FORM 3 MID TERM 3 EXAMS

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FORM 3 MID TERM 3 EXAMS

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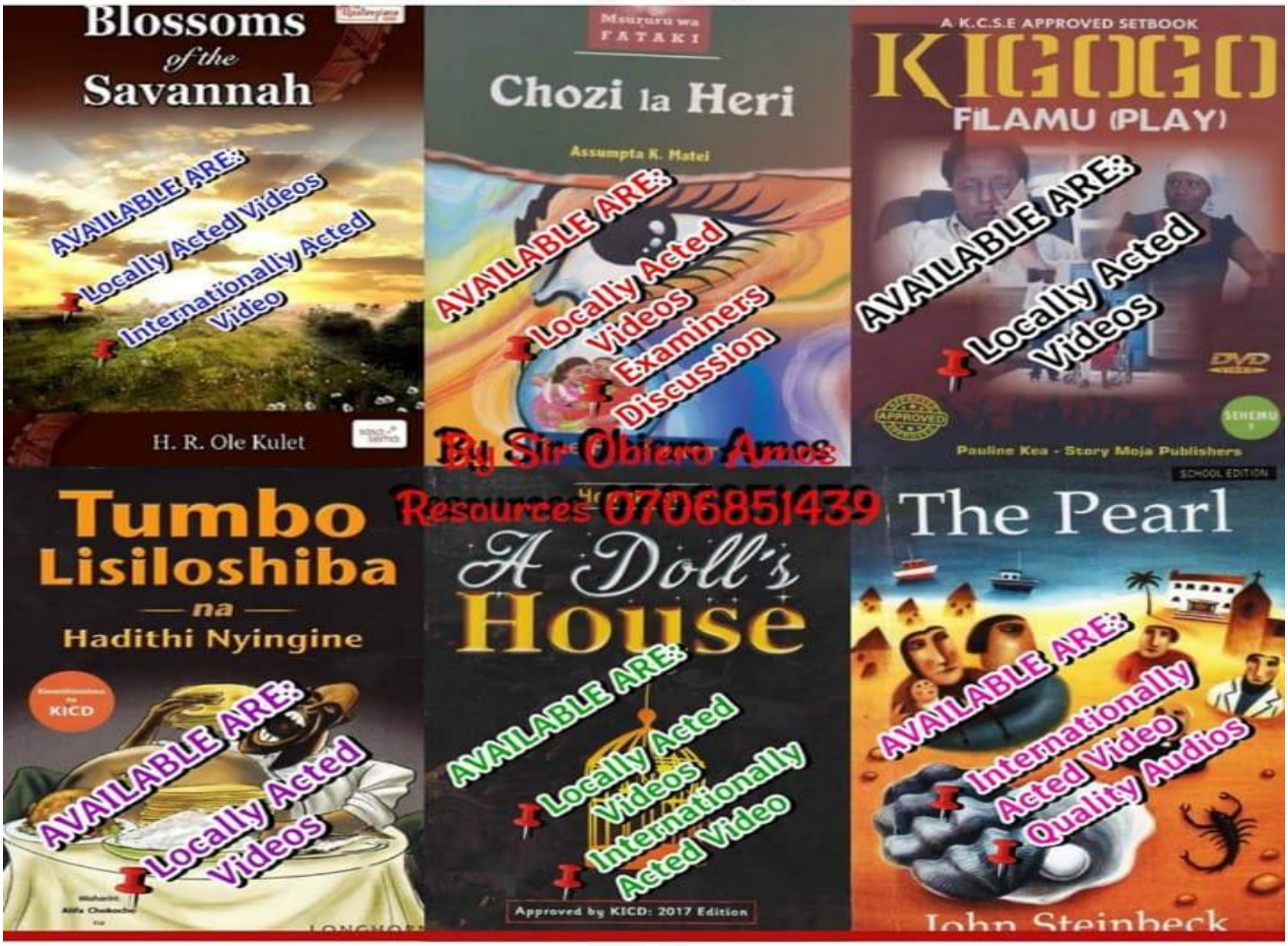

Name: ……

Class: …… Adm……
FORM 3
MID-TERM THREE EXAMS
AGRICULTURE EXAM
PAPER 1
TIME:

SECTION A
Answer all the questions in this section in the spaces provided.

1. Name two classes of weeds on the basis of the following.
   a) Growth cycle (1mk)

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   b) Plant morphology (1mk)

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2. State four reasons for land fragmentation in Kenya. (2mks)

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3. Give four advantages of individual owner operator tenure system as practised in Kenya. (2mks)

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4. Give four methods of breaking seed dormancy. (2mks)

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5. State four disadvantages of organic mulch in crop production. (2mks)

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6. Give four practices carried out in a tree nursery. (2mks)

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7. State four reasons for staking tomatoes. (2mks)

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8. List three methods of treating water for use on the farm. (1 ½ mks)

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9. Give two examples for each of the following categories of water pipes.
   a) Metal pipes (1mk)

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   b) Hose pipes (1mk)

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10. What is organic farming? (1mk)

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11. State four problems that may be brought about by hardpans in crop land (4mks)

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12. State four information contained in a land title deed. (2mks)

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13. Mention the simultaneous processes that lead to the formation of erosional characteristics of a gully. (4mks)

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14. State three factors that determine the depth of planting. (1 ½ mks)

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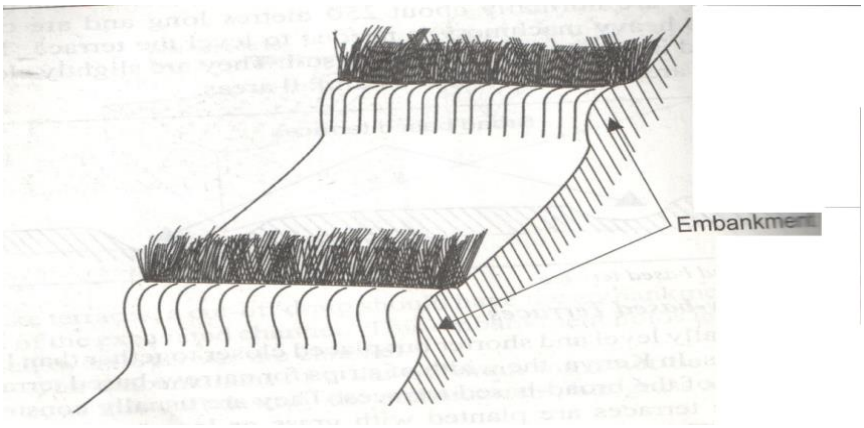
SECTION B (20MKS)

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

15. The diagram below shows a soil water conservation structure.



a) Identify the method of soil and water conservation shown in the diagram. (1mk)

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b) State three practices that can be carried out on the above structure to make it stable. (3mks)

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c) State any other structure that can be used in soil and water management. (1mk)

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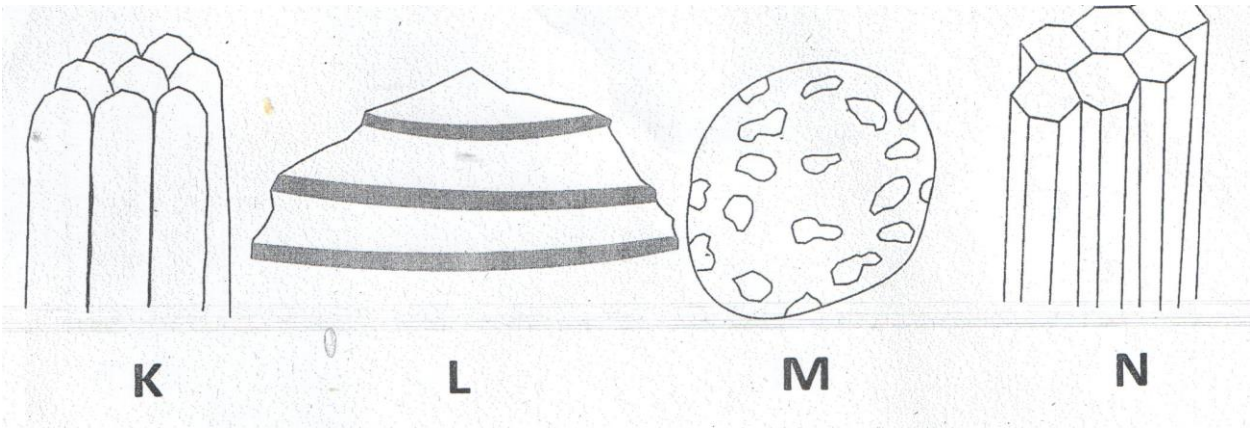
16. The diagram K, L, M and N below represents types of soil structures. Study the diagrams carefully and the answer the questions that follow.



a) Identify the soil structures labeled L , N and M. (3mks)

L – ……

M – ……

N – ……

b) Give one difference between soil structure K and N. (1mk)

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c) How can the soil structure labeled M be improved? (1mk)

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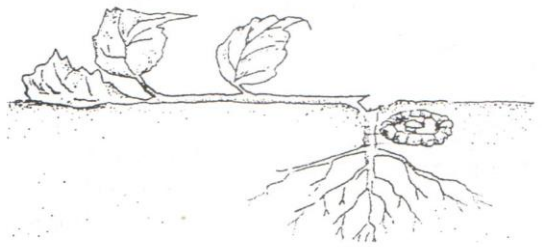
17. A plot of land measures 6.6m long by 3.6m wide. This plot is prepared for planting cabbages at a spacing of 60cm by 60cm. the outermost row starts at 30cm from the edges all around the plot. Calculate:

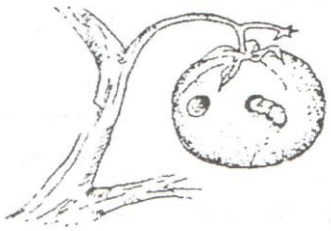
a) The number of the rows falling on the width side of the plot. (2mks)

b) The number of cabbage seedlings that should be planted on the plot. (3mks)

18. Study the illustrations given below and then answer the questions that follow



A



B

a) Identify the pests shown by illustrations A and B (1mk)

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b) State two effective methods of controlling each of the pests labeled A and B.

A (2mks)

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B (2mks)

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<u>Section C (40mks)</u>

<u>Answer any two questions from this section in the spaces provided.</u>

19. Outline safety precautions when using herbicides. (12mks)

b) Outline physical measures that have been employed in the control of pests. (8mks)

20. Explain five effects of soil erosion. (5mks)

b) Describe the field production of tomatoes from transplanting to harvesting. (15mks)

21. Describe advantages of sub-surface irrigation. (7mks)

b) Explain contribution of agriculture to National development. (12mks)

c) Define agriculture. (1mk)

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NAME: .....

CLASS: ..... ADM: .....
AGRICULTURE PAPER 2
MID-TERM 3
FORM THREE
TIME:

Answer ALL Questions in this section.

1. Give two uses of foot bath in a cattle dip. (2mks)

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2. Give four characteristics of exotic cattle that make them not to survive well in arid areas. (2mks)

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3. Differentiate between roughage and concentrate feeds as used in livestock nutrition. (2mks)

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4. List four reasons for treating timber before roofing farm building. (2mks)

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5. Give three problems associated with lambing in sheep. (3mks)

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6. Give 2 importance of growing grass around a fish pond. (2mks)

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7. Outline four qualities of honey. (2mks)

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8. Outline four maintenance practices that should be carried out on a hand saw. (2mks)

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9. List four management practices that should be carried out during mating season in sheep. (2mks)

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10. Give one function of omasum in ruminants. (1mk)

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11. State two uses of sickle on the farm. (2mks)

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12. State four routes of administering vaccines in poultry. (2mks)

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13. State three circumstances which would lead a farmer to cull a high producing dairy cow. (3mks)

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14. Give two best methods of indentifying bulls. (1mk)

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15. Name four materials collected by bees. (2mks)

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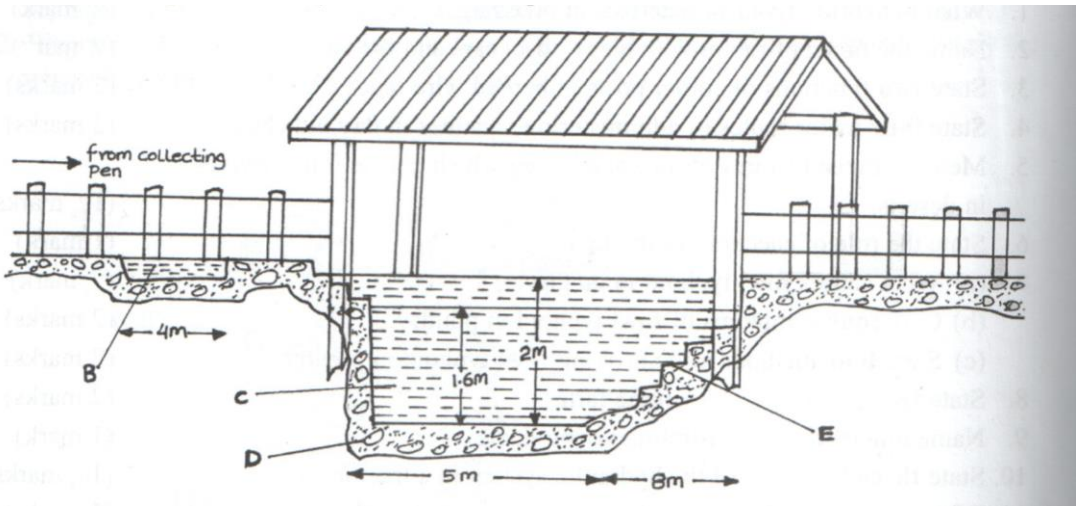
SECTION B: 20 MARKS

Answer All Questions in this section.

16. The diagram below illustrates a cross section of a livestock handling structure. Use it to answer questions that follow.



a) Name parts. (4mks)

B: .....

C: .....

D: .....

E: .....

b) Give the function of parts. (2mks)

B:

.....

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D:

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17. Diagrams Q and R below illustrate a practice carried out on livestock. Study them and answer questions that follow.

a) Identify methods Q and R. (2mks)

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b) Give one tool of carrying out practice Q. (1mk)

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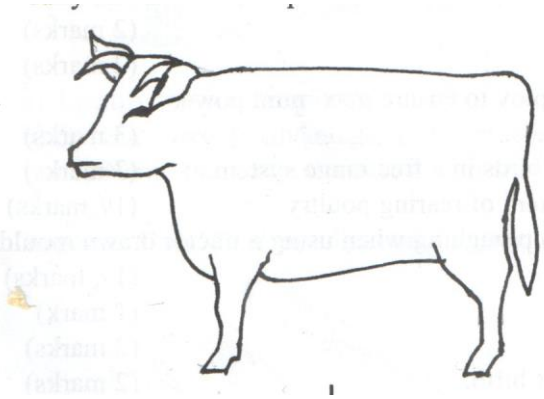
18. Diagram L below illustrates the external features of a cow. Study it careful and answer the questions that follow.



a) Using letter T with a pointing arrow indicate four areas where ticks are found. (3mks)

b) Name two chemical methods of controlling ticks. (2mks)

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c) Name the type of animal giving a reason. (2mks)

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19. A farmer wanted to prepare a 200kg of calf rearing ration containing 20% D.C.P. Using pearson's square method calculate the amount of maize containing 10% DCP and sunflower containing 35% DCP the farmer would need to prepare the ration. (4mks)

SECTION C: (40 MARKS)

Answer any TWO questions in this section.

(a) Describe four methods used in fish preservation prior to marketing. (8mks)

(b) State four advantages of embryo transplant. (4mks)

(c) Describe four disease predisposing factors in livestock. (8mks)

20. (a) Compare and contrast ruminants and non-ruminants. (10mks)

(b) Describe five uses of water in the animal's body. (10mks)

21. (a) Describe five possible uses of a crush. (5mks)

(b) Explain five importance of dehorning animals. (10mks)

(c) State five reasons for swarming of bees. (5mks)

231/3 – BIOLOGY FORM THREE

CONFIDENTIAL

Moss plant labeled K in a watch glass / peri-dish.
Showing (Rhizoids, leaves, seta, capsule.

Hand lens

REQUIREMENTS

Each candidate will require the following:

- 5 test - tubes
- 5ml of solution L_1 – starch solution 0.5%
- 5ml of solution L_2 – diastase solution 10%
- 2ml of solution L_3 – Boiled diastase solution 10%

  NB: boiled for 10 minutes
- Means of labeling – 3 labels
- Water bath
- Thermometer
- Iodine solution
- 3 Droppers
- A White tile
- Means of timing

NAME: ……

CLASS: …… ADM: ……

MID-TERM 3

FORM THREE

BIOLOGY PAPER 1

1. State **three** ways in which protein are important to plant. (3marks)

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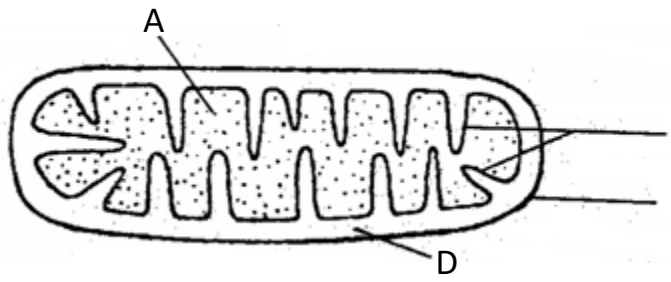
2. The diagram **below** represents a cell organelle.



(a) Identify the organelle. (1 mark)

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(b) Name the part labeled**B**. (1 mark)

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

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3. Define **binominal nomenclature**. (1marks)

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4. Name any **two** problems that animal species overcome by their dispersion. (2marks)

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5. Explain why tropical forests do not have undergrowth (2marks)

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6. How is blood pressure generated and maintained in a vein? (2marks)

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7. What is the function of catalase? (2marks)

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8. (a) State the importance of cross-pollination to flowering plants. (1mark)

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(b) How is self-pollination a disadvantage to flowering plants? (1mark)

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9. What is the role of light energy in autotrophic nutrition in spermatophyte? (2 marks)

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10. How is fur important to desert animal, other than in the regulation of their body temperature? (1mark)

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11. What are the functions of named product of white blood cells? (3 marks)

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12. Explain three adaptations of cardiac muscles to their function. (3 marks)

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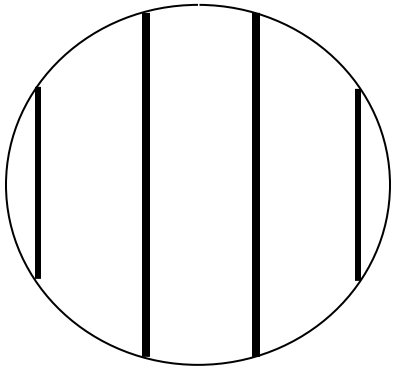
13. A form one student trying to estimate the size of onion cells observed the following on the microscope's field of view.



(a) Define the term resolving power. (1 mark)

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(b) If the student counted 20 cells across the field of view calculate the size of one cell in micrometers. (2 marks)

14. What is **tidal volume** in ventilation in man? (1mark)

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15. Define peristalsis and state its importance in the nutrition of mammals. (2 marks)

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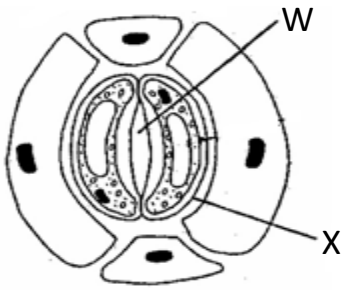
16. The diagram **below** shows part of plant tissue.



(a) Name cell labeled **X** and part labeled **W**. (2 marks)

X

……

……

W

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17. Why is the liver part of the digestive system? (2 marks)

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18. State the importance of cytoplasmic filaments in sieve tube elements. (1 mark)

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19. State any two characteristics of populations. (2marks)

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20. Describe any **two** functions of mitosis? (2 marks)

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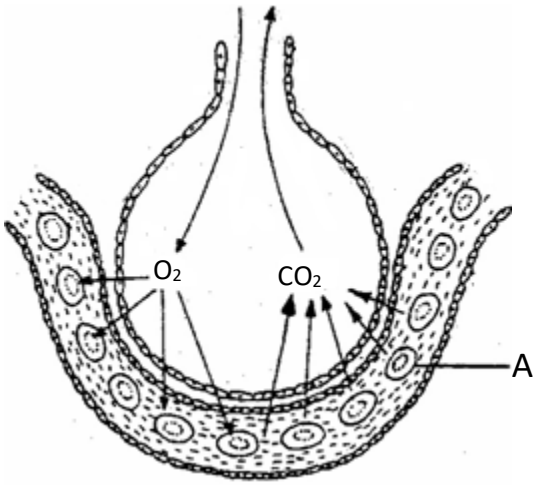
21. The diagram **below** shows the exchange of gases in alveolus.



(a) State how the alveoli are adapted to their function. (3 marks)

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(b) Name the cell labeled**A**. (1 mark)

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22. What are the external conditions needed, by root hair cells, for the uptake of mineral salts ions from the soil? (2 marks)

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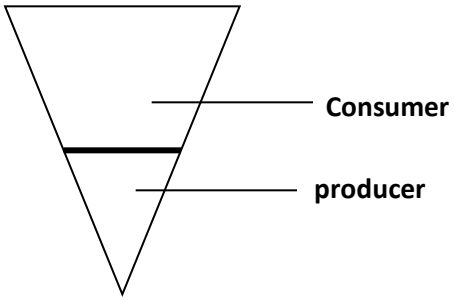
23. The diagram below represents a pyramid of biomass derived from a certain ecosystem



(a) Suggest the type of ecosystem from which the pyramid was derived (1mk)

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(b)State the significance of short food chains in an ecosystem (1mk)

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24. Suggest two reasons for the appearance of glucose in the urine of a man. (2 marks)

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25. (a) State the source Carbon (IV) oxide in aquatic ecosystems. (2 marks)

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(b) State the importance of Carbon (IV) oxide to aquatic ecosystems. (2 marks)

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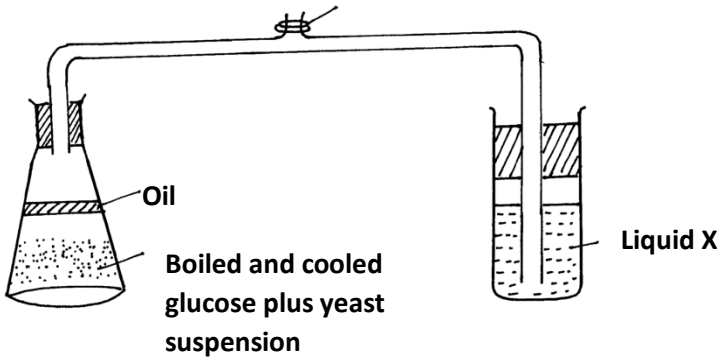
26. The set up below shows apparatus to demonstrate a certain biological process



(a) What biological process was being investigated in the experiment (1mk)

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(b)Write down a word equation that represents the reaction above (1mk)

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(c) In the above set up, why was it important to boil and cool glucose before adding yeast? (1mk)

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27. What is the homeostatic importance of cuticles of leaves? (2marks)

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28. Outline two functions of parenchyma cells in herbaceous plants. (2 marks)

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29. What is the important of diffusion to red blood cells? (2marks)

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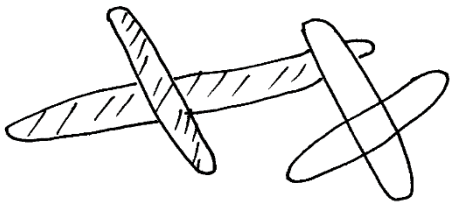
30. The diagrams below show a pair of homologous chromosomes. Study them and answer the questions that follow.



(i)State the phenomenon shown above (1mk)

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(ii) What is the genetic significance of the phenomenon above? (2mks)

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31. Account for the thick wall and narrow lumen of an artery. (2marks)

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32. How do pathogens that enter the body through the respiratory tract in man prevented from causing diseases? (1mark)

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33. Where does the detoxification of ammonia take place in mammals? (1mark)

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34. Name the processes that take place in the grana of chloroplast. (2marks)

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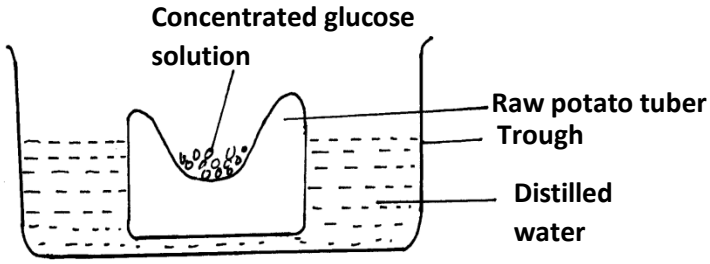
35. The experiment illustrated below was set up to investigate a certain physiological process using a raw tuber



(a) Suggest a possible physiological process that was being investigated (1mk)

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(b) Explain the results obtained in the above experiment after a few hours (2mks)

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(c) State the observations that would have been made if the experiment was repeated using boiled potato (2mks)

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36. Name the causative organism of the following diseases

(i) Malaria (1mk)

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(ii) Bilharzia (1mk)

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Name: ……..……..

