FORM END TERM 2 EXAM
PAPERS I.E AND 3 PLUS CONFIDENTIALS]



FOR ANSWERS CALL 0743241064

CHEMISTRY
FORM 2 EXAM
END OF TERM II, 2023
TIME: 2HOURS

Name: …… **Adm no: ……..……**

School: …….. Candidate's Signature……

Date: ……..……..

*(i) Answer **all** the questions in the spaces provided.*

*(ii) Write your **name** and **index number** in the spaces provided above.*

(iii)Mathematical tables and electronic calculators may be used for calculations.

*(iv) All workings **must** be clearly shown where necessary*

For Examiner's Use only:

QUESTION	**MAXIMUM SCORE**	**CANDIDATE'S SCORE**
1 – 19	**80**	

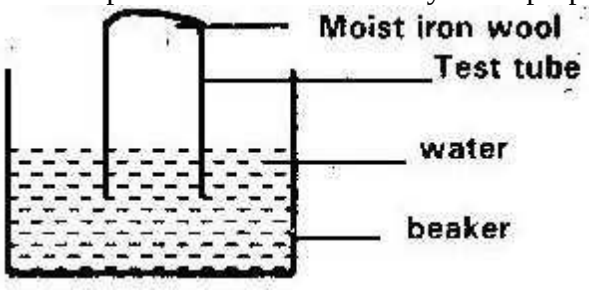
1. (a) Define chemistry (1mrks)

(b) state three roles of chemistry in the society. (3mrks)

2. Putting out flames after use is one of the laboratory rules, state three other laboratory rules. (3mrks)

3. List two differences between temporary physical change and permanent chemical change. (4mrks)

4. The set up below was used to study some properties of air



State and explain two observations that would be made at the end of the experiment. (4mks)

5. The table below gives information about ions of **P** and **Y**

Ion	P^+	Y^{2-}
Electron arrangement	2.8	2.8.8
Number of Neutrons	12	16

a) Write the electron configuration for the atom of Y (1mk)

b) How many protons are there in the nucleus of (2mks)

(i) **P**

(ii) **Y**

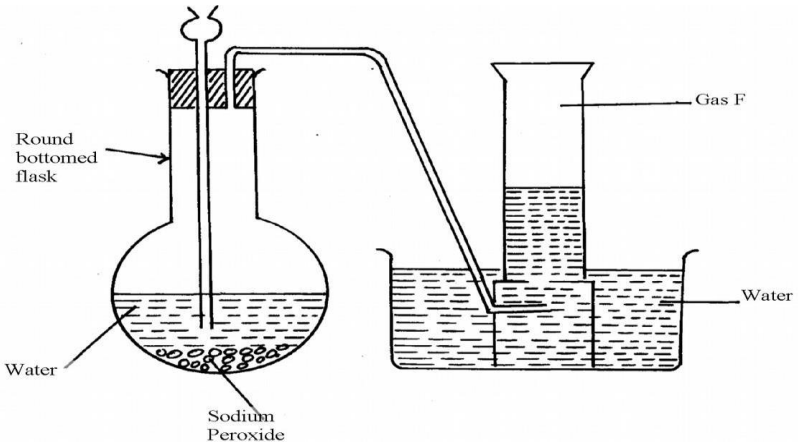
(c) Write the formula of the compound formed when **P** and **Y** reacts (2mks)

6. Diamond and graphite are allotropes of carbon.

(i) What are allotropes? (1mk)

(ii) In terms of structure and bonding explain why diamond is used in drilling through hard rocks while graphite is a lubricant (2mks)

7. The diagram below is a set up for the laboratory preparation of gas F.



(i) Name gas **F** **(1mrk)**

(ii) At the end of the experiment, the solution in the round bottomed flask was found to be a strong base. Explain why this was so (2mrks)

(iii)Which property of gas **F** makes it be collected by the method used in the set-up?(1mrk)

(iv) Give **one** industrial use of gas **F** **(1mrk)**

8. Oxygen exists naturally as isotopes of mass number 16, 17 and 18 in the ratio 96:2:2 respectively. Calculate its R.A.M**.** **(3 mrks)**

9. The grid given below represents part of the periodic table. Study it and answer the questions that follow. The letters are not the actual symbols of the elements.

