

F3 ENDTERM 1 EXAMINATIONS

BRIGHTMIND SERIES

ALL SUBJECTS

A Trial of Endterm 1 Examinations among Select National Schools for the current Form 3 Students in the Republic of Kenya.

SUBJECTS COMPILED;

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

COMPREHENSIVE

For Marking Schemes

Mr Isaboke 0746-222-000 / 0742-999-000

MWALIMU CONSULTANCY

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES)

CHRISTIAN RELIGIOUS EDUCATION

TIME: 2½ HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

INSTRUCTIONS;

- *Answer any five questions*
- *All answers must be written in English*

QUESTIONS

- 1. a). Identify** six reasons why Jesus used parables in His teachings. **(6mks)**

b). Describe the parable of the Pharisees and the tax collector. (Luke 18: 9-14). **(8 mks.)**

c). Give six reasons why Christians pray. **(6mks)**
- 2.a). Outline** the preparations that Jesus made for the last supper.(Luke 22:7-14). **(7mks)**

b).Describe four areas of conflicts between Jesus and the Jewish religious leaders. **(8mks)**

c).Give five factors that bring conflicts among church leaders today. **(5mks)**
- 3. a).Give seven** reasons why Jesus sent the Holy Spirit to the disciples after His ascension.**(7mks)**

b).Outline seven teachings about Jesus from Peter's speech during Pentecost. (Acts 2:1-40).**(7mks)**

c).State six activities that Christians engage in which demonstrate their love for God. **(6mks)**

- 4. a).Explain** what the teaching of Jesus about the vine and the branches in John 15;1-10 reveal about the unity of believers. (8mks)
- b).Identify seven factors which caused disunity in the early church. (7mks).
- c).Give five ways in which Christians prevent divisions in the church in Kenya today. (5mks)
- 5. a) .Outline** eight roles of prophets in the Old Testament. (8mks)
- b). Identify six ways through which the Old Testament prophets communicated their messages to the people. (6mks)
- c). Identify six problems experienced by church leaders in their work. (6mks)
- 6. a). Describe** seven traditional practices which demonstrate people's believe in God. (7mks)
- b).Explain the methods which are used to teach the youth in Traditional African Communities
- c).State six factors which undermine the role of elders in the society today. (6mks)

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES)

HISTORY AND GOVERNMENT

TIME: 2½ HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

INSTRUCTIONS TO THE CANDIDATES

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

Answer **all** questions in section **A**, three in section **B** and **two** in section **C**.

This paper consists of **eight** printed pages, the candidate should check the question paper to ascertain that all pages are printed and that no questions are missing

The candidate should answer all the questions in **English**.

SECTION A

Answer all questions from this section (25 Marks)

- 1. Identify** the branch of history that deals with people's way of governance. **(1 mk)**
- 2. Give two** characteristics that distinguish man from other primates. **(2 mks)**
- 3. Give two** religious roles performed by the Orkoiyot of the Nandi during the pre-colonial period. **(2 mks)**
- 4. Identity** two treaties that were signed between the British and the Arab rulers at the Coast of East Africa to end slavery and slave trade. **(2 mks)**
- 5. Name** two methods that European powers used to acquire colonies in Africa. **(2 mks)**
- 6. Name** one chartered Company that European powers used to administer the East African protectorate. **(1mk)**
- 7. Name** one treaty that was signed between Lewanika of the Lozi and the British. **(1 mk)**

8. Name one African community that took part in the Maji Maji uprising between 1905 and 1907. (1 mk)
9. Identify the main reason why the local government was established in colonial Kenya. (1 mk)
10. Identify two roles that Mekatilili Wa Menza played during the Agiriama resistance to colonial rule in Kenya. (2 mks)
11. Identify two Sub-sections of the Luo community which resisted British rule in Kenya. (2 mks)
12. Name the British administrator who introduced indirect rule in Northern Nigeria. (1 mk)
13. Name one commune in Senegal where the policy of assimilation was successfully applied. (1 mks)
14. Identify two duties of African Chiefs in the British colonial administration in Nigeria. (2 mks)
15. Name the white settler who introduced wheat growing in Kenya. (1 mk)
16. State two duties of the governor in colonial Kenya. (2 mks)
17. Name the constitutional month when General elections are held in Kenya. (1 mk)

SECTION B

Attempt Only Three Questions From This Section (45 Marks)

- 18.a) State three economic activities of the Borana in the pre-colonial period in Kenya. (3 mks)
- b) Explain the political organization of the Akamba during the Pre-colonial period. (12 mks)
- 19a). List down five terms of the Anglo-German agreement of 1890 (Heligoland treaty). (5 mks)
- b) Explain five reasons why armed resistance by Kenyan communities was defeated by the British in the colonial period. (10 mks)
- 20.a) Identify five reasons why Kabaka Mutesa I of the Buganda collaborated with the British. (5 mks)
- b) Explain five causes of the Franco –Mandinka War (1891 -1897). (10 mks)
21. a) List down three aims of the construction of the Kenya- Uganda railway during the colonial period. (3mks)
- b) Apart from providing settlers with land, explain six other ways through which the colonial government promoted settler farming in Colonial Kenya. (12 mks)

SECTION C (30 MARKS)

Attempt only TWO questions from this section.

- 22.a)** Name three rights to children in the constitution of Kenya. (3 mks)
- b) Explain six circumstances under which the government of Kenya may limit the freedom of movement of a person. (12 mks)
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- 23a).** Name five sources of the British constitution. (5 mks)
- b) Explain five advantages of a written constitution. (10mks)
-
- 24a)** State three conditions that Africans had to fulfill in order to become assimilated French citizens in Senegal. (3mks)
- b) Explain six reasons why the British applied indirect rule in Northern Nigeria. (12) mks)

END

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES)

GEOGRAPHY

TIME: 2¾ HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

INSTRUCTIONS TO CANDIDATES

- (i) This paper consists of two sections A and B answer all questions in section A*
- (ii) In section B answer question 6 and any other two questions.*
- (iii) All questions must be written in the answer booklet provided.*

For examiner's use only

Section A	1 – 5	
Section B	6	
	7	
	8	
	9	
	10	
TOTAL		

SECTION A

1. (a) Give three components of solar system (3mks)
- (b) State two effects of the rotation of the earth (2mks)
2. (a) Name three types of **folds** (3mks)
- (b) State two factors that determine the folding of crustal rocks (2mks)
3. (a) What is forestry (2mks)
- (b) State three factors that has led to the reduction of the area under forests on the slopes of Aberdare **ranges** (3mks)
4. (a) Name three forms of precipitation that commonly occur in East Africa (3mks)
- (b) What is a Stevenson screen? (2mks)
5. (a) Name two scales used to measure intensity of an earthquake (2mks)
- [b] Give three causes of **earthquakes** (3mks)

SECTION B(75 MARKS)

Answer question 6 and any other two questions

6. Study the map of Kisumu East (1:50,000) sheet 116/2 provided and answer the following questions
- (a) (i) Give the six figure grid reference of Air photo principal point 92/KE/3153 (2mks)
- (ii) Measure the distance of the road C544 from the Rabour market to Nyamonge junction. Give your answer in **kilometers** (2mks)
- (b) Citing evidence from the map give four social activities carried out in the area covered by the map (8mks)
- (c) Describe the drainage of the area covered by the **map** (8mks)
- (d) Draw a square 10cm by 10cm to represent the area to the East of Easting 00 and between northing 80 to northing 90 (1mk)
- On the square mark and label ;
- [i] All weather road.
- [ii] Kano plain;
- [iii] River Ombeyi
- [iv] Papyrus swamp. (4mks)

7. (a) Name two types of earth movements (2mks)
- (b) Describe the origin of the continents according to the theory of continental drift (8mks)
- (c) Name three types of faults (3mks)
- (d) (i) Students are planning to carry out a field study of faulting in Rift valley. State four importance of having a pre-visit of the area (4mks)
- (ii) Name any three features they are likely to identify which are as result of faulting (3mks)
- (iii) State three methods they are likely to use in the data recording (3mks)
- (iv) State two problems they are likely to experience during the study [2mks]
8. (a)(i) Give the difference between mass wasting and weathering (2mks)
- (ii) State four physical conditions that influence the rate of mass movements (4mks)
- (b) Explain the following process of weathering
- (i) Hydration (2mks)
- (ii) Oxidation (2mk)
- (iii) Frost action (3mks)
- (c) (i) Give three processes of slow mass movements (3mks)
- (ii) Outline the effects of mass wasting on the environment (4mks)
9. a(i) Differentiate between the long and cross profile of a river (2mks)
- (ii) Give any five characteristics of the river in the youthful stage (5mks)
- (iii) Name three types of river erosion (3mks)
- b (i) explain three ways in which river transport its load (6mks)
- (ii) Name four features formed by river deposition in old stage (4mks)
- (c) (i) What is river rejuvenation (2mks)
- (ii) Outline 3 causes of river rejuvenation [3mks]
10. (a) State six factors that influences exploitation of minerals (6mks)
- (b) (i) Name two surface mining methods (2mks)
- (ii) Give three uses of soda ash (3mks)
- (c) State four effects of mining on the environment (4mks)
- (d) Name any two oil producing countries in the Middle East [2marks]
- (e) Explain four economic benefits of mining (8mks)

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES)

BIOLOGY

TIME: 2 HOURS

NAME.....

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INDEX NO..... ADM NO.....

Instructions: Answer all question in the spaces provided.

1. Distinguish between a cell and an organelle (2mk).

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2. State the name given to the study of;

i) The cell (1mk)

ii) Microorganisms (1mk)

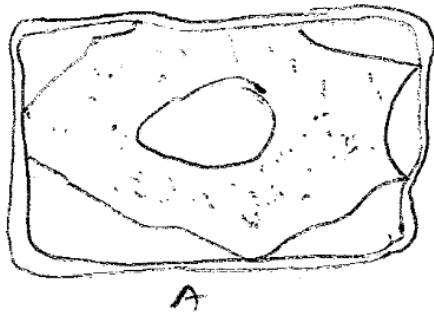
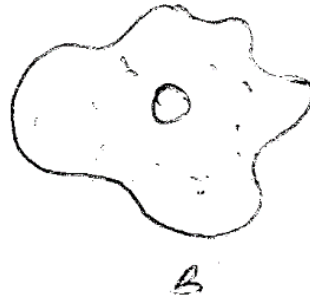
3. (a) State two characteristics of living organisms that are specific to plants. (2mks)

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4. The diagram shows two types of cells placed in a certain solution. Study them and answer questions that follow



a. Name the physiological process responsible for the observed results. (1mk)

b. Give the correct biological term used to describe cells A & B. (2mks)

A –

B –

5. Give a reason for each of the following biological phenomena

a) when placed in fresh water *Entamoeba histolytica* does not burst (2mks)

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b) A mature plant cell does not lose its shape after losing water (1mk)

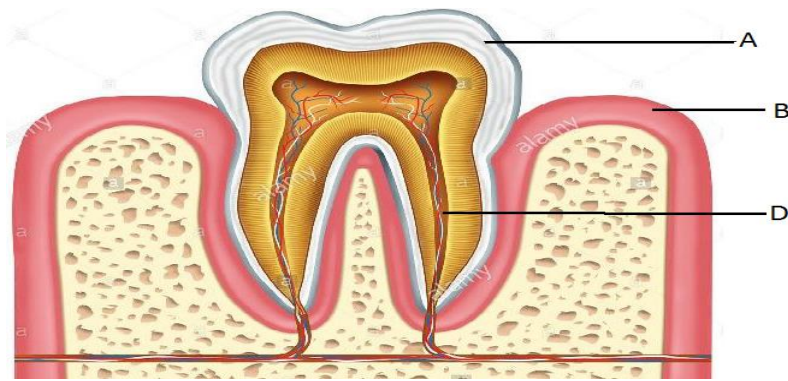
6. Name the polysaccharide that constitute the

i. Cell wall of plant cells (1mk)

ii. Cell wall of fungi cells. (1mk)

iii. Xylem vessels and tracheal (1mk)

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



(i) Name the part labelled A and B.

(2mks)

A

B

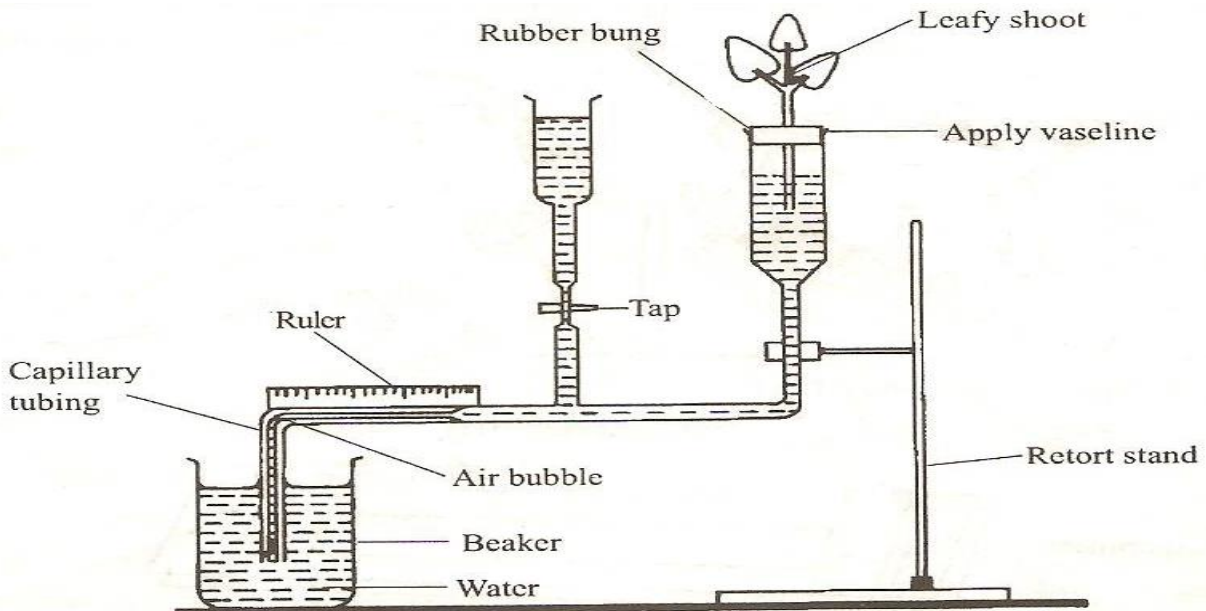
(ii) State two ways in which structure D is adapted to its functions.

