ENDTERM 2 ASSIGNMENT

FORM 2 ALL SUBJECTS

Attempt This Assignment in Your New Exercise Books

This work shall Be Collected On Opening Date!

NAME; …….

ADMISSION NO; ……

STREAM ……

HAVE A NICE HOLIDAY, STAY SAFE!

BY ADMINISTRATION

FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657

ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

BIOLOGY

SECTION A 40 MARKS

Answer All the questions in the space provided.

1. Name the most appropriate tool that Biology students can use for collecting
   i. Crawling animals (1mk)

   ……...…

   ……...

   ii. Flying insects (1 mk)

   ……...…

   ……...

2. State the name given to the study of:
   a) Cells (1 mk)

   ……...……

   ……...

   b) Classification of living organisms (1 mk)

   ……...……

   ……...

3. a) Define the term species (1 mk)

   ……...……

   ……...

   b) A Tiger is known as Panthera Tigris
   i. Identify two mistakes made in writing the scientific name (2 mks)

   ……...…

   ……...

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……...…

……...

ii. Explain why a Leopard and a tiger cannot breed yet they belong to the same genus (1 mk)

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4. A cell was magnified 200 times using a light microscope whose eye-piece lens magnification was X10. What was the magnification of the objective lens (3 mks)

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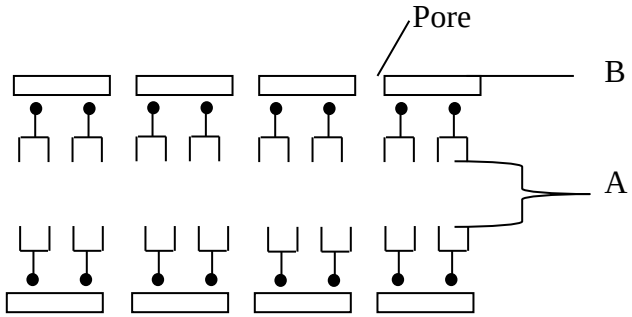
5. The cell structure below was observed under the light microscope



a) Identify the cell structure (1 mk)

b) ……...……

……..……...

c) Name the labeled parts A and B (2 mks)

A…….

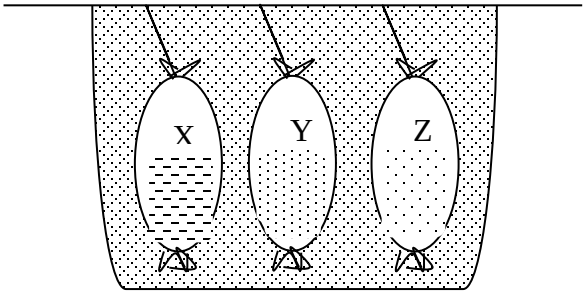
B ……

d) State one function of the above structure (1 mk)

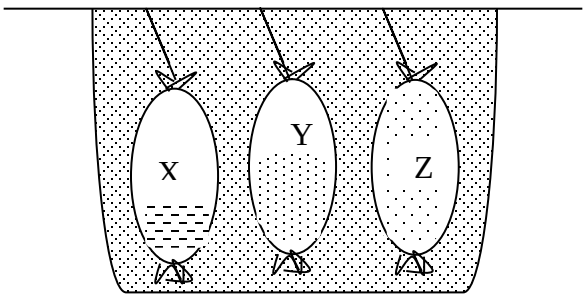
……...……

……..…...

6. In an experiment equal amounts of three different sugar solutions were placed in the risking tubings X, Y and Z. the tubings were placed in a beaker of water containing 5% sugar solution. The set up was left for two hours. The results were as shown in the diagram below.



Beginning of experiment



End of experiment

a) Name the process being investigated in the experiment (1 mk)

……...……

……...

b) Account for the observations made at the end of the experiment (3 mks)

……...……

……...

……...……

……...

c) State three importance of the process named in (a) above in living organisms (3 mks)

……...……

……...

……...……

……...

7. i) Name the carbohydrates that is (3 mks)

a) Found in abundance in mammalian blood

……...……

……...

b) Stored in mammalian liver

……...……

……...

c) Stored in plant seeds

……...……

……...

ii) List two importance of water in living organisms (2 mks)

……...……

……...

……...……

……...

8. The enzyme pepsin and trypsin are secreted as inactive precursors:

   a) What are the name of the precursors (2 mks)

   ……...……

   ……...

   ……...…

   b) Why are they secreted in an inactive form (1 mk)

   ……...……

   ……...

   ……...……

   ……...……...

9. State <u>two</u> structural and <u>two</u> environmental factors that affect the rate of transpiration

   a) Structural (2 mks)

   ……...……

   ……...

   ……

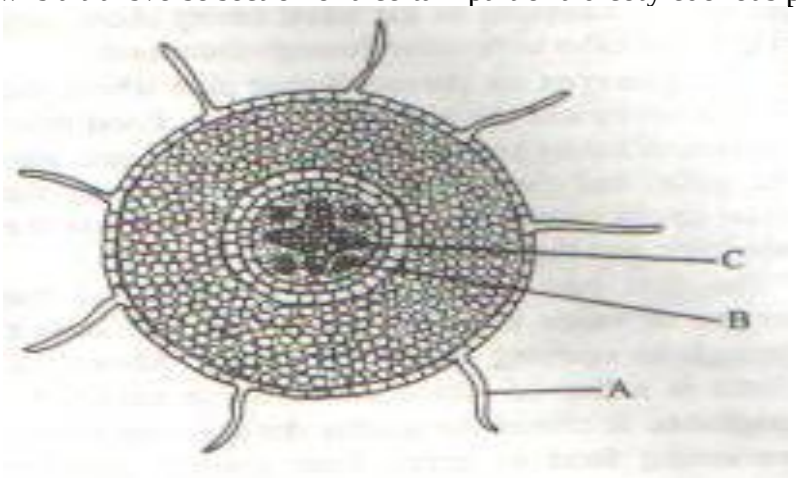
   b) Environmental (2 mks)

   ……...……

   ……...

   ……

10. The diagram below is a transverse section of a certain part of a dicotyledonous plant.



a) Which part of the plant was the section made from (1 mk)

……

……

b) Give reasons for your answer (1 mk)

……

……

c) State the functions of the parts labeled A and C (2 mks)

A……

……

C……

11. Give an example of an animal with (2 mks)

a) Open circulatory system

……

……

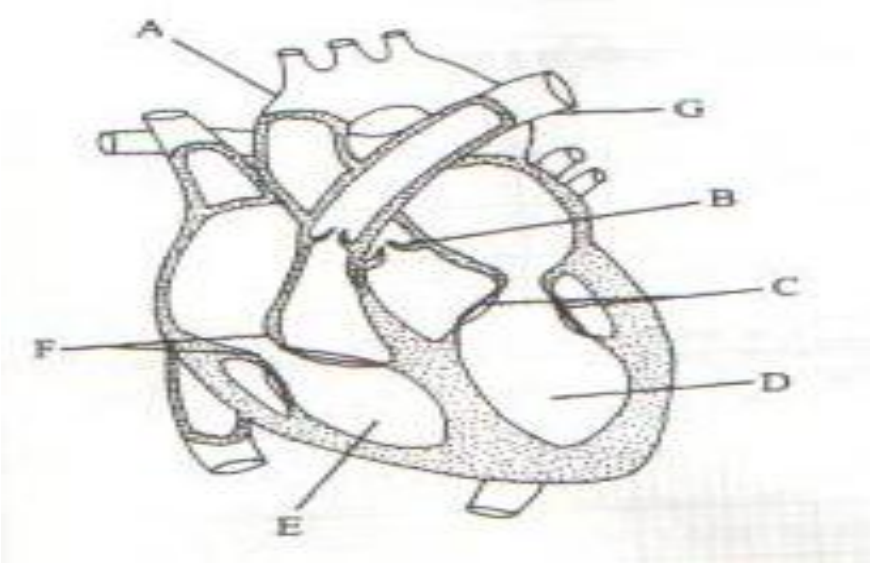
b) Closed circulatory system

……

……

SECTION B 40 MARKS

12. The diagram below show the internal structure of a mammalian heart



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a) Using arrows show the direction of blood flow in and out of the heart (2mks)

……

……

b) Name the parts labeled (2 mks)

A……

C……

c) The muscular wall of chamber D is at least three times thicker than the wall of chamber E. give a reason for this difference (1 mk)

……

……

d) Name two special characteristics of heart muscles which distinguishes it from other parts of muscles (2 mks)

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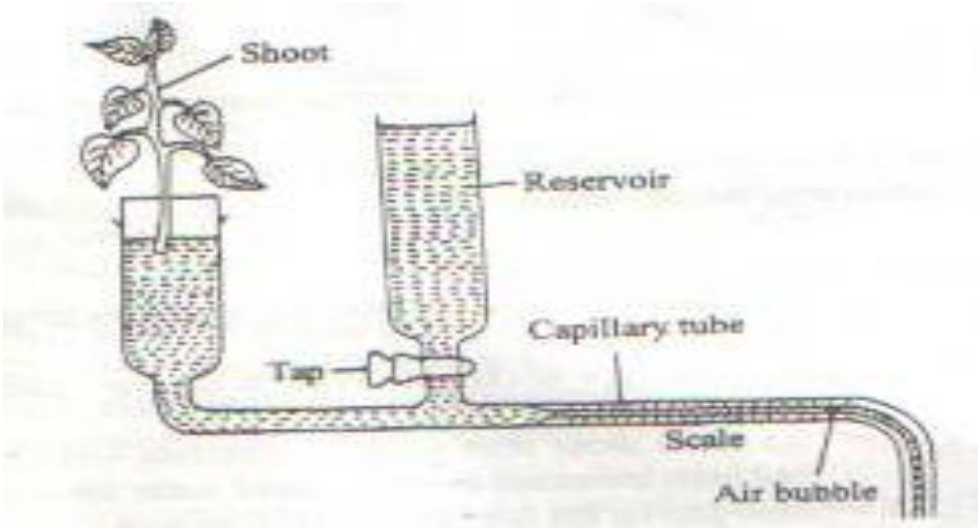
e) In what way does the artery labeled G differ from other arteries in the body (1 mk)

