FORM 2 END OF TERM II

HOLIDAY HOMEWORK

KENYA EDUCATORS CONSULTANCY ASSESMENTS

A Compilation of Assessment & Revision Questions Covering the syllabus upto the End of term 2 as per the curriculum design

ALL SUBJECTS TESTED

All the learners should attempt the questions at the back of their exercise books and revise the questions by the use of the marking schemes provided during the August 2023 Holidays!

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AGRICULTURE FORM 1 HOLIDAY ASSIGNMENT BOOKLET (Volume 1) (74 Questions)

1. Give two reasons why farmers are engaged to practice organic farming. 2mks

2. Give two advantages of intensive system of farming. 2mks

3. Name three forms of horticulture practiced in Kenya. 3mks

4. List three physical weathering agents in the soil formation process. 3mks

5. State two mechanical methods of separating soil particles. 2mks

6. Give two roles of soil micro-organisms that are beneficial to crops. 2mks

7. Explain three factors that influence the type of irrigation to be used in a farm. 3mks

8. Give four reasons for treating water for use in the farm. 2mks

9. State three disadvantages of using plastic pipes to convey water. 3mks

10. State four factors that affect the quality of farmyard manure. 4mks

11. State any four characteristics of a fertile soil. 4mks

12. Give tow reasons for carrying out the following operations in the land preparation.

    a) Rolling 2mks

    b) Lavelling 2mks

13. State four factors that influence the number of secondary cultivations in seedbed preparations. 2mks

14. Give four reasons for keeping livestock health record in the farm. 4mks

15. What is meant by preference and choice as used in agriculture. 1mk

16. State two ways by which soil PH may affect crop production. 2mks

17. Give the meaning of the following terms;-
    a) Nitrogen fixation into the soil 1mk
    b) Phosphorous fixation in the loss of soil fertility. 1mk

18. Give three reasons for planting crops at the correct spacing . 3mks

19. Name the plant part used for vegetative propagation of each of the following plants.
    a) Cassava ½ mk
    b) Sisal ½ mk
    c) Pyrethrum ½ mks
    d) Sweet potatoes ½ mks

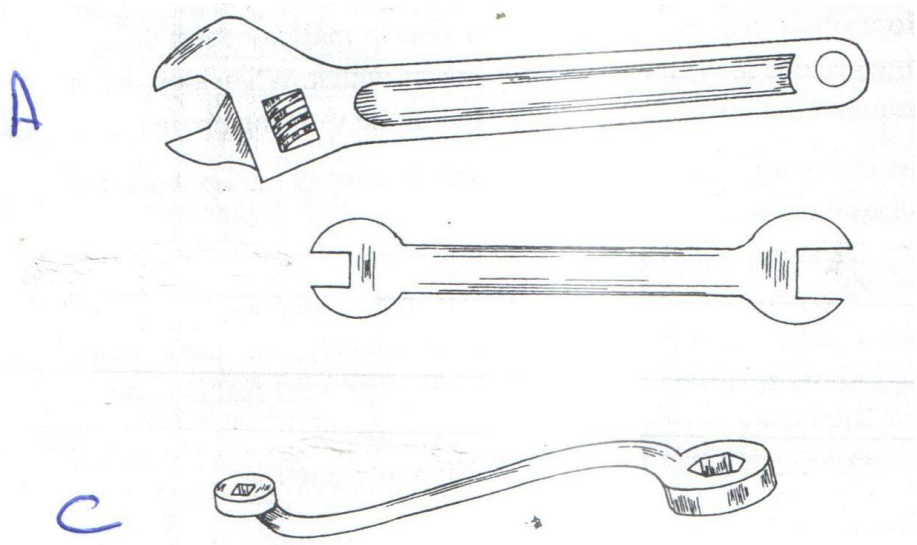
20. Study the diagram below and answer the questions that follow.

a) Identify the method of frame formation in production shown above. 1mk

b) Apart the above method, give two other methods of frame formation in tea production. 2mks

c) Give two disadvantages of multiple stem pruning system in coffee. 2mks

20. The following are metal work tools and equipments. Study them and answer the questions that follow.



a) Identify the above tools.

Tool A _____ 1mk

Tool B _____ 1mk

Tool C _____ 1mk

b) State the functional advantage of tool C compared to tool B. ½ mk

c) State the advantage of tool A compared to tool C and B. ½ mk

21. A Form two class visited a farm and found the following record. Study the record and answer the questions that follow.

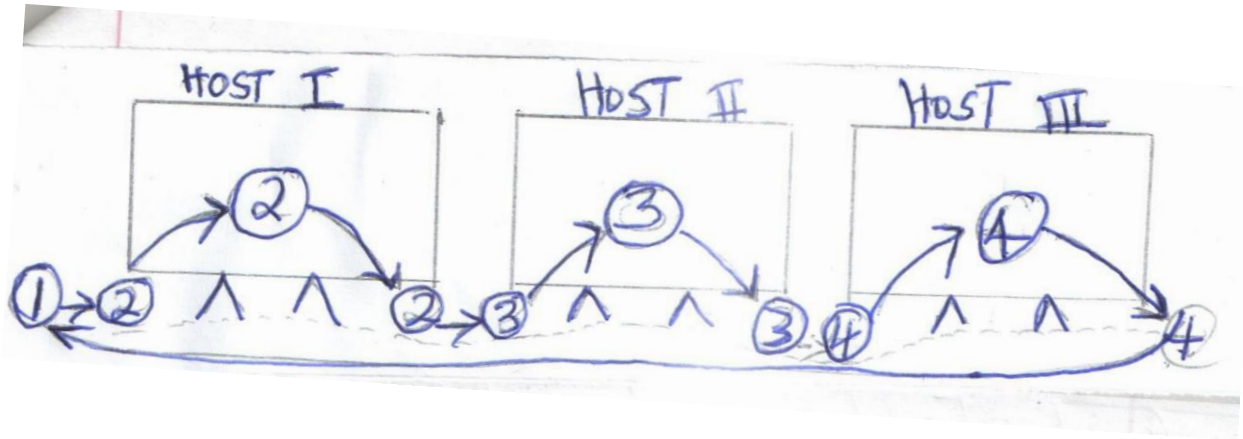
Month of... September ..... 20 .....

Name/No of cow	DAYS IN THE MONTH Milk yield/day.								CONTINUE TO END OF MONTH	TOTALS
	1		2		3		4			
	AM	PM	AM	PM	AM	PM	AM	PM		
Nairobi										
Kidogo										
Nyati										
TOTALS										

a) What type of a record is shown above. 1mk

b) State two types of information that a farmer can get from the above record. 2mks

22. The following is a life cycle of ticks



i) Identify the type of the life cycle. 1mk

ii) Name the tides labeled 1 to 4.

1 _____ 1mk

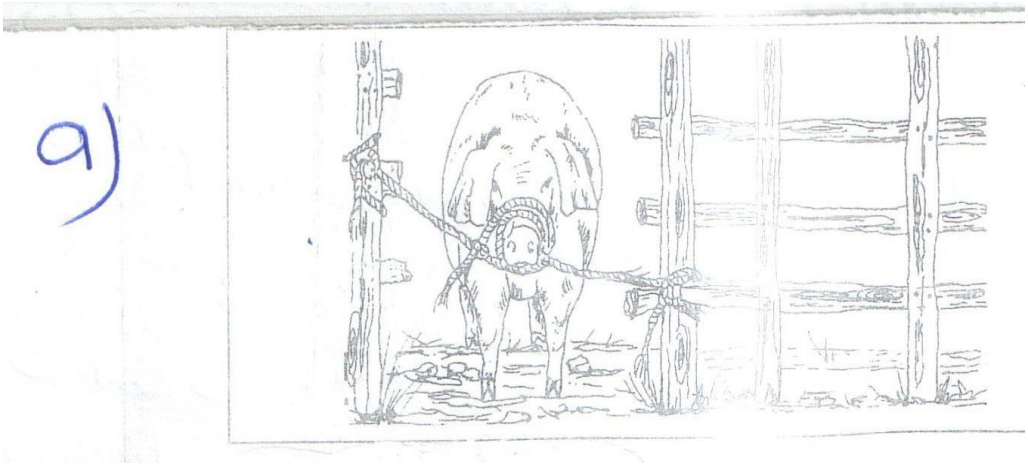
2 _____ 1mk

3 _____ 1mk

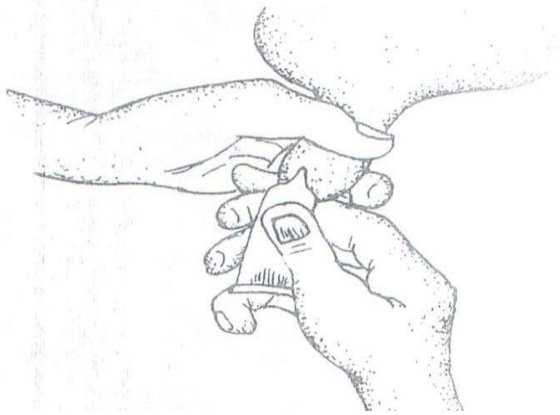
4 _____ 1mk

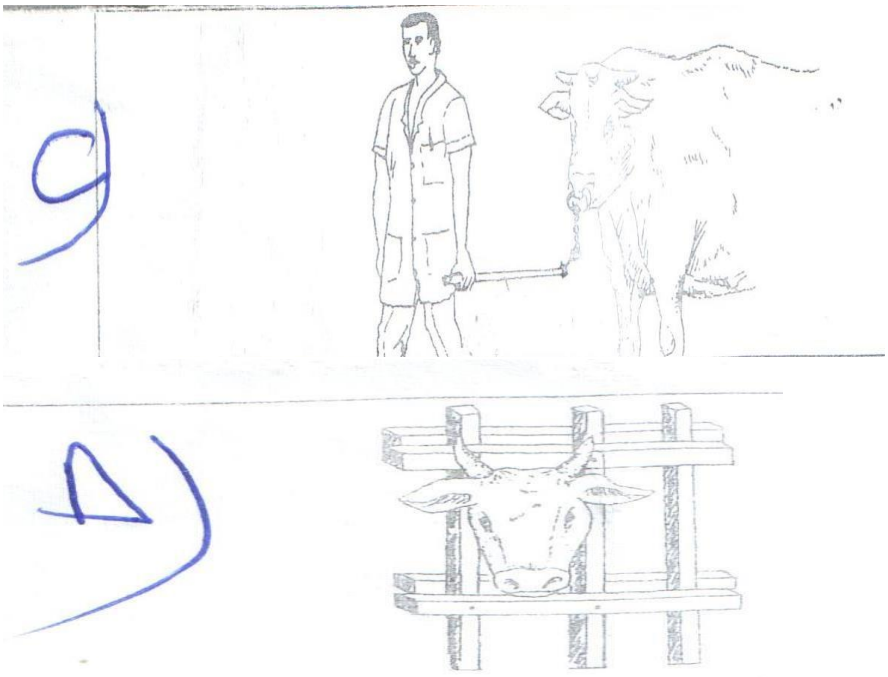
23. The following are appropriate methods of handling livestock animals. Study them and answer the questions that follow.

a)



b)





i) What is being illustrated by figure (a) above. 1mk

ii) State the equipment being used in figure C above. 1mk

iii) What farm operation would make it necessary for a farmers use the structure D above. 1mk

24. a) State and explain all the practices carried out in a nursery while the seedlings are growing. 7mks

b) State and explain four factors that influence a crop rotation programme. 8mks

25. a) State and explain the field management practices of tomatoes after transplanting. 8 mks

b) Explain four factors affecting maintenance requirement of livestock in a farm. 4mks

c) State three characteristics of succulent roughages that are given to the animals. 3mks

26. Differentiate between olericulture and pomoculture as used in crop production.(2mks)

27. List four methods of farming.(4mks)

28. State four advantages of organic farming. (4mks)

29. Give four advantages of intensive farming.(4mks)

30. List three physical weathering agents in the soil formation process.(3mks)

31. State two mechanical methods of separating soil particle according to size during soil analysis.(2mks)

32. State two effects of HIV/AIDS on agricultural production.(2mks)

33. Distinguish between soil structure and soil texture.(2mks)

34. Give three reasons for growing crops under optimum temperature conditions (3mks)

35. Give two roles of soil microorganisms that are beneficial to crops. (2mks)

36. State four biotic factors that influence crop production.(4mks)

37. Explain how the properties of rainfall influence crop production.(4mks)

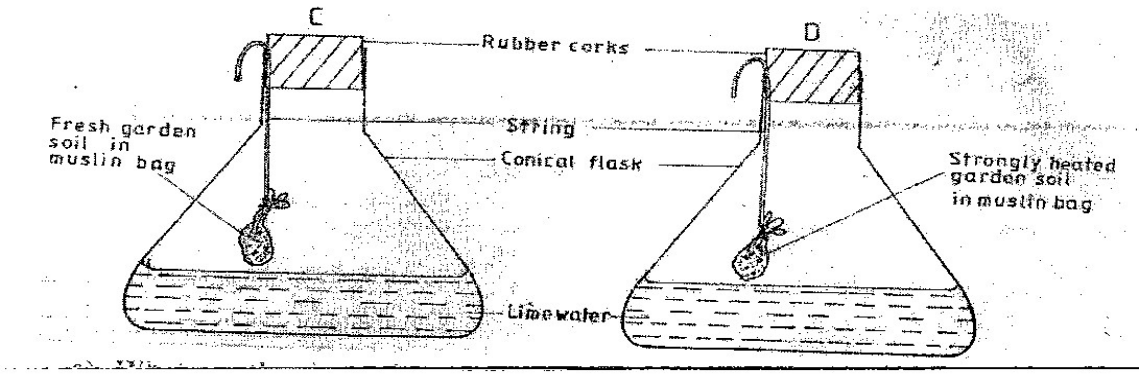
38. Explain four ways in which the government policy improves agricultural production.(4mks)

39. Give four conditions of the land which may make it necessary to carry out reclamation practices.(4mks)

40. List three methods of treating water for use in the farm.(3mks)

41. State three aspects of light that affect agriculture.(3mks)

42. The diagram below shows a set-up of an experiment to study an aspect of soil. The setup was left undisturbed for five hours. Study it and answer the questions that follow.

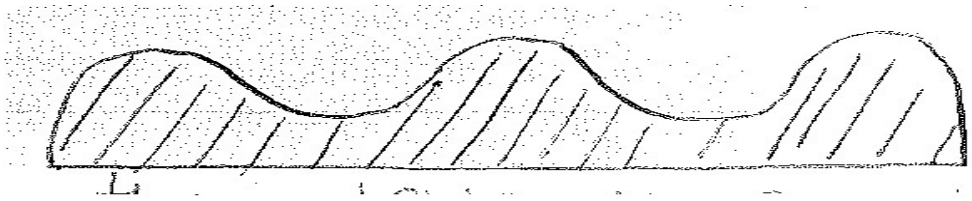


b) What was the aim of the experiment.(1mk)

c) State one observation that was made in each of the flask labeled C and D.(2mks)

d) Give a reason for each of your answer in (b) above. (2mks)

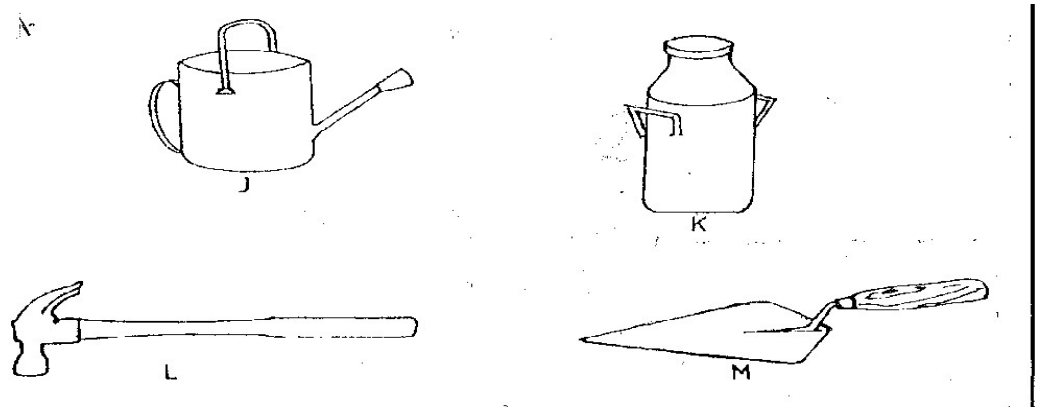
43. Study the diagram below and answer question that follow.



b) Identify the tertiary operation above.(1mk)

c) Give two importance of practicing the above tertiary operation.(2mks)

44. The diagram below represents farm tools and equipments. Study them and answer the questions that follow.



b) Identify the tool / equipment labeled J,K and M.

J _____ (1mk)

K _____ (1mk)

M _____ (1mk)

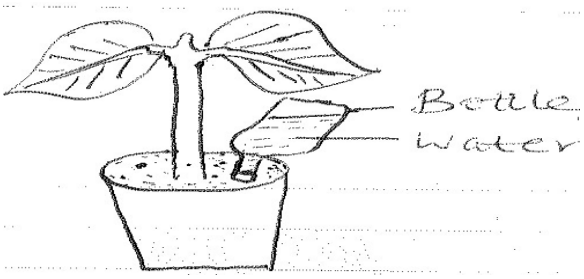
b) State one use of each of the tool equipment labeled K and L.

K (1mk)

L (1mk)

c) Give two maintenance practices for the equipment labeled K above.(2mks)

45. The diagram below represents an irrigation system. Use it to answer the questions that follow.



a) Identify the irrigation system show.(1mk)

b) Give four advantages of the system named in (a) above (4mks)

46. a) Give five main reasons why farmers prepare a seedbed before planting. (5mks)

b) Name three ways of achieving primary cultivation. (3mks)

c) State and explain three tertiary operations carried out in the farm to suit production of certain crops. (6mks)

d) Define the term subsoiling as used in land preparation. (1mk)

b) State and explain five reasons for maintaining farm tools and equipment. (10mks)

47. What are essential nutrients ? **(1 mark)**

48. Name **two** examples of liming elements **(1mark)**

49.State **three** roles of Nitrogen in vegetable production **(3 marks)**

50. A farmer was advised to apply 40kg of P205 per hectare of maize at planting time. The phosphatic fertilizer available was single superphosphate containing 20 % P2O5.

i) Calculate the amount of Single superphosphate fertilizer the farmer would apply in two hactares **(2 marks)**

51. State **two** ways in which a farmer can raise the PH of the soil. **(2 marks)**

52. State **two** things that would happen to the element nitrogen when ammonium sulphate fertilizer is applied to the field of maize. **(2 marks)**

53. **a)** Give **three** benefits of vegetative propagation in oranges **(3 marks)**

b) Differentiate the terms bulb and bulbils **(2 marks)**

c) State **one** environmental condition necessary for the successful chitting in Irish potatoes **(1 mark)**

54. Give **four** factors that determine the depth of planting in crops **(2marks)**

55. Give **three** benefits of crop rotation **(4 marks)**

56. State **two** disadvantages of Monocropping **(2 marks)**

57. Give **four** benefits of using organic mulch for mulching **(2 marks)**

58. State **four** reasons for pruning fruit coffee **(4 marks)**

59. State **two** practices which help to achieve optimum plant population **(2 marks)**

60. **a)** What is earthing up in crop production**?** **(1 mark)**

b) Give a reason for earthing up in each of the following crops **(4 marks)**

i) Irish potatoes……

ii) Groundnuts……

iii) Tobacco……

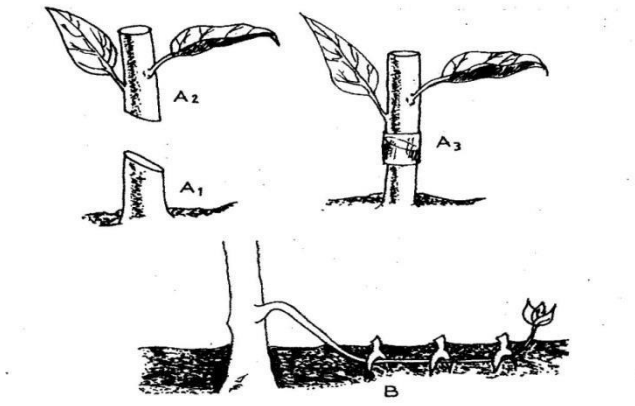
iv) Maize…….

61. **a)** State **two** factors that determine the method of harvesting to be used by a farmer **(1 mark)**

b) The stem cuttings should be obtained from the middle part of the shoot. Give a reason why the top and bottom parts are not suitable for stem cutting. **(2 marks)**

62. The diagrams labeled 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 labeled A_1, and A_2 **(1 mark)**

A_1.....

A_2.....

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

A_3.....

B……

63. **a)** Name **two** notifiable diseases in cattle. **(1 mark)**

b) Name **two** vector borne diseases in livestock **(1 mark).**

64. Name **one** intermediate host for each of the following livestock parasites **(1 mark)**

a. Liver fluke (Fasciola spp)

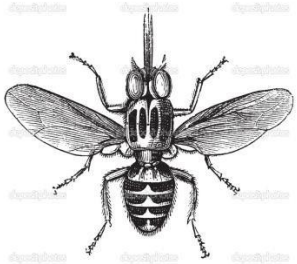
b. Taenia solium

65. State **two** ways by which proper feeding contribute to disease control in livestock. **(2 marks)**

66. Give **FOUR** causes of blossom end rot in tomatoes **(4 marks)**

67. The diagrams are illustrations of a livestock parasite. Study and answer the question that follow.

M N



a) Identify the parasites labeled as M and N above. **(1 mark)**

b) State **two** harmful effects of M parasite **(2 marks)**

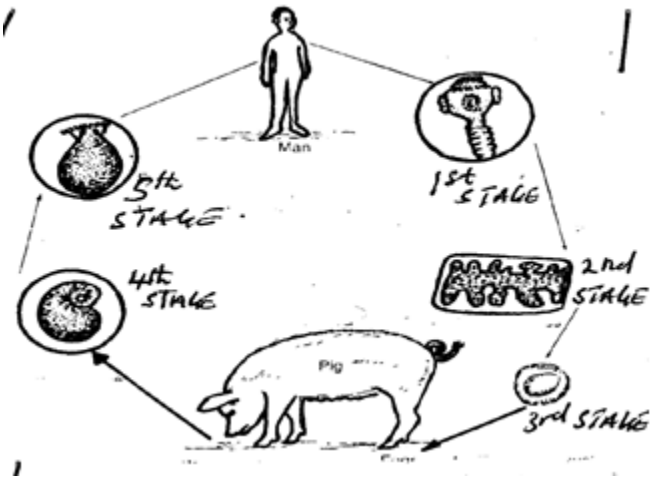
c) Name a class chemical used to control the parasite M **(1 mark)**

d) Name a disease transmitted by the parasite N; **(1 mark)**

To Man……..

To Livestock……..

68. The illustration below shows a life cycle of an internal parasite. Study it anser the questions that follow.



a. **i)** Identify the parasite above. 1 mark

ii) How is the parasite passed from livestock to man. **(1 mark)**

b. Give **two** forms in which the parasite is found in livestock. **(1 mark)**

69. Give **four** reasons why water is important to animals **(4 marks)**

70. State **four** sources of carbohydrates for livestock **(4 marks)**

71. **a)** Name the following Nutrients **;** **(2 marks)**

i) A vitamin whose deficiency leads to redarded growth ,poor eye sight, and reduced resistance to

diseases…….

ii) A vitamin which is found in whole grains and can be synthesized by micro-organisms in the

rumen…….

iii) Mineral which is required for reproduction in livestock……..

iv) A mineral required by piglet immediately after birth to control piglet anaemia……

72. State **four** factors affecting digestibility **(4 marks)**

73. A farmer is required to prepare 100 kg of ration of 30% digestible crude protein (DCP) from simsim seed cake containing 50% DCP and maize meal 10% DCP. Using Pearson's square method calculate the amount of simsimand maize the farmer requires.(4marks)

74. The photographs below illustrate the parts of a ruminant stomach. Study them and answer the questions that follow.

A

C

i. Identify parts A and C **(1 mark)**

A C

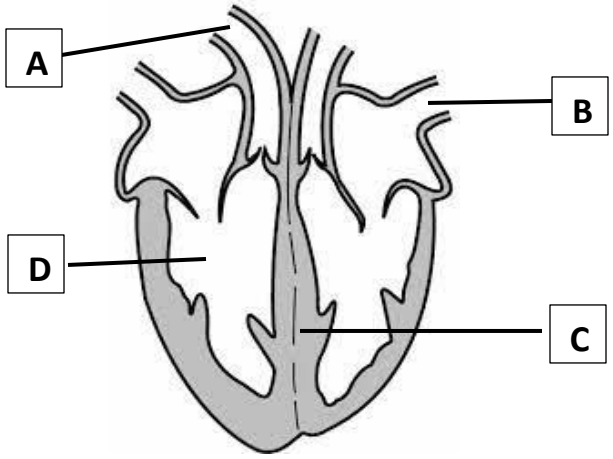
ii. Give the functions of the part labeled as B and D **(2 marks)**

a) Explain **three** field practices in carrot production. **(6 marks)**

b) Describe harvesting in onions. **(4 marks)**

BIOLOGY FORM 1 HOLIDAY ASSIGNMENT BOOKLET (Volume 1) (48 Questions)

1. The diagram shown below represents a mammalian heart. Use it to answer the questions that follow



a) State the differences between vessel **A** and **B** in terms of the following:(2mks)

Vessel	Diameter of Lumen	Concentration of Oxygen in the blood
A		
B		

b) i) Name the part labelled **C** (1mk

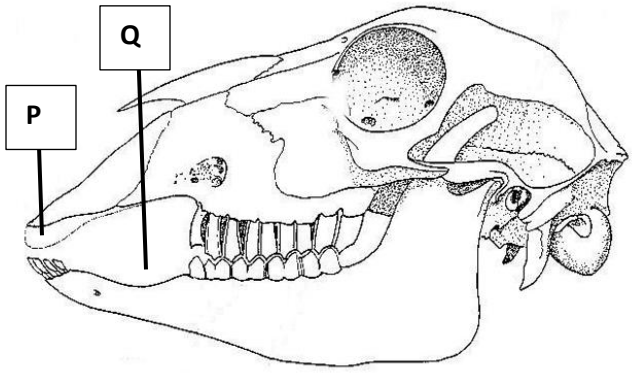
ii) How is part **C** important in the functioning of the heart? (1mk

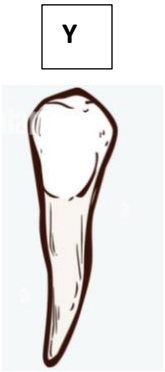
c) i) Which chamber of the heart is represented by letter **D** (1mk

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

d) Explain why animals with the heart shown above are more active than the rest(2mks

2. The diagrams shown below were used to study nutrition in a particular animal





a) i) Name the mode of nutrition of the animal whose skull is shown above (1mk

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

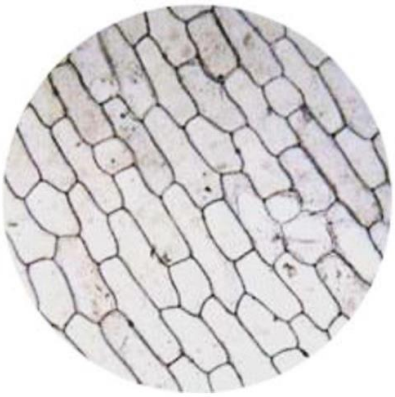
iii) Why do animals with the skull shown above have a longer alimentary canal(2mks

b) State the significance of parts **P** and **Q** to the nutrition of the animal whose skull is represented above (2mks

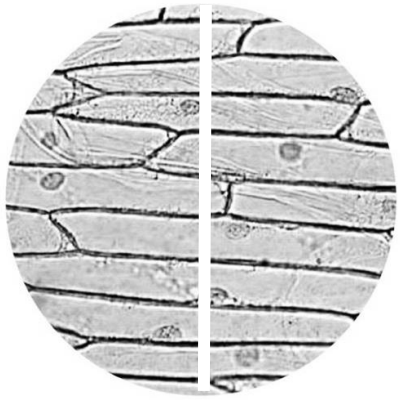
c) i) Identify the tooth represented by **X** (1mk

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

3. The diagram shown below the same cells in the same field of view of light microscope under different microscopy conditions



Before



After

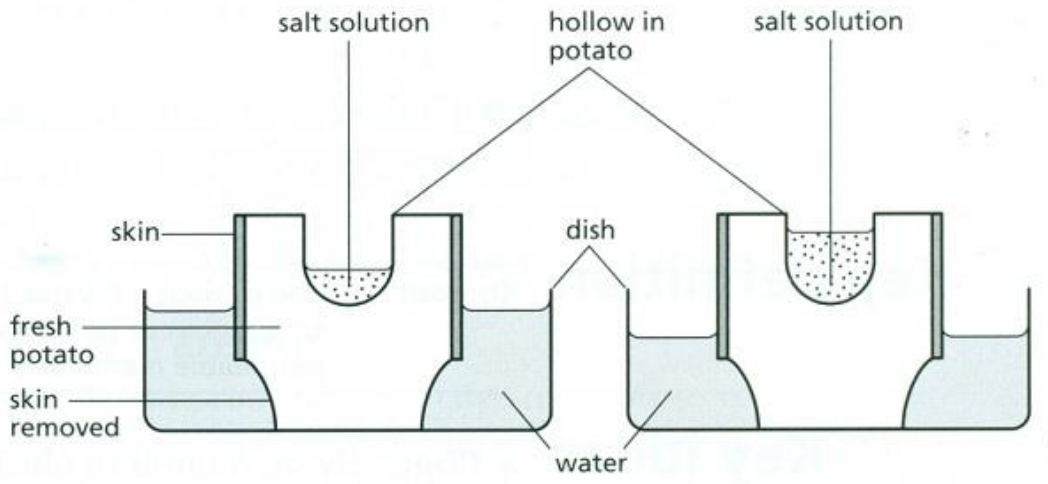
a) From the changes observed in the cells after adjustment of the microscope conditions, give **TWO** advantages of using a microscope over using a hand lens (2mks

b) i) Determine the number of cells along the diameter of the field of view represented by the white line in the second diagram (1mk

ii) If the diameter of field of view is 5mm, determine the diameter of one cell in micrometers (3mks

c) If the actual diameter of a single cell is 0.55micrometers, determine the total magnification used to observe the cells in the second diagram (2mks

4. The diagram shown below was used by Form One students to investigate a physiological process and observations made 30 minutes later.



Before **After**

a) Which physiological process was being investigated? (1mk)

b) Give **TWO** ways the physiological process mentioned in a) above is beneficial to animals (2mk

c) Account for the changes observed after the experiment (3mks

d) Explain the observation made if boiled potato was used in the experiment (2mks

5. The table below shows changes in the heart beat, concentration of oxygen and lactic acid in the blood during different levels of physical activity of a healthy athlete.

Level of Physical activity	Heartbeat (Beats per minute)	Oxygen Concentration(%)	Lactic acid concentration(mol)
Resting	60	100	0
Easy	80	95	0.5
Moderate	100	90	2
Difficult	120	85	4
Very Difficult	140	80	10

a) Account for the change observed in the concentration of lactic acid (3mks

b) Give **TWO** reasons why the increase in heart beat with increase in physical activity is important to the body. (2mks

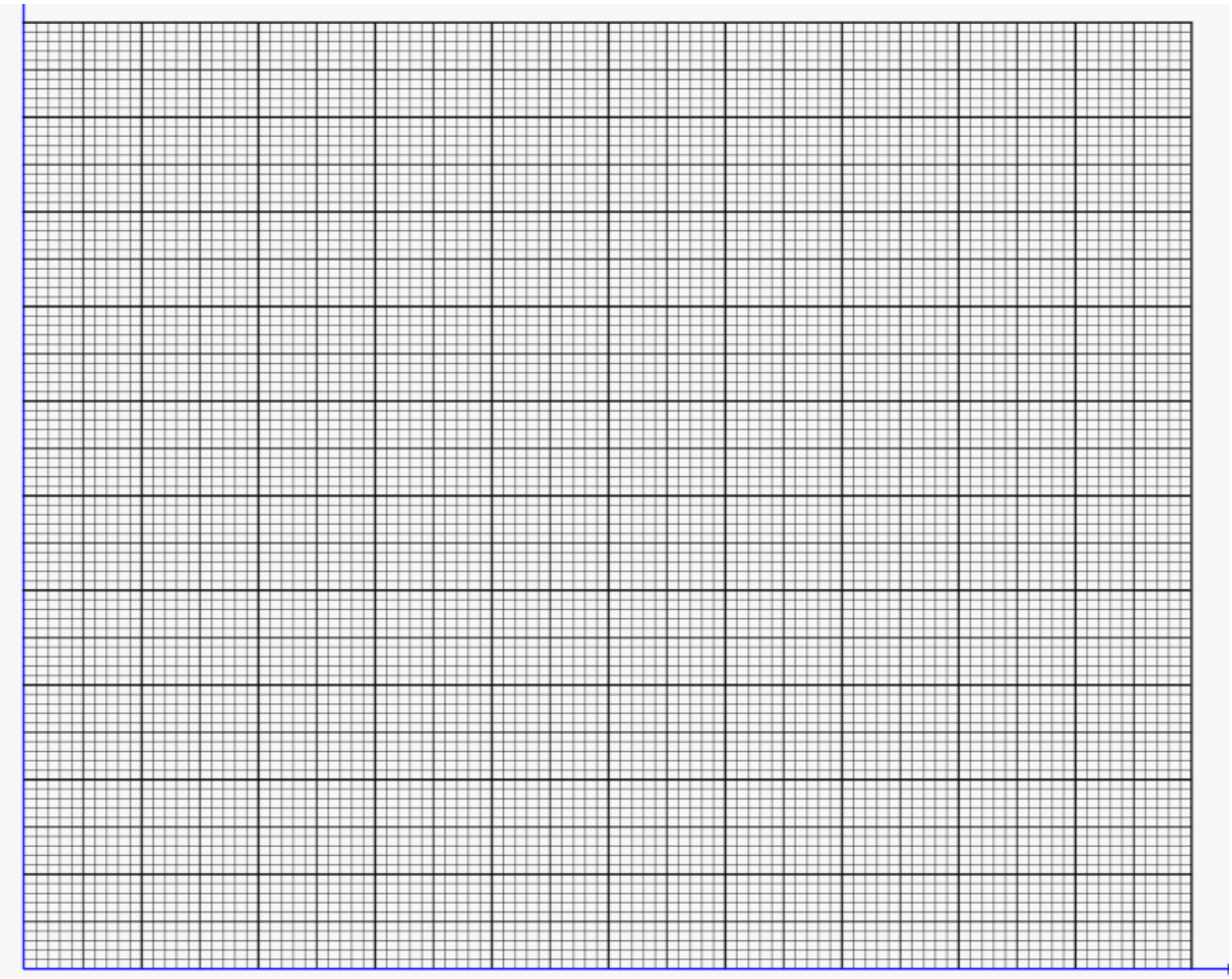
c) State **TWO** ways the body deals with excess lactic acid accumulated during physical body exercise (2mks

d) Explain why during intense exercise the athlete will breathe faster (1mk

6. The table below shows the rate of product formation for an enzyme over a range of pH values.

pH	**1.0**	**2.0**	**3.0**	**4.0**	**5.0**	**6.0**	**7.0**	**8.0**
Rate of product formation for enzyme (mg/hr)	34.5	40.5	33.5	15.0	2.50	0.0	0.0	0.0

a) Plot a graph of rate of product formation against pH for the enzyme (6mks



b) Account for the changes in the rate of product formation at

i) pH of **1.0** to **2.0** (2mks

ii) pH of **3.0** to **5.0** (2mks

c) From the graph, determine the following:

i) Optimum pH for the enzyme (1mk

ii) The rate of product formation at pH of **3.5** (1mk

d) With a reason, name the part of the alimentary canal where the enzyme above is found (2mks

e) Give **THREE** variables that may increase the maximum rate of product formation of the enzyme above (3mks

f) i) State **TWO** factors that may cause irreversible change in structure of enzymes(2mks

ii) State one way of reversing competitive enzyme inhibition (1mk

7. a) Describe how red blood cells are adapted to their functions (8mks

b) Describe how the various environmental factors increase the rate of transpiration in plants (12mks

8. a) Explain how various physiological mechanisms work to raise temperature back to normal in mammals on a cold day (10mks

b) Describe how various factors influence energy requirements in human beings. (10mks

9. The table below shows **three** enzymes **A, B** and **C** and their respective optimum pH.

Enzyme	**Optimum pH**
A	6.8
B	2.0
C	8.0

a. (i) Name the most likely region of the alimentary canal of a mammal where enzyme **B** would be found. (1mk)

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

10. Explain how the following adaptation reduce transpiration in xerophytes

    a. Sunken stomata (2mks)
    b. Thick waxy cuticle (2mks)

11. Give **two** characteristics that distinguish scientific names of organisms from the ordinary names (2mks)
12. (a) What is natural immunity (1mk)

    (b)(i) Define the term Allergy (1mk)

    (ii) List two causes of allergy in humans (2mks)

13. (a) Give one physiological difference between a plant cell wall and a cell membrane (1mk)

    (b) State two structural differences between a cell wall and a cell membrane (2mks)

14. The following reaction may occur in a forward and backward direction

Water + Carbon (IV) Oxide $\rightleftharpoons$ Glucose + Oxygen + Energy

a) Name the organelle where the above reactions occurs in:

(i) Forward direction 1mk,

(ii) Backward direction 1mk

(b)Give **one difference** and **one similarity** for the two organelles named in **(a)** above 2mk

15. In an investigation, a student extracted three pieces of paw paw cylinders using a cork borer of 50 mm length and placed in a beaker containing a solution. The results in the table below.