(2mks)

(iii) List two ways of preventing gingivitis.

(2mks)

8. Below is a set up that was used to investigate a certain process in plants



a) State what the above apparatus can be used to measure.

(1mk)

i) Give two precautions that should be taken when setting up the experiment

[2marks]

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(ii) State a reason for each precautions stated in b (i) above

[2marks]

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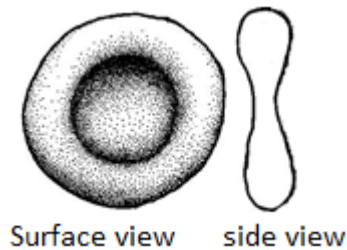
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(c) List two structural factors that affect the process under investigation

[2marks]

9. Shown below are diagrams of the same mammalian blood cell



a) State two morphological features of cell represented in the diagram above

(2mks)

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b) How is the feature stated above advantageous to the cell..

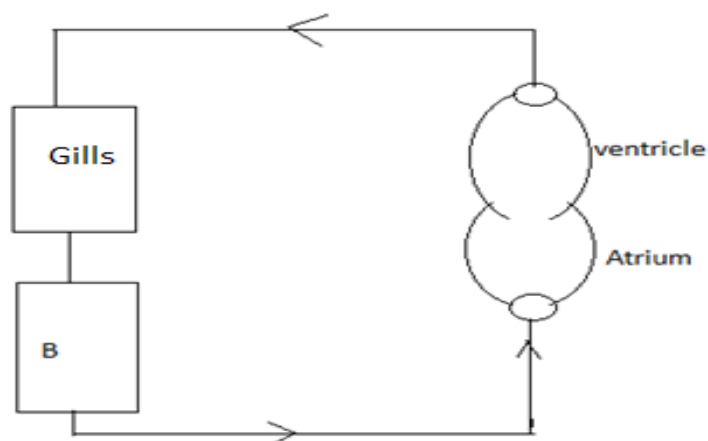
(2mks)

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



a. i) Identify the type of circulatory system shown above (1mk)

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

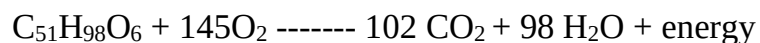
ii) Give a disadvantage of this type of circulation (2mk)

11. An individual is blood group A positive (2mks)

a) Name the antigens in the individual's blood

b) Give the reason why the individual cannot receive blood from blood group A donor (2mks)

12. The equation below shows an oxidation reaction of food substances.



a) What do you understand by the term respiratory quotient? (1mk)

b) Determine respiratory quotient of the oxidation of food substance. (2mks)

c) Identify the food substances. (1mk)

d) In a cell where does aerobic respiration occur? (2mks).

13. Explain the following

a) The stomach lining is made of protein but is not digested by protein-digesting **enzymes** (2mks)

b) Digestion of starch does not continue in the stomach. (2mks)

c) One easily suffers nose bleeding when climbing mountain. (2mks)

d) A camel can stay for 60 days without drinking water. (1mk)

14. Name **three** sites where gaseous exchange takes place in plants. 3mks)

15. Describe the changes that occur to the rib cage and the diaphragm during inspiration. (4mks)

- 18.** State 5 general characteristics of class Aves **(5mks)**
- 19.** Give three ways in which atmospheric nitrogen is fixed into nitrates **(3 marks)**
- 20.** Name the polysaccharide that constitute the
- i.** Cell wall of plant cells **(1mk)**
 - ii.** Cell wall of fungi cells. **(1mk)**
 - iii.** Xylem vessels and tracheal **(1mk)**
- 21.** A wild beast in maasai mara national park was found to be infested with a lot of ticks. State the trophic level occupied by the following organisms.
- (a)(i) Wild beast. **(1mark)**
 - (ii) Ticks. **(1mark)**
- (b) Sketch a pyramid of numbers to represent the above feeding relationship. **(1mk)**

22. A student observed feeding relationship while on a tour in a coastal Island.

Eagles feed on small fish, Small fish feed on sea grass, Insect larvae and molluscs feed on sea grass, Insect larvae fed on by small fish, while crabs feed on insect larvae and molluscs.

a) From the above information, construct a food web. (3mks)

b) In which trophic level is small fish found. (1mk)

c) Extract a food chain where the Eagle is a tertiary consumer. (1mk)

d) Suppose all the crabs were poisoned, what would be the immediate effect in the ecosystem? Give a reason. (1mk)

(e) Give a reason why pyramid of biomass is a better representation of energy flow in an ecosystem than pyramid of numbers. 1mk)

23. (a) Define the term poikilotherm.

(1mk)

(b) Describe the role of mammalian skin in thermoregulation.

(19mks)

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES)

CHEMISTRY

TIME: 2 HOURS

NAME.....

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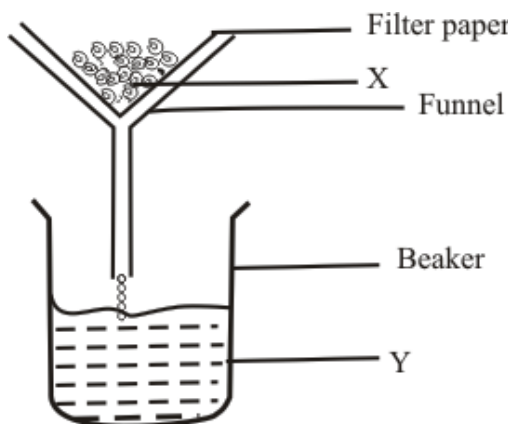
ANSWER ALL QUESTIONS IN THE SPACES PROVIDED

1. (a) State Boyle's law (1mk)

(b) A gas occupies 500cm^3 at 27°C and $100,000\text{ Pa}$. What will be its volume at 0°C and $101,325\text{ Pa}$? (2mks)

2. When Magnesium metal is burnt in air, it reacts with both oxygen and nitrogen gases giving a white solid. Write two equations for the reactions that take place. (2 marks)

3. Filtration is carried out in the apparatus shown



a) Name **X** **($\frac{1}{2}$ mark)**

b) State **one** property that makes it possible to separate mixtures using filtration. **($\frac{1}{2}$ mark)**

4.(a) State Graham's law of diffusion **(1 mark)**

(b) A volume of 120 cm³ of nitrogen gas diffused through a membrane in 40 seconds, how long will 240cm³ of carbon (IV) oxide diffuse through the same membrane (N=14.0, C=12.0, O=16.0)
(3 marks)

5. Study the table below and answer the questions that follow

Substance	M.pt °C	B.pt °C	Electrical conductivity in solid state	Electrical conductivity in molten state
J	365	463	Nil	Nil
K	1323	2773	Good	Good
L	1046	1680	Nil	Good
M	2156	2776	Nil	Nil

Place J, K, L and M in the appropriate categories from the following:

- i.** Metallic solid **(1 mark)**
- ii.** Covalent solid **(1 mark)**
- iii.** Ionic solid **(1 mark)**

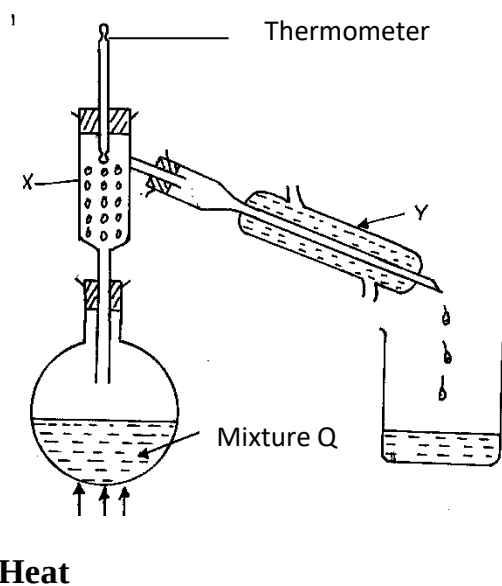
6.A certain element A whose atomic number is 14 has 3 isotopes. The table below shows the mass number and relative abundance of each isotope.

Isotopic mass	% abundance
28.0	92.2
29.0	4.7
30.0	3.1

Calculate the relative atomic mass of element A.

(2mks)

7.Study the diagram below and answer the questions that follow. The diagram shows the method of separating components of mixture Q.



a) Name apparatus X and Y.

(1mk)

X:

Y:

b) What is the purpose of apparatus X?

(1mk)

c) Show the direction of flow of cold water used for cooling the vapor formed.

(1mk)

8. In an experiment to determine the percentage of impurity in Sodium carbonate, 1.8g of impure Sodium carbonate was reacted with excess 2M Hydrochloric acid. 340cm³ of dry Carbon (IV) oxide gas was collected during the experiment at room temperature and pressure.

(Na=23, O=16, C=12; Molar gas volume at r.t.p.=24dm³)

a) Why was excess 2M Hydrochloric acid used in the experiment? **(1mk)**

b) Write an equation for the reaction that produced Carbon (IV) oxide **(1mk)**

c) Calculate

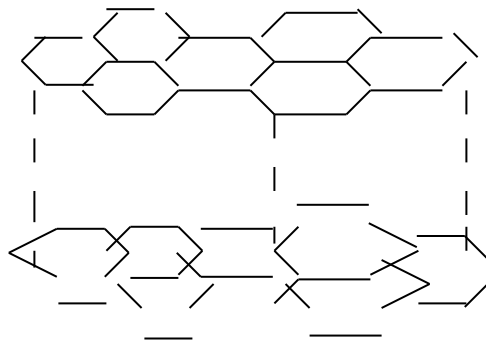
i. The number of moles of Carbon (IV) oxide **produced** **(2mks)**

ii. The number of moles of Sodium carbonate that reacted with the acid **(2mks)**

iii. The mass of Sodium carbonate that reacted with the **acid** **(2mks)**

iv. The percentage of impurities in the sample of Sodium carbonate **(2mks)**

9. The diagram below shows the structure of one of the allotropes of carbon



- i. Identify the **allotrope** (1mk)
- ii. State one property of the above allotrope and explain how it is related to its structure. (2mks)

10. 20.0cm^3 of a solution containing 4g per litre of sodium hydroxide was neutralized by 8.0cm^3 of dilute sulphuric (VI) acid. Calculate the concentration of sulphuric (VI) acid in moles per litre.
(Na=23, O=16, H=1, S=32) (3mks)

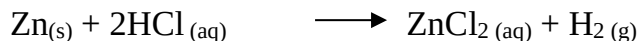
11. The P^{H} values of some solutions are given below

P^{H}	14.0	1.0	8.0	6.5	7.0
Solution	M	L	N	P	Z

- (a) Identify the solution with the lowest concentration of hydrogen ion. Give reason for your answer (1mk)

(b) Which solution would be used as an anti-acid for treating stomach upset. Give for your answer **(1mk)**

12. Zinc metal and hydrochloric acid reacts according to the following equation



1.96g of Zinc metal were reacted with 100cm³ of 0.2M hydrochloric acid

a) Determine the reagent that was in excess **(2mks)**

Zn=65.2; Molar gas volume at s.t.p 22.4 liters

(b) Calculate the total volume of hydrogen gas that was liberated at s.t.p **(1mk)**

13. 0.9g of potassium chloride and potassium carbonate mixture completely reacted with 25cm³ of 0.2M hydrochloric acid

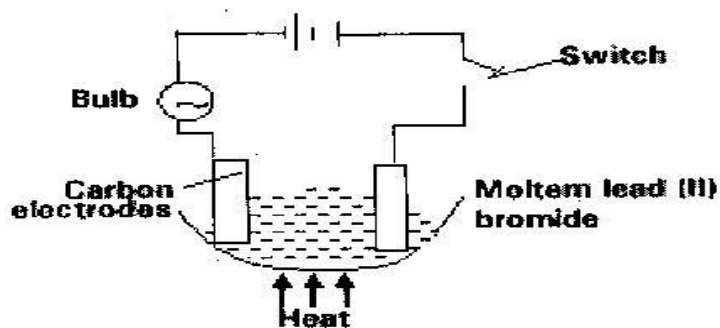
(i) Write an equation of the reaction which takes place **(1mk)**

(ii) Determine the number of moles of the acid used **(1mk)**

(iii) Calculate the mass of potassium chloride in the mixture (K=39.0; C=12.0; O=16.0) **(1mks)**

14. A compound of carbon, hydrogen and oxygen contains 57.15% carbon, 4.76% hydrogen and the rest oxygen. If its relative molecular mass is 126, find its molecular formula. (C = 12, H = 1, O = 16) **(3mks)**

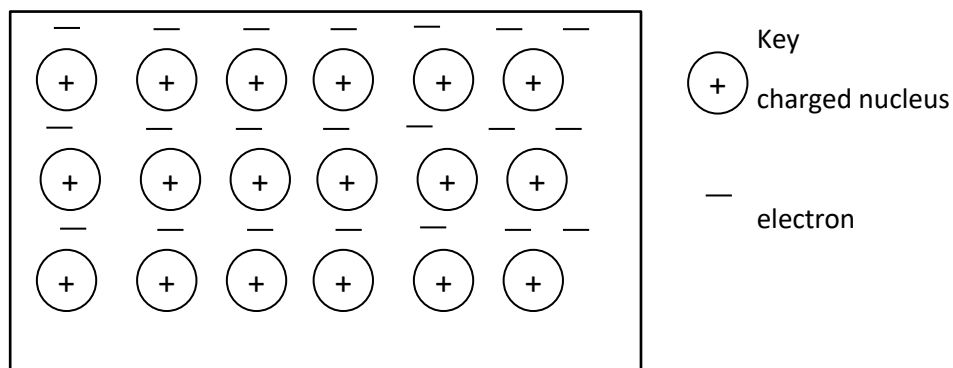
15. Study the set up below and answer the questions that flows



State all the observations that would be made when the circuit is completed (3mks)

16. Describe how solid samples of salts can be obtained from a mixture of lead (II) chloride, sodium chloride and ammonium chloride. (3mks)

17. The diagram below is a section of a model of the structure of element Q



a) State the type of bonding that exist in Q (1mk)

b) In which group of the periodic table does element Q belong. Give a reason (2mks)

18. Use the table below to answer the questions that follow. (The letters do not represent the actual symbols of the elements).

