# FORM 2 END TERM 3 SERIES 1 EXAMS

ALL SUBJECTS TESTED

FORM 2 END TERM 3 SERIES 1 EXAMS

Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

Subjects Tested: 1. AGRIC 2.BIO 3.BST 4.CHEM 5.CRE 6.ENG 7.GEOG 8.HIST

9.KISW 10.MATHS & 11.PHY 13. IRE, 14. COMP & 15. HSCI

N/B In Response to the Huge Costs Associated in Coming Up with Such/Similar Resources Regulary, We inform us All, MARKING SCHEMES ARE NOT FREE OF CHARGE. However Similar QUESTIONS, Inform of soft Copies, are Absolutely FREE to Anybody/Everybody. Hence NOT FOR SALE

by Amobi Group of Examiners.

AGRICULTURE (443/1)

FORM TWO (2)

Time: 2 Hours

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: ……………………………………………………………………………………………………

School: …………………………………………………………………………………………………

Adm No: ……………… **Date**: …………………… **Signature**: ………………………………………………

INSTRUCTIONS

- *This paper consists of three sections A, B and C.*

- *Answer all questions in sections A and B.*

- *Answer any two questions from section C on the attached foolscaps.*

SECTION A (30 MARKS)

1. (a) List **three** aspects of rainfall that determine the type of crop grown. (1½ marks)

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    (b) List **three** human factors that hinder agricultural development. (1½ marks)

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2. Give **four** factors which influence the rate of weathering. (2 marks)

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3. Differentiate between pomoculture and olericulture. (1 mark)

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4. (a) State **four** benefits of water harvesting. (2 marks)

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(b) State **three** ways by which water can be collected and stored on the farm.   (1½ mark)

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5. Give **four** factors that influence the choice of tools and equipment used in primary

cultivation.   (2 marks

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6. State **five** factors determining the quality of farm yard manure.   (2½ marks)

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7. Give **four** reasons for seed selection before planting. (2 marks)

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8. State **three** factors which increase the depth of planting. (1½ marks)

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9. Give **four** deficiency symptoms for potassium in crops. (2 marks)

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10. Define the following terminologies as used in agriculture.

(a) Seed dressing. (1 mark)

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(b) Seed inoculation (1 mark)

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11. Give **four** ways of controlling damping off disease in nursery seedlings.   (2 marks)

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12. List **three** physical weathering agents in the soil formation process.   (1½ marks)

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13. State **four** advantages of drip irrigation.   (2 marks)

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14. State **two** factors that would determine the amount of fertilizer to be top dressed to a crop in
      the field   (1 mark)

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15. State **four** ways in which burning of vegetation may lead to lose of soil fertility.(2 marks)

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SECTION B (20 MARKS)

16. The diagram labelled D below shows a Kale crop infested by a pest.
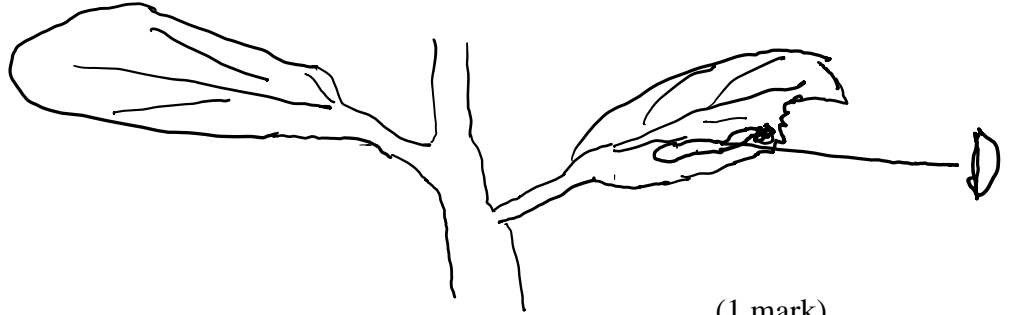
(a) Identify the pest.   (1 mark)

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(b) What damage does the pest cause the crop?   (1 mark)

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(c) State **two** methods of controlling the pest.   (2 marks)

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17. The diagram labelled A_1, A_2, A_3 and B below illustrate materials and methods of vegetative propagation. Study them and answer the questions that follow.

(a) Name the parts labelled A_1 and A_2.   (2 marks)

A₁ ....

A₂ ....

(b) Name the methods of propagation illustrated in diagrams A_3 and B.   (2 marks)

A₃ ....

B ....

18. The illustration below is a diagram of a nursery for raising tomato seedlings.
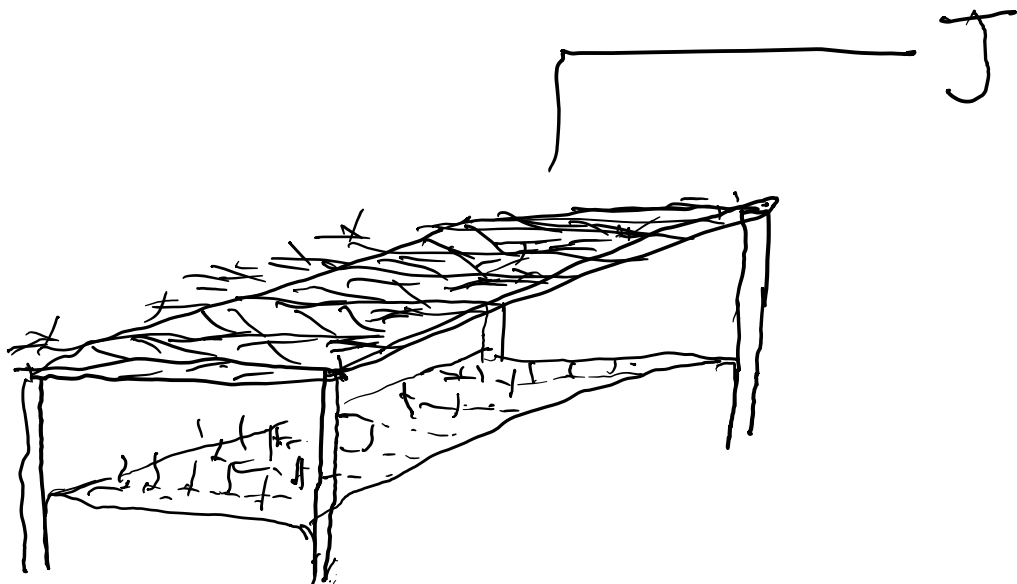
(a) Name the part labelled J. (1 mark)

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(b) State **two** uses of part labelled J. (1 mark)

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(c) Give **two** management practices that should be carried out on the nursery from the time
   seedlings emerge to the stage of transplanting. (2 marks)

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19. The diagram below shows a house water storage tank. Study it and answer the questions that
   follow.
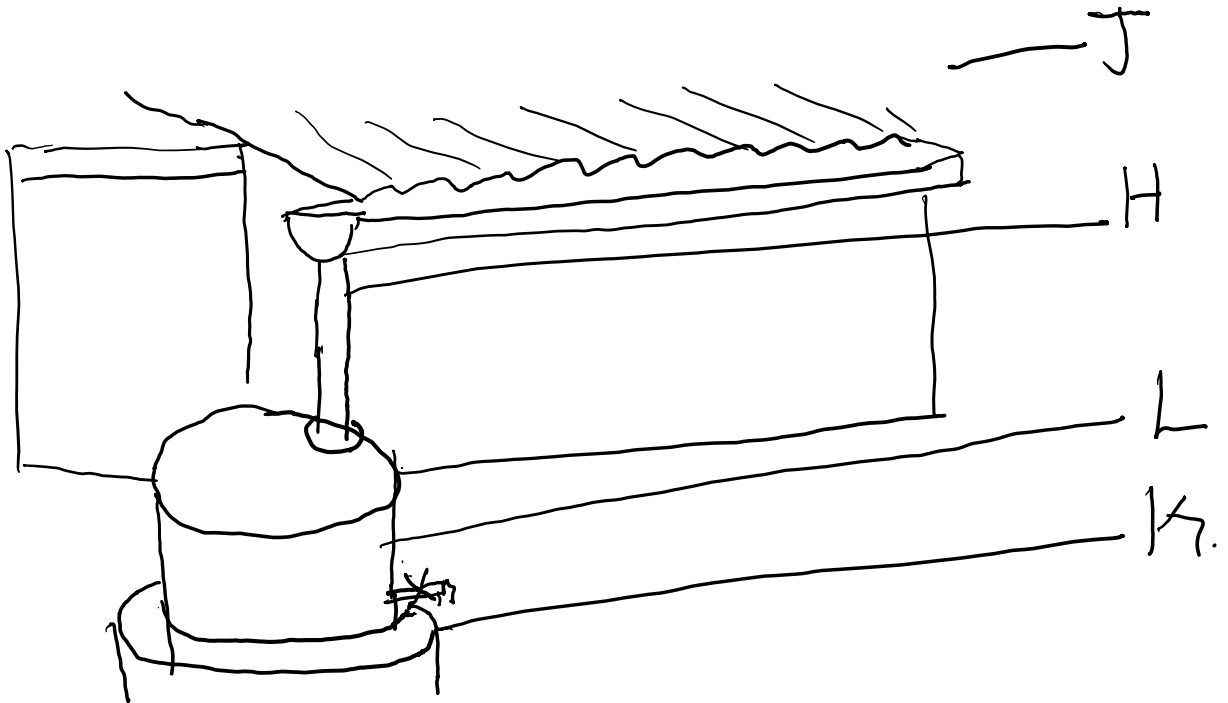
(a) Identify the parts labelled H, J, K, L.   (2 marks)

H ....

J ....

K ....

L ....

(b) Give the function of the part labelled J.   (1 mark)

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20. The diagram below shows a method of soil sampling.
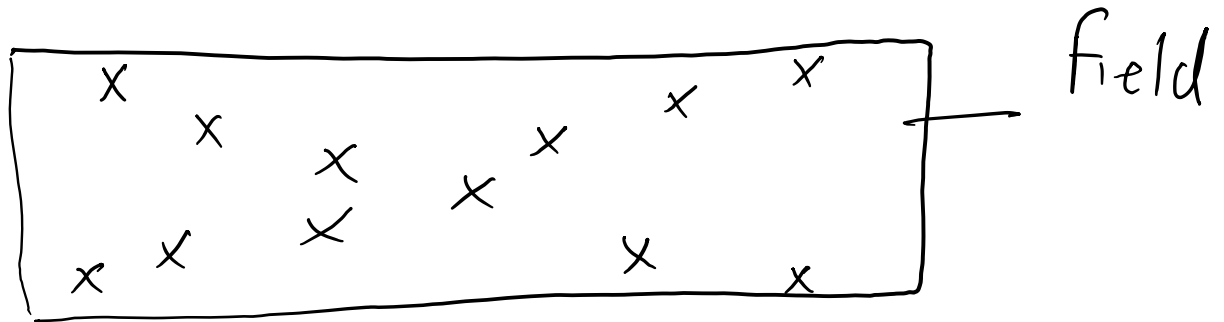
(i)   Name the above method of soil sampling.   (1 mark)

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(ii)   State **four** precautions taken when collecting the soil for testing using the named

         method above.   (2 marks)

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     (iii)   Give **two** reasons for testing soil from the farm.   (2 marks)

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SECTION C (40 MARKS)

- *Answer any two questions from the section.*

21. (a) Explain the factors that determine the time of harvesting crop produce.   (10 marks)

    (b)Explain the various post harvest practices done on the crop produce after harvesting.(10 marks

22. Describe the field production of tomatoes under the following sub-heading.

    (i)   Ecological conditions.   (4marks)

    (ii)   Transplanting   (4marks)

    (iii)   Field practices.   (8 marks)

    (iv)   Disease control   (4 marks)

23. (a) Describe ways in which soil loses its fertility.   (10 marks)

    (b)Explain the benefits of organic mulch in crop production.   (10 marks)

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BIOLOGY PAPER (QUESTION PAPER)
FORM TWO (2)
TIME 2 HOURS

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: ……………………………………………………………………………………………………

School: …………………………………………………………………………………………………

Adm No: ……………… **Date**: …………………… **Signature**: ……………………………………………

INSTRUCTIONS

- Write your answers correctly and clearly in the spaces provided

- Be keen on Spelling of Technical Terms

FOR OFFICIAL USE

TOTAL MARKS	STUDENT'S SCORE
80	

1. Name the branch of Biology that deals with the study of the following:
   a) Classification of living organisms   (1mk)

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   b) Internal structure of an organism   (1mk)

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2. Explain why an insect needs to undertake gaseous exchange (2mks)

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3. Identify and state the function of each of the following apparatus (4mks)
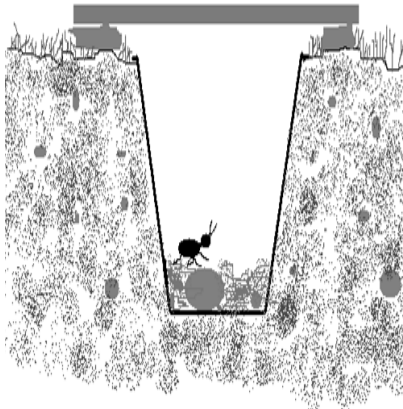
Name .... Name ....
     Function   Function

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4. a) Write down the formula for calculating magnification when using a light microscope to observe specimen (1mk)

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b) Sam drew the rear leg of a grasshopper which measured 45mm on the insect. If he used a magnification of X0.5, calculate the length of the leg drawn in centimeters. (3mks)

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5. Use the diagram shown to answer the questions that follow
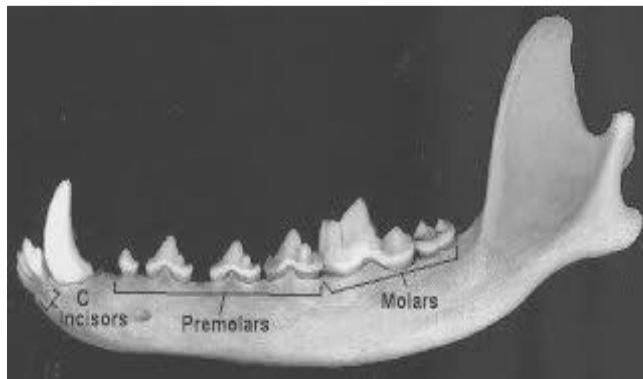
a) Name the mode of feeding for the animal whose lower jaw is shown above (1mk)

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b) Give **TWO** reasons for your answer in a) above (2mks)

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6. Account for the following observations
   a) A mountain climber has more red blood cells than a person of the
      same size, age and gender living in low lands   (2mks)

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   b) A baby has higher energy requirement than an adult   (2mks)