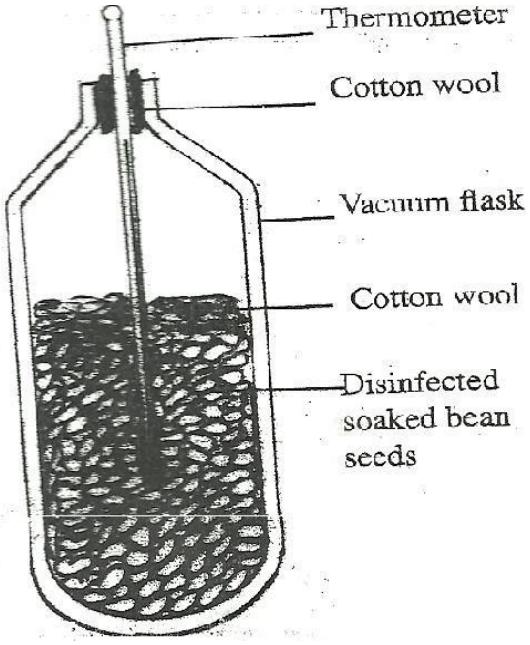
Feature	Result
Average length of cylinders	56 mm
Stiffnes of cylinders	stiff

(a) Account for the results in the table above. (3 marks)

(b) What would be a suitable control set-up for the investigation? (1 mark

16. What is the effect of contraction of the diaphragm muscles during breathing in mammals? (3 marks)

17. In an experiment, disinfection soaked bean seeds were put in a vacuum flask which was then fitted with a thermometer as shown in the diagram below.



The temperature readings were taken every morning for three consecutive days.

a) Which process was being investigated? (1 mark)

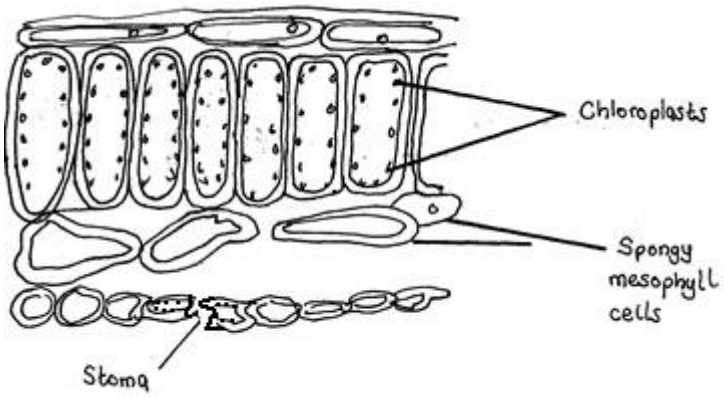
b) i) What were the expected results? (1 mark)

ii) Account for the answer in (b) (i) above? (2marks)

c) Why were the seeds disinfected? (2marks)

18. How does each of the following contribute to cooling of the body of a mammal?
    a. Sweating. (2mks)
    b. Vasodilation (2mks)

19. The figure below shows a section through a leaf. A leaf is designed for photosynthesis and this process provides a supply of simple sugars for a plant.



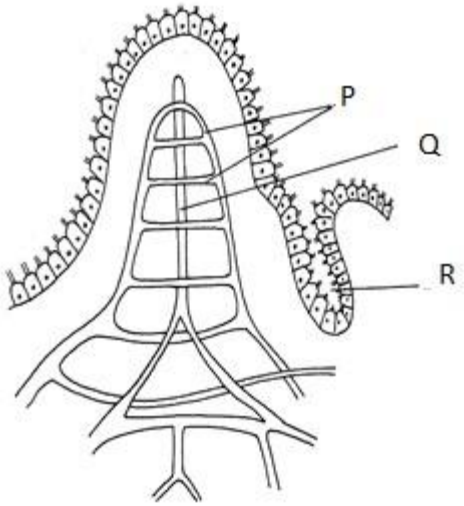
a) i) State the adaption of the chloroplasts to photosynthesis. (2mks)

ii) Explain the advantage of the distribution of the chloroplasts as shown in figure above. (2mks)

iii) Suggest the function of the stomata and the spaces between the spongy mesophyll cells in the process of photosynthesis. (2mks)

b)i)Name the tissue that translocate sugars from the leaves to others parts of the plant. (1mk)

20. The diagram below shows a part of human digestive system. Study it and answer the questions below.



a. Identify the structure and state its functions (2mks)

(b)(i)Name the parts labelled P and Q (2mks)

(ii)State the role of the part labelled R (1mk)

(c)How is the structure stated in (a) above adapted to its function (2mks)

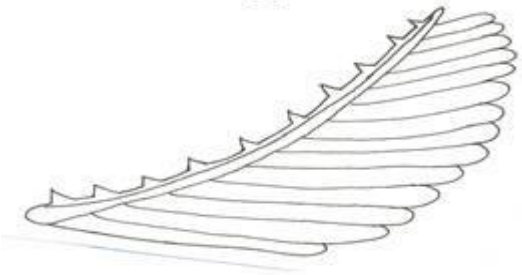
(d)What is the role of enzyme enterokinase in digestion? (1mk)

e) Name two enzymes present in the juice secreted by part R. (2mks)

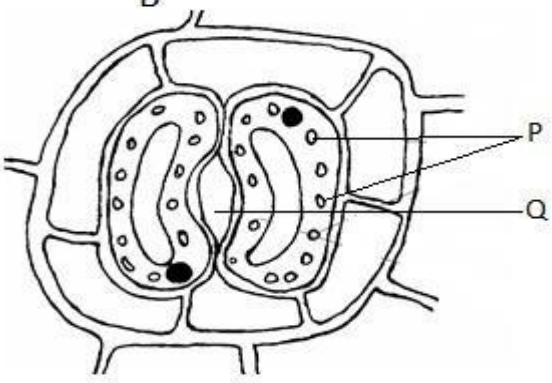
21. The diagrams below represent structures used for a certain process in living organisms. Study them and answer the questions that follow.

B

A



B



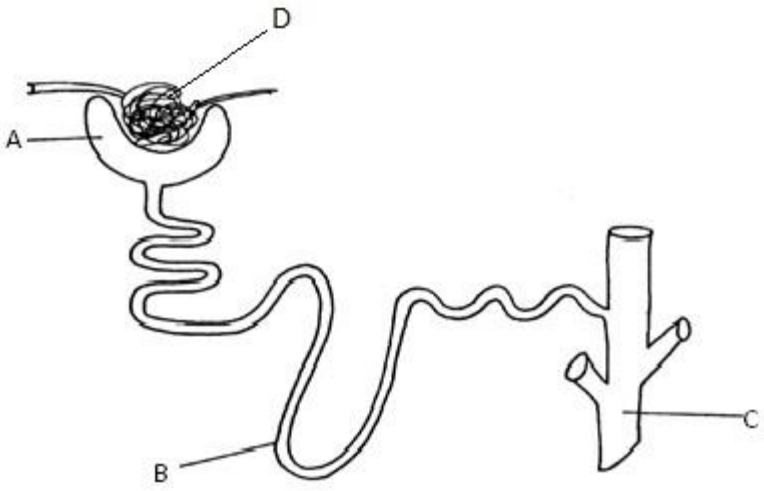
a) Identify the process 1mk

b) State two ways in which each of the structures is adapted to carry out the process named above

c) Name part P and Q in structure B. 2mks

d) Name one structure that carries out the process named in (a) above in a frog. 1mk

22. a)The diagram below represents a nephron of a mammal:



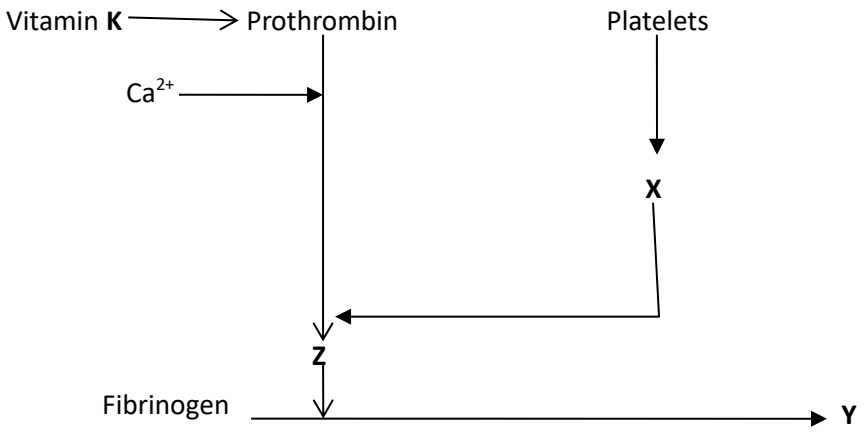
i)Name the parts labeled **A, B** and **D** **3mks**

(ii) Name a major substance in glomerular filtrate whose concentration remains the same between **A** and **C** 1mks

b)If the human pancrease is not functional:-

a. Name the hormone which will be deficient 1mk
b. Name the disease the human is likely to suffer from 1mk
c. What is diuresis? 1mk

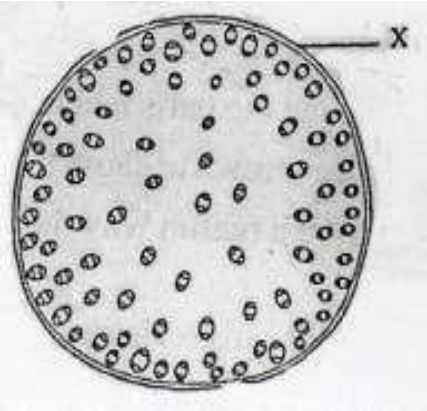
23. a) The flow diagram below represents blood clotting process



i) Name the proteins represented by the letters; X,Y Z (3mks)

b) State the importance of blood clotting 2mks

24. The diagram below shows a transverse section of a plant organ



(a) Name the plant organ from which the section was obtained (1mk)

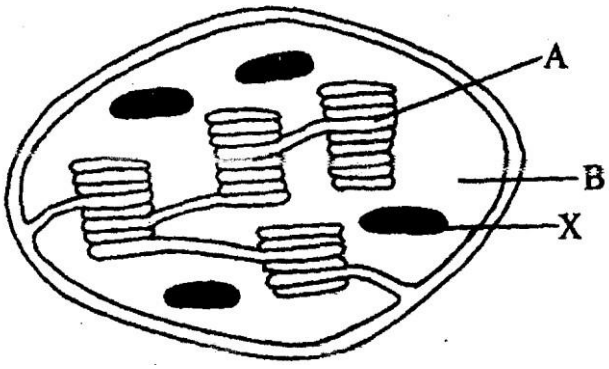
(b) (i) Name the class to which the plant organ was obtained. (1 mk)

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

(c)Name the part labeled X (1 mk)

25. Describe the functions of various parts of the mammalian heart (20mks)

26. The diagram below represents a plant cell organelle



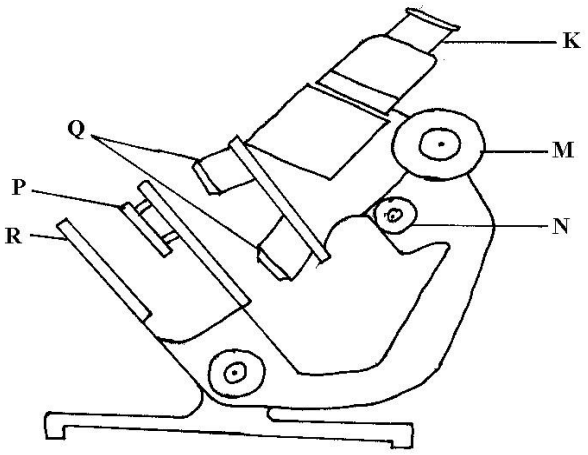
a) Name the organelle. (1mk)

b) In which of the labelled parts does carbon (IV) Oxide fixation occur? (1mk)

c) Name the parts labelled A and B and state how each is adapted to its functions. (4mks)

d) Explain what would have happened to the structures labelled X had the plant been kept in darkness for 48 hours. (2mks)

27. The diagram below shows some components of a light microscope.



a) Name the parts labeled (2mrks)

b) State the functions of (2mrks)

c) A student was viewing a prepared slide of a plant cell under high power microscope. The features of the cell were blurred. Which one of the labelled parts of the microscope would the student use to obtain:-

(i) a sharper outline of the features. (1mrk)

(ii) Give the formula used to calculate magnification in a light microscope. (1mrk)

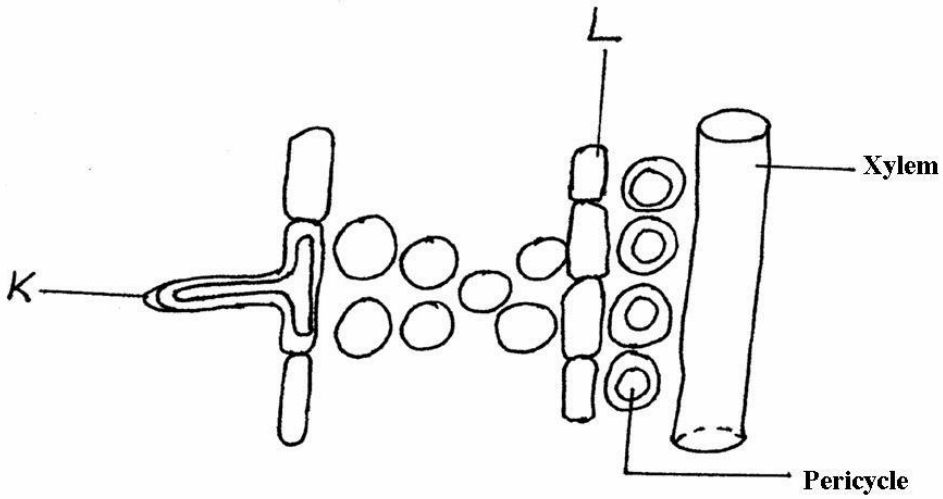
d) A student was preparing a section of a plant cell to be viewed on a light microscope. Give a reason for each of the following steps:-

(i)Cutting a very thin section (1mrk)

(ii)Staining the section (1mrk)

(iii)Putting the section in water (1mrk)

28. The diagram below shows part of a longitudinal section of a root: -



(a) Identify cells K and L :- (2 mks)

(b) State two adaptations of Cell K to its functions :- (2 mks)

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

30. Name the cell organelles responsible for :

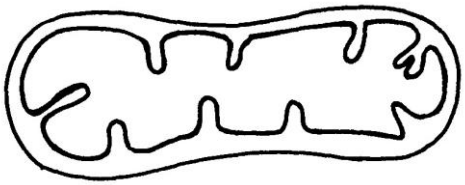
i) Protein synthesis

ii) Destroying worn – out organells and cells

31. a) Lietego school biology student used a microscope with x40 objective lens and x5 eye piece lens which had 2mm radius. Calculate the area of the field of view in micrometers. (2mks)

b) What is the average size of the cell in micrometers (2mks)

32. (a) Identify the organelle shown below:- (1mk)



(b) How is the organelle you have identified in **(a)** above suited to its function(2mks)

33. State **three** properties of the cell membrane (3mks)

34. a) What is the formula for calculating linear magnification of a specimen when using a hand lens (1mk)

35. Distinguish between the following terms :-(4mks)

a) Magnification and resolution of a microscope

Mounting and staining of a specimen

36. Name the organelle that performs **each** of the following functions in a cell. (3mks)

(a) Transport of packaged glycoproteins

(b) Destruction of worn out cell organelles

(c) Synthesis of proteins

37. Why are the following procedures done when preparing sections to be observed under a light microscope? (3mks)

(a) Making of thin sections

(b) Using a sharp blade to make the sections

c)Staining

38. State **three** physiological processes that are involved in movement of substances a cross the cell membrane (3mks)

39. Name the diseases caused by deficiency of : (2mks)

(a) Iodine

(b) Vitamin C

40. What are the **two** functions of bile salts during the process of digestion? (2mks)

41. State **two** adaptations of herbivores which enable them to digest cellulose(2mks)

42. State **three** factors that affect the rate of osmosis(3mks)

43. State **three** roles of light in photosynthesis(3mks)

44. Explain how saliva is important in digestion (2mks)

45. Briefly explain the fate of the following products from the light stage of the process of Photosynthesis (3mks)

(a) Oxygen

b)Hydrogen

(c) ATP

46. State **three** ways by which plants compensate for lack of the ability to move from one place to another(3mks)

47. State **four** difference between monosaccharide and polysaccharides(4mks)

48. Describe how mammalian small intestine is adapted to its function (7mks)

BUSINESS STUDIES FORM 1 HOLIDAY ASSIGNMENT BOOKLET (Volume 1) (69 Questions)

1. State the term given to the following disciplines of business studies: (4 marks)

(a) Study of how man strives to satisfy his unlimited wants using the limited resources

_____

(b) Study of the process of identifying a business opportunity and acquiring resources to start and operate a business

_____

(c) Study of trade and aids to trade

_____

(d) Refers to systematic way of recording business activities which are used for decision making

_____

2. A manufacturing industry is planning to construct a warehouse. Advice the manufacturer on any **four** features that a good warehouse should have for it to function effectively. (4 marks)

3. State **four** characteristics of economic resources. (4 marks)

4. Draw **four** differences between a private company and a cooperative society. (4 marks)

5. The computer is fast overtaking the typewriter as equipment for producing documents in an office. Outline **four** reasons that may account for this. (4 marks)

6. Out the table given indicate the appropriate type of advertising method used. (4 marks)

	Description	**Type**
(a)	To promote a particular brand of product.	
(b)	To persuade a customer to buy a product.	

(c)	Creating awareness about a product.	
(d)	To promote the name of the company.	

7. State **four** services offered by retailers to consumers. (4 marks)

8. Outline four circumstances under which a trader may choose to transport his goods by air. (4 marks)

9. Highlight **four** risks owners of a supermarket may insure against. (4 marks)

10. Name the factor of production that each of the following resources relate to. (4 marks)

Resources	Factor of production
(a) Manager	
(b) Equipment	
(c) Farmer	
(d) River	

11. State **four** essential business environments that positively affect performance of a business. (4 marks)

12. In each of the following case a communication line is explained. Study it and identify the line of communication described. (4 marks)

(a) The principal addresses the assembly

_____

(b) All class secretaries hold a meeting in the hall to discuss indiscipline in their classes

_____

(c) Cabinet secretary of education passed by the school and gave an address as he proceeded to a national rally in a nearby stadium

_____

(d) End of year party held in the school attended by BOM members, teachers, students and support staff

_____

13. State **four** factors that may lead to the success of a business. (4 marks)

14. State **four** reasons to justify the provision of essential services by the government instead of leaving them to the private sector. (4 marks)

15. Highlight **four** ways in which goods are prepared for sale in a warehouse. (4 marks)

16. Three partners would like to engage in a partnership form of business without a written agreement. Highlight how the partnership act will guide them regarding (4 marks)

(i) Profit and loss sharing

_____

(ii) Salary to partners.

_____

(iii) Loans given to the business by a partner

_____

(iv) Admission of a new partner

_____

17. State **four** disadvantages of promoting sales through personal selling. (4 marks

18. Highlight **four** disadvantages of water transport. (4 marks

19. In the spaces provided below, indicate the type of utility created by each of the following business activities. (4 marks)

Business activity	Type of utility
(a) Making a desk	
(b) Selling goods to Kamau	
(c) Transporting gods to the market	
(d) Storing goods in a shop.	

20. Identify the insurance terms described below. (4 marks)

	Description	Term
(i)	To transfer ownership of life policy to another person.	
(ii)	Insuring same subject for the same risk with more than one insurance company.	

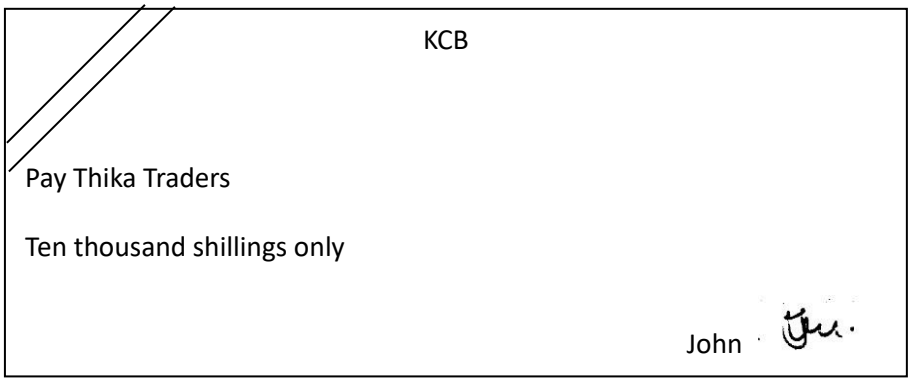
(iii)	Regular payment of insurance cover.	
(iv)	Refund received on cancellation of life policy before maturity.	

21. A business opportunity may exist where there are certain gaps in the market. Highlight **four** such gaps. (4 marks)

22. Highlight **four** benefits a member of a Sacco enjoys. (4 marks)

23. State four advantages of enclosed office layout. (4 marks)

24. The diagram below represents a specimen of a cheque. (4 marks)



From the above diagram indicate the following

(a) Payee

(b) Drawer

(c) Drawee

(d) Crossings

25. State **four** circumstances in which sign language may be preferred. (4 marks)

26. A resource is something that is used by a business to achieve an objective. Identify four resources available in a business (4 Marks)

27. Outline four characteristics of human wants (4 Marks)

28. John and Peter jointly own goods valued at sh. 160,000 with a capital contribution of the ratio 3:1 respectively. The insured the goods against fire at sh. 100,000. A fire broke out and destroyed goods worth sh. 80,000. Calculate the amount to be received in compensation by each of them. (4 Marks)

29. The following are some functions of some various equipment used in offices. Indicate the type of machine that matches the function given. (4 Marks)

Functions	**Equipment**
a) Destroying unwanted documents	_____
b) Cutting paper into required shape and size	_____
c) Making postage impression on envelopes	_____
d) Making shorthand dictation	_____

30. Outline ways through which partnership may be formed. (4 Marks)

31. In the spaces provided below indicate the type of utility created by the following business activities (4 Marks)

Business activity	**Types of utility**
a) Selling face masks to customers	
b) Transporting onions	
c) Storing onions in a granary	
d) Making a camera	

32. Outline **four** reasons why a business person may prefer written communication to verbal communication. (4 Marks)

33. Highlight four advantages of human porterage. (4 Marks)

34. Highlight four characteristics of labour as a factor of production. (4 Marks)

35. In the spaces provided below, state the document to which each of the following statement relate. (4 Marks)

Statement	Document
a) Inform the buyer when goods were dispatched and by what means b) A request by seller for payment in advance c) Used to correct an undercharge in an invoice d) Shows details of the transactions between seller and buyer during a given period	

36. List four sources of business idea. (4 Marks)

37. Outline four duties of commercial attaches. (4 Marks)

38. State **four** ways in which the nature of goods would influence the choice of transport. (4 Marks)

39. Highlight **four** circumstances under which it may be appropriate to use personal selling to promote products. (4 Marks)

40. In the spaces provided, indicate whether each of the following statements relate to preference shares or ordinary shares. (4 Marks)

Statement Types of shares

(i) Has voting rights ……

(ii) Rate of dividend is fixed ……

(iii) Considered first in liquidation ……

(iv) Represent ownership ……

41. Explain five external business environments and how they influence a business negatively. (10 Marks)

42. Explain any five principles of insurance. (10 Marks)

43. Highlight **five** differences between an open plan office and enclosed office layout. (10 Marks)

44. Explain 5 features of economic resources (10 Marks)

45. Identify four disciplines that make-up Business studies.4MKS

46. State whether each of the following factors fall under external or internal business environment.

	External	**Internal**
a. Law's governing Business operations in Kenya		
b. Share holders decisions		
c. Changes in tax		
d. Changes in population		

47. Give four challenges faced in the satisfaction of human wants.4mks

48. Outline four characteristics of free resources.4mks

49. Highlight four reasons why the government involves itself in Business Activities.4mks

50. In the table below, match the descriptions with appropriate type of a partner.4mks

Statement/description	**Type of partner**
a. Under 18 years of age	
b. Does not take part in the running of the business	
c. Allows his/her name to be used as if he/she is a partner.	
d. Has unlimited liabilities.	

51. State four differences between goods and services.4mks

52. Outline four ways in which traders may exploit consumers.(4mks)

53. Outline four reasons why a trader may construct their own warehouse. .(4mks)

54. List four means of payment that a trader may use to effect payment.(4mks)

55. Highlight four merits of an open plan office layout .(4mks)

56. Outline any four features of Public Corporations. (4mks)

57. The table below shows different characteristics of production. Indicate whether each relate to direct or indirect production. 4mks

Characteristics of production	Type of production
i. Uses machines and modern technology	
ii. Mainly produces as the needs arises	
iii. Production is market oriented	
iv. Level of output is generally low.	

58. Identify any four gaps in the society that may give rise to a business opportunity.(4mks)

59. State four ways in which the government may regulate business activities.(4mks)

60. Highlight four roles of transport in promotion of trade. (4mks)

61. Highlight four reasons why letters continue to be used as a means of communication.(4mks)

62. Outline four roles played by Nairobi Stock Exchange market in Kenya's economy.(4mks)

63. Identify the following types of warehouse having the following characteristics.

Characteristics	**Type of warehouse**
i. Holds tax free goods produced locally or imported	
ii. Used to hold dutiable goods from within or outside the country.	
iii. Goods can stay in store without the owner worrying about high storage charges or loss of goods.	
iv. These warehouses are located at entry points, terminals and urban areas for hire by local traders.	

64. Give four reasons why office documents should be filed.(4mks)

65. Outline four features of a supermarket .(4mks)

66. List four functions of an entrepreneur as a factor of production. (4mks)

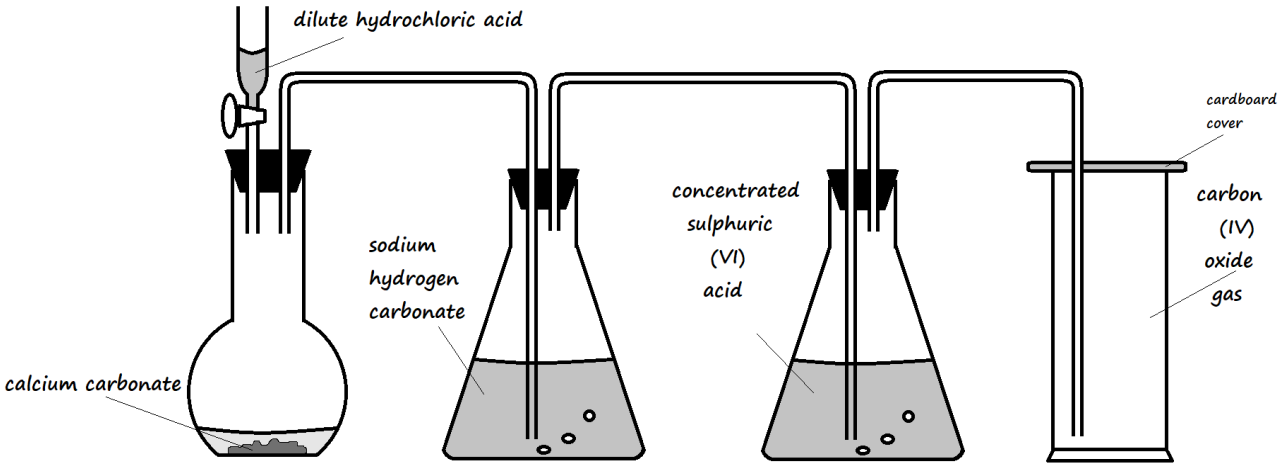
67. State four barriers to effective communication. 4mks

68. Outline four circumstances under which non-verbal signs may be used.(4mks)

69. Identify four circumstances under which air transport would be suitable for a business.

CHEMISTRY FORM 1 HOLIDAY ASSIGNMENT BOOKLET (Volume 1) (81 Questions)

1. Explain the change in mass expected when each of the following is heated in an open crucible:
   a) Copper metal (1 Mark)
   b) Copper (II) nitrate (1 Mark)
2. The diagram below shows the setup of apparatus used to prepare a dry sample of carbon (IV) oxide gas. Study it and answer the questions that follow



   a) State the role of sodium hydrogen carbonate in the setup (1 Mark)
   b) Write the equation for the reaction taking place in the conical flask containing calcium carbonate (1 Mark)
   c) Give a reason why dilute sulphuric (VI) acid is not suitable for use in place of dilute hydrochloric acid (1 Mark)
3. The table below shows the melting point and boiling point values of elements across period 3 of the periodic table. Study it and answer the questions that follow.

	Na	Mg	Al	Si	P	S	Cl	Ar
Melting point (°C)	98	650	660	1410	44 590	119 113	-101	-189
Boiling point (°C)	890	1110	2740	2360	280	446	-35	-186

a) Explain the trend in melting point and boiling point values between sodium and aluminium (2 Marks)

b) Give a reason why both phosphorous and sulphur have **two values** of melting point (1 Mark)

4.

a) What are isotopes? (1 Mark)

b) Calculate the relative atomic mass of element E whose isotopic composition, shown below, is in the ratio 80:6:14 (2 Marks)

5. Write balanced chemical equations for the reactions between:

a) Dilute hydrochloric acid and calcium hydrogen carbonate (1 Mark)

b) Dilute sulphuric (VI) acid and potassium hydroxide solution (1 Mark)

6. When sodium metal is burnt in air, a white solid is observed. When the metal is burnt in pure oxygen, the product formed is yellow. Name the white solid and yellow solid. (2 Marks)

a) White solid

b) Yellow solid

7. Dilute hydrochloric acid was added to a calcium compound **X** to form a colourless solution **W** and colourless gas **Y**. Gas **Y** formed a white precipitate **L** when bubbled through lime water.

a) Name the following substances:

i) Compound **X** (½ Mark)

ii) Solution **W** (½ Mark)

iii) Gas **Y** (½Mark)

iv) White precipitate **L** (½ Mark)

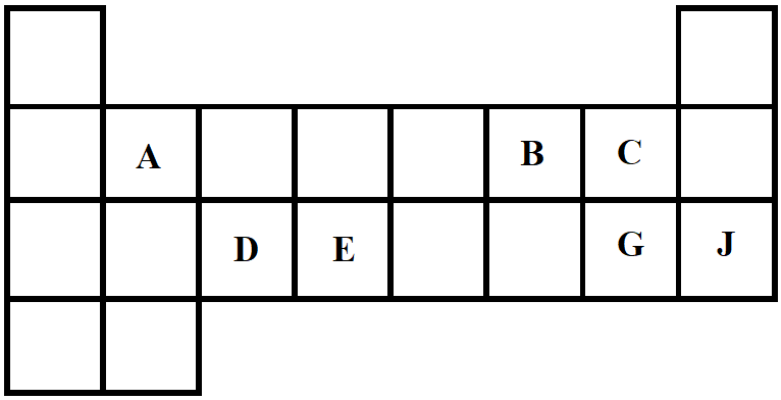
b) Write a balanced chemical equation for the reaction that took place (1 Mark)

8. Explain the following observations:

a) All group VIII elements are gases at room temperature (1 Mark)

b) Sodium has a lower melting point than magnesium (2 Marks)

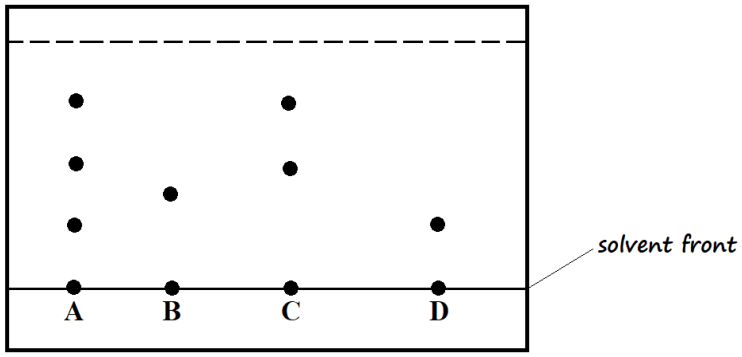
9. The grid below shows a section of the periodic table. The letters **A**, **B**, **C**, **D**, **E**, **G** and **J** do not represent the actual symbols of elements.



