama 1)**

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9. Tunga sentensi yenye muundo ufuatao**:** **(alama2)**
Nomino ya wingi , kivumishi, kitenzi kishirikishi, kivumishi

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10. Andika sentensi ifuatayo kulingana na maagizo.
Matunda yanayozalishwa kwa njia za kiasili yana virutubishi vingi. **(alama 1)**
Anza kwa: Virutubishi vingi

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11. Tumia viwakilishi badala ya nomino zilizopigiwa mstari.
Mzee atatembelea mji **(alama 1)**

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12. Akifikisha sentensi ifuatayo:
basi mwanangu akasema cheusi hivyo ndivyo tunavyoweza kufikia gender parity wewe waonaje **(alama 3)**

……
……...

13. Unganisha sentensi zifuatazo kwa kutumia kiunganishi cha wakati.
Idi alijishindia tuzo. Idi alishiriki katika uhifadhi wa mazingira. **(alama 1)**

.....

14. Tumia 'kwa' katika sentensi kuonyesha: **(alama 2)**

a) nia

.....

b) pamoja na

.....

15. Changanua sentensi ifuatayo kwa kielelezo cha matawi.
Upepo ulivuma tulipokuwa tukiondoka**.** **(alama 3)**

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16. Andika sentensi ifuatayo katika kauli ya kutendewa.
Rono alicheza gitaa akiwa kwa Kiprono**.** **(alama 2)**

.....

17. Onyesha matumizi ya **ka** katika sentensi ifuatayo:
Mumbi alitia embe kapuni likaiva**.** **(alama 1)**

.....

18. Andika sentensi ifuatayo katika hali ya mazoea.
Mmomonyoko wa udongo ulipozuiliwa mashamba yalinawiri. **(alama 2)**

.....

19. Tunga sentensi **moja** kutofautisha maana ya **baba na papa**
(alama 2)

.....

20. Methali: Haraka haraka haina baraka huambiwa mtu aliye na kasi isiyofaa katika kutenda mambo.Mtu anayepuuza shida za wenzake huambiwa aje?
(alama 1)

.....

a) Bainisha kiima na chagizo katika sentensi ifuatayo**:** **(alama 1)**
Wale wageni walikipenda sana.

.....

b) Andika kihisishi cha kuitikia wito kwa mtu wa jinsia ya kike **(al 1)**

……

c) Tunga sentensi ya masharti inayoonyesha kwamba tendo lilifanikiwa kwa sababu ya kufanikiwa kwa tendo lingine**.**
(alama 1)

.....

d) Andika miundo **miwili** ya nomino katika ngeli ya KI-VI**.**
(alama 1)

.....

e) Ainisha virai vilivyopigiwa mstari**.**
(alama 1)
Zana hizi zimeundwa <u>na mafundi</u> <u>wenye ustadi mkubwa</u>.

.....

e) ISIMU JAMII: (Alama 10)

(v) Umepewa jukumu la kutoa ushauri nasaha(elekezi) kwa kijana mwenzako anayefikiria kujitoa uhai kuhusu manufaa ya kutojitoa uhai. Fafanua sifa **tano** za kimtindo utakazotumia ili kufanikisha mazungumzo yako**.**
(alama 5)

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(vi) Eleza mitindo **mitano** ya matumizi ya lugha katika muktadha wa bunge. **(alama 5)**

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JINA…….…….. KIDATO…...…….……

NAMBARI YA USAJILI……SAHIHI…….……

TAREHE……

FORM 4 END TERM 2 SERIES 1 EXAMS

102/3 KISWAHILI – Karatasi ya 3

FASIHI

Muda: Saa 2 ½

Maagizo

1. *Andika jina lako na nambari yako ya mtihani katika nafasi ulizoachiwa hapo juu.*
2. *Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.*
3. *Jibu maswali **manne** pekee .*
4. *Swali la **kwanza** ni la **lazima.***
5. *Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne. zilizobaki;yaani:Riwaya, Tamthilia, Hadithi fupi na Ushairi.*
6. *Usijibu maswali **mawili** kutoka **sehemu moja**.*
7. *Majibu yote **lazima** yaadikwe kwa lugha ya Kiswahili.*
8. ***Karatasi hii ina kurasa 5 zilizopigwa chapa.***
9. ***Watahiniwa ni lazima wahakikishe kwamba kurasa zote za karatasi zimepigwa chapa sawasawa na kuwa maswali yote yamo.***

SEHEMU A: FASIHI SIMULIZI

1.Lazima

a) ”Mwanangu nakuomba uzingatie uadilifu maishani uongofu ni nuru ya mustakabali wa kila mtu…”

i)Tambua kipera na utanzu wa tungo hili **(al. 2)**

ii) Kwa kutumia hoja **mbili** eleza muundo wa kipera hiki **(al. 2)**

iii) Fafanua sifa **nane** za kipera hiki **(al.8)**

b) Eleza vikwazo **vinane** vya ukuaji wa fasihi simulizi. **(al.8)**

SEHEMU B: RIWAYA

Assumpata k. matei: : chozi la Heri

Jibu swali la 2 au la 3

2.”Si kufua, si kupiga deki, si kupika…almuradi kila siku na adha”

(i) a) Eleza muktadha wa kauli hii. **(ala.4)**

(j) Taja mbinu mbili za kimtindo zilizotumika katika dondoo hili. (al.2)

(k) Kwa kutumia hoja **kumi na nne**, eleza maudhui yaliyodokezwa na dondoo hili. **(al.14)**

3.”Kila mara hujiuliza ikiwa watoto huwa na hadhi tofauti nje au ndani ya ndoa”

Amali inayotajwa imekumbwa na changamoto chungu nzima.Jadili kwa kurejelea riwaya nzima. **(al.20)**

SEHEMU C: TAMTHILIA

P. Kea : Kigogo

Jibu swali la 4 au la 5

4.”Acha porojo zako. Kigogo hachezewi;watafuta maangamizi!”

a)Eleza muktadha wa dondoo hili **(al.4)**

b)Fafanua sifa za mzungumzaji (**al.6)**

c)Kwa kurejelea hoja **kumi**, thibitisha kwamba kucheza na kigogo anayerejewa ni sawa na kutafuta maangamizi **(al.10)**

5.”Tunahitaji kuandika historia yetu upya.”

a)Eleza sababu **kumi na mbili** kuonyesha kwa nini ilikuwa muhimu kuiandika historia ya sagamoyo upya **(al.12)**

b)Onyesha mikakati inayotumiwa kuiandika upya historia ya Jumuiya ya sagamoyo **(al.8)**

SEHEMU D: USHAIRI

Jibu swali la 6 au la 7

6.Soma shairi lifuatalo kisha ujibu maswali yafuatayo.

LONGA

Longa longea afwaji, watabusarika

Longa uwape noleji, watanusurika

Longa nenea mabubu,sema na viduko

Longa usichachawizwe, tamka maneno

Longa usitatanizwe, mbwa aso meno

Longa usidakihizwe,kishindo cha funo

Longa yote si uasi, si tenge si noma
Longa pasi wasiwasi,ongea kalima
Longa ukuli kwa kasi, likate mtima

Longa zungumza basi, liume ja uma
Longa japo ni kombora, kwa waheshimiwa
Longa liume wakora, kwani wezi miwa

Longa bangu na parara, hawakuitiwa
Longa bunge si kiwara, si medani tawa
Longa ni simba marara, wanaturaruwa.

Maswali

v. Tambua na ueleze nafsi neni katika shairi hili **(al.1)**

vi. Onyesha vile kibali cha utunzi wa mashairi kilivyotumika kukidhi mahitaji ya kiarudhi **(al.4)**

vii. Kwa kutoa maelezo mwafaka, tambua bahari **nne** zilizotumika na mtunzi kwenye shairi hili. **(al.4)**

viii. Eleza aina **tatu** za urudiaji katika shairi **(al.3)**

ix. Tambua na ueleze **toni** ya shairi **(al.2)**

x. Eleza maana ya misamiati ifuatayo kama ilivyotumika katika shairi. **(al.2)**

i. Afwaji

ii. Tenge

xi. Eleza umbo la shairi hili. **(al.4)**

7.Soma shairi lifuatalo kisha ujibu maswali

Kila nikaapo husikia tama
Na kuwazia hali inayonizunguka

Huyawazia madhila
Huziwazia shida
Hujiwazia dhiki

Dhiki ya ulezi
Shida ya kudhalilishwa kazini
Madhila ya kufanyiwa dharau
Kwa sababu jinsia ya kike
Hukaa na kujidadisi

Hujidadisi kujua ni kwa nini
Jamii haikisikii kilio changu
Wezangu hawanishiki mikono
Bali wananidharau kwa kuikosea utamaduni

Hukaa na kujiuliza
Iwapi raha yangu ulimwengu huu?
Iwapi jamaa nzimaa ya wanawake?

