F2 END TERM 2 EXAMS

ALL SUBJECTS

Dear Students, Attempt These Exams!

For Marking Schemes Call 0705525657

Name: …… **Class: ……..….....**

Date: …… **Adm No: ……**

END TERM 2 EXAM
FORM TWO
MATHEMATICS
TIME: 2 HOURS 30 MINUTES

INSTRUCTIONS TO CANDIDATES:

- Write your name, admission number, Class, Signature and write date of examination in the spaces provided
- The paper contains two sections. Section I and Section II.
- Answer ALL the questions in section I
- Answer any five questions in section II.
- Answers and working must be written on the question paper in the spaces provided below each question.
- Show all steps in your calculations below each question.
- Marks may be given for correct working even if the answer is wrong.
- KNEC mathematical table may be used, except where stated otherwise.

FOR EXAMINERS USE ONLY

SECTION I

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

SECTION II

Question	17	18	19	20	21	22	23	24	TOTAL
Marks									

GRAND TOTAL

FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657

SECTION I (50 MARKS)

Answer all the questions from this section

1. Work out the following, giving the answer as a mixed number in its simplest form

$$\frac{\frac{2}{5}\div\frac{1}{2}of\frac{4}{9}-1\frac{1}{10}}{\frac{1}{8}-\frac{1}{6}\times\frac{3}{8}}$$ (3marks)

2. When a certain number is divided by 30, 45, 54, there is always a remainder of 21. Find the least numbers. (3marks)

3. Evaluate without using mathematical tables of a calculator,

$$\frac{0.0084\times1.23\times3.5}{2.87\times0.056}$$ expressing your answer as a single fraction. (3marks)

4. Use logarithm to solve tables to evaluate (4 marks)

$$\sqrt[3]{\frac{45.3\times0.00697}{0.534}}$$

5. If each interior angle of a regular polygon is 150^0, how many sides does the polygon have? (3 marks)

6. Solve for x in the equation
$32^{(x-3)} \div 8^{(x-4)} = 64 \div 2^x$ (3 marks)

7. Use reciprocal table to work out.
$$\frac{7}{0.5283} + \frac{0.5}{3.735}$$ (4marks)

8. Three pens and four exercise books cost sh. 87. Two pens and five exercise books cost sh.93. Find the cost of one pen and one exercise book. (3marks)

9. A Kenyan Company received US dollars 100,000. The money was converted into Kenya Shillings in a bank which buys and sell foreign Currencies as shown below.

	Buying (kshs)	Selling (ksh)
1 US Dollar	77.25	77.44
1 sterling pound	119.93	120

a) Calculate the amount of money in ksh, the Company received. (1mark)

b) The company charged the Kenya shillings calculated above into sterling pounds to buy Car in Britain. Calculate the cost of the car to the nearest sterling pounds. (2marks)

10. A company saleslady sold goods worth sh. 1,600,000. From this sale she earned a commission of sh. 40,000.

a) Calculate the rate of Commission. (1mark)

b) If she sold goods whose marked price was sh. 3 600,000 and allowed a discount of 2%, calculate the amount of commission she received. (2marks)

11. A piece of metal has a volume of $20cm^3$ and a mass of 300g. Calculate the density of the metal in kg/m^3. (3marks)

12. The area of a sector of a circle of diameter 126cm is $4158cm^2$. Calculate the angle subtended at the centre of the circle. (Take pie $=\frac{22}{7}$) (3marks)

13. Simplify completely by factorization. (3 marks)

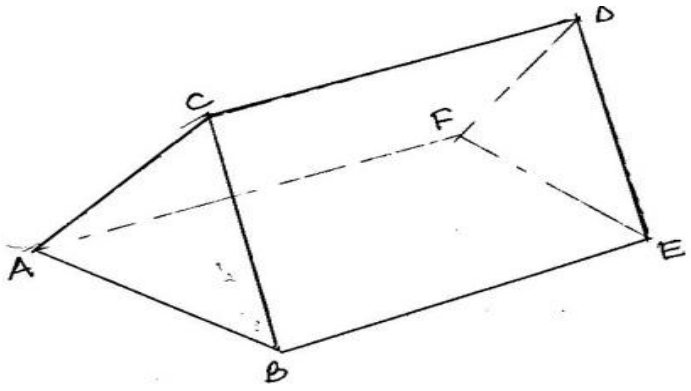
$$\frac{ax + bx + ya + yb}{ma + mb + na + nb}$$

14. Evaluate: $\frac{-12\div(-3)\times4-(-20)}{-6\times6\div3+(-6)}$ (3 marks)

15. Use the tables of cubes to evaluate: (3 marks)

$(3.461)^3 - \sqrt[3]{2809}$

16. The figure below is a prism whose cross-section is an equilateral triangle such that AB=BC=CA=3cm, BE=CD=AF=5cm



Draw the net of the prism (3mark

SECTION II (50 MARKS)
Answer five questions only from this section

17. A line L passes through point (-2,3) and (-1, 6) and is perpendicular to a line P at (-1, 6)

a) Find the equation of L. (3marks)

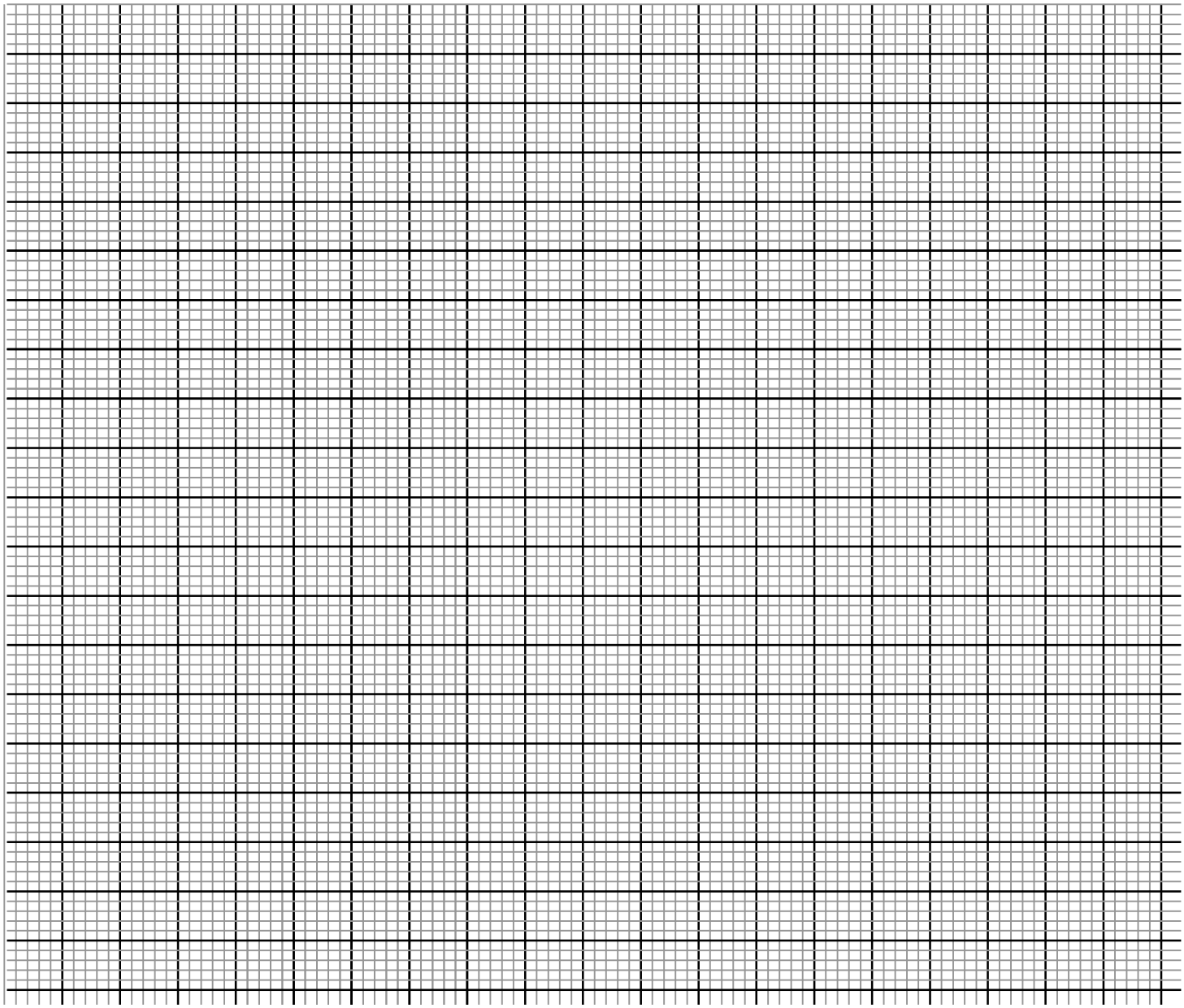
b) Find the equation of P in the form ax + by = c. (3marks)

