FORM 3 MIDTERM 2 EXAMS

(SMART-GRADE SERIES)

ALL SUBJECTS

Smart-grade Collection of Standard set of Mid-Term 2 Assessment Tests for the Current Class for all High Schools in the Republic of Kenya.

SUBJECTS TESTED;

Mathematics, English, Kiswahili, Biology, Chemistry, Physics, CRE, Geography, History, Business Studies, Home-Science & Agriculture.

SMART-GRADE SERIES

For Marking Schemes / Answers

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MWALIMU CONSULTANCY

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

BIOLOGY

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

1. State two functions of lipids **(2 marks)**

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2. The gill of a tilapia fish is composed of many outgrowths called gill filaments. Explain the significance of this observation **(2 marks)**

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3. A process that occurs in plants is represented by the reaction below

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

i. Identify the **process** **(1 mark)**

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ii. Name the substance that accumulates in muscles when the food is broken down with insufficient oxygen **(1 mark)**

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iii. State the side effect of accumulation of the substance named in (ii) above. **(1 mark)**

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4. Name the disease in humans that is caused by lack of each of the following.(3 marks)

i. Vitamin C

ii. Vitamin D

5. State four ways by which the mammalian skin responds to low temperature in the environment. **(4 marks)**

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6. Explain how sunken stomata lower the rate of transpiration **(2 marks)**

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7. Distinguish between haemolysis and crenation **(2 marks)**

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8. Why should respiratory surfaces be **(2 marks)**

i. Moist

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ii. Thin

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9. State two functions of the cell sap **(2 marks)**

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10. What Osmoregulatory changes would take place in a marine amoeba if it was transferred to fresh water environment **(3 marks)**

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11. State two functions of the plasma membrane **(2 marks)**

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12. State the economic importance of anaerobic respiration **(3 marks)**

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13. Name the branch of Biology that involves the study **of:** **(2 marks)**

a) Organisms for the sake of classifying them.

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b) Microscopic organisms.

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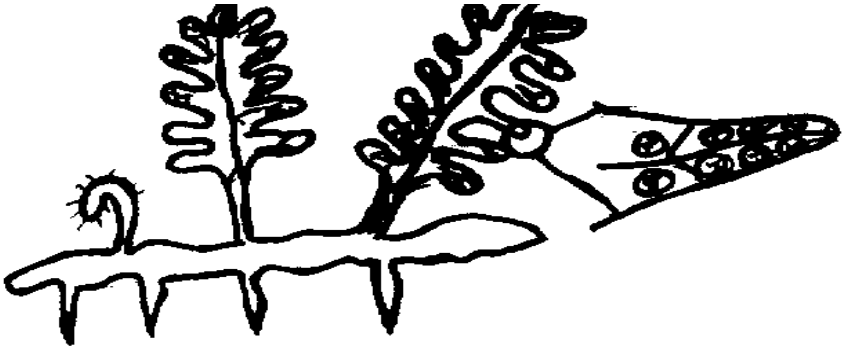
14. The diagram below represents a plant



a) Name the division to which the plant belongs**.** **(1 mark)**

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b) Give three reasons for your answer in (a) above. **(3 marks)**

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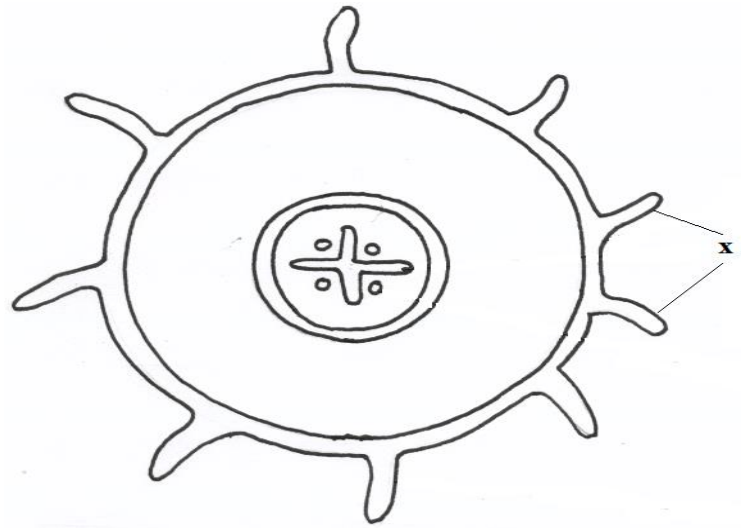
15. The diagram below represents a transverse section of a plant part. Study it and answer the Questions that follow.



a) Name the class in which the plant belongs**.** **(1 mark)**

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b) Give a reason for answer (a) above **(1 mark)**

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c) State one adaptation for the structures labeled X to their functions. **(1 mark)**

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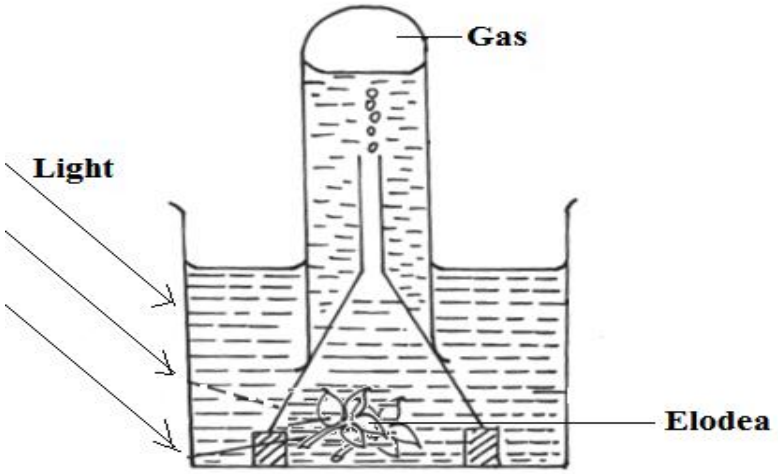
16. The diagram below represents a set up that was used to investigate a certain process in a plant.



(a) State the process that was being investigated. **(1 mark)**

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(b) Other than the factors shown, state two factors that would affect the process named in (a) above. **(2 marks)**

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17. a) Name the causal organism for amoebic dysentery. **(1 mark)**

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b) State three preventive measures of schistosomiasis in human beings **(3 marks)**

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c) Name the organism that causes cholera and state two precautionary measures to prevent cholera outbreak. **(3 marks)**

Organism-

Measures-

18. Describe capture - recapture method of estimating population. **(3 marks)**

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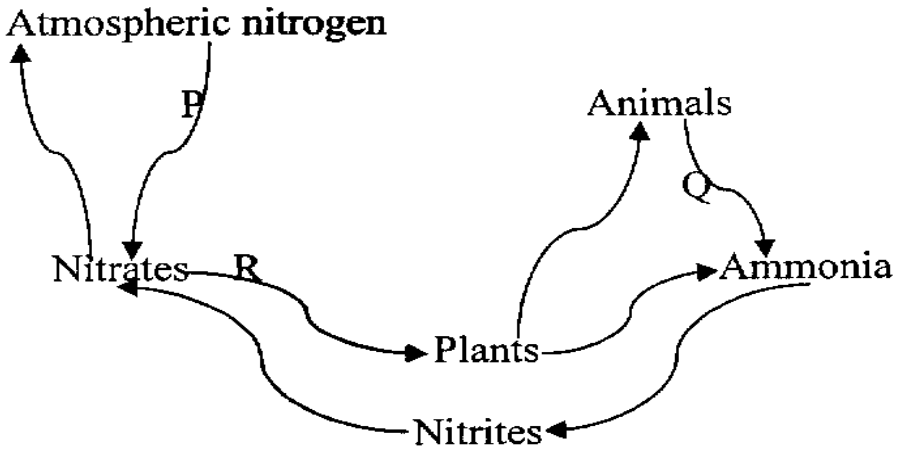
19. The diagram below shows a simplified nitrogen cycle



(a) Name the processes labeled **P,Q and R** **(3 marks)**

P

Q

R

b) List down three adaptations of the preys against being predated upon by predators. **(3 marks)**

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20. Give two reasons why primary productivity decreases with increase in depth in an aquatic ecosystem. **(2 marks)**

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21. a) Give two ways by which the skins prevent entry of microorganisms into the body.**(2 marks)**

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b) What is the importance of deamination in excretion and homeostasis**?** **(1 mark)**

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22. a) What type of circulatory system is found in members of class insecta? **(1 mark)**

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b) Name the blood vessel that transports blood from:

(i) Small intestine to liver**.** **(1 mark)**

ii) Lungs to heart **(1 mark)**

23. Distinguish between natural and acquired immunity. **(2 marks)**

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24 a) Describe the condition known as varicose **veins** **(2mks)**

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b. What is the role of blood platelets in the blood clotting process? **(2mks)**

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25. What is meant by the following terms? **(2 marks)**

a) Habitat:

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b) Ecosystem

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26. Differentiate between the following pairs of terms:

(i) Guttation and transpiration. **(2mark)**

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(ii) Morphology and anatomy. **(2mark)**

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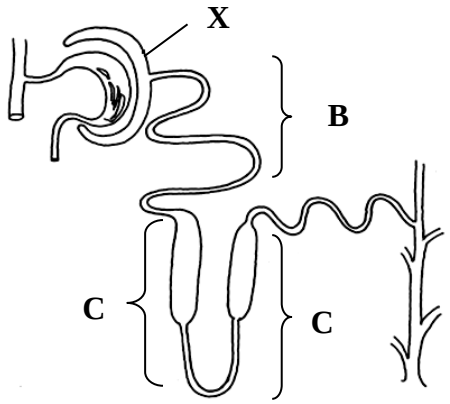
27. The diagram below represents the structure of a nephron. Study it and answer the questions that follow.



(a) State the roles of the part labelled B and C. **(2 marks)**

B:

C:

(b) Which hormone is involved in the function of the part labelled D? **(1 mark)**

(c) Name the part labelled X. **(1 mark)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

BIOLOGY

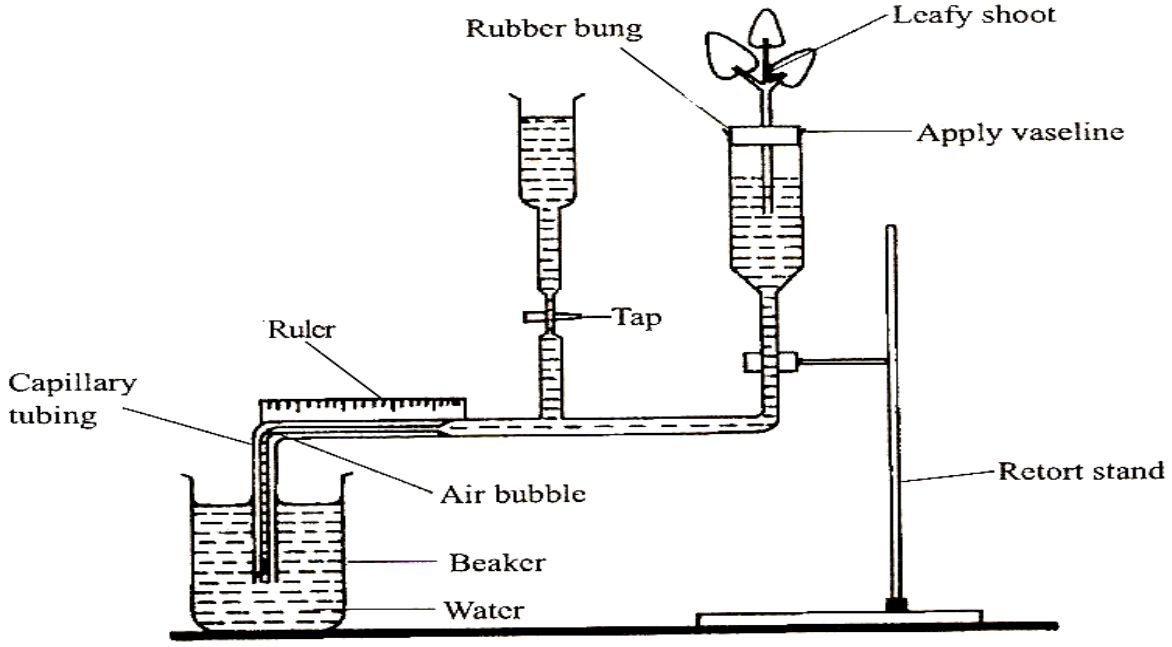
PAPER 2 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

1. Below is a set up that was used to investigate a certain process in plants



(a) State the process that was being investigated **(1 mark)**

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(b)(i) Give **two** precautions that should be taken when preparing the experiment **(2marks)**

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(ii) State a reason for each precautions stated in b (i) above **(2marks)**

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(c) List **three** structural factors that affect the process under investigation **(3 marks)**

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2. a) Distinguish between pyramid of numbers and pyramid of biomass**.** **(2marks)**

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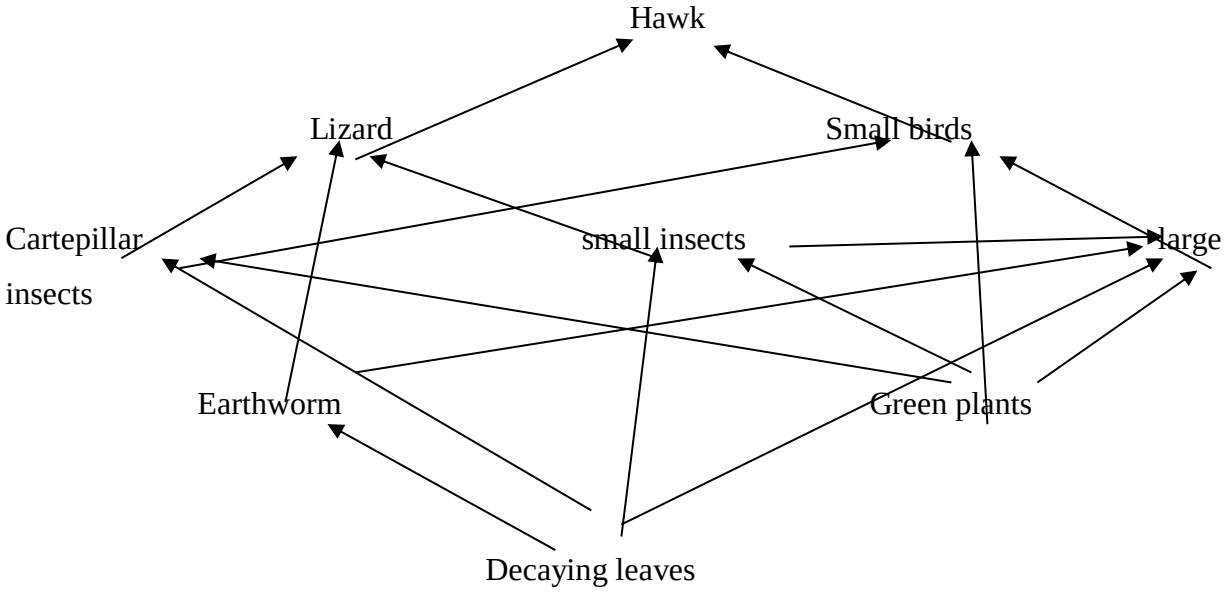
b) From an ecological study, students formed the following food web



From the food web, construct two food chains with lizard as tertiary consumer**.** **(2 marks)**

c) i) Which organism has the least biomass in the ecosystem**.** **(1 mark)**

ii) Give reasons for your answer in **c)i) above** **(3marks)**

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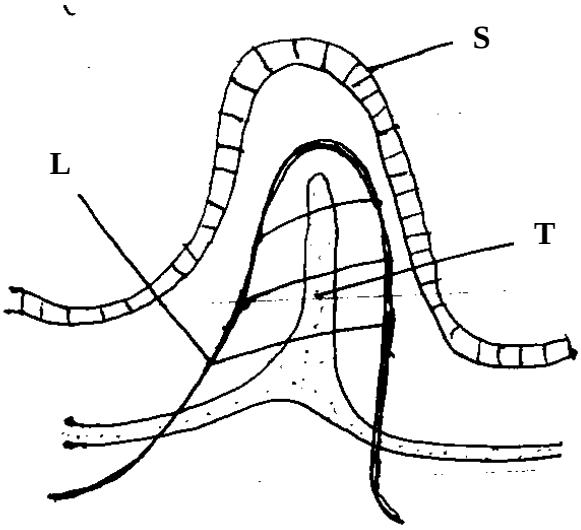
3. The diagram below represents structure found in the walls of ileum.



a) Identify the structure shown in the diagram. **(1 mark)**

b) Name parts labelled S, T and L. **(3 marks)**

S

T

L

c) Name products of digestion which are absorbed into; **(2 marks)**

L

T

d) State how the above structure is adapted to its function. **(2 marks)**

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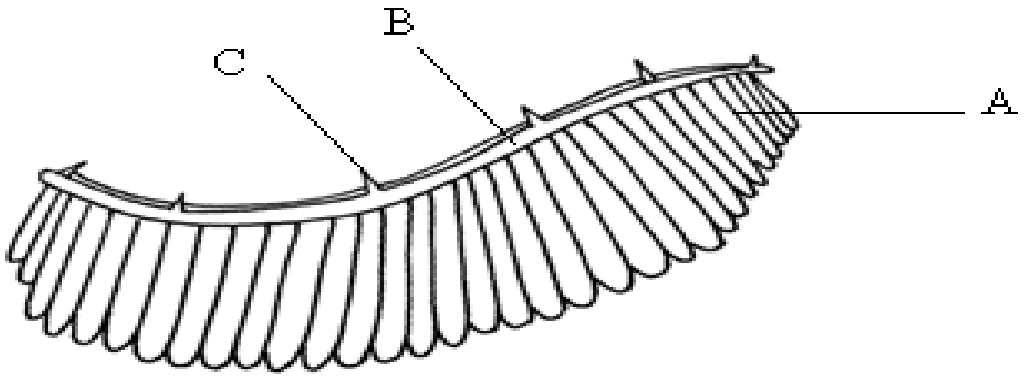
4. (a) Name the gaseous exchange structure in the following organisms.

(i) Amoeba **(1 mark)**

(ii) Grasshopper **(1mark)**

(b) The diagram below illustrates the structure of a gill from a bony fish.



(i) Name the parts labelled A, B, C **(3 marks)**

A

B

C

(ii) State the function of the part labelled C **(1 mark)**

(iii) How is part A adapted to carry its functions **(2 marks)**

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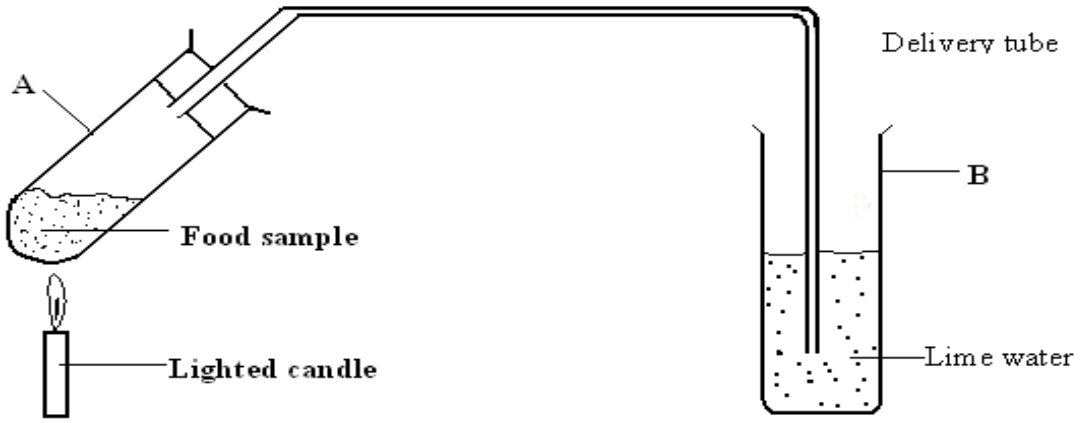
5.(a) The diagram below shows an experimental set – up by form two students.



(i) State the aim of the experiment. **(1mark)**

(ii) State the expected results at the end of the experiment. **(2 marks)**

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(iii) What conclusion can you make from this experiment? **(1 mark)**

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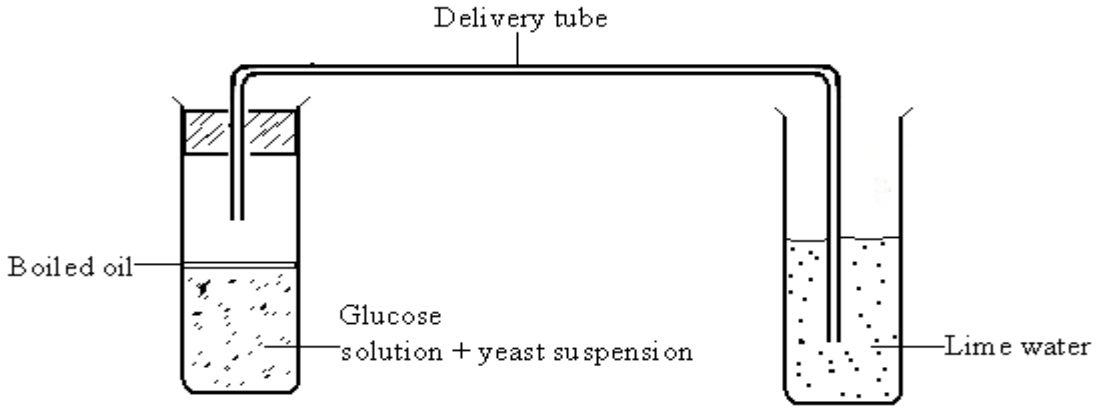
(b) Examine the diagram which shows a set used to demonstrate a certain process.



(i) State the aim of the experiment. **(1 mark)**

(ii) Why was it necessary to boil the glucose solution before adding the yeast suspension.

(1 mark)

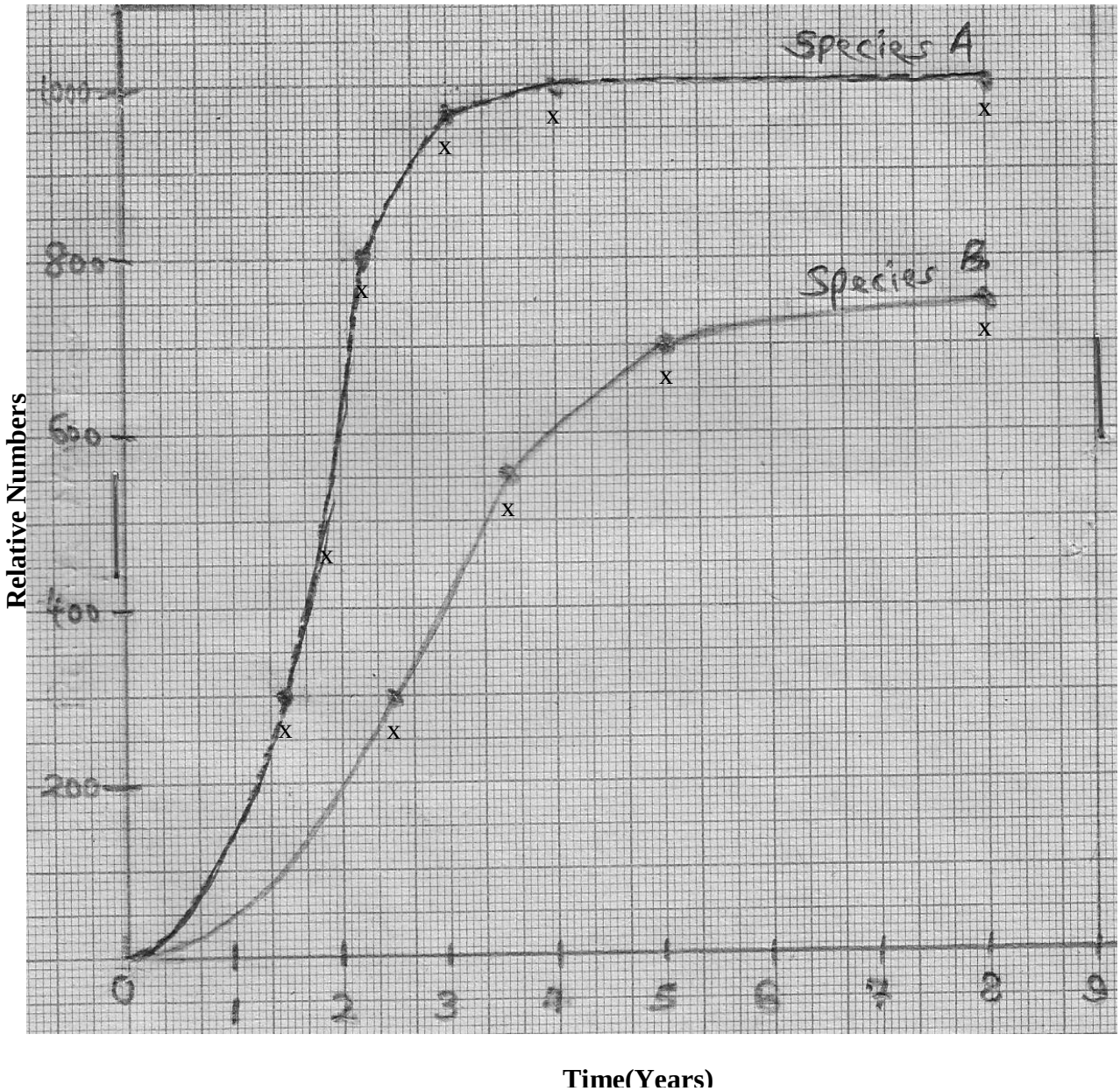
(iii) Why was it necessary to cool the glucose before adding the yeast suspension**?(1mark)**

(iv) Why was the oil layer added? **(1 mark)**

SECTION B(40MARKS)

Answer questions 6 (Compulsory) and either question 7 or 8 in the spaces provided.