……

……

13. The figure below is a diagram of a potometer



a) What is it used for? (1 mk)

……..……..……

……..……

b) State one precautions which should be taken when setting up a photometer (1 mk)

……..……..……

……..……

c) The rate of transpiration was determined under normal conditions in the laboratory. Giving reasons, explain the differences you would expect if the measurements were repeated under the following conditions.

i. The shoot is placed close to the heat source (2 mks)

……..……..…

...……..……

ii. Some leaves are removed (2 mks)

……..……..…

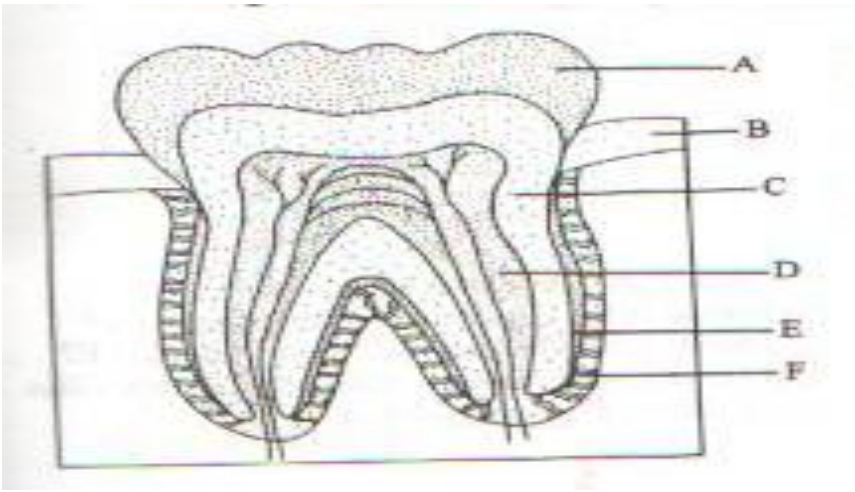
...……..……

iii. The shoot is placed in a current of air created by a fan (2 mks)

……..……..…

...……..……

14. The figure below is a diagram of a vertical section of a mammalian tooth



a) Name the parts labeled A – F (2 mks)

A…….. D……..…….

B…….. E……...

C …….. F……...

b) How are the structures labeled A and D adapted to their functions (2 mks)

……

……

c) List down three ways of preventing teeth diseases (3 mks)

……

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15. a) Give two reasons why clotting of blood is important (2 mks)

……

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b) Name one enzyme and one metal ion that are required in the blood clotting process (2 mks)

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c) Explain why excessive bleeding may lead to death of a patient (3 mks)

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e) Explain why deficiency of vitamin K leads to excessive bleeding even from small cuts (1 mk)

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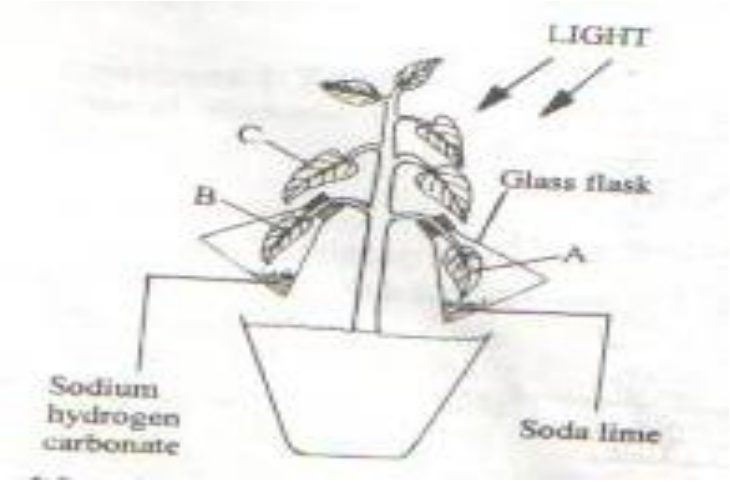
16. The diagram below illustrates an experiment to show carbon (IV) oxide is necessary for photosynthesis. The corks have been smeared with Vaseline to prevent entry of gases.



a) Why is it necessary to place the plants in the dark for two days before starting the experiment? (1 mk)

……

……

b) What is the role of soda lime? (1 mk)

……

……

c) Give the results you would expect if the leaves A and C were subjected to an iodine test after being in bright sunlight for 6 hours.

i. A (1 mk)

……

……

ii. C (1 mk)

……

……

d) Explain the results given in (C) above (2 mks)

……

……

e) A part from carbon (IV) oxide, name <u>two</u> other factors which are necessary for photosynthesis to take place (2 mks)

……

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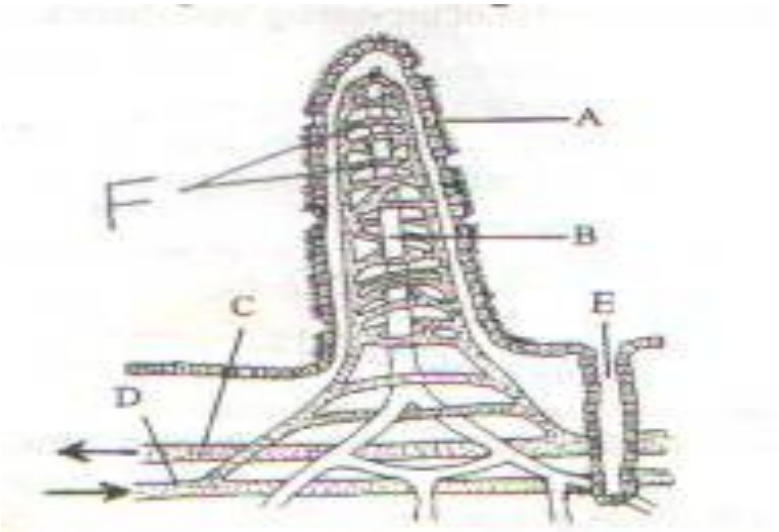
SECTION C 20 MARKS

17. The figure below is a diagram of an intestinal villus. Study it and answer the questions that follow.



a) Name the parts labeled A – D (2 mks)

A…….. C……..

B…….. D……

b) What is the importance of the villi? (1 mk)

……

……

c) What is the function of the part labeled F (1 mk)

……

……

d) Most of absorption of digested food in mammals takes place in the ileum. In what ways is it adapted for this function (4 mks)

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e) Name two nutrients that are absorbed in mammalian gut without chemical digestion (2 mks)

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18. State and Explain five factors that determine energy requirements in human beings (10 mks)

ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

AGRICULTURE

SECTION A (30MKS)

1. Define the following terms (2mks)
   a) Entomology

   b) pomology

   c) Apiculture

   d) olericulture

2. Outline four aspects of rainfall important in Agriculture (2mks)

3. State the four physical agents of weathering (2mks)

4. Give four effects of biotic factors in the soil (2mks)

5. Distinguish between rip saw and cross-cut saw (1mks)

6. For each of the following tools give two examples (2mks)
   a) file

   b) scrappers

   c) chisels

   d) gauged marking tools

7. Describe four conditions necessary for land clearing to take place (2mks)

8. State four reasons why burning as a method of land clearing is discouraged. (2mks)

9. a) What is minimum tillage? (1mk)

10. Distinguish between a weir and a dam (1mk)

11. Give two types of each of the following pipes (1mks)
    a) Hose pipes

    b) Metal pipes

12. Identify two dairy goats (1mk)

13. Give four benefits derived from a camel (2mks)

14. Differentiate between macro nutrients and micro-nutrients (1mks)

15. Highlight the functions of phosphorus in plants (2mks)

16. Give four fertilizers that can be used during planting in crops (2mks)

17. List any four methods of harvesting crops (2mks)

18. Highlight any two diseases that attack cabbages (1mk)

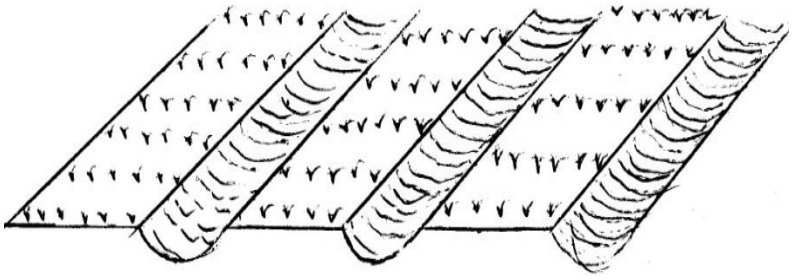
19. List any two insect-pests that attack tomatoes (1mk)

SECTION B (30MKS)

20. Study the diagram below and answer the questions that follow
    a) Identify what is being tested in the above set-up (1mk)
    b) Identify the most ideal soil for most crops (1mk)
    c) Give two ways of improving the clay soil to be used for cultivation (2mks)
    d) Describe four characteristics of clay soils (4mks)

21. The diagram below represents a hand saw study it and answer the questions that follow
    a) Name the parts marked P,Q,R,S and T (2 ½ mks)
       P
       Q
       R
       S
       T
    b) Give four maintenance practices for the above saw (4mks)

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



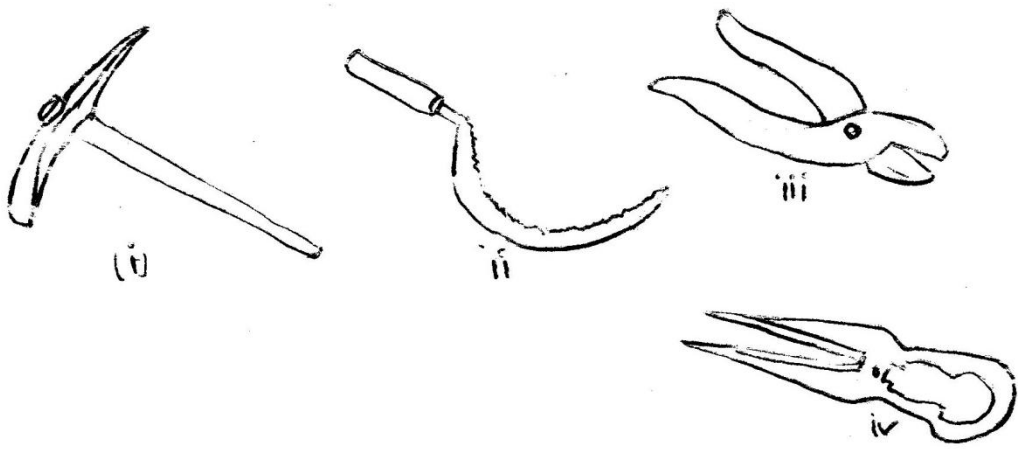
    a) identify the structure above (1mks)

    b) State the function of the structure in (a) above (1mks)

    c) State the importance of activity carried by the structure in (a) above (4mks)

23.