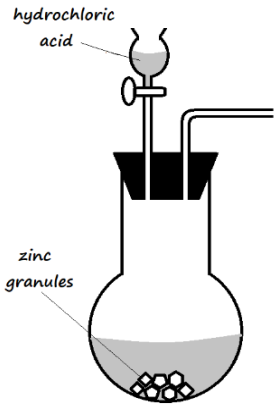
a) Write the formulae of
   i) Hydroxide of **D** (½ Marks)
   ii) Hydrogen carbonate of **A** (½ Marks)

b) Draw a dot (•) and cross (×) diagram for the compound formed between elements **A** and **G** (2 Marks)

10. Element **Q** has an electron configuration of **2.8.2** while element **R** has an electron configuration of **2.4.** Solid samples of elements **Q** and **R** were burnt in air, then water added separately to the resultant products. State the effect of the resultant solutions on both red and blue litmus paper:
    a) Solution of product of **Q** (1 Mark)
    b) Solution of product of **R** (1 Mark)
11. The reactivity of the alkaline earth metals increases down the group, while the reactivity of the halogens decreases down the group. Explain this observation. (3 Marks)
12. The following chromatogram was obtained in an experiment to investigate the components present in certain dyes



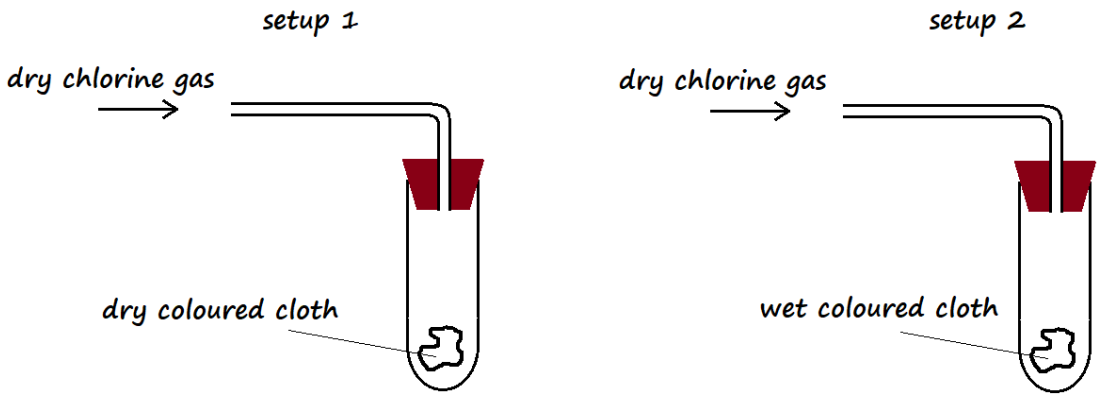
    a) Identify a mistake on the diagram (1 Mark)
    b) Which two dyes, when mixed, would produce dye **A**? (1 Mark)
    c) Which dye is pure? (1 Mark)
13. A mixture contains iron (III) chloride, calcium chloride, and iron filings. Describe how one can separate and obtain pure substances from the mixture. (3 Marks)
14. The setup below was used to prepare hydrogen gas in the laboratory



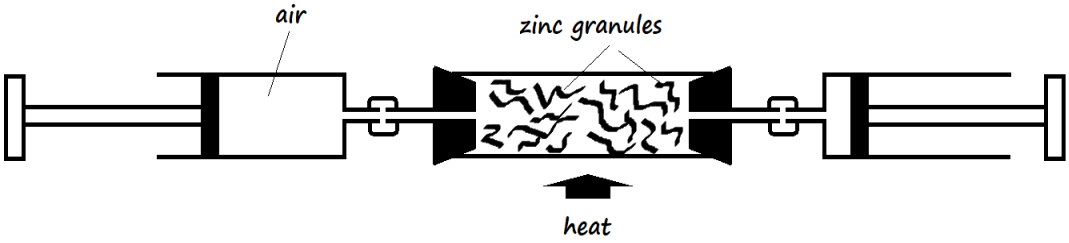
a) Complete the diagram to show how a dry sample of hydrogen gas can be collected (2 Marks)

b) Name a substance which may be added into the flask to speed up the production of the hydrogen gas (1 Mark)

15. A certain element formed a compound with the chemical formula **$Fe_2O_3 \bullet xH_2O$** when left open in the atmosphere.
    a) Name the compound (1 Mark)
    b) In temperate countries, salt is put on roads during winter. Explain the reason for this practice (1 Mark)
    c) Why is does this practice raise great concern to motorists? (1 Mark)
16. Study the diagrams below and answer the questions that follow.



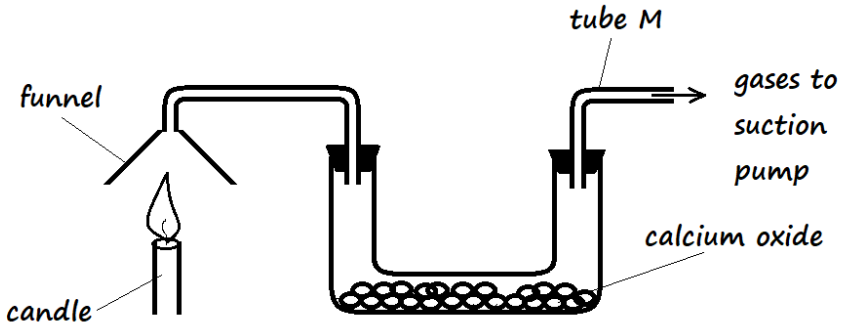
    a) State the observation made in
        i) Setup **I** (½ Mark)
        ii) Setup **II** (½ Mark)
    b) Explain the observation made in setup **I** above (2 Marks)
17. In an experiment, a certain volume of air was repeatedly passed between two syringes over heated zinc granules, as shown below.



    a) Why was air passed repeatedly over the heated copper? (1 Mark)

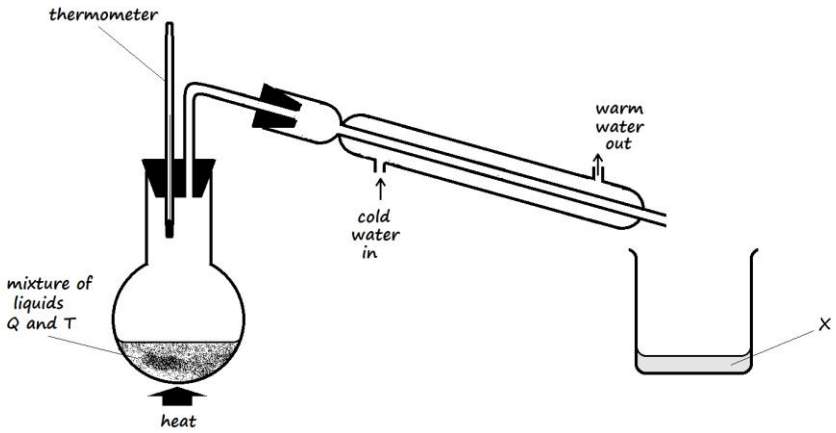
b) The experiment was repeated using magnesium ribbon instead of copper turnings. In which experiment was the change in volume greater? Explain. (2 Marks)

18. Copper (II) oxide and powdered charcoal are both black. How can zinc granules be used to distinguish between the two substances? (2 Marks)
19. Explain the main disadvantage of using the method of painting as a method of protecting iron surfaces from rusting (2 Marks)
20. The products of a burning candle were passed through a U-tube as shown in the setup below.



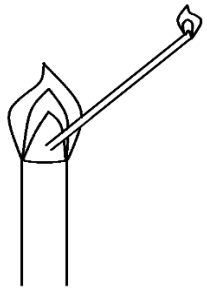
a) State the role of calcium oxide in the setup (1 Mark)
b) Name the gas that came out through tube **M** (1 Mark)
c) State the observation that would be made in the U-tube if calcium oxide is replaced with anhydrous cobalt (II) chloride (1 Mark)

21. The setup below was used to separate two miscible liquids **Q** and **T** whose boiling points are 98^{o}C and 78^{o}C respectively



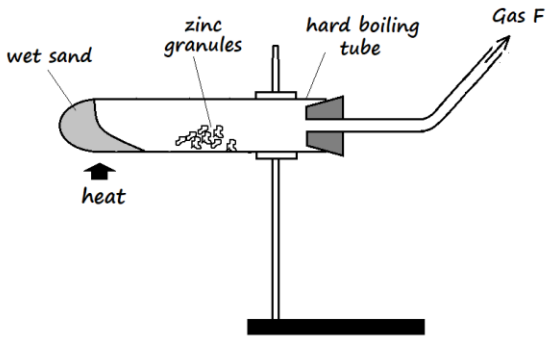
a) Identify **two** mistakes made in arranging the setup (2 Marks)
b) Identify **X** when the thermometer reads 80^{o}C (1 Mark)
c) What property makes the components of the mixture separable using this setup when the necessary corrections have been made? (1 Mark)

22. The setup below demonstrates an experiment that was carried out on a Bunsen burner flame in the laboratory



a) What does the experiment show? (1 Mark)
b) Which type of flame is this? (1 Mark)
c) State **one** other characteristic of this flame, other than the one shown in the setup (1 Mark)

23. Pure nitrogen can be obtained from air through fractional distillation of liquefied air. Why is it possible to separate the components of air? (2 Marks)
24. A spatula of zinc powder was added to a test tube containing hydrochloric acid. A colourless gas was evolved. State the identity of the gas and a test that would confirm your answer (2 Marks)
25. Explain the following observations:
    a) The melting points of alkali metals decrease down the group (2 Marks)
    b) The element hydrogen can be placed in group I and group VII (1 Mark)
26. When a spatula of calcium metal is put in water, a fizzing sound is heard, and the resultant solution has a white appearance. Explain. (2 Marks)
27. In the extraction of oil from cashew nut in the laboratory, the seeds were first crushed and then propanone was added as crushing continued.
    a) Why were the seeds first crushed? (1 Mark)
    b) What would be the effect of using water instead of propanone? Explain (2 Marks)
28. An unknown element is assigned the symbol **Jw**. When the oxide of **Jw** is dissolved in water, the resultant solution turns blue litmus paper red, while red litmus paper remains red.
    a) State and explain the relationship between the atomic radius and ionic radius of **Jw**. (2 Marks)
    b) What is the most likely observation made if a spatula of sodium hydrogen carbonate powder is added to the flask containing a solution of the oxide of **Jw**? Explain (2 Marks)
29. A student used the setup shown in the diagram below to study the reactions of some metals with steam.



a) What observation is made when **gas F** is ignited? (1 Mark)
b) When the experiment was repeated using iron powder instead of zinc granules, only a small volume of **gas F** was obtained. Give a reason for this observation. (1 Mark)
c) The wet sand was heated before heating the zinc granules. Explain (1 Mark)

30. (a) Define allotropy(1mk)

(b) Name one element that exhibits allotropy (1mk)

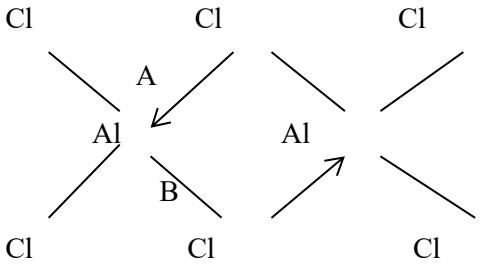
(c) Identify the two allotropes of the element named in (b) above (1mk)

31. Complete the table below (3mks)

Particle	Number of protons	Number of electrons	Number of neutrons	Mass number
Ca^{2+}	20		20	
Mg^{2+}		10	12	
Na		11		23

32. A form 1 student accidentally mixed copper (II) oxide, iodine and sodium chloride. Briefly explain how a sample of sodium chloride crystals can be obtained (3mks)

33. Below is a structure of aluminium chloride



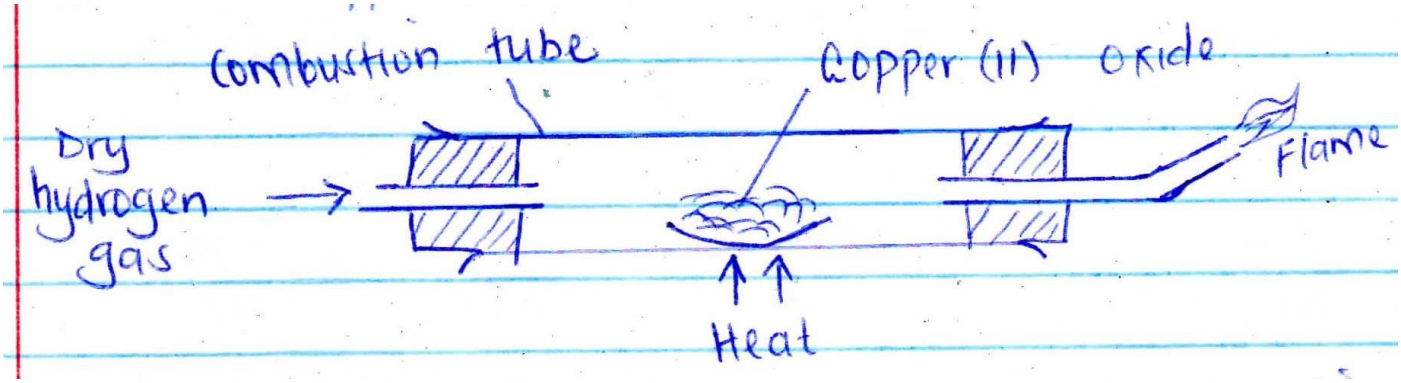
a. Identify the bonds labeled as

A – (1/2mk)

B - (1/2 mk)

b. When aluminium chloride is dissolved in water the resulting solution has a pH of 3. Explain (2mks)

34. In an experiment, hydrogen gas was passed over heated copper (II) oxide as shown below



a. Write down a balanced chemical equation that took place in the combustion tube. (1mk)

b. State and explain two observations made in the combustion (2mks)

35. You are given four elements namely A, B, C and D with electron arrangement as 2.8.1, 2.8.7, 1 and 2.6 respectively.

a. Write down the formula of the compound formed when C and D react (1mk)

b. Which of the four elements belong to the same

i. Group (1/2 mk)

ii. Period (1/2mk)

c. Compare the atomic and ionic radius of element A. (2mks)

36. Study the equation below and answer the questions that follow.

$PbO_{(s)} + Zn_{(s)} \longrightarrow ZnO_{(s)} + Pb_{(s)}$

a. What name is given to this type of a reaction ?Explain (2mk)

b. If lead metal and zinc (II) oxide were used, the reaction would not have taken place. Explain (1mk)

37. A form 2 student tested the pH values of solutions A,B,C and D and obtained the following results

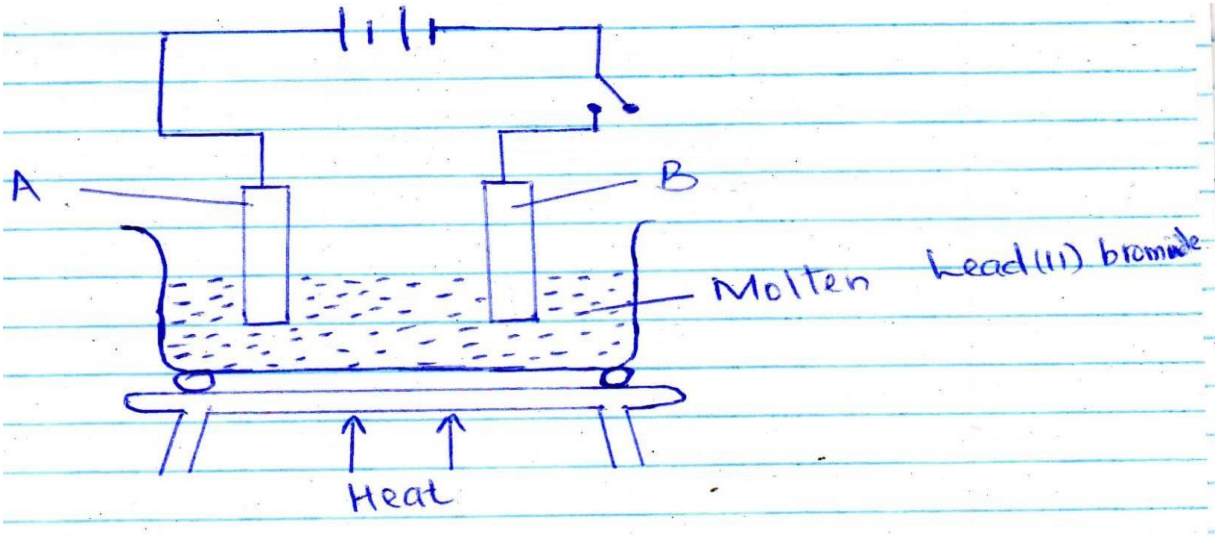
Solution	A	B	C	D
PH	7.0	13.5	1.0	6.0

a. Which of the solutions could be
   i. Distilled water (1/2mk)
   ii. Ethanoic acid (1/2mk)

b. Identify two solutions that would react to form salt and water as the only product (1mk)

c. What is the name given to the reaction between B and C? (1mk)

38. The diagram below shows electrolysis of molten lead (II) bromide



a) Name electrodes

A – (1/2mk)

B - (1/2mk)

b) Write down the equation for the reaction that takes place at
Electrode A (1mk)

Electrode B (1mk)

c) Write down the overall equation for the reaction (1mk)

d) State the observations made at electrode

A - (1/2mk)

B - (1/2mk)

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

A						E	F	H
	B		D				G	
	C							I

a. Name the chemical family to which the following elements belong

i. F and G (1/2mk)

ii. B and C (1/2mk)

b. An element X has atomic number 14. Indicate its position in the periodic table. (1mk)

c. Compare the electric conductivity of A and C (2mks)

d. Element H is said to be inert. Explain. (2mks)

e. (i) write down the formula of the compound formed when element D and E reacts (1/2mk)

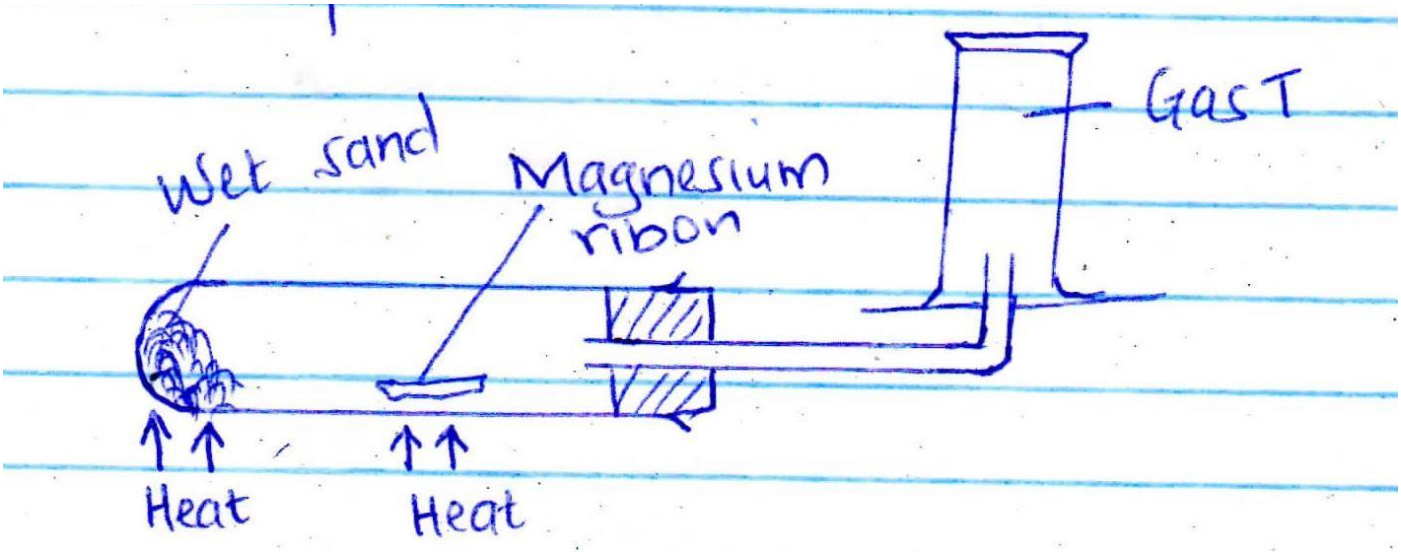
(ii) Identify the bond and structure found in the compound formed in (i) above

(iii) Bond - (1mk)

(iv) Structure - (1mk)

f. How does the atomic radius of E and F compare? (2mks)

40. A form two student set-up the apparatus as shown below. Study it and answer the questions that follow.



a) Identify gas T. (1mk)

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

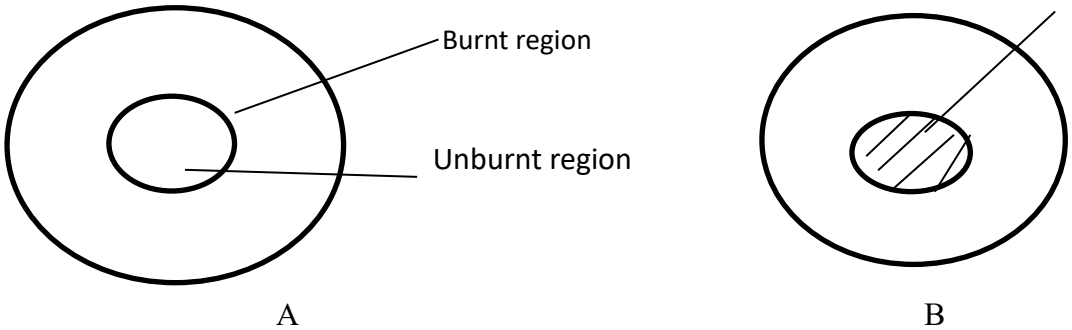
c) State the test for gas T. (1mk)

41. (a) What is a flame? (1mk)

(b) Name two types of flames (1mk)

(c) The diagram below shows the appearance of two pieces of paper placed in different parts of a flame which is produced when the air hole is open and quickly removed before they caught fire.

Uniform scorch marks



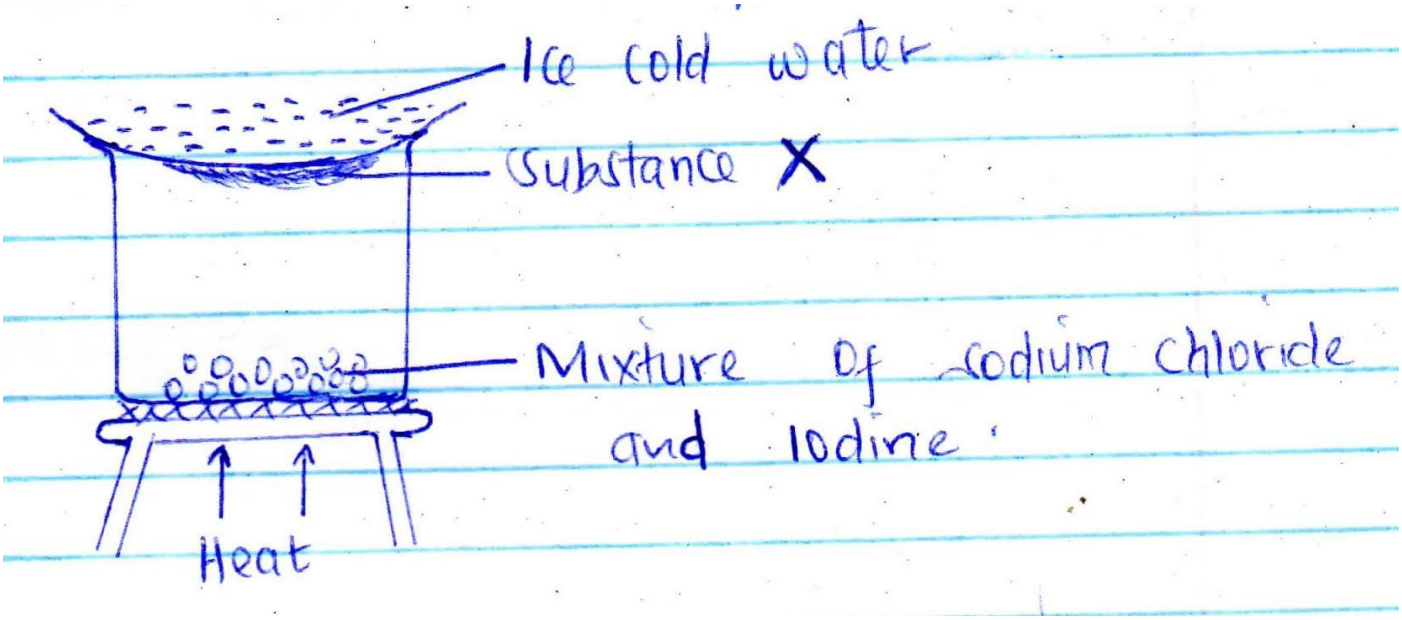
A B

Name the parts of the flame where the papers were placed

A – (1mk)

B - (1mk)

13. The diagram below shows a separation technique. Study it and answer the questions that follow



a) Identify X (1mk)

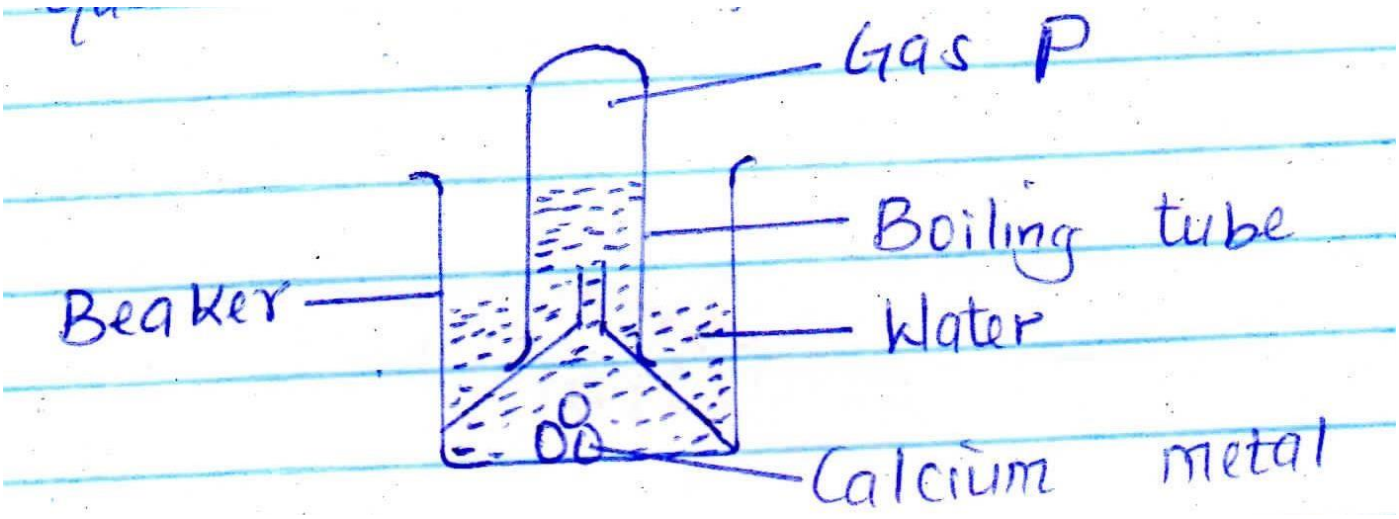
b) What is the name given to the separation method illustrated above? (1mk)

c) Explain the role played by the ice cold water (1mk)

42. (a) Define isotopes (1mk)

(b) Element L has two isotopes with mass number 62:93 and 64:93. Their percentage abundances are 69.09 % and 30:91 % respectively. Determine the relative atomic mass of L (2mks)

43. The diagram below shows reaction between calcium metal and water. Study it and answer the questions that follow.



a) Identify gas p (1mk)

b) Write an equation for the reaction that took place. (1mk)

c) State the observation made when a blue and a red litmus paper are dipped in the resultant solution (2mks)

44. State three differences between a physical and a chemical change (3mks)

Physical	Chemical

i. Using a dot(**.**) and cross(**x**) diagram, show the bonding in the following

i) Hydroxonium ion (H_3O^+) (2mks)

ii) Sodium chloride (NaCl) (2mks)

iii) Carbon (IV) oxide (CO_2) (2mks)

45. (a) State two conditions necessary for rusting (1mk)

(b) What is the chemical name for rust? (1mk)

(c) Name two methods that can be used to prevent rusting (2mks)

46. (a) When a blue litmus paper is dipped in chlorine water, it changes to red and then white. Explain this observation (2mks)

(b) Write two equations that show the observation made above. (2mks)

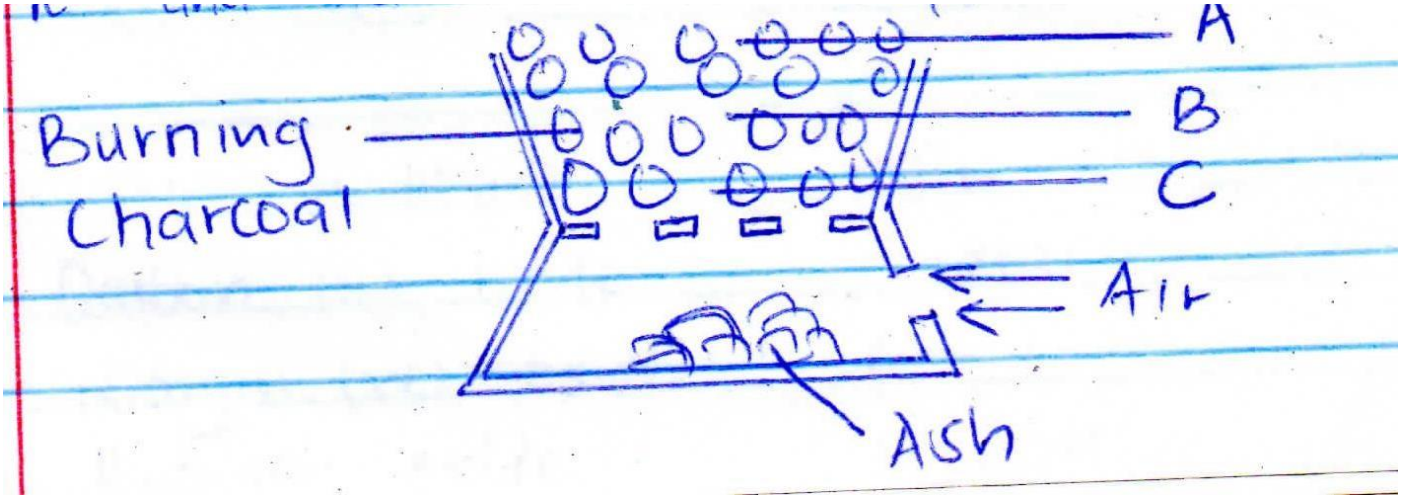
47. Write down balanced chemical equations to show what the following salts produce when heated strongly.

(a) KNO_3 (1mk)

(b) $NaHCO_3$ (1mk)

(c) $FeSO_4$ (1mk)

48. The diagram below shows a burning jiko. Study it and answer the questions that follow



a) Briefly explain what happens in the parts labeled (1mk) A B & C

b) Why is it not advisable to use a jiko in a poorly ventilated room? (2mks)

c) How is carbon (IV) oxide gas tested (1mk)

49. State three ways in which purity of a substance can be determined (3mks)

i. Categorize the following oxides as either acidic, neutral or basic (2mks)

a) Sodium hydroxide -

b) Carbon (IV) oxide-

c) Nitrogen (IV) oxide-

d) Hydrogen oxide -

50. Write down the formula of the following compounds.

a) sodium sulphate (1mk)

b) Ammonium chloride (1mk)

51. Explain the following observations.

a) Molten magnesium chloride conducts electricity whereas solid magnesium chloride does not. Explain (2mks)

b) Propane and ethanol have close molecular mass, but ethanol has a higher melting point than propane. (2mks)

52. (a) Name three sub-atomic particles ($1\frac{1}{2}$mks)

(a) What is the name given to a group of atoms with a net charge that exist and react as a unit during chemical reactions?($\frac{1}{2}$mk)

(b) Complete the table below (2mks)

Particle	Oxidation number	Valency
X_{2+}		
Y_{2-}		

53. (a) Balance the chemical equation below (1mk)

$$NaCl(aq) + Pb(NO_3)_2(aq) \longrightarrow PbCl_2(s) + NaNO_3(aq)$$

(b) The reaction illustrated in (a) above shows a method of salt preparation. Identify the method. (1mk)

54. The electron arrangement of ions X^{3+} and Y^{2-} are 2.8 and 2.8.8 respectively.
    a. Write the electron arrangement of elements X and Y.
        i. -
        (1 mk)
        ii. -
        (1 mk)

    b. Write the formula of the compound that would be formed between element X and Y. (1 mk)

55. Study the equation below;

$Mg_{(s)} + ZnO_{(s)} \longrightarrow MgO_{(s)} + Zn_{(s)}$

    a. By use of arrows, indicate oxidation and reduction reactions in the equation. (2 mks)
    b. Name the reducing agent in the above reaction. (1 mk)

56. Distinguish between the terms deliquescent and efflorescent salts. (2 mks)

57. The table below shows PH value of different solutions.

Solution	A	B	C	D
PH	14	7	2	11

a. Which solution is likely to be sugar solution? (1 mk)

b. Two of the solutions were found to react with both aluminium oxide and zinc oxide. Identify the two giving reasons. (2 mks)

58. Identify the methods that are most appropriate to obtain. (3 mks)
    a. Oil from coconut

    b. Diesel from crude oil

    (iii)Sugar crystals from sugar solution

59. An element Q has an electron arrangement of 2.8.5 (a) Identify the group and period to which it belongs.

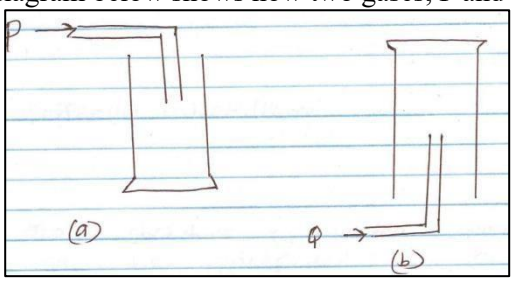
    Group - (1 mk)

    Period - (1 mk)

    (b) is element Q a metal or a non-metal? (1 mk)

60. Carbon has two isotopes namely $^{14}_{6}C$ *and* $^{12}_{6}C$. Calculate the relative abundance of these two isotopes if the relative atomic mass of carbon is 12.4. (3 mks)

61. The diagram below shows how two gases, P and Q were collected.



(i) Name the two methods shown above.

a - (1 mk)

b - (1 mk)

(ii) State the property of Q that enables it to be collected as shown above. (1 mk)

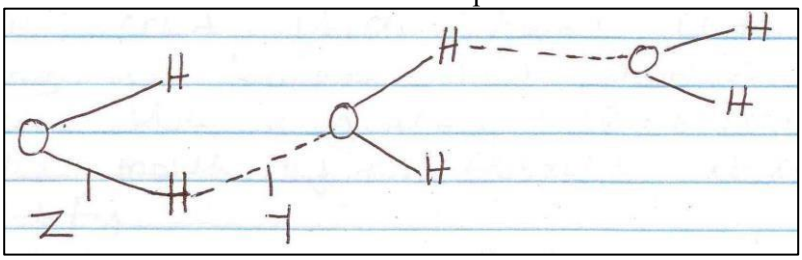
(iii)Give an example of a gas that is collected using the method shown in (b) above. (1 mk)

62. State and explain the changes in mass that occur when the following substances are separately heated in open crucibles.

(i) Copper metal (1 ½ mk)

(ii) Copper (ii) Nitrate (1 ½ mks)

63. The structure of water molecule can be represented as shown below.



a. Name the type of bonds represented by letters Y and Z.