6. Two herbivorous mammal species were introduced into an ecosystem at the same time and in equal numbers. The graph below represents their populations during the first seven years. Study the graph and answer the questions that follow.



(a) (i) Which species has a better competitive ability? **(1 mark)**

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

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(b) Account for the shape of the curve for species **A** between;

(i) One year and three years. **(3mark)**

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(ii) 4 years and eight years. **(3mark)**

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(c) A natural predator of species **A** was introduced into the ecosystem. With a reason, state how the Population of each species would be affected? **(4marks)**

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(d) State **four** other biotic factors of the ecosystem which affects organisms distribution in their habitat other than the one illustrated in the above graph**.** **(4mrks)**

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(e) Name the instruments used to measure the following;

(i) Light intensity **(1mrk)**

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(ii) Light penetration in **water** **(1mrk)**

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(iii) **Speed** of **wind** **(1mrk)**

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(iv) Atmospheric pressure **(1mrk)**

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7. Describe the nitrogen cycle **(20 mks)**

8. **(a)** State four characteristics of gaseous exchange surfaces **(4 mks)**

(b) Describe the mechanism of gaseous exchange in a mammal **(16mks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

BIOLOGY PRACTICAL (confidential)

1. *F – starch solution*
2. *Solution G1- unboiled diastase enzyme*
3. *G2 – Boiled diastase enzyme*
4. *Thermometer*
5. *250ml beaker labeled warm water bath*
6. *Benedict's solution*
7. *Iodine solution*
8. *Means of timing*
9. *6 test tubes*
10. *Test tube rack*
11. *Means of heating*
12. *Tripod stand*

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

BIOLOGY

PAPER 3 (PRACTICAL)

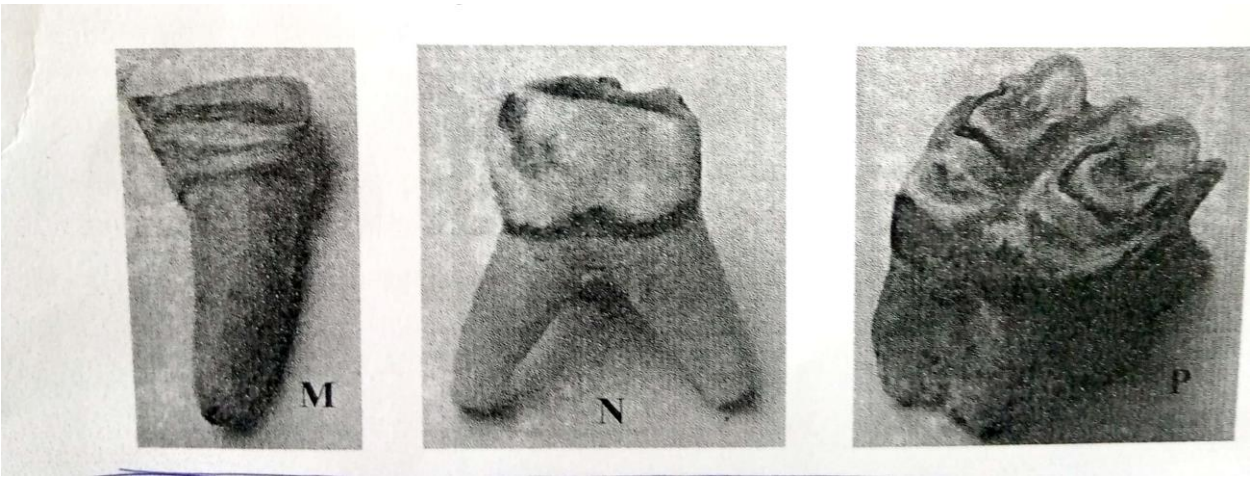
TIME: 1¾ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

*Answer **ALL** the Questions*

1. You are provided with photographs of specimens labeled M,N and P which were obtained from an animal. Study them.



i. Identify specimens: **(3mks)**

M

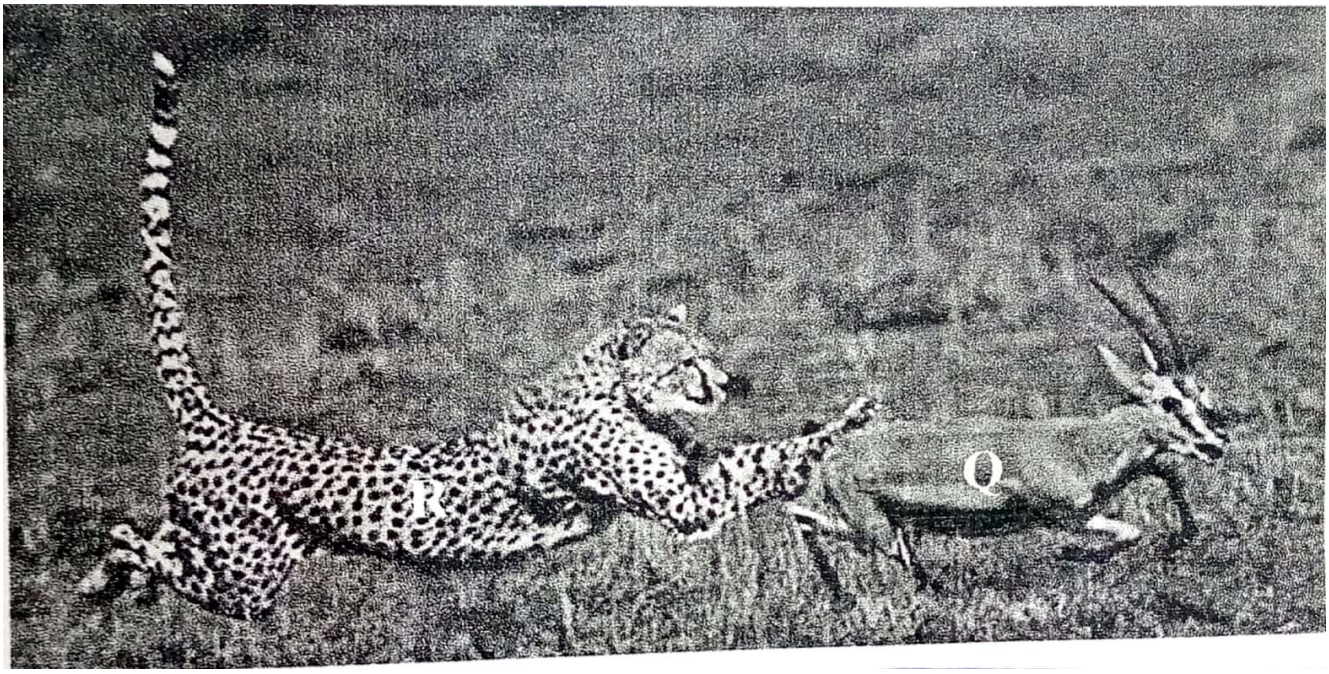
N

P

ii. For each specimen, name, observe features and state how each feature adapts the specimen to it functions. **(6mks)**

Specimen	**Feature**	**Adaptation and function**
M		
N		
P		

2. Below is a photograph depicting interaction of organisms in a certain ecosystem?



a. Write down a possible food chain involving three organisms found in the photograph above.

(1mk)

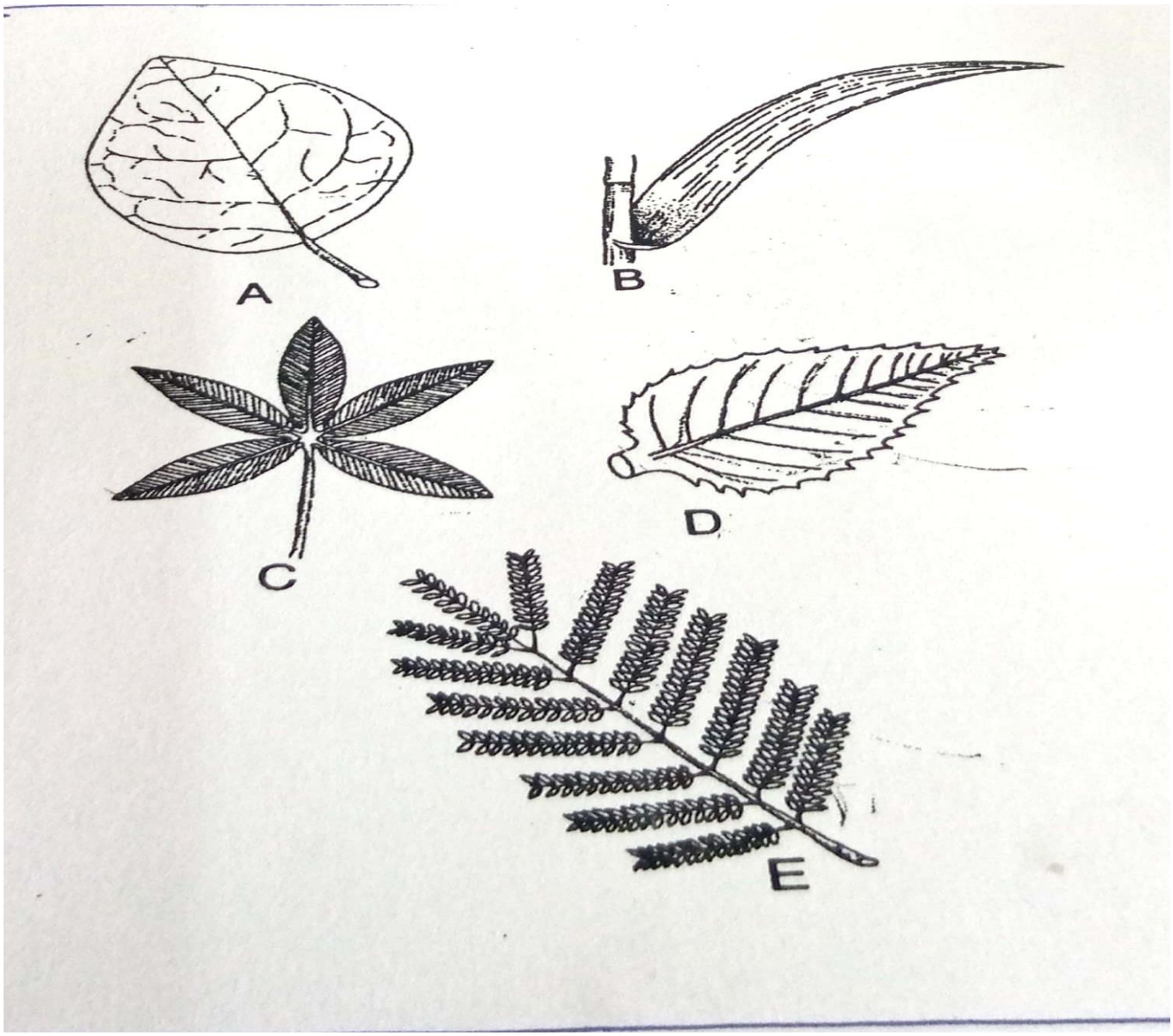
b. Draw a well labeled pyramid of biomass using the food chain in (a) above. **(3mks)**

What feeding relationships are exhibited by the animals shown in the photographs? **(2mks)**

c. Give the adaptations of animal R regarding its feeding relationship mentioned in b (ii) above.

(3mks)

d. A number of leaves are represented by leaves A, B, C, D and. Use the dichotomous key made using leaves A, B, C, D and E below.



1a. Leaf veins network……go to 2

b. Leaf veins parallel…… B (maize)

2a. Leaf simple…… go to 3

b. Leaf compound ……go to 4

3a. Leaf margin smooth……. A (Bougainvillae)

b. Leaf margin serrated…….. D (Hibiscus)

4a. Leaf with five leaflets……. C (Bombax)

b. Leaf with many leaflets…….E (Acacia)

e. Using the above dichotomous key show the steps and identify at the leaves shown above.

(10mks)

Leaf	Steps	Identity
A	1a, 2a, 3a	Bougainvillae
B	1b	Maize
C	1a, 2b, 4a	Bombax
D	1a,2a,3b	Hibiscus
E	1a,2b,4b	Acacia

3. You are provided with three unknown solutions labeled F, G1 and G2. G1 is the same as G2 except that G2 has been boiled. You are also provided with iodine solution, Benedict's solution, means of heating 250ml beaker labeled for a warm water bath, thermometer, tripod stand, means of timing, test-tubes, test tube holder and test tube rack.

a. Place 2ml of solution F in a test tube and add an equal volume of Benedict's solution.

i. Shake to mix and then heat to boil and write down your observation. **(1mk)**

ii. What conclusion do you make from your observation in a (i) above? **(1mk)**

b. Place 2ml of solution F in a test tube. Add 3 drops of iodine solution and shake to mix and write down your observation. **(1mk)**

iii. What conclusion do you make from your observation in b(i) above? **(1mk)**

c. Place 4ml of solution F in a test tube and add 10 drops of solution G1 and mix. Allow the mixtures to stand in a warm water bath between $35^{O}C$ – $38^{O}C$ for 10 minutes. Divide the resulting mixture into two portions.

i. To one portion in a test tube add 3 drops of iodine solution and shake to mix and write your observation. **(1mk)**

ii. What conclusion can you make from your observation in c (i) above? **(1mk)**

iii. To the second portion in a test tube add 2ml of Benedict's solution, shake to mix and heat to boil and write your observation. **(1mk)**

iv. What conclusion can you make from your observation in c (iii) above? **(1mk)**

d. To about 4ml of solution F in a test tube add 10 drops of G2 and mix, allow the mixture to stand in a warm water bath between $35^{O}C$ – $38^{O}C$ for 10minutes. Divide the resulting mixture into two, carry out iodine test and Benedict's test as described in (c) above and complete the table below. (4mks)

Test	**Observations**	**Conclusion**
Iodine test		
Benedict's test		

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

CHEMISTRY

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

INSTRUCTIONS TO STUDENTS

1. *Answer all questions in this question paper.*
2. *All your answers must be written in the spaces provided in this question paper.*

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1 -	80	

1) (a) State and explain simple method you can use to separate a mixture of sulphur powder and iron fillings **(2mark**

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(b) A mixture of iron and sulphur was heated strongly until it glowed red throughout and then left to cool. Explain why you cannot obtain sulphur and iron from the product using the method you stated in (a) above **(2marks)**

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2) Explain why the following substances are good conductors of electricity:

(a) Molten lead II **bromide** **(1mark)**

(b) Aluminium **(1mark)**

3) Define the term electrolyte **(1mark)**

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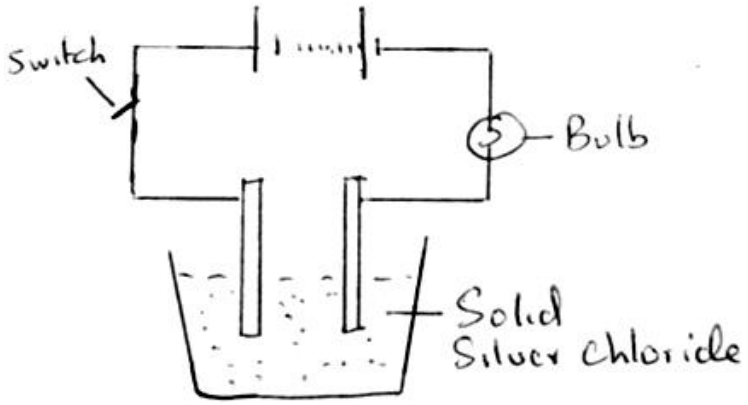
4) The following set up was used to investigate the effect of an electric current on silver chloride



(a) Label the cathode and anode on the diagram **(1mk)**

(b) When the switch was closed the bulb did not light. Explain. **(1mk)**

(c) If the bulb lights, write the equation of the reaction occurring at the cathode. **(1mk)**

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

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5) State three application of electrolysis. **(3marks)**

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6) Calculate the pressure required to compress 4.24 dm^3 of a gas at 5.4299 X 10^4 Pascal's to 1.56 dm^3 at constant temperature. **(2marks)**

7) Draw the structure of;

i) Hydroxonium ion H_3O^+ **(2mk)**

ii) Ammonium ion (Al = 13, 0 = 8) **(2mk)**

8) The table below shows some properties of substances A-E. Study it and answer the questions that follow.

substance		Solubility in water	Solubility in chloroform	m.p.(^oC)	b.p .(^oC)
A		soluble	soluble	-22	141
B		insoluble	soluble	115	444
C		soluble	insoluble	801	1465
D		insoluble	soluble	-188	-42
E		insoluble	insoluble	1083	2600

(a) Which of the substances is a gas at room temperature of 25 ^{o}C? . **(1mark)**

(b) What is the physical state of substance A at room temperature of 25 ^{o} C? **.** **(1mark)**

(c) How can you separate the mixture of substances B , C and E ? **(3marks)**

9) What volume of acidified potassium manganate VII of concentration 0.02 moles per dm^3 is decolorized by 200 dm^3 of hydrogen peroxide of concentration 0.02 moles per dm^3 ? **(3marks)**

Use the following ionic equation

$$2MnO^{4-}{}_{(aq)} + 6H^{+}{}_{(aq)} + 5H_2O_{2(aq)} \longrightarrow 2Mn^{2+}{}_{(aq)} + 8H_2O_{(l)} + 5O_{2(g)}$$

10) A mass of 3.6 g magnesium reacts in excess chlorine to form a chloride. If the mass of the chloride formed is 14.25 g, find the formula of the chloride formed. (Mg = 24, Cl =35.5).

2marks)

11) Starting with copper metal describe how a dry sample of copper II carbonate can be prepared in the laboratory**.** **(3 marks).**

12) The table below shows the first ionization energies of metals A to D (not their actual chemical symbols) in the same group of the periodic table.

Metal	**A**	**B**	**C**	**D**
First ionization energy ($kJmol^{-1}$)	**402**	**496**	**520**	**419**

(a) Arrange the metals in order of that they occur in the periodic table starting from the topmost to the lowest. Give a reason to support your answer**.** **(3marks)**

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(b) Which of the metals has the largest atomic radius? **(1mark)**

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13) When a piece of calcium is dropped into a beaker of water, it sinks to the bottom and bubbles of a gas are observed on the surface of the metal.

(a) Why does calcium sink to bottom of the beaker**?** **(1mark)**

(b) Name the gas that is formed in the reaction. **(1mark)**

(c) Besides effervescence, what else is observed in the beaker as the reaction progresses? Explain this observation**.** **(2marks)**

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(b) Write an equation for the reaction between calcium and water**.** **1mk**

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14) Explain the following statements:

(a) Following a bee's sting, application of sodium hydrogen carbonates to the affected area of the skin reliefs the irritation. **(2marks)**

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(b) It is not advisable to clean aluminium utensils using wood ash . **(2marks)**

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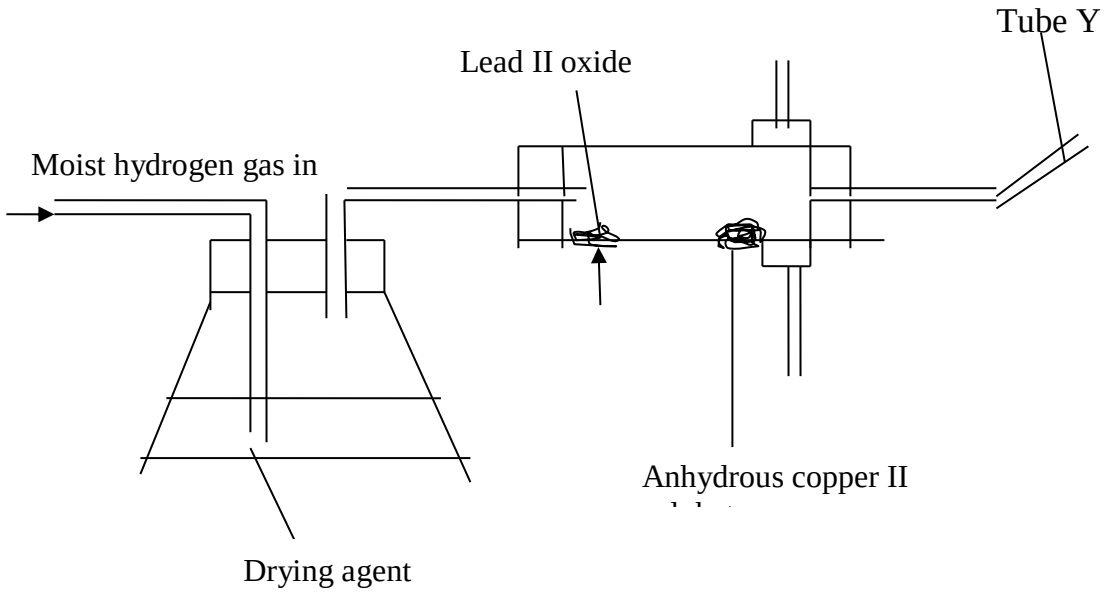
15) The set-up below was used to investigate some properties of hydrogen gas. Study it and answer the questions that follow:



(a) Name a suitable liquid that can serve as a drying agent. **(1mark)**

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(b) State the observations you would expect in the combustion tube as the experiment progresses. **(2mks)**

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16) Explain the following terms:

a) Water of crystallization **(1mark)**

b) Hygroscopy **(1mark)**

c) Acidic salts **(1mark)**

d) Normal salts **(1mark)**

17) Explain the role of helium in the welding of metals. **(2marks)**

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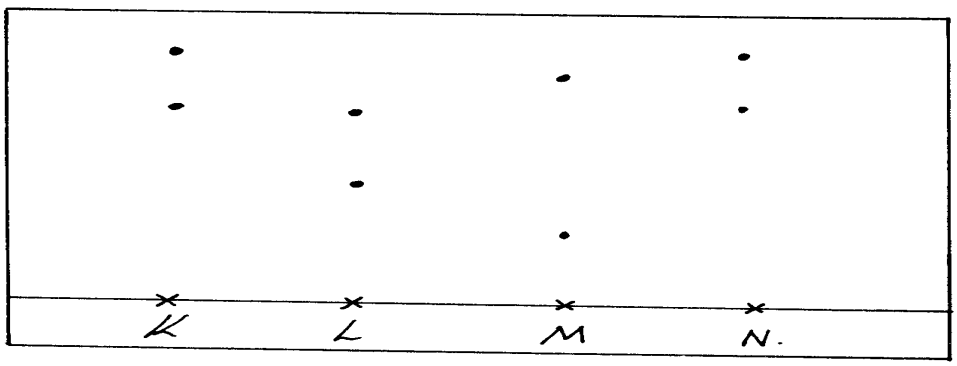
18) Whereas hydrogen was commonly used in airships and weather balloons earlier on it is no longer used nowadays. Give a reason for this**.** **(1mark)**

19) Chebet, Mutua and Waweru are international athletes. Paper chromatography was used to test for the presence of illegal drugs in their blood which enhance the performance. The diagram below shows the chromatogram with the illegal drug labeled N.



a) Who among them tested positive for the illegal drug? Explain. **(2marks)**

(b) Explain what is meant by 'solvent front'. **(1mark)**

20) An aqueous solution of ammonia was added drop wise to a solution of copper (II) Sulphate until in excess .State the observation made when

i) A few drops of aqueous ammonia were added. **(1 mark)**

ii) Excess aqueous ammonia was added. **(1 mark)**

21) The table below gives information about the ions W^+ and y2-

Ion	W+	Y2-
Electrons arrangements	2.8	2.8.8
Number of neutrons	12	16

a) How many protons are there in the nucleus of

i) Elements W? **(1 mark)**

ii) Elements Y**?** **(1 mark)**

b) Write the formula of the compound formed when W and Y reacts. **(1 mark)**

c) State two conditions under which the compound would conduct electricity. **(2marks)**

22) The following data gives the PH vales of some solution A, B and C..