Maswali

a. Taja sifa **mbili** za shairi huru zinazojitokeza katika shairi hili **(al.2)**

b. Eleza dhamira ya mshairi **(al.2)**

c. Kwa kutoa mifano, eleza maana ya mistari mishata **(al.3)**

d. Bainisha tamathali **mbil**i za usemi zilizotumika katika shairi hili **(al.4)**

e. Eleza nafsineni katika shairi hiri **(al.2)**

f. Tambua **toni** ya shairi hili **(al.2)**

g. Taja maudhui **matatu** katika shairi hili **(al.3)**

h. Eleza maana ya msamiati ufuatao kama ulivyotumiwa katika shairi **(al.2)**

Madhila
Kudhalilishwa

SEHEMU E: HADITHI FUPI

A. Chokocho na D kayanda : Tumbo lisiloshiba na Hadithi Nyingine.

8.”…hamna mwendawazimu wala mahoka kati yetu, mimi nimepewa zawadi hizo”

a) Eleza muktadha wa dondoo hili **(al.4)**

b) Eleza sifa nne za msemaji **(al.4)**

c) Hakiki nafasi ya maudhui ya busara kwa mujibu wa hadithi hii **(al.12)**

NAME…….…….... STREAM…..…….……..

ADM NO……..SIGNATURE……..……

DATE……

FORM 4 END TERM 2 SERIES 1 EXAMS

121/1
MATHEMATICS
PAPER 1
TIME:2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

1. *Write your name, index number and class in the spaces provided.*
2. *Sign and write date of the of the examination in the spaces provided.*
3. *The paper contains two sections: Section I and II*
4. *Answer ALL questions in section I and **STRICTLY FIVE** questions from section II.*
5. *All working and answers must be written on the question paper in the spaces provided below each question.*
6. *Show all the steps in your calculations, giving you're your answers at each stage in the spaces below each question.*
7. *Marks may be awarded for correct working even if the answer is wrong.*
8. *Non-programmable silent electronic calculators and KNEC mathematical tables may be used except where stated otherwise.*

FOR EXAMINER'S USE ONLY

SECTION 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL

GRAND TOTAL

SECTION II

17	18	19	20	21	22	23	24	25	TOTAL

This paper consists of 14printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing.

SECTION I:(50 Marks). Attempt ALL questions in this section

1. Without using a calculator evaluate (3 Marks)

$$\frac{\left(3\frac{1}{3}+1\frac{1}{9}\right) \div 1\frac{1}{3}}{\left(4\frac{2}{9}-2\frac{5}{9}\right) x \frac{2}{3}}$$

2. A basket ball team play 10 matches in a tournament. The following are scores in each match.

9, 15, 17, 16, 7, 20, 21, 15, 10, 12

Determine:

(a) the mode. **(1 mark)**

(b) the median. **(2 marks)**

3. The gradient of curve at any point is given by 2x – 1. Given that the curve passes through point (1, 5), find the equation of the curve. **(3 Marks)**

4. Simplify: $\frac{9x^2-1}{3x^2+2x-1}$ **(3 Marks)**

5. Find the value of $\sqrt{\left(\frac{2x^2+2(p+r)}{p-r} \div \frac{1}{2}\right)+r}$; if $p = r + 2, x = p + 1$ and $r = 2$.

(**3 Marks)**

6. A car uses 1 litre of petrol for every 8 kilometres. The car was to travel 480 kilometres and had 15 litre of petrol at the beginning of the journey. Each litre of petrol cost sh. 112.00. How much did it cost for the extra petrol added?

(3mks)

7. Two pipes **A** and **B** can fill an empty tank in 3hrs and 5hrs respectively. Pipe **C** can empty the full tank in 6 hours. If the three pipes **A**, **B**, and **C** are opened at the same time, find how long it will take for the tank to be full.
(3marks)

(3 marks)

8. Without using tables or calculators, find the value of **t** in

$$log_3(t+5) - log_3(t-3) = -2$$

9. The position vectors of A and B are given as **a** = 2**i** – 3**j** + 4**k** and **b** = -2**i** – **j** + 2**k** respectively.
Find to 2 decimal places, the length of vector **AB**. **(3 Marks)**

10. A regular polygon has internal angle of 150^0 and side of length 10cm.

- Find the number of sides of the polygon. **(2 Marks)**

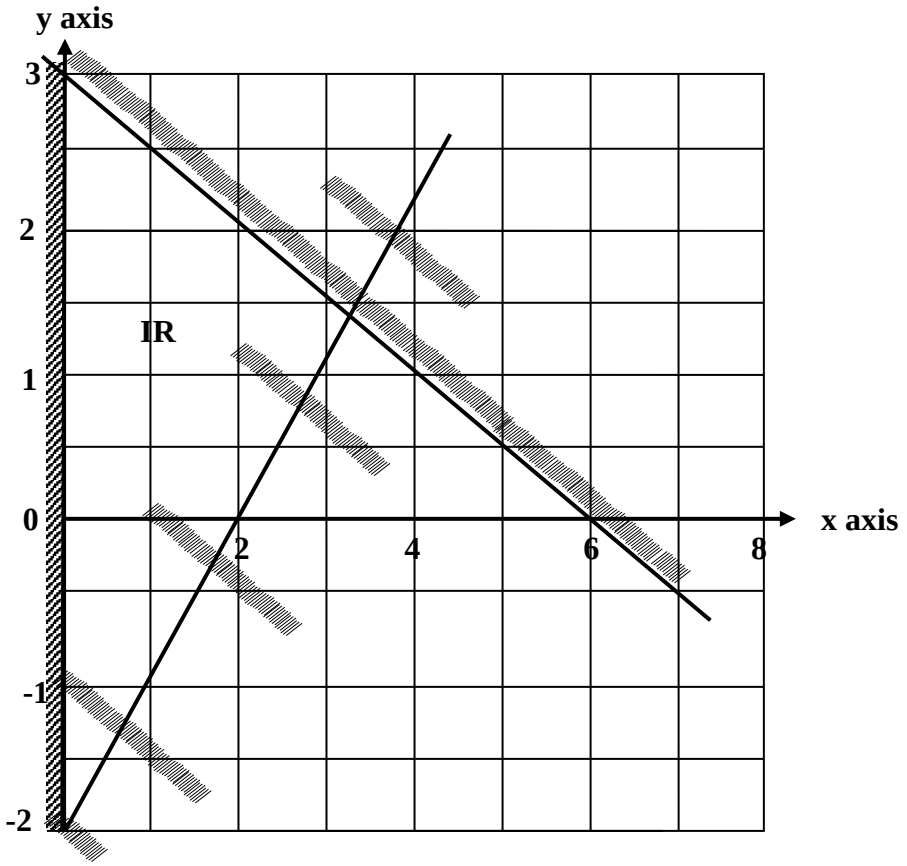
- Find the perimeter of the polygon.

(2 Marks)

11. Solve for x in the equation. **(3 Marks)**

$9^{(2x-1)} \times 3^{(2x+1)} = 243$

12. The region R in the figure below is defined by the inequalities L1, L2 and L3.



Find the three inequalities **(3 Marks)**

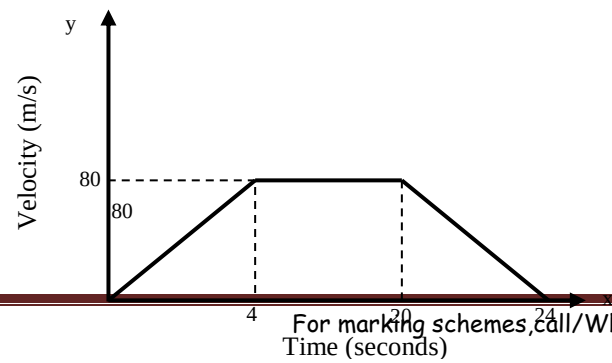
13. Two boys and a girl shared some money. The elder boy got $\frac{4}{9}$ of it, the younger boy got $\frac{2}{5}$ of the remainder and the girl got the rest. Find the percentage share of the younger boy to the girl's share. **(3Marks)**

14. Use tables of reciprocals only to find the value of

$$\frac{5}{0.0829} - \frac{14}{0.581}$$

(3 marks)

15. The figure below is a velocity – time graph for a car. (not drawn to scale).



1. Find the total distance traveled by the car? **(2 MKs)**

2. Calculate the deceleration of the car. **(2 Marks)**

16. A point C is on a line PQ where PQ = 9cm. C divides PQ such that $PC = \frac{4}{7}PQ$.

By construction locate C. **(3 marks)**

SECTION II (50 MARKS): Answer any five questions in this section.

17. Arc of a circle of radius 40cm subtends an angle of 126° at the centre of the circle. Using $\pi = \frac{22}{7}$;

(a) Calculate:

(i) the length of the arc. **(2 marks)**

(ii) the area of the sector. **(2 marks)**

b) The sector is folded to form a cone.

