KCSE 2023 MOCK EXAMS

ALL SUBJECTS

Second Cycle of Joint Examination Trial amongst selected High Schools administered to the current KCSE Candidates.

All the Best to our KCSE 2023 Candidates.

SUBJECTS COMPILED;

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

SERIES 2

For Marking Schemes

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

MWALIMU CONSULTANCY

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

313/1 **Christian Religious Education** Paper 1

Time: 2½ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) *This paper consists of **six** questions.*

b) *Answer **ANY** five questions in the sheets provided.*

c) *The candidate should check the question paper to ascertain that the pages are printed as indicated and that no questions are missing.*

d) *Each question contains 20 marks*

e) *Candidates should answer the questions in English.*

FOR EXAMINERS USE ONLY

QUESTION	1	2	3	4	5	6	TOTAL
SCORE							

*Answer **ANY** five questions*

1. (a) Describe the first account of creation according to Genesis 1. **(8 marks)**

(b) Outline the meaning of the Biblical accounts of creation according to Genesis 1&2 **(7 marks)**

(c) State five ways in which Christians continue with God's creation. **(5 marks)**

2. (a) Outline seven promises that God gave to Abraham during his call. **(7 marks)**

(b) Why was Moses a suitable leader to the Israelites **(8 marks)**

(c) State the leadership qualities that a Christian can learn from Moses. **(5 marks)**

3. (a) State six reasons for Kingship in Israel. **(6 marks)**

(b) Explain the significance of David as an ancestor of Jesus to Christians. **(8 marks)**

(c) State six lessons Christians learn from the failures of King Saul. **(6 marks)**

4. (a) Describe the evils that Prophet Amos condemned in Israel. **(8 marks)**

(b) Explain Prophet Amos teaching on hypocritical religion in Israel. **(7 marks)**

(c) State the ways through which Christians fight hypocrisy in our churches today. **(5 marks)**

5. (a) Describe the personal life of Prophet Jeremiah. **(8 marks)**

(b) State the circumstances that led the Israelites to be taken to exile in Babylon during the time of Prophet Jeremiah. **(7 marks)**

(c) State the relevance of Prophet Jeremiah's suffering to Christians **today.** **(5 marks)**

6. (a) Give reasons why pregnancy before marriage is rare in traditional African Communities. **(7 marks)**

(b) State the importance of bride wealth in the traditional African Communities. **(5 marks)**

(c) Explain the socio-cultural changes that have taken place in traditional African Communities in Kenya today. **(8 marks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

313/2 **Christian Religious Education** Paper 2

Time: 2½ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- ***a)*** *This paper consists of **six** questions.*
- ***b)*** *Answer **ANY** five questions in the sheets provided.*
- ***c)*** *The candidate should check the question paper to ascertain that the pages are printed as indicated and that no questions are missing.*
- ***d)*** *Each question contains 20 marks*
- ***e)*** *Candidates should answer the questions in English.*

FOR EXAMINERS USE ONLY

QUESTION	1	2	3	4	5	6	TOTAL
SCORE							

For Marking Schemes Contact 0746-222-000 / 0742-999-000

*Answer **ANY** five questions*

1. **(a). Basing** your answer on the infancy stories, in Luke 1:5-56, describe Mary's visit to Elizabeth. **(7 marks)**

(b). Describe the annunciation of the birth of Jesus by Angel Gabriel as recorded in Luke 1:26-38 **(8 marks)**

(c). State lessons that Christians learn from the magnificat. **(5 marks)**

2. **(a). Narrate** the Baptism of Jesus on river Jordan. **(Luke 3:21-22 (6 marks)**

(b). Identify four teachings of John the Baptist **(8 marks)**

(c). Why are Christians finding it difficult to apply the teachings of John the Baptist in their lives. **(6 marks)**

3. **(a). Describe** the healing of the ten lepers. **(7 marks)**

(b). Explain four teachings from the triumphant entry of Jesus into **Jerusalem. (8 marks)**

(c). State five lessons that Christians learn from the suffering and death of **Jesus. (5 marks)**

4. **(a). Describe** the unity of believers as expressed in the image of the body of Christ. **(8 marks)**