Element	Atomic number	Melting point °C
A	11	97.8
B	13	660
C	14	1410
D	17	-101
E	19	63.7

a) Write the electronic arrangement for the ions formed by element B and D. **(1mks)**

b) Select an element which is:

i. A non-conductor of electricity **(1mk)**

ii. The most reactive non-metal **(1mk)**

c) To which period of the periodic table does element E belong? **(1mk)**

d) Element E loses its outermost electron more readily than A. Explain. **(1mk)**

19. 0.12g of a metal X reacted with dilute hydrochloric acid to form X^{2+} ions with liberation of 240cm³ of hydrogen at r.t.p. Determine the RAM of X. **(3 marks)**

(Molar gas volume at r.t.p = 24dm³)

20. Use the information in the table below to answer the questions that follow. (The letters do not represent the actual symbol of the element).

Oxide	J ₂ O	TO	X ₂ O ₃	WO ₂	Y ₂ O ₅	ZO ₂
PH of oxide in water	13	9	X	X	1	4
Melting point (°C)	1193	3075	2045	1728	563	-91

a) Identify the oxide with

i. Giant ionic structure. (½ mark)

ii. Giant atomic structure. (½ mark)

iii. Simple molecular structure. (½ mark)

iv. Write the formula of the chloride of W. (½ mark)

21. When a hydrocarbon was completely burnt in oxygen, 4.2g of carbon (IV) oxide and 1.71g of water were formed. Determine the empirical formula of the hydrocarbon. (3 Marks)

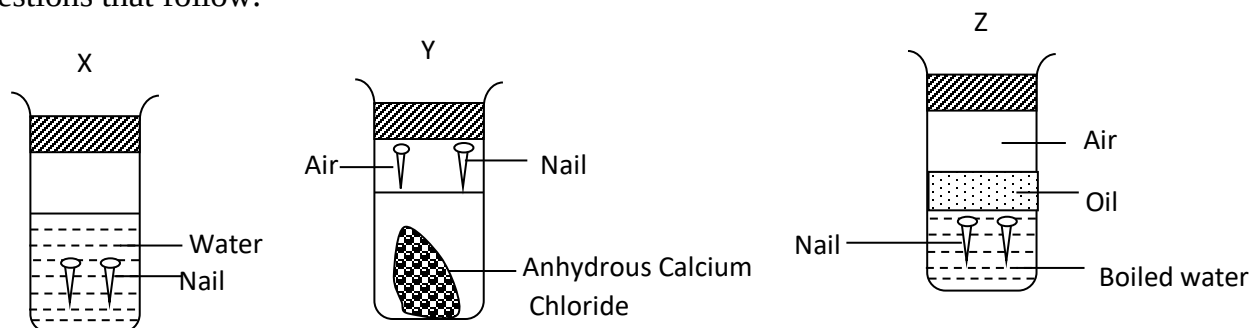
(H = 1.0, C = 12.0, O = 16.0)

22. State and explain the change in mass that occurs when the following substances are separately heated in open crucibles. (3 Marks)

(a) Copper metal

(b) Copper (II) Nitrate

23. An investigation was carried out using the set-up shown below. Study it and answer the questions that follow.



(i) State and explain what will happen in test-tubes X, Y, Z after seven days? **(3 Marks)**

X –

Y –

Z –

24. Describe how the following reagents can be used to prepare Lead Sulphate: solid potassium sulphate, solid lead carbonate, dilute nitric (V) acid and distilled water. **(3mks)**

25. On strong heating of potassium nitrate it liberates oxygen gas. In the space provided below, draw a labeled diagram of a set up that could be used for heating potassium nitrate and collecting the oxygen gas liberated. **(3mks)**

26. When chlorine gas dissolves in water it forms chlorine water which appears yellow. Identify the components of chlorine water. **(1mk)**

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES)

PHYSICS

TIME: 2½ HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

INSTRUCTIONS TO CANDIDATES:

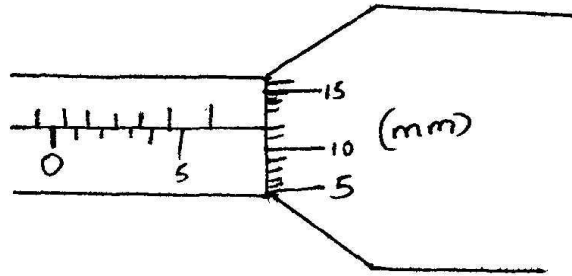
- Write **your name, admission number, date** of examination in the spaces provided above.
- This paper consists of sections: **A** and **B**.
- Answer **all** the questions in section **A** and **B** in the spaces provided.
- All working **must** be clearly shown in the spaces provided.
- Mathematical tables and electronic calculators may be used.

For Examiner's Use Only

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 18	40	
B	19	13	
	20	13	
	21	12	
	22	11	
	23	11	
TOTAL SCORE		100	

SECTION A (40 MARKS)

1. The diagram below shows a portion of a micrometer screw gauge used to measure the diameter of a metal pipe. The reading on the gauge when the jaws were fully closed without the pipe was 0.012cm.



What is the diameter of the pipe?.

(12mks)

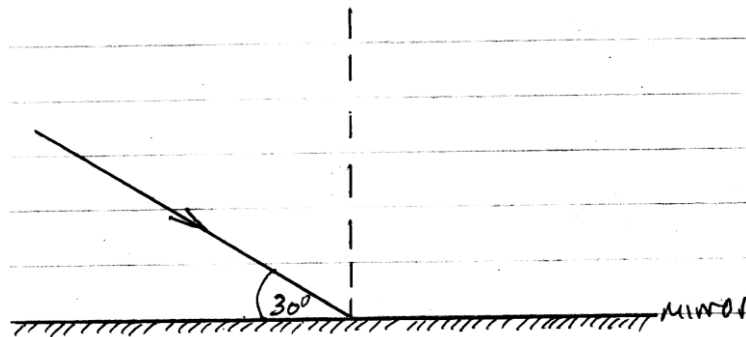
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2. The figure below shows a ray of light incident on a plane mirror.



a) What is the angle of reflection?

(2mks)

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b) The mirror is rotated clockwise through an angle of 10° . Through what angle does the reflected ray make with the horizontal? (2mks)

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3. A device allows current of 10A to pass through a point in a circuit for 25 seconds. Calculate the total charge passing through the point within the period. (2 mks)

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4. Why is attraction not a sure test when establishing the polarity of a magnet? (2 mks)

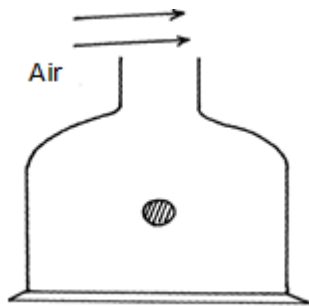
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5. The figure below shows a light body floating in a container



State and explain the observation when a stream of air is blown over the mouth of the container at high speed as shown (2mks)

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6. $X\text{cm}^3$ of substance A which has density of 800kg/m^3 is mixed with 100cm^3 of water with a density of 1000kg/m^3 . The density of the mixture is 960kg/m^3 . Determine;

I) total volume (1mk)

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II) total mass (1mk)

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III) the value of X (2mks)

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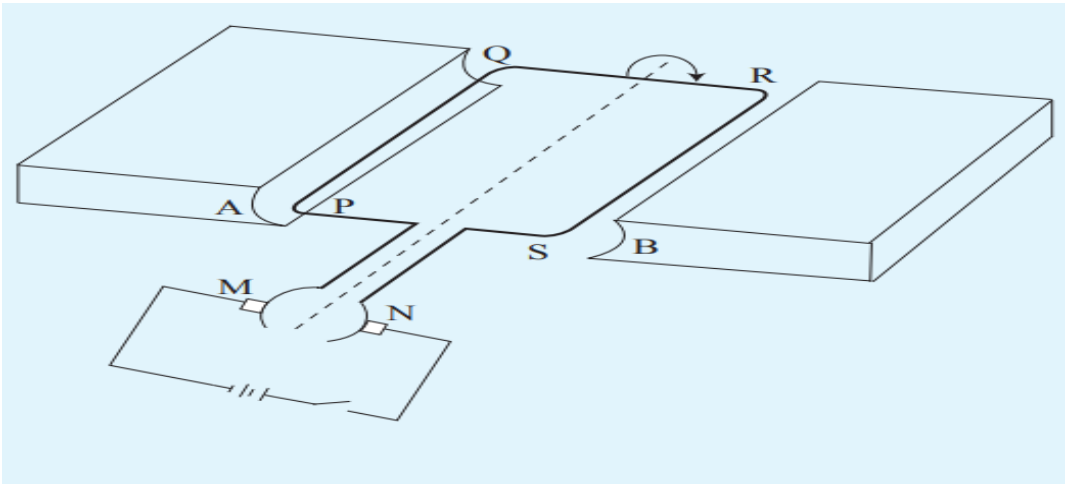
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7. The figure below shows a coil PQRS lying between two unlike magnetic pole of pieces A and B of an electric motor.



(a) Given that PQRS rotates in a clockwise direction when the switch is closed, state the polarity of A. (1 mk)

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b) State two ways of increasing the speed of rotation of the coil (2 mks)

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8. (a) What is an echo? (1 mk)

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(b) State the effect of temperature on the speed of sound. (1 mk)

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9. A spoon partly submerged in a glass of water appears bent. Explain. (1 mk)

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10. Distinguish between transverse and longitudinal waves (2 mks)

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11. A hippo of mass 500kg is able to walk on a muddy river bank while a car of mass 220kg is not able. Explain (2mks)

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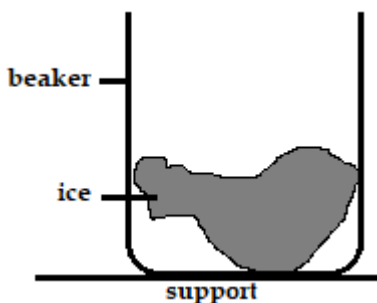
12. Name three types of forces which can act between objects without contact. (3 mks)

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13. Figure below shows a beaker placed on a bench. A block of ice is placed in the beaker as shown. State and explain the change in the stability of the beaker when the ice melts. (2 mk)



14. Give a reason why water is not a suitable liquid for use in a barometer (1 mk)

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15. An astronaut is on the moon. He drops a hammer from a height of 3.2m and it takes 2.0s to hit the lunar landscape. What is the acceleration due to gravity of the moon? (3 mk)

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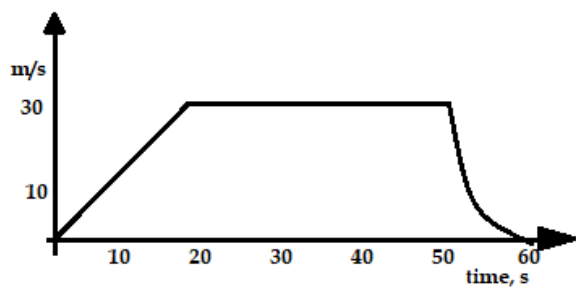
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16. The figure shows a speed-time graph for part of the journey of a motorcar



Determine the distance the car travels in the first 40 seconds (3 mks)

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

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18. What is the difference between energy and work. (1mk)

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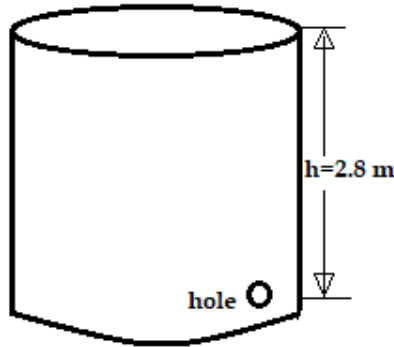
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SECTION B (60 marks)

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



a. Determine:

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

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

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

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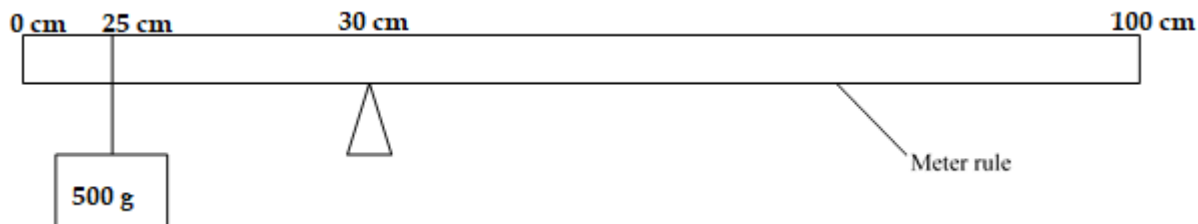
- b.** State the principle of moments **(1mk)**

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- c. A metre-rule whose centre of gravity is at the 50cm mark balances at the 30cm mark when a mass of 500g is placed at the 25cm mark as shown in the below.