Y –

(1 mk)

Z -

(1 mk)

64. Element R has a valency of 2, element Q has a valency of 1 while element B has a valency of 3. Write the chemical formulae of their sulphates, phosphates and nitrates. (4½ mks)

Element	Sulphates	Phosphates	Nitrates
R			
B			
Q			

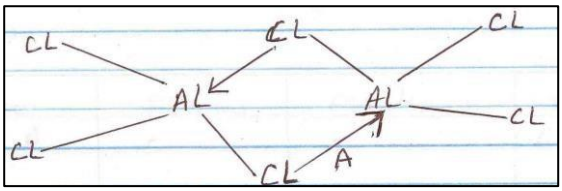
65. When a white solid X is heated, a yellow solid which turns white on cooling is formed and a brown gas is seen. When a glowing splint is placed at the mouth of the test-tube it relights. a) Identify;

(i) Solid X - (1 mk)

(ii) The brown gas - (1 mk)

a. Write an equation for the decomposition of solid X. (1 mk)

66. Below is a structure of aluminium chloride.



a. Identify bond A. (1 mk)

b. State the observations made when aluminium chloride solution is tested with blue and red litmus paper.
Explain. (2 mks)

67. Which particles conduct electricity in;

a. Molten lead (ii) bromide (1 mk)

b. Aqueous sodium chloride (1 mk)

(iii)Graphite (1 mk)

68. The following table gives the structures of the different atoms. Study it and answer the questions that follow. (A, B, C, D and E do not represent the actual symbols of the elements).

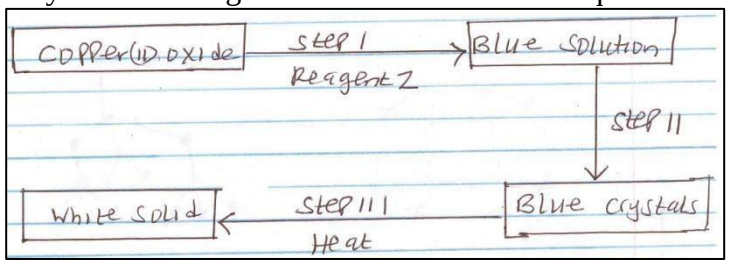
Atom	Protons	Electrons	Neutrons
A	5	5	6
B	9	9	10
C	10	10	11
D	15	15	16
E	10	10	12

a. What is the mass number of atom B? (1 mk)

b. Which of the atoms has a mass number of 11? (1 mk)

c. Which of the atoms represent isotopes of the same element. (1 mk)

69. Study the following flow chart and answer the questions that follow.



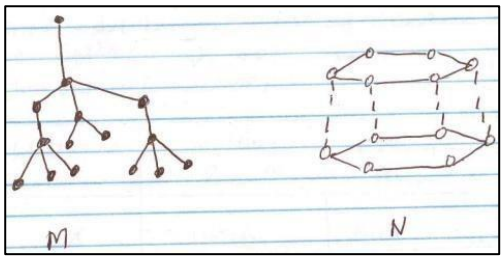
a. (i) Identify reagent Z. (1 mk)

(ii) Identify the white solid. (1 mk)

b. Write a chemical equation for the formation of the blue solution. (1 mk)

70. State two properties that makes aluminium to be used in making of overhead electric cables. (2 mks)

71. The structures below represent two allotropes of carbon. Study them and answer the questions that follow



a) Identify the allotropes labeled

M -

(1/2 mks)

N -

(1/2 mks)

b) Explain in terms of structure and Bonding which of the two allotropes;

(i) Conducts electricity. (1 mk)

(ii) Is used in making drilling equipments. (1 mk)

72. (a) Name two conditions which accelerate rusting. (2 mks)

(b) State ONE method used for preventing rusting. (1 mk)

73. The information below gives melting points of some substances. The letters do not represent the actual symbols of elements.

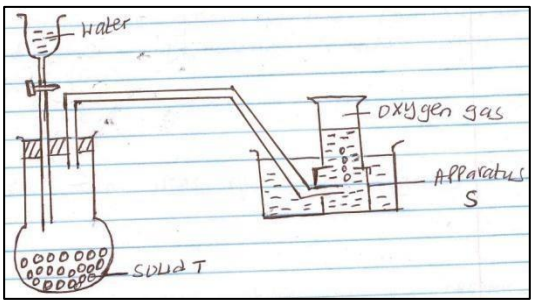
Substance	Melting point ^{0}C	Boiling point ^{0}C
X	1536	3100
Y	65	1115
Z	-40	361
P	-218	-190
Q	99	890
R	116	445

(i) Identify any two substances that are solids at room temperature (25^{0}C). (2 mks)

(ii) Identify a substance that is a liquid at room temperature. (1 mk)

(iii)Identify a substance that remains as a liquid over the widest range of temperature. (1 mk)

74. (a) The following diagram shows how oxygen can be prepared and collected in the laboratory.



(i) Name;

I apparatus S - (1 mk)

II solid T - (1 mk)

(ii) Why is it possible to collect oxygen as shown in the diagram? (1 mk)

(iii)Explain why it is important NOT to collect any gas for the first few seconds of the experiment? (1 mk)

(iv) Write an equation for the reaction that takes place. (1 mk)

(b) What name is given to the compounds formed when an element reacts with oxygen? (1 mk)

(c) State TWO uses of oxygen. (2 mks)

75. Name the salts obtained by reacting;

a. Zinc oxide with dilute sulphuric (vi) acid. (1 mk)

b. Sodium carbonate with nitric acid. (1 mk)

(iii)Potassium carbonate and dilute hydrochloric acid. (1 mk)

76. (a) The table below shows properties of some substances.

Substance	Melting point (^{0}C)	Boiling point (^{0}C)	Electrical conductivity	
			Solid	Liquid
A	-112	-107	Poor	Poor
B	801	1413	Poor	Good
C	97.5	880	Good	Good
D	44	280	Poor	Poor
E	1700	2200	Poor	Poor
F	-110	46.3	Poor	Poor

Select a substance which;

a. Has a giant ionic structure. (1 mk)

b. Is a metal (1 mk)

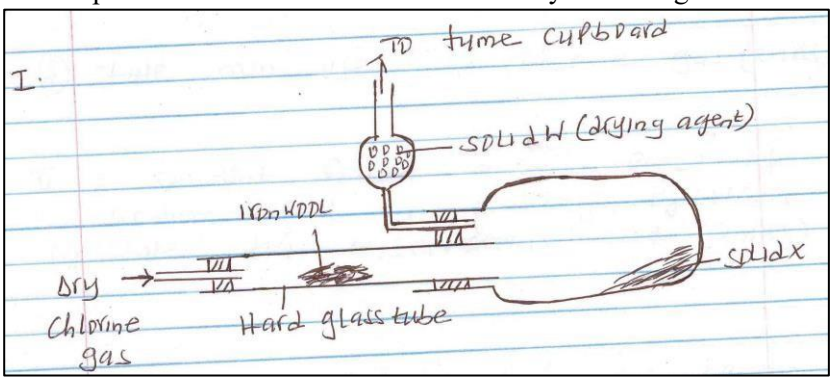
(iii)Has a giant atomic structure. (1 mk)

(b) Using dots(.) and crosses (x) illustrate bonding in ammonia molecule (NH_3). (N=7, H=1) (2 mk

77. When a student was stung by a nettle plant, a teacher applied an aqueous solution of ammonia to the affected area of the skin and the student was relieved of the pain. Explain. (1 mk)
78. (a) The information below is on four elements represented by letters P, Q, R and S. study it and answer the questions that follow. Q reacts with dilute acids but not with acids. S displaces P from its oxide and
P reacts with cold water. Arrange the elements inorder of increasing reactivity. (1½ mks)

(b) State ONE reason why Helium is preffered to hydrogen in weather balloons. (1 mk)

79. The set up below shows the reaction between dry chlorine gas and iron wool.



a) Give one essential condition that is missing in the set up. (1 mk)
b) Why is it not advisable to release excess chlorine gas in the atmosphere? (1 mk)
c) Write a chemical equation for the formation of solid X. (1 mk)
d) Name solid W and state why it is necessary. (2 mks)
e) Give the formula of the product formed if iodine vapour is reacted with heated iron wool. (1 mk)
f) State two uses of chlorine gas. (2 mks)

(ii) A student placed a small piece of sodium metal in a trough of water.

(i) State two observations made? (2 mks)
(ii) Write a chemical equation for the reaction that took place. (1 mk)

80. The products formed by action of heat on nitrates of elements A, B and C are shown below.

Nitrates	Products formed
A	Metal oxide + Nitrogen(iv)oxide + Oxygen
B	Metal + Oxygen + Nitrogen(iv)oxide
C	Metal nitrite + Oxygen

I. (a) Arrange the metals inorder of increasing reactivity. (1 mk)

(b) Which element forms a soluble carbonate? (1 mk)

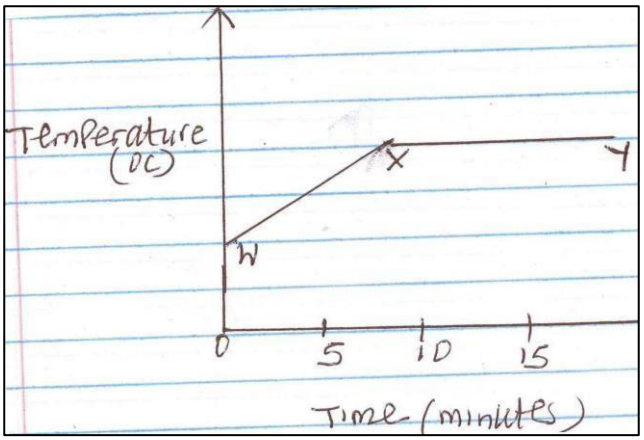
(c) Give an example of element B. (1 mk)

II. (i) Write an equation to show the effect of heat on each of the following;

a. Sodium hydrogen carbonate. (1 mk)

b. Copper(ii)carbonate (1 mk)

81. The graph below shows the curve obtained when water at 20^0C was heated for 15 minutes.



a. What happens to water molecules between point W and X? (1 mk)

b. In which part of the curve does change of state occur? (1 mk)

c. Explain why the temperature does not rise between point X and Y. (1 mk)

d. Which test would be used to check if water is pure? (1 mk)

COMPUTER STUDIES FORM 1
HOLIDAY ASSIGNMENT BOOKLET
(Volume 1)(34 Questions)

1. State the meaning of the term computer software. (2marks)
2. State three features of fifth generation computers (3marks)
3. Differentiate between home page and web page as used in the internet (2marks)
4. State three characteristics of mainframe computers (3marks)
5. The management of an organization intends to purchase a printer. State three factors that they should consider during purchase. (3marks)
6. Describe each of the following computer cables:
   i.) Parallel cables; (2 marks)
   ii.) Serial cables; (2 marks)
7. A computer technician has observed a lot of dust on the computers in computer laboratory. State three precautions that need to be put in place to avoid this. (3marks)
8. Explain the term proofreading as used in word processing. (2marks)
9. State the function of each of the following computer keyboard keys when using a word processor:
   i.) End (1mark)
   ii.) Insert (1mark)
   iii.) Backspace (1mark)
10. Explain two problems associated with the computer hard disk. (4marks)
11. State the spreadsheet function that can be used to obtain each of the following values in a worksheet:
    i.) Number of cells with values in a column. (1mark)
    ii.) Mean of values in a range of cells. (1mark)
12. A school intends to install internet communication service in school. State any three advantages of this service to the students. (3marks)

13. State two ways in which one can create a password which cannot be easily accessed by hackers. (2marks)
14. State two ways through which a computer user can minimize Repetitive Strain Injuries (RSI) associated with the use of a computer. (2marks)
15. Identify four tasks that can be achieved using a Desktop Publishing program from the following list of tasks. (2 marks)
    i.) Managing students records in school
    ii.) Creation a calendar
    iii.) Designing a building structure
    iv.) Creating a banner
    v.) Creating a book cover
    vi.) Processing of examination results
    vii.) Creating business cards.
16. a) Give any three differences between label and value. (3mks)

    b) Use the table below to answer questions that follows use relative cell reference where applicable

	A	B	C	D	E	F	G	H
1	NAME	GENDER	BASIC PAY	ALLOWANCE	GROSSPAY	TAX	NET PAY	RANK
2	KEN	M	56000					
3	ANN	F	54000					
4	JOY	F	52000					
5	FRED	M	50000					
6	SAM	M	48000					
7								
8			0.15					
9								

Given that:

The male get 20% of the basic salary allowance while the female get 25% of basic salary allowance

Gross pay = Basic salary + Allowance

Every employee is taxed 15% of the Gross pay

Net pay = Gross pay – tax

Write the formula to calculate:

i) Ken's Allowance_____(2mks)

ii) Ann's Gross pay_____(1mk)

iii) Joy's Tax_____(2mks)

iv) Fred net pay_____(1mk)

v) Sam's Rank to see if the highest pay_____(2mks)

c) Explain the following database components. (3mks)

i) Worksheet_____

ii) Database_____

iii) Graph_____

d)What is a cell_____-(1mk)

17. a) What is a database? (1mk)

b) Give any three advantages of electronic database. (3mks)

c) Differentiate between. (6mks)

i.) Default value and caption

ii.) Validation rule and validation text

iii.) Indexed and primary key.

d) What is a control as used in database? (1mk)

e) Explain the function of forms in database. (1mk)

f) State any three examples of action query. (3mks)

18. Copyright laws are laws granting authors the exclusive privilege to produce, distribute, perform or display their creative works. It is a legal framework for protecting the works such as book publishing, motion-picture production and recording. State two challenges that are posed to these laws by ICT (2 marks)

b) Explain how data in a computer system is secured using: (4 marks)

(i) Password

(ii) User access level

c) State three characteristics of a suitable password. (3marks)

d) State two characteristics of a computer that is infected by computer viruses

e) State two measures that can be put in place to control piracy of software

f) Pesa Mingi Company has offices in Nairobi and Kampala connected to a network. The management is convinced that someone is illegally gaining access to the data in their computers. State Two ways in which the company can overcome this problem. (2marks)

19. a What is word processor software? (1mk)

b) Give any three paragraph formatting feature used in MS. Word. (3mks)

c) State the meaning of the following short cut commands as used in word processor. (4mks)

a. Ctrl + C
b. Ctrl + V
c. Ctrl + F
d. Ctrl + S

d) State any **two** examples of drop caps that can be used in text formatting. (2mks)

e) Study the text below and answer questions that follow

WHAT IS A METHODOLOGY?

The term methodology is not well defined either in Literature or by practitioners. There is very little agreement as to what it means other than at a general level. The term is usually used very loosely and yet it is used very extensively. This loose use does not mean that there are no definitions, simply that there are no universally agreed definition[s]. At The General Level, It Is Regarded as a recommended series of steps and procedures to be followed in the course and developing an information system. In a brief *a d h o c* survey, this proves to be about the maximum that people will agree to and of course such a definition raises many more questions than it answers.

Identify any four formatting features used in the above paragraph. (4mks)

f) What is a word wrap? (1mk)

20. Write the following abbreviations in full [4mks] CPU

_____

DRAM

_____

ROM

_____

BIOS

_____

21. Differentiate between the following terms [6mks]

Data and information

Hardware and software

Softcopy and hardcopy output

22. a) What is a peripheral device? Give two examples of peripheral devices. [4mks]

b) Mention four major categories of computer hardware. [2mks]

23. State four characteristics of fifth generation computers. [4mks]

24. a) Write the following abbreviations in full: [3mks] ENIAC

ICT
EDVAC

b) Describe three major ways of classifying computers. [6mks] a)
Define the term computer laboratory. [2mks]

b) State four standard conditions a computer laboratory should meet. [4mks]

25. a) What is a UPS? [2mks]

b) Describe two major functions of a UPS. [4mks]

c) Explain the following terms in relation to power supply problems.

Brownout [2mks]
Blackout [2mks]
Power sag [2mks]

26. State four advantages of using voice recognition devices. [4mks]

27. Describe three types of registers. [6mks]
28. State four differences between a CRT and a flat panel screen. [4mks]

Cathode ray tube	Flat panel display

29. State any three factors to consider when choosing a monitor. [3mks]

30. State any four factors to consider when choosing storage devices. [4mks]
31. a) List and explain three examples of utility software. [6mks]

_ b) State three factors which determine the cost of a computer system. [3mks] Define a file and a folder. [2mks]

32. a) Differentiate between type-over and insert mode as used in word processing. [2mks]

b) List two types of word processors. [2mks]
c) Differentiate between formatting and editing as used in word processing. [2mks]

d) List five toolbars available in a word processor. [5mks]

33. Define the following terms as used in worksheet list management: [8mks]

a) Sorting

b) Filtering

c) Subtotals

d) Data validation

34. a) What is a database? [2mks]

b) List four advantages of using a database in storage of records. [4mks]

CHRISTIAN RELIGIOUS EDUCATION
FORM 1 HOLIDAY ASSIGNMENT
BOOKLET (Volume 1)(15 Questions)

1 a) Give **five** causes of the original sin from the book of Genesis. **(5mks)**
b) List down instructions that God gave to Abraham regarding circumcision. **(7mks)**
c) Outline **six** moral teachings from the 10 commandments. **(6mks)**

2.a)State **seven** ways used by King David to promote the worship of God in Israel **(7mks)**

b) What lessons would modern political leaders learn from King Solomon. **(6mks)**

c) Describe the nature of the local Canaanite religion. (**7mks**)
3(a) State Jeremiah's prophecy about the messiah. **(6mks)**
b) State the message of Angel Gabriel about Jesus during the annunciation of his birth in Luke 1:32-35). **(7mks)**
c) Give **seven** ways in which parents develop their children's spiritual life. **(7mks)**
4a) With relevance to the sermon on the plain, state teachings of Jesus on how human beings should relate to one another. **(8mks)**
b) Describe the incident in which Jesus forgave the sinful woman in Luke 7:36-50. **(8mks)**
c) State ways in which Christians show their belief in God? **(6 mks)**

5 a) State ways in which human beings venerated and communicated with spirits. **(7mks)**

b) How do the aged in the Traditional African Communities prepare their family members before they die **(7mks)**
c) How are conflicts solved in Traditional African Society **(6mks)**

6. a) Give seven historical books of the Old Testament (7mks)

   b) What were the effects of bible translation into African languages? (7mks)

   c) Why should Christians make effort to read the bible? (6mks)

7. a) Give seven roles of ancestors in Traditional African communities. (7mks)

   a. State ways through which human beings venerated and communicated with the spirit world in

African Traditional society. (7mks)

b. Identify ways in which Christians show respect for God. (6mks)

8. a) Describe announciation of the birth of Jesus to the shepherds. (8mks)

   a. What were the qualities of Jesus shown in the event when he accompanied His parents to the temple for Passover? (6mks)

   b. Give reasons why children should take part in church activities. (6mks)

9. a) Narrate the parable of the rich man and Lazarus. (8mks)

   a. Identify the teachings of Jesus on wealth from the parable of the rich man and Lazarus. (5mks)

   b. Identify seven ways in which Christians help people who are in need. (7mks)

10. a) Describe the triumphant entry of Jesus into Jerusalem LK 19:28-40. (5mks)

    a. Identify reasons why Jesus conflicted with Jewish religious leaders in His Jerusalem ministry. (5mks)

    b. Give reasons why many people today still reject the gospel of Jesus. (7mks)

11. (a) Identify **seven** epistles of Saint Paul in the new testament. (7mks)

(b) How does God speak to human beings through the bible. (6mks)

(c) List **seven** ways in which God speaks to us today. (7mks)

12(a) State how sin was punished in African Traditional Religious belief. (7mks)

(b) Outline **six** responsibilities given by God to human beings in the Genesis story of creation. (6mks)

(c) Identify how does man continue with Gods work of creation (7mks)

13.(a) Describe the call of Abraham as expressed in Genesis 12:1-9. (8mks)

(b) Outline the characteristics of the covenant between God and Abraham. (6mks)

(c) Give **six** promises given to King David through Prophet Nathan. (6mks)

14.(a) Give reasons why there was widespread of idolatry in Israel at time of Elijah.(7mks)

(b) Give **seven** activities of Jeroboam that led to religious schism in Israel. (7mks)

(c) Identify **seven** factors that have affected the true worship of God today. (7mks)

15.(a) Outline **seven** ways how African people venerated ancestors. (7mks)

(b) Identify the moral values acquired during marriage in traditional African. (7mks)

(c) Identify acceptable ways of acquiring property in African Traditional society.(6mks)

ENGLISH FORM 1 HOLIDAY ASSIGNMENT BOOKLET (Volume 1)(Questions)

1. **IMAGINATIVE COMPOSITION**

   Write a composition beginning with:

It was going to be a wonderful day

2. **CLOZE TEST (10 MARKS)**

   Read the passage below and fill in each blank space with the most appropriate word.

   Gambling addiction is (1) _____ the rise in Kenya leaving young people bankrupt and suicidal.

   Kenya is the third –largest gambling market in (2) _____ behind South Africa and Nigeria. (3) _____ losing Ksh. 48,000 on bad bets in just a few hours, Jackson Kimani was thinking of (4) _____ suicide.

   The 26-year-old is a salaried employee. (5) _____works at a mobile money agency in Nairobi. Kimani took money from his shop to put a stake on (6)_____number of football games (7) _____ consecutively lost his bets. It was Saturday afternoon and Kimani says he was fortunate his manager didn't come in to check the balance.

   On Sunday, he took (8) _____chance and bet Kshs. 12000 on a number of games in European (9) _____. If he didn't recover whatever he took, he thought he would have to commit suicide (10)_____he knew the police would swiftly catch him.

3. **ORAL SKILLS (30MARKS)**

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

Be Ware

If you don't want a voice
With a bull-frog croak,
Take my advice:
Don't start to smoke

If you don't want bad breath

Like a dirty joke,
Take my advice:
Don't start to smoke

If you don't want lungs
Filled with sooty coke
Take my advice:
Don't start to smoke.

If you don't want a heart
Renewing one you broke,

Take my advice:
Don't start to smoke.

By John Kitching

Questions:

1. Identify the rhyme scheme and comment about it. (1mark)

2. Identify any two pairs of rhyming words in the poem. (2marks)
3. Other than rhyme, which other sound pattern is evident in the poem. (2marks)

b) Give a word that is pronounced the same as the following. (3marks)

i) Whale _____

ii) Missed _____

iii) You _____

c) Identify the silent letter in each of the following words (3 marks)

(i) Mutton
(ii) Sachet
(iii) Sword

d) The manager of smart uniform company calls to speak to the principal Upendo Secondary School. The secretary answers the phone call. Read the conversation below and then answer the questions.

Secretary: (picks the phone) Hello, secretary Upendo Secondary school speaking
Manager: Hello, could I speak to the principal, please?
Secretary: May I know whom I am speaking to please?
Manager: Okay. Please remind him of our meeting in your school.
Secretary: That is alright. I will relay the message to him.
Manager: Thank you for your assistance. Goodbye
Secretary: Goodbye and thank you for calling.

i) Explain how the speakers employ etiquette in their conversational skills (2 marks)

ii) Design a telephone message you would relate to the principal if you were the secretary (2 marks)

4. COMPREHENSION

Read the passage below and answer the questions that follow

The process of developing social skills among children at an early age is important. Researchers have cited rejection by peers as the greatest challenge children face in their quest to build meaningful social skills. It has been reported that children who get bullied and snubbed by peers are more likely to have problems in relating with others. In recent times, researchers have found at least three factors in a child's behavior that can lead to social rejection. The factors involve a child's inability to pick up on and respond to nonverbal cues from their pals. In the United states 10 to 13 percent of school-going children experience some form of rejection by their peers. In addition to causing mental health problems, bullying and social isolation can increase the likelihood of a child getting poor grades, dropping out of school, or developing substance abuse problems.

It is reported that the social skills that children gain on the playground or elsewhere could show up later in life, according to Richard Lavoie, an expert in child social behaviour. He says that children experiment with the relationship styles they will have as adults during unstructured playtime-when children interact without the guidance of an **authority figure.** Researchers say that the number-one need of any human is to be liked by other humans. However, researchers have expressed concern that our children are like strangers in their own land. They don't understand the basic rules of social behaviour and their mistakes are usually unintentional.

Children who face rejection may have problems in at least one of three different areas of nonverbal communication, which is the reason they are rejected. These are reading nonverbal cues; understanding their social meaning; and coming up with options for resolving a social conflict. A child, for example, simply my not notice a person's scowl of impatience or understand what a tapped foot means. In another situation, a child may have trouble reconciling the desires of a friend

with her own. Anyone trying to help children on their social skills should try to pinpoint the weaknesses a child has and then build those up.

When children have prolonged struggles with socializing, "a vicious cycle begins," children who are **shunned** by others have few opportunities to practice social skills whereas popular children have more than enough opportunities to perfect theirs. However, having just one or two friends can be enough to give a child the social practice he or she need.

Parents, teachers and other adults in a child's life can help, too. Instead of reacting with anger or embarrassment to a child who, say, asks Aunt Vera if her new hairdo was a mistake, parents should teach social skills with the same tone they use for teaching numeracy skills or proper hygiene. If presented as a learning opportunity, rather than a punishment, children usually appreciate the lesson. It is important to note that most children are so desperate to have friends that they **just jump on board.**

To teach social skills, Lavoie advises a five-step approach in his book. The process works for children with or without learning disabilities and is best conducted immediately after a wrongdoing has been made. First, ask the child what happened and listen without judgment. Second, ask the child to identify their mistake. Often children only know that someone got upset, but don't understand their own role in the outcome. Third, help the child identify the cue they missed or mistake they made, by asking something like: "How would you feel if Emma was hogging the tyre swing?" Instead of lecturing with the word "should," offer options the child "could" have taken in the moment, such as "You could have asked Emma to join you or told her you would give her the swing after your turn. "Fourth, you can create an imaginary but similar scenario where the child can make the right choice. For example, you could say, "If you were playing with a shovel in the sand box and Aiden wanted to use it, what would you do?" Lastly, give the child" social homework" by asking him to practice this new skill, saying: "Now that you know the importance of sharing, I want to hear about something you share tomorrow."

(Adapted from livescience.com-Tue Feb 2, 2010)

Questions

a) In one sentence, explain what this passage is talking about? (2marks)

b) What is the number one need of any human being? (1mark)

c) What are cited as the causes for social rejection according to the passage(2marks)

d) What is social rejection likely to lead to (2marks)

e) What vicious cycle is referred to in this passage (2marks)

f) How can a parent make children appreciate the lesson on social skills? (2marks)

g) "How would you feel if Emma was hogging the tyre swing?" Re-write in reported speech. (1mark)

h) Make notes on the five-step approach to teach children social skills (5marks)

i) Explain the meanings of the following words and phrases as used in the passage (3marks)

i. Authority figure ……

ii. Shunned ……

iii. Jump on board ……

5. ORAL LITERATURE

Read the following narrative then answer the questions that follow (20marks)

Once upon a time Hare and Hyena were very good friends. They visited each other every day and herded their cows together.

There came a time when the cows started dying one after the other. The two friends wanted to find out why the cows were dying. Hare said, 'Let us go and kill our mothers and take out their livers. We shall then cook and taste these livers. The bitter liver will show whose mother was making the cows die. At once Hyena went and killed his mother. He took out the liver and cooked it. Hare went and hid his mother in the garden in bushy banana plants. He then went and killed an antelope, took out its liver and cooked it.

The two friends met to eat their livers. "My liver is very bitter", said the Hyena. "Mine is very sweet," said Hare, "So it was your mother who was making the cows die." Hyena kept quiet and went home feeling sad. He moved from the old house to a smaller one because now he had no mother. Hare did the same

After a short time, there was great famine in the land. The two friends decided that each of them was to look for food on alternate days sharing, on an equal basis what was available. When it was

Hyena's turn, he went and found only honeycombs without any honey. When Hyena brought these, Hare refused this because he had secretly gone to his mother who had given him some bananas. This went on for many days, and Hyena grew thinner and thinner. Then he started wondering. "How does my friend remain fat and he doesn't eat anything. I will find out."

One day he followed Hare. Hare went to his mother as usual. 'Mother, mother, I have come' and the mother dropped some bananas which Hare ate quickly. He then looked for some honeycombs and took them to the friend. "This is all I could find my friend." The Hyena kept quiet. The next day he went to the banana plant and called. His voice however was very deep and no bananas were dropped for him.

There was an old hyena who was staying at the end of the forest and used to give advice to people. So Hare's friend went to her and told her his problem. "Go and put your tongue on the path of black ants," He was told, "Let them bite your tongue until it hurts. That's how your voice will be soft."

Hyena went and did as he was told. When he went to Hare's mother his voice was as soft as Hare's. "Mother, mother I have come." And Hare's mother dropped bananas for his him. Then he told her to come and greet him. When she came down and saw it was Hyena she screamed but there was nobody near to help. Hyena killed her immediately.

Hyena went and met Hare as usual saying nothing about Hare's mother. The following day it was Hare's. "Mother, mother I have come.' And Hare's mother dropped bananas for his him. Then he told her to come and greet him. When she came down and saw it was Hyena she screamed but there was nobody near to help. Hyena killed her immediately.

Hyena went and met Hare as usual saying nothing about Hare's mother. The following day it was Hare's turn. He went to his usual place. "Mother" he called again. He climbed up. There was nobody. Having seen some blood on the ground, Hare knew what had happened to his mother.

When Hare got back to Hyena's house, he said nothing. At night, Hare took all cows including Hyena's and went away to live in another part of the country. That ended the Hare and Hyena's friendship. And that is the end of my story to you.

Questions

a) With illustrations, classify the above narrative (2marks)

b) Identify three features of narratives (3marks)

c) Identify three features in this story that are characteristics of oral narratives (3marks)

d) Briefly explain the character traits of the following (4marks)

i. Hare ……

ii. Hyena ……

e) What moral lesson do you learn from this story? (2marks)

f) Identify two socio-economic activities from the community in which the narrative is taken from. (1mark)

6. GRAMMAR

i) **Fill in the blank space with the most appropriate interjection. (2marks)**

a) ……What a beautiful dress.

b) …….I have hurt my knee.

ii) **Use the most suitable form of the word in brackets to fill in the blank spaces. (3marks)**

a) My lawn ……. (cut) once a week.

b) We……(ask) by the teacher tomorrow

c) The fire brigade…….(phone) by neighbors soon after fire had broken out.

iii) **Fill in the blanks with correct words from the brackets. (3marks).**

a) All the guests will be ……(dinning/dining) with the queen tonight.

b) The people of Kameno shunned chege"s……(prophecy/prophesy) about the coming of the white men.

c) Children should always listen to their parents pieces of……..(advice/advise)

iv) **Change the following sentences into passive.**

a) Njoroge wrote the best composition.

b) Sue bought the beautiful house on the hill.

v) **Rewrite the following sentences putting the adjectives in brackets in their correct order.**

a) The old woman keeps a (black big fat) cat

b) Mr. Musumba likes wearing his (white old cotton) shirt.

c) She gave me a (metal small square) box.

vi) Rewrite the following sentences according to instructions given after each.

a) John told the principal that he needed to go and see the nurse because he was feeling unwell. (write in direct speech)

b) These books belong to the daughters of our teachers. (End with the word books.

1. WRITING - 20 MARKS

(a) The habit of failing to do assignments in your class has become rampant. You don't like it and you want to design a poster to warn your classmates against it. Design that poster. (10 marks)

(b) Your desk mate had done her assignment and requested you to present her book to your teacher of English. You failed to take her book to the teacher. Write a letter of apology to your desk mate apologizing for the mistake. (10 marks)

2. CLOZE TEST – 10 MARKS

Fill in each blank space in the passage below with the most appropriate word.

When it (1) ……to your turn to speak, move to the front of the room and face the (2) …….. Assume a relaxed but upright posture. Plant your feet firmly (3) …… the floor and allow your arms to hang (4) …… by your side. Arrange your (5) …… before you start to speak. Then take a moment to look over and smile. (6) ……..will help you to establish (7) ……. and your listeners from the start. Once you are into the speech feel free to use your hands to (8) ……., but don't worry overly; about

(9) ……..these ahead of time. If you don't normally use your hands expressively during informal conversations, then you shouldn't feel compelled to do this a lot during your speech; whatever signs you use should flow (10) …….. and Spontaneously.

3. ORAL SKILLS – 25 MARKS

(A) Study this tongue-twister. Ni nini kikusikitishacho?

(i) Translate into English (1 mark)

(ii) What effect does the translation have on it? (2 marks)

(iii) State two functions of tongue twisters. (2 marks)

(B) For each of the following words given, provide another with the same pronunciation.(5 marks)

(i) Billed ……

(ii) Ate ……

(iii) Quay …….

(iv) Neigh ……

(v) Wet ……

(C) You are stranded at a bus stop. You decide to call your Principal to report that you cannot arrive in school in time for classes. Below is a part of the telephone conversation. Fill the other part. (6 marks)

You: …….. (1 mark)

School secretary: I'm sorry the principal is in a meeting and cannot speak to you at the moment.

You: …….. (1 mark)

School secretary: May I know your class teacher please?

You: …….. (1 mark)

School secretary: I'm sorry Mrs Mwangi is already in class. Can you please leave a message?

You: …….. (1 mark)

School secretary: Oh, Mrs Muli is your house mistress? Just hold on as I connect you to her.

Mrs Muli: Hello. What can I do for you?

You: …….. (1 mark)

Mrs Muli: Sorry, I'll inform your class teacher about your predicament. Bye for now.

You: …….. (1 mark)

D. Read the following poem and then answer the questions that follow.

The Bride

Why do you wear that dress so white?
Why do you wear that veil so light?
Why do your young eyes shine so bright?
Is it your wedding?

I wear dress and veil to show
That gladly to my love I go
My young eyes shine because I know
It is my wedding.

(i) What is the rhyme scheme of this poem? (2 marks)
(ii) Using illustrations show how rhythm has been has been achieved in the poem. (3 marks)

E. Indicate by underlining the stressed syllable in the following words. (4 marks)

	Verb	***Noun***
(i) Refuse	…….	……..
(ii) Project	…….	……..

4. COMPREHENSION (POETRY) – 20 MARKS

Read the poem below and answer the questions that follow.

You embarrass me …
Mwananchi
Why do you embarrass me with your questions
About the new Mercedes I bought
The large farm I own
The houses, the wives,
An inflated stomach!

Mwananchi
Why do you threaten me with your threats
The threats in your bloodshot eyes
Fixedly pointed at me wherever I go
Like if you are ready
To release the arrow that will deflate me
Into nothingness;
Even the watchmen, the dogs, the police
Are all not enough to protect me
From your increasing shouts to protest
Against my good judgement;

Mwananchi
Have your forgotten how you loved me
And gave me your vote
That I may be your man in parliament?

Now that I have the power
I will mend your confused senses
And keep you in prison
Until you see me as your leader again
And keep those bloodshot eyes away from me.

I will charge like an angry lion

And scare you out of your wits
Until like a frightened dog,
You keep your head forever …
Everett M. Standa

(a) Identify the persona in the poem. (2 marks)

(b) What is the message of the poem? (4 mks)

(c) Identify and comment on any two aspects of style in the poem. (6 mks

(d) Describe the tone of the poem. (2 marks)

(e) Identify and illustrate two character traits of Mwananchi. (4 mks)

(f) Explain the meaning of the following words and phrases as used in the poem. (2 marks)

(i) Inflated stomach
(ii) Scare you out of your wits.

5. GRAMMAR 25 MARKS

A. Combine each pair of simple sentences below to make a complex sentence. (5 marks)

(i) The doctor must be tired. She had no sleep last night.