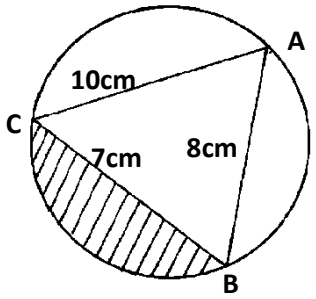
Calculate:

(i) the radius of the base of the cone. **(2 marks)**

(ii) the height of the cone.correcr to 2 decimal places **(2 marks)**

(iii) the capacity of the cone in litres correct to 2 decimal places.
(2 marks)

18. The figure below shows a triangle **ABC** inscribed in a circle. **AC** = 10cm, **BC** = 7cm and
AB = 10cm.



(a) Find the size of angle **BAC**. **(3mks)**

(b) Find the radius of the circle. **(2mks)**

(c) Hence calculate the area of the shaded region. **(5mks)**

19.A straight line passes through the points (8, -2) and (4,-4).

a) Write its equation in the form ax + by +c = 0, where a, b and c are integers**.(3 Marks)**

(b) If the line in (a) above cuts the x-axis at point P, determine the coordinates of P. (**2 Marks)**

(c) Another line, which is a perpendicular bisector to the line in (a) above cuts the y axis at the point Q. Determine the coordinates of point Q. **(3 Marks)**

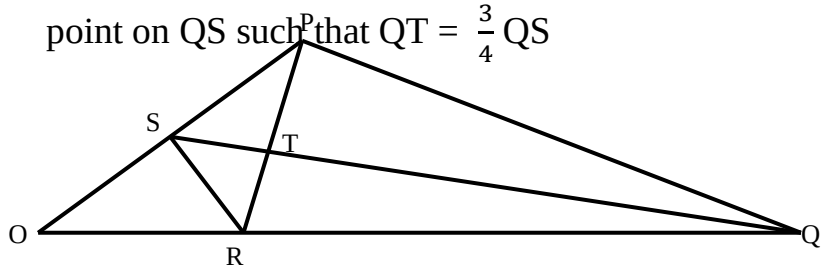
(d) Find the length of QP **(2 Marks)**

20.(a) A bus travelling at 99km/hr passes a check-point at 10.00a.m. and a matatu travelling at 132km/h in the same direction passes through the check point at 10.15a.m. If the bus and the matatu continue at their uniform speeds, find the time the matatu will overtake the bus. **(6mks)**

(c) Two passenger trains A and B which are 240m apart and travelling in opposite directions at 164km/h and 88km/h respectively approach one another on a straight railway line. Train A is 150 metres long and train B is 100 metres long. Determine time in seconds that elapses before the two trains completely pass each other.

(4mks)

21. The figure below shows triangle OPQ in which OS = $\frac{1}{3}$ OP and OR = $\frac{1}{3}$ OQ. T is a point on QS such that QT = $\frac{3}{4}$ QS



a) Given that OP = p and OQ = q, express the following vectors in terms of p and q.

(i) $\underset{\sim}{SR}$ **(1 Mark)**

(ii) $\underset{\sim}{QS}$ **(2 Marks)**

(iii) $\underset{\sim}{PT}$ **(2 Marks)**

(iv) $\underset{\sim}{TR}$ **(2 Marks)**

b) Hence or otherwise show that the points P, T and R are collinear.
(3 Marks)

22. A saleswoman is paid a commission of 2% on goods sold worth over ksh. 100,000. She 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 sales woman's monthly salary was increased by 10%. Her total earnings that month were ksh. 17600. Calculate:

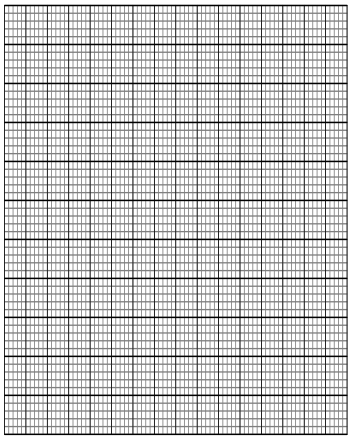
(i) The total amount of money received from the sales of hand bags that month.
(5 mks)

ii) The number of handbags sold that month. **(2 mks)**

23.(a) Fill the table below for the function $y = 2x^2 + 6x - 5$, for $-4 \leq x \leq 3$ **(2 Marks)**

X	-4	-3	-2	-1	0	1	2	3
Y								

b) **(i)** Draw the curve for $y = 2x^2 + 6x - 5$, for $-4 \leq x \leq 3$ on grid given **(3 Marks)**



(ii) On the same axes, draw line y = 7x + 1 **(1Mark)**

(c) Determine the values of x at the points of intersection of the curve **(2 Marks)**

$y = 2x^2 + 6x - 5$ and line $y = 7x + 1$

(d) Use your graph to estimate the value of $2x^2 + 6x = 5$ **(2 Marks)**

24.The displacement S metres of a moving particle after t seconds is given by

$S = 2t^3 - 5t^2 + 4t + 2$

Determine

(a) the velocity of the particle when t = 2. **(3 marks)**

(b) the value(s) of t when the particle is momentarily at rest. **(3 marks)**

(c) the displacement when the particle is momentarily at rest. **(2 marks)**

(d) the acceleration of the particle when t = 5. **(2 marks)**

NAME…….…….. STREAM…..…….……..

ADM NO……..SIGNATURE……..……

DATE……

FORM 4 END TERM 2 SERIES 1 EXAMS

121/2
MATHEMATICS
PAPER 2
TIME: 2 ½ HOURS

INSTRUCTIONS TO CANDIDATES:

(a) Write your name and index number in the spaces provided above
(b) Sign and write the date of examination in the spaces provided above.
(c) This paper consists of ***TWO*** sections: ***Section I*** and ***Section II.***
(d) Answer ***ALL*** the questions in ***section I*** and only five from ***Section II***
(e) All answers and working must be written on the question paper in the spaces provided below each question.
(f) ***Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.***
(g) Marks may be given for correct working even if the answer is wrong.
(h) ***Non-programmable*** silent electronic calculators and KNEC Mathematical tables may be used except where stated otherwise.

FOR EXAMINER'S USE ONLY

Section I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total

Section II

17	18	19	20	21	22	23	24	Total

Grand Tot

This paper consists of 14 printed pages.
Candidates must check to ascertain that all pages are printed as indicated and that no question(s) is/are missing.

SECTION I (50 MARKS)

1. Evaluate without using Mathematical tables or a calculator. **(3mks)**

$2\log 5 - \frac{1}{2}\log 16 + 2\log 40$

2. Solve for x given that the following is a singular matrix $\begin{pmatrix} 1 & 2 \\ x & x-3 \end{pmatrix}$ **(2mks)**

3. Make b the subject of the formula a = $\frac{bd}{\sqrt{b^2 - d}}$ **(3 mks)**

4. Without using mathematical tables or calculators express in surd form and simplify

$\frac{1 + Cos\,30^o}{1 - Sin\,60^o}$ **(3 mks)**

– Agotho has a rectangular plot that was measured to the nearest meter and found to be 80m in length and 60m in width. Determine the percentage error in its perimeter. **(3 marks)**

6. Peter operates a printing firm and the cost of printing a book is partly constant and partly varies as the number as pages. If a book has 200 pages, the cost in sh 400 and if it has 100 pages, the cost is sh 240. Find the cost of printing a book with 400 pages. **(4 mks)**

7. A body starts from rest and after t seconds its velocity in ms^{-1} was recorded as shown below;

T in (sec)	0	1	2	3	4	5	6
Velocity	0	0.29	5.4	7.7	9.7	11.4	12.7

Use the trapezoidal rule to estimate the distance covered by the body between 1 and 6 seconds

(2 mks)

8. 14 people can build 10 huts in 30 days. Find the number of people working at the same rate that will build 18 similar huts in 27 days. **(3mks)**

9. A point M (60 °N, 18 °E) is on the surface of the earth. Another point N is situated at a distance of 630 nautical miles east of M.
Find:

a) the longitude difference between M and N; **(2 mks)**

(b) The position of N. **(1 mk)**

10. (a) Expand $(x-0.2)^5$ in ascending powers of x. **(2mks)**

(b) Use your expansion up to the fourth term to evaluate 9.8^5. **(2mks)**

11. The equation of a circle center (a, b) is $x^2 - y^2 - 6x - 10y + 30 = 0$.
Find the values of a and b. **(3 mks)**

12. Solve for x in the equation $\sqrt{3}\tan(x - 20)^0 = -1$, for $0^0 \leq x \leq 360^0$ **(3mks)**

13. Find the equation of the tangent to the curve $2x^2 - 8y = 0$ at the point $(12,18)$. **(3mks)**

14. Transformations M and N are represented by the matrices; $\begin{pmatrix} 2 & 0 \\ 0 & 2 \end{pmatrix}$ and $\begin{pmatrix} 3 & 0 \\ 1 & 3 \end{pmatrix}$
respectively. Point R has co-ordinates (3, -2), find the co-ordinates of R^1 the image of R under transformation represented by N followed by M. **(3 mks)**

15. A coffee dealer mixes two brands of coffee, x and y to obtain 40kg of the mixture worth Ksh. 2,600. If brand x is valued at Ksh. 70 per kg and brand y is valued at Ksh. 55 per kg. Calculate the ratio in its simplest form in which brands x and y are mixed.