Adm no …….. Class……..

231/2

BIOLOGY FORM THREE

MID-TERM THREE

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

- *Answer **ALL** the questions*
- *Answers should be written in the spaces provided*

1. A student observed feeding relationship while on a tour in a coastal Island.

   Eagles feed on small fish, Small fish feed on sea grass, Insect larvae and molluscs feed on sea grass, Insect larvae fed on by small fish, while crabs feed on insect larvae and molluscs.

   a) From the above information, construct a food web. (3mks)

   b) In which trophic level is small fish found. (1mk)

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c) Extract a food chain where the Eagle is a tertiary consumer. (1mk)

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d) Suppose all the crabs were poisoned, what would be the immediate effect in the ecosystem. Give a reason. (1mk)

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(e) Give a reason why pyramid of biomass is a better representation of energy flow in an eco-system than pyramid of numbers. (1mk)

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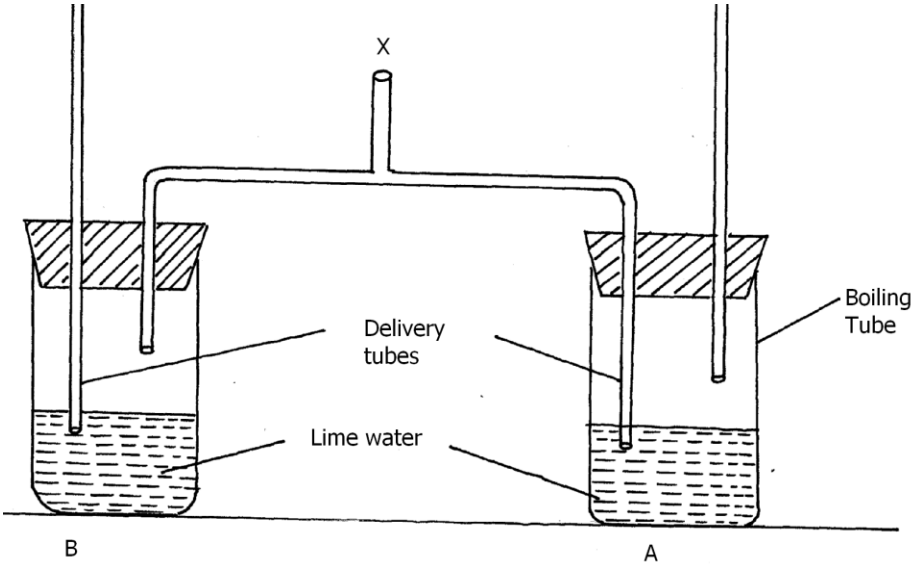
2. An experiment was set up as shown below.



a) A student blew air in and out through point X. Using arrows indicate on the diagram how air gets in and out of the set up. (2mks)

b) (i) In which of the test tube would lime water turn milky first. (1mk)

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(ii) Give a reason. (1mk)

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(c) What is the effect of lactic acid in the thigh muscles of an athlete after a short fast race. (2mks)

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(d) Identify the type of muscle in human being where formation and effect of lactic acid is not felt. (1mk)

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(e) What is the biological significance of boiling milk /ultra heat treated milk. (1mk)

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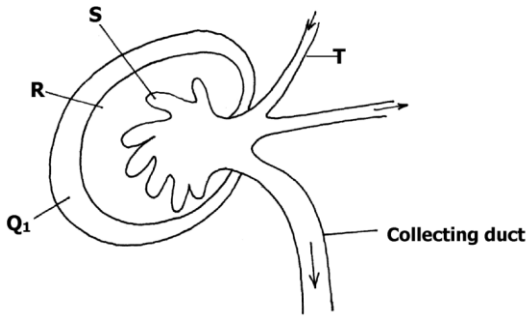
3. The diagram below is a longitudinal section of an organ in mammals



a) Name the organ (1mk)

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b) Identify the parts R and S (2mks)

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c) i) State two differences in the structure above found in the deserted- rat and fish (3mks)

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ii) Account for the difference stated above. (2mks)

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d)Name the gland associated with the secretion of aldorsterone hormone. (1mk)

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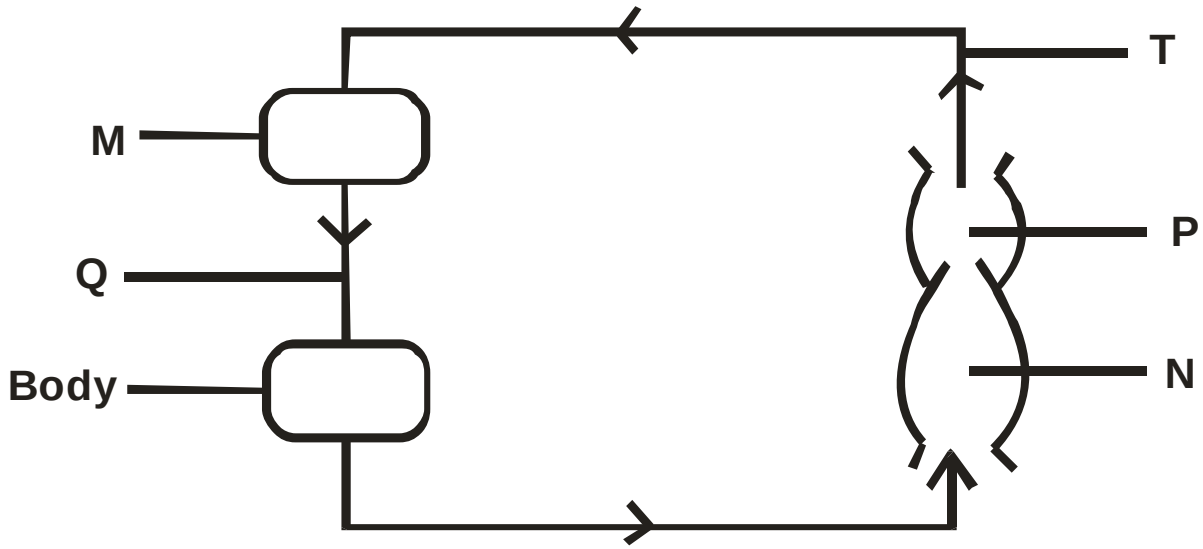
4. The diagram below represents a circulatory system found in a certain class of chordates.



a) Identify the type of circulatory system shown above. (1mk)

……

……

b) Name **one** class of animals having this type of circulatory system. (1mk)

……

……

c) Identify parts labelled M, N and P. (3mks)

M: ……

N: ……

P: ……

d) What disadvantages is faced by having the types of circulatory system shown above? (2mks)

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e) Between blood vessels Q and T, which one carries oxygenated blood? (1mk)

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5. In an experiment to investigate the rate of reaction indicated by the equation.

$C_{12}H_{22}O_{11} \longrightarrow C_6H_{12}O_6 + C_6H_{12}O_6$

Sucrose Fructose Glucose

It was found out that for products fructose and glucose to form, substance "K" was needed. Temperature was maintained at 37°C.When substance "L" was added, reaction slowed and then stopped.

a) Suggest identity of the substances (2mks)

K: ……

L: ……

c) Other than temperature, state <u>three</u> factures that increase the rate of reaction. (3mks)

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d) Explain how substance "L" slowed the rate of reaction. (2mks)

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e) What type of reaction is represented by the equation above? (1mk)

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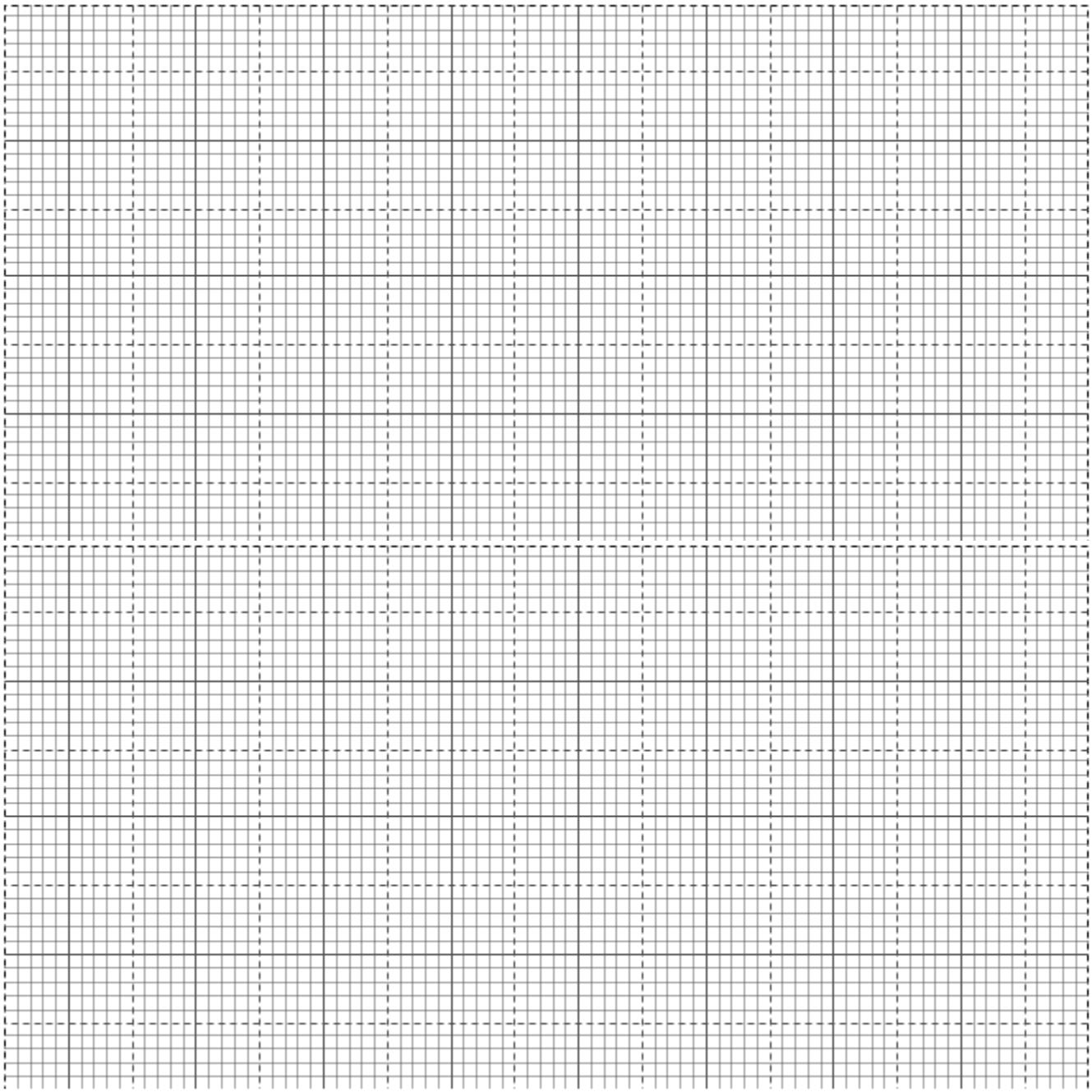
SECTION B (40 MARKS)

Answer questions 6 (compulsory) and either questions 7 or 8 in the spaces provided questions

6. The glucose level in mg per 100cm^3 of blood was determined in two person Y and Z. Both had stayed for six hours without taking food. They were fed on equal amount of glucose at the start of the experiment. The amount of glucose in their blood was determined at intervals .The results are shown in the table below.

Times in minutes	**Glucose level in blood in mg /100cm^3**	
	Y	**Z**
0	85	78
20	105	110
30	105	110
45	130	170
60	100	195
80	93	190
100	90	140
120	90	130
140	88	120

a)On the grid provided, plot graphs of glucose levels in blood against time on the same axes. (7mks)



c) What was the concentration of glucose in the blood of Y and Z at the 50th minute? (2mks)

Y: .....

Z: .....

c) Account for the level of glucose in present Y

i) During the first 45 minutes. (2mks)

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ii) After 45th minute to the end. (4mks)

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d) Account for the decrease in glucose level person Z after 60 minutes. (2mks)

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e) Low blood sugar level in harmful to the body. Explain. (3mks)

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7. Discuss the adaptations of seeds and fruits to dispersal. (20mks)

8 Describe the structure and functions of various organelles in a mature animal cell.

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Name: ……..……..……

Adm no: ……..…..... Class: .....

231/3
BIOLOGY FORM THREE
MID-TERM THREE
TIME: $1^{3}/_{4}$ HOURS
INSTRUCTIONS TO CANDIDATES:

- *Answer **ALL** the questions*
- *Answers should be written in the spaces provided*

1. Below is a photograph of an adult human jaw with teeth. Study the diagram and answer the questions that follow.

a) State the mode of nutrition in man. (1mk)

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b) Name the type of teeth labeled I and III. (2mks)

I: ……

III: ……

c) Name the parts of teeth labeled H and J. (2mks)

H: ……..

J: ……..

d) Identify **one** distinguishing feature between teeth labeled II and IV. (1mk)

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e) State **one** function of tooth IV. (1mk)

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f) Write the dental formula from the jaw shown in the photograph. (1mk)

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g) Explain why tooth I would be more prone to dental carries than tooth III, (2mks)

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2. Use the hand lens provided to observe specimen K and answer the questions that follow.

a) (i) In the space below draw a fully labeled diagram of representative part of the specimen. (5mks)

(ii) Calculate the magnification of your drawing. (2mks)

b) Identify:

(i) The Kingdom (1mk)

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(ii) The Division, to which the specimen belongs. (1mk)

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(iii) Give a reason for your answer in b (ii) above. (1mk)

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c) State the functions of any **two** parts labeled in your diagram. (2mks)

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d) What is the mode of reproduction in the specimen? (1mk)

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e) Explain the significance of colour observed in the specimen M. (2mks)

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……You are provided with solutions labeled L_1, L2 and L_3. Note that L_3 is the same as L2 except that L_3 has been boiled.

Label three test- tubes A, B and C.
Into the test- tube labeled A add 1ml of solution L_1.
Into the test- tube labeled B add 1ml of L_1 and 1ml of L_2.
Into the test- tube labeled C add 1ml of L_1 and 1ml of L_3.

a) Withdraw a drop from test – tube A and place it on a white tile. To the drop add one drop of iodine solution. Record your observation in the table below. (3 mks)

Test - tube	observation	conclusion
A		
B		
C		

Repeat the procedure with contents in test – tubes B and C. Record your observations in the table.

Place the three test –tubes labeled A, B and C into a water bath at 37^0C.

NB. Ensure that the temperature of the water bath does not fall below 35^0C or exceed 38^0C

b) After 30 minutes, test the contents of each of the test – tubes labeled A, B and C following the procedure in (a) above. Record your observations in the table below.
(6 mks)

Test - tube	**observation**	**conclusion**
A		
B		
C		

c) Why was test – tube labeled A included in the experiment? (1mk)

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d) (i) suggest the identity of solution L_2 (1mk)

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(ii) Give a reason for your answer in (d) i above. (1 mk)

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e) Suggest a part of the alimentary canal in the body of a mammal where the process being investigated in the experiment would take place. (1mk)

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f) Account for the results at the end of the experiment in the test – tube labeled.

i) B (1mk)

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ii) C (1mk)

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NAME: ……………………………….…………………………………………………….

ADM: ………………………………….   CLASS: ………………………………….

FORM THREE MID-TERM THREE

BUSINESS STUDIES PAPER ONE

TIME.2hrs

1 a) Outline four reasons why organizations need to safe keep documents in files (4mks)

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2.Give the four components of business studies (4mks)

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3.A business is expected to be socially responsible to various groups such as customers, employees, government, public and suppliers. Indicate against each statement the most appropriate group (5mks)

Statement	Group
i)Fair remuneration	
ii)Timely tax returns	
iii)Fairness in tender allocation	
iv)Equal job opportunities	
Quality products	

4.Use the table below to outline four differences between basic wants and secondary wants (4mks)

Basic wants	Secondary wants

5.Identify three activities in the extractive level of production (4mks)

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6.Outlinefour ways in which partners may be classified (4mks)

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7.Highlight four characteristics of mail order store (4mks)

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8.Outline the meaning of the following terms as used in accounting (4mks)

i)Network of a business

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ii)Business transaction

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iii)Cash transaction

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vi)Credit transaction

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9.State four main factors that may limit the level of a country's national income. (4mks)

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10.Identify four ways in which a business may be of benefit to people in the surrounding area (4mks)

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11.State the effect of each of the following transaction on the balance sheet by writing increase or decrease or no effect in each case

Transaction	Effect
a)Bought machinery on credit	
b)withdrew cash from the business for personal use	
c)Purchased stock in cash	
d)Paid outstanding by cheque	

12.State four ways of increasing efficiency and effectiveness of human porterage

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13.The following information relates to Makuyu Traders. Determine the missing figures. (3mks)

	Assets	Liabilities	Capital
a)	50000	70000	
b)	320000		280000
c)		14360	12000

14.Post the following transactions in the ledger books of Embakasi traders (4mks)

March 1/2013 commenced business with sh. 150,000 cash at bank
March 5/2013 bought machinery in credit for sh. 9500
March 7/2013 withdrew sh 5000 from bank for office use
March 8/2013 paid sh 3000 cash to creditor

15.Give four reasons that make insurance companies decline to insure acts of nature (4mks)

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16.Name 4 sources of business ideas. (4mks)

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17.State 4 office etiquette of a business person. (4mks)

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18.Mention four main types of demand. (4mks)

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20.Name 4 methods of government involvement in business (4mks)

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21.Name 4 types of public utilities. (4mks)

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22.Name 4 barriers of effective communication. (4mks)

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23.Name 4 types of life assurance contracts (4mks)

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24.Name 4 characteristic of a good filing system. (4mks)

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25.Give 4 characteristics of oligopoly market structure. (4mks)

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NAME: ……..……..……..

ADM: …… CLASS: ……..

FORM THREE MID-TERM THREE EXAMS

BUSINESS STUDIES PAPER TWO

TIME.2hrs

1.(a) Explain five internal economies of scale that may be experienced by the firm**(10mks)**

(b) Explain five factors to be considered when setting up an office layout for a business organization **(10mks)**

2a) Explain **five** assumptions that will makea circular flow oftwo sector economyto hold. (10marks)

b)Explain **five** ways of improvingthe efficiencyofawarehouse.
(10 marks)

3.a)Explain six ways which the government of Kenya can use to influence the supply of maize in Kenya (12mks)

b)The following balance relate to the business of Roba traders during the period ended 31st March 2014.

Cash at bank	680,000
Premises	500,000
Machinery	175,000

Creditors	190,000
Furniture	85,000
Motor van	200,000
Cash in hand	50,000
ADS5y loan	630,000

Extract the trial balance of Roba traders as at 31st March 2014 (8mks)

4a)Discuss any four importance's of a balance sheet with special reference to the interested parties to a balance sheet (8mks)

b)Highlight any six types of an employment and disclose a remedy (solution) for each type (12mks)

5. a)Describe**four** circumstances under whichan insurancecompanywould not compensatethe insured in the event of loss. (8 marks)

b)The followingbalancesheet was extractedfromthe books ofImarastores on 1stMay2015.

IMARASTORES

BalanceSheet

Asat1stMay2015

	Ksh		Ksh
Furniture	82,000	Mbotela(credi	27,000
Stck	140,00		
Cash	20,000		
	442,00		~~442,000~~

The followingtransaction took placeduringthemonth of May2015.

4.5.2015: Theowner ofImarastores sold personalassets forKsh 30,000 receivingpayment by chequewhich heinvested in thebusiness.

10.5.2015: Hepurchasedgoods for Ksh 29,000 oncreditfrom Mbolela.

19.5.2015: Heturnedgoods worth Kshs 3,000 to Mbotela after theywerefund defective.

30.5.2015: Hesold goods forKsh 12,000 cash.

Required: Open relevantledger accounts, record the abovetransaction andbalancethem off.(12 marks)

6. a) Highlight any five distinguishing characteristics between a public Ltd company and public corporation. (10 marks)

b) Discuss five conditions necessary for the existence of perfect competition type of market structure.

(10 Marks

NAME: ……..……..……..

ADM: …… CLASS: ……..

FORM THREE MID-TERM THREE EXAMS

313/1 CRISTIAN RELIGIOUS EDUCATION

(Paper 1)

TIME 2.5 HRS

ANSWER ANY FIVE QUESTIONS

1. (a) Explain ways in which CRE promotes national unity(8mks)

(b) Outline six reasons why Bible is referred to as the word of God.(6mks)

(c) Outline ways in which Christians obey instructions given by God in creation stories.(6mks)

2. (a) From the call of Moses, explain five reasons why he was reluctant to accept the task given by God.(10mks)

(b) Outline five roles of Moses in Israel.(5mks)

(c) Give five problems church leaders face in their work today.(5mks)

3. (a) Identify six reasons why Samuel was against kingship in Israel(6mks)

(b) outline ways in which David promoted worship of Yahweh in Israel. (7mks)

(c) What lessons do church leaders learn from David's leadership? (7mks)

4. (a)Identify characteristics of true prophets in the old testament(5mks)

(b)Explain the Visions of Prophet Amos and give their significance (10mks)

(c) Identifyfive evils in society today that prophet Amos would have condemned(5mks)

5. (a)Explain four reasons why prophet Jeremiah condemned human sacrifice(8mks)

(b) Outline five characteristics of the new covenant as foretold by prophet Jeremiah(5mks)

(c) State lessons Christians learn from prophet Jeremiah's suffering and lamentations(7mks)

6.(a) Give the importance of kinship in traditional African society(7mks)

(b) Highlight six responsibilities of living towards ancestors(6mks)

(c) Outline ways in which Christians honour God today(7mks)

NAME: ……

ADM NO: …….. CLASS: ……..

FORM THREE MID-TERM THREE EXAM

313/2 (Paper 2)

CHRISTIAN RELIGIOUS EDUCATION

TIME: 2.5 HRS

ANSWER ANY FIVE QUESTIONS

1a) Describe activities that took place during dedication of Jesus in the Temple (LK 2:22-40)*(8mks)*

(b) Outline seven lessons Christians learn from the incident when Jesus was left behind by his parents in the Temple. (Luke 2: 41 - 52). *(7 mks)*

(c) State five ways in which Christians show respect to places of worship in Kenya today. *(5 mks)*

2. (a) With reference to the sermon on the plain, state six teachings of Jesus on how human beings should relate to one another. *(6 mks)*

(b) Describe the incident in which Jesus calmed the storm. (Luke 8: 22 - 25). *(7 mks)*

(c) Identify virtues that Christians learn from the miracle of the feeding of the five thousand. *(7 mks)*

3. (a) State five accusations that were made against Jesus during his trial. (Luke 22: 66 - 23: 1-23).*(5mks)*

(b) Give reasons why Jesus appeared to His disciples after resurrection. *(7 mks)*

(c) Why should Christians be discouraged from taking part in mob justice? *(8mks)*

4. (a) Explain the teaching of Peter concerning the people of God (1st Peter 2: 9 - 10) *(8mks)*

(b) Give ways through which Christians can promote unity among themselves in Kenya today. *(7mks)*

(c) State how kindness as a fruit of the Holy Spirit is abused in the Church in Kenya today. *(5mks)*

5 a) Outline the events that took place at Jesus entry into Jerusalem (Luke 19:28-40. (7mks)

(b) State what the two disciples to Emmaus discussed about Jesus. (6mks)

(c) Explain how unity is demonstrated in Kenyan churches today. (7mks)

6 a) Explain the teaching of Jesus on prayer *(7mks)*

(b) State the occasions when Jesus prayed (*7mks*)

(c) Why do some Christians find it hard to pray ?*(6mks)*

JINA: ……..……..