24. Study the diagrams below and answer the questions that follow



a) Identify tools (i), (ii), (iii), (iv) (4mks)

i.

ii.

iii.

iv.

b) Give the use of each of the tools named in (a) above (4mks)

i.

ii.

iii.

iv.

SECTION C(40MKS)

25. a)Name and explain the importance of Agriculture in the economy of Kenya (6mks)

b) Give practices carried out in minimum tillage (7mks)

c) Describe the benefits of minimum tillage (7mks)

26. a) Highlight the importance of water treatment (4mks)

b) Describe four characteristics of a fertile soil (6mks)

c) State any four characteristics of nitrogenous fertilizers (6mks)

d) Describe four characteristics of a good storage structure (4mks)

ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

BUSINESS STUDIES

1. State the term given to each of the following statements.(4mks)

Statement	Term
a. Movement of goods and services from producers to consumers	
b. Creation of goods and services	
c. Using a good or service	
d. Satisfaction derived from using a good or a service.	

2. Give four sources of business ideas.(4mks)

3. Under what circumstances would cash with order (c.w.o) be appropriate in a business.(4mks)

4. Outline four principles of cooperatives (4mks)

5. Give four sources of capital for a limited liability company (4mks)

6. State four advantages of partnerships over sole proprietorship.(4mks)

7. Outline four measures taken by an office business to safeguard an organization property.(4mks)

8. Outline four advantages of an enclosed office layout.(4mks)

9. State four factors of production giving a reward for each.(4mks)

10. Identify the macro-environmental factors affecting business operations as described by the following.

Statement	Factor
a. .Law and policies that regulate business activities.	
b. Affects buyer's ability to buy commodities offered by a business.	
c. Firms selling similar products trying to outdo each other.	
d. Dictates how people live and what products they consume.	

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

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

13. Outline four reasons why choice is important in satisfaction of human wants.(4mks)

SECTION B.

ANSWER ALL QUESTIONS IN THIS SECTION

14. a. Explain three roles of an entrepreneur to an economy .(6mks)

b. Identify four characteristics of economic resorces (4mks)

15. a.A form four School leaver intends to start a business. Outline three ways in which knowledge of business studies will benefit him.(6mks)

ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

CRE

1. State two biographical books in the Bible. (2mks)
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2. Mention two attributes of God according to creation accounts. (2mks)
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3. State two reasons why Moses was reluctant to go and rescue Israelites inEgypt (2mks)
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4. Identify two failures of King Solomon. (2mks)
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……

5. State two features of the caananite religion during the time of prophet Elijah (2mks)
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……

6. Give two ways in which the church in kenya can assist prisoners (2mks)
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7. List two responsibilities of African towards the Sprits in the traditional Africa society (2mks)

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8. Identify two rituals associated with death in the traditional African society (2mks)

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9. State two characteristics of Jesus according to angel sent to Mary (LK 1: 26- 38) (2mks)

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10. Give two ways in which the church can use modern technology to spread the good news. (2mks)

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SECTION B

Answer any four questions in this section.

11 a) State five promises made to Abraham by God. (5mks)

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b) Describe the covenant making incidence between God and Abraham (10mks)

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c) Identify five ways in which one can indicate to be a Christian (5mks)

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12a) State five reasons why Idolatry spread among Israelites after settling in Caana (5mks)

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b) Describe the contest between prophet Elijah and Baal prophets at mount carmel (10mks)

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c) Give five reasons why Christians should avoid corruption in their lives. (5mks)

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13a) Identify five reasons why bride wealth was important in traditional African community (5mks)

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b) Explain the importance of Kinship in traditional African society (10mks)

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c) State five forms of irresponsible sexual behaviours in our society today (5mks)

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14 a) State five prophecies by prophet Isaiah that refers to the character of messiah
(Isaih 61: 1- 2) (5mks)

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b) Explain five reasons why the Birth of Jesus was extra-ordinary (10mks)

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c) Describe the dedication of Jesus . (LK 2: 21-40) (5mks)

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15a) Identify five teachings of John the Baptist (Lk 3: 1-20) (5mks)

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b) Explain five reasons why Jesus was baptized (Lk 3: 21-22) (10mks)

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c) Give five ways in which a Christians can support the poor in the society. (5mks)

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ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

ENGLISH

SECTION A

Composition (20mks)

1. Write a composition entitled 'The effects of Modern Technology on the Youth Today.'

SECTION B

2. **Cloze Test (10mks) Read the passage below and fill in each blank space with an appropriate word**.

Most of us know 1_____ our human rights are. We often demand that they be respected. This is as it should be. Unfortunately, some of us do 2_____realize that others have rights too. For instance, you have the right to 3_____ loud music. You have to consider if the music would be a nuisance to other people who want peace and 4_____ . What about the way we dress? Should we dress to please ourselves? Should we dress to please others? Definitely, we come first. We must not dress in a way that 5_____the modesty of others. Also, many people defend the right to 6 _____. They know how harmful this is to our health. I, however, strongly believe that smoking should not be done I 7_____. Doing so denies others the right to enjoy a pollution free environment and 8_____ their health. Remember nobody is likely to 9_____ your rights if you do not respect those of others. Long live 10_____ human rights.

SECTION C

3. **Oral Skills (10mks)**

A. **For each of the following words provide a word pronounced in the same way. (5mks**)

i. bury _____

ii. gate _____

iii. cruise _____

iv. taught _____

v. flecks _____

B. Identify the silent letters in the following words (5mks)

i. Debut _____

ii. Chassis _____

iii. Crochet _____

iv. rendezvous _____

v. poignant _____

SECTION D

Comprehension (20mks)

Read the passage below and answer the questions that follow

There are varied opinions as to what real pleasure ought to be. However, this is one view which approaches this controversial topic from the positive angle and lays down certain tests which true pleasure must satisfy.

Firstly, no pleasure can be right if its effects on the person who indulges in it are harmful. There are pleasures which can injure a man's body and which, in the end, can have a permanent ill-effect on his health. There are pleasures which can coarsen a man's moral fibre and lower his resistance against that which is wrong. Any pleasure which leaves a man less physically fit, less mentally alert, less morally sensitive is wrong.

There are obvious instances of this. Excessive use of alcohol lowers a man's power of self-control and renders him liable to do things which he would not have done if he had been soberly master of himself. The taking of drugs and stimulants can end in leaving a man a physical wreck. Over-indulgence in eating and drinking can leave a man a burden to himself, with his physical fitness seriously impaired. Promiscuous sexual relationships can leave a man with the most tragic of diseases which will not only ruin his own life, but will be passed on to his children.

One of the simplest tests of pleasure is: What does it do to the man who indulges in it? If it is actively harmful, or even if it has a built-in risk in it, it cannot be right.

Secondly, no pleasure can be right if its effect on others is harmful. There are pleasures which can result in the corruption of other people, either physically or morally. To teach others to do wrong, to invite them to do, or to make it easier for them to do so, cannot be right. To take drugs should not be painted as adventurous and free. An illicit relationship, similarly, should not be presented as a beautiful friendship. Experiment with things which experience has proved to be disastrous cannot be looked on as the assertion of freedom.

Thirdly, pleasure which becomes an addiction can never be right. One of the old Greeks said that there were only two questions about any pleasure: 'Do I possess it or am I possessed by it?' 'Do I control it or does it control me?' The minute a man feels that some pleasure is gripping him in such a way that he cannot do without it, he will be well advised to break it before it breaks him.

Addiction can happen with things like tobacco and alcohol: it can also happen with drugs, so that a man becomes hooked on some drugs and thereby become a slave to them. It is better to have nothing to do with pleasure which is liable to become an addiction. It is essential, the moment we become aware of the growing addiction, to stop.

Fourthly, a pleasure is wrong if, to enjoy it, the essentials of life have to take second place. A pleasure should not cost too much, even if it is a good thing in itself. A man may spend on a game time and money which should have gone to his home and family. Anything in life that gets out of proportion is wrong. Whenever any pleasure annexes time and money which should have gone to things and to people in life of even greater importance, then, however fine it is in itself, it is wrong.

questions

i. According to the information given in paragraph 2, how can pleasure affect a man? (2mks)

ii. What is the author's argument excessive use of alcohol? (2mks)

iii. Rewrite the following statements according to the instructions given after each.
   a) Addiction can happen with things like tobacco and alcohol: It can also happen with drugs (Begin Not only ……..) (2mks)

b) A pleasure should not cost too much .
(Supply a question tag) (1mk)

iv. What is the author's recommended test for pleasure? (2mks)

v. How can pleasure become harmful to other people? (2mks)

vi. Pick any four adverbs of sequence used in the passage (2mks)

vii. State the author's definition of true pleasure according to the last paragraph (2mks)

viii. Find out the meaning of the following words and phrases as used in the passage (5mks)

a) Controversial

b) Over-indulgence

c) built –in-risk

d) Ilicit relationship

e) annexes

SECTION E

Poetry (10mks) Read the poem below and answer the questions that follow

My Papa's Waltz by Theodore Roethke
The whiskey on your breath
Could make a small boy dizzy;
But I hung on like death:
Such waltzing was not easy.

