FORM TWO EXAMS

FOR THE ANSWERS

CONTACT MR ORIOSA

0743241064

NAME :…… ADM NO…….

CANDIDATE'S SIGNATURE…….DATE:……

BIOLOGY

FORM II

TIME: 2 HOURS

END OF TERM 3 2021.

INSTRUCTIONS TO CANDIDATES

- Write your name and admission number in the spaces provided above.
- Answer ALL questions in the spaces provided

This paper consists of**11** printed pages:

NB: Candidates should check the question paper to ensure that all the printed pages are printed as indicated and no question is missing.

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1-16	**80**	

Name the most appropriate tool that Biology students can use for collecting

i. Crawling animals (1mk)

……

……..

ii. Flying insects (1 mk)

……

……

1. State the name given to the study of:

a) Cells (1 mk)

……...

……

b) Classification of living organisms (1 mk)

……...

……

2. a) Define the term <u>species</u> (1 mk)

……...……

……

b) A Tiger is known as Panthera Tigris

i. Identify two <u>mistakes</u> made in writing the scientific name (2mks)

……

……

…….....

……

……

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

……

……

…….....

3. 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 (3mks)

……...……

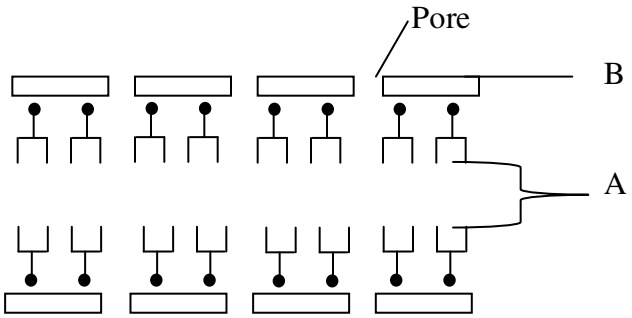
……

…….....

……...……

……..

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



a) Identify the cell structure (1 mk)

……

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

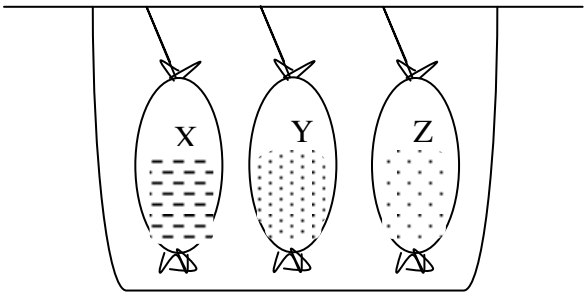
A……

B……..……

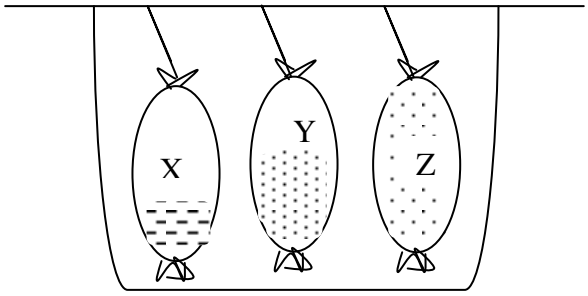
c) State one function of the above structure (1mark)

……

6. In an experiment equal amounts of three different sugar solutions were placed in the viskingtubing's 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 (3mks)

……...

……..

……...

……

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

……...

……

……...

……..…

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

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 (2mks)

……...……

……

……...……

……

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

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

pepsin

……...…

trypsin

……...…

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

……...…

……..……

……...…

……...…

9. State two structural and two environmental factors that affect the rate of transpiration

a) Structural (2mks)

……..…….…...

……...……..

……..…….…...

……...……

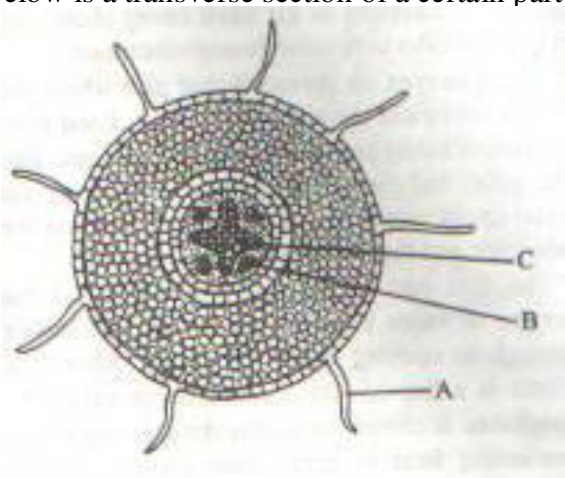
b) Environmental (2mks)

……..…….…...

……...……

……..…….…...

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 (2mks)

A……..…….…..

……...……

C……..……..…..

……..……

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

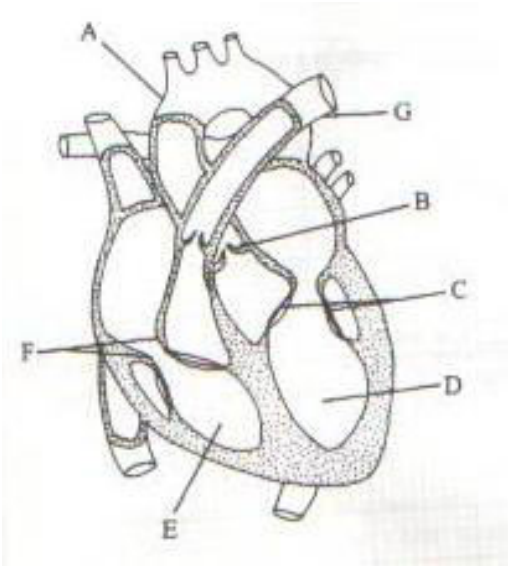
a) Open circulatory system

……..……..

d) Closed circulatory system

……..…….

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



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

b) Name the parts labeled (2mks)

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 (2mks)

……..……..…...

……..……

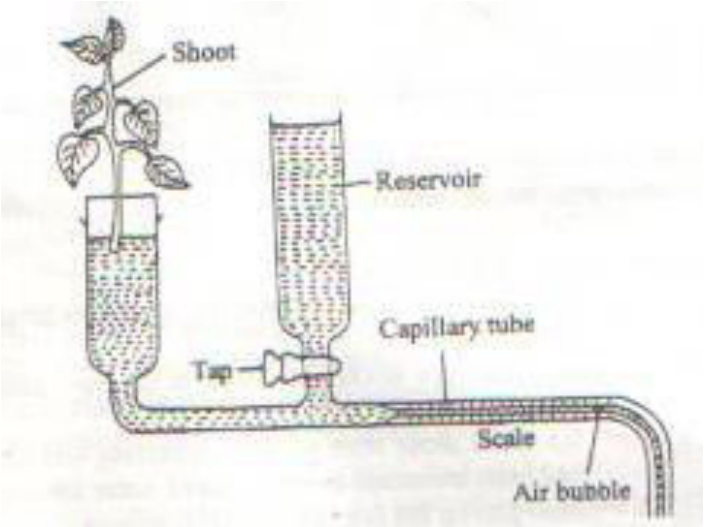
…….....

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 potometer (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 (2mks)

……..……

…….....……..……

……

ii. Some leaves are removed (2mks)

……..……

…….....……..……

……..

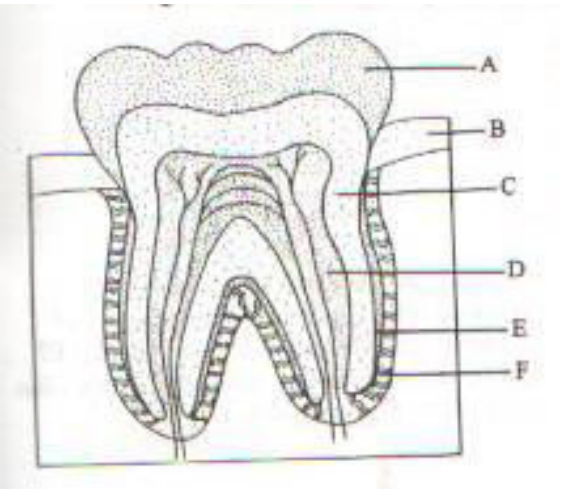
iii. The shoot is placed in a current of air created by a fan (2mks)

……..……

…….....……..……

……

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



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

A……..

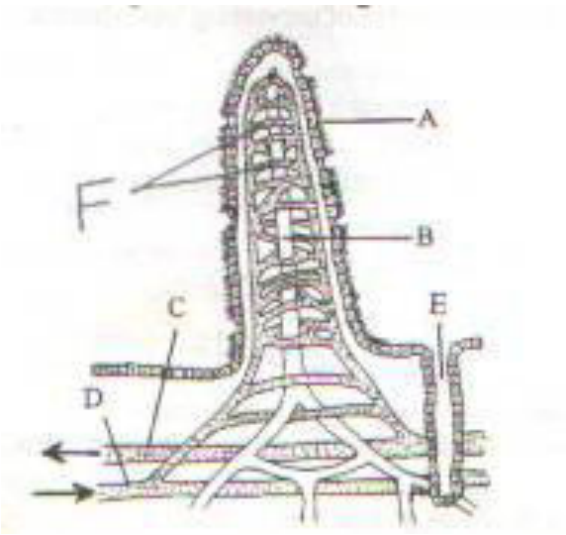
B……..

C ……..

D……..

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

15. 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 (2mks)

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 (4mks)

…….…….…...

….……...……...……

……

……

……

…….…….…...

….……...…….

…….…….…...

….……...……..

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

……

……

……

……

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

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

Name…… Adm No……
Class…….