NAMBARI: ……. KIDATO: ……

102/1

KISWAHILI

INSHA

KARATASI YA 1

KIDATO CHA TATU

MUDA: SAA 1 ¾

MAAGIZO:

- Andika Insha mbili. Insha ya kwanza ni ya lazima.
- Kisha chagua insha nyingine moja kati ya hizo tatu zilizobaki.
- Kila insha isipungue maneno 400.
- Kila insha ina alama 20.

MASWALI:

1. Wewe ni katibu wa kamati ya maslahi ya klabu ya wasanii chipukizi mtaa wa Rehema.
   Andika kumbukumbu za mkutano uliofanywa hivi karibuni kujadili suala la usalama
   uliozorota.

2. Mfumo wa elimu nchini Kenya una kasoro nyingi na unafaa kufanyiwa mabadiliko. Eleza.

3. Andika kisa kinachodhihirisha maana ya methali: Ujana ni moshi ukienda haurudi.

4. Tunga kisa kinachomalizika kwa maneno haya: '……. Hapo ndipo iliponipambazukia kuwa
   nilikuwa naogelea baharini pekee, kinyume na wenzangu wote.

JINA: ……...……..

DARASA: …… NAMBARI: ……
KISWAHILI

KIDATO CHA TATU

MJARIBU WA PILI MUHULA WA TATU,

SEHEMU A.UFAHAMU (ALAMA 15)

Soma makala yafuatayo kisha kisha ujibu maswali:-

Waajiri wengi wanazilaumu taasisi za elimu kwa kukosa kutoa wafanya kazi wenye ujuzi tosha, hasa wa kiteknolojia za kisasa kama kutumia kompyuta kutenda kazi mbalimbali. Hali hii imekuwa ya kuhuzunisha sana.

Ujuzi wa kuweza kutumia Kompyuta unaweza kumfaa mwanafunzi hata anapokosa nafasi ya kujiunga na chuo kikuu kwa vile anaweza kuendelea na elimu yake kupitia kwa elimu mtandao. Pia anaweza kufanya utafiti wa kina kupitia intaneti na kwa njia hii akaimarisha elimu yake.

Mojawapo ya njia ya kuimarisha elimu kuhusu maswala ya teknolojia ni kuanzishwa kwa mikakati mipya ya kufunza. Somo la Kompyuta laweza kuimarika mashuleni endapo kwanza walimu watahamasishwa juu ya faida za ujuzi huu.

Kwa kutumia Kompyuta kufunza, walimu wanaweza kufunza madarasa kadhaa katika kipindi kimoja bila kulazimika kuyahudhuria. Hii itapunguza kiwango cha kazi kwa walimu kwa vile watapata muda wa kufanya utafiti mpana. Aidha, watapata habari na ufahamu zaidi wa mambo kwa kutumia mitambo ya Kompyuta kutoka kwenye intaneti, kupitia tovuti.

Hata hivyo mipango hii inakabiliwa na changamoto kama vile bei za juu za mitambo na vifaa vya Kompyuta, ukosefu wa miundo msingi itakayowezesha utumiaji wa mitambo hii na ukosefu wa walimu waliohitimu somo la Kompyuta. Pia, kuna tatizo la ukosefu wa nguvu za umeme hasa maeneo ya mashambani; vile vile, katika maeneo yaya haya, wanafunzi na wazazi wengi huvichukulia somo la Kompyuta kuwa gumu na linalofaa wakaazi na wanafunzi kutoka maeneo ya mijini na linalofaa wakaazi muhimu kwao mashambani.

Maswali

(a) Ipe taarifa uliyoisoma anwani inayoifaa AL.2

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(b) "Hali hii imekuwa ya kuhuzunisha." Ni hali gani inayozungumziwa katika aya ya ? AL.2

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(c) Ujuzi wa kutumia Kompyuta unaweza kumfaidi vipi mwanafunzi? AL.4

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(d) Mikakati mipya ya kuimarisha elimu kuhusu maswala ya teknolojia inakabiliwa na vizingiti vipi? AL.3

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(e) Taja manufaa mawili ambayo mwalimu anaweza kupata kutokana na ujuzi wa teknolojia ya Kompyuta AL.2

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(f) Andika msamiati mwafaka zaidi kwa maneno yafuatayo: AL.2

(i) Kompyuta

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(ii) Intaneti

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SEHEMU B.UFUPISHO (ALAMA 15)

Soma taarifa hii kisha ujibu maswali

Umaskini ni tatizo sugu katika jamii. Binadamu wengi hujikuta katika hali hii kwa sababu hawakubahatika kusoma. Baadhi yao huenda walijaribu kusoma wakashindwa mapema kujipandisha kielimu. Ukosaji wa elimu huchangia sana

katika kukuza ukata. Elimu huweza mtu kupata tonge kwa kujipatia kazi za kumwezesha kuyakidhi mahitaji ya maisha. Hali kadhalika, elimu humsaidia binadamu kupata maarifa mengi ya kutendea shughuli zake za kimaendeleo. Kwa mfano, kama ni wakulima wanaweza kutumia **pembejeo** zifaazo ili kuboresha uzalishaji wa mazao. Wakulima wenye elimu hawatapendelea njia duni za kuendeleza kilimo kama vile kutumia visagilima na mbinu nyingine za kijadi. Badala yake watatumia njia za kisasa za kuvunia mazao yao.

Umaskini mwingine huwa mwiba wa kujichoma. Baadhi ya watu ni mikunguni. Kulaza damu kwao kunawafanya kuwa wategemezi katika familia na jamii kwa jumla. Kwa vile hawajazoea kuinamia cha mvunguni, hata wakifunzwa kuchakura hawawezi. Ili kujaribu kuutibu uwele wao na ufukara baadhi yao hutafuta njia za mkato kama vile upwekuzi wa vitu vya wale waliojitahidi. Wakifanikiwa huweza **kufurisha vibindo vyao.** Hata hivyo mkono mrefu wa walinda usalama ukiwakumbatia wao hubakia kusagika kwa dhiki isiyomithilika ndani ya magereza.

Majanga ya kimaumbile kama vile mitetemeko ya ardhi, mikurupuko ya maradhi hatari, moto, ukame na mafuriko huchangia na kuzidisha umaskini. Matukio hayo yakiandama kidindia watu wengi huhasirika. Licha ya mali nyingi kupotea, manusura huachwa wakiwa maskini hohehahe. Matumizi yao hupotea kwani wengi huhitajika kuanza maisha upya.

Vijana ni nguzo muhimu katika maendeleo ya nchi yoyote ile. Endapo watajiingiza katika uraibu wa dawa za kulevya, wataathirika wao wenyewe na jamii kwa jumla. Pamoja na kuwa vijana hawa hufuja pesa nyingi katika ununuzi wa dawa hizi, dawa zenyewe huwadhoofisha na kuwapoka nguvu za kushiriki katika uzalishaji mali. Kutokana na hali hii,umaskini hupaliliwa na kushamiri zaidi.

Umaskini huzua matatizo mbalimbali katika jamii. Ufukara huchachawiza juhudi za serikali za kuwapa raia wake mahitaji ya kimsingi kama vile huduma za afya. Pia umaskini husababisha maovu mbalimbali ya kijamii kama vile mauaji na ukahaba.

Baadhi ya wanajamii huona kwamba njia ya kipekee ya kukabiliana na changamoto zinazosababishwa na hali ya ulitima ni kupitia kwa biashara haramu. Hali hii huchochea zaidi kudorora kwa maadili ya kijamii.

Mataifa mbalimbali ulimwenguni yamezua mikakati mahsusi ya kukabiliana na umaskini. Baadhi ya mataifa yamebuni utaratibu maalum wa kupunguza mwanya mkubwa uliopo kati ya matajiri na maskini. Mojawapo ya mipango hiyo ni kupandisha viwango vya kodi inayotozwa wenye mishahara minono na wafanyibiashara wenye pato kubwa. Aidha huduma za burudani hutozwa kodi ya kiwango cha juu. Kupitia kwa kodi hizo, na njia nyinginezo, serikali za nchi hizo hupata pesa za kuwahudumia maskini.

Mataifa yanayoendelea yanaweza kuwakwamua wananchi kiuchumi kwa kuwapa wahitaji mitaji ya kuanzisha miradi mbalimbali ya kimaendeleo. Mifano ya miradi hiyo ni viwanda vya 'Jua kali', ususi wa vikapu na uchongaji wa vinyago. Hali kadhalika, serikali inaweza kuwatafutia masoko ya nje wafanyi biashara wadogo wadogo. Aidha, serikali inaweza kupunguza ushuru kwa bidhaa zinazoagizwa na masoko ya nje wafanyibiashara wa aina hiyo. Mathalan, ushuru unaotozwa nguo kuukuu zinazoingizwa nchini ukipunguzwa, wauzaji wa nguo hizi watafaidika zaidi na hali ya umaskini itaendelea kupungua.

Sehemu za mashambani ni mhimili mkubwa wa uchumi. Ingawa kumekuwa na juhudi za kuzistawisha sehemu hizi kwa kusambaza huduma za umeme na maji kwa gharama nafuu, bado hali haijawa ya kuridhirisha. Ili kuimarisha sehemu hizi na

kukabiliana vilivyo na tatizo la umaskini, hatuna budi kusambaza huduma hizi hasa katika sehemu kame. Sehemu hizi zikipata maji, kilimo chenye natija kitaendelezwa na umaskini utakuwa karibu kuzikwa katika kaburi la sahau. Ikiwa tutazitekeleza sehemu hizi, vijana wanaoweza kusistawisha watahamia mjini kutafuta maisha 'bora'. Hali hii itazidisha msongomano wa watu mjini.

Umaskini ni nduli ambaye lazima aangamizwe ima fa ima. Vijana hawana budi kubadili mtazamo wao hasa kuhusu kazi za mashambani na kujitahidi kuimarisha kilimo. Fauka ya hayo, mifumo mwafaka ya elimu ibuniwe ili kukidhi mahitaji ya kiuchumi ya taifa. Badala ya kuhimiza elimu ya kinadharia, elimu tekelezi isisitizwe zaidi ili wale wanaokosa kazi za kiafisi waweze kujiajiri katika kazi za kiufundi. Ukusanyaji wa ushuru uimarishwe zaidi. Hali ya usalama iendelee kustawishwa ili kuzidi kuwavutia wawekezaji, na hivyo kubuni nafasi zaidi za kazi.

Maswali

(a) Kulingana na kifungu '**umasikini ni hali inayoletwa na udhaifu wa mtu binafsi'**. Jadili (maneno 30-40) AL.7

MATAYARISHO

NAKALA SAFI

(b) Jamii ina uwezo wa kukabiliana na hali ya umaskini inayowakumba raia wake. Thibitisha kwa mujibu wa kifungu (maneno 40-50) AL.8

MATAYARISHO

NAKALA SAFI

SEHEMU C.MATUMIZI YA LUGHA: (ALAMA 40)

(a) Eleza sifa za sauti /ch/ (alama 2)

(b) Badilisha sentensi ifuatayo iwe mazoea kwa kutumia kirejeshi “O”. (alama 2)
Mtoto anayelia huchapwa

(c) Pambanua viungo vya kisarufi katika neno lifuatalo. (alama 3)
Tuliwalimia

_____

_____

_____

_____

(d) Tunga sentensi ukitumia neno mzee kama: (alama 2)
(i) Kivumishi

_____

_____

_____

(ii) kielezi

_____

_____

_____

(e) Jaza mapengo. (alama 3)

Kutenda	Kutendewa
Pa	_____
Cha	_____
Nya	_____

(f) Eleza maana ya misemo ifuatayo. (alama 2)

(i) Giza la ukata

_____

_____

(ii) Meza mate machungu

_____

_____

(g) Bainisha shamirisho katika sentensi ifuatayo. (alama 3)

Maksundi alimjengea Tamari nyumba kwa matofali mazuri.

_____

_____

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_____

(h) NSomino zifuatazo zinapatikana katika ngeli gani? (alama 2)

(i) Topasi

_____

_____

(ii) Kambare

_____

_____

(i) Andika sentensi ifuatayo kwa kufuata maagizo. (alama 2)

Mizizi ya mibaruti hii iliwaponya watu ambao walikuwa na shida kama hii yenu (kanusha kwa umoja).

_____

_____

(j) Changanua sentensi ifuatayo kwa kutumia kielelezo matawi. (alama 4)

Mwizi aliyetuibia jana amekamatwa hatimaye.

_____

_____

_____

_____

_____

_____

(K) Tunga sentensi yenye masharti yafuatayo. (alama 3

(i) Kiima
(ii) kiarifu
(iii) chagizo

_____

_____

_____

_____

(l) Andika sentensi ifuatayo kwa ukubwa huku ukikanusha. (alama 3)
Kijibwa chake ni kikali

_____

_____

(m) Jaza neno ambalo ni kinyume cha lile lililopigwa mstari katika sentensi. (alama 2)

(i) Vile vitu <u>ulivyovichanganya</u> itakubidi

_____

_____

(ii) Bomba hili <u>limeziba</u> mwite fundi aweze

_____

_____

(n) Andika katika usemi halisi. (alama 3)

Mama aliwahimiza warudi siku hiyo la sivyo wangekosa tuzo.

_____

_____

_____

(o) Tambulisha kishazi tegemezi na kishazi huru. (alama 2)
Wanafunzi waliofanya vyema walituzwa jana

_____

_____

_____

(p) Kamilisha methali ifuatayo. (alama 2)

Jitihada za mja _____

_____

SEHEMU D. ISIMU JAMII (ALAMA 10)

A : Ingia 46! Adams mbao Kenyatta, railways beba! 46 Adams mbao kenyatta, railways!

B : Namba nane ngapi?
A : Mbao ingia, blue.
B : Nina hashuu.
A : Blue Auntie.
B : Sina.
A **:** Ingia. 46 Adams mbao, kenyatta railways gari bebabeba.
C : Mimi sinako shirini. Chukuako tu kumi.
A : Dinga inakunywanga petrol mzee.
C : Kumi mingi.
A : Haaya ingia twende. Driver imeshona twende.

Maswali

(i) Eleza muktadha wa mazungumzo haya AL.2

_____

_____

_____

(ii) Taja sifa **nane** za lugha inayotumika katika sajili hii AL.8

_____

_____

JINA: ……

NAMBARI: ……..…… KIDATO: ……..
102/3
KISWAHILI FASIHI
KARATASI YA 3
KIDATO CHA TATU

MAAGIZO:
Jibu maswali yote kwenye nakala ulizopewa.

Ushairi

1. **SHAIRI 'A'.**

Umekata mti mtima

Umeangukia nyumba yako

Umeziba mto hasira

Nyumba yako sasa mafurikoni

Na utahama

Watoto Wakukimbia

Mbuzi kumkaribia chui

Alijigeuza Panya

Akalia kulikuwa na pala

Kichwani

Mchawi kutaka sana kutisha

Alijigeuza Simba

Akalia na risasi kichwani

Jongoo kutaka sana kukimbia

Aliomba miguu elfu

Akaachwa na nyoka

Hadija wapi sasa yatakwenda

Bwanako kumpa sumu ?

Hadija umeshika nyoka kwa mkia

Hadija umepitia nyuma ya punda

SHAIRI 'B'

Piteni jamani, Piteni haraka

Nendeni, nendeni huko mwendako

Mimi haraka, haraka sina

Mzigo wangu, mzigo mzito mno

Na chini sitaki kuweka

Vijana kwa nini hampiti ?

Kwa nini mwanicheka kisogo ?

Mzigo niliobeba haupo.

Lakini umenipinda ngongo na

Nendako

Haya piteni ! Piteni haraka ! Heei !

Mwafikiri mwaniacha nyuma !

Njia ya maisha ni moja tu.

Huko mwendako ndiko nilikotoka

Na nilipofikia wengi wenu

Hawatafika.

Kula nimekula na sasa mwasema

Niko nyuma ya wakati

Lakini kama mungepita mbele

Na uso wangu kutazama

Ningewambia siti miaka

Mingi.

(a) Haya ni mashairi ya aina gani ? Toa sababu

(b) Washairi hawa wawili wanalalamika. Yafafanue malalamishi yao

(c) Onyesha jinsi kinaya kinavyojitokeza katika tungo hizi mbili

(d) Ni vipi Hadija :-

(i) Amekata mti mtima ?

(ii) Amepita nyuma ya Punda (al.2)

(e) Toa mifano 2 ya uhuru wa mashairi kwa kurejelea mashairi haya

(f) Kwa kurejelea shairi '**B**' eleza maana ya:-

(i) Mzigo

(ii) Siri

(iii) Kula nimekula

(iv) Niko nyuma ya wakati

2. ***Soma hadithi hii halafu ujibu maswali .***

Hapo zamani za kale, Mungu alituma wajumbe wawili waende duniani. Wajumbe hawa ni Kinyonga na Mjusi. Kwanza alimtuma Kinyonga na kumwagiza akaseme "wanadamu hamtakufa." Kinyonga alienda kwa mwendo wa kuduwaa, akasimama hapa na pale akila matunda ya miti. Kwa sababu ya hali hii alichelewa sana kufikisha ujumbe kwa binadamu.

Baada ya muda kupita, Mungu alimtuma Mjusi na ujumbe akaseme, "Mwanadamu sharti kufa." Mjusi aliunyanyua mkia akafyatuka pu! Mbio akawahi duniani kabla ya kinyonga kuwasili. Kwa haraka alitangaza agizo kuu, "Wanadamu sharti kufa!" Akarejelea haraka kwa Mungu. Baada ya muda kinyonga naye akafika duniana na kutangaza, "Wanadamu hamtakufa!" Wanadamu wakapinga mara na kusema, "La! Tumeshapata ujumbe wa Mjusi, wanadamu sharti kufa! Hatuwezi kupokea tena neno lako! Basi kulingana na neno la mjusi, wanadamu hufa.

Maswali

(a) (i) Hadithi hii huitwaje?

(ii) Toa sababu zako

(b) Eleza **sifa tatu** zinazohusishwa na ngano za fasihi simulizi katika hadithi hii

(c) Kinyonga ni mhusika wa aina gani?

(d) Hadithi hii ina umuhimu gani?

(e) Taja njia zozote **nne** za kukusanya kazi za fasihi simulizi

(f) **Tambulisha vipera hivi**:-

(i) Kula hepi

(ii) Sema yako ni ya kuazima

(iii) Baba wa Taifa

3. "**Nilijua ni utoto tu"**

(a) Fafanua muktadha wa dondoo hili
(alama 4)

(b) Eleza sifa na umuhimu wa mnenaji
(alama 20)

3. Onyesha jinsi uongozi mbaya unavyojitokeza katika tamthilia ya Kigogo.
(alama 20)

Name: ……

Adm No: …… Candidate's Signature:**……**

Date: ……

121/1

MATHEMATICS

Paper 1

Time: $2^1/_2$ Hours

INSTRUCTIONS TO THE CANDIDATES

- *Write **your name** and **index number** in the spaces provided above*
- *This paper contains two sections; **Section** 1 and **Section 11**.*
- *Answer all the questions in **section 1** and only **five** questions from **Section 11***
- *All workings and answers must be written on the question paper in the spaces provided below each question.*
- *Marks may be given for correct working **even if** the answer is wrong.*
- *Calculations and KNEC Mathematical tables may be used **EXCEP**T where stated otherwise.*
- *Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.*

FOR EXAMINERS'S USE ONLY

Section 1

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Marks																	

Section 1I

GRAND TOTAL

Question	17	18	19	20	21	22	13	24	**Total**
Marks									

SECTION I (50 MARKS)

Answer all questions in this section in the spaces provided.

1. Without using a calculator, evaluate

$\frac{3/4 + 1\,5/7 \div 4/7 \text{ of } 2\,1/3}{(1\,3/7 - 5/8) \times 2/3}$ Giving your answer as mixed fraction (3mks)

2. Two boys and a girl shared some money. The younger boy got $5/18$ of it; the elder boy got $7/12$ of the remainder and the girl got the rest. Find the percentage share of the younger boy to the girl's share. (4mks)

3. Three numbers, 1400,1960 and **n** have a G.C.Dand L.C.M of 70 and $2^2 \times 5^2 \times 7^2 \times 11$ respectively.Find the least possible value of **n** (3mks)

4. A bus starts off from Kitale at 9. a.m and travels towards Kakamega at a speed of 60km/hr. At 9.50 a.m, a matatu leaves Kakamega and travels towards Kitale at a speed of 60Km/h. How far from Kitale will the two vehicles meet?
(3mks)

5. Find the equation of a straight line which is equidistant from the points **A**(2,3) and **B** (6,1) (3mks)

6. Simplify the expression completely (3mks)

$$\frac{12x^2 - 16x}{20 - 11x - 3x^2}$$

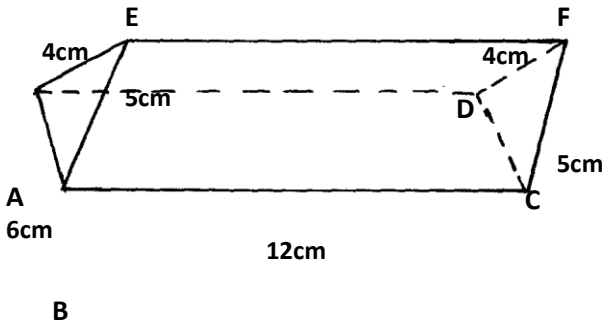
7. Given that sin $\vartheta = \frac{2}{3}$ and ϑ is an acute angle, find without using tables $tan^2 \vartheta + Cos^2 \vartheta$. Give your answer as a mixed fraction. (3mks)

8. Solve for ***y*** in the equation below. (4mks)

$8(2^2)^y = 6(2^y) - 1$

9. Using a ruler, a pair of compasses only and (proportional) a set square, construct on the upper side division of line **BC**, a line **BD** such that $\angle$ **DBC** = 37.5°. Use the line **BD** to divide **BC** into 4 equal portions. (3mks)

10. Sketch the net of the solid below. (2mks)

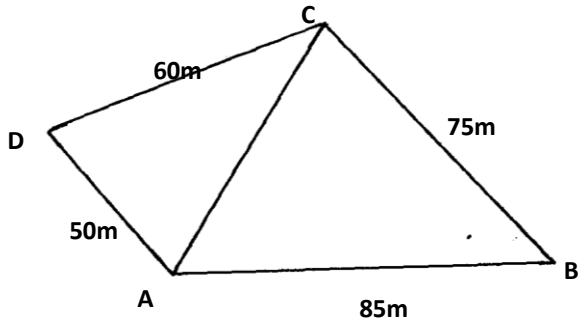


11. In a regular polygon, each interior angle is x^o and each exterior angle is $\left(\frac{x-36}{3}\right)^o$

(i) Find angle X^o (1mk)

(ii) Find the number of sides of the polygon (2mks)

12. The figure below represents a plot of land **ABCD** such that **AB**= 85m, **BC** 75m **CD**= 60m **DA** = 50m and angle **ACB** = 90°. (not drawn to scale)



Determine the area of the plot, in hectares correct to two decimal places. (4mks)

13. An open rectangular box measures externally 32cm long, 27cm wide and 15cm deep. The box is made up of metal 1cm thick. If it has a mass of 1.5kg, what is the density of the box to 4 significant figures? (3mks)

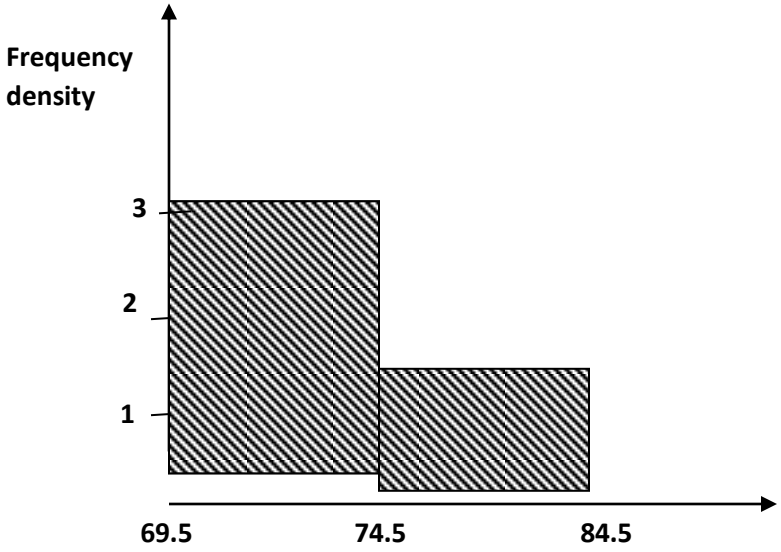
14. Find the integral values of *x* which satisfy the following inequalities;
2x + 3 > 5x – 3 > -8 (3mks)

15. A Kenyan bank buys and sells foreign currency as shown below.

	Buying Ksh	Selling Ksh
1 US dollar ($)	63.00	63.20
1 UK pound (£)	125.00	125.95

A tourist arrived in Kenya with £ 9600 which he converted into Kshs at a commission of 5%. He later used ¾ of the money before changing the balance of dollars at no commission calculate ; to the nearest dollar, the amount he received. (3mks)

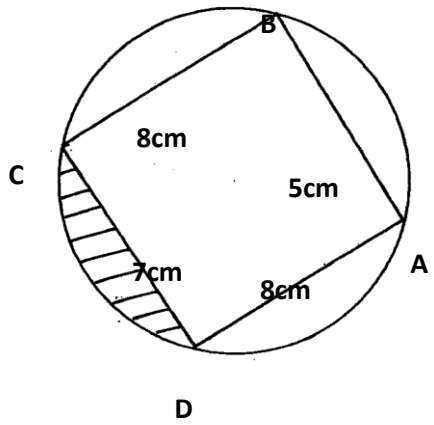
16. The histogram shown below represents the distribution of marks obtained in attest. The bar marked A has a height of 3.2 units while **B** has aheight 1.2 units. If the frequency of the class represented by **B** is 6, find the frequency of the bar represented by **A**. (3mks)



SECTION II (50 MARKS)

Answer any five questions in this sections in the spaces provided.