We romped until the pans
Slid from the kitchen shelf;
My mother's countenance
Could not unfrown itself.

The hand that held may wrist
Was battered on one knuckle;
At every step you missed
My right ear scraped a buckle.

You beat time on my head
With a palm cake hard by dirt,
Then waltzed me off to bed
Still clinging to your shirt

Questions

a) Say what happens in the poem (2mks)

b) Who is the persona in the poem (1mks)

c) What is the persona's attitude towards Papa? (2mks)

d) Identify figures of speech used in the poem (2mks)

e) i) Identify and illustrate the rhyme scheme of the poem. (2mks)

ii) To what effect does the poet use rhyme. in the poem (2mks)

SECTION F

Oral Literature (15mks)

Read the narrative below and answer the questions that follow:

This thinghappened long time ago when people first appeared on earth. One day, the people were told that if they didn't want to die, they should send chameleon with a fat piece of meat to take to the moon who would pass it to

God. They were also told to give Lizard a hoe to take to the moon. Then, if Chameleon reached the moon with the fat piece of meat before Lizard with the hoe, the people would not die, but would live forever.
That day, the people never slept a wink. They stayed awake throughout the night and early the next morning. They sent Chameleon far ahead of lizard. However, on the way, the temptation to taste the succulent appetizing piece of meat proved too great, so Chameleon stopped to taste a little meat. The meat proved to be tender and juicy and chameleon ended up eating a chunk of it. The remaining piece that was to be taken to the moon became dirty, covered with soil. Once Chameleon realized that he was late, he lowered the meat down from his back and begun to hurry, dragging it along. As Chameleon hurried along, all the other animals stared at him, sniggered and hid away. But of course, most of them have been envious of Chameleon for the important errand on which he had been sent. So they were happy to see that he had failed. By the time Chameleon reached the moon, with the dirty piece of meat, Lizard had already handed the hoe over to the moon and man thus lost the golden opportunity to acquire immortality. "The moon chased away the Chameleon and threw the dirty piece of meat after him. The hoe which Lizard carried was used by the Luo to dig graves and bury their dead. Death had been born.
Since that time that Chameleon messed up the Moon's gift meat, the type of death from which an individual would die is fixed right on the day of his or her birth! And initially death didn't come secretly to human beings. Death just sent word to whoever he wanted to take away to get ready on a particular day. But since no one liked to die, people used to give death a hard time. He always had to chase one person for days, before he overpowered and caught him. People used all sorts of tricks to evade death, so he decided to come secretly and catch them unawares. That's why human beings never know the date they die.

Questions

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

b) Describe the character of the following as brought out in the narrative (4mks)
   i. Lizard

   ii. Chameleon

c) Identify and illustrate three oral features that make the above an oral narrative (3mks)

d) Give three functions of the narrative that you have identified in (a) above (3mks)

e) Identify and illustrate one economic activity of the community from which this narrative is drawn (2mks)

f) Explain the meanings of the following words and phrases as used in the narrative (1mks)

i. Sniggered

ii. immortality

GRAMMAR (15MKS)

A. Complete the following sentences by filing in the blanks with the correct proposition (3mks)

i. The traveller was robbed _____ all his money

ii. Mike expressed his interest _____ modern art

iii. Juma's parents no longer have much influence _____ him.

B. choose the correct pronoun to fill in the gap (3mks)

i. She knows as well as _____ that food is not permitted in the dormitories (me, I)

ii. There's not much difference between you and __ _____(he,him)

iii. I am taller than _____ (she, her)

C. **Re-write the following sentences according to the instructions given after each (4mks)**

i. He went to look for a window – cleaner since he could not do the work himself (rewrite to change the compound noun to plural)

ii. "I greeted the president this morning, "Esther exclaimed (change to indirect speech)

iii. If you have nothing more to contribute, we will stop the fundraising now (Begin: Unless…..)

iv. The favourite colour of Bosire is blue (correct the sentence where necessary)

D. Rewrite the following sentences using the present perfect tense form of the verb in brackets (3mks)

i. The dresses I bought _____ (shrink)

ii. The market _____ (grow) and changed a great deal.

iii. The shirt _____ (cost) him a fortune

E. Complete the following idiomatic expressions with the correct word. (2mks)

i. Do not take him seriously, he is just pulling your _____

ii. Her behaviour is getting out of _____.

ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

CHEMISTRY

1. 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.
      X - (1 mk)

      Y - (1 mk)

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

2. 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)

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

4. 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)

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

   (ii) Diesel from crude oil

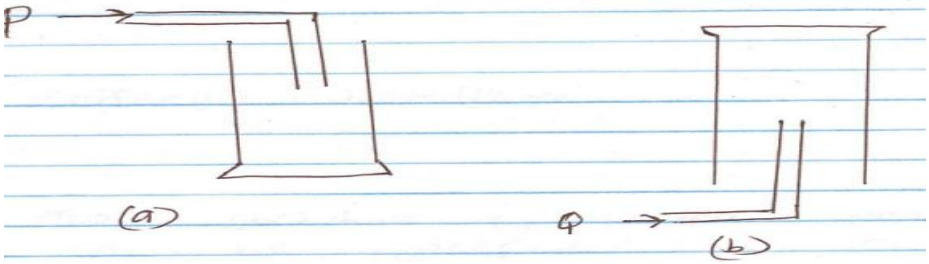
   (iii)Sugar crystals from sugar solution

6. 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)

7. 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)

8. 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)

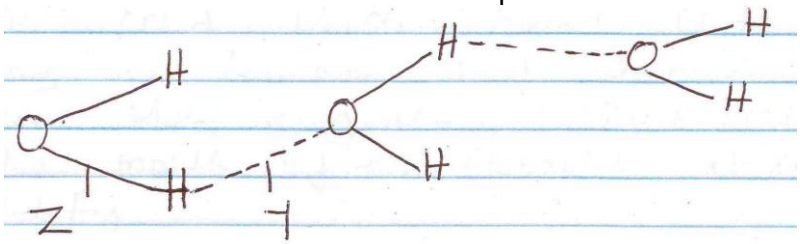
(ii) State the property of Q that enables it to be collected as shown above. (1 mk)

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

9. 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)

10. 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)

11. 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			

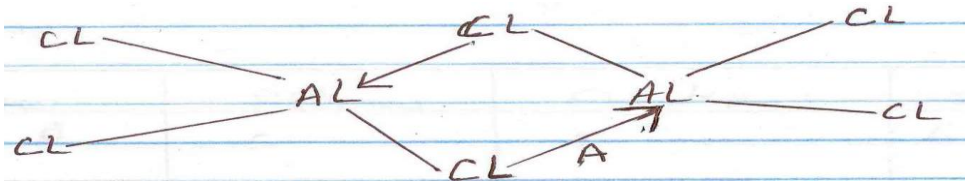
Q			

12. 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)

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

13. 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)

14. Which particles conduct electricity in;
    (i) Molten lead (ii) bromide (1 mk)

    (ii) Aqueous sodium chloride (1 mk)

    (iii)Graphite (1 mk)

15. 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).

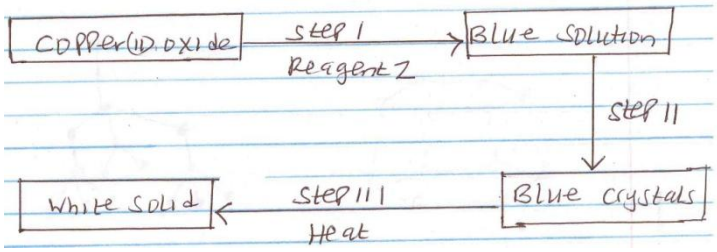
Atom	Protons	Electrons	Neutrons
A	5	5	6
B	9	9	10
C	10	10	11
D	15	15	16
E	10	10	12

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)

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



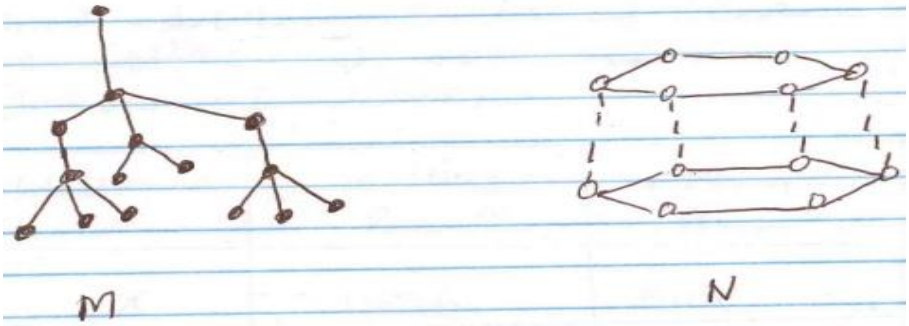
(a) (i) Identify reagent Z. (1 mk)

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

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

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

18. 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)