c) Given that another line Q is parallel L and passes through point (1, 2), find the x and the y intercepts of line Q. (2marks

d) Find the point of intersection of lines P and Q. (2marks)

18. Triangle PQR has vertices at P(2,3),Q(1,2) and R(4,1), while triangle $P^1Q^1R^1$ has vertices at P^1(-2,3),Q^1(-1,2), R^1 (-4,1).

(a) (i) Draw triangle PQR and $P^1Q^1R^1$ on the grid provided below (2marks)



(ii) Describe fully a single transformation which maps triangle PQR onto triangle $P^1Q^1R^1$. (1mark)

(b) (i) On the same plane, draw triangle $P^{11}Q^{11}R^{11}$ the image of PQR, under reflection on line $y + x = 0$ (2marks)

(ii) Describe fully a single transformation which maps triangle $P^{11}Q^{11}R^{11}$ onto triangle $P^1Q^1R^1$. (1mark)

(c) Draw triangle $P^{111}Q^{111}R^{111}$such that it can be mapped onto triangle PQR by a positive quarter turn about the origin (2marks)

(d) State all pairs of triangles that are oppositely congruent (2marks)

19. A businessman sold a car at sh.900 000 after allowing his customer a 10% discount on the marked price of the car. In so doing he made a profit of 20%.

a) Calculate

(i) The marked price of the car. (3 marks)

(ii) The price at which the businessman had bought the car (2marks)

b) If the businessman had sold the same car without giving a discount. Calculate the percentage profit he would have made. (3 marks)

c) In the month of December the businessman sold 20 vehicles without giving a discount. Determine the total profit he received from the sale. (2 marks)

20. Four towns A, B, C and D are such that town B is 180 km East of A. Town C is at a distance of 120km on a bearing of 300^0 from B. Town D is due West of C and North Of A.

(a) Using a scale of 1cm to represent 20km, make an accurate scale drawing to show the relative positions of the towns. (4 marks)

(b) Find:

(i) Determine the bearing of C from A (1mark)

(ii) Determine the distance of C from D (2 marks)

(iii) Determine the bearing of B from D (1 mark)

(iv) Determine the distance of A from D (2 marks)

21. The measurements (in metres) of a field were given in a field note book as follows:
Base line XY = 240m

	Y	
	150	50 to P
To Q 60	120	
	50	20 to M
	X	

(a) Using a scale of 1 cm to represent 20 m, draw an accurate map of the farm. (4 marks)

(b) **Find** the area of the field in hectares. (4marks)

(c) If the farm is on sale at sh. 900 000 per hectare, find how much the farm costs. (2 marks)

22. Triangle ABC is such that AB = 7cm, angle ABC = 120^0 and angle BAC = 30^0.

(a) Using a ruler and a pair of compass only, construct triangle ABC. (3 marks)

(b) Measure the length of:

(i) Line BC (1 mark)

(ii) Line BC (1 mark)

(c) Drop a perpendicular from C to meet line AB extended at M. (2 marks)

(d) Measure the length of line CM (1 mark)

(e) Calculate the area of triangle ABC (2 marks)

23. A hollow metal pipe whose internal and external and internal diameters are 6.3cm and 2.8cm respectively is 3.5m long.

(a) Calculate the volume of the metal used to make the pipe. (4 marks)

(b) The pipe is melted down and recast into a solid cylinder of height 1.75m. Calculate the radius of the cylinder to two decimal places. (4 marks)

(c) Given that the density of the metal above is $4.2g/cm^3$, calculate the mass of the solid cylinder in kilograms. (2 marks)

24. Three business people Kamau, Gachui and Maina agreed to contribute Kshs. 1 210 000 to start a business. The ratio of Kamau's contribution to Gachui's contribution is 3 : 2 while that of Gachui to Maina is 1 : 3.

(a) Determine the ratio of Kamau's contribution to Maina's contribution. (2 marks)

(b) Determine the amount of money contributed by Kamau (2 marks)

(c) They agreed to share their profits as follows;
50% to be shared in the ratio of their contributions
40% to be retained for the running of the business
10% to be set aside for emergencies
If their total profit for the year 2014 was sh.704 000, determine the

(i) Amount of money retained for running the business. (2 marks)

(ii) The amount of money set aside for emergencies. (2 marks)

(iii) The amount of received by Gachui (2 marks)

FORM 2 END TERM 2 EXAM

NAME: …….

ADM NO.: …… CLASS: …..

PHYSICS EXAM

TIME: 2HRS

1. Explain the following: (2mks)
   i) Wet floors and wet roads are dangerous to walk on.

   ii) Racing cyclist usually wears smooth tight clothes.

2. Convert each of the following from Kelvin to ^oC. (2mks)
   a) 0 K

   b) 167 K.

3. A mixture consists of $40cm^3$ of water and $60cm^3$ of liquid x. If the densities of water and liquid x are $1.0g/cm^3$ and $0.8g/cm^3$ respectively. Calculate the density of the mixture.
   (3mks)

4. The air pressure at the base of a mountain is 75.0cm of mercury while at the top 60.0cm of mercury. Given that the average density of air is 1.25kg/cm^3 and the density 13600kg/m^3, calculate the height of the mountain. (4mks)

5. (a) Define the term Brownian motion and its cause. (2mks)

   (b) Differentiate the three states of matter with relation to intermolecular space and intermolecular force. (3mks)

6. (a) Define the term temperature and state its SI unit. (2mks)

   (b) Explain why in construction, concrete beams are reinforced with steel. (2mks)

   (c) Explain three effects of anomalous expansion of water. (3mks)

7. State there advantages of mercury over alcohol as thermometric liquid.(3mks)

8. (a) State the three modes of heat transfer. (3mks)

(b) State three factors affecting thermal conductivity. (3mks)

(c) Explain why the ventilators for a room are put near the roof and not near the floor. (2mks)

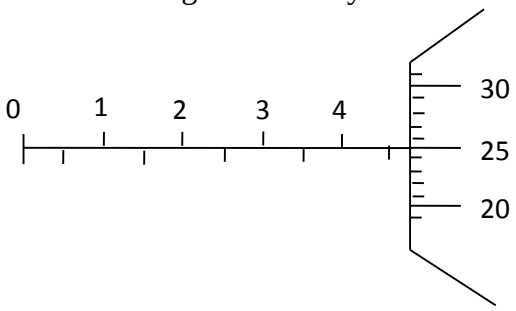
9. State the laws of reflection. (2mks)