(4mks)

16. Given that y = 3 Sin $(\frac{2}{5}x + 30)^0$ for $0^0 \leq x \leq 360$. Determine:

(i) Amplitude of the curve. **(1 mk)**

(ii) Phase angle of the curve **(1 mk)**

(iii) Period of the curve. **(2 mks)**

SECTION II (50 MARKS)

Answer only five questions in this section

17. (a Hellen's earnings are as follows:

Basic salary sh. 38000 per month

House allowance sh. 14000 per months

Travelling allowance sh.8500 per month and

Medical allowance Ksh.3300 per month.

She is given a personal relief of Ksh. 12672 per annum

The table for payable tax is shown below

Income in K£ p.a	Payable tax rate in Kshs per K£
0-6000	2
6001-12000	3
12001-18000	4
18001-24000	5
24001-30000	6
30001-36000	7
36001-42000	8
42001-48000	9
Over 48000	10

Calculate

(i) Hellen's taxable income in K£ p.a **(2mks)**

(ii) Her P.A.Y.E **(5mks)**

Hellen is deducted the following items per month

NHIF Ksh.320

Cooperative shares Ksh.2000

Loan repayment Ksh5000

Determine her net salary per month
(3mks)

18. The data below represent the heights taken to the nearest centimeters of 40 lemon trees in a garden. (NB: A = Assumed mean)

Height (cm)	f	x	d = x - A	fd	d^2	fd^2
131 – 140	3					
141 – 150	4					
151 – 160	7					
161 – 170	11					
171 – 180						
181 – 190	5					
191 – 200	1					

a) Complete the table. **(6 mks)**

b) Using 165.5 as the assumed mean, calculate the mean height. **(2 mks)**

c) Calculate the standard deviation of the distribution. **(2 mks)**

19. An arithmetic progression (AP) has the first term a and the common difference d.
(a) Write down the third, ninth and twenty fifth terms of the AP in terms of a and d.
(1mk)

(b) The AP above is increasing and the third, ninth and twenty fifth terms form the first three

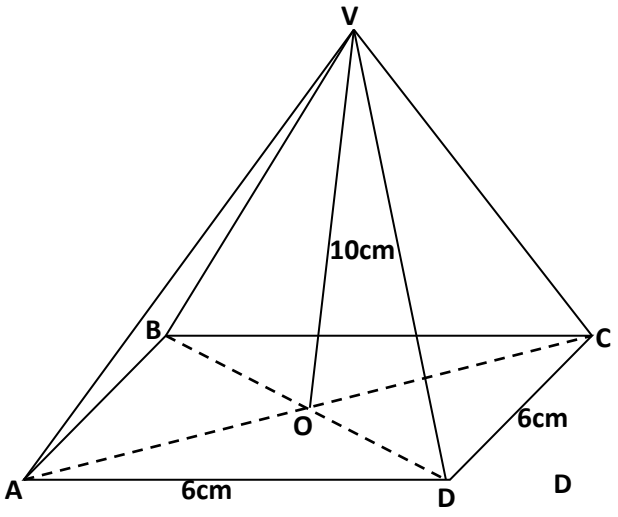
consecutive terms of a Geometric Progression (G.P) The sum of the seventh and twice the sixth terms of the AP is 78. Calculate:-

(i) the first term and common difference of the AP. **(5mks)**

(ii) the sum of the first nine terms of the AP. **(2mks)**

(iii) The difference between the fourth and the seventh terms of an increasing AP. **(2mks)**

20.The figure below is a square based pyramid ABCDV with AD = DC = 6cm, and height VO = 10 cm.



a. State the projection of VA on the base ABCD. **(1 mk)**

b. Find

i. The length of VA **(3 mks)**

ii. The angle between VA and ABCD **(2 mks)**

iii. The angle between the planes VDC and ABCD **(2 mks)**

iv. Volume of the pyramid (**2 mks)**

21. **(a)** Complete the table below for the function $y = x^2 + 3$ **(2mks)**

x	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
y	4		7			15.25	19		27		39

(b) Use the mid-ordinate rule with five strips to estimate the area bounded by the curve, the line

$x = 1$ and the line $x = 6$. (**2mks)**

(c) Use integration to find the exact area in (b) above. **(3mks)**

(d) Calculate the percentage error arising from the use of mid-ordinate rule. **(3mks)**

22. A contractor applied for contracts

A - Building a classroom block

B - Constructing school dining hall

C - Putting up a dormitory block

The probability of getting A is 0.7. The probability of getting B is 0.6 If A is obtained and only 0.3 if A is not obtained. The probability of getting C is 0.8 if B is obtained and only 0.4 if B is not obtained.

a) Draw a tree diagram to represent the above information. (2 marks)

b) Find the probability of getting

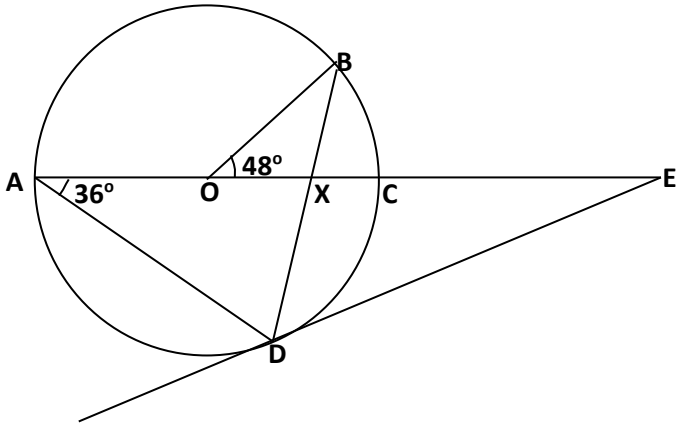
i) The three contracts **(2 marks)**

ii) Only one contract **(2 marks)**

iii) At least one contract (2 marks)

iv) None of the contract **(2 marks)**

23. In the figure below, O is the centre of the circle. A, B, C and D are points on the circumference of the
circle. A, O, X and C are points on a straight line. DE is a tangent to the circle at D. Angle BOC= 48^0 and angle CAD = 36^0.



(a) Giving reasons or otherwise, find the value of the following angles:-

i. Angle CBA **(1 mk)**

ii. Angle BDE **(2 mks)**

iii. Angle CED **(3 mks)**

(b) It is also given that AX = 12 cm, XC = 4 cm, DB = 14 cm and DE = 20 cm. Calculate:

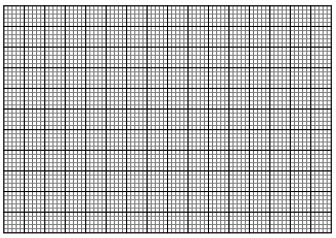
i. DX **(2 mks)**

ii. AE **(2 mks)**

24. A tailoring business makes two types of garments A and B. Garment A requires 3 metres of material while garment B requires 2 ½ metres of material. The business uses not more than 600 metres of material daily in making both garments. It must make not more than 100 garments of type A and nor less than 80 of type B each day.

(a) Write down three inequalities from this information other than and $x \geq y$, where x is the number of garments of type A and y the number of garments of type
(3mks)

(b) Graph these inequalities. **(3mks)**



(c) If the business makes a profit of sh 80 on garment A and a profit of sh. 60 on garment B, how many garments of each type must it make in order to maximize the profit and what is the total profit?
(4mks)

End

NAME……..…….... CLASS…….……

ADM NO……SIGNATURE……

DATE……..

FORM 4 END TERM 2 SERIES 1 EXAMS

232/1
PHYSICS PAPER 1
TIME: 2 HOURS

INSTRUCTIONS TO THE CANDIDATE:

*(a) Write your **name** and **index number** in the spaces provided above.*
*(b) **Sign** and write the **date** of examination in the spaces provided above.*
*(c) This paper consists of **two** Sections **A** and **B**.*
*(d) Answer **all** the questions in sections **A** and **B** in the spaces provided.*
*(e) All working **must** be clearly shown in the spaces provided.*
*(f) Non-programmable silent electronic calculators and KNEC Mathematical tables **may be** used.*

FOR EXAMINER'S USE ONLY:

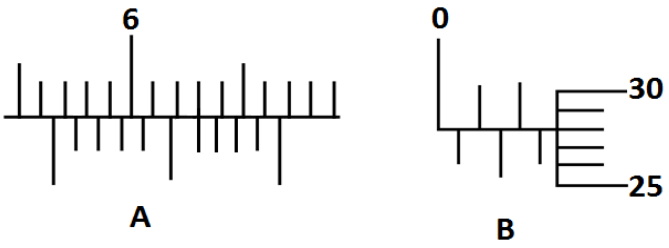
Section	Question	Maximum Score	Candidate's Score
A	1-8	25	
B	9	9	
	10	7	
	11	9	
	12	12	
	13	8	
	14	10	
Total Score		80	

SECTION 25 MARKS

1. What you understand by the term SI unit. **(1 mark)**

……
……
……..