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

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

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

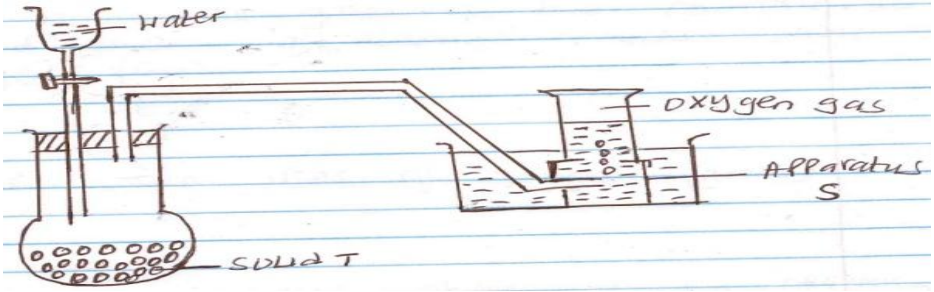
Substance	Melting point ^{0}C	Boiling point ^{0}C
X	1536	3100
Y	65	1115
Z	-40	361
P	-218	-190
Q	99	890
R	116	445

(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)

21. (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)

22. Name the salts obtained by reacting;
(i) Zinc oxide with dilute sulphuric (vi) acid. (1 mk)

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

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

23. (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;
(i) Has a giant ionic structure. (1 mk)

(ii) Is a metal (1 mk)

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

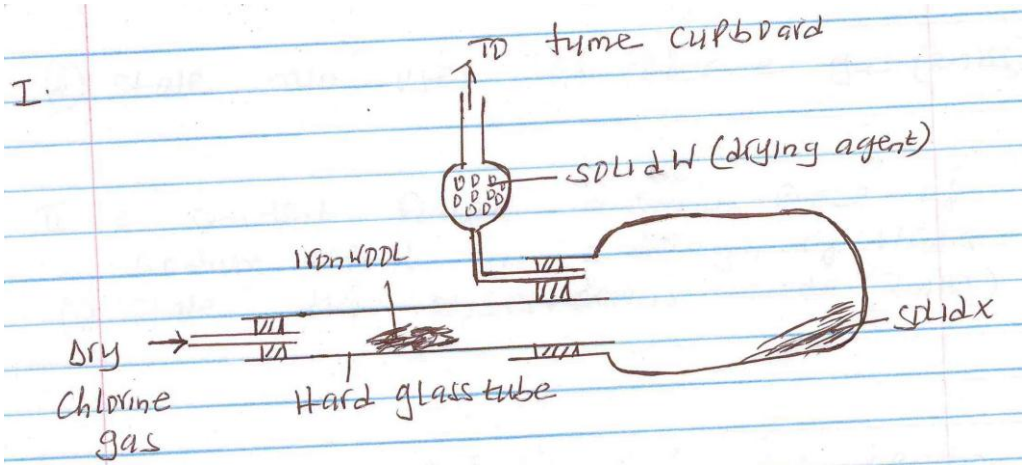
(b) Using dots(.) and crosses (x) illustrate bonding in ammonia molecule (NH_3). (N=7, H=1) (2 mks)

24. 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)

25. (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)

26. 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)

27. 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)

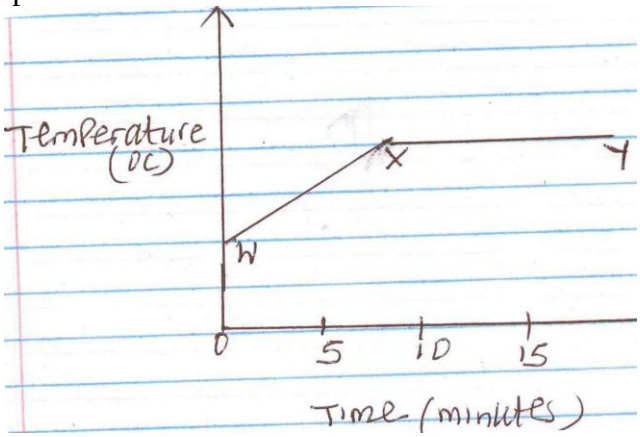
(c) Give an example of element B. (1 mk)

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)

28. 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)

ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

GEOGRAPHY

SECTION A

1. a) Define the term solar system (1mk)

   b) List down two theories that explain the origin of the solar system (2mks)

2. a) Give a brief explanation about the origin of the earth (4mks)

b) Fill in the blank spaces on the dimension of the earth (4mks)

Equatorial diameter

polar diameter

equatorial circumference

polar circumference

c) List down four proofs that the earth is spherical (4mks)

3. a) List down four effects of rotation of the Earth (4mks)

b)with the aid of a well labelled diagram, explain how solar eclipse occurs (4mks)

4. a) Define the term weather (1mk)

b) List down four factors that determine the amount of solar radiation which reaches the earth surface. (4mks)

5. a) Explain the term humidity (1mk)

b)Differentiate between absolute humidity and relative humidity (2mks)

6. a) What is the meaning of the term winds? (1mks)

b) With Aid of well labelled diagrams explain how land and sea breezes occur (6mks)

7. a) Name the four main zones of the atmosphere (4mks)

b) Differentiate between negative, positive and zero lapse rate. (3mks)

c) What is the ozone layer? (2mks)

d) What is its importance to man? (2mks)

- The table below shows rain fall and temperature in town x use it to answer the questions that follow

Months	j	F	M	A	M	J	J	A	S	O	N	D
Temp °C	23	24	26	28	29	28	26	26	26	30	28	25
Rainfall mm	3	0	3	1	18	500	720	408	300	70	15	0

a) Calculate

i. The total annual rainfall (2mks)

ii. The mean monthly rainfall (2mks)

iii. The annual range of temperature (2mks)

iv. The mean annual temperature (2mks)

b) Using the table indicate the following

i. The wettest month (1mks)

ii. The hottest month (1mk)

iii. The coolest month (1mk)

SECTION B

8. a) Define the term Earth movements (1mk)

b) Formation of internal or External land forms by tectonic forces is determined by the following (3mks)

c) List down two types of earth movements (2mks)

a) Give two causes of earth movements (2mks)

b) List down three evidences supporting continental drift theory (3mks)

c) List down three types of boundaries associated with plate tectonic movements (3mks)

9. a) Define the term folding (1mk)

b) Briefly explain the process of folding (3mks)

c) List down three different types of folds (3mks)

d) List down three features resulting from folding (3mks)

c) Fill in the gaps below (5mks)

Fold mountain	where found
i. Atlas	_____
ii. _____	Europe
iii. _____	Asia
iv. Andes	_____
v. _____	North America

f) Give three significances of folding to human activities (3mks)

10. a) Define the term faulting (1mks)

b) List down three types of faults (3mks)

c) i)What is a rift valley? (1mk)

ii) Mention three ways in which the rift valley may have been formed (3mks)

11. a) Explain the meaning of the following terms;
    i. A picture (1mk)
    ii. A map (1mk)
    iii. A plan (1mk)

    b) Give three uses of maps (3mks)

ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

HISTORY

Instructions:
Answer all the questions

SECTION A (25 MARKS)

1. Identify two main branches of the study of History. (2mks)

2. State two limitations of relying on oral tradition as a source of information on history. (2mks)

3. Name the type of picture writing used in Egypt. (1mk)

4. Identify two ways used by early man to obtain food during the middle stone age. (2mks)
5. Name one remaining Southern Cushitic group in Kenya. (1mk)
6. State two functions of the Kambi among th MijiKenda. 2(mks)

7. State one contribution of Ludwig Krapf in the spread of Christianity in Kenya. (1mk)
8. Give one example f regional trade in Africa. (1mk)
9. Mention two factors that make the camel a good pack anima. (2mks)

10. State two limitations of using cell phones. (2mks)

11. Give the contribution for Wright brothers in the development of transport.

12. Give the main contribution for Junas Edward Salk in the field of medicine. (1mk)

13. Identify two uses of Bronze during the pre-colonial period. (2mks)

14. Give two ways in which one can qualify to become a Kenyan citizen. (2mks)

15. Give two methods of conflict resolution. (2mks)

SECTION B (45 MARKS)

16. (a) State three functions of the Orkoiyot among the Nandi. (3mks)
(b)Explain six results of Cushites migration in Kenya. (12mks)
17. (a) State five agricultural practices in Europe before the Agrarian Revolution. (5mks)
(b) What were the results of development of early agriculture in Mesopotamia? (10mks)
18. (a) Give five factors that led to the development of trans-Saharan trade. (5mks)
(b)Explain five factors for the decline of the Trans-Atlantic trade. (10mks)
(i) Decline in demand of sugar – reduced the demand for slaves.
(ii) Independence of America – it deprived the British of Profits made from the slave trade.
(iii)Industrial revolution
- Machines replaced human labnour as they were more efficient
(iv)Anti – slavery movement – Christian missionaries advocated for abolition of slave trade
(v) Economic views – influencial economists like Adam Smith advanced argument for a free enterprise economy.
(vi)American civil war – a civil war between North and South over institution of slavery – The North which was against slavery won the war leading to abolition of slavery in USA
(vii) Slavery revolts e.g. in Jamaica, Antique
(viii) Contribution of Africans –s ome Africans actively campaigned against slave trade e.g. King Nzinga
19. (a) Identify five political responsibilities of a Kenyan citizen. (5mks)
20. (a) Identify five political responsibilities of a Kenyan citizen. (5mks)
(b) Explain circumstances which may force the government to limit the right to freedom of movement and residence (10 mks)
21. (a) Identify three national symbols. (3mks)
(b) Explain six factors which have enhanced national unity in Kenya since independence (12 mks)

ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

KISWAHILI

(INSHA)

ALAMA 20

1 Andika insha itakayomalizika kwa maneno haya: "……. siku hiyo nilirudi nyumbani nikiwa nimesikitika na kujawa na majonzi tele. Nilikuwa sijawahi kuona ajali mbaya kama hiyo"

B UFAHAMU (ALAMA 15)

Soma taarifa hii kisha ujibu maswali ifuatayo.

Ukandaji

Je,unajua kuwa ukandaji wa mwili umetumika kama njia mojawapo ya matibabu toka dahari? Watu wanaofahamika kutumia ukandaji kimatibabu toka jadi ni Wahindi,Wachina,Wagiriki,Warumi na Waafrika.