17. The figure below (not drawn to scale) shows a quadrilateral **ABCD** inscribed in a circle. **AB** = 5cm, **BC** = 8cm, **CD** = 7cm and **AD** = 8cm. **AC** is one of the diagonals of length 10cm.



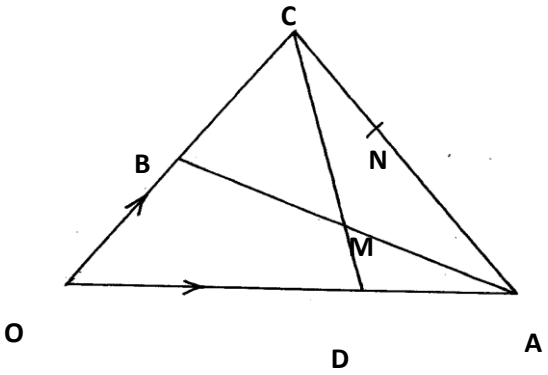
(a) Find the size of angle **ABC**. (3mks)

(b) Find the radius of the circle. (2mks)

(c) Hence, calculate the area of the shaded region. (5mks)

18. In the figure below $\overrightarrow{OB} = \underset{\sim}{b}$, $\overrightarrow{OC} = 3\overrightarrow{OB}$ and $\overrightarrow{OA} = \underset{\sim}{a}$

(a) Given that $\overrightarrow{OD} = 1/3\ \overrightarrow{OA}$ and $\overrightarrow{AN} = ½\ \overrightarrow{AC}$, $\overrightarrow{CD}$ and $\overrightarrow{AB}$ meet at **M**. Determine in terms of $\underset{\sim}{a}$ and $\underset{\sim}{b}$



(i) $\overrightarrow{AB}$ (1mk)

(ii) $\overrightarrow{CD}$ (1mk)

(b) Given that $\overrightarrow{CM} = k\overrightarrow{CD}$ and $\overrightarrow{AM} = h\overrightarrow{AB}$ determine the values of the scalars **k** and **h** (5mks)

(c) Show that **O**,**M** and **N** are collinear. (3mks)

19. Three variables p, q and r are such that p varies directly as q and inversely as the square of r.

a. When p = 18, q = 24 and r = 4.
Find p when q = 30 and r = 10. (4mks)

b. Express q in terms of p and r. (1mk)

c. If p is increased by 20% and r is decreased by 10% find:

i. A simplified expression for the change in q in terms of p and r. (3mks)

ii. The percentage change in q. (3mks)

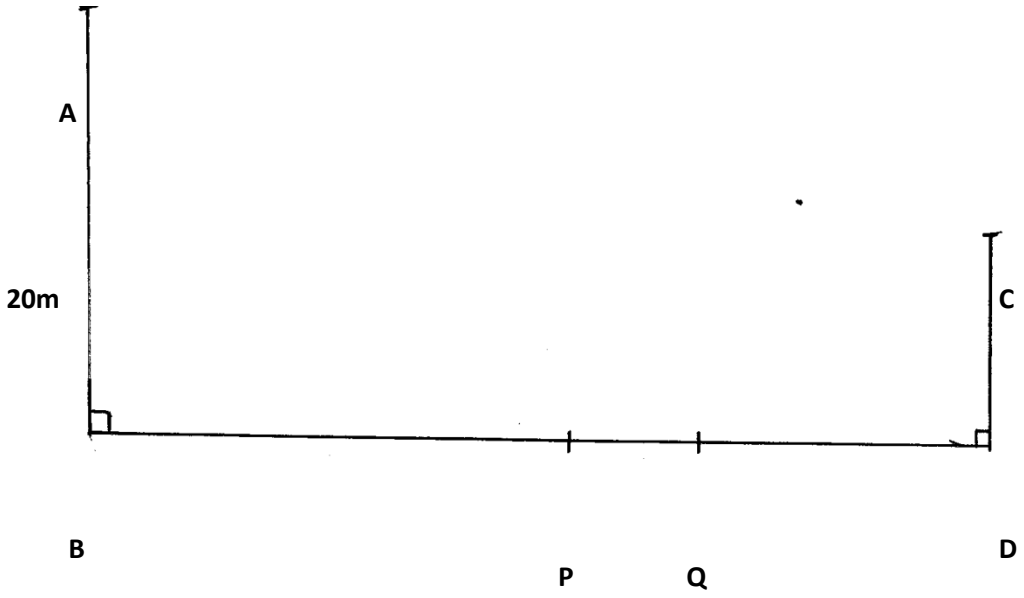
20. A circular lawn is surrounded by a path of uniform width of 7m. The area of the path is 21% that of the lawn.

(a) Calculate the radius of the lawn. (4 marks)

(b) Given further that the path surrounding the lawn is fenced on both sides by barbed wire on posts at intervals of 10 metres and 11 metres on the inner and outer sides respectively. Calculate the total number of posts required for the fence. (4 marks)

(c) Calculate the total cost of the posts if one post costs sh 105. (2 marks)

21. The diagram below represents two vertical watch – towers **AB** and **CD** on a level ground. **P** and **Q**are two points on a straight road **BD**. The height of the tower **AB** is 20m and road **BD** is 200m



(a) A car moves from **B** towards **D**. At point **P,** the angle of depression of the car from points**A** is 11.3°Calculate the distance **BP** to 4 significant figures. (2mks)

(b) If the car takes 5 second to move from **P** to **Q** at an average speed of 36km/hr, calculate the angle of depression of **Q** from **A** to 2 decimal places. (3mks)

(c) Given that **QC** = 50.9 cm, calculate

(i) The height of **CD** in meters to 2 decimal places;

(2mks)

(ii) The angle of elevation of **A** from **C** to the nearest degree. (3mks)

22. The parents of acertain mixed secondary school decided to buy a school van worth Ksh. 900,000. Each student was to contribute the same amount of money. 50 students were transferred from the school; as a result each f the remaining students had to pay Ksh. 600 more.

(a) Find the original number of the students in the school. (5mks)

(b) Find the percentage change in contributions per student. (3mks)

(c) If the ratio of boys to girl in the school was 11: 7 find the amount money contributed by boys alone. (2mks)

23. Five members of 'SILK', a self-supporting enterprise Jane, Jepchoge, Esther, Mama Charo and Chepkoech were given a certain amount of money to share amongst themselves. Jane got 3/8 of the total amount while Jepchoge got 2/5 of the remainder. The remaining amount was shared equally among Esther, Mama Charo and Chepkoech each of which received Kshs. 6,000;

a. How much was shared among the five business women? (3mks)

b. How much did Jepchoge get? (2mks)

c. Jane, Jepchoge and Chepkoech invested their money and earned a profit of Kshs. 12,000. A third of the profit was left to maintain the business and the rest was shared according to their investments. Find how much each got. (5mks)

24. Onyango and Juma live 200km apart. One day, Onyango left his house at 7.00am and travelled towards Juma's house at an average speed of 30km/hr. Juma left his house at 7.30am on the same day and travelled towards Onyango's at an average speed of 40km/hr.

(a) Determine:-

i. The time they met. (2mks)

ii. The distance from Onyango's house where the two met. (2mks)

iii. How far was Onyango from Juma's house when they met? (2mks)

(b) The two took 15 minutes at the meeting point and then travelled to Juma's house at an average speed of 20km/hr. Find the time he arrived at Juma's house.(2mks)

Name: ……. Index No: ……..

121/2 Candidate's Signature ……

MATHEMATICS Date: ……

PAPER 2

TIME: 2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

- Write your **name** and **indexnumber** in the spaces provided at the top of the page.
- The paper contains two sections; section I and II.
- Answer ***all*** the questions in section I and any five questions from section II.
- All answers and working **Must** be written on the question paper in the spaces provided below each question.
- Non- programmable silent electronic calculators and **KNEC** mathematical tables may be used except where stated otherwise.
- Mark may be given for correct working even if the answer is wrong. .

For Examiners Use Only

Section I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total

SectionII **GRAND TOTAL**

Question	17	18	19	20	21	22	23	24	Total

SECTION I (50 MARKS)

Answer all questions in this section in the spaces provided.

1. Use logarithms in all steps to evaluate. (4mks)

$$\frac{2.53^2 \, x 83.45}{\sqrt{0.4562}}$$

2. By using completing square method, solve for x in $4x^2 - 3x - 6 = 0$ (3mks)

3. Make **p** the subject in T = $\sqrt[3]{\frac{p^2+n}{m^2}} + R$ (3mks)

4. If $\frac{\sqrt{14}}{\sqrt{7}-\sqrt{2}}$ - $\frac{\sqrt{14}}{\sqrt{7}+\sqrt{2}}$ = a $\sqrt{7}$ + b $\sqrt{2}$

Find the value of **a** and **b** where **a** and **b** are rational numbers. (3mks)

5. (a) Find the first three terms in ascending powers of x of $(2 - x)^5$ (1mk)

(b) Hence find the value of the constant **k**, for which the coefficient of ***x*** in the expansion of $(k + x)(2 - x)^5$ is -8 (2mks)

6. **OA** $= 3\underset{\sim}{i} + 4\underset{\sim}{j} - 6\underset{\sim}{k}$ and **OP** $= \underset{\sim}{i} + 15\underset{\sim}{k}$. **P** divides **AB** in the ratio 3 : – 2. Write down the coordinates of **B**. (3mks)

7. Simplify **(3 marks)**

$$\frac{p^2 - 2pq + q^2}{p^3 - pq^2 + p^2q - q^3}$$

8. Find the relative error in the area of a parallelogram whose base is 8cm and height 5cm. (3mks)

9. (a) Find the inverse of the matrix $\begin{pmatrix} 4 & 3 \\ 3 & 5 \end{pmatrix}$ **(1 mark)**

(b) Hence solve the simultaneous equation using the matrix method **(2 marks)**

4x +3y = 6

3x + 5y = 5

10. A straight line L_1 has its X intercept a = -3 and its y-intercept b = 5.

a) Write the equation of L_1 in the form $\frac{x}{a} + \frac{y}{b} = 1$ $(1mks)$

b) Find the equation of another line L_2 which passes through (1, -2) and is perpendicular to L_1 (3mks)

11. Use reciprocals, squares and square root tables only to evaluate (3mks)

$$\frac{2}{(0.5245)^2} - \frac{5}{\sqrt{363.4}}$$

12. Using a ruler and a pair of compasses only construct triangle ABC such that BC=6cm, <ABC=75° and BCA=45°. Drop a perpendicular to BC from A to meet BC at O hence find the area of triangle ABC (3mks)

13. A two digit number is such that the difference between the ones digit and the tens digit is 2. If the two digits are interchanged, the sum of the new and the original number is 132. Find the original number (3mks)

14. A quantity P varies partly as the cube of **Q** and partly varies inversely as the square of **Q**. when **Q** = 2, **P** = 108 and when **Q** = 3, **P** = 259. Find the value of **P** when **Q** = 6. (3mks)

15. Solve for *y* in the following equation below: (4mks)

$\log_4 y + \log_y 4 = 2$

16. Obtain the values of *x* for which the matrix is singular (3mks)

$$\begin{pmatrix} x^3 & x \\ 1 & 1 \end{pmatrix}$$

SECTION II (50 MARKS)

Answer any five questions in this sections in the spaces provided.

17. The table below shows income tax rates.

Monthly taxable income	Rate of tax(Ksh/£)
1 – 435	2
436 – 870	3
871 - 1305	4
1306 – 1740	5
Excess over 1740	6

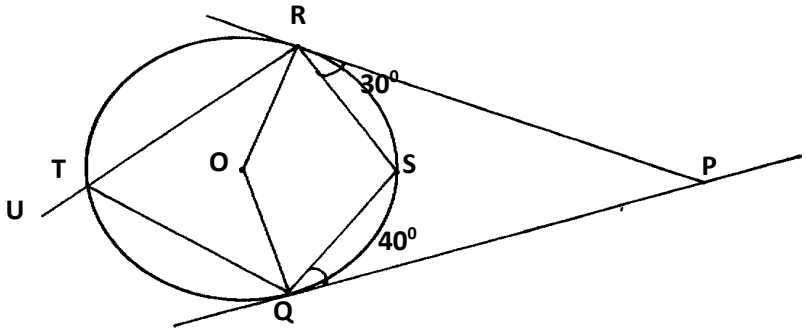
An employee earns a monthly basic salary of sh. 30,000 and is also entitled to taxable allowances amounting to Ksh. 10,480.

(a) Calculate the gross income tax (4mks)

(b) The employee is entitled to a personal tax relief of Ksh. 800 per month. Determine the net tax. (2mks)

(c) If the employee received a 50% increase in his total income, calculate the parentage increase on the income tax. (4mks)

18. In the figure below, **O** is the centre of the circle. **PQ** and **PR** are tangents to the circle at **Q** and **R** respectively. $\angle$**PQS** = 40 and $\angle$**PRS** = 30^0. **RTU** is a straight line.



Calculate by giving reasons

(a) ∠**QRS** (2mks)

(b) ∠**RTQ** (2mks)

(c) ∠**RPQ** (2mks)

(d) Reflex ∠**QOR** (2mks)

(e) ∠**TRO** given that **TR** = **TQ** (2mks)

19. Three darts players Jane, Kelly and Brony are playing in a completion the probability that Jane, Kelly and Brony hit the bull's eyes is $^1/_5$, $^2/_5$ and $^3/_{10}$ respectively.

(a) Draw a probability tree diagram to show all the possible outcomes for the players. (4mks)

(b) Calculate the probability that :

(i) Jane or Brony hit the bull's eye. (2mks)

(ii) All the three fail to hit the bull's eye. (2mks)

(iii) Only two fails to hit the bull's eye. (2mks)

20. Three towns **X, Y** and **Z** are such that **X** is on a bearing of 120^0 and 20km from **Y.** Town **Z** is on a bearing of 220^0 and 12cm from **X**

(a) Using a scale of 1cm to represent 2km, show the relative position of the places (3mks)

(b) Find;

(i) The distance between **Y** and **Z** (2mks)

(ii) The bearing of **X** from **Z** (1mk)

(iii) The bearing of **Z** from **Y** (1mk)

(iv) The area of the figure bounded by **XYZ** (3mks)

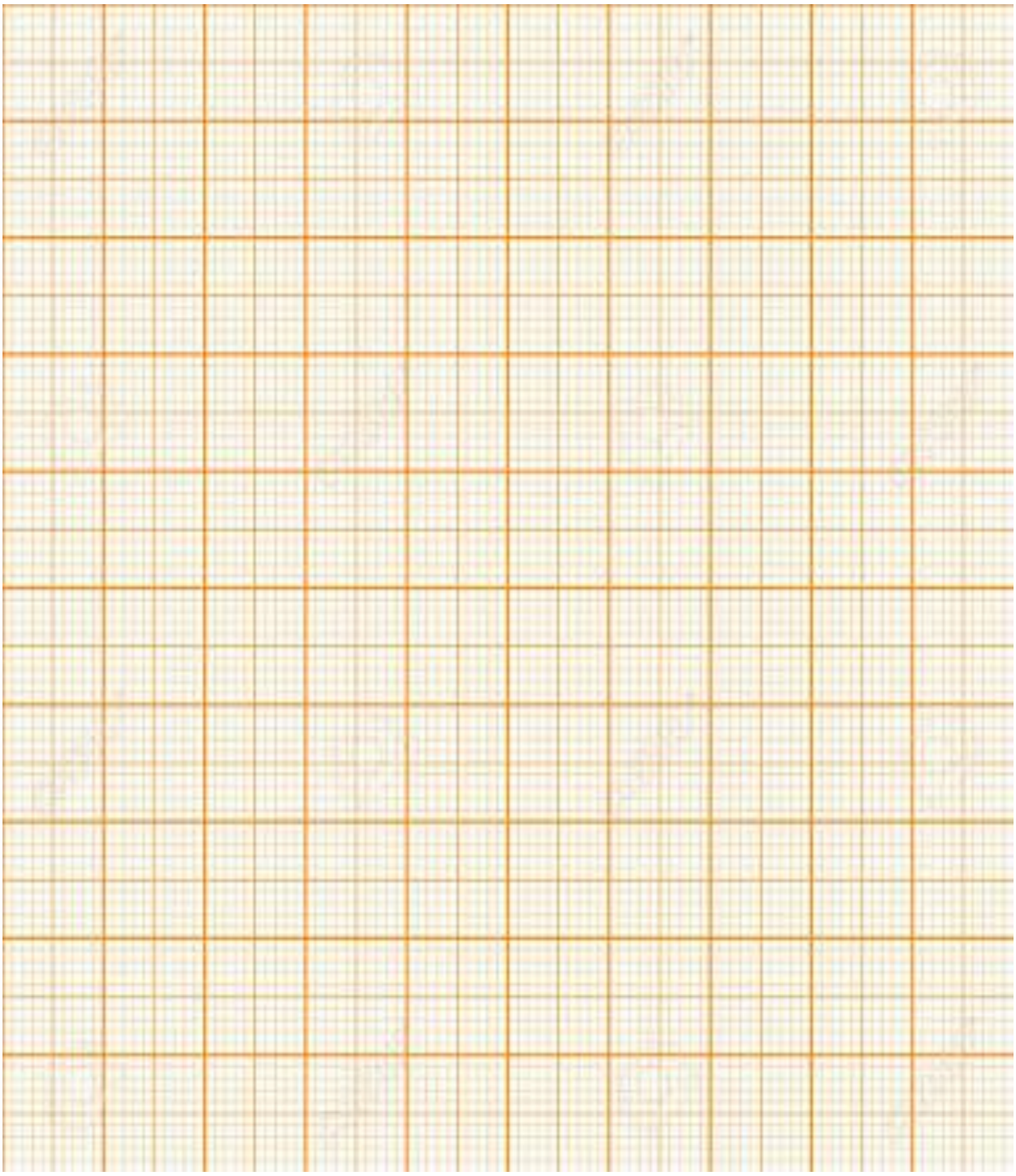
21. The fourth, seventh and sixteenth term of an arithmetic progression are in geometric progression. The sum of the first six terms of the arithmetic progression is 12.
Determine the

(a) First term and the common difference of the arithmetic progression. (6mks)

(b) Common ratio of the geometric progression. (2mks)

(c) Sum of the first six terms of the geometric progression. (2mks)

22. Draw the graph of $y = 2x^2 - 3x - 5$ taking the values of x in the interval $-2 \leq x \leq 4$. (5mks)



(a) Use the graph in to solve the equation $2x^2 - 3x - 5 = 0$ (2mks)

(c) Using a suitable straight line, solve the equation $2x^2 - 5x - 3 = 0$ (3mks)

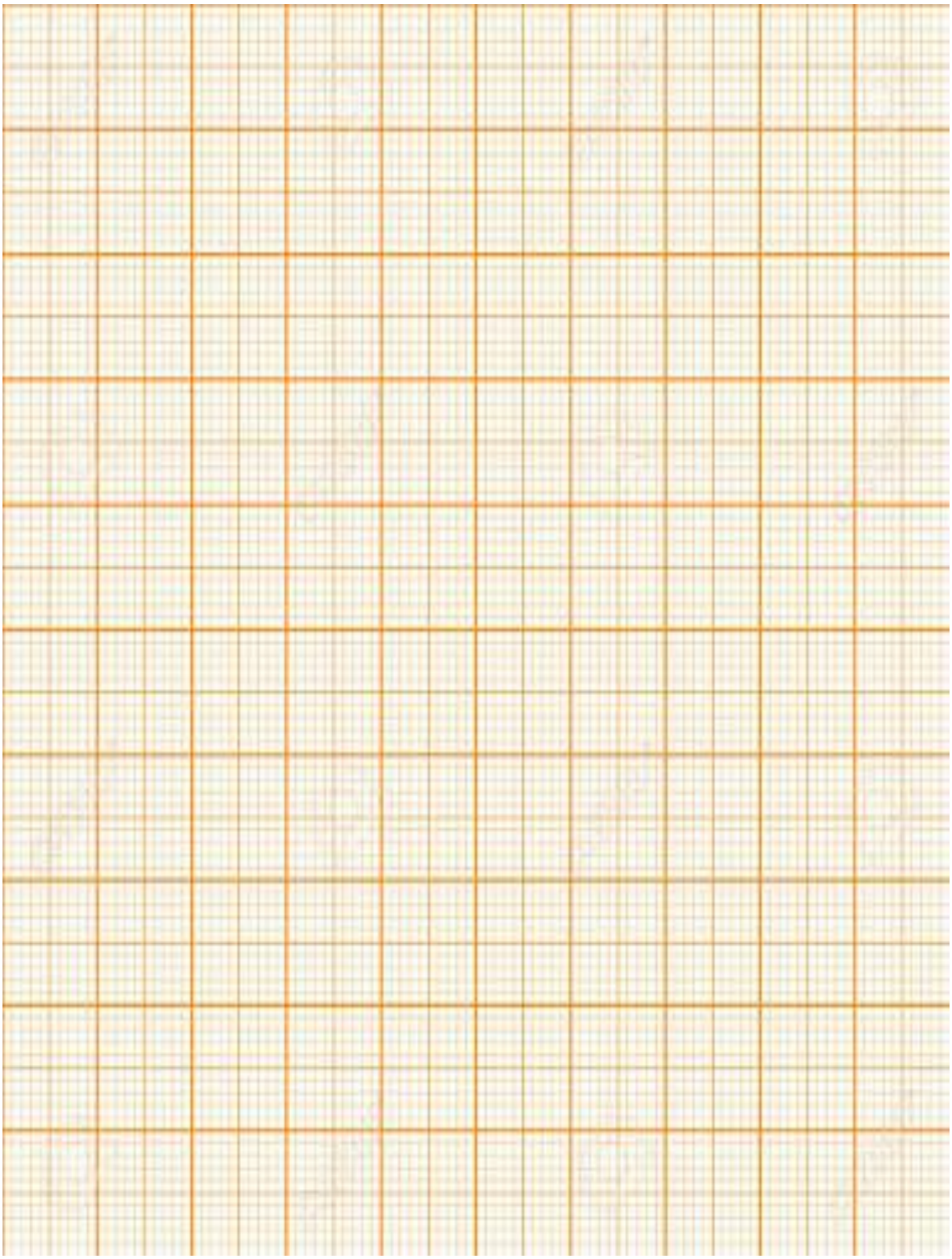
23. Draw the quadrilateral with vertices at **A** (-6,-1) **B** (-6,-4) **C**(3,-7) and **D** (3,2).

a) On the same grid draw the image of **ABCD** under enlargement centre (0,-1) scale factor $^1/_3$ label the image $\mathbf{A^1\ B^1\ C^1\ D^1}$
(3mks)

b) Draw $\mathbf{A^{11}B^{11}C^{11}D^{11}}$ the image of $\mathbf{A^1\ B^1\ C^1\ D^1}$under rotation of +ve 90^0 about (1,0)
(2mks)

c) Draw $\mathbf{A^{111}B^{111}C^{111}D^{111}}$ the image of $\mathbf{A^{11}\ B^{11}\ C^{11}\ D^{11}}$under a reflection in the line y-x = 0 (2mks)

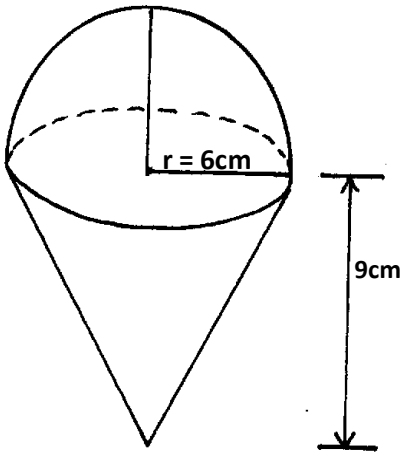
d) Draw $\mathbf{A^{1V}B^{1V}C^{1V}D^{1V}}$ the image of $\mathbf{A^{111}\ B^{111}\ C^{111}\ D^{111}}$under translation $\begin{pmatrix} 2 \\ 3 \end{pmatrix}$ and write the co-ordinate of the final image. (3mks)



24. The volume of two similar solid cylinders are 4096cm^3 and 1728cm^3.

(a) If the curved surface area of the smaller one is 112cm^2. Find the height of the larger cylinder if the radius is 7cm. (4mks)

b) The diagram below represents a solid made up of a hemisphere mounted on a cone. The radius of the hemisphere and cone are each 6cm, and the height of the cone is 9cm.