Student's Signature……. Date ……

FORM 2
233
CHEMISTRY

2 Hours

TERM 3 2021 CHEMISTRY
THEORY
2 HOURS

Instructions to students

- Write your name and admission number in the spaces provided above.
- Sign and write the date of examination in the spaces provided above.
- Answer **all** the questions in the spaces provided.
- KNEC mathematical tables and silent non-programmable electronic calculators may be used for calculations.
- All working **MUST** be clearly shown where necessary.
- ***This paper consists of 11 printed pages.***
- ***Students should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.***
- ***Students should answer the questions in English.***

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORE	STUDENT'S SCORE
1 - 17	80	

1. Name a method that can be used to separate each of the following substances. (3mks)
   a) A mixture of petrol and diesel.

   _____
   _____
   _____

   b) Kerosene and water.

   _____
   _____
   _____

   c) Food coloring ingredients in a sauce.

   _____
   _____
   _____

2. The table below shoes the formulae of elements P, Q, R and S (not actual symbols) and their chlorides.

Elements	P	Q	R	S
Formulae of chlorides	PCl	QCl_2	RCl_3	SCl_5

   a) State the group in which element Q belongs. (1mrk)

   _____
   _____
   _____

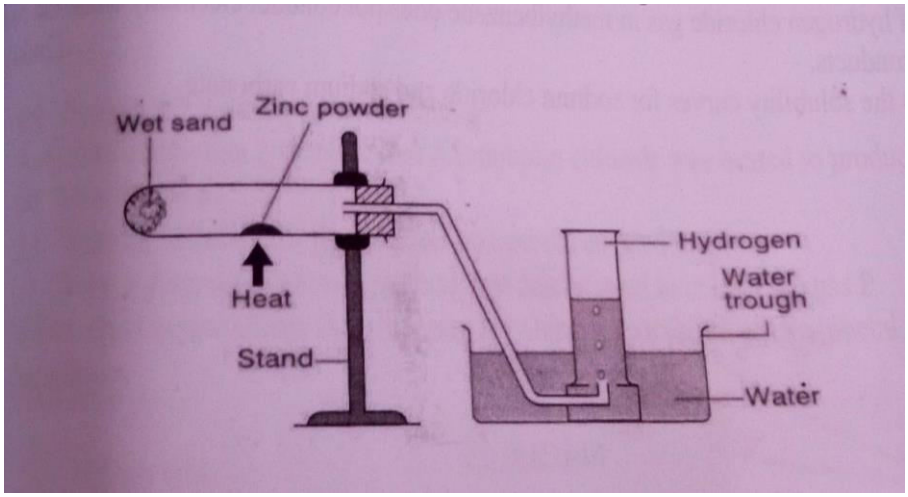
   b) Identify one element which is a non-metal. (1mk)

   _____
   _____
   _____

   c) Write down the formulae of P oxide. (1mk)

   _____
   _____
   _____

3. Hydrogen can be prepared by passing steam over heated Zinc powder as shown in the diagram



a) Write down the chemical reaction that produces hydrogen gas. (1mrk)

_____

_____

_____

_____

b) Explain why hydrogen should be burned if not collected over water. (1mrk)

_____

_____

_____

_____

c) Give another metal that can be used instead of Zinc. (1mrk)

_____

_____

_____

4. A piece of sodium metal was placed in a trough half filled with cold water. State the observations that were made. (3mrks)

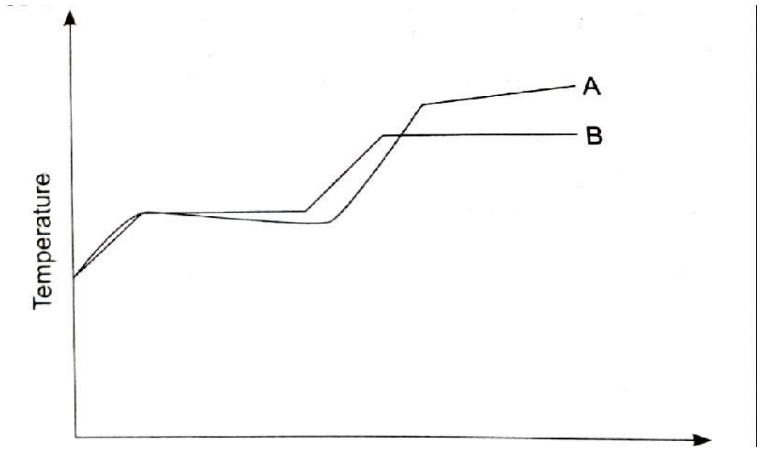
_____

_____

_____

_____

5. The curves below represents the variation of temperature with time when pure and impure samples of a solid were heated separately.



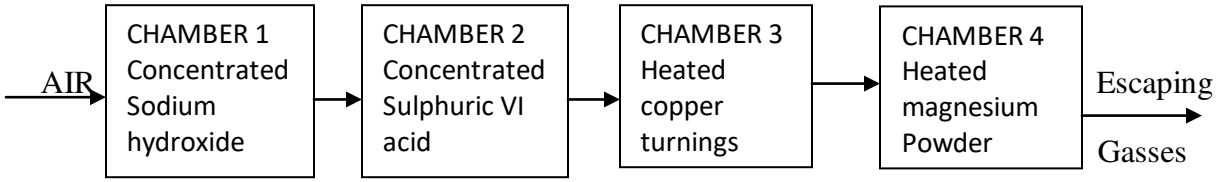
i. Which curve shows the variation in temperature of the pure solid. Explain (2Mrks)

_____
_____
_____
_____

ii. State the effect of impurities in the melting and boiling points of a pure substance. (2Mrks)

_____
_____
_____

6. Air was passed through several reagents as shown below;



a.) Name the main inactive component of air (1mk)

b.) Name the components of air that are removed in the following chambers

i. Chamber 1

_____

_____

ii. Chamber 3

_____

_____

iii. Chamber 4

_____

_____

c.) What is the purpose of passing air through concentrated Sulphuric (VI) acid? (1mk)

_____

_____

_____

d.)Write a chemical equation for the reaction which takes place in

i. Chamber 1

_____

_____

_____

ii. Chamber 4

_____

_____

_____

e.) Explain the observation made in chamber 3 during the reaction.

(2mrks)

_____

_____

_____
_____

f.)Name one gas which escapes from the scheme above. (1mrk)

_____
_____
_____

7.a) Distinguish between hygroscopy and efflorescence.
(2mrks)

_____
_____
_____
_____

b.)Starting with lead (II) oxide describe how you would prepare Lead (II) sulphate
(3mrks)

_____
_____
_____
_____
_____
_____

8.a) discuss the criteria for testing purity of water. (2mrks)

_____
_____
_____
_____

b.) write the word equations for the reaction between dilute hydrochloric acid and the following.

(i) magnesium oxide

(ii) calcium hydrogen carbonate

(ii) zinc metal

(iv) potassium hydroxide

(4mrks)

_____

_____

_____

_____

9. a) Using dots and crosses to represent electrons, draw a diagram to show bonding in Sodium Chloride(NaCl) (2mrks)

b.) name and draw two apparatus used in measuring exact volumes of solutions in the laboratory

(2mrks)

10. Both ions Y^{2-} and Z^{2+} have an electron configuration of 2.8.8

a.) Write the electron arrangement for

(2mrks)

Y

_____

_____

Z

_____

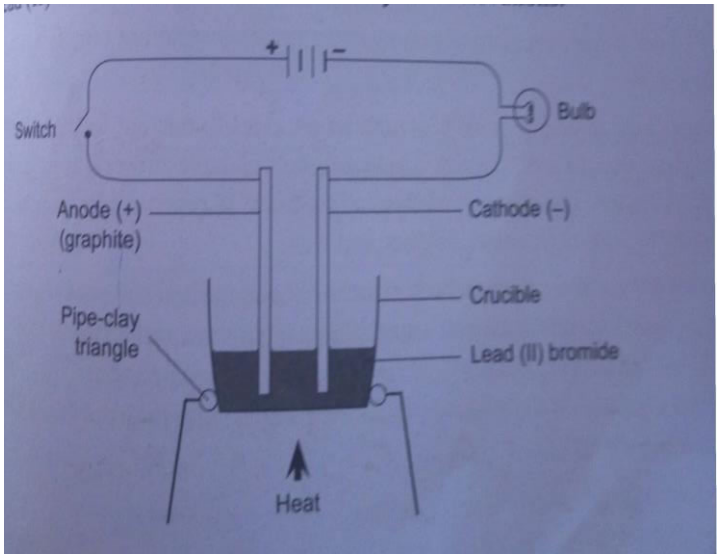
_____

b.) What is the mass number of atom Z given that it has 20 neutrons (1mrk)

_____

_____

11. The diagram on the next page shows a set up which was used by a student to investigate the effect of electricity on molten Lead (II) Bromide.



a.) Explain the observation at the cathode

(2mrks)

_____

_____

_____
_____

b.) Why does solid lead (II) Bromide not allow the passage of electricity (2mrks)

_____
_____
_____

c.)Write equations to show the reactions taking place

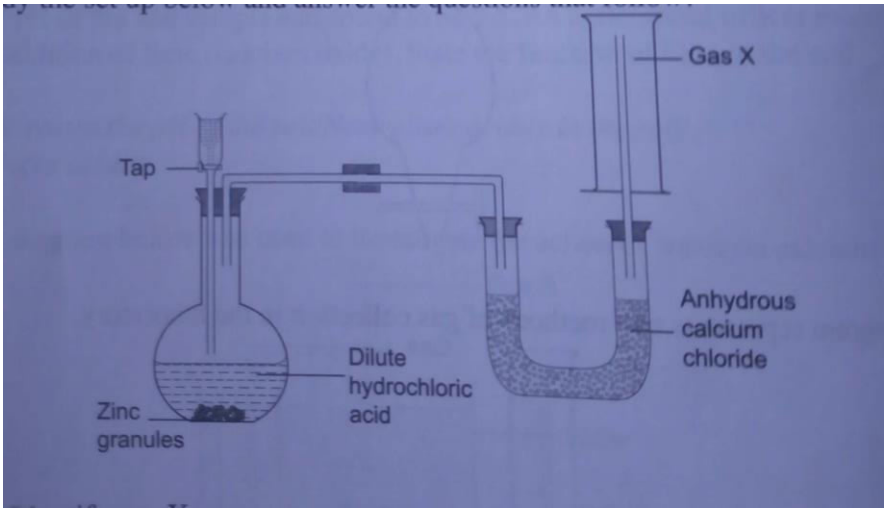
i. At the cathode (1mrk)

