FORM 3 ENDTERM 1 EXAMS

ALL SUBJECTS

Series 2 of End of Term 1 Examinations for the Form 3 Students in the Republic of Kenya.

SUBJECTS TESTED;

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

SERIES 2

For Marking Schemes

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MWALIMU CONSULTANCY

FORM 3 ENDTERM 1 EXAMS

SERIES 2

BIOLOGY

PAPER 1

TIME: 2 HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

Answer All the Questions

1. The scientific name of the cat is *Felis Catus* classify the cat into; **(3mks)**

i) Kingdom……

ii) Genus……

iii) Species……

2. The figure below shows a structure of a tooth:



(a) Identify the tooth: - **(1 mk)**

……

(b) State how the tooth named in (a) is modified to perform its function:- **(1 mk)**

……

……

3. a) Name the hormone secreted in the human body when one takes in a large amount of water:- **(1 mk)**

……

(b) Which disease results from inadequate production of the hormone named in (a) above? **(1mk)**

……

4. Give two structural features that can be used to separate a housefly, a millipede, and a tick into their respective classes. **(2mks)**

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5. State three main functions of the stomach in human beings:- **(3 mks)**

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6. It was found that during germination of bean seeds, 9.2 cm^3 of carbon IV Oxide was produced while 9.0 cm^3 of oxygen was used up.

(a) (i) Calculate the respiratory quotient of the reaction:- **(2 mks)**

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(ii) Identify the substrate being met abolished:- **(1 mk)**

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(b) In which part of the cell does glycolysis occur? **(1 mk)**

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7. State three functions of the mammalian blood other than transport **(3mks)**

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8. Other than sexual intercourse name the other ways by which HIV/AIDS is spread **(3mks)**

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9. State three characteristics features of an efficient respiratory surface **(3mks)**

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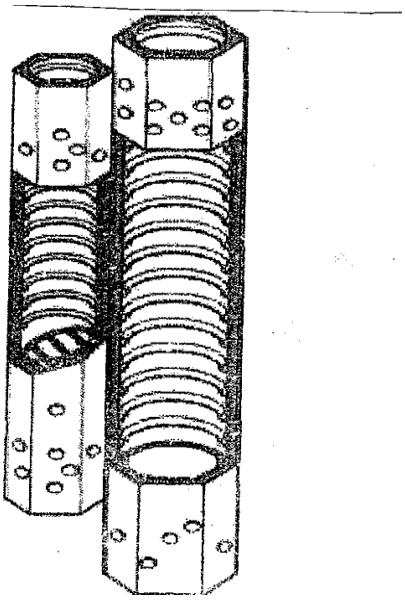
10. State three environmental factors that affect the rate of stomatal transpiration **(3mks)**

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11. The cells shown below are adapted for transport in flowering plants.



(a) Name the tissue in which these cells are found. **(1 mk)**

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(b) Identify and explain **<u>two</u>** observable features of these cells that adapt them to their role in transport. **(2mks)**

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12. Name two areas in human body where active transport takes place. **(2mks)**

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13. State the functions of the following cell organelles: **(2mks)**

(a) Nucleolus.

……

(b) Plasma membrane

……

14. Distinguish between guttation and transpiration **(2mks)**

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15. What are the functions of the following parts of a light microscope? **(3mks)**

(a) Eye piece lens

……

(b) Condenser

……

(c) Diaphragm

……

16. (a) What is peristalsis? **(1mks)**

……

……

(b) Explain how the process above is brought about. **(2mks)**

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17. (a) State **three** structural differences between arteries and veins in mammals **(3mks)**

……

……

……

(b) Name a disease that causes thickening and hardening of arteries **(1mk)**

……

18. Identify **two** forces that help in upward movement of water in plants **(2mks)**

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……

19. State **two** reasons why lipids are rarely used as a respiratory substrate compound to Carbohydrates. **(2mks)**

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……

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20. The equation below represents a metabolic process that occurs in the mammalian liver: **(2mks)**

Amino acids = organic compound + urea

(a) Name the process

……

(b) What is the importance of the process to the mammals?

……

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21. **(a)** Define the term balanced diet. **(2mks)**

……

……

(b) State the importance of roughage in a diet. **(1mark)**

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……

22. **(a)** How do the following factors affect the rate of diffusion? **(3mrks)**

(i) Surface area to volume ratio

……

……

(ii) Diffusion gradient

……

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(iii) Temperature

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……

23. Name any three specialized plant cells. **(3marks)**

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24. Name **three** sites where gaseous exchange takes place in terrestrial plants. **(3 marks)**

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25. A student in form three caught an organism which had the following characteristics

i) Body divided into two parts.

ii) Simple eyes.

iii) Eight legs.

Classify the organism up to the class level. **(3 marks)**

26.(a) Distinguish between the counter flow and parallel flow system in gaseous exchange**(1mk)**

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(b) Which of the two systems mentioned in (a) above is efficient? Give a reason **(2mks)**

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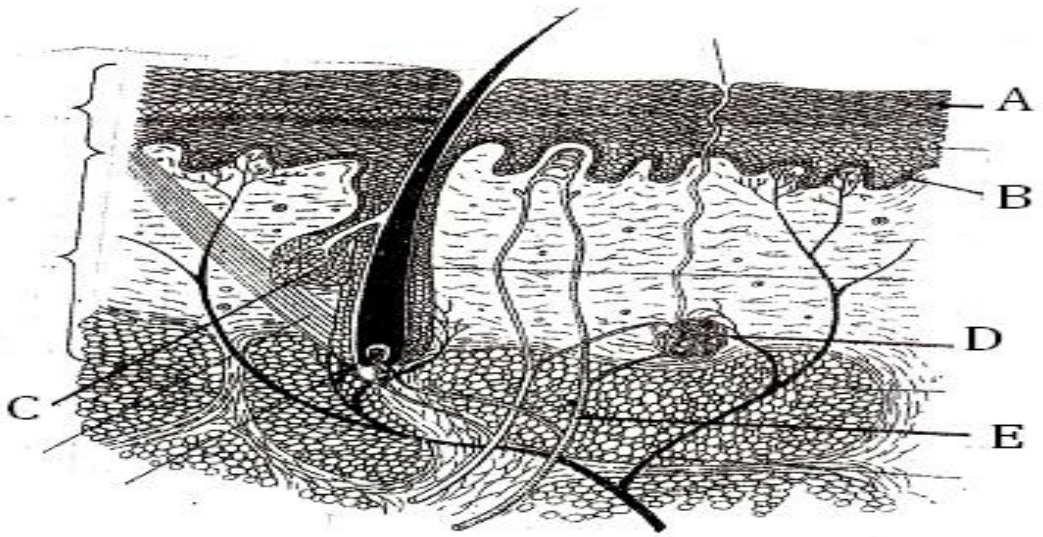
27. Name the enzyme, the vitamin and the metallic ions required in the clotting of blood. **(3mks)**

(i) Enzyme

ii) Vitamin

iii) Metallic ion

28. The figure below is a photomicrograph of a section of mammalian skin. Study it and answer the questions that follow.



(i) State two functions of the secretion from the gland labeled C **(2mrks)**

……

……

……

(ii) Explain the behaviour of structure E when environmental temperature falls to 10^0c.**(2mrks)**

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29. Astronauts from the outer space brought a material to earth. Explain how you would establish if the material is living or non-living. **(2mrks)**

……

……

……

FORM 3 ENDTERM 1 EXAMS

SERIES 2

BIOLOGY

PAPER 2

TIME: 2 HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS TO CANDIDATES

- ***a)*** *Write your name and index number in the spaces provided above.*
- ***b)*** *Sign and write the date of examination in the spaces provided above.*
- ***c)*** *Answer all questions in section A the spaces provided*
- ***d)*** *In section B, answer question 6 (compulsory) and either question 7 or 8.*
- ***e)*** *You are required to spend the first 15 minutes of the time allocated for this paper reading the whole paper carefully before commencing your work.*

For examiners use only

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1		
	2		
	3		
	4		
	5		
B	6		
	7 or 8		
	Total	80	

SECTION A (40 MARKS)

Answer ALL the questions in this section in the spaces provided

1. a) Distinguish between natural and acquired immunity **(l mark)**

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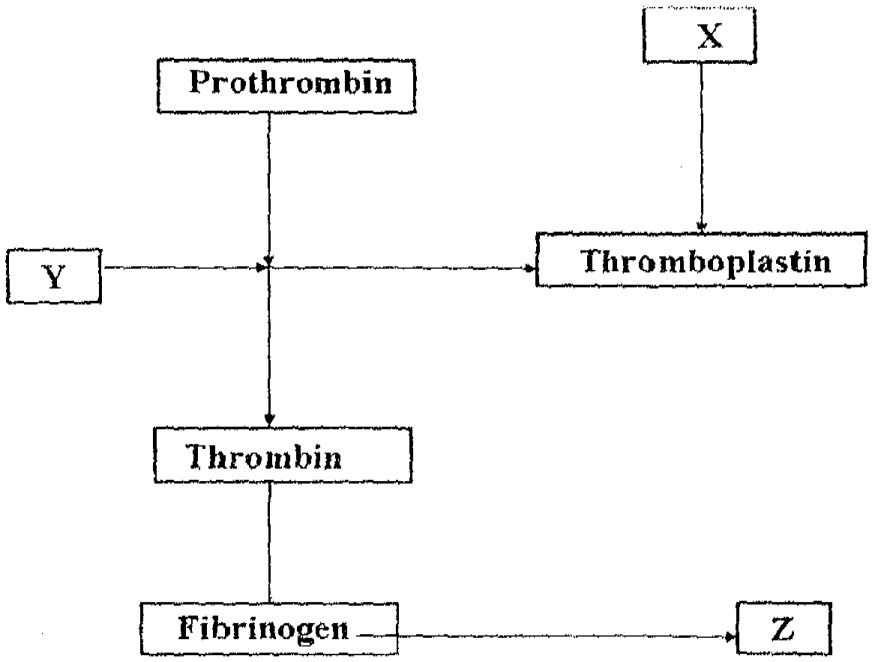
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b) Define the term allergy **(l mark)**

……

……

c) The chart below shows the blood clotting mechanism



i) Name the blood cells represented by X **(1mark)**

……

ii) The end product of the mechanism represented by Z **(1 mark)**

……

d)Explain how the following environmental factors increase the rate of transpiration.

i) Temperature **(2 mrks)**

……

……

ii) Humidity **(1 mark)**

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iii) Atmospheric pressure **(1 mark)**

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2. A student wanted to observe human red blood cells under a light microscope. He put l0ml of solution X,Y and Z in three boiling test tubes. The solutions were of different concentration .In each of the test tubes he put three drops of blood sample. The experiment was left to stand for 30 minutes. He placed one drop of solution X on glass slide and observed under the microscope. The same procedure was repeated for solutions Y and Z.

He made the following observation.

Solution	**Observation**
X	Normal Cells
Y	Wrinkled Cells
Z	No cells observed

(a) What was the physiological process observed. **(1mk)**

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(b) Explain why red blood cells observed in solution Y were wrinkled. **(3mks)**

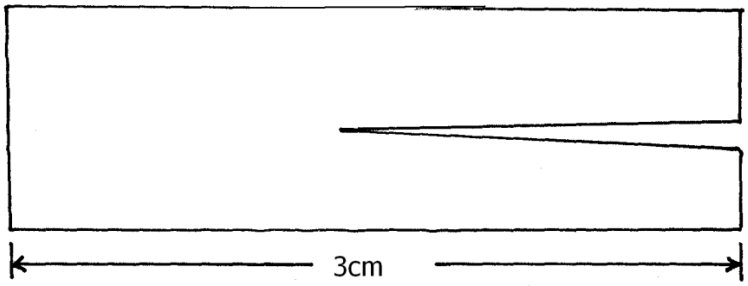
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(c) A 3cm long piece of kale (sukuma wiki) stem was cut halfway along its length as shown below.



(i) If the piece was placed in solution Z for 30 minutes, its shape changed . Using a pencil draw a diagram in the space provided to show the expected change. **(1mk)**

(ii) Explain the results obtained in C(i) above. **(3mks)**

……

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……

3. During an ecological study, students collected and marked 120 ants and released them. After 48 hours, the students captured another 90 ants, 20 of which had been marked previously.

(a) How many ants were there in the compound? Show your working. **(3mks)**

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(b) What are the limitations of this method in sampling animal populations. **(4mks)**

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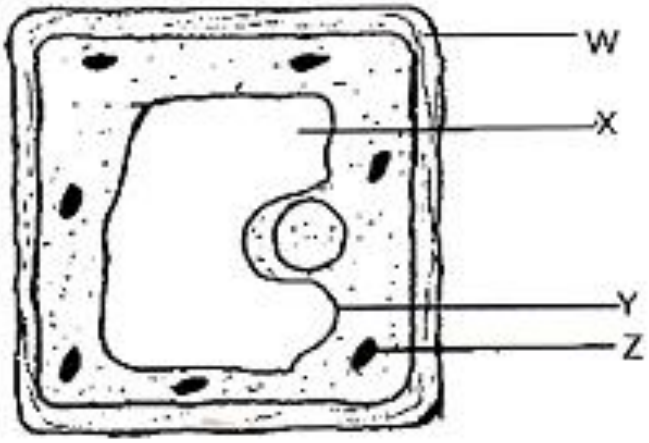
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(c) State two other methods which could be used to determine the population. **(1mk)**

……

……

4. Examine the diagram below carefully and use it to answer the questions that follow.



(a) Name the parts labeled X, Y, and Z **(3mrks)**

X:

……

Y:

……

Z:

……

(b) State the substance by which the part labeled W is made up of **(1mark)**

……

(c) Name the process by which mineral salts move into the structure labeled X **(1mark)**

……

(d) Explain what happens to a red blood cell when placed in distilled water. **3marks)**

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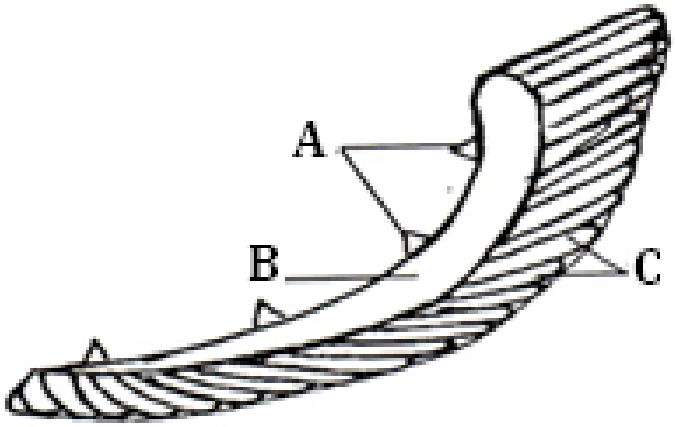
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5.a) Name two sites where gaseous exchange takes place in an aquatic plant. **(2marks)**

……

……

The diagram below represents the gills of a bony fish. Study it and answer the questions that follow.



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

A:……

B:……

C:……

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

……

……

(iii) Explain how the part labeled C is adapted to perform its functions **(2mrks)**

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……

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

Question 6

Two individuals A and B drunk volumes of concentrated solution of glucose. The amount of glucose in their blood was determined at intervals. The results are shown in the table below.

Time (minutes)	Glucose level in blood mg / 100cm^3	
	A	B
0	87	84
15	110	123
30	135	170
45	115	188
60	100	208
90	95	202
120	90	144
150	88	123

a) On the grid provided, plot graph of glucose level in blood against time on the same axis.

(6mrks)

Attached graph

b) What is the concentration of glucose in the blood of A and B at the 20th minute? **(1mark)**

……

……

……

c) Explain why the glucose level in person A stopped rising after 30minutes while it continued to rise in person B. **(2mrks)**

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d) Account for the decrease in the glucose level in person A after 30minutes and person B after 60minutes. **(4mrks)**

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e) Name the compound that stores energy released during oxidation of glucose. **(1mark)**

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f)State five factors that determine energy requirements in human **(5mrks)**

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……

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g) Name the organ in which control of blood sugar level mainly takes place. **(1mark)**

……

……

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

(b) Describe the mechanism of gaseous exchange in a mammal. **(l6mks)**

8. (a) What is meant by the term digestion? **(2mks)**

(b) Explain the role of bile in the digestion of food. **(4mks)**

(c) Describe the digestion of protein in the human body. **(l4mks)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

BIOLOGY

PAPER 3

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 ENDTERM 1 EXAMS

SERIES 2

BIOLOGY

PAPER 3

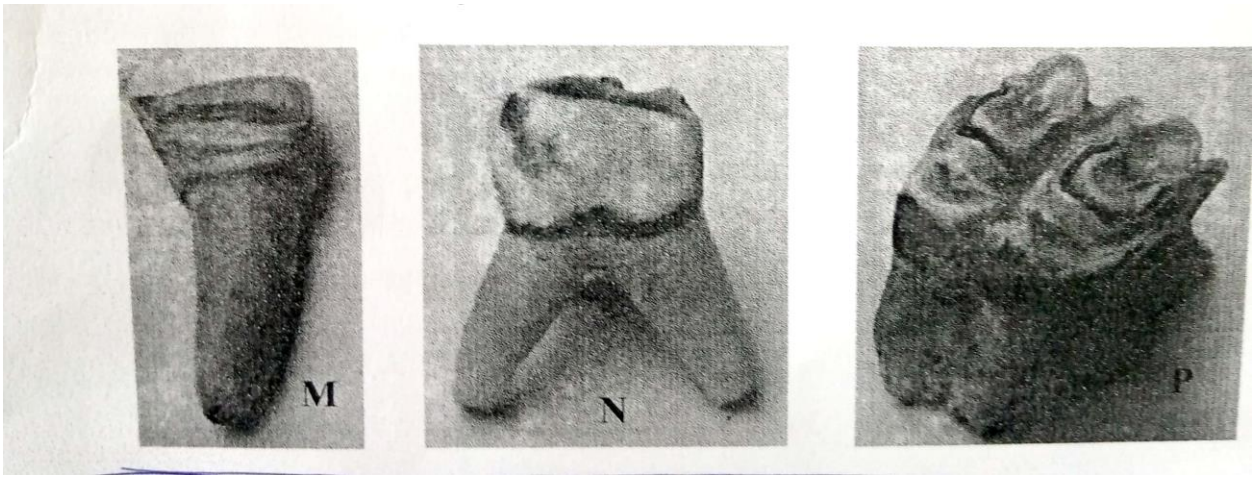
TIME: 1¾ HOURS

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

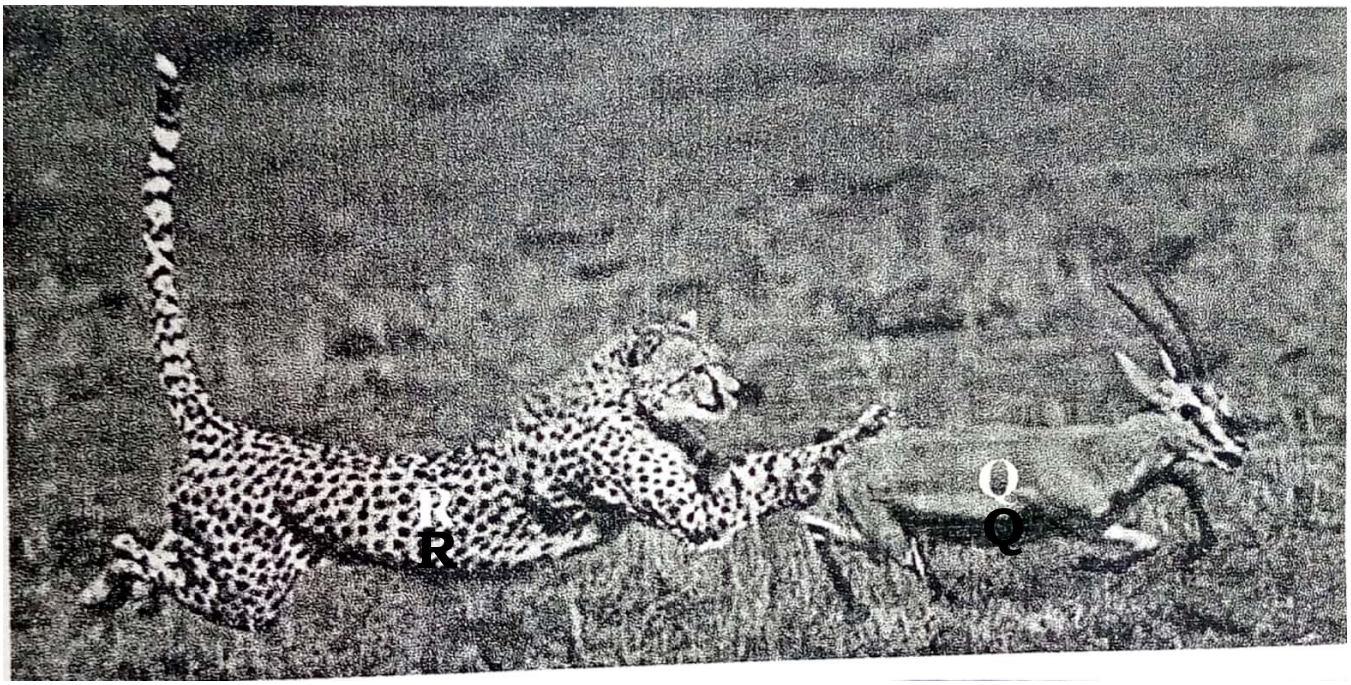
N

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.**(3mk**

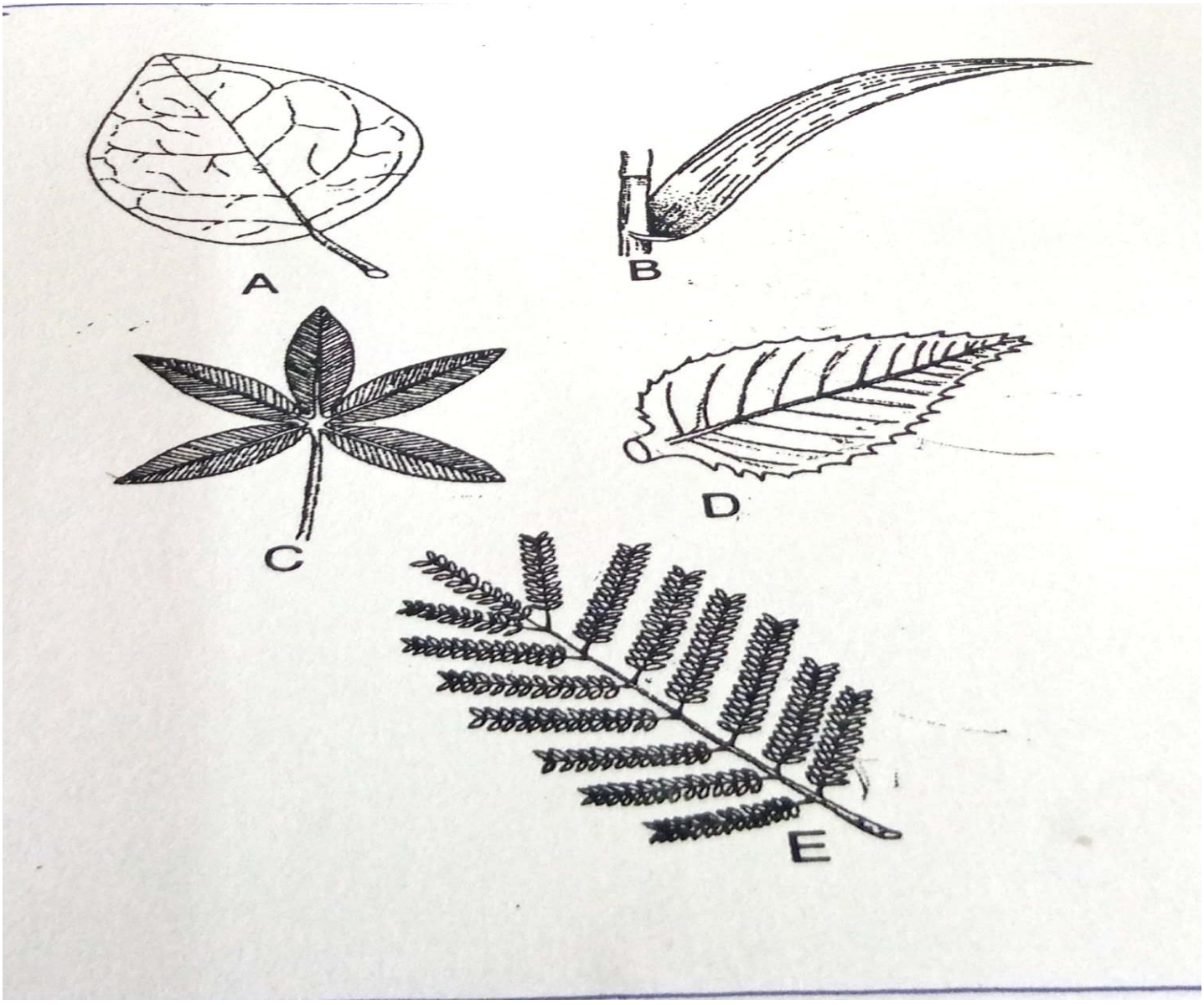
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d. A number of leaves are represented by leaves **A, B, C, D** and. Use the dichotomous key made using leaves **A, B, C, D and E** below.