Calculate the volume of the solid. Take $\pi = \frac{22}{7}$ (6mks)

NAME _____

ADM NO: _____ **CLASS:** _____

101/1
ENGLISH
Paper 1
(Functional writing, cloze test and oral skills.)
2 Hours.
FORM 3 MID-TERM 3

1. You are the secretary of Umoja Faith Church Youth Group. The group is planning to hold a meeting on 16th August 2015 whose main agenda will be the Mission Outreach and initiating income generating activities. The constitution stipulates that there must be a 21-day notification of the meeting.
   i) Write a notice of the meeting that will be sent to the members. 6 marks
   ii) During the meeting, 8 members were present, 3 including the treasurer sent apologies and the whereabouts of 2 members were unknown. The youth pastor attended the meeting. Apart from the main issues, members raised some matters from the previous meeting. There were also some personal issues raised by some members.
   Write down the minutes of the meeting. 14 marks

2. *Read the passage below and complete each blank space with an appropriate word 10 marks*

Citizens used to i)…… that political leaders would observe the principles of good governance simply ii)……they were expected to. iii)……; it appears most leaders on the continent have replaced integrity with reckless impunity that has iv)…… Africa in chaos. v)……office are also supposed to be vi)…… to the people that entrusted them with the vii)……of leading them. viii)……, the political elite in the continent see people as a means to an end. In many countries these days, Kenya included, politics has become the easiest way to make money. Electioneering is seen as an ix)……with extremely lucrative returns when campaign loyalties are x)……with appointments in the government of the day.

3. *a) Read the following Ankole song and answer the questions that follow.*

Suck and I hide you, my gentle one
Suck and I hide you, my beloved

I dreamt that the hunt was at Buganga
I dream that the hunt was at Ngarama

Where, oh where, shall I put, my little baby?
put you in a clump of grass, my gentle one
Where, oh where, shall I put you, my lovely little lips? If I
The hunters' rough dog will come sniffing around

The hunters' thick club tears up the back

Suck and I hide you, gentle one
Suck and I hide you, for whom the drum sounds

Where, oh where, shall I put you, my lovely little lips?
Where, oh where, shall I put you, my beloved?

If I put you by the wayside, gentle one
Passers-by will take you with them, my beloved
If I put you in an anthill, my little baby
The ants will enclose you in their nest, lovely
little lips
Suck and I hide you, little baby
Suck and I hide you, my gentle one

When I am dead and gone, gentle one
Feed on little blades of grass like cow, my belovedAnd
wash them down with a little water, my little baby
That's what raises orphans, you for whom the
drum sounds

If I do not die, my little baby

Good things will be ours to enjoy, you for whom the drum sounds

i) Identify aspects of oral performance that make this song easy to remember? 2 marks

……

……

……

(ii)In what ways would this song be made interesting to listen to? 2 marks

……

……

……

(iii)How would you perform the last two lines of the above song? (2 marks)

……

……

……..

c) Study the genre below and answer the questions that follow

I have a wife everyone she bears has a bead

i) Identify the genre under which the above item falls. 1 mark

ii) Assuming you were to perform this genre, what will you do before the presentation? 1mark

iii) How will (ii) above assist you as a presenter? 1mark

c) *Identify the silent letters in the words below* **3marks**

i) Shepherd …….

ii) Rendezvous ……

iii) Epistle ……

d) *Write another word that has the same pronunciation as the following words* **3marks**

i) Mark ……..

ii) Broach ……

iii) Proof ……..

e) *Underline the stressed the syllables in the highlighted words* **2 marks**

i) We have to *relocate* these people

ii) The security officer will *punish* you if you come late.

f) ***Indicate whether the following sentences have a falling or a rising intonation.*** **2 marks**

i) A stitch in time saves nine
ii) Do you like tomatoes or not.

g) Jaramba's son, Mariapa, was really enthusiastic to go for a party with his friends at Carnivore. He had been invited to a friend's birthday party. He had to get permission from the father first in order to attend. However, Mariapa failed to convince his father because of his approach and language. What could have been the weaknesses in his negotiation skills? 5 marks

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h) *Read the conversation below between Audrey, a student, and the school secretary then answer the questions that follow.* 6 marks

Audrey: Hallo. Good morning.

Secretary: Hallo. Who is on the line and what do you want?

Audrey: I am a Form 4Y student and I have been away from school for three days now. May I speak to the Principal?

Secretary: The Principal is not in the office now.

Audrey: Could I please leave a message for him?

Secretary: Oh, please, don't you have his cellphone number?

Audrey: No madam, since it is official, kindly take down the…

Secretary: Excuse me, young girl, I am too busy for this idle chat.

Audrey: I am sorry but it is very urgent, madam.

Secretary: (*without a pen or paper)* Go ahead and you better be quick.

Audrey: Thanks for the attention

i) *Identify the weaknesses in the secretary's telephone conversation skills.* *3marks*

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(ii)What should she do to improve on this? *3marks*

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NAME: _____

ADM NO: _____ CLASS:_____

ENGLISH PAPER 2

MID-TERM 3 FORM 3 EXAMS

TIME 2hrs 30 mins

Attempt all the questions

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

One good thing about music, Bob Marley sang in Trenchtown Rock, is when it hits you, you feel no pain – but for South Africa's apartheid regime, the opposite was true as it felt the wrath of musicians who composed protest songs against its oppressive policies.

During the apartheid years, music was more than a solace – it was a "weapon of struggle" used against the aggressor whose only recourse was to ban it from the airwaves, but never from the hearts of the millions who were oppressed.

Music had always been used to soothe souls during sufferance and it is said that it is slavery that gave birth to (heavy metal) rock when slaves used their shackles or tools to make music either to entertain themselves or to irk their captors.

The separatist system that saw people like Nelson Mandela and other black South African leaders jailed for dissidence gave rise to more protest music than ever before.

And South Africa's anti-apartheid musicians were so influential that their songs were not only banned, but they were also forced into exile. Mandela believes that these protest songs, together with those of non-South Africans, played a significant role in the collapse of apartheid and, indeed, his February 11, 1990 release from Robben Island.

"Artistes reach areas far beyond the reach of politicians. Art,especially entertainment and music, is understood by everybody, and lifts the spirits and the morale of those who hear it," Mandela admitted after his release.

South Africa's musicians like Hugh Masekela and the MirimaMakeba started the protest campaign back in the late '50s and early '60s after leaving South Africa for the United States, where they used music to highlight the desperate situation of their compatriots who were living under oppressive rule in the townships back home.

The Musical campaigns against apartheid intensified internationally throughout the'70s and '80s and saw the composition, production and performance of many a political song by musicians who had never even set foot in African but were inspired to join the anti-apartheid bandwagon- with some, like Paul Simon, even stirring controversy when he was accused of breaking the cultural boycott against South Africa by touring the country and utilizing contributions from local acts.

But the beat never stopped. In the UK, The Specials released Free Nelson Mandela while in the US, Gil Scott-Heron and Brian Jackson released protest classic Johannesburg off the album From South Africa to South Carolina. Little Steven (and the Disciples of Soul), together with Artists United Against Apartheid, conceived and produced Sun City Resort in one of South Africa's so-called homelands where international Musical concerts were frequently held.

Adopted from Sunday Nation December 8th 2013.

(a) What type of music is the author referring to in the passage (1 mark)

……

……

(b) According to the passage what were the contributions of the anti-apartheid musicians. (2 marks)

……

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……

(c) Who are the international singers who joined the musical campaigns against apartheid. (3mark)

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……

(d) Artistes reach areas far beyond the reach of politicians (add a question) (1 mark)

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……

(e) Make notes on the titles of songs sung against the apartheid regime (4marks)

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(f) Identify the setting of the passage (2 marks)

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(g) ***Paraphrase the following sentence***

"artists reach areas far beyond the reach of politicians. Art, especially entertainment and music is understood by everybody, and it lifts the spirits and the morale of those who hear it " (3 mark)

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(h) Give this passage another title (1 mark)

……

……

(i) ***Explain the meaning of the following words and phrases*** (3 marks)

(i) irk their captors

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(ii) dissidence

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(iii) stirring controversy

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2.BLOSSOMS OF THE SAVANNAH (25mks)

Read the following excerpt and answer the questions that follow

They were silent as they climbed the hill on their way back from Nasila to draw water .The water containers that they carried on their backs were now heavy. The straps that supported the containers pressed down their heads with a painful exhaustion.
As they walked, each one of them allowed her mind to fleeting roam the fanciful land of wishful thinking.

Resian thought how wonderful it would be, had she had a chance to enroll at the Egerton University and after graduation had a chance to work with her role model ,MinikeneNkoitoi ,the Emakererei at the sheep ranch that she managed .She imagined herself already there driving a large flock of sheep .And when she thought of sheep , her mind flew back to fifteen years or so earlier and **reminisced**the first time she saw a sheep.It was a childhood memory ,a memorable picture from the swirling scene around her which had been captured and preserved by her mind when she and Taiyo accompanied their father to the Nakuru Agricultural show.She could still see in her mind a group of big,docile tawny woolly animals that stood panting drowsily in a green pasture ,with the sun beaming down brightly from a clear blue sky .She had then admired the white long overcoats that the handlers wore.

Taiyo also thought of Emakererei .She would ask Joseph Parmuat , to assist her compose a song in her praise .She had already put words to a tune she had composed to ridicule the three women who she thought **collaborated** with men to oppress the women folk .They were Nasila's three blind mice who , she thought , did not seem to know that the world was changing .Those were the *enkasakutoni*who threatened to curse *intoiyenemengalana*and ensured they did not get husbands nor children;the midwife Enkaitoyoni who threatened to spy on the young women as they gave birth to ensure that any who was among intoiye-nemengelana had her status altered there and then;and the **dreaded** Enkamuratani,who will never tire of wielding her olmurunya**menacingly.**

QUESTIONS

1. place the excerpt in its immediate context. (4 marks)

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2. identify and illustrate two aspect of style in this excerpt (4marks)

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3. discuss two themes evident in this excerpt (4 marks)

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4. Discuss one character trait of Resian and Taiyo in the excerpt (4 marks)

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5. The straps that supported the containers pressed down their heads with a painful exhaustion. Rewrite beginning: with…… (1 mark)

……

……

6. How does Resian's thoughts come to be fulfilled in future? briefly explain(4marks)

……

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7.Explain the meaning of the following words as used in the excerpt. (4 marks)

i. Reminisced.

……

……

ii. Collaborated

……

……

iii. Dreaded

……

……

iv. Menacingly

……

……

3.***Read the poem below and answer the questions that follow***

The earth does not get fat.

It makes an end of those who wear the head plumes.

We shall die on the earth.

The earth does not get fat. It makes an

end of those who act swiftly as heroes

Shall we die on the earth?

Listen O earth. We shall mourn because of you.

Listen O earth. We shall die on the earth?

The earth does not get fat. It makes and an end of chiefs.

Shall we die on the earth?

The earth does not get fat.

It makes an end of the women chiefs

Shall we die on the earth?

The earth does not get fat. It makes an

end of the royal women

Shall we die on the earth?

Listen O earth. We shall mourn because of you.

Listen O earth. We shall die on the earth?

The earth does not get fat. It makes an end of the beast

Shall we die on the earth?

Listen you who are asleep, who are

left tightly closed in the land.

Listen you who are asleep, who are

Left tightly closed in the land.

Shall we all sink into the earth?

Listen O earth, the sun is setting tightly

We shall all enter into the earth.

(a). Identify the genre above (2 marks)

……

……

(b). Explain the functions of the above genre (4 marks)

……

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(c). Explain the meaning of the words, "The earth does not get fat" (2 marks)

……

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(d). Identify **two** aspects of style and comment on their effectiveness (6 marks)

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(e). What is the speaker's attitude towards the subject. (2 marks)

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(f). Explain Two characteristics of the genre above (2 marks)

……

……

……

(g) Under what circumstances is the genre likely to be performed and for what purpose? (2 marks)

……

……

……

2. ***Rewrite the following sentences according to the instructions after each*** (3 marks)

(a) You can do better than this. (Begin: This ……..)

……

……

(ii) Having failed once, I do not want to fail again. (Begin. As……)

……

……

(iii) The teacher asked Kamau if he would go home that day or the following day. (Change to direct speech)

……

……

(b) ***Using the verbs in brackets, replace the underlined words and phrases with correct phrasal verbs*** (3 marks)

(i) The two friends met each other accidentally …… (run) in town

(ii) The city council askaries demolished …… kiosks in the city Centre (bring)

(iii) Otienovisited …… us on his way to town (call)

(c) ***Complete each of the following sentences with the appropriate prepositions*** (3 marks)

(i) Many people think that manual labour is …… their dignity

(ii) The judge was prejudiced …… the accused from the beginning.

(iii) John has retired …… private life.

(d) ***Supply one word which means the same as the underlined phrases in the following sentences*** ***(2 marks)***

(i) The man who broke into the house was finally arrested ……

(ii) The kitchen was filled with a pleasant smell from the day's recipe ……..

(e)***<u>Explain the differences in meaning between the sentences in each of the pairs given below</u>***

(4 marks)

I. I saw parents in the school library
II, I saw "parents" in the school library

……

……

……

I. His brother who lives in Lamu is a mechanic
II. His brother, who lives in Lamu, is a mechanic

……

……

……

NAME: _____

ADM NO: _____ **CLASS:**_____

101/3 - ENGLISH

PAPER 3

(CREATIVE COMPOSITION AND ESSAYS BASED ON SET TEXTS)

TIME: 2 ½ HOURS

Instructions

(a) Answer three questions only.

(b)Question one and two are compulsory

(c)In question one,choose one composition either a or b.In question 2, all the questions are compulsory.

1. Imaginative composition.

(20marks)

Either:

a) Write a composition beginning:

Looking at my father, I knew my brother and I were in hot soup.....

Or

Write a story to illustrate the saying

"All that glitters is not gold"

2. The compulsory set text

BLOSSOMS OF THE SAVANNAH

(a)'Women are their own enemies .'Write an essay exemplifying the truth of this statement using Blossoms of the Savannah .(20mks)

(b)'Not all aspects of culture and traditions are bad.' Drawing your illustrations from the novel Blossoms of the Savannah ,validate the above assertion .(20mks)

NAME: ……..…….

ADM NO: ……..…… CLASS:……..

CHEMISTRY FORM THREE.
MID-TERM 3 EXAM
PAPER 2.
TIME: 2HOURS

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

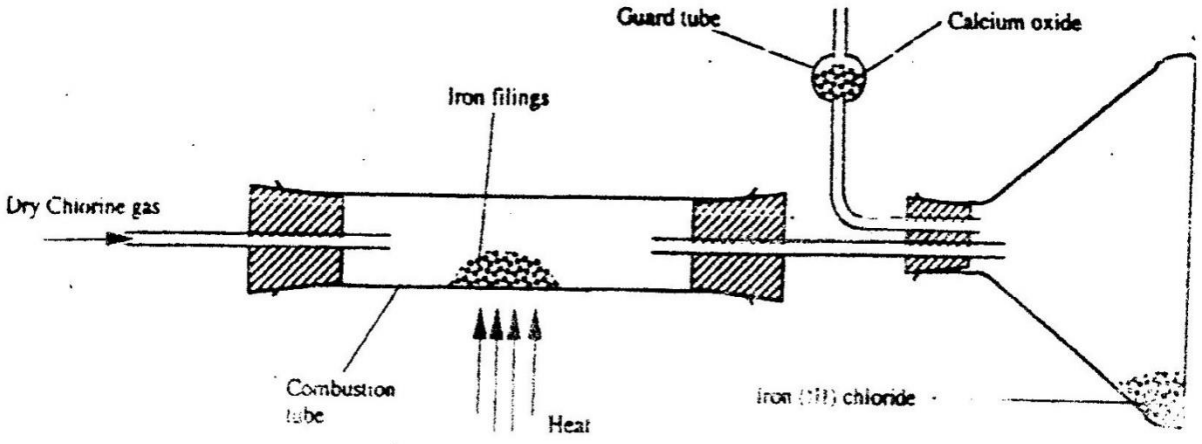
1) a) Give the name of reagent which when reacted with concentrated hydrochloric acid produce chlorine gas. (1mk)

……

……

b) A student set out to prepare iron III chloride using the apparatus

shown in the diagram below.



i) Explain why:

I. It is necessary to pass chlorine gas through the apparatus before heating begins. (1mk)

……

……..

II Calcium oxide would be preferred to calcium chloride in the guard tube. (2mk)

……

……

……

ii) What property of iron (III) chloride makes it possible to be collected as shown in the diagram? (1mk)

……

……

iii) Write an equation for one chemical reaction that took place in the guard tube. (2mk)

……

……

iv) The total mass of iron (III) chloride formed was found to be 0.5g.
Calculate the volume of chlorine gas the reacted with iron.
(Fe - = 56.0, Cl = 35.5 and Molar gas volume at 298K is 24,000cm (2mks)

c) When hydrogen sulphide gas was passed through a solution of iron (III) chloride, the following observation were made:
i) The colour of the solution changed from reddish – brown to green and
ii) a yellow solid was deposit. Explain these observations. (2mks)

……

……

……..

d) One of the industrial uses of chlorine gas is manufacture of Hydrochloric acid.

(i) Give one source of chlorine gas. (1 mk)

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

Element	A	B	C	D	E	F	G
Atomic radius (nm)	0.156	0.136	0.125	0.110	0.110	0.104	0.099
Ionic radius (nm)	0.095	0.065	0.050	-	-	0.184	0.181
1^{st} Ionization energy KJ/mol	492	743	790	791	1060	1063	12.54
Mpt (^oC)	97.8	650	660	1410	44.2	119	-101
Atomic number	11	12	13	14	15	16	17

I Explain why

(i) A has a larger atomic radius than its ionic radius? (1 mk)

……

……

……

(ii) G has a smaller atomic radius than its ionic radius? (1 mk)

……

……

II Comment on the trend of melting points from A to C. Explain (2 mks)

……

……

……

……

III What is the general trend of the 1st ionization energies for elements A – F. Explain? (2 mk)

……

……

……

IV Explain why D has the highest melting point. (2 mk)

……

……

……

(b) The grid below is a section of the periodic table. The letters do not represent the actual symbols of the elements. Use it to answer the questions that follow.

								Q
Y				M			N	
K	L					S	O	R
							P	

i) How does electro negativity vary from N to P? Explain (2 mks)

……

……

……

ii) Give the formula of the compound formed between L and P. (1 mk)

……

……

ii) An oxide of Y was dissolved in water to form a solution. How would you distinguish between this solution and a solution made by dissolving an oxide of S in water. Explain. (2 mks)

……

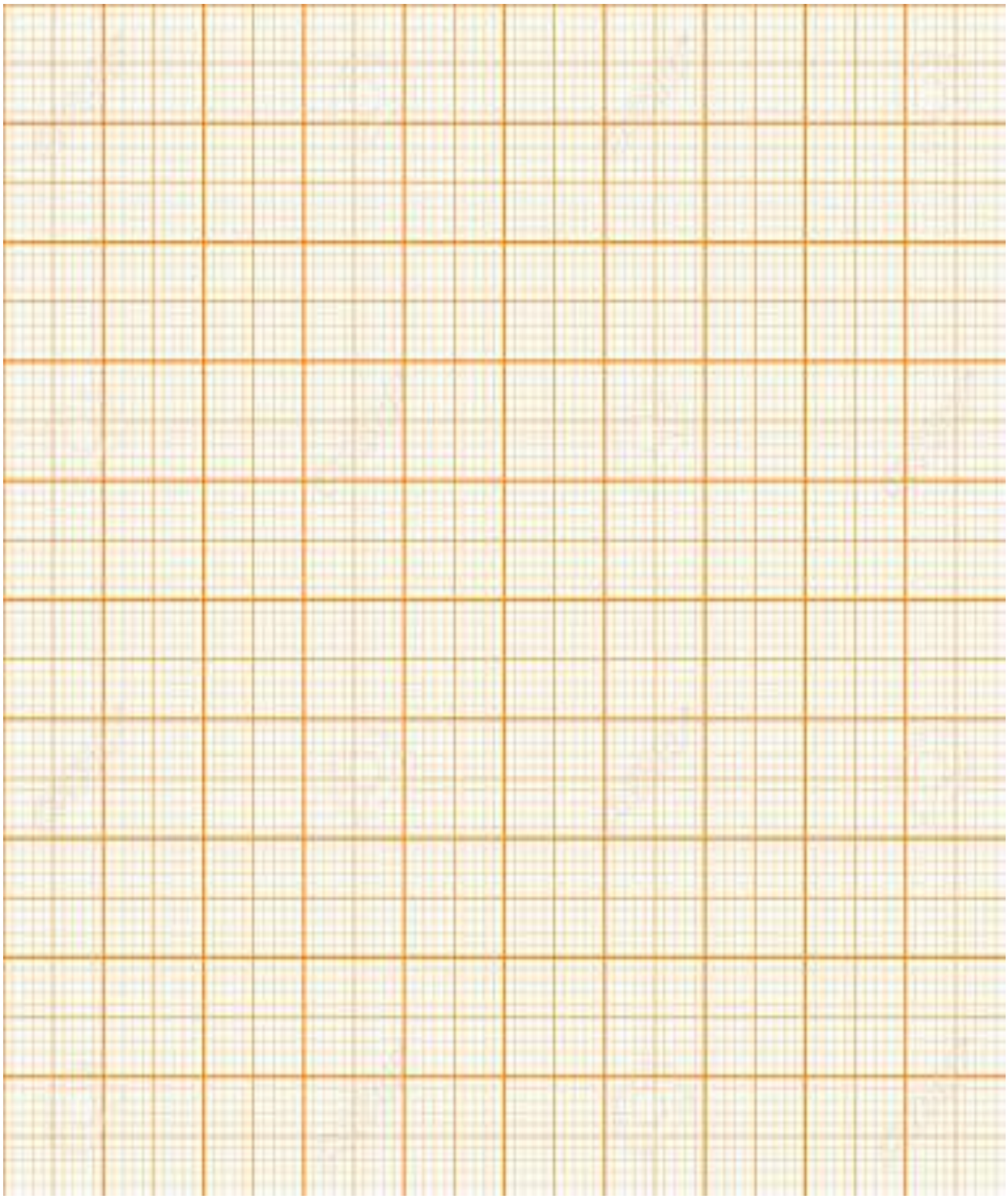
……

……

3. (a) The table below gives formulae and volumes occupied by 1g of some gases at STP, study it and answer the questions that follow:

Formulae of gas	Ne	C_2H_2	Ar	NO_2	SO_2	SO_3
Relative molecular mass	20	26	40	46	64	80
Volume occupied by 1g (cm^3)	1120	861	560	485	350	280

i). Plot a graph of volume of gas (Y-axis) against the relative molecular mass (3mks)



ii). Use the graph to predict the volume occupied by 1g of Carbon (ii) oxide and use your answer to calculate the molar gas volume at STP (C = 12, 0 = 16) (3 mks)

b) i) State Graham's law of diffusion? (1mk)

……

……

……

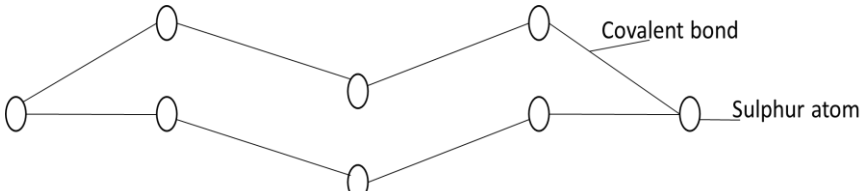
ii)Apart from density or mass of a gas state one other factor that affects the rate of diffusion (lmk)

……

……..

iii) Calculate the relative molecular mass of gas V (RMM of X = 34) Gas V takes 60 seconds to diffuse through a porous plug. A gas X diffuses through the same plug in 90 second (2mks)

4). Study the structure below and answer questions that follow



(a) ***What*** observation is made when the molecule above is heated to a temperature of 113°C? (2mks)

……

……

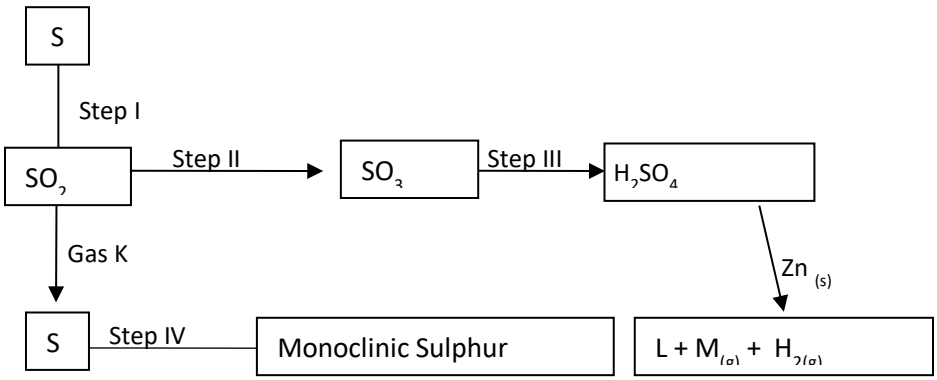
……

(b) ***Write an equation*** for the reaction of atom of the above structure with hydrogen. (2mk)

……

……

II. Study the scheme below and answer questions that follow.



(a)

i) ***Name***

Gas ***K*** (1mk)

.....