(ii) A lady will call to see me. Please ask her to wait.

(iii) It was very hot last night. I still slept well.
(iv) He spoke very softly. Nobody could hear what he said

(v) She is a great orator. That cannot be denied.

B. Underline the verb phrases in the following sentences. (5 marks)

(i) I have been studying English for ten years.

(ii) Many people do not Accept clones.

(iii) Scientists are doing a lot of research.

(iv) Dolly did not have a long life.

(v) The wedding has been cancelled.

C. Fill in the blanks with the most appropriate subordinating conjunction from the box. (5 marks)

So that, when, although, whenever before, how, while, why, once, until

(i) She sheltered in our house ……the rain stopped.

(ii) Nyagaka studied French ……..he would apply for a job in the United Nations.

(iii) ……the food was still growing in the shamba, we had absolutely nothing to eat.

(iv) It is a mystery …….. the man came back for the girl.

(v) Mwadime gets very happy …….his mother-in-law visits him.

D. Join each pair of sentences appropriately with the words given in brackets. (5 marks)

(i) She was successful. She felt dissatisfied. (In spite of her …...)

(ii) I wish to go to the cinema. I do not want to sit here doing nothing. (Instead of)

(iii) A few buses are running. There is a strike. (In spite of……)

(iv) The President returned homefrom Cairo. There is unrest in the country.
(because of ……)

(v) He is in a stable condition. He lost a lot of blood. (despite…….)

E. Use the verb given in brackets in its progressive aspect. Use the appropriate auxiliary. (am, is, are) to go with the verb. (5 marks)

(i) The guests …… dinner now. (eat)

(ii) She …… very fast. (run)

(iii) Nakato ……to visit me today. (come)

(iv) You …….. to me (not listen)

(v) Njue …… the baby. (feed)

A) FUNCTIONAL WRITING (20MKS)

Imagine you are one of the passengers in Easy Coach Bus going to Kisumu. You alight in Nakuru and later realize that you picked another passenger's luggage by mistake. Write a letter of apology to the manager, Easy coach company Kisumu office. Direct him to pick the luggage at the Nakuru office and request him to drop yours at the same office. Remember to thank him for being kind.

B) CLOZE TEST (10MKS)

FILL IN THE BLANKS WITH THE MOST APPROPRIATE WORD

I 1_____I was treated less kindly when I arrived. The host did not look directly 2 _____ me. Yet I had thought that my visit would be 3 _____ appreciated. There were six people in that small room and all continued to direct their 4 _____ towards the television set. It was news time. I was 5 _____ on time for a great disappointment 6 _____I encouraged myself, "not again, not ever."

When I asked why I was given such a hostile 7 _____, I got evasive answer.

Anyway, I was supposed to be a goodwill messenger from the local Government Revenue Department 8 _____ six gentlemen sitting 9 _____ the tiny table were meant to be waiting with bated breath and appreciation for my news. Well, I decided they could wait a 10 _____ longer.

C. ***COMPREHENSION***

1. ***Read the passage below and answer the questions that follow:***

BAKING soda or bicarbonate or edible soda (ENO), as it is also called, is sodium bicarbonate in chemistry books. It is different from washing soda or soda ash, which is sodium carbonate. Soda bicarbonate was called 'saleratus' in earlier days.

In the human body, it is the main mildly alkaline substance. The human body makes it out of carbon dioxide breathed in sodium obtained from the salt in the diet. it helps to maintain the delicate balance between acidity and alkalinity that is necessary for the normal chemical activity in the body. It helps transport carbon dioxide to the lungs, neutralizes stomach acids as a component of saliva, helps cut

down on tooth decay. The blood of a healthy human being is slightly alkaline. When the amount of sodium bicarbonate in the blood is insufficient, we suffer from acidosis. The digestive juices from the liver and pancreas are alkaline. The gastric juice in the stomach is decidedly acidic and it contains hydrochloric acid.

To most people, baking or edible soda in tablet form or a powder is a comforting medicine to sooth acidity. A teaspoon dissolved in a glass of water is a popular and effective remedy for indigestion. A cupful dissolved in bathwater along with two cupfuls of starch helps relieve the itching of allergic reactions.

When mixed with water to form paste, it helps alleviate the pain of minor burns and a paste of soda bicarbonate and water or cold cream, relieves the discomfort of insects bites. For fungus on your feet, especially between your toes, apply a soda bicarbonate paste. For foot odour soak your feet in a solution of soda bicarbonate in water. Take soda bicarbonate and mix it with a little bit of water, and apply it with your fingers along the gum-line in your teeth. Brush your teeth after this. It will help you stop all sorts of gum diseases. Mixed with a little common salt, soda bicarbonate makes an excellent tooth powder. Most toothpaste contains a little soda bicarbonate.

As a formidable plaque deterrent soda bicarbonate was recognized as an efficient dental cleaner in 1931 only. Soda bicarbonate is now a major component of best selling toothpastes. There is exclusive soda bicarbonate toothpaste. From the home medical cabinet, soda bicarbonate has now moved to the industry. Today, it is used to curb acid emissions from chimneys and to help prevent acid rain, to keep toxic materials like lead and copper out of drinking water, to help in biodegradation of sewage and to remove contamination from soil. It may turn out to be world's 'greenest' natural chemical. It has more than 300j applications in industry and more and more uses are still being discovered. Soda bicarbonate is also added to cattle feed. Cattle raised for meat industry are fed a high energy, low-fibre diet to maximize weight gain, are given supplementary soda bicarbonate to speed up their digestion process. Dairy cows which are given a similar diet, also have soda (bicarbonate mixed with their feed).it (increases their milk production). Use of soda bicarbonate in baking was an instant success as a time-saver.

Yeast breads needing a rising time of two to three hours where quickly joined by quickrising baking soda batters, breads and biscuits.

When soda bicarbonate is combined with an acid like vinegar (acetic acid), butter-milk containing lactic acid, carbon dioxide is released to create an instant cleaning agent.

Scour tarnished brass and copper pots with a paste of soda bicarbonate and lemon juice. They will shine once again. Flush one cup of soda bicarbonate down the toilet every week. It helps clean clogged septic tanks. For food stuck or burnt into pots and pans, cover the burned food generously with soda bicarbonate. Add enough hot water and let it soak for a few minutes. Wash thoroughly.

1. a) How does the human body absorb soda bicarbonate?(2mks

b) In note form, what is the importance of soda bicarbonate in the human body?(4mks

c) The digestive juices from liver and pancrease are alkaline.(Begin: Both ….)(1mk

In a paragraph of not more than 40 words, summarize the uses of edible soda at home(8mks

ROUGH COPY

FAIR COPY

d) Soda bicarbonate is used to curb acid emission from chimneys and to help prevent acid rain. (Begin: Not only …..)(2mks

e) Give the meanings of the following words and phrases as used in the passage (1mk
i) Comforting medicine to soothe acidity (1mk

ii) Remedy (1mk

iii) Greenest natural chemical (1mk

iv) Deterrent (1mk

(f) ***Rewrite the following sentence in reported speech:***
"There are many people who can help you if you are really serious about financial success", he said, "so seek them out and ask for help".(1mk)

(g) What does the writer say is the truth about loans? (2mks)

(h) ***Explain the meaning of the following words and phrases as used in the passage***: (4mks)

(i) Back to the drawing board
(ii) To gauge our financial health
(iii) Seek
(iv) Premium

C) ORAL SKILLS (30MKS)

a) Oral Poem

Read the following oral poem and answer questions that follow (8 marks)

One hand cannot manage work
A threshing stick cannot thresh millet with
One hand
Some hands breed hatred at eating time
Nobody hates being assisted
Let millet be threshed
Let it be threshed, let it be threshed
Cut a threshing stick for me
A lazy wife

Is taken back to her parents

When the rain fails

It blames the wind

And a lazy woman

Blames the threshing stick

Cut a threshing stick for me-ii

My co-wife, cut me a threshing stick

You woman, owner of this occasion

Remember that work is the stomach

Take care not to starve us

The threshing sticks are sounding

Let the millet leave the threshing ground

(Adapted from Oral Literature of the Embu and Mbeere by CiarunjiChesaina)

Questions

1. Identify and illustrate two mnemonic effects (sound devices) in the poem.(2 marks)

2. You've been asked to perform the above poem. Explain how you will prepare for it. (2 marks)

3. What non-verbal aspects would you use in the performance of the poem and where? (2 marks)

4. While performing the above poem you notice that members of the audience are murmuring what could the problem be? (2 marks)

b) Give another word with the same pronunciation as the word given (3 marks)

(i) Born .....

(ii) Heard .....

(iii) Gamble .....

(iv) Core .....

(v) Some .....

(vi) Aisle .....

c) Identify the silent letter in the following words (3 marks) (i) psychology

(ii) Debut

(iii) know

(iv) Tomb

(v) Lesson

(vi) Subtle

d) You attend a prize-giving ceremony in your school. Mention four things that will indicate that the students are attentive as the chief guest speeches. (4 marks)

e) The underlined indicates the stressed word in the sentence below. Briefly explain what each sentence means (3 marks)

(i) Tom visited Mary yesterday
(ii) Tom visited Mary yesterday
(iii) Tom visited Mary yesterday

f) **TELEPHONE CONVERSATION**

Imagine that your uncle, John calls you and wants to send you to your grandmother tomorrow. Fill in the blank spaces so as to complete the conversation that took place

Uncle John: hello Jack. This is Uncle John. How are you?

You: _____ (1mk

Uncle John: I am happy that you are fine. Please, do me a favour. I brought some items for your grandma and she needs them urgently._____ (1mk You: tomorrow? _____ (1mk Uncle John: What plans?

You: _____ (1mk

Uncle John: could you reschedule the visit? Joseph will you understand You: _____ (2mks

Uncle John: I see your point. You cannot cancel the visit for a second time? You: _____ (2mks

Uncle John: sure! I'll try Patrick _____ (1mk)- You: I assure you he will be of help _____ (1mk

Uncle John: oh! I didn't know he enjoys travelling. Thank you for that suggestion. You: thank you for being understanding.bye.

SECTION E: GRAMMAR (20 MARKS) 1. Fill in the blanks with simple present form of the verbs in brackets.(5 Marks)

i. Nairobi _____ the capital of Kenya. (be)

ii. The posts _____ very heavy. (be)

iii. She and her sister _____ very hard.(work)

iv. They _____ to work by bus. (come)

v. Raising children _____ a fortune. (cost)

A. Arrange the adjectives given in brackets in the correct order in the space provided. (supply a, or an where necessary). (5mks)

1. She was wearing a _____ dress. (Japanese, silk, green)
2. I have just read (a/an) _____ novel. (new, exciting, Caribbean)
3. The meeting took place in a _____ hall. (conference, dilapidated)
4. The company is proud to launch a_____ drink. (refreshing, sparkling, new)
5. His car was a_____ model. (French, reliable, twenty-year old)

(a) Complete each of the following sentences with one of the words in brackets. (3mks)

(i) They saw _____ animals in the park than they expected. (less, fewer)

(ii) After walking for three kilometers, they were lucky to get _____ water from the stream. (little, a little).

(iii) We cannot accommodate another person, there is _____space left. (little, a little)

(b) Use the right form of the words in brackets. (3mks)

(i) The modern world today has many _____ forms of communication. (sophistication).

(ii) There are several factors which contribute to a healthy _____ (exist). (iii) Victims of drug abuse become social _____ (fit).

C)supply questions tags to the following statements(4mrks)

1. He didn't come to school,……..?
2. I have not seen her,……..?
3. Jane rarely sleeps in class,……..?
4. She is a smart lady,…….?

GEOGRAPHY FORM 1 HOLIDAY ASSIGNMENT BOOKLET (Volume 1)(26 Questions)

1 (a) What is a land breeze? [2mks]

(b) State three ways in which sea breezes influence the adjacent land [3mks]

2. (a) For each of the following rocks, include the metamorphic equivalent [2mks]

Original rock	Metamorphic rocks
Limestone	
Clay	

(b) List three characteristics of sedimentary rocks [3mks]

3. a) Name two type of boundaries associated with the plate tectonic theory [2mks]

(b) Give three effects of the movement of tectonic movement [3mks]

4. (a) Name one fold mountain in

(i) Asia ……..

(ii) South Africa …….

(b) Apart from the Fold Mountains, name three other features resulting from folding [3mks]

5. (a) Give two uses of diamond

(b) Identify three problems facing diamond mining in South Africa [3mks]

6. The table below represents rainfall and temperatures of station Y. Use it to answer the questions (a) and (b)

Months	J	F	M	A	M	J	J	A	S	O	N	D
Temperature 0^{o}_{C}	30	31	31	31	30	29	28	29	29	29	29	30
Rainfall (mm)	250	250	325	300	213	25	25	25	25	275	380	200

(a)i} Calculate the annual range of temperature of station y [2mks

{ii}Compute the total annual rainfall for station y [2mks]

{b}describe the climate characteristics of station y [6mks]

{c}State three significance of weather forecasting to the human activities [3mks]

7(a){i} Define faulting (1mk)

{ii}Identify three types of faults (3mks)

(b){i} Apart from compressional process explain two other processes that may cause faulting (4mks)
{ii}Apart from Rift Valley, name three other relief features that were formed by faulting

(3mks)

(c) You intend to carry out a field study in a nearby place where faulting has occurred

{i} identify two appropriate method you would use to collect data (2mks)

{ii}What are the likely problems you would face in your study (2mks)

8.a{i} What is vulcanicity? (1mk)

{ii}Name three intrusive volcanic features (3mks)

{iii}State four negative effects of vulcanicity in Kenya (4mks)

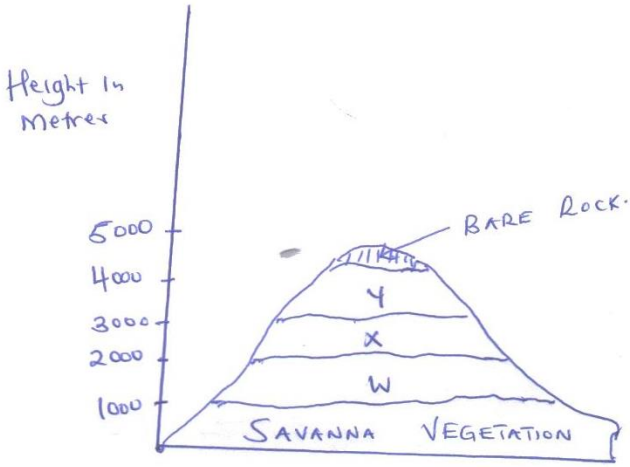
(b)You intend to carry out a field study of a volcanic landscape;

{i}State four reasons why it is necessary to carry out a reconnaissance of the area of study [4mks]

{ii}During your field study, you intend to study volcanic rocks. State why you would need the following items;

- Hammer (1mk]
- A polythene bag (1mk)

9.a{i}The diagram below represents zones of natural vegetation on a mountain in Africa. Use it to answer question (a)i} and {ii}



(a)i}Name the vegetation zones marked (3mks)

- W……
- X…….
- Y……

{ii}Describe the characteristics of savanna vegetation (3mks}

{iii}Name the temperature grasslands found in the following countries

- Canada…….

- Russia ……
- Australia…….

(b)Explain three causes of decline of area under forest in Kenya (6mks)

10.a){i}Give two examples of energy minerals (3mks)

Minerals	**Area mined**
Fluospar	
	Kariandusi
Trona	

(b)i} Name two leading importers of Soda ash form Kenya in Africa (2mks]

{ii}State three benefits of Trona Mining in Kenya's economy (3mk)

(c)i} Name two by-product of crude oil (2mks)

{ii}State three problems associated with oil mining (3mks)

11. a) Define the term equinox (1mk)

b)Name the time of the year when equinox is experienced (2mks)

c) What is the time at Hola 40^{o}C , when the time at Accra in Ghana 0^{o} is 12.00 noon (3mks)

12. a) Differentiate between tensional force and compressional force (2mks)
b) Apart from normal fault , list three other types of faults (3mks)

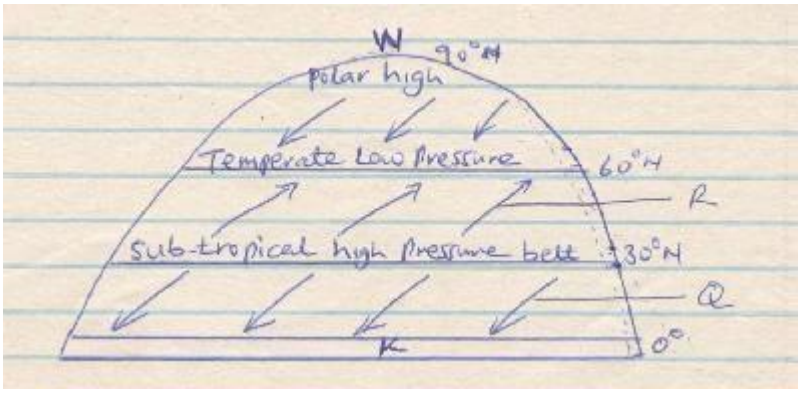
c)Draw a well labeled diagram of a normal fault (4mks)

d)Explain **three** ways in which features resulting from faulting positively influence kenya's economy (6MKS)

13. a) (i) Define the term weather (2mks)

ii) Apart from precipitation , list **four** other elements of weather (4mks)
iii) Apart from rain name **three** types of precipitation that occurs in Kenya (3MKS)
b)While using a well labeled diagram describe how relief rainfall occurs (8mk

14. a) Study the diagram below and answer question i, ii, and iii



i. Label the part marked W

ii. Name the pressure belt labeled K

iii. Identify the wind labeled

Q - R -

b)i) What do the initials I.T.C.Z stand for ? (1mk)

ii. State four characteristics of ITCZ (4mks)

15. a) what is a minerals? (2mks

b)Describe the following characteristics of minerals

i. Colour(2mks

ii.Hardness (2mks

c)Fill in the part of the table labeled A ,B , C and D in the table below

Original rock	Type of rock	New rock
Sandstone	Sedimentary	A
B	C	Gneiss
D	sedimentary	Marble

A

B

C

D

d)Give four uses of rocks (4mks)

16. a) (i) What is vegetation ?(2mks)

ii.Describe the characteristics of Equatorial forest (4mks)

iiiName the grasslands found in the following regions

-North America

-South America

-Australia

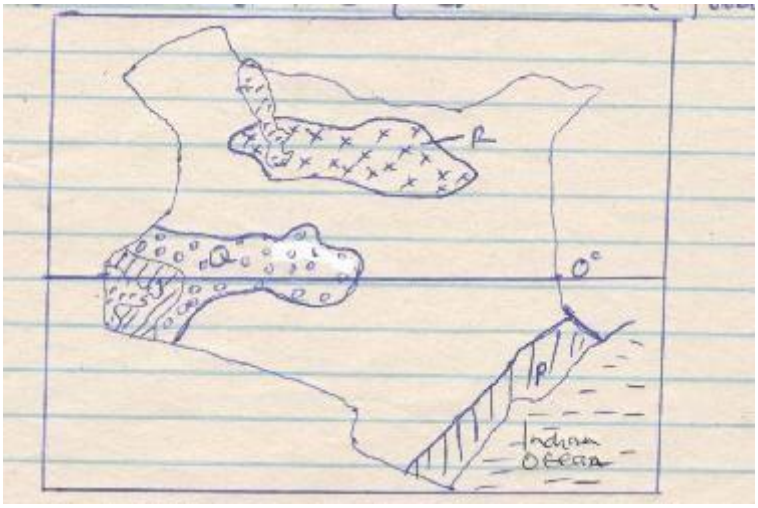
b) You are planning to carry out a field study in a forest near your school.

i) List two sources of information you are likely to use before the actual field study (2mks)

ii)State three ways how you would identify different types of plants (3mks)

17. Study the map of Kenya showing climate regions .

Use it to answer the question that follows



a. Identify the climatic region marked P and Q

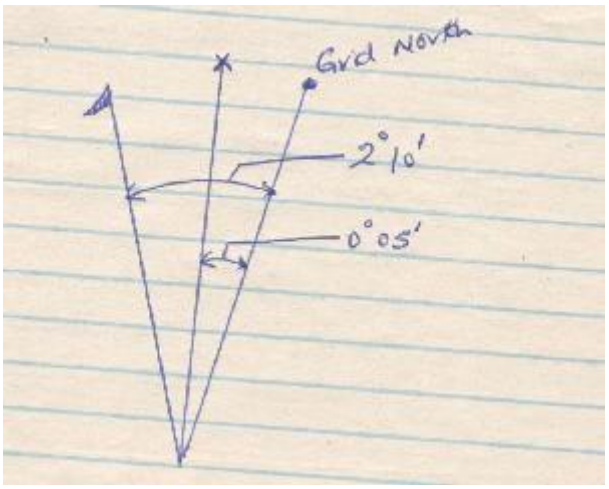
P

Q

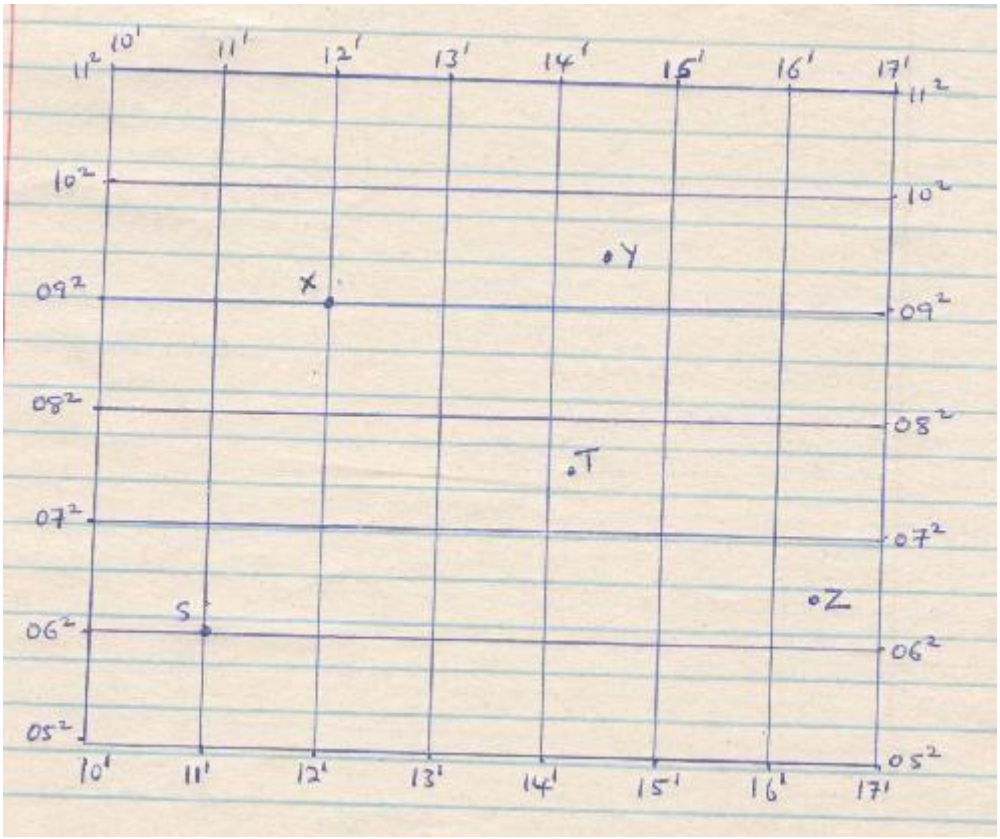
b. State two characteristic of the climatic region marked L(3mks

18. a) Name two methods used to represent relief on a topographical map (2mks

b)The diagram below represent a compass on a topographical map . Calculate the magnetic variation



c)Study the map extract below and answer the question that follows



i. Give the four figure reference for points

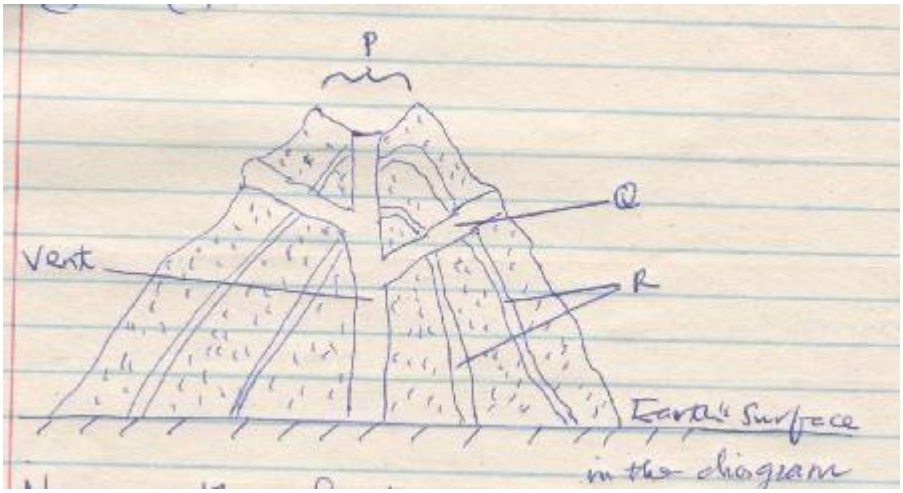
X

Y

Z

ii. Calculate the bearing of point S from T(2m

19. (a) Study the diagram below and answer question (i) and (ii)



i. Name the feature shown in the diagram above(1mk

ii. Identify the features labeled P , Q and R (3mks)

P

Q

R

b) Describe how geysers are formed (5mks

20. (a) What is a galaxy? (1mk)

(i) Describe the characteristics of the sial. (5mks)

21. (a) Define an isolyet. (1mk)

(ii) Give **three** factors that influence the amount of rainfall in a place. (3mks)

22. (a) Distinguish between a upthrow and a downthrow. (2mks)

(b) Outline **two** examples of fault scarps in Kenya. (2mks)

23. (a) Give **two** types of earthquake waves. (2mks)

(b) State **three** natural causes of earth quakes. (3mks)

24. (a) State **two** ways in which minerals occur. (2mks)

(b) Describe solution as a method of mining. (4mks)

25. (a)(i) What is forestry? (2mks)

(ii) Apart from tropical hardwood forests, name two other types of natural forests. (2mks)

(iii) State the problems experienced in exploitation of tropical hardwood forests. (5mks)

(b) List the characteristics of planted forests in Kenya. (5mks)

(c) Explain three factors that favor forestry in Canada. (6mks)

(d) Give five measurers that the government has taken to conserve and manage forests in Kenya. (5mks)

25. (a)(i) Define the word internal land forming process. (2mks)

(ii) Apart from Rift valley, features caused by faulting, identify three features that result from vertical earth movements. (3mks)

(b)(i) State four causes of earth movements. (4mks)

(ii) Describe the theory of continental drift. (6mks)

(c)(i) State three characteristics of plate tectonics. (3mks)

(ii) Describe the following types if plate boundaries.

(a) Constructive boundary (3mks)

(b) Compressional boundary. (2mks)

(iii) Give two plates in the Pacific Ocean that led to the formation of the Andes mountains. (2mks)

26.(a)(i) What is vegetation? (2mks)

(ii) Differentiate between natural vegetation and planted vegetation. (2mks) (b)

Explain how the following factors influence the distribution of vegetation:

(i) Relief (2mks)

(ii) soils (2mks)

(c) Describe the characteristics of the savannah vegetation region relief. (6mks)

(d) You are planning to carry out a field study in a forest.

(i) Give four reasons why it is important to seek permission from the school administration. (4mks)

(ii) List three sources of information you are likely to use before the actual field study.(3mks)

(iii) Identify four challenges you are likely to encounter during the field study. (4mks)

HISTORY & GOVERNMENT

FORM 1 HOLIDAY ASSIGNMENT

BOOKLET (Volume 1)(60 Questions)

1. Give one branch in the study of History and Government (1mk)
2. Identify two reasons why early man lived in groups (2mks)
3. State one way in which poor transport has led to shortage of food in Africa (1mk)
4. List two inventions that have revolutionized food preservation in the 21st century (2mks)
5. What was the main reason for the migration of the Bantus from Shungwaya during pre-colonial period (1mk)
6. State two religious functions performed by Oloibon of the Maasai during pre-colonial period (2mks)
7. Identify two factors that led to the spread of Islamic religion in Kenyan coast in 1600 AD (2mks)
8. Name two main items of trade from the interior of Kenya during the Long Distance trade (2mks)
9. State two conditions that a person should meet to qualify to be a Kenyan citizen by birth (2mks)
10. Give one economic factor that promote national unity (1mk)
11. State the main reason why a Kenyan citizen should obey the law (1mk)
12. Identify one factor that facilitated the acquisition of slaves during Trans-Atlantic trade (1mk)
13. Name one earliest water vessel used by man as a means of transport (1mk)
14. Give one disadvantage of using coal as a source of industrial energy during the 19th century (1mk)
15. State the main factor that led to the growth of Kilwa as an early urban center in Africa (1mk)
16. Identify two ways in which centralization of authority contributed to the growth of Buganda kingdom (2mks)
17. State two ways in which direct democracy is exercised in Kenya (2mks)

18 a) Identify five hunting methods used by man during Old Stone Age Period (5mks)

b) Describe the culture of early man during the Early Stone Age Period (10mks)

19 a) State five advantages of using currency system of trade (5mks)

b) Explain five ways in which West African communities benefited from Trans-Saharan trade (10mks)

20 a) Name five traditional forms of communication (5mks)

b) Explain five impacts of using internet as a source of information on History and Government (10mks)

21 a) State five factors that facilitated the growth of Asante kingdom (5mks)

b) Describe social organization of the Buganda kingdom up to 19th century (12mks)

22 a) Give three symbols of national unity in Kenya (3mks)

b) Explain six importance of National Integration in Kenya (12mks)

23 a) State three challenges faced in constitution making process in Kenya (3mks)

b) Describe the stages involved in constitution making process (12mks)

24 a) Give three circumstances under which rights and freedom of movement and residence can be limited (3mks)

b) Explain six social rights of an individual in Kenya (12mk)

25. State one branch of history (1mk)

26. Give two functions of the council of elders among the Nandi (2mks)

27. Apart from Carbon 14, name the other chemical method of dating fossils (1mk)

28. What is dual citizenship (1mk)

29. Sate the main disadvantage of the sailing ship (1mk)

30. Name two ancient forms of picture writing (2mks)

31. Give the contribution of Alexander Flemming in the field of medicine (1mk)

32. Mention two uses of iron (2mks)

33. State the main reason for the growth of Kilwa (1mk)

34. State two sources of energy used by ancient communities (2mks)

35. Name two officials who assisted the Kabaka in administration (2mks)

36. Give two items acquired from Europe during the Trans-Atlantic trade (2mks)

37. Name two missionaries who worked along the coast of Kenya in the mid – 19th century (2mks)

38. Identify two natural factors that facilitated the coming of Arabs to the East African Coast (2mks)

39. Define the term Democracy (1mk)

40. Name the type of constitution used in Britain (1mk)

41. Name one organ of the government of Kenya (1mk)

42. a) Name three materials used by early man to make tools (3mks)

b) Describe how the invention of five transformed man's way of life (12mks)

43. a) Name five early visitors to the coast of East Africa (5mks)

b) Explain why plantation Agriculture was successful in East Africa during the rule of Seyyid Said (10mks)

44. 20)a) Identify five traditional methods of communication (5mks)

b) Explain five impacts of scientific inventions on agriculture (12mks)

45. a) State five roles of Kukiiko in Buganda Kingdom (5mks)

b) Explain the political organization of the Asante (10mks)

46. a) State three rights of an arrested person in Kenya (3mks)

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

47. Apart from the Borana, name four communities that belong to the Eastern Cushites in Kenya. 4marks)

48. Give four reasons that led to the migration and settlement of the Western Bantus in Kenya.
(4marks)

49. State four factors that led to the growth of towns along the Kenyan Coast before 19th Century. (4 marks)
50. Give four factors that led to the decline of the Portuguese rule along the East African Coast in the 16th C. (4 marks)
51. State four rights of an accused person during trial in a court of law in Kenya. (4 marks)
52. Give four circumstances under which ones freedom of expression may be limited in Kenya.
    a. marks)
53. State four political causes of conflict. (4 marks)
54. Give any four ways of peaceful conflict resolution in a country such as Kenya. (4 marks)
55. State four characteristics of a good constitution. (4 marks)
56. State four factors that determine the formation of a constitution of a country. (4 marks)
57. (a) State five economic activities of the River – Lake Nilotes in the pre – colonial period. (5 marks)

    (b) Describe the political organisation of the Mijikenda during the pre – colonial period.

    (10 marks)

58. (a) Outline five factors that facilitated emergence of plantation agriculture along the Kenyan coast in the 19th Century. (5 marks)

    (b) Explain five ways through which establishment of mission stations promoted the spread of Christianity. (10 marks)

59. (a) State five values of good citizenship in Kenya. (5 marks)
    a. Explain five importance of National Integration in Kenya. (10 marks)
60. (a) Give five Independent Commissions established by the Constitution of Kenya. (5 marks)
    a. Explain five features of the Independence Constitution of 1962. (10 marks)

HOME SCIENCE FORM 1 HOLIDAY ASSIGNMENT BOOKLET (Volume 1)(70 Questions)

1. Give the scientific name of each of the following nutrients. (2 marks)

   Vitamin B 1.

   Vitamin E

   Vitamin C

   Vitamin A

2. Give **two** rules to observe when taking body measurements. (2 marks)
3. Identify **three** factors to consider when buying shoes. (3 marks)
4. Suggest **two** benefits a consumer may get from advertising. (1 mark)
5. Give your understanding of each of the following in drainage. (3 marks)

   Sewer

   Manhole

   Septic tank

6. Fill the table below on pattern marking and symbols. (4 marks)

Symbol	Description	Purpose
		
		
		
		

7. Mention **two** differences between dry beriberi and wet beriberi. (2 marks)
8. List **two** precautions to take when deep fat frying. (2 marks)
9. Identify **two** diseases that can be transmitted through sharing water bottles.(1 mark)
10. Give **two** advantages of boiling as a method of cooking. (2 mark)
11. Mention **two** causes of anaemia other than poor iron intake in food. (2 marks)
12. Identify **four** measurements that should be taken when making a pair of shorts.(2 marks)
13. State **three** ways of avoiding worm infestation. (3 marks)
14. Mention **three** precautions to take when using an electric iron. (3 marks)
15. Give **two** uses of a seam ripper. (1 mark)
16. Outline **two** reasons why consumers should be educated. (2 marks)
17. Mention **two** reasons for lining a kitchen bin. (1 mark)
18. Give **two** points to observe when working permanent stitches. (2 marks)
19. Your parents are planning to celebrate their 25th wedding anniversary and they have invited a number of their friends
    a) . Give the steps you will follow in laundering and treating the white linen table cloth to be used for the occasion. (12 marks)

b) Outline the procedure you will follow in cleaning the polished wooden dining table (8marks)

20.

a) Discuss **three** ways that the use of an article can affect the laundry process. (6 marks)
b) Explain **three** dangers of drug abuse in students. (6 marks)
c) Mention **four** ways a consumer can show integrity when shopping. (4 marks)
d) Give **four** ways of avoiding drowning during school holidays. (4 marks)

21.

a) Identify **four** information that a consumer can get from a packet of packed foodstuff. (4 marks)
b) Explain **three** reasons why linen is good for making dish cloths. (6 marks)
c) Mention **four** reasons why water is important in the diet. (4 marks)
d) Discuss **three** factors a young family should consider when choosing on where to live. (6 marks)

22.

a) Mention **three** ways of identifying textile fibres. (3 marks)
b) Discuss **three** dangers of having raw sewage flowing in a residential area. (6 marks)
c) Identify **five** ways conserving nutrients when cooking and preparing spinach.