10. Explain two dangers of electrostatics. (2mks)

11. State two applications of electrostatics. (2mks)

12. List three methods of demagnetizing a permanent magnet. (3mks)

13. What is the reading indicated by the micrometer screw gauge below. (3mks)

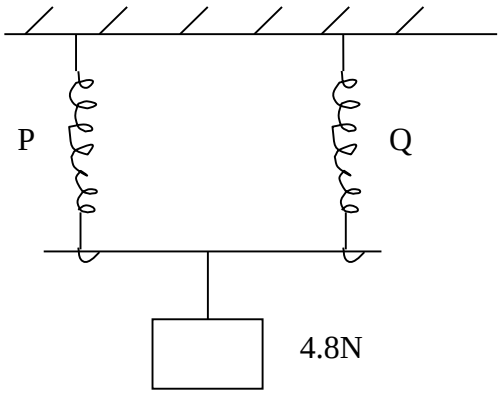


14. A uniform metal rod of length 80cm and mass 3.2kg is supported horizontally by the two vertical spring balances C and D. Balance C is 20cm from one end while balance D is 30cm from the other end. Find the reading on each balance.
(3mks)

15. A convex mirror of focal length 9cm produces an image on its axis 6cm from the mirror. Determine the position of the object. (3mks)

16. Explain how an electric bell works. (3mks)

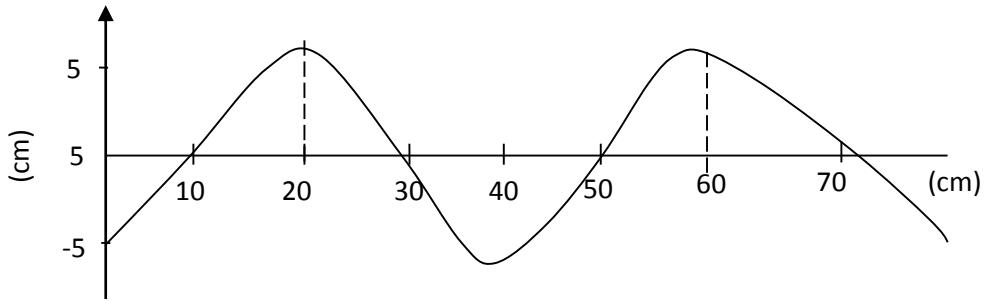
17. Two very light identical springs P and Q are arranged as shown below.



A weight of 4.8N is supported by the spring. Given that each spring has a spring constant of 10N/cm; determine the total extension of springs P and Q.
(3mks)

18. Differentiate between transverse waves and longitudinal waves.(2mks)

19. The figure below shows a wave form in a string.



Given that the speed of the wave is 10m/s. With reference to this wave motion, determine;

a) Wavelength. (1mk)

b) Amplitude. (1mk)

c) Frequency. (2mks)

d) Period (2mks)

20. What is the relationship connecting frequency, wavelength and velocity of sound in air? (1mk)

21. A person standing 49.5m from the foot of a cliff claps his hands and hears an echo 0.3 seconds later. Calculate the velocity of the sound in air. (3mks)

FORM 2 END TERM 2 EXAM
KISWAHILI

JINA…… NAMBARI……...DARASA…….

SEHEMU A; INSHA ALAMA 20

Andika ratiba ya siku ya wazazi shuleni

SEHEMU YA B: UFAHAMU: (ALAMA 15)

Soma shairi lifuatalo kisha ujibu maswali yafuatayo.

MAVAZI REKEBISHENI

Vazi njema kivaliwa, huongezeka heshima,

Staha mtu kapewa, poteendapo daima,

Mavazi duni si sawa, kina dada ninasema,

Mavazi rekebisheniusheratiumezidi.

Longi kwa nyuma kushika, na mapajani kubana,

Chupizilipowafika, dhahiri kuonekana,

Buremunaaibika, na kujishusha maana,

Mavazi rekebisheni, usheratiumezidi.

Kifuanikujikaza, maziwayaning'inie,

Kitu gani munawaza, hamna bahari nyie,

Ni ashikimwasambaza, sikizeniniwambie,

Mavazi rekebisheni, usheratiumezidi.

Msichana ni hatia, magotinikufichuka,

Hivyo basi kuvalia, rindalisoyafunika,

Huenda zusha hisia, maovuyakawafika,

Mavazi rekebisheni, usheratiumezidi.

Sitakosakuzitaja, skatimnazovaa,

Zaisha kwa mapaja, kikirikuchuchumaa,

Iko wazi nyonga moja, mkatoulivyokaa,

Mavazi rekebisheni, usheratilumezidi.

Wazi nitawasomea, nguo hizi nguo gani?

Dada zetumwakosea, kuzivaahadharani,

Ndizo hizo huchochea, usherati mitaani,

Mavazi rekebisheni, usheratiumezidi.

Nguo chini zishusheni, mwilini mzipanue,

Heri kuingia deni, za heshima mnunue,

Kuigiza za kigeni, ni utumwamtambue,

Mavazi rekebisheni, usheratiumezidi.

Betitisanamaliza, kalamunaweka chini,

Iwapo wajiuliza, nakereketwa ni nini?

Ni stahanahimiza, sio wake kuhaini,

Mavazi rekebisheni, usheratiumezidi.

MASWALI YA USHAIRI

(a) Shairi hili ni la aina gani? (alama 2)

(b) Eleza vina vya beti za kwanza mbili (alama 2)

(c) Toa kibwagizo cha shairi hili kisha ufafanue maana yake. (alama 2)

(d) Eleza maana ya misamiati hii kama ilivyotumika katika ushairi. (alama 4)

Staha –

Dhahiri –

Shani –

Duni –

(e) Shairi hili liko katika bahari zipi? (alama 2)

(f) Uhuru wa mshairiunadhihirikavipi katika shairi hili? (Alama 3)

MATUMIZI YA LUGHA (AL 30)

1. Pambanua sauti hizi kama ni ghuna au si ghuna. (al 1)
   /Z/

   /K/

2. Eleza maana ya kiimbo. (al 1)

3. Eleza maana ya shadda. (al 1)

4. Eleza maana ya mofimu.(al 2)

5. Andika kwa wingi sentensi hizi. (Al.2)
   i. Goti la mtoto liliumia.

   ii. Ukwato wa ngamia ni mpana.

6. Bainisha nomino hizi ni za aina gani. (al.2)
   i. Sukari.

   ii. Mapenzi.

7. Tumiavivumishi vya sifa katika mabanokukamilisha sentensi zifuatazo. (al 2)
   i. Mtoto Yule ni _____ (nene)

ii. Bei ya meli ni _____ mno (ghali)

8. Jazapengo kwa kiulizi sahihi kisha uandike sentensi kwa wingi (al 2)
   Ni mpishi _____ aliyepika.

9. Fafanua maana ya misemo ifuatayo. (al2)

   i. Kula mate.

10. Andika katika ukubwa. (al 2)
    i. Jiji hili litapanukaupesi.

    ii. Jizeelililokosa adabu limekaripiwa.

11. Geuza sentensi zifuatazo katika hali ya usemi halisi. (al 2)
    i. Ruhenialishauliwa na kasisiaache tabia mbaya.

    ii. Mwalimu alimwabiapremjiafanye bidii katika masomo yake.

12. Andika vitenzi vifuatavyo katika hali ya kutendeshana. (al 2)
    i. Penda .

    ii. Endesha.

13. Tambua kikundi nomino (KN) na kikundi tenzi (KT) katika sentensi zifuatazo. (al 2)

    i. Anatembea kwa madaa kama tausi.

14. Kanusha sentensi zifuatazo. (Al) 2
    i. Mimi nilicheza.

    ii. Wewe huchora.