.....

Gas ***M*** (1mk)

.....

.....

ii) ***State*** the observation made in

Step I (1mk)

.....

.....

Step II (1mk)

.....

.....

iii) ***State the conditions*** necessary for step II to occur. (2mks)

.....

.....

.....

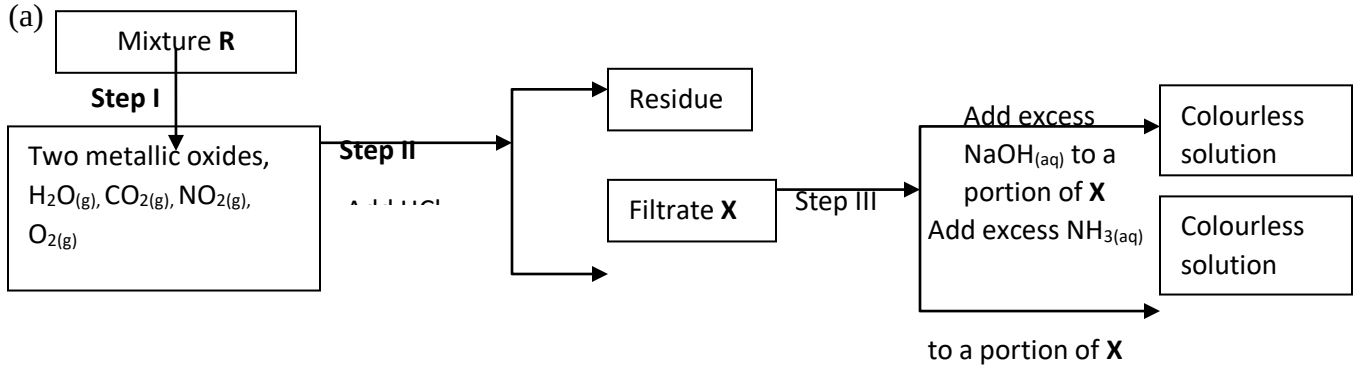
(b)Write an equation to show how pollution effect of sulphur (IV) oxide is controlled in contact process. (2mks)

.....

.....

5.The flow charts below show an analysis of a mixture **R** that contains two salts. Study the analysis and answer the questions that follow: -

(a)



(i) State:-

(I) The condition in **step I** (1 Mark)

……

……

(II) The process in **step II** (1 Mark)

……

……

(ii) A small portion of mixture **R** is added to dilute nitric (V) acid in a test-tube. What would be observed? (1 Mark)

……

……

(iii) Write an equation for the reaction between the cation in filtrate **X** and sodium hydroxide Solution (1 Mark)

……

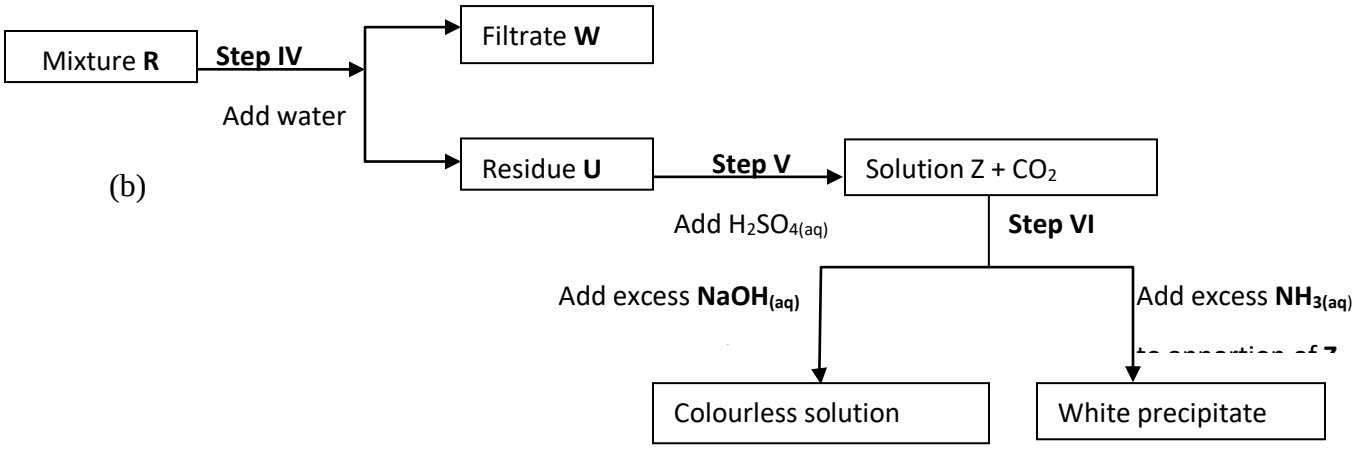
……

(iv) Explain how water vapour in **step I** could be identified (1 Mark)

……

……..

(b)



State and explain the conclusion that can be made from **step IV** only (2 Mark)

……

……

……

Name the anion present in residue **U**. Explain (2 Mark)

……

……

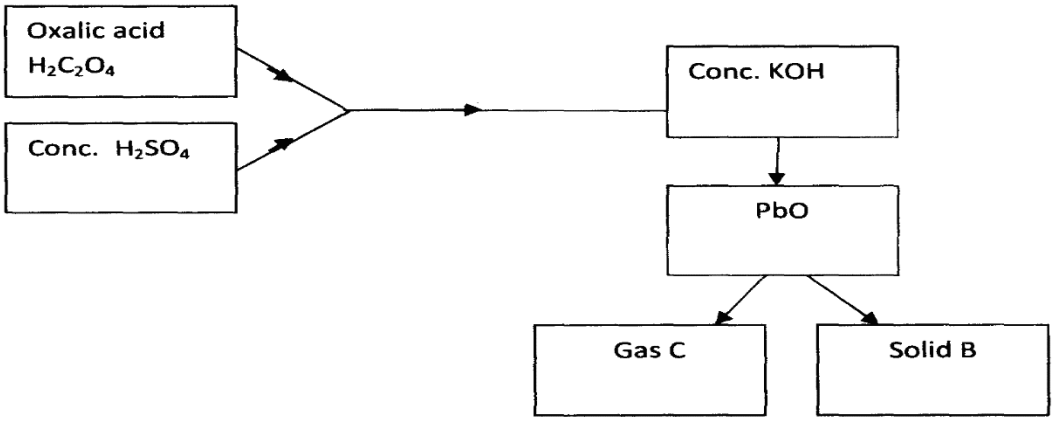
……

(iii) From the flow chart in **(a)** and **(b);**
Write the formulae of cations present in mixture **R** (2 Mark)

……

……

6. a) The flow chart below shows the preparation of carbon (II) oxide and its reactions



i.) Name the type of reaction taking place between $H_2C_20_4$ and Conc. H_2S0_4 (lmk)

.....

.....

ii). Why is gaseous mixture passed through Conc. KOH? (lmk)

.....

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iii). Write an equation for the production of B and C (lmk)

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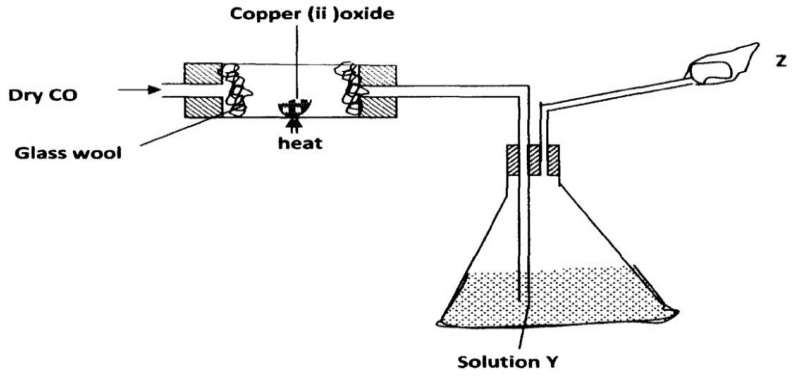
b). The figure below is used to investigate the effect of carbon (ii) oxide on copper (ii) oxide. Study it and answer the questions that follow Copper (ii) oxide



i) What will be observed in the combustion tube at the end of the experiment? (lmk)

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ii) Identify Y and give its use (2mks)

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iii) Why is it necessary to burn the excess gas at Z (2mks)

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iv) Write the equation for the reaction taking place at Z (lmk)

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v) What is the use of glass wool? (lmk)

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……

vi Give two uses of carbon (II) oxide (2mks)

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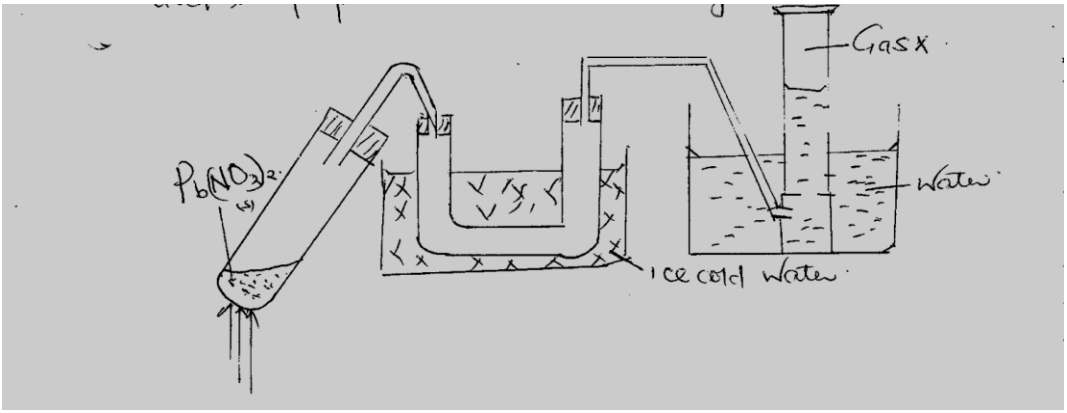
7.The diagram below represents a set up that can be used to prepare and collect nitrogen (iv) oxide.



a. Write a chemical equation for the reaction that takes place in the boiling tube. (1 mk)

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b. Name gas x. (1 mk)

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……

c. What observations are made on final residue in the boiling after reaction on heating and cooling the residue. (1mk)

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……

d. When a piece of burning magnesium is lowered into a gas jar containing gas x it continues to burn.

i. Explain the observation 2mks

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ii. Write a chemical equation for the reaction. (1mk)

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e. What precaution should be taken when preparing gas x

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f. Explain why it is not advisable to use copper (II) nitrate instead of lead (II) nitrate. (1mk)

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g. What property of gas x makes it possible to be collected by the method above.(1mk)

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h. State one use of gas x?. (1 mk)

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CHEMISTRY
PAPER 3
(CONFIDENTIAL)

Requirements for candidates

In addition to the apparatus and fittings found in a Chemistry laboratory, each candidate will require the following.

1. about 100cm^3 of solution F
2. about 50cm^3 of solution G
3. one burette 0 – 50ml
4. one pipette 25ml
5. two conical flasks
6. 100ml measuring cylinder
7. 200ml or 250ml beaker
8. label sticker
9. About 150ml distilled water
10.
11. Phenolphthalein indicator
12. one CLEAN METALLIC spatula
13. one boiling tube
14. 6 clean dry test-tubes
15. one test-tube holder
16. blue and red litmus paper
17. filter paper

Access to:

1. Means of heating(Bunsen burner)
2. 2M ammonia solution with a dropper
3. 2M nitric(v) acid with a dropper.
4. 0.2M lead(ii)nitrate solution

NOTE

Solid A is a mixture of Zinc carbonate and anhydrous zinc sulphate in the ratio 1:1.

Solution F is prepared by dissolving 4g of sodium hydroxide pellets in about 800cm^3 of distilled water and diluting it to one litre solution.

Solution G is prepared by dissolving 23.46g of tartaric acid (2,3 dihydroxy butanedioc acid) in 200cm^3 of distilled water and diluting it to 250cm^3 solution.

Name:……..……..

ADM NO: ……..….. CLASS:…….……..

FORM THREE MID-TERM 3 EXAM

CHEMISTRYPRACTICAL

Paper 3

Time: 2 ½ Hours

1. You are provided with:

   - 0.1m sodium hydroxide solution F

   - Solution G made by dissolving 23.46g of dibasic acid H_2MO_6 in 250cm^3 of distilled water

   You are required to:

   (i) Dilute solution G

   (ii) Standardize the diluted solution H using the sodium hydroxide solution F

   (iii) Determine the mass of M in the formula H_2MO_6

   Procedure 1

   Using a measuring cylinder measure 20cm^3 of solution G and transfer it into a beaker.

   Measure 80cm^3 of distilled water and add it to the 20cm^3 of solution G in the beaker. Label this as solution H.

Procedure II

Place solution H in a burette. Pipette 25cm^3 of solution F into 250cm^3 conical flask. Add 2 – 3 drops of phenolphthalein indicator and Titrate with solution H. Record your results in table 1. Repeat the titration two more times and complete the table.

a) Table 1

	1	II	III
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution H used (cm^3)			

(4 marks)

b) Calculate the average volume of solution H used. (2 mark)

c) Determine the number of moles of:-

I Solution F in 25cm^3 (3 mark)

II Acid in solution H in the average volume used. (2 marks)

III acid in $100cm^3$ of solution H. (2 marks)

IV acid in $20cm^3$ of solution G. (2 mark)

V acid in $250cm^3$ of solution G (2 marks)

d) Calculate the:

I Molar mass of acid H_2MO_6 (3 marks)

II Mass of M in the formula H_2MO_6 given that (H = 1, O=16). (3 marks)

2. You are provided with solid A. Carry out the tests below. Identify any gas or gases produced and record your observations and inferences.

a) Heat gently a spatula endful of solid A in a dry test tube. Test the gas with red and blue litmus paper.

Observations	Inferences
(2 mk)	(2 mk)

b) Place a spatula endful of solid A in a boiling tube. Add 10cm^3 of distilled water. Filter off the residue. Divide the filtrate into two portions. Retain the residue.

(i) To the first portion add 3 drops of ammonia solution and then excess.

Observations	Inferences
(2mk)	(1mk)

(ii) To the second portion add 3 drops of Lead (ii) nitrate solution.

Observations	Inferences
(1 mk)	(1 mk)

c) To the residue obtained in (b) above add 5cm^3 of dilute nitric acid. Divide the solution into two portions.

Observations	Inferences
(1 mk)	(1 mk)

(i) To the first portion add 3 drops of Ammonia solution and then excess.

Observations	Inferences
(2 mk)	(1 mk)

(ii) To the second portion add 3 drops of lead (ii) nitrate solution.

Observations	Inferences
(1 mk)	(2 mk)

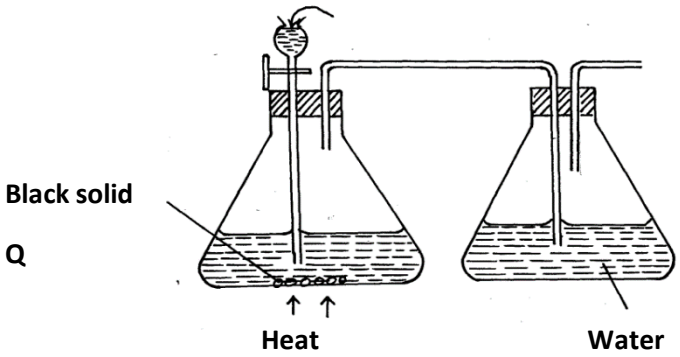
CHEMISTRY PAPER ONE.

FORM THREE

TIME: 2 HOURS

Answer ALL questions in the spaces provided

1. The diagram shows an incomplete set-up for the laboratory preparation and collection of chlorine gas. Study it and answer the questions that follow.



(a) Complete the set-up to show how dry chlorine gas is collected. (2mks)

(b) Name substance Q.(1mk)

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……

2) Give a reason why it is possible to separate nitric (V) acid from sulphuric (VI) acid which is used one of the reagents in the preparation of nitric (V) acid. (1mks)

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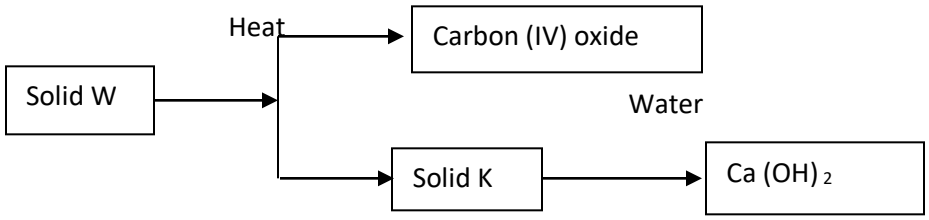
3). Study the scheme below and answer the questions that follow



a) Identify solids W and K (2mks)

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b) Write an equation for the formation of $Ca(OH)_2$ from solid K (1mk)

……

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c) Write an equation for the decomposition of solidW (1mk)

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……

4) The ions M^{3+} and N^{2-} have identical electronic arrangement. M is in period three.

i) Write the electronic arrangement of

M (1mk)

……

……

N(1mk)

……

……

ii) Write the formula of the compound formed when M and N combine. (1mk)

……

……

5) Explain why there is a general increase in first ionization energy of elements in period three of the periodic table from left to right. (1mk)

……

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……

6When excess magnesium ribbon is burned in air, two products are formed.

i)identify the two products (2mk)

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ii) Write the two equations of the reactions that form the products in (i) above (2mks)

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7. a) State the Boyle's law. (1mk)

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b) Calculate the pressure required to compress 12 liters of nitrogen gas at 1 atmosphere to give a volume of 4 liters. (2mks)

8. An element W of atomic number 11 and an atom of element Y of atomic number 9 combine to form a compound.

a) Write the formula of the compound. (1mk)

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……

b) State the type of bond present in the compound formed. (1mk)

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……

c) Identify the type of structure formed. (1mk)

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……

9). A compound has the following composition by mass:

Carbon =40%, hydrogen=6.7%, oxygen=53.3%

Given that the relative molecular mass of the compound is 180, determine its molecular formula (C=12, H=1, O=16.0) (3mks)

10). The melting point of phosphorous trichloride is -91^0C while that of sodium chloride is 801^0 C. In terms of structure and bonding, explain the difference in their melting points. (3mks)

11) Explain why the following substances conduct an electronic current.

a) magnesium metal

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(1mk)

b) Molten magnesium chloride. (1mk)

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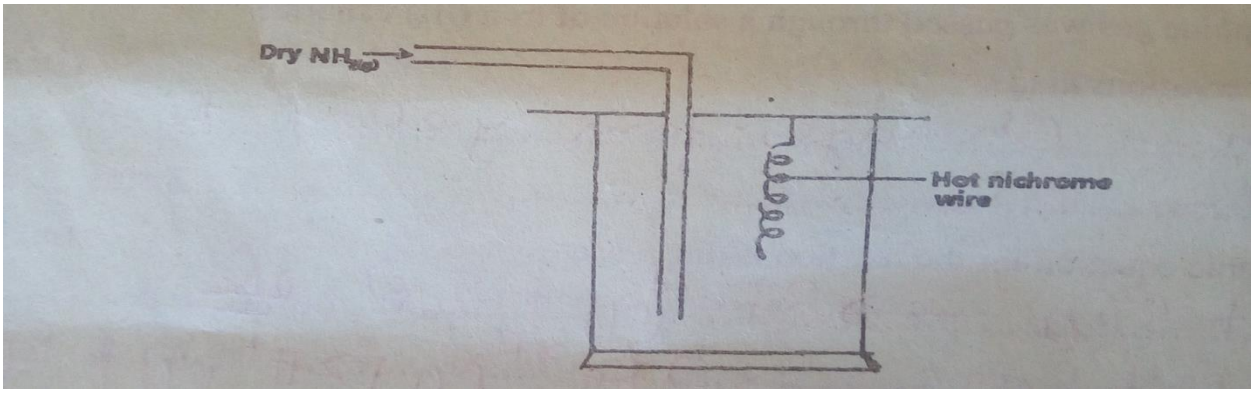
12). The apparatus below was a set-up to show the catalytic oxidation of ammonia. Study the diagram and answer the questions that follow.



i)write an equation for the reaction that takes place in the in the gas jar. (1mk)

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……

ii) Why is it necessary to have a hot nichrome wire in the gas jar? (1mk)

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……

13). When 3.125g of a carbonate, MCO_3 was heated completely, the volume of carbon (IV) oxide evolved during the heating is $600cm^3$ at room temperature and pressure. Calculate the relative atomic mass of M. (Molar gas volume at r.t.p=$24dm^3$) (3mks)

14). A sample of river water was suspected to contain zinc and sulphate ions. Describe how the presence of zinc and sulphate ions can be established. (3mks)

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15). Using dots (.) and crosses(x) to represent electrons, show bonding in carbon (II) oxide(2mks)

16). When a burning candle is put into a gas jar of sulphur (IV) oxide gas, it goes off but a burning magnesium ribbon continues to burn. Explain these observations. (2mks)

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17). Starting with copper metal, describe how pure copper (ii) carbonate can be prepared in the laboratory (3mks)

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18). State the observations that would be made when chlorine gas is bubbled through potassium bromide solution. (1mk)

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b) Write the ionic equation for the reaction in (a) above (1mk)

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19. An element M has two isotopes. $^{63}_{29}M$ And $^{65}_{29}M$. The relative atomic mass of the naturally occurring M is 63.55. Calculate the percentage abundance of each isotope. (3mks)

20. Distinguish between the terms deliquescent and efflorescent as used in chemistry. (2mks)

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21 10 cm^3 of concentrated sulphuric(vi) acid was diluted to 100cm^3. 10 cm^3 of the resulting solution was neutralized by 36cm^3 of 0.1M sodium hydroxide solution. Determine the mass of the sulphuric (vi) acid that was in the concentrated acid.