(5 marks)

d) Explain **three** qualities of a fabric suitable for making a swimming costume. (6 marks)

23. State **three** areas to study in home science. **(3 marks)**
24. Name **two** layers of the skin. **(2 marks)**
25. Name **two** classification of household refuse. **(2 marks)**

26. Define term drainage. **(1 mark)**

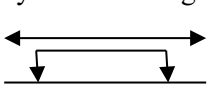
27. Suggest **three** reasons for drainage. **(2 marks)**

28. State **two** disadvantages of poor sanitation. **(2 marks)**

29. What are communicable diseases? **(1 mark)**

30. State **two** important reasons for pressing work during construction. **(2 marks)**

31. Identify the following symbols in garment pattern piece. **(3 marks)**



32. State **two** reasons why wool is not suitable for making aprons. **(2 marks)**

33. State **three** importance of learning consumer education. **(3 marks)**

34. Suggest the meaning of the following:

a. Goods **(1 mark)**

b. Services **(2 marks)**

35. State **two** types of conspicuous seams. **(2 marks)**

36. What is **food** fortification? **(1 mark)**

37. State **one** way of conserving nutrients during storage. **(2 marks)**

38. Suggest **two** advantages of using an electric cooker. **(2 marks)**

39. State **two** changes that you are likely to observe when deep frying mandazi. **(2 marks)**

40. What is aflatoxin? **(1 mark)**

41. Suggest **two** method of finishing a plain seam. **(2 marks)**

42. Suggest **two** ways of improving cloths storage facilities. **(2 marks)**

43. Your grandmother has invited you to her house to stay overnight. You are helping her wash her woolen sweater.

a. Explain **six** steps one should avoid when laundering and drying a woolen article.

(6 marks) b. Explain step by step how to daily clean her sitting room. **(8 marks)**

c. Explain to her six points to observe when using chemical disinfectant in her laundry.

(6 marks)

44.

a) List **four** items which can be recycled at our homes. **(4 marks**

b) Identify **five** activities carried out in management of amoebic dysentery. **(5 marks**

c) Explain **three** disadvantages of open drainage in an area. **(6 marks**

d) List **four** laundry processes. **(2 marks)**

45.

a) Discuss **three** treatments why may be done to clothes and article during the rising stage.

(6 marks

b) List **four** fabrics which cannot be disinfected by boiling. **(4 marks**

c) Discuss three rules for darning.

(6marks

d) Draw the following washing symbols

i. Don't dry in the sun **(1 mark)**

ii. Hang on the line to dry **(1 mark)**

iii. Do not tumble dry **(1 mark)**

iv. Use cool iron **(1 mark)**

46.

a) Explain **three** causes of malnutrition **(6 marks**

b) List **four** sources information for the consumers. **(4 marks**

c) Discuss **three** important factors of enriching a teenage girl diet with iron giving food **(6 marks**

d) List **four** reasons for wearing shoes **(4 marks**

47. Suggest 2 ways of preventing falls in the house. (2mks)
48. Give two examples of self-neatened seams. (2mks)

49. Mention two reasons why consumer education is important. (2mks)

50. Give the difference between sedimentation and filtration. (2mks)

51. State 3 positive effects of advertisements on the consumer. (3mks)

52. Name three foods that can be given in the management of kwashiorkor. (3mks)

53. State two dangers posed by poor disposal of household refuse. (2mks)
54. State any 3 precautions to observe when using a charcoal iron. (3mks)

55. Give 2 reasons for pressing during garment construction. (2mks)

56. State three advantages of building a family house. (3mks)

57. Sketch and name any three pattern symbols which need to be transferred to fabric for garment construction processes. (3mks)

58. Mention any three functions of the skin. (3mks)
59. Mention two advantages of frying food. (2mks)

60. Name three labour saving equipment used in modern kitchens. (3mks)

61. Suggest three ways through which a cookery apron can be decorated. (3mks)

62. State two advantages of a well planned kitchen. (2mks)

63. State three undesirable qualities of synthetic fibres. (3mks)

64. Name two methods of removing fixed dirt from terrazzo floor. (2mks)

65. Give 5 signs and symptoms of tuberculosis. (5mks)

66. Explain 5 reasons for cleaning a house. (10mks)

67. Explain five precautions to be taken when handling kitchen equipment. (10mks)

68. Explain any 5 causes of malnutrition. (10mks)

69. With the aid of two labeled diagrams describe how to make an overlaid seam. (10mks)

70. Explain 5 points on the care of ironing board. (10mks)

KISWAHILI FORM 1 HOLIDAY ASSIGNMENT BOOKLET (Volume 1)(Questions)

UFAHAMU

Soma kifungu kifuatacho kisha ujibu maswali

Siku moja , mtu ambaye alijulikana kwa jina la Moto, alikuwa ameketi chini ya kivuli cha mbuyu. Alikuwa akifanya hivyo kwa kungojea kulungu kunaswa na mtego wake. Hapo mbuyuni, ndipo palikuwa na njia ya kulungu ya kwenda mtoni kunywa maji. Kupitia mbuyuni, iliwabidi kwanza wapitie pale mtegoni. Lakini kwa kuwa kwa siku hii ya leo wakati wao wa kunywa maji ulikuwa bado kuwadia, naye Moto, badala ya kurudi ili aje baadaye, akaonelea heri angojee hapo.

Haikuwa mara yake ya kwanza kutega kulungu. Alikuwa amewanasa wengi na kwa muda mrefu sana. Na ingawaje alifurahia nyama yao laini, ni kuwachuna ndiko alikokuzira. Hii ilikuwa ni kwa sababu ya vifaa butu vya mawe ya kuchonga alivyokuwa akitumia. Kwa sababu hii basi, haikuwa rahisi kuwachuna. Pia, alikuwa akiwala wabichi. Ili kujipa kazi akisubiri, akaonelea amtengenezee utunda mpenzi mkewe. Hakuwa na shida kuamua utunda huo ungekuwa wa namna gani. Nyakati hizo, shanga zilikuwa bado hazijavumbuliwa. Ni jiwe na mti tu ndivyo vilivyokuwapo, navyo ndivyo vilivyokuwa mali ghafi.

Kwa ala yake, jiwe la kuchonga, Moto akakata vijiti viwili. Kikubwa akakiita 'mama' na kidogo, 'baba'. Dhamira yake ilikuwa kumtengenezea mkewe ushanga na tembe zikiwa za mti. Akiweka kijiti mama chini, alitumia kijiti baba kupekejea tundu. Alifanya hivi kwa nguvu zake zote, Haja ilikuwa ni atoboe matundu mengi, halafu ayakate na kuyaviringisha na baadaye ayaunge na uzi wa mua ili apate huo ushanga. Akizidi kupekecha, na jasho kumtoka, na huku mawazo yake yote yakiwa juu ya uso wa mkewe, hakuwa ameona cheche zikianguka juu ya majani makavu yaliyokuwa katikati ya mapaja yake. Alichokisikia kwa ghafla, kilikuwa ni kuchomeka na kuona moshi ukifusika. Alishtuka na akaruka kwa woga. Hakuwa ameshawahi kuona kioja kama hiki maishani!

Huku akitetemeka kwa hofu, cheche hiyo ikaanza kusambaa. Ilijieneza kwa haraka na kuwasha majani, nyasi na miti. Sasa ikawa imepata nguvu na kuenea kwa upesi na kumeza vichaka na misitu iliyokuwa mbele yake. Kuangalia hivi, akajiona amesimama peupe! Kutoka kwa upande wa mtegoni, kukaja harufu nzuri ya kunukia. Alifuata na alipofika, akaona kulungu ambaye alikuwa ameshikwa na mtego, ameokwa vizuri sana na nguvu hizo ngeni. Hakujua zinaitwaje wala hakujua aziiteje. Kwa hivyo, hakuwa ameshawahi kuona ama kuonja kitu cha kuchoma sembuse cha kupikwa!

Ni harufu ya kuiva ya kulungu na kudondoka kwa mafuta ya kunona ndivyo vilimtia ujasiri. Naye kwa hatua za woga, akanyatanyata akanyakua kinofu na kukionja. Si utamu huo aliousikia! Sasa akanyafua jinofu. Halafu akaingilia maini, moyo na mafigo. Kulungu akamshinda ingawaje alimla maradufu ya kawaida yake. Aliyebaki, akamfunga ndani ya majani ya mgomba na kuwapelekea watu wake. Pamoja na kulungu, akawa amechukua pia kinga kilichokuwa kikiwaka na vile vijiti viwili ambavyo baadaye kijiti mama alikuja kukiita "wimbombo" na kijiti baba, " ulindi"...

Ilikuwa alfajiri asubuhi watu waliposhtukia "tatata" za kualika kwa kuni na kulipuka kwa moshi kutoka nyumbani kwa Moto. Nyumba yenyewe ilionekana ikiwa na nuru nyekundu ya ajabu na ya kutisha. Walinyatanyata kuelekea kwenye kioja hicho. Kiliwavutia zaidi kwani walivyozidi kulisongelea, ndivyo ile baridi ya asubuhi ilivyozidi kuwatoka. Mvuto huo ukawapumbaza. Lakini walipumbazika zaidi walipoona - nyuma ya kioja hicho na kupita pazia la moshi, Moto ameketi.

Macho yake yalionekana mekundu mno. Hii ilikuwa sababu ya moshi; lakini hawakuwa wakijua hivyo. Kiwiliwili chake kilionekana kikiyumbayumba nyuma ya miale. Haya yote yakamfanya kutisha. Wenzake wasijue la kufanya kwa sababu ya bambuazi, wakawa wamesimama tuli wameduwaa. Hapo ndipo waliposikia sauti ikinena: "Mimi ndimo Moootoo...; naivisha na kuunguza, natokeza na naoteka. Anitakaye nitakuja kwake nimpe huu uwezo wangu..."

Ili kuwaogofya zaidi, akaupulizia nao ukaalika kwa moshi na cheche nyingi zilizowafanya wenzake kurudi nyuma kwa hofu. Kuona hivi, akaendelea kuwatia woga kwa kusema, "Hizi ndizo nguvu za Moootoo... mimi ndimi Moootoo...nijieni niwageuzie maisha yenu..."

Akiwa bado ana sehemu ya nyama ya kulungu, akawagawia na kuwaambia wale. Kila mmoja wao akakubali kuwa ilikuwa tamu sana. Naye ndipo aliwaambia siri ya kioja. Hakuwaambia ule ukweli wa mambo, badala yake, aliwaambia ati ni malaika ndiye aliyemtunukia uwezo huo! Aliwalambisha kwa kuwapa kaa kuchukua makwao. Nao, kwa kukosa jina la kufaa, wakaliita "Moto".

Punde si punde, watu wakawa wamezoea moto na wengi wakawa wanakuja kwake tu. Hakutaka uenee vivi hivi tu. Kwa hivyo, akaweka masharti: moto ulipatikana kwake tu kila jioni, na uzimwe mara

moja baada ya matumizi. Ni hapo kwake tu ambapo "moto mpya" ungeweza kupatikana. Moto hauibiki wala haufichiki, akawakanya. Na ambaye angefanya ujasiri wa kuuiba ama kuuficha, basi asije kulia kwake baadaye, akawaeleza.

Masharti haya yalifuatwa, naye akawa mgawaji wa moto wa pekee. Uwezo huu ulimtia hisia za ukubwa - na punde si punde, za utukufu pia! Sasa watu wakawa, bila moto, hakukuliwa kitu na basi kumtegemea yeye kukazidi. Hapa ndipo aliwageukia na kuwaambia:

“Ili kuulinda huu Moto Mtakatifu usife, imenibidi kuacha kazi zangu. Lakini siko radhi kuendelea kufa njaa na familia yangu."

" Tutakugawia chakula chetu ili uzidi kuuchunga huo Moto Mtakatifu ili usife," wakamkatiza.

Basi, kwa kila mtu kumpatia theluthi ya chakula chake, Moto akapata uwezo wa kurundika ziada. Siku si nyingi, mkewe na watoto wake wakawa hawana haja ya kufanya kazi. Hali watu hawakukoma kumpatia "kodi ya moto", ndivyo yeye na kizazi chake walivyozidi kujiepusha na kufanya kazi, huku wakizidi kuzua masharti magumu ya kuficha "Utukufu wa Moto".

Maswali

a) Ipe makala uliyosoma anwani mwafaka (alama 1)

b) Moto alikuwa ameketi chini ya kivuli cha mbuyu kwa sababu gani? (alama 2)

c) Eleza tabia zozote mbili za Moto kutokana na makala hii (alama 2)

d) Taja na ueleze methali moja inayoweza kutumiwa kueleza matukio katika makala hii (alama 2)

e) Taja masharti mawili yaliyowekwa na Bwana Moto kwa kutotaka Moto uenee hivi hivi tu. (alama 2)

f) Moto na Aila yake walifaidikaje baada ya uvumbuzi huu? (alama 2)

g) Eleza maana ya maneno yafuatayo kama yalivyotumika katika taarifa. (alama 3)

(i) Kioja ……

(ii) Alikokuzira ……

(iii) wimbombo ……

3. MATUMIZI YA LUGHA

(a)i)Taja ala zinazotumika katika kutamka sauti zifuatazo: (alama 2)

(i) |dh|

……

(ii) |gh|

……

(b) Andika neno lenye muundo ufuatao (alama 1)

irabu ya chini, nazali ya midomoni, irabu ya nyuma juu

(c) Bainisha miundo ya silabi katika maneno yafuatayo **(alama 2)**

chura…….

mbwa…….

(d) Bainisha utendakazi wa viambishi katika neno lifuatalo. (alama 3)

Kiliwaumiza

(e) Iiandike sentensi ifuatayo ukitumia kiwakilishi cha pekee o – ote. (alama.2)

Ufunguo wowote ufunguao ni wetu.

(f) Eleza maana mbili za sentensi hii. (alama.2)

Alitukimbilia kabisa.

(g) Andika katika kauli ya kutendesheka (ala.2)

(i) Iga

……

(ii) Vaa

……

(h) Andika udogo wa sentensi ifuatayo. (ala.2)

(i) Sahani zetu ni nzuri kuliko zao.

(i) Tumia ritifaa katika sentensi ili kuonyesha matumizi yake mawili **(alama 2)**

(j) Andika katika wingi (ala. 2)

Kuku wa jirani kijijini mwetu aliangua kifaranga aliyelemaa.

(k) Tunga sentensi ukitumia nomino zifuatazo pamoja na kivumishi- ingine. (ala. 2)

(i) Dau

……

(ii) Urembo

……

(l) Geuza katika usemi wa taarifa. (ala.2)

Karen: Tafadhali usiukanyage mguu wangu.

Chemosi: Ah! Mbona niukanyage?

(m) Tumia kielelezo cha jedwali kuchanganua sentensi.

Musa aligongwa na gari vibaya sana. (ala.4)

(n) Ainisha matumizi ya '-ema' katika sentensi ifuatayo. (alama. 3)

Mwanafunzi mwema ametuzwa vyema kwa wema wake.

(o)Yakinisha sentensi ifuatayo **(alama 2)**

Uchaguzi mkuu hautafanyika mwaka huu

(p) Andika kulingana na maagizo yaliyotolewa. (ala.2)

Jina langu ni Omondi lakini huitwa Omosh kwa kifupi. (Anza kwa: Watu…….

(q) Onyesha virai vitatu katika sentensi hii na utaje ni vya aina gani. (ala.3)

Mtoto yule mdogo amekunywa maziwa kwa kikombe.

(r) Andika kinyume cha: (ala.1)

Walizama walipokuwa wakikusanya mchanga.

(s) Toa neno jingine lenye maana sawa na: (ala.1)

kariha

4. ISIMU JAMII (ALAMA 10)

Mhusika A : Wewe ndiwe Hatia Mpendamakosa? Kutokana na ushahidi uliotolewa, na kulingana na kifungu cha 55A cha sheria , ni wazi kuwa una mashtaka ya kujibu……

Mhusika B: (Akimkatiza kauli) Nakana Mheshimiwa!

Mhusika A: Mshatakiwa,jambo ulilofanya ni hatia kulingana na sheria za nchi. Ni hatia kwa mtu kuiba kitu hata kiwe kiasi gani. Sababu uliyotoa kwa kitendo chako pia haifai. Mahakama inakuhukumu kuihudumia jamii katika kifungo cha nje cha miezi sita. Kesi imekwisha.

Maswali:

(a) Lugha hii hutumika katika muktadha upi? (ala.2)

(b) Tambulisha wahusika **A** na **B** (ala.2)

Mhusika **A**:……..

Mhusika **B**:……

(e) Eleza sifa sita za sajili ya mazungumzo hayo. (ala. 6)

FASIHI SIMULIZI (Alama 15)

Soma kifungu kufuatacho kisha ujibu maswali yanayofuata

Mchuuzi wa mchuzi hana ujuzi wa mjusi wa juzi.

a. Tambua vipengele vifuatavyo vya kifungu hiki cha fasihi simulizi (alama 2)
   i) utanzu……
   ii) kipera……..
b. Kipera hiki kina sifa mbalimbali. Eleza zozote tano (alama 5)
c. Kipera hiki kina umuhimu upi katika jamii yako? (alama 6)

d) Andika mifano miwili zaidi ya kipera hiki (alama 2)

A. (INSHA)

ALAMA 20

Umekutana na binamu yako aliyekuwa masomoni ng'ambo kwa muda wa miaka miwili. Andika mazungumzo kati yenu kuhusu mabadiliko yaliyotokea nchini tangu aende. (alama 20)

B. USHAIRI (ALAMA 20)

SOMA USHAIRI UNAOFUATA KISHA UJIBU MASWALI.

Tumeingia uwanjani, kukutana na vijana

Tahiyatuni kaeni, kusikia yenye
mana, Akili zifungueni, mpate
kutulizana, Sigara si ya kuigwa,
vijana fikirieni.

Si sinema msidhani, mtaanza kuugua,

Maradhi ya vifuani, mapafu yataungua,

Sijitie ubabeni, kujitia
mnajua, Sigara si ya kuigwa,
vijana fikirieni.

Mkingia shughulini, midomo itaungua,

Mtanuka midomoni, thamani kuwapungua,

Mkizitupa makaoni, hasara mtazizua,

Sigara si ya kuigwa, vijana fikirieni,

Ulevi nao acheni, twataka kuwazindua,

Mtangia hatiani, hivyo mnajizuzua,

Wengi hawawathamini, walevi
wanapujua, Ulevi msitamani, vijana
fikirieni.

Usingie madawani,kalewa bila kujua,

Si bangi si heroini, siwaze kuzichukua,

Mtangia mashimoni, tubaki tukitundua,
Madawani jitengeni, vijana fikirieni.

Mkijitia uhuni, mjue mtajichubua,

Mpiga ngumi kutani, mazuri
hatavumbua, Ukimwi u mitaani, upesi
utawanyakua, Acheni kuyatamani,
vijana fikirieni.

Uvivu nao acheni, utakuja wasumbua,

Vitabu kavishikeni, mazuri mtayavua,
Heshima muithamini, si watu

kuwatibua, Haki zenu zijuchi, vijana
fikirieni.

Maswali:

(a) Lipe shairi hili kichwa mwafaka. (alama 2)

(b) Eleza umbo la shairi hili ukizingatia yafuatayo. (alama 10)
(i) Mishororo
(ii) Vina
(iii)Beti

(iv)Mizani

(v) Aina ya ushairi

(c) Bainisha matumizi ya uhuru wa mwandishi ukizingatia: . (alama 4)
(i) Inkisari
(ii) Mazda

(iii)Tafsida

(iv)Kufinyanga sarufi/kuboronga

(d) Taja maudhui mawili kutoka shairi hili. (alama 2)

(e) Taja tamathali moja ya lugha na mbinu ya kisanaa (alama 2)

C. ISIMU JAMII (ALAMA 10)

Taja na ueleze kaida zozote tano za matumizi ya lugha katika jamii.

*D. **FASIHI SIMULIZI*** *(ALAMA 10)*

Huku ukieleza andika sifa zozote tano za fanani/ mtambaji bora.

E. SARUFI (ALAMA 40)

(a) Taja sifa mbili za kila mojawapo ya sauti hizi /s/ /z/ (alama 2)

Weka shadda kwenye maneno haya (alama 2)

(i) Stima

(ii) Rukwama

(b) Bainisha viambishi katika maneno haya (alama 2) (i) Walioandikiana
(ii) Vilivyovunjwa

(c) Tumia kihusishi cha mahali kutunga sentensi (alama 2)

(d) Eleza matumizi ya msemo huu (alama 2) Pua na mdomo'

(e) Eleza dhana ya 'ni' katika sentensi hizi. (alama 2)
(i) Simameni tuombe

(ii) Ninataka tuelewane

(f) Tumia kimilikishi cha nafsi ya tatu umoja kutunga sentensi (alama 2)

(g) Andika maana mbili za sentensi hii: (alama 2)
(h) Mtoto alimlilia mama.

(i) Tumia alama hizi kutungia sentensi. (alama 2)
(i) Mshazari

(ii) Kistari kifupi

(j) Andika sentensi hii bila kutumia 'amba' (alama 2
(k)) Gari ambalo lilinunuliwa jana limeibiwa.
(l) Nyambua vitenzi hivi katika hali ya kutendesha. (alama 2)
(i) Oa
(ii) Kimbia

(m) Kamilisha makundi haya. (alama 2)
Chane ya _____

Shungi la _____

(n) Onyesha matumizi mawili ya kiambishi 'po'katika sentensi moja .(alama 2)

(o) Weka maneno haya katika ngeli mwafaka. (alama 2)

(i) Tikiti

(ii) Dole

(p) Andika sentensi mbili sahihi kwa kurekebisha sentensi hii. (alama 2)
Huku mlimo, panawafaa watu kama nyinyi.
(q) Tumia – zuri kama kielezi, kiwakilishi na kivumishi katika sentensi. (alama 3)

(r) Kamilisha methali hii
Aso hadhari _____

(s) Bainisha aina za maneno
(alama 2)
Angelina ni mtoto mtukutu

(t) Ainisha vitenzi kwenye sentensi hii (alama 2)
Yeye alishindwa kuruka kiunzi kile

(u) Yakinisha sentensi ifuatayo. (alama 2)
Nisingemuona nisingetimiza ahadi yako

A: UFAHAMU (ALAMA 15)

Soma kifungu hiki kisha ujibu maswali

Mnamo mwaka wa 2004, mwanahistoria Bethuel Allan Ogot alidai kwamba mfumo wetu wa elimu unafaa kulaumiwa kwa kuchangia hali ya sasa ya kuzorota kwa maadili ya jamii nchini Kenya.

Akiwasilisha maoni yake kwa Kamati ya Kitaalamu ya Utamaduni katika Kongamano la Marekebisho ya katiba katika ukumbi wa Bomas of Kenya, Nairobi, Prof. Ogot alisema, silabasi katika viwango vyote vya elimu 'imefurika' mambo ya kigeni ambayo huwatenga wanafunzi na utamaduni wa mwafrika.

Prof Ogot alilalamika kwamba mfumo wa elimu wa 8-4-4 uliookopwa kutoka jimbo la Alberta, Canada haukutilia maanani masuala ya utamaduni wa mwafrika. Alitoa wito wa kuchunguzwa upya vitabu vinavyotumiwa kufundishia nchini Kenya ili kuona ni vipi vinaakisi tajriba za bara la Afrika na kupendekeza vitumiwe katika kufundishia. Aliongeza kwamba kwa miaka mingi, vyuo vyetu vikuu vimekuwa 'vikipika na kupakua' wahitimu ambao hawana miizizi chambilecho taban Lo Liyong.

Alipendekeza kuwa kulikuwapo dharura ya kuandikwa kwa katiba iliyotetea utamaduni wa mwafrika. "Katiba mpya itakuwa chapwa iwapo itashindwa kuakisi utamaduni unaothaminiwa katika jamii zetu." Akasema Ogot. Mtazamo wa Prof Ogot umenichochea kutathmini suala la elimu na utamaduni nchini Kenya.

Je , madai ya msomi huyu yana mashiko? Ikiwa jibu ni ndio, tuchukue hatua z(i)pi 'kuwakinga' vijana wetu dhidi ya uigizaji kinyani wa tamaduni 'mbovu' za kigeni?
Fasili ya kimsingi ya utamaduni wa jamii ya watu ni siasa za watu hao (mfumo wa utawala), maisha ya kijamii (imani, mbeko yao, dini yao, ushirikina wao, elimu yao, mavazi yao, kucheka na kulia kwao, maombolezi yao, chakula chao,n.k); na uchumi wa jamii hiyo (kilimo, ufugaji, uvuvi, biashara n.k) Aidha, hakuna utamaduni 'ulio bora' kuliko mwingine.

Utamaduni vile vile huathiriwa na mazingira na hubadilika kadri ya mpito wa wakati. Ni kweli pia kwamba tamaduni huathiriana jamii mbili zinapotagusana. Aidha, enzi hii ya utandawazi imekwisha

kufuta mipaka ya kijiografia na kuufanya ulimwengu kuwa kijiji – hivi kwamba, tukio moja katika eneo Fulani ulimwenguni huathiri maeneno mengine kwa njia moja au nyingine. Kwa mfano, tunaweza kufuatilia siasa za uchaguzi mkuu wa Marekani tukiwa katika nyumba zetu kwa sababu ya hatua kubwa zilizopigwa katika sayansi na teknolojia.

Ninaikubali kauli ya Prof Ogot kwamba Afrika inaiga mno kutoka ugenini kuliko jinsi mataifa ya magharibi yanavyoiga kutoka kwetu. Mpaka sasa, bara la Afrika limekuwa ni jaa la kupokea kila kitu – vikiwemo viberiti, vichokonoameno, sindano na hata nyembe kutoka Uchina. Silabasi na mitaala ya mifumo yetu ya elimu inapaswa kufumbata kwa uketo masuala ya utamaduni ili watoto wetu wahamasishwe kwamba mumo kwa mumo katika utamaduni wa mwafrika mna mambo mengi mazuri yanayopaswa kuonewa fahari.

Suala la lugha za asili ambazo husheheni utamaduni linapaswa kupewa kipaumbele. Watoto wetu wanapaswa kubwishswa ukweli kwamba usemaji wa lugha za kigeni kwa mfano Kijerumani, Kiingereza, Kifaransa n.k kwa uhodari hakuoneshi ustaarabu wa aina yoyote kwa hakika. Haivunji mfupa kwa mtu kuwa mweledi wa kuzungumza Kiswahili, Kimaasai, Kiogiek, Ekegusii, Kiluhyia, Dholuo na ndimi nyingine za kiasili na wakati huohuo ukawa mweledi wa kuzungumza lugha za kigeni.

Aidha kuna haja ya kuimarisha utamaduni wa Mwafrika kupitia kwa nyenzo kama vile tamasha za miziki na nyimbo, mashindano ya michezo ya kuigiza, uandaaji wa filamu zinazosheheni na kufaharia Uafrika, uvaaji wa mavazi ya mitindo ya Kiafrika na uandishi wa fasihi inayofumbata tajriba za mwafrika.

Mwisho na muhimu zaidi ni kuimarisha elimu itakayowakomboa kimawazo watoto wetu na kwa wakati huohuo kuwawezesha kujihakiki na kuhakiki kasumba za kimagharibi ambazo zinashamiri kutwa kucha. Mtaala unaofanyiwa marekebisho vilevile unapaswa kuandaliwa kwa namna ambayo itaondolea mbali kabisa uakademia katika mfumo wetu wa elimu. Hivi sasa, kuna mlipuko wa ung'ang'aniaji wa shahada – ghafla bin vuu, kila mtu anakazana kupata shahada hata pale ambapo shahada yenyewe haitamwezesha kuwa na maarifa na ujuzi wa kuchangia kuleta mabadiliko katika jamii. Ilimradi kuna watu wanaoingia vyuoni kusoma ili wafe wakiwa na hizo shahada.

Mtazamo wangu ni kwamba, mfumo wetu wa elimu unapaswa kumwezesha au kumchochea kila mtu kugundua uwezo na vipawa vyake; na uchumi upanuliwe ili vipawa hivyo viweze kunadiwa na kuleta mapato. Je, si kinaya kwamba mwanamuziki na msanii William Ingosi(aliyeimba mwana wa Mberi) alifariki bila kunufaika kiasi cha haja kutokana na talanta yake?

Maswali

1. kwa nini lawama zinaelekezwa kwa mfumo wetu wa elimu kwa mujibu wa kifungu ulichosoma? (al. 1)
2. Ni vipi silabasi ya mfumo wa 8-4-4 ina upungufu? (ala. 2)
3. Kwa nini kulikuwa na dharura ya kuandikwa kwa katiba iliyotetea utamaduni wa Mwafrika? (al. 1)
4. Utamaduni wa jamii ya watu kimsingi unahusu nini hasa kulingana na kifungu? (al. 3)

5. Taja mambo mawili yanayoathiri utamaduni. (al. 2)
6. Eleza jinsi utandawazi umeufanya ulimwengu kuwa kijiji. (al. 2)
7. Silabasi na mitaala ya mifumo yetu ya elimu inapaswa kufanya nini? (al. 1)
8. Kuna umuhimu gani kuimarisha elimu nchini? (al. 1)

9. Eleza maana ya maneno haya kama yalivyotumika. (al. 2)

(i) Zinapotagusana

(ii) Kipaumbele

SEHEMU B: SARUFI NA MATUMIZI YA LUGHA (ALAMA 40)

1. Taja sifa bainifu za sauti /u/ (alama 2)

2. Bainisha aina za nomino katika sentensi.(alama 2)

Ujinga wake ulimkoshesha maji safi.

3. Andika sentensi ifuatayo kwa ukubwa wingi. (ala. 2)
Ngoma ikilia sana hupasuka.

4. Tunga sentensi zilizo na vivumishi vya pekee vyenye dhana zifuatazo. (alama 2)

(i) Kutobakisha

(ii) Umilikaji

5. Tofautisha sentensi zifuatazo (alama 2)

(i) Ningesoma kwa bidii ningefaulu.
(ii) Ningalisoma kwa bidii ningalifaulu.

6. Tunga sentensi mbili kuonyesha matumizi mawili ya kiakifishi. (alama 2)
Nukta za dukuduku
7. Eleza maana ya: (alama 1)
Mofimu

8. Eleza matumizi ya kiambishi “ki” katika sentensi ifuatayo. (alama 3)
Ukiruka kipira hicho kitapotea.
9. Bainisha viwakilishi katika sentensi. (alama 2) Sisi tutaimba wimbo mtamu.

10. Tunga sentensi ambayo ina kihusishi cha wakati. (alama 1)

11. Tambulisha aina za vitenzi kama vilivyotumika katika sentensi. (al. 3)

Kijana huyo aliweza kuinua mzigo huo na akaufikisha hotelini.

12. Nyambua vitenzi vifuatavyo kulingana na maagizo.

kutenda	kutendewa	kutendesha
kimbia		
chota		

13. Andika katika usemi wa taarifa
"Mtaweza kumsaidia mvulana huyu kesho?" Mzazi akauliza. (alama 3)

14. Ainisha fungutenzi ifuatayo kwa kuonyesha viambishi awali na tamati. (alama 2)
Anamchezea

15. Andika katika wingi karibu.

Cheo kicho hicho ndicho alichopewa. (al. 2)

16. Yakinisha. (alama 1)
Hatujamkumbusha kurejesha vitabu.

17. Andika kwa hali ya "a" (alama 1)
Anasoma vizuri

18. Taja miundo miwili ya ngeli ya U – YA (alama 2)

19.Nomino zifuatazo zimo katika ngeli gani? (alama 2)

(i) Furaha

(ii) Nyasi

20. Andika kwa kutumia 'o' rejeshi tamati. (alama 2)
Mtoto ambaye hutii walimu hufaulu.

21. Tunga sentensi sahihi ili kubainisha maana ya vitate. (alama 2)

(i) Posa

(ii) Poza

SEHEMU C: ISIMUJAMII (ALAMA 10)

Soma kifungu kifuatacho kisha ujibu maswali

Okoa mapesa. Usihadaike na miigizo, LNST ndiyo tu bidhaa ya kipekee inayoweza kuponya zaidi ya magonjwa hamsini kwa mpigo mmoja.

1(i) Tambua sajili hii. (ala. 2)

(ii) Eleza kwa tafsiri sifa zozote nane za sajili hii. (alama 4)

2. Taja sifa zozote nne za sajili ya hospitali. (alama 4)

SEHEMU YA D: FASIHI SIMULIZI (ALAMA 15)

1(i) Eleza maana ya maigizo. (alama 2)

(ii) Taja sifa zozote tano za maigizo. (alama 5)

2. Eleza maana ya aina zifuatazo za nyimbo. (alama 2)

(i) Kimai
(ii) Wawe

3.Utanzu wa hadithi una vipera mbalimbali. Fafanua vipera vifuatavyo.

(i) Ngano za mazimwi

(ii) Ngano za mtanziko.

4. Taja sifa zozote nne za methali. (al. 4)

SEHEMU YA E: USHAIRI (ALAMA 15)

Soma shairi lifuatalo kisha ujibu maswali

Mwanangu, wenye dhambi vishawishi, vikejeli

Mwanangu, katu wasikushawishi,
bilikuli Mwanangu, aushi nawe
uishi, kama mwali Mwanangu
sikubali!

Mwanangu, sherati sikuperembe, kakubali

Mwanangu, usiwache wakubembe,
kwa Sali Mwanangu, mithiliyo
mapembe, ya fahali Mwanangu
sikubali!

Mwanangu, wajeuri siwe nao, ni shubili

Mwanangu, usifwate njia zao,
pita mbali Mwanangu,ujeuri
sera yao, mazohali Mwanangi
sikubali!

Mwanangu, waongo usiwasifu, kulihali

Mwanangu, uongo ubainifu, si
amali Mwanangu, ndimi zao
hazikufu, si manzili Mwanangu
sikubali!

Mwanangu, wafisadi siwe nao, kemikali

Mwanangu, tama ndo utu wao, si
Injili Mwanangu, wahepe kila
uchao, kiakili Mwanangu
sikubali!

Mwanangu, wote waliowabaya, wanadhili

Mwanangu, usije ukawapeya,
ikibali Mwanangu, katika hino
duniya, kaa mbali Mwanangu
sikubali!.