_____
_____
_____

ii. At the anode (1mrk)

_____
_____
_____

12. Study the set up below and answer the questions that follow



a.) Identify gas X (1mrk)

_____

_____

_____

b.) Write a chemical equation for the reaction liberating gas X (1mrk)

_____

_____

_____

_____

c.) Why is it not advisable to use calcium in this method of preparing gas X? (2mrks)

_____

_____

_____

d.) Give the use of anhydrous calcium chloride in the U-tube (1mrk)

_____

_____

_____

e.) Name another substance that could serve the same purpose as anhydrous calcium chloride (1mrk)

_____

_____

_____

f.) Name the method used to collect gas X (1mrk)

_____

_____

_____

13. The grid below shows part of the periodic table. Use it to answer the questions that follow.

						S	U	V
P	R		X			T		W
Q								

a.) Which of the elements has the largest atomic radius? Explain (2mrks)

_____

_____

_____

_____

b.) Identify the most reactive metal. Explain (2mrks)

_____

_____

_____

_____

c.) Name the chemical family to which P and Q belong. (1mrk)

_____

_____

_____

d.) Compare the atomic radius of S and U. Explain

(2mrks)

_____

_____

_____

_____

_____

e.) Select an element that does not form an ion. Explain

(2mrks)

_____

_____

_____

_____

f.) Give the formula of one stable cation with an electron arrangement of 2.8.8 (1mrk)

_____

_____

_____

14.a) Define the term isotope (1mrk)

_____

_____

_____

_____

b.)Chlorine gas has a relative atomic mass of 35.5. It is made up of two isotopes $^{35}_{17}CL$ and $^{37}_{17}CL$. Determine the relative abundance of each isotope in the chlorine gas.

(3mrks)

_____
_____
_____
_____

15. Write a balanced equation for the decomposition of the following solids

(3mrks)

a. $PbCO_{3(s)} \xrightarrow{HEAT}$

_____
_____

b. $Na_2CO_3.\ 10H_2O_{(s)} \xrightarrow{HEAT}$

_____
___

c. $KNO_{3(s)} \xrightarrow{HEAT}$

_____
_____

16. Though Sodium and aluminium are in the same period and are both metals, aluminium is a better conductor of electricity. Explain

(2mrks)

_____
_____
_____
_____
_____
_____
_____
_____

17.(a) List any three uses of oxygen gas`

(3mrks)

_____
_____
_____

_____

_____

(b) State the conditions necessary for rusting.

(2Mrks)

_____

_____

_____

_____

Name: ……ADM. NO:……

School: …….. Date……

BUSINESS STUDIES
FORM 2
TIME: 2 HOURS

END OF TERM THREE EXAMINATION 2021

INSTRUCTIONS:

- ***Write your name and Admission number in the spaces provided***
- ***Answer all questions in the spaces provided .***
- ***This paper has TWO sections (SECTION A AND SECTION B)***

1. Resources are categorized broadly into economic and free resources. Identify any three free resources. (3mks)

a)

b)

c)

2. Give four reasons why it is difficult to satisfy human wants (4mks)

a)

b)

c)

d)

3.State four methods of government involvement in business activities.(4mks)

a)

b)

c)

d)

4. Highlight four circumstances under which a trader may choose to transport his/her goods using containers (4mks)

a)

b)

c)

d)

5. State the types of advertisement described below: (4mks)

a)It is meant to promote the name of the business enterprise---

b)Aim at giving general information to the customers about the availability of a certain products---

c) Using famous persons in the advertisement campaign---

d)Aims at promoting the sales of a particular brand of a product---

6. Distinguish between the following types of warehouses. (4mks)

Public warehouses	Private warehouses

7. Highlight four causes of breakdown in communication (4mks)

a)

b)

c)

d)

8. Identify four types of large scale retailers. (4mks)

a)

b)

c)

d)

9. Commerce is the study of trade and aids to trade. List four aids to trade.(4mks)

a)

b)

c)

d)

10. State four factors that are considered in determining premiums to charged.(4mks)

a)

b)

c)

d)

11 .Identify the terms given to each of the following statements. (4mks)

Statements	Terms
a) Transport goods from producers	
b) Activities carried out with a view of making profit	
c) A person who uses a good or a service	
d) Increasing the usefulness of a good or a service	

12 . Extraction involves obtaining goods from their natural settings. Indicate four activities under extraction.(4mks)

a)

b)

c)

d)

13. Highlight four disadvantages of enclosed office layout.(4mks)

a)

b)

c)

d)

14. In the spaces provided below, indicate with a tick whether each of the following statements related to preferences or ordinary shares. (4mks)

Statement	Preference shares	Ordinary shares
a)Represent ownership		
b)Rate of divided is fixed		
c)Has voting rights		
d)considered first in liquidation		

15. Mr. Keboi sold goods on credit to Mrs. Chebe worth sh. 10,000.She was allowed a trade discount of 10%.The cash discount was quoted as follows:

-10% if she paid within two weeks

-5% if she paid after two weeks

If she paid during the 3rd week calculate the amount of money she paid.(4mks)

16. Mr. Njoroge was paid his debt by use of a cheque of which he deposited it in the bank. After three days the cheque was dishonoured.Give four reasons that made this cheque to be dishonoured. (4mks)

a)

b)

c)

d)

17. Classify the following business environments as either internal or external. (4mks

Business culture	
Demography	
Politics	
Shareholder's resolutions	

18. Give three examples of small scale retailers without shops. (3mks)

a)

b)

c)

SECTION B(Answer any three questions in this section)

19. Explain **five** factors to consider when selecting an office equipment. (10mks)

20. Explain **five** essentials of a warehouse. (10mks)

21. Savings and credit cooperatives have been registering an increasing number of members.Explain **five** reasons for such a development (10mks)

22. Describe any five roles of stock exchange market in an economy. (10mrks).

NAME…….ADM……

DATE……SIGN……

AGRICULTURE FORM TWO

END OF TERM THREE 2021

INSTRUCTIONS TO STUDENTS

This paper has three sections **A**,**B** and **C**

Answer **ALL** the questions in section **A** and **B** in the spaces provided

Answer only **TWO** questions in section **C** in the spaces provided

FOR EXAMINERS USE ONLY

SECTION	MAXIMUM SCORE	STUDENTS SCORE
A	30	
B	20	
C	20	
	20	
TOTAL	90	

SECTION A

Answer **ALL** the questions in this section

1) **Differentiate** between apiculture and aquaculture (1mk)

   ……

   ……

   …….

2) Name **four** methods of farming (2mks)

   ……

   ……

   ……

   ……

3) State **four** possible uses of income earned from sale of agricultural produce (2mks)

   ……

   ……

   ……

   ……..

4) List **four** human factors that influence agriculture (2mks)

   ……

   ……

   ……

   ……..

5) Give **four** reasons for treating water for use on the farm (2mks)……

   ……

   ……

   ……

   ……..

6) State the **use** of each of the following farm tool listed below (2mks)

Sickle……..

Milk churn……

Elastrator……..

Drenching gun……..

7) State **four** precautions that should be observed when using workshop tools (2mks)

……

……

……

……..

8) Give **four** reasons why burning is discouraged as a method of land clearing (2mks)……

……

……

……

……..

9) Name **four** practices that enhance minimum tillage (2mks)……

……

……

……

……..

10) Give **two** sources of underground water (1mk)

……

……

11) State **four** characteristics of a fertile soil (2mks)

……

……

……

……

12) Name**four** breeds of dairy goats (2mks)

……

……

……

……

13) Name **two** types of labour records (1mk)

……

……

14) List **four** symptoms of Nitrogen deficiency in plants (2mks)

……

……

……

……

15) Name **two** vegetative materials used to propagate pineapples (1mk)

……

……

16) Outline **four** factors considered when selecting a nursery site (2mks)

……

……

……

……

17) State **four** characteristics of a good grain store (2mks)

……

……

……

……..

SECTION B

ANSWER <u>ALL</u> THE QUESTIONS IN THIS SECTION

18) The following is a list of plant nutrients; copper, calcium, nitrogen, zinc, molybdenum, phosphorus, carbon, sulphur, iron and magnesium.

Which of the above nutrients are?

a) Macro elements (2mks)

……

…….

b) Micro elements (1mk)

…….