(S=32, H=1, O= 16) (3mks)

22. a) Explain why potassium carbonate cannot be manufactured by the Solvay process. (1mk)

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b) Write the equation for the reaction that takes place in the Solvay tower (Carbonator) (1mk)

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……

c) State one commercial use of soda-ash (1mk)

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23. What name is given to each of the following?

a) Ability of an element to attract electrons (1mk)

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b) Types of forces that holds the atoms of Neon together (1mk)

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24. Zinc sulphate was prepared by adding excess Zinc oxide to dilute sulphuric (vi) acid in a beaker. The mixture was wormed until no more effervescence occurred. Excess Zinc oxide was filtered and the filtrate evapourated and then cooled. Fine crystals were obtained.

a) Write an equation for the above reaction (1mk)

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b) Why was excess zinc oxide used (1mk)

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c) How would you know that the reaction is over (1mk)

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25. Hydrogen sulphide was passed through a solution of Iron (III) chloride

i) State the observation made (1mk)

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ii) Write an ionic equation for the reaction that took place (1mk)

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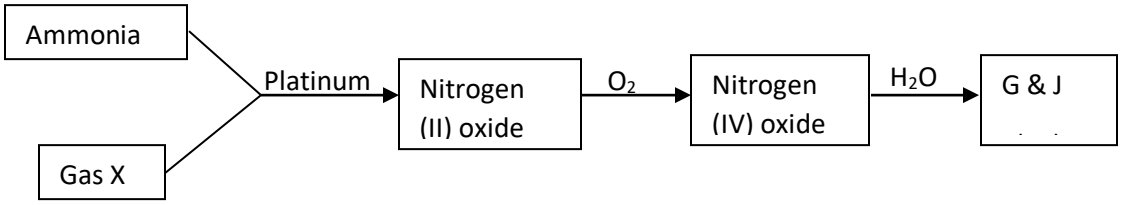
26. Study the flow chart below and answer the questions that follow



i. Identify gas X (1mk)

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ii. Write an equation for the reaction between ammonia and gas X (1mk)

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iii. Write an equation to show the formation of G and J (1mk)

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……

27 All apparatus used during preparation nitric (V) acid are made of glass. Give a reason. (1mks)

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28. Sulphur (IV) oxide gas was bubbled through acidified potassium chromate (VI) solution and Iron (III) Sulphate solution chromate. Explain the observations made in each case.

(i) With Potassium Chromate (VI) solution. (1 ½ mk2)

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(ii) Iron (III) Sulphate solution (1 ½ mks)

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29.3.22g of hydrated Sodium Sulphate, $Na_2SO_4{}^{o}X\ H_2O$ were heated to a constant mass of 1.42g, determine the value of X in the formula. (Na = 23, S = 32, O = 16, H=1). (2 mks)

30. 20 cm^3 of 2 M Sulphuric (IV) acid reacted completely with 3.2 g of WOH (O=16, H=1) Calculate the R.A.M of W in the formula WOH. (3 mks)

31) The figure below shows part of non-luminous flame.

(a) (i) Describe an experiment that would confirm that region labeled A is not suitable for heating. (1 ½ mks)

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(ii) Explain why luminous flame produce light and soot. (1 ½ mks)

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Name: ……..

Class:…… Adm No:……
FORM 3
MID-TERM THREE
GEOGRAPHY EXAM
PAPER 1
TIME:

INSTRUCTIONS.
Answer all the questions in the spaces provided.

1. What is desertification? (2mks)

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b. State three negative effects of desertification. (3mks)

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2. Describe the solar system. (2mks)

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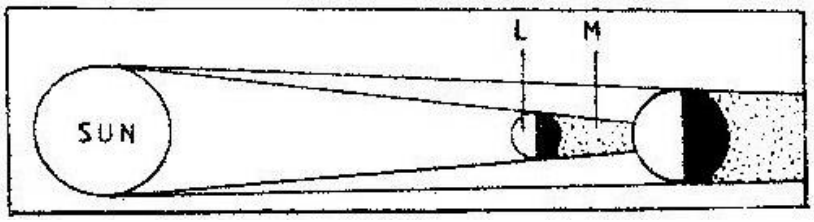
b. Use the diagram below to answer the questions that follow.



i. What type of an eclipse is represented by the diagram? (1mk)

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ii. Name the features marked L and M. (2mks)

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3. Identify two causes of earth movement. (2mks)

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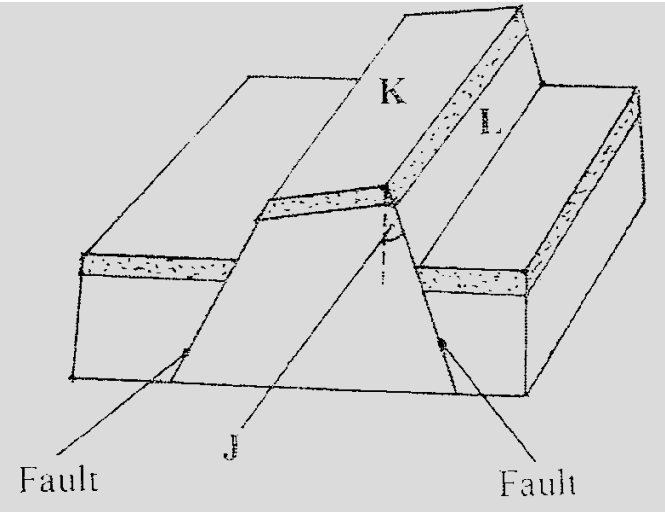
b. The diagram below shows some features formed as result of faulting.



i. Identify the angle marked J. (1mk)

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……

ii. Identify the features marked K and L. (2mks)

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4. Apart from water vapour, name two other substances that are suspended in the atmosphere. (2mks)

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b. Give two features that are considered when classifying clouds. (2mks)

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iii. Name one type of cloud that give rise to rainfall in the tropical regions. (1mk)

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5. Give three causes of earthquakes. (3mks)

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b. Name two major earthquake zones of the world. (2mks)

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SECTION B

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

6. Study the map of Kitale 1:50,000 (sheet 75/3) provided and answer the following questions.
   a. Identify two human made features found at the grid square 3319. (2mks)

iv. Identify the altitude of the highest point in the area covered by the map. (2mks)

v. What is the magnetic variation of the map? (1mk)

   b. i. Measure the distance of the dry weather road (C640) from the junction at point M(345142) to the junction at point N (416201) give your answer in kilometers. (2mks)

   ii. Draw a square 10cm by 10cm to represent the area enclosed by easting 36 and 46 and northings 13 and 23. (1mk)

   On the square mark and name the following. (4mks)

   i. Forest
   ii. Plantation
   iii. River Naigameget
   iv. Dry weather road (C640)

   c. Describe the drainage of the area covered by the map. (5mks)
   d. Identify two social services offered in Kitale municipality. (2mks)
   e. Citing evidence from the map explain three factors that favour agricultural activities. (6mks)

7. Outline two factors that influence the development of drainage patterns. (2mks)

ii. Outline five characteristics of a river in its youthful stage. (5mks)

b. Describe the following processes of river erosion.

i. Attrition (2mks)

ii. Corrosion (4mks)

c. Explain three negative effects of rivers to the human environment. (6mks)

d. Your class is planning to carry out a field study of a river in its old stage.

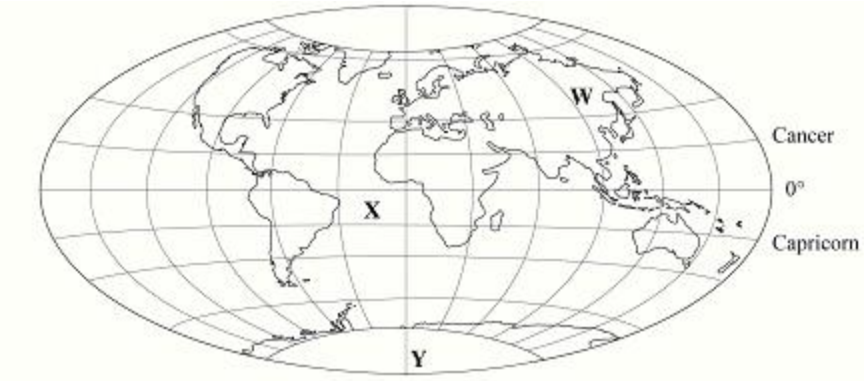
i. State three reasons why it would be necessary to pre-visit the area of study. (3mks)

ii. State three activities you would carry out to determine why deposition occurs at this stage. (3mks)

8. Name the first two planets of the solar system. (2mks)

b. Explain the origin of the earth according to the Nebula cloud theory. (8mks)

c. Use the map below to answer questions (c) (i)



i. Name:

The continent marked W. (1mk)

The ocean marked X (1mk)

The line of longitude marked Y. (1mk)

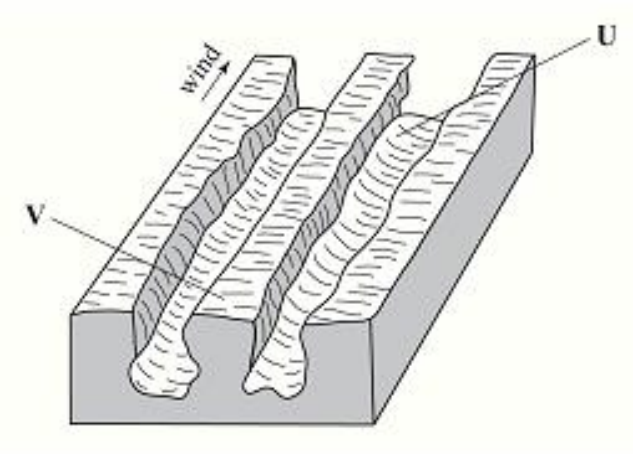
ii. Give two reasons why the earth has a spherical shape. (4mks)

iii. State four effects of the rotation of the earth on its axis. (4mks)

d. Describe the structure of the earth's crust. (4mks)

9. Name two major deserts found in Africa. (2mks)

ii. The diagram below represents features resulting from wind erosion in a desert. Use it to answer question a. (ii).



a. Name the features marked U and V. (2mks)
b. Describe three processes through which wind transports its load. (6mks)
c. Using a well labeled diagram, describe how a barchans is formed. (7mks)
d. Explain four ways in which desert features are significance to human activities. (8mks)

10. Name three types of faults. (3mks)

ii. Apart from compressional forces explain two other processes that may cause faulting. (4mks)

b. With the aid of diagrams, describe how compression forces, may have led to the formation of Great Rift Valley. (8mks)

b. Explain five ways in which faulting is of significance to human activities. (10mks)

Name: ……..

Class :…….. Adm No: ……
FORM 3
MID-TERM 2 EXAMS
GEOGRAPHY PAPER 2
TIME:

INSTRUCTIONS.
Answer all the questions in the spaces provided.

1. a) Name three mining methods. (3mks)

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b) State three conditions that are necessary for the formation of petroleum. (3mks)

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2. a) List two factors that determine the distribution of forests in Kenya. (2mks)

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b) Give three economic uses of mangrove forest. (3mks)

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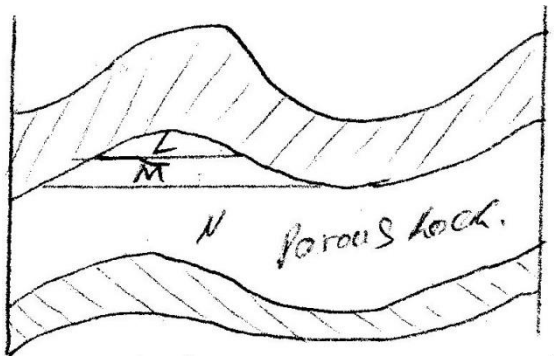
3. The diagram below shows the occurrence of petroleum in the earth's crust. Use it to answer question (a).



a) Name the substance in the area labeled L, M and N. (3mks)

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

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4. Name five uses of soda ash. (5mks)

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5. State five factors that have led to the reduction of the area under forest on the slopes of Mt. Kenya. (5mks)

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6. Study the photograph below and use it to answer question (a)

i. What evidence shows that this is a ground general – view photograph? (2mks)

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ii. Draw a rectangle measuring 12cm by 8 cm. (1mk)

iii. On the rectangle sketch and label the following features shown on the photographs. (5mks)

- Planted crops
- Tree stumps
- Forest
- Felled trees
- The sky

iv. Describe the characteristics of the forest shown on the photograph. (5mks)

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b) Explain four measures being taken by the government of Kenya to control human encroachment on forested areas. (8mks)

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c) Give the differences between softwood forests in Kenya and Canada under the following sub-headings.

i. Tree harvesting (2mks)

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ii. Marketing of forest products. (2mks)

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d) Explain four problems facing forestry in Kenya. (8mks)

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e) What is Agro forestry? (2mks)

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ii) Give four reasons why Agro forestry is encouraged in Kenya. (4mks)

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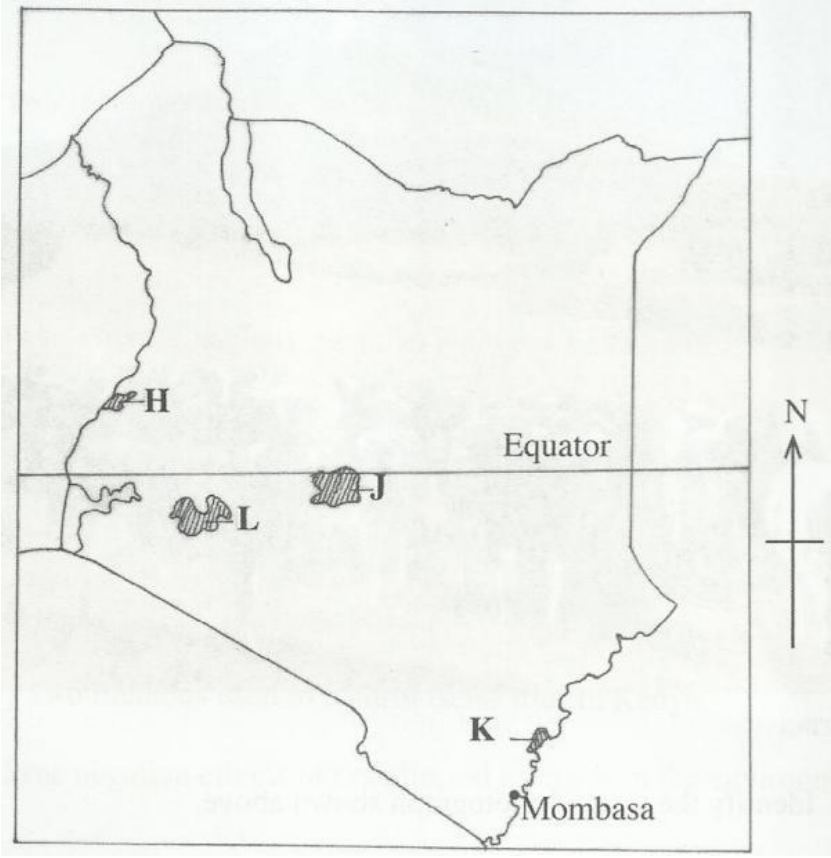
iii) Use the map of Kenya below to answer questions.



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

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b) Explain four factors that favour the growth of natural forest in the area marked L. (8mks)

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iv) Explain two benefits of petroleum mining to economies of Middle East countries. (2mks)

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7. The table below shows the quantities of minerals produced in Kenya in tones between year 2001 and 2005. Use it to answer questions a(i) and (II) Source economic survey 2006

Mineral/Year	2001	2002	2003	2004	2005
Soda ash	297,789	304, 110	352, 560	353, 835	360, 161
Fluorspar	11,885	85,015	80, 201	117, 986	26, 595
Salt	5,664	18,848	21,199	31,139	26,595
Others	6,093	7,000	4,971	6,315	8,972

i. Calculate the average annual production of soda ash over the 5 years period. (1 mk)

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ii. Calculate the total mineral production for the year 2003. (1mk)

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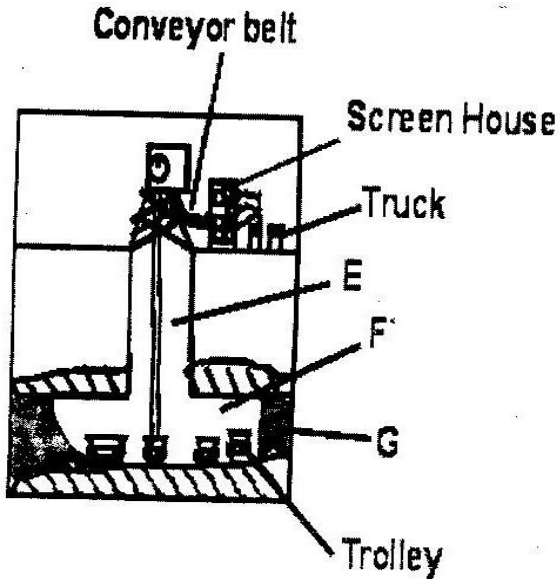
……

b) The diagram below shows shaft mining.



i. Name the part marked E, F, G. (3mks)

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ii. State three problems associated with shaft mining. (3mks)

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c) Explain four ways in which gold mining has contributed to the economy of South Africa. (8mks)

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d) Explain three negative effects of mining on the environment. (6mks)

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NAME: ……

ADM NO: …… CLASS: ……..

HISTORY AND GOVERNMENT

FORM THREE PAPER 1 MID-TERM 3

SECTION A

Answer all the questions in these section

1. Name two southern cushites that inhabited Kenya during the pre-colonial period (2mks)
2. Give one way in which iron working helped in migration of Kenyan communities (1mk)
3. Apart from the Akamba name two other Kenyan community that participated in th long distance trade. (2mks)
4. Identify two benefits of dual citizenship (2mks)
5. Give two characteristics of the Kenyan government (2mks)
6. Outline one early mean of communication used by the Kenyan communities in pre-colonial period (1mk)
7. Give two strategic reasons that led to occupation of Kenya by the British (2mks)
8. Name one colonial governor who encouraged settlers farming in Kenya (1mk)
9. What was the main recommendations of Fraser commission of 1908(1mk)
10. Give the main reason that that led tom formation of early political parties in Kenyaup to 1939. (1mk)
11. Identify the main feature of Kenyans first independentparliament (1mk)
12. What was the main reason for convening the 2nd Lancaster conference in 1962(1mk)
13. Define the term democracy (1mk)
14. Give two social causes of disunity in Kenyatoday (2mks)
15. Identify the most significant aspect of the Nandi social organization (1mk)
16. Give two reasons that may lead to deprivation of freedom of expression to a Kenyan citizen (2mks)
17. Explain two recommendations of Littleton constitution of 1954(2mks)

SECTION B (45MKS)

Answer any three questions from this section

18. a) Identify three main economic activities of the Luo during the precolonial Kenya (3mks)

b) Describe the political organization of the akamba in 19th century (12mks)

19. a) Give the characteristic of early political organization in Kenya(3mks)

b) Explain six factors which promoted African political organization in Kenya after 1945(12mks)

20a) Outline the terms of Devonshire white paper (5mks)

b) Describe the method used by the colonial government to acquire labour for settlers in Kenya (10mks)

21a) Identify five merits of democracy (5mks)

b) Explain five principles of democracy (10mks)

SECTION C (30MARKS)

Answer any two questions

22a) identify the factors that should be considered while drafting the constitution of a country (5mks)

b) Describe the stages of constitution making process in Kenya (12mks)

23a) give three ways in which education promotes national unity in Kenya (3mks)

b) Discuss the procedures followed while solving conflicts through the mediation method (12mks0

24a) what were the main objectives of local native council in Kenya during the colonial period (3mks)

b) Describe the structure of central government in colonial Kenya (12mks)

NAME: .....

CLASS: ..... ADM.NO:.....

TIME.2hrs 30 Mins

HISTORY PP2, FORM THREE, MID-TERM 3

1. Give one reason why History is referred to as a science. (1mk)
2. Outline two classes of Monarchial government (2mks)
3. Give one advantage of Oral traditions as a source of information on History and government. (1mk)
4. Outline two characteristics of the Homo habilis. (2mks)
5. Give one disadvantage of hunting in groups during the Stone Age period. (1mk)
6. Definition of Agrarian Revolution(1mk)
7. One criteria that used to classify trade. (1mks)
8. Name one type of sailing ship invented by the Portuguese. (1mk)
9. Two reasons for space exploration.
10. Identify two early forms of communication used by early man. (2mks)
11. Two factors that facilitated the spread of Iron working in Africa. (2mks)
12. Two political effects of the Industrial Revolution in Europe. (2mks)
13. State two roles played by missionaries in the process of colonization. (2mks)
14. First president of the FRELIMO Movement. (1mk)
15. Name one method of administration used for to ruler Kenya during the colonial period. (1mks)
16. Give one function of Athens as an urban center. .
17. Name two Cities that developed along East African cost. (2mks).

SECTION B (45mks) Answer any three Questions from this section.

18. a) Identify five advantages of the Enclosure System in Britain during the Agrarian Revolution. (5mks)

    b) Explain five factors that facilitated the Science Revolution in Europe. (10mks)

19.

(a) Outline five factors that facilitated the development of the Trans – Saharan trade. (3mks)

(b) Explain five reasons for the decline of the Trans – Atlantic trade. (10mks)

20. (a) give three reasons why attainment of independence by Mozambique tool long? (3mks)

(b) Factors for the emergence of African Nationalism in South Africa. (12mks)

21. (a) Reasons why Lewanika collaborated . (3mks)

(b) Factors that enable SamoriToure to resist the French for long. (12mks)

SECTION C (30mks) Answer any two questions in this section.