(b). Outline St. Paul's teaching on how the gifts of the Holy Spirit should be used in the church. **(7 marks)**

(**c). How** are the gifts of the Holy spirit misused in the church today. **(5 marks)**

5. **(a). Identify five** sources of Christian ethics. **(5 marks)**

(b). Explain the Christian understanding of marriage. **(7 marks)**

(c). State the problems related to family life today. **(8 marks)**

6. (a). Outline seven moral duties of employers to employees. **(7 marks)**

(b). Mention seven factors that determine a just wage. **(7 marks)**

(c). Show how retrenchment of workers affect their families. **(6 marks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

311/1 **History and Government** Paper 1

Time: 2½ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *This paper consists of three sections A,B and C*
- *Answer **All** questions in section A, **three** questions in section B and **two** Questions in section C*
- *Answer to all question must be written in the answer booklet provided*
- *Candidate should answer the questions in English*

FOR EXAMINER USE ONLY

SECTION	QUESTION	MAX SCORE	SCORE
A	1-17	25	
B		15	
		15	
		15	
C		15	
		15	
TOTAL SCORE			

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SECTION A (25 MARKS)

Answer All the Questions in This Section

1. Give **two** ways in which archeologists identify a pre-historic site. **(2 marks)**
2. State the **main** natural factor that caused the Abagusii to migrate from Mount Elgon region to their present homeland. **(1 mark)**
3. State the **main** factor that contributed to the growth of the city states along the Kenyan Coast before 1500AD. **(1 mark)**
4. Give **one** way in which the translation of the Bible into vernacular languages facilitated the spread of Christianity in Kenya. **(1 mark)**
5. Give **one** economic responsibility of a Kenyan citizen. **(1 mark)**
6. Identify **one** economic factor that promotes national unity in Kenya. **(1 mark)**
7. Identify **one** way in which elders resolve conflicts in the community. **(1 mark)**
8. State **two** similar grievances of the Taita Hills Association and the Ukamba Members Association to the colonial government. **(2 marks)**
9. Outline **two** ways in which the ex-soldiers of the Second World War contributed to the struggle for independence in Kenya. **(2 marks)**
10. What was the **main** contribution of Prof Wangari Maathai to the development of Kenya? **(1 mark)**
11. State **two** functions of the Supreme Court in Kenya. **(2 marks)**
12. Give **two** qualifications that a person must fulfil in order to be allowed to register as a voter in Kenya. **(2 marks)**
13. State **two** functions of the secretary to the cabinet in Kenya. **(2 marks)**
14. Name **two** branches of the National Police Service in Kenya. **(2 marks)**
15. Give **one** reason for the adoption of the Harambe strategy in Kenya after independence. **(1 mark)**
16. Identify **two** types of land ownership in Kenya.
17. Give the **main** function of the Commission on Revenue Allocation in Kenya. **(1 mark)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SECTION B (45 MARKS)

Answer Any THREE Questions in this Section

18. (a) Identify **five** ways in which the Kenyan communities interacted during the pre-colonial period. **(5 marks)**

(b) Describe the social organization of the Nandi during the pre-colonial **period.** **(10 marks)**

19. (a) Give **five** reasons why Seyyid Said transferred his capita from Muscat to Zanzibar. **(5 marks)**

(b) Explain **five** reasons that led to the decline of the Portuguese rule along the East African Coast. **(10 marks)**

20. (a) Why did the British use indirect rule in Kenya? **(5 marks)**

(b) Explain **five** reasons as to why the Kenyans were defeated by the British during the Scramble and Partition. **(10 marks)**

21. (a) Identify **five** challenges faced by the Ugandan railway builders. **(5 marks)**

(b) Explain **five** problems faced by the early political movements in Kenya between 1919 - 1939. **(10 marks)**

SECTION C - 30 MARKS

Answer Any Two Questions in this Section

22. (a) Identify **five** factors that limit National Unity. **(5 marks)**

(b) Explain **five** importance of National integration in Kenya. **(10 marks)**

23. (a) Identify **five** principles of democracy. **(5 marks)**

(b) Explain **five** roles of harambee in nation building in Kenya. **(10 marks)**