								A
B				**G**		**H**	**E**	
	J		**I**	**L**				**C**
D							**M**	
Y								

(i) What name is given to the family of elements to which A and C belong? **(1 mrk)**

(ii) Write the chemical formula of the sulphate of element D. **(1 mrk)**

(iii) Which letter represents the most reactive **(2mrks)**

(a) Metal

(b) Non-metal

(iv) Select one element that belongs to period 4. **(1mrk)**

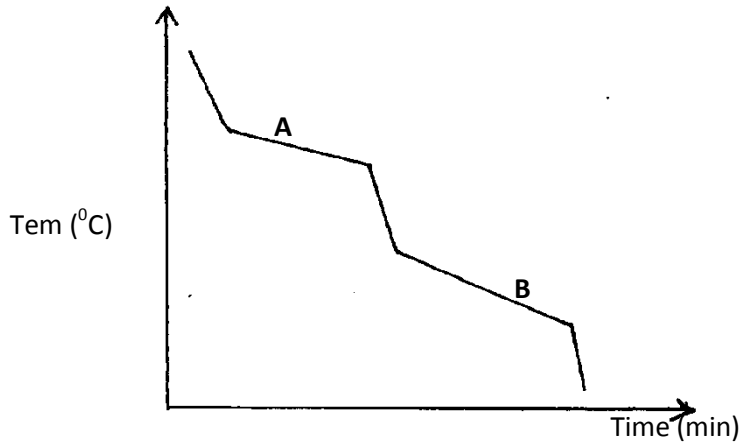
(v) Explain why the Ionic radius of element E is bigger than the atomic radius. **(2mrks)**

(vi) The electron configuration of a divalent anion of element N is 2.8.8. Indicate the position of element N on the periodic table drawn above. **(1mrk)**

(vii) How do the atomic radii of I and C compare. Explain. **(2mrks)**

(vii) Explain the trend in the 1st ionization energies of the elements J, I and L. **(1mrk)**

10. The following is a cooling curve of a certain substance.



(a) Is this a pure or impure substance? Explain

(2mrks)

(b) Explain using kinetic theory what happens in region **A**

(2mrks)

11.The following is a list of pH values of some substance:

Substance	**M**	**N**	**V**	**X**	**Z**
pH	10.6	7.2	13.2	5.9	1.5

Identify:

(i) Strong acid

(1mrk)

(ii) Weak base **(1mrk)**

12**.** Briefly explain the following:

(a) Alkaline earth metals are generally less reactive than-alkali metals.

(2mrks)

(b) Though sodium and aluminum are in the same period and are both metals, aluminum is a better conductor of electricity.

(2mrks)

13. Two papers **A** and **B** were placed at different levels of a non-luminous flame. Paper **A** was placed at the lowest part of the flame while **B** was placed at the tip.

(a) Indicate **below** the observations made on each paper. (2mrks)



Paper **A**



Paper **B**

(b) Explain the observations made on paper **A**. (1mrk)

14**.** Balance the following equations. **(4mrks)**

i. Cl_2 (g) + NaOH (aq) $\longrightarrow$ NaCl (aq)+ NaOCl(aq) + $H_2O_{(l)}$

ii. $Cl_2(g) + KOH(aq) \longrightarrow KCl(aq) + KClO_3(aq) + H_2O(l)$

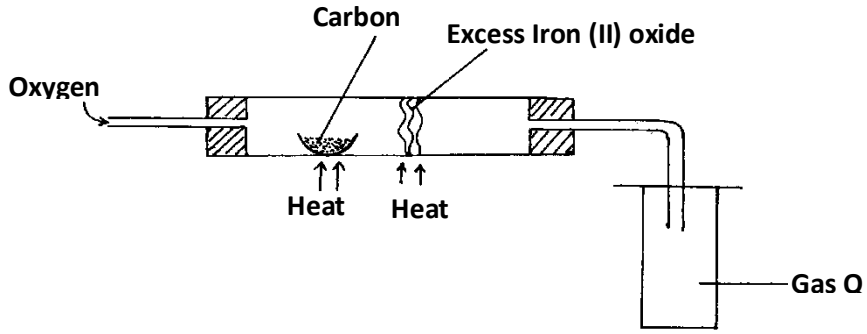
iii. $Fe\ Cl_2(aq) + Cl_2(g) \longrightarrow FeCl_3(aq)$

iv. $Mg(s) + Cu\ SO_4(aq) \longrightarrow MgSO_4(aq) + Cu(s)$

15. You are provided with water, lead carbonate, dilute nitric (V) acid and solid sodium chloride. Describe in very clear steps how you would prepare a sample of lead chloride.

(3 mrks)

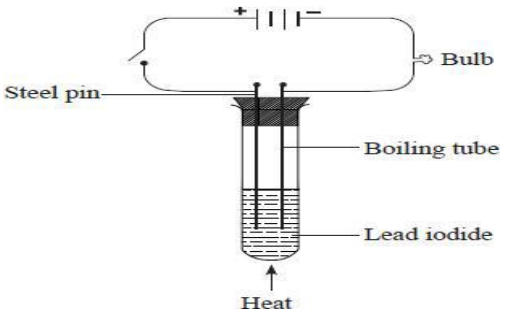
16. The set up below was used to obtain a sample of iron.



i) Write **two** equations for the reaction which occur in the combustion tube. (2mks)

ii) Identify gas **Q** (1mrk)

17. The diagram below shows a set up which was used by a student to investigate the effect of electricity on molten lead (II) iodide.