Determine:

- i. The mass of the meter-rule (3 mks)

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- ii. With the metre-rule remaining on the knife-edge at the 30 cm mark, a mass of 125g is suspended from the 70 cm mark. The mass of 500g is moved until the rule is balanced. Determine the new position of the 500g mass (3 mks)

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20. a. Define the following terms:

- i. Momentum (1 mk)

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- ii. Terminal velocity (1 mk)

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b. A body is initially in motion. If no external force acts on the body, state the motion of the body. (1 mk)

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c. A force of 6N acts on a 2kg trolley and accelerates at 2 m/s². Calculate the retarding force acting on the trolley. (3 mks)

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d. A car of mass 800kg starts from the rest and accelerates at 1.2ms⁻². Determine;
i) The velocity attained in moving 400m from the starting. (2mks)

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ii) its momentum after it has moved 400m from the starting point. (2 mks)

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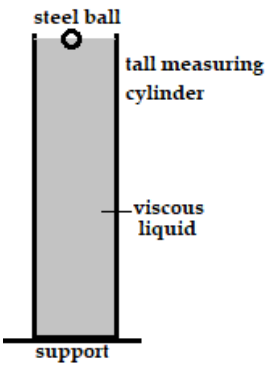
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e. The diagram shows a tall measuring cylinder containing a viscous liquid. A very small steel ball is released from rest at the surface of the liquid as shown.



i. On the space alongside the diagram, sketch the velocity- time graph for the motion of the ball from the time it is released to the time just before it reaches the bottom of the cylinder. **(1 mk)**

ii. Name all the forces acting on the ball when it is mid-way through the tall measuring cylinder **(3 mks)**

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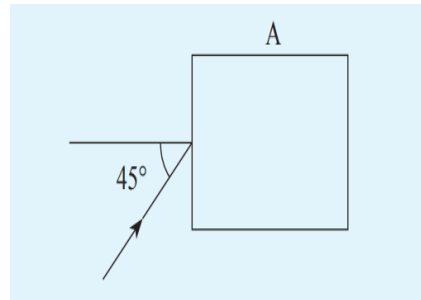
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21. (a) State the Snell’s laws. **(1 mk)**

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(b) The diagram in figure below shows a ray of light incident on the face of a glass cube of refractive index 1.5.



Calculate: (i) the angle of refraction.

(3 mks)

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(ii) the critical angle c for glass-air interface.

(3 mks)

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(c) State two conditions necessary for total internal reflection to occur.

(2 mks)

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(d) A tank full of water appears to be 0.5m deep. If the height of water in the tank is 1.0m, calculate the refractive index of water.

(2 mks)

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22. (a) State the basic law of magnetism. (1 mk)

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(b) State and explain two methods on how a magnet can be destroyed. (2 mks)

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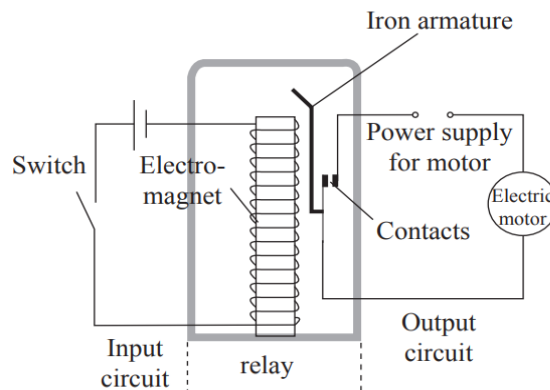
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(c) The figure below shows an electromagnet relay switch.



Explain its operation. (3 mks)

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(d) The figure below shows a conductor carrying current in a magnetic field:



(i) Indicate on the diagram, the direction of force on the conductor. (1 mk)

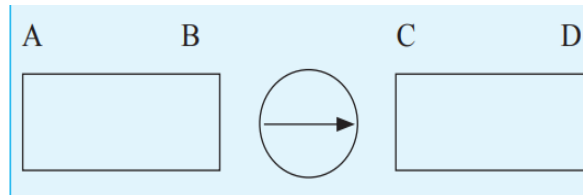
(ii) State two changes that can be made to alter the direction of the force. **(2 mks)**

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(e) The figure shows a plotting compass placed between two magnets.



Indicate the polarity of end C of the magnets. Explain your answer. **(2 mks)**

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23. a) (i) Define velocity ratio of a machine. **(1 mk)**

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(ii) Draw a labeled diagram of a pulley system with a velocity ratio of 5. **(2 mks)**

(iii) Suggest any two possible reasons why the efficiency does not reach the 100% mark. **(2 mks)**

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c) The effort piston of a hydraulic machine is of radius 2.8 cm, while that of the load piston is of radius 14cm. The machine raises a load of 120 kg at a constant velocity through 2.5m. If the machine has an efficiency of 80%, find:-

(i) The velocity ratio of the hydraulic machine. (2 mks)

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ii)The mechanical advantage of the hydraulic machine. (2 mks)

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(iii) The effort needed to raise the load. (2 mks)

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FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES) AGRICULTURE

TIME: 2 HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

INSTRUCTIONS TO CANDIDATES:

1. Write your name and admission number in the spaces provided
2. This paper consists of three sections; A, B and C
3. Answer ALL the questions in sections A, B and C
4. All answers to be written in English

FOR OFFICIAL USE ONLY

SECTION	QUESTION	MAX. SCORE	CANDIDATE SCORE
A	1 – 12	40	
B	13 – 18	30	
C	19 – 20	30	
	TOTAL	100	

SECTION A (40 MKS)

ANSWER ALL QUESTIONS IN THE SPACES PROVIDED

1. Differentiate between the following

a) Floriculture and pomoculture

(1mk)

b) Crutching and ringing

(1mk)

2. State four non-chemical methods of controlling ticks

(4 mks)

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3. Give three farming practices that can destroy soil structure

(3mks)

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4. A fertilizer has the following characteristics

- White crystalline like sugar
- Highly volatile
- Acidic
- Highly soluble in water

a) Identify the fertilizer (1mk)

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b) Give two reasons why this fertilizer should not be used for planting crops (2mks)

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5. State four types of details contained in a land title deed (4 mks)

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6. Give four importance of keeping a dairy cow in good health (4 mks)

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7. Mention three types of records a farmer growing maize should keep (3mks)

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8. (a) Name two breeds of camels (1mk)

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(b) Give three factors that make camels suit for semi-arid areas of Kenya (3mks)

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9. State four factors that promote faster rooting of cuttings (4 mks)

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10. Name the tools used for the following operations

(i) Cutting wool from sheep (½ mk)

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(ii) Pruning hard branches of coffee (½ mk)

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(iii) Tooth clipping (½ mk)

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(iv) Cutting galvanized iron sheets (½ mk)

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11. Which benefits does a Kenyan farmer enjoy from mixed farming (3mks)

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12. Give four advantages of a Kenya Top Bar Hire (KTBH) over a log hire (4 mks)

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SECTION B (30 MKS)

ANSWER ALL QUESTIONS IN THE SPACES PROVIDED

- 13.** A farmer wants to prepare 360kgs of sow and weaner meal containing 20% D.C.P using the pearson's square method, calculate the amount of maize containing 10% D.C.P and sunflower containing 40% D.C.P the farmer would require to prepare the ratio. (show your working)

(4 mks)

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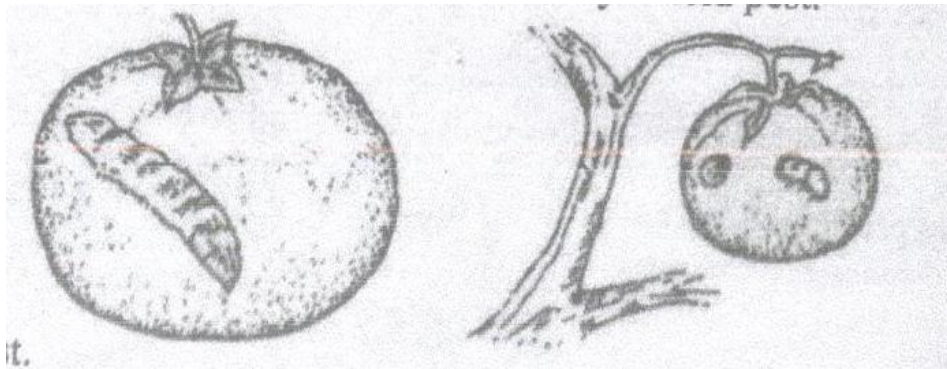
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- 14.** The diagram below shows a tomato plant attacked by a certain pest



- a)** Identify the pest

(1mk)

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- b)** Give two harmful effects caused by the pest on tomato plants

(2mks)

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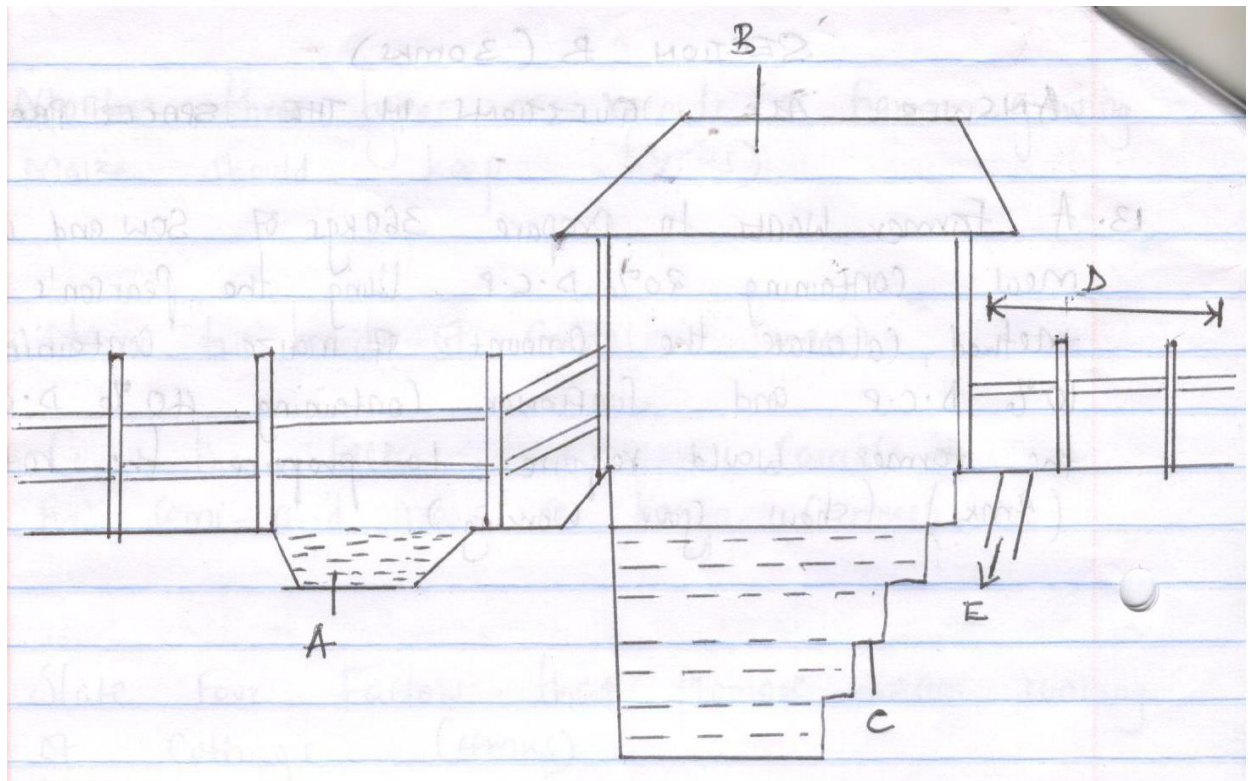
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- c)** Give two control measures of the above pest

(2mks)

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15. The diagram below illustrates a farm structure



a) Identify the farm structure

(1mk)

b) Name the parts labeled A, B, C and E

(2mks)

A –

B –

C –

E –

c) Describe the roles of the parts labeled A, B and D in the farm structure

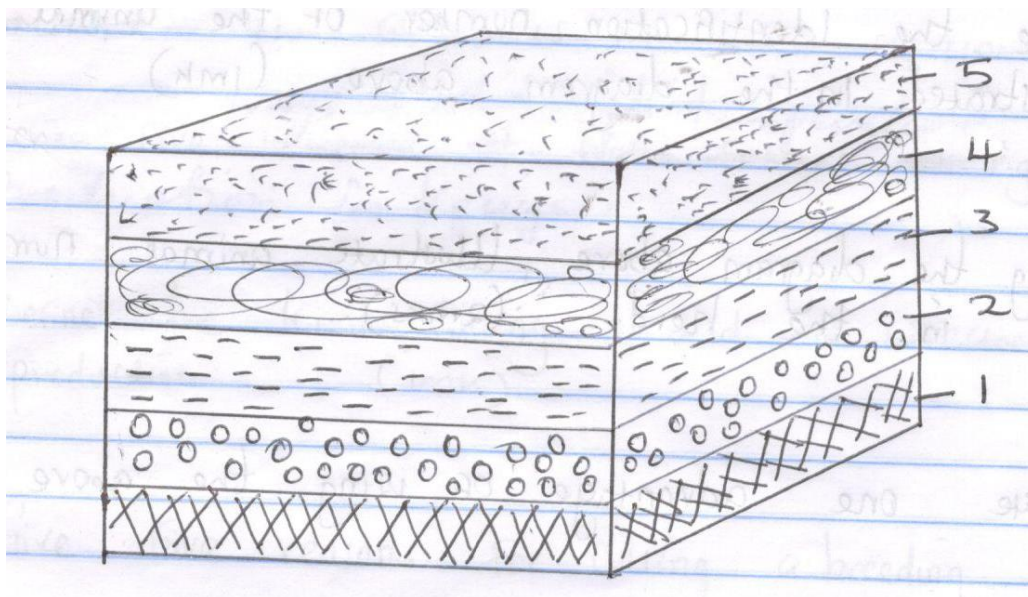
(3mks)

A –

B –

D –

16. The diagram below shows a compost heap. Study it and answer questions that follow



- a) Name the parts labeled 1, 2, 3 and 4

(2mks)

1 –

2 –

3 –

- b) Give the importance of the parts labeled 1, 4 and 5

(3mks)

1 –

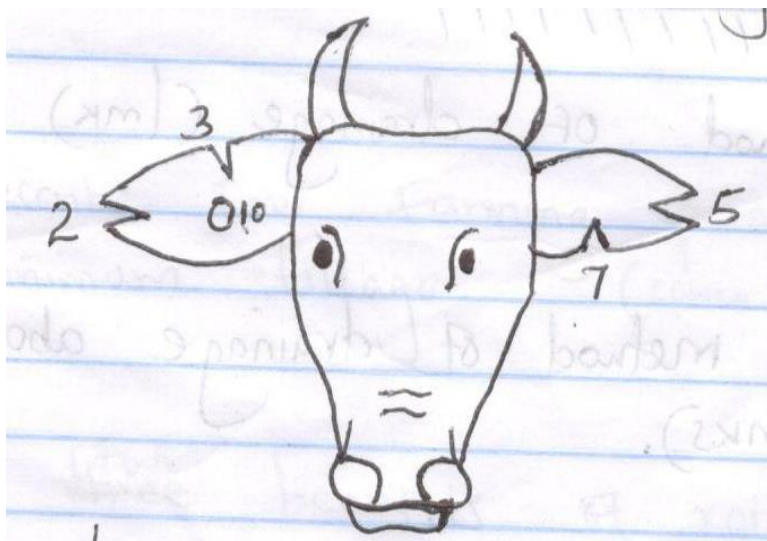
4 –

5 –

- c) Describe the use of a long sharp pointed stick driven into the compost at an angle