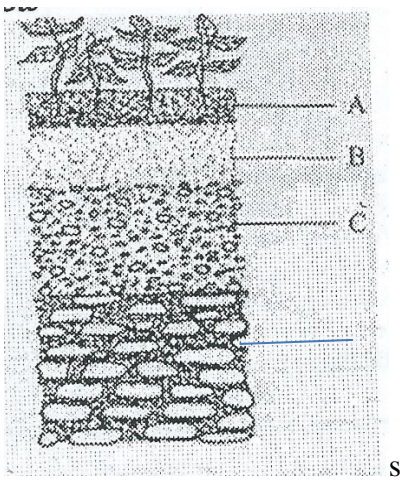
c) Fertilizer elements (1mk)

……

d) Liming elements (1mk)

……

19) The diagram below illustrates a feature observed after digging the soil several meters deep. Study the diagram carefully and answer the questions that follow



s

a) Identify the feature that the diagram above represents in the study of soil (1mk)

……..

b) Name the parts on the diagram labelled A,B,C and D (2mks)

……

……

……

……

c) State two ways in which the knowledge of the above feature would be of benefit to a farmer (2mks)

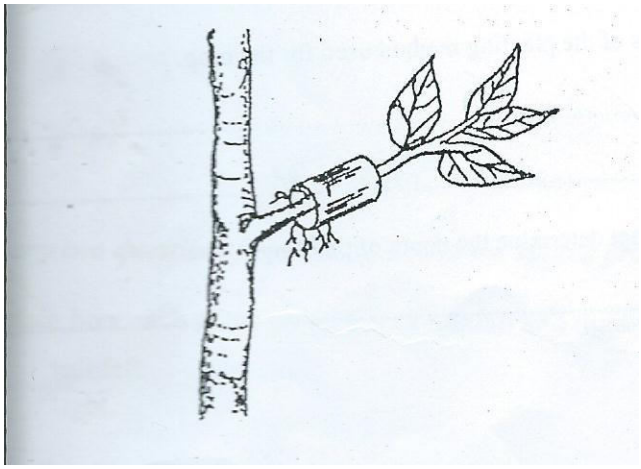
……

……

……

……

20) the diagram below illustrates a nursery practice



a) identify the practice (1mk)

……..

b) describe the procedure followed in carrying out the practice illustrated (2mks)

……

……

……

…….

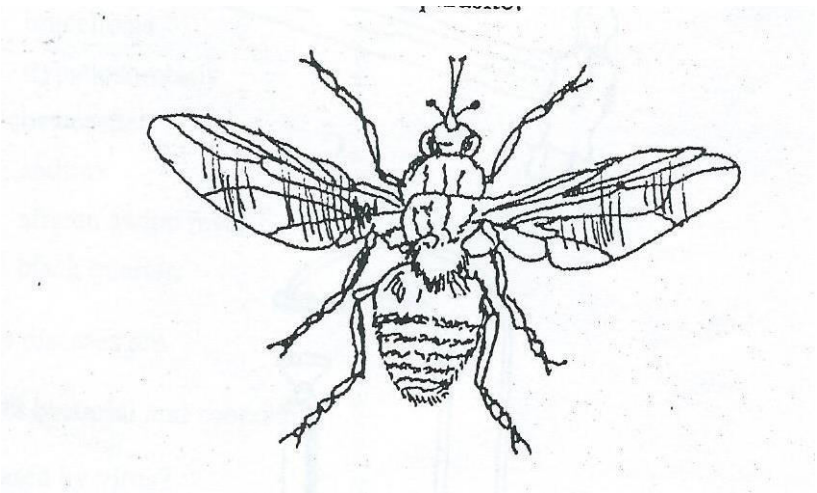
c) state two advantages of the practice illustrated above in crop production (2mks)

……

……

……

21) The diagram below illustrates a livestock parasite



a) identify the parasite illustrated above (1mk)

……

b) state the major harmful effect of the parasite (1mk)

……

c) explain three control measures of the parasite (3mk)

……

……

……

SECTION C

ANSWER ONLY TWO QUESTIONS IN THIS SECTION

22) a) Explain the importance of vegetables to a farmer (5mks)

……

……

……

……

……

……..

b) Briefly describe the production of onions under the following sub-headings

i)Varieties (1mk)

……

……

ii)Ecological requirements (3mks)

……

……

……

……

……

iii)Land preparation (3mks)

……

……

……

……

iv)Field management practices (4mks)

……
……
……
……
……
……

v)Harvesting and marketing (4mks)

……
……
……
……
……

23a) Define the following terms as used in livestock health (2mks)

i) Disease……
……

ii) Health……
……

b) State four pre-disposing factors of livestock diseases(2mks)
……
……
……
……

c) Give reasons for keeping livestock healthy (6mks)
……
……
……
……
……
……
……

d) Outline methods a farmer can use to control livestock diseases (5mks)

……

……

……

……

……

……..

e) Describe the harmful effects of parasites on livestock (5mks)

……

……

……

……

……

……

24a) Explain five advantages of crop rotation (10mks)

……

……

……

……

……

……

……

……

……

……

……

……
……
……
……
……
……
……

b) Outline five activities that may be undertaken in organic farming (5mks)

……
……
……
……
……

c) A farmer wanted to prepare 200kg of calf rearing ration containing 20 % DCP , using the pearsons square method calculate the amount of maize containing 18% DCP and sunflower containing 35% DCP the framer would need to prepare.
(5mks show your working)

NAME: …… ADM. NO. ……

SIGNATURE ……. DATE ……

CHRISTIAN RELIGIOUS EDUCATION

FORM TWO,

TERM THREE, 2021

TIME: 2 HOURS

INSTRUCTION TO CANDIDATES..

Answer all questions in the spaces provided

1. a) What is C.R.E? (1Mrk)

b) State 5 reasons for studying C.R.E in school. (5Mrks)

c) Identify 5 literary forms in the Bible (5Mrks)

d) Mention 5 historical books in the bible (5Mrks)

2. a) List 5 versions of the bible used in Kenya today (5Mrks)

b) Identify 5 effects of the bible translations into local languages (5Mrks)

c) What is the name of the Latin Bible translation (2Mrks)

3. a) In Genesis name five attributes of God (5Mrks)

b) Mention 5 promises God made to Abraham. (5Mrks)

c) Name 5 characteristics of a covenant. (5Mrks)

4.a) List the ten commandments as found in Exodus chapter 20 (10Mrks)

b) Identify 5 judges that ruled the Israelites in the wilderness. (5Mrks)

c) List 5 lessons learnt from the failures of king Saul. (5Mrks)

5. a) State five prophesies of Nathan concerning the Messiah (5Mrks)

b) Identify 5 major ideas in the magnificent. (5Mrks)

c) State the lessons a childless couple learn from Zechariah and Elizabeth. (5Mrks)

6. a)Give 5 reasons why Jesus taught in parables. (5Mrks)

b) Explain the meaning of the parable of the sower. (10Mrks)

c) State 5 lessons that Christians learn from the parable of the sower. (5Mrks)

d) Name two parables in which Jesus taught about persistence in prayers. (2Mrks)

NAME……..…….. ADM.NO……..

CANDIDATES SIGN……..…….. DATE……...……

GEOGRAPHY

FORM TWO

TERM 3 2021

TIME: $2\frac{1}{2}$HOURS

<u>INSTRUCTIONS TO CANDIDATES</u>

a) Write your **name** and **ADM** number in the spaces provided above.
b) **Sign** and indicate the **date** on the spaces provided.
c) Answer **all** the questions in this question paper.

SECTION A

Answer all the questions in this section:

1. a) Define the term environment (2 mks)

   …….

   ……

   ……

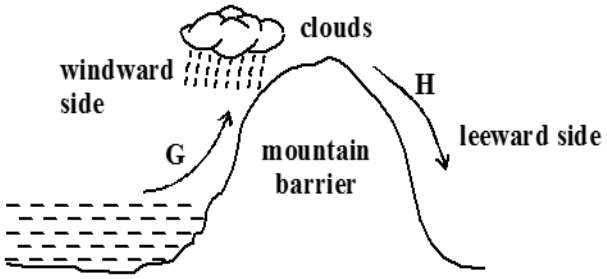
   b) Name **two** branches of Geography (2 mks)

   ……..

   …….

   …….

2. a)



   i) Identify the type of rainfall shown in the diagram above (1 mk)

   ……

   ……

   ii) State the difference in characteristics of the winds marked G and H (2 mks)

   ……..

   ……..

   ……..

   b) State **three** factors that determine the amount of solar radiation reaching the earth's surface (3 mks)

   ……

   …….

   …….

   …….

3. a) Differentiate between weather and climate (2 mks)

   ……..

   …….

   …….

   b) Explain how the following factors influence climate

   i) Distance from the sea (3 mks)

   …….

   ……..

   ……

   ……

ii) Altitude (3 mks)

……
……
……

……
……
……
……

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

……...
……...
……

b) State **any two** major earthquake seismic zones of the world (2 mks)

……
……
……
……

5. Give **two** ways in which minerals occur (2 mks)

……
……..
……..

6. ***SECTION B (Answer all the questions in this section***

The table below shows the area under different species of trees in forest cover in Kenya. Study the table and answer the questions that follow.

	In '000 hactares			
Tree cover / Year	2013	2014	2015	2016
Mahogany	100	85	60	40
Pine	120	100	120	140
Meru oak	140	120	100	80
Comphor	80	60	40	20
Total	420	365	320	280

a) i) Using a scale of 1 cm to represent 20,000 hectares, draw a comparative line graph to represent the data shown (7 mks)

ii) Explain the difference between forestry in Kenya and Canada on

i) Transporting of logs (2 mks)

…….

……..

……..

……..

ii) Distribution of softwood forests (2 mks)

……

……..

…….

…….

iii) Harvesting (2 mks)

…….

……..

…….

…….

7. a) Name **three** types of faults (3 mks)

…….

…….

…….

b) i) With the aid of a well labeled diagram, describe how rift valley is formed by tensional forces (6 mks)

ii) Explain **three** ways in which faulting may influence drainage system (6 mks)

……

……

…….

……..

……..

……

…….

c) Explain **three** ways in which faulting is of significance to human activities (6 mks)

……..

…….

……

…….

……..

……..

8. a) What is a natural vegetation (2 mks)

…….

……..

b) Describe any **three** characteristics of equatorial vegetation (3 mks)

……..

……..

……

……..

c) Draw a diagram to show the vegetation zones on a mountain in Africa (4 mks)

d) Student from a local secondary school carried out a field study on vegetation around their school.

i) State **two** follow-up activities after the field study (2 mks)

…….

……..

……..

9. a) State **two** methods of representing relief on Topographical maps (2 mks)

…….