(a) Explain what happens to the lead iodide during the electrolysis. (2mrks)

(b) Why does solid lead (II) iodide not allow the passage of electricity? (1mrk)

(c) Write equations to show the reaction taking place:
(i) At the cathode. (1mrk)

(ii) at the anode (1mrk)

18. Write balanced equations for the following reactions: (8mrks)

(a)Calcium carbonate and hydrochloric acid.

(b)Magnesium and Sulphuric (VI) acid.

(c)Copper (II)Oxide and Nitric (V)acid.

(d)Sodium Hydroxide solution and Hydrochloric Acid.

19. State three applications of carbon (iv) oxide (3mrks)

ENDTERM EXAM 2HR

FORM TWO

2023, JULY

NAME …….ADM NO. ....…….CLASS……

1. a) What is a database management system software (DBMS)? (1mk)

b) Give two **examples** of DBMS **software**. (2mks)

2. Give two disadvantages of **MANUAL** filing systems in data storage. (2mks)

3 List and explain any ***four*** common objects which can be created using DBMS software. (4mks)

4. Describe any two database **models**. (4mks)

5. Define the following terms as used in databases. (3mks)

I. Macros

II. Primary key

III. Field property

6. Give two **data types** used in databases and give one example of **a field property** that can be applied alongside each of data type you have mentioned. (4mks)

7. Explain the meaning of the following as used in computer studies. (4mks)

a) Shareware license

b) Firmware

c) Power supply unit

d) Firewire cable

8. Give two advantages of **vendor off the shelf software**. (2mks)

9. Differentiate between a **single task** and a **multitask** operating system (2mks)

10. Differentiate between **toggle case** and **title case**. (2mks)

11. Highlight two **factors** considered when purchasing a **monitor**. (2mks)

12. Define the following as used in word processing. (4 marks)

i) Word wrap**.**

ii) Drop Cap

iii) Orphan

iv) Window

13. Control unit is an essential component of the CPU. Describe the functions of the control unit. (2 marks)

14. Speech recognition devices are used to capture natural sound and convert the input into digital form. State two problems related to speech recognition devices. (2 mks)

15. Differentiate between pasteboard and master page as used in DTP (2 marks)

16. Differentiate between graphic-based and layout based desktop publishing software. (2 marks)

17. Classify the following software's according to purpose. (4 marks)

	software	Classification
1.	Need for Speed Game	
2.	BIOS	
3.	Google Chrome Browser	
4.	Adobe InDesign 6	

18. Give Three advantages of using GUI based operating system over a command line interface.

(3mks)

19. Outline two ways in which computers can be applied in hotels. (2mks)

20. c) Give **two** reasons why input screens are better data entry designs than entering data directly into a table.

(2 marks)

d) The figure below is an extract of a worksheet containing information on household items. Use it to answer the following questions:

	A	B	C	D	E	F
1	**Item description**	**No of units**	**Cost per unit**	**Total cost**		
2	Maize flour	20	210			
3	Tea leaves	64	185			
4	Sugar	77	149			
5	Salt	28	25			

i) Write a formula to calculate the total cost of sugar. (1 mks)

ii) The prices of all items increased by 10% and the value 10% is placed in cell B8. Using cell addresses with absolute referencing only, write a formula to calculate the new unit of the salt.

(2 mks)

iii) Write a function to display the number of cells in which the cost per unit is equal to 25.

(2 marks)

iv) Write a function to display the least total cost for all items. (1 mark)

20. A school computer laboratory is scheduled to undergo major renovations. The lab is scheduled to receive new computer whose specifications are given below: Explain the meaning of each item. (5mks)

- Pentium IV 2.8GHz processor
- 40GB HDD
- 4 GB RAM
- 56 x CD ROM
- 17"SVGA TFT monitor

21. Explain two safety precautions when handling removable storage media. (2mks).

22. State two factors to consider when choosing an operating system software. (2mks)

NAME: …… ADM NO: ……..CLASS: …
C.R.E
FORM TWO
END TERM 2 – 2023
TIME: 2 HOURS

1. Name the five books of the Bible referred to as the Pentateuch.

(5mks)

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2. Outline the activities carried out by the Israelites on the night of the Passover.

(5mks)

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3. State the functions of the temple in the Jewish community.

(7mks)

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4. Describe the incident in which King Ahab took Naboth's vineyard.

(8mks)

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5. List five moral value promoted during funeral ceremonies in traditional African communities.

(5mks)

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6. Outline Micah's prophecy concerning the Messiah (Mica 5: 1 – 5)

(7mks)

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7. Basing your answer on infancy narratives in Luke 1: 5 – 56, describe what took place when Mary visited Elizabeth.

(8mks)

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8. With reference to the sermon on the plain, outline five teachings of Jesus on how human beings should relate to one another.

(5mks)

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9. Give reasons why Jesus healed the sick.

(6mks)

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10. Outline the instructions that Jesus gave to the seventy two disciples when he send them on a mission. (8mks)

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11. State signs of end times as taught by Jesus in Luke 21: 5 – 38.