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 ENDTERM 1 EXAMS

SERIES 2

CHEMISTRY

PAPER 1

TIME: 2 HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

Answer ALL the questions

1.a) Distinguish between ionization energy and electron affinity. **(2mks)**

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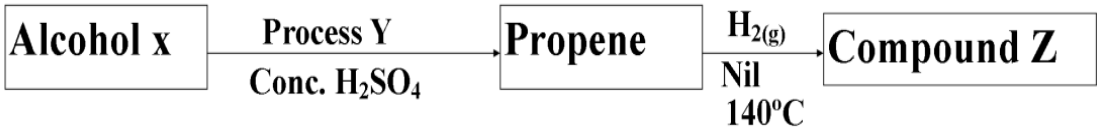
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b) The atomic number of A and B are 9 and 17 respectively. Compare the electron affinity of A and B. Explain . **(1mk)**

……

……

2. Use the reaction scheme below to answer the questions that follow.



i) Draw the structure of alcohol X. **(1mk)**

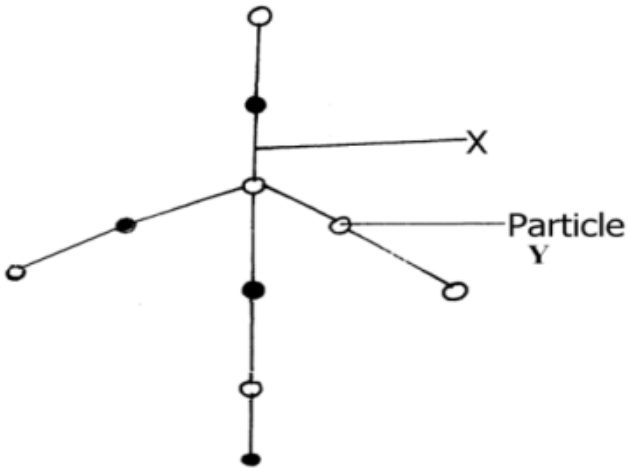
ii) Name process Y. **(1mk)**

……

iii) Write the molecular formula of the 5^{th} member in which propene belong. **(1mk)**

……

3. Silicon (IV) oxide has a structure similar to that of diamond. Part of the structure is shown below.



a) What does x represent? **(1mk)**

……

b) What type of structure is shown by the diagram? **(1mk)**

……

c)Predict one physical property of silicon (IV) oxide and explain how it is related to its structure. **(1mk)**

……

……

4.Describe how a dry solid sample of lead (II) chloride can be prepared using the following reagents dilute nitric (V) acid dilute hydrochloric acid and lead (II) carbonate. **(3mks)**

……

……

……

……

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

……

……

b)Ammonia gas diffuses 1.41 times faster than gas XH_3.Determine the relative atomic mass of element X.(H = 1 , N = 14) **(2mks)**

6.An ore of iron was found to contain 7g of iron and 3g. of oxygen.(fe = 56 O =16)

a) Workout its emprical formula. **(2mks)**

……

……

……

b) Write a balanced equation for reaction of the oxide in (a) with hot carbon. **(1mk)**

……

……

7. Carbon (iv) Oxide can undergo the changes below.

$$CO_{2(s)} \underset{B}{\overset{A}{\rightleftharpoons}} CO_{2\,(g)}$$

a) What are process **A and B?**

A..... **(1mk)**

B..... **(1mk)**

b)Suggest one use of carbon (iv) oxide that utilizes process **A and B.** **(1 mk)**

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8.The table sows the PH values of solutions A to E

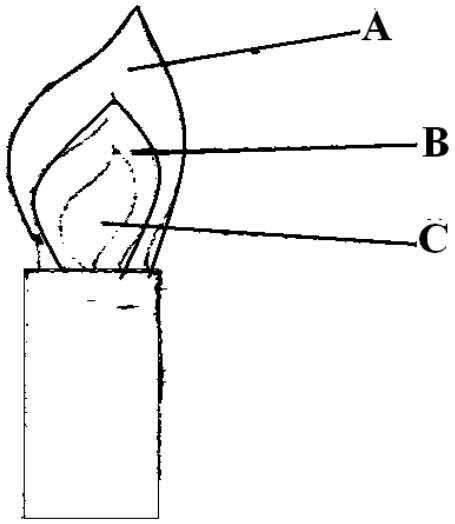
Solution	A	B	C	D	E
PH	6	13	2	10	7

a) What is meant by the term PH? **(1mk)**

b) Which of the solutions contains the largest number for hydroxide ions **(1mk)**

c) What will be the PH value of the mixture of D and E. **(1mk)**

9.The diagram below shows a Bunsen Burner when in use.



Which of the labeled parts is used for heating? Give a reason**.** **(2mks)**

……

……

10. The table below shows the atomic numbers of elements T, U, V and W. Study it and answer the questions that follow. The letters are not the actual symbols of the elements.

Element	T	U	V	W
Atomic number	13	16	17	20

(a) What type of bond would be formed between:-

(i) elements U and W **(1mk)**

……

(ii) elements V and U **(1mk)**

……

(b) Which of the elements are metals. **(1mk)**

……

11. Oxygen gas can be prepared in the laboratory by catalytic decomposition of hydrogen peroxide.

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

……

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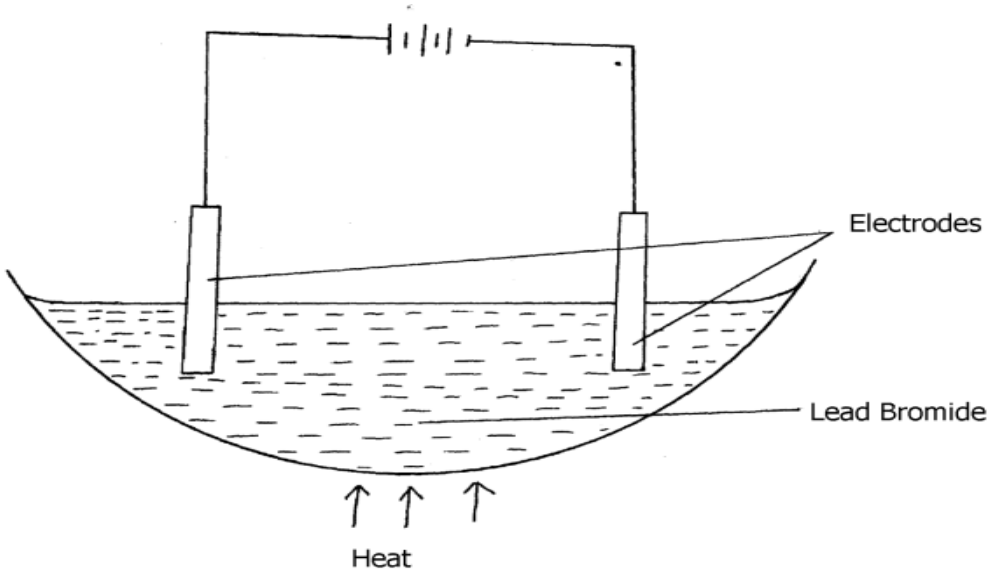
(b) State the Name of the suitable catalyst used. **(1mk)**

……

(c) Give one industrial use of oxygen **(1mk)**

……

12. The d diagram below shows electrolysis of lead bromide



a) Label the anode. **(1mk)**

b) Write half equations to shows reactions at cathode. **(1mk)**

……

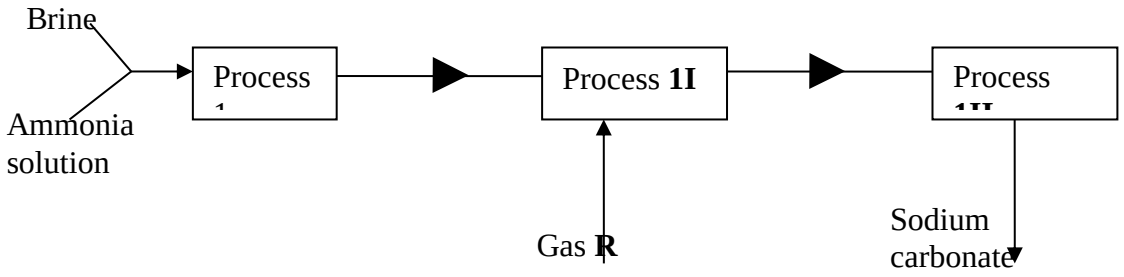
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c) State one application of electrolysis. **(1mk)**

……

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13. Below is a simplified scheme of solvary process. Study it and answer the questions that follow:



(a) Identify gas **R**…….. **(1mk)**

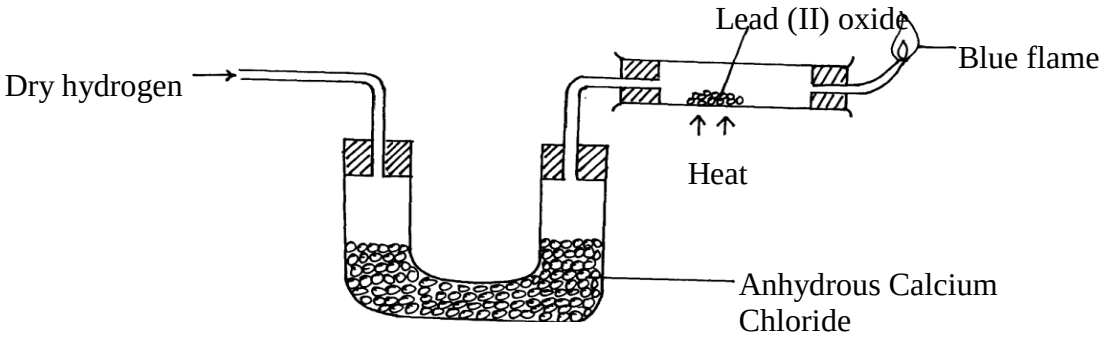
(b) Write an equation for process **III** **(1mk)**

……

(c) Give **one** use of sodium carbonate **(1mk)**

……

14. The set-up below was used to investigate the properties of hydrogen



(i) State the observations that was made in the combustion tube as the reaction progressed to completion **(2mks)**

……

……

……

(ii) Write equations for the reactions ;

I) In the combustion tube **(1mk)**

……

……

II) At the jet of the delivery tube **(1mk)**

……

……

III) State the properties of hydrogen that were investigated **(2mks)**

……

……

15. Classify the process below as chemical or physical changes **(2mks**

Process	**Physical or chemical change**
(a) Fractional distillation	
(b) Displacement reaction	
(c) Sublimation	
(d) Neutralization	

16. Iron reacts with oxygen in the presence of moisture to form hydrated iron (III) oxide.

$Fe_2O_3.2H_2O$

(a) What name is given to the process that produces hydrated iron (III) oxide? **(1 mk)**

……

(b) What does the term 'hydrated' mean? **(1 mk)**

……

……

(c) Name one method used to prevent corrosion of iron. **(1 mk)**

……

17. The table **below** gives elements represented by letters which are not the actual symbols.

Element	U	V	W	X	Y	Z
Atomic No.	8	12	13	15	17	20

(i) Select an element that can form divalent anion. **(1 mark)**

……

(ii) What is the structure of the oxide of **W**? **(1 mark)**

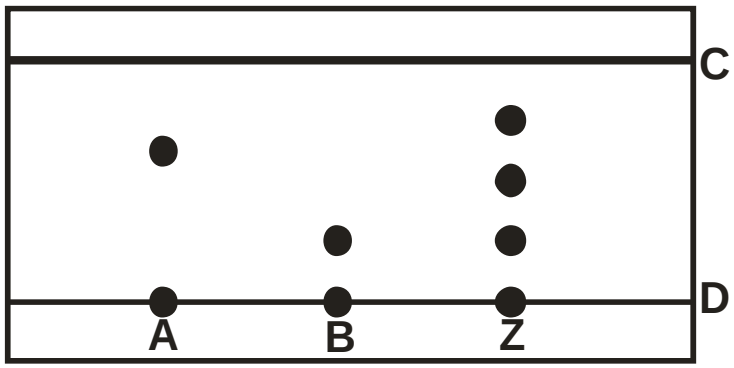
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(iii) Compare the atomic radius of **W** and **X**. **(1 mark)**

……

……

18. Spots of three pure pigments A,B and mixture Z were placed on a filter paper and allowed to dry. The paper was then dipped in a solvent. The results obtained were as on the paper chromatogram.



i) Identify;

a) Baseline. **(1mark)**

……

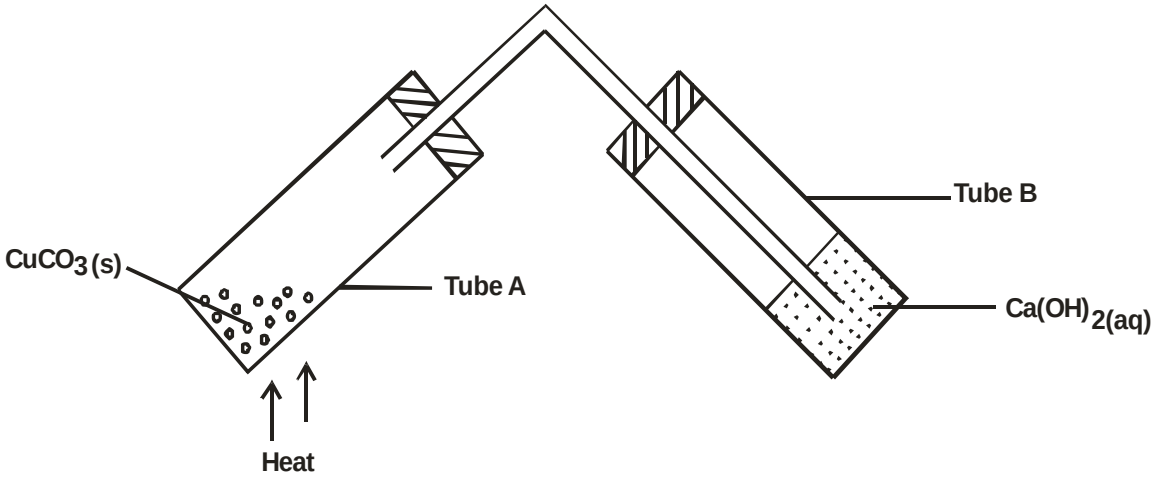
b) Solvent front. **(1mark)**

……

ii) Which pure pigment was component of Z.? **(1mark)**

……

19. The following was used to investigate the effect of heat on a sample of Copper(II) Carbonate.



a) State the observation made in test tube. **(2 mrks)**

A ……

B……

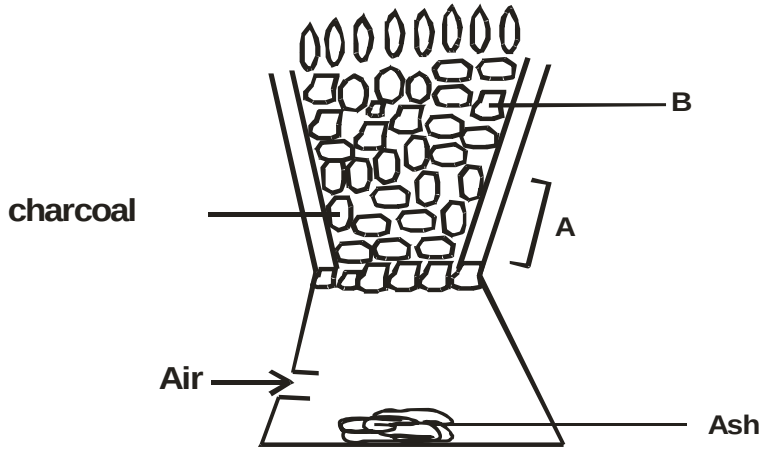
b) Write equation for the reaction that occurs in tube A. **(1mark)**

……

……

20. Sketch a graph of temperature time for a pure substance A with a melting point of 20^0C and boiling point of 90^0C and it is heated from 0^0C to 100^0C. **(2mrks)**

21. The diagram below shows a burning "jiko" in a room which has sufficient supply of oxygen.



i) Using chemical equations, explain what happens at A and B. **(2mrks)**

……

……

……

……

ii) State the main danger of emitting excess carbon (IV) oxide into the atmosphere. **(1mark)**

……

……

22. 3.22g of hydrated Sodium Sulphate, $Na_2SO_4{}^{o}X\ H_2O$ were heated to a constant mass of 1.42g, determine the value of X in the formula. **(Na = 23, S = 32, O = 16, H=1).** **(2 mks)**

23.a) The atomic number of Sulphur hydrogen and oxygen are 16, 1 and 8 respectively. Write the electron arrangement of Sulphur in the following substances.

(i) **H_2S……** **(1 mk)**

(ii) **SO_3^{2-}……** **(1 mk)**

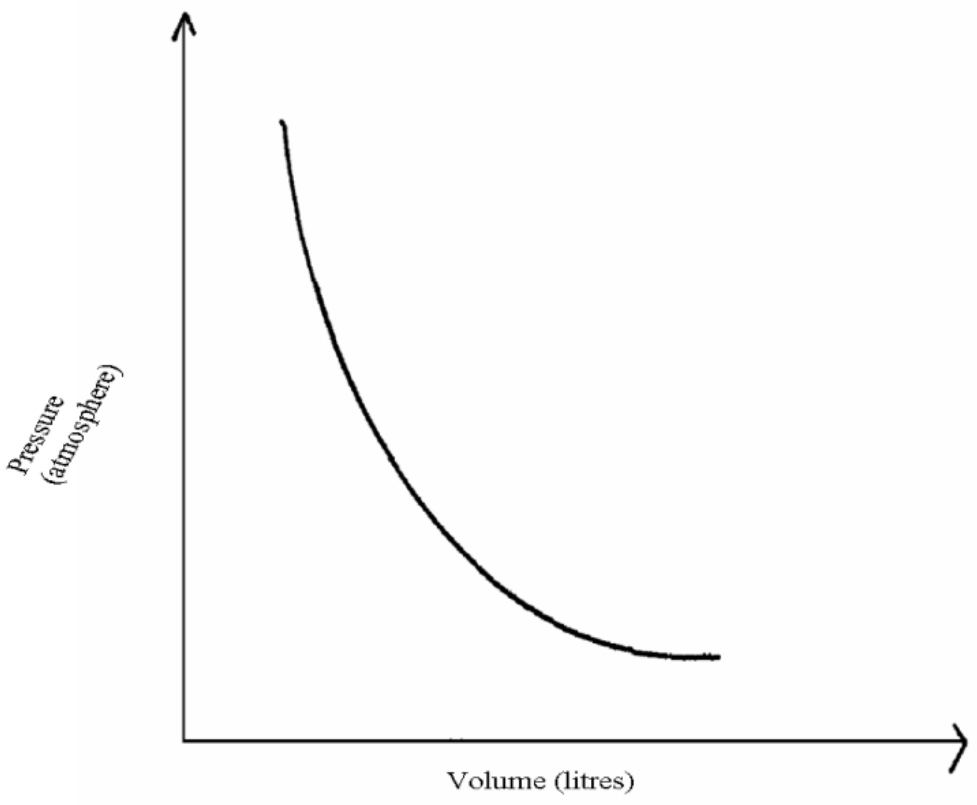
(b) State the number of neutrons and electrons in the species of Aluminum shown below:

$^{27}_{13}Al^{3+}$

Neutrons …….. **(1mk)**

Electrons ……. **(1 mk)**

24. The graph below shows the behaviour of a fixed mass of a gas at constant temperature.



(i) What is the relationship between the volume and the pressure of the gas. **(1 mk)**

……

……

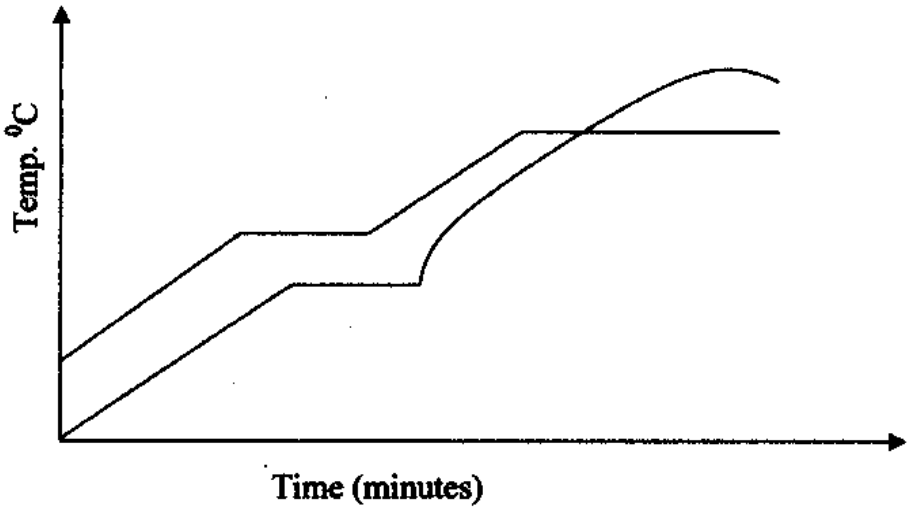
(ii)12 litres of oxygen gas at one atmosphere pressure were compressed to 2.5 atmospheres pressure at constant temperature. Calculate the volume occupied by the oxygen gas**.** **(2 mks)**

……

……

……

25.Two samples of a similar substance from different containers were investigated. The graph below represents the variation of temperature with time when heated.



a) Explain the variation in the curves of:

Sample I……..(1mk)

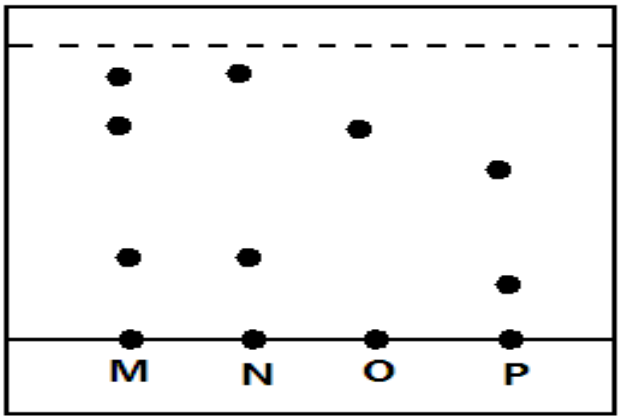
Sample II…… (1mk)

b) Common salt is sprinkled on roads during winter in temperate countries. Explain. **(1mk**

……

……

26. Study the diagram below and answer the questions.



a) On the diagram mark the base line. **(1mk)**

b) Name the dyes which are in M. **(1mk)**

……

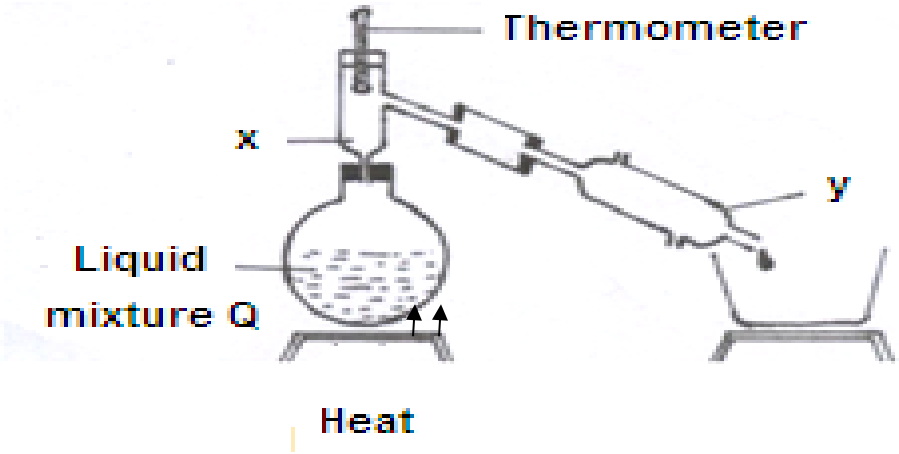
……

c) Which mixture of dyes has the dye with lowest solubility? Explain. **(1mk)**

……

……

27. Study the diagram below and answer the questions that follow. The diagram shows the method used to separate components of mixture Q.



a) Name **X and Y.** **(1mk)**

X……

Y……

b) What is the purpose of apparatus X**?** **(1mk)**

……

c)Show the direction of flow of cold water used for cooling the vapour formed**.** **(1mk)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

CHEMISTRY

PAPER 2

TIME: 2 HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS TO CANDIDATES:

- ***a)*** *Write your name and index number in the spaces provided above*
- ***b)*** *Answer ALL the questions in the spaces provided*
- ***c)*** *Mathematical tables and electronic calculations may be used*
- ***d)*** *All working MUST be clearly shown where necessary*

For examiner's use only:

QUESTIONS	MAX. SCORE	CANDIDATES SCORE
1		
2		
3		
4		
5		
6		
7		
Total score	**80**	

Answer All the Questions

1. (a) Study the following part of periodic table chart and use it to answer the questions that follow. The letters are not the actual symbols of the elements.

						A		
	S		**C**			**D**	**E**	
F	**G**							
							H	

(i) Which elements form ions with charge of -2?Explain **(2mks)**

……

……

(ii) If the oxides of B and D are separately dissolved in water, what effect will their aqueous solution have on litmus. **(2mks)**

……

……

(iii) How would you expect the ionic reactions of C and E to compare? Explain **(2mks)**

……

……

……

(iv) Write the formula of the compounds formed between elements G and H **(1mk)**

……

(v) In terms of structure and bonding, explain why the oxide of D has a lower melting point than the oxides of B. **(2mks)**

……

……

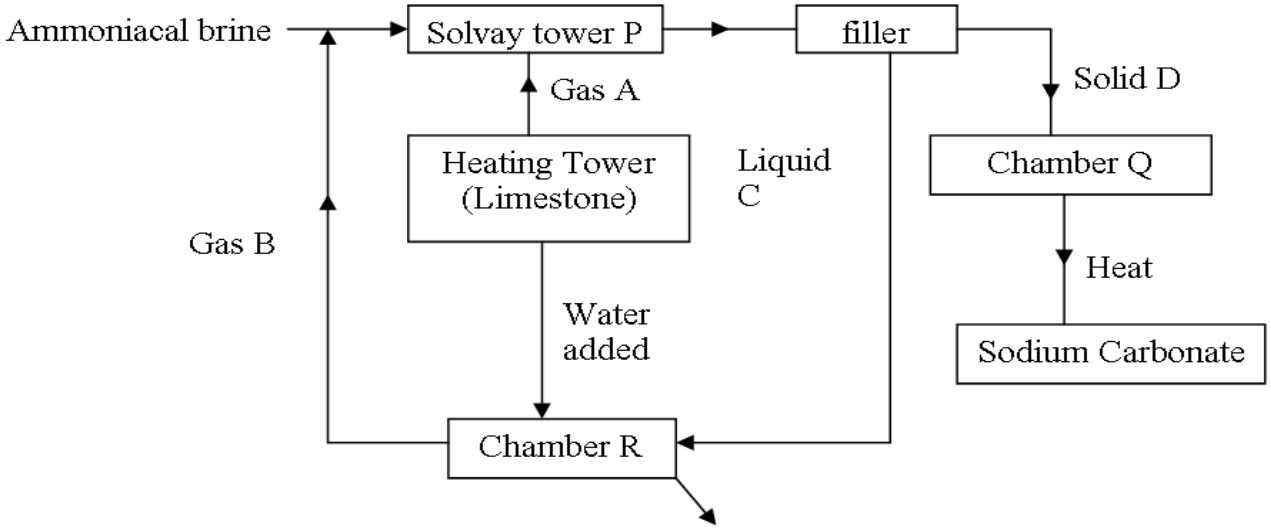
……

(vi) Write an equation to show the action of heat on the carbonates with element G **(1mk)**

……

(b) When 1.5litres of chlorine gas were completely reacted with element B 5.937g of the product were formed. Determine the relative atomic mass of element B. (Atomic mass of chlorine = 35.5 Molar gas volume = 24litres) **(3mks)**

2.The scheme below shows the manufacture of sodium carbonate by the Solvay process. Study it and use it to answer the questions that follow.