Ukandaji unajulikana kuwa na manufaa makubwa kimatibabu. Mathalani,ukandaji hufungua vitundu vya ngozi. Ufunguzi huu huondoa sumu mwilini kupitia kwa utoaji jasho. Pili,ukandaji hupunguza mkazo wa misuli. Misuli ikiwa na mkazo zaidi kwa muda mrefu huleta urundikaji wa asidi. Ukandaji huondoa asidi hii,huufanya mwili kuwa mlegevu,humletea mtu uchangamfu na kuondoa uchovu.

Halikadhalika,ukandaji huimarisha mzunguko wa damu mwilini kwa wepesi. Hali hii huhakikisha kuwa virutubishi vya mwili huweza kufikia viungo vyote vya mwili. Hili nalo huchangia kuzidisha uwezo wa mwili kujikinga na maradhi. Hewa safi ya oksijeni huweza pia kusambaa kote mwilini kupitia kwa uimarishaji wa mzunguko wa damu. Aidha,ukandaji wa taratibu na polepole hupunguza mkazo wa neva na kuziliwaza ukandaji wa kasi huchangamsha neva na kuimarisha utendaji kazi wake.

Ukandaji unaweza kufanyiwa kiungo chochote mwili ni. Ukandaji huu huweza kuwa na matokeo mbalimbali mwilini.

Mathalani,ukandaji wa njia ya chakula mwilini,hasa tumbo na utumbo,huimarisha usagaji wa chakula na kuchangia uondoaji wa uchafu na sumu mwilini. Nao ukandaji wa njia ya mkonjo hustawisha uondoaji wa chembechembe za sumu mwilini.

Kwa kawaida,viganja vya mikono hutumika katika ukandaji. Viungo hivi vinapaswa kuwa na wororo. Wororo huu hupatikana kwa kutumia mafuta. Mafuta ambayo ni bora zaidi kwa shughuli za ukandaji ni ya ufuta au simsim. Matumizi ya kitu chochote kama ungaunga kinachoweza kuziba vitundu vya ngozi hayapendekezwi.

Ukandaji wapaswa kutekelezwa kwa njia ifuatayo. Mtu aanzie mikono na miguu. Kisha aingie kukanda kifua,tumbo,mgongo na makalio. Hatimaye,akande uso na kichwa. Mtu anaweza kutumia kitambaa kukandia mgongo. Ni bora kutumia viganja vya mikono kukandia. Kwa njia hii,manufaa huwa maradufu. Kwanza,tutanufaika na ukandaji na wakati huo huo tutakuwa tukifanya mazoezi ya viungo. Wasioweza kujikanda,wanaweza kuomba msaada. Ni muhimu ukandaji ufuatiwe na kuoga kwa maji vuguvugu.

Kwa walio na tatizo la shinikizo au mpumuko wa damu wanaweza kubadilisha utaratibu wa ukandaji. Waanzie kichwani,kisha waelekee usoni,kifuani,tumboni,mgongoni,makalioni,miguuni na kuhitimisha mikononi.

Hata hivyo,ukandaji haupaswi kufanywa wakati mtu anaugua maradhi yoyote. Wanawake wajawazito nao wanatakiwa kuepuka ukandaji wa tumbo. Halikadhalika,ukandaji wa tumbo hauruhusiwi wakati mtu anaendesha,ana vidonda vya tumbo au uvimbe tumboni. Hatimaye,ukandaji haupendekezwi iwapo mtu ana maradhi ya ngozi.

MASWALI

(a) Ukandaji ni nini? (alama 1)

(b) Eleza manufaa matatu ya ukandaji. (Alama 3)

(c) Ukandaji unatakiwa kutekelezwa kwa njia gani? (alama 2)

(d) Ukandaji unatakiwa kutekelezwa na nani na kwa nini? (alama 2)

(e) Onyesha ni lini ukandaji haupendekezwi. (alama 2)

(f) Eleza maneno yafuatayo kama yalivyotumika: (5 alama)

(i) ufunguzi

(ii) auni

(iii) maradufu

(iv) maji vuguvugu

(v) shinikizo la damu

(C) UFUPISHO

Soma taarifa hii kasha ujibu maswali

Kuna wataalamu siku hizi wanaosema kuwa jela si pahala pa adhabu bali pa matibabu. Yaani madhumuni ya kumtia mhalifu jela isiwe kumwadhibu kwa makosa aliyofanya bali iwe kumtibu na kujaribu kumrekebisha tabia yake ili awe raia mwema.

Zamani wahalifu waliadhibiwa kwa mujibu wa makosa waliyoyafanya. Mhalifu aliyefanya makosa madogo madogo alifungwa lakini mtu aliyeua naye aliuawa. Sasa wataalamu wanatuambia kuwa mhalifu akiadhibiwa anapokuwa kifunguno,basi akitoka hurejea tena kufanya uhalifu. Madhumuni ya kumtia jela iwe si kumwadhibu bali kumfunza tabia njema. Wanatuambia kuwa makosa afanyayo mhalifu yanatokana na matatizo ya jamii kwa jumla,nayo ni matatizo kama ya umaskini, msongamano wa watu,kosa afanyalo mhalifu si kosa lake pekee bali ni kosa la jamii nzima.

Jitu lilizoea kuua halioni kitu kumpiga mtarimbo au rungu la kichwa na kumyang'anya kila alicho nacho. Siku hizi,jitu kama hili baadhi ya wataalamu husema lisiuawe lifungwe maisha tu. Lakini 'kifungo cha maisha' ni kama tunavyokijua. Muuaji hufungwa pengine miaka kumi tu kisha husamehewa muda uliobaki. Hapo tena huwa huru ama kuifichua mali aliyoiiba na kuistarehea raha mustarehe au kurejea tena kufanya uhalifu.

Haya ni kinyume kabisa na mambo yaliyokuwa zamani. Aliyeua aliuawa kwa hivyo watu waliogopa kuua. Raia na pia askari waliokuwa wakiwasaka wahalifu walinusurika vifo kwani wahalifu wengine walichukua silaha za hatari kama bastola na bunduki.

Sasa wale wahalifu wabaya sana – mijizi, minyang'anyi na wauaji ndio wanaotukuzwa. Magazeti huwashawishi makatili hawa na kuwapa mapesa chungu nzima waeleze maisha yao ya kikatili. Magazeti haya sasa ndiyo yanayopata wasomaji wengi. Pia wachapishaji vitabu vya hadithi zinazohusikia na uhalifu, biashara zao zinazidi kustawi. Kadhalika sinema zinazoonyesha picha za ukatili; wizi na mauji hujaa watazamaji wanaoshangilia uhalifu ufanywao.

Wahalifu kwa upande mmoja wanatukuzwa na masinema vitabu na magazeti na kwa upande mwingine "haki" zao zinapiganiwa na baadhi ya wataalamu. Watu wanaowalaani wahalifu ni wale waliohasirika tu na kuteswa na wahalifu . Baadhi yao hata kulaani hawawezi kwa sababu wameshauawa,hawana tena kauli.

MASWALI

(a) Fupisha aya ya kwanza hadi ya tatu kwa maneno 50.

Matayarisho

Nakala safi (alama 6/mtiririko 2)

(b) Fupisha aya mbili za mwisho kwa maneno kati ya 45-50

Matayarisho

Nakala safi (alama 6/Mtiririko 1)

D MATUMIZI YA LUGHA: (ALAMA 40)

(a) Eleza tofauti kati ya sauti /z/ na /d/ (ala 1)

(b) Eleza tofauti kati ya:

(i) Mofimu huru

(ii) Mofimu tegemezi (ala 2)

(c) Ainisha viambishi katika sentensi hii.

(i) Mlipewa (ala 2)

(d) Onyesha kundi nomino na kundi tenzi katika sentensi hii.

(i) Nyayo za wanyama hao zimeonekana hapa. (ala 2)

e) Onyesha nomino za jamii katika sentensi zifuatazo

(i) Chuki baina ya jamii lazima ikomeshwe barani Afrika.

(ii) Wageni watatumbuizwa na bengi ya kayamba Afrika.

f) Bainisha vitenzi halisi kwa kuvipigia mstari

(i) Nyanchama hakufika mkutanoni

(ii) Horukut amerudi kutoka masoni (ala 2)

g) Eleza maana ya misemo ifuatayo.

(i) kupiga domo

(ii) kupiga kijembe (ala 2)

h) Tunga sentensi mbili kuonyesha tofauti kati ya maneno haya.

(i) shuka

(ii) suka (ala 2)

(i) Onyesha vivumishi vya sifa katika sentensi zifuatazo.

(I)(i) Anayetaka chakula kitamu ni nani?

(ii) Kiatu kirefu kimeng'oka kikanyagio.

(ala 2)

(j) Geuza neno lililopigwa mstari kuwa kiwakilishi

(i) Mtoto mbaya aliadhibiwa (ala 1)

(k) Yakinisha sentensi ifuatayo katika umoja.

(i) Nyuzi zisingekatika zisingepotea (ala 2)

(L) Tunga sentensi ukitumia viwakilishi vifuatavyo.

(i) Nafsi viambata

(II) Visisitizi

M) Tumia kiwakifishi kifuatacho kubainisha matumizi yake katika sentensi ili kutoa maana mbili tofauti.

(i) Ritifaa (ala 4)

N) Andika katika udogo na wingi

(i) Njusi aliyekuwa na jicho moja alianguka mtoni (ala 2)

(O) Taja visawe vya maneno yafuatayo.

(i) Damu

(ii) Mjinga

Q) Andika sentensi hii katika ukubwa

(i) Huyo nyoka alikatwa mkia na mvulana yule (ala 2)

R) Tumia kitenzi jina na kivumishi kutunga sentensi (ala 2)

S) Nyambua

Filisisha (tenda) (ala 1)

I) Sahihisha:

Kwenye nilisomea ni bali (ala 1)

U) Tumia herufi mwafaka kuainisha maneno katika sentensi hii.