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7. The diagram shown below is of a structure found in cells
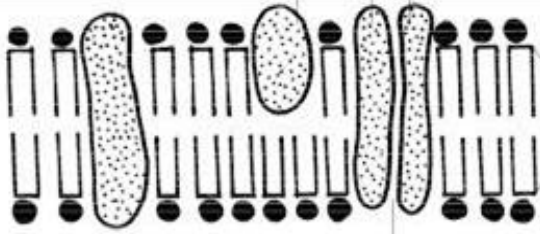
   a) Label the following parts: Phospholipid layer; a pore   (2mks)

   b) State TWO properties of the structure above   (2mks)

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8. a) Define the term 'active transport'   (1mk)

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    c) Give **TWO** ways in which active transport and diffusion are different(2mks)

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9. State the economic importance of the following excretory products from
    plants   (3mks)
    a) Papain:

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    b) Quinine:

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    c) Colchicine:

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10. The following diagram is a cross section of a dicot plant
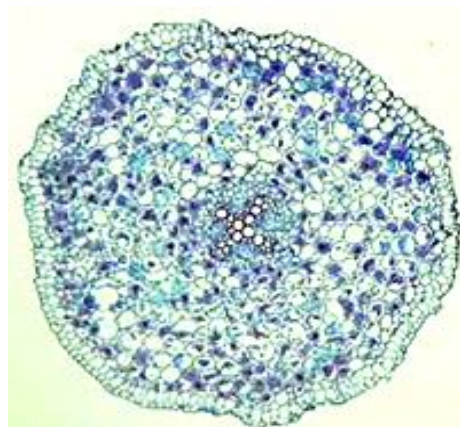
a) From which organ of the plant was the cross section above obtained? (1mk)

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

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11.a) How is large surface area achieved in red blood cells in order to enable them be efficient at their function.   (2mks

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b) Give **TWO** advantages of Carbon (IV) Oxide transportation by the red blood cells (2mks

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12. Distinguish between the following terms:
   i)   Allograft and isografts   (2mks

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   ii)   Guttation and Transpiration   (2mks

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13. a) Explain how the following antibodies defend the body against pathogens

   i)Lysins1mk

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   ii)Agglutinins (1mk

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   b) Which other way do White Blood Cells defend the body against pathogens in addition to use of antibodies?   1mk

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14. a) What is the role of proximal convoluted tubule in the kidney?   (1mk

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   c) Give **TWO** adaptations of proximal convoluted tubule to its function(2mks

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15. Name the organelles that form the following: (2mks

   i)   Ribosomes...

   ii)   Lysosomes: ....

16. State **THREE** structural differences between arteries and veins   (3mks

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17. Study the diagram shown below
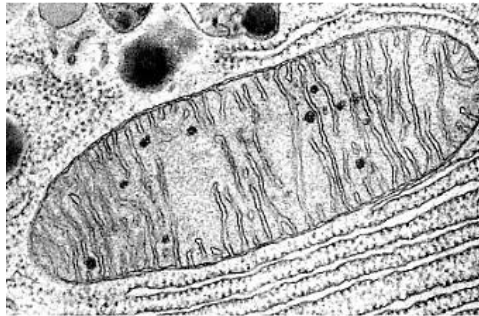
a) State the adaptation of the organelle shown above to its function .(1mk

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Name **TWO** products from the process that takes place in the organelle shown above which are useful in the physiological process that occurs in the chloroplast of plant cells   (2mks

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b) Why do Red Blood Cells lack the organelle shown above?   (1mk

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18. a) What is an enzyme? (1mk

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b) Give **THREE** factors that increase rate of enzymatic reactions (3mks

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19. The table below shows the number of various teeth in the jaws of an animal

	Canines	Molars	Incisors	Premolars
Lower Jaw	2	6	4	4
Upper Jaw	2	6	0	4

a) Determine the total number of teeth the animal has (1mk

b) Write down the dental formula of the animal whose teeth are shown on the table above (1mk

c) With a reason, determine the mode of feeding of the animal represented above (2mks

Mode of Feeding ....

Reason

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20. a) Label the following parts of the light microscope on the diagram shown below   (4mks

Coarse Adjustment Knob; Revolving Nose Piece; Mirror; Objective lens
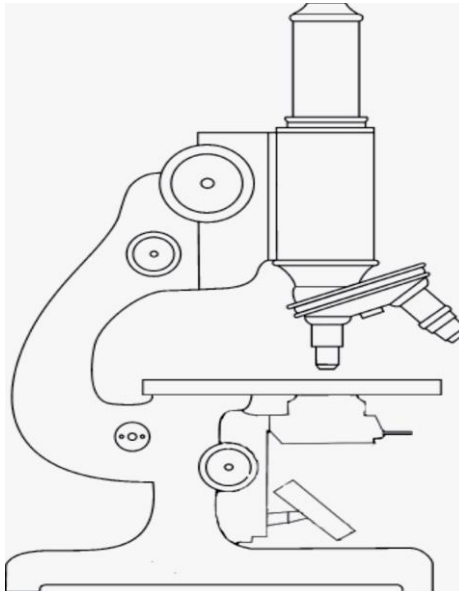
b) State **TWO** precautions observed before storage of the light microscope   (2mks

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21. Consider the following experimental set up used to investigate a physiological process
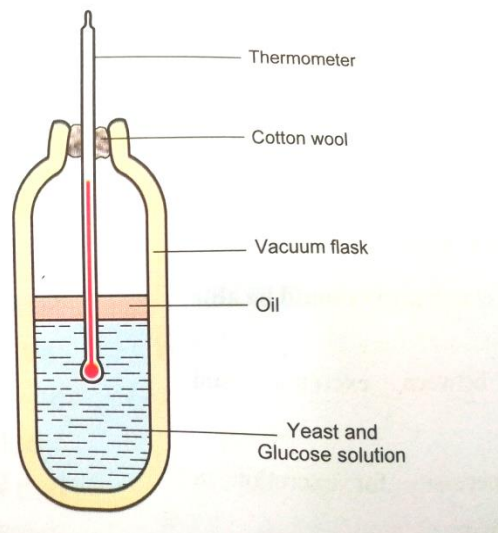
a) What was the aim of the experiment?   (1mk

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b) Account for the change that will take place in the thermometer (2mks

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

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22. Consider the following equation of a chemical equation

$$\boxed{A} + \boxed{B} \xleftarrow{\boxed{X}} \boxed{C} + \text{Water}$$
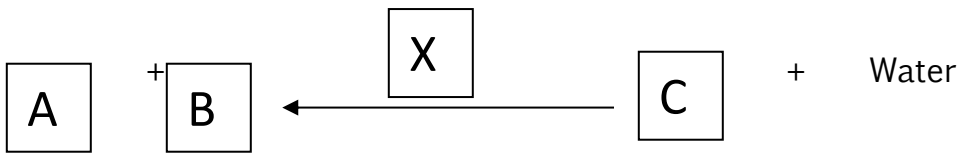
If **A** is glucose and **C** is Lactose, Name the Following

a) Enzyme **X** (1mk   ....

b) Compound **B** (1mk   ....

23. The following diagram shows onions cells captured in a field of view of a light microscope
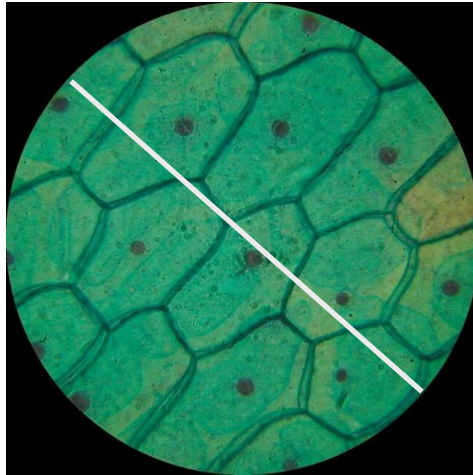
a) Measure the length of the white line to determine the diameter of the field of view in millimeters   (1mk

b) How many cells are found along the diameter represented by the white line?   (1mk

c) Determine the actual diameter of one cell if a magnification of X1000 was used to observe the cells above   (3mks

d) State a weakness of the process above of estimating cell size   (1mk

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BUSINESS STUDIES 565/1 (THEORY)

FORM TWO

TIME 2Hrs

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: ……………………………………………………………………………………………

School: ……………………………………………………………………………………………

Adm No: ……………… **Date**: ………………… **Signature**: …………………………………………

ANSWER ALL QUESTIONS

1. Identify four importance of learning business studies to the country. (4 mks)

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2. Identify four factors that influence entrepreneurial practices in Kenya. (4marks)

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3. State four types of utilities created through the production. (4 mks)

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4. State four challenges encountered in the satisfaction of human wants (4 mks)

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5. Identify four ways in which an office is important to a business. (4marks)

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6. Outline four ways in which a well laid out business structure is likely to lead to success of the business. (4marks)

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7. Identify four functions of a proforma invoice. (4marks)

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8. Outline the importance of trade to a country. (4marks)

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9. Highlight four drawbacks of direct production. (4marks)

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10. State four advantages of sending parcels using courier firms. (4marks)

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11. List four circumstances under which the location of a warehouse can be inappropriate.(4marks)

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12. The following are descriptions of various insurance policies. Identify the name of the policy described by the statement.   (4marks)

Description	POLICY
Covers an organization against losses which might arise as a result of debtors failure to pay their debts	
Covers for the losses of profit due to interruption of business activities as a result of fire.	
Covers employees who may suffer injuries while on duty.	
Covers partial or total physical disability caused to a person due to injury.	

13. Outline four functions of advertising firms to the producers.   (4marks)

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14. State four circumstances that will make the standard gauge railway more desirable than road(4marks)

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15. Outline four characteristics of sole proprietorship business (4 mks)

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16. Give four limitations of consumer-initiated methods in consumer protection. (4marks)

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17. In the table below, indicate the type of advertising which fits the description. (4 marks)

Description	Type
a) Create awareness about a product	....
b) Promotes the name of the manufacturer	....
c) Persuades a particular brand of a product	....
d) Promotes a particular brand of a product	....

18. State four sources of business ideas (4 mks)

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19. Explain five factors to be considered by a business when choosing a means of communication   (10 mks)

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20. Explain five differences between a sole proprietorship and a public limited company.(10 marks)

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21. Explain the meaning of the following terms as used in insurance (8 marks)

a. Indemnity

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b. Third party motor vehicle insurance.

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c. Contribution.

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d. Subrogation.

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CHEMISTRY (QUESTION PAPER)
FORM TWO (2)
Time: 2 Hours

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: ……………………………………………………………………………………………………

School: …………………………………………………………………………………………………

Adm No: ……………… **Date**: ………………… **Signature**: ……………………………………………

INSTRUCTIONS:

- *Write your **name** and **other details** on the space provided above*

- *Answer **all** the questions in the spaces provided for each question.*

- *All working **must** be clearly shown where necessary.*

- *Mathematical tables and non-programmable electronic calculators may be used.*

For Examiners Use Only

Questions	Total marks	Student's score
1 - 26	**80**	

This paper consists of 10 printed pages. Students should check to ascertain that all pages are printed as indicated and that no questions are missing.

1. Draw a diagram of the apparatus used to measure accurately 250 cm^3 of liquids or solutions.   (1 mark)

2. In the laboratory, there are two types of flames; **with reasons**, state which flame is used for:

   (a) Heating (1 mark)

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   (b) Lighting (1 mark)

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3. Define the term drug abuse.   (1 mark)

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4. Shanty accidentally mixed iron fillings, iron (III) chloride crystals and sulphur powder. Describe how she would obtain each of the substances separately.   (3 marks)

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5. Classify the following as either chemical or physical changes. (5 marks)

Process	Type of change
Electrical conductivity by copper wire	
Rusting of an iron nail	
Sublimation of iodine	
Burning candle wax	
Attraction of iron filings by a magnet	

6. Matter exists in three states. Describe how particles behave in each state according to kinetic theory of matter.
   (a) Solid state: (2 marks)

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   (b) Liquid state: (2 marks)

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   (c) Gaseous state: (2 marks)

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7. Explain how acid rain can be formed. (2 marks)

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8. Solutions may be classified as strongly basic, weakly basic, neutral, weakly acid, or strongly acidic. The information below gives solutions and their pH values. Study it and answer the questions that follow.
   Classify the solutions in the table using the stated classifications.   (2 Marks)

Solution	pH value	Nature of solution
B	0.5	
C	6	

9. A farmer tested soil in his farm and found out that its pH was 5.5. This was below the recommended pH of 7.0. Suggest how the farmer could achieve the recommended pH of soil in his fam.   (1 mark)

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10. Name **three** gaseous components of unpolluted air.   (3 marks)

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11.   (a) Zinc reacts with dilute sulphuric (VI) acid to produce a colourless gas. Write an

      equation for the reaction.   (1 mark)

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(b) Describe a test for the colourless gas. (2 marks)

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12. The set – up below was used to obtain a sample of iron metal.
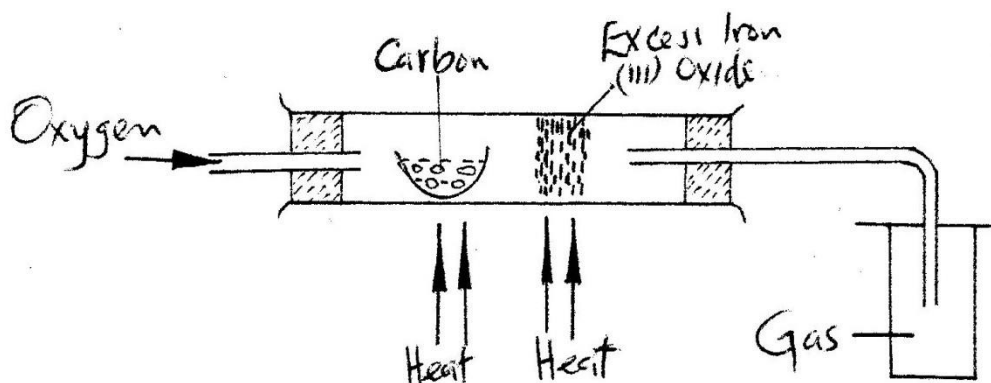
(a) Write **two** equations for the reactions which occur in the combustion tube. (2 marks)

Equation 1:

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Equation 2:

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(b) Name the gas collected in the gas jar. .... (1 mark)

(c) Give **two** uses of carbon (II) oxide that are also uses of hydrogen. (2 marks)

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13. (a) Name **one** natural source of water for a chemical industry.   (1 mark)

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(b) Kerosene is a **hydrocarbon**. Name the product of burning kerosene that is a liquid at room

temperature. ....   (1 mark)

(c) Metal **Y** can displace metal **X** from its oxide. Hydrogen can reduce the oxide of metal **X**. Metal
X does not react with water, while metal **Y** reacts with water moderately. Metal **Z** reacts with
explosively with water. Arrange the metals and hydrogen from the most reactive. (1 mark)

14. The set-up below was used to prepare a gas **Q**.
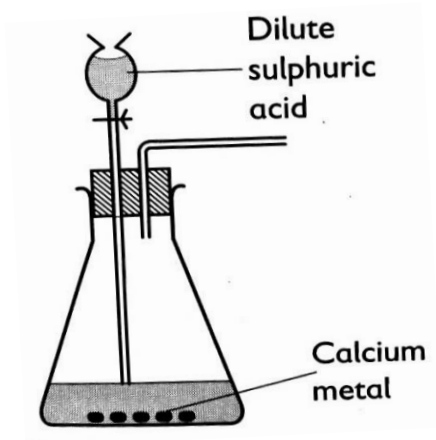
(a) Complete the diagram to show how a dry sample of gas **Q** may be collected. (2 marks)

(b) Give a reason why calcium is not the most appropriate metal for use in this preparation.