15. Kamilisha methali zifuatazo ?(al 1)
    i. Cha kuvunda. _____
16. Andika kinyume cha maneno yafuatayo. (al 2)
    i. Tandika _____
    ii. Umba _____
17. Pambanua sentensi ifuatayo kwa njia ya mstari. (al 2)
    Naimba huku nafanya kazi. _____

ISIMU JAMII(ALAMA 5)

Eleza sifa za lugha ya hotelini

FASIHI SIMULIZI (al 10)

a) Taja aina nne za hadithi.

.

b) Eleza umuhimu wa hadithi.

FORM 2 END TERM 2 EXAM
HISTORY

NAME …….ADM…….CLASS……

SECTION A: Answer all the questions

1. Name two early urban centers in Africa. (2mks)

2. Give two factors that led to rise of scientific inventions. (2mks)

3. Give two disadvantages of barter trade. (2mks)

4. Give two factors that make camel a good pack animal. (2mks)

5. Give two dispersal points of Bantu. (2mks)

6. Give two functions of warriors in African Traditional Communities. (2mks)

7. Give two ways of acquiring citizenship by birth in Kenya . (2mks)

8. Give the three symbols of national unity in Kenya. (3mks)

9. State two similar factors for the rise of early agriculture in Egypt and Mesopotamia. (2mks)

10. Identify two sources of information of east Africa coast. (2mks)

11. Give two functions of Kabaka of Baganda. (2mks)

12. Identify two hominids involved in the stages of evolution of man. (2mks)

13. Give three characteristics of coastal city state. (3mks)

14. Identify three peaceful methods of resolving conflicts. (3mks)

15. What was the main symbol of unity among the Shona community. (1mk)

16. State two reasons why Africa is believe to be the cradle of mankind. (2mks)

SECTION B: Answer three questions in this section.

1. a) Characteristic of industrial revolution in Britain (5mks)

b) Explain factors that have made the industries of third world countries to lag behind. (10mks)

2. a) State the economic activities of Asante Community. (5marks)

b) Explain the political organization among the Shona community.(10 marks)

3. a) Give three factors that led to the decline of Meroe as an Urban center. (3mks)

b) Explain six factors that contributed to development of urban center in colonial Africa. (12mks)

4. a) Give five reasons/ factors that led to migration of Bantu communities. (5mks)

b) Explain the results of migration of Luo community. (10mks)

FORM 2 END TERM 2 EXAM
GEOGRAPHY
TIME 2HRS

NAME: …….....CLASS:…..... ADM NO :…..……..

*Answer **ALL** the questions*
Answers should be written in the spaces provided

1. Define the following terms (6mks)

a) Geography

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b) Vulcanicity

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c) Earth movements

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2. Give the three branches of geography (3mks)

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3. What is solar system (2mks)

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4. a) List three types of rocks according to their mode of formation (3mks)

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b) Mention three characteristics of sedimentary rocks (3mks)

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5. Give two types of earth movements (2mks)

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6. Differentiate between weather and climate
(2mks)

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7. a) Describe the continental drift theory (6mks)

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b) Give three evidences supporting continental drift theory (3mks)

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8. a) Give three extrusive volcanic features (3mks)

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b) Explain four positive significance of vulcanicity to human activities (8mks)

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9. a) Define earthquake (2mks)

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b) Give two scales used to measure earthquake (2mks)

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10. Differentiate between seismic focus and epicenter (2mks)

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11. With the aid of a well labeled diagram describe how orographic rainfall is formed (6mks)

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12. Distinguish between direction and bearing

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    ..... (2mks)

13. Highlight 2 modern methods of showing direction

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..... (2mks)

14. Give 4 methods of representing relief on a topographical maps

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    ..... (4mks)

15. Differentiate between a picture and a photograph

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    ..... (2mks)

16. Briefly describe the three types of ground photograph

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..... (6mks)

17. Give the three parts of a photograph

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18. Describe how a composite volcano is formed

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..... (6mks)

19.Give two differences between a geyser and a spring

(2mks)

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FORM 2 END TERM 2 EXAM

NAME:……..……CLASS:……ADM NO:……..

CHRISTIAN RELIGIOUS EDUCATION

TIME $1^{3}/_{4}$HRS

1. Outline six instructions given to man by God in the creation stories. (6mks)

2. State seven promises of God to kind David .(7mks)

3. Give reasons why Elijah faced danger and hostility as a prophet of God. (5mks)

4. Highlight six roles of the spirits towards the living. (6mks)

5. State occasions when Africans offered sacrifices. (6mks)

6. Show how john the Baptist prepared the way for the messiah. (6mks)

7. Using examples show seven literacy forms used in writing the bible. (7mks)

8. Describe what happened when the boy jesus went with his parent to Jerusalem for the Passover feasts as in (luke 2:41-52). (7mks)

9. State seven similarities in the anaunciation of the birth of John the Baptist and that of Jesus Christ(7mks)

10. Explain seven reasons why jesus used parables in teaching. (7mks)

11. Relate the miracle of jesus healing of the centuries servant. (luke 7:1-10).(8mks)

12. Outline the instructions given to the seventy two disciples before sending them on their mission. (8mks)

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FORM 2 END TERM 2 EXAM

NAME.....ADM. NO.....

CLASS……DATE.....

233/1

CHEMISTRY

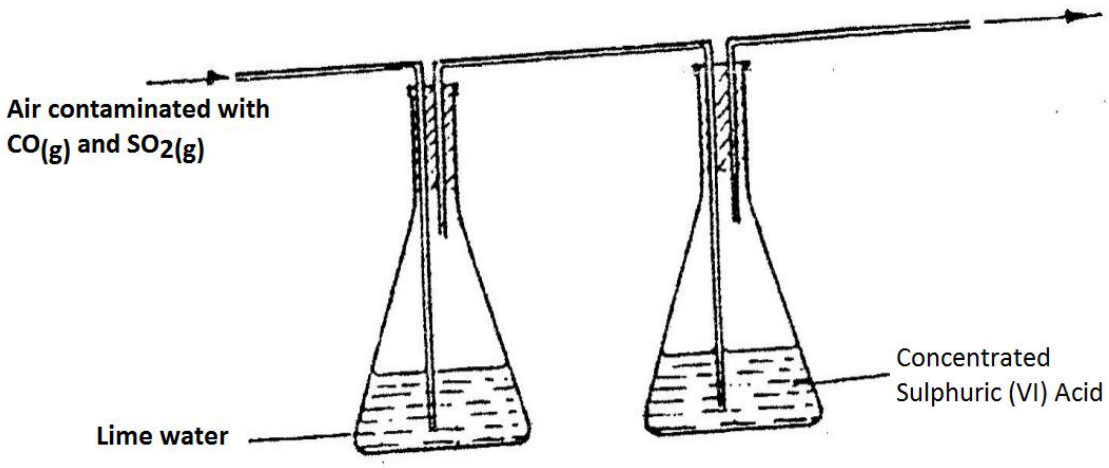
THEORY

2 HRS

1. Complete the table below for the characteristics of the sub atomic particles. (2marks)

sub atomic particle	Relative mass	Electrical charge
Proton	1	
Neutral	1	

2. A sample of air contaminated with carbon monoxide and sulphur dioxide was passed through the apparatus shown in the diagram below.



Which contaminant was removed by passing the contaminated air through the apparatus? Explain.

(2mks)

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3. Explain how you would obtain solid lead carbonate from a mixture of lead carbonate and sodium carbonate powders. (3mks)

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4. Describe how the following reagents can be used to prepare copper (II) hydroxide, solid copper (II) sulphate, solid sodium hydroxide and distilled water. (3mks)

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5. Aluminium metal is a good conductor and is used for overhead cables. State any other two properties that make aluminium suitable for this use. (2mks)

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6. State with reasons whether the changes below are physical or chemical. (3mks)

CHANGE	**TYPE OF CHANGE**	**REASON**
I. Heating iodine crystals gently.		