(1mk)

17. Below is a method of identifying a cow



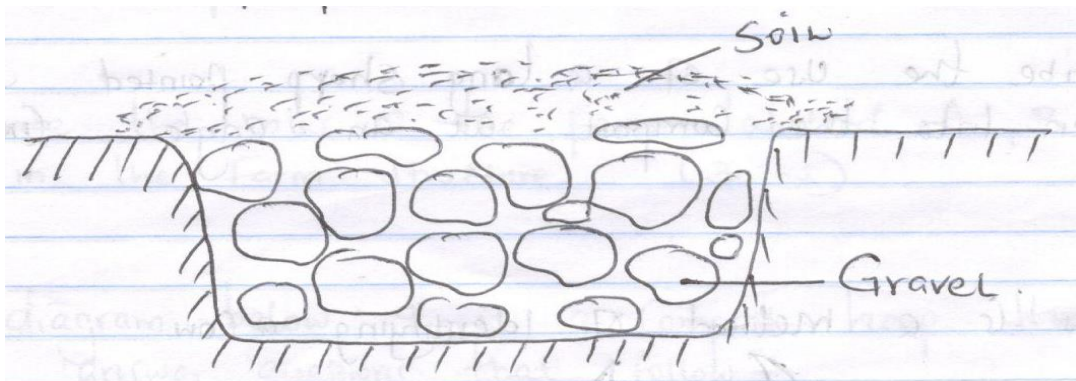
(a) Name the method of identification above (1mk)

(b) Give the identification number of the animal illustrated in the diagram above (1mk)

(c) Using the diagram above, illustrate animal number 12 and 17 in the herd (2mks)

(d) State one advantage of using the above method (1mk)

18. The diagram below shows a method of drainage used in crop production



a) Identify the method of drainage (1mk)

b) Describe how the method of drainage above is carried out (3mks)

SECTION C (30MKS)

ANSWER ALL QUESTIONS IN THE SPACES PROVIDED

- 19.** (a) Describe five ways in which high temperature affects Agricultural production in Kenya (5mks)
- (b) (i) Define the term culling as used in livestock production (1mk)
- (ii) Give five reasons for culling a breeding sow (5mks)
- (c) Explain factors that affect the seed rate (5mks)
- 20.** (a) Describe management practices carried out to ensure high fish yields from a fish pond (5mks)
- (b) (i) Define the term minimum tillage (1mk)
- (ii) Describe four farming practices that encourage minimum tillage (4mks)
- (c) Give four benefits of raising kale seedlings in a nursery (4mks)

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES) BUSINESS STUDIES

TIME: 2 HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

INSTRUCTIONS

ANSWER ALL THE QUESTIONS IN THE SPACES PROVIDED

1. Classify the following wants as either basic or secondary. (4 marks)

- (a) Need for shelter _____
- (b) Education _____
- (c) Need for a car _____
- (d) Entertainment _____

2. List four means of audio-visual communication. (4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

3. Outline four functions of intermediaries. (4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

4. Define the following areas of Business Studies. (4 marks)

- (a) Economics - _____
- (b) Accounting - _____
- (c) Office practice - _____
- (d) Commerce - _____

5. Highlight four factors that may contribute to the ineffectiveness of a warehouse. (4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

6. State four limitations of Facebook as a way of communication to the user in social media.

(4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

7. Outline four features of a perfect competition product market

(4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

8. In the spaces provided below, indicate the types of utility created by each of the following commercial activities.

(4 marks)

Commercial Activity

Type of utility

- (a) Transporting goods _____
- (b) Selling goods to a customer _____
- (c) Making a chair from timber _____
- (d) Store keeping _____

9. State four ways of increasing effectiveness of human portorage. (4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

10. Highlight four internal business environment that may negatively affect the operations of a business. (4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

11. Outline four features of ordinary shares. (4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

12. Outline four duties of a personal secretary. (4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

13. State four circumstances under which an insurer may refuse to insure an applicant. (4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

14. State four types of information that a buyer should seek from a seller using a letter of inquiry. (4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

15. Highlight four emerging trends in product promotion. (4 marks)

- (a) _____
- (b) _____
- (c) _____
- (d) _____

16. Explain five ways of determining the size of a firm. (10 marks)

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17. Explain five reasons as to why entrepreneurs are required to generate business plans.

(10 marks)

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18. Explain five methods of price determination other than price mechanism in a market. (10 marks)

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19. Explain five disadvantages of government involvement in business. **(10 marks)**

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FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES)

ENGLISH

TIME: 2½ HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

INSTRUCTIONS.

- 1. Write your name and admission number in the spaces provided above**
- 2. Answer all the questions in the spaces provided**
- 3. All the answers should be In English**

FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM SCORE	STUDENT'S SCORE
1: Functional Writing	20	
2: Cloze test	10	
3:Comprehension passage	20	
4:Oral skills	15	
5: Set book Extract Questions	20	
6:Grammar	15	
TOTAL	100	

QUESTION ONE: FUNCTIONAL WRITING (20 MKS)

Your school's drama club is preparing for the county drama festivals. The club also needs to raise twelve thousand shillings to buy the necessary costumes and props for the festivals. Each member is therefore expected to contribute two hundred shillings and attend rehearsals. As the secretary to the club, write a memo to the members informing them of these expectations. In your memo, inform them of the dates and venue for the festivals, deadline for the contribution and rehearsal program. Ensure that the patron gets this information.

This image shows a full page of white paper with horizontal dashed lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

For Marking Schemes Contact 0746 222 000 / 0742 999 000

QUESTION TWO: CLOZE TEST (10 MKS)

Fill in each blank space with appropriate word

When people hurt you, should you lash out at them(1) give them a piece of your(2)? There are those that argue that(3) your emotions is much better than suppressing them. Perhaps the(4) lies in between.

What most people would agree(5) is the fact that it is(6) to run away from the cause of your hurt because(7) is bound to breed resentment. Imagine that your cubemate in the dormitory has(8) damaged your reputation by telling blatant lies about you. Instead of(9) him or her to settle the matter, you move to the(10) cubicle. You may feel better for some time but the problem is not dealt with and in the meantime, resentment is growing in you..

QUESTION THREE: COMPREHENSION (20 MKS)

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

When Google hosted a boot camp in California this month for its Android operating system, there were some new faces in the room: auto manufacturers. They made the trip to learn about Android Auto, a new dashboard system meant to let a smartphone power a car's center screen. Tasks as varied as navigation, communication and music apps, all constantly talking to the cloud. And to the driver. A similar scene is playing out just a few miles down the road at Apple, where a rival system, Car Play, has been developed for iPhone users.

After years of being treated as an interesting side business, autos have become the latest obsession for Silicon Valley, with Apple assigning about 200 engineers to work on electric vehicle technology and Google saying it envisions the public using driverless cars within five years. But nowhere is that obsession playing out more immediately than in the battle to develop the next generation of cars' dashboard systems.

In the coming weeks and months, dealerships around the country will begin selling vehicles capable of running Android Auto, Apple Car Play, or both. The systems go far beyond currently available Bluetooth pairing for playing music or making a hands-free call, and allow for Google's or Apple's operating system to essentially take over the center screen and certain buttons within the car. "Consumers have spoken," said John Maddox, assistant director of the University of Michigan's Mobility Transformation Center.

"They expect to have coordination between their phone and their vehicle." Here at Google's headquarters, Android Auto is about to make its debut in Americans' cars after two years in

development. Plug in a smartphone with a USB cord and the system powers up on a car's screen. The phone's screen, meanwhile, goes dark, not to be touched while driving. Apple's Car Play works similarly, with bubbly icons for phone calls, music, maps, messaging and other apps appearing on the car's center screen. (Apple declined to comment for this article.)

While the idea of constantly connected drivers zipping along roads raises concerns about distracted driving, both companies say their systems are designed with the opposite goal: to make cellphone-toting drivers safer. "We looked at what people do with their phones in the car, and it was scary," said Andrew Brenner, who heads Google's Android Auto team. "You want to say to them, 'Yikes, no, don't do that.'"

Brenner said his team tried to figure out how to minimize distraction during tasks people frequently do while driving, while also deciding what should be prevented in the car altogether. Google even built its own driver-distraction lab, to test different variations.

Android Auto, for example, has no "back" button like the smartphone version. No "recents" button either. Google Maps has been adjusted to make fonts bigger and streets less detailed, for easier reading while driving. No action should take more than two seconds — consistent with the Transportation Department's voluntary guidelines. "Things that we don't show are just as important as what we do show," Brenner said. Music is most definitely in. Streaming video? Most definitely not.

Most social media will also be blocked, and texts can be sent only with voice commands. Apps on the screen are optimized for speed: glance, touch and eyes back to the road. "It's these little glances at the screen that people do in a car," he said.

"We want something that's very glanceable, that can be seen and done quickly." When the Android Auto project began, it included a core group of automakers like General Motors, Audi, Honda and Hyundai. Now, as it prepares for its debut, roughly two dozen car brands have signed on to offer it soon. Apple has teamed up with roughly the same number of brands, many of which will offer both systems. Most automakers are staying mum on their exact start dates, but Hyundai is expected to act shortly, and Volkswagen has indicated availability for its next Golf. GM has said the same about its Spark subcompact. One of the most widespread adopters will be Ford, which this year will begin offering both Android Auto and Car Play in conjunction with the revamping of the automaker's much-criticized Sync system.

By the end of 2016, they will be available on all Fords sold in the United States. "We don't want people to have to make a vehicle choice based on which mobile phone they have," said Don Butler, Ford's executive director for connected vehicles and services. "We want to accommodate all customers and their devices."

Fiat-Chrysler, considered to have one of the better infotainment platforms on the market, has signed on to support Google's and Apple's systems. But a bit of lament is evident. "We're confident that our systems deliver a good experience for our customers," said Eric Mayne, a spokesman at Chrysler. "But we're not standing still either."

Questions

a) Why did Auto manufacturing companies make the trip to California? (2mks)

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b) What according to the passage shows the seriousness that companies have attached to autos?

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c) What does the expression “Consumers have spoken,” imply? (2mks)

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d) Briefly explain how the system works. (2mks)

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e) Why, in your opinion, does the driver have to be blocked from social media? (3mks)

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f) In point form, summarize how developers have tried to minimize distractions that may arise out of the new developments. (5mks)

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g) *Rewrite the following in reported speech.* (1 mark)

“We’re confident that our systems deliver a good experience for our customers,” said Eric Mayne, a spokesman at Chrysler.

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h) What do the following words mean as used in the passage? (3 marks)

i) Debut

ii) Mum

iii) Infotainment

QUESTION FOUR: ORAL SKILLS

Read the following narrative and answer the question that follow (15 mks)

Once upon a time a woman who was pregnant and about to give birth went to the bush to collect firewood. On reaching the bush , she suddenly gave birth to a baby boy who was so deformed and ugly that she decided to exchange it for other baby _a normal looking one she found abandoned and crying in a nearby thicket. She didn’t know that this baby was a sprit called Ekipie by the Turkana.The woman returned home with the baby and since it was evening time, she had to milk the cow they owned .She put the milk containers in her hut where her eldest daughter was minding the new baby. Then she went out again to complete some other chores.

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

“The baby has drank it all.”

“I can’t believe such a tale. It’s ridiculous for you to say such a thing ,”she scolded her daughter.“

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

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

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

Questions

a. What would you do to prepare your audience to listen to the above story? [2mks]

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b. What two things would indicate that the audience is following the story? [2mks]

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c. What two oral devices would use in narrating this story? [2mks]

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d. How would you perform the reply of the girl “The baby has drunk it all.” [2mks]

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e. *Kot took kot’s coat, Kot went to court and the court told kot return Kot’s coat to Kot.*

i. Identify the genre [1mk]

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ii. What’s lost when the above genre is translated into another language? [1mk]

.....

.....

f. Write a homophone for each of the words below.

(5mks)

i. Cell

ii. Eye.

iii. Blew.

iv. Knew

iv. Guest.

QUESTION FIVE: EXTRACT FROM SET BOOK.

Answer either 5a or 5b

5a) Read the following excerpt from *Fathers of Nations* by Paul B. Vitta. Then answer the questions that follow (20 marks)

Forty-nine foreign heads of state were in Banjul for the **summit**. All looked happy, and why not? Had they not escaped from troublemakers in their home countries? They saw a stay free from trouble ahead of them here, in the Gambia, a country everyone kept calling 'the land of Kunta-kinteh'. All hoped to get from their stay as much rest as possible. Of course, at some point, they would each other take the floor and, as fans back home expected, address the summit, but this was something that they could do with little or no effort at all.

For Gambians, though, the presence of so many visiting dignitaries was not fun. True, forty-nine heads of state could give a hosting country good publicity, but heads of state are a huge inconvenience. So, this publicity comes at a high price. Nowhere is the price higher than it is in Africa. Here, before the dignitaries arrive, bulldozers dispatched at night in slum-clearance 'exercises' **demolish** roadside kiosks on which whole families depend for their livelihood. This way, the dignitaries will see that a few streets once had sidewalks. Roads get rare layers of tarmac at times of maximum traffic. This way, motorists come to a standstill when it really hurts. Checkpoints sprout everywhere. This way, guards get even more bases for **extorting** bribes from passers-by.

When the dignitaries finally arrive, water taps at which whole neighborhoods' queue to get just buckets of water dry up because now all water has to go to new water fountains built to **mesmerise** the visitors.