(i) Ingawa anataka kucheza karata,ni mlevi (ala 3)

E. ISIMU – JAMII

Soma mazungumzo yafuatayo kisha ujibu maswali yanayofuata.

Mhudumu: Mnakaribishwa. Menyu hii hapa.

Mtakula nini?

Mteja 1: Naomba uniletee mix na ugali. Fanya haraka.

Mteja 2: Mhudumu,hebu leta madodo na chemsha mbili. Pia niletee maji ya machungwa.

Mhudumu: Sawa. Baada ya dakika moja utapata yote uliyoagiza.

Mteja 1: (Akila) Wewe-Please bring me drinking water. Yawe baridi tafadhali.

Mhudumu: Ndiyo haya hapa mezani. Glasi ndio hii pia,karibu.

Mteja 2: Nina haraka mzee. Wapi tooth pick?

Mhudumu: Hizo hapo ,mezani karibu na maji.

Mteja 1: (Akiita) Mhudumu,naomba uniletee ugali saucer tafadhali.

Mhudumu: Naam.

Mteja 2: (Akisimama) Nimeshiba. Hizi hapa pesa

Niletee change haraka niondoke.

MASWALI

a) Ni sajili gani inayohusishwa katika mazungumzo haya? (ala 2)

b) Taja sifa zozote tano za sajili hii (ala 5)

c) Dondoa msamiati unaotambulisha sajili hii (ala 3)

ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

MATHEMATICS

ANSWER ALL THE QUESTIONS IN THE SPACES PROVIDED BELOW EACH QUESTION

SECTION 1(50 MARKS)

1. Evaluate $\frac{-8\div2+12\times9-4\times6}{56\div7\times2}$ [3 Marks]

2. A matatu travelling at 56 Km/h take 2 ½ hours to move from town A to town B. Find the distance between towns A and B. [2 Marks]

3. Determine the gradient and the co-ordinates of the x and y intercepts of the line whose equation is $2y + 3x = 1$ [3 Marks]

4. Find the correct 3s.f the value of
$$\frac{1}{6.43} + \frac{2}{3.56} + \frac{1}{8.51}$$
[2 Marks]

5. Without using mathematical tables, evaluate
[3 Marks]
$$27^{2/3} \times \left(\frac{81}{16}\right)^{-1/4}$$

6. The diagonals of a rhombus measure 9.2 cm and 7.5 cm respectively. Calculate the area of the rhombus
[2 Marks]

7. A man is three times as old as his daughter. In twelve years time he will be twice as old as his daughter. Find their present age.
[3 Marks]

8. Use logarithm tables to evaluate
[4 Marks]

$$\sqrt[4]{\frac{37^2 \times 0.0168}{75.63}}$$

9. An artisan has 63Kg of metal of density 7000Kg/m^3. He intends to use it to make a rectangular pipe with external dimension 12 cm by 15 cm and internal dimension 10 cm by 12 cm. calculate the length of the pipe in metres.
[4 Marks]

10. Determine the equation of a line that passes through (-2,5) and is parallel to the line whose equation is $5y + 2x = 10$

[4 Marks]

11. Use the elimination method to solve the simultaneous equations

$2x + 3y = 1$ [4 Marks]

$3x = 2y + 8$

12. A trader sold a wrist watch for sh. 3,150 after giving a 10% discount. Find the marked price of the watch.

[2 Marks]

13. Express as a fraction in its lowest form
[3 Marks]

3. 7̈1

14. Seven people can build five huts in 30 days. Find the number of people working at the same rate that will build nine similar huts in 27 days.
[3 Marks]

15. The size of each interior angle of a regular polygon is five times the size of the exterior angle. Find the number of sides of the polygon.
[3 Marks]

16.Line AB below shows a side of triangle ABC. BC= 5cm and angle ABC = 60°

a. Using a ruler and compass only, complete the triangle ABC.
[2 Marks]

b. From C construct a perpendicular to meet line AB at point N. Measure length CN in centimetres
[2 Marks]

c. Determine the area of triangle ABC [1 Mark]

SECTION B [50 MARKS]

17. Complete the tables below for the equations of the lines $y = -\frac{3}{4}x + 4$ and $y = -3 + 2x$

a. $y = -\frac{3}{4}x + 4$

x	-2	0	2
y		4	

$y = -3 + 2x$

x	-2	0	2
y		-3	

b. using one big square to represent 1 unit on y – axis and 2 big squares to represent 1 unit on x – axis, draw the lines $y = -\frac{3}{4}x + 4$ and $y = -3 + 2x$ [5 Marks]

c. use your graphs to solve the simultaneous equations

$3x + 2y = 8$ [1 Mark]

$2x - y = 3$

18. a school hall measure 10m long, 7m wide and 4m high. All its inside walls and ceiling are painted.
    Calculate,

    i. the total surface area painted
    ii. the cost of painting at 200/= per square metre.
        [10 Marks]

19. a bird flies from tree P to another tree Q which is 50m on a bearing of 030° from P. from Q the bird flies 80m due west to another tree R and finally flies due south to another tree S which is on a bearing of 120° from P.

    a. using the scale 1cm = 10m, construct an accurate scale drawing showing the positions of P,Q,R, and S
       [5 Marks]

    b. by measurement from your scale drawing determine;
    i. the distance and bearing of R from Q [2 Marks]
    ii. the distance and bearing of S from R [2 Marks]
    iii. the distance of S from P [1 Mark]

20.a. On a Cartesian plane plot and draw the triangle ABC, A(1,2), B (1,6), C (5,5) [2 Marks]

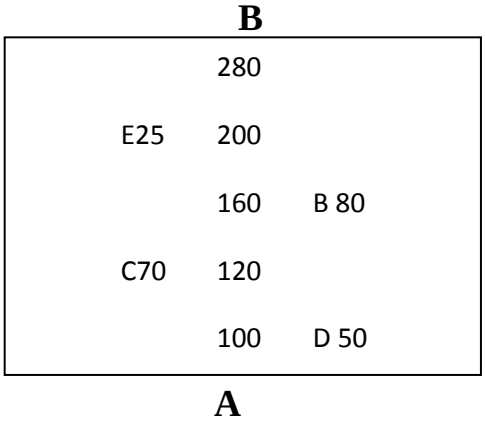
b. Draw the image of triangle ABC after reflection on the line y= x

c. Draw Δ A"B"C" the image of Δ ABC after reflection along y – axis [2 Marks]

d. Draw Δ A"B"C" the image of A'B'C' after rotation through -180° about the origin [2 Marks]

e. Determine the mirror line that makes Δ A'"B'"C'" the image of triangle ABC [2 Marks]

21. The table shows recordings from surveyors' field book.



a. Draw a sketch diagram from the data in the field book
[2 Marks]

b. Given that the recordings are in metres, determine the area of the land in hectares.
[8 Marks]

ENDTERM 2 HOLIDAY ASSIGNMENT

FORM 2

PHYSICS

Take: Acceleration due to gravity g = 10m/s^2

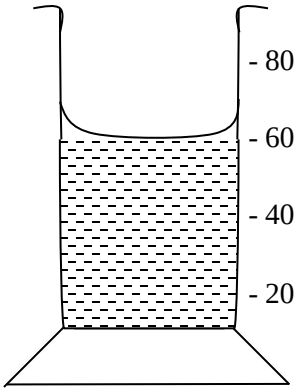
Density of water 1 g/cm^3

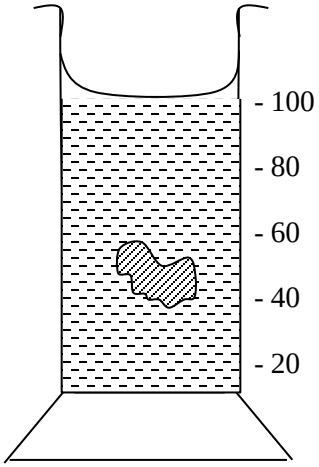
Density of mercury 13.6 g/cm^3

SECTION A (50 MARKS)

1. Draw a vernier caliper scale to show a reading of 3.36cm (2 mks)

2. The figure below shows the change in volume of water in a measuring cylinder when an irregular solid is immersed in it.





Given that the mass of the solid is 567g determine the density of the solid in Kg/m^3. (Give your answer correct to 2 d.p) (3 mks)

3. A small drop of oil has a volume of $5 \times 10^{-8} m^3$. When it is put on a surface of some clean water, it forms a circular film of $0.1 m^2$ in area.

   i. What is the size of a molecule of oil (3 mks)

   ii. State 2 assumptions you made in your calculations (2 mks)

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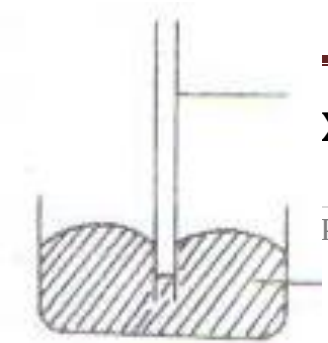
4. A body weighs 600N on the surface of the earth and 450N on the surface of another planet. Calculate the value of g in that planet (g on the earth = 10 N/Kg) (3 mks)

5. The diagram below shows the behaviour of mercury in a capillary tube. Explain this observation (3 mks)



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6. How does temperature rise and impurities affect the surface tension of water (2 mks)

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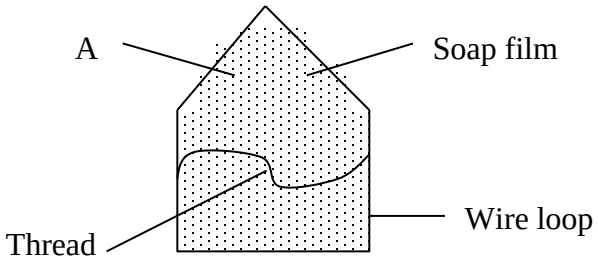
7. The diagram below shows a soap film trapped in a wire loop with a loose thread passing through