2. Form four students used two measuring instruments to measure two quantities A and B as shown below



Given that **A - 2B = K** calculate the value of K. Express your answer SI unit and in standard form**. (4 mark)**

3. With a help of a diagram show how 15N force and 9N force can have a resultant force of

(i) 24N **(1 mark)**

(ii)6N **(1 mark)**

4. State how a thermometer can better
   - Quick action (1 mark)

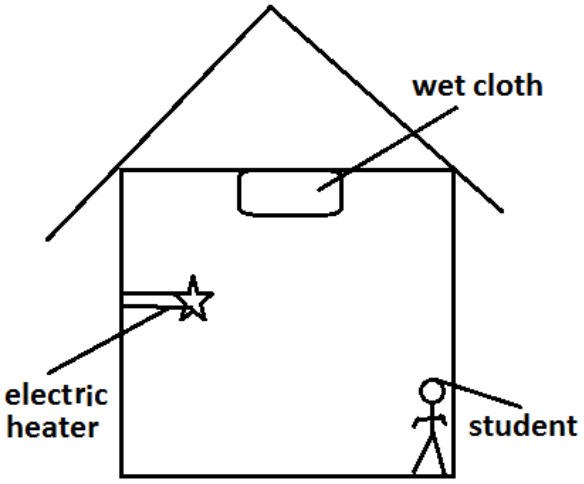
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- Accuracy (sensitive to small changes in temperature) (1 mark)

……

……

5. The diagram below shows a cross-section of a house. Electric heater is on, wet cloth is hanged on the roof and a student is standing near one wall of the house.



State the mode of heat transfer through which

(a) Wet cloth is getting heat (2 mark)

……

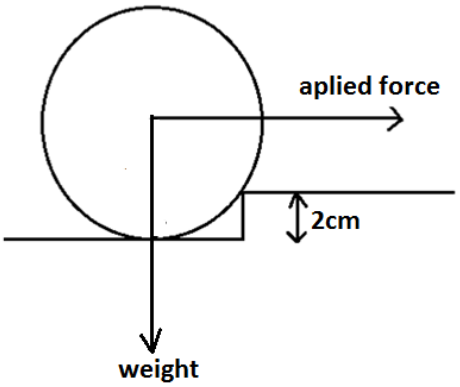
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(b) Student is not getting heat (2 mark)

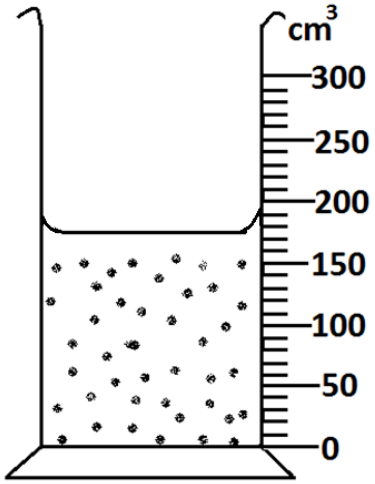
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6. The figure below shows a cylinder of radius 17cm being pulled by horizontal force against a step 2cm high. If a force of 11.2 N is just sufficient to turn the drawn so that it rises over the step, calculate its weight (3 mark)



7. The diagram below shows a measuring cylinder with water.



15 metal balls are gently lowered. Show on the diagram the final volume of water if the metal balls have a density of 1200kg/m^3 and the mass of each ball is 7.2g. **(4 mark)**

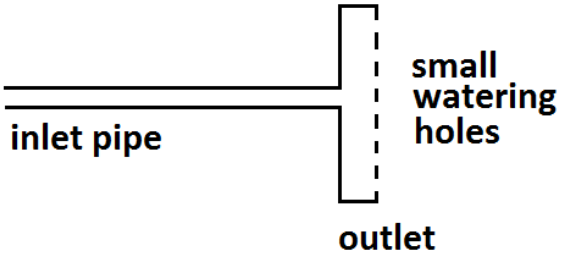
8. .

(i) Define pressure and state its SI unit **(2 mark)**

……

……

(ii) The diagram below shows a device used for watering crops out let has **N** number of holes. Inlet has a cross-section area of 2.4cm^2 and water flows at 15m/s. calculate the number of small holes if each hole has a cross-section area of 3mm^2 and water come



SECTION 55 MARKS

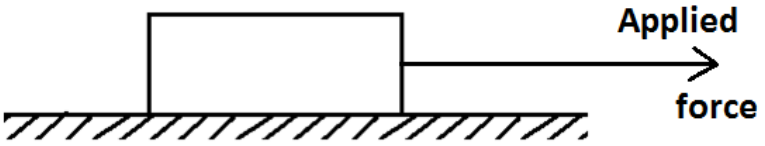
9.

(i) A trailer of mass 30000kg travelling at a velocity of 20m/s collide with a bus of mass 10000kg travelling at 10m/s in the opposite direction. The impact takes 0.5 seconds before the two vehicles move off together at a constant velocity for 15 seconds. Determine.

a) The common velocity**. (3 mark)**

b) The impulsive force on the trailer on impact. **(3 mark)**

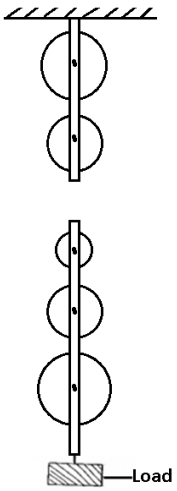
(ii) An wooden block of mass 600g is pulled along a horizontal bench with a constant force as shown below



If the block accelerate at $2m/s^2$ and coefficient of friction between the block and the table is 2.5 calculate applied force. (3 mark)

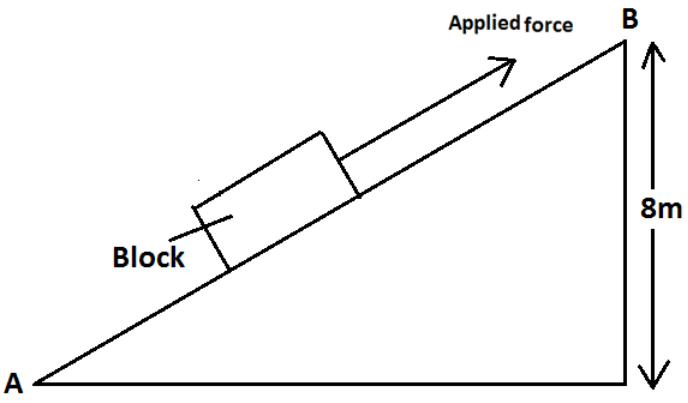
10.

i. The diagram below shows a block and tackle. Show on the diagram the path string passes through the pulleys and state velocity ratio (2 mark)



ii. Define a transducer, give one example that illustrate how it work **(2 mark)**

iii. A block of weight 120N is pulled along an inclined plane using a steady force as shown below



If distance AB is 25m and work done against friction is 240J calculate the value of applied force (3 mark)

11.

a) State pressure law **(1marks)**

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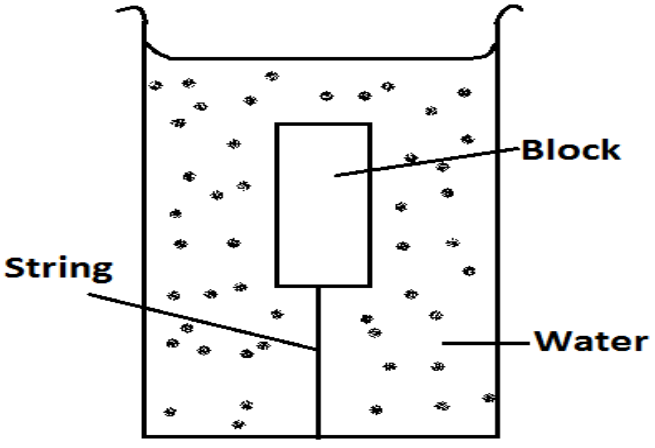
b) In an experiment to verify Charles laws state two quantities that are kept constant. **(2marks)**