II. Formation of brown coating on iron when exposed to moist air.		
III. Heating Zinc oxide		

7. The table below shows the relative molecular masses and the boiling points of methane and water.

	Relative molecular mass	Boiling point(^oC)
Methane	16	-161
Water	18	100

Explain why the boiling point of water is higher than that of methane. (2mks)

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……

……

8. (a. Two solutions J and K were tested with blue litmus papers and methyl orange indicator.

Blue litmus remained blue in both solutions. Methyl orange remained orange in K but turned yellow in J.

(a) What is the nature of substance J? Explain. (2 marks)

(b) Give an example of a substance that K is likely to be. (1mark)----------

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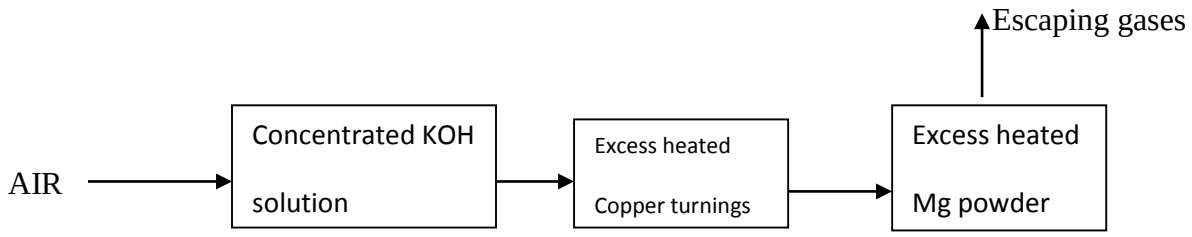
9. Air was passed through several reagents as shown in the flow chart below.



(a) Write an equation for the reaction which takes place in chamber with magnesium powder.(1mk)

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……

……

(b) Name one gas, which escapes from the chamber containing magnesium powder. Give a reason for your answer. (2mks)

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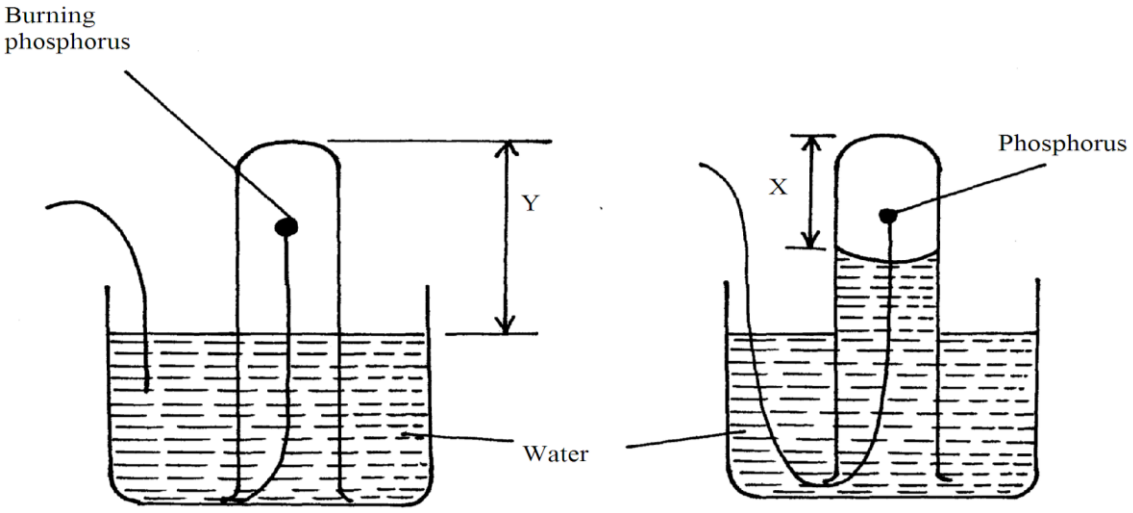
……

10. A student set-up the apparatus below in order to determine the percentage by volume of oxygen in air.



AT BEGINING AT END

a) Why did water rise when the reaction had stopped? (1mk)

.....

.....

b) The student wrote the expression for the percentage by volume of oxygen in air as

$$\frac{y-x}{y} x100\%$$

Why was the volume of oxygen calculated using the above expression incorrect? (1mk)

.....

.....

..

c) What should have been done after the reaction had stopped in order to get a correct volume.

(1mk)

.....

.....

..

11. Study the table below.

Ion	Electronic configuration
L^-	2,8,8
M^{2+}	2,8
N^{3+}	2,8,8

(a) Which elements belong to the same period of the periodic table? (1 mark)

(b) What is the formula of the compound formed by L and N.? (1 mark)

(c) Compare the atomic and ionic radii of element L. (1 mark)

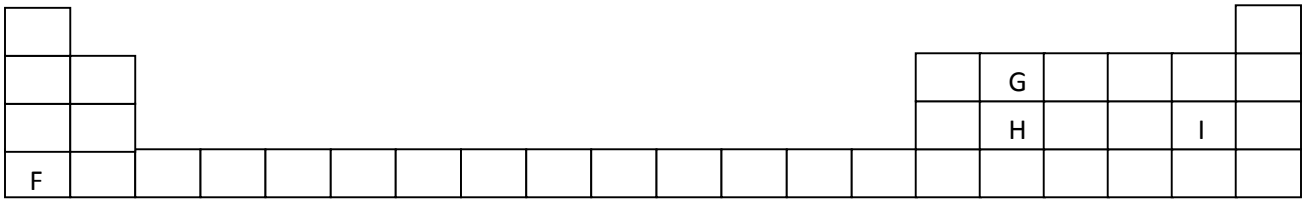
---

12. In temperate countries, salt is sprayed on roads to defrost and clear roads but the long term effect on this practice is costly to motorist.

(a) Explain the role of salt in defrosting the ice. (1mk)

(b) Explain why the long term effect is costing to motorist. (1mk)

13. The grid below shows part of a periodic table. The letters do not represent the actual symbols of the elements



a) Select the:

(i) Element which has the largest atomic radius. (1mk)

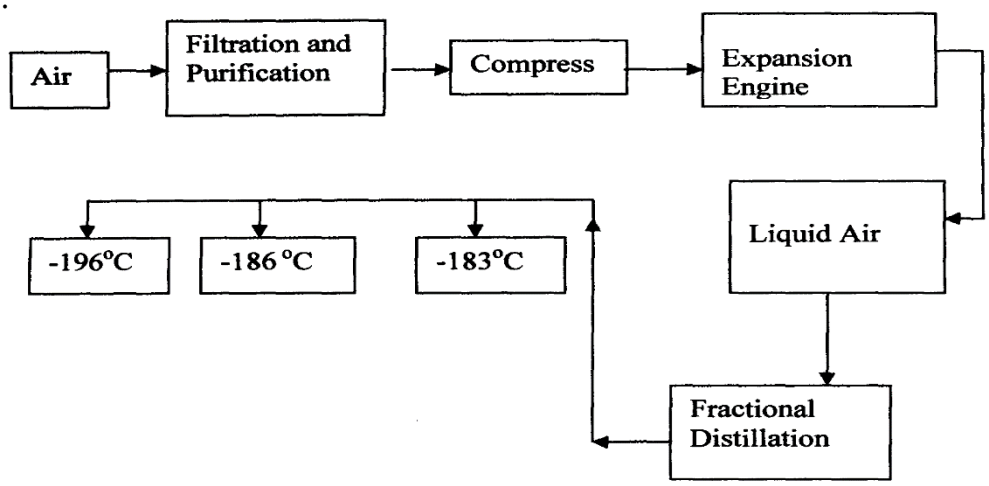
……

(ii) Most reactive non-metal. (1mk)