Solution	PH
A	13.0
B	6.9
C	2.0

a) Which solution would produce carbon (IV) oxide gas when reacted with copper (II) carbonate? Explain. **(2 mark)**

b) What colour change would occur in solution A on addition of three drops of phenolphthalein indicator. **(1 mark)**

c) What volume of 0.2 M hydrochloric acid would react completely with 0.005 moles of pure calcium carbonate? **(3 marks)**

23) What is an allotrope**?** **(1mark)**

(a) Give two allotropes of sulphur. **(2marks)**

(b) State three uses of sulphur. **(3marks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

CHEMISTRY

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO; .....

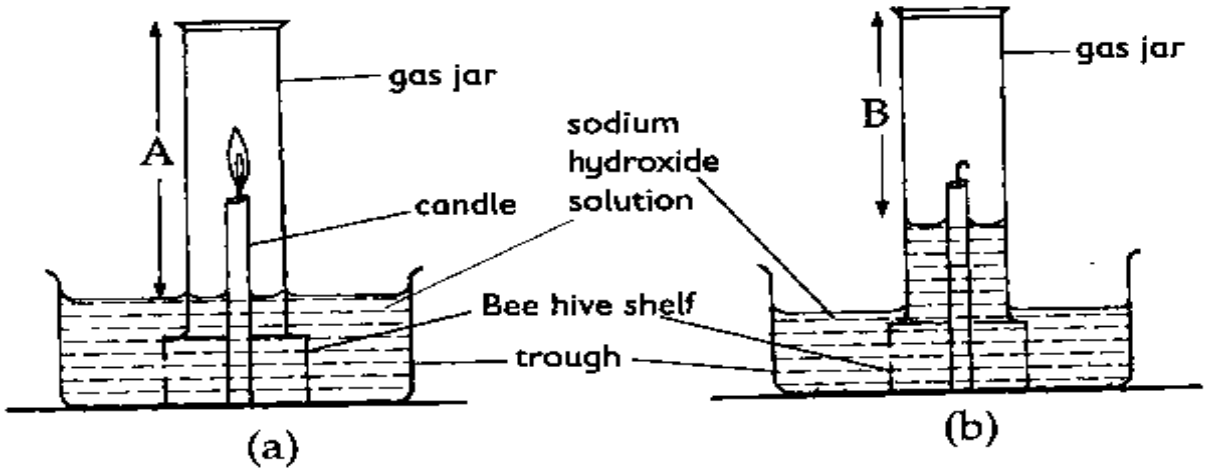
CLASS..... DATE.....

INSTRUCTIONS TO STUDENTS

1. Answer all questions in this question paper.
2. All your answers must be written in the spaces provided in this question paper.

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1 - 7	80	

1. The set up below was used to determine the percentage of oxygen in air. Use it to answer the questions that follow.



a) **i)** State the observations made after the experiment. **(1 mk)**

ii) What was the length of the air column in the gas jar before and after burning? **(1 mk)**

iii) Determine the percentage of air used up by the burning candle. (A=10cm, B=79cm) **(2 mks)**

b) State two sources of errors in the experiment. **(2 mks)**

……

……

c) Why is it necessary to leave the apparatus to cool before taking the final reading? **(1 mk)**

d) i) Write a balanced chemical equation for the reaction sodium peroxide and water. **(1 mk)**

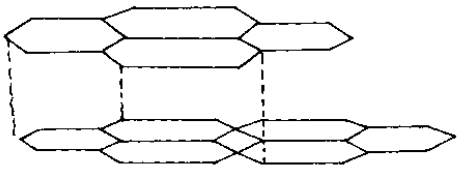
ii) If 39g of sodium peroxide was used, calculate the volume of oxygen gas prepared at r.t.p. **(3 mks)**

iii) Using dot and cross diagrams, draw the structure of ozone (O_3). The atomic number of oxygen is 8. **(2mks)**

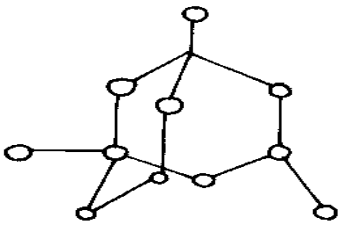
iv) State two properties of oxygen gas that makes it suitable to collected by over water method. **(2mks)**

2. a) The diagram below shows two allotropes of carbon

A



B



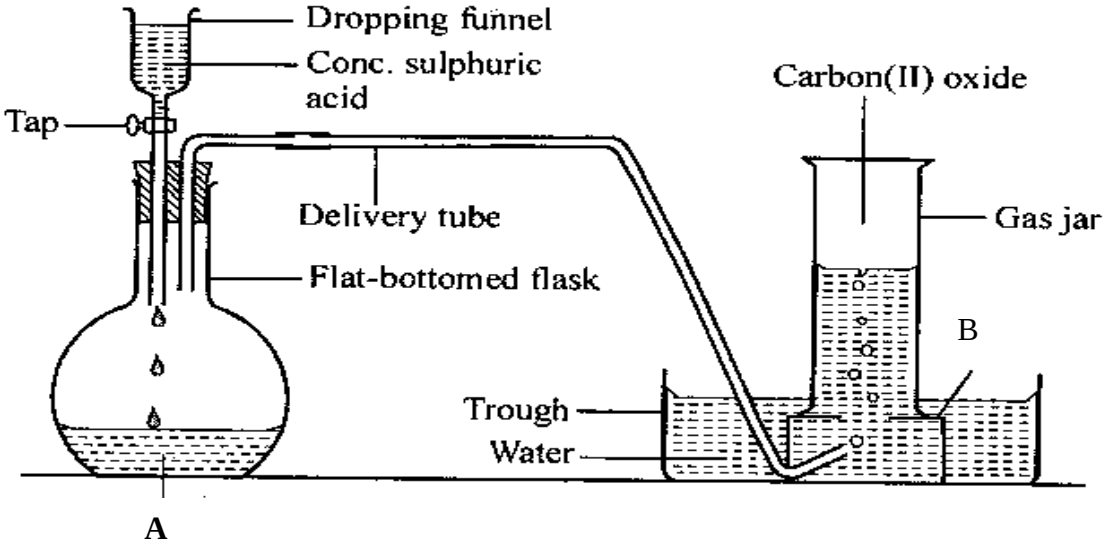
(i) Identify allotrope **(2mks)**

A…… **B**……

ii) Give a reason why allotrope **A** is used as a lubricant **(1mk)**

(iii) State **one** use of allotrope **B** **(1mk)**

b) The diagram below is a set-up used in the laboratory preparation of Carbon (II) oxide. Use it to answer the questions that follow.



i) Name

A: Substance A **(1 mk)**

B: Apparatus B **(1 mk)**

ii) Write a balanced chemical equation for the reaction taking place in the flask. **(2 mks)**

iii) State one use of carbon (II) oxide gas **(1 mk)**

c) Give the chemical name of trona ($Na_2CO_3.NaHCO_3.2H_2O$) **(1 mk)**

3. The grid below shows part of the periodic table. Use it to answer the questions that follow. The letters are not the actual symbols.

A								
B				C			D	E
L	F		G	H			J	
						K		

a) i) Write the equation for the reaction that occurs between elements **L** and **D.** **(1 mk)**

ii) Explain why element **H** has a higher boiling points than element **D**. **(2 mks)**

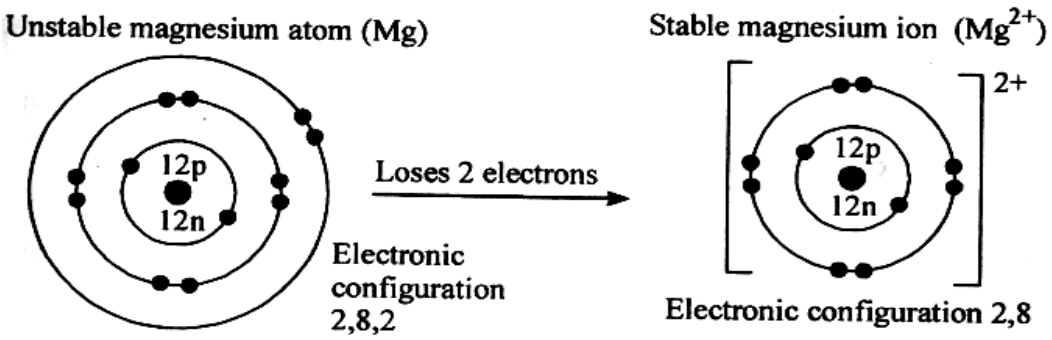
iii) State **one** use of element **E** **(1 mk)**

iv) Compare and explain the atomic radius of **B** and **C.** **(2mks)**

b) i) Write a balanced equation for reaction between element L and oxygen. **(2 mks)**

ii) 11.5g of **L was** completely burnt in oxygen. Calculate the volume of gas that was used. **(3 mks)**
(L = 23, O = 16.0, molar gas volume at room temperature is $24dm^3$)

c) The ionization of magnesium can be represented diagrammatically as shown in the figure below.



Define the following terms: **(4 mks)**

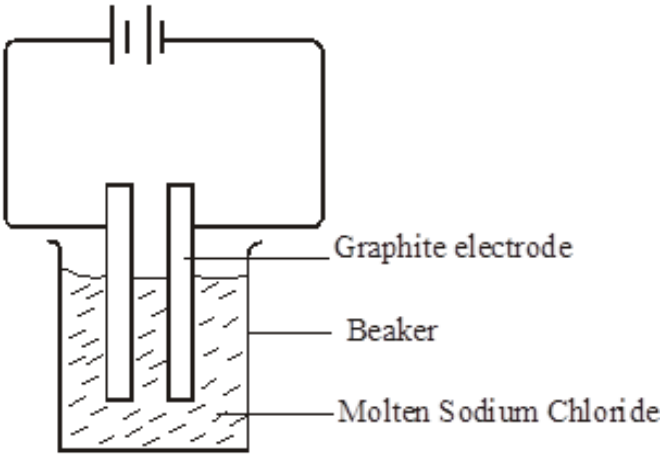
i) Ionization energy

ii) Electron affinity

iii) Electronegativity

iv) Electro-positivity

4. a) The diagram below represents an experiment which was carried out by a student, to investigate the effect of passing an electric current on molten sodium chloride.



i) Molten sodium chloride is a binary electrolyte. State the meaning of the term binary electrolyte.

1 mark

ii) State observations made at the

A: anode **1 mark**

B: Cathode **1 mk**

iii) Write an equation to show what happens at the cathode and anode. **2 mks**

At the cathode

At the anode

iv) Show the direction of flow of electrons on the set up **1 mk**

b) Define the following terms; **(4 mks)**

i) Electrolyte

ii) Anode

ii) Cathode

iii) Electrode

c) State the use of the battery (cell) in the electrolytic cell. **1 mk**

d) State two industrial applications of electrolysis. **2 mks**

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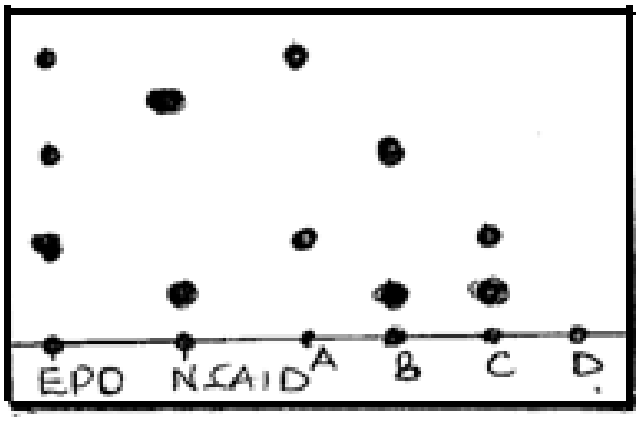
5. i) Four athletes A, B, C and D were suspected of using NSAID and EPO drugs as blood boosters to enhance their performance. Their blood samples were taken and analyzed using chromatography. The results obtained were recorded in the chromatogram below.



(a) State and explain two factors that determine the distance travelled by a sample along the filter paper. **(2 mks)**

(b) On the diagram above indicate the baseline and the solvent front. **(1 mks)**

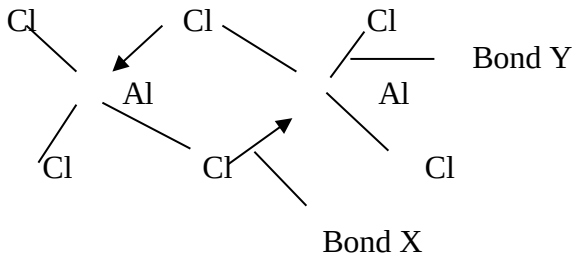
(c) Which athlete(s) tested positive of the use of EPO drug only? **(1 mks)**

(d) Which athlete(s) tested positive of use of both EPO and NSAID drugs. **(1 mks)**

(e) Which athlete had his blood sample negative of EPO and NSAID drugs? **(1 mk)**

(f) Name a suitable solvent used in papers chromatography. **(1 mk)**

ii) Below is a structure of aluminium chloride dimer. Study it and answer the questions that follow

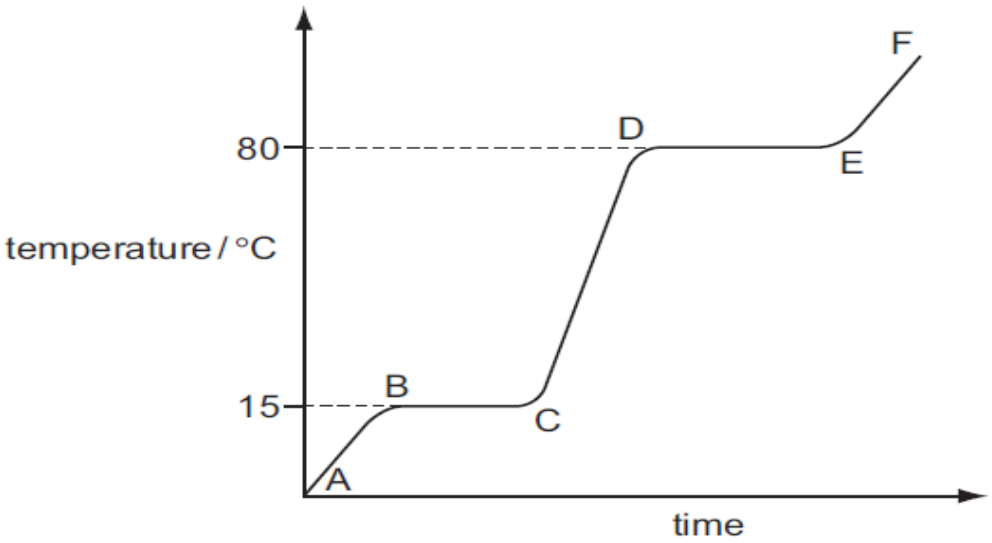


Identify bond

X …….. **(1mk)**

Y …… **(1mk**

6. a) The diagram below shows a heating curve for a sample of compound X.



(i) Is X a solid, a liquid or a gas at room temperature, 20 °C? **(1mk)**

(ii) Name the change of state which occurs in region DE. **(1mk)**

(iv) Explain how the curve shows that a pure sample of compound X was used. **(1 mk)**

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b) Compound X is a hydrocarbon. It contains 85.7% of carbon. The mass of one mole of X is 84 g.

(i) What is the percentage of hydrogen in the compound? **(1mk)**

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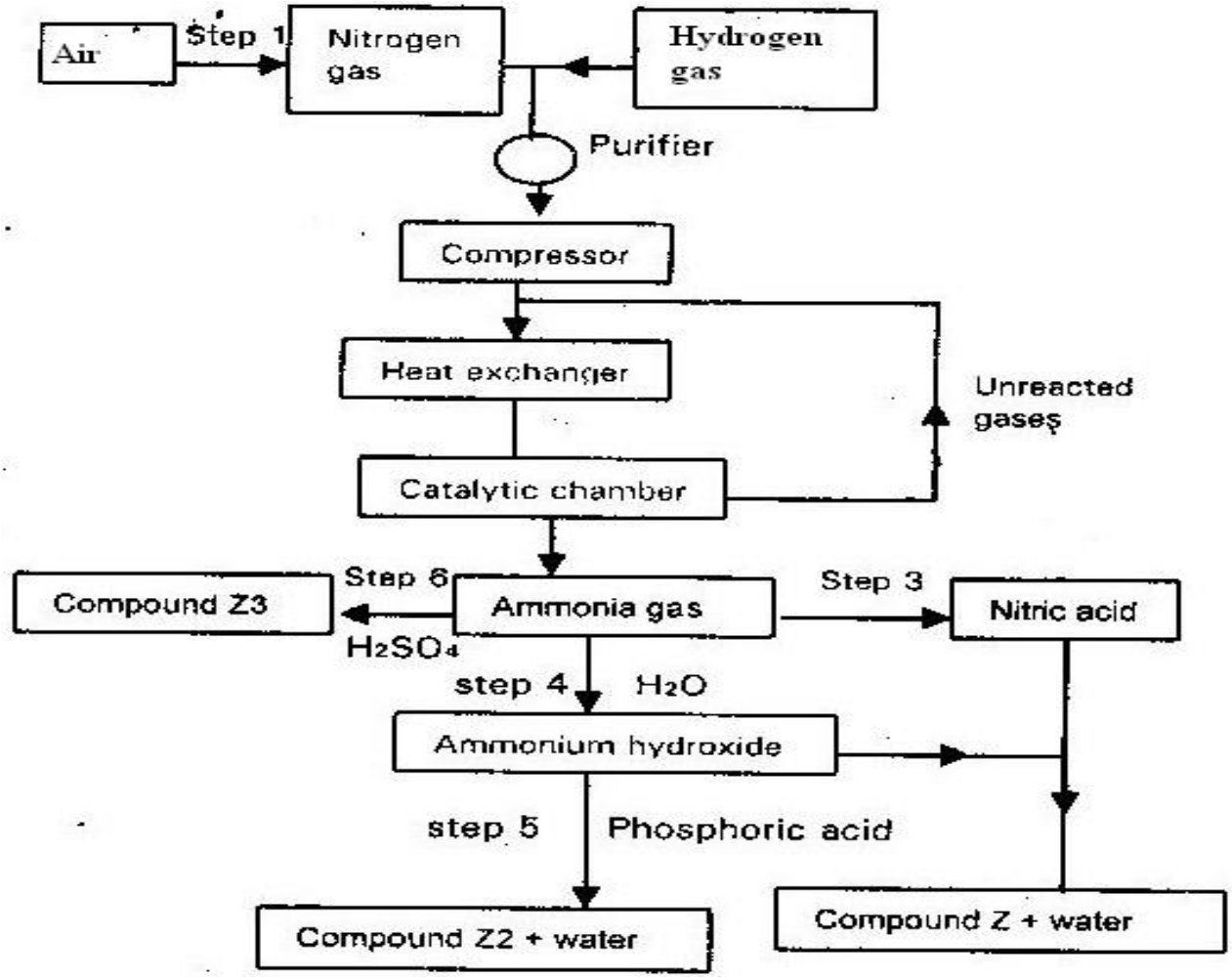
(ii) Calculate the empirical formula of X. Show your working. **(3 mks)**

Element	***C***	***H***
RAM	***12***	***1***
% Mass	***85.7***	***14.3***
No. of moles	***85.7 / 12 =7.142***	***14.3 / 1 = 14.3***
Divide by smallest	***7.142 / 7.142 = 1***	***14.3 / 7.142 2***
Empirical formula	***CH_2***	

(iii) What is the molecular formula of compound X? **(2 mks)**

7. The flow chart below shows the industrialization of ammonia and the process used in the manufacture of some ammonium compounds. Study it and answer the questions that follow



(a) Give the name of the

(i) Process in step 1 **(1 mk)**

(ii) Reaction that takes place in step 5 **(1 mk)**

(b) Write a balanced chemical equation for the reaction between nitrogen and hydrogen. **(1 mk)**

(c) Explain why it is necessary to compress nitrogen and hydrogen in this process . **(2 mks)**

(d) Write an equation for the reaction which takes place in step 6 **(1 mk)**

(e) Name the catalyst and reagents used in step 3 **(2 mks)**

(f) Name compound Z_1 **(1mk)**

(g) Give one commercial used of compound Z_2 **(1 mk)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

CHEMISTRY

PAPER 3 (PRACTICAL)

CONFIDENTIAL

QUESTION 1

Ensure each student have the following:

1. *150cm^3 of solution A labelled A.*
2. *100 cm^3 of solution B labelled B.*
3. *3 conical flasks.*
4. *50ml burette.*
5. *25ml pipette.*
6. *One complete retort stand.*
7. *250ml volumetric flask.*
8. *A white tile.*
9. *1 label*
10. *500ml distilled water in a wash bottle.*
11. *250ml empty beaker.*
12. *Methyl orange indicator in a bottle dropper. (freshly prepared)*
13. *One filter funnel*
14. *50cm^3 of solution C labelled C*
15. *Phenolphthalein indicator in a bottle dropper*

N/B

1. Solution A is made by dissolving 4.3cm^3 of concentrated hydrochloric acid (1.18g/cm^3) in 600cm^3 distilled water and diluting to 1 litre.
2. Solution B is made by dissolving 0.96g of Sodium Hydroxide pellets in about 800cm^3 of distilled water and diluting to 1 litre.
3. Solution C is made by dissolving 15.74g of hydrated Sodium Carbonate – $Na_2CO_3.10H_20$ – in 800cm^3 of distilled water and diluting to 1 litre solution.

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

INSTRUCTIONS TO CANDIDATE.

Attempt all the questions

The paper has a maximum score of **30 marks**.

1. You are provided with:-

- Solution A, Hydrochloric acid.
- Solution B, 0.024 M Sodium hydroxide.
- Solution C, containing 15.74g of Na_2CO_3. x H_20 in 250ml of the solution.

You are required to:-

(a) Prepare a dilute solution of the hydrated sodium carbonate, C.

(b) Determine:-

(i) The concentration of solution A.

(ii) The value of x in the carbonate.

Procedure a

– Using a pipette place 25.0 cm^3 of solution C into a 250ml volumetric flask.

– Add about 200cm^3 of distilled water. Shake well.

– Add more distilled water to make upto the mark.

– Label this solution D.

– Retain solution D for use in procedure b and c.

Procedure b

- Fill a burette with solution A.
- Using a clean pipette and pipette filler, place 25.0 cm^3 of solution B into a 250ml conical flask.
- Add two drops of phenolphthalein indicator and titrate with solution A.
- Record your results in table 1.
- Repeat the titration two more times and complete the table.

Table 1

	I	II	III
Final burette reading (cm3)			
Initial burette reading(cm3)			
Volume of solution A (cm^3) added			

(4 marks)

(a) Determine the:-

(I) Average volume of solution A used. (show your working) (**2marks)**

(II) Number of moles of sodium hydroxide in 25cm^3 of solution B used. **(1 mark)**

(III) Number of moles of acid in volume of solution A used. **(2marks)**

(IV) Concentration of solution A in moles per litre. **(2marks)**

Procedure C

- Fill the burette with solution A. Using a pipette, pipette 25.0cm^3 of solution D into a conical flask. Add 2 drops of methyl orange indicator and titrate with solution A.
- Record your results in the table.
- Repeat the titration two more times and complete the table.