……
……
……

c) A balloon seller has a cylinder containing hydrogen of volume $3.0m^3$ at a pressure of 2.6×10^5 N/m^2 at 27^0C he sells a balloons of volume $1250cm^3$ at a pressure of 1.04×10^5 N/m^2 at 27^0C. Calculate the number of balloons he can sell**. (3marks)**

d) Calculate the maximum pressure of a glass block of density 2500kg/m^3 would exert on a horizontal surface, if the block measured 30 x 12 x 20cm. **(3marks)**

xii. A rectangular block is held at the bottom of a container bv a string as shown below



On the diagram show the forces acting on the bock **(3marks)**

xiii. If density of water is 1000kg/m^3 and the block has a volume of 750cm^3 and a density of 0.8g/cm^3 calculate the value of each force. **(3marks)**

xiv. An object weighs 1040g in air, 640g when fully immersed in water and 720g when fully immersed in a liquid. If the density of water is 1000kg/m^3, find the density of the liquid. **(3marks)**

xv. In a hydrometer what is the purpose of

i. Lead shots. **(1marks)**

ii. Narrow stem **(1marks)**

iii. Wide bulb **(1marks)**

12. A copper of heat capacity 600J/K contains 200g of water at 20^0C. Dry steam at 100^0C is passed through the water while stirring until it reaches a final temperature of 60^0C. Given that specific heat of capacity of water as 4200J/Kgk and specific latent heat of steam as 2260,000 J/kg

4. Heat absorbed by water **(2 marks)**

5. Heat absorbed by calorimeter **(2 marks)**

6. Write an expression on heat lost by steam heat lost by steam **(2 marks)**

7. Calculate the mass of the steam condensed **(2 marks)**

13.

(i) Explain why a body moving in a circular path at constant velocity is said to be accelerating. **(1 marks)**

(ii) A stone is projected horizontally from top of a cliff with initial horizontal velocity of 20m/s if the stone land s 100m from the bottom of the cliff, calculate height of the cliff**.** **(3 marks)**

(iii) A string of negligible mass has a bucket tied at the end. The string is 70cm long and the bucket has a mass of 450g. The bucket is swung horizontally making 8.4 revolutions per second. Calculate

a) The linear velocity. **(3 marks)**

b) The tension on the string. **(3 marks)**

NAME…….…….. CLASS…….……

ADM NO……SIGNATURE……

DATE……..

FORM 4 END TERM 2 SERIES 1 EXAMS

232/2
PHYSICS
Paper 2
(Theory)
TIME: 2 HRS

INSTRUCTIONS

- Write your name and your Index number in the spaces provided.
- This paper consists of **two** sections, Section **A** and **B.**
- Answer **ALL** the questions in both section in the spaces provided in this paper.
- **ALL** working must be clearly shown.
- Mathematical tables and electronic calculators **may be** used.

Take: Planck's constant $=6.6\times10^{-34}$ Js

FOR EXAMINER'S USE ONLY:

SECTION	QUESTION	MAXIMUM SCORE	STUDENTS SCORE
A	1-12	25	
B	13	11	
	14	09	
	15	15	
	16	10	
	17	10	
	TOTAL	**80**	

This paper consists of 12 printed pages

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

1.State any 2 ways of in increasing the size of an image formed by a fixed pinhole camera**.**
(2 mks)

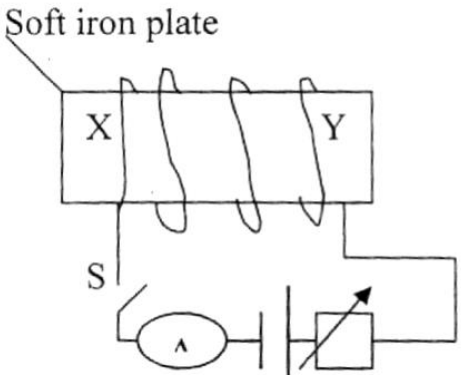
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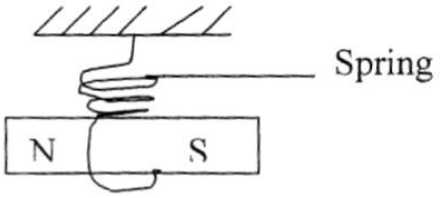
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2.State 2 advantages of alkaline battery over a lead acid battery. **(2 mks)**

……
……

3. The diagrams below show a soft iron plate in a solenoid and a permanent magnet suspended by a spring.





State with reason the behaviour of the magnet when the switch S is closed. (**2 mks)**

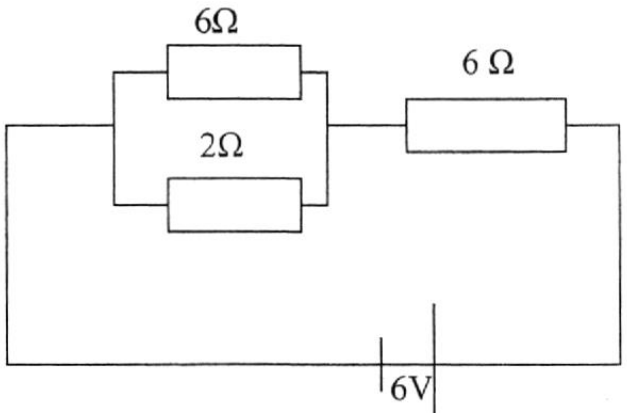
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4. A man, standing between 2 parallel vertical walls, claps his hands. He hears the first echo 0.3 seconds later and the next echo after a further 0.2 seconds. If the velocity of sound in air is 300m/h. Calculate the distance between the walls. **(3 mks)**

5. The table below shows an electromagnetic spectrum. Complete the table in the order of increasing wavelength from A- B. **(2 marks)**

A			Visible Light			B

6.The figure below shows a 6V battery connected to an arrangement of resistors.



Determine the current flowing through 2 Ω resistor. **(4 marks)**

7.State difference between semi conductors and metallic conductors. **(1 mark)**

……

……

……

8. A radioactive sample has a mass of 16g and a half-life of 10 days. How much of the original sample remains after 40 days. **(2 marks)**

9. Negatively charged rod is brought near the cap of a lightly charged electroscope. The leaf divergence first reduces but as the rod comes nearer, it diverges more.

i) State the charge of the electroscope. **(1 mark)**

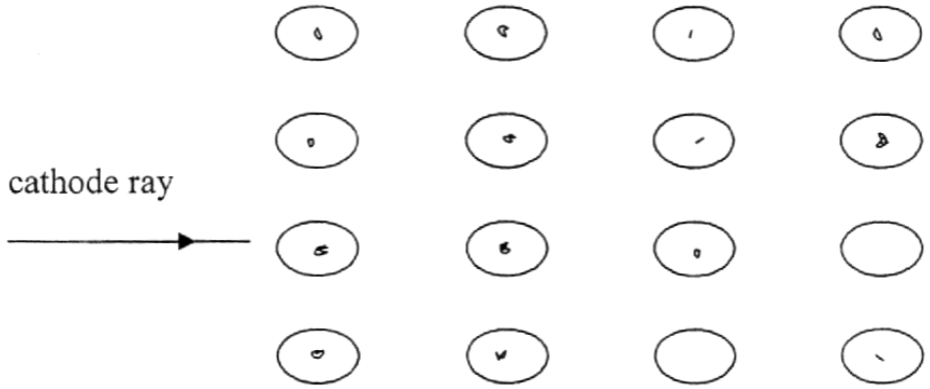
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(ii) Explain the behaviour of the leaf above. **(1 mark)**

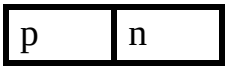
……

10. Water waves pass a point in a swimming pool at the rate of 30 crests per 60 seconds. One of the crests was observed to take 2 seconds to travel between 2 points, 6m apart. Determine the wavelength of the water waves. **(2 marks)**

b. The figure below shows a cathode ray beam entering a magnetic field, perpendicular to the plane of the paper complete the diagram to show the path of the beam in the field. (1 mark)



11.The diagram below shows a junction diode.