Questions

1. Explain what happens immediately before this extract

(2mks)

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2. Identify and explain two devices of style used in the excerpt. (4 marks)

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3. Identify and illustrate two themes evident in this extract (4mks)

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4. From your knowledge of the rest of the book, identify the four guests who checked in at Seamount hotel. Where did each come from? (4mks)

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5. Highlight two inconveniencies to the Gambians for hosting the summit (2mks)

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6. Explain the meanings of the following vocabulary used in the excerpt. (4 marks)

a) Mesmerise

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b) Demolish

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c)Extorting.....

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d) Summit

.....

5b) Read the following extract from the play “The Samaritan” by John Lara and then answer the questions after.(20mks)

Seymour: (Springing to his feet with clenched fists) That cannot be possible. Nobody can write that kind of thing about me in this world!

Harvester: (Looking at Ted and Seymour) Copies of indisputable documentary evidence to that effect were all over today’s newspapers and are being shared in all media platforms.

Seymour: (Resuming his seat and swearing with trembling voice) Those are fake documents! These are all barefaced falsehoods! And I can assure you one thing: Those behind the allegations now have their appointment with fate! Certainly!

Ted : (Sitting properly and looking up for the first time) **Supply of air?** I am beginning to think this is serious. Could we end up in Baneta Express Prison?

Harvester:(Turning pages of his note book)But that is only one of the allegations ,there are many more ,including drug trafficking, grabbing of public land, **inflation** of the cost of municipal projects, use of proxies to secure municipal tenders, undertaking shoddy public works, murder and gang warfare. The information is very detailed on the people and companies involved .

Mossi: There is a lot of personal information on municipal leaders on that evil thing , too; including lifestyles of individual municipal officials, where they live, the kind of houses they live in, their businesses, the vehicles they own, other properties in their possession, when the properties were acquired, and a lot of other personal details I don’t want to mention here. (Looking at Bembe) There was a lot of talk yesterday on the Madingo Golf Club, with everyone Wondering where you got the money to put it up.

Bembe: (Sitting up with an expression of horror on his face) The Madingo Golf Club? No! I have always been very **discreet** about my private affairs! How did they get the Information it is mine?

Mossi: You see, there is hardly anything on earth you can do without somebody knowing About it. You should also remember that those we regard as our friends are Sometimes wolves in sheep’s clothing. And they may have a lot of information About us, which could be damaging!

Bembe: This might be our worst nightmare!

Mossi: What worries me most is the recent formation of a lobby group,an amorphous virtual group, comprising mostly of lawyers, calling itself *The Samaritan*. It is calling upon the people to volunteer as witnesses and help in the prosecution of those

involved in corruption and abuse of office in the Municipality. They are also planning to **petition** the Local Government Minister ,the Prime Minister, and the Chief Justice to take action. The situation is not pretty at all.

Ted: (Looking at Justice Jaden)Can such online allegations form a strong basis for prosecution and conviction?

Jaden: (Adjusting his eyeglasses) Yes, they can; provided there are valid documents supporting the allegations.

Bembe: (Throwing his hands in the air) I think we have no choice other than ban that thing within Maracas Municipality! The Municipal Council needs to pass a by-law to that effect urgently. I will enforce it immediately!

Jaden: (Adjusting his eyeglasses and then his tie) I think we need to be careful and strategic. On what basis do you ban it? And how can you police the use of mobile phones to ensure the ban is effective?

Seymour: We can think creatively about that. For example, we can claim that municipal authorities are concerned that suspect Apps, particularly spy Apps, are finding their way into our municipality. This may lead to theft of confidential information such as bank account details. We can also cite issues of cyberbullying and the sharing of pornographic materials in schools

QUESTIONS

a) What is Seymour referring to at the beginning of the excerpt ? (2mks)

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b) Identify and illustrate two aspects of style in this excerpt. (4mks)

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c) Discuss two themes evident in this excerpt (4mks)

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d) Discuss one character trait of Seymour as presented in this excerpt. (2mks)

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e) From your knowledge of the rest of the play, what two things does Mossi suggest could be done to control the use of the Samaritan App? (2mks)

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f) From your knowledge of the rest of the play, briefly explain the origin of the Samaritan App. (3mks)

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g) Explain the meaning of the following words and phrases as used in the excerpt (3mks)

- i) Supply of air
- ii) inflation
- iii) discreet.....

QUESTION SIX: GRAMMAR. (15MKS)

a) Rewrite the following sentences according to the instructions given after each. Do not change the meaning. (4mks)

- i) Juma did not do the assignment. He did not report to the teacher. (Rewrite into one sentence using correlative conjunctions)

.....

ii) *Complete with the correct alternative.*

They won the match because they had had enough.....

(Practice/practise)

iii) The brave warrior killed the lion. (*Rewrite in passive*)

.....
.....

iv) My examination results were released only after I had cleared the fee balance.(*Begin: Not until.....*)

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.....

b) ***Fill in the blank spaces with the correct form of the word in brackets. (4mks)***

i) He was relieved when the three left his compound. (passerby)

ii) The inmates took advantage of theto escape from custody.
(confuse)

iii) The film, though poor in artistic value, was a success. (finance)

iv) He didn't know the correctof the word. (pronounce)

c) ***Complete the following sentences using an appropriate preposition. (4mks)***

i) It is improper to hurl abuses people.

ii) The principal was very happy her students.

iii) Mueni and her family had lived in Mombasa twenty years.

iv) Benda told us to wait for himthe river side

d) ***Replace the underlined phrasal verb in each of the following sentences with an appropriate word. (3mks)***

i) Juma always calls in on us during meals.

ii) We felt completely let down by her performance

iii) The war broke out in 1996.

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES)

KISWAHILI

TIME: 2½ HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

Maagizo

- a) Andika jina lako na nambari yako katika nafasi ulizoachiwa hapo juu.*
- b) Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.*
- c) Jibu maswali **yote**.*
- d) Majibu yote yaandikwe kwa nafasi ulizoachiwa.*
- e) Majibu yote lazima yaandikwe kwa lugha ya Kiswahili.*

Kwa Matumizi ya Mtahini Pekee

Swali	Upeo	Alama
1. Ufahamu	15	
2. Ufupisho	15	
3. Matumizi ya Lugha	40	
4. Isimujamii	10	
JUMLA	80	

Soma kifungu kifuatacho kisha ujibu maswali yanayofuata.

Watoto wetu huku uswahilini huwa wanapitia masaibu mengi mno. Na hata ukiona mtoto kalelewa hadi kuwa mtu mzima huku kwetu, nadhani kuna haja ya kumpa tuzo kwa kuweza kuhimili mikikimikiki na patashika za maisha ya kila siku. Hawa watoto changamoto zao huanza pale wanapozaliwa kwani hata majina wanayopatiwa huwa yana mengi. Watoto wa huku kwetu hupatiwa majina kulingana na hali halisi ya maisha wakati wanapozaliwa, wapo wanaopewa majina ya chausiku, wengine wanaitwa shida, lakini pia wapo wale wanaoitwa semeni, sikudhani na hata chuki.

Sambamba na majina wanayopatiwa, hawa watoto wa huku kwetu huandamwa na patashika na hekaheka tangu wakiwa wadogo. Kwani maisha ya uswahilini yanajulikana, ni yale yaliyojaa mbio za kutafuta na kuweza kukidhi mahitaji ya siku hadi siku. Napo katika harakati hizo wazazi huwa na muda mdogo wa kuonyesha mapenzi na ukaribu na watoto. Hivyo mzazi akivurugwa kwenye shughuli zake, hasira huishia kwa mtoto, hapo utasikia mtoto akiitwa majina ya wanyama wa aina zote kuanzia paka, mbwa, fisi na hata kuku.

Tunaona akina mama waliohangaishwa na waume zao wanavyomalizia machungu kwa watoto kupitia vipigo, maneno na hata masimango. Wapo wale ambao mume anapotoweka nyumbani kwa siku kadhaa watoto huenda wasipikiwe chakula na wengine wakaamua kutembeza kiboko kwa watoto bila sababu yoyote ya msingi. Hawa watoto wetu huwa wakija huku mtaani wananyemelewa na binadamu wala watu, wale ambao wana sifa ya kuharibu watoto na kuharibu maisha yao, yaani wale wabakaji na wengine wanaodhulumu utoto wao.

Watoto hawa wa uswahilini wanapokuwa watu wazima ni wachache ambao wanaweza kumudu maisha na kuishi katika hali ya kawaida. Kwani kwa watoto wa kiume, wengine waliopitia maisha haya ya patashika nao pia huendeleza patashika hizi katika familia zao. Ndiposa wanakuwa waliotawaliwa na hasira waliokosa upendo kwa wake zao na watoto pia. Wengine wanakuwa wataalamu wa kupiga wake na hata watoto wao.

Halafu wapo wale wanaokuwa hawana habari na majukumu ya familia, anajijali yeye na nafsi yake, bila kujua watoto wanasoma vipi, wanakula nini, wanavaa nini na hata huduma za nyumbani zinapatikanaje. Kuna kila sababu ya kuwapa tuzo wale waliotelewa uswahilini na wakaweza kumudu maisha yao baadaye.

Maswali

- a) “Watoto wa uswahilini hukumbwa na masaibu mengi mno”. Thibitisha kauli hii kwa kutoa hoja **tano** kutoka kwa kifungu. **(alama 5)**

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b) Mtoto umleavyo ndivyo akuavyo. Eleza jinsi methali hii inaafiki kifungu ulichosoma.

(alama 3)

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c) Kwa nini mwandishi anadhani kuwa kuna haja ya kuwatuza watoto waliolelewa uswahilini.

(alama 2)

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.....

d) Eleza maana ya vifungu hivi kwa mujibu wa kifungu.

(alama 2)

i) Binadamu wala watu

.....

ii) Patashika na hekaheka

.....

e) Taja na ueleze maudhui makuu yanayojitokeza kwenye kifungu.

(alama 2)

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.....

f) Kipe kifungu hiki anwani mwafaka.

(alama 1)

.....

2. UFUPISHO

(Alama 15)

Soma makala haya kisha ujibu maswali yanayofuata.

Moto mkubwa ambao umekuwa ukiendelea katika msitu wa Aberdare kwa wiki mbili zilizopita haujazimwa hadi sasa, huku Wakenya wakiendelea kuteseka kutokana na athari za kiangazi. Moto huo ulioanza katika eneo la Satima kaunti ya Nyandarua, umeharibu zaidi ya ekari arubaini za ardhi. Mnamo Ijumaa, ndege ya helikopta ya shirika la la wanyama pori Kenya. Iliwabeba wanahabari wa shirika la **Nation** kutathmini athari za moto huo, ambapo pia umewaathiri wanyama pori.

Hali ya kiangazi na upepo mkali unaoendelea umefanya juhudi za kuudhibiti na kuuzima moto huo kuwa ngumu. Naibu mkurugenzi wa Shirika la Wanyamapori Kenya, katika eneo la uhifadhi wa milima, Bwana Bakari Chongwa, alisema kuwa walinzi wanafanya kila juhudi kuuzima moto huo, ambao umeharibu eneo kubwa la msitu. Walinzi hao walisema wamebaini kiini cha moto huo kuwa

shughuli haramu ambazo zimekuwa zikiendeshwa na baadhi ya watu. Walisema kuwa watu hao watakatwa na kukabiliwa kisheria. Akihutubu kwenye shughuli za kuzima moto huo, Bwana Bakari alidhibitisha kuwa watu wawili wamefariki kwenye visa vinavyohusiana na mioto katika misitu.

Zaidi ya hayo, kando na walinzi wa Shirika la Wanyamapori Kenya kukabili moto huo, kuna ndege yenye uwezo wa kubeba lita elfu mbili za maji inayowasaidia kuzima moto kutoka angani. Afisa huyo alisema moto huo utaathiri sana shughuli za kiuchumi katika maeneo hayo.

Kwingineko, moto mwingine unaendelea kuharibu maeneo muhimu katika msitu wa Mau. Kulingana na wizara ya mazingira, misitu na mabadiliko ya hali ya hewa, Kenya imekumbwa na visa mia moja themanini vya mioto katika muda wa miezi miwili iliyopita. Hayo yanafanyika huku Wakenya 4.2 milioni wakiendelea kuathiriwa na kiangazi. Takwimu hizo ambazo zilitolewa na Shirika la Uhifadhi Chakula Kenya, zinaonyesha kuwa zaidi ya watoto 970,000 walio chini ya umri wa miaka mitano na wanawake 142,000 wanaonyonyesha wanahitaji matibabu ya dharura kutokana na athari za utapiamlo. Mnamo Julai mwaka uliopita idadi hiyo ilikuwa 884,000. Tayari, rais wa nchi ya Kenya amewarai wahisani, sekta ya kibinafsi na wadau wengine kuisaidia serikali katika kubuni mikakati ya muda mrefu kukabili athari za kiangazi. Rais ameahidi kutumia fedha zitakazotolewa vizuri na kwa njia ya uwazi kukabili hali hiyo.

Kwa sasa kaunti ya Turkana, Marsabit, Mandera, Isiolo, Garissa, Baringo na Samburu ni baadhi ya zile zilizoathiriwa sana. kaunti zingine zilizoathiriwa na kiangazi hicho ni Wajir, Pokot Magharibi, Laikipia, Kajiado, Kilifi na Kwale. Kutokana na kiangazi hicho, zaidi ya watu mia tano elfu wanakumbwa na uhaba wa chakula katika kaunti za Machakos, Homabay, Migori, Siaya, Elgeyo Marakwet, Kiambu, Nakuru, Kirinyaga na Murang'a. Katika kaunti ya Machakos, baadhi ya maeneo yalioathiriwa ni Mavoko, Masinga, Kalama, Kathiani kati ya mengine.

a) Kwa kutumia maneno 95-100, fupisha aya nne za kwanza. (al 9) (1ut.)

Matayarisho

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Nakala Safi

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b) Fupisha ujumbe muhimu katika aya mbili za mwisho. (al 6) (1ut)

Matayarisho

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Nakala Safi

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3. MATUMIZI YA LUGHA

(Alama 40)

a) Taja sauti zenye sifa zifuatazo.