Table 2

	I	II	III
Final burette reading			
Initial burette reading			
Volume of solution A (cm^3) added			

(4 marks)

(b) (i) Determine the:-

(I) Average volume of solution A used. **(2marks)**

(II) Moles of the acid in the average volume of solution A used. **(2marks)**

(III) Concentration in grams per litre of the carbonate in solution C. **(2marks)**

(ii Write an equation for the reaction that occurred between the acid and the carbonate **(1mark)**

(iii) Determine:-

(I) number of moles of the carbonate in $25cm^3$ of solution D used. **(2 marks)**

(II) Number of moles of carbonate in $250cm^3$ of solution D. **(2 marks)**

(III) Concentration of solution C in moles per litre. **(2marks)**

(IV) Value of x in $Na_2CO_3.xH_2O$. (H= 1.0, C = 12.0, O = 16.0 Na = 23.0) **(2 marks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

PHYSICS

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

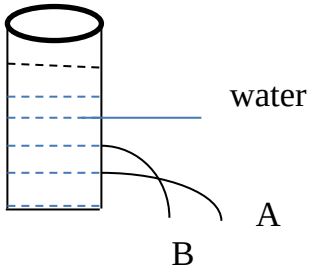
Answer All Questions In The Space Provided.

SECTION A (25 MARKS)

1. State any two forces that acts between two objects not in contact. **(2mks)**

2. State two physical characteristics that change when a metal cube is heated. **(2mks)**

3. The diagram below shows jets from two holes at the side of a tank filled with water. Explain why Jet A is longer than B **(2mks)**



4. State the law of conservation of linear momentum **(1mk)**

5. State physical quantities whose SI units are shown below. **(2mks)**

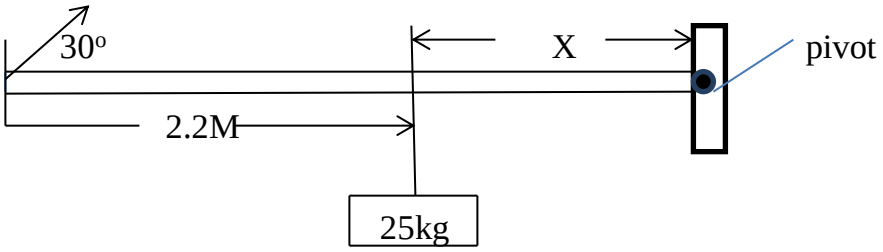
NM

Kgm/s

M^3/s

J/kg K

6. The system below was used to balance a mass of 25kg fixed at a distance of Xm from the pivot. Find the value of X to 2.d.p. **(3mks)**



7. State two circumstances under which an object floats on a liquid. **(2mks)**

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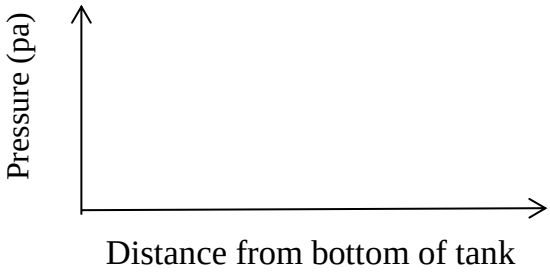
8. In the graph below sketch the graph of pressure experienced by a ball moving from the bottom of a tank of water towards the surface. **(3mks)**



9. Two springs A and B. have the same length and same diameter. When the same object was suspended from the bottom of each spring separately, there was a difference in their extensions. State **two** factors that may have caused the difference extensions **(2mks)**

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10. A road surface offers friction of 32,000N, to a vehicle of mass 2500kg running on it. Find the coefficient of kinetic friction of the road. Explain if the value obtained will change when it rain. **(3mks)**

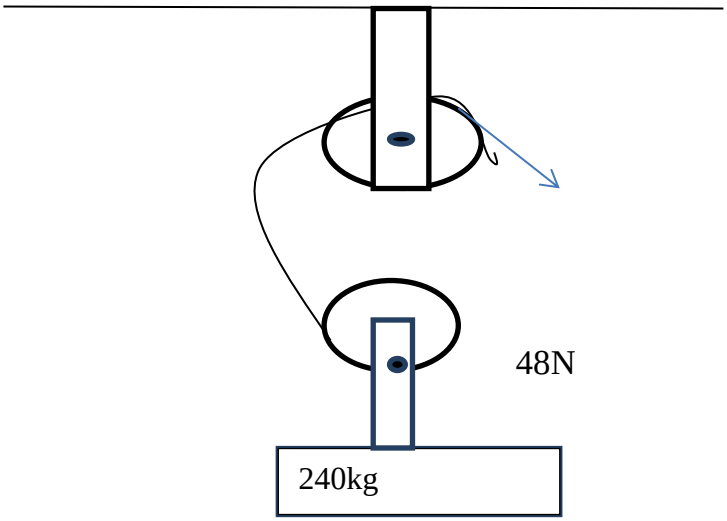
11. In a laboratory experiment, it was realized that two different gases of equal volume diffused across a chamber at different rates. What may have caused the difference? **(2mks)**

12. State one physical change that affects the speed of sound in air. **1mks**

SECTION B. (55MKS)

13.(a) Outline the order of energy transformations when lighting a match box **(3mks)**

(b) The system below was used to lift a load of mass 240kg in a warehouse using a force of 48N.



Find

(i) V..R **(2mks)**

(ii) Efficiency **(3mks)**

14.(a) Explain how unusual expansion of water favours aquatic life. **(4mks)**

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(b) The number of particles per mm^3 of substances A, B and C are given in the table below.

substance	No of particles per mm^3
A	3.0×10^7
B	4.5×10^{28}
C	6.8×10^{12}

(i) Identify the states of matter of the substances **(3mks)**

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(ii) Explain how the number of particles of B will change when heated. **(3mks)**

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(c) State the factors that determine pressure exerted by a wooden block resting on a table surface. **(3mks)**

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15. (a)A bullet of mass 20g travelling at a velocity of 600m/s hits a suspended wooden block of mass 400g. The bullet gets stuck inside the wooden block and the two bodies move together in one direction. If the string holding the wooden block is not cut; Find

1. The common velocity of the bullet and wooden block. **(3mks)**

2. Maximum height the two bodies reach **(3mks)**

3. The time taken by the two bodies to reach maximum height **(3mks)**

16.(a) (i) State three characteristics of turbulent flow. **(3mks)**

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(iii) Give three examples of Bernoulli's effect in air. **(3mks)**

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(b)(i) A liquid flows in a pipe of cross sectional area $60cm^2$ has a constriction of cross sectional area of $18cm^2$ of one point. The velocity of the liquid at the construction is $5m/s^{-1}$. Find

(i) The velocity of liquid in the wider section **(3mks)**

(ii) The volume of liquid in litres that passes through the construction in one hour. **(2mks)**

17. A stone is projected vertically upwards from the top of a building at a velocity of 20m/s. If the stone took 5.5 seconds to reach the bottom of the building. Find;

(i) After how long did the stone start the down ward journey **(3mks)**

(ii) Height of the building. **(3mks)**

(iii) Velocity with which the stone hits at the bottom of the building **(3mks)**

18. a) An oil drop of volume $0.4mm^3$ was placed on a clean water surface. It spread to form a monoatomic circular patch of area $2000mm^2$. Use this data to calculate the diameter of a molecule of oil**.** **(3mks)**

b) Name **two** applications of Pascal's Principle. **(2mks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

PHYSICS

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

INSTRUCTIONS:

- *Answer all the questions in the spaces provided.*
- *Mathematical tables and electronic calculators may be used where necessary.*

SECTION A : (25 MARKS)

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

1. Figure 1 below shows an object in front 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.

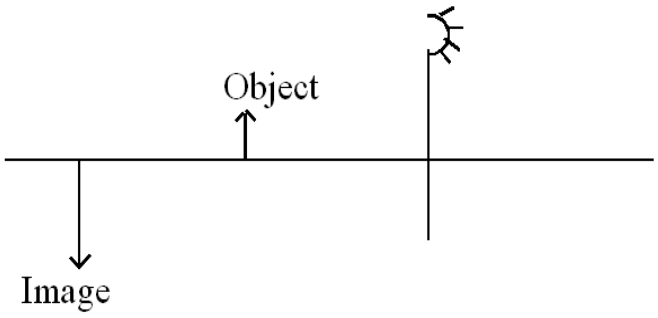

Figure 2

Locate position of its principal focus. **(2mks)**

3. State the use of Manganese (IV) oxide in dry cell. **(1mk)**

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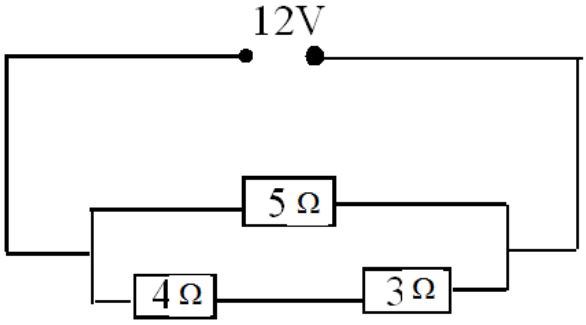
4. Use figure 3 below to answer following questions.



Determine

(a) Total resistance. **(3mks)**

(b) Potential difference across 4Ω resistor. **(3mks)**

5. Figure 4 shows conductor carrying current in magnetic field and moves in direction shown.

Figure 4

Identify polarities X and Y. **(2mks)**

6. 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

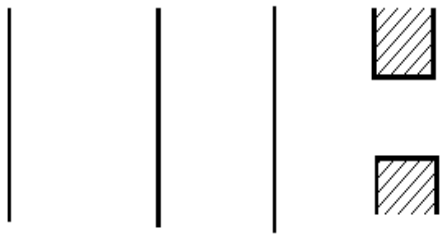


Figure 6

9. (a) Define refractive index. **(1mk)**

(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)**

SECTION: B (55MARKS)

Answer All Questions In This Section

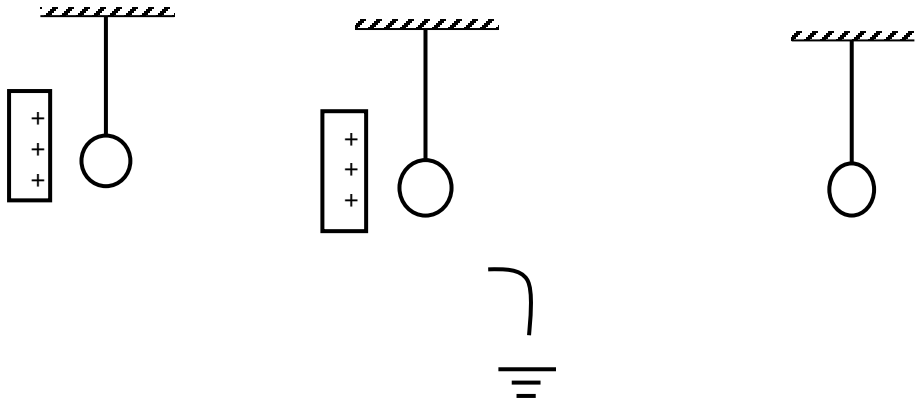
11. (a) An uncharged metal rod brought close but not touching the cap of a charged electroscope causes a decrease in the divergence of the leaf. Explain the observation. **(1mark)**

(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)**

(ii) the distance of the separation of the plates decreased **(1 mark)**

(c) Figure 7 illustrates a method of charging a metal sphere.

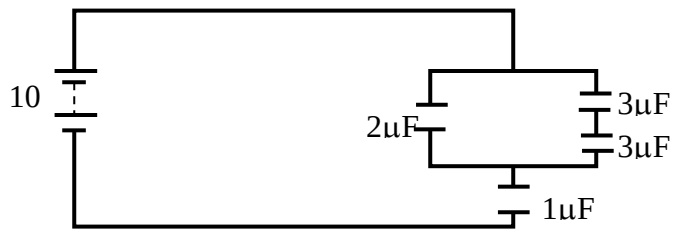


(i) (ii) (iii)

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)**

(d) Figure 9 shows an arrangement of capacitors connected to a 10V d.c supply.



Determine

(i) the combined capacitance **(2 marks)**

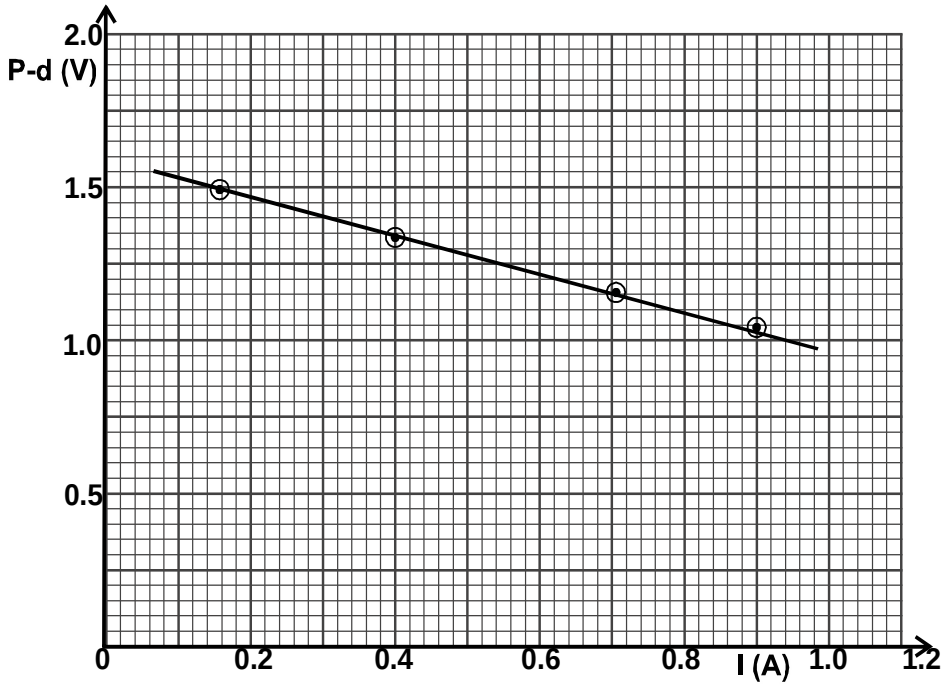
(ii) the total charge in the circuit **(1 mark)**

(iii) the total energy stored in the circuit. **(2marks)**

12 (a) Distinguish between e.mf. and terminal voltage of a battery. **(2 marks)**

(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.

.



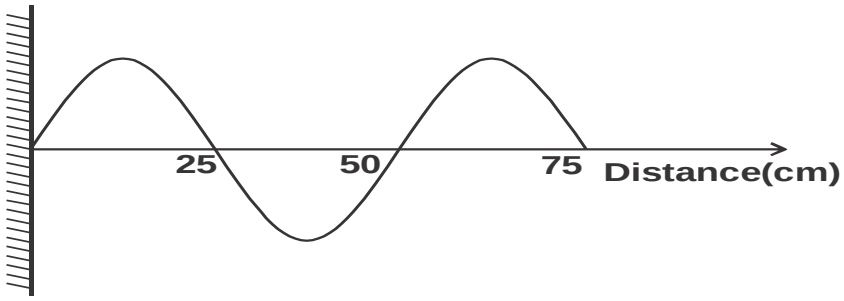
(i) From the graph determine

(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.

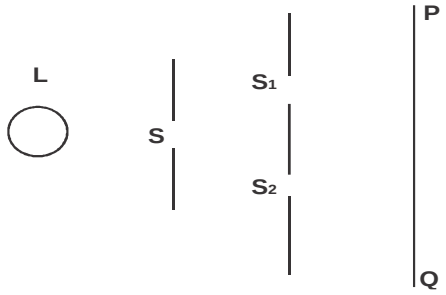


i) State with reason the type of wave shown **(2 marks)**

ii) Determine the wavelength of the wave. **(1 mark)**

iii) Calculate the frequency of the wave given that the speed of the wave is 9m/s. **(3 marks)**

b) 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.

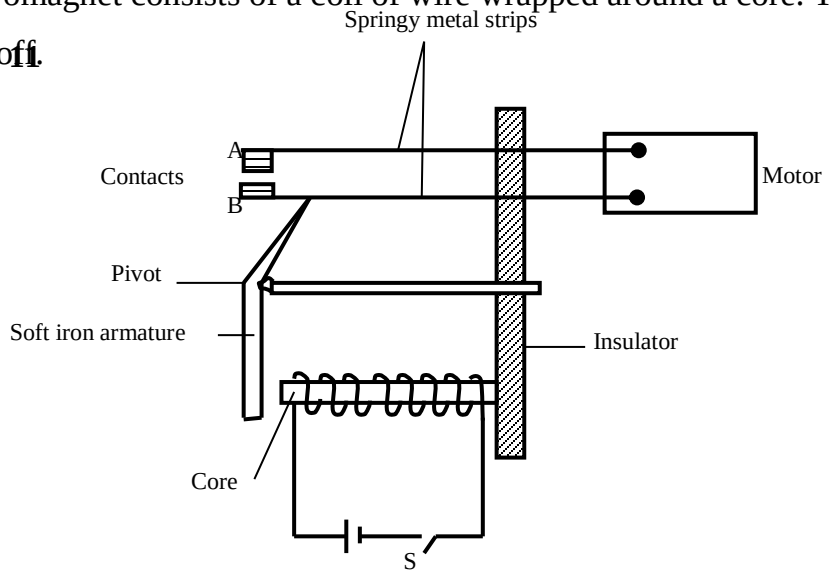


i)Explain what is observed on screen PQ. **(2 marks)**

ii)What is the significance of S_1 and S_2 ? **(1 mark)**

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)**

(b) What happens to the core when switch S is closed? **(2marks)**

(c) Why do the contacts A and B close when the switch S is closed. **(2marks)**

(d)When the switch S is opened, what will happen to;

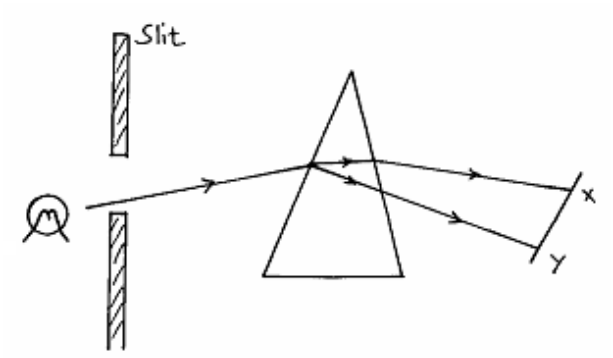
(i) The core **(1mark)**

(ii) Soft iron armature. **(1mark)**

(b) Give **one** other application of an electromagnet. **(1mark)**

(c) State **two** ways in which an electromagnet could be made more powerful. **(2marks)**

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)**

(iii) Name the colour at **X** and **Y**. Give a reason. **(3mks)**

(iii) What is the purpose of the slit? **(1mk)**

16. The figure 4 shows a circuit with a coil used to warm oil in a beaker.

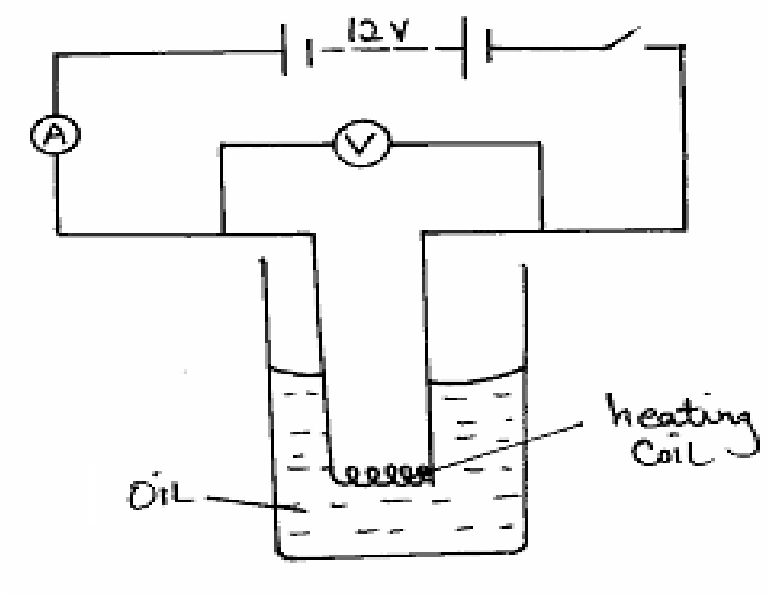


Figure 4

(a) State the Ohm's Law. **(1mk)**

(b) (i). Explain how heat is produced in the coil. **(2mks)**

(ii)Given that the reading of the ammeter is 2.5A, determine the resistance of the coil. **(3mks)**

(iii). How much heat is produced in the coil in a minute? **(3mks)**

(iv). Give **two** changes that can be made in the set-up in order to produce more heat per minute.

(2mks)

(iii) How much heat is produced in the coil in a minute?

(3marks)

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

CONFIDENCIAL

1. *You are provided with the following;*

- *a rectangular glass block*
- *4 optical pins*
- *a soft board*
- *a plain paper*

2. *You are provided with the following;*

- *A pendulum bob*
- *Two pieces of wood*
- *A retort stand*
- *A boss*
- *A clamp*
- *A ctop watch*
- *A metre rule/or half metre rule*
- *A piece of thread*

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

NAME…… ADM NO; ……

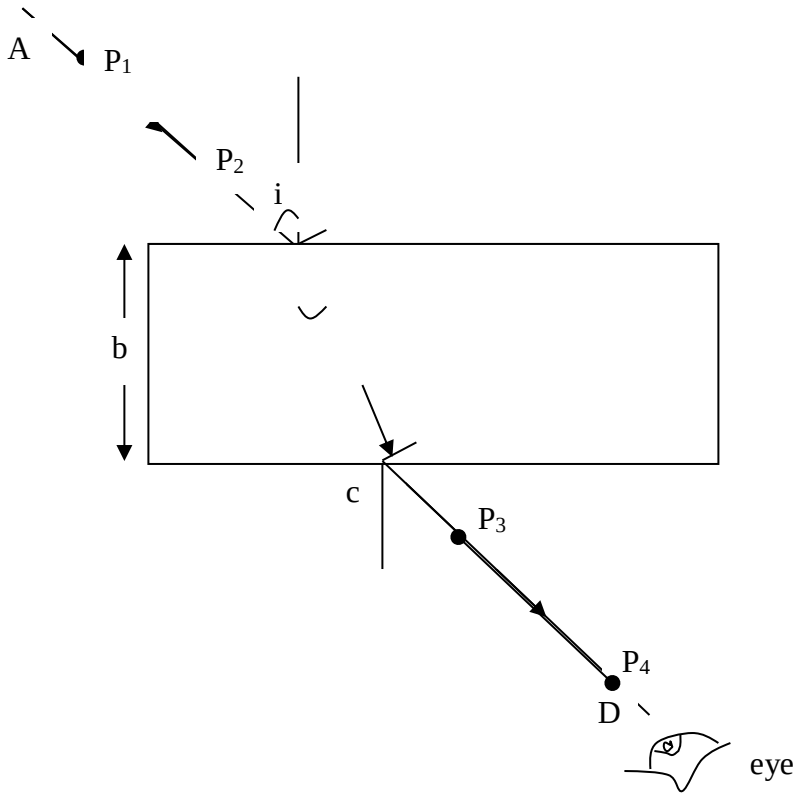
CLASS…… DATE……

1. You are provided with the following;

- a rectangular glass block
- 4 optical pins
- a soft board
- a plain paper

Proceed as follows:

(a) Place the glass block on the plain paper with one of the largest face upper most. Trace round the glass block using a pencil as shown below.



(b) Remove the glass block and construct a normal at B. Construct an incident ray AB of angle of incidence, i = 20^0.

(c) Replace the glass block and trace the ray ABCD using the optical pins.

(d) Remove the glass block and draw the path of the ray ABCD using a pencil. Measure length L and record it in the table below.

Angle i^0	L (cm)	L^2 (cm^2)	$\frac{1}{L^2}$ (cm^{-2})	$Sin^2 i$
20				0.1170
30				0.2500
40				0.4132
50				0.5868
60				0.7500
70				0.8830

(6 marks)

(e) Repeat the procedure above for the angles of incidence given.

(f) Calculate the value of L^2 and $\frac{1}{L^2}$; Record in the table.