Complete the diagram to show how the diode can be connected in a reverse bias mode**.**
(1 mark)

12.An Uranium 236 isotope has a symbol $^{2361}_{92}U$ when bombarded by a neutron, it splits to give

Substances K and L and 2 neutrons. Calculate the values of a and b in the equation below. (1 mark)

$$^{236}_{92}U + {}^{1}_{1}n \longrightarrow {}^{95}_{56}K + {}^{a}_{b}L + {}^{+2}_{0}\text{n}$$

SECTION B 55MKS

13a) Explain why a cathode ray tube is evacuated **(1 mark)**

……

b) State four properties of cathode rays **(2 marks)**

……

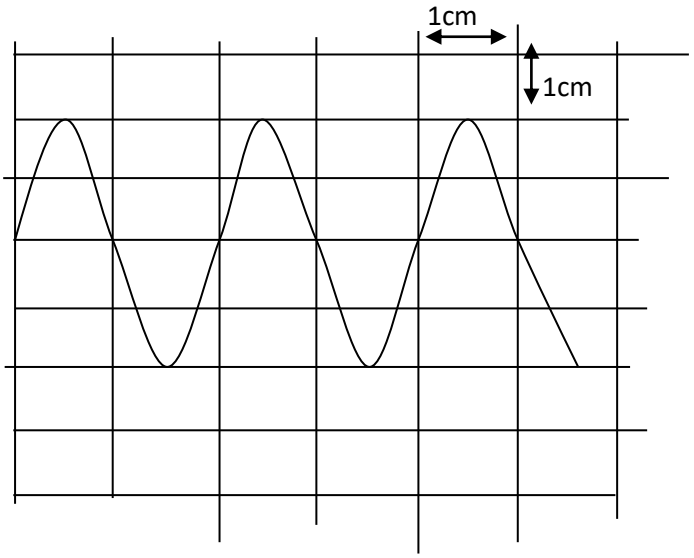
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c) The figure shows the waveform displayed on the cathode ray oscilloscope screen when an alternating voltage is applied on the Y-input. The time- base is set at 1ms/cm and the Y-gain at 10v/cm



Calculate;

i. The amplitude of the ac input voltage **(2marks)**

ii. The frequency of the ac input voltage signal **(2 marks)**

d) The threshold frequency of sodium is $5.6x10^{14}$Hz .Find **(2marks)**

i. Work function of sodium

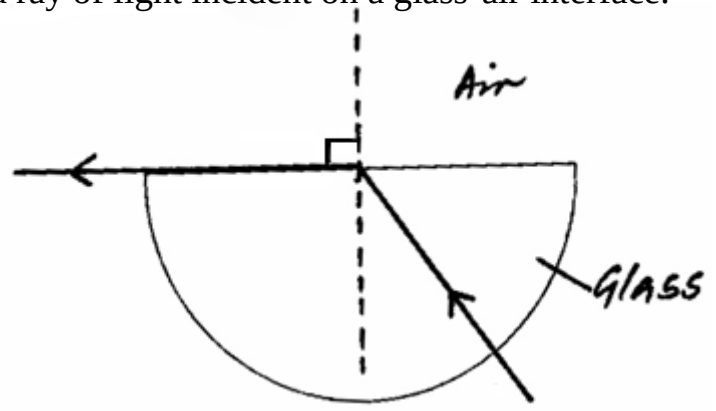
ii. The kinetic energy of the ejected electrons when sodium is shone with light of frequency $8.6x10^{14}$ Hz **(2 marks)**

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

……

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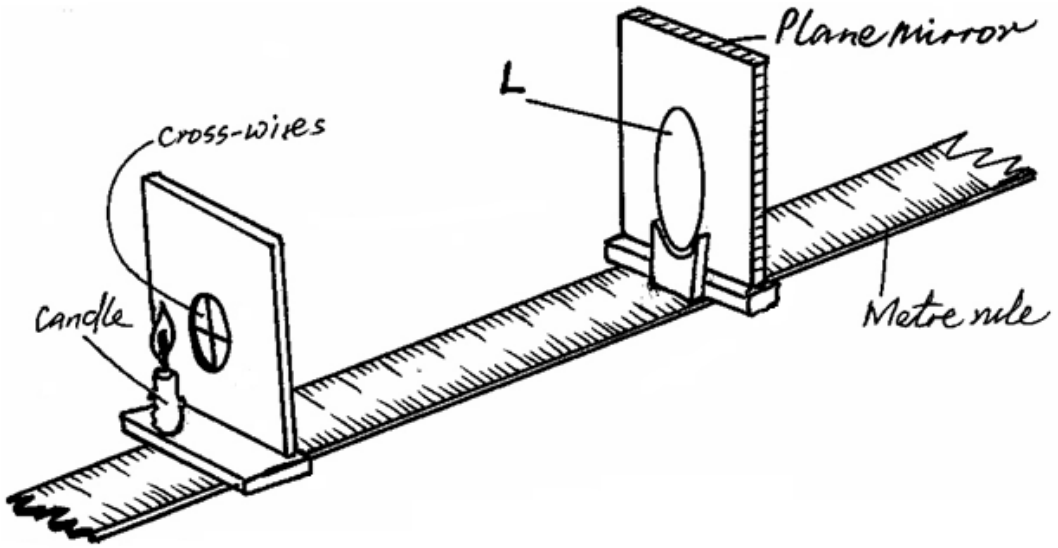
ii)The figure shows a ray of light incident on a glass-air interface.



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

ii) Given that the refractive index of the glass is ${}_a\eta_g$, and that the critical angle **c** = 42°, determine the value of is ${}_a\eta_g$. **(3 marks)**

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



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

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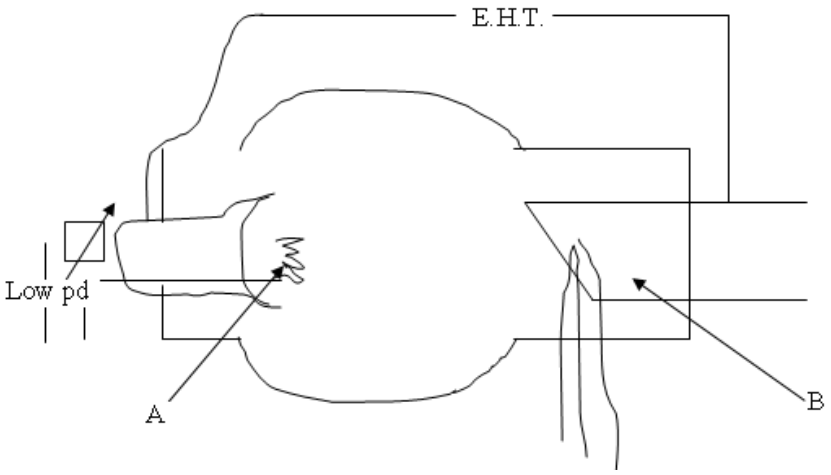
15.a) State one advantage of high voltage transmission. **(1mark)**
……

(b) A generator produces 150kw at a voltage of 5kv. The voltage is stepped up to 60kv and transmitted through cables of resistance 15Ω to a step down transformer in a substation. If both transformers are 80% efficient, calculate the:

(i) Current through the transmission cables. **(3marks)**

(ii) Power lost during transmission. **(3marks)**

(c) The figure below shows the features of an x ray tube



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

……
……

(ii) Explain how change in the potential across PQ change the intensity of the x-rays produced in the tube. **(1marks)**

……
……

(iii) During the operation of the tube, the target becomes very hot. Explain how the heat is caused. **(1mark)**

……

(iv) What property of lead makes it suitable for use as shielding material? **(1mark)**

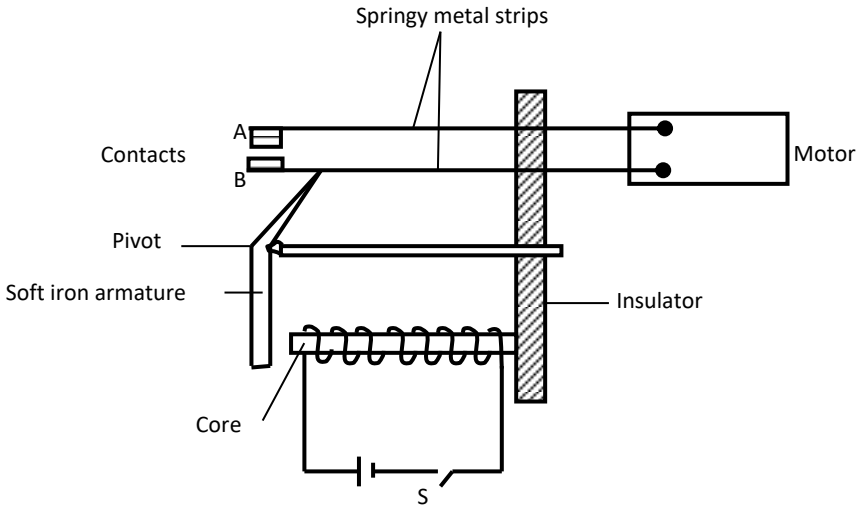
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(b) In a certain X ray tube, the electrons are accelerated by a p.d of 12000v. assuming that all the energy goes to produce x rays, determine the frequency of the x rays produced(take planks constant $h=6.62\times10^{-34}$Js, and the charge of an electron $e=1.6\times10^{-19}$

(3marks)

16.Figure 8 shows an electromagnetic relay being used to switch an electric motor on and off. The electromagnet consists of a coil of wire wrapped around a core. The motor in figure is switched off.