……

b) Show on the grid the position of the element J which forms J^{2-} ions with electronic configuration 2, 8, 8. (1mk)

14. Oxygen is obtained on large scale by the fractional distillation of air as shown on the flow chart below.



a) Explain why air is considered as a mixture (1mk)

b) Identify the substance that is removed at the filtration stage (1mk)

c) Explain why Carbon (IV) oxide and water are removed before liquefaction of air. (1mk)

d) Identify the component that is collected at -186°C (1mk)

15. Study the table below and answer the questions that follow:-

Substance		A	B	C	D	E	F
Melting Point (^oC)		801	113 OR 119	-39	5	-101	1356
Boiling point (^oC)		1410	445	457	54	-36	2860
Electrical Conductivity	Solid	Poor	Poor	Good	Poor	Poor	Poor
	liquid	Good	Poor	Good	Poor	Poor	Poor

Identify with reasons the substances that:

(i) Have a metallic structure (2mks)

(ii) Have a molecular structure (2mks)

(iii) Substances A and C conduct electric current in the liquid state. State how the two substances differ as conductors of electric current (2mks)

16. Atoms of element X exists as $^{14}_{6}X$ and $^{12}_{6}X$

(a) What name is given to the two types of atoms. (1mk)

……

(b) Use dot (·) and cross (x) diagrams to illustrate the atomic structure of $^{14}_{6}X$ (2mks)

……

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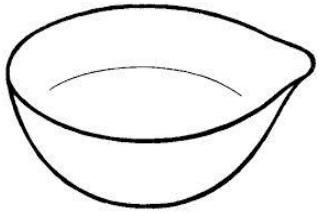
……

17. Give 2 reasons why most laboratory apparatus are made of glass. (1mk)

(b) The diagrams below are some common laboratory apparatus. Name each apparatus and state its use. (2mks)



Name **Name:**

Use **Use:**

18. Soot is one of the environmental pollutants.

(i) Explain the term pollutant. (1mk)

……

……

(ii) State how soot is formed from hydrocarbons. (1mk)

……

……

……

19. Phosphorus element smoulders in air to form two oxides

(a) Name the two oxides. (2 mks)

(i) _____

(ii) _____

(b) State the nature of the solution when the above mentioned oxides are dissolved in water. (1mk)

_____

_____

_____

20. (a) What is meant by the terms: (2 mark)

(i) Atom

_____

_____

(ii) Mass number

_____

_____

(b) The formula of element T is TCl_3. What is the formula of its sulphate? (1 mk)

_____

_____

21. Crystals of sodium carbonate decahydrate ($Na_2CO_3 . 10H_2O$) were exposed to air for about four days.

(i) State what was observed. (1mk)

…… (ii) Name the process that took place. (1mk)

……

(ii) Write an equation for the reaction that occurred. (1mk)

……

……

22. Explain why molten calcium chloride conducts electricity while silicon (IV) oxide does not. (2mks)

……

……

23. The table below gives the first ionization energy of three elements

Element	A	B	C
1st ionization energy(kJ/mol)	496	419	520

(i) Define the term first ionization energy. (1mk)

……

……

(ii) Select the element that is the most reactive. Explain. (2mks)

……

……

……24. State the colour of the indicators in the solutions given in the table below: (3mks)

	Colour in	
Indicator	**Acid**	**Base**
Litmus	Red	
Methyl orange		Yellow
Phenolphthalein	Colourless	

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FORM 2 END TERM 2 EXAM

NAME: …… ADM NO: …… CLASS: …….

BUSINESS STUDIES

TIME: 1 ½ HOURS
MAXIMUM SCORE = 70MARKS

Answer all the questions in the spaces provided.

1. State the term given to each of the following statements:- (3 mks)
   (a) Activities carried out with view of making profit –

   (b) Increasing the usefulness of a good or services. –

   (c) Movement of goods from producer to consumer –

2. State whether each of the following factors fall under macro-environment or micro-environment.
   (i) Competitive environment –

   (ii) Legal-political environment –

   (iii) Business structure –

   (iv) Business culture –

3. Using examples, distinguish between man-made resources and human resources. (4 mks)

4. List down four factors of production and their rewards. (4 mks)

5. Outline four circumstances under which a partnership may be dissolved. (4 mks)

6. State four ways in which government may regulate business activcities. (4 mks)

7. List four essential elements of transport. (4 mks)

8. State four barriers to effective communication. (4 mks)

9. Outline procedure for making an insurance claim. (5 mks)

10. Highlight four circumstances under which personal selling is appropriate. (4 mks)

11. State four reasons why a cheque may be dishonoured. (4 mks)

12. Classify the following staff as subordinate, junior or management. (4 mks)

Staff	Category
(a) Executive officer (b) Driver (c) Typist (d) Receptionist (c) Director	

13. List various sources of a business idea. (4 mks)

14. Outline four factors to consider when selecting office requirement. (4 mks)

15. State four functions of retailers to consumers. (4 mks)

16. State four types of utilities. (4 mks)

17. Classify each of the following as renewable or non-renewable resource.

Item	Renewable	Non-renewable
Wood Solar energy Gravel Natural gas		

FORM 2 END TERM 2 EXAM
231
BIOLOGY

Name: ……Adm no ……..….....
Class.....

INSTRUCTIONS TO CANDIDATES:

- *Answer **ALL** the questions*
- *Answers should be written in the spaces provided*

1. The equation bellows shows a chemical reaction that takes place in green plants under certain conditions

Carbon (IV) Oxide + Water ⟶ Glucose + X

a) Name the;

(2mks)

i) Process represented by the

equation……

ii) Substance represent by

X……..…….……

b) Other than the reactants, state two conditions necessary for this reaction to occur.

(2mks)

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c) Name **three** types of cells in which the process occurs

(3mks)

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2. Name **one** example of the specialized cells in plants and one example in animals.

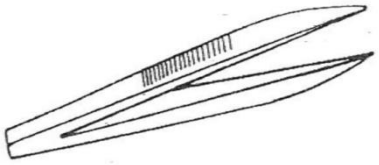
(i) Plants…….

(1mk)

(ii)

Animals…….(1mk)

3. Identify the following apparatus and state its functions.



i) Name…….(1mk)

ii) Function

(1mk)

……..…

……..……

…...…….

4. A student measured the length of a mitochondrion on a photomicrograph whose magnification was X 40000 and found it to be 1mm. Calculate the actual size of the mitochondrion. (3mks)

5. State the type of solution that makes the plant cell.

(2mks)

i)

Flaccid……

ii)

Turgid……

6. Name the carbohydrate stored in:

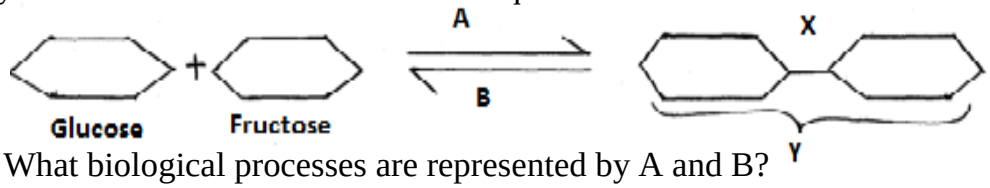
i) Cell wall. ……

(1mk)

ii) Mammalian liver. ……

(1mk)

7. Study the reaction below and answer the questions that follow.



a) What biological processes are represented by A and B?

(2mk)

A .....

B .....