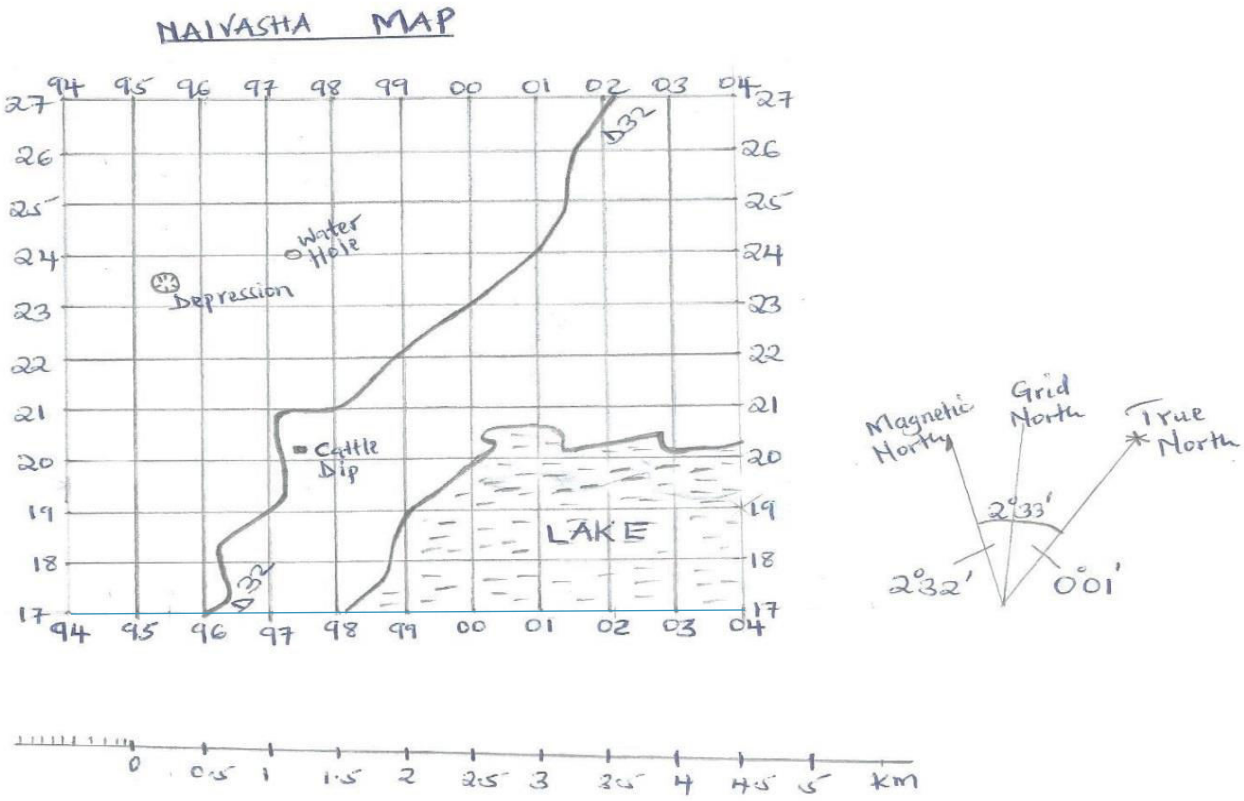
…….

b) Convert the following scales into statement scale

i) 1:50,000 (1 mk)

ii) 1:250,000 (1 mk)

c) Study the map of Naivasha below and answer the questions that follow.



i) Measure the distance of the road D32 and give your answer in kilometres (2 mks)

……

……..

ii) Give the **six** figure grid reference of the cattle dip (1 mk)

……

……

iii) Calculate the area of the lake using the Grid Square method (2 mks)

……

……

……

iv) Give any two uses of maps (2mks)

……

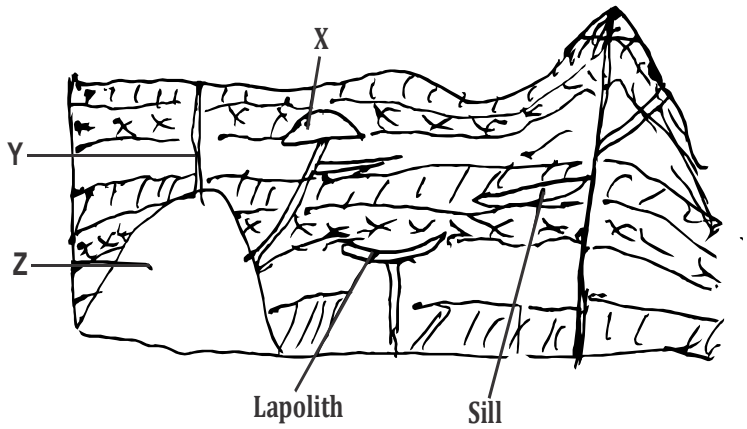
……

v) Give the magnetic variation/declination of Naivasha map (1 mk)

……

……

10. Study the diagram below



a) i) Name the features marked X,Y and Z (3 mks)

X……

Y……

Z……

ii) Explain how a sill is formed (4 mks)

……

……

……

……

……

……

b) Explain **four** ways in which volcanic mountain positively influence human activities (8 mks)

……

……

……

……
……
……..

……
……
……..
……
……
……..
……
……
……..
……
……

c) Students carried out a field study on volcanic rocks

i) State **two** problems they are likely to encounter (2 mks)

……..
……..
……

ii) State **two** objectives for the study (2 mks)

……..
……
……
……..

NAME……..ADM……

DATE……..CLASS:……

HISTORY AND GOVERNMENT
FORM 2
TIME: 2 ½ HRS

END OF TERM 3 2021

INSTRUCTIONS

a. **Write your name, admission number and current date in the space provided.**
b. **This paper consists of three sections A, B and C**
c. **Answer ALL questions in section A , B and C**
d. **All answers should be written in English**

SECTION A(25MKS)

1. Name **two** archeological sites in Kenya. (2mks)

……

……

2. Identify **one** role of the Njuri Ncheke among the Ameru of Kenya in the pre-colonial period. (1mk)

……

……

3. Give **two** written evidences of contact between the Kenyan coast and the outside world . (2mks)

……

……

4. State **two** economic effects of Seyyid Said rule on East African Coast.(2mks)

……

……

5. Give the **main** trade item from the interior during the long- distance trade in Kenya in the 16th century. (1mk)

……

……

6.State **two** reasons why the Akamba participated in the long distance trade. (2mks)

……

……

7. Name **one** example Eastern Cushites .(1mks)

……

……

8.Identify **two** disadvantages of unwritten constitution. (2mks)

……

……

9. Identify **one** type of democracy. (1mk)

……

……

10. State **two** the roles of the Tuaregs in the Trans-Saharan trade.(2mks)

……

……

11.State **two** disadvantages of using coal as a source of energy.(2mks)

……

……

12.Outline **two** reasons how the discovery of iron in Africa affected people's lives in the continent. (2mks)

……

……

13.State the **main** factor that led to the growth and development of Johannesburg.(1mk)

……

……

14. Identify **two** factors that led to the growth of Athens as an early urban center.(2mks)

……

……

15. Give **two** reasons why the people of Asante Kingdom celebrated the Odwira festival during the pre- colonial period. (2mks)

……
……

16. (a) State **five** roles played by the council of elders among the Kenyan communities during the pre-colonial period.(5mks)

……
……
……
……
……
……

(b) Explain five effects of Bantu migration and settlement in Kenya . (10mks)

……
……
……
……
……
……
……
……
……
……
……
…….....

17.(a) Identify the **three** types of trade. (3mks)

……
……
……

(b) State six factors that led to decline of the Trans- Saharan Trade. (6mk)

……

……

……

……

……

……

……

……

……

……

……

……

18. (a) State **five** factors that contributed to the growth of Nairobi city in Kenya.(5mks)

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

(b) Explain the effects of urbanization in Kenya. (10mks)

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

……

19 (a) State three advantages of road transport. (3mks)

……

……

……

……

(b) State three disadvantages of space exploration. (3mks)

……

……

……

……

20.a) State six problems hindering industrialization in the Third World Countries. (6mks)

……

……

……

……

……

……

……

……

……

……

(b) State five impacts of scientific invention in the field of medicine. (5mks)

……

……

……

……

……

……

……

……

……

……

……

……

21. (a) Give t**hree** symbols of national unity in Kenya. (3mks)

……

……

……

……

(b) Identify **six** factors which promote national unity in Kenya. (6 mks)

……

……

……

……

……

……

……

……

……

……

……

……

22. (a)**S**tate five characteristic of a written constitution. (5mks)

……

……

……

……

……

……

……

(b)Identify five features of the New constitution (2010) of Kenya. (5mks)

……

……

……

……

……

MATHEMATICS FORM 2

END OF TERM 3 2021

TIME 2 ½ HRS

NAME …….....ADM NO.....

Instructions

- This paper has two sections; section A and section B
- Attempt all the questions in this paper
- Use of calculators and KNEC mathematical tables may be used except where stated otherwise.

1. Using logarithms tables only, evaluate. (4 Marks)

$$\sqrt[3]{\frac{849.6\ x\ 2.41}{3941}}$$

2. Solve the equation (3 Mks)

$$\frac{x-2}{3} - \frac{3-x}{4} = \frac{x-2}{2}$$

3. A tourist arrived in Kenya with sterling pound (€) 4680 all of which he exchanged into Kenyan shillings. He spent ksh. 52,352 while in Kenya and converted the rest of the money into US dollars. Calculate the amount he received in US dollars. The exchange rates were as follows. (3mks)

Currency	Buying	Selling
US$	65.20	69.10
Sterling pound €	123.40	131.80

4. Solve for the value of x (3Mks)

$2^{3x-2}\times 8^{x}=4^{(x+1)}$

5. A line passes through the point whose coordinates are A(1,3) and B (-2,-1) find the equation of the line (3 Mrks)

6. Express $1.\dot{5}2\dot{3}$ as a fraction. (3mks)

7. Use reciprocal and square tables to evaluate, to 4 significant figures, the expression.

. (3Marks)

$$\frac{1}{0.3654} - 4.151^2$$

8. The diagonal of a square measures 44cm.Calculate the perimeter of the square. 3mrks

9. Calculate; [3mks]

$$\frac{2.61 \times 21.83 \times 0.073}{61.72 \times 11.73}$$

10. Patrick spent 2/5 of his salary on food, 1/3 of the remainder on electricity and saved the rest.

(a). What fraction of his salary did he save? (2mrks).