(g) Plot a graph of $\frac{1}{L^2}$ (y-axis) against $Sin^2 i$. **(5 marks)**

(h) Calculate the gradient, S. **(3 marks)**

Given that the equation of that graph is: : $\frac{1}{L^2} = -\left(\frac{1}{n^2 b^2}\right) \cdot Sin^2 i + \frac{1}{b^2}$

(i) Determine the $\frac{1}{L^2}$ – intercept C and the $Sin^2 i$ – intercept B.

C = _____ **(1 mark)**

B = _____ **(1 mark)**

(j) Calculate the value of Q given by; **(2 marks)**

$$Q = -\left(\frac{C}{S}\right) \div B$$

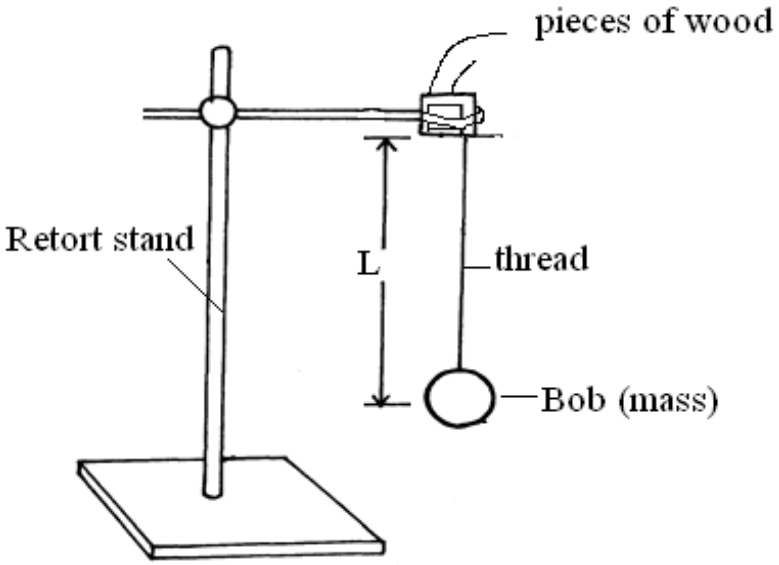
(k) Hand in your constructions on the plain paper together with the answer script. **(2 marks)**

2 .You are provided with the following;

- *A pendulum bob*
- *Two pieces of wood*
- *A retort stand*
- *A boss*
- *A clamp*
- *A ctop watch*
- *A metre rule/or half metre rule*
- *A piece of thread*

Proceed as follows;

a) Suspend a pendulum bob on a retort stand as shown below.



b) Displace the bob for a small angle. As it is oscillating time ten oscillations for every length of the string shown in the table **below (9marks)**

C)

Length, l(m)	0.4	0.6	0.8	1.0	1.2	1.4
Time ,t, for 10 oscillations(s)						
Periodic time, T(s)						
F=$^{1}/_{T}$ (Hz)						
F^2(Hz^2)						
$^{1}/_{L}$(m^{-1})						

Plot a graph of F^2 against 1/L**.** **(5 marks)**

d) Determine the slope,**S**, of the graph. **(3 marks)**

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.....

e) Given that the relationship between **F** and **L** is given by, $F^2 = \frac{g}{4\pi^2 L}$,use the graph to determine the value of **g** giving its units **.** **(3marks)**

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FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

CHRISTIAN RELIGIOUS EDUCATION

PAPER 1

TIME: 2½ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

Instructions to candidates

Answer any five questions.

QUESTIONS	1	2	3	4	5	6	TOTAL
MARKS							

QUESTIONS

1. **(a)** Explain the difference between the first and the second account of creation. **(8 marks)**

   (b) Outline **six** consequences of sin after the fall of man in the Genesis stories of creation. **(6 marks)**

   (c) Show **six** causes of evil in African traditional societies. **(6 marks)**

2. **(a)** State **five** reasons why Moses was reluctant to go back to Egypt. **(5 marks)**

   (b) Describe how God showed love and concern to the people of Israel during the exodus. **(8 mark)**

   (c) Give lessons Christians learn from the incident when the Israelites worshipped the golden calf. **(6 marks)**

3. **(a)** State **six** promises of God to king David. **(6 marks)**

(b) Explain how King Solomon turned away from the covenant way of life. **(7 marks)**

(c) Show importance of the temple of Jerusalem to the Israelites. **(7 marks)**

4. **(a)** Mention different forms of injustice that prophet Amos condemned. **(8 marks)**

(b) Explain reasons why prophets condemned Israelites way of life. **(6 marks)**

(c) State evils that prophet Amos would condemn in Kenya today. **(6 marks)**

5.(a) Explain the role of prophets in the old Testament. **(7marks)**

(b) State seven teachings of prophet Amos on the day of the Lord **(7mks)**

(c) What can Christians do to avoid God's punishment **(6marks)**

6. **(a)** Name **five** specialists in traditional African communities. **(5 marks)**

(b) Describe why cleansing rituals where performed in traditional African communities. **(8 marks)**

(c) Identify **seven** factors that are undermining the role of elders in Kenya today? **(7 marks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

CHRISTIAN RELIGIOUS EDUCATION

PAPER 2

TIME: 2½ HOURS

NAME…… ADM NO; ……

CLASS…… DATE……

Instructions to candidates

Answer any five questions.

QUESTIONS	1	2	3	4	5	6	TOTAL
MARKS							

1. a) In what ways did Jesus the Messianic prophecies of Isaiah about the suffering servant? **(8mks)**

b) Outline seven events that took place on the night that Jesus was **born.** **(7mks)**

c) Give five factors that hinder people from accepting the call of Christ to salvation. **(5mks)**

2. a) Describe the healing of the centurion servant, L**uke 7: 1 – 10.** **(8mks)**

b) State ways which recited to the miracles of **Jesus.** **(6mks)**

c)Identify ways through which the church continue with healing ministry of **Jesus.** **(6mks)**

3. a) Describe the parable of the tenants, **Luke 20:9 – 18.** **(8mks)**

b) State Jesus teaching on w**ealth.** **(6mks)**

c) In what ways do people misuse their wealth **today?** **(6mks)**

4. a) Highlight Peters message on the day of **Pentecost.** **(7mks)**

b) Identify four teachings of st. Paul on the similarities between the Church and husband wife relationship**.** **(7mks)**

c) Give five ways in which Christians fight injustices in the society t**oday.** **(5mks)**

5. a) Narrate the incident in which Jesus praised the widow who offered two copper coins in the temple in (**Luke 21:1-4)** **(5mks)**

b) Give reasons why Christians take part in the lord supper **today?** **(8mks)**

c) How can Christian prepare themselves for the second comin**g of Christ.** **(7mks)**

6. a) Describe the effort made by the Jewish religious leaders to have Jesus arrested and put to **death.** **(7mks)**

b) Outline seven reasons why Judas betrayed Jesus. **(7mks)**

c) State six reasons why the resurrection of Jesus is important to Christian to**day?** **(6mks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

GEOGRAPHY

PAPER 1

TIME: 2¾ HOURS

NAME…… ADM NO; ……

CLASS…… DATE……

INSTRUCTIONS TO CANDIDATES:

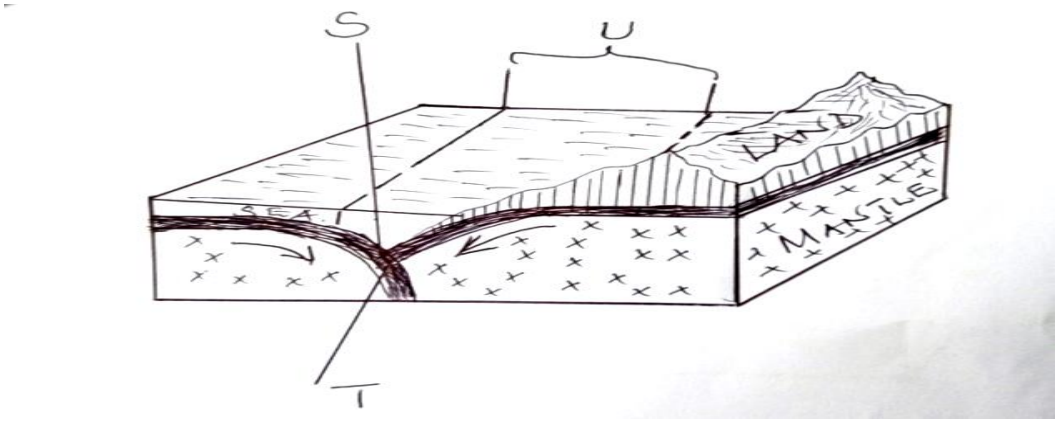
- *This paper consists of three sections; A, B and C.*
- *Answer all questions from section A and B.*
- *In section C, answer any three questions. All answers must be written on the answer sheets provided.*

SECTION A:

Answer all the questions in this section.

1. (a) Name two types of earth movements. **(2 mks)**

(b) The diagram below represents tectonic plate boundary. Name the areas marked S, T and U. **(3 mks)**



2. **(a)** Differentiate between seismic focus and epicenter. **(2 mks)**

(b) State two ways through which a river transports its load. **(2 mks)**

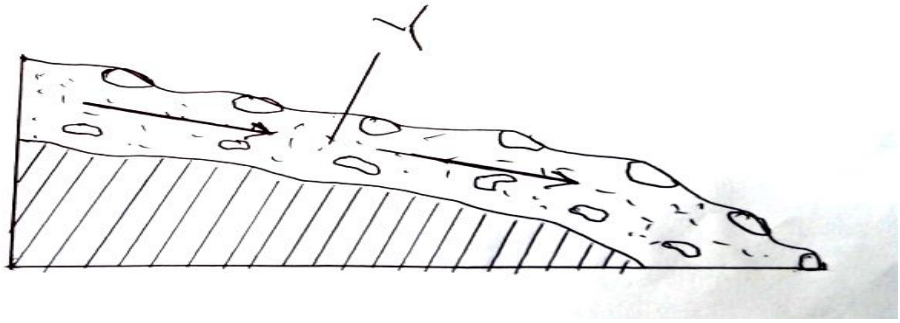
3. **(a)** Apart from exfoliation, name two other physical weathering processes influenced by temperature changes. **(2 mks)**

(b) Describe exfoliation process. **(4 mks)**

4. **(a)** State two ways through which a river transports its load. **(2 mks)**

(b) State three conditions necessary for the formation of a delta. **(3 mks)**

5. **(a)** The diagram below shows a process of slow mass wasting.



(i) **Identify** the process. **(1 mk)**

(ii) **Name** the feature marked Y. **(1 mk)**

(b) **State three** conditions which may influence occurrence of landslides. **(3 mks)**

Study the map of **Nyeri (1:50,000) sheet 120/4** provided and answer the questions that follows

6. a) i) Give the latitudinal and the longitudinal position of the south west corner of the map extract **(2mks)**

ii.) Calculate the magnetic declination of the map extract **(2mks)**

b. i) Which adjoining sheet is to the S.E of the area covered by the map**?** **(1mk)**

ii.) What is the general flow of river Chanya **(2mks)**

iii.) Give three social function of Nyeri town **(3mks)**

c.) Calculate the area of Nyeri Forest to the East of Easting 69 and North of Northing 56. (Give your answer in Kilometre squared($Km^{2)}$ **(2mks)**

d.) Citing evidence from the map. Give

i.)Two reasons why the area is covered by the map is suitable for coffee growing **(4mks)**

ii.) Two factor that favor saw milling in the area covered by the map **(4mks)**

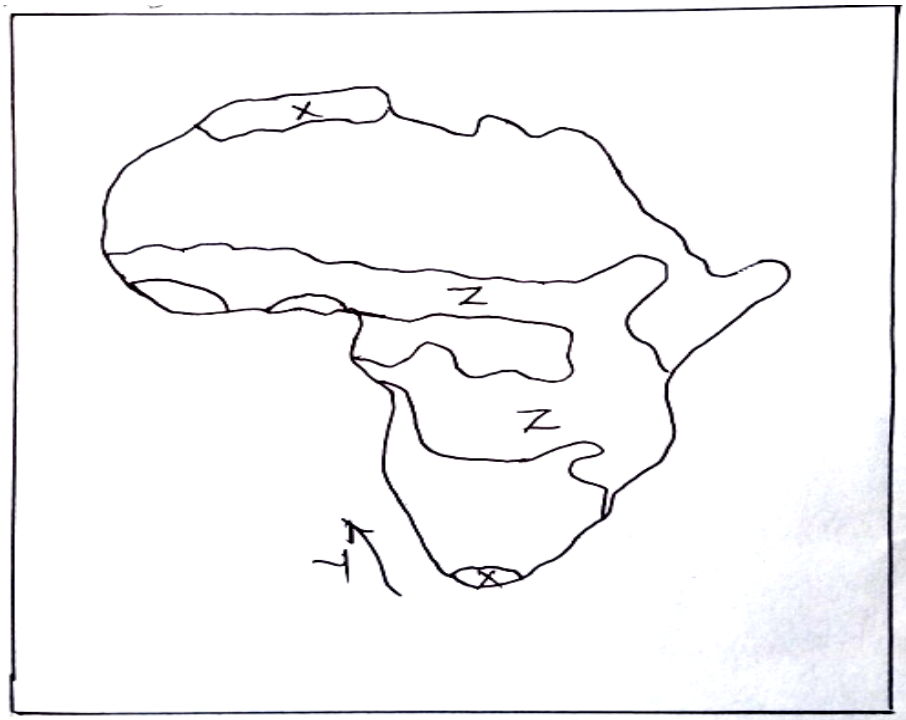
e.) Describe drainage of the area covered by the map **(5mks)**

7. (a) (i) What is fog? **(2 mks)**

(ii) State two conditions necessary for the formation of fog. **(2 mks)**

(b) With the aid of a labeled diagram, describe how relief rainfall is formed. **(7 mks)**

(c) Use the map of Africa below to answer the questions that follow.



(i) Name, the type of climate experienced in the region marked X. **(1 mk)**

The ocean current marked Y. **(1 mk)**

(ii) Describe the characteristics of the type of climate found in the area marked Z. **(6 mks)**

(d) Suppose your class carried out a field study on weather around the school environment;

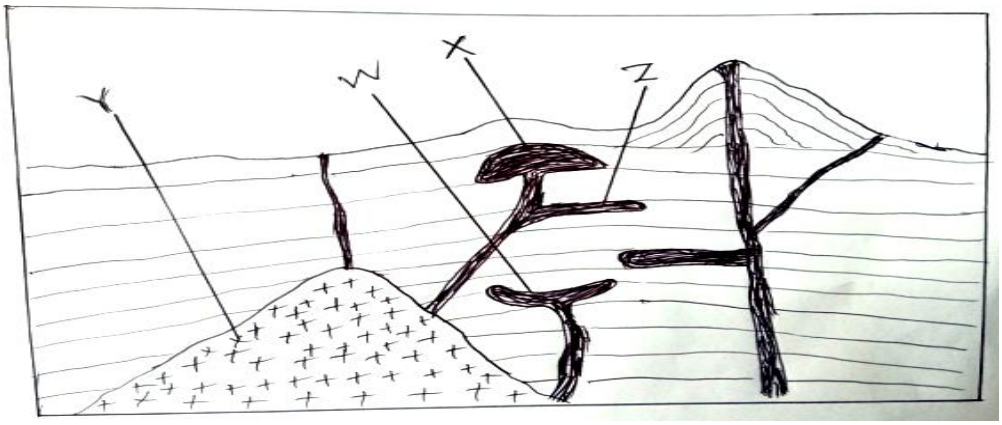
(i) Explain two effects of wind on climate that they are likely to have identified**.** **(2 mks)**

(ii) Give two methods the class used to collect data in the field. **(2 mks)**

(iii) Give two follow-up activities the class was involved in after the field study. **(2 mks)**

8. (a) Distinguish between magma and Lava. **(2 mks)**

(b) The diagram below shows intrusive volcanic landforms. Use it to answer the questions that follow.



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

(ii) Describe how feature Z is formed **(4 mks)**

(c) (i) Name two features that result from fissure eruption. **(2 mks)**

(ii) List two types of lava. **(2 mks)**

(d) (i) Describe how a composite volcano is formed. **(6 mks)**

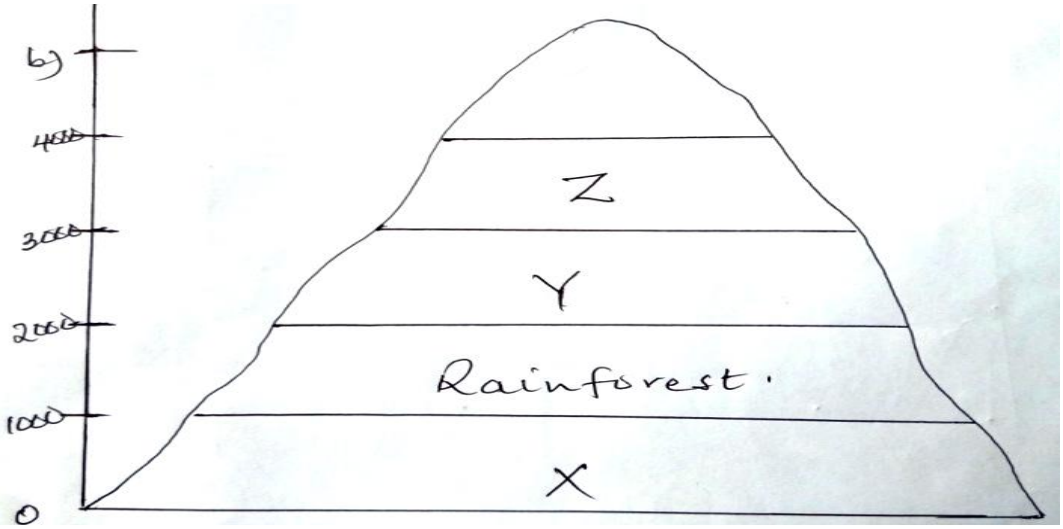
(ii) Explain the significance of volcanic features to human activities. **(6 mks)**

9. (a) (i) Define Secondary Vegetation. **(2 mks)**

(ii) State three climatic factors which influence the distribution and type of vegetation. **(3 mks)**

(iii) Give three uses of mangrove trees. **(3 mks)**

(b) The diagram below represents zones of natural vegetation on a mountain slope. Use it to answer the questions that follow.



(i) Name the vegetation zones marked X, Y and Z. **(3 mks)**

(ii) Describe the characteristics of the rainforest vegetation. **(6 mks)**

(c) You are required to carry out a field study on natural vegetation within your local environment.

(i) Give three types of information for your study. **(3 mks)**

(ii) State three way s you would do to identify the different types of plants. **(3 mks)**

(iii) State two ways in which the information collected during the study would be useful to the local community. **(2 mks)**

10. (a) (i) Define the term Ocean. **(2 mks)**

(ii) State three sources of salt in ocean water. **(3 mks)**

(iii) State three factors which determine the temperature of the ocean water. **(3 mks)**

(b) (i) Describe three processes of wave erosion. **(6 mks)**

(ii) Name five features resulting from wave erosion. **(5 mks)**

(c) Your class is required to carry out a field study on wave erosion along the Kenyan coastline.

(i) Why would you need to carry the following?

A mosquito net. **(1 mk)**

Light clothes **(1 mk)**

(ii) Explain reasons why you think your study will be important to the government of Kenya. **(3 mks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

GEOGRAPHY

PAPER 2

TIME: 2¾ HOURS

NAME…… ADM NO; ……

CLASS…… DATE……

INSTRUCTIONS TO CANDIDATES:

- *This paper consists of three sections; A, B and C.*
- *Answer all questions from section A and B.*
- *In section C, answer any three questions. All answers must be written on the answer sheets provided.*

SECTION A:

Answer All The Questions In This Section:

1. a. Define the term Geography? **(2 mks)**

b. Outline 4 importances of Geography in the learning process. **(4 mks)**

2. a. State 4 layers of the earth. **(4 mks)**

b. Name the boundary that separate:- **(2 mks)**

i. The crust and Mantle.

ii. The mantle and the core.

3. a. State 2 effects of earths rotation. **(2 mks)**

b. Outline 3 causes of earth movements. **(3 mks)**

4. a. Give three examples of rapid mass movements. **(3 mks)**

b. Name 3 fold mountains of Alphine Orogeny. **(3 mks)**

5. a. What is agro-forestry. **(3 mks)**

SECTION B:

INSTRUCTIONS:

Question 6 Is Compulsory And Any Other Two:

6. The table below shows temperature and rainfall date of station X.

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp. ^oC	12	13	14	17	19	22	24	26	24	20	16	13
Rainfall in (mm)	112	84	74	41	46	15	10	5	41	79	130	137

a. Use the data to calculate

i. The mean monthly temperature. **(3 mks)**

ii. The mean monthly Rainfall. **(3 mks)**

iii. The median rainfall. **(2 mks)**

iv. The temperature and rainfall range. **(4 mks)**

b. Use the rainfall data to draw a simple line graph. **(7 mks)**

c. State 3 advantages of using a simple line graph. **(3 mks)**

d. Outline clearly 3 disadvantages of using this technique. **(3 mks)**

7. a. Define the term vegetation. **(2 mks)**

b. i. State and explain 4 factors which influences the distribution of vegetation. **(8 mks)**

ii. Explain clearly 4 uses of vegetation. **(8 mks)**

c. i. Give 3 characteristics of Savanna Grasslands. **(3 mks)**

ii. Fill in the blank spaces. **(4 mks)**

Temperature grassland	Where its found
Prairies	-
Steppes	-
Pampas	-
Veldt	-

8. a. i. Define the term forest. **(2 mks)**

ii. Explain five uses of forests and forest products in Kenya. **(10 mks)**

b. i. Outline any 4 problems facing forestry in Kenya. **(4 mks)**

ii. Highlight five forest conservation measures commonly used in Kenya. **(5 mks)**

c. Compare and contrast softwood forestry in Canada and Kenya. **(4 mks)**

9. a. i. Define the term mining. **(2 mks)**

ii. State three ways in which minerals occur. **(3 mks)**

b. i.State and explain 4 factors that influence the occurrence and exploitation of minerals**.(8 mks)**

ii. Explain any two methods employed in underground mining. **(4 mks)**

c. i. State 4 effects of mining in the environment. **(4 mks)**

ii. Highlight 4 problems facing mining in Kenya. **(4 mks)**

10. a. Name the minerals found in the following places in East Africa. **(3 mks)**

i. Ruhuhu valley

ii. Kariandusi

iii. Tororo

b. Describe the stripping method of open cast mining. **(3 mks)**

c. Study the data below and answer questions that follow:-

Percentage of mineral production.

COUNTRY A		**COUNTRY B**	
Lime stone	- 10%	Iron ore	- 50%
Coal	- 20%	Bauxite	- 10%
Iron ore	- 50%	Tin	- 10%
Trona	- 20%	Others	- 30%

i. Draw a dividend rectangle 10cm long to show the percentage of minerals mined in country A. **(5 mks)**

ii. State three advantages of using dividend rectangles to represent geographical data.**(3 mks)**

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

ii. Describe the stages involved in the processing of diamonds. **(4 mks)**

iii. State 5 economic contributions of diamonds to the economy of South Africa.**(5 mks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

HISTORY AND GOVERNMENT

PAPER 1

TIME: 2½ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

INSTRUCTIONS:

This paper consists of three sections; A, B and C.
Answer all questions in section A, three questions in section B and two questions in section C.

SECTION A: (25 MARKS)

Answer all the questions from this section.

1. **Identify one** branch in the study of History and Government of Kenya. **(1 mk)**
2. State the first settlement area of the Luo during their migration from Sudan. **(1 mk)**
3. Sta**te two** economic activities of the Abagusii in Kenya during the pre-colonial period.**(2 mks)**
4. **Identify** the two main items of trade from the interior of Kenya during the long distance trade. **(2 mks)**
5. **Identify two** contributions made by the early Christian missionaries in the field of education in Kenya. **(2 mks)**
6. **Identify** two communities which resisted the British occupation of Kenya. **(2 mks)**
7. State the main duty of the Governor during the British colonial rule in Keny**a.** **(1 mk)**
8. Give the main reason why poll tax was introduced in Kenya during the colonial period.**(1 mk)**
9. **Give the** meaning of the term "National Integration" **(1 mk)**
10. **Give two** advantages of representative democracy. **(2 mks)**
11. **Name two** Africans elected to the legislative council in 1957. **(2 mks)**
12. **Give any two** characteristics of human rights. **(2 mks)**
13. Give one function of the judiciary in Kenya. **(1 mk)**

14. **Name** the document which contains the rights of citizens in Kenya. **(1 mk)**

15. **Identify one** condition that one must fulfill in order to register as a voter in Kenya. **(1 mk)**

16. **Give** two importance of the UN charter on Human Rights. **(2 mks)**

17. **Give one** national symbol of unity in Kenya. **(1 mk)**

SECTION B: 45 MARKS)

Answer any three questions from this section.