Maswali

1. Taja anwani mwafaka ya shairi hili. (alama 2)

2. Thibitisha kuwa ushairi huu ni wa arudhi. (alama 3)

3. Eleza vina katika ubeti wa pili. (ala. 3)

4. Onyesha aina tatu za idhini/uhuru wa mshairi katika shairi hili. (alama 3)

5. Taja nafsinenewa katika shairi hili. (alama 2)

6. Eleza muundo wa shairi hili. (alama 4)

7. Taja tamathali moja ya usemi iliyotumika na utoe mfano mmoja. (alama 1)

8. Eleza maana ya maneno haya kama yalivyotumika katika ushairi. (alama 2)

(i) Akawapeya

(ii) Sali

MATHEMATICS FORM 1 HOLIDAY ASSIGNMENT BOOKLET (Volume 1)(68 Questions)

1. Evaluate
   (3 marks)

$$\frac{2\frac{1}{5}+\frac{2}{3}\text{ of }3\frac{3}{4}-4\frac{1}{6}}{1\frac{1}{4}-2\frac{2}{5}\div 1\frac{1}{3}+3\frac{3}{4}}$$

2. Three metallic tanks have the capacities of 447 litres, 577 litres and 669 litres. Find the capacity of the largest container that can fill the tanks an exact number of times, leaving a remainder of 7 litres, 5 litres and 9 litres respectively.
   (3 marks)

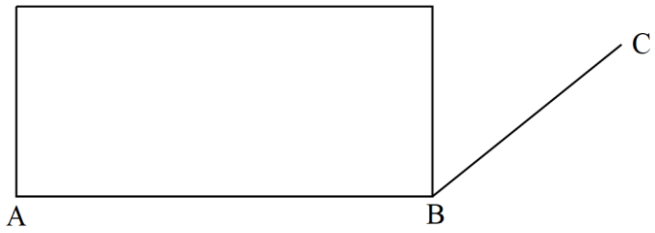
3. The marked price of a computer is Kshs. 72,000. Rhenice bought the computer at a discount of 8%. The dealer still made an 20% profit. Calculate the amount of money the dealer paid for the computer. (3 marks)

4. Use tables of squares, square roots and reciprocals only to evaluate
   (4 marks)

$$\frac{1}{\sqrt{446.9}}-0.1273^2$$

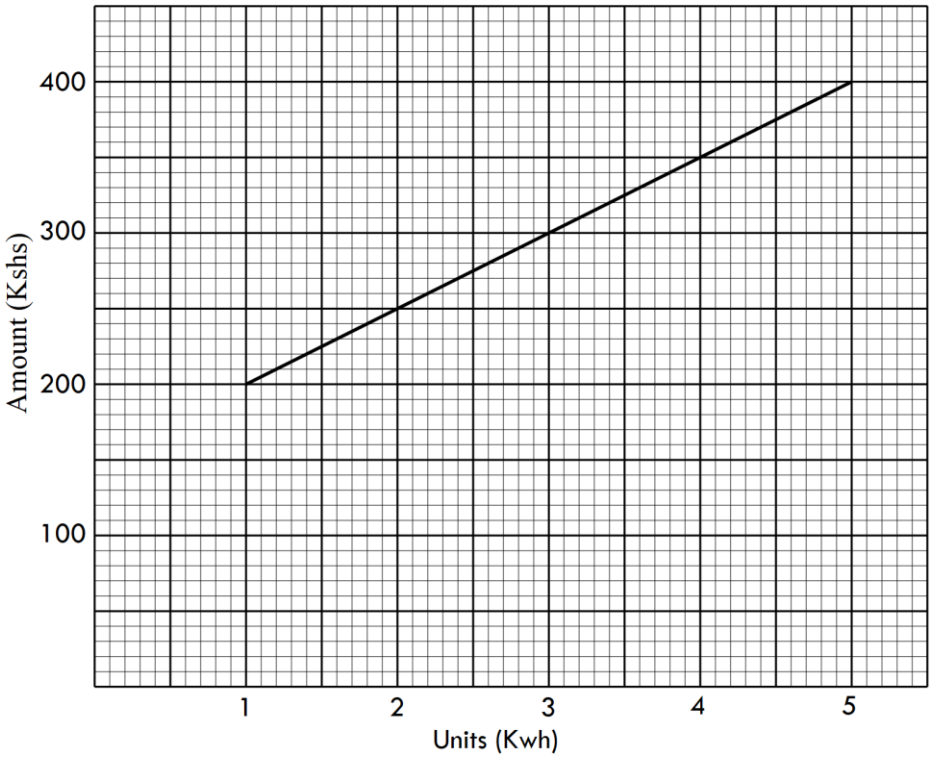
5. The length of a grass lawn is 2 metres less than twice its width. The area of the lawn is 60 m^2, calculate its length
   (3 marks)

6. The figure below shows part of a solid cuboid ABCDEFGH



Complete the solid (3 marks)

7. The graph below shows the relationship between the electricity bill (in Kshs.) and the number of units consumed (in kilowatt hours)



Use a graph to determine the

(a) fixed charge of the bill. (1 mark)

(b) cost per unit of the consumption (2 marks)

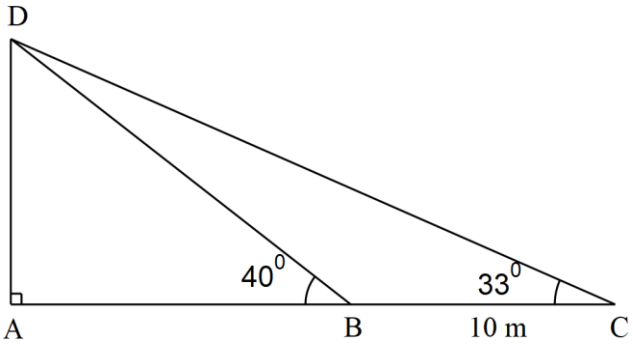
8. Solve for x in the equation (3 marks)
$(3^{2x})^3 = 81 \times 9^4$

9. Given that $\boldsymbol{p} = \begin{pmatrix} -1 \\ 3 \end{pmatrix}$ and $\boldsymbol{r} = \begin{pmatrix} 3 \\ 2 \end{pmatrix}$ and find $|\boldsymbol{q}|$ given that $\boldsymbol{q} = 3\boldsymbol{p} - 2\boldsymbol{r}$. (3 marks)

10. The cost of four exercise books and three pens is Kshs. 630. Five similar exercise books and two similar pens cost Kshs. 70 more. Calculate the cost of each item. (3 marks)

11. Two similar containers have surface areas of 700 cm^2 and 1008 cm^2 respectively. If the height of the larger container is 29.4 cm, calculate the height of the smaller container. (3 marks)

12. The cross-section of a swimming pool is such that the shallow end is 1 metre deep and the deepest end 1.5 metres deep. The width of the pool is 6 metres. Given that the pool is 15 metres long, calculate the capacity of water if the swimming pool is full. (3 marks)
13. Calculate the distance AB in the figure below. Give your answer correct to 4 significant figures. (4 marks)



14. A number P is formed by writing all the prime numbers between 0 and 10 is ascending order while another number Q is formed by writing all the square numbers between 0 and 10 in descending order.
    (a) Find $P - Q$ (2 marks)

    (b) Hence find the total value of the third digit in the answer of $P - Q$ (1 mark)
15. Using a ruler and a pair of compasses only, construct a triangle PQR in which PQ=8.7 cm, $\angle$PQR=$52\frac{1}{2}^0$ and QR=4cm. Measure PR (3 marks)
16. Oscar started a road trip that took him a total of 9 hours 28 minutes and completed the trip on a Tuesday at 6. 03 a.m. At what time did he start the trip? Give your answer in 12 hour clock system (3 marks)

17. The table below shows the marks scored by 50 students in a Zeraki Achievers' Examination.

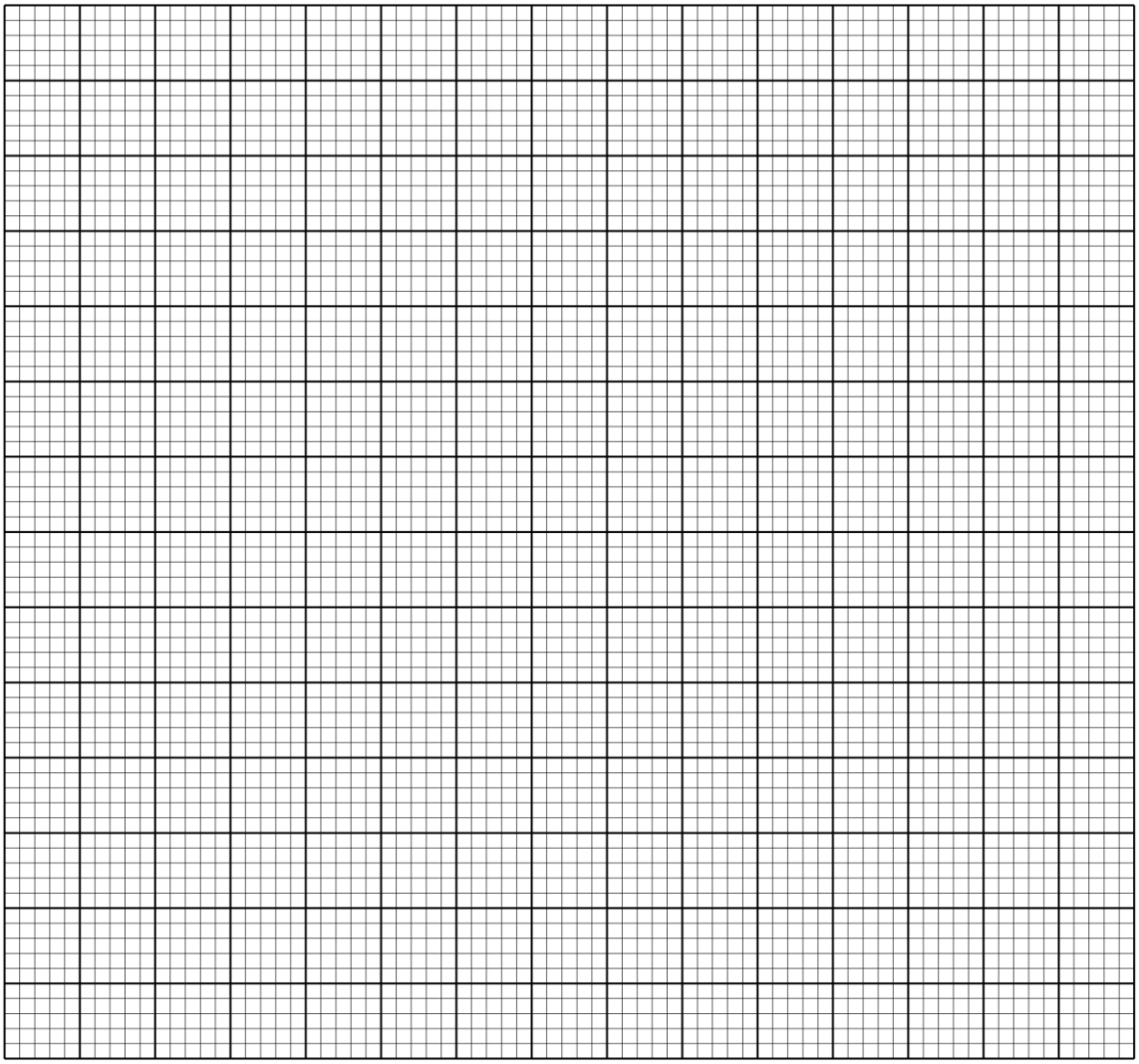
Marks (%)	20 – 24	25 – 34	35 – 39	40 – 54	55 – 59	60 – 74
Number of Students	7	8	10	13	9	3

    (a) Calculate
        (i) The mean mark (4 marks)

        (ii) The median mark (3 marks)

(b) The mean age of 14 students is 16 years. If two more students join them, the new mean becomes 16.5 years. If one of the added student is 22 years old, find the age of the other student. (3 marks)

18. (a) On the grid provided, draw the square whose vertices are P(6, −2), Q(7, −2), R(7, −1) and S(6, −1) (1 mark)



(b) On the same grid, draw:

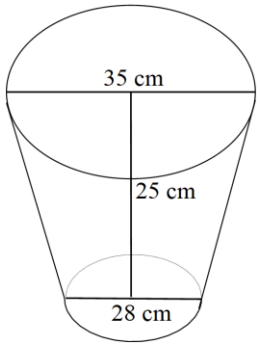
(i) $P'Q'R'S'$ the image of PQRS, under an enlargement scale factor 3, centre (9, −4). State the coordinates of $P'Q'R'S'$ (3 marks)

(ii) $P''Q''R''S''$ the image of $P'Q'R'S'$ under a reflection in the line $y = 0$ (2 marks)

(iii) $P'''Q'''R'''S'''$ the image of $P''Q''R''S''$ under a rotation of -90^0 about (0, 0)(2 marks)

(c) Describe a single transformation that maps P′Q′R′S′ on to P‴Q‴R‴S‴. (2 marks)

19. The diagram below shows a solid frustum whose top and bottom diameters are 35 cm and 28 cm respectively. The height of the frustum is 25 cm. Using $\pi = \frac{22}{7}$



(a) Calculate the volume of the solid (6 marks)

(b) The frustum is melted and recast into a solid sphere. Calculate the radius of the sphere correct to 2 decimal places . (4 marks)

20. A matatu left a town P at 9.00 a.m. for town Q, 51 km away at an average speed of 48 km/h. Half an hour later, a car left town Q for town P travelling along the same route at an average speed of 60 km/h.
Find;

(a) (i) the time they met (3 marks)

(ii) how far they met from town P (2 marks)

(b) A body starts from rest and accelerates uniformly attaining a velocity of 40 m/s in three seconds. It maintains this velocity for five seconds, and then decelerates at 8 m/s^2 for two seconds. It further decelerates uniformly and comes to rest in four seconds.

(i) Using the information above, calculate the value of a and b in the table below.

(2 marks)

Time (seconds)	0	3	a	10	14
Velocity (m/s)	0	40	40	b	0

(ii) Hence, calculate the total distance covered by the body. (3 marks)

21. Samantha and Kerina entered into a joint business venture in which they contributed Kshs. 150,000 and Kshs. 120,000 respectively every year. After one year, Joyce joined the venture too and contributed Kshs. 90,000.

(a) Calculate the ratio of their investment after 3 years of business (3 marks)

(b) The agreed as follows; that 30% of the profits after 3 years be used to carter for the operational costs of the business while the rest would be shared proportionately. At the end of the third year, the profit was Kshs. 1,870,000. Calculate each person's share. (4 marks)

(c) Samantha and Kerina put their shares together and bought fish cages at Kshs 25, 500 per cage. Calculate the number of fish cages they bought. (3 marks)

22. A straight line L_1 whose equation is $3y - 2x = -2$ meets the x- axis at R
(a) Determine the coordinates of R. (2 marks)
(b) A second line L_2 meets L_1 at a right angle at R. Find the equation of L_2 in the form $y = mx + c$, where m and c are constants. (4 marks)
(c) A third line L_3 passing through $(-4, 1)$ is parallel to L_1. Find the equation of L_3 in the form $ax + by + c = 0$, where a, b and c are integers. (2 marks)
(d) Calculate the acute angle L_2 makes with the line $y = 0$ (2 marks)

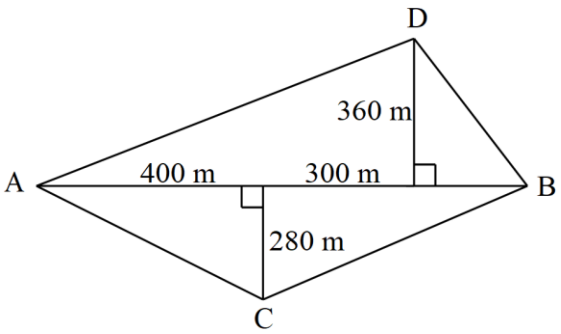
23. (a) Three schools, Kisumu School, Sinyolo Girls and Thurdibuoro are such that Sinyolo girls is on a bearing of 062^0 from Kisumu School at a distance of 32 km. Thurdibuoro is 50 km from Kisumu School and on a bearing of 167^0 from Sinyolo girls. Using a scale of 1: 500,000,
(i) Show the relative positions of the three schools (3 marks)

(ii) Use the scale drawing to find:
- Bearing of Kisumu School from Thurdibuoro. (1 mark)

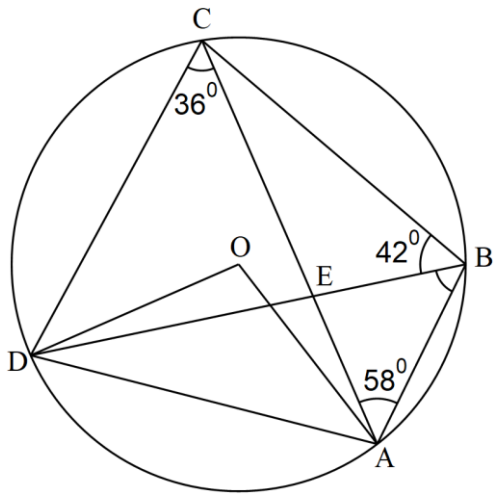
- Distance of Thurdibuoro from Sinyolo girls (1 mark)

(iii) A talent centre **M**, is to be located such that it is equidistant from each of the three schools.
- On the diagram in (i) above, show the position of **M** (2 marks)
- Hence find the bearing of **M** from Sinyolo girls (1 mark)

(b) The figure below shows a school farm. Using AB=750 metres as the base line, enter the measurements of the farm in a surveyor's field book (2 marks)



24. In the figure below, O is the centre of the circle, ABCD is a cyclic quadrilateral and that $\angle CBD = 42^0$, $\angle BAC = 58^0$ $\angle DCA = 36^0$



Giving reasons, find the values of:

(a) $\angle DAC$ (2 marks)

(b) $\angle ADB$ (2 marks)

(c) Acute $\angle DOA$ (2 marks)

(d) $\angle BDO$ (2 marks)

(e) $\angle DEC$ (2 marks)

25. Without using a calculator evaluate **(3marks)**

$$\frac{1/2 \text{ of } 3\,1/2 + \frac{3}{2}\left(5/2 - \frac{2}{3}\right)}{\frac{3}{4} \text{of } 2\,1/2 \div \frac{1}{4}}$$

26. Simplify the expression: $\frac{3x^2 - 4xy^2 + y}{9x^2 - y^2}$ **(3marks)**

27. Four strings measuring 12cm, 18cm, 24cm and 36cm are cut into pieces of equal length so that exact number of pieces is obtained from each string without wastage. Find the longest length of each string. **(2marks)**

28. All prime numbers between ten and twenty are arranged in descending order to form a number.

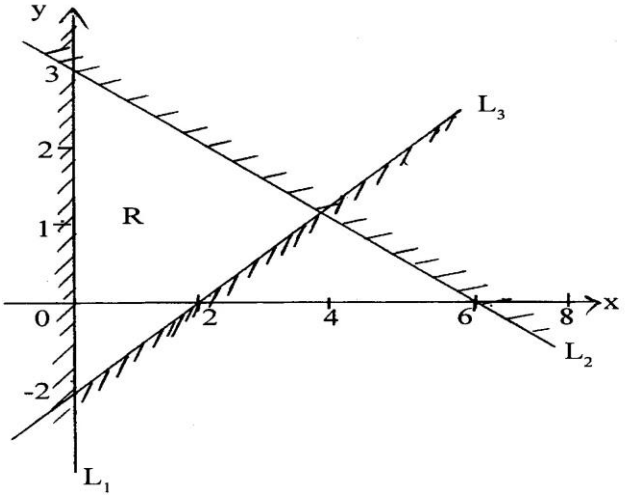
(i) Write down the number. **(1mark)**

(ii) State the total value of the third digit of the number formed in (i) above. **(1mark)**

29. Use tables to evaluate:- **(3 marks)**

$$\frac{5 - \sqrt{(4.125)^3}}{(0.293)^2}$$

30. The Region R in the figure below is defined by the inequalities L1, L2 and L3.



Find the three inequalities. **(3marks)**

31. Without using tables calculate the value of:

$$\frac{1+\cos A}{1-\sin A}$$

Where A is an acute angle and $\tan A = \frac{3}{4}$. **(3marks)**

32. .Solve for □ in the equation: $\frac{3^x}{9} = \frac{1}{3^{(1-2x)}}$ **(3marks)**

33. Convert the recurring decimal.

$0.\dot{0}0\dot{9}$ into fraction. **(2marks)**

34. .Use logarithm tables to evaluate:

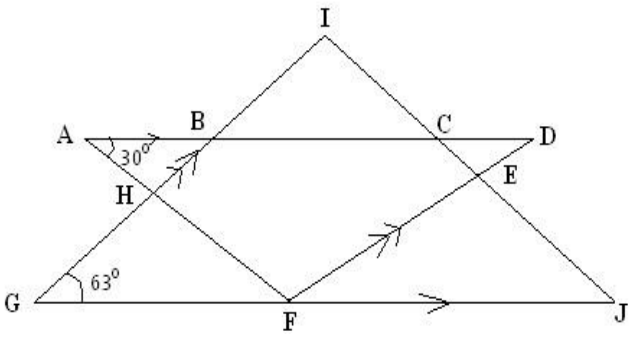
$$\frac{81 \; Log \; 5.623}{\sqrt{823 \; \square \; 72.46}} \; 47.$$

(4marks)

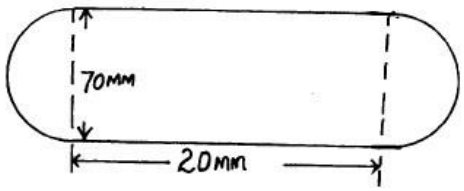
35. The volume of a sphere is given by $\frac{4}{3}\pi r^3$. Find the radius of a sphere whose volume is $1047.816 cm^3$ (take π to be $\frac{22}{7}$) **(4marks)**

36. In the figure below, AD is parallel to GJ and GI is parallel to FD. Angle BAH = 30^0 and angle BGF = 63^0. Find angle

AFD. **(3marks)**



37. The figure below (not drawn to scale) shows the cross-section of a metal bar of length 3 metres. They are equal semi circles.



Determine the mass of the metal bar in kilograms if the density of the metal is $8.87g/cm^3$. **(3marks)**

38. Find the area of the sector of a circle of radius 3cm if the angle subtended at the centre is 140^0

(3marks)

39. Using ruler and a pair of compasses only:
    a. Construct triangle ABC in which BC = 8cm and angle ABC = 105^0 and angle BAC = 45^0. **(3marks)**

40. A Forex Bureau in Kenya buys and sells foreign currencies as shown below:

Currency	Buying (Kshs)	Selling (Kshs)
Chinese Yuan	12.34	12.38
South African Rand	11.28	11.37

A businesswoman from China converted 195 250 Chinese Yuan into Kenya Shillings.

(a) Calculate the amount of money, in Kenya shillings, that she received. **(1 mark)**

(b) While in Kenya, the businesswoman spent Kshs.1 258 000 and then converted the balance into South African Rand. Calculate the amount of money, to the nearest Rand, that she received.

(3 marks)

41. Five members of 'SILK', a self supporting enterprise Jane, Jepchoge, Esther, Mama Charo and Chepkoech were given a certain amount of money to share amongst themselves. Jane

got 3/8 of the total amount while Jepchoge got 2/5 of the remainder. The remaining amount was shared equally among Esther, Mama Charo and Chepkoech each of which received Kshs. 6,000;

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

b. How much did Jepchoge get? **(2marks)**

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

(5marks)

42. The height of 200 students in a school were measured and recorded in the table below.All heights are given to the nearest cm.

Height (cm)	Class midpoint (x)	Frequency (f)	fx
135- 139		8	
140- 144		12	
145- 149		35	
150- 154		40	
155- 159		50	
160- 164		25	
165- 169		15	
170- 174		9	
175- 179		6	

a) Copy and complete the table. (2mks)

b) State the modal class. (1mk)

c) Use the completed the table to calculate the mean height of the students. (3mks)

d) Draw an histogram and hence a frequency polygon representing the above data. 4mks)

43. A ship B is on bearing of 080^0 from port A and at a distance of 95km. Another ship is stationed at port D which is on a bearing of 200^0 from A and a distance of 124km from B. A ship leaves B and moves directly to island P which is on a bearing of 140^0 from A.

a. Using a scale of 1cm to represent 10km, make a scale drawing to show the relative positions of A, B, D and P. **(4marks)**

(b) Hence find:-

i. The distance from A to D. **(2marks)**

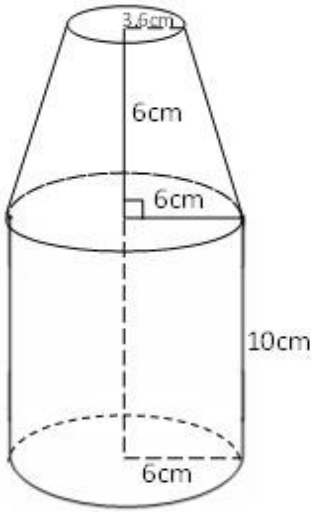
ii. The bearing of D from B. **(1mark)**

iii. The bearing of P from D. **(1mark)**

iv. The distance from P to D. **(2marks)**

44. A right conical frustum of base radius 6cm is mounted on top of a cylinder of the same base radius and height 10cm. The top of the solid frustum is of radius 3.6cm. The height of frustum is also 6cm.

Take $\pi = \frac{22}{7}$.



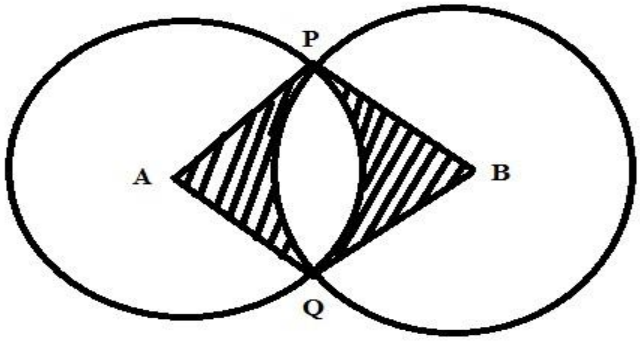
Calculate:

(a) The total surface area of the solid. **(6marks)**

(b) The volume of the solid. **(4marks)**

45. The diagram below shows two circles, centre A and B which intersect at points P and Q.

Angle PAQ = 700 and PBQ = 400 and PA = AQ = 8cm.



Use the diagram to calculate to two d.p

a) The length PQ **(2marks)**

b) The length PB **(2marks)**

c) Area of minor segment circle centre A. **(2marks)**

d) Area of the shaded region. **(4marks)**

46. The coordinates of a triangle ABC are A(1, 1) B(3, 1) and C (1, 3).

a. Plot the triangle ABC. **(1 mark)**

(c) ABC undergoes a reflection along the line X = 0, obtain the coordinates and plot on the graph
points A' B' C', under the transformation **(3 marks)**

(d) The triangle A' B' C', undergoes an enlargement scale factor -1, centre origin. Obtain the coordinates of the image A'' B'' C'' **(3marks)**

(e) The triangle A'' B'' C'' undergoes a rotation centre (1, -2) angle 120^0. Obtain the coordinates of the image A'''B'''C''' **(3 marks)**

47. A matatu and Nissan left town A for town B 240km away at 8.00a.m travelling at 90km/hr and 120km/hr respectively. After 20 minutes the Nissan had a puncture which took 30 minutes to mend. a) How far from town A did the Nissan catch up with the matatu? **(6 marks)**

b) At what time did the Nissan catch up with the matatu? **(1 mark)**

c) At what time did the matatu reach town B? **(3 marks)**

48. Use logarithms tables only to evaluate

$$\sqrt[3]{\frac{36.72 \times (0.46)^2}{185.4}}$$

to 4 decimal places. Leave your answer in standard form. (4 marks)

49. A perpendicular line is drawn from a point P (3,5) to the line $x + 2y = 3$. Find the equation of the perpendicular. (3 marks)

50. Simplify the expression $\frac{12}{9x - 4a} x_2 + - _2 a x _2 6 a_2$. (3 marks)

51. On a map whose scale is 1: 400 000 , an estate is represented by area of 6.3 cm^2. Calculate the area of the estate in hectares. (3 marks)

52. The sum of two numbers is 15. The difference between five times the first number and three times the second number is 19. Find the two numbers. (3 marks)

53. A Kenyan businessman bought goods from Japan worth 2950 000 Japanese Yen. On arrival in Kenya, custom duty of 20□ was charged on the value of the goods. How much duty was paid in Kshs?

1 US dollar = 118 Japanese Yen

1 US dollar = 76 Kenya shillings (3 marks)

54. Given that $\boldsymbol{R} = 2\boldsymbol{a} - 3\boldsymbol{b}$ where $\boldsymbol{a} = \begin{pmatrix} \mathbf{5} \\ \mathbf{2} \end{pmatrix}$ **and** $\boldsymbol{b} = \begin{pmatrix} \mathbf{1} \\ \mathbf{3} \end{pmatrix}$**.**

a. Find vector R. (2 marks)

b. Find $\boldsymbol{R}'$ the image of R under a translation vector $\begin{pmatrix} 2 \\ -3 \end{pmatrix}$ (1 mark)

55. Simplify without using tables giving your answer in index form. (3 marks)

$$\frac{5^{\frac{1}{2}} \times 5 \times 4^{-\frac{1}{2}}}{64^{\frac{1}{2}} \times 3^0 \times 5^2}$$

56. Using ruler and pair of compass only, construct parallelogram PQRS $PQ = 4, QR = 6$, and $\angle QRS = 150°$ (3 marks)

57. A regular polygon is such that its exterior angle is one eight the size of interior angle. Find the number of sides of the polygon. (3 mark

58. Use reciprocal, squares and square root tables only to evaluate the expression; (3 marks)

$$\frac{3}{\sqrt{0.003449}} - 18.79^2$$

59. Find the integral values that satisfy the inequality. (3 marks)

$2x+3 \square 5x-3 \square -8$

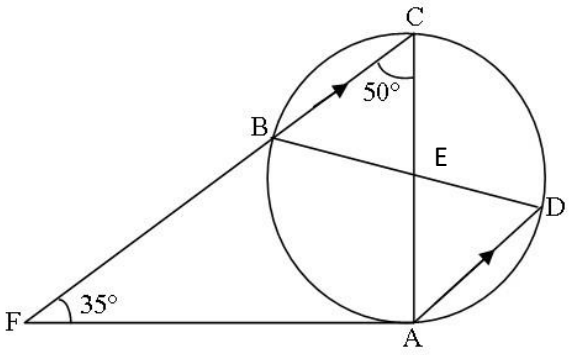
60. Twenty people working $7\frac{1}{2}$ hours a day can finish a piece of work in 21 days. Find how many hours a day must 45 people work to finish the work in 7 days. (3 marks

61. A building site was surveyed and measurement recorded in the field book in metres as follows.

	F	
300		
	50 to E 200	
160 120 to D		
	70 to C 100	
60 60 to B		
A		

Draw the map of the building. (4 marks)

62. In the figure below, if $\angle ACB = 50°$, $\angle BAC = 45°$, $\angle AFB = 35°$ and FC is parallel to AD.



Calculate:

a) $\angle ABF$. (2 marks)

b) $\angle AEB$ (1 mark)

63. Solve for x in $\sin(x - 15)° - \cos(x + 5)° = 0$ (3 marks)
64. Two towns P and Q are 550 km apart. A bus starts from town Q towards town P at 8:45 a.m. and at an average speed of 80 km/h. A car starts from P towards Q at 10:00 a.m at an average speed of 100 km/h. Calculate:
    a) The distance covered by the bus before the car starts the journey. (2 marks)
    b) How far from Q the two vehicles meet. (3 marks)
    c) The time the two vehicles met. (2 marks)
    d) The time the car arrived at town Q. (3 marks)
65. The lengths of a sample of 50 flower stalks were measured at a horticultural centre and recorded in the table below

Length in cm	8-10	11-13	14-16	17-19	20-22	23-25
Number of flower stalks	4	7	11	15	8	5

    a) State the modal class (1 mark)
    b) State the median class. (1 mark)
    c) Calculate
        i. The mean length (4 marks)
        ii. The median length (4 marks)
66. Town B is 20 km N60°W from village A. town B is 25 km 040° from town C. Village D is due east of town C and due south of village A.
    a. Using a scale 1: 500 000 draw a diagram showing relative position of town B, town C, village A and village D. (3 marks)
    b. Determine;
        i. Distance between village A and town C. (1 mark)
        ii. Distance between town C and village D. (1 mark)
        iii. Compass bearing of town C from village A. (1 mark)
        iv. Compass bearing of village D from town B. (1 mark)

c. Determine the area enclose by the diagram in (a) above in hectares. (3 marks)

67. A rectangular tank whose internal dimensions are 1.7 m by 1.4 m by 2.2 m is three quarters full of milk.

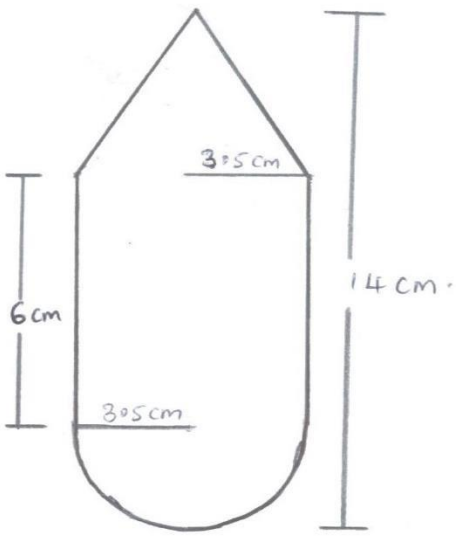
a. Calculate the volume of milk in the tank in cubic metres. (3 marks)

b. The milk is to be packed in small packets. Each packet is in the shape of a right pyramid on an equilateral triangular base of sides 16 cm. The height of each packet is 13.6 cm. Calculate the volume of milk in cubic centimetres contained in each packet.

(4 marks)

c. Full packets obtained are sold at sh. 25 per packet. Calculate the exact amount of money that will be realized from the sale of all the packets of milk. (3 marks)

68. The figure below is a model representing a storage container. The model whose height is 14 *cm* is made up of a conical top, a hemispherical bottom and the middle part is cylindrical. The radius of the hemisphere and the conical part are each 3.5 cm and the height of the cylinder is 6 cm.



a. Calculate the volume of the model. (5 marks)

b. Calculate its surface area. (5 marks)

PHYSICS FORM 1 HOLIDAY ASSIGNMENT BOOKLET (Volume 1)(55 Questions)

1. **Figure 1** below shows a scale of vernier calipers when measuring the width of a meter rule.

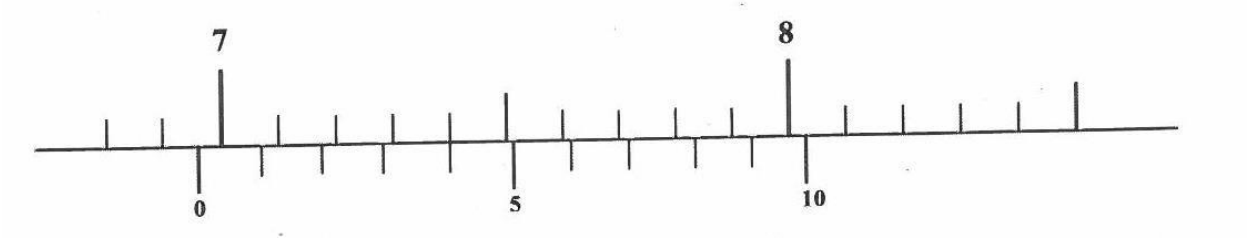


Figure 1

What is the actual width of the meter rule if the calipers has a zero error of + 0.6mm.? (2mks)

2. A clinical thermometer has a constriction in the bore just above the bulb. State the use of the constriction. (1mk)

3. Convert -200°C into Kelvins (1mk)

4. **Figure 2** below shows air trapped by a column of the mercury in a U-tube . The atmospheric pressure is 76 cm Hg.