(b). If he spent Sh. 1,200 on food, how much did he spend on electricity? (2Mks)

11. Solve the following simultaneous equation (3 Mks)

$5x+6y=28$

$3x+4y=18$

12. Two similar containers have base areas of 750 cm^2 and 120cm^2 respectively. Calculate the volume of the larger container in liters given that the volume of smaller container is 400 cm^3 (3 Mrks).

13. If r=5, s=2, and t=3, find the value of; (3mks)

$$\frac{r^2+s^2-t}{t^3}$$

14. A farmer has three containers of capacity 12L, 15L and 21L, calculate the capacity of:
    a) The smallest container which can be filled by each one of them an exact number of times (2 Mrks).

    (b). The largest container which can fill each one of them an exact number of time.(2 Mks)

15. Given that tan x = ¾, find Cos(90-x) (2 Mks).

16. The two arms of a pair of compass of dividers are spread so that the angle between them is 45^0.Find the area of the sector formed if the length of the arm is 8.4cm.Take π = 22/7.(3marks)

SECTION II (50 MARKS)

ANSWER ALL QUSTIONS

17. An amount of money was shared among five girls, Alice, Jane, Brenda, Mary and Ivy. Alice got $\frac{1}{8}$ of the total amount while Jane got $\frac{2}{5}$ of the remainder. The remaining amount was shared equally among Brenda, Mary and Ivy each getting ksh.490.
    a. How much did Jane get? (3mks)

    b. How much was shared among the three girls. (3mks)

c. Alice, Jane and Ivy invested their money and earned a profit of ksh.3640. a half of the profit was left to maintain the business and the rest shared according to their investments. Calculate how much each got. (4mks)

18. A surveyor recorded the measurements of a field book using xy=400m as the base line as shown below

	Y	
To E 200	320	
	210	150 To D
To F 205	170	150 To C
	50	225 To B
	X	

a) Use a scale of 1 cm to represent 50 m to draw the map of the field. (5 Mks)

b) Find the area of the field in hectares (5 Mks)

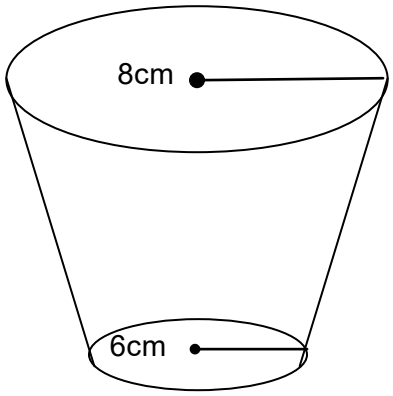
19. (a). On the grid provided, draw the square whose vertices are A(6,-2) B(7,-2) C(7,-1) and D(6,-1). (2mrks)

b. 0n the same grid draw;

(i). A'B'C'D', the image of ABCD under an enlargement scale factor 3centre (9,-4). (4mrks)

(ii). A"B"C"D", the image of A'B'C'D' under a rotation of $+90^0$ about (0,0). (4 mrks)

20. A pail is in the shape of a container frustrum with base radius 6cm and top radius 8cm. The slant height of the pail is 30cm as shown below. The pail is full of water.



a. Calculate the volume of water in the pail.
(6mks)

b. All the water is poured into a cylindrical container of circular radius 7cm, if the cylinder has the height of 35cm, calculate the height of the cylinder above the water level, which is not in contact with water.
(4mks)

21. The sides of a triangular plot of land are 170m, 190m and 210m, but the altitudes of the plot as well as the angles are not known. Find

a) The area of the plot in Hectares 5mks

b) The angles of the plot 5mks

NAME……. ADM NO…….

CLASS……DATE……..

PHYSICS, FORM TWO
TERM 3 2021
TIME:2 HOURS

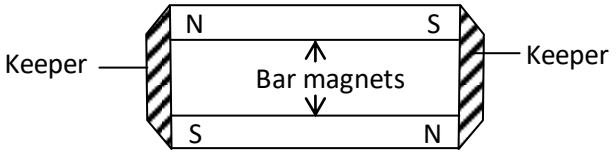
INSTRUCTIONS TO STUDENTS

a) Write your name and admission number in the spaces provided above
b) Answer all the questions in the spaces provided
c) All working must be clearly shown
d) Take acceleration due to gravity=10N/kg
   Density of water=1000kg/m^3
   Density of mercury=13,600kg/m^3

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
	1-19	80	
TOTAL SCORE		80	

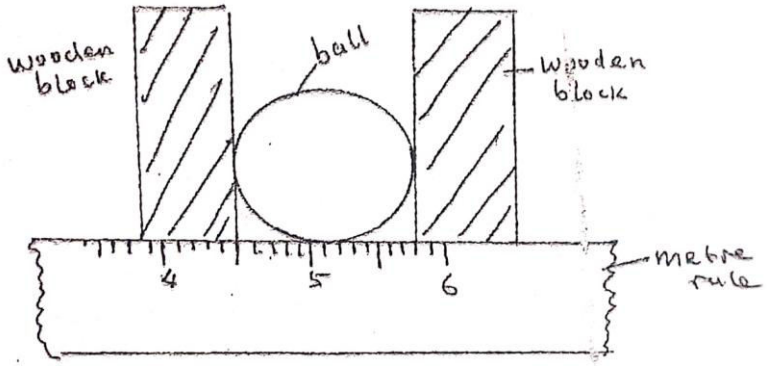
1. (a) State the basic law of magnetism. (2 marks)

(b) The figure **below** shows how magnets are stored in pairs with keepers at the ends.



Explain how this method helps in retaining magnetism longer. (2 marks)

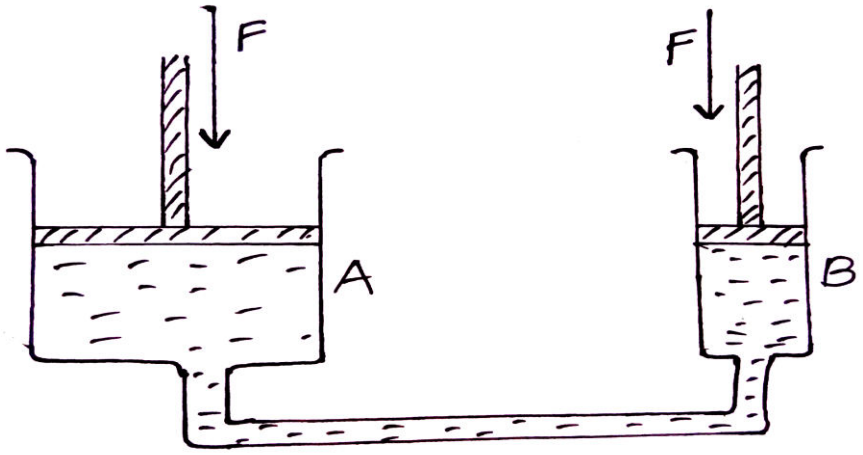
2. The figure below shows a spherical ball placed between 2 wooden blocks and a metre rule.



What is the volume of the ball? (3mks)

3. A solid weighs 16.5N on the surface of the moon. The force of gravity on the moon is 1.7N/kg. Determine the mass of the solid. (2mks)

4. The figure below shows two cylinders containing a liquid and connected with a tight-fitting flexible tube. The cylinders are fitted with air- tight pistons A and B as shown.



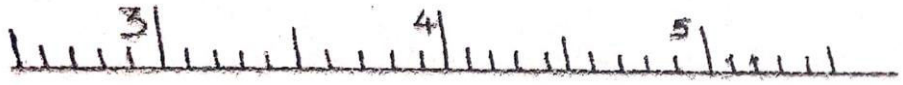
What is observed when forces of equal magnitude F, are on the pistons as shown? Explain the observation. (3mks)

5. A bottle of soda stands on a bench. As the temperature of the surrounding rises the temperature of the bottle also rises. State and explain the effects of this on the stability of the bottle. (3mks)

6. Explain how heat loss by:
   (i) Radiation is minimized in a vacuum flask. (1mk)

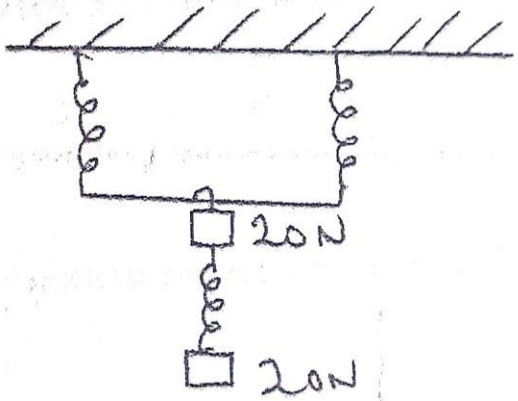
   (ii) Conduction is minimized in a vacuum flask. (1mk)

7. The figure below shows part of the main scale of vernier calipers.



Insert the vernier scale to the main scale, to show a reading of 3.62cm. (2mks)

8. The three springs shown below are identical and have negligible weight. The extension produced on the system of springs is 20cm. Determine the constant of each spring. (3mks)



9. An athlete runs at 4m/s from point A to point B and immediately turns and runs back from B to A with a speed of 8m/s. Calculate the average speed of the athlete. (2mks)

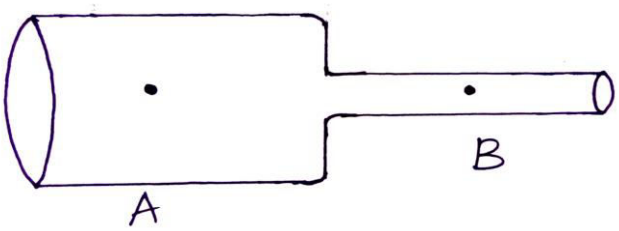
10. (a) In an experiment to estimate the diameter of an oil molecule, an oil drop of diameter 0.06cm spread over a circular patch whose diameter is 20cm. Determine:-
    (i) The volume of the oil drop (3mks)

(ii) The area of the patch covered by oil. (3mks)

(iii) The diameter of the oil molecule. (2mks)

(b) State any assumption made in (ii) above. (1mk)

(c) The figure below shows parts A and B of a glass tube.