18. **(a)** Name three groups that makes up the Luo who migrated to Kenya. **(3 marks)**

    (b) What were the social effects of the migration of Luo into Kenya? **(12 mks)**

19. **(a)** Give three reasons for the coming of Arabs at the East African coast. **(3 mks)**

    (b) Describe the way of life in the coastal towns of Kenya before the 19th century. **(12 mks)**

20. **(a)** **Identify** three communities in Kenya who showed mixed reaction to European colonization. **(3 mks)**

    (b) Explain six negative effects of British colonial rule on the people of Kenya . **(12 mks)**

21. **(a)** What were the activities of the imperial British East Africa Company (IBEAC) between 1888 and 1895? **(3 mks)**

    (b) Explain the reasons why Imperial British East Africa company (IBEAC) rule came to an end in 1895. **(12 mks)**

SECTION C: 30 MARKS)

Answer any two questions.

22. **(a)** Give any three symbols of National Unity in Kenya. **(3 mks)**

    (b) Explain six factors which undermine National Unity in Kenya. **(12 mks)**

23. **(a)** Outline five features of Independence constitution of 1962. **(5 mks)**

    (b) **Discuss** the five main provisions of the National Accord of 2008. **(10 mks)**

24. **(a)** **State** three responsibilities of a Kenyan citizen as per the new constitution.**(3 mks)**

    (b) **Explain** six rights of an accused person in Kenya. **(12 mks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

HISTORY AND GOVERNMENT

PAPER 2

TIME: 2½ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

SECTION A (25MKS)

Answer all questions in this section.

1. Identify one class of monarchial form of the government. **(1mks)**
2. Identify two aspects of culture of early man that had their origin in the late Stone Age. **(2 mrks)**
3. Identify two uses of copper in Africa during the 19th century. **(2mks)**
4. State two reason why Kabaka Mwanga of Buganda collaborated with the British. **(2mks)**
5. State two ways in which slaves were acquired during the Trans-Saharan trade. **(2mks)**
6. Give one negative impacts of internet today. **(1mks)**
7. Give two factors that led to the decline of Kilwa town. **(2mks)**
8. State two problems industrial workers faced in Europe after industrial revolution. **(2mks)**
9. Name the leader of the British South African Company (BSACO.) in the 19th century. **(1mk)**
10. Identify the main contribution of William Morton in the field of medicine **(1mk)**
11. State two terms of Helligoland treaty of 1890 **(2mks)**
12. State two use of the wheel in ancient Mesopotamia. **(2 mrk)**
13. State two reasons why early people domesticated crops and animals during the Neo-lithic period. **(2mks)**
14. Identify two uses of sailing ships in modern society. **(2mks)**
15. Give one disadvantages of using messages in traditional society. **(1mks)**

SECTION B (45 MARKS)

Answer Any Three Questions in this Section

16. (a) Give five changes that led to the Agrarian Revolution in Britain. **(5marks)**

(b) Explain the effects of the Agrarian Revolution in Britain. **(10marks)**

17. (a) Give three factors that led to development of urban centre in Africa during the pre-colonial period. **(3marks)**

Explain six consequences of urbanization in Europe during the 19th century **(3mks)**

18. a). Give three reasons why the Ndebele were defeated by the British in 1893 – 1894 **(3mks)**

b) Briefly describe the results of the Anglo-Ndebele war (Chimurenga) in 1893-1894.

19. a) Give three communities that were involved in the Maji Maii Rebellion**.** **(3 marks)**

b) What reasons led to the failure of the Maji Maji Rebellion in 1907 **(12 marks)**

SECTION C (30 MARKS)

Answer ANY TWO questions from this section.

20. a).Give three duties of the Katikiro. **(3 marks)**

Explain six factors that led to the rise and growth of the Asante empire**.** **(12 marks)**

21. a) Give three social reasons that led to the scramble and the partition of Africa in the 19th century by European powers. **(3mks)**

b) Explain six impacts of partition of Africa by European powers**.** **(12mk)**

22. (a) Give five causes of the Maji Maji rebellion of 1905 to 1907 in Tanganyika**.** **(5 mks)**

(b) Explain five reasons why Samori Toure resisted the French for so long**.** **(10 mk)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

AGRICULTURE

PAPER 1

TIME: 2 HOURS

NAME…… ADM NO; ……

CLASS…… DATE……

SECTION A (30MARKS)

Answer ALL the questions in the spaces provided

1. Give **four** biotic factors which influence Agriculture positively. **(2 marks)**

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2. State **two** farming practices which enhance organic farming. **(1 mark)**

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3. Which chemical are used during water treatment to; **(1½ marks)**

i) Coagulate solid particles

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ii) Soften the water

_____

iii) Kill pathogens

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4. Give **two** reasons that makes phosphatic fertilizers good for use during planting time.**(1 mark)**

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5. List down **four** qualities of a good farm record. **(2 marks)**

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6. What do you understand by the following terms? **(1½ marks)**

i) Seed dressing

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ii) Seed inoculation

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iii) Chitting

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State three problems associated with land fragmentation in Kenya? **(1½ marks)**

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7. Outline **four** land Reforms Programmes which have been carried out in Kenya since independence. **(2 marks)**

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8. List down **four** common methods of harvesting water. **(2 marks)**

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9. Give three methods of breaking seed dormancy. **(1½ marks)**

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10. What do you understand by the following terms as used in pests classification according to mode of action. **(2 marks)**

i) Stomach poisons

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_____

ii) Systemic poisons

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iii) Contact poisons

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iv) Suffocants

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12.Give **two** reasons why farmers are encouraged to practice organic farming. (1 mark)

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13. State **three** advantages of shifting cultivation. (1½ marks)

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14. List **four** methods of farming. **(2 marks)**

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15. Outline **three** effects of soil organisms which benefit crop growth. **(1½ marks)**

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16. State **two** harmful effects of strong wind on crop production. **(1 mark)**

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17.State **three** advantages of adding organic matter to sandy soil. **(1½ marks)**

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18. State **three** ways by which biological agents can enhance the process of soil formation.**(1½ marks)**

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19. Outline **four** main reasons for secondary tillage. **(2 marks)**

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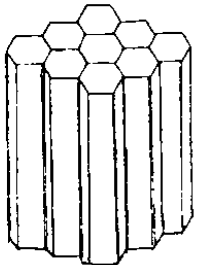
SECTION B (20 MARKS)

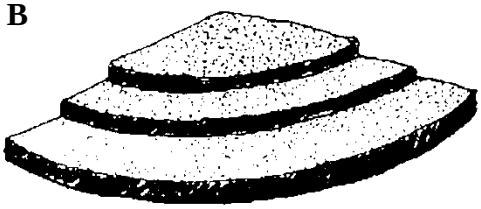
Answer ALL the questions in the spaces provides

20.Below are two types of soil structures A and B.

A



B



a) Identify the two- types of soil structures. **(2 marks)**

A _____

B _____

b) State where the above soil structures are likely to be found. **(1 mark)**

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c) Outline ways which soil structure influences crop production. **(3 marks)**

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

i) What is layering? **(1 mark)**

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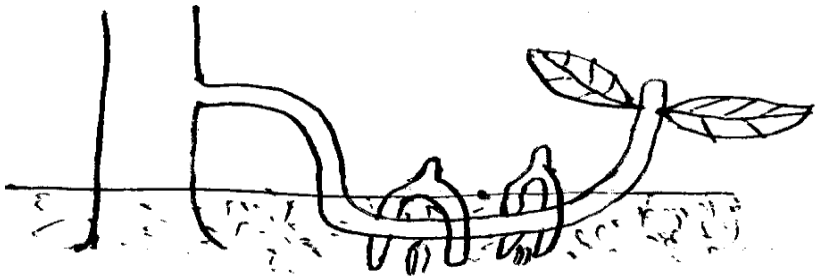
ii) Identify the type of layering shown below. **(1 mark)**



b) Give **two** advantages of tissue culture in crop production. **(2 marks)**

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22a) Maize requires 120kg/ha of phosphorus pentoxide (P_2O_5). How much of the compound fertilizer 20:20:10 would be applied to 0.4 hectare of land to achieve this rate. (show your working). **(3 marks)**

b) Distinguish between straight fertilizers and compound fertilizers. **(2 marks)**

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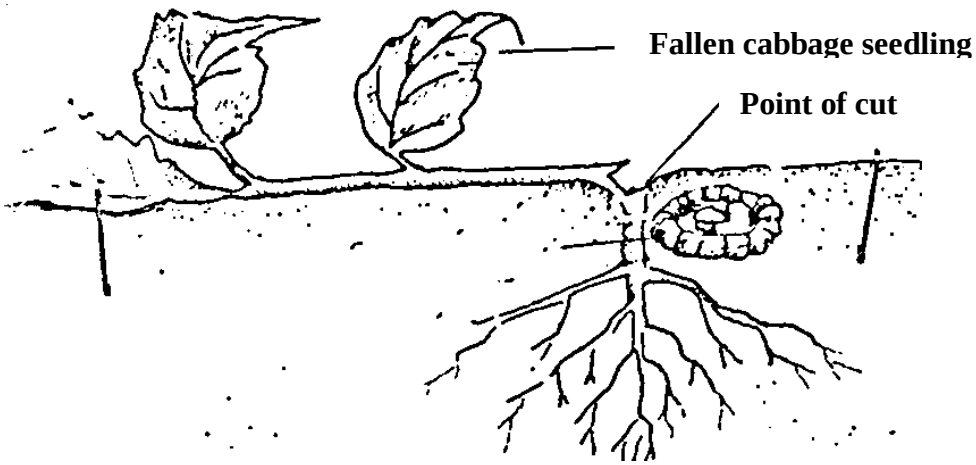
23. The diagram below shows a cabbage seedling which has been attacked by a certain pest.



a) Identify the pest **(1 mark)**

_____

b) State **three** methods of controlling the above pest **(3 marks)**

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SECTION C (40MARKS)

Answer any TWO questions in this section in the spaces provided after question 25

24.a) Outline the factors affecting rooting of cuttings. **(5 marks)**

b) State and explain human factors that influence Agricultural producti**on.** **(10 marks)**

c) Highlight the management practices carried out in a nursery. **(5 marks)**

25.a) State and explain **five** ways through which soil loses its fertility. **(10 marks)**

b) Describe **five** characteristics of Nitrogenous fertilizers. **(5 marks)**

c) Outline **five** methods used in application of inorganic fertilizers. **(5 marks)**

26.a) Explain **seven** cultural methods of controlling crop diseases. **(7 marks)**

b) Describe precautions taken during the harvesting of coffee. **(4 marks)**

c) Given that a crop of cabbage is planted at a spacing of 60cm × 60cm, calculate the plant population in a plot of land measuring 4m × 3m. (show your working). **(4 marks)**

d) Give **five** factors that determine spacing of cabbages in the field. **(5 marks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

AGRICULTURE

PAPER 2

TIME: 2 HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

SECTION A 30 MARKS

1. Give four control measures of a liver fluke in livestock. **(2mks)**

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2. State two signs that shows that a cow is about to parturate**.** **(2mks)**

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3. State four signs of infestation by external parasites in livestock. **(2mks)**

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4. Name two notifiable diseases in Keny**a.** **(1mks)**

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5. State four reasons for feeding colostrums to calves immediately after parturitio**n.** **(4mks)**

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6. Distinguish between mathering ability and prolificacy as used in livestoch breeding. **(2mks)**

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7. Name the vegetative part of each of the following crops which is pro**pagated.** **(2mks)**

i) Sweet potatoes……..

ii) Cassava……

iii) Bananas……

iv) Oranges……..

8. Name two methods of weed control in **pasture.** **(1mk)**

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9. Name four methods used in identifying farm **animals.** **(2mks)**

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10. State two reason s why it is necessary to have individual calf pens instead of communal calf **pen.** **(1mks)**

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11. State two effects of HIV/AIDS on agricultural production **.** **(1mk)**

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12. State four reasons for maintaining farm tools and equipment in proper condition**.** **(2mks)**

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13. Give four factors which characterize small scale farmi**ng.** **(2mks)**

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14. Give four benefits of conservation of **farage.** **(2mks)**

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15. Name four suitable sites for **agroforestry.** **(2mks)**

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16. Give objectives of land settlement and resettlement in **Kenya.** **(2mks)**

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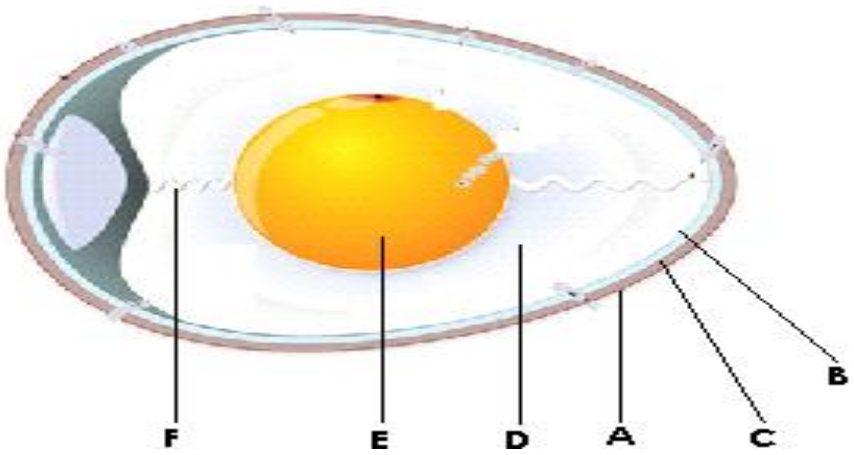
SECTION B 20MKS

17. The diagrame below is an illustration of an egg. Study it carefully and answer the questions that follow.



i) Name the parts labeled (3mks)

A……

B……..

C……..

D…….

E……

F…….

ii) State the qualities of the part labeled A that should be considered when selecting eggs for incubation**.** **(2mks)**

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iii) What is the function of the part labeled E in a fertilized egg. **(1mks)**

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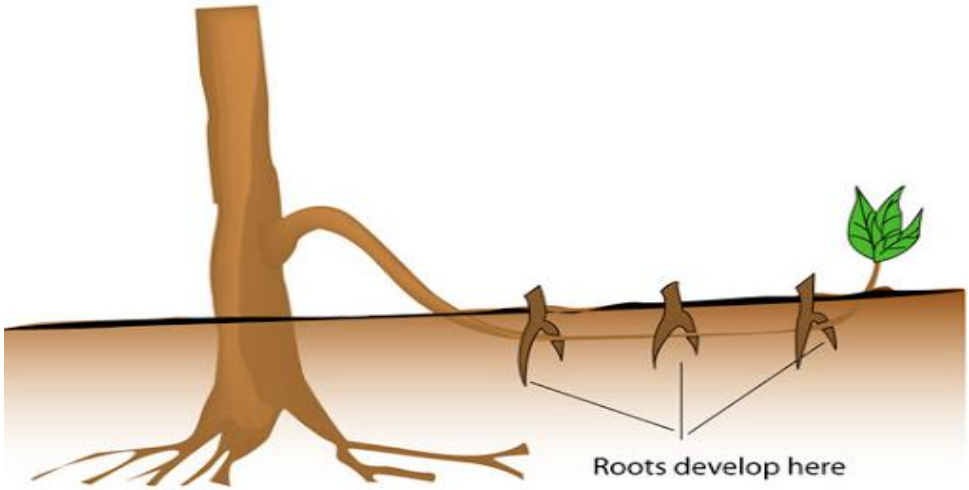
18. Study the diagram below and answer the question that follow.



i) What is layering?

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ii) Identify the type of layering shown above

iii) Give two advantages of tissue culture in crop production

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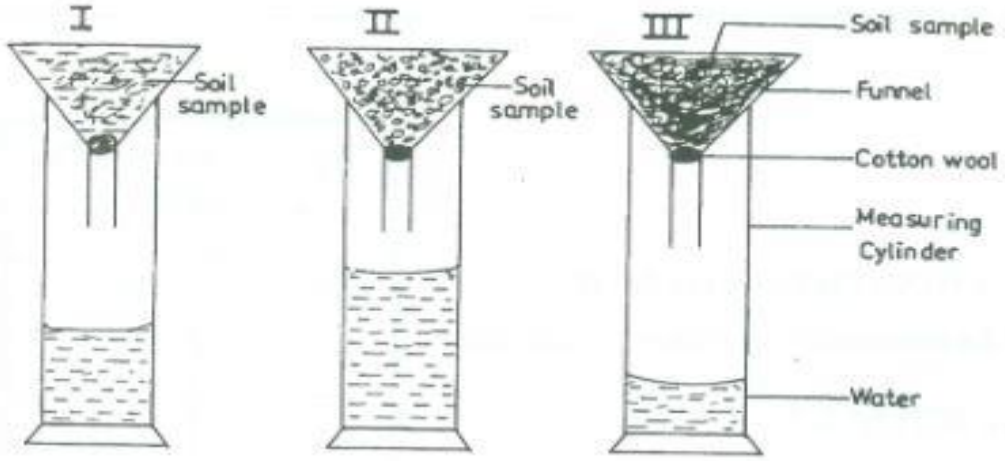
19. The diagram below illustrates an experiment on soil. Study it carefully and answer the question that follow.



a. State the aim of the experiment. **(1mk)**

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b. If the volume of water illustrated in the measuring cylinder was observed after one hour, identify the soil sample labeled **I** and **II** and give reasons.

Soil sample

I……

Reasons

II……

Reason.

c. State two ways in which the soil structure of the soil sample labeled **III** above can be improved. **(2mks)**

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20. State four reasons why docking/tailing is done in wool. **(2mks)**

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21. State two management practices that should be carried on a knapsack sprayer. **(1mk)**

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22. State two reasons why bees swarm. **(2mks)**

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State two methods of tick **control.** **(1mk)**

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SECTION C (40MARKS)

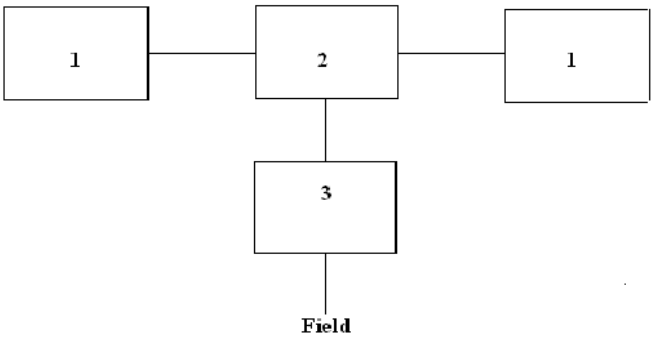
Answer any TWO questions in this section in the spaces provided after question 25

23. i)State five difference between ruminants and non-ruminants. **(5mks)**

ii) Discuss calf rearing from birth to first calving.

iii) State five problems that farmers are likely to face when marketing their produce.

24. A) Illustrated below is a method of turning compost. Study the method and answer the questions that follow.



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

b. Using arrows in the diagram show how the turning is done before the manure can be taken to the field**.** **(2mks)**

c. I) which other methods can be used to prepare the manure**.** **(1mk)**

ii) After how long should the compost be ready for use? **(1mk)**

B i) state four reasons for maintaining farm tools and equipment in proper condition. **(2mks)**

ii) list three factors that makes embryo transplant unpopular with many livestock farmers**.(3mks)**

iii) An agriculture student was adviced to apply a comlete faerizer 40:30:10 in a 20m by 10m plot at a rate of 400g per hectare.

a. Calculate the percentage of p2o5 in the cmlete fertizer. **(3mks0**

b. Calculate the amount o fertilizer the student would require for the plot. **(3mks)**

c. Calculate the amount of k2o that wwould be contained in 600kg of a compound fertilizer. 30:20:10 (NP2O2:K2O) respectively.

25. Describe the production of tomatoes under the following sub-heading:

a. Nursery production **(12mks)**

b. Transplanting

c. Field management practices. **(3mks)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

BUSINESS STUDIES

PAPER 1

TIME: 2 HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

Answer All Questions in section A and Any three in section B.

1. Outline four assumptions that are associated with perfect competition. **(4mks)**

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2. Highlight four circumstances under which a trader may wish to hire an office machine rather than purchasing it**.** **(4mks)**

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3. State four gaps that an entrepreneur can exploit. **(4mks)**

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4. Assuming you are a human resource manager in an institution, outline four measures you can take to improve employees productivity. **(4mks)**

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5. Land is a basic factor in production. Outline four characteristics that describe it. **(4mks)**

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6. Outline four limitation of using free samples in product promotion. **(4mks)**

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7. State four characteristic of a good filling system. **(4mks)**

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8. Outline four uses of a delivery note in trade. **(4mks)**

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9. Define the following terms**.** **(4mks)**

a) Monopoly –

b) Duopoly-

c) Product differentiation –

d) Market –

10. Name the type of business organization described in each of the following**.** **(4mks)**

Description	Business Organization
Formed by act of parliament	
May have infinite members	
Managed by a committee	
Formed between two to fifty partners	

SECTION B

11. Explain five sources of monopoly power**.** **(10mks)**

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12. Explain five factors that need to be considered before a firm start producing a certain production. **(10mks)**

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13. Outline five disadvantages of localization of firms**.** **(10mks)**

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14. Explain five factors influencing the choice of distribution channel. **(10mks)**

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FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

BUSINESS STUDIES

PAPER 2

TIME: 2½ HOURS

NAME…… ADM NO; ……

CLASS…… DATE……

Answer Any Five Questions

1a) Explain five benefits that may accrue to a country that encourages entrepreneurship .**10mks**

b. **Highlight** five differences between private limited company and public limited company. **10mks**

2a) Explain five factors that justifies the existence of a small scale firms in an economy. 10mks

b**) Explain** five principles of insurance. **10mks**

3a) Describe five channels of distribution for locally agricultural product. **10mks**

b) **Explain** five roles played by warehousing in the development of Kenya's economy. **10mks**

4a) In recent research shows that there has been an increase in quantity demanded for soft drinks **,** **explain** five reasons that account for this trend. **10mks**

b) **Explain** five factors to consider when selecting office equipments**.** **10mks**

5a) Explain five uses of national income statistics. **10mks**

b) **Explain** five reasons that may lead to business success. **10mks**

6a) Explain five factors that influence the choice of means of transport**.** **10mks**

b) **Explain** five features of perfect competition. **10mks**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

ENGLISH

PAPER 1

TIME: 2 HOURS

NAME…… ADM NO; ……

CLASS…… DATE……

1. FUNCTIONAL WRITING

Imagine you are the secretary of the committee planning for a fundraising ceremony aimed at raising funds to construct a hall for your school.

a) Design an **invitation card** to be sent to the guests. **(12 marks)**

b) Write a **thank you note** that you will send to the area MCA who had graced the occasion. **(8 marks)**

2. CLOZE TEST

Fill each of the blank spaces with the most appropriate word. (10 marks)

I passed all the 1._____ courses that I took at my university, but I could never pass botany. 2._____ was because all botany students had to spend several hours a week in a laboratory 3._____ through a microscope at plant cells, and I could never see through a microscope. I never once saw a 4._____ through a microscope. This used to enrage my lecturer. She would wander 5._____ the laboratory pleased with the progress all the students were making 6._____ drawing the involved and, so I am told, interesting structure of flowers cells, 7._____ she came to me. I would just be standing there. "I can't see anything," I would say. 8._____ would begin patiently enough, explaining 9._____ anybody can see through a microscope, but she would always end up in a fury, 10._____ that I too could see through a microscope but just pretended that I couldn't…!

3. ORAL SKILLS

a) Read the story below and answer the questions that follow.