(a) Name (i) gases A and B **(1mark)**

(b) Name liquid C and Solid D **(1mark)**

(c) Write equations for the reactions taking place in tower P and chamber R **(2mrks)**

(d) Name the product formed in chamber at chamber R and give one of its uses **(2mrks)**

……

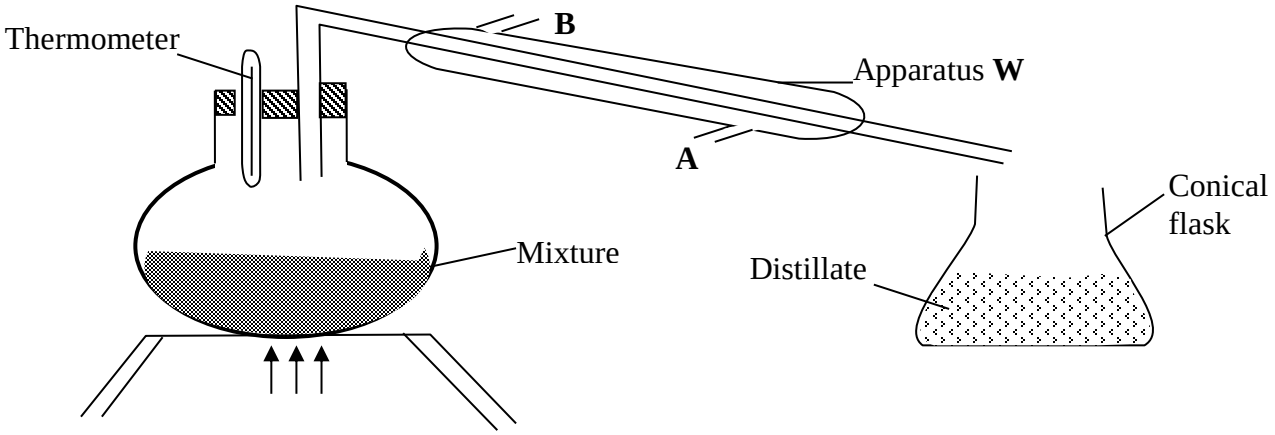
……

(c) State two uses of sodium carbonate **(1mark)**

……

……

3. A student left some crushed fruit mixture with water for some days. He found the mixture had fermented. He concluded that the mixture was contaminated with water and ethanol with boiling point of 100^{o}C and 78^{o}C respectively. The set-up of apparatus below are used to separate the mixture.



(i) Name the piece of apparatus labelled **W** **(1mk)**

……

(ii) What is the purpose of the thermometer in the set-up? **(1mk)**

……

……

iii) At which end of the apparatus **W** should tap water be connected**?** **(1mk)**

……

(iv) Which liquid was collected as the first distillate? **Explain** **(2mk)**

……

……

……

(v) What is the name given to the above method of separating **mixture?** **(1mk)**

……

vi) State **two** applications of the above method of separating mixt**ures** **(1mk)**

……

……

(vi) What properties of the mixture make it possible for the component to be separated by the above methods**?** **(2mk)**

……

……

4. I. In an experiment, a piece of magnesium ribbon was cleaned with steel wool. 2.4g of the clean magnesium ribbon was placed in a crucible and completely burnt in oxygen. After cooling the product weighed 4.0g

a) Explain why it is necessary to clean magnesium **ribbon** **(1mks)**

……

……

b) What observation was made in the crucible after burning magnesium ribbon**?** **(1mk)**

……

c) Why was there an increase in mass**?** **(1mk)**

……

……

d) Write an equation for the major chemical reaction which took place in the crucible**(1mk)**

……

……

e) The product in the crucible was shaken with water and filtered. State and explain the Observation which was made when red and blue litmus paper were dropped into the filtrate **(3mks)**

……

……

……

II.Below is a list of oxides.

MgO, N_2O, K_2O, CaO and Al_2O_3

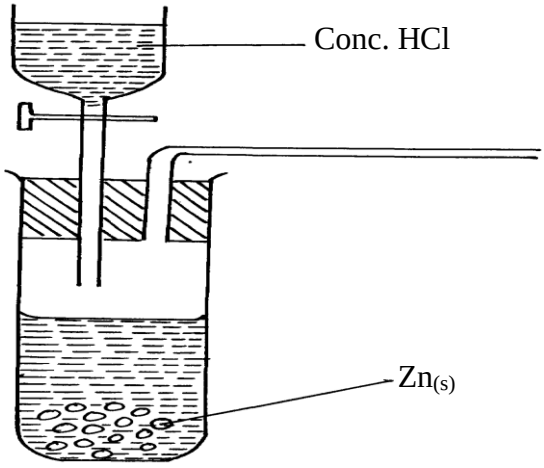
Select:-

a) A neutral oxide. **(1mk)**

b) A highly water soluble basic oxide**.** **(1mk)**

c) An oxide which can react with both sodium hydroxide solution and dilute hydrochloric acid. **(1mk)**

5. a) The set-up below was used by a form three student to prepare a dry sample of gas **M**. Study it and use it to answer the questions that follow:-



(i) Complete the diagram to show how a dry sample of gas **M** can be **collected** **(3mks)**

(ii) State the identity of gas **M** **(1mk)**

……

iii) state two industrial uses of gas M**.** **(2mks)**

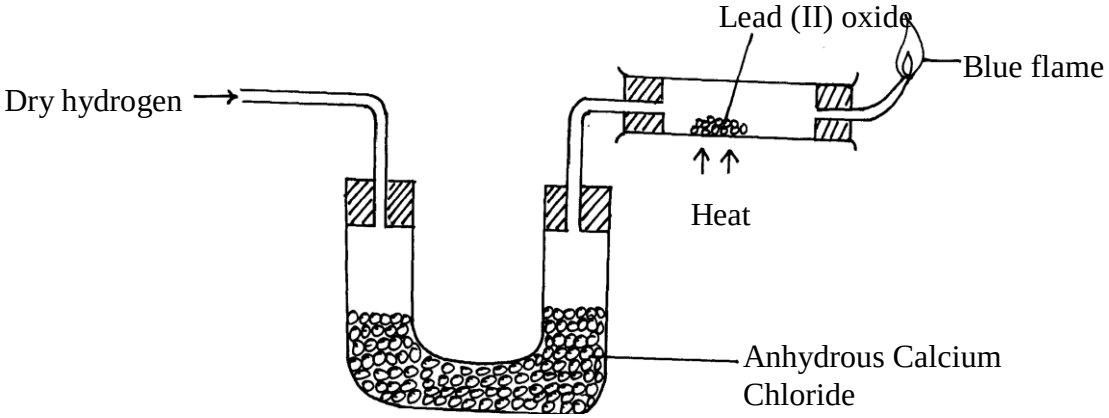
……

……

……

b)What property of concentrated sulphuric acid is being employed in the above preparation**? (1mk)**

The set-up below was used to investigate the properties of hydrogen



(i) State the observations that was made in the combustion tube as the reaction progressed to completion **(2mks)**

……

……

(ii) Write equations for the reactions ;

I) In the combustion tube **(1mk)**

II) At the jet of the delivery tube **(1mk)**

Naturally occurring boron exists as two isotopes, boron-10 B with a relative abundance of 20% and boron-11 B with a relative abundance of 80%.

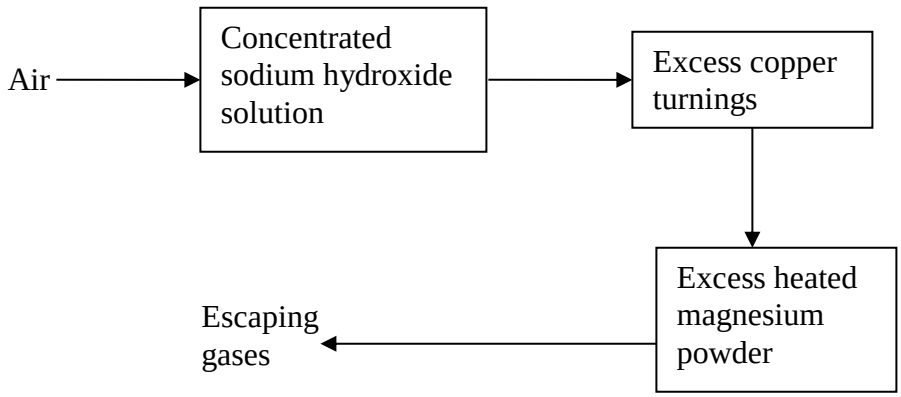
(a) How many electrons does each atom of boron contain? **(1mk)**

(b) How many neutrons does each atom of the most abundant isotope contain? **(1mk)**

(c) Calculate the relative atomic mass of boron. **(2mks)**

(d) Make a diagrammatic representation of an atom of the least abundant isotope of boron showing the distribution of electrons and composition of the nucleus. **(2mks)**

II. Air was passed through several reagents as shown below:



(a) Write an equation for the reaction which takes place in the chamber containing Magnesium powder **(1mk)**

……

(b) Name **one** gas which escapes from the chamber containing magnesium powder. Give a reason for your answer **(1mk)**

……

……

(c) State two industrial uses of hydrogen gas **(1mk)**

……

……

6.In the preparation of magnesium carbonate, magnesium was burnt in air and the product collected. Dilute sulphuric acid was then added and the mixture filtered and cooled. Sodium carbonate was added to the filtrate and the contents filtered. The residue was then washed and dried to give a white powder.

(a) Give the name of the product **(1mk)**

(b) Write the chemical equation for the formation of the product **(1mk)**

(c) (i) Name the filtrate collected after sodium carbonate was added**.** **(1mk)**

(ii) Write down the chemical formula of the white powder **(1mk)**

(d) Write a chemical equation for the reaction between product in **(a)** and the acid **(1mk)**

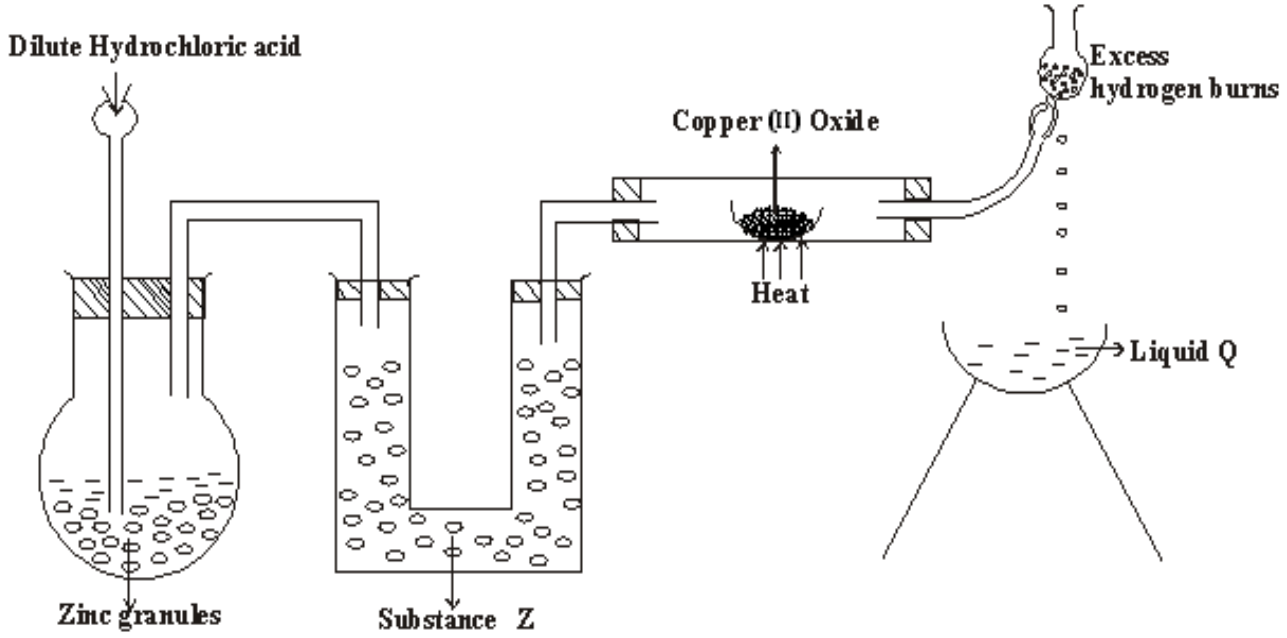
(e) Write an ionic equation to show the formation of the white **powder** **(1mk).**

(f) Write an equation to show what happens when the white powder is strongly heated. **(1mk)**

(g) Identify the ions present in the filtrate after addition of sodium carbonate**.** **(1mk)**

(h) What is the name given to the reaction that takes place when sodium carbonate was added to the filtrate? **(1mkss)**

7.(a) In an experiment to investigate the properties of hydrogen, a student set up as follows.



(i) Name substances **(2 marks)**

Z……

Q……..

(ii) State two properties of hydrogen that were being investigated. **(2marks)**

……

……

(iii) Give two precautions that should be taken towards the end of the experiment. **(2marks)**

……

……

……

(iv) State two reasons why it is not suitable to use dilute nitric (V) acid in the preparation of hydrogen with zinc. **(2marks)**

……

……

……

b) Water molecule (H_2O) combines with H^+ to form hydroxonium ion. (H_3O^+) explain. **(2marks)**

……

……

……

c) Give TWO reasons why hydrogen is used to fill meteorological balloons. **(2mark)**

……

……

……

FORM 3 ENDTERM 1 EXAMS

SERIES 2

CHEMISTRY

PAPER 3

CONFIDENTIAL

QUESTION ONE

In addition, to the common laboratory apparatus and fittings, each candidate should be provided with:

- *About 80cm^3 of solution R*
- *About 100cm^3 of solution Q*
–1.06g of solid A accurately weighed
- *25ml pipette*
- *50ml burette*
- *250ml volumetric flask*
- *100ml plastic beaker*
- *Three conical flasks*
- *Labels*
- *50ml measuring cylinder*
- *Metallic spatula*
- *source of heat*
- *boiling tube*
- *six dry test tubes*

Access to methyl orange
Solid A is anhydrous sodium carbonate

QUESTION TWO

Solid J (2g) (each student) – prepared by mixing zinc sulphate and ammonium sulphate in the ratio 1:1

- *2 M sodium hydroxide solution*
- *2M ammonium hydroxide solution*
- *2M lead (ii) nitrate solution*
- *2 M nitric (IV) acid*

FORM 3 ENDTERM 1 EXAMS

SERIES 2

CHEMISTRY

PAPER 3

TIME: 2 HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

QUESTION 1

You are provided with the following:

- 3.3g metal carbonate, MCO_3, labeled solution Q
- 2M hydrochloric acid, labeled solution P
- Sodium hydroxide, labeled solution R containing 40g/L of solution

You are required to determine the relative atomic mass of metal M

PROCEDURE

i. Measure accurately 100cm^3 of solution P into clean 250cm^3 conical flak and add all the 3.3g of solid Q, MCO^3

ii. Shake the mixture well and wait for effervescence to stop. Label the resulting solution as S

iii. Pipette 25cm^3 of solution R into a conical flask and add 2-3 drops of phenolphthalein indicator.

iv. Fill the burette with solution S and titrate against the solution R until the end point.

v. Record your results in the table below. Repeat the procedure at least two times to complete the table. **(4 mks)**

	i	ii	Iii
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution S used (cm^3)			

a) What is the average volume of solution S used? **(1mk)**

b) Calculate the moles of sodium hydroxide, solution R used**.** **(2mks)**

c) Calculate the moles of hydrochloric acid in the average volume of solution S used. **(2mks)**

d) Calculate the moles of hydrochloric acid in 100cm3 of solution S. **(2mks)**

e) Calculate the moles of hydrochloric acid in the 100cm3 of the original solution P. **(2mks)**

f) Calculate the moles of hydrochloric acid, solution P that reacted with solid Q, **MCO3. (2mks)**

g) Calculate the moles of MCO3 that reacted**.** **(2mks)**

h) Calculate the relative formula mass (RFM) of MCO3**.** **(2mks)**

i) Calculate the relative atomic mass (RAM) of metal **M.** **(1mk)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

PHYSICS

PAPER 1

TIME: 2 HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS TO CANDIDATES

- *Write your name and index number in the spaces provided above*
- *Sign and write the date of the examination in the spaces provided*
- *Attempt **ALL** questions in sections A and B.*
- *All your answers must be written in the spaces provided in this question paper.*
- *All working must be clearly shown*
- *Non programmable silent electronic calculators and KNEC mathematics table may be used except where stated otherwise*

FOR EXAMINER'S USE ONLY

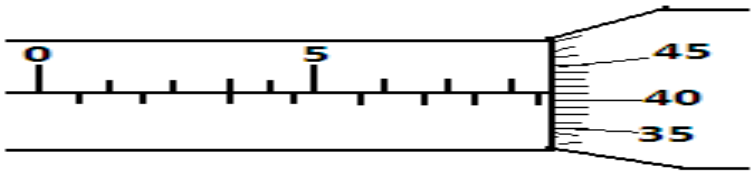
Section	Question	Maximum Score	Candidates' Score
A	Q1 – Q13	25	
B	Q16	12	
	Q17	13	
	Q18	16	
	Q19	14	
		80	

SECTION A (25 MARKS)

(Answer ALL the questions in the spaces provided)

1. What is the reading on the micrometer screw gauge shown below with an error of +0.5mm?

(1mk)



……

2. In a ball and ring experiment, the ball goes through the rings at room temperature. When it is heated it does not go through the ring, but when left on the ring for some time, it goes through. Explain this **observation** **(2mks)**

……

……

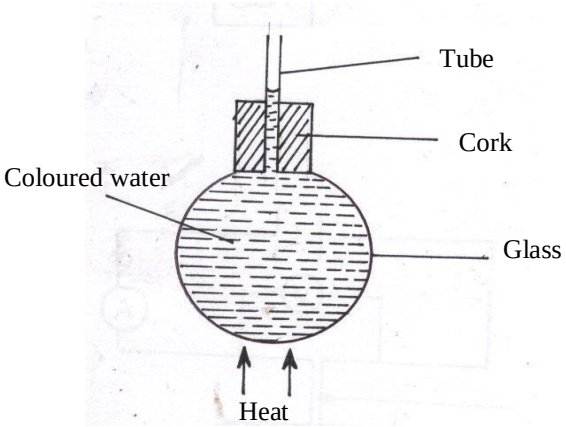
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3. In the study of free fall, it is assumed that the force F acting on a given body of mass, m, is gravitational, given by F = ma. State **two** other forces that act on the same body **(1mk)**

……

……

4. In the set up shown below, it is observed that the level of the water initially drops before starting to rise. Explain this observation **(2mks)**



……

……

……

5. Distinguish between **speed** and **velocity.** **(2mks)**

……

……

……

6. State how the pressure in a moving fluid varies with speed of the fluid**.** **(1mk)**

……

……

7. A piece of metal weighs 3N in air and 2N when totally immersed in water. Calculate the volume of the metal **(3mks)**

8. Explain how a person is able to drink a soda using a drinking straw. **(2mks)**

……

……

……

9. Give a reason why air is not commonly used as the fluid in a hydraulic lift**.** **(1mk)**

……

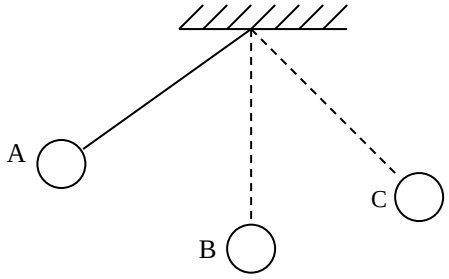
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10. State **one** assumption made when estimating the size of an oil molecule in the oil drop experiment. **(1mk)**

……

……

11. The figure below shows a swinging pendulum.



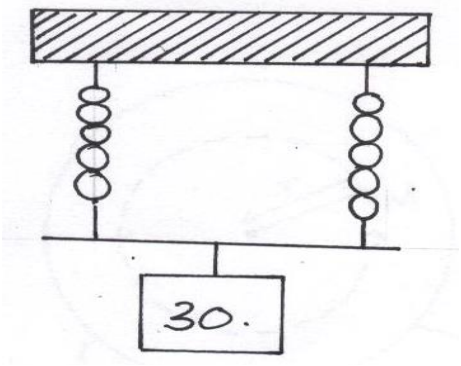
State the energy conservation taking place as the pendulum moves from A to B and B to C **(2mks)**

……

……

……

12. The identical springs of spring constant 3N/cm are used to support a load of 30N as shown.



Determine the extension on each spring **(3mks)**

……

……

……

……

13. In a vacuum flask, the walls enclosing the vacuum are silvered on the inside. State the reason for this. **(1mk)**

……

……

14. State the features that govern the strength of a spiral spring of a given material. **(2mks)**

……

……

15. Sketch velocity-time graph of a body moving down a viscous fluid. **(1mk)**

SECTION B (55 MARKS)

(Answer ALL the questions in the spaces provided)

16. (a) State the principle of conservation of linear momentum. **(1mk)**

……

……

(b) Calculate the recoil velocity of a gun of mass 0.4kg which fires a bullet of mass 0.0045kg at a velocity of $400ms^{-1}$ **(3mks)**

(i) State **two** factors which affect frictional force of a body **(2mks)**

……

……

(ii) Suggest **three** ways in which friction can be minimized **(3mks)**

……

……

……

(iii) State **three** advantages of friction **(3mks)**

……

……

……

17.

a) Fig. 8 shows a cylindrical can filled with a liquid of density 0.8 gcm^{-3}. A hole of diameter 2.0 cm is drilled at a depth of 2.8 m from the top of the can.

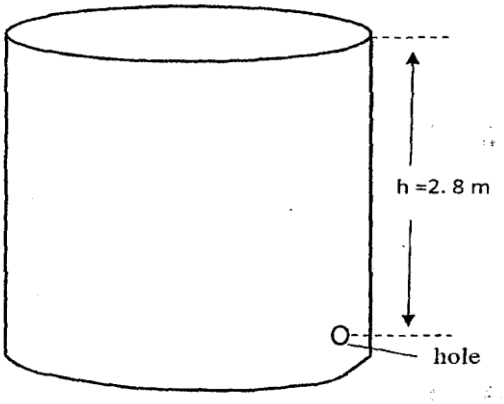


Fig. 8

Determine:

i. The cross-sectional area of the hole. **(2mks)**

ii. The maximum pressure exerted by the liquid at the hole. **(2mks)**

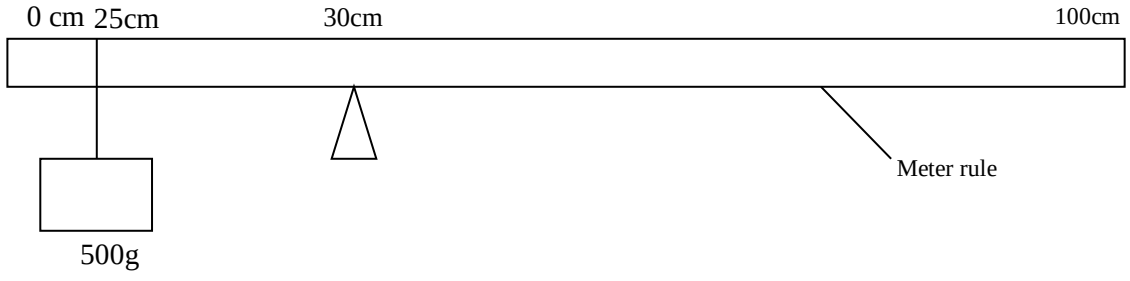
iii. The maximum force exerted on a jet of liquid through the hole. **(2mks)**

b) State the principle of moments **(1mk)**

……

……

c) A metre rule whose centre of gravity is at the 50cm mark balances at the 35cm mark when a mass of 500g is placed at the 25cm mark as shown in the figure 8 below



i. Determine the mass of the meter rule **(3 mks)**

ii. With the metre rule remaining on the knife-edge at the 30 cm mark, a mass of 125g is suspended from the 70 cm mark. The mass of 500g is moved until the rule is balanced. Determine the new position of the 500g **mass**

18.

a) For a body moving with a constant acceleration, a , show that:

i. V = u + at where v and u are the final and initial velocities respectively while t is the time taken **(2mks)**

ii. $S = ut + \frac{1}{2}at^2$ where S is the distance covered**(**An object is projected vertically upwards with a velocity of 200m/s. Calculate:

i. Its velocity after 5 seconds **(2mks)**

ii. The distance covered in the first 8 seconds **(2mks)**

iii. The maximum height reached **(2mks)**

b) The figure below shows a uniform cardboard in the shape of a parallelogram.



Locate the centre of gravity of the cardboard**.** **(1 mk)**

c) Two samples of bromine vapour are allowed to diffuse separately under different conditions, one in a vacuum and the other in air. State with reasons the conditions in which bromine diffuse slower. **(2 mks)**

……

……

……

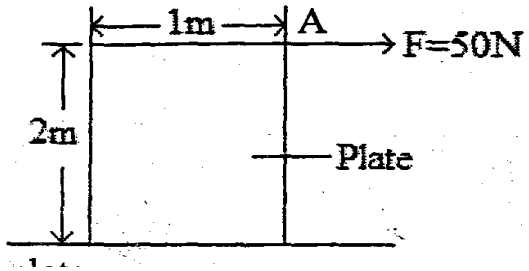
19.

a) State **two** factors affecting stability of body **(2mks)**

……

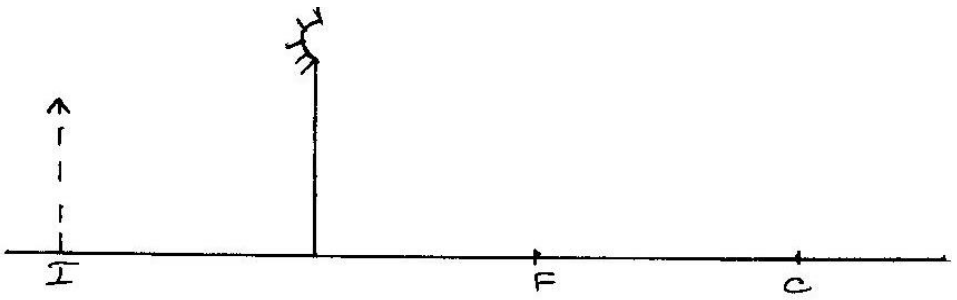
……

b) The figure below shows a metal plate 2 m long, 1M wide and negligible thickness. A horizontal force of 50 N applied at point 'A' Just makes the plate tilt.