(i) State the part of the tube where the pressure will be lowest when air is blown through the tube. (1mk)

(ii) What is the relationship between the velocity of air and its pressure at any point along the tube AB. (1mk)

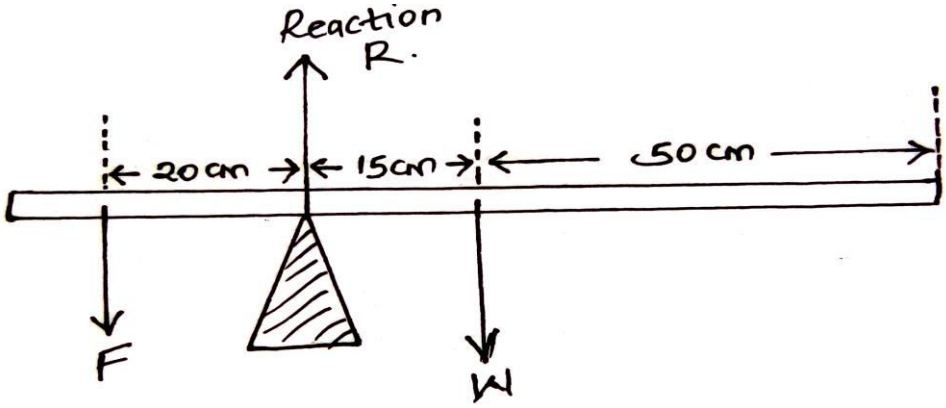
(d) Water flows along a horizontal pipe of cross-section area $35cm^2$ and constriction of cross-section $5cm^2$, if the speed of water at the constriction is 2m/s,Calculate the speed in the wide section. (2mks)

11. (a) State the principle of moments. (2mk)

(b) A uniform metal strip is 3.0cm wide 0.6cm thick and 100cm long. The density of the metal is $2.7\ g/cm^3$.

i. Determine the weight of the metal strip. (3mks)

ii. The strip is placed on a pivot and kept in equilibrium by forces as shown.



Determine the value of F and R. (4mks)

(c) (i) Define the centre of gravity of a body (1mk)

ii) State the factors that affect the stability of a body. (2mks)

iii) Give any state of equilibrium. (1mk)

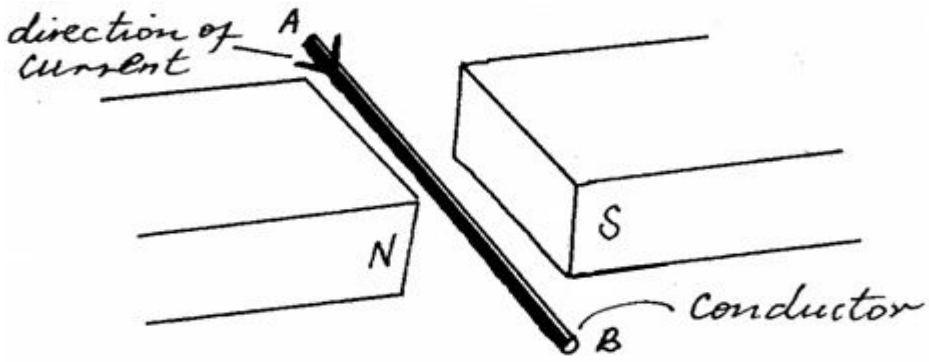
12. An object of height 10cm is placed 50cm in front of a concave mirror of focal length 30cm. By calculation, determine,
    (a) Position of the image (2mks)

    (b) Size of the image. (2mks)

    (c) Calculate the magnification. (2mks)

.

13. The figure below shows a current-carrying conductor **AB** in a magnetic field..



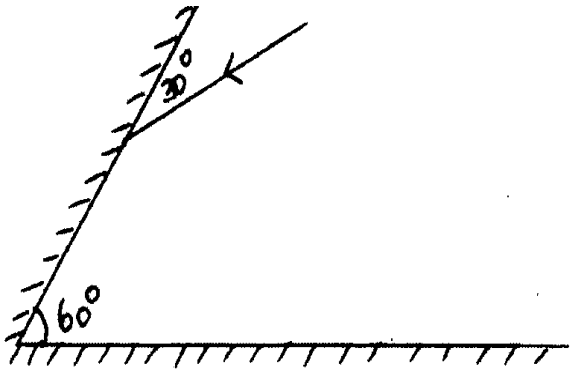
(a) Indicate the direction of force F acting on the conductor. (1mark)

(b) State two factors that determine the magnitude of the force F (2mark)

14. A girl standing at a distance claps her hands and hears an echo from a tall building 2 seconds later. Determine how far the building is. *(Take the speed of sound in air =340m/s)* (2marks)

15. State **two** ways in which one can increase the strength of an electromagnet. (2 marks)

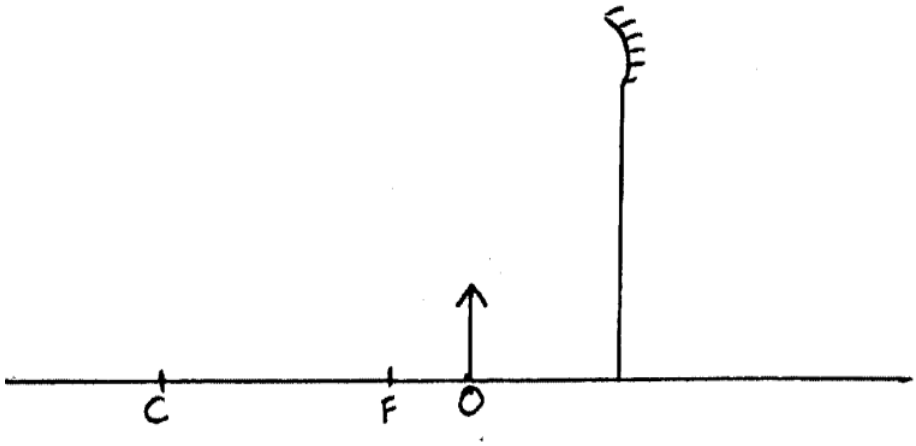
16. The figure belowshows two mirrors inclined at 60° to each other.



Complete the ray diagram to show how it travels after striking the two mirrors and find the angle of reflection on each surface. (2marks)

17. State two defects that occur in a simple cell. Explain how these defects can be minimized (2marks)

18. The figure below shows an object placed in front of a concave mirror. By use of correct ray diagram, locate the position of image. (3 marks)

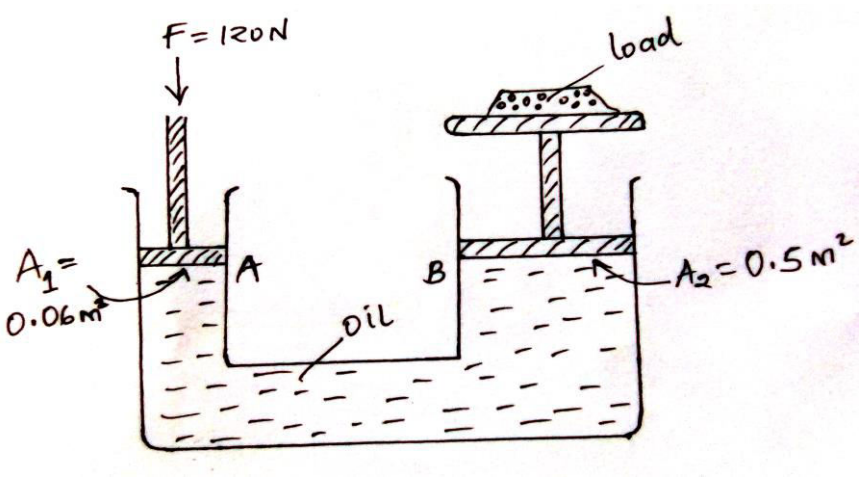


19. (a) Define pressure and state its SI units. (2mks)

b) State Pascal's principle. (1mk)

c) Give a reason why ink is most likely to ooze out of a pen when one is up an airplane. (1mk)

e) The figure below is a simple hydraulic machine used to raise heavy loads.



Calculate:-

(i) The pressure exerted on the oil by the force applied at A. (2mks)

(ii) The load raised at B. (2mks)

(iii) Give two properties which make the oil suitable for use in this machine. (2mks)

KISWAHILI KIDATO CHA PILI

MUHULA WA TATU MWAKA WA 2021

MUDA; MASAA $2_{1/2}$

JINA..... NAMBARI YA USAJ ILI ……

<u>Insha ya kiuamilifu.</u> (alama 20)

1. Hali ya usalama imekuwa ikizorota katika lokesheni yako.
   Andika barua kwa chifu wa eneo lenu ukionyesha visa vya ukosefu wa usalama na upendekeze njia za kukabiliana na hali hiyo.