24. (a) State **five** functions of the County Governor in Kenya. **(5 marks)**

(b) Explain **five** challenges facing county government in Kenya. **(10 marks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

311/2 **History and Government** Paper 2

Time: 2½ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

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

b) *Answer all questions in section A.* ***THREE*** *questions from section B and* ***TWO*** *questions from section C.*

c) *Answers to all the questions MUST be written in the answer booklet provided.*

d) *Candidate should answer the questions in English*

FOR EXAMINER'S USE ONLY

SECTION A	SECTION B				SECTION C			TOTAL
1-17	18	19	20	21	22	23	24	

SECTION A (25 MARKS)

Answer All the Questions in This Section

1. Define the term monarchical government' **(1 mark)**

2. Mention any two characteristics of Dryopithecus. **(2 marks)**

3. Give the major invention of the middle Stone Age Period. **(1 mark)**

4. Give the main item of trade from North Africa during the Trans-Saharan trade. **(1 mark)**

5. State the main reason why Agriculture developed in Egypt. **(1 mark)**

6. Mention two urban centres that emerged as a result of early Agriculture in Mesopotamia. **(2 marks)**

7. State one advantage of using solar as a source of energy. **(1 mark)**

8. List two factors for the growth of Meroe. **(2 marks)**

9. Give one function of the Emirs during the British indirect rule in Northern Nigeria**.(1 mark)**

10. Name two titles used to refer to the Swahili officials in the administration of German in Tanganyika. **(2 marks)**

11. Identify two characteristics of the French policy of assimilation. **(2 marks)**

12. Mention one type of spirit in the Shona kingdom in the 19th century. **(1 mark)**

13. Give two duties of Lukiiko in the Buganda kingdom. **(2 marks)**

14. Give two Nations which belonged to the Triple Entente during the First World War.**(2 mks)**

15. State two functions of the international court of justice (ICJ) as an organ of the League of Nations. **(2 marks)**

16. Identify the immediate cause of the First World War. **(1 mark)**

17. Name the European power that colonized the Democratic Republic of Congo. **(1 mark)**

SECTION B (45 MARKS)

Answer Any Three Questions in This Section

18 a). Give three stages in the evolution of man before Homo erectus. **(3 marks)**

b). Describe six ways in which the discovery of fire by early man improved his way of life. **(12 marks)**

19.a). Give three disadvantages of mobile phones. **(3 marks)**

b). Discuss positive impact of Telecommunication. **(12 marks)**

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20. a). **Outline <u>five</u>** methods which were used by Europeans to acquire Colonies in African **(5 marks)**

b). Explain <u>five</u> reasons why Africans were defeated during the majimaji rebellion. **(10 marks)**

21.a). Outline **<u>five</u>** grievances by Africans against apartheid in South Africans. **(5 marks)**

b). Explain <u>five</u> challenges faced by African nationalist in their struggle for majority rule in South Africa. **(10 marks)**

<u>SECTION C: 30 MARKS</u>

<u>Answer Any Two Questions In This Section.</u>

22. a). Name three communes that were established by French in Senegal during the colonial period. **(3 marks)**

b). Describe the structure of British colonial administration in Northern African. **(12 marks)**

23. a). What were the causes of the First World War. **(5 marks)**

b). Explain five reasons why Allied Powers won the world war one (WWI) **(10 marks)**

24. a). Name three permanent members of the United Nations Security Council. **(3 marks)**

b). Explain six ways in which the United Nations provides humanitarian assistance**.** **(12 marks)**

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

312/1 **Geography** Paper 1

Time: 2¾ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES.

a) *Write your **NAME, SCHOOL** and **INDEX NUMBER** in the spaces provided above.*

b) ***Sign** and write **date** of examination in the spaces provided.*

c) *This paper has two sections: **A** and **B**.*

d) *Answer **all** questions in section **A**, **question 6** and any **two other** questions from section **B**.*

FOR EXAMINERS USE ONLY

SECTION A

QUESTION NUMBER	1	2	3	4	5	SUB TOTAL
MARKS						

SECTION B

QUESTION NUMBER	6	7	8	9	10	SUB TOTAL
MARKS						

TOTAL

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SECTION A

Answer All the Questions in This Section