(1 mark)

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(c) Write an equation for the reaction for the formation of gas **Q**.   (1 mark)

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15. Complete the key shown below for sub atomic particles. (3 marks)
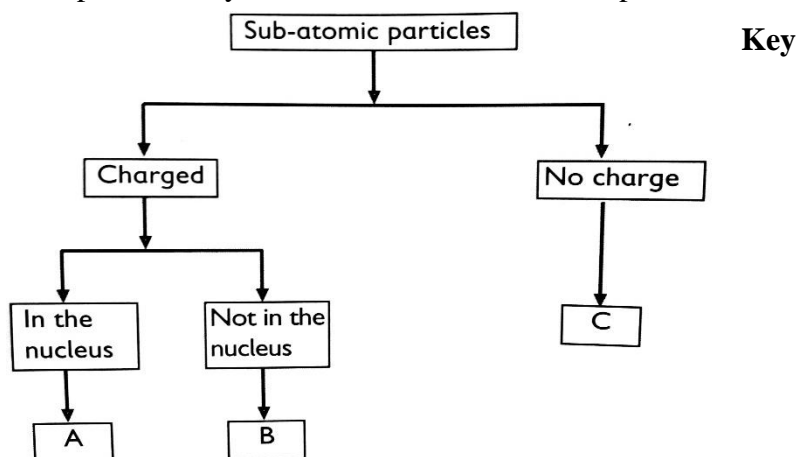
A ....

B ....

C ....

16. The relative atomic mass of element Y which consists of the isotopes ^{20}Y and ^{22}Y is 20.2. Calculate the percentage of the atoms in the isotopic mixture. (3 marks)

17. The ionic radii of the ions of Q and R are given as follows: Q^{2+} = 2,8,8 and R^- = 2,8.

(a) Complete the table below: (2 marks)

Element	Group	Period
Q		
R		

(b) Write the formula of the product formed when Q and R react. (1 mark)

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18. The halogens are a group of non-metals in Group VII of the Periodic Table.

(a) Describe an experiment which shows that chlorine is more reactive than iodine. Include an equation in your answer. (3 marks)

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(b) State **two** observations made when warm sodium metal in a deflagrating spoon is lowered in a gas jar full of chlorine gas? (2 marks)

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(c) Write an equation for the reaction in (b) above. (1 mark)

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19. The following table gives the number of protons in the nucleus of some elements. The letters do not represent the actual symbols of elements. Use it to answer the questions that follow.

Element	E	F	G	H	I	J	K	L
Number of protons	3	12	6	17	10	19	14	35

(a) Which elements belong to the same group of the periodic table?   (2 marks)

……………………………………………………………………………………………………

(b) How will the reactivity of element **F** compare with that of element **K**? Explain.(2 marks)

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20. The atomic numbers of elements **X** and **W** are 11 and 16 respectively.

(a) Write the electronic arrangements of the elements.   (1 mark)

Element X…………………………………… Element W……………………………….

(b) Predict the type of bonding in the product formed if elements **W** and **X** were to be

reacted. Give the formula of the resulting compound.   (2 marks)

Type of bond……………………………………

Formula of compound ………………………

21. The table below show the physical properties of some substances. Use it to answer the questions that follow.

Substance	Melting point (^{0}C)	Boiling point (^{0}C)	Electrical conductivity	
			Solid	Liquid
U	1083	2595	Good	Good
V	801	1413	Poor	Good
W	6	80	Poor	Poor
X	-114	-84	Poor	Poor
Y	3550	4287	Poor	Poor

(a) Which substance is likely to be;   (1 mark)

   (i) An element **…………………………**

   (ii) (ii) A liquid at 22°C **……………………………**

(b) Which substance is likely to have the following structures?   (3 marks)

   (i) Simple molecular structure

   ………………………………………………………………………

   (ii) Giant ionic structure

   ………………………………………………………………………

   (iii) Giant atomic structure

   ………………………………………………………………………

22. The diagram below shows the apparatus used for the electrolysis of molten sodium bromide.
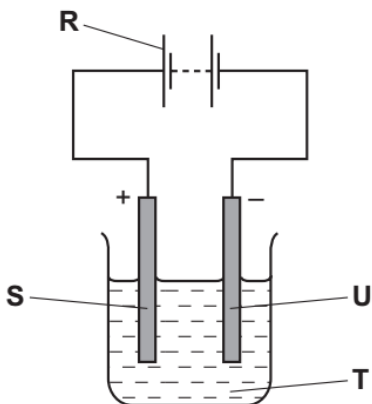
(a) What does the term electrolysis mean?   (1 mark)

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(b) Which letter **R, S, T** or **U** on the diagram represents the cathode?   (1 mark)

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(c) State the observation made at the anode.   (1 mark)

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(d) Which **condition** is missing in the set-up? (1 mark)

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(e) Write the half equation for the reaction at: (2 marks)

   (i) Cathode:

      ....

(ii) Anode:

....·

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

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24. Sketch a curve to illustrate the relationship between the volume of a fixed mass of a gas and its pressure at constant temperature.   (1 mark)

25. Study the flow chart below and use it to answer the questions that follow.
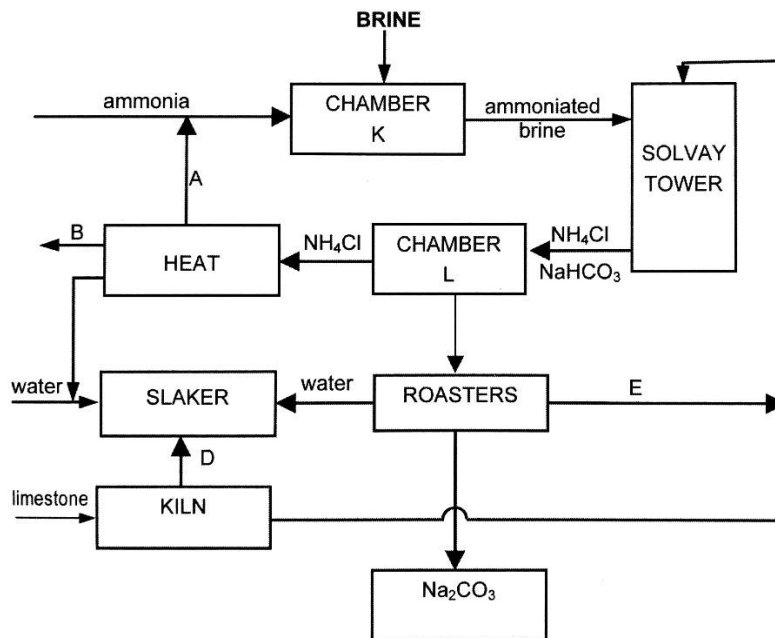
(a) Name the substances labelled **A, B, D** and **E**.   (2 marks)

A ....

B ....

D ....

E ....

(b) Cold water is made to circulate around **chamber K**. Suggest a reason for this. (1 mark)

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(c) Give **one** reason for recycling in this process.   (1 mark)

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(d) Write down the equations for the reactions taking place in:

   (i)   The kiln   (1 mark)

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   (ii)   Solvay tower (overall equation)   (1 mark)

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(e) Give **two** uses of substance **B**.   (1 mark)

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26. Describe an experiment that can be used to prepare a solid sample of sodium hydrogen carbonate in the laboratory starting with sodium metal. (3 marks)

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COMPUTER STUDIES 451/1 (THEORY)

Kenya Certificate of Secondary Education (KCSE)

FORM TWO

TIME 2 Hrs.

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: ………………………………………………………………………………………………

School: ……………………………………………………………………………………………

Adm No: ……………… **Date**: ………………… **Signature**: ……………………………………………

INSTRUCTION TO CANDIDATES

- Write your Name and Index number in spaces provided above.

- This paper consists **TWO** sections.

- Answer **ALL** questions in section **A**.

- Answer Question 16 and any other **THREE** Questions from Section **B**

- All answers MUST be written in the spaces provided on this question paper.

SECTION	QUSTIONS	CANDIDATE'S SCORE
A	1 -15	
B	16	
	17	
	18	
	TOTAL SCORE	

SECTION A (40MARKS)
ANSWER ALL THE QUESTION IN THIS SECTION

1. State three differences between impact printers and non-Impact printer**(3marks)**

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2. Peter used a compact disk recordable to save his work. ½ of the disk was used to store video files while ¼ of the remainder was to save audio file. Note that CD-recordable is 700MB. Calculate the remaining space in bytes **(3marks)**

3. Describe four ways in which ICT can be used to improve health care provision **(4Marks)**

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4. Mention three factors to consider when choosing an ISP for internet connectivity (**3marks**)

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5. Describe the term portability as used in the following context.
   (i) Hardware **(1mark)**

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   (ii) Software **(1mark)**

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6. John is a first-year student at JKUAT. He is expected to login his student portal to access online assignments. Mention three ways in which he would prevent virus from infecting his computer (**3marks**)

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7. Using relevant examples distinguish between a formula and function **(3marks)**

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8. Musato high school wanted to setup a network connectivity to be used in school. Mention three internet connectivity requirement that the school must have in order to get the connection (3**marks)**

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9. What is a master page in Desktop publishing **(2marks)?**

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10. State the function of the following keys.
    (i) Return key**(1mark)**

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    (ii) Delete**(1mark)**

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11. Describe the following features of Database management software.
    (i) Macro (1mark)

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    (ii) Table (1mark)

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12. State three factors to consider when choosing a monitor **(3marks)**

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13. Milenga Special School received grants from the National government to purchase computers to be used in the departments and the Headteachers' office, as a computer student the headteacher approached you to guide him on the hardware and software considerations to execute the project. Mention four hardware related factors that you need to consider for the project to be implemented successful **(4marks)**

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14. Describe three functions of an operating system**(3marks)**

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15. Describe the effects of the following actions in a computer lab.
   (a) Eating in a computer laboratory (**1mark**)

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   (b) Smoking in the computer laboratory (**1mark**)

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SECTION B (60 MARKS)
ANSWER ALL THE QUESTION I THIS SECTION

16. (i)Describe three components of a spreadsheet **(3marks)**

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(ii)Describe three components of a function **(3marks)**

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....

(ii)A School keeps a spreadsheet of examination results in four subjects. Part of the spreadsheet is shown below.

	A	B	C	D	E	F	G	H	I
1	**Name**	**Class**	**Math**	**Science**	**IT**	**English**	**Average**	**Position**	**Remark**
2	Peruza	11C	87	72	64	61	**71**	1	
3	Kegg	11A	82	69	57	52	**65**	2	
4	Kolacz	11A	73	51	73	51	**62**	3	
5	Khan	11C	44	21	50	85	**50**	4	
6	Dyos	11B	41	54	70	31	**49**	5	
7	Lenski	11B	17	41	40	34	**33**	6	
8	Allen	11A	33	24	19	44	**30**	7	
9	**Mean score**	-	53.86	47.43	53.29	51.14	51.43		
10	**Highest**	87	**Lowest**	17			######		

Table 1

(a) What formula has been used to:
(i) Calculate the mean score for Math **(1mark)**

(ii) Assign Lenski position 6 out of 7**(1mark)**

....

(iii)Get student with the highest marks in Math and Science**(1mark)**

....

(b) Show how cell G10 can be represented in R1C1 style **(1mark)**

....

(c) Write a function that will display Excellent, Good, Average and Fail in the remark column based on the average score (**3marks**)

Average	Remark
66 -100	Excellent
46-65	Good
36-45	Average
0-35	Fail

Table 2

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....

(d) State the validation check that should be carried out on data entered in cell C2 to F8 to ensure values over 100 are not input **(2marks)**

17.

(a) List two items found in Ms-word formatting toolbar **(2marks)**

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(b) With an aid of a diagram explain the difference between merging cells and splitting cells **(3marks)**

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(c) Mark Jacob typed **Kanga High School** in a Ms-Word workspace. State how the line of text will appear if he applies the following change case option.
(i) Toggle case **(1mark)**

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(ii) Sentence case **(1mark)**

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(iii) Upper case **(1mark)**

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James was preparing a document which contains lines of text and graphic. When he typed the last sentence, the whole sentence was pushed to the next page making the document to have two pages. Mention fours ways that can be applied to this document to make it fits with a page**(3marks)**

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(d) Describe four proofreading tools supported by Ms-words**(4marks)**

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18.

(a) State the difference between Fill and stroke as applied in DTP **(2marks)**

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(b) Give three purposes of desktop publishing software**(3marks)**

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(c) Describe two types of desktop publishing software **(2marks)**

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(d) Describe the following terms as used in DTP.
    (i) Pasteboard **(1mark)**

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    (ii) Printable area**(1mark)**

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    (iii)Ruler**(1mark)**

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(e) Describe the following features with respect to DTP.
    (i) Wrapping text**(1mark)**

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    (ii) Drop cap**(1mark)**

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(f) State the function of the following toolbox items as used in Adobe Page Maker
    (i) Text tool **(1mark)**

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    (ii) Cropping tool**(1mark)**

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      (iii)Zoom tool(**1mark**)

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19.

  (i) Describe the following database models.
     (a) Relational l Model (**1mark**)

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....

     (b) Networked model (**1mark**)

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....

     (c) Object oriented (**1mark**)

....

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....

  (ii) A database was set up to record the test results for a class of students. Part of the database is as shown below.

Name	ID	Math	English	Science	History	Geography
Paul Smith	0017	70	55	65	62	59
Ravi Gupta	0009	29	34	38	41	44
Chin Hwee	0010	43	47	50	45	52
John Jones	0013	37	67	21	28	35
Diana Abur	0001	88	92	95	89	78
Rose Achieng	0016	21	13	11	27	15

    (a) Give the number of fields that are in the table above (**2marks**)

....