2.**UFAHAMU(AL.15)**

<u>Soma taarifa ifuatayo kisha ujibu maswali</u>

Aibu kubwa ya taifa kushindwa kukabiliana na tatizo sugu la ajali za barabarani bado inaendelea. Wahusika katika sekta ya uchukuzi na mawasiliano licha ya matumizi ya vidhibiti mwendo na kanda za usalama. Ajali za barabarani zinaangamiza idadi kubwa ya watu kila mwaka, wakiwemo viongozi na watu mashuhuri.

Miongoni mwa sababu ambazo zinaleta maafa barabarani ni pamoja na uendeshaji kasi kupita inavyotakikana, yaani kukiuka masharti yaliyowekwa na wizara ya uchukuzi na mawasiliano. Madereva wengi hung'oa vithibiti mwendo vilivyowekwa hawarekebishi mikanda ya usalama, wala hawa peleki magari yao kwa ukaguzi mara kwa mara kama inavyopaswa kutekeleza kanuni zilizowekwa kwa hivyo hutegemea hongo kuwa barabarani. Fauka ya hao, madereva wa malori na matrela mara nyingi huendesha magari hayo wakiwa walevi. Dawa za kulevya kama vile miraa na bangi, hutumiwa sana na watu hawa, na matokeo yake huwa ajali mbaya.

Hata hivyo, lawama haiwezi kuelekezewa madereva pekee. Ukiangazia barabara nchini utapata kuwa barabara nchini Kenya haziko katika hali nzuri . Zile za lami zimekuwa na mashimo makubwa ambapo mvua ikinyesha hufanya vidimbi mithili ya machimbo ya madini yaliyojaa maji baada ya kuachwa wazi. Na zile barabara zisizokuwa za lami zimeharibika kiasi kwamba ni vigumu kuzitofautisha na njia za ng'ombe kwenye maeneo kame.Kinachohitajika ni serikali kuzifanyia ukarabati ili kuzirudisha katika kiwango ambacho zitaweza kufaa tena.

Wananchi pia inafaa waelimishwe ili wasikubali kuingia kwenye magari ambayo tayari yamejaaa kupita kiasi. Hili litawasaidia wananchi wenyewe kudumisha usalama wao barabarani. Pia inafaa watambue ya kwamba wana jukumu la kuwaarifu walinda usalama endapo dereva anaendesha kwa kasi sana kuliko ile ya kilomita 80 kwa saa iliyokubaliwa.

Inafahamika kuwa maafisa wa uslama ndio wafisadi zaidi, hivyo basi huchangia katika kuongeza idadi ya vifo barabarani. Katika vita dhidi ya ufisadi na ajali za barabarani, ni mwananchi mwenyewe ambaye anawezesha kukomesha hali hii. Kwa mfano, afisa wa usalama akipatikana akichukua hongo, yeye pamoja na yule aliyetoa hongo wapelekwe kwenye vituo vya kukabiliana na ufisadi na wachukuliwe hatua kali, matatizo haya yataisha.

Lakini kabla kufika hapo, ni muhimu kumhamasisha mwananchi kuhusu haki zake na namna ya kukabiliana na suala hili la ufisadi. Hali hii inatuonyesha kwamba mipango maalum inapaswa kufanywa na serikali ili kuwaelimisha wananchi kama hatua ya kwanza ya kukabiliana na ufisadi hatimaye izilainishe sekta zote wala si ya uchukuzi na mawasiliano pekee.

Maswali

(a) Mbali na ajali za barabarani, taja, tatizo lingine sugu ambalo linakumba nchi ya Kenya (al.1)

……

……

(b) Ajali za barabarani zinasababishwa na nini? (al.4)

……

……

……

……

……

(c) Mwandishi anapendekeza hatua zipi zichukuliwe na serikali ili suluhisho la kudumu lipatikane? (al.2)

……
……
……

(d) Taja hatua ambazo serikali imechukua ili kuimarisha uchukuzi (al.3)

……
……
……
……
……

(e) Ni kitu gani ambacho kinaonyesha kuwa serikali imeshindwa kukabiliana na ajali barabarani? (al.2)

……
……

(f) Eleza maana ya maneno haya:- (al.3)

(i) Tatizo sugu.

……

(ii) Vithibiti mwendo.

……

(iii) Machimbo.

……

(iv) Ukarabati.

……

(v) Hongo.

……

(vi) Kuhamasisha..

……

3 .Matumizi ya lugha (alama 40)

(a) **Jaza mapengo**:-

Kutenda	**Kutendesha**	
(i) Chota	.....	(ala 1)
(ii) Lewa	.....	(ala 1)

(b) **Taja sauti moja ya;** (ala 1)

(i) King'ong'o

.....

(ii) Kiyeyusho (al.1)

.....

(c) **Tumia neno "*shujaa*" katika sentensi kama**:- (al. 1)

(i) Kivumishi

.....

(ii) Kielezi... (al. 1)

.....

(d) **Tambua vitenzi katika sentensi hii kwa kuvipigia mistari:-** (al. 2)

Sisi tulikwisha kutambua alikuwa na nia mbaya. Yeye ndiye mwizi .

.....

(e) **Andika wingi wa sentensi hii katika hali ya ukubwa**:- (al. 2)

Kichinjio hiki kilikarabatiwa kwa pesa nyingi

.....

.....

(f) **Eleza maana mbili ya sentensi ifuatayo** (al.2)

Wanafunzi waliwaaandikia barua

.....

.....

(g) **Jaza neno ambalo ni kinyume cha lile lililopigwa mstari katika sentensi:-** (al.2)

(i) Vile vitu **<u>ulivyovichanganya</u>** itakubidi …….

(ii) Bomba hili l**<u>imeziba</u>** mwite fundi aweze ……..

(h) **Unganisha sentensi hii kwa kutumia *'O'* rejeshi :-** (al. 1)

Wavu umekatika. Wavu ni wao

.....

(i)) ***Eleza maana ya :-*** (al. 2)

(i) Kiimbo:.

.....

.....

(ii) Shadda…

.....

.....

(j) **Yakinisha sentensi hii**: (al. 2)

Sijafahamu kwa nini hawamkaribishi mpwa wao.

.....

.....

(k) **Andika katika usemi halisi:-** (al. 2)

Mama aliwahimiza warudi siku hiyo la sivyo wangekosa tuzo

.....

.....

(l) **Akifisha sentensi ifuatayo**:- (al.3)

Sijaona kitabu kizuri kama mayai waziri wa maradhi, utaniazima siku ngapi bashiri alimwuliza rita

.....

.....

.....

.....

(m) **Changanua kwa njia ya mishale.** (al. 4)

Mama anapika na baba akisoma gazeti

.....

.....

.....

.....

.....

.....

.....

.....

(n)) **Panga nomino hizi katika ngeli mwafaka** (al. 2)

(i) Kipofu.....

(ii) Uyoga.....

(o) **Tambulisha kundi nomino na kundi tenzi ktika sentensi** (al.2)

Wanafunzi watundu wanacheza darasani

.....

……

……

(p) **Pambanua viambishi mbalimbali katika sentensi ifuatayo** (al. 3)

Waliwapendezea

……
……
……
……
……
……

(q) Eleza maana ya misemo:- (ala. 2)

(i) Fuga mtu –

……

(ii) Kuwa na faragha –

……

(r) Chai hiyo iliwavutia watalii (*Anza* : Watalii……..) (al. 2)

……
……
……

4)Isimu Jamii **(al.10)**

a) Lugha ya kiswahili inakabiliwa na matatizo mengi sana. Yataje na kuyaeleza.

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

***5)* USHAIRI(ALAMA 15)**

Soma shairi lifuatalo kisha ujibu maswali yanayofuata

1. Yawile matononofu majani, hali yoyote iwavyo
   Yefura ukamilifu majani, yalikiota vilivyo
   Pamoja yalimakifu majani, kwa jinsi mambo yendayo
   Fahali kayatilifu majani, ndivyo igeuke sivyo
   Wanapowana fahali ziumiazo n' nyasi

2. Ingawa yali dhaifu majani, pamoja yalishikana
   Ama katika wakifu majani, au kwa kusaidiana
   Ndugu yali bainifu majani, tokea zamani sana
   Yakapondwa bila hofu majani, fahali walipowana
   Wanapowana fahali ziumiazo n'nyasi

3. Pondaponda mepondeka majani, fahali wakivutana
   Tena yakatawanyika majani, kwa jambo lisilo kina
   Yakabaki kudhiika majani, ndugu wanaofanana
   Fahali wanayacheka majani, wala habri hawana
   Wanapowana fahali ziumiazo n'nyasi

4. Fahali wanapotaka yakini, hata hutembeleana
   Na makoo kadhalika yakini, wanapotoka kuonana
   Ndama pia watavuka yakini, ng'ombe ile kulishana
   Tena nyasi hazochoka yakini, karibu kazikutana
   Wanapowana fahali ziumiazo n' nyasi

5. Si ndaama si ukoka majani, si mbuga si wanda tena
   Yamebaki mabaka majani, vipande kuoteana
   Kwa machaka hazoshika majani, hayawezi kupachana
   Na fahali watimka majani',ngali wakisuguana
   Wanapowana fahali ziumiazo n'nyasi

Maswali

(a) Mwandishi ana ujumbe gani katika shairi hili? (al.1)

……

……

……

……

(b) Eleza muundo wa shairi hili. (al. 5)

……

……

……

……

……

……

……

……

(c) Mwandishi amefauluje katika kutumia uhuru wa kishairi? (al.3)

……

……

……

……

(d) Andika ubeti wa pili katika lugha ya nathari (al. 4)

……

……

……

……

(e) Eleza maana ya msamiati ufuatao kama ulivyotumiwa katika shairi (al. 2)

(ii)Mabaka

(iii)Kupachana