(alama 1)

i) Kati, mbele tandazwa

ii) Kikwamizo ghuna cha ufizi

b) Unda neno lenye muundo ufuatao wa silabi.

(alama 1)

K-KKI.....

I-KI-KI.....

c) Kando na muundo wa **m-wa**, fafania miundo miwili katika ngeli ya A-WA.

(alama 2)

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.....

d) Bainisha mofimu katika sentensi.

(alama 3)

Tulichokikana

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e) Tambua viambishi katika maneno yafuatayo.

(alama 1)

Jisu

Samehewa.....

f) Tumia kivumishi cha pekee chenye dhana ya kuisitiza katika ngeli ya LI-YA kutunga sentensi.

(alama 1)

.....

g) Nyambua vitenzi vifuatavyo katika kauli zilizo kwenye mabano.

(alama 2)

i) sahau – (kutendeka)

ii) lewa - (kutendesha)

h) Ainisha vitenzi katika sentensi ifuatayo.

(alama2)

Amina angali anacheza uwanjani.

i) Tunga sentensi moja kuonyesha matumizi ya kistari kifupi.

(alama 2)

j) Geuza maneno yaliyopigwa mstari kuwa viwakilishi.

(alama 2)

Kipepeo mweupe anarukia maua mazuri

k) Tumia ‘o’ rejeshi kuleta dhana ya mazoea katika sentensi ifuatayo.

(alama 2)

Makundi ambayo huundwa ni hatari katika taifa nzima.

l) Tambua vielezi katika sentensi ifuatayo na ueleze ni vya aina gani.

(alama 2)

Kitanda kizuri kilichonunuliwa kiwandani juzi kilitengenezwa kwa mbao.

m) Andika sentensi ifuatayo katika usemi wa taarifa.

(alama 2)

“Sitarudi nyumbani leo,” Mama alituambia.

n) Tunga sentensi yenye mpangilio ufuatao wa maneno.

(alama3)

KN(N+U+N+s) + KT (T+E)

o) Andika sentensi ifuatayo katika hali ya ukubwa wingi. **(alama 2)**

Mfupa mkubwa umeletewa mbwa

.....

p) Andika kinyume cha sentensi ifuatayo. **(alama 2)**

Alikasirishwa na wanafunzi wake kwa kulala mapema.

.....

q) Ainisha virai katika sentensi ifuatayo. **(alama 3)**

Lango lililojengwa kanisani limeibiwa na wezi.

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r) Eleza matumizi ya ‘po’ katika sentensi ifuatayo. **(alama 2)**

Alipokimbia alifika walipokuwa .

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s) Changanua sentensi ifuatayo kwa kutumia visanduku/jedwali. **(alama 4)**

Waliobaki ni wale wafupi .

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t) Unda nomino inayoishia kwa kiishio ‘u’ kutokana na kitenzi kifuatacho. tukuza **(alama 1)**

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(Alama 10)

“Shida hiyo ilianza lini?... Umempa dawa yeyote?... Nenda kwenye *lab* ukapimwe kisha uniletee matokeo.

(alama 2)

.....

.....

(alama 8)

[illegible]

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES) MATHEMATICS

TIME: 2½ HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

INSTRUCTIONS TO CANDIDATES

1. Write your name and admission number in the spaces provided at the top of this page.
2. This paper consists of two sections: **Section I** and **Section II**.
3. Answer **all** questions in **section I** and ONLY five questions in **Section II**.
4. Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.
5. Marks may be given for correct working even if the answer is wrong.
6. **KNEC** Mathematical tables may be used.

For Examiner's Use Only

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

17	18	19	20	21	22	23	24

Grand
Total

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SECTION I (50 Marks)

Answer all the questions in this section.

1. Solve for x in $16^{2x+1} = 0.25$. (3 marks)

2. Evaluate. (3 marks)

$$\frac{\frac{3}{4} + 1\frac{5}{7} \div \frac{4}{7} \text{ of } 2\frac{1}{3}}{\left(1\frac{3}{7} - \frac{5}{8}\right) \times \frac{2}{3}}$$

3. Simplify $(1 + \sqrt{3})(1 - \sqrt{3})$ and hence evaluate $\frac{1}{1 + \sqrt{3}}$ to 3 significant figures given that $\sqrt{3} = 1.7321$. (3 marks)

4. A line passes through the points A (1, 3) and B (3, 7). Determine;

a) The gradient of line AB. **(1 mark)**

b) The equation of line AB in the form $ax + by = c$. **(2 marks)**

c) The x – intercept of line AB. **(1 mark)**

5. Three business men Peter, James and David contributed a total of Ksh. 82,250 to start a business. The ratio of the contribution of Peter to James was 2:3 and that of James to David was 4:5. How much did David contribute? **(3 marks)**

6. The length and width of a rectangle are stated as 18.5cm and 12.4cm respectively. Both measurements are given to the nearest 0.1cm. Calculate the percentage error in the area of the rectangle. **(3 marks)**

7. A refrigerator can be bought in cash for Ksh. 35,000. The same refrigerator can be purchased on hire purchase terms by first paying a deposit of Ksh 6,000 followed by 24 equal monthly instalments of Ksh. 1,500. Calculate the hire purchase price and the carrying charge.

(3 marks)

8. Otieno bought 3 trousers and 2 sweaters at a total cost of Ksh. 1575. If he had bought 2 trousers and 3 sweaters he would have spent Ksh.225 more. Find the cost of 5 trousers and 2 sweaters.

(4 marks)

9. Solve for x in the equation $\frac{1}{2}\log_2 81 + \log_2(x - \frac{x}{3}) = 1$

(3 marks)

10. An electric post erected vertically is 20 m from point P on the same ground. The angle of elevation of the top, T, of the post from P is 30° . Given that S is the midpoint of the post, calculate, correct to 1 decimal place, the angle of elevation of S from P. **(3 marks)**

11. Given the inequalities $x - 5 \leq 3x - 8 < 2x - 3$

(a) Solve the inequalities. **(2 marks)**

(b) List the integral values of x that satisfy the combined inequality in (a) above. **(1 mark)**

12. Without using mathematical tables or a calculator, evaluate: **(3 marks)**

$$\sqrt[3]{\frac{0.4 \times 1.28}{0.0608 + 0.0032}}$$

- 13.** A hemispherical bowl has external and internal radii as 21 cm and 17.5 cm respectively. It is made of a material whose density is 9.3 g/cm^3 . Calculate the mass of the bowl in kilograms.
- (4 marks)**

- 14.** Ali's family is watching a movie. Ali checked the watch and realized that the movie ended at 0110h. If the movie lasted 2.3 hours, what was the time on Ali's watch when the movie started.
- (2 marks)**

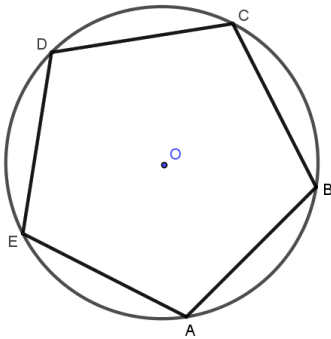
15. A forex bureau in Nairobi Kenya buys and sells foreign currency at rates shown below.

	Buying in Ksh.	Selling in Ksh.
Euro	129.80	131.60
UAE Dirhams	28.40	29.80

A Belgian tourist arrived in Nairobi, Kenya with 5000Euros. She converted the whole amount to local currency. While in Kenya she spent Ksh.321200 and changed to UAE Dirhams before leaving for Dubai. Calculate the amount in UAE Dirhams that she received.

(3 marks)

16. The diagram below shows a regular pentagon ABCDE inscribed in a circle of radius 1.5 cm and centre O.



Calculate the area of the pentagon.

(3 marks)

SECTION II (50 Marks)

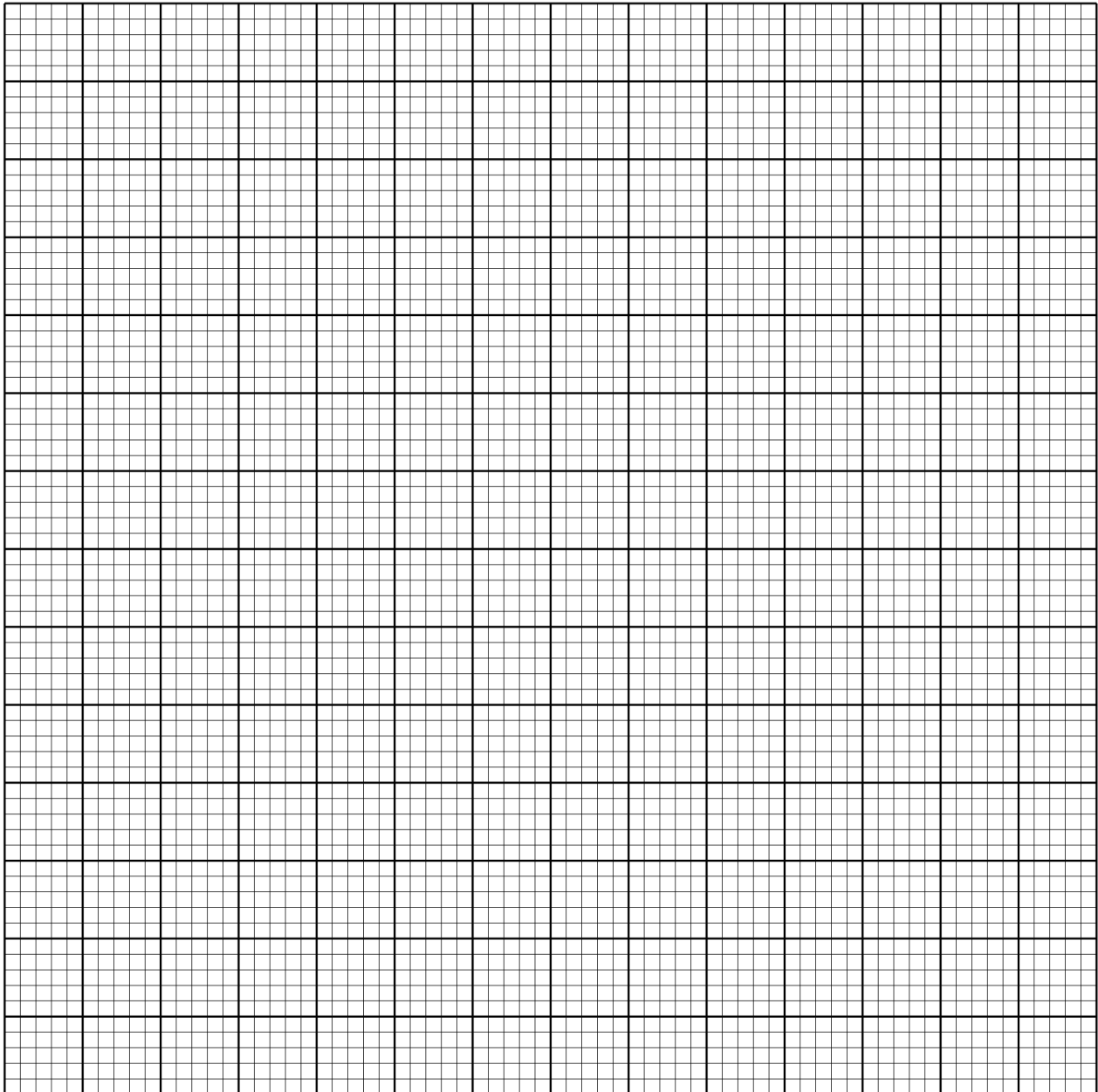
Answer ONLY Five questions in this section.

17. Complete the table below for the:

a) Equation $y = 6 + x - x^2$ taking integral values of x in $-3 \leq x \leq 5$. (2 marks)

x	-3	-2	-1	0	1	2	3	4	5
6	6	6	6	6	6	6	6	6	6
x	-3	-2	-1	0	1	2	3	4	5
$-x^2$		-4			-1		-9		25
y			4		6		0	-6	

b) On the grid provided draw the graph of $y = 6 + x - x^2$ for $-3 \leq x \leq 5$. (3 marks)



c) Using the same axes draw the graph of $y = 2 - 2x$. **(2 marks)**

d) From your graph find the values of x which satisfy the simultaneous equations. **(1 mark)**

$$y = 6 + x - x^2$$

$$y = 2 - 2x$$

e) Write and simplify a quadratic equation which is satisfied by the values of x where the two graphs intersect. **(2 marks)**

- 18.** The table below shows marks obtained by 100 candidates at East side high school in biology examination.

Marks	15 – 24	25 – 34	35 – 44	45 – 54	55 – 64	65 – 74	75 – 84	85 – 94
Frequency	6	14	24	14	x	10	6	4

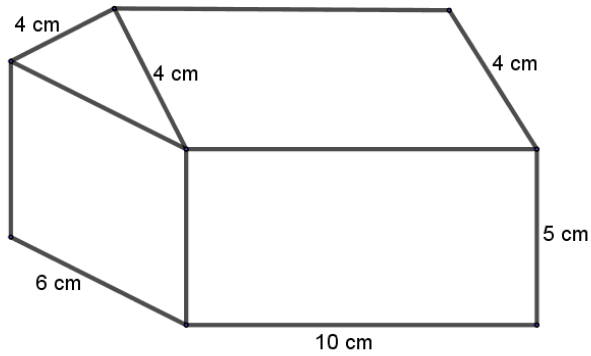
a) Determine the value of x. **(2 marks)**

b) State the modal class **(1 mark)**

c) Calculate the median mark **(3 marks)**

d) Calculate the mean mark **(4 marks)**

19. The figure below shows a metallic block with a uniform cross section. Calculate;



- a) Its volume. (4 marks)

- b) Its surface area. (3 marks)

- c) The block was melted and recast into a cone of height 18 cm. Determine the radius of the cone formed. (3 marks)

20. A surveyor recorded the measurement of a maize farm in a field book as shown below.

(Take $XY = 400\text{m}$ as the base line). All measurements are in metres.