22. (a) Name any three early urban center that developed in North Africa. (3mks)

b) Explain the factors that facilitated the growth of Athens as an early urban center (12mks)

23. (a) State five factord that led to the decline of Asante Kingdom. (5mks)

b) How was the Asante Empire Organized politically in the 19th century. (10mks)

24. (a) State five reasons why the British employed direct rule in Zimbabwe. (5mks)

b) Explain the effects of direct rule in Zimbabwe. (10mks)

PHYSICS PRACTICAL

REQUIREMENT (CONFIDENTIAL)

NB: Physics teachers should ensure that candidates do not get prior knowledge of the content of this paper

Question 1

Each student should have

- A concave mirror of f = (15-20cm) on a lens holder
- A screen
- A metre rule
- A candle and a match box The match box may be shared)

Question 2

Each student should have:

- An ammeter (0-1A)
- A voltmeter (0-2.5V) or (0-5V)
- A switch
- A nichrome wire (29-28mm) mounted on a mm scale -1 metre long
- Along wire with a crocodile clip at one end (or a jockey)
- Two new size D dry cells and cell holder
- Six connecting wires, two with crocodile clips at one end
- A micrometer screw gauge (may be shared)

Name: ……

Adm. No: …… CLASS……

232/3

PHYSICS

Paper 3 (Practical)

Time: 2 ½ Hours

FORM 3

INSTRUCTIONS TO THE CANDIDATES:

- *Write your **name** and **index number** in the spaces provided above.*
- ***Sign** and **write** the **date** of the examination in the spaces provided above.*
- *You are supposed to spend the first **15** minutes of the **2 ½** hours allowed for this paper reading the whole paper carefully.*
- *Marks are given for a clear record of the observation actually made, their suitability, accuracy and the use made of them*

FOR EXAMINER'S USE ONLY

Question	Maximum Score	Candidate's Score
1	20	
2	20	
TOTAL	40	

QUESTION 1

Apparatus

Concave mirror on a lens holder

Screen

Metre rule

Candle

Proceed as follows;

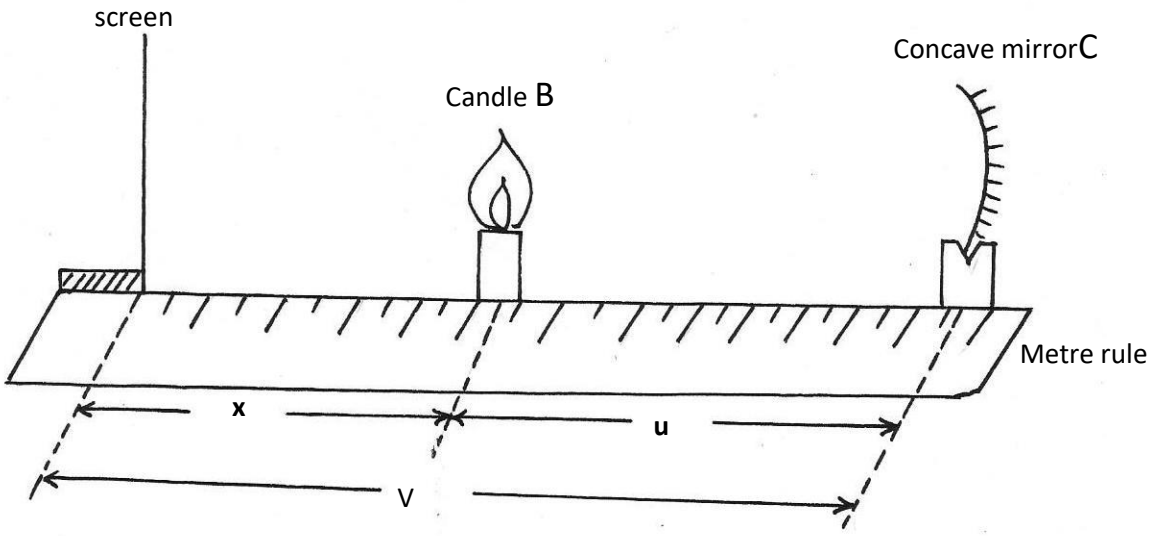


Figure 1

(i) Set the apparatus as shown in fig 1

(ii) Place the candle at a distance x= 5.0cm from the screen

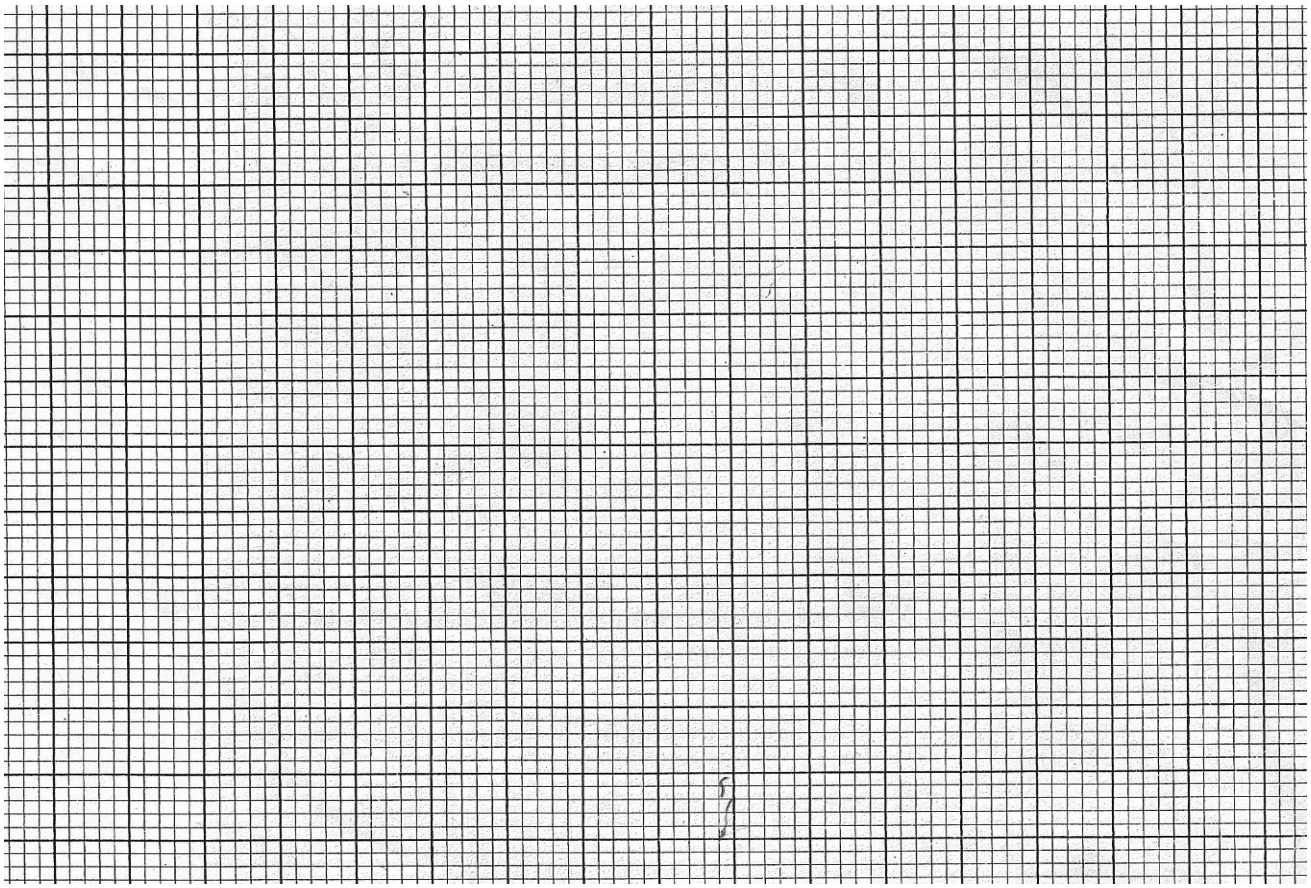
(iii) Move the mirror to and from to focus a clear, sharp image of the candle on the screen

(iv) Measure and record the distance u between the mirror and candle and the distance v between the screen and the mirror.

(v) Repeat the experiment for other values of x and complete the table below (table 1)

X(cm)	5.0	10.0	15.0	20.0	25.0	30.0
U(cm)						
V(cm)						
(u+v) cm						
Uv(cm2)						

(vi) Plot a graph of (u+v) (y axis) against uv (5mks)



(v) Determine the slope S of the graph (5mks)

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(b) Using the value of S obtained in VII above, determines the value of f, the focal length of the mirror. (2mks)

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(c) Given that R = $\frac{4f}{S^2}$ determine the value of R (2mks)

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QUESTION 2

You are provided with the following

- An ammeter (0-1A)
- A voltmeter
- A wire mounted on a mm scale
- A switch
- A long wire with a crocodile clip at one end (crocodile clip to be used or a jockey)
- 2 new size D dry cells and a cell holder
- A micrometer screw gauge(may be shared)
- Six connecting wires, two with crocodile clips at the end

Proceed as follows

(i) measure the diameter d of the mounted wire at 3 different points

Average diameter= mm (1mk)

(ii) Set up the apparatus as shown in the circuit diagram in fig 2

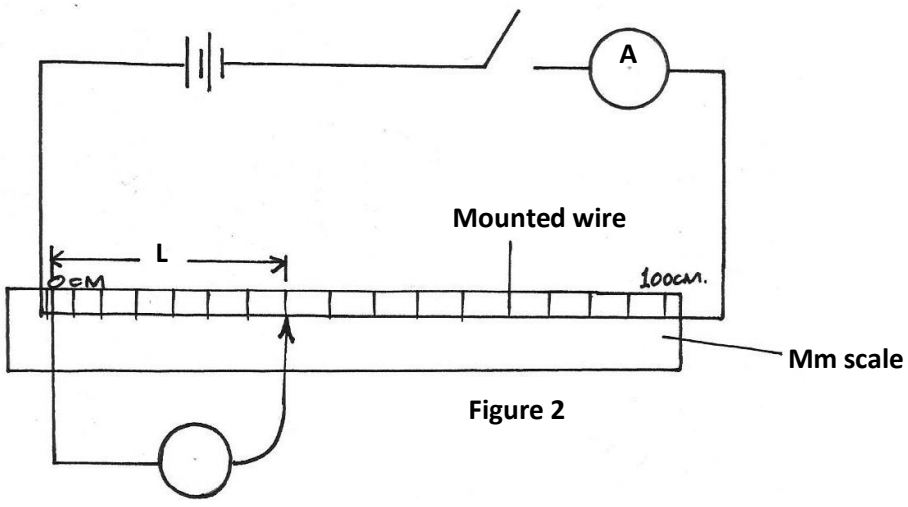

Figure 2

V

(iii) Close the switch and tap the mounted wire with crocodile chip as shown in the circuit. Ensure that both meters show possible deflection. Open the switch

(iv) Tap the wire at L= 20cm, close the switch, and record in the table provided the ammeter and the voltmeter reading.

(v) Repeat procedure in IV for the other values of L, shown in the table below and complete the table. (8mks)

L (cm)	L(m)	V(volts)	I	R= $\frac{V}{I}$(Ω)
20				
30				
40				
50				
60				
70				
80				

(vi) Plot the graph of R(y-axis) against Lcm (grid provided)

(a) Determine the slope of the graph (3mks)

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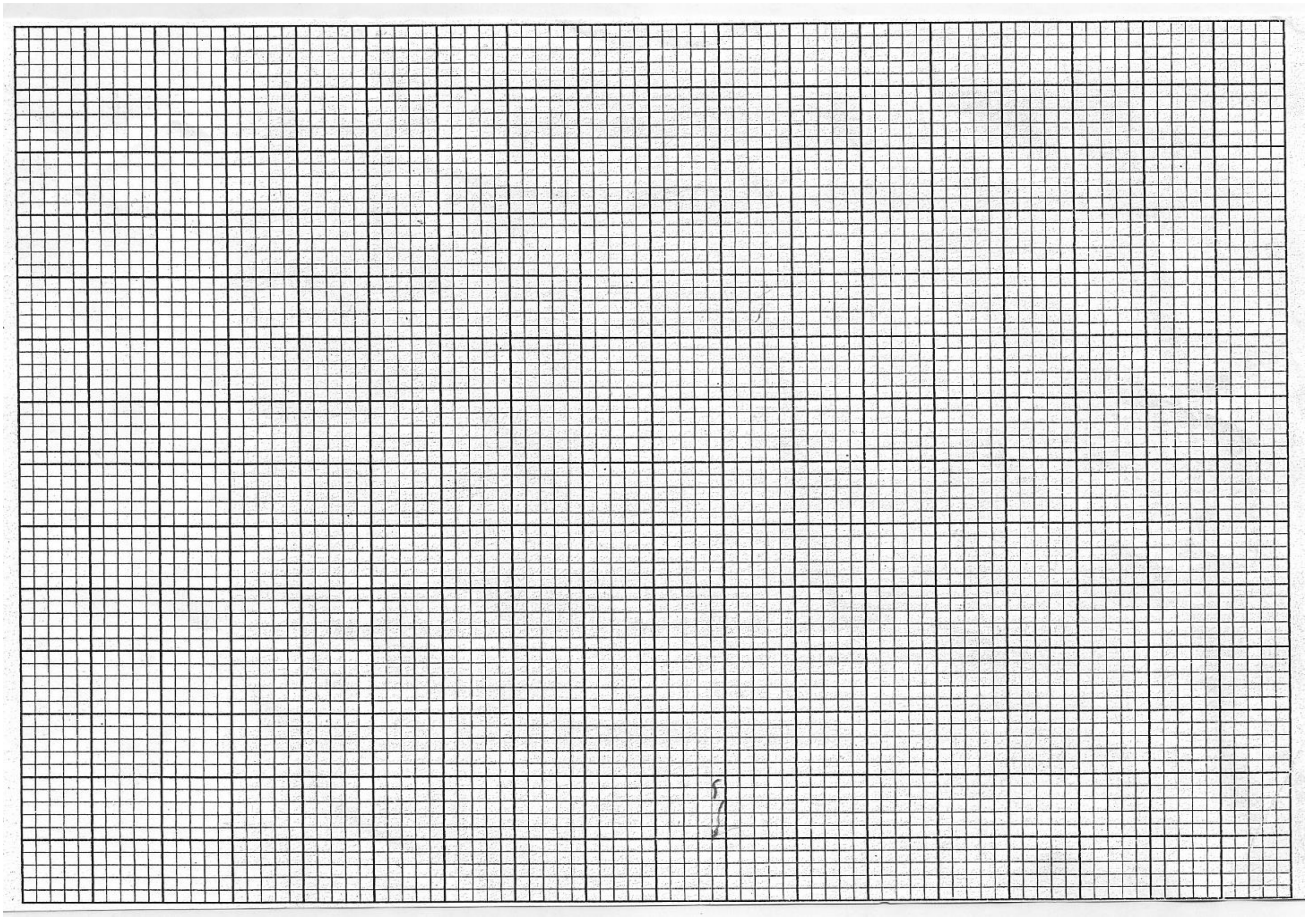

(b) Given that the where A is the cross sectional area of the wire and ρ is a constant for the material of wire. Determine the value of the constantρ

NAME: ……..……..……

ADM NO: …….. CLASS: ..…….……
MID-TERM II1 EXAMS
FORM 3 PHYSICS PP2
TIME: 2 HOURS

SECTION A : (25 MARKS)

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

1. Figure 1 below shows an object infront of plane mirror.

Figure 1

Sketch image of object using mirror shown. (1mk)

2. Figure 2 below shows an object infront of concave mirror and it's image.

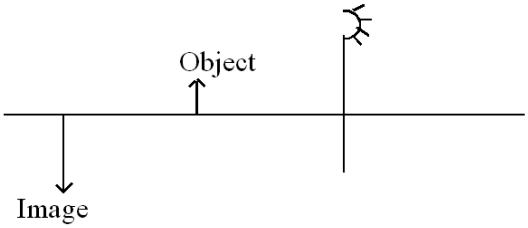

Figure 2

Locate position of its principal focus. (2mks)

3. State the use of Manganese (IV) oxide in dry cell. (1mk)

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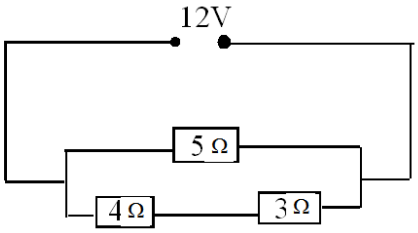
4. Use figure 3 below to answer following questions.



Determine

(a) Total resistance. (3mks)

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(b) Potential difference across 4Ω resistor. (3mks)

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5. Figure 4 shows conductor carrying current in magnetic field and moves in direction shown.

Figure 4

Identify polarities X and Y. (2mks)

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5. A man standing between two parallel walls fires a gun. He hears an echo after 1.5 seconds and another one after 2.5 seconds and yet another one after 4 seconds. Determine the separation of the walls. (Take velocity of sound 340 m/s)

7. A student shouts and hears an echo after 0.6 seconds. If the velocity of sound is 330m/s. Calculate the distance between student and reflecting surface. (3mks)

8. Figure 6 shows water waves moving towards barrier. Show the emergence of the reflected waves

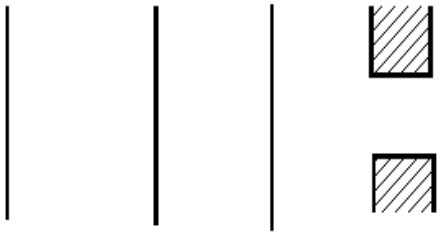

Figure 6

9. (a) Define refractive index. (1mk)

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(b) The critical angle of a material is 43.2^0. Determine the refractive index of that material. (2mks)

(b)A battery of emf E drives a current of 0.25A when connected to 5.5W resistor. When the 5.5W resistor is replaced with 2.5W resistor, the current flowing becomes 0.5A. Find the emf E and the internal resistance r of the battery. (3 marks)

10.Define the term sulphation as applied to lead acid cells. (1 mark)

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SECTION: B(55MARKS)

ANSWER ALL QUESTIONS IN THIS SECTION

11. (a) An uncharged metal rod brought close but not touching the cap of a charged electroscope causes a decrease in the divergence of the leaf. Explain the observation. (1mark)

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(b) In experiment to investigate factors affecting capacitance of a capacitor, a student increased the area of the plates and decreased the separation of the plates. Explain the effect on the capacitance when

(i) the area of plates increased (1 mark)

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(ii) the distance of the separation of the plates decreased (1 mark)

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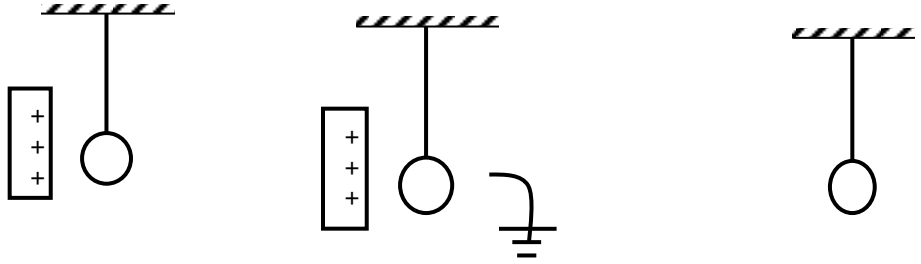
(c) Figure 7 illustrates a method of charging a metal sphere.



(i) (ii) (iii)

Fig. 7.

(i) Name the method of charging shown in fig 8.(1mar(ii) Indicate the final charge on the sphere in fig 8. (1 mark)

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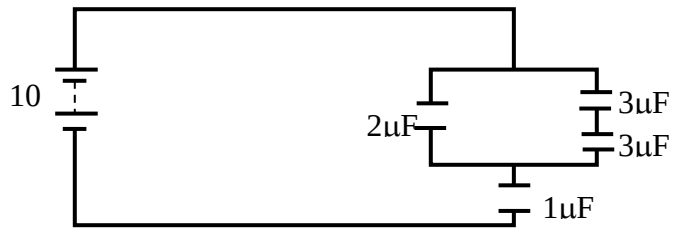
(d) Figure 9 shows an arrangement of capacitors connected to a 10V d.c supply.



Determine

(i) the combined capacitance (2 marks)

(ii) the total charge in the circuit (1 mark)

(iii) the total energy stored in the circuit. (2marks)

12 (a) Distinguish between e.mf. and terminal voltage of a battery. (2 marks)

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(b)The graph in figure 8 shows the variation of potential difference V against current I for a cell when current is drawn from it.

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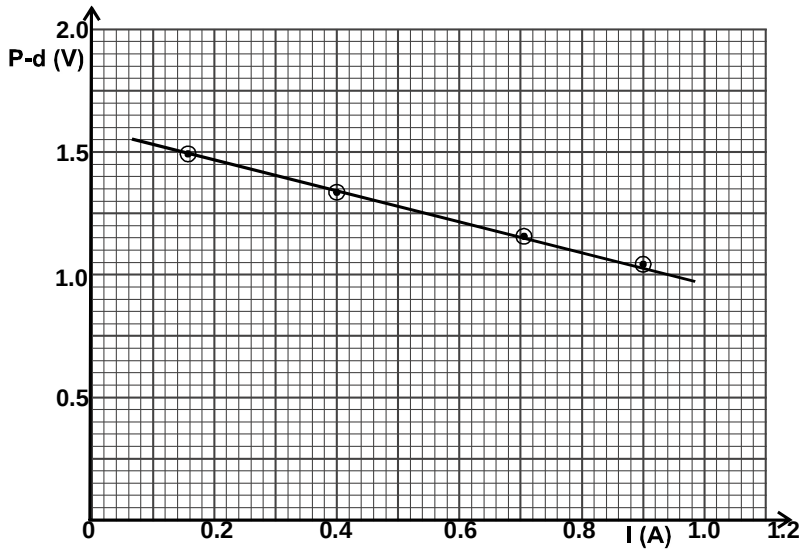


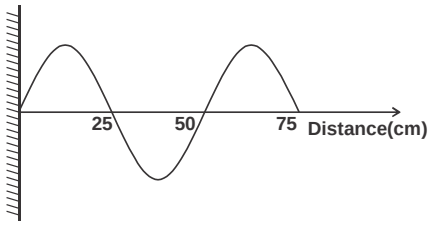
(i) From the graph determine

(a)The e.m.f of the cell. (2 marks)

(b)The internal resistance of the cell. (4marks)

(c)on the space provided below, draw a circuit that could be used to obtain the results represented by the graph.(2 marks)

13.(a) Figure 9 is an illustration of a wave pattern.



i) State with reason the type of wave shown. (2 marks)

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ii)Determine the wavelength of the wave. (1 mark)

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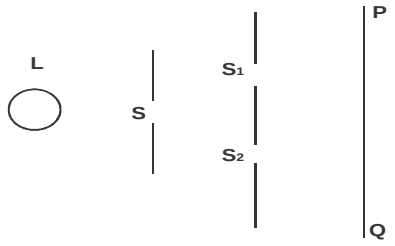
iii)Calculate the frequency of the wave given that the speed of the wave is 9m/s. (3 marks)

c) Figure 10 show s monochromatic source of light L behind a barrier with a single slit S placedbehind another barrier with two identical slits S_1 and S_2. A screen PQ is placed in position as shown.



i)Explain what is observed on screen PQ. (2 marks)

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ii)What is the significance of S_1 and S_2 ?

(1 mark)

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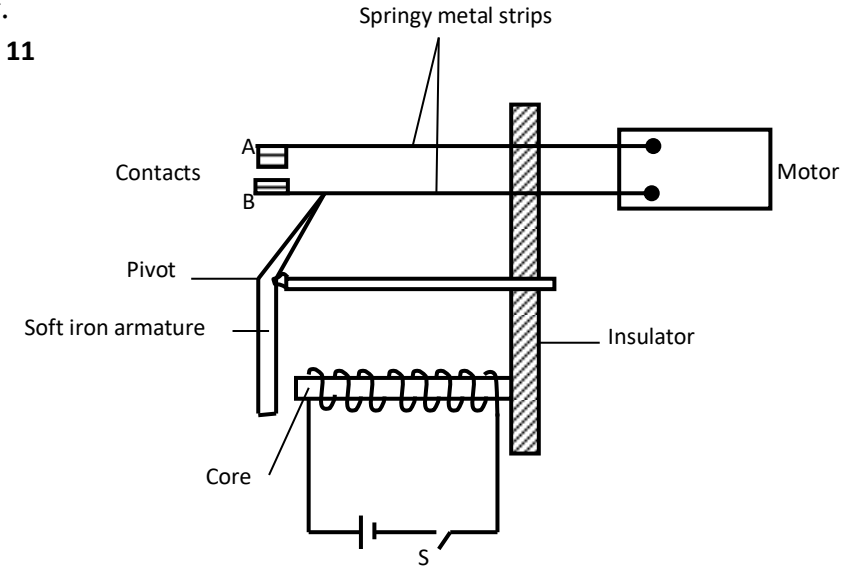
14.Figure 11 shows an electromagnetic relay being used to switch an electric motor on and off. The electromagnet consists of a coil of wire wrapped around a core. The motor in figure is switched off.

Figure 11



(a)Suggest suitable material for the core. (1mark)

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(b)What happens to the core when switch S is closed? (2marks)

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(c)Why do the contacts A and B close when the switch S is closed. (2marks)

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(d)When the switch S is opened, what will happen to;

(i) The core (1mark)

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(ii) Soft iron armature. (1mark)

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(b) Give **one** other application of an electromagnet. (1mark)

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(c) State **two** ways in which an electromagnet could be made more powerful. (2marks)

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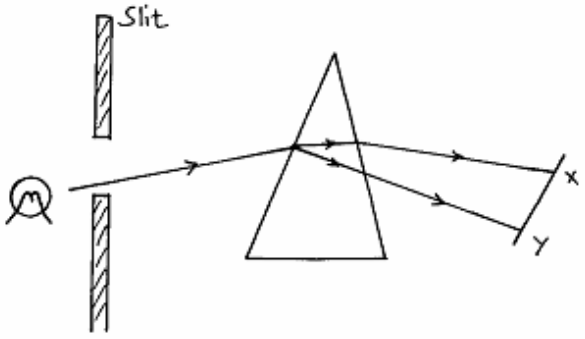
15.Figure 12 below shows a narrow beam of white light onto a glass prism.



(i) What is the name of the phenomenon represented in the diagram? (1mk)

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(iii)Name the colour at **X** and **Y**. Give a reason. (3mks)

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(iii)What is the purpose of the slit? (1mk)

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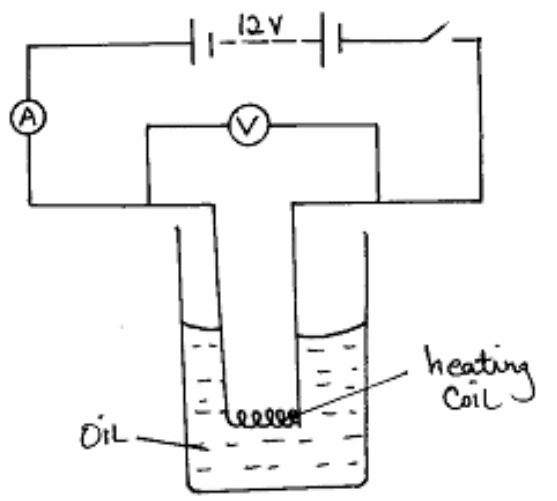
16. The figure 4 shows a circuit with a coil used to warm oil in a beaker.

Figure 4



(a) State the Ohm's Law. (1mk)

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(b) (i). Explain how heat is produced in the coil. (2mks)

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(ii) Given that the reading of the ammeter is 2.5A, determine the resistance of the coil. (3mks)

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(iii).How much heat is produced in the coil in a minute? (3mks)

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(iv).Give **two** changes that can be made in the set-up in order to produce more heat per minute. (2mks)

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(iii)How much heat is produced in the coil in a minute? (3marks)

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