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(b) How many records are in the above table (**2marks**)?

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(c) Choose the most appropriate key field for the table and give a reason for your choice (**2marks**)

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(d) Choose the data type for Name, ID, and Math (**3marks**)

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(e) Suggest how the marks columns should be validated (1mark)

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(f) Write an expression that can be used to calculate the total at the query grid **(2marks)**

20.

(a) Describe two functions of a file extension **(2marks)**

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(b) Explain the following terms as used in computing.
   (i) Hanging **(1mark)**

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....

   (ii) Virus **(1mark)**

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   (iii)Troubleshooting**(1mark)**

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(c) Identify four resources that are under operating system control **(4marks)**

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(d) Why must operating system be installed in the computer before installing any other software **(2marks)**

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(e) Give four reasons that may cause computer malfunction **(4marks)**

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CHRISTIAN RELIGIOUS EDUCATION
FORM TWO (2)
Time: 2 Hours

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: …………………………………………………………………………………………………

School: …………………………………………………………………………………………………

Adm No: ……………… **Date**: ………………… **Signature**: ……………………………………………

INSTRUCTIONS TO CANDITATES

1) Write your name and index number in the spaces provided above.
2) This paper consists of five questions.
4) Answer all the **five** questions on the foolscaps provided.
5) Each question carries 20 marks.

FOR EXAMINERS ONLY

Question	Marks
1	
2	
3	
4	
5	

1 a) Name six books from the General Epistles (6mks)

   b) Describe the major translations of the bible ((7mks)

   c) What were the effects of Bible translations on African languages? (7mks)

2 a) Describe how the Israelites crossed the red sea (6mks)

   b) State the condition for the renewal of the covenant at Mt. Sinai (7mks)

   c) Give the effects of idolatry in Israel (7mks)

3 a) Highlight the Jewish expectation of the messiah in the Old Testament (6mks)

   b) Describe the baptism of Jesus (7mks)

   c) What is the significance of the baptism of Jesus to Christians today (7mks)

4 a) Give the duties of a disciple as taught in St. Luke's gospel (6mks)

   b) State the teaching of Jesus on Watchfulness and readiness (7mks)

   c) Narrate the parable of the great feast (7mks)

5 a) Outline the causes of death in Traditional African Society (7mks)

   b) Give the role of the medicine women /men in the community (6mks)

   c) State moral values that were observed in the African traditional society (7mks)

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ENGLISH FORM 2
TERM 3 (2021)
Time: 2 ½ hours

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: …………………………………………………………………………………………………

School: …………………………………………………………………………………………………

Adm No: ……………… **Date**: …………………… **Signature**: ……………………………………………

INSTRUCTIONS TO CANDIDATES.

(a) Write your Name and Adm Number in the spaces provided.

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

(c) Answer all questions in this paper.

(d) All your answers must be written in the spaces provided.

(e) This paper consists of **10** printed pages.

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

(g) Candidates **must** answer all the questions in English.

The paper consists of six sections as follows

SECTION A	WRITING	20MKS
SECTION B	COMPREHENSION	20MKS
SECTION C	CLOZE TEST	10MKS
SECTION D	ORAL SKILLS	10MKS
SECTION E	POETRY	20MKS
SECTION F	GRAMMAR	20MKS
	TOTAL	**100MKS**

SECTION A: WRITING(20MKS)

You are the secretary of the ST JOHN'S CLUB in your school. The club is planning for a funds drive to buy the THE FIRST AID KIT.

a) Design an invitation card to be used for the purpose of inviting guests to the occasion. (8mks)

b) Your friend had invited you to his birthday party which will be held on the same day as the fund drive. Write him a letter telling him that you will be engaged on that day, and therefore you will not be in a position to attend the party. (12mks)

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SECTION B: COMPREHENSION   (20MKS)

Read the following passage carefully, then answer the questions that follow.   (20 marks)

The prevalence of diabetes in Kenya has more than doubled in the past three decades, accounting for 20 per cent of deaths in the country.

With a national prevalence rate of between 3 .1 per cent and 4.6 per cent (between 1.4 million and 2.1 million Kenyans), experts are warning that the cases are rising at an alarming rate.

Today, one in every 17 Kenyans has diabetes, and 12,890 people in the country died from both diabetes and high blood glucose in 2014.

A report jointly published by the World health Organisation (WHO) and *Lancet* on World Health Day last year shows that the prevalence of diabetes in Kenya was six per cent in 2014, a 150 per cent rise from 2.4 per cent in 1980.

Globally, the number of adults with diabetes has almost quadrupled to 4.22 million in 2014 from 108 million in 1980, with most living in developing countries.

So alarming is the situation that during the launch of the first Global Report on Diabetes, WHO director general Margaret Chan called for action on diabetes, saying there was need to step up prevention and treatment of disease.

According to experts, sedentary lifestyles, stress, being overweight and obese are some of the factors driving this dramatic rise. However, some people, especially those in rural areas, are affected by diabetes as a result of their genetic make-up.

"People are also not getting screened as often as they should. Some are not getting screened at all despite the test being cheap," said Dr. Eva Njenga, a diabetes specialist.

Experts note that the normal diabetes health advice – not smoking, eating healthy, and limiting alcohol intake – can help keep people healthy.

Dr. Njenga advises: "If you are not diabetic, ensure that you go for screening at least once a year. If any of the members of your family has diabetes, then you should be **screened** two to three times in a year, since you are genetically **predisposed**."

Mr. Zachary Ndegwa, a programme officer at the division of **non-communicable** diseases, said there are only 50 diabetes clinics and at least 12 specialists (endocrinologists) in Kenya.

"As we speak, it can take up to six months after the first booking for a patient to start their routine check-up," said Dr. Njenga.

Diabetes is a **non-communicable** disease in which the body's ability to produce or respond to the hormone insulin is impaired, resulting in abnormal breakdown of carbohydrates and elevated levels of glucose in the blood and urine.

The most common diabetes symptoms include frequent urination, intense thirst and hunger, weight gain, unusual weight loss, fatigue, cuts and bruises that do not heal, male sexual dysfunction, numbness and tingling in hands and feet.

If not controlled, diabetes has dire consequences including possibility of heart attack, stroke, blindness, kidney failure and for some, gangrene, leading to leg amputation.

Questions

(a)   Name the WHO director general according to the passage.   (1 mark)

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....

(b)   Define diabetes according to the passage.   (3 marks)

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(c)   In note form list down the most common diabetes symptoms.   (6 marks)

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(d) State <u>three</u> factors that are driving the dramatic rise of diabetes according to experts.(3 marks)

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(e) Mr. Zachary Ndegwa, a programme officer at the division of non-communicable

diseases, said there are only 50 diabetes clinics and at least 12 specialists in Kenya.

(Rewrite changing the sentence into direct speech)   (1 mark)

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(f) Identify <u>three</u> consequences of not controlling diabetes according to the passage.(3 marks)

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(g) Give the meaning of the following words as used in the passage.   (3 marks)
   (i) screened

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   (ii) predisposed

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(iii) non-communicable

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SECTION C: CLOZE TEST (10mks)

A student in Mandera County *1* _____ history after scoring an A in

last year's form four examination. Ibrahim Abdi Ali, a former student at Sheikh Ali Secondary

School *2* _____

the troubled Rhamu Sub-county, *3* _____81 points. No

Mandera student had

4 _____ scored an A. Speaking at Tawfiq Secondary school

where *5* _____

has been a volunteer teacher, Ibrahim said it was by God's 6 _____

that he broke the record in the hardship 7_____ ."I challenge

students to keep the fire 8 _____

since it has taken much perseverance to achieve this," he said. Ibrahim said he

9_____ _ out of school in Form Two due to lack of fees,

10_____the principal of Sheikh Ali came to his rescue.

SECTION D : ORAL SKILLS   (10MKS)

a) Indicate whether the following sentences will have a <u>Rising</u> or a <u>falling</u> intonation.   (4mks)

   i.   What did the two agree on?

....

....

   ii.   Did you see the summary?

....

....

iii.   I have donated more blood.

……

……

iv.   The farmer harvests much, doesn't he?

……

……

b) Give the meaning of the following sentences when the underlined words are stressed   (3mks)

i.   James read the novel.

……

……

ii.   James read the novel.

……

……

iii.   James read the novel.

……

……

c) For each of the underlined words, provide a word that is pronounced the same way.   (3mks)

Why did the idle bridal party groan?

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……

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……

SECTION E: ORAL POETRY (20MKS)

Read the song below and answer the questions that follow.

A Sudden Storm

The wind howls, the trees sway,
The loose house-top sheets clatter and clang,
The open window shuts with a bang,
And the sky makes night of the day.

Helter-skelter the parents run,
Pressed with a thousand minor cares:
'Hey, you there! Pack the house-wares!
And where on earth's my son?'

Home skip the little children:
'Where have you been, you naughty boy?'-
The child can feel northing but joy,
For he loves the approach of the rain.

The streets clear, the houses fill,
The noise gathers as children shout
To rival the raging wind without,
And naught that can move is still-

A bright flash! A lighted plain;
Then, from the once-black heavens,
Accompanied by noise that deafens,
Steadily pours the rain.

Pious Oleghe

Questions

(a)   Explain what is happening in the poem before the rain pours.   (4 Marks)

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(b)   Explain the meaning of the following lines as used in the poem   (4 Marks)

     (i)   The wind howls, the trees sway

....

....

....

     (ii)   And the sky makes night of the day

....

....

....

     (iii)   Helter-skelter the parents run

....

....

....

     (iv)   Pressed with a thousand minor cares

....

....

....

c)   Identify and illustrate any stylistic devices used in the poem.   (4 Marks)

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    d)   From the poem, what suggests that the storm is violent. (2 Marks)

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    e)   Explain the difference in the reaction between the old and the young to the coming rain.   (4 mks)

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    f)   Give the poem another title.   (2 Marks)

....

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SECTION F: GRAMMAR (20MKS)

  1. Fill in the blank spaces using the past tense of the word in brackets   (3mks)

  a) The students _____assistance from the police after the attack.(seek)

  b) The visitors _____us goodbye and left immediately.(Bid)

  c) All the workers _____ their union dues through the bank (pay)

2. Use the plural form of the noun in brackets to fill in the blanks.   (3mks)

   a) They used the _____ to cultivate their farms. (ox)

   b) The cattle rustlers ran down the _____.(valley)

   c) The _____ were very supportive.(mother- in -law)

3. **Convert the following sentences into the passive voice.**   (4mks)

   a. The principal rewarded the students

....

....

   b. The visitor has been eating mangoes at the launch.

....

....

   c. People believe that the sun goes round the earth.

....

....

   d. We are going to clean all the classrooms in the afternoon.

....

....

4. **Convert the following into reported speech.**   (3mks)

   a) "Where were you yesterday?" the teacher asked Mary.

....

....

....

   b) "I'm feeling unwell," said Joseph

....

....

....

   c) "Jesus is the son of God," says the Bible.

....

....

....

5. **Join the following clauses into one sentence using the most suitable relative pronoun.**

    (2mks)

    a) I wrote an article

        The article was published in the daily newspaper

....

....

....

    b) Muna has bought a car

        Muna works as a Barber

....

....

....

6. **Choose the correct alternative from the brackets to complete the sentences.   (3mks)**

    a) Those who sat _____ (infront, in front) rarely dozed.

    b) When I left the room earlier, they were _____(altogether, all together)

    c) All_____(except, accept, exempt) Njiru arrived on time.

7. **Supply a suitable question tag.**   (2mks)

    a) She likes going out.

        ....

    b) Lend me your pen.

        ....

GEOGRAPHY

(THEORY)

312/2

FORM TWO

Time 2 ½ hours

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: …………………………………………………………………………………………………

School: …………………………………………………………………………………………………

Adm No: ……………… **Date**: ………………… **Signature**: …………………………………………

INSTRUCTIONS
a)   Write your name, class and admission number in the spaces provided.
b)   Answer all the questions.
c)   All answers must be written in the spaces provided in this booklet.

SECTION A

1. a)   Define the following terms:
   i)   Geography   (2 mks)

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....

....

   ii)   Orbit   (2 mks)

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2. a)   Differentiate between longitudes and latitudes.   (2 mks)

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   b)   Name two forces responsible for the formation of rift valleys.   (2 mks)

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3. a) State three characteristics of a Stevenson Screen. (3 mks)

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b)   Name two types of high clouds.   (2 mks)

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4. a)   When the local time at Kabale ($30^{o}E$) is noon, what is the local time at Wajir ($40^{o}E$)?(3 mks)

b)   List down three methods of representing relief on topographic maps.   (3 mks)

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5. a)   Give three examples of igneous rocks.   (3 mks)

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b)   State three characteristics of sedimentary rocks.   (3 mks)

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SECTION B

6.   The table below shows petroleum production in thousand barrels per day for countries in
      Middle East in April 2006. Use it to answer the questions that follow

Country	Production in '000' barrels
Iran	3800
Kuwait	2550
Qatar	800
Saudi Arabia	9600
United Arab Emirates	2500
Iraq	1900

a)   i)   What is the difference in production between highest and lowest producer? (2 mks)

      ii)   What is the total amount of petroleum produced in April 2006 in the Region? (2 mks)

iii)   Calculate the average petroleum production per day for the region in month of April
                                                                                          (2 mks)

b)   Draw a divided rectangle 14cm long to represent the above data.   (8 mks)

c)   i)   State four factors that influence the exploitation of minerals.   (4 mks)

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        ii)   State four benefits of petroleum to the economies of Middle East countries.   (4 mks)

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iii)   State three uses of soda ash.   (3 mks)

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7. a)   i)   What is folding?   (2 mks)

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ii)   State three factors that influence folding.   (3 mks)

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b)   i)   Name threefold mountains outside Africa.   (3 mks)

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ii)   Name four types of folds.   (4 mks)

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c)   Explain four economic importance of folding.   (8 mks)

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8. a)   i)   What is derived vegetation?   (2 mks)

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ii)   State four characteristics of equatorial rain forest. (4 mks)

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b)   i)   Explain three adaptation characteristics of desert vegetation.(6 mks)

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        ii)   Give three reasons why there is no vegetation on top of Mt. Kenya. (3 mks)

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9. a)   i)   Differentiate between weather and climate. (2 mks)

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ii)   List down three elements of weather that can be recorded in a school weather station.