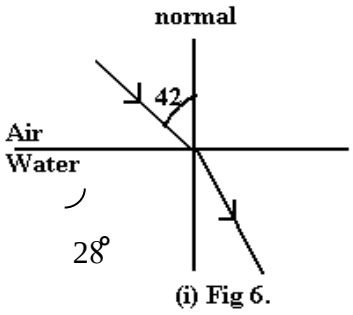


Calculate the weight of the plate. **(3mks)**

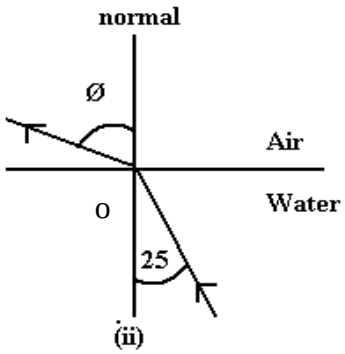
c) Fig 4 shows an image I formed by an object placed in front of a convex mirror. C is the centre of curvature of the mirror. Using ray diagram, locate the object position. **(3mks)**



d) Fig 6 (i) and (ii) show refraction of light at air-water interface. Determine angle Ø in figure 6(ii**)** **(3mks)**

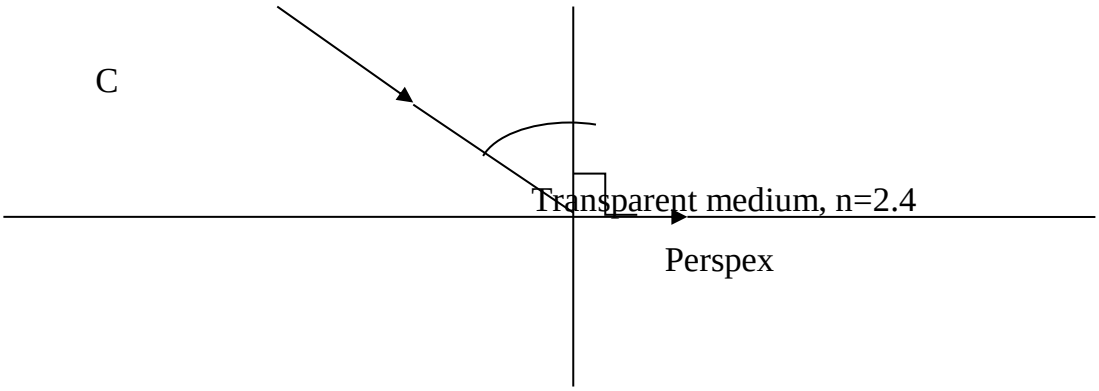


(i) Fig 6.



(ii)

e) A ray of light now travels through a transparent medium into the Perspex as shown in the figure below:



Calculate the critical angle **(3mks)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

PHYSICS

PAPER 2

TIME: 2 HOURS

NAME…… ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS TO CANDIDATES

1. *Write your name and index number in the spaces provided at the top of this page.*

2. *Sign and write the date of examination in the spaces provided above.*

3. *This paper consists of TWO sections: A and B*

4. *Answer ALL the questions in the sections A and B in the spaces provided.*

5. *ALL working MUST be clearly shown.*

6. *Non-programmable silent electronic calculators and KNEC mathematical tables may be used.*

FOR EXAMINERS USE ONLY.

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 13	25	
B	14	12	
	15	11	
	16	12	
	17	08	
	19	11	
Total Score		**80**	

SECTION A (25 MARKS)

1. Give one difference between luminous and non-luminous sources of light. **(1mk)**

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2. When a negatively charged rod is brought near the cap of a leaf electroscope, the leaf rises. Explain this observation, **(2mks)**

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3. **Figure 2** represents a displacement-time graph for a wave.

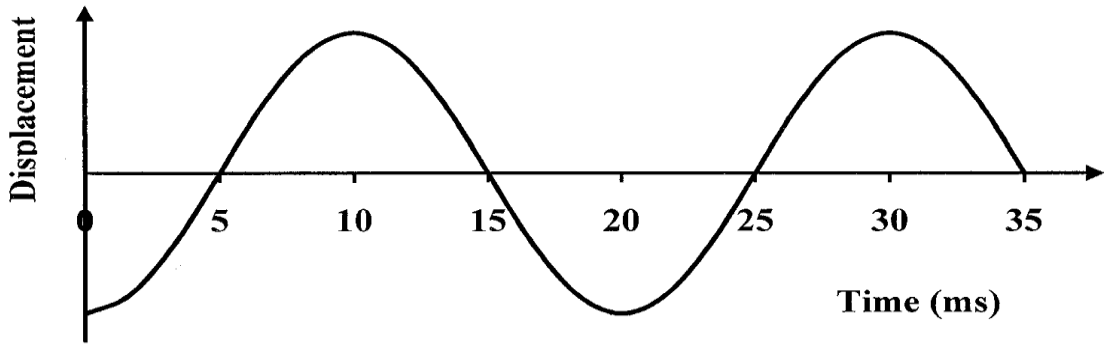


Figure 2

Determine the frequency of the wave. **(2mks)**

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4. ***State*** the conditions necessary for a wave incident on a slit to be diffracted. **(2mrks)**

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5. In an experiment to determine the focal length of a concave mirror, magnification M was determined for various image distances v. Figure 3 shows a graph of magnification M against image distance v for the results from the experiment.

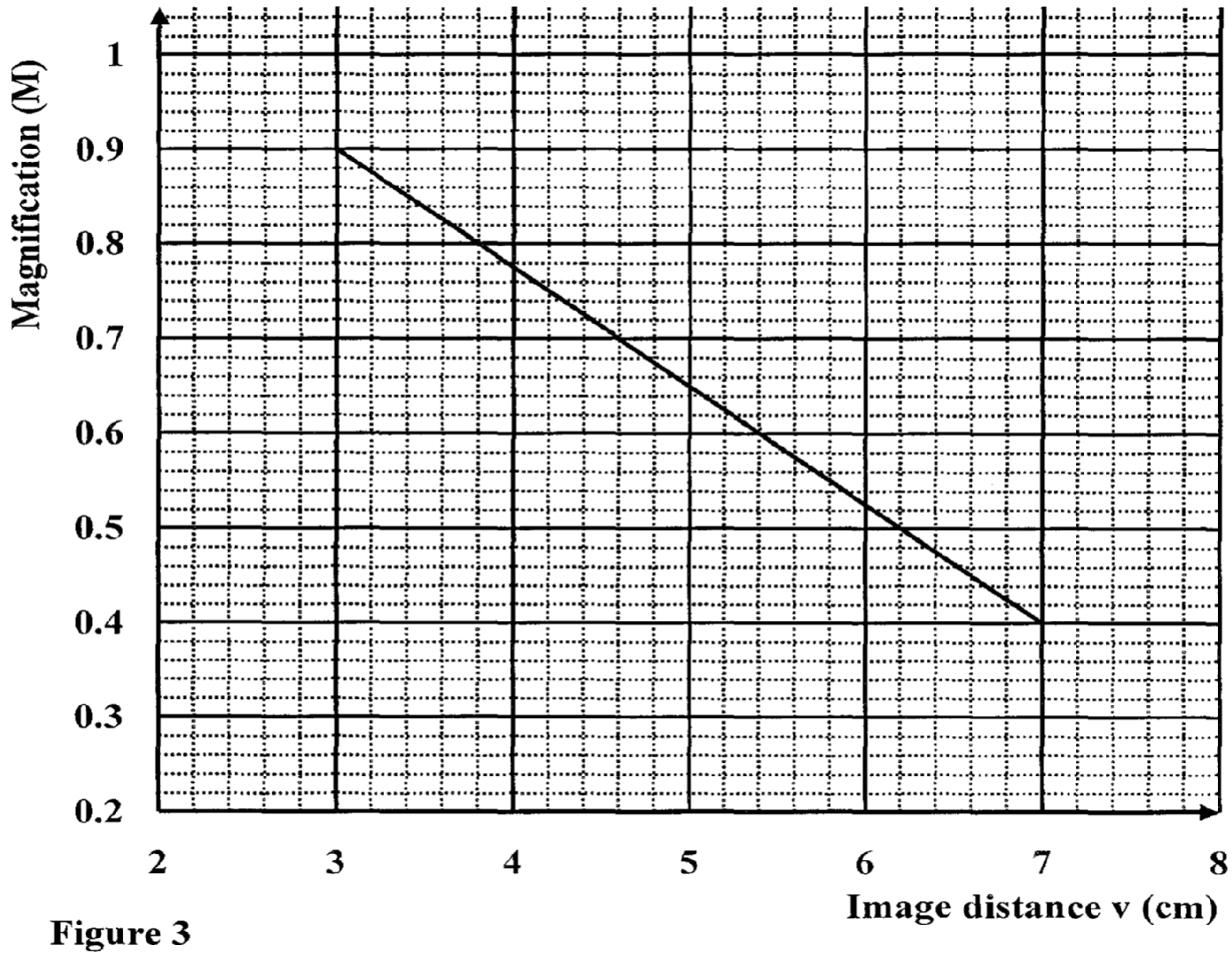


Figure 3

Given that M = 1 $\frac{v}{f}$, determine the focal length f of the mirror. **(3mks)**

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6. A hair dryer is rated 2500W, 240V. Determine its resistance. **(2mks)**

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7. **Figure 4** shows the magnetic field pattern round a current-carrying conductor. Indicate on the conductor the direction of the current. **(1mk)**

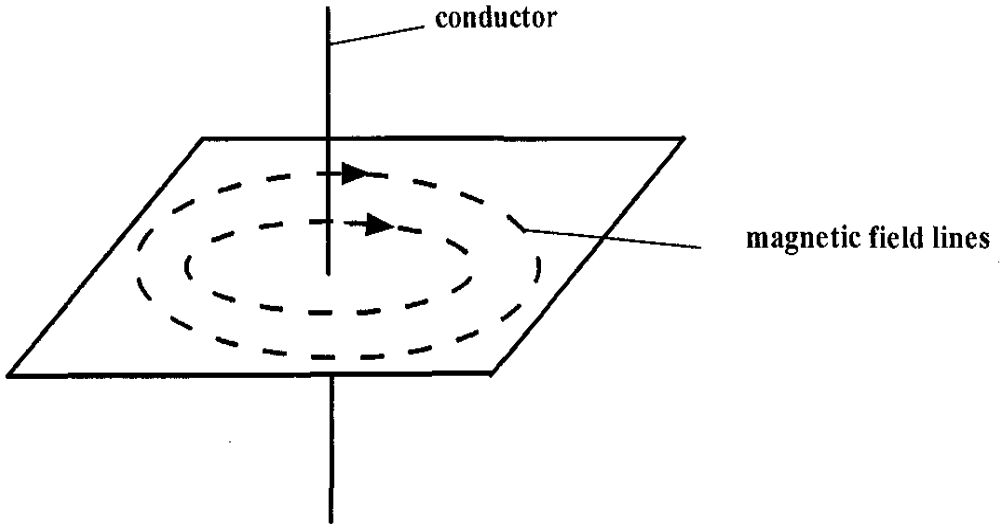


Figure 4

8. Why is repulsion the sure test for a magnet? **(1mk)**

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9. **Figure 5** shows a ray of light incident on an air bubble which is inside water,

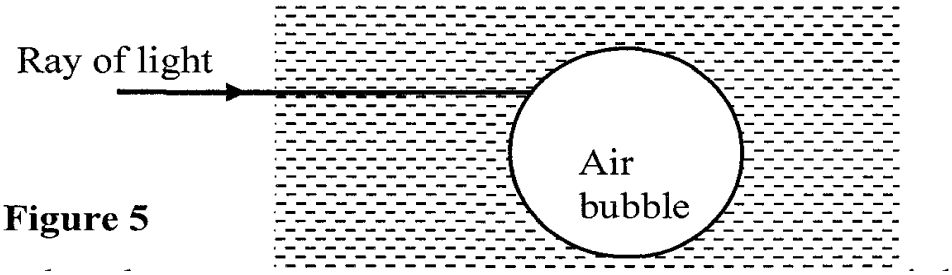


Figure 5

Complete the ray to show the path it follows through the air bubble. **(1mk)**

10. Explain how polarization of a cell increases the cell's internal resistance. **(2mks)**

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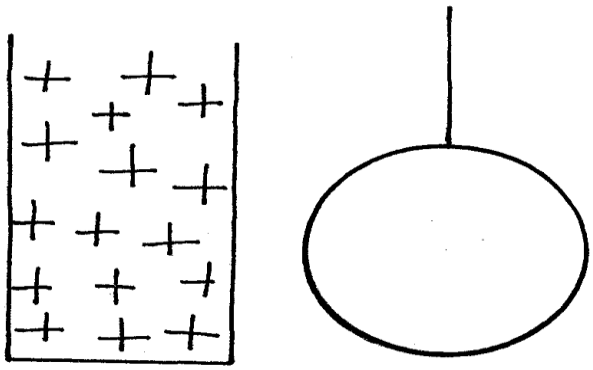
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11.

a) A positively charged material was brought close to an insulated metallic ball as shown in Fig 4. State and explain the distribution of charge in the ball **(2mks)**

Fig. 4



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b) Explain why sound cannot be heard from far when one shouts in a forest **(1mk)**

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12. Using the variation of resistance with temperature, differentiate between a conductor and a semiconductor. **(1mk)**

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13. A cell of internal resistance $O.5\Omega$ is in a circuit containing a 10Ω resistor. A current of $2A$ flows in the circuit. Determine the emf of the cell. **(2mks)**

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SECTION B (55 MARKS)

14. **(a)** **(i)** State Snell's law of refraction of light **(1mk)**

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(ii) Give two advantages of totally internally reflecting prisms over plane mirrors.

(2mks)

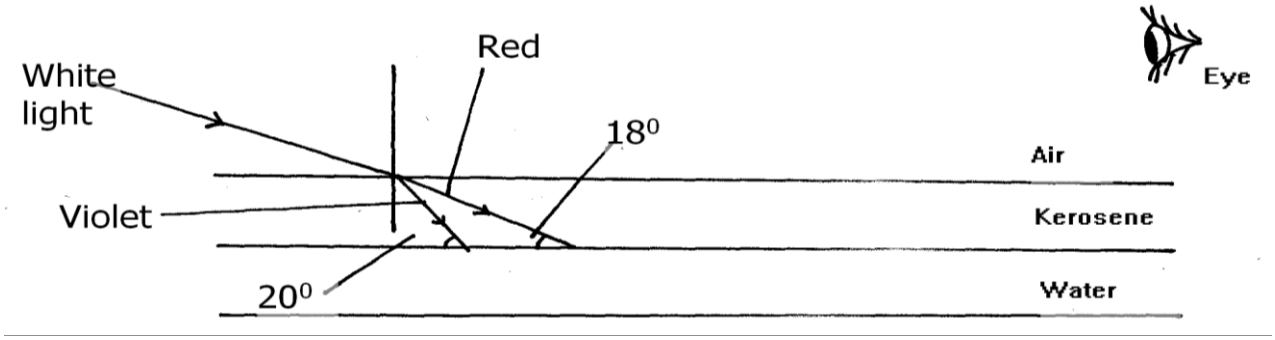
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(b) A ray of light is incident on a kerosene water interfaces as shown in figure 7

Fig. 7



Given that the refractive index of water and kerosene are 1.33 and 1.44 respectively, Determine

(i) the refractive index for the kerosene – water interface **(3mks)**

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(ii) determine and show on the figure the path of the rays of light between the Kerosene-water surface **(3mks)**

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(iii) Why does the colours of the light separate at the kerosene layer. **(1mk)**

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(iv) State and explain the observation that the eye above the two surfaces would see **(2mks)**

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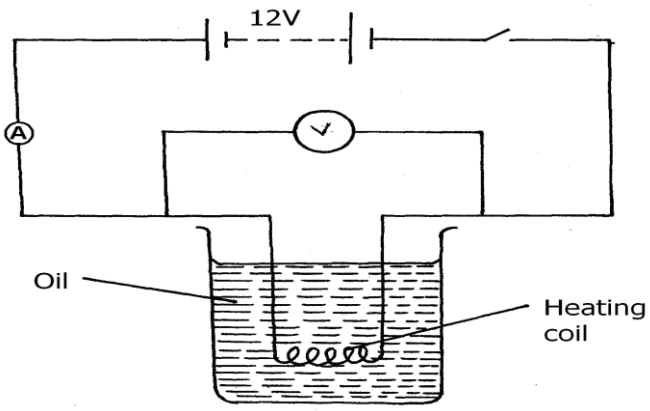
15. (a) State Ohm's law **(1mk)**

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(b) The figure 8 below shows a circuit with a coil used to warm oil in a beaker.

Fig. 8



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

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(ii) Given that the reading of the ammeter is 2.4A determine the resistance of the coil.**(3mks)**

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

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(iv) Give two changes that can be made in the set up in order to produce more heat per minute. **(2mks)**

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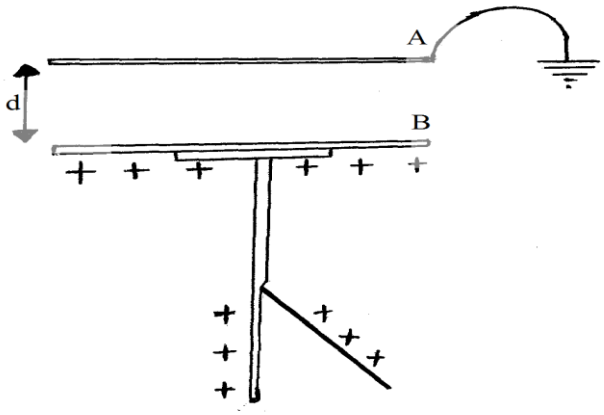
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16. (a) Define capacitance of a capacitor **(1mk)**

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The figure below shows a charged electroscope two aluminium plates A and B arranged a shown



State and explain the observations made when:

(i) d is reduced **(2mks)**

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(ii) the plate A is more horizontally **(2mks)**

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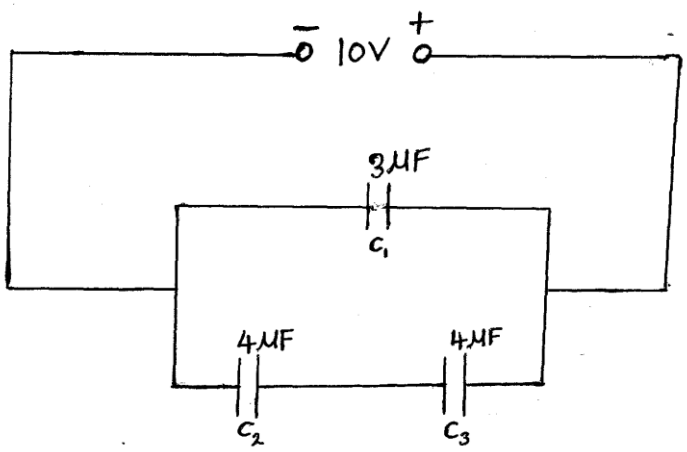
(iii) a sheet of polythene is placed between A and B **(2mks)**

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(b) Three capacitors are connected to a 10V battery as shown below.

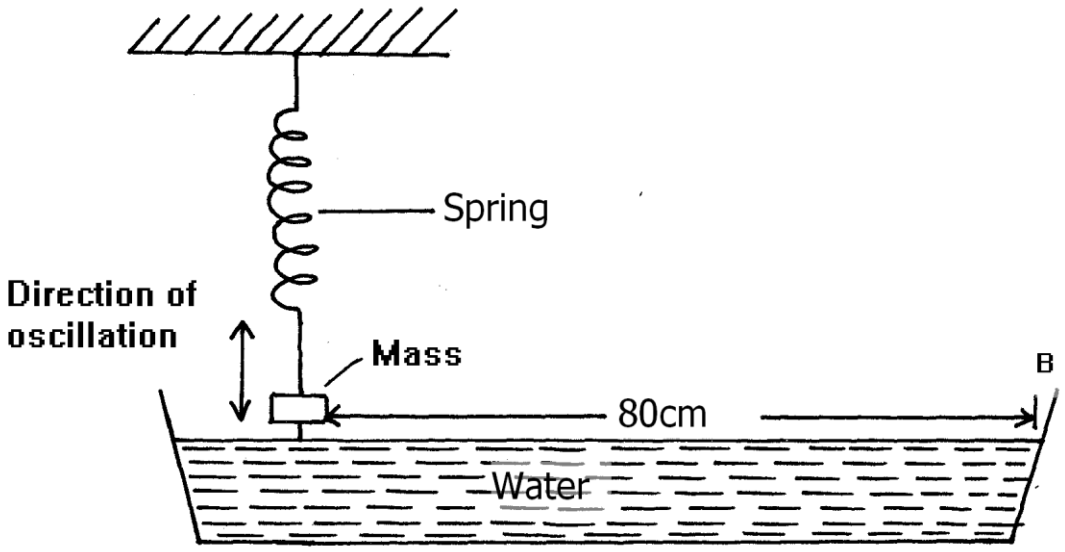


(i) Calculate the combined capacitance **(3mks)**

(ii) What is the charge on the $3\,\mu$F capacitor **(3mks)**

17. Students set up a mass attached to spring such that when it oscillates it taps on water surface in a wide shallow tank.

Fig. 6



The students measured time for 20 oscillations and found that the mass takes 36 seconds.

(i) Determine the periodic time of the mass **(2mks)**

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(ii) Calculate the frequency of the waves produced on the water surface **(3mks)**

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(iii) Given that the student counted four ripples between the mass and end B of the tank, Determine the speed of the waves. **(3mks)**

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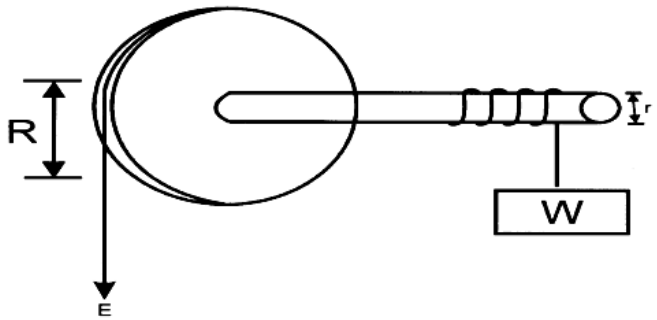
18.

a. A machine is a device that enables work to be done more easily and conveniently. State any two ways in which a machine makes work easier. **(2 maks)**

……

……

b. Figure 7 shows a wheel and axle being used to raise a load W by applying an effort E. The radius of the wheel is R and of the axle is r.



i) Show that the velocity ratio (V.R) of this machine is given by $\frac{R}{r}$ **(3 Mrks)**

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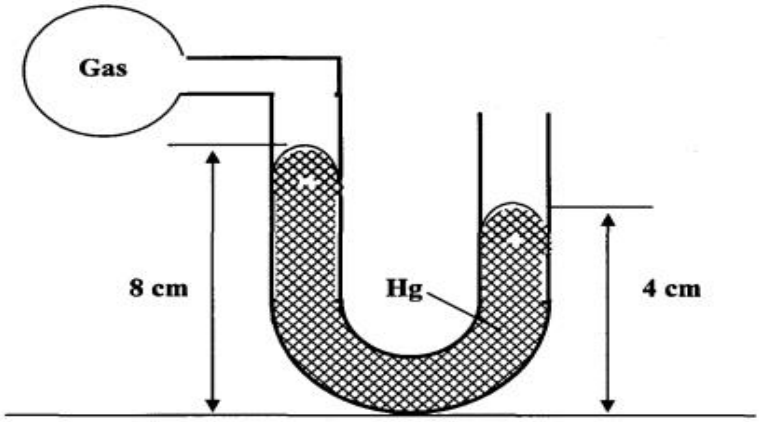
ii) Given that r = 5cm and R = 50cm, determine the effort required to raise a load of 200N if the efficiency of the machine is 90%. **(3 mks)**

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c. An airtight flask containing a gas is connected to a mercury manometer. The levels of mercury in the two limbs of the manometer are as shown in the diagram below.



Calculate the pressure of the gas (Density of mercury = 1.36 x 10^4 kg/m^3 and atmospheric pressure = 1.0 x10^5 N/m^2) **(3mks)**

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d. State one way of making the surface tension of a liquid stronger. **(1mk)**

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FORM 3 ENDTERM 1 EXAMS

SERIES 2

PHYSICS

PAPER 3

PHYSICS CONFIDENTIAL

QUESTION 1

Each candidate will require the following

- *A retort stand, clamp and boss*
- *A spiral spring (k= 10 N /m)*
- *A stop watch*
- *Three 100g masses*
- *Three 50g masses*
- *5 optical pins*
- *A rectangular glass block (100x 60x 18 mm)*
- *A white plain paper*
- *A soft board*
- *4 thumb pins*

QUESTION 2

Each candidate should be provided with

- *two retort stands*
- *a metre rule*
- *some cotton thread (approximately 1.2m long)*
- *a ball of plasticine*
- *a stop watch*
- *a protractor*
- *half metre rule*

FORM 3 ENDTERM 1 EXAMS

SERIES 2

PHYSICS

PAPER 3

TIME: 2¼ HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS TO CANDIDATES

- *Write **your name** and **index number** in the spaces provided*
- *Answer **ALL** the questions in the spaces provided in the question paper.*
- *You are supposed to spend the first 15 minutes of the 2 ¼ hours allowed for this paper reading the whole paper carefully before commencing your work.*
- *Marks are given for clear record of observations made, their suitability, accuracy and the use made of them.*
- *Candidates are advised to record their observations as soon as they are made.*
- ***Non-programmable** silent electronic calculators and KNEC mathematical table may be used.*

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	SCORE
1	20	
2	20	
TOTAL	SCORE	

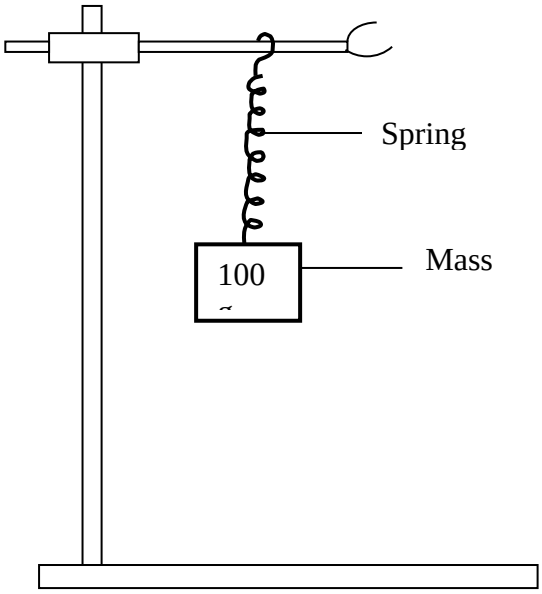
PART A

1. You are provided with the following:

- A retort stand, clamp and boss.
- A spiral spring.
- A stop watch.
- Three 100g masses.
- Three 50g masses.