(6mks)

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NAME:……ADM:……CLASS:……
AGRICULTURE
FORM TWO
END TERM 2 EXAM - 2023
TIME: 2HOURS
*Instruction. Attempt **ALL** the questions.*

1. Differentiate between micro-nutrients and macro-nutrients. 2marks

2. Give four characteristics of the nitrogenous fertilizer. 4 marks

3. State two reasons why soil sampling is important in crop production. 2 marks

4. Outline five advantages of using seeds in the propagation of crops. 5 marks

5. Give one reason why the following treatments are carried out on seeds before planting. 2marks

   a. Seed inoculation

   b. Seed dressing

6. Given that maize crop is plated at a spacing of 80cm by 25cm, calculate the plant population in one hectare of land if two maize seeds are planted per hole. 3marks

7. Sate four factors to consider when selecting the site for nursery bed establishment. 4marks

8. Give three advantages of practicing monocroping. 3marks

9. State four reasons why timely weed control is advisable in crop production. 4marks

10. Name four commonly grown vegetable in Kenya. 4marks

11. Name one disease that affects tomato and how it can be controlled. 2marks

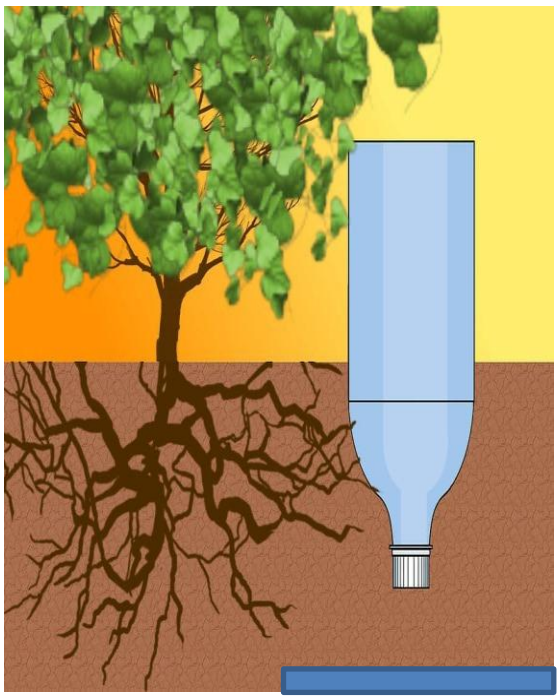
12. Why should a farmer get concerned about the health of livestock? 4marks

13. a . Describe the life cycle of a two host tick. 5marks

b . Name four ways of controlling internal parasites in livestock. 4 marks

14. Outline six factors considered when selecting planting materials. 6marks

15. The diagram below shows a type of irrigation system. Use it to answer the questions that follow.



a. Identify the irrigation system shown in the diagram below. 1mark

b. State two advantages of the irrigation system in 15 a. 2marks

16. Outline four importance of organic matter in the soil. 4marks

17. The diagram below shows a farm equipment.



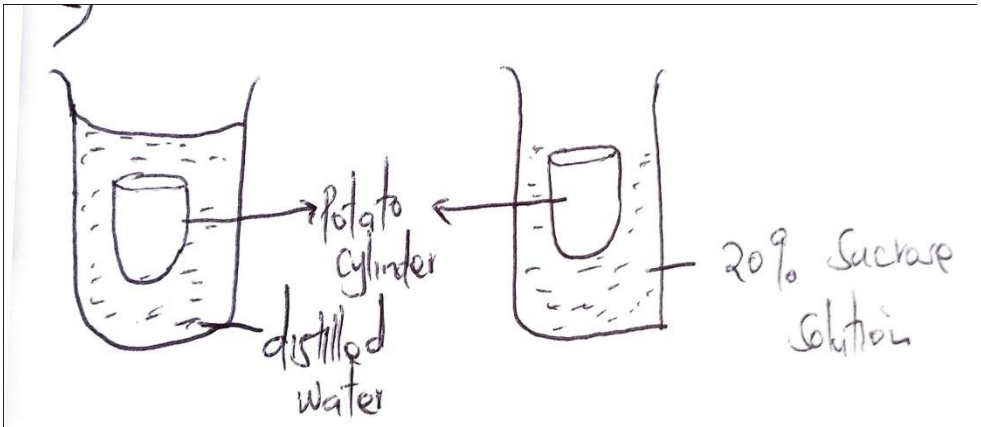
a. Identify the equipment. 1mark

b. State two advantages of using the equipment. 2marks

c. Give three maintenance practices carried out on the equipment. 3 marks.