3 mks

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b)   Your class intends to carry out a field study in the nearest weather station.

i)   State three preparation you would make for the study.   (3 mks)

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ii)   Give three methods that you would use to record the data.   (3 mks)

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iii)   Name any four instruments you are likely to observe in the weather station.(4 mks)

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Term 3

HISTORY AND GOVERNMENT (QUSTION PAPER)
FORM TWO (2)
Time: 2 Hours

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: ……………………………………………………………………………………………………

School: ………………………………………………………………………………………………

Adm No: ………………… **Date**: …………………… **Signature**: ……………………………………………

SECTION	QUESTIONS	MARKS
A	1-17	
B	18	
	19	
	20	
	21	
C	22	
	23	
	24	
TOTAL		

1. Define the term pre-history   (1mk)

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2. Give two reasons why early man moved from forests to settle in grasslands   (2mks)

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3. Give two inventions that led to Agrarian Revolution in Britain   (2mks)

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4. Identify two similarities between early agriculture in Mesopotamia and Egypt   (2mks)

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5. Name the dispersal area of the Eastern Bantus   (1mk)

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6. State two religious functions performed by Oloibon of the Maasai during pre-colonial
   period   (2mks)

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7. Identify two main items of trade from the interior of the Kenya during Long Distance Trade   (2mks)

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8. Give one condition one must fulfill in order to get a Kenyan citizen by registration   (1mk)

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9. Outline one political factor which cause conflict in Kenya   (1mk)

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10. Outline one role played by the middlemen during Trans-Atlantic Trade   (1mk)

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11. Give two features of Roman Roads by 300 AD   (2mks)

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12. Identify one invention that revolutionized food preservation during the 19th Century(1mk)

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13. State one theory of origin about the knowledge of iron working in Africa   (1mk)

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14. Give the main factor that led to the growth of ancient Kilwa   (1mk)

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15. State two functions of the Ssaza chiefs among the Baganda in the 19th Century (2mks)

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16. Identify two ways of amending the constitution in Kenya   (2mks)

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17. Give one advantage of representative democracy   (1mk)

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SECTION B (45MKS)-*Answer any three questions in this section*

18a) State five uses of stone tools by early man   (5mks)

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b) Explain five reasons why Africa is regarded as the original homeland of mankind   (10mks)

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19a) Name five communities among the Plain Nilotes who settled in Kenya during pre-colonial period   (5mks)

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b) Describe the political organization of the Agikuyu during pre-colonial period   (10mks)

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20a) Outline five challenges faced by factory workers in Europe during industrial revolution   (5mks)

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b) Describe five factors that have promoted industrialization in South Africa   (10mks)

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21a) Give five economic activities of the Asante during the 19th Century   (5mks

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b) Explain five functions of Kabaka of the Buganda Kingdom during the pre-colonial period (10mks)

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SECTION C (30MKS)-*Answer any two questions in this section*

22a) Identify three peaceful methods of conflict resolution   (3mks)

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b) Explain six factors which undermine national unity in Kenya   (12mks)

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23a) Give three reasons why the constitution is important in Kenya (3mks)

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b) Explain six ways in which the Bill of Rights protects the rights of individuals (12mks)

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24 a) State three development rights of a child   (3mks)

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   b) Explain six principles of democracy   (12mks)

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HOME SCIENCE
FORM TWO
Time: 2 Hours

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: ……………………………………………………………………………………………

School: ……………………………………………………………………………………………

Adm No: ……………… **Date**: ………………… **Signature**: …………………………………………

Instructions to candidates

1. This paper consists of three sections. A, B and C
2. Answer <u>all</u> questions in section A. Section B is compulsory. Answer the <u>two</u> questions in section C.
3. Answers to questions must be written in the space provided.
4. All answers must be written in English.

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1-20	40	
B	21	20	
C		20	
		20	
Total Score		100	

SECTION A (40 Marks)

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

1. List **four** methods that can be used to disinfect clothes.   (2 marks)

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2. Name **two** hand made stitches that can be used to neaten the raw edges of a seam. (1 mark)

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3. Give the nutritional disorder that may be caused by lack of each of the following nutrients. (2 marks)

   i)   Calcium

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   ii)   Thiamine

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   iii)   Retinol

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   iv)   Niacin

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4. Mention **two** reasons why a pit latrine should be kept covered when not in use.(2 marks)

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5. Give **two** qualities of a good pair of bedsheets.   (2 marks)

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6. List **two** reasons for tacking work when sewing.   (2 marks)

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7. Mention **two** ways of conserving nutrients when preparing and cooking green leafy

    vegetables.   (2 marks)

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8. Identify **three** qualities of a good bathroom floor.   (3 marks)

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9. List **two** methods of cooking that can be used when cooking for a sick person. (1 mark)

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10. Mention **two** points on care of cutting out shears.   (2 marks)

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11. Outline **three** ways of minimizing COVID 19 infections in schools.   (3 marks)

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12. Suggest **two** ways of avoiding poisoning at home.   (2 marks)

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13. Mention **three** qualities of a fabric suitable for making an apron.   (3 marks)

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14. Outline **three** things that may influence what you buy when going back to school.(3 marks)

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15. List **two** ways of making spring water safe for drinking.   (1mark)

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16. Give **two** causes of frequent cholera outbreaks in the country.   (2marks)

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17. State the effect of hot water when removing chewing gum on a garment.   (1 mark)

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18. Identify **two** properties of nylon that limit its use for pyjamas.   (2 marks)

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19. Suggest **three** reasons why washing machines may not be a common laundry equipment in
    many Kenyan homes.   (3 marks)

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20. State **two** advantages of using tomatoes when cooking meat.   (1 mark)

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SECTION B (20 Marks)

COMPULSORY

Answer question 21 in the spaces provided.

21. You are staying with your elderly grandmother in the village over the holiday.

    a) Outline the procedure you will follow to make the muddy water from the river safe for drinking without using chemicals.   (10 marks)

    b) Launder her knitted acrylic shawl.   (10 marks)

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SECTION C (40 Marks)

Answer any **TWO** questions from this section in the spaces provided.

22.

a) Giving a reason in each case mention **four** nutrients that are important for a person with

Anaemia. (6 marks)

b) Give **four** points to distinguish between symptoms of wet Beriberi from those of dry

Beriberi. (4 marks)

c) Suggest **five** ways of reducing Tuberculosis infections in the population. (5 marks)

d) Outline **five** desirable qualities of a seam on the side of a skirt/trouser. (5 marks)

23.

a) Mention **five** reasons why educating a woman is important in ensuring a healthy family. (5 marks)

b) Suggest **five** dangers of living in a poorly drained environment. (5 marks)

c) Explain **three** reasons why a house may not be cleaned frequently. (6 marks)

d) Outline **four** factors that determine the choice of personal clothes. (4 marks)
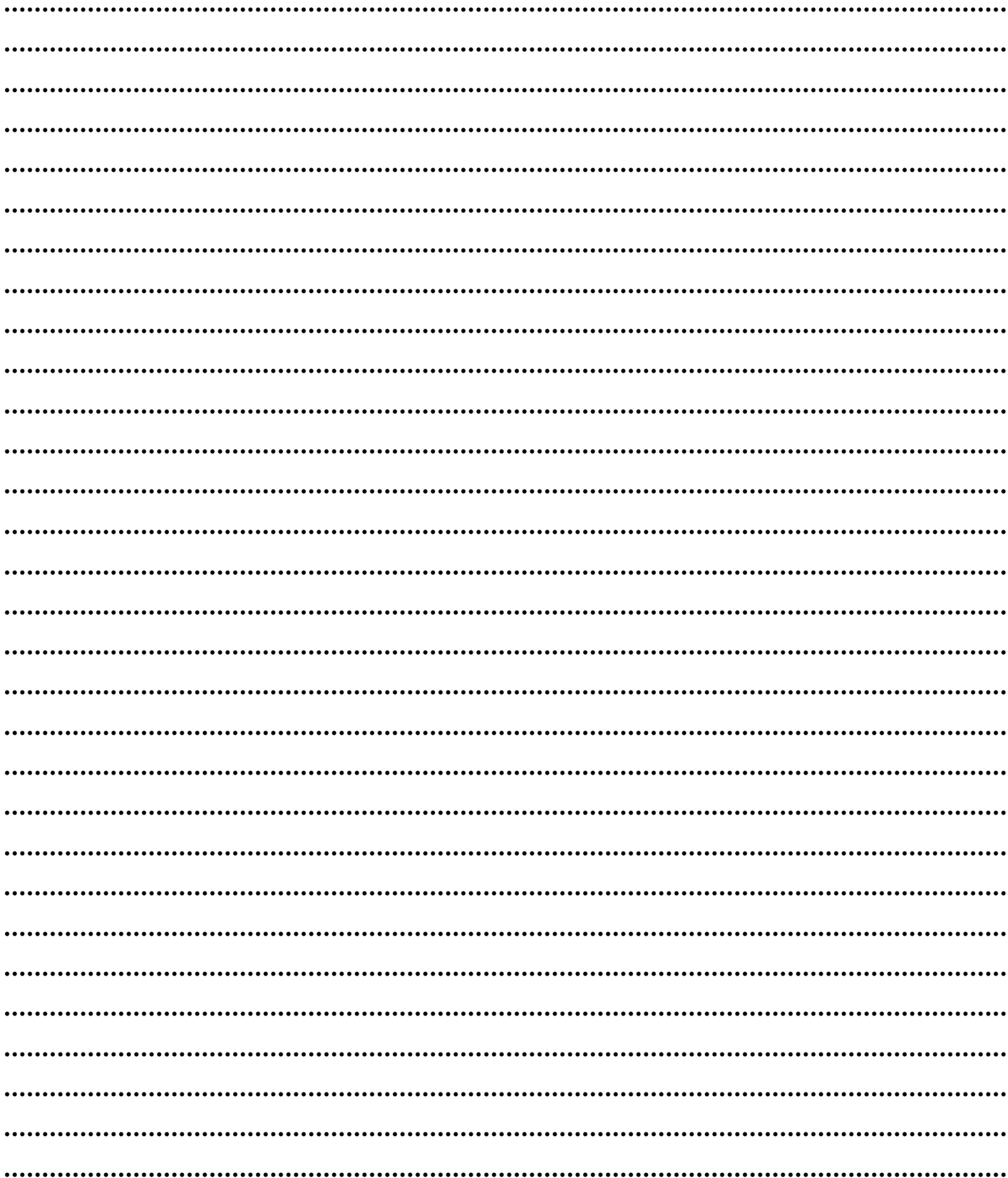
24.

a) Outline **five** dangers of living in a crowded neighbourhood. (5 marks)

b) Mention **three** limitations of using dry cleaning as a sole method of laundering clothes at home. (3 marks)

c) Suggest **four** ways your parents can advertise the potatoes they have harvested to get buyers. (4marks)

d) Explain **three** reasons why wool would not be suitable for making sportswear.(6 marks)

e) Differentiate between an epidemic and a pandemic in infectious diseases.(2marks)

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AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: ……………………………………………………………………………………………

School: ……………………………………………………………………………………………

Adm No: ……………… **Date**: ………………… **Signature**: …………………………………………

INSTRUCTIONS TO CANDIDATES

1. This paper contains five (5) questions.
2. Answer all questions
3. Write your answers in the answer sheet provided.
4. All answers must be in English.

1. a) Discuss the importance of the *Holy Quran* to Muslims. (10mks)
   b) State five attributes of Allah mentioned in *Ayyatul Kursi* (5mks)
   c) Give five differences between the holy *Quran* and *Hadith* (5mks)

2. a) State the qualities one should possess to be a Muhaddith. (5mks)
   b) State five privileges accorded to a Muslim traveler (5mks)
   c) Explain five benefits of *swalah* on a Muslim (10mks)

3. a) Mention the *Ulul azmi* prophets (5mks)
   b) Discuss the importance of Islamic morality. (10mks)
   c) Identify five types of sexual perversion (5mks)

4. a) Elaborate five conditions to be fulfilled before a marriage is considered valid in Islam
   (5mks)
   b) Explain four types of divorce in Islam (8mks)
   c) List the accusations which were leveled against Caliph Uthman. (7mks)

5. a) Describe five roles of the City States in the spread of Islam along the East African Coast. (10mks)
   b) Identify the contributions of *Sheikh* Al Amin Mazrui in promoting education among
   Muslims in Kenya. (5mks)
   c) Outline the achievements of *Sheikh Hassan Al-Banna.* (5mks)

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MTIHANI WA PAMOJA
KISWAHILI KIDATO CHA PILI
MTIHANI WA MUHULA WA TATU
Mwezi wa Julai
MUDA: SAA 2 ½

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Jina:...

Shule: ....

Nambari ya Usajili: .... **Tarehe:** .... **Sahihi:** ....

MAAGIZO:

Andika jina na nambari yako katika nafasi ulizoachiwa hapo juu

1. Jibu maswa yote. Majibu yaandikwe katika nafasi zilizoachwa kwenye kijitabu hiki cha maswali

KWA MATUMIZI YA MTAHINI PEKEE

Swali	Upeo	Alama
1	15	
2	15	
3	40	
4	10	
5	20	
Jumla	80	

1. **UFAHAMU**   **(ALAMA 15)**

    Soma taarifa ifuatayo halafu ujibu maswali

Kama kuna jambo ambalo limeiparaganya akili yamahuluki ni kuielewa dhana ya demokrasia. Kiumbe huyu heshi kuuliza mkururo wa maswali. Demokrasia ni nini hasa? Tunaweza kula demokrasia? Ni dude gani hili lina kichwa au mkia pekee yake? Je demokrasia inazuia njaa? Demokrasia ni himaya ya wasomi tu au vilevile ni haki ya mafalahi? Kwa muda mrefu kumekuwa na kinyang'anyiro kikubwa katika jamii ambacho azma na. matokeo yake yamekuwa ya kutatanisha. Baadhi ya watu wamejitokeza kama mchuzi wa ugali na kuzusha zahama ambazo si za kuyumkinika. Vichwa vya adinasi vikafyekwa kwa miundo na maparange na matumbo yakapasuliwa na kuapakaza utumbo na vijusi kila mahali. Shingo zikapigiwa vigingi na kukomewa ardhini. Demokrasia si mchezo wa lelemama. Ni sharti tujifunge vibwebwe tumwage damu na tufe ili tupate demokrasia ya kweli!" Mmoja wa mibabe wa demokrasia alinguruma kadamnasi ya umati huku ngoma za vita zikirindima." Hata Marekani na ulaya walimwaga damu. Mamilioni ya watu walipukutishwa na kimbunga cha demokrasia. Chini walilaliana kama Vimatu na tunutu. Hawa manafiki wanafikiri hatuwajui. Katu hatutakubali porojo zao. Wanatupikia majungu kisha wakatoweka. Kuna demokrasia ya Afrika na ile ya Ulaya ' mkereketwa wa Uafrika akachanganua.