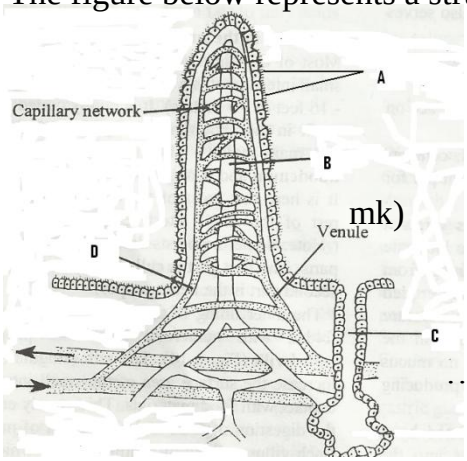
b) Identify the product Y……

(1mk)

c) State the bond represented by X

…….....……(1mk)

8. The figure below represents a structure obtained from the ileum of a mammal.



a) Give the identity of the structure. (1 mk)

……

…..

b) What is the importance of the structure named in (a) above? (1 mk)

..……

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.....……

c) Name the parts labeled A, B and D. (3mks)

A…….

B…….

D…….

9 (i) Name the juice secreted by the part labeled C.

(1mk)

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……

……..

(ii) List **two** enzymes present in the juice named in d (i) above.

(2mks)

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10. What are the structural differences between veins and arteries?

(3mks)

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11. State three differences between aerobic and anaerobic respiration.

(3mks)

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12. (i) Name the type of immunity developed by the body when one is vaccinated against a certain disease
(1mk)

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ii) Name the blood groups of a person whose blood plasma has antibody b
(2mks)

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iii) State the role of thrombin in blood clotting (1mk)

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13. a) Define respiration (1mk)

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b) Study the equation below. Identify the process represented below (1mk)

$C_6H_{12}O_6 \longrightarrow 2C_2H_5OH + CO_2 + 210KJ$

……

……

……

c) Name an organism this process may occur…….(1mk)

d) Identify the food substrate of whose respiratory quotient (RQ) was found to be 0.7 (1mk)

……

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……

14. State the functions of the following hormones

a) Antidiuretic hormone

(2mks)

……

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b) Glucagon

(2mks)

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……15. Outline three ways in which the gills of Tilapia fish are modified to perform their function (3 mks)

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16. a) Calculate the respiration quotient (RQ) from the equation below:- (3 mks)

$2C_{51}H_{98}O6 + 145O_2 \longrightarrow 102\ CO_2 + 98H_2O + Energy$

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b) Identify the substrate being respired in the above equation (1 mk)

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17. a) Explain what is meant by the term oxygen debt in human beings (2 mark)

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b) What are the end products of anaerobic respiration in animals (2 mrks)

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18. i) Where in a cell does glycolysis take place?

(1mrk)

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(ii) Name the product of the above process

(1mrk)

……

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……

19. The equation below summarizes a metabolic process in plants.

Glucose ⟶ Ethanol + carbon (IV) oxide + Energy

State two industrial applications of the above equation.

(2mks)

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20. Explain why a rat, though small eats more frequently than an elephant

(2mks)

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21. Give the conditions necessary for the second phase of aerobic respiration

(3mks)

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22. Name any three respiratory diseases

(3mks)

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23. Briefly explain the process of inhalation in man.

(8mks)

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FORM 2 END TERM 2 EXAM
AGRICULTURE

TIME; 1HR 45MINS

NAME:…… ADM.;…….CLASS:……..

INSTRUCTION

- **This paper has two section A and B**
- **Answer all questions in these sections in the spaces provided after the questions.**

SECTION A(60MKS)

1. State main categories of parasites (1mk)

2. State four importance of water treatment.
   (2mks)

3. Mention 3 major sources of water on the farm.
   (11/2mks)

4. State four ways in which nitrogen is removed from the atmosphere
   (2mks)

5. State the intermediate hosts of the following parasites.
   (2mks)
   (i) Tapeworm(Taenia spp)

   (ii) Liver fluke

6. State 3 forms of soil water.
   (11/2mks)

7. State four vector-borne diseases affecting farm animals.
   (2mks)

8. State the plant part used for vegetative propagation in the following plants.
   (2mks)
   i) Pyrethrum

   ii) Sisal

   iii) Pineapples

   iv) Tea

9. State four pests commonly found in tomatoes.
   (2mks)

10. State any four post-harvest practices in crop production. (2mks)

11. Differentiate between soil texture and soil structure
    (2mks)
    Soil texture

    Soil structure

12. State four factors influencing soil formation.
(2mks)

13. List four factors that influence the rate of respiration in an animal. (2ms)

14. State four factors that influence crop rotation
(2mks)

15. Give the term used to describe the following livestock. (4mks)
(i) Mature male cattle

(ii) Mature castrated male cattle

(iii) A mature female pig after first parturition

(iv) Mature female bird

16. Differentiate between gapping and rogueing
(2mks)
Gapping

Rogueing

17. State four characteristics of plants used as green manure.
(2mks)

18. Differentiate between over-sowing and under-sowing. (2mks)
Over-sowing

Under- sowing

19. State four factors that determine spacing in crop production (2mks)

20. State four divisions of livestock farming. (2mks)

21. (a) State the two classes of phylum Arthropod a with most ecto- parasites (2mks)

(b) State four characteristics of an effective acaricide (2mks)

(c) Name two types of labour records. (2mks)

(d) Name two minor pests in tomato production (1mk)

22. State the causal organism of the following diseases. (2mks)
a) Mastitis

b) Rinderpest

c) Red water

d)Foot and mouth

23. a) State four methods of fertilizer application

b) Define the term agriculture. (1mk)

d) State four factors that determine the type of irrigation (2mks)

e) Differentiate between seed dressing and seed inoculation (2mks)

Seed dressing

Seed inoculation

24. A) Differentiate between mixed farming and agroforestry (2mks)
Mixed farming

Agroforestry

b) State four factors within the animal that may pre-dispose it to a disease. (2mks)

c) State the lacking mineral in the following disorders. (2mks)
(i) Anaemia in piglets

(ii) Osteomalacia

(iii)Milk fever

(iv)Swayback in lambs

SECTION B (20MKS)

25. A farmer with one hectare of land requires 40kg of n in his farm. He applied CAN which costs shs 35 per kg. CAN contain 20kg N.
    (a) Calculate the amount of C.A.N the farmer requires
    (2mks)

    (b) How much will a farmer with one and a half hectares spend to apply in his farm?
    (1mk)

    (c) Name two types of compound fertilizers used by farmers.
    (2mks)

26. Study the diagrams below of farm tools and equipment and answer the questions that follow.

    a) Identify tools O and N
    (2mks)

b) State the function of tool P
(1mk)

c) State two maintenance practices of tool Q.
(2mks)

27. The diagram below shows a livestock parasite

a) Identify the above parasite. (1mk)

b) Name any two diseases transmitted by the parasite.
(2mks)

c) State the four main stages in its life cycle.
(2mks)

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

a) What is the experiment set up above designed to study. (1mk)

b) Name the three types of soil.
($1^1/_2$mks)

c) State 3 characteristics of soil A above.
($1^1/_2$mks)

d) State one method of improving soil C above.
(1mk)

FORM 2 END TERM 2 EXAM
FORM TWO ENGLISH
TERM 2 EXAM .

NAME…….ADM……..STREAM……

1. Your school's **Debating Club** had attended a debating contest in another school. On your way back to school you went to a supermarket without permission and delayed everyone. Write a letter of **apology** to the Debating Club patron. (**10mks**)

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

It is an indisputable fact that agriculture **1** ……the backbone of the economy. It is therefore **2** …… that we stop over-relying on the rain-fed agriculture. Israel is a classic **3** …… Of a country that has reclaimed its deserts and put them **4** ……use. Land which was **5** …….. 'useless has been turned around and **6** ……..…useful. Egypt which solely depends on **7** …… River Nile is a leading exporter of fruits and cereals. For our country to **8** …….. self-sufficiency in food production and to get a **9** ……for export, land should be utilized to the **10** …..……This is only possible with irrigation.