18. State four reasons why a farmer should keep proper farm records. 4marks

19.NAME: ……. ADM NO: ……... CLASS: ……..
20.BIOLOGY
21.FORM TWO
22.END-TERM 2 EXAM 2023
23.TIME: 1 ¾ HOURS
24.
25. INSTRUCTIONS:
26. Answer all the questions in the spaces provided.
27.
28. 1. (a) Define the term growth. (1 mk)
29.
30.
31.
32.
33. (b) Name the tissue in plant responsible for:
34. (i) Primary growth (1 mk)
35.
36.
37. (ii) Secondary growth (1 mk)
38.
39.
40. 2. The potato cylinders were carefully divided on a blotting paper and weighed. Each piece
41. weighed 2 grams. One was placed in each test as shown in the diagram below.
42.



43.
44. (a) After 48 hours, which potato cylinder will be heavier. Explain. (2 mks)
45.
46.
47.
48. (b) Name the substances whose movement was responsible for the weight changes in the
49. potato cylinder you identified in (a) above? (1 mk)
50.
51.
52. (c) Name the process which was responsible for the movement of the substance you
53. identified in (b) above. (1 mk)
54.
55.
56.
57. 3. Why are the following steps taken when preparing a cross section of a leaf for viewing under
58. the microscope?

(a) Cutting thin section. (2 mks)

(b) Placing the section in water. (2 mks)

4. Below is a dental formula of a mammal

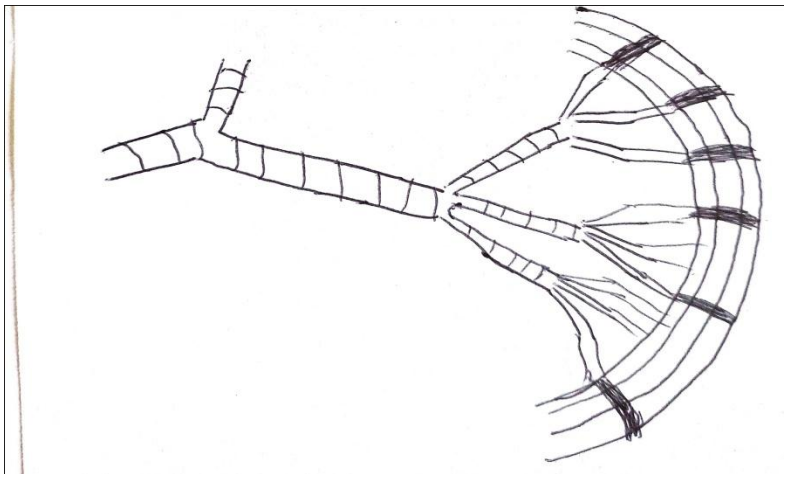
$$I\ \frac{O}{4} \quad C\ \frac{0}{0} \quad PM\ \frac{3}{3} \quad M\ \frac{2}{3}$$

(a) What is the total number of teeth (1 mk)

(b) (i) What is the mode of feeding in the mammal? (1 mk)

(iii) Give one reason for your answer above. (1 mk)

5. The figure below shows a structure used in gaseous cells



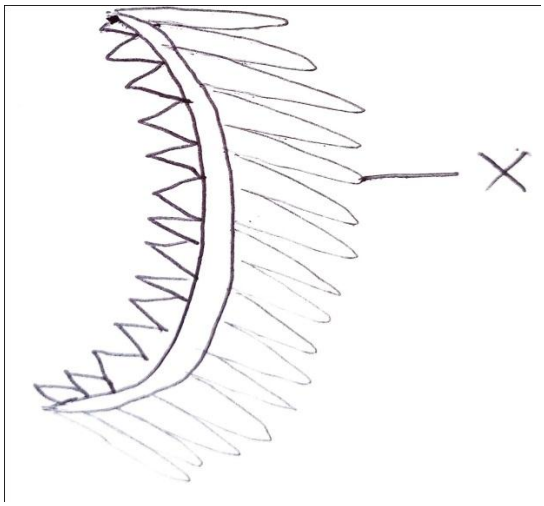
(a) What do guard cells lie in close contact with epidermal cells? (1 mk)

(b) Identify the structure,. (1 mk)

(ii) Explain one observable texture on the figure that adapts the structure to its function. (2 mks)

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6. The diagram below represents an organ of gaseous exchange.



(a) What is the name of the organ? (1 mk)

(b) State two ways in which structure X is adapted to gaseous exchange. (2 mks)

7. How does carboxyhaemoglobin lead to death? (2 mks)

8. Name the cell structures that synthesize the following cell organelles:-

(a) Lysosomes - (1 mk)