The film is then ruptured at point A

a) Redraw the diagram to show how the thread is affected (2 mks)

b) Explain why the thread behaves in this manner (2 mks)

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8. The reading on a mercury barometer at Mombasa is 760mm. calculate the pressure at Mombasa (density of mercury = 1.36×10^4 Kg/m^3) (3 mks)

9. Explain the reason why a person moving from lowland to highland is likely to suffer a hose bleeding (3 mks)

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10. Describe a simple experiment to show that pressure in liquid increases as depth increases (3 mks)

11. Distinguish between the three states of matter in terms of particle spacing and kinetics (3 mks)

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12. Explain why the blades of a panga feels colder than the wooden handle when touched with a finger after exposure to low temperatures (2 mks)

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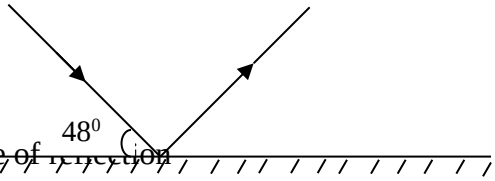
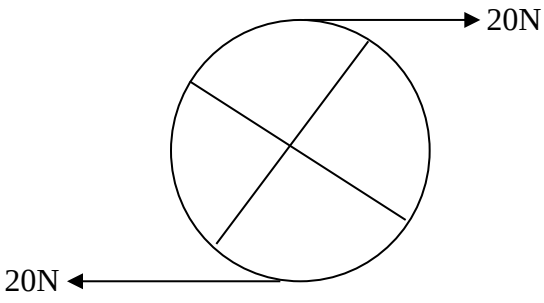
13. The figure below shows a ray of light being incident on a mirror



What ~~is the angle of reflection~~ (3 mks)

14. The diagram below shows a "couple" in action



Given that the diameter of the wheel is 0.6m, determine the moment to the couple (3 mks)

15. State the basic law of magnetism (2 mks)

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16. Draw the magnetic field pattern for the magnets shown below (2 mks)

17. Explain the reason why a freely suspended bar magnet comes to rest pointing in the N – S direction (3 mks)

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18. Explain why repulsion is the only sure test for magnetism (2 mks)

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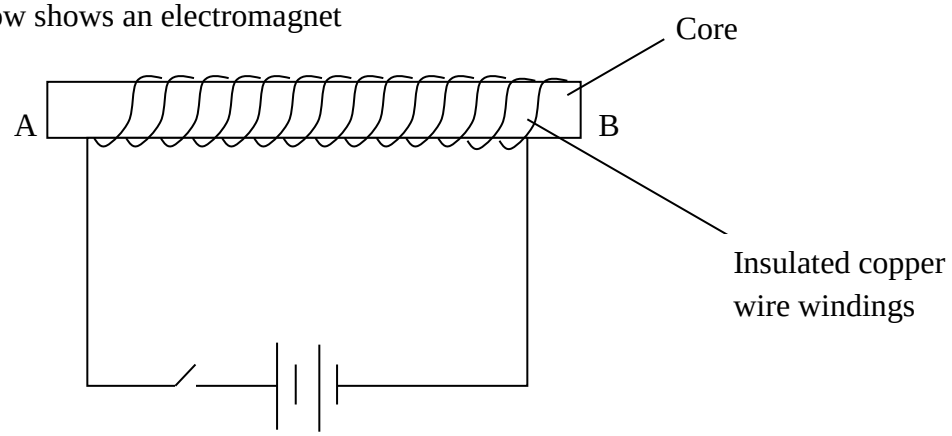
SECTION B (50 MARKS)

19. The figure below shows an electromagnet



i. Explain why the core is made up of iron and not steel (2 mks)

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ii. On the same diagram indicate the direction of the current flow when the switch is closed (1 mk)

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iii. When the current is allowed to flow through the electromagnet it is magnetized. Identify the poles of the magnet (2 mks)

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iv. Give the name of the law you have used to determine the poles and state it (3 mks)

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v. Explain what would happen if the current is allowed to flow for a long time (2 mks)

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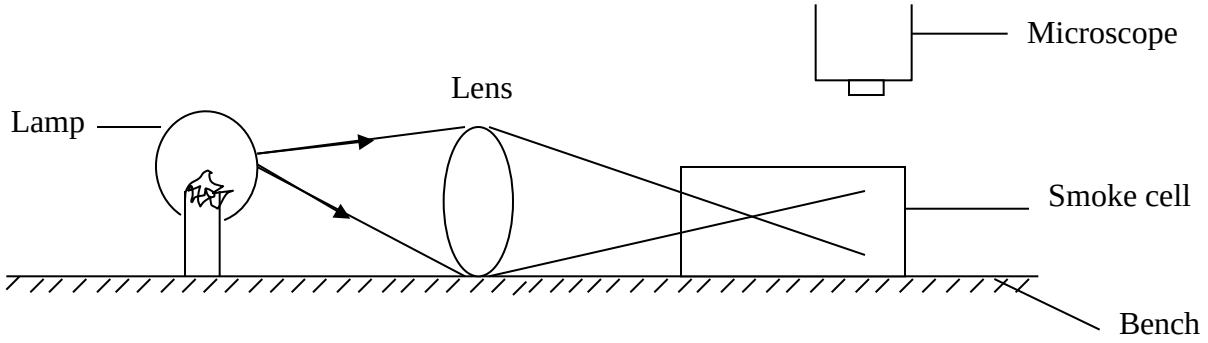
20. Brownian motion of smoke partides can be studied by using the apparatus shown below. To observe the motion, some smoke is enclosed in the smoke cell and then observed through the microscope as shown below



a) Explain the role of the <u>smoke particles</u>, <u>lens</u> and <u>microscope</u> in the experiment (6 mks)

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b) State and explain the nature of the observed motion of the smoke particles (3 mks)

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c) State what will be observed about the motion of the smoke particles if the temperature surrounding the smoke cell is raised slightly (1 mk)

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21. a) State the principle of moments (2 mks)

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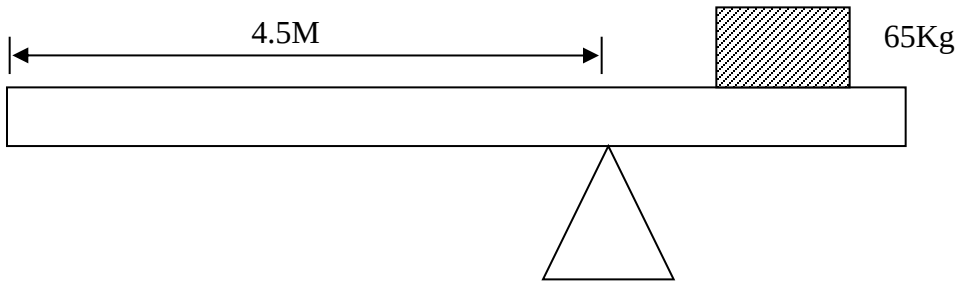
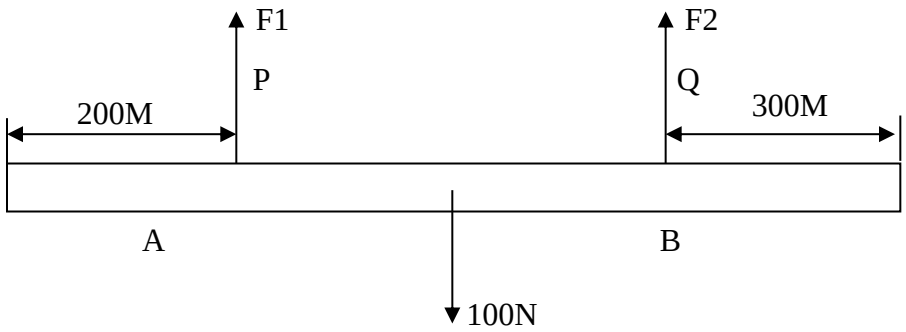
b) The diagram below shows a uniform wooden beam of length 6m and mass 30kg pivoted as shown below



How far from the pivot will the 65kg mass be for the beam to be in equilibrium (3 mks)

c) A uniform metre rule of weight 100N is suspended horizontally by two vertical springs P and Q placed 20cm and 30cm from its ends respectively. Calculate the force (tension) in each string (5 mks)



22. In an experiment to determine the density of a soil using a density bottle, the following measurements were recorded.

Mass of empty density bottle = 42. 9g

Mass of density bottle full of water = 66.1g

Mass of density bottle with some soil = 67. 2g

Mass of density bottle with soil filled up with water = 82.0g

Use the above data to determine the:-

a) Mass of water that completely filled the bottle (2 mks)

b) Volume of water that completely filled the bottle (1 mk)

c) Volume of the density bottle (1 mk)

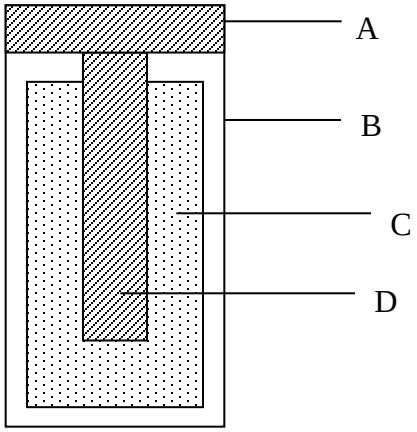
d) Mass of soil (1 mk)

e) Mass of water that filled the space above soil (1 mk)

f) Volume of soil (1 mk)

g) The density of the soils (2 mks)

23. The figure below shows the features of a dry cell (lenclanche). Use the information in the figure to answer the following questions.



a) Name the parts (4 mks)

A……..

B……..

C……..

D……..

b) Explain the purpose of B (2 mks)

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c) State 2 defects of a dry cell and give their remedies (4 mks)

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