3. a).Study the **poem** below and then answer the questions that follow.

If We Must Die – Claude Mckay

If we must die – let it not be like hogs
Haunted and penned in an inglorious spot,
While round us bark the mad and hungry dogs,
Making their mock at our accused lot,
If we must die – oh let us only die
So that our precious blood may not be shed
In vain; then even the monsters we defy
Shall be constrained to honour us through dead!
Oh Kinsmen! We must meet the common foe;
Though far outnumbered, let us show us brave
And for their thousand blows deal one death blow
What though before us lies the open grave?
Like men we'll face the murderous, cowardly pack
Pressed to the wall, dying, but fighting back!

Questions

(i) Describe the **rhyme scheme** of this poem. (2 marks)
……

(ii) Which words would you **stress** in the last line of this poem and why? (3 marks)
……

……

(iii) Apart from **rhyme**, how else has the poet **achieved rhythm**? (4 marks)

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(iv) Suppose you were **performing** the above poem, explain **ways** in which you would make it very interesting (2mks)

……
……
……
……
……

b).You have been invited to a very important interview. Explain briefly what you would need to do **before,** and **during** the occasion to ensure that you look presentable. (6 marks)

……

……

……

……

……

c).For each of the words given below, write down another word with a **similar pronunciation**. (5marks)

Maid ……

One ……

Hire …….

Guest ……..

Ewe……..

d).Identify the s**ilent** letters in the words below (5mks)

History
Debt
Psychology
Yacht
Condemn

4 .Read the passage below and answer the questions that follow

Terrorism is a real and urgent threat to nations and their interests a threat that could become perilous if terrorists acquire nuclear or biological weapons. The policies pursued by the bush administration have too often been counterproductive and self-defeating. In the name of an 'offensive' strategy, they have undermined the values and principles that made the United States a model for the world, dismayed cooperative nations around the world and jeopardize their cooperation with us, and provided ammunition for terrorist recruitment in the Middle East and beyond. To achieve our long-term objective we must go beyond narrow counterterrorism policies to **embed** counterterrorism in an overarching national security strategy designed to restore American leadership and respect in the world. This leadership must be based on a strong commitment to our values and to building the structures of international cooperation that are needed to only fight terrorists, but also to meet key challenges of our time: proliferation; climate change and energy security; the danger of pandemic disease; and the need to sustain a vibrant global economy that lifts the lives of people everywhere.

We have to demonstrate that the model of liberty and tolerance embodied by the United States, are the enemy of these universal ambitions. We must pursue an integrated set of policies- on non-proliferation, energy and climate, global public health and economic development- which reflect recognition that in an independent world, the American people can be safe and prosperous only if others too share in these blessings. Our policies must demonstrate a respect for differences of history, culture and tradition, while remaining true to the principles of liberty embodied in the Universal Declaration of Human Rights. This kind of enlightened self-interest led others to rally to American leadership in the Cold War and offers the best hope for sustaining our leadership in the future. The world is filled with terrorist organizations. While the State Departments list of **designated** groups includes almost four dozen, numerous well known ones are still omitted because of issues related to designation process. Yet to many organizations, only one subset currently poses a serious and sustained threat to the United States and its allies: the Sunni jihadist organization known by the shorthand 'al Qaeda'

The group merits this special status because it is the only terrorist organization with the ambition and the capability to inflict genuinely catastrophic damage, which can provisionally be defined as attacks that

claim causalities in the four digits or higher. The group is also unique in that it may eventually be able to carry out a campaign of repeated attacks that would have a paralyzing effect on American life and its institutions. Its ability to **foil** fundamental U.S. strategic goals-as it did in Iraq and as it threatens to do together with the Taliban in Afghanistan-has been amply demonstrated. As the turmoil in Pakistan has demonstrated, its capacity for upsetting the geopolitics of major regions of the world today is also unrivalled among non-state actors. The evidence provided by September 11, 2001 is sufficient to demonstrate the groups' capability and its determination. Unlike most terrorist, it eschews incremental gains and seeks no part of a negotiation process; it seeks to achieve its primary ends, including mobilization of a large number of Muslims, through violence.

The Bush administration has fundamentally misunderstood the nature of the jihadist movement and its actions have made the threat considerably worse. The administration has hyped the threat and subordinated foreign security policy into the 'Global War on Terror.' It has relied on the wrong tools –principally the military- and vastly overemphasized tactics at the expense of strategy. To the extent that it has a strategy for reducing the appeal of jihad, it is the 'freedom agenda' which has backfired. Counter terrorism requires a shift away from a foreign and security policy that makes counterterrorism the **prism** through which everything is evaluated and decided. It requires a policy that must go beyond uncompromising efforts to do away with those who seek to harm us today. International engagement is essential in meeting this threat since it will ensure that new terrorist recruits do not come to take the place of those that have been defeated.

(Adapted from 'strategic Counterterrorism' by Daniel Benjamin, Policy Paper Number 7, 2008)

Questions

a) .In what ways were the policies pursued by the Bush administration counterproductive and self-defeating? (3mks)

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.....
.....

b).What according to the author is the **essence** of American counterterrorism leadership? (3mks)

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.....
.....
.....

c).Make **notes** on what ought to be done to uphold American leadership? (4mks)

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.....

.....
.....

d).In the following sentence, replace the **underlined expression** with one word (1mk)

It requires a policy that must go beyond uncompromising efforts to <u>do away with</u> those who seek to harm us today……
…….

e).Why is Al-Qaida a unique group? (2mks)

.....
.....
.....
.....
.....

f).What is needed in the fight against terrorism? (2mks)

.....
.....
.....
.....
.....

g).In **your opinion**, what is the most dangerous aspect of terror a threat? (1mk)

.....
.....
.....
.....

h).Explain **the meaning** of each of the following words as used in the passage (4mks)

a) Embed……
……..

b) Designated……
……..

c) Foil……
……

d) Prism……
……

5. **GRAMMAR**
(15mks)

i).Fill in the blank with the **correct verbs** from the brackets
(3mks)

1. The team……expected back tomorrow. (**are/is**)

2.You ……..stay at home if you are feeling sick.(**would/should**)

3 .Parliament……resolved to abolish school fees in all public schools.(**has/have**).

ii) .**Join** each of the following pairs of sentences into one sentence using the **phrase g**iven in brackets. (3mks)

1a.James is more responsible than his brother.

b. James is the last born . (**although)**

2 a. Onyango met the woman.

b . Onyango wanted to marry the woman's daughter. (**whose**)

3 a. The woman read a newspaper

b. The man prepared a meal. (**while**)

iii).Fill in the blanks in the following sentences using the correct **collective nouns**
(3mks)

1. The……of onlookers was controlled by the police officers.
2. Many brides in African weddings throw the……..of flowers at their bridal party.
3. Some suitors believe in using a ……of singers to persuade ladies to accept their love.

iv).Use the correct **possessive pronouns** from the choices given to complete the sentences below.
(3mks)

1. Do you prefer to send the information via your email or…….(**him/mine**)

2. Our computer is not as big as……(**theirs/ours**)

3……..(**Hers/She**) was a case of mistaken identity.

v).Rewrite the sentences below with the a**djective** in their **correct order**.
(3mks)

1. .A designer is waiting to interview a dark Rwandese tall tailor.

2. We gave Kamau some heavy new sports grey shoes.

3. The company sold their black mahogany oval Turkish table.

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