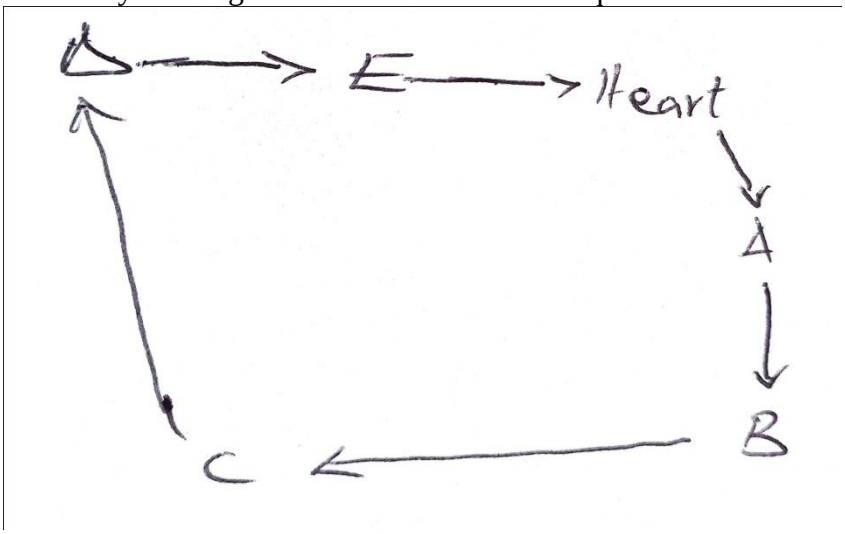
(b) Ribosomes - (1 mk)

9. What is the importance of the strona in the Chloroplast? (2 mks)

10. State three adaptations that enables prey to evade predators. (3 mks)

FOR ANSWERS CALL 0743241064

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



(a) Name the blood vessels labeled A to E. (2 mks)

A _____

E_____

(b) State two differences between blood vessel B and D. (2 mks

(c) State two adaptations of the blood vessel labeled C to its functions. (2 mks)

12. (a) Name three factors affecting the rate of breathing in human beings. (3 mks)

(b) Define the following terms as used in gaseous exchange. (2 mks)

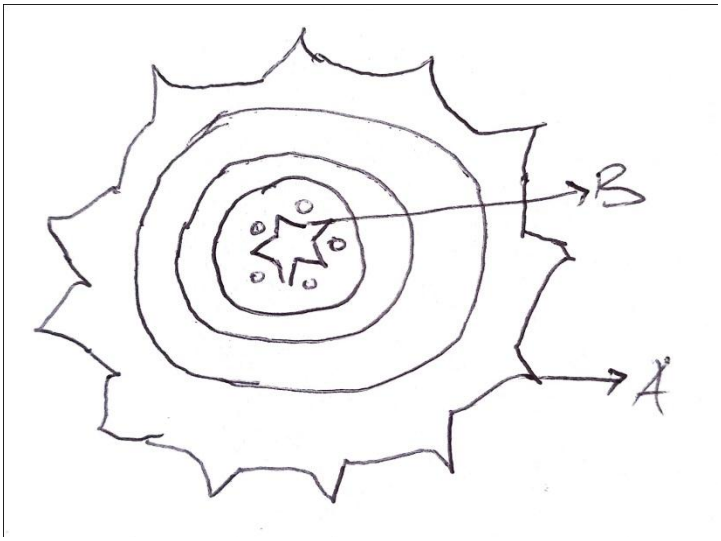
(i) Tidal volume –

(ii) Residual volume -

13. Draw a well labeled diagram of the guard cells. (3 mks)

14. State three properties of lipids. (3 mks)

15. The diagram below represents a cross section obtained from a plant. Use it to answer the questions that follow.



(a) From which part of the plant was the section obtained from? (1 mk)

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

(c) Name part B. (1 mk)

FOR ANSWERS CALL 0743241064

(d) Name the material that strengthens the part you named in (c) above. (1 mk)

16. Name the conditions under which urine production increases in animals. (2 mks)

(b) What is diabetes insipidus? (1 mk)

17. Describe the structure of the skin to its functions. (5 mks)

18. (a) What is photosynthesis? (1 mk)

(b) Discuss three factors affecting the rate of photosynthesis. (6 mks)

19. Explain the economic importance of plant excretory products. (5 mks)

NAME:…… ADM NO: ……. CLASS: …….

BUSINESS STUDIES
FORM TWO
END TERM 2 EXAM 2023
TIME: 2 HOURS

INSTRUCTIONS:
Answer all the question sin the spaces provided.

1, Briefly define the following forms of utilities:- (3 mks)
(i) Form utility –

(ii) Possession utility –

(iii) Place utility –

2. Mutwiri has been advised by his bank to write a business plan. List four benefits Mutwiri would get by drawing a business plan. (4 mks)

3. List four challenges faced by people as they seek their wants. (4 mks)

4. Containerization is common feature in road and water transport., List four benefits of containerization. (4 mks)

5. List four benefits consumers enjoy from warehousing. (4 mks)

6. The Kenyan government has diverse ways on controlling and regulating business in Kenya. Explain three ways that Kenya government regulates and control trade. (6 mks)

7. Outline four differences between public corporation and public companies. (4 mks)

8. List four components of effective communication. (4 mks)

9. Highlight four issues for consideration when selecting means of transport. (4 mks)

10. Juma, Kipchoge and Muiruri are deciding of forming a private limited company. Highlight four contents of the articles of association that they might consider. (4 mks)

11. Differentiate between debit note and credit note. (4 mks)

12. Explain four qualities of a good filling system. (8 mks)

13. List down four qualities of a good sales person. (4 mks)

473. 14. Outline five differences between general insurance and life insurance. (10 mks)

General Insurance	Life Insurance

474.
475.
476. 15, Define the term specialization. (1 mk)
477.
478.
479.
480.
481.
482. 16. Give two characteristics of preference shares. (2 mks)

NAME ……ADM NO……CLASS……..