A long time ago, there was a child who used to trouble his parents at night by crying. The mother tried to stop him from crying but in vain. Then, the mother warned the child and said, "If you don't stop crying, I will throw you out to the wizard!" But the child kept on crying. When the mother could stand it no longer, she stood up and threw the child outside. Unfortunately, there was a wizard who was listening outside and he picked the child up and ran with him. Suddenly, the father realized that the child's cries were dying away. He stood up, took his panga and went after the wizard. When the wizard heard the footsteps following him, he quickly placed the child in the fork of the tree nearby and ran away. From that day, the child never cried again.

i. What two **features** of oral narratives are evident in this story**?** **(4marks)**

ii. How would you perform the line…"there was a wizard who was listening outside and he picked the child up and ran with him**."** **(2marks)**

iii. How would you make the story interesting if you were to narrate it to your class? **(4mks)**

iv. Describe how you will introduce this story to your audience. **(2marks)**

v. State two things that will assist you to know if your audience is attentive**.** **(2marks)**

b) Based on the pronunciation of the letters in the **boldface**, write the odd word out. **(3marks)**

i. Enou**gh** sta**ff** dou**gh**

ii. Ma**ch**ine **ch**ess **ch**ef

iii. Spa**t**ula pun**ch** bu**tt**er

c) If you are to attend the Great Debaters Contest hosted by a television station in Kenya;

a. How would you prepare for the contest? **(3marks)**

b. Which non-verbal heckles would you use while your teammate is presenting to encourage the judge to take note of the points? **(2marks)**

d) Fail not to first carve a learn calf, four fat calves and five fine vine leaves.

a. Identify the genre that the above item belongs to? **(1mark)**

b. State two **features** of the above genre. **(2marks)**

c. State any two **functions** of the genre. **(2marks)**

e) Provide a word which the following letter is silent. (**3marks)**

a. p

b. t

c. z

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

ENGLISH

PAPER 2

TIME: 2½ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

QUESTION 1. COMPEREHENSION PASSAGE(20 MARKS)

Read the following passage and answer the questions that follow

You may think that expecting food to change your life is too much to ask. But have you considered that eating the right food at the right time will increase your energy, help you manage weight and ward off major illness?

Researchers have found that eating a meal with plenty of protein leaves you feeling more satisfied for longer when compared to a meal loaded with low-quality carbohydrates. your body takes longer to digest protein, leading to a gradual increase in blood sugar. The high protein breakfast will therefore carry you through the morning and ,more importantly ,through your tea break. Many high-carbohydrate meals are absorbed quickly and send blood sugar on a roller coaster ride, taking your appetite with it and depleting your energy.

Many foods contain antioxidants neutralize molecules known as free radicals before they damage arteries and body cells. This protects you from heart diseases, high blood pressure, cancer and diabetes; you can now see why antioxidant foods should be consumed in generous portions. Actually, forget pills-antioxidants work best when consumed in foods. In fact, nutritionists recommend that we eat five portions of fruit and vegetables a day. Its less daunting than it sounds: a portion equals a piece of fruit, three tablespoons of cooked vegetables or a glass of flesh juice.

And do you desire to relieve yourself of some baggage? calcium is the latest weight –loss star to appear on the scene. Scientists stumbled on its magic by accident. From a study that measured the blood pressure of obese people, it was discovered that those who took one large tub of yoghurt a day in their diet lost an average of eleven pounds of body fat in one year, even though they did not eat less.

A follow-up study found that people high-calcium diet lost more weight and fat than did people on a low calcium diet- and again, both consumed the same number of calories.

Researcher*believe calcium encourages fat cells to stop "getting fatter". Instead, the cells burn extra fat without you having to go anywhere near a gymnasium.

It probably sounds strange to say that you can eat more in order to lose weight .Obviously, the question you should ask immediately is, "Eat more of what?"We are talking about foods rich in fibre . They have what is refer to as low energy density; that translates to few calories relative to weight. This means that you can down a mountain without fear of calorie overload.

Fibre also aids weight loss because its filling. Most high fibre foods take a lot of chewing triggering your bodies fullness sensors. Moreover, you absorb the food more slowly so you feel full longer. Will the wonders of food ever cease? Not if researchers in nutrition keep up their pace. Let them keep the good news flowing-such as the fact we don't have to starve ourselves to lose weight and keep disease at bay.

QUESTIONS

a. From the information given in the first paragraph, how can you improve your life? **(2 marks)**

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b. In not more than 35 words, summarize the effects of eating carbohydrates**.** **(4 marks)**

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c. Explain how free radicals contribute to the occurrence of high blood pressure and cancer.

(2 marks)

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.....

d. In what two forms can antioxidants- be consumed? **(2 marks)**

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.....

e. "In fact nutritionists recommend that we eat five portions of fruits and vegetables a day."

Rewrite the sentence above as a question without changing the meaning, beginning:

Don't…….. **(1 mark)**

f. What is the attitude of the author towards calcium calcium as a weight –cutting measure? **(2 marks)**

g. According to the passage, how can you use up excess fat? **(2 marks)**

h. Identify an instance of irony in the passage. **(2 marks)**

i. Explain the meaning of the following words as used in the passage. **(3 marks)**

i. Daunting-

ii. Baggage-

iii. Down a mountain-

QUESTION 2

Read the following excerpts and answer the questions that follow.

Ramdaye: Aaa, aah, aah, aah that was sericus mayhem! It never occurred to us that Mayor Mossi would violently disrupt our meeting. The message is now very clear: he will not allow any meeting to discuss his ouster.

Seymour: It certainly was. The hooligans were very brutal. (Demonstrating) But I drew my gun and refused to run away. I dared them to touch me!

Ted: One of them aimed a rock at my head. I never though anybody could handle such a huge stone. It flew past my head like a rocket-propelled grenade. It missed my head by the thickness of a pig's bristle!

Seymour: (Looking at Hon. Ramdaye) I was shocked you could run as you did, at your age! You whizzed past me like an express train! I never thought you would ever come to a stop!

Ted: I doubt they were just hooligans.

Seymour: Yes, their organisation and speed suggest there is more than meets the eye. It was like a military operation.

Ted: And there was smoke all over: burning tyres, papers, mattresses and sacks, combined with tear gas smoke. Sadly,we never anticipated this. I think the Mayor is a good organiser.

Ramdaye: He is called Mossi-ca-Tunya, the smoke that thunders! He is a master schemer and a go-getter!

Seymour: It is very clear that we at war. We need to carry on with our plan, to the last detail. We will not be cowed! We must mobilize the entire Municipal Council to pass the no confidence motion against him. (Looking at Hon. Ted) And, to get down to business, you remember we tasked you to talk to Councillors and Aldermen and assess whether they will support the no confidence motion.

Ted: Yes, you did, and as you know, our political landscape comprises Councillors and Aldermen of mixed ethnicity as well as those of the Afro and Indo descent.

Ramdaye: Oh, yes, it does. So?

Ted: I was on the phone almost all night and very little support was forthcoming. I assumed wrongly that we could whip up racial and class prejudice to get many of them to support us. How mistaken I was! After talking to them, I realised that our chamber members are of different categories that we must keep in mind even as we seek to woo them to support our cause.

QUESTIONS

(a) Briefly recount the events leading to this excerpt. **(2 marks)**

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(b) Why does Hor. Ted doubt the brutal young man who disrupted their morning meeting to discuss the Mayor's ouster were just hooligans? **(2 marks)**

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(c) Discuss two character traits of Hon. Seymour and one of Ted brought out in the excerpt. **(6 marks)**

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(d) What two themes are evident in the excerpt? **(4 marks)**

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(e) Single out and illustrate two features of style employed in the excerpt**.** **(4marks)**

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(f) (i) I never thought you would ever come to a stop! (Rewrite beginning: **How...) (1 mark)**

.....

.....

(ii) One of them aimed at a rock at my head. ***(Add a question tag)***

.....

(iii) Yes, their organization and speed suggest there is more than meets the eye. *(Write replacing the underlined word with a phrasal verb*. **(1 mark)**

.....

.....

(iv) I dared them to touch me. **(Report) (1 mark)**

.....

(g) Explain the meanings of the following words used in the excerpt. **(3 marks)**

• Ouster

• Whizzed

Go-getter

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

A TAXI DRIVER ON HIS DEATH BED (By Timothy Wangusa)

When with prophetic eye I peer into the future
I see that I shall perish upon this road
Driving men that I do not know
This metallic monster that I now dictate,
This docile elaborate horse,
That in silence, seems to simmer and strain
Shall surely revolt some tempting day.
Thus I shall die: not that I care
For any man's journey,
Nor for the proprietor's gain.

Nor yet the love of my own.
Not for these do I attempt the forbidden limits.
For these defy the traffic man and the cold cell,
Risking everything for the little, little more.

They shall say, I know, who pick up my bones,
"Poor chap, another victim to the ruthless machine"
Concealing my blood under the metal.

QUESTIONS

a) What is the poem about? **(3mks)**

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b) What is the attitude of the persona towards his fate? **(2mks)**

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c) With illustrations, identify the persona in the poem **(2mks)**

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d) What is the irony in the poem? **(2mks)**

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e) With illustrations, identify and comment on any other two stylistic devices used in the poem **(6mks)**

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f) Comment on the following line **(2mks)**

"Poor chap, another victim to the ruthless machine"

……

……

……

g) How will the persona's death come about? **(2mks)**

……

……

……

h) Give the poem another **title** **(1mk)**

_____

_____

QUESTION 4

a. After each of the following words, write a word that is gender sensitive. **(3 marks)**

i. Spokesman-

ii. Airhostess-

iii. Cleaning lady-

b. Use the correct form of the word in brackets to complete each of the following sentences.

(3 marks)

i. Owino did not know that a tree had…….(strike) his house

ii. Nobody expected the company to make ……..(lose)

iii. The three……..(passer-by)were arrested.

c. Fill in the blank spaces below with the correct form of the verb in brackets**.(3 marks)**

i. The team was……..…..…... for coming late.(qualify)

ii. They were……..…..……attacked by the gangsters.(vicious)

iii. The ……..of the matter brought the president to their county.(grave)

d. Fill each blank space in the following sentences with the correct preposition**.(6 marks)**

i. Sometimes it is quicker to go……..……..foot than……..bus.

ii. Sign your name……..…the dotted line……...the bottom of the page.

iii. There is something exciting……...…football.

Throughout Kenya, football matches are played……..…..capacity crowds.

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

ENGLISH

PAPER 3

TIME: 2½ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

INSTRUCTIONS

Answer three questions only

1. **IMAGINATIVE COMPOSITION**

Either

a) Write a story starting with:

As I said goodbye to her, little did I know that would be the last time I would be seeing her…

(20 Marks)

Or

b) Write a composition to illustrate the following proverb:

"Beauty lies in the eyes of the beholder." **(20 Marks)**

2. **THE NOVEL (COMPULSORY)**

Fathers of Nations by Paul B. Vitta **(20 Marks)**

Good leadership generates security and desirable resources and opportunities distribution, discuss the irony of this statement basing your arguments on the novel **Fathers of nations** by **Paul B, Vitta**

3. **The Samaritan by John Lara**

To guarantee they stay in charge, leaders will employ every tactic at their disposal. Talk about it using Mayor Mossi from **John Lara's The Samaritan.**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

KISWAHILI

PAPER 1

TIME: 1¾ HOURS

NAME…… ADM NO; ……

CLASS…… DATE……

MAAGIZO KWA MTAHINIWA:

1) *Andika jina lako, nambari ya mtihani na tarehe katika karatasi ya majibu.*
2) *Karatasi hii ina maswali manne.*
3) *Jibu maswali mawili pekee. Kila swali lina alama ishirini.*
4) *Swali la kwanza ni la lazima.*
5) *Chagua swali jingine lolote kutoka kwa matatu yaliyosalia.*
6) *Majibu yote yaandikwe katika karatasi ya majibu uliyopewa.*
7) *Majibu yote yaandikwe katika lugha ya Kiswahili.*

Sehemu hii imehifadhiwa kwa matumizi ya mtahini pekee.

SWALI	1	2	3	4
UPEO	20	20	20	20
ALAMA				

UPEO	40
ALAMA ZA MTAHINIWA	

1. **SWALI LA LAZIMA.**

Gari unalosafiria limehusika katika ajali mbaya barabarani. Japo kuna walioaga dunia, wewe hujadhurika kwa njia yoyote.

Andika mahojiano kati yako na mwandishi wa gazeti la Mwangaza ambaye amekuja kukuhoji kuhusu ajali hiyo.

2. Pendekeza njia mbalimbali zinazoweza kutumiwa ili kuleta utangamano wa kitaifa.

3. Sitapiki nyongo harudi haramba.

4. Malizia kwa maneno haya… hapo ndipo nilipogundua umuhimu wa uhifadhi wa mazingira.

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

KISWAHILI

PAPER 2

TIME: 2½ HOURS

NAME…… ADM NO; ……

CLASS…… DATE……

MAAGIZO KWA MTAHINIWA

- *Jibu maswali yote.*
- *Majibu yote yaandikwe katika nafasi zilizoachwa katika kijitabu hiki cha maswali.*
- *Tumia hati safi.*

KWA MATUMIZI YA MTAHINI PEKEE

Swali	Jumla	Tuzo
1	15	
2	15	
3	40	
4	10	
JUMLA	80	

1. UFAHAMU (Alama 15)

Soma makala yafuatayo kasha ujibu maswali

Huku ulimwengu unapoingia katika teknologia ya tarakilishi na sera ya utandaridhi, ukweli wa mambo ni kuwa akina mama wamezinduka. Suala la usawa wa kijinsia limeanza kushamiri kote duniani na ole wake mwanamume yeyote ambaye hajawa tayari kutembea na majira. Lakini hebu tuchunguze jambo hili kwa makini zaidi.

Usawa wa jinsia ni nini? Usawa wa kijinsia ni usawa wa binadamu wote; wawe wake au waume. Usawa huu unapaswa kudhihirika katika kugawa nafasi za kazi, utoaji wa elimu, nafasi za uongozi na nyanja nyinginezo zozote za maisha.

Ubaguzi wa aina yoyote ile hasa dhidi ya mwanamke ni jambo linalokabiliwa na vita vikali sana ulimwenguni kote.

Dahari na dahari, hasa katika jamii za kiafrika, kumekuwa na imani isiyotingisika kuwa mwanamke ni kiumbe duni akilinganishwa na mwanaume. Kwa hivyo mwanamke amekuwa akifanyiwa kila aina ya dhuluma ikiwepo kupigwa, kutukanwa, kudharauliwa, kunyimwa haki zake, kunyimwa heshima na mambo kama hayo. Lakini je, ni kweli kuwa mwanamke ni kiumbe duni asiyefaa kutendewa haki?

Tukichunguza jamii kwa makini tunaweza kuona mara moja kuwa hivyo ni imani potofu isiyo na mashiko yoyote. Ukiimulika familia yoyote ile iliyopiga hatua kimaendeleo, uwezekano mkubwa ni kuwa mume na mke wa familia inayohusika wana ushirikiano mkubwa. Mume anamthamini mke wake na hadiriki kufanya maamuzi muhimu yanayoweza kuathiri maendeleo ya familia bila kumhusisha mke. Mume kama huyo huketi na mkewe, wakishauriana na kufikia uamuzi bora.

Tukitoka katika muktadha wa kifamilia na kumulika ulimwengu wa kazi iwe ni katika afisi za kiserikali au kwenye makampuni binafsi, ukweli ni kwamba kiongozi yeyote yule aliyefaulu katika usimamizi wake mara nyingi huwa na mke nyumbani ambaye wanashauriana kila uchao kuhusu kazi anayofanya hata kama mke hafanyi kazi mahali pale. Hisia na mawaidha anayotoa mke kwa mume wake ni tunu na huenda asiyapate kwingineko kokote hata katika vitabu vya kupigiwa mifano. Hii ni mojawapo ya sababu ambayo huwafanya viongozi wa nchi mbalimbali kupenda sana kuwatambulisha wake na familia zao waziwazi kwa vile wanajua kuwa jamii inathamini sana msingi wa jamii. Kiongozi ambaye hana mke au familia au yule ambaye mke wake hatambuliki, hutiwa mashaka na jamii hata kama ni kiongozi aliye na azma ya kushikilia kazi ngumu ya kuongoza umma.

Tukirudi nyuma kidogo na kupiga darubini mataifa ya mbali, tunaweza kuwaona wanawake mashuhuri walio uongozini ambao hadi waleo unapigiwa mfano. Wanawake mashuhuri waliotoa uongozini ambao hadi waleo unapigiwa mfano. Wanawake hao walisimamia mojawapo ya mataifa yenye uwezo na ushawishi mkubwa zaidi duniani. Ingawa wengi wao sasa wameng'atuka, uongozi wao bado unakumbukwa hata baada ya miaka mingi ya wao kuamua kupumzika, Mifano ni kama: Bi Margaret Thatcher aliyekuwa waziri mkuu wa Uingereza, Bi Bandranaike wa Sri Lanka, Golda Meir wa Israel na wengine wengi katika mataifa kama Indonesia, Ufilipino, Bangladesh, Pakistani na kwingineko.

Katika kufikia tamati, tunapozungumza kuhusu jinsia, hatuna budi kugusia kitafsili masuala nyeti. Kwanza, imani ya kushikilia kikiki tamaduni zisizofaa, ni jambo linalofaa kuchunguzwa kw makini. Kwa mfano, kuna badhi ya jamii ambazo humlazimu mke kurithiwa baada ya kifo cha mumewe. Vile vile baadhi ya jamii za kiafrika zinashikilia kuwa mwanamke hana haki ya kurithi. Kutokana

na imani hii, wanawake wengi huishi maisha ya taabu baada ya kutengana na waume zao kwa vile hawana haki ya kurithi chochote kutoka kwa wazazi wao hata kama wazazi hao wana mali nyingi kupindikukia. Mali ya wazazi ni haki ya watoto wa kiume wala si watoto wa kike! Hili ni jambo la kusikitisha mno.

Isitoshe, wanawake hukumbwa na kizingiti kingine wanapojaribu kumiliki mali ya waume zao baada ya waume hao kukata kamba. Sababu ni kuwa, baada ya hao wenda zao kuwekwa kaburini, vita vya umiliki wa mali huanza mara moja na mwishowe yule mke maskini hujikuta hana hata mahali pa kulala sembuse mali waliyochuma na mali yake yote kunyakuliwa na aila ya mumewe . Jambo hili linaonyesha namna tulivyoachwa nyuma na uhalisia wa mambo. Ni lazima jamii izinduke na itoke kwenye kiza hiki chenye maki nzito.

MASWALI

(a) Ina maana gani kusema kuwa wanaume hawana budi "kutembea na majira?"**(alama2)**

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.....

(b) Kabla ya uzinduzi huu kuhusu usawa wa kijinsia, wanawake wamekuwa wakitendewa dhuluma za kila aina. Taja tatu. **(alama 3)**

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(c) Je, ni kwa nini viongozi wengi hupenda kujitambulisha na familia zao? **(alama 2)**

.....

.....

(d) Je, unaamini kuwa hisia na mawaidha anayotoa mke kwa mume wake ni tunu na huenda yasipatikane kwingineko? Fafanua **(alama 2)**

.....

.....

.....

(e) Je licha ya kunyimwa haki yake ya kujiamulia, ni matatizo yapi mengine yanayoweza kumukumba mke anayelazimishwa kurithiwa? **(alama 3)**

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……

(f) Eleza maana ya maneno yafuatayo jinsi yalivyotumiwa katika muktadha**.** **(alama 3)**

Kushamiri……

……

Hulka……

……

Azma……

……

MUKHTASARI (Alama 15)

Soma taarifa ifuatayo kasha ujibu maswali yatakayofuata.

Binadamu hupenda kujivika vilemba vingi mno.Tunapenda kuheshimiwa na kutukuzwa na kila mtu. Tunapenda kuombwa ushauri na wote ambao wanahitaji ushauri! Tunapenda kutambuliwa popote tuendapo.

Watu wengi hukataa kufanya jambo la halali kwa kuhofia kuitwa wajinga. Mfano mzuri ni pale ambapo mtu amekosea kidogo katika kutenda jambo; utaona kuwa mtu huyo anaona ugumu wa kuomba radhi au samahani ati kwa sababu ataonekana mjinga.

Je, ni mara ngapi mkurugenzi ameita mkutano na katika barua yake akatisha kuwaadhibu watakaochelewa na mwishowe ni yeye mwenyewe anayechelewa? Tena huwa haombi msamaha. Ataulaumu usingizi uliomchukua, au gari lililomleta.

Aghalabu tunapowakuza watoto wetu, tunawafunza maadili mema. Tunawahimiza wale wadogo kwamba ni vizuri kuomba radhi kwa wakubwa wako unapowakosea. Lakini kumbuka kwamba kukosea ni kwa binadamu wote. Mtu anaweza kukukosea kwa makusudi au kwa bahati mbaya. Kwa hivyo tunapaswa kufahamu kwamba, tunapofanya makosa ni lazima tuombe msamaha, iwe ni kwa wakubwa au kwa wadogo, ili kuondoa kero.

Waja wengi huogopa kusimama mbele za watu na kuwasilisha au kutenda jambo fulani. Kisa na maana, mtu hataki kutenda jambo fulani halafu akosee. Hajiamini na anaogopa kuwa huenda watu wakaona kasoro yake. Lakini kumbuka, kukosa njia ndiko kuijua.

Huenda ikawa watu wanajadili maswala ibuka kama vile ufisadi, kuavya mimba, matumizi ya dawa za kulevya, ukimwi, uzuiaji wa kizazi na kadhalika... labda huyaungi mkono maoni ya watu wengine kwa sababu ya imani na maadili yako. Hata hivyo, hutaki kusimama ukatoa msimamo wako mbele za watu ingawa dhamiri yako imekwazika. Baadaye utasikika ukiwalaumu watu wengine ilhali

ulikataa kusimama na kutetea msimamo wako.

Wengi wetu hujichukua kuwa watu muhimu sana. Wanaona kuwa sherehe au mkutano wowote hauwezi kufaulu ikiwa wao hawako. Wanapokuwa kwenye hiyo mikutano wao hutaka watambuliwe. Hupenda majina yao yatajwe. Haya huwaridhisha , lakini swali ni je, kuwepo kwao ni muhimu kiasi hicho? Kumbuka kwamba mkutano ungeendelea vizuri bila kuwepo kwao. Kwa hivyo, tusiwe watu wa kutaka kutambuliwa kila tunapoenda mahali. Pia, tusilalamike ikiwa hatukuhusishwa katika jambo fulani.

Unaposhuhudia jambo fulani, kama wizi au ajali, usiwe na woga wa kutoa usaidizi kwa kutoa ushuhuda. Wengine hata huogopa kutoa usaidizi huo, hata kwa manusura wa ajali za barabarani, eti kwa sababu wanahofia kuitwa mahakamani kutoa ushuhuda. Kuna shida gani kuenda kusema yale uliyoyashuhudia bila kuongeza au kutoa chochote?

MASWALI

a) Bila kupoteza maana, fupisha aya ya kwanza hadi ya nne.(maneno 60) **(alama 7)**

Nakala chafu:

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Nakala safi:

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b) Fupisha aya nne za mwisho. (maneno 50) **(alama 8)**

Nakala chafu.

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Nakala Safi.

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MATUMIZI YA LUGHA (Alama 40)

a. Taja tofauti iliyopo kati ya sauti /f/ na /v/ **(alama 1)**

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……

b. Andika sentensi ifuatayo ukitumia kinyume cha neno lililoandikwa kwa herufi ya mlazo:

(alama 1)

Binadamu hawezi *kumuumba* mwenzake.

……

c. Andika sentensi ifuatayo upya ukizingatia kisawe cha neno lililopigwa mstari: **(alama 1)**

Mtoto mwenye <u>hamaki</u> hawezi kuelewa maagizo.

……

d. Andika kwa usemi halisi: **(alama 3)**

Yule mshukiwa aliyekamatwa na polisi alisema kuwa papo hapo ndipo alipoficha ule mkufu.

……

e. Tunga sentensi inayoshirikisha nomino uliyopewa pamoja na vipashio vifuatavyo vya sarufi: kivumishi kisisitizi, kitenzi kishirikishi, kitenzi, na kielezi cha wakat**i.** **(alama2)**

Pinde……

……

f. Sahihisha sentensi zifuatazo :

(i)Ndegwa alipeana kalamu yake kwa mwanafunzi. **(alama 1)**

……

(ii)Siku hizi mahitaji imezidi na pesa haitoshi. **(alama 1)**

……

g. Tunga sentensi mbili kubainisha maana mbili tofauti za neno: **rudi.** **(alama 2)**

(i)……

……

(ii)

……

……

h. Akifisha: **(alama 2)**

Mtume asimame nusura aingie kwenye shimo la taka

……

i. Unda nomino kutokana na kivumishi:**refu** **(alama 1)**

……

……

j. Onyesha chagizo katika sentensi ifuatayo: **(alama 1)**

Watu wanne walipeperushwa juu kwa juu na upepo mkali.