PROCEDURE

a) Suspend a 100g mass at the end of a spiral spring as shown below.



b) Now give the mass a small vertical displacement and release so that it performs vertical oscillation.

c) Time for 20 oscillations and determine the period.

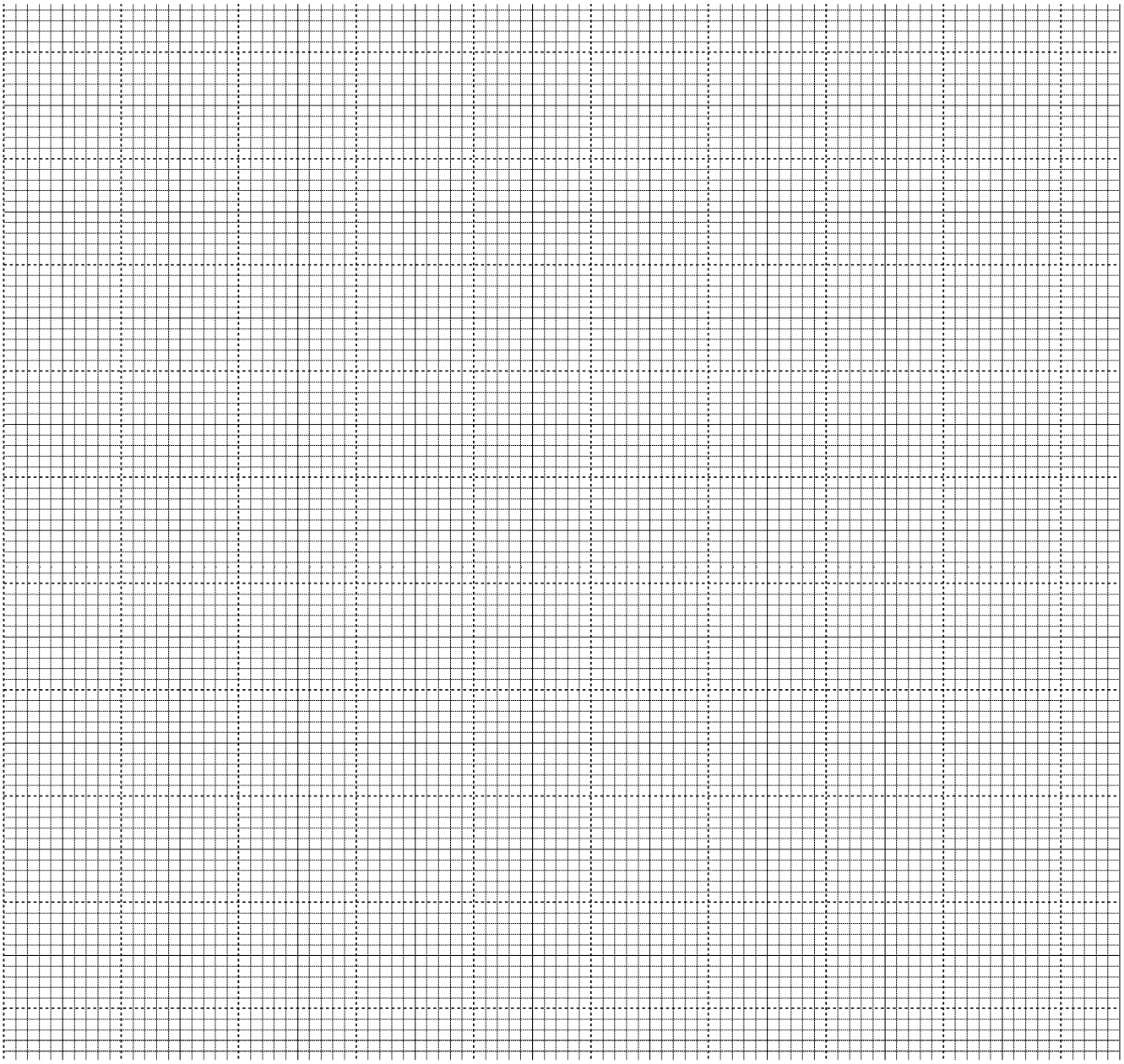
Enter the result in the table below.

d) Repeat the experiment for other values of mass given and complete the table.

Mass m(g)	100	150	200	250	300	350
Time for 20 oscillations t (s)						
Period time T (s)						
T^2 (S^2)						

6marks

e) Plot a graph of T^2 (S^2) (y –axis) against m (kg). **(5mrks)**



f) Determine the slope of the graph. **(2mrks)**

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g) Given that $T^2 = \pi^2 m$ where k is the spring constant , use the graph to obtain the value of the spring constant k. k **(2mrks)**

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PART B

You are provided with the following

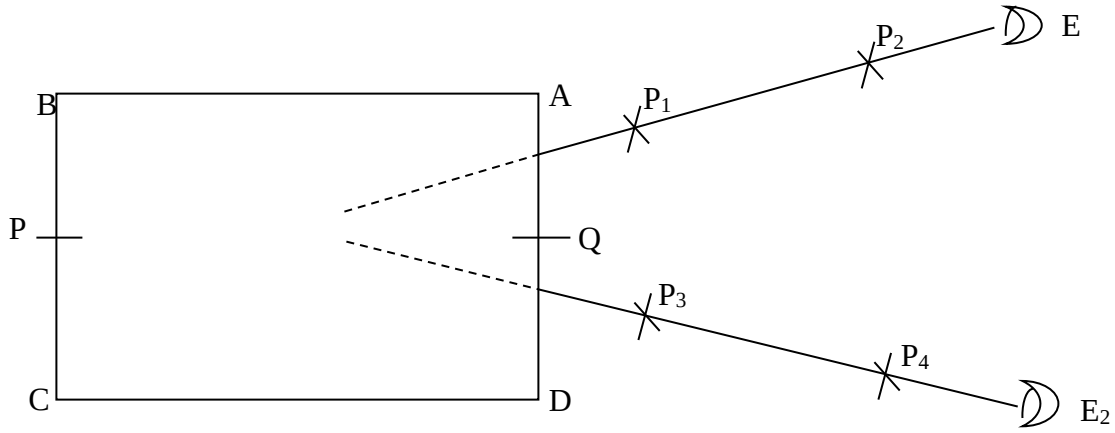
- *5 optical pins*
- *A rectangular glass block*
- *A plain paper*
- *A soft board*
- *4 thumb pins*

Proceed as follows

h)Fix the white piece of paper on the soft board using thumb pins. Place the glass block on the white paper and

draw the outline of the block.

i) Remove the glass block and indicate the sides A, B, C and D as shown.



j)On side BC, determine its center and fix a pin P_0 as shown. Looking from one side at the opposite end of the slab, fix pin P_1 and then pin P_2 so that they are in line with the image I of the pin P_0 .On the other side locate the same image using pins P_3 and P_4 as shown above.

k)Remove the glass block and the pins and produce lines P_1P_2 and P_3P_4 to their points of intersection;(the position of the image I) **(1mrk)**

l) Determine the midpoint of AD and label it Q. Measure the lengths QP_0 and Q1. **(2mrks)**

QP_0 =.....cm

Q1 =.....cm

m) Work out the ratio $= \frac{QP_O}{Q1} = n$ **(1mark)**

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n) What does n represent **(1mark)**

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QUESTION 2

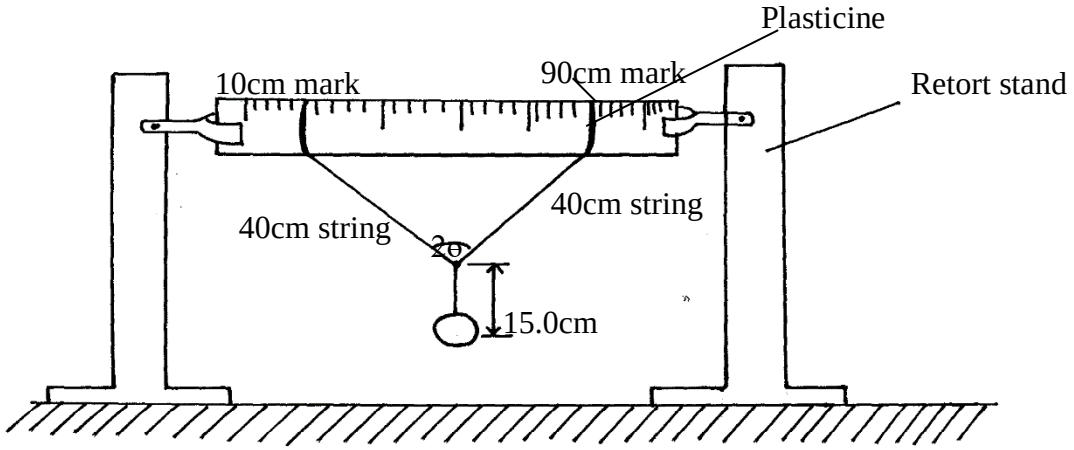
You are provided with the following;-

- two retort stands
- a metre rule
- some cotton thread (approximately 1.2m long)
- a ball of plasticine
- a stop watch
- a protractor
- half metre rule

Proceed as follows:

(a) (i) Attach one end of a string to the metre rule at 10cm by fastening a loop of string tightly round the metre rule. Fix the string at this point with a small piece of plasticine. Tie the other end of the string around the metre rule at the 90cm mark. Fix this loop with another small piece of plasticine.

ii) Attach the pendulum bob to the centre of the string so that the centre of gravity of the bob is 15.0cm below the point of suspension (see figure below)



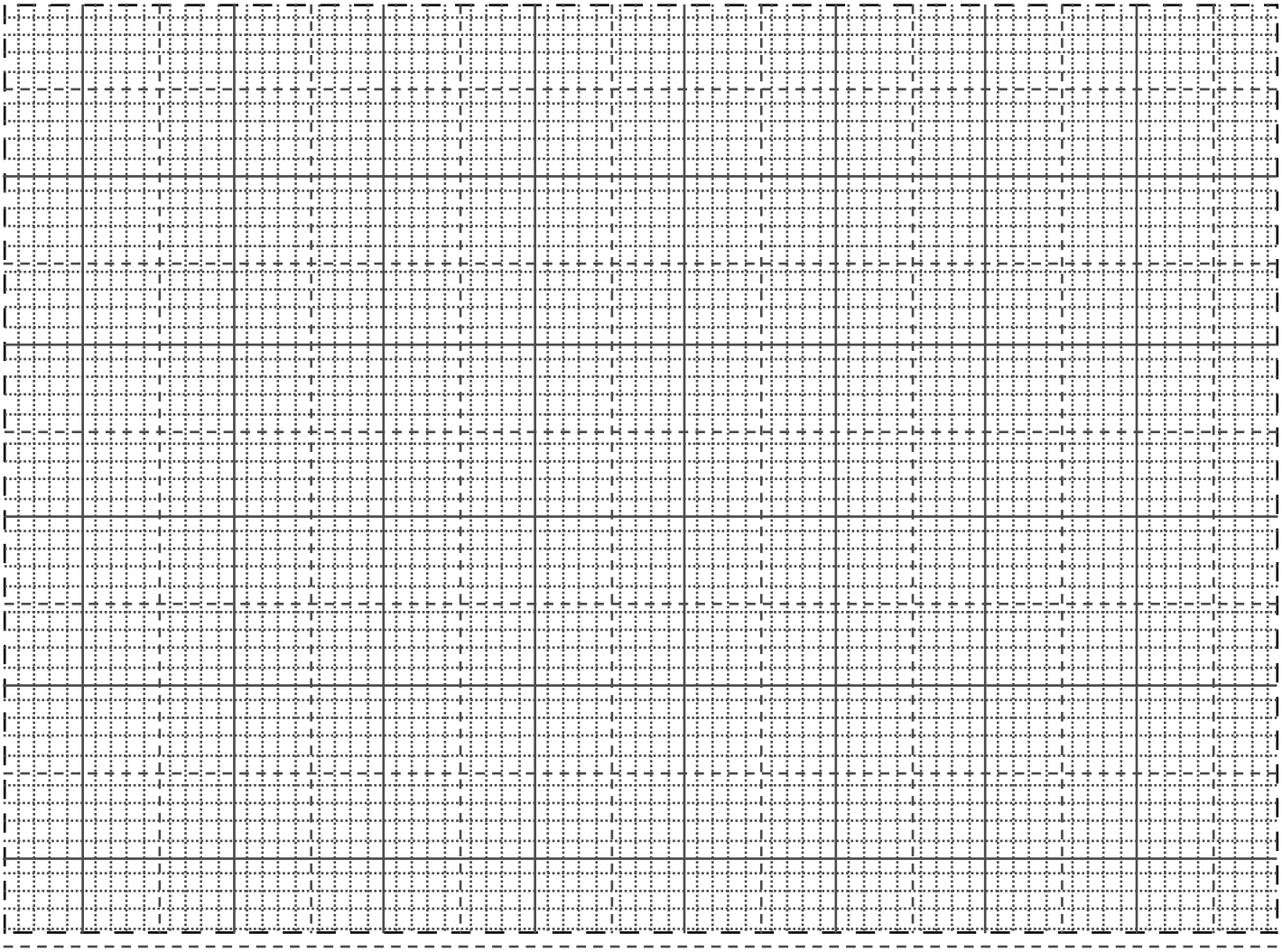
marks: refix the pasticine measure the angle 2Θ and period T, as before.

(iv) Repeat (ii) above with the loops at 15cm and 85cm, 20cm and 80cm, 25cm and 75cm , 30cm and 70cm, 35cm and 65cm

(v) Enter all your results in the table below: **(7mks)**

Position of loop	2ɵ	Cos ɵ	Time , t for 10 oscillations	Period, T (sec)	$T^2(S^2)$
10cm and 90cm					
12cm and 88cm					
15cm and 85cm					
20cm and 80cm					
25cm and 75cm					
30cm and 70cm					
35 cm and 65cm					

(c) (i) On the grid provided plot a graph of T^2 (y-axis) against CosϴΘ **(5mks)**



(ii) Find the intercept on the T^2-axis **(1mk)**

(iii) Determine the slope of your graph **(2mks)**

(i) Measure the angle 2Θ

…….

(ii) Pull the pendulum towards you through a small distance, releases it and measure the period, **T** for motion by timing 10complete oscillations

(iii) Remove the pasticine slide the loops to the 12cm and 88cm

(d) (i) Measure the length, **L**, of the pendulum when $2\Theta = 0^o$ in metres **(1mk)**

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……

(ii) From your graph, determine the period **T** of the pendulum when $2\Theta = 0^o$ **(2mks)**

(iii) Using the formula $T = \sqrt{2\pi^l/_g}$ determine the value of 'g' given that T= 2.0 **(2mks)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

AGRICULTURE

PAPER 1

TIME: 2 HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS

- *Write your name , class, admission number above*
- *This paper consist of three section A, B, and C*
- *Answer all questions in section A and B*
- *Answer any two questions in section C*
- *All answers should be written in the spaces provided*

SECTION A (30MKS)

1.State four factors which determines the farming systems adapted by farmers **(2mks)**

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2.Give four reasons for sub in maize field **(2mk)**

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3.Name two types of inventories in the farm **(1mk)**

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4.State four negative of HIV/AIDS to agriculture **(2mks)**

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5.State four effects of soil erosion **(2mks)**

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6.State four deficiency symptoms of nitrogen in plants **(2mks)**

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7.Highlight two effects of land title deed to farm **(1mk)**

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8.State two methods of controlling headsmat in maize **(1mk)**

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9.Give two forms of large scale farming practiced in Kenya **(1mk)**

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10. State two ways in which parent rode influences soil characteristics **(1mk)**

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11. Give four farming practices carried out to achieve minimum tillage **(2mks)**

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12. State two characteristics of plantation farming **(1mk)**

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13. Give three classes of weeds under growth cycle **(1 ½ mks)**

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14. State four post-harvesting practices on crops **(2mks)**

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15. List four advantages of mulching in Agriculture line **(2mks)**

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16. State three benefits of using certified seeds **(2mks)**

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17. State four importance of air in soil **(2mks)**

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18. State four factors used in classification of inorganic fertilizer **(2mks)**

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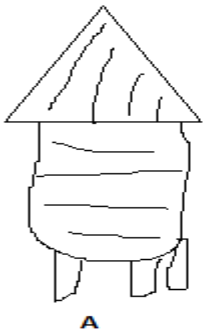
19. State one cause of hard pan in soil

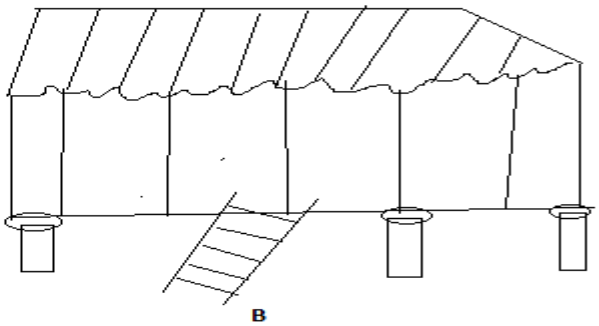
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SECTION B (20MKS)

Answer All questions

20. The diagram labeled A and B illustrate storage structures study the diagram carefully and answer the question that follows.





(a) Identify the structures **(2mks)**

A

B

(b) State four structural differences between **(A and B)**

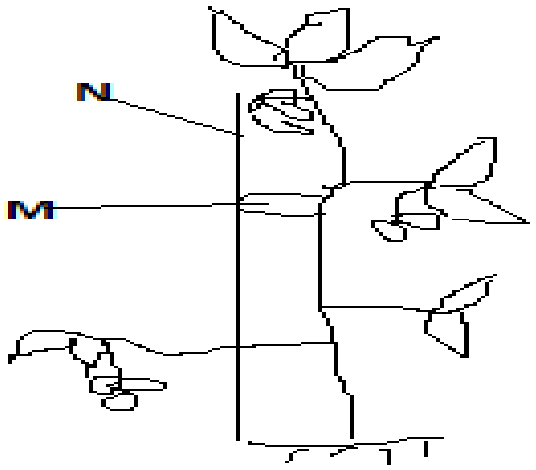
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(c) State four maintenance practices carried out on stradine **(2mks)**



21.(a) Identify the practice illustrated **(1mk)**

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(b) Name material used in N and M and then uses **(2mks)**

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(c) List down four problems faced by a farmer who does not carry out the practice **(4mks)**

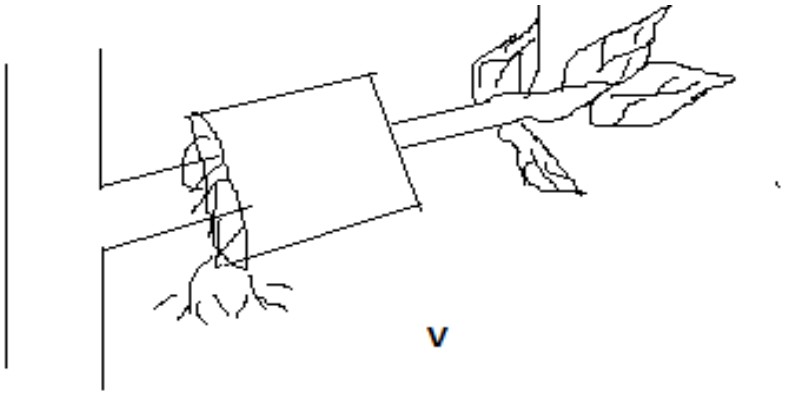
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22. The diagram below illustrates a method of propagating some of the common field crop.
Study the diagram and answer the questions that follows



(a) Identify the method illustrated **(1mk)**

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(b) Name two field crop which can be propagated using above method **(2mks)**

……

……

(c) State two conditions to be ensured at point V to ensure full rooting **(2mks)**

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SECTION C 40MKS

23. Discuss the production of bean under the following sub-headings **(20mks)**

(a) Land preparation **(4mks)**

(b) Selecting and treatment of planting materials **(4mks)**

(c) Planting **(4mks)**

(d) Field management practices **(4mks)**

(e) Harvesting of bean **(4mks)**

24. State five advantages and disadvantages of overhead irrigation **(10mks)**

(b) State factors used in choosing irrigation methods **(5mks)**

(c) What are the uses of water in livestock farm **(5mks)**

25. What factors determine the number of secondary cultivation during land preparation **(5mks)**

(b) Give reasons why minimum tillage may be carried out **(6mks)**

(c) Explain the activities carried out in tertiary cultivation **(6mks)**

(d) What are the factors that determine the depth of ploughing **(3mks)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

AGRICULTURE

PAPER 2

TIME: 2 HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS

- *Write your name , class, admission number above*
- *This paper consist of three section A, B, and C*
- *Answer all questions in section A and B*
- *Answer any two questions in section C*
- *All answers should be written in the spaces provided*

SECTION A

1.State four preparation practices carried out in a store before crop produce is brought in for storage **(2mks)**

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2 .Give problems associated with mineral deficiency imbalance in livestock **(2mks)**

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3.State **four** factors that lowers the performance of an animal **(2mks)**

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4. State one use of the following farm tools **(2mks)**

(a) Pipe wrench

(b) Sickle

(c) Slasher

(d) Tin snip

5.Explain briefly **four** factors that affect maintenance ration requirement of an animal **(2mks)**

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6.Give **four** factors considered when selecting dairy goat **(2mks)**

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7.State **four** features for inbreeding **(2mks)**

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8.Define cross breeding in livestock production

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9.Name **four** meat breeds of rabbit **(2mks)**

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10. State the gestation period of the following animals **(1mk)**

Saw -

Cattle -

11. Outline four characteristic that enable camels to survive in desert **(2mks)**

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12. Name two commercial feeds fed to layers **(1mk)**

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13.(a) What organic causes Newcastle disease in birds **(2mks)**

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(b) State four specific symptoms of Newcastle disease **(2mks)**

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(c) Give 2 methods of controlling the disease **(1mk)**

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14. Give two feeding characteristics of goats which make them less vulnerable to internal Parasite **(2mks)**

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15. Give two characteristics of roughages **(1mk)**

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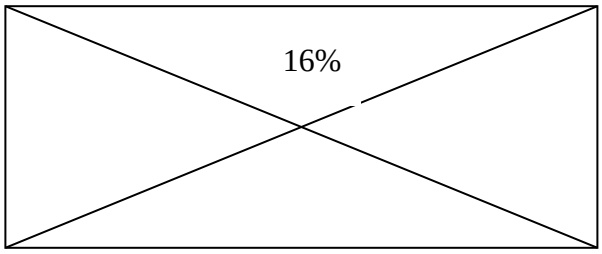
16. Mention two methods of preventing rusting in farm tools **(2mks)**

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SECTION B 20 MARKS

17. The diagram below represents a method of ration computation. Study and answer the questions that follows



(a) Identify the method above **(1mk)**

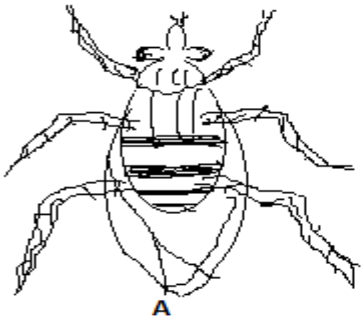
(b) In a practical lesson form three student of agriculture were supplied with the following specimens

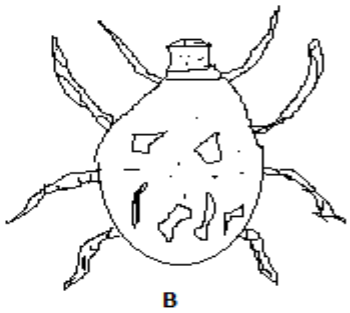
(i) crushed marshed labeled I

(ii) Bloodmeal labeled J

Calculate the quantity of the specimen I (8% DCP) and J 28% DCP) that can be mixed to make 150 kg of feed containing 16% DCP **(4mks)**

18. The diagram below illustrate external parasite study the diagram and answer the question that follow





(a) Identify the two parasite labeled AB **(2mks)**

A

B

(b) Name one disease tramsimitted by A and B **(2mks)**

A

B

(c) Name the class of chemicals used to spray and control parasite **A and B** **(2mks)**

A

B

(d) Mention two harmful effect of parasites A and B in livestock production apart from disease transmission **(2mks)**

A

B

SECTION C

19.(a) Describe the desirable features of a grain store **(10mks)**

(b) Describe the importance of keeping healthy animal **(10mks)**

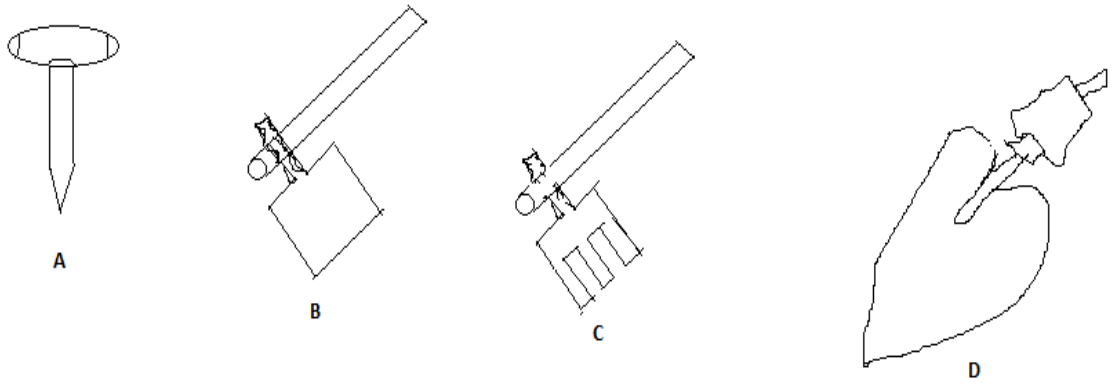
20.Describe the process of egg formation in poultry production with an aid of a diagram **(20mks)**

21.(a) Define parasite as it applies in livestock management stating animals mostly affected **(4mks)**

(b) What economic importance are parasite to livestock **(10mks)**

(c) Give 3 examples of internal and external parasite **(6mks)**

22. Diagram A, B, C, and D illustrate some farm tools and equipments



(i) Give their names **(2mks)**

A

B

C

D

(ii) Give one function of each tools **(2mks)**

A

B

C

D

(iii) Classify each tools in appropriate category **(2mks)**

A

B

C

D

(iv) State one appropriate maintenance that can be done on tool **A** **(1mk)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

BUSINESS STUDIES

PAPER 1

TIME: 2 HOURS

NAME…… ADM NO; ……..