312/2

GEOGRAPHY

FORM 2

TIME: 2 HOURS

END OF TERM TWO EXAM-2023

FORM TWO

Kenya Certificate of Secondary Education. (K.C.S.E)

INSTRUCTIONS TO CANDIDATES

- ***Answer all questions in this Paper.***

1.a.) State two theories that try to explain the origin of the Solar system. (2mks)

b. List three disciplines related to Geography. (3mks)

2.a) State four benefits of studying Geography. (4mks)

b. State four effects of the Revolution of the Earth. (4mks)

3.a) Name three instrument kept in the Stevenson screen. (3mks)

b. Explain the reasons why the Stevenson screen has the following features.

i. Raised 121cm above the ground. (1mk)

ii. Wooden carved sides. (1mk)

iii) Painted white and constructed with an insulated roof. (1mk)

4.a) Mention four factors that influence the weather of a place. (4mks)

b. Name the four layers of the atmosphere. (4mks)

5.a) State four significance of weather forecasting. (4mks)

b. Name three techniques of sampling. (3mks)

6.a) State four causes of Earth movements. (4mks)

b) Mention four evidences supporting continental drift theory. (4mks)

7.a) Name four types of faults. (4mks)

b) Name four features resulting from faulting. (4mks)

8.a. The following is the number of veterinary officers per Sub County in Nakuru County. Use it to draw a sample divided rectangle length 10cm. Show your calculations. (8mks)

NAME:…… ADM. NO……

311

HISTORY

END OF TERM II, 2023

TIME 2 ½ HOURS

FORM TWO

INSTRUCTION TO CANDIDATES

❖ *Answer* ***ALL*** *questions only in this paper in the answer booklet provided.*

This paper consists of 4 printed pages. Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

SECTION A: ANSWER ALL QUESTIONS (25 MARKS)

1. Give the **main** source of history of Kenyan communities' during the pre-colonial period. **(1 mark)**

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2. Name **two** stages of evolution according to Charles Darwin Theory. **(2 marks)**

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3. State **two** factors that show that Africa is the cradle of mankind. **(2 marks)**

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4. Give **one** negative effect of the land enclosure system in Britain during the Agrarian Revolution. **(1 mark)**

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5. State **two** similarities between early agriculture in Mesopotamia and Egypt. **(2 marks)**

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6. Give **one** cultural practice that the Agikuyu borrowed from the Gumba during the pre-colonial period**.**

(1 mark)

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7. State **two** functions of Fort Jesus during the Portuguese rule. **(2 marks)**

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8. Mention **one** method of trade in pre-colonial Africa. **(1 mark)**

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9. What was the contribution of Alexander Graham Bell in the communication sector? **(1 mark)**

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10. Give **two** ways by which poor transport hinders industrialization in the third world countries. **(2 marks)**

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11. Identify **one** invention that revolutionized food preservation during the 19th Century. **(1 mark)**

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12. State **two** functions of the Saza chiefs among the Baganda in the 19th Century. **(2 marks)**

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13. Give **two** factors that led to the development of local trade. **(2 marks)**

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14. State **two** disadvantages of using coal as a source of industrial energy. **(2 marks)**

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15. Give **two** reasons that led to the decline of Meroe Town. **(2 marks)**

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16. Identify the **most** fundamental right of a Kenyan Citizen. **(1 mark)**

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17. State **two** characteristics of Human Rights. **(2 marks)**

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18. Identify **five** ways in which the right to life may be limited in Kenya (5mks)

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19. Discuss **five** values of good citizenship in Kenya (10mks)

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SECTION B: ANSWER ALL QUESTIONS (45 MARKS)

20. **(a)** State **three** factors that led to the migration of the Plain Nilotes during the pre-colonial period.

(3 marks)

(b) Explain **six** results in the migration and settlement of the Plain Nilotes in Kenya. **(12 marks)**

19. **(a)** Give **three** advantages of using railway transport over road transport. **(3 marks)**

(b) Explain **six** effects of telecommunication on modern society. **(12 marks)**

20. **(a)** Give **three** functions of the Lukiiko among the Buganda Society in the 19th Century. **(3 marks)**

(b) Describe the social organization of the Shona during the 19th Century. **(12 marks)**

SECTION C: ANSWER ALL QUESTIONS (30 MARKS)

21.(a) State **three** factors that can lead to revocation of citizenship acquired through registration. **(3 marks)**

(b) Explain **six** rights of an accused person in Kenya. **(12 marks)**

22. **(a)** Give **five** advantages of a written constitution. **(5 marks)**

(b) Explain **five** problems that have been experienced in the constitution making process in Kenya.