	Y	
	360	80 to Q
80 to R	280	
160 to S	200	
	80	200 to P
	X	

a) Using a scale of 1cm to represent 40 metres draw the map of the field. **(5 marks)**

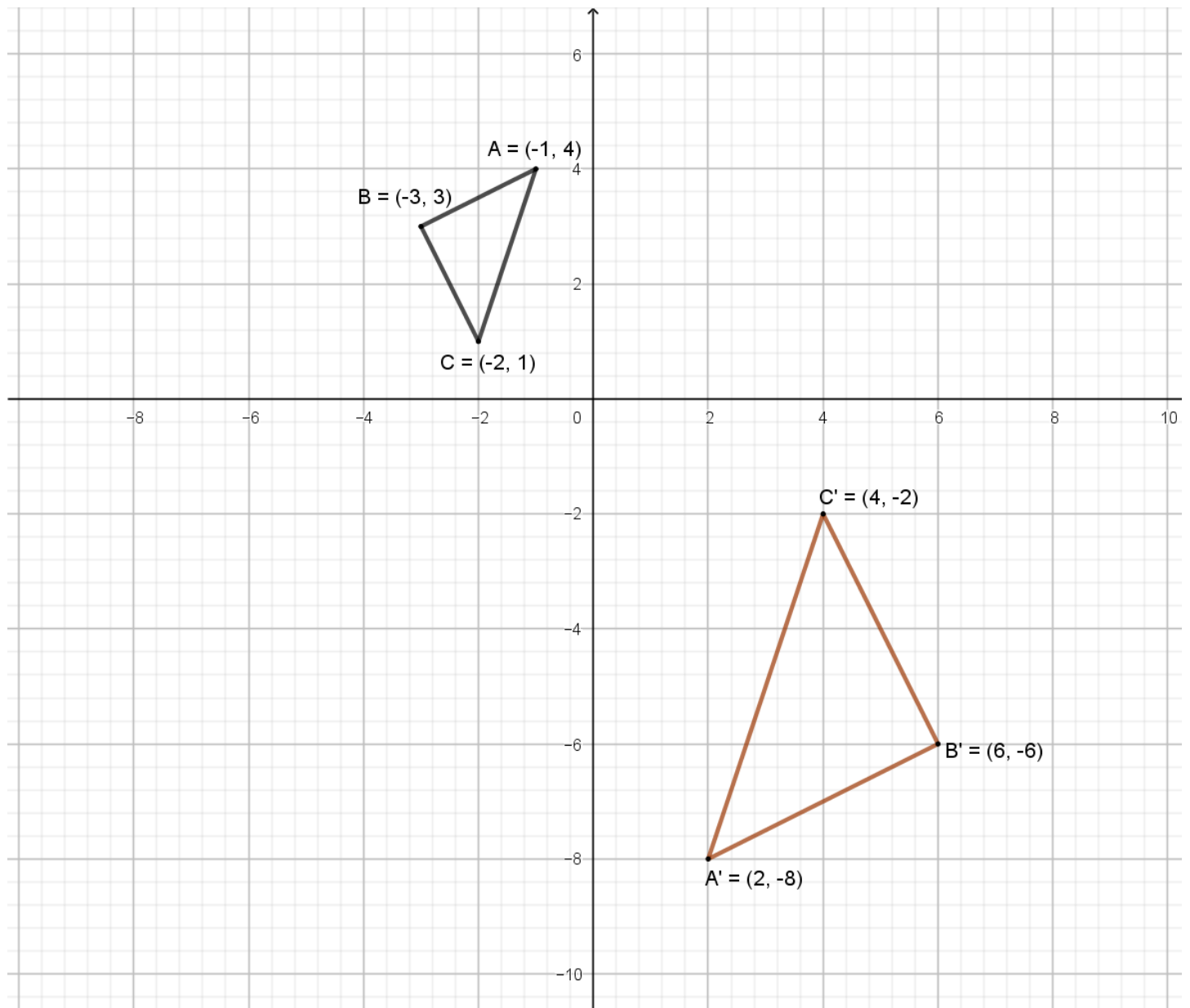
b) Find the area of the farm in hectares. **(5 marks)**

21. A Businessman is paid a commission of 5% on sales of goods worth over Ksh 100,000. He is paid a monthly salary of Ksh 15,000 but 2% of his total earning is remitted as tax. In a certain month he sold goods worthy Ksh. 500,000.

a) Calculate his monthly net earnings that month. **(5 marks)**

b) The following month, his monthly salary increased by 20%. His commission was increased to 10% but on goods worth over Ksh. 200,000. If his total earnings that month was Ksh 64,800, Calculate the money received from the sale of goods. **(5 marks)**

22. Triangle ABC and $A'B'C'$ are drawn on the grid.



a) Describe fully a single transformation that mapped triangle ABC onto triangle $A'B'C'$.

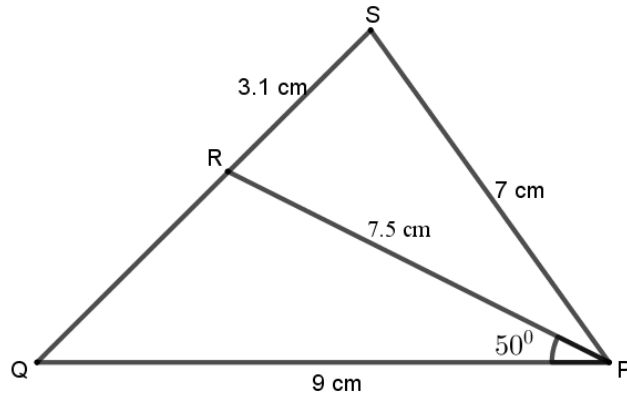
(2 marks)

b) On the same grid, draw:

- i. Triangle $A''B''C''$ the image of triangle $A'B'C'$ under a rotation of $+90^\circ$ about $O(0,0)$.
(2 marks)
- ii. Triangle $A'''B'''C'''$ the image of triangle $A''B''C''$ under a reflection in the line $y = -x$.
(2 marks)

c) Draw the line of symmetry of triangle $A'B'C'$ and hence determine its equation in the form $y = mx + c$, where m and c are constants. (4 marks)

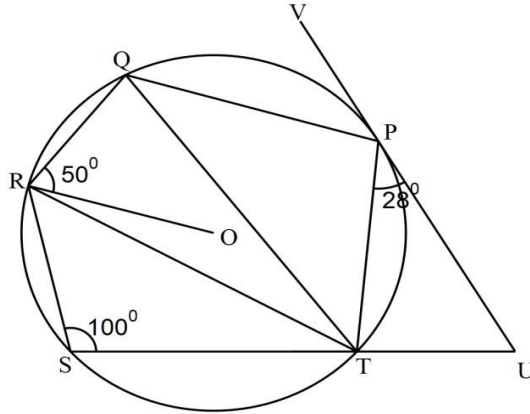
23. In the diagram below, $PQ = 9\text{ cm}$, $PS = 7\text{ cm}$, $RS = 3.1\text{ cm}$ and $PR = 7.5\text{ cm}$. Angle $QPR = 50^\circ$.



Calculate

- (a) The distance from Q to R. (2 marks)
- (b) The size of angle Q. (2 marks)
- (c) The size of angle RPS. (3 marks)
- (d) Area of triangle PQS. (2 marks)

24. In the figure below, P, Q, R, S and T lie on the circumference of a circle centre O. Line UPV is a tangent to the circle at P. Chord ST of the circle is produced to intersect with the tangent at U. Angles UPT, RST and ORQ are 28° , 100° and 50° respectively.



a) Determine the sizes of the following angles;

i. RTP

(3 marks)

ii. QTP

(3 marks)

(b) Given that $PQ = 6 \text{ cm}$, calculate correct to 1 decimal place, the radius of the circle.

(4 marks)

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES)

COMPUTER STUDIES

TIME: 2½ HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

SECTION A (40 MARKS)

Answer all the questions in this section

1. State the technology used in the following computer generations. (2mks)

4th generation

1st generation

2nd generation

3rd generation

2. Outline **two areas that should be considered when categorizing software. (1mk)**

3. State any three disadvantages of a magnetic diskette or floppy diskette. (3mks)

4. a) Define data processing ` (1mk)

b) Explain **two** characteristics of good information. (2mks)

5. Distinguish between data verification and data validation. (2mks)

6. Describe the following menu tools as used in Ms. Word. (2mks)

i) Print layout

ii) Web layout.

7. Define the following terms as used in mail merging. (4mks)

Main document

Data source

8. a) What is the difference between real- time system and Online systems. (2mks)

b) Explain how information and communication technology has contributed to teaching and Learning in schools. (2mks)

9. List any **four** ways of dealing with virus on a computer. (4mks)

10. Convert 111.010_2 to a decimal number. (3mks)

11. Explain TWO types of error that are likely to exist in a program. (4mks)

12. State two ways in which ICT can be used in industrial control. (2mks)

13. State two reasons why it is necessary to have well connected and proper cables in a computer lab. (2mks)

14. Explain the functions performed by:

a) The control unit (2mks)

b) Arithmetic and logic unit (ALU)

15. What is a relational database? (1mk)

SECTION B (60 MARKS)

Answer question 16 and any other three questions from this section in the spaces provided.

- 16. (a)** State the three basic types of program control structures. **(3mks)**
- b)** Differentiate between Source program and Object code in programming. **(4mks)**
- c) Mumias sugar company pays casual employees based on the number of hours worked as follows
- Less than 10 hours @ khs 100/= per hour
- Up to 15 hours @khs 150/= per hour
- More than 15 hours@khs. 200/=per hour
- a) Write a pseudo code to input the name, rate hours worked. The pseudo code should output the name, hours worked and the wage paid. **(8mks)**

- 17. a)** Give any three circumstances that may make an organization to develop new information system. **(3mks)**

- b) Study the spreadsheet below and answer the questions that follow

	A	B	C	D
1	WESTLINK COMPUTER BOOKS CENTRE			
2	TITLE	PRICE	NO.SOLD	COST
3	Computer longhorn book 2	320	25	
4	Visual basic (6)turbo	820	21	
5	Computer longhorn book 4	350	100	
6	Computer science	900	12	
7	Computer Applications	845	36	
8	Computer hardware	1250	10	
9	Computer software	1250	27	
10				

- i) Write down the formula that can be used to find the cheapest book. **(2mks)**
- ii) Write down the formula that can be used to determine the total sales for the book titled' computer Applications. **(2mks)**
- iii) Write down the formula that can be used determine the average price of the books. **(2mks)**

- c) State any three advantages of using an electronic spreadsheet as compared to a traditional worksheet. (3mks)
- d) State three advantages of automated production in manufacturing industries. (3mks)
- 18. a)** State any two roles of a Computer trainer as a career opportunity. (2mks)
- b) i)** Distinguish between a primary key and a foreign key as used in DBMS. (2mks)
- ii)** What do the term **header** and **footer** mean? (2mks)
- c)** Convert the 522_8 to its base 10 equivalent. (3mks)
- d)** Using long division methods convert 67_{10} into binary. (3mks)
- e) Outline three disk management activities. (3mks)
- 19. a)** Differentiate between analog and digital data. (2mks)
- b) Outline three advantages of using computers for data processing over other types of office and business equipment. (3mks)
- c) State four devices under direct control of the operating system. (4mks)
- d) Briefly** describe the following types of computational errors (3mks)
- (i) Truncated
- (ii) Transposition
- (iii) Transcription
- e) Explain three most commonly used coding schemes. (3mks)
- 20. a)** State one advantage and two disadvantages of command line interface. (3mks)
- Advantage
- Disadvantages**
- b) Explain three communication services offered through internet. (3mks)
- c) Other than computer viruses, errors are accidental, discuss any three threats to computerized system and explain the preventive measures that can be taken to avoid such threats. (6mks)
- d) Explain what is meant by data back up and name two dangers of inadequate data backup procedures. (3mks)

FORM 3 ENDTERM 1 EXAMINATIONS

(BRIGHTMIND SERIES) HOME SCIENCE

TIME: 2½ HOURS

NAME.....

SCHOOL..... SIGN.....

INDEX NO..... ADM NO.....

Answer all the questions in section A and B and two questions in section C.

SECTION A – 40 MARKS

1. Give the correct meaning of each of the following: -

I. A stain: (1mk)

II. Suction:- (1mk)

III. Meal management (1mk)

IV. Lacto vegetarians (1mk)

V. Dessert:- (1m)

2. State three qualities of a well-made seam. (3m)

3. Suggest three ways of managing a victim who is nose bleeding. (3m)

4. Give three guidelines on darning articles. (3m)

5. List down two qualities of a good advertisement (2m)

6. Mention three uses of old newspapers during a general cleaning. (3m)

7. State three functions of the skin. (3m)

8. Give two qualities of a good water storage container. (2m)

9. List down four commonly used embroidery stitches. (2m)
10. Point out 2 factors that affect the cleaning frequency of a kitchen. (2m)
11. State 2 reasons of using fabric conditioner. (2m)
12. Mention 2 causes of missing machine stitches. (2mks)
13. Suggest two ways by which nutrients can be lost during storage. (2m)
14. Give two advantages of grouping clothes storage. (2m)
15. Name two types of advertisement. (2m)

SECTION B. 20 MARKS (COMPULSORY)

- 16.** You have planned to spend your weekend at home. Describe the procedure you will follow in Carrying out the following tasks. **(10M)**
- (a) Use charcoal as an abrasive to clean a stained **aluminium** **(5m)**

SECTION C – 40 MARKS

Answer any 2 questions from this section .

- 17(a) Point out five advantages of constructing traditional houses. **(5m)**
- (b) State three advantages and two disadvantages of dry cleaning articles. **(5m)**
- Advantages
- Disadvantages.
- (c) Highlight five ways of managing a child suffering from kwashiorkor. **(5m)**
- (d) Identify five precautions to take when cleaning glass utensils. **(5m)**
- 18(a) Suggest five ways of encouraging a child to play. **(5m)**
- (b) Briefly discuss five points to consider when planning meals for elderly persons. **(5m)**
- (c) By use of well labelled diagrams explain how work out a French seam. **(10m)**
- 19(a)** Suggest five ways of caring for the sink **(5m)**
- (b) Briefly explain five factors that determine the dietary needs of individual family members **(10m)**
- (c) Point out five properties which make acetate suitable for making garments. **(5m)**

*****END*****