Figure 8



a) Suggest suitable material for the core. **(1mark)**

……

b) What happens to the core when switch S is closed? **(2marks)**

……
……

c)Why do the contacts A and B close when the switch S is closed. **(2marks)**

……
……

c) When the switch S is opened, what will happen to;

i. The core **(1mark)**

……

ii. Soft iron armature. **(1mark)**

……

d) Give **one** other application of an electromagnet. **(1mark)**

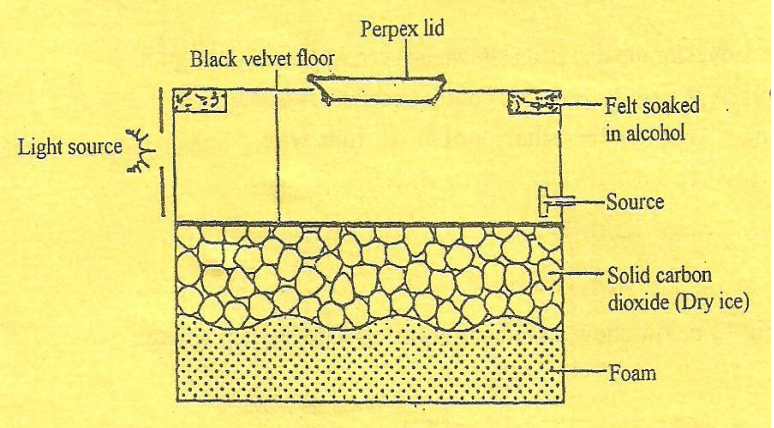
……

e) State **two** ways in which an electromagnet could be made more powerful. **(2marks)**

……
……
……..

17.Explain why carbon-14 ($^{14}_{6}C$) is radioactive while carbon $^{12}_{6}C$ is not. **(1 mark)**

(b) The figure below shows features of a diffusion cloud chamber used for detecting radiations from a radioactive source.



Explain how the chamber works when a radioactive particle is introduced at the source.
(2 marks)

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……..

(c) What is the purpose of solid carbon (iv) oxide. **(1 mark)**

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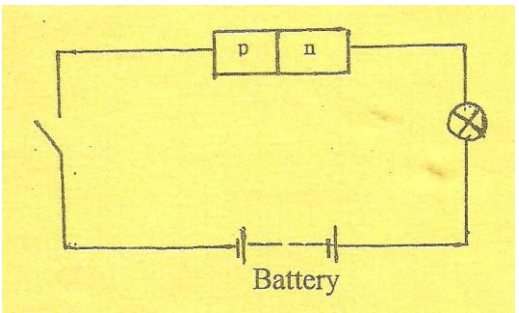
b)(i) Using a diagram explain how doping produces a p-type semi-conductor. **(3 marks)**

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(ii) What is biasing? **(1 mk)**

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…….

(iii) The diagram below shows a circuit with a p-n junction and a very low power bulb.



State with reason the observations made on the bulb when the switch is closed.
(2 marks)

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NAME……..…….... **CLASS**……..……

ADM NO……**SIGNATURE**……

DATE……..

FORM 4 END TERM 2 SERIES 1 EXAMS

231/3
PHYSICS
PAPER 3(PRACTICAL)
TIME: 2½ HOURS

Instructions to candidates:

1. *Write your **name** and **index number** in spaces provided **above**.*
2. ***Sign** and write the date of examination in spaces provided **above**.*
3. *Answer **all** the questions in spaces provided in the question paper.*
4. *You are **NOT** allowed to spend the first 15 minutes of 2½ hours allowed for this paper reading the whole paper carefully before commencing the work.*
5. *Marks are given for clear record of the observations actually made, their suitability, accuracy and the use made of them.*
6. *Candidates are advised to record their observations as soon as they are made.*
7. *Non-programmable silent electronic calculators and KNEC Mathematical table may be used.*

FOR EXAMINER'S USE ONLY

Question 1	**Total 15**
Candidate's Score	

Question 2	**Total 25**
Candidate's Score	

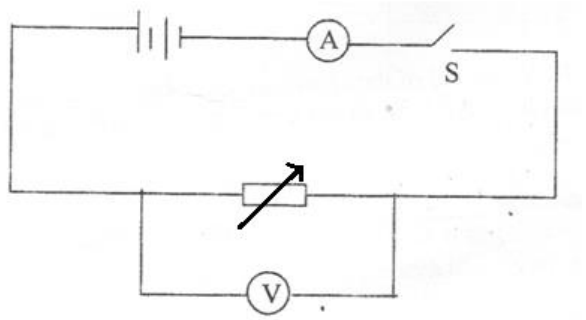
1. You are provided with the following

- Two dry cells
- One ammeter**(0-2.5A)**
- One voltmeter**(0-5v)**
- A variable resistor**(0-50Ω)**

- A switch
- 6 connecting wires

Proceed as follows

i. Set up the apparatus provided as in the diagram below.



ii. Close the switch and adjust the variable resistor until the voltmeter reads 2.9V. Record this value of voltage V and the corresponding value of current I in the table below.

Voltage (V)	2.9	2.8	2.7	2.6	2.5	2.4	2.2
Current (A)							

iii. Repeat procedure (b) above for the other values of V and complete the table. **(5mks)**

iv. Plot a graph of Voltage (V) against Current (A). **(5mks)**

v. From the graph, determine the emf, E and internal resistance of the battery given that E=V+rI

iv. E **(2mk)**

v. r **(3mks)**

2. You are provided with the following apparatus:-

- A meter rule

- One stop watch, one stand, clamp and boss
- One spring
- Two pieces of wood
- A beam balance or electronic balance (to be shared)

One mass labeled M

Proceed as follows

i. Hang the spring vertically by clamping one end as shown in fig 1 (the small pieces of wood to clamp the spring)

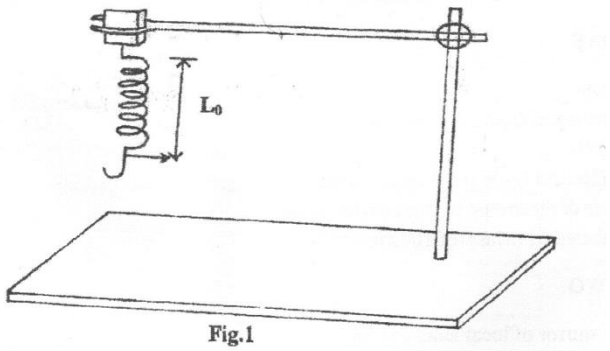


Fig.1

ii. Measure the length Lo, of the unloaded spring and record below.

L0=_____mm **(1mk)**

iii. Hang the mass M given from the lower end of the spring. Measure the length, L1 of the loaded spring

L1=_____mm **(1mk)**

iv. Find the value of L1-L0_____cm **(1mk)**

v. Using the balance given find the mass of the object M

Mass of M=_____g **(1mk)**

vi. Hang the mass M from the lower end of the spring. Displace it by small vertical distance and release so that the spring makes vertical oscillations.

Oscillations N	5	7	10	13	15	18	20
Time in seconds $\left(\frac{N+10}{10}\right)$							
$\left(\frac{N+10}{10}\right)^2$							

a) On the grid provided, Plot a graph of $\left(\frac{N+10}{10}\right)^2$ against $\left(\frac{N+10}{10}\right)$ **(5mks)**

b) i. determine the Slope S, on the graph at N=16 **(2mks)**

ii. find the constant k, given that**: (2mks)**

$$K = \frac{MS}{13L}$$

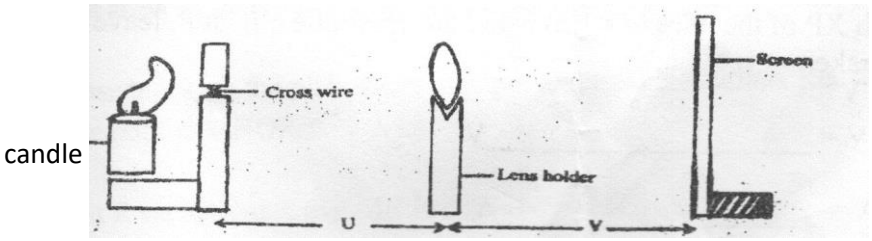
L1=_____mm **(1mks)**

2.a) You are provided with the following apparatus

- lens
- lens holder
- cardboard with cross wire
- white screen S
- candle
- Match box

Proceed as follows

a) Set up the apparatus as shown below



b) Let the distance U be 15 cm, by adjusting the distance of the screen from the lens, determine the distance V that will give the sharpest image of the cross wire on the screen. Record the value for V

V=_____cm**(1mks)**

c) Repeat the experiment for U=20cm, 25cm and enter them in the table. Complete the table. (3mks)

U (cm)	V (cm)	$I/_U$ (cm^{-1})	$I/_V$(cm^{-1})	$I/_U + I/_V = I/_f$ cm^{-1}	F cm
15					
20					
25					

d) Determine

i. mean value of $\frac{1}{f}$ **(1mks)**

ii. mean value of f **(1mks)**

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