CLASS…… DATE……..

565/1

BUSINESS STUDIES

PAPER 1

INSTRUCTIONS TO CANDIDATES:

- Answer ALL the questions in the spaces provided.

FOR EXAMINERS USE ONLY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Marks														
Question	15	16	17	18	19	20	21	22	23	24	25			
Marks														

TOTAL MARKS

1.Identify four factors that influence the level of capital of a business enterprise. **(4 marks)**

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……

2.Give four features of economic resources **(4 marks)**

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3.Indicate with a tick(✓) in the appropriate column the business environment associated with each of the factors mentioned below. **(4 marks)**

	FACTOR	**INTERNAL**	**EXTERNAL**
i)	Government policy		
ii)	Technological environment		
iii)	Financial resources		
iv)	Firm structure		

4.State four reasons why people engage in business activities. **(4 marks)**

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5.Outline four tools used by the government to influence the quantity of a product supplied in a market. **(4 marks)**

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6.Highlight four factors that may be used to determine the size of a firm. **(4 marks)**

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7.Indicate by writing the word "TRUE" or "FALSE" against the statement describing characteristics for goods and services. **(3 marks)**

	STATEMENT	**TRUE or FALSE**
a)	Goods are inseparable from their producers	
b)	Services can be standardized in form of size, appearance quality	
c)	Services are experienced not owned	
d)	Goods are not always perishable	
e)	Services are highly perishable	
f)	Goods can change in value overtime	

8.The central bank is a banker to the government. Outline four banking services it provides to the Kenya government. **(4 marks)**

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9.The following are types of advertising: Product advertising, competitive advertising, informative advertising and institutional advertising. In the table below, match each type with its appropriate description. **(4 marks)**

	TYPE OF ADVERTISING	**DESCRIPTION**
a)		Promotes the name of the manufacturer
b)		Persuades the consumers to buy a product
c)		Creates awareness about a product
d)		Promotes a particular brand of a product

10,Outline four barriers to written communication. **(4 marks)**

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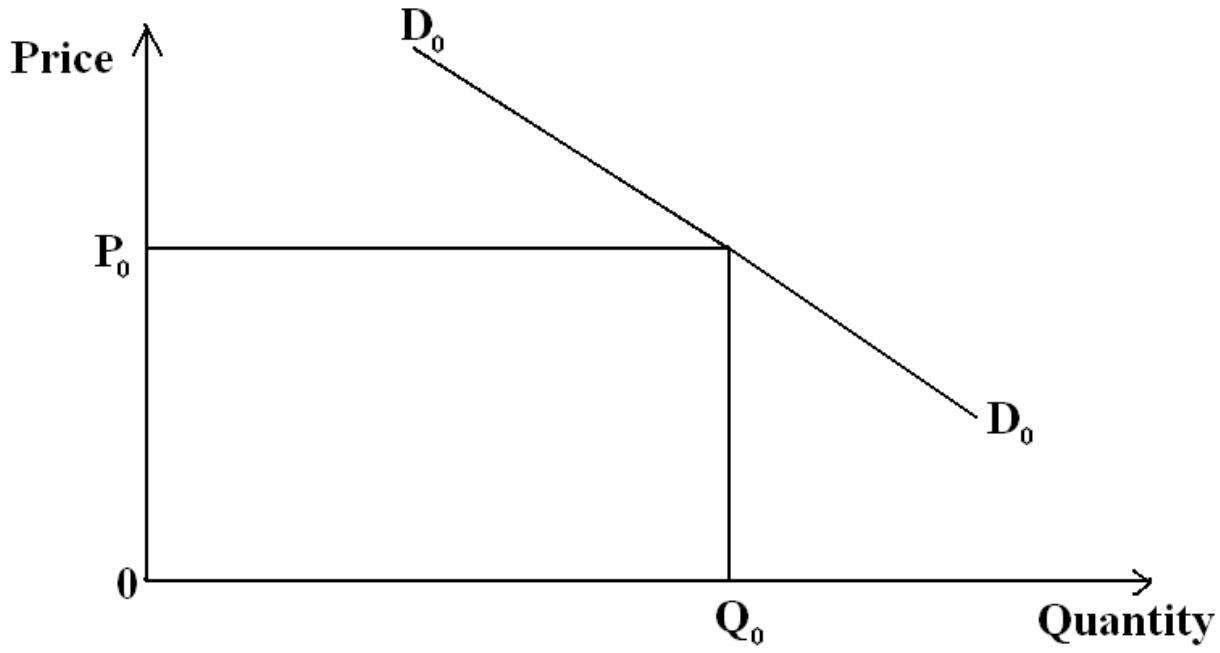
……

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11.For each of the following cases, name the motive for holding money. **(4 marks)**

	CAES	MOTIVE
a)	To meet daily bus fare expenses	
b)	To meet unexpected medical emergencies	
c)	To stock maize when prices fall	
d)	To meet daily food requirements	

12. The diagram below shows the current demands for petrol.



a) What is the effect of an increase in the price of cars on demand for petrol**.** **(2 marks)**

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b) Draw a new demand curve on the diagram above to show the effect of an increase in price of cars. **(2 marks)**

13.State four reasons why few Kenyans take out life assurance policies. **(4 marks)**

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14. For each of the transactions given below, indicate in the appropriate column, the source documents and the book of original entry in which the transaction is recorded. **(4 marks)**

	Transaction	Book of original entry	Source document
a)	Sale of tables on credit		
b)	Purchase of stock on credit		
c)	Goods returned by a customer		
d)	Payment to a creditor		

15. Outline four sources of a business idea. **(4 marks)**

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16. Write down the international trade document that relate to each of the following statements

	STATEMENT	**DOCUMENT**
a)	Indicate the country of origin of the imported goods	
b)	A document of title to the goods traded in international trade	
c)	Used to demand for payment before delivery of goods	
d)	Facilitated an importer to obtain credit	

17. The financial period of Buteba Traders ends on 31st December every year. On 31st December 2011 the business had the following assets and capital.

Item	Sh.
Capital	24,000
Stock of goods	1,500
Debtors	2,000
Machinery	20,000
Cash	4,000

Required:

Calculate the total liabilities and prepare a balance sheet as at 31st December 2011. **(4 marks)**

18. Highlight four circumstances under which a country may be classified as underdeveloped.**(4 mks)**

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19. Record the following transactions in the cash book of Jerussa Entreprises for the month of January 2011 and balance it off.

2011

Jan. 1: Cash in hand sh. 10,000, cash at bank sh. 20,000

Jan. 10:Paid Luke Sh. 8,800 and Joan sh. 11,000 after deducting 12% cash discount in each case by cheque

Jan. 30:Banked all the cash leaving sh. 1,200 in the cash box. **(5 marks)**

JERUSSA ENTREPRISES
CASHBOOK FOR JANUARY, 2011

Date	Details	Disc All.	Cash	Bank	Date	Details	Disc Rec.	Cash	Bank

20. State four benefits that consumers get from small scale retailers. **(4 marks)**

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21. The following information was obtained from the books of Okame Traders on 30th June 2011.

Opening stock		8,000
Purchases	53,000	
Sales		62,900
Returns outwards		2,700
Closing stock		12,700

Prepare Okame Trading Accounts for the year ended 30th June 2011. **(4 marks)**

22. The following balances were extracted from the books of Mwambo wholesalers for the year ended 31st December,2005.

Sales		500,000
Purchases	320,000	
Opening stock		80,000
Closing stock		40,000
Debtors	140,000	
Creditors	90,000	

Calculate

a) Margin

b) Current ratio

c) Rate of stock turn over **(4 marks)**

23. The following statistics refer to a hypothetical economy. Use it to calculate the per capita income using the income approach. **(4 marks)**

	(Ksh in millions)
Total profits by entrepreneurs	80,0000
Total rent received by landlords	130,000
Total interests earned by financial institutions	40,000
Total salaries paid by employees	-50,000
Total population	40

END

END

24. Give four features that differentiate a public corporation from a public limited company.**(4 mrks)**

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25. Highlight four undesirable effects of inflation to the Kenyan economy **(4 marks)**

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FORM 3 ENDTERM 1 EXAMS

SERIES 2

BUSINESS STUDIES

PAPER 2

TIME: 2 HOURS

NAME…… ADM NO; ……..

CLASS…… DATE……..

565/2

BUSINESS STUDIES

PAPER 2

INSTRUCTIONS TO CANDIDATES:

- *Answer any FIVE questions.*
- *Write your answers in the answer sheet provided*
- *All questions carry equal marks*

QUESTIONS

1. a) Explain **five** benefits that would accrue to a businessman who uses a Liner rather than Tramps Steamers. **(10mks)**

b) Using a diagram, describe the effects of outward shift in supply curve on equilibrium price and quantity. **(10mks)**

2. a) Explain ***four*** measures that may be taken by the government to promote her export. **(8mks)**

b) The following Trial Balance was extracted from the books of Kisumu Auto spares as at 31st Oct 2011

Kisumu Auto Spares
Trial Balance
As at 31st Oct 2011

	DR	CR
Capital		653,560
Motor vehicle	603,000	
Equipment	200,600	
Furniture	94,400	
Debtors	75,900	
Creditors		74,300
Carriage on sales	14,400	
Discount Received		26,400
Salaries	12,400	
Rent Income		12,600
Sales		319,400
Purchases	300,000	
Advertising	22,200	
Rates	9,400	
Stock 1-11-2010	61,500	
Bank		412,600
Cash	105,060	
TOTAL	**1,498,860**	**1,498,860**

Stock on 31st October 2011 was sh. 80,200

Required,

(i) Prepare Trading ,Profit and Loss account for the year ended 31st Oct 2011

(ii) Prepare Balance sheet as at 31st October 2011 **(12mks)**

3. a) Explain **Five** circumstances under which a manufacturer would find it advisable to distribute his goods through wholesalers. **(10mks)**

b) Explain ***five*** functions of the central bank of Kenya in the Economy. **(10mks)**

4. a) Distinguish between shares and debenture as a source of finance. **(10mks)**

b) Outline five circumstances under which a firm will be located near the market for its products. **(10mks)**

5. a) The following information relates to Bizna Distributor Company for the year ended 31st Dec 2009

	shs
Gross profit	600,000
Opening stock	285,000
Sales	2,400,000
Purchases	1,830,000
Expenses	360,000
Closing stock	315,000
Fixed assets	400,000
Debtors	900,000
Bank	35,000
Current liabilities	438,000

Required calculate

i) Margin **(2 ½ mks)**

ii) Rate of stock turnover **(2 ½ mks)**

iii) Return on capital employed **(2 ½ mks)**

iv) Current ratio **(2 ½ mks)**

b) Explain **five** ways in which the Entrepreneur contributes to the production of goods. **(10mks)**

6. a) Describe **five** means of payment that a trader may use to settle business debts. **(10mks)**

b) Explain **five** indicators of under development in Kenya. **(10mks)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

ENGLISH

PAPER 1

TIME: 2 HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

101/1

ENGLISH

PAPER 1
(FUNCTIONAL SKILLS)
TIME: 2 HOURS

INSTRUCTIONS

1. *Write your name index number in the spaces provided.*
2. *Answer all questions in this paper*
3. *All answer must be written in the spaces provided in this question paper*

FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM	SCORE
1	20	
2	10	
3	30	
Total Score	**60**	

1. You are a young investigative journalist; you've just visited a welfare organization that received funds from a donor. The organization however feels that the funds can't suffice their plans and therefore appeals for more funds from the donor. Write a report.

2. CLOZE TEST (10mks)

Fill in each blank space in the following passage with a suitable word.

Can you _____1_____ a basic standard two test? You may be schooled but you are not_____2_____ this, a woman's baby is dying _____3_____! Picture this, a woman's baby is on the _____3_____ a disease and a nearby poster On the _____4_____ gives details on how to prevent or _____ 5_____ it, yet _____6_____ cannot interpret it despite having attended primary school. This is part of a dilemma that a group of education researchers are out to ____7_____: Weather Kenya's _____8_____can be read but cannot process information.-_____9_____Education researchers have designed a unique test _____10_____ at reviewing Kenyans? Ability to read and write completely, despite, going through a rigorous school system.

3. ORAL SKILLS (30mks)

a) Read the oral narratives below and answer the questions that follow.

Once upon a time, a woman who was pregnant and about to give birth went to the bush to collect firewood. On went to the bush to collect firewood. On reaching the bush, she suddenly gave birth to a baby boy who was so deformed and ugly that she decided to exchange it for another baby. A normal – looking one she found abandoned and crying in a nearby thicket. She didn't know that this baby was a spirit called Ekipie by the Turkana.

The woman returned home with the baby and since it was evening time, she had to milk the cows. So as usual, she took three gourds and filled them with milk from the numerous cows they owned. She put the milk containers in her hut where her eldest daughter was minding the new baby. Then she went out again to complete some of her other chores.

Later, when she returned to the hut where she had left the baby, she found to her dismay, that there was no milk at all. All the three guards were empty. Surprised, and shocked, she questioned her daughter about the milk and what had happened to it. The girl replied;

"The baby has drunk it all".

"I cant belief such a tale. It's ridiculous for you to say such a thing", She scolded her daughter.

"Don't tell lies. Admit you are just imagining things. Who drank the milk?"

The woman persistent in questioning her daughter in questioning her daughter who swore it was the baby.

Strange as it may sound to you, the same thing happened again the following day and a several consecutive days. The woman grew puzzled and confused. Her husband too began to complain about the non – availability of milk in the household. Now, the woman had no alternative but to tell him the truth.

QUESTIONS

i) What would you do to prepare your audience to listen to the above story? **(2mks)**

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ii) What two things would indicate to you that the audience is following the story? **(2mks)**

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iii) What two oral devices would you use in narrating this story?

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iv) How would you perform the reply of the girl" The baby has drunk it all"

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b) Provide homophones for the following words.

i) Know.....

ii) Scene.....

iii) Sight.....

iv) Blew.....

v) Ewe.....

c) Explain the difference in meaning between the following sentences. **(2mks)**

i) The <u>thief</u> entered this house

……

……

ii) The thief entered <u>this</u> house

……

……

d)In the following paragraph, the writer has utilized one of the genres of oral literature to express his feeling about the subject. Answer the following question based on it.

The prince was their, idol
Through he was enjoying the peas.
He was bored and need parrying,
The regency took the queue
To enjoy from the generous air,
The kind sun of the kingdom.

(Karnabomain)

Replace the underlined words with those that have the same sounds to bring out the intended surface/ literal meaning. (3mks)

i).....

ii).....

iii).....

iv).....

v).....

e)" Your Bob owes our bob. If your Bob doesn't give our Bob the bob owes our Bob, Our Bob will give your Bob a bob in the eye?

i) Identify the genre above **(2mks)**

……

ii) Give one characteristic feature of the genre above. **(2mk)**

……

f) Mrs. Jabali of Upendo High School asked her class to decide which of the set books in their syllabus they should perform for the rest of the school. Read the form Four champions discussion below and then answer the questions that follow.

Mrs Jabali: Rose, Would you lead the discussion?
Rose: Aha,Ok. The question is, What play should we pick for our class play? Does anyone have suggestions? Mercy?
Mercy: I suggest we do an Enemy of the people.
Sharon: How about shreds of Tenderness?
Rose: No, I dislike Shreds of Tenderness Passionately.
Kaunda: I love the River Between.
Mercy: No way! That would make a stupid play! let's do An Enemy of the people.

Rose: Sasha!
Sasha: I have never watched Shreds of Tenderness but .....
Joy: It is a super barb play.
Rose: Joy, Please let Shasa finish then it is your turn.
Joys: Sorry
Sasha: Anyway, I have never seen a play on An Enemy of the People but I have watched a movie and I loved it.
Rose: Lilian
Lilian: I just wanted to say that I like think Shreds of Tenderness is really good play.
Rose: Naom?
Naom: I saw the Movie An Enemy of the people too, and I really liked it. I loved the part where Catherine storms the.....
Rose: Excuse me, Naom, But we should talk about that after the discussion is over. Does anyone have any other suggestions? No? Ok.Mercy proposed An Enemy of the People, Sharon like Shreads of Tenderness and Kaunda wants the River Between. Has anybody seen or read all three? No? Ok. I suggest that we read them and then continue the discussion in a couple of days. Is that okay with everyone? Ok. The discussion is over.

i) In terms of effective communication identify five things some members of form four champions did wrong in the discussion. **(5mks)**

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ii) Mention three aspects or etiquette displayed by some members during the discussion. **(3mks)**

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FORM 3 ENDTERM 1 EXAMS

SERIES 2

ENGLISH

PAPER 2

TIME: 2½ HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

101/2

ENGLISH

INSTRUCTIONS TO CANDIDATES

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

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

c) *Answer ALL questions in the spaces provided in this question paper*

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM	CANDIDATE'S
1	20	
2	25	
3	20	
4	15	

1. Read the following passage and answer the questions that follow.

The statements, events and reactions of the past couple of weeks surrounding the perennially vexed subject of corruption makes me wonder. Are we on the cusp of the challenge to and confrontation against corruption?

Certainly we have come a long way In identifying and isolating it. Let me give a small example. Twenty one years ago, I wrote a piece for the *Sunday Nation* which was entitled "Why Kenya's looting brigade now has its eyes on public land"

The main **thrust** of the article was that after the monetary excesses of 1992 and 1993, there was a growing penchant for Kenya's looting brigade to next move their focus and activities to public land. The process was as simple and as was crude. A handful of politically connected private individuals or entities would get allocated a prime piece of public land for a nominal sum. A title would be processed and then it would be sold, in part or whole, at a much higher price to a public institution that had the cash resources. It became known as "land grabbing" and most Kenyans can give countless examples of where this has taken place. It was double plunder because not only was the land grabbed; it was often paid out of public resources or savings that were meant for other things.

Today, we talk about this activity and make reference to it with alacrity and in most cases without fear. Not so in 1994.When I first wrote the piece and offered it to the *Sunday Nation*, it passed the relevant tests of being well researched and factually correct, but publishing it was another matter. There was a culture of fear that shrouded the whole country and putting one's head above the parapet was regarded as dangerous and reckless. The piece was pushed around a couple of editorial desks and the decision to publish was **deferred** for a while I recall I was requested to "soften" the piece. When it did eventually get printed, I was very much aware that I might get a backlash and braced myself accordingly. Today, there is much less remaining of that culture of fear but as we have been reminded several times recently, corruption at many levels continues unabated. The **Dossier** compiled by the Ethics and Anti-corruption Authority (EACC) is evidence enough. The stance made by the president on Thursday is also encouraging.

So where to now? There is no doubt that the public outrage the majority of the population, who are mere victims, as opposed to beneficiaries, is gathering the momentum of landslide proportions. We should not underestimate that growing anger. This is both unsurprising and gratifying. For most of us, corruption just makes our lives much tougher, more fatiguing and even expensive.

The big question is: how seriously will those who have been named take it? The norm in many countries which aspire to high integrity standards is that when a person is named by such a body as the EACC, then that person should step aside. The onus is on the relevant bodies to complete

investigations and prosecute as and when necessary and for the person named to defend him or herself.

That is where we should be heading. The president should make it clear that all the people named in the scandal should step aside. If we move down that road, then we are indeed heading in the right direction. If we do not then this will just be another bout of public gesturing of the bread and circuses variety.

Lastly, the EACC and in turn the Director of Public Prosecution, need to do some serious ground work to fully support and, where applicable, prosecute what is being alleged. We are watching and in a number of cases, rather sceptically.

QUESTIONS

a) According to the passage, what statements show that corruption has taken a long time to be addressed? **(2marks)**

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b) From the writer's perspective, what is land grabbing**?** **(2marks)**

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c) Why is it easier today to talk about land grabbing? **(2marks)**

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d) Why does the writer refer to land grabbing as the double plunder? **(2marks)**

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e) How does corruption affect the wider society? **(2marks)**

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f) What steps should be taken when suspects involved in corruption step aside? Give your answer in note form. **(3marks)**

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g) We should not underestimate that growing anger. (**Rewrite in passive)** **(1mk)**

……

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h) In which way can the EACC help in the fight against corruption? **(2marks**

……

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……

i) What is the meaning of the following words as used in the **passage?** **(3mrks)**

i. Thrust

ii. Deferred

iii. Dossier

***2.* Read the excerpt below and answer the questions that follow (25 marks)**

Dr. Afolabi heard someone call him from behind. He stopped walking then turned to look. There she was! She wore a scarlet blouse, a black skirt, and red high heels. Who was she? She was not anyone he could remember. Perhaps she had called someone else. He looked around. No one else had stopped. That **made sense**: she had called his name. well, who was , and why had she chosen him?

She called again. "Dr. Afolabi! May I please have a word with you?" she asked.

"With me?" he asked. "Are you sure?"

"I am sure all right, which means you will now follow me. This way please." She led him to a corner with two chairs. So sit here" She indicated one of the two chairs. "One minute is all I'll take. Well, maybe I'll take more, but five at most" She sat on the other chair.

"One minute, five minutes-where is the difference?" he **joked**. Then he sat as well.

"My name is McKenzie, "she began. Fiona McKenzie. First, let me thank you for agreeing to sit for this interview. Wait. Can I tell you something else first before I continue? You see, whenever I say my name is McKenzie, people look at me **quizzically**, silently demanding an explanation."

"And the explanation, Ms. McKenzie, is what? He asked.

Questions

a) Why do people look at McKenzie quizzically and demand an explanation? **(4mks)**

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b) From your knowledge the text, explain why Fiona wants to have a conversation with Afolabi who does not seem to know her. **(3mks)**

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c) Identify and illustrate three stylistic devices used in this excerpt. **(6mks)**

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d) For each of the following character, identify and illustrate one character trait. **(4mks)**

i. Fiona

……

……

Dr. Afolabi

……

……

e) She indicated one of the two chairs.

(Rewrite and add a question tag) **(1mk)**

……

……

……

f) From your knowledge of this set text, how important is Dr. Afolabi to Fiona in person? **(4mks)**

……

……

……

……

……

g) Explain the meaning of the following words and phrases as used in the excerpt. **(2mks)**

i. Made sense

……

……

……

ii. Quizzically

……

……

……

3 ***Read the poem below and answer the questions thereafter.***

I watched her at the bus stop
White blouse swelling
Before the impatient push
Of breasts earger to be free
Orange skirt billowing provocatively
Under the silken cares
Of the harbor breeze
Eyes flashing with life
I watched her,
But went quickly on my way,
For she was but a secondary student

I would have forgotten her
But I saw her again that night
Glowing in the soft light of mpakani Bar,
Six inches taller
Wide trouser clinging possessively
The youthful thrust of her buttocks
Before dropping to mask the raised heels
She was transformed!
I wouldn't have recognized her
But for those eyes
So provocatively thirsty
With a pang of jelousy
I glanced at her partner
And chocked into my glass-
My father!

Richard S. Mabala.

a)What is the poem about?Illustrate. **2mks**

……

……

b)Explain the transformation that the subject underwent. **3mks**

……

……

……

……

c)Identify two lines from the poem that show that the persona looked at the subject lustfully**2mks**

……

……

……

d)Identify and illustrate two features of style used in the poem. **4mks**

……

……

……

……

……

e)What is the importance of the first person techniques used in the poem**?** **2mks**

……

……

……

f)Rewrite these lines as instructed: **2mks**

i) I wouldn't have recognized her but for those eyes.

(Begin:If**……**

……

ii)I would have forgotten her but I saw her again that night.(Rewrite beginning:Had**……**

……

g)Explain these expressions as used in the poem:

i) billowing provocatively

……

……

ii) mask **(2MKS**

……

……

4 Grammar (15 marks)

a)Rewrite each of the following sentences as instructed do not change the meaning **(3mks)**

i)Makau gives a present to each of his friends during Christmas (Rewrite in passive)

……

……

ii)It began to drizzle as soon as we started our exams (Rewrite beginning: Hardly..)

……

……

iii)"Why do you always come late to work?" The boss asked. ''This is no longer acceptable!" (Rewrite in indirect speech)

……

……

b)Rewrite the sentences below replacing the underlined words with appropriate phrasal verb.

(3mks)

i) Juma always **visited** us when he had time.

……

ii) The teacher was **angry** with us.

……

iii) We opened school two weeks early to **compensate** for the lost time

……

c) Complete the following sentences with the correct form of the word in brackets. **(3mks)**

i) Abudi was liked by all her colleagues because of her ……(humble)

ii) She was relieved when the three ……(passer-by) left her compound.

iii) He ……(true) believes in hard work.

d) Replace the underlined words with one word. **(3mks)**

i) He was accused of stealing <u>knives, forks and spoons</u>.

……

ii) The <u>brothers and sisters</u> fought over their parent's property.

……

iii) The thief stole the <u>container used by young children as toilet</u> mistaking it for a bowl.

……

e) Fill in the blank spaces below with the most appropriate preposition. **(3mks)**

i) The Harambee Stars players shared the prize money _____ themselves

ii) They had a super goalkeeper they could depend _____

iii) Our school mission vision and motto are in line _____ the Government policy

FORM 3 ENDTERM 1 EXAMS

SERIES 2

ENGLISH

PAPER 3

TIME: 2½ HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS

Answer two questions only

One from the novel or the play and the other one imaginative

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) **(20 Marks)**

FATHERS OF NATIONS (20marks)

"Money and desire can change an individual". Basing your illustrations on **Paul Vitta's Fathers of Nations**, write an essay to back up this statement. **(20 marks)**

OR

3.THE PLAY

THE SAMARITAN (20marks)

Hope is the mother of success is proven to be a true statement in **John Lara's The Samaritan,** write an essay to justify this. Or however bad a situation is, hope saves the day. **(20 marks)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

KISWAHILI

KARATASI YA 1

MUDA: SAA 1¾

NAME……. ADM NO; ……..