Demokrasia ya Afrika basi imefuata mkondo huu wa umwagikaji damu. Kila kukijiri uchaguzi zahama hutawala. Walio madarakani hawataki kubanduka. Hutaruta visababu vya kukwepa wimbi la ushinde. Demokrasia ni mchezo wa mizengwe tu ati. Hali hil imesababisha maafa makubwa, uharibifu mkubwa wa mali, majeraha, ukimbizi wa raia ndani na nje ya mataifa husika, dhuluma za kimapenzi dhidi ya wanawake, kuzagaa kwa magonjwa ainati, uhasama wa kikabila. Jambo la kusikitisha ni kwamba raia na viongozi hawaelekei kujifundisha chochote kutokana na hali. Huku mataifa mengi Ulayani na Asia yakikwea daraja moja baada ya nyingine kimaendeleo, Afrika imedumaa tu. Imesalia kuimba ule wimbo wake wa kutokea azali' Tutaendelea vipi na tunadhulimiwa na kaka wakubwa". Siasa ya demokrasia katika bara la Afrika ina tija kubwa hususan kwa wale wachache wanaofanikiwa kudhibiti nyenzo za kutia tonge kinywani. Ulitima wa umma husalia miradi hewa ya tabaka la viongozi ambayo hutumiwa kujinadi zamu nyingine ifikapo tena. Demokrasia ya kweli imo mikononi mwa umma pale utakapojikomboa kimawazo na kwa ujasiri kudai huduma bora, uajibikaji na kuheshimiwa kwa mkataba wa kijamii uliosisiwa na Jean Jacques Rousseau.

Maswali

a) Binadamu amechanganyika kwa njia ipi) (Alama 2)

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b) Ni vipi Demokrasia ya kweli inaweza kufikiwa (Alama 2)

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c) Kwa nini inasemekana kuwa 'Demokrasia ni mchezo wa mizengwe? (Alama 2)

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d) Ni athari gani hutokana na kinyang'anyiro cha Demokrasia? (Alama 4)

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e) "Dhiki za raia zimesalia kuwa mradi-hewa wa wanasiasa" Eleza.   (Alama2)

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f) Fafanua maana ya maneno na mafungu yafuatayo jinsi yalivyotumika katika taarifa.

(Alama 3)

i)   Mafahali

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ii)   Wanatupikia majungu

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iii) Ukarabati

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2.   UFUPISHO

(ALAMA 15)

Soma makala yafuatayo kisha ujibu maswali yanayofuata

Wakaazi wengi wa maeneo ya kitajiri miji yetu hawajui wapo chini ya utawala wa machifu.Huenda wakasalia katika hali hii ya kutojua hadi wanapokosa kulipa ujira wa watumishi wao wa nyumbani halafu maskini mwajiriwa huyu anaripoti kwa chifu, kwa kuwa ni hali yake. Chifu ni uzi muhimu katika vazi Ia kijamii. Bila hawa maafisa, jamii kama tunavyoijua ingeporomoka. Wakati mwingine hawaungwi mkono. Mfano mzuri ni kukataliwa kwa katiba kielelezo cha Wako, Novembe 2005, wakati wa kura ya maoni. Kwa sababu jukumu la chifu au

kibadala chake halikudhihirishwa wazi wazi katika kielelezo, wengi walikataa stakabadhi hiyo, wakihofia sasa hawataweza kufikia mtawala wao kushughulikia malalamishi yao.

Nimeishi mtaa wa Nairobi West miaka mingi na kuhudhuria kamati nyingi za lokesheni, chini ya uwenye kiti wa chifu akisaidiwa na naibu na wazee. Mikutano, pia inahudhuriwa na madiwani, inspekta wa askari tawala na wawakilishi wengi na washia dau katika lokesheni. Takribani kila swali linalogusia maslahi ya jamii linajadiliwa na kuchunguzwa na maazimio kupitishwa. Mada muhimu wakati wa mikutano hii ni usalama, taa za barabarani, ulanguzi wa mihadarati hasa karibu na taasisi za elimu, kudumisha usafi wa vyoo vya umma, kudumisha usalama kupitia kwa raia na swala nyeti la vioski.

Kazi ngumu ya chifu ni kuwazia kila kju. Kwa mfano, mwenye kioski ni sharti apate mkate wa kila siku na sehemu ya biashara yake iliyoko ni muhimu. Ikiwa kioski kitajengwa na kukiuka sheria   za baraza la jiji au ikiwa wizi usiofahamika na utumizi wa dawa za kulevya unatokea kufuatia kukua kwa idadi ya vioski katika eneo, shinikizo zinaelekezwa kukuwa kwa wenye vioski. Chifu lazima azingatie shinikizo za umma hatari za kiusalama na hofu za wenye vioski kabla ya kufanya uamuzi ikiwa mijengo hiyo ibomolewe.

Tatizo jingine ni watoto wa barabarani. Makao ya kuwakimu ni machache kama walivyo wahudumu wa kijamii, suluhu ni nini? Tuwatupe katika ukumbi wa kijamii, ambao watahepa pindi *tu,* wapatapo fürsa ndogo au wapelekwe huduma kwa vijana wa Taifa, ambapo wachache wanaweza kutunzwa kwa wakati mmoja. Ili kufaulu kwa wengine, sharti wawe katika vituo vya urekebishaji tabia za matumizi ya dawa za kulevya. Tuwakabidhi polisi kwa sababu wanaranda au tujaribu kuungana na vituo vya urekebishaji tabia kuhakikisha hawatarudi barabarani.

Mazingira ya lokesheni pia huibuka katika ajenda. Hali ya barabara, juhudi za kusafisha mazingira, wizi wa maji na umeme, usafiri wa umma, uchafuzi wa mazingira, hewa na kelele, hii inatokea kupitia malalamishi ya watu wanaoishi karibu na mabaa na uzingativu wa saa ya biashara hujadiliwa kila mara. Chifu ni sharti afahamu sheria na kanuni zinazotawala hali hizo, halafu ajadili na wahusika kabla ya kutoa mwelekeo. Usawa na uwazi katika kugawa fedha za Hazina ya maendeleo ya maeneo Bunge, pia hujadiliwa.

Katika maswala haya mengine, chifu ndiye aliye nyanjani. Anawajibikia jamii na wakubwa wake na hatarajii shukrani au kutambuliwa kwa kazi njema aliyofanya. Isipokuwa hukashifiwa anapofeli. Watu wengine wana taswira ya Chifu kama mtu kwenye jukwa, kofia yake. na kifimbo

kinachompa mamlaka ya kuhutubia baraza, Kajubu tyji zaidi ya hivyo. Kwa mujibu wa kitabu cha mafunzo ya machifu na Naibu wao (Januari 2004), wajibu wa chifu ni kuwakilisha sera na mipango ya serikali kwa wananchi. Chifu ni ajenti wa "mabadiliko" mwenye wajibu Wa kuhamasisha watu katika

maendeleo. Anajishughulisha na kujua ni nani maskini katika lokesheni, mkoa, mgonjwa asiyeweza kupata tiba na kupanga jinsi mhasiriwa atakavyopelekwa hospitali kama anavyoweza. Ni sharti ashughulikie ugomvi wa kinyumbani, uhalifu wa watoto, dhuluma za watoto, agawe chakula na mavazi kwa wahitaji na kuhukumu kesi ndogo za wizi na uharibifu. Chifu hutatua kesi za kisheria kwa wasioweza kumudu wakili. Wakati wananchi wanapohisi mbunge wao hafikiliki na hawana imani na polisi, chifu ndiye suluhisho.

Lakini kuna machifu wachache ambao hawafanyi kazi yao vyema. Kwa ufupi, chifu ni mkusanyiko wa kushngaza; mfalme katika himaya yake, pasta, baba msikivu, wanasaikolojia, mtunga sheria na mdumisha sheria, balozi mchaguzi, mama, mlumbi na askari asiyechelewa. Ingawa halipwi vyema, anafanya kazi bila tarakilishi, na aghalabu hujilipia gharama ya kodi ya afisi yake kutoka mfuko wake. Kwa sababu ni mtumishi wa *umma,* tunataraji afanye kazi mufti. Hiyo haimaanishi tusishukuru kwa kazi njema aliyofanya. Serikali inaweza kufanya hivi kwa kuimarisha hali yake ya kazi, mazingira yake ya kikazi, na kuhakikisha yana tarakilishi, anapata mafunzo ya uongozi na usimamizi. Wananchi sharti washukuru watu hawa kwa kujitolea sabili.

Maswali

a)   Fupisha aya nne za kwanza (Maneno 60)   (Alama 6, mtiriko,1)

      Matayarisho

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Jibu

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b)   Kwa maneno kati ya 80-90 fupisha aya ya tano hadi mwisho. (Alama 9, mtiririko 1)

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3. **MATUMIZI YA LUGHA**

(ALAMA 40)

a)   i)   Taja sauti mbili ambazo ni vikwamizo na hutamkiwa kwenye ufizi(Alama 1)

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        ii)   Taja sifa mbili bainifu za vokali 'U'   (Alama 2)

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    b)   Yakinisha sentensi hii.   (Alama 2)

        Simba asiponguruma wanyama wote hawababaiki.

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c) Andika upya sentensi ifuatayo kwa kufuata maagizo uliyopewa.   (Alama 2)

Mbwa ambaye aliripotiwa kuwa ameibwa amepatikana katika bwawa la maji.

(Anza: Katika bwawa………………………..)

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d) Changanua sentensi ifuatayo kwa kutumia mbinu ya matawi   (Alama 4)

Mwanafunzi stadi amenunua kitabu kizuri

e) Ukizingatia neno lililo katika mabano, andika sentensi hizi katika hali ya kutendeka.

i) Daraja hili(vuka) tu wakati wa kiangazi   (Alama 1)

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ii) Kitabu hicho(soma) ijapokuwa sura zingine hazimo.   (Alama 1)

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f) Andika katika ukubwa wingi (Alama 2)

Kitoto kijeuri kikiletwa kitarejeshwa kwao.

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g) Andika katika usemi taarifa. (Alama 2)

"Tutawatembelea wazazi wetu leo jioni" Leo alimwambia Asha.

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h) Tunga sentensi ukitumia nomino zifuatazo pamoja na kivumishi ___ingine(Alama 2)

    i) dau

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    ii) urembo

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i) Bainisha yambwa tendwa na yambwa tendewa katika sentensi hii. (Alama 2)

Mbunge wa Mtondo Kaskazini atawajengea wanakijiji josho kisha aghurie mjini.

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j) Tunga sentensi ukitumia viwakilishi vifuatavyo. (Alama 2)

    i) Nafasi viambata

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ii)   Visisitizi

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k)   Tumia neno dhahiri katika setensi kulingana na maagizo   (Alama 3)

Kama:

i)   Kiambishi

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ii)   Kivumishi

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l)   Tunga sentensi ya neno moja yenye visehemu vifuatavyo vya sarufi. (Alama 3)

i)   Kiambishi kiwakilishi cha kiima

ii)   Kiambishi kiwakilishi cha wakati uliopo

iii)   Kiambishi kiwakilishi cha kitendewa/mtendewa

iv)   Shina la kitenzi

v)   Kiambishi cha kauli ya kutendesha

vi)   Kiishio

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       m)   Bainisha kirai nomino na kirai kivumishi katika sentensi hizi.   (Alama 2)

            i)   Nguo aliyonunua mzazi ni mpya.

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            ii)   Kondoo mwenye manyoya mengi hupendeza.

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       n)   Akifisha   (Alama 3)

sikukuu ya madaraka nilikwenda eldama ravine kumwona yohana akasema atakuja kuniona pamoja na mkewe siku ya jumapili

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       o)   Eleza tofauti za kimaana baina ya sentenzi hizi.   (Alama 4)

            i)   Jambazi kutoka dukani aliiba

            ii)   Kutoka dukani jambazi aliiba.

            iii)   Aliiba jambazi kutoka dukani.

            ii)   Jambazi aliiba kutoka dukani.

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p)   Unda nomino mbilimbili kutokana na mizizi ifuatayo.   (Alama 2)

         i)   -f-

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         ii)   -l-

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4.   ISIMU JAMII
(ALAMA 10)

a)   Eleza maana ya lugha   (Alama 1)

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b)   Taja sifa nne za lugha   (Alama 4)

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c)   Eleza sifa za sajili ya maabadani   (Alama 5)

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FASIHI SIMULIZI

a. Fafanua Uhusiano uliopo baina ya fasihi simulizi na fasihi andishi. (Alama 10)

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b. Huku ukitoa mifano kem kem, eleza dhima zozote tano za fasihi simulizi.(alama 10)

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121/1   **MATHEMATICS FORM TWO**   **PAPER 1**
TIME: 2½ hours

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: ……………………………………………………………………………………

School: ……………………………………………………………………………………

Adm No: ……………… **Date**: …………………… **Signature**: ………………………………………………

Instructions

(a) *Write your name, admission number and class in the spaces provided above.*

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

(c) *This paper consists of **two** sections; **Section I** and **Section II.***

(d) *Answer **all** the questions in **Section I** and any **five** questions from **Section II***

(e) ***Show all the steps in your calculations, giving your answers at each stage in the spaces provided below each question***

(f) *Marks may be given for correct working even if the answer is wrong.*

(g) *Non-programmable silent electronic calculators and Kenya National Examinations Council Mathematical tables may be used, except where stated otherwise.*

(h) *This paper consists of **16** printed pages.*

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

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Section I

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

Section II

Total

17	18	19	20	21	22	23	24	Total

Grand

SECTION I (50 Marks)

Answer *all* the questions in this section

1. George spends five-eighths of his salary on food, one-sixth of the remainder on school fees, two-thirds of what remains on contingencies and saves Kshs. 6,000. Calculate George's monthly salary. (3 marks)

2. (a) Find the GCD of 1240 and 860 (1 mark)

   (b) Hence find the number of square tiles that can be used to cover a floor of dimensions 12.4 m by 8.6 m (2 marks)

3. Without using a mathematical table or a calculator, find the values of a and b given that: (3 marks)

$$\frac{0.0168 \times 2.46 \times 7}{5.74 \times 0.0112} = \frac{a}{b}$$

4. Ten years ago, Mary was twice as old as her daughter Ruth. If the sum of their ages now is 56 years, calculate their present ages. (3 marks)

5. Simplify the expression below (3 marks)
$$\frac{2x - 3y + 4x^2 - 6xy}{1 - 4x^2}$$

6. A rectangular plot of land measures 120 m by 50 m. One of the longer sides has a wall already erected along it. The plot is to be fenced using chain link. One roll of chain link measures is 16 m long. A gate 6 m wide is left on one of the shortest sides. Calculate the number of rolls of chain link required to completely fence the plot. (3 marks)

7. In the figure below, O is the centre of the circle. The reflex $\angle AOD=244^0$ and $\angle BCD=48^0$.
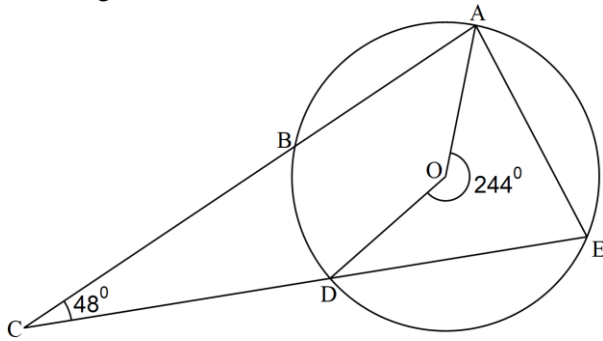
Calculate the size of $\angle BDC$ (3 marks)

8. The figure below shows a face and an edge of a triangular prism ABCDEF.
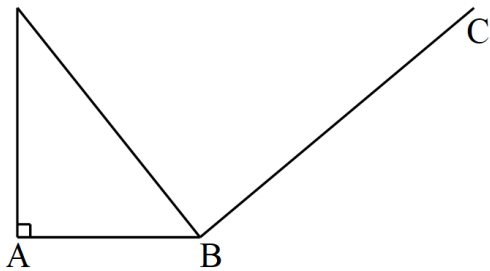
Complete the prism, labeling it accordingly and showing the hidden lines as broken. (2 marks)

9. Use tables of logarithms only to evaluate   (4 marks)

$$\sqrt[3]{\frac{0.2103 \tan 89.4^0}{74.6^2}}$$

10. Evaluate without using mathematical tables   (3 marks)

$$(125)^{\frac{2}{3}} \times \left(\frac{625}{64}\right)^{-\frac{1}{2}}$$

11. A tourist arrived in Kenya with Great Britain Pounds (GBP) 8,640 all of which she exchanged into Kenya Shillings. He spend Kshs. 517,906 while in Kenya and converted the rest of the money into US dollars (USD). Use the exchange rates below to calculate the amount of money he received to the nearest USD.   (3 marks)

Currency	Buying (Kshs.)	Selling (Kshs.)
1 GBP	145.40	154.29
1 USD	104.61	111.00

12. Two similar cups have capacities of 1 litre and 343 cm³. The surface area of the smaller cup is 122.5 cm², calculate the surface area of the larger cup. (3 marks)

13. The figure below shows the cross-section of a solid equipment used in a construction firm. It comprises of a circular hole of diameter 56 cm drilled on to a square of side 70 cm. The solid is 1.5 m long

70 cm

56 cm

70 cm
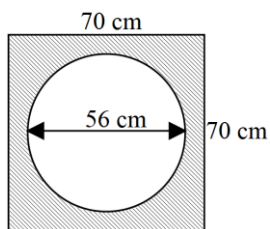
Calculate the volume of the solid in m³. Use $\pi = \frac{22}{7}$ (4 marks)

14. Find the modulus of the **AB** given that $a = -4i - 7j$ and $b = 3i - 8j$ correct to 2 decimal places (3 marks)

15. Use a ruler and pair of compasses only in this question.
Construct a trapezium PQRS such that PQ=7.4 cm, $\angle PQR=105^0$, $\angle SPQ=\angle RSP=90^0$, PS=5.3 cm and PQ parallel to SR. (4 marks)

16. Show on a number line the range of all integral values of x which satisfy the following pair of inequalities. (3 marks)

$$3 - x \leq 1 - \frac{1}{2}x$$

$$-\frac{1}{2}(x - 5) < 7 - x$$

Answer *any five* questions in this section

17. Four schools, **K**, **L**, **M** and **N** are such that **L** is on a bearing of 055^0 and a distance of 8.5 km from **K**. **M** is 7.2 km from **L** on a bearing of 144^0. **N** is 5 km due south of **M**. A campsite **P** is due west of **N** and on a bearing of 159^0 from **K**

   (a) Using a scale of 1: 100,000 make a scale drawing to show the relative positions of **K**, **L**, **M**, **N** and **P**   (5 marks)

   (b) Use the scale drawing in (a) above to find:

   (i) The distance between **K** and **M**   (2 marks)

   (ii) The bearing on **P** from **L.**   (1 mark)

(c) Show the position **T** of a communication mast installed such that it is equidistant from **K**, **N** and **P**.

(2 marks)

18. (a) The ratio a: b $=$ 2: 3 and the ratio b: c = 2: 5. If the sum of the three quantities is 2,050, calculate the difference between quantities c and a. (4 marks)

(b) Two business partners Eric and Bryan contributed Kshs. 100,000 and Kshs. 120,000 respectively to start a tech firm. They agreed that 30% of the proceeds from the firm would be shared in the ratio of their contributions and another 30% shared equally. At the end of the year, the business realized a profit of Kshs. 198,000

Calculate:

(i) The amount of money they shared (2 marks)

(ii) The amount received by each. (4 marks)

19. The figure below shows a solid drum that is in the shape of a frustum of a cone with top and bottom radii as 30 cm and 20 cm respectively. The drum is 45 cm high.
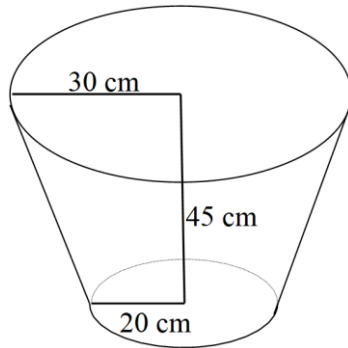
(a) Calculate the height of the original cone from which the drum was made. (2 marks)

(b) Calculate to 2 decimal places, the surface area of the drum. Use $\pi = 3.142$ (8 marks)

20. Below are masses of students taken in a medical centre.

35	55	32	37	60	35	38
20	54	66	59	34	56	42
31	44	47	45	55	48	39
29	27	24	33	36	35	43
45	48	28	52	39	64	41

(a) Starting with the class 20 – 29 and class size of 10, make a frequency distribution table for the data.   (2 marks)

(b) Calculate the mean mass   (4 marks)

(c) (i) On the grid provided, draw a histogram to represent the data above   (2 marks)
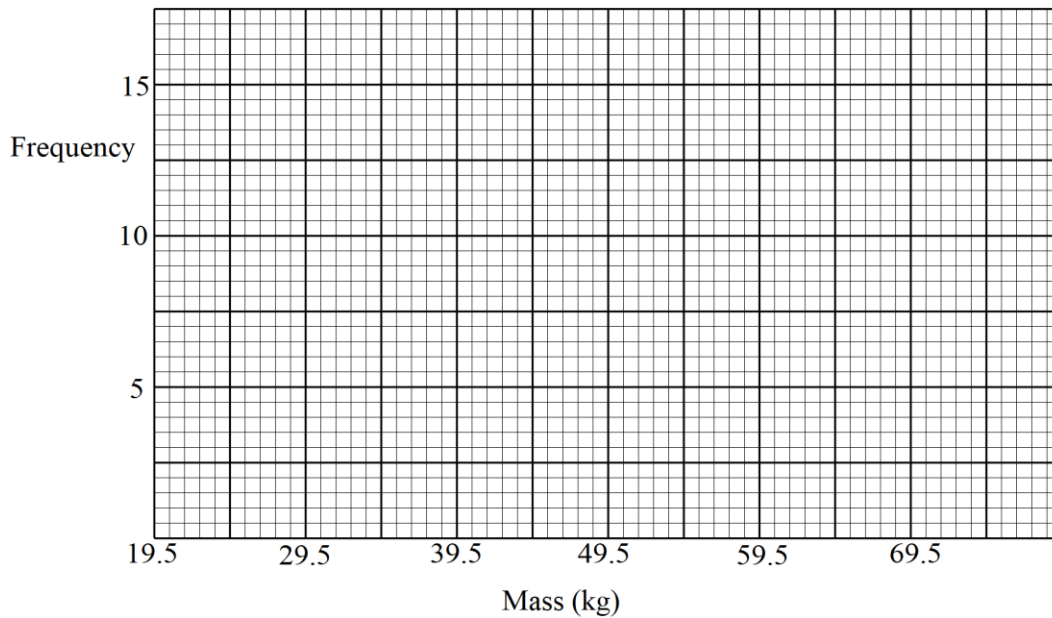
(ii) On the histogram, draw a line to estimate where the median mass lies.   (2 marks)

21. (a) Calculate the time in seconds it takes a bus 5 m long and moving with a speed of 60 km/h to go past a truck 15 m long and heading in the opposite direction with a speed of 50 km/h if the distance between the bus and the truck is 200 m   (3 marks)

(b) A bus left Eldoret at 7.12 a.m. towards Nairobi at an average speed of 72 km/h. At 8.22 a.m., a car left Eldoret   for Nairobi at an average speed of 100 km/h. The distance between Nairobi and Eldoret is 348 km.

Calculate:

(i) The time of the day when the car caught up with the bus.   (4 marks)

(ii) The distance from Nairobi where the car caught up with the bus.   (3 marks)

22. A youth group plans to buy a branding machine at a cost of Kshs. 72,000 by contributing equal amount of money. Before they contribute, 3 new members join the group, and as such each of the members has to contribute Kshs. 1,200 less.

(a) By taking x as the original number of members of the group, write an expression for:

    (i) The original amount to be contributed by each member   (1 mark)

    (ii) The amount contributed by each member after the new members joined   (1 mark)

(b) Find the total members who contributed.   (6 marks)

(c) At the end of the year, the machine realized a profit Kshs. 337,500. The profit was shared equally among the members. Calculate the amount of money received by each member of the group. (2 marks)

23. Triangle **T** has coordinates A$(-2, -2)$, B$(-5, -5)$ and C$(0, -4)$. **T^1** is the image of **T** after a transformation **M** such that A$'(2, 2)$, B$'(5, 5)$ and C$'(4, 0)$

(a) (i) On the same pair of axes, draw triangles **T** and **T^1** (2 marks)
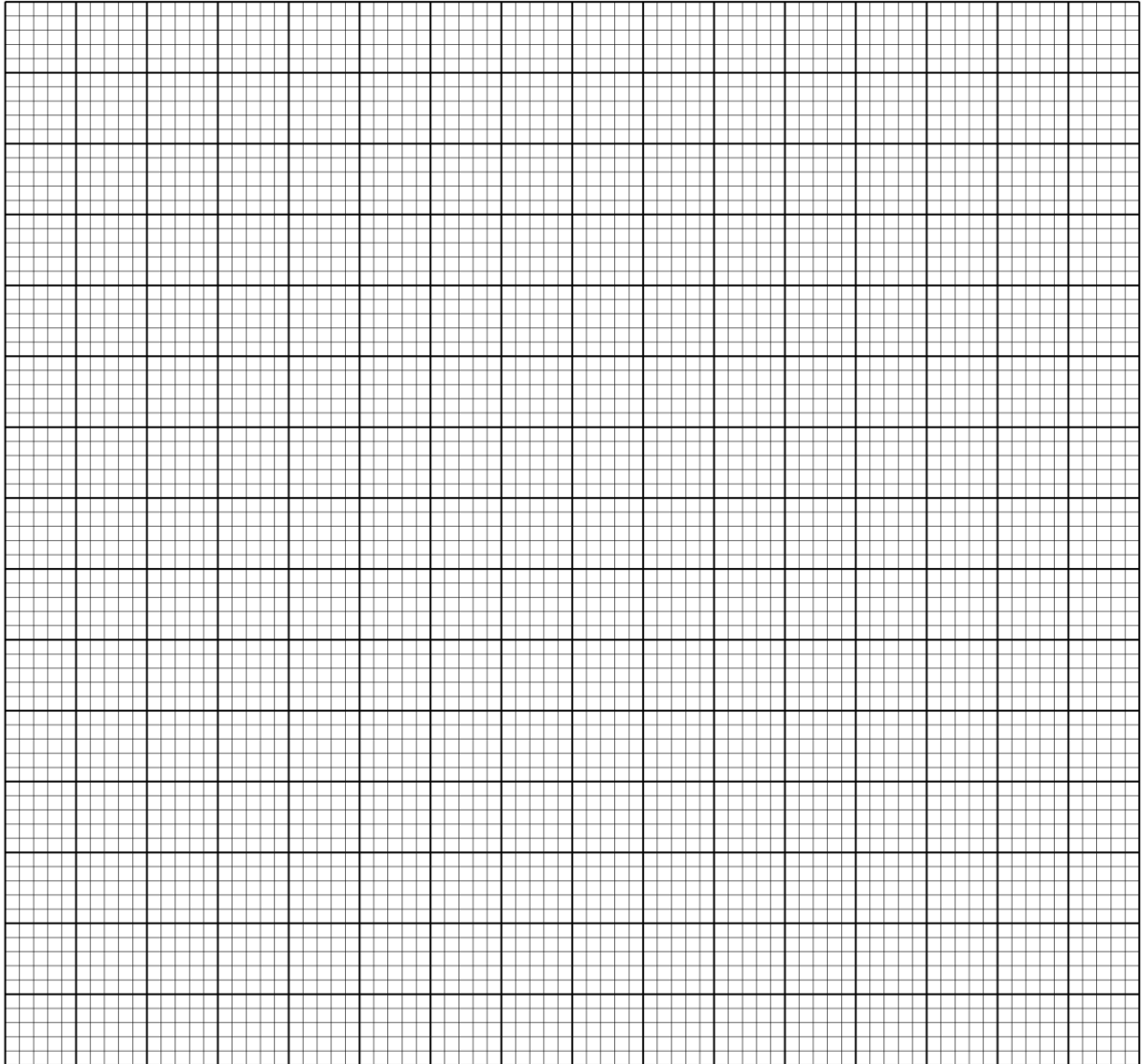
(ii) Describe the transformation **M** fully (2 marks)

(b) **T^2** is the image of **T^1** after a rotation of $+90^0$ about $(1, 1)$. Draw **T^2** on the same axes and state its coordinates (3 marks)

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(c) T^3 is the image of T^2 under a translation described by vector $\begin{pmatrix} 5 \\ -7 \end{pmatrix}$.

   (i) Draw T^3 (2 marks)

   (ii) Which pair of the triangles exhibit opposite congruency?   (1 mark)

24. A straight line L_1 passes through the points $(-2, 8)$ and $(4, -4)$

   (a) (i)   Find the equation L_1 in the form $ax + by = c$, where a, b and c are integral values. (3 marks)

      (ii) L_1 crosses the x-axis at point P, determine the coordinates of P.   (2 marks)

   (b) (i)   Another line L_2 is perpendicular to L_1 through point P. Determine the y-intercept of L_2.(3 marks)

      (ii)   Determine the angle L_2 makes with the x-axis correct to 2 decimal places.   (2 marks)

Term 3
PHYSICS (QUESTION PAPER)
FORM TWO (2)
Time: 2 Hours

AMOBI GROUP OF EXAMINERS

FORM 2 END TERM 3 SERIES 1 EXAMS

Name: ……………………………………………………………………………………………

School: …………………………………………………………………………………………

Adm No: ……………… **Date**: ………………… **Signature**: ……………………………………………

Instruction to candidates

- This paper consists of two sections **A** and **B**
- Answer all questions in section **A** and **B** in the spaces provided
- All workings **must** be clearly shown, and Use the **CONSTANTS** given.
  - ✓ Gravitational acceleration, 'g' = 10m/s^2

FOR OFFICIAL USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATES' SCORE
1-11	25	
12	11	
13	11	
14	13	
15	12	
16	8	
TOTAL	**80**	

SECTION A (25 marks)

1. Define the term 'accuracy 'and state the accuracy of a metre-rule (2 marks)

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2. A form one student was attempting an experiment when he got electrocuted. State the first aid measure that should be carried out to help him. (1 mark)

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3. Convert $4.304 g/cm^3$ to kg/m^3. (2marks)

4. Figure 1, shows a book being pulled along the surface of a table.
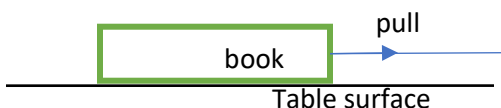
Figure 1

Besides the tension force, label all the other forces acting on the book. (3 marks)

5. Why are gases easily compressible while liquids and solids are almost incompressible?(1 mark)

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6. Water flows steadily along a horizontal pipe at a volume rate of $8.0 \times 10^{-3} m^3/s$. If the cross-section area of the pipe is $20cm^2$. Calculate the velocity of the fluid. (3 marks)

7. Convex mirrors are preferred to plane mirrors as vehicle side mirrors. Explain (1 mark)

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8. The diagram below (figure 2) shows a wave representing a water ripple (not drawn to scale)
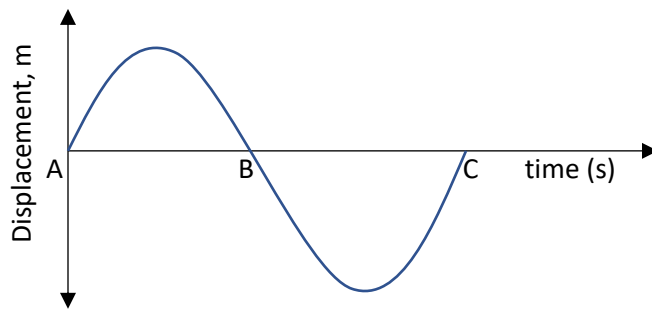
Figure 2

If the speed of the ripple is 30cm/s and the distance AB = 6cm, determine
a) The frequency of the wave (2marks)

b) The periodic time of the wave (2 marks)

9. The figure below (figure 3) shows a conductor carrying current placed in the magnetic field of two magnets. Complete the diagram by showing the field pattern and the direction of force F that acts on the conductor. (2marks)

Figure 3

10. A boy standing Infront of a cliff blows whistle and hears the echo after 0.5s. He then moves 17 metres away from the cliff and blows the whistle again. He now hears the echo after 0.6s. Determine the speed of the sound. (3marks)

11. A student observed some pollen grains on the surface of water in a beaker with the help of hand lens as shown figure 4, below.
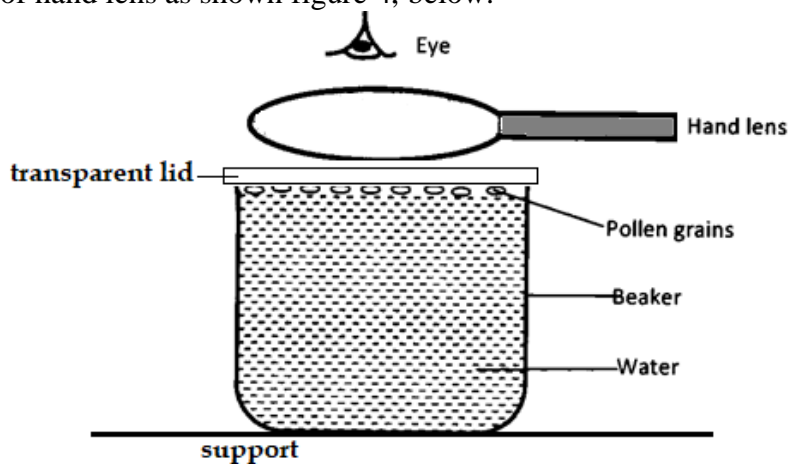
Figure 4

a) State the observation made. (1mark)

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b) Explain the observation in (a) above. (1mark)

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c) What conclusion can be drawn from the above experiment? (1mark)

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SECTION B (55 MARKS)

12. The figure 5 below shows two containers filled with two different liquids to the same height.

A   table   B
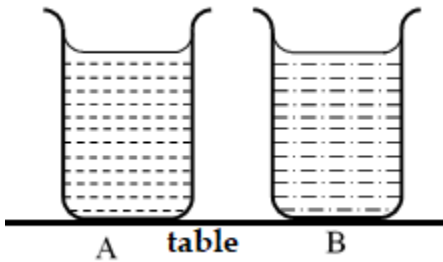
Figure 5

a) It was found that the pressure at the bottom of A is greater than that at B. Explain (1 mark)

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b) The figure below (figure 6) shows a car braking system. The brake fluid is an oily liquid.
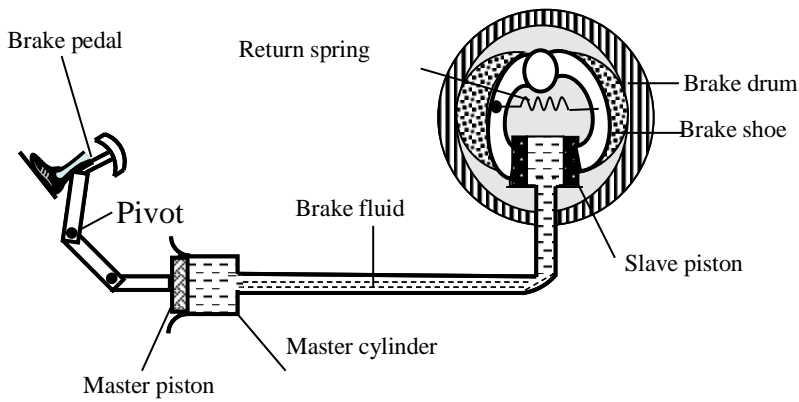
Figure 6

The brake drum rotates with the wheel of the car.

    i.   Explain how pushing the brake pedal makes the brake rub against the drum. (4 marks)

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    ii.   The cross-sectional area of the master piston is 2.0cm^2. A force of 140N is applied to the master piston. Calculate the pressure created in the brake fluid by the master piston.   (2 marks)

    c)   The cross-sectional area of each slave piston is 2.8cm^2. Calculate the force exerted on each slave piston by the brake fluid.   (2 marks)

d) The force exerted on the master piston is greater than the force applied by the foot on the brake pedal. Using the principle of moments, explain this. (2 marks)

13.
   a) State 'Hooke's law' (1 mark)

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   b) It is easier to bend an iron rod than a glass rod of the same dimensions at the same temperature. Explain this. (1 mark)

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   c) State two factors that govern the strengths of a spring of a given material. (2 marks)

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   d) Two identical springs of spring constant 5.O N/cm are used to support 60N as shown in figure 7, below.
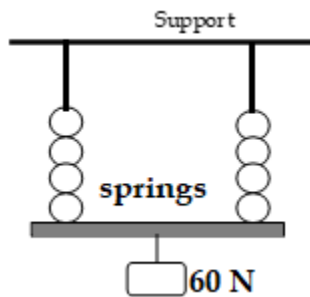
Figure 7

Determine the extension of each spring. (3 marks)

e) A student wants to find the mass of a Bunsen burner but has not got a balance. He has a steel spring, a pan, a lamp-stand, a ruler and a 100g mass. He arranges them as shown in the diagram (figure 8) below and uses them to obtain the result shown in the table alongside.
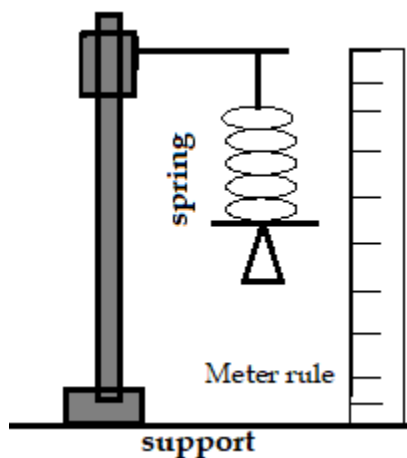
Load in pan	Length of spring (mm)
None	50
100 g	150
Bunsen burner	200

Figure 8

i. Suggest the relationship between the load and extension for any steel spring? (1 mark)

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ii. Use the information in the table to find the mass of a Bunsen burner.   (3 marks)

14. The diagram below (figure 9) shows a series circuit.
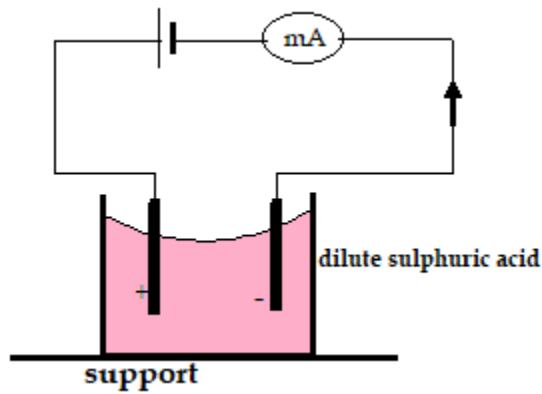
Figure 9

a) A current of 2mA flows around the circuit.

   i.   State the sub-atomic particle responsible for the flow of current   (1mark)

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   ii.   How much charge passes through the liquid in 3 minutes?   (2marks)

b) The capacity of an accumulator 120 Ah. What does this mean?   (1 mark)

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c) Polarization is a defect in a simple cell. Explain the meaning of polarization and suggest how you would minimize its effect in the cell.   (2 marks)

d) The circuit below (figure, 10) shows lamps in parallel.
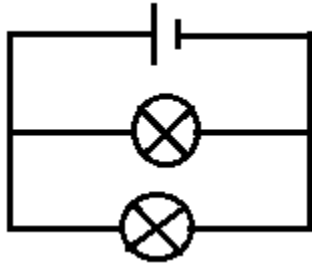
Figure 10

Indicate on the diagram with an S where you would put a switch to control both lamps together.   (1 mark)

e) Polythene rod is rubbed with a cloth and held near to the cap of a metal leaf electroscope. The metal leaves move apart as shown in diagram below:
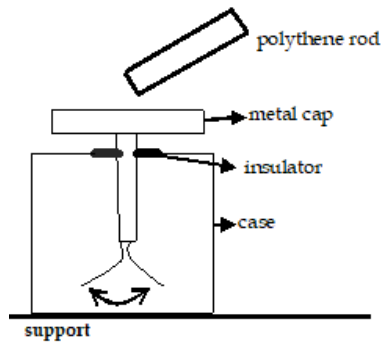
Figure 11

    i.   Explain what happens to the polythene rod when it is rubbed with the cloth (2 marks)

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    ii.   The metal leaves move apart when the polythene rod is brought near to but not touching the metal cap. Explain.   (2 marks)

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f)   Give two factors that affect the amount of charge on the leaves.   (2 marks)

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15. The figure 12, represents a tube through which liquid is flowing in the direction shown by the arrow. The vertical tubes have equal cross-sectional area.
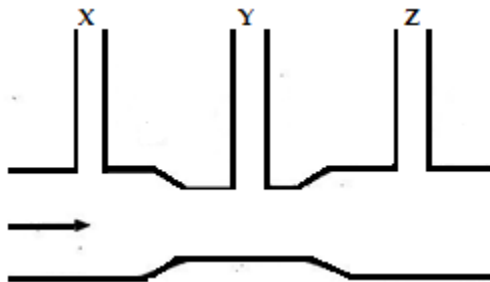
Figure 12

a)   Show on the figure12, above, the relative positions of the level of the liquid in sections marked, X, Y and Z.   (1 mark)

b)   Explain the meaning of:
    i.   Streamline flow   (1 mark)

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    ii.   Turbulent flow   (1 mark)

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c)   State Bernoulli's principle.   (1 mark)

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d)   Water flows in a horizontal smooth pipe. State the changes that would be observed in the nature of the flow if the speed of the water is steadily increased from low to high value?   (1 mark)

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e) Two table Tennis balls are in the same level while suspended from threads a short distance apart. A stream of air is blown between the balls in a horizontal direction. Explain what happens to the balls. (2 marks)

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f) Water flows along a horizontal pipe of cross sectional area 30cm^2. The speed of the water is 4m/s but it reaches 7.5m/s in a constriction in the pipe. Calculate the area of the constriction. (3 marks)

g) It is dangerous to stand too close to a railway-line on which a fast moving train is passing. Explain. (2 marks)

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16. The figure 13, below shows a point object O placed in front of a plane mirror
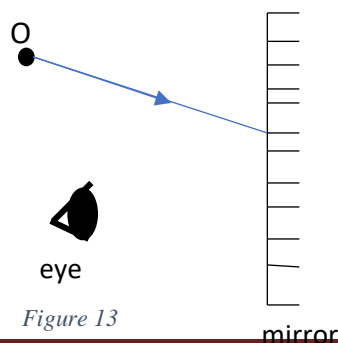
Figure 13

mirror

a. On the same diagram, draw a ray to locate the position of the image, I, as seen from the eye E. (2 marks)

b. Explain what is meant by a virtual image? (1 mark)

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c. State one disadvantage of a convex mirror as a driving mirror (1 mark)

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d. The diagram shows a ray of light incident on a plane mirror at point O.
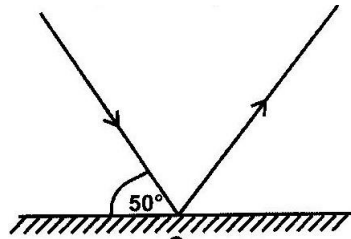
Figure 14

The mirror is rotated clockwise through an angle of 30^0 about an axis perpendicular to the paper. Determine the angle through which the reflected ray rotated. (2 marks)

e. Give two main reasons why concave mirrors are unsuitable as driving mirrors (2 marks)

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