……

……

k. Tunga sentensi ukitumia**: isije ikawa** **(alama 2)**

……

……

l. Andika upya sentensi ifuatayo ukitumia virejeshi vya tamati: **(alama 2)**

Mwanafunzi anayefanikiwa maishani ni yule anayesoma kwa bidii na pia anayewatii wazazi wake.

……

……

……

m. Ainisha viambishi awali na tamati katika sentensi: **Anikumbukay**e **(alama 2)**

……

……

n. Kanusha kwa udogo: Mwizi aliiba kikapu na ng'ombe. **(alama 2)**

……

……

o. Andika umoja wa sentensi: **(alama 1)**

Kwato za wanyama hutufaidi.

……

……_

p. Andika kwa wingi **:** **(alama 4)**

Wimbi hilo la maji lilimhofisha mvuvi akashindwa kutupa wavu wake majini.

……

……

q. Andika katika hali ya kutendewa: **(alama 2)**

Kuku hawa wamemsumbua Sabina kwa muda mrefu.

……

……

r. Tumia sentensi moja moja kubainisha tofauti kati ya sentensi **sahili** na sentensi **ambatano**

(alama 2)

……

……

……

s. Changanua sentensi ifuatayo kwa njia ya mistari au mishale:

Mwanasiasa aliyewapuuza wanaeneo bunge lake amekomelewa. **(alama 4)**

……

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……

……

t. Andika katika usemi wa taarifa. **(Alama 2)**

"Karibu Bakari, tafadhali kaa", Maimuna alisema. "Asante, je, habari za nyumbani?" Bakari aliuliza.

……

……

……

……

u. Taja aina ya yambwa iliyopigiwa mstari katika sentensi uliyopewa: **(alama 1)**

Mpishi amempikia <u>mgeni</u> wali vizuri.

……

……

ISIMUJAMII (Alama 10)

(a) Taja nadharia zozote mbili zinazohusiana na chimbuko la lugha ya Kiswahili**.** **(alama 2)**

.....

.....

.....

(b) Kwa kutolea mifano, eleza sifa zozote nne za kimsingi za sajili inayoweza kutumika darasani.

(alama 8)

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FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

KISWAHILI

PAPER 3

TIME: 2½ HOURS

NAME…… ADM NO; ……

CLASS…… DATE……

MAAGIZO: Jibu maswali yote katika karatasi hii.

SWALI	UPEO	ALAMA
1	20	
2	15	
3	55	
4	10	
jumla	100	

SEHEMU YA A: FASIHI SIMULIZI.

1. a) Eleza umuhimu wa nyimbo katika usimulizi wa **hadithi.** **(al.4)**

b) i)Eleza maana ya misimu**.** **(al.2)**

ii) Taja mifano yoyote miwili ya misimu. **(al.2)**

c) Taja sifa tatu za vitanza ndimi**.** **(al.3)**

d) Taja sifa tatu za vitendawili**.** **(al.3)**

e) Fafanua umuhimu wa vitendawili. **(al.6)**

2. SEHEMU YA B: USHAIRI.

Soma shairi lifuatalo kisha ujibu maswali yote.

Akosaye shukurani, zako juhudi hajali,
Hata mfanyie nini, haoni huyo hajali,
Hata mpe milioni, matusi ndio stahili,
Aona huna akili, ni yeye ndiye mshindi.

Patia kila la shani, bure unajisumbua,
Takuona kama nyani, tena atakunyambua,

Akuona punguani, chochote hutaambua,
Usingoje shukurani, tenda wema wende zako.

Utafute kwa juhudi, bila kukata tamaa,
Mpe apate faidi, wala asipate njaa,
Hatachoka kukaidi, atakuletea baa,
Na mawazo yakujaa, maishayo hafikiri.

Mpe vyote vya haluwa,wenzako wamtamani,
Hatakupa ya muruwa, juhudi haioni,
Ataka kuzidishiwa, asubuhi na jioni,
Ufanyacho hathamini, aongeze ya karaha.

Si ndugu wala si mwana, si rafiki si jirani,
Shukrani kiwa hana, jua uko hatarini,
Hadharani tatukana, aulize ndiwe nani,
Ambe kama hajaona, kinyangarika kamawe.
Hebu yeye msaili, amepata toa nini?
Haweziye kukubali, kukupa hata thamani,
Ni bure wake ukali, akutia mashakani,
Yake wala hayaoni, mwovu hana shukurani.

Mfadhili watengaje, jana alikuopoa,
Mwaema wambwekeaje, mabaya wayachokoa,
Mzazi wadharauje, mbali alishakutoa,
Sasa jaribu kupoa, ujifunze shukurani.

Maswali

1. Lipe shairi hili anwani mwafaka. **(al.1)**
2. Hili ni shairi la aina gani? Thibitisha. **(al.2)**
3. Eleza dhamira ya mshairi katika shairi hili. **(al. 2)**
4. Bainisha mifano mitatu ya uhuru wa mshairi katika shairi hi**li.** **(al.6)**
5. Andika ubeti wan ne kwa lugha nathari. **(al. 4)**
6. Taja na utolee mfano tamathali zozote mbili za usemi katika shairi**.** **(al.4)**
7. Eleza maana ya neno hili kama lilivyotumika katika shairi hili. **(al1)**
Shani

3. TAMTHILIA YA BEMBEA YA MAISHA

Anwani bembea ya Maisha inaafiki tamthiliya hii. Jadili kwa kutoa hoja ishirini **(alama 20)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

MATHEMATICS

PAPER 1

TIME: 2½ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

INSTRUCTIONS

1: *This paper consists of two sections 1 and 2. Answer all the questions in section 1 and any **5** questions in section 2.*

2: *KNEC mathematical tables and electronic non- programmable calculators may be used where necessary.*

3: *Answer all the questions in the spaces provided*

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

Section 2	17	18	19	20	21	23	24	total	

Grand total

SECTION 1

Answer all questions in this section

1. Find without using tables or a calculator the value of **(3mk|)**

$$\frac{1.33 \times 0.51}{0.19 \times 0.0017}$$

2. The ratio of the size of the exterior angle to the interior angle of a regular polygon is 1:3. Determine the number of sides of the polygon and name it. **(3mk)**

3. Given that $2x^2 - kx + 18$ is a perfect square, find k and hence solve the equation $2x^2 - kx + 18 = 0$ by factorization. **(4mk)**

4. Work out using logarithms to 4 s.f

$$\frac{\sqrt{(6.225\log 1.001)}}{(56.7\times 0.031)^3}$$ **(4mk)**

5. Mr. Kanja,Miss Kanene and Mrs Nyaga have to mark a form three math contest for 160 students. They take 5mins, 4mins, and 12mins respectively to mark a script. If they all start to mark at 9.00 am non-stop, what is the shortest time they can take to complete the marking? **(3mk)**

6. Jackie takes 5minutes to run a distance of 1km in a race. Express her speed in

a) km/hr

b) m/s **(2mk)**

7. Use reciprocal tables to find the value of f given that $\frac{1}{f} = \frac{1}{11} + \frac{2}{13}$ **(3mk)**

8. A man left $\frac{1}{5}$of his estate in Kerugoya to his wife and $\frac{1}{3}$ to each of his two sons .The remainder was to be shared equally among his six brothers. If the estate was worth sh 3 456 000, how much did each of those people get? **(3mk)**

9. A distance of 12km is represented by a length of 4cm on a map. Given that the scale of the map is 1:n, find the

a) value of n

b) actual area in hectares of a field on the map with an area of $32cm^2$ **(3mk)**

10. Solve the equation $\frac{1}{3}(x+4)-\frac{1}{2}(2x-4) = 2$ **(2mk)**

11. The sides of a right angled triangle measured to the nearest cm are 5cm, 12cm and 13cm Determine the

a) limits within which the measured dimensions lie **(1mk)**

b) percentage error in the area of the triangle. **(3mk)**

12. Form a quadratic equation in the form $ax^2+bx+c=0$ whose roots are b and twice the negative reciprocal of b. **(3mk)**

13. The coordinates of points A and B are A (2, 3).B (4,–5). M is the midpoint of vector AB. Determine the coordinates of point M and the magnitude of vector BM. **(3mk)**

14. The equation of line L is y=3x–4 and is perpendicular to line H. They cross each other at the y-intercept of line L. Find the equation of line H. **(3mk)**

15. In a circle radius 10cm, an arc PQ subtends an angle of $\frac{5}{12}\pi$ radians at the centre of the circle. Calculate the radius of another circle whose circumference is equal to the length of arc PQ **(4mk)**

16. Solve for a in 3^{2a+3} =2187 **(3mk)**

SECTION B

Answer any 5 questions in this section

17. Four towns are situated in such a way that town Q is 500km on a bearing of 120º from P. Town R is 240km on a bearing of 210º from town P, while town S is due north of town Q and due east of town P.

a) Draw a sketch diagram showing the relative positions of P, Q, R and S. **(2mk)**

b) Find by calculation

i) the distance QR **(2mk)**

ii)the distance QS **(2mk)**

iii)the angle PRQ **(2mk)**

iv)area of triangle PQS **(2mk)**

18. a) Represent the following inequalities graphically by shading the unwanted region

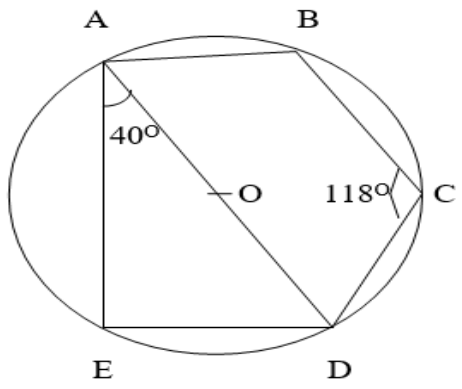
$x \geq 0$, $y \geq 0$, $x+y \geq 5$, $x+y \leq 10$, $y \leq 7$, $x \leq 7$ **(6mk)**

b) write down the coordinates of one point that is inside the wanted region **(1mk)**

c) Name the figure formed by the unshaded region **(1mk)**

d)measure and find the sum of all the angles in the figure formed in c) above. **(2mk)**

19. In the figure below, O is the centre of the circle and ∟EAD=40º, ∟BCD=118º



Find giving reasons

a) ∟ADE **(2mk)**

b) reflex ∟EOD **(2mk)**

c) ∟EBD **(2mk)**

d) ∟EAB **(2mk)**

e) ∟DAB **(2mk)**

20. The marks scored in a form three maths exam were recorded as follows

69 70 72 40 52 60 22 31 78 53 28 67 63 54 57 48 47 56 55 62

75 38 37 44 62 64 58 39 45 48 65 50 85 46 47 57 35 34 58 64

62 37 41 42 36 54 82 48 53 57 56 72 56 48 44 55 78 59 50 45

a) Make a grouped frequency table with classes 20—29,30—39,40—49,etc **(2mk)**

b) What is the modal distribution of the test **(1mk)**

c) Calculate the mean of the data **(4mk)**

d) Calculate the median mark **(3mk)**

21. The velocity(v)of a vehicle measured at intervals of time(t) were recorded as follows

t(s)	0	2	4	6	8	10	12
v(m/s)	0	20	40	40	30	8	0

a) Represent this motion on a graph **(3mk)**

b) Calculate the acceleration **(2mk)**

c) Calculate the total distance travelled by the vehicle **(3mk)**

d)Calculate the average velocity of the vehicle **(2mk)**

22. A wooden stool is in the form of a frustum of a cone with slant edge 40cm,top diameter 30cm and bottom diameter 50cm.

a) calculate the perpendicular height of the stool **(3mk)**

b)calculate the total surface area of the stool in terms of π **(3mk)**

c)calculate the volume of wood used to make the stool in terms of π **(3mk)**

d)given that the density of the wood used to make the stool is $0.8g/cm^3$, calculate the mass of the stool in kg **(1mk)**

23. Using ruler and compasses only,

a) construct triangle ABC in which AB=5cm,BC=6cm and angle ABC=120º. **(3mk)**

b)measure angle ACB **(1mk)**

c)drop a perpendicular from C to cut AB produced at P. Measure CP. **(2mk)**

d)hence calculate area of triangle ABC to 1dp **(2mk)**

e)calculate the radius of a circle that passes through the vertices of triangle ABC **(2mk)**

24. The distance between two towns A and B is360km.A minibus left town A at 8.15a.m and travelled towards B at an average speed of 90km/hr. A matatu left town B at 10.35a.m on the same day and travelled towards A at an average speed of 110km/hr.

a)i)how far from A did they meet? **(4mk)**

ii)at what time did the two vehicles meet? **(2mk)**

b) A motorist left his home at 10.30a.m on the same day and travelled at an average speed of 100km/hr. He arrived at B at the same time as minibus. Calculate the distance from B to his home. **(4mk)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

MATHEMATICS

PAPER 2

TIME: 2½ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

INSTRUCTIONS

*1. This paper consists of two sections. Answer all the questions in section 1 and any **5** questions in section 2.*

2. KNEC mathematical tables and non-programmable calculators may be used when necessary

3. Answer all the questions in the spaces provided.

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

Section 2	17	18	19	20	21	22	23	24	total

Grand total

SECTION 1

Answer all the questions in this section

1. Evaluate $\dfrac{36 - 8 \times -4 - 15 \div -3}{-3 \times -3 - 8(-6 + -2)}$ **(3mk)**

2. Simplify $\dfrac{a+b}{2} - \dfrac{2a-b}{3}$ **(3mk)**

3. Find the greatest number which divides 181 and 236 and leaves a remainder of 5 in each case

(2mk)

4.A rectangle measures 20cm by 15cm.If each dimension is increased by 2.5cm, by what percentage is

a) the perimeter of the rectangle increased **(2mk)**

b)the area of the rectangle is increased **(2mk)**

5.The angle of elevation of the top of a tree from a point P on horizontal ground is 30º. From another point Q 8 metres from the base of the tree, the angle of elevation of the top of the tree is 48º.

a) Calculate to one decimal place the height of the tree. **(1mk)**

b) Calculate the distance between P and Q **(2mk)**

6.Given that $\cos\theta = -0.8070$, find θ for $0 \leq \theta \leq 720$ **(3mk)**

7.A piece of wire 40cm is bent to form a right-angled triangle whose hypotenuse is 17cm long. Find the lengths of the other two sides of the triangle **(4mk)**

8.Solve for x in $\log 5 - 2 + \log(2x+10) = \log(x-4)$ **(3mk)**

9. Solve the quadratic equation by completing of squares giving your answer to 3sf

$11x^2 - 13x + 3 = 0$ **(4mk)**

10. Rationalize the denominator and simplify

$$\frac{4\sqrt{5}+3\sqrt{2}}{2\sqrt{2}-\sqrt{5}}$$ **(4mk)**

11. Use a calculator to work out

a) $\sqrt[4]{\frac{186\times120}{490\times211}}$ **(1mk)**

b) $\sqrt[3]{\frac{62^2-270}{91\times4693}}$ **(1mk)**

12. A tourist from Kenya left for Ethiopia. He exchanged sh 9898 into Ethiopian Birr at the rate of 1 Eth.Birr=ksh7.95. He spent ¾ of the money he got and converted the balance back to Kenyan money at the rate of 1Eth.Birr=ksh7.98 Calculate what he finally got to 2dp **(3mk)**

13. Simplify the expression

$$\frac{9t^2-25a^2}{6t^2+19at+15a^2}$$ **(3mk)**

14. Three types of tea costing sh203,sh146 and sh197 per kg are blended in the ratio of 2:5:k. Find the value of k,if the blend when sold at sh221 per kg gives 30% profit **(3mk)**

15. A two digit number is such that 4 times the units digit exceeds the tens digit by1. If the digits are reversed, the number formed is decreased by 45. Find the number. **(3mk)**

16. A triangular field has dimensions 21m by 52m by 47m.

a) calculate the area of the field to the nearest m^2. **(2mk)**

b)calculate the length of a straight ditch dug from the largest angle meeting the opposite side at right angles. **(1mk)**

SECTION B

Answer any 5 questions in this section

17. A bookseller bought a number of cartons of books at a cost of ksh 57600 from Kagumo bookstore. Had he bought the same books from Kerugoya bookstore, it would have cost him ksh 480 less per carton. This would have enabled him to buy 4 extra cartons of books for the same amount of money. By taking x to be the number of cartons of books he actually bought;

a) write an expression in x

i) for the cost of each carton he bought at Kagumo bookstore **(1mk)**

ii)for the cost of each carton had he bought from Kerugoya bookstore **(1mk)**

b)find the value of x **(6mk)**

c) the bookseller later sold all the books he had bought each carton at ksh 720 more than he had paid for it. Determine the percentage profit he made **(2mk)**

18. A cylindrical metal bar of diameter 14cm and length 2m is melted and moulded into spherical balls. In the process, 5% by volume of metal is lost and what remains makes balls of radius 3.5cm.

a)calculate the volume of metal used to make the balls. **(3mk)**

b)find to the nearest whole number the number of balls made **(3mk)**

c)find the total surface area of the metal bar **(2mk)**

d)find the total surface area of the balls made **(2mk)**

19.a) Draw the graph of $y=(2x-3)(x-1)$ for the interval $-2 \leq x \leq 4$ **(6mk)**

Graph Paper Provided (Attached)

b)use your graph to solve

i)$2x^2-5x+3=0$ **(1mk)**

ii)$2x^2=3x+2$ **(3mk)**

20. a) Plot triangle ABC with coordinates A(1, 1), B(3, 1) and C(1,3) **(1mk)**

b)Plot $A'B'C'$ the image of ABC under an enlargement scale factor 2 centre A and write down it's coordinates **(2mk)**

c)Plot $A''B''C''$ the image of $A'B'C'$ under a reflection in the line x+y=0 and write down it's coordinates **(3mk)**

d)$A''B''C''$ is then reflected in the line y=0 to give $A'''B'''C'''$. Give the coordinates of $A'''B'''C'''$ **(2mk)**

e)Describe fully a rotation that maps $A'''B'''C'''$ onto $A'B'C'$ **(2mk)**

21.Three businessladies Wanjiku, Muthoni and Njoki decided to buy a lorry. The .marked price of the lorry was 2.8million shillings. The dealer agreed that the ladies could pay a deposit of 60% of the marked price and the rest to be paid within a year.The ladies raised the deposit in the ratio of 3:2:5 respectively. At the end of the year the lorry had realized 2.08million shillings which the three shared in the ratio of their contribution. However, they were required to contribute for the balance of the lorry from these earnings again in the ratio of their original contributions.

a)calculate amount to be paid as deposit **(1mk)**

b)how much did each contribute to pay for the deposit? **(3mk)**

c)how much did Njoki receive at the end of the year? **(1mk)**

d)calculate the total amount Muthoni and Njoki contributed to pay for the balance. **(3mk)**

e)how much money did Wanjiku remain with after paying her share of the balance? **(2mk)**

22.a) Make a table and draw the graph of y= sinx–cosx for x in the range $0° \leq x \leq 360°$, with y values to 2dp and x intervals of 30° **(6mk)**

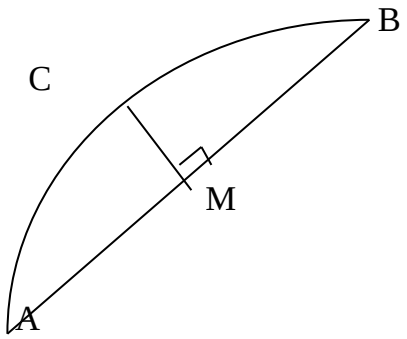
b)use the graph to find the value of y when

i) x=75° **(1mk)**

ii) x=255° **(1mk)**

c)find the values of x for which y= –0.9 **(2mk)**

23.The figure below is a segment of a circle centre O radius r units.CM is the perpendicular bisector of AB .



Given that CM=1cm and AB=$2\sqrt{3}$cm,

a)calculate the radius of the circle centre O from which the segment was cut **(3mk)**

b)calculate the angle that chord AB subtends at the centre of the circle **(2mk)**

c)hence calculate

i)the length of arc ACB **(2mk)**

ii)the area of the segment AMBC **(3mk)**

24.A rectangular sheet of metal which measures 120cm by 0.8m is 1.5mm thick and is made of material whose density is 2.2 g/cm³. From each of the four corners of the rectangle, a square of side 10cm is cut off and the remaining part folded to form an open cuboid.

a)calculate

i) the capacity of the cuboid in cm³ to the nearest whole number **(3mk)**

ii)the mass of the empty cuboid in kg to the nearest whole number **(3mk)**

b)the cuboid is filled with a liquid whose density is 0.75g/cm³. Calculate the mass in kg of the cuboid when full of the liquid **(2mk)**

c)calculate the mass of metal lost in kg **(2mk)**

FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

HOME-SCIENCE

PAPER 1

TIME: 2½ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

INSTRUCTIONS

Answer all the questions in the spaces provided.

1. Give another name for the following vitamins. **(2mks)**

a. Vitamin K

b. Vitamin A

2. Suggest two ways in which malnutrition can be caused by ignorance. **(2mks)**

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3. State the function of each of the following parts of the sewing machine. **(2mks)**

a. Feed dog

b. Stop motion screw.

4. Mention two items found in the homes that are frequently recycled. **(2mks)**

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5. State three ways of controlling infections at home. **(3mks)**

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6. Draw care labels to show the following. **(2mks)**

a. Do not bleach

b. Use a warm iron

7. List five signs of pregnancy. **(5mks)**

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8. Giving reasons in each case suggest three nutrients whose intake should be increased during pregnancy. **(6mks)**

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9. Give three qualities of fruits used for making jam. **(3mks)**

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10. State two factors which determine the efficiency of a disinfectant. **(2mks)**

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11. Give three precautions to take when using a charcoal iron. **(3mks)**

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12. Give three reasons for decorating foods. **(3mks)**

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13. Give three factors that determine the laundry process to be used. **(3mks)**

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14. State three reasons for emptying pockets before washing clothes**.** **(3mks)**

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15. Suggest two factors that make cotton fabrics most preferred for making hospital bed sheets.

(2mks)

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SECTION B

ANSWER ALL QUESTIONS.

16. You are preparing to go for along holidays from school. Describe how you would:

a. Clean your wooden locker. **(8mks)**

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b. Launder your blanket. **(12mks)**

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c. Wash your stainless steel spoon. **(7mks)**

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FORM 3 MIDTERM 2 EXAMS

SMART-GRADE SERIES

HOME-SCIENCE

PAPER 2

TIME: 2½ HOURS

NAME..... ADM NO; .....

CLASS..... DATE.....

45MKS

INSTRUCTIONS

Answer all the questions in the spaces provided.

A pattern of a girls skirt is provided. You are advised to study the sketches, instructions and layout carefully before you begin the test.

Material provided.

1. Pattern pieces.

A – Skirt back

B - Skirt front

C – Pocket

D – Waist band

2. Plain light weight cotton fabric 55cm x 90cm wide.

3. Sewing thread to match the fabric.

4. One large envelop.

THE TEST

Using the materials provided cut out and make the **RIGHT HALF** of the skirt to show the following processes:

a. Making of the back dart.

b. Preparation of plants on the skirt front.

c. Attachment of front pocket to the skirt and back pocket to the skirt back. Do not trim or neaten the seam.

d. Making the side seam using an open seam. Neaten below the pocket only.

e. Joining of the pocket seam. Do not neaten.

f. Preparation of an interfaced waistband.

g. Attachment of the waistband, slip-hem the back piece only.

h. Making of the worked loop on the back waistband for a 1cm wide button.

At the end of the examination, family sew onto your work on a single fabric, a label bearing your name and admission number. Remove needles and place it in the envelope provided. Do not put scraps if fabric in the envelope.

THE END

For Marking Schemes, Contact Mr Isaboke

0746-222-000/0742-999-000

Mwalimu Consultancy Ltd

FOR THE FOLLOWING;

- ✓ ONLINE TUITION
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