CLASS…… DATE……..

102/1

KISWAHILI

KARATASI YA 1

(INSHA)

KIDATO CHA TATU.

MUDA: SAA 1 ¾

MAAGIZO

1. *Andika Insha m**bili***
2. *Swali la **kwanza** ni la **lazima***
3. *Chagua insha nyingine kutoka hizo tatu zilizobaki*
4. *Kila insha isipungue maneno **400***
5. *Kila insha ina alama **20***

MASWALI

1.Halmashauri ya utunzi wa mitihani nchini imewatahadharisha watahiniwa dhidi ya udanganyifu katika mitihani ya kitaifa. Andika tahadhari hiyo na hatua zitakazochukuliwa dhidi ya watakaozikiuka.

2.Katiba mpya imewapa vijana uhuru wa kujitegemea na kujiendeleza kimaisha. **Thibitisha**

3.Pilipili usiyoila yakuashiani?

4.Andika hadithi itakayomalizikia kwa:

……kisa hiki kilinifundisha kwamba kuzaliwa masikini si hoja.

FORM 3 ENDTERM 1 EXAMS

SERIES 2

KISWAHILI

KARATASI YA 2

MUDA: SAA 2 ½

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)**

……

……

……

(b) Kabla ya uzinduzi huu kuhusu usawa wa kijinsia, wanawake wamekuwa wakitendewa dhuluma za kila aina. Taja tatu. **(alama 3)**

……

……

……

(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)**

……

……

……

(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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……

……

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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)**

……

……

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: **Anikumbuka**ye **(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)**

……

……

……

……

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 ENDTERM 1 EXAMS

SERIES 2

KISWAHILI

KARATASI YA 3

MUDA: SAA 2½

NAME……. ADM NO; ……..

CLASS…… DATE……..

MAAGIZO: Jibu maswali yote katika karatasi hii

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 ENDTERM 1 EXAMS

SERIES 2

CHRISTIAN RELIGIOUS EDUCATION

PAPER 1

TIME: 2½ HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

313/1

CRE

PAPER 1

Answer Any Five Questions

1. (a) Outline ways in which Christians use the Bible to spread the good **news** **(6mks)**

(b) State **seven** problems which church leaders encounter in their work of evangelization **(7mks)**

c) Explain the reasons why the bible was translated from original languages to local languages **(7mks)**

2. (a) Outline the differences in the **two** accounts of creation in Genesis 1 and **2** **(7mks)**

b) Outline the consequences of breaking taboo in the traditional concept in the African society.**(7m)**

c) Describe **six** ways in which Christians continue with God's work of creation **(6mks)**

3. a) Explain ways in which King David promoted the worship of Yahweh in **Israel** **(7mks)**

b) Outline **seven** failures of King Saul as the first King of **Israel** **(7mks)**

c) Outline the duties of Samuel as a prophet of God **(6mks)**

4.(a) Give s**even** reasons why Elijah faced danger and hostility in **Israel** **(7mks)**

(b) List **five** forms of corruption in Kenya tod**ay** **(5mks)**

(c) Explain the relevance of Elijah's prophetic mission to Christians tod**ay** **(8mks)**

5(a) Explain four importance of Kinship ties in the traditional African society. **(8 mks)**

(b) Identify seven changes that have taken place in the rite of initiation today. **(7 mks)**

(c) Give reasons why dowry is losing its meaning in the contempary Kenya. **(5 mrks)**

6. a) Highlight the difference between the traditional and Old Testament prophets

b) Identify various ways through which the Old Testament Prophets communicated their messages to the people

c) What lessons can a Christian learn from the Old testament Prophets

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FORM 3 ENDTERM 1 EXAMS

SERIES 2

CHRISTIAN RELIGIOUS EDUCATION

PAPER 2

TIME: 2½ HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

Answer Any Five Questions

1. (a)Outline the message of angel Gabriel to Mary **(Luke 1:7:6)** **(6mks)**

(b)What does the magnificant reveals about the nature of **God?** **(8mks)**

(c)State six activities that took place when Jesus was **born (Lk 2:6-20)** **(6mks)**

2. (a)Describe the temptation of Jesus in the wilderness before he begun his public **ministry(8mks)**

(b)Outline the lessons Christians learn from the temptation **of Jesus** **(6mks)**

(c)State the problems faced by new converts in the church **today** **(6mks)**

3 (a) State the teachings that Jesus made to the guests at the Pharisees house in (Lk 14:1-14)(6mks)

(b)Outline reasons why Jesus used the parable of the great feast in his teaching in Lk 14:15 – **2(8mks)**

(c)State reasons why Christians take part in the Lord's Supper **(6mks)**

4a). Identify six ways in which the Holy Spirit was manifested on the day of **Pentecost** **(6mks)**

b). Give eight causes of disunity in the **church** **(8 mks)**

c). Show how the gift of the Holy Spirit are misused in the church **today** **(6mks)**

5a). Narrate the incident of the healing of the woman with the flow of blood by Jesus Luke 8: 43-48 **(7mks)**

b). Give four reasons why the miracles of Jesus are regarded as his saving work **(8mks)**

c). Identify five factors that may hinder Christians from assisting the sick in the society. **(5mks)**

6a). Narrate the parable of the lost sheep **(6mks)**

b). State eight teachings about God from parable of the lost sheep **(8mks)**

c) . Identify six ways in which the church brings back people of weak faith. **(6mks)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

GEOGRAPHY

PAPER 1

TIME: 2¾ HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS TO CANDIDATES:

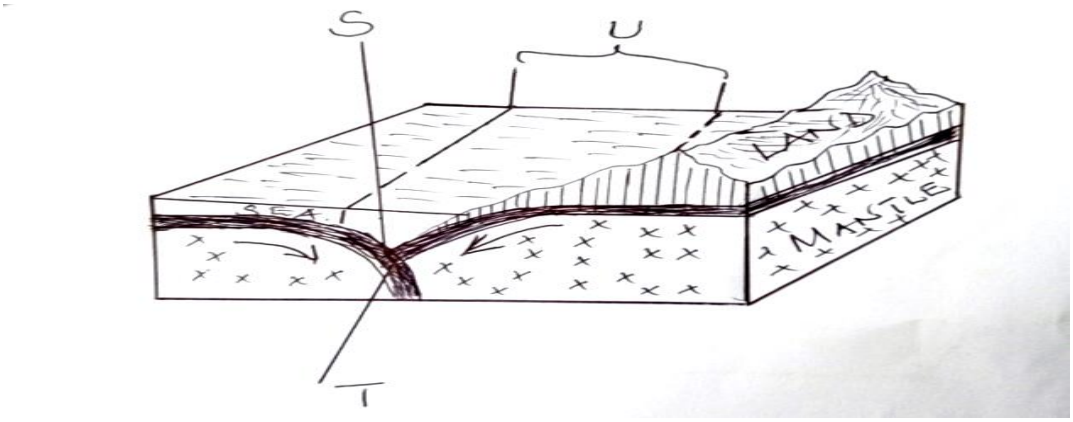
- *This paper consists of three sections; A, B and C.*
- *Answer all questions from section A and B.*
- *In section C, answer any three questions. All answers must be written on the answer sheets provided.*

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)**

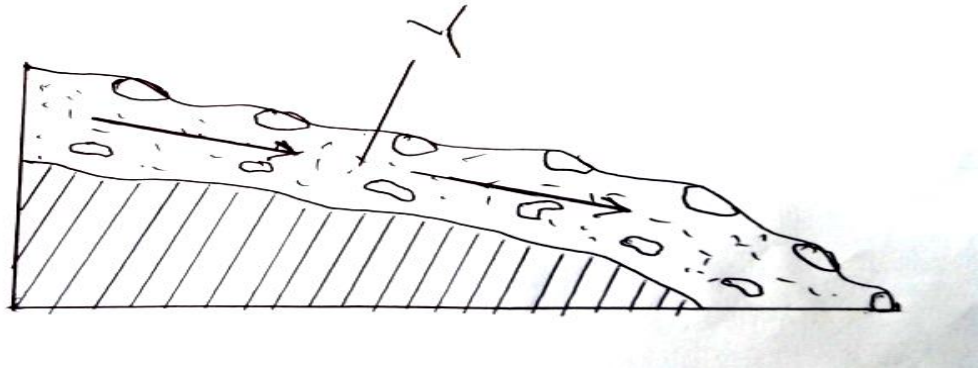
3. (a) Apart from exfoliation, name two other physical weathering processes influenced by temperature changes. **(2 mks)**

(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)**

1. Study the map of **Kisumu East (1:50000)** provided and answer the following questions.

(a) i) What is the bearing of the trigonometrical station at Grid reference 081980 from the rock out crop at grid reference 071992. **(2 marks)**

ii) Measure the length of the all – weather road (bound surface) B 2/1 from the junction at grid reference 974911 to the edge of the Map, grid reference 947967.(Give your answer in kilometers**)** **(2 marks)**

iii) Draw a rectangle 10m by 15cm to represent the area covered by the map. On a rectangle, mark and name: **(1 mark)**

- A lake **(1 mark)**
- A plantation **(1 mark)**
- River Luando **(1 mark)**

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

ii) Explain how relief has influenced settlement in the area covered by the map. **(4 marks)**

b) Citing evidence from the map, give **three** economic activities carried out in the area covered

by the map. **(3 marks)**

c) Students from the school at Masogo (grid square 0681) carried out a field study of the course of River Ombeyi.

i) State **three** findings they are likely to have come up with **(3 marks)**

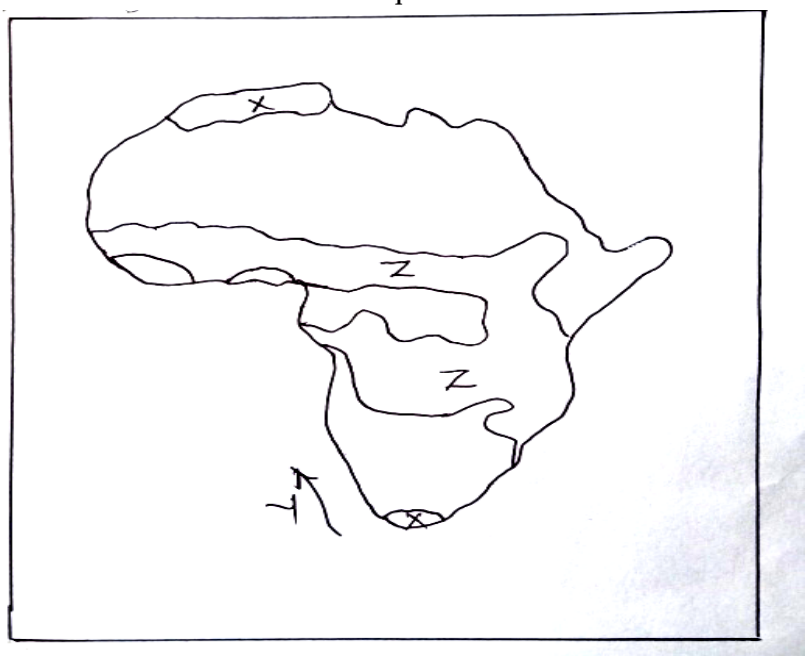
ii) Give **three** advantages of studying rivers through field work **(3 marks)**

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;

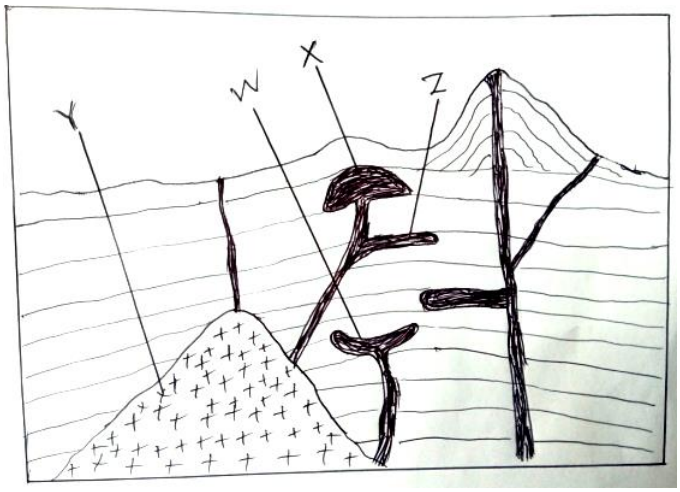
(i) Explain two effects of wind on climate that they are likely to have identified. **(2 mks)**

(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)**

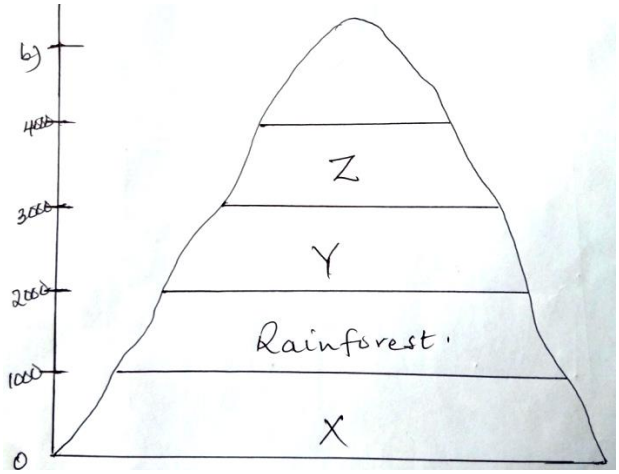
(ii) Explain the significance of volcanic features to human activities. **(6 mks)**

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 plant**s.** **(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 ENDTERM 1 EXAMS

SERIES 2

GEOGRAPHY

PAPER 2

TIME: 2¾ HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

Answer All Questions

1.Name three patterns of human settlements. **(3mks)**

2.i) List any two products from Jua kali industry in Kenya exported to other countries. **(2mks)**

ii) Name two renewable sources of energy used in Kenyan industries. **(2mks)**

3.a) Name three surfaces that are reclaimed in Kenya. **(3mks)**

b)Identify the method of reclamation used in each surface mentioned in 3(a) **(3mks)**

4.Explain how the following practices help in soil conservation

i)Mulching **(2mks)**

ii)Terracing **(2mks)**

5.a) Describe how deep-shaft mining takes place. **(5mks)**

b)Name three products from an oil refinery other than petrol. **(3mks)**

SECTION B

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

6.The table below shows milk yield in kilograms per dialy cow in Denmark between 1990 and 1995.

Year	1990	1991	1992	1993	1994	1995
Yields in kg	5243	6693	7398	7610	7792	7946

(a) **(i)**Draw a divided circle of radius 3-5cm to represent the milk yield in Denmrk,

Show all your calculations **(2mks)**

(ii)State two advantages of using the divided circle to represent **data** **(2mks)**

(iii)Name two other methods, apart from the divided circle, that could be used to represent the above data. **(2mks)**

(b) (i)Explain three physical factors that have favoured farming in Denmark **(6mks)**

(ii)State three problems facing dairyFarmers in Kenya **(3mks)**

(c) Explain two reasons why beef farming is more developed in Argentina than in Kenya. **(4mks)**

7 (a) (i)State any two forms in which minerals occur **(2mks)**

(ii)Name any three places where limestone is mined in Ken**ya** **(3mks)**

(b) Explain how the following factors influence the exploitation of a mineral

(i)Market **(2mks)**

(ii)The quality of ore **(2mks)**

(iii)Technology **(2mks)**

(c) **(i)**Name two provinces in south Africa where gold is mined **(2mks)**

(ii) Explain three problems facing gold mining in south Africa **(6mks)**

(d) Describe the processing of diamond in south Africa.

8 (a)(i) Apart from oil, name **two** sources of non-renewable energy. **(2 mks)**

(ii) List **three** advantages of solar energy. **(3 mks)**

(b) Explain **four** problems encountered in mineral exploitation in Keny**a.** **(8 mks)**

(c) Explain the effects of over-relience on oil as a source of energy. **(8 mks)**

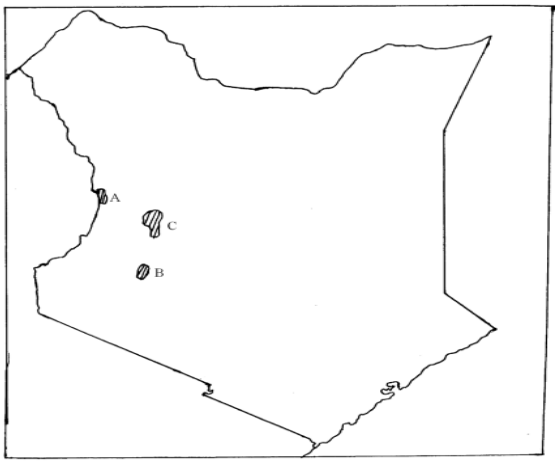
(d) State **four** methods the Government of Kenya uses to manage and conserve her energy resources. **(4 mks)**

9 a)i) define the term forestry. **(1 mark)**

ii) Give three differences between natural forest and planted forests**.** **(3 mrks)**

b) Explain FOUR causes of forest depletion in Kenya today. **(8 mrks)**

c)i) From the map below, give the names of the forests marked A, B ad C



ii) State FOUR measures that are being undertaken by the Kenya Government to conserve forests. **(4 mrks)**

d) Explain THREE factors favouring the exploitation of softwoods inCanada **(6mks)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

HISTORY AND GOVERNMENT

PAPER 1

TIME: 2½ HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

SECTION A: Answer All Questions in This Section. (25 MKS)

1. What is the difference between a Pongidae and a Hominidae? **(1 mark)**

2. Identify the community that displaced the Pokomo from Shungwaya. **(1 mark)**

3. List **two** roles of warriors among the pre-colonial Miji-Kenda. **(2 marks)**

4. State **two** roles of the Orkoiyot among the pre-colonial Nandi community. **(2 marks)**

5. Who was the first European to see Mt. Kenya in 1849? **(1 mark)**

6. Name **two** constitutional amendments which were done in 1982 in Kenya. **(2 marks)**

7. Define the term "Scorched earth policy". **(1 mark)**

8. Which was the **main** war method used by Africans in their resistance? **(1 mark)**

9. Identify the agreement signed to end partitioning of East Africa. **(1 mark)**

10. List two ways the Akamba displayed their resistance against the colonial administration. **(2 marks)**

11. Identify the basis of the political organization of African communities in Kenya during the pre-colonial period. **(1 mark)**

12. Name one political parties that existed in Kenya at Independence. **(1 mark)**

13 Mention two duties of a chief during the colonial administration in Kenya**. (2 marks)**

14 State one group that provided education in Kenya during the colonial period. **(1 mark)**

15 Name one community in Kenya that showed mixed reaction towards British colonization in Kenya. **(1 marks)**

16. State two methods which were used by the British to establish their rule in Kenya**. (2 marks)**

17. State two development rights of children. **(2 marks)**

SECTION B

Answer three questions in this section.(45 marks)

18. (a) State **five** economic activities of the Agikuyu during the pre-colonial period**. (5 marks)**

(b) Describe the political organization of the pre-colonial Somali community. **(10 marks)**

19. (a) List **five** reasons for the coming of the missionaries to Kenya. **(5 marks)**

(b) Explain **five** positive results of the Omani rule along the Kenyan Coast. **(10 marks)**

20. **(a)** Identify **three** terms of the Devonshire Whitepaper 1923. **(3 marks)**

(b) Explain **six** methods used by the colonial government to promote settler farming in Kenya. **(12 marks)**

21. **(a) Identify five** reasons for the collaboration of the Maasai. **(5 marks)**

(b)Explain **five** reasons for failure of armed resistance by the Kenyan communities.**(10 marks)**

SECTION C:

Answer any two questions in this section.(30 marks)

22. (a) State **three** factors that may cause revocation of citizenship by registration in Kenya **(3mks)**

(b)Explain **six** rights that are guaranteed to an arrested person by the Bill of Rights in Kenya. **(12 marks)**

23. a) State **five** non-violent methods of resolving a conflict. **(5 marks)**

b) Explain **five** factors that promote national unity. **(10 marks)**

24. (a) State **three** characteristics of indirect democracy. **(3mks)**

(b) Explain **six** principles of democracy. **(12mks)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

HISTORY AND GOVERNMENT

PAPER 2

TIME: 2½ HOURS

NAME…… ADM NO; ……..

CLASS…… DATE……..

SECTION A: (25 MARKS)

Answer all the questions from this section.

1. State the main characteristic of the stone age era. **(1 mk)**

2. Identify the methods of irrigation used by early Egyptian farmers. **(2 mks)**

3. State two results of the interaction between the Shona and the Ndebele during the pre-colonial period. **(2 mks)**

4. Identify the main features of colonial rule in Zimbabwe. **(2 mks)**

5. State the most important unifying item of the Asante Kingdom in the left 19th century.(1 mk)

6. Mention two early forms of written communication. **(2 mks)**

7. State the two main duties of the Indigenous rulers in Northern Nigeria. **(2 mks)**

8. State one main reason for the use of barter trade in the Trans-Saharan trade. **(1 mk)**

9. What name was given to Kinjeketile's whispering campaign of spreading his ideas during the Maji maji rebellion. **(1 mk)**

10. State two factors that influenced the Neolithic revolution. **(2 mks)**

11. Who is credited with the invention of the cotton gain? **(1 mk)**

12. Identify two types of Monarchical government. **(2 mks)**

13. How does Jean Jacques Rousseau define government? **(1 mk)**

14. Give one scientific discovery in the field of medicine in the 19th century. **(1 mk)**

15. Give one physical feature of Austrolopithecus Boisei. **(1 mk)**

16. Identify two places where Olduwan tools were found. **(2 mks)**

17. Give one problem experienced by using steam for energy. **(1 mk)**

SECTION B: (45 MARKS)

Answer any three questions from this section.

18. (a) Identify three advantages of space exploration. **(3 mks)**

(b) Explain six economic effects of modern road transport. **(12 mks)**

19. (a) Give five reasons for the failure of the Maji maji rebellion. **(5 mks)**

(b) Explain five reforms introduced by Germans after the Maji maji uprising. **(10 mks)**

20. (a) State three factors leading to development of Athens. **(3 mks)**

(b) Discuss the impact of Agrarian and Industrial development on urbanization. **(12 mks)**

21. (a) Give three reasons for the coming of missionaries to Africa. **(3 mks)**

(b) Discuss six obstacles missionaries encountered in spreading Christianity. (**12 mks)**

SECTION C: (30 MARKS)

Answer any two questions from this section.

22. (a) Give five factors for the failure of assimilation policy in French West Africa. **(5 mks)**

(b) Explain the effects of British rule in Zimbabwe. **(10 mks)**

23. (a) State three factors that have led to growth of Johannesburg. **(3 mks)**

(b) Identify six problems facing industrialization in South Africa. **(12 mks)**

24. (a) State three functions of the Katikiro of Buganda during the pre-colonial period. **(3 mks)**

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

FORM 3 ENDTERM 1 EXAMS

SERIES 2

MATHEMATICS

PAPER 1

TIME: 2½ HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS TO CANDIDATES:

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

For Examiner's Use Only;

Section I

Questions	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**TOTAL**
Marks																	

GRAND TOTAL

Section II

Questions	17	18	19	20	21	22	23	24	**TOTAL**
Marks									

1.Without using mathematical tables or calculators, evaluate the following leaving your answer as a

fraction in its simplest form. **(3mks)**

$$\sqrt[3]{\frac{0.119\times 0.256}{0.068\times 7}}$$

2.Two boys and a girl shared some money .The elder boy got $\frac{4}{9}$ of it, the younger boy got $\frac{2}{5}$ of the reminder and the girl got the rest. Find the percentage share of the younger boy to the girl's share. **(4mks)**

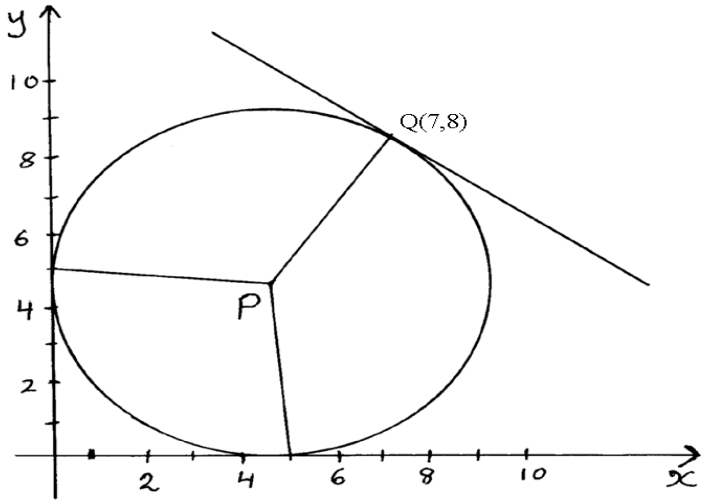
3.From a point A, the angle of elevation of top of a watch tower is 20^0.From another point which is 25m from the base of the tower, the angle of elevation of the top of the tower is 26^0.Giving your answer to three decimal places, determine the height of the tower and hence calculate the distance between the points A and B if they are both on the same side of the tower and lie on a straight line with the base of the tower. **(3mks)**

4.If X is a positive integer, find all possible values of x given that $1<\frac{2}{5}x^2<7$. **(3mks)**

5.A train whose length is 60 metres is travelling at 40km/h in the same direction as a bus whose length is 20m.If the speed of bus is 80km/h and moving parallel to the train, calculate the time it takes the truck to overtake the train completely in seconds. **(3mks)**

6.A positive two digit number is such that the product of the digits is 20.When the digits are reversed , the number so formed is greater than the original number by 9.Find the number.

7.The diagram below shows a circle with centre P(5,5) and radius 5 units

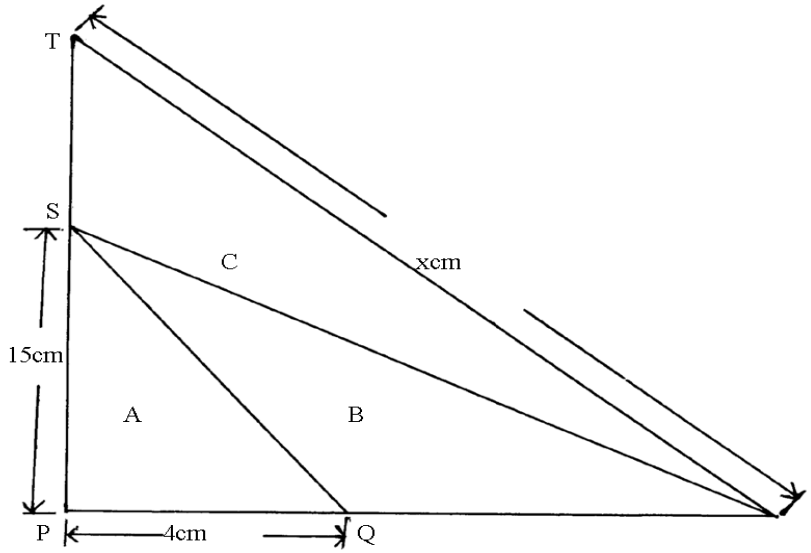


(a) Write down in terms of x and y the equation of the circle in the form $ax^2+by^2+cx+dy+e=0$ where a,b,c,d and e are constants. **(1mk)**

(b) Determine the gradient of PQ **(1mk)**

(c) Find the equation of the tangent at Q in the form ax+by=c. **(2mks)**

8.Find the value of x in the following figure given that area A =Area B=Area C(Give your answer to 2 decimal places) **(4mks)**



9.Odhis car Hire company hires out as follows; sh. 2500 per day and sh. 270 per kilometer covered. They offer a discount of 30km free each day of hire.Makori hires a car for 5 days and drives for 480km.Calculate the total cost. **(2mks)**

10. Omwando borrows sh. 90,000 for 5 years at 6 ½ % simple interest p.a.What amount does he have to pay at the end of that time? **(3mks)**

11.Solve for t in the equation

$9^{t+1} + 3^{2t} = 30$. **(3mks)**

12. Given the curve $y= x^2-2x+6$, find the coordinates of the point on the curve at which the gradient is 4. **(2mks)**

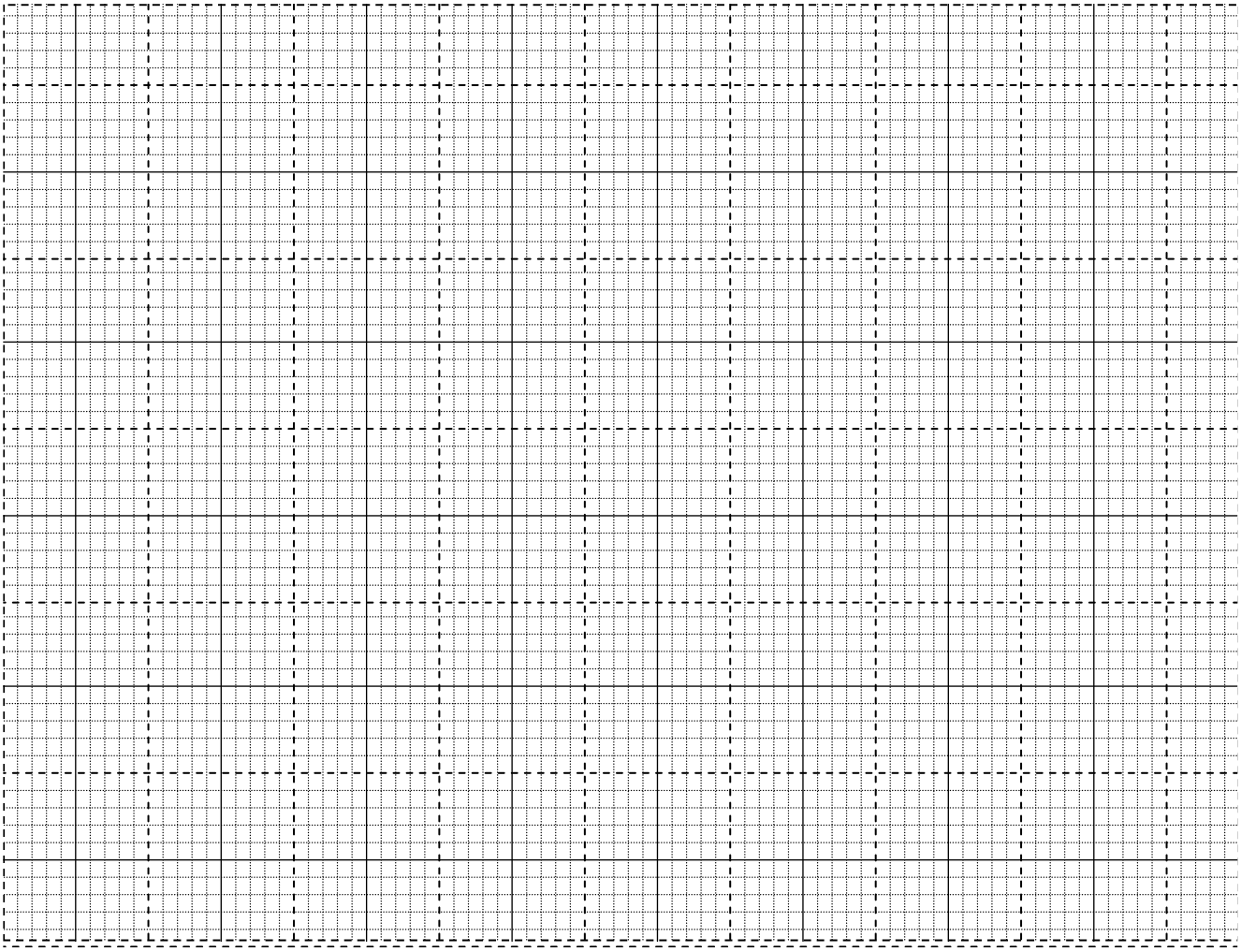
13. Mary has some money in two denominations only. Fifty shilling notes and twenty shilling coins. She has three times as many fifty shilling notes as twenty shilling coins. If altogether she has sh. 3400, find the number of fifty shilling notes and 20 shilling coins.

14.In Ngamongo village, a piece of work can be completed by 45 workers in 10 days .They worked for 4 days after which 15 workers were laid off. How many days would it take the remaining workers to complete the work? **(3mks)**

15. The table below shows marks obtained by a form three class in a certain school.

Marks (x)	$8 \le X < 9$	$9 \le X < 11$	$11 \le X < 13$	$13 \le X < 16$	$16 \le X < 20$	$20 \le X < 21$
No. of students (y)	2	6	8	3	2	1

Use the table to represent the information on a histogram. (3mks)



16. Find the inverse of the matrix $\begin{pmatrix} 2 & 1 \\ 3 & 2 \end{pmatrix}$ and hence solve the simultaneous equations bel**ow.(4mks)**

2x+y=21

3x+2y=34

SECTION II (50 MARKS)

ANSWER ANY FIVE QUESTIONS.

17. A bag contains 5 red , 4 white and 3 blue beads. Two beads are selected at random.

(a) Draw a tree diagram and list the probability space. **(3mks)**

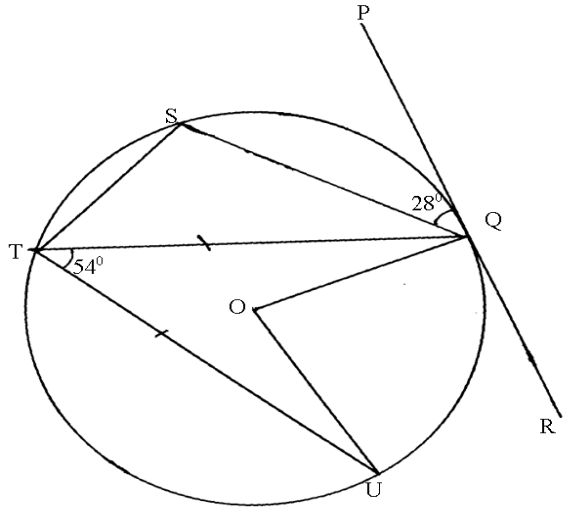
(b) Find the probability that

(i) The last bead selected is red. **(2mks)**

(ii) The beads selected were of the same colour **(2mks)**

(iii) At least one of the selected beads is blue. **(3mks)**

18. In the figure below,O is the centre of the circle.PQR is a tangent to the circle at Q. Angle PQS=28^0,angle UTQ=54^0 and UT =TQ.



Giving reasons , determine the size of

(a) Angle STQ. **(2mks)**

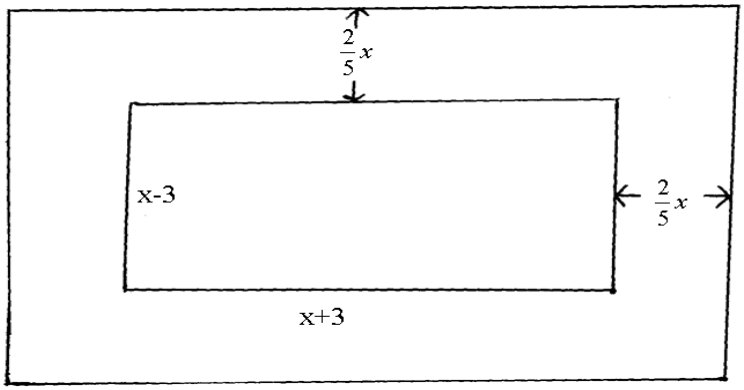
(b) Angle TQU. **(2mks)**

(c) Angle TQS **(2mks)**

(d) Reflex angle UOQ . **(2mks)**

(e) Angle TQR. **(2mks)**

19.The following figure represent a dancing floor with a carpeted margin all around of $\frac{2}{5}x$ wide leaving a dancing space of (x-3)m by (x+3)m



If the total area of the entire room is $315m^2$

(a) Calculate the value of x. **(5mks)**

(b) Calculate the area of the carpeted margin. **(3mks)**

(c) If the carpet cost sh. 750 per m^2,calculate the total cost of the sealed margin. **(2mks)**

20. John bought 3 brands of tea, A B and C. The cost price of the three brands were sh 25, sh 30, sh 45 per kg respectively. He mixed the three brands in the ratio 5:2:1 respectively: After selling the mixture he made a profit of 20%.

(a) How much profit did he make per kilogram of the mixture? **(4 mks)**

(b) After one year the cost price of each brand was increased by 10%

(i) For how much did he sell one kilogram of the mixture to make a profit of 15%? (Give your answer to the nearest 5 cents) **(3 mks)**

(ii) What would have been his percentage profit if he sold one kilogram of the mixture at sh. 45. **(3 mks)**

21. A car accelerates from rest for 10 seconds until it reaches a velocity of 12 metres per second.It then continues at this velocity for the next 40 seconds after which it brakes and comes to rest until a constant retardation of 1.5 meres per second

(a) Determine

(i) The acceleration over the first 10 seconds **(2mks)**

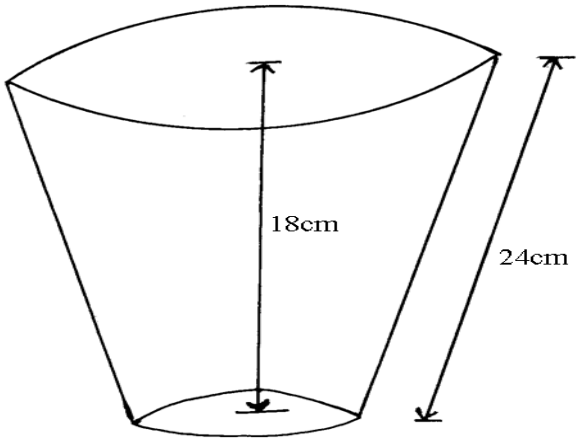
(ii) The time taken during the retardation **(2mks)**

(b) Draw the velocity time graph for the journey and use it to determine.

(i) The total distance covered by the car **(4mks)**

(ii) The percentage of the total distance which was covered during the first 15 seconds. **(2mks)**

22. The diagram below shows a flower vase of depth 18cm.The ratio of the top and bottom diameters is 5:2 (Take $\prod$ =3.142)



Calculate

(a) The volume of the flower vase **(7mks)**

(b) The curved surface area of the flower vase **(3mks)**

23. Given that x-y=3 and 3x+y=17, find without solving for X and Y the value of

(a) $2xy-x^2-y^2$ **(2mks)**

(b) $6xy+y^2+9x^2$ **(2mks)**

(c) $3x^2-2xy+y^2$ **(3mks)**

(d) $\frac{3x^2-4xy+y^2}{9x^2-y^2}$ **(3mks)**

24. Three Kenyan warships A,B and C are at sea such that ship B is 450km on a bearing of 030^0 from ship A. ship C is 700km from ship B on a bearing of 120^0.An enemy ship D is sighted 1000km due south of ship B.

(**a)**Taking a scale of 1cm to represent 100km locate the position of the ships A,B,C and D **(4mks)**

(b) Find the compass bearing of :

(i) Ship A from ship D **(1mk)**

(ii) Ship D from ship C **(1mk)**

(c) Use the scale drawing to determine

(i) The distance of D from A **(1mk)**

(ii) The distance of C from D **(1mk)**

(d) Find the bearing of :

(i) B from C **(1mk)**

(ii) A from C **(1mk)**

FORM 3 ENDTERM 1 EXAMS

SERIES 2

MATHEMATICS

PAPER 2

TIME: 2½ HOURS

NAME……. ADM NO; ……..

CLASS…… DATE……..

INSTRUCTIONS TO CANDIDATES:

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

FOR EXAMINER'S USE ONLY;

Section I

Questions	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**TOTAL**
Marks																	

Section II

Questions	17	18	19	20	21	22	23	24	**TOTAL**
Marks									

GRAND TOTAL

1. Evaluate without using tables or calculators. **(3mks)**

$$\sqrt{\frac{0.8064 \times 6.048}{1.008 \times 0.1344}}$$

2. Evaluate $\dfrac{-4 \text{ of } [(-4 + -5 \div 15) + -3 - 4 \div 6)]}{84 \div -7 + 3 - - 5}$ **(2mks)**

3. Solve for θ without using table given that $0 \leq \theta \leq 90^{o}$and that $\sin (2\theta - 30^{o}) - \cos 4\theta = 0$ **(3mks)**

4. Solve for x given that $5^{2x+2} - 20 \times 5^{2x} = 625$ **(3mks)**

5. The angle of a quadrilateral ABCD in order are 2 (x -10), 4 (x + 5), 5(x+4) and (x-20) in degrees. Find the exterior angles of the quadrilateral. **(4mks)**

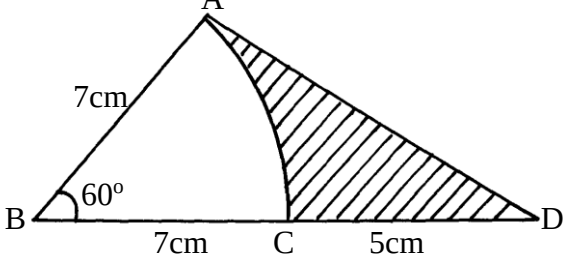
6. A radio costing kshs. 1240 is marked to sell at a price calculated to give a profit of 40 %. What will be its selling price in sale when 25% is taken off the marked price? **(3mks)**

7. Show that if OA = - i+ 7j, OB = 3i – 5j and OC = 4j, then points AB and C are collinear**. (4mks)**

8. Four men can dig 2 acres of land in 3 days working 4 hour a day. How many men are required to dig 5 acres of land in 4 days working 3 hours a day at the same rate. **(3mks)**

9. The surface area of two similar bottles are 12 cm^2 and 108cm^2 respectively. If the larger one has a volume of 810 cm3. Find the volume of the smaller one. **(3mks)**

10. In the figure given below, AC is an arc of a circle centre B$\angle$ ABD = 60^o, AB = BC = 7cm and CD= 5 cm.



Calculate

a) The area of triangle ADB **(2mks)**

b) The area of the shaded region. **(2mks**

11. Solve the inequalitites and represent the information on the number line. **(3mks)**

$-3+2x<3x+2<4(x-5)$

12. Make x the subject of the formula in $3s=2p\sqrt{\frac{x}{3x-5}}$ **(3mks)**

13. Given x = 13.4cm and y = 4.3 cm. calculate the percentage error in $\frac{x}{y}$ correct to 4 d.p**(3mks)**

14. A straight line through the point A (2, 1) and B (4,m) is perpendicular to the line whose equation is $3y = 5 - 2x$, Determine the value of m. **(3mks)**

15. Okoth deposited some money at 10% compound interest compounded annually. How long will it take to double the amount to the nearest year? **(3mks)**

16. Chebet has 5 brown chicken and 3 black ones. She picks two of them for slaughter at random, one after the other. What is the probability that the two are of different colours. **(3mks)**

SECTION II

Answer only five questions.

17. A bus left Nairobi at 8.00am and traveled towards BUsia at an average speed of 80km/hr. At 8.30 am a car left Busia for Nairobi at an average speed of 120km/hr. Given that the distance between Nairobi and Busia is 400km.

Calculate:

a) The time the car arrived in Nairobi. **(2mks)**

b) The time the two vehicles met. **(4mks)**

c) The distance from Nairobi to the meeting point. **(2mks)**

d) The distance of the bus from Busia when the car arrived in Nairobi. **(2mks)**

18. A triangle whose vertices are A (1,4) B (2,1) and C (5,2) is given the following transformation:

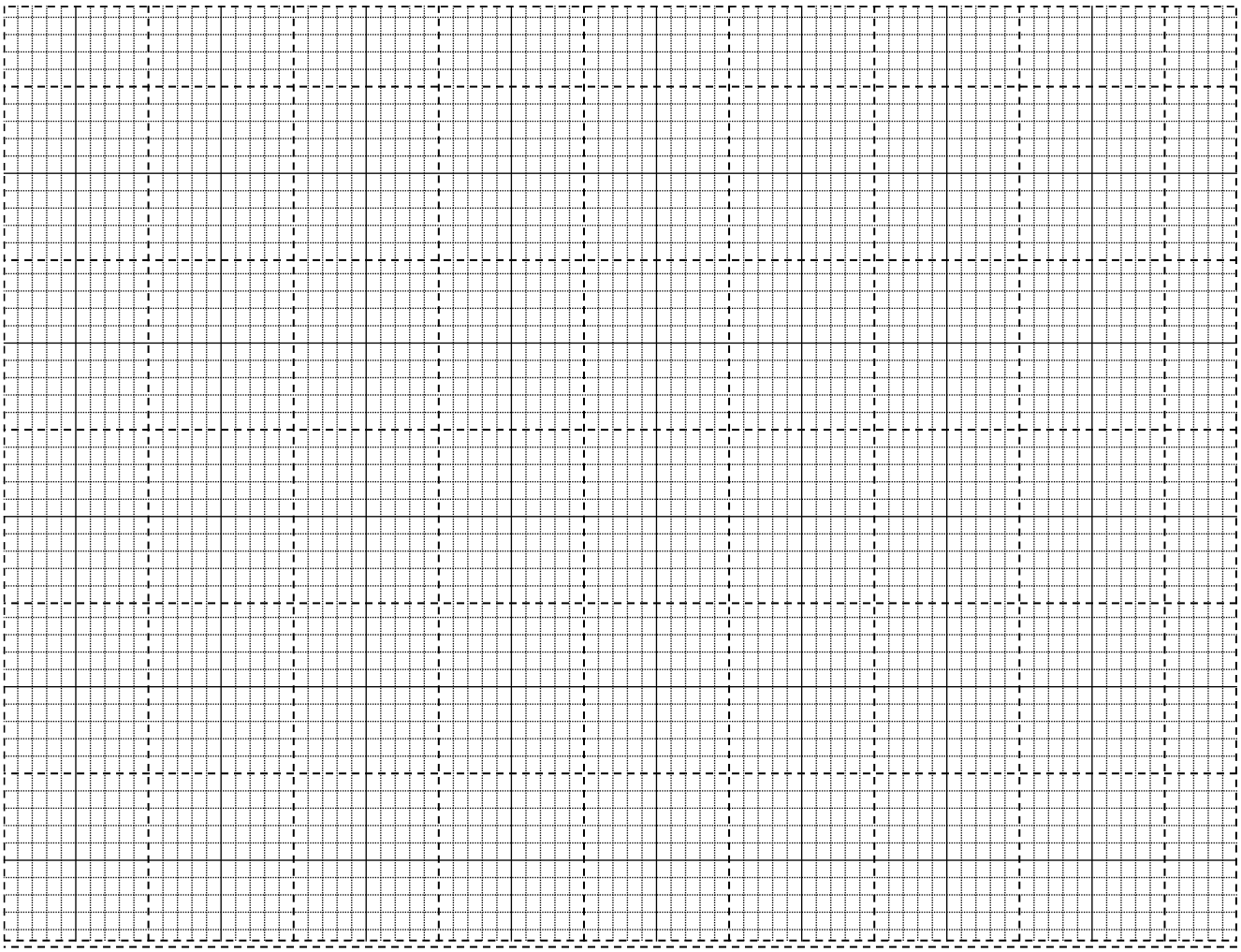
i) Reflection in the line y = -x to $A^1B^1C^1$

ii) $A^1B^1C^1$ is then given rotation of + 90° about the origin to $A^{11}B^{11}C^{11}$

iii) $A^{11}B^{11}C^{11}$ is then given a translation vector $\begin{pmatrix} -2 \\ 1 \end{pmatrix}$ to $A^{11}B^{11}C^{11}$

iv) $A^{11}B^{11}C^{11}$ is then given an enlargement scale factor – 2 centre (0, 0) to $A^{IV}B^{IV}C^{IV}$.

On the given grid plot a triangle ABC and it's images $A^1B^1C^1$, $A^{11}B^{11}C^{11}$, $A^{111}B^{111}C^{111}$ and $A^{IV}B^{IV}C^{IV}$. And give coordinates of $A^{IV}B^{IV}C^{IV}$. **(10mks)**



19. A Post OT stand vertically on level ground John moves from O, the foot of the flag post to point R, on the level ground. The points T, O and R from a right angled isosceles triangle whose perimeter is 56m. S is another point on the level ground 35m from O calculate:

a) The angle of elevation of T from S. **(6mks)**

b) The distance ST. **(2mks)**

c) Find the maximum possible distance between R and S. **(2mks)**

20. A salesman received a basic salary of sh. 50,000 a year together with a commission of 6 % on the value of goods sold and a car allowance of sh. 2.50 per km.

a) Find the total amount he received in a year in which he sells goods worth sh. 625,000 and travels 10,000km. **(4mks)**

b) The next year he travels 12,000km and receives a total of shs. 134,000

i) Calculate the value of goods sold. **(4mks)**

ii) Calculate the percentage increase in the value of the goods sold. **(2mks)**

21. Two airports a and B are such that B is 500km due east of A. two plane P and Q take off from A and B respectively and at the same time.

Plane P files at 360km/hr on a bearing of 030^{o}

Plane Q flies at 240km/hr on a bearing of 315^{o}

The two planes land after 90 minutes.

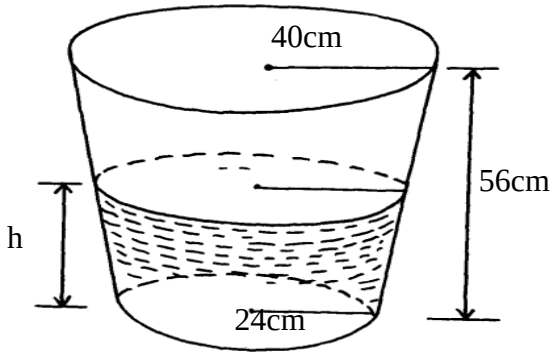
Using a scale of 1: 10,000,000

a) Show the positions of the planes after 90 min. **(6mks)**

b) Find the distance between the planes after 90 min. **(2mks)**

c) Find the bearing of plane Q from plane P after 90 minutes **(2mks)**

22. The figure below shows a container in form a frustrum of an open top radius 40cm and base radiu24 cm. the depth is 56 cm.



a) Calculate the volume of the container in litres. **(4mks)**

b) Of the container is ¾ full of water by volume,
Calculate the radius of the meniscus. **(6mks)**

23. Use a ruler and compass only in this question.

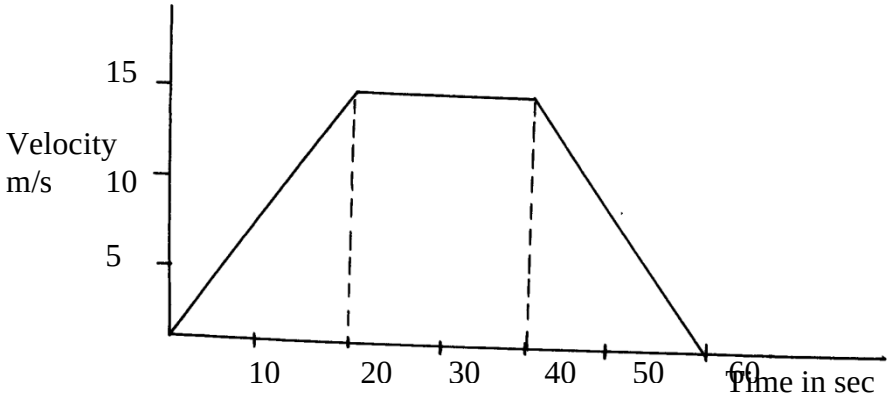
a) Construct Δ ABC such that AB = 6cm AC= 8.5 cm and $\angle$ BAC = 120^{o} **(3mks)**

b) Construct the locus ℓ, of points equidistant from A and B **(2mks)**

c) Construct the locus ℓzof points equidistant from AB and BC **(3mks)**

d) Find the points of intersection, P_1 and P_2, of 1_1 and 1_2 and measure P_1P_2 **(2mks)**

24. The diagram below shows the graph of a moving matatu from one bus stop to another.



a) Find the acceleration of the matatu. **(2mks)**

b) Find the deceleration of the matatu **(2mks)**

c) Calculate the distance the matatu while accelerating. **(2mks)**

d) Calculate the distance the matatu covered while traveling at an acceleration of $0m/s^2$ **(2mks)**

e) Find the distance between the two bus stops. **(2mks)**


THE END

FOR THE FOLLOWING;

- ✓ONLINE TUITION
- ✓REVISION NOTES
- ✓SCHEMES OF WORK
- ✓SETBOOKS VIDEOS
- ✓TERMLY EXAMS
- ✓QUICK REVISION KITS
- ✓KCSE TOPICALS
- ✓KCSE PREMOCKS
- ✓TOP SCHOOLS PREMOCKS
- ✓JOINT PREMOCKS
- ✓KCSE MOCKS
- ✓TOP SCHOOLS MOCKS
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