(10 marks)

FOR ANSWERS CALL 0743241064

Name:.....Class:.....Adm No:.....
FORM 2 END-TERM EXAM
MATHEMATICS
TERM 2 2023.
TIME –

INSTRUCTIONS TO CANDIDATES.
Answer all the questions in the spaces provided.

1. Evaluate without using a calculator: (3mks)

$$\frac{{}^{5}/_{6} \text{ of } (4\ {}^{1}/_{3} - 3\ {}^{5}/_{6})}{{}^{5}/_{12} \times {}^{3}/_{25} + 1\ {}^{5}/_{9} \div 2\ {}^{1}/_{3}}$$

2. A cylindrical tank of diameter 1.4m and height 1.2m is two-thirds full of water. The tank if filled using a cylinder bucket of diameter 35cm and diameter 20cm. find the number of buckets to fill the tank. (3mks)

3. A man sets off by bus on a journey of 130cm. after the bus has travelled 119km at an average speed of 42km/hr, it breaks down and he is immediately given a lift by a passing cyclist who takes him to his destination of an average speed of 66km/h:
   Calculate:
   a) The time taken for the whole journey. (2mks)

   b) His average speed for the whole journey. (2mks)

4. One interior angle of a certain polygon is 84^{o}. If each of the other angles is 147^{o}, how many sides does this polygon have? (3mks)

5. Evaluate using square root, reciprocal and square tables only: (3mks)

$$\frac{1}{\sqrt{0.7235}} - \frac{1}{(10.56)}$$

6. The volumes of two similar cans are $12cm^3$ and $216cm^3$ respectively. If the base area of the smaller can is $75cm^2$, find the base area of the larger can. (3mks)

7. Find all integral values that satisfy the inequality: (3mks)

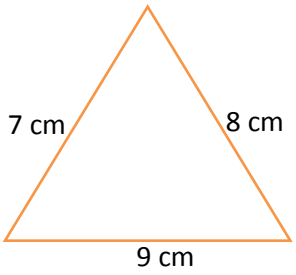
$2x + 3 \geq 5x - 3 > -8$

8. Convert $0.1\dot{2}\dot{3}$ into a fraction. (3mks)

9. Use tables to evaluate: (3mks)

$$\sqrt{\left(\frac{3.45 \times 16.7}{31.4}\right)}$$

10. Find the area of the triangle below: (2mks)



Section B.

11. A line L_1 passes through points (-2,3) and (-1, 6) and is perpendicular to L_2 at (-1,6)

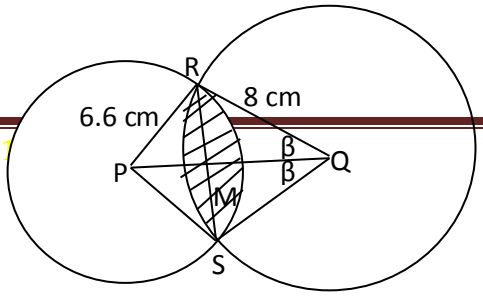
a) Find the equation of L_1. (2mks)

b) Find the equation of L_2 in the form of ax by – c =0 where a b c are constants. (2mks)

c) Given that another line L_3 is parallel to L_1 and passes through point (1,2) find the x and y intercepts of L_3. (3mks)

d) Find the points of intersection of L_2 and L_3. (3mks)

12. The figure below shows two circles with centres P and Q and of radii 6.6 cm and 8 cm respectively. Centres P and Q are 10 cm apart and PM:MQ = 2:3.



FOR ANSWERS CALL 0743241

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Calculate to 2 decimal places:

a) The size of angle RPS. (2mks)

b) The size of angle RQS (2mks)

c) The area of the shaded region. (take $\pi = 3.142$) (6mks)

13. The triangle ABC has the vertices(-2,-2)

a) B(-2,-5) and C(-5,-4). Draw$\triangle$ABC on the paper grid provided. (1mk)

b) $\triangle$ABC is the image of $\triangle$ABC under reflection in the line x + y =0 draw triangle ABC on the same axes and state its co-ordinates. (3mks)

c) ΔABC is the image of Δ ABC under a positive turn about the origin. DrawΔABC under an enlargement centre (0,0) and scale factor -1. Draw ΔABC and state its coordinates. (3mks)

14. Four towns PRT and S are such that R is 80km directly to the north of P and T is on a bearing of 290^{o} from P at a distance of 65km. S is on a bearing of 330^{o} from T and a distance of 30km. using a scale of 1cm to represent 10km, make on accurate scale drawing to show the relative position of the towns. (3mks)

a) Find the distance and the bearing of R and T. (3mks)

b) Find the distance and the bearing of S from R. (3mks)

c) Find the bearing of P from S. (1mk)