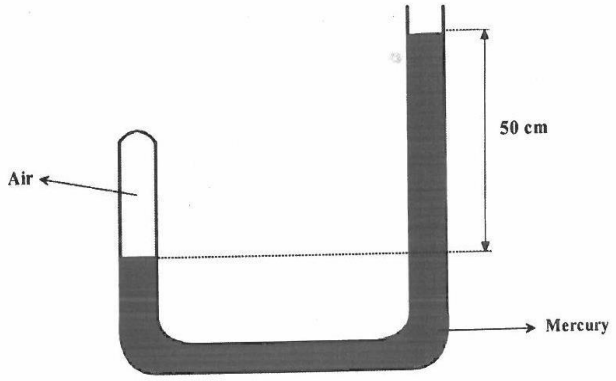


Figure 2

At what pressure in mmHg is the enclosed air? (3mks)

5. A solid weighs 90.65N on the surface of Jupiter. The gravitational acceleration in Jupiter is 25.89. Find the mass of the solid on earth (2 mk)

6. State any **two** ways of increasing the size of an image formed by a pinhole camera. (2 mks)

7. Why is mercury preferred as a barometric liquid and not water ? (1 mk)

8. A leaf electroscope A is charged and placed on a bench. Another uncharged leaf electroscope B is placed on the same bench and moved close to A until the caps touch each other. ***State*** and ***explain*** what is likely to be observed on the leaf of A and B. (2 mks)

9. The mass of an empty density bottle is x g. when full of water its mass is 70g and when full of liquid Y whose density is 0.96g/cm³ its mass is 68.4g. Determine the value of x. (density of water is 1g/cm³) (2 mks)

10. a) State the main difference between primary chemical cells and secondary chemical cells. (1mk)

b) State how the design of a dry Lechlanche cell reduces polarization. (1mk)

11. Using the domain theory of magnetism, explain why a bar magnet may lose its magnetism when hammered. (1 mk)

12. **Figure 3** below shows two identical springs constant 3N/cm supporting a load of 30N.

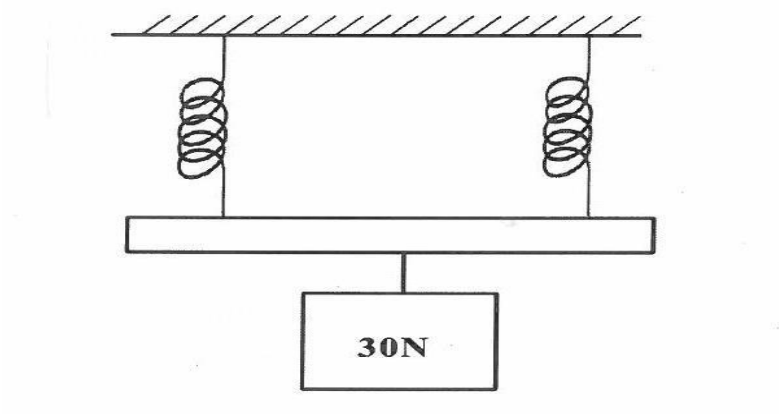


Figure 3

Determine the extension of each spring (3mks)

13. Explain why a bus should not carry standing passengers. (1mk)

14. Name two forces that determine the shape of a liquid on a solid surface (2 marks)

15. a) State the principal of moments (1mk)

b) A uniform metal strip is 3.0cm wide, 0.5 cm thick and 100 cm long. The density of the metal is 2.7 g/cm3. Determine

(i) The weight of the Metal strip. (2mks)

The strip is placed on a pivot and kept in equilibrium by forces in the figure below.

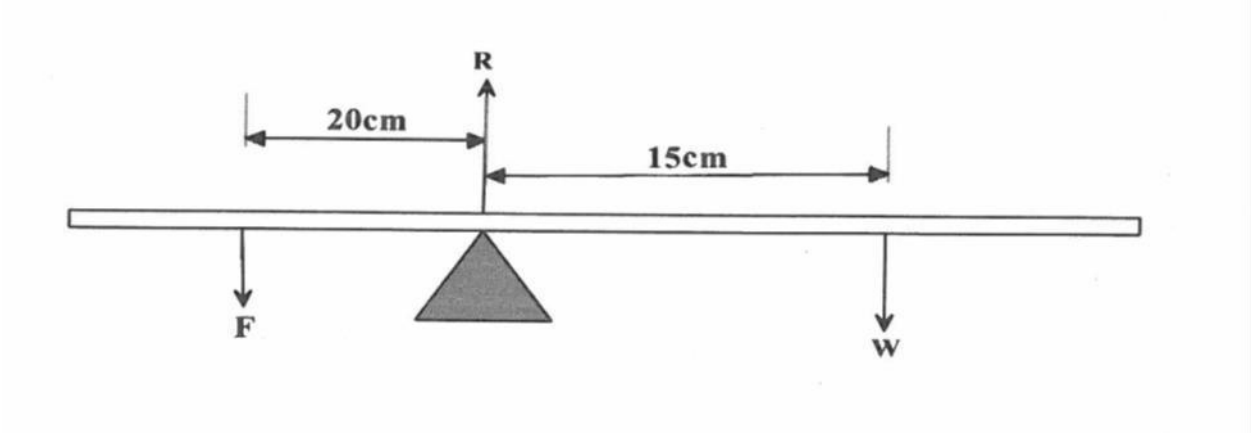


Figure 4

(ii) Determine the value of F . (3mks)

c) A balancing toy made of a plastic container has an ice block inside it as shown below in figure 4.

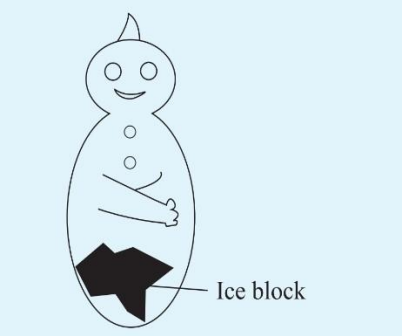


Figure 5

(i) Explain its state of equilibrium. (1 mark)

(ii) (ii) What changes in stability will be experienced when ice in the plastic container melts? (2 marks)

16. (a) State Hooke's law (1mk)

(b) A graph of force (y-axis) against (x-axis) is provided. Use it to answer questions below.

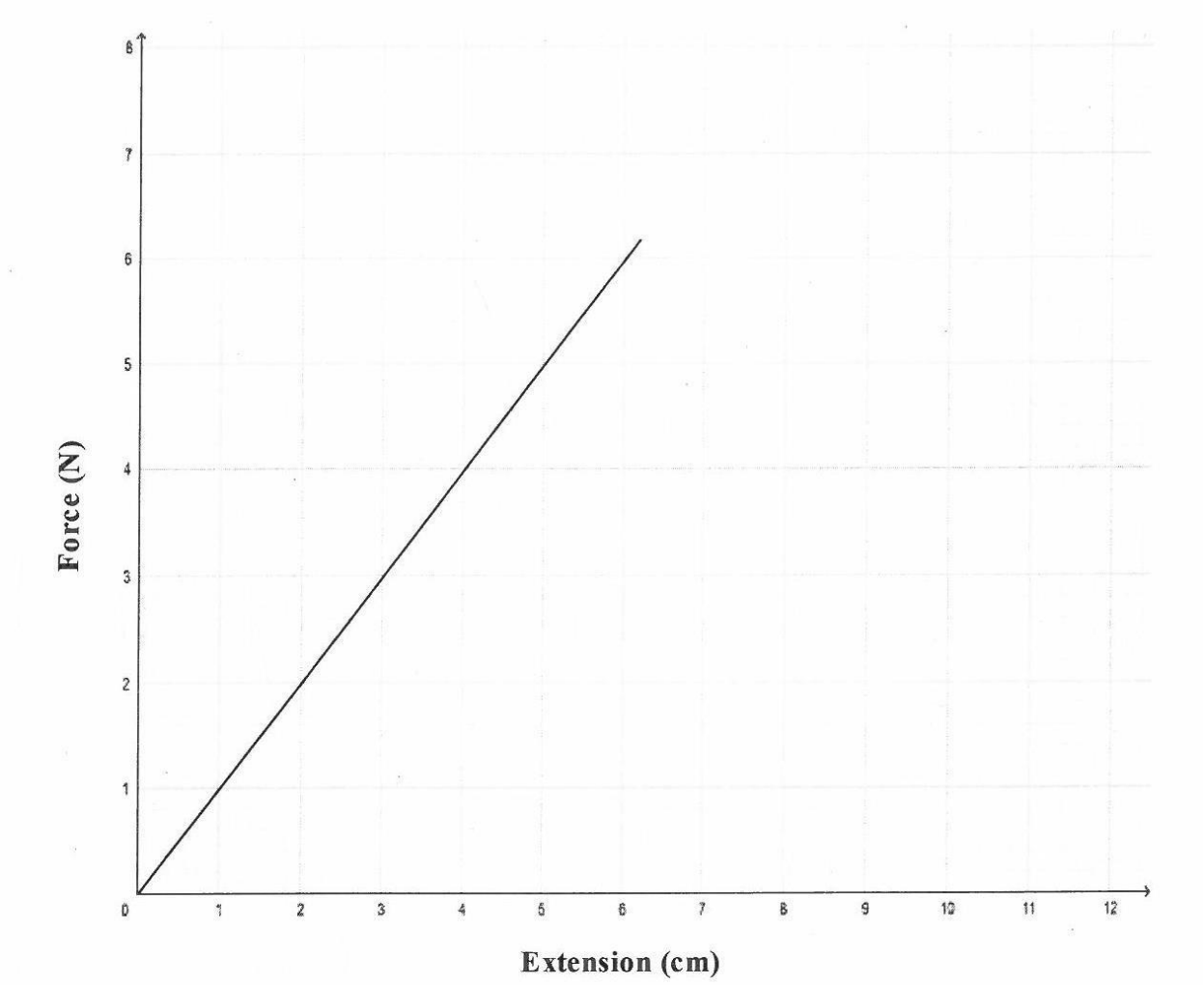


Figure 6

From the graph determine.

i). Work done in stretching the spring by 3cm. (3mks)

ii). Spring constant .Give your answer in SI Units. (3mks)

iii). State **two** factors that affect the spring constant. (2mks)

17. Figure 7 below shows how the displacement varies with time for a certain wave.

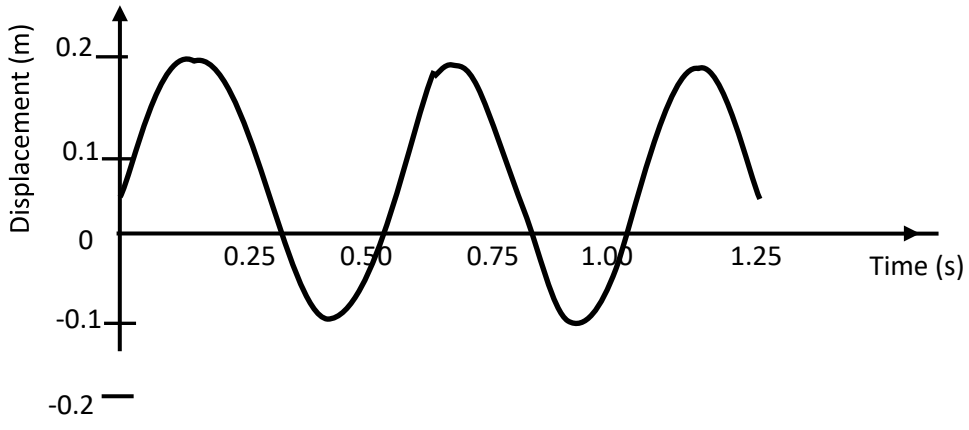


Figure 7

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

b) In determining the depth of a sea, an echo sounder produces ***ultrasonic sound***. Give ***two*** reasons why this sound is preferred. (2mks)

c) The figure 8 below shows a set up made by a Form 2 student to study an aspect of a wave.

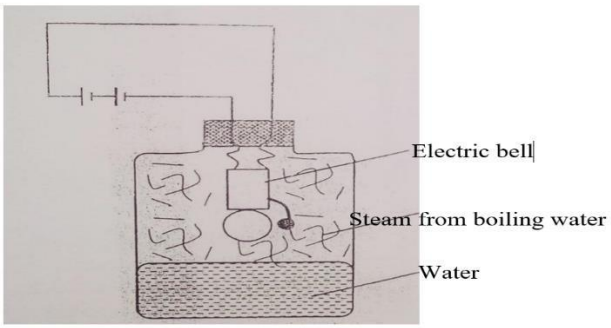


Figure 8

(i) State what happens to the sound from the bell as the bottle and its contents are cooled to 0°C (1 mk)

(ii) Explain the observation in (i) above (2 mks)

d) A boy stands some distance from a high wall and claps his hands. He claps again each time he hears an echo.

(i) What ***two*** measurements would need to be made in order to determine the speed of sound? (2mks)

(ii) The boy's friend notes that it takes 10 s to make 11 claps. Determine how far the boy is from the wall, given that the speed of sound in air is 330 m/s. (2 mks)

18. (a) Distinguish between streamline and turbulent flow. (2mks)

(b)Figure 9 below shows two light sheets of paper arranged as shown

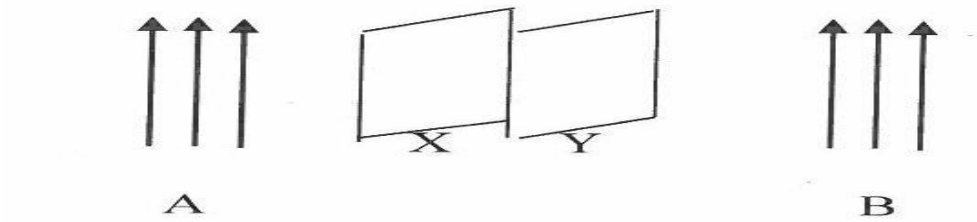


Figure 9

Explain the observation made when air is blown at the same time at point A and B.

(2mks)

(c) Figure 10 below shows an incompressible fluid moving through a tube of varied crosssection area. If the area of the small tube is 0.05m2, Calculate the area of large tube in

cm2. (3mks)

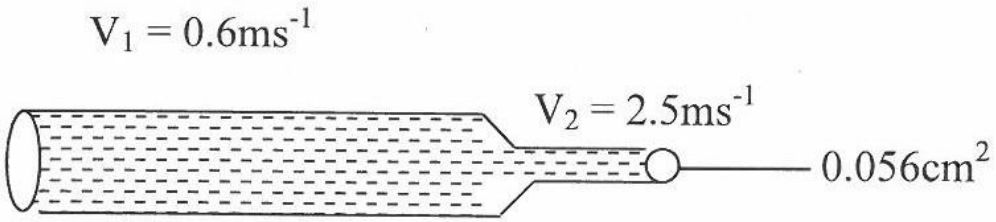


Figure 10

(d) State the Bernoulli's principle (1mks)

(e) State any **TWO** assumptions made when deriving the equation of continuity (2mks)

19. In figure 11 below, a steel rod is placed inside a solenoid to make a magnet:

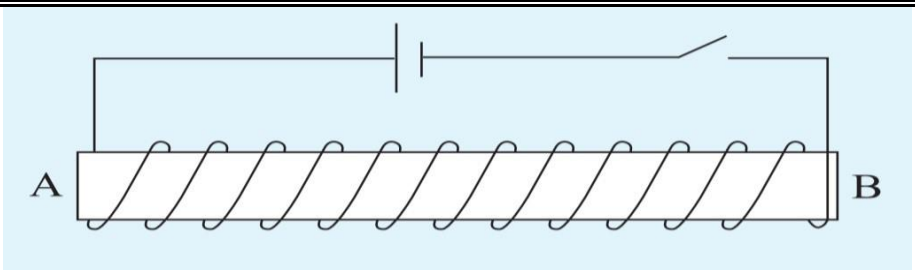


Figure 11

(a) Indicate the direction of the current ***on the solenoid***. (1 mark)

(b) Identify the polarities of ends A and B. (2 marks)

(c) Why is steel used as rod AB? (1mark)

(d) What would happen if soft-iron core was used as rod AB? (1 mark)

(e) What happens if alternating current was used instead of direct current? (1 mark)

20. I. Define the following terms as applied to curved mirrors:

(a) Pole (1mark)

(b) Centre of curvature (1mark)

(c) Focal plane (1mark)

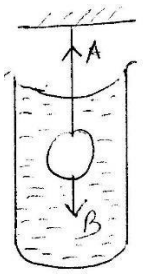
II. An object of height 10 cm is placed 15cm before a concave mirror of focal length 10 cm. Using a scale of 1 cm rep 10 cm. Determine:

(i) The image position. (3 marks)

(ii) The magnification. (2 marks)

21. During a physics lesson, form 1 students measured their teachers shadow and the length obtained was 120cm. The actual height of the teacher is 180cm. Estimate the height of a tree whose shadow has a length of 720cm at the same time. (3mks)

22. The diagram below shows a body immersed in water tied on a string.



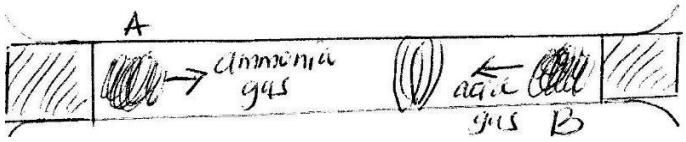
i) Name forces labeled A and B. (2mks)

ii) Name one other force acting on the body and not indicated in the diagram (1mks)

23. State one advantage of fitting wide tyre on a vehicle that moves on earth roads. (1mk)

24. a) Define Diffusion. (1mk)

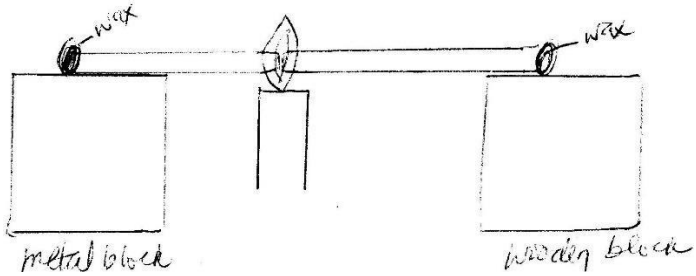
a. In the figure below, ammonia gas and an acid gas diffuse and react to form a white deposit on the walls of the glass tube. The deposit forms nearer end B.



i) Which gas diffuses faster? (1mk)

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

25. Two identical Aluminum rods are shown in the figure below. One rest on metal block and the other on a wooden block. The protruding ends are heated on a Bunsen burner as shown.



State with a reason on which bar the wax is likely to melt sooner. (2 mks)

26. a) State three properties of a good thermometric liquid. (3 mks)

a. Explain why clinical thermometer should never be sterilized by putting them in boiling water. (1mk)

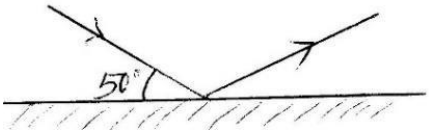
b. Water boils at 100°C. What is this temperature in Kelvin scale? (1mk)

27. a) Define the following terms in respect of reflection of light.

i) Angle of incidence (1mk)

ii) Angle of reflection.

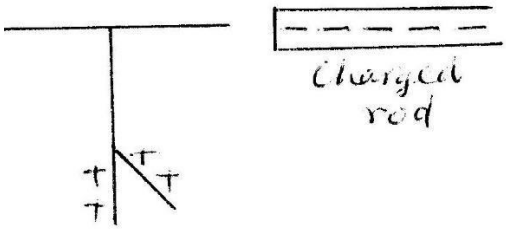
a. The figure below shows a ray of light incident on a plane mirror at point O.



O

The mirror is rotated through an angle of 40° maintaining the incident ray. Determine the angle through which the reflected ray is rotated. (2mks)

28. The figure below shows a negatively charged rod brought slowing near the cap of a positively charged leaf electroscope.



i) State what was observed (1mk)

ii) Explain your observation. (2mks)

a. Explain why fuel tankers are fitted with loose chains hanging under them near the ground. (1mk)

29. a) A charge of 240C flows through a bulb in 4 minutes. Calculate the amount of current flowing through the bulb. (3mks)

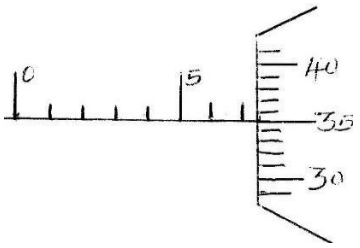
a. State 2 advantages of an alkaline battery over a lead acid battery. (2mks)

30. a) State Hooke's law

a. State the SI unit of spring constant. (1mk)

b. An object of weight 40N attached at the end of a spring causes an extension of 0.5cm on the spring. Determine the spring constant. (3mks)

31. a) The following micrometer screw gauge was used to measure the thickness/diameter of a pendulum bob. What is the reading? (2mks)



a. In an experiment to estimate the size of a molecule of olive oil, a drop of oil has a volume of 0.15mm^3 was placed on a clean water surface. The oil spread into a patch of area 7 .5 x 10^4 mm^2,

Estimate the size of the molecule. (3mks)

32. a) State Bernoulli's principle (1mk)

b) Doors that normally open inward usually close when it's windy. Explain. (1mk)

c) Water flows through a pipe of varying cross section area. One end of the pipe is 5cm^2 and water flows at that point at a velocity of 0,3 m/s. Determine the cross-sectional area of the other end if water flows at that end at 0.1 m/s. (3mks)

33. Define the following terms giving an example of each.

a. Vector quantity (2mks)

b. Scalar quantity (2mks)

34. Explain why two thin blanket are warmer than a single thick one. (1mk)

35. A rectangular block of wood 4 cm x 3cm x 2cm of mass 4.6g. Calculate

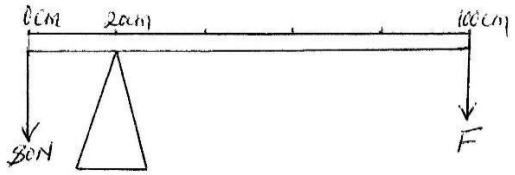
a) Its density in kg/m^3. (2mks)

b) Determine the weight of the block (2mks)

c) Determine the greatest pressure (3mks)

36. a) State the principal of moments. (1mk)

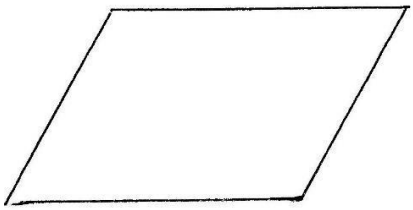
b) i) A uniform metre rule of mass 1kg is balanced at 20 cm mark by force of 80 N and F(N) acting at 0cm and 100cm marks respectively as shown in the diagram below. (3mks)



Calculate F.

ii) Define center of gravity of a body. (1mk)

iii) The figure below shows a uniform cardboard in the shape of a parallelogram. (1mk)



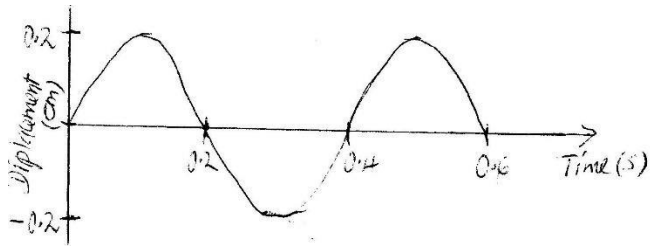
Locate the Centre of gravity of the cardboard.

c) State the reason why a steel sphere resting on a horizontal surface is said to be in neutral equilibrium. (1mk)

37. a) i) Distinguish between transverse and longitudinal waves. (1mk)

ii) Give one example of a transverse wave end one example of longitudinal wave. (2mks)

a. The figure shows the displacement time graph of a wave travelling at 200 cm/s.



Determine;

i) Amplitude (1mk)

ii) Period (1mk)

iii) Frequency (2mks)

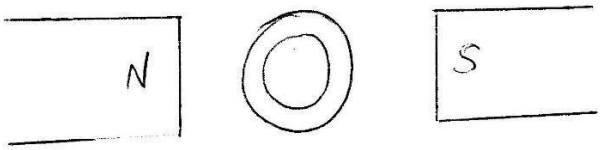
iv) Wavelength (2mks)

b. i) State two factors that affects speed of sound in a solid. (2 marks)

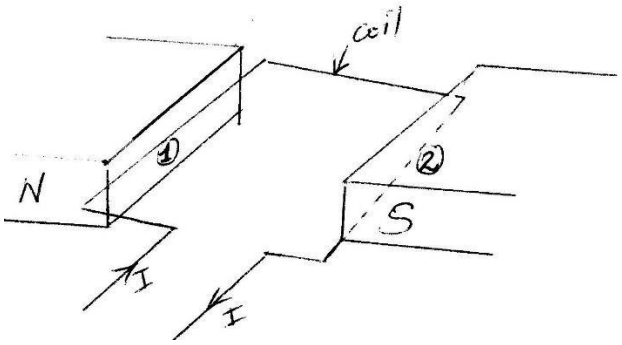
ii) A soldier standing some distance from a wall, blows a whistle and hears its echo 1.8 seconds later. How far is the wall from the soldier (speed of sound in air is 3.30 m/s. (3mks)

38. a) State the basic law of magnetism. (1mk)

a. The figure below shows a soft iron ring placed between the poles of a magnet. On the same diagram sketch the magnetic field pattern. (1mk)



b. The diagram below shows a current carrying coil in a magnetic field.



i. Identify the rule used. (1mk)

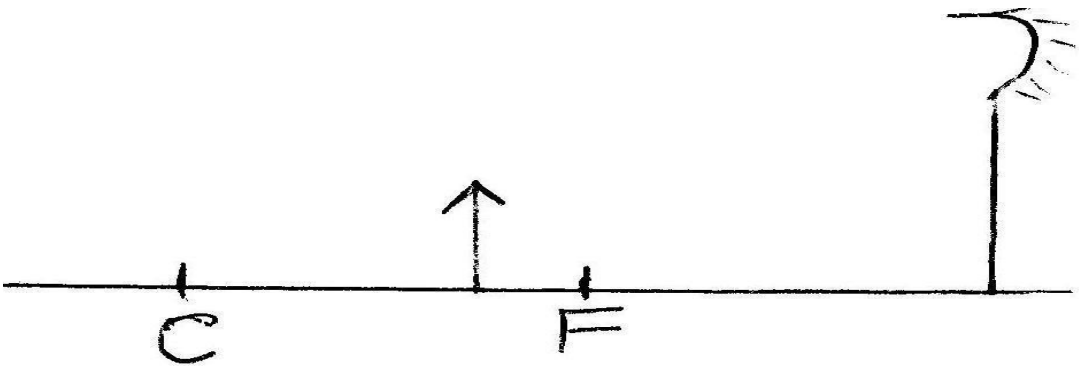
ii. Mark in the diagram the direction of the force acting on the sides of the coil labeled 1 and 2 (2mks)

iii. State two ways of increasing the force on the coil.

d) State three methods of making a magnet to lose its magnetism. (3mks)

39. a) What is Centre of curvature as used to describe mirrors. (1mk)

b) An object m is placed between F and C of a concave mirror as shown in the diagram.



i) Complete the diagram to show the image formed. (2mks)

ii) State two characteristics of the image formed

c) State two differences between image formed by plane mirror and that formed by concave mirror. (2mks)

d) State one application of each of the following. (2mks)

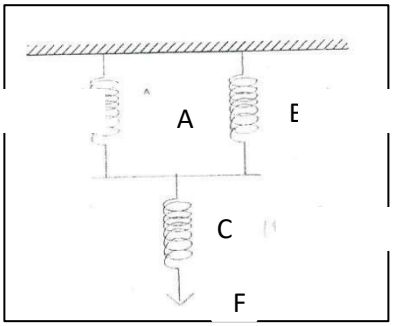
i) Convex mirror

ii) Parabolic mirror

e) A small object is placed 15cm in front of a convex mirror whose focal length is 10cm. Determine the position of the image. (3mks)

40. Study the arrangement and answer the questions that follow.

A and B are identical rubber strips and each has an elastic constant of $50Nm^{-1}$. C has an elastic constant of $100Nm^{-1}$.



i. If C extends by 4 cm, by how much would A extend? (2 mks)

ii. Determine the force F, which would cause these extensions. (2 mks)

41. State two factors that affect the turning effect of a force. (2 mks)

42. The figure below shows a u-tube manometer containing oil of density 0.9g/cm^3. One end is connected to a gas tap.
If atmospheric pressure is 1.0 x10^5 pa, find the pressure of the gas. (3 mks)

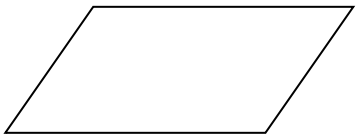
43. State two advantages of an alkaline cell over a lead-acid cell. (2 mks)

44. Three forces 12N due East, 4N due South and 15N due West acted on a body. If the body was in equilibrium, find the resultant force. (2 mks)

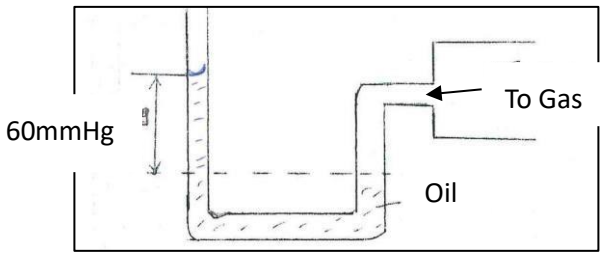
45. Explain the following observation. A balloon, when rubbed on a blazer, it sticks to the ceiling board.
(1 mk)

46. A block measuring 20cm by 10cm by 4cm rests on a flat surface. The block has a weight of 6N. determine;
    a. The minimum pressure it exerts on the surface. (2 mks)
    b. The density of the block in kg/m^3. (3 mks)

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

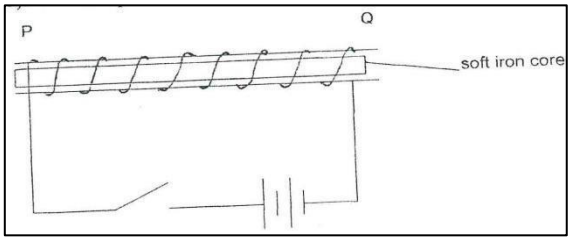


Locate the centre of gravity of the cardboard. (1 mk)



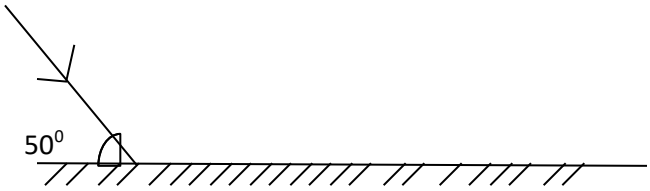
48. (a) What is an electromagnet? (1 mk)

(b) Name the polarity of ends P and R on the diagram below, when the current is switched on



P …… and Q ……. (1 mk)

49. The figure 4 below shows a ray of light incident on the surface of a plane mirror.



The mirror is now rotated clockwise through an angle of 10^0. Find the angle between the incident and the

reflected rays. (1 mk)

50. The force on a current carrying conductor in a magnetic field can be varied by changing among other, the magnetic field strength and magnitude of the current. Name two other factors that cause the force to vary. (2 mks)

51. (a) Sketch a diagram of micrometer screw gauge with the reading of 12.25 mm. (2 mks)

(b) The oil level in a burette is $10.0cm^3$. 5000 drops of the oil are run off the burette. If the radius of 1 drop is 0.7 mm.

a. Calculate the volume of one drop. (2 mks)

b. What is the final reading of the burette. (1 mk)

(c) The oil was made to spread on a surface of water forming a circular patch of diameter 21.0 m.

(i) Calculate the area of the oil patch. (2 mks)

(ii) Calculate the thickness of the oil molecule. (2 mks)

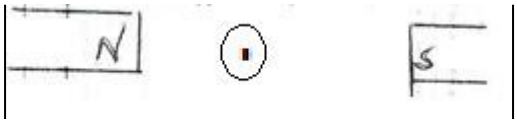
(d) State one assumption made in c(ii) above. (1 mk)

52. (a) State the Flemings left hand rule.
(1 mk)

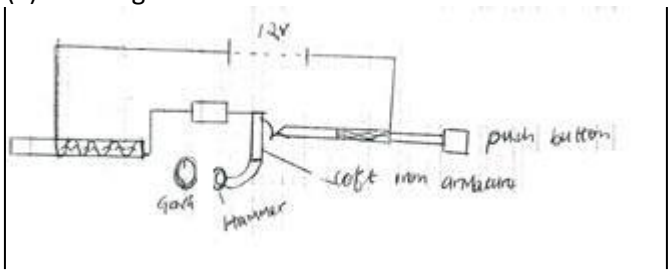
(b) Sketch the resultant field pattern around the following current carrying conductor and show the direction of the forces acting on the conductors.

(i) Current flowing into the paper. (1 mk)

(ii) Current flowing out of the paper.
(1 mk)



(c) The diagram below shows an electric bell.



(i) Describe how the electric bell works. (4 mks)

(ii) Explain what would happen if the armature is made of steel. (1 mks)

(iii)What adjustment should be done to the system to make it operate effectively with a lower voltage battery. (1 mk)

53. (a) Differentiate between a real image and a virtual image. (1 mk)

(b) An object of height 10cm is placed 5cm infront of a concave mirror of local length 10cm.

(i) By use of ray diagram shows the location of the image on the grid provided (4 mks)

Use the ray diagram in (i) above to determine the

(ii) Image distance (2 mks)

(iii)Magnification (3 mks)

(c) State the reason why convex mirror is used as a driving mirror instead of plane mirror. (1 mks)

54. (a) State Hooke's law.

(1 mk)

(b) A spring with the upper end fixed, hang vertically and several masses are suspended from its lower end one at a time. The readings were recorded as shown.

Mass in kg	0	0.02	0.04	0.06	0.08	0.10
Extension mm	0	11	9	29	41	51
Force N						
Extension in m						

(i) Fill in the table. (2 mks)

(ii) Plot a graph of extension in (m)(y-axis) against force in N. (5 mks)

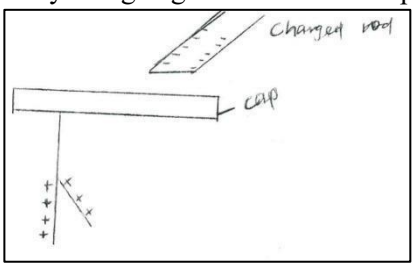
(c) (i) From the graph determine the extension of a mass 0.045kg. Give your answer in mm.(2 mks)

(ii) Determine the spring constant of the spring. (3 mks)

(d) If two such springs were connected in series, what extension would they show when a mass of 1.5kg hangs from one end. (2 mks)

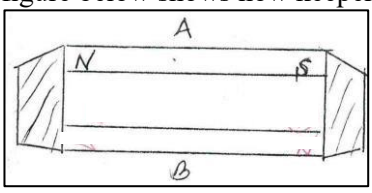
55. (a) State two advantages of a lead acid accumulator over dry cells.
(2 mks)

(b) The figure below shows a highly negatively charged rod being brought slowly near the cap of a positively charged gold leaf electroscope.



State and explain what will be observed on the leaf of the electroscope. (2 mks)

(c) The figure below shows how keepers are used to store magnets. (2 mks)



(i) Mark on the diagram the polarity of the magnet B. (2 mks)

(ii) Briefly explain how keepers assist in storing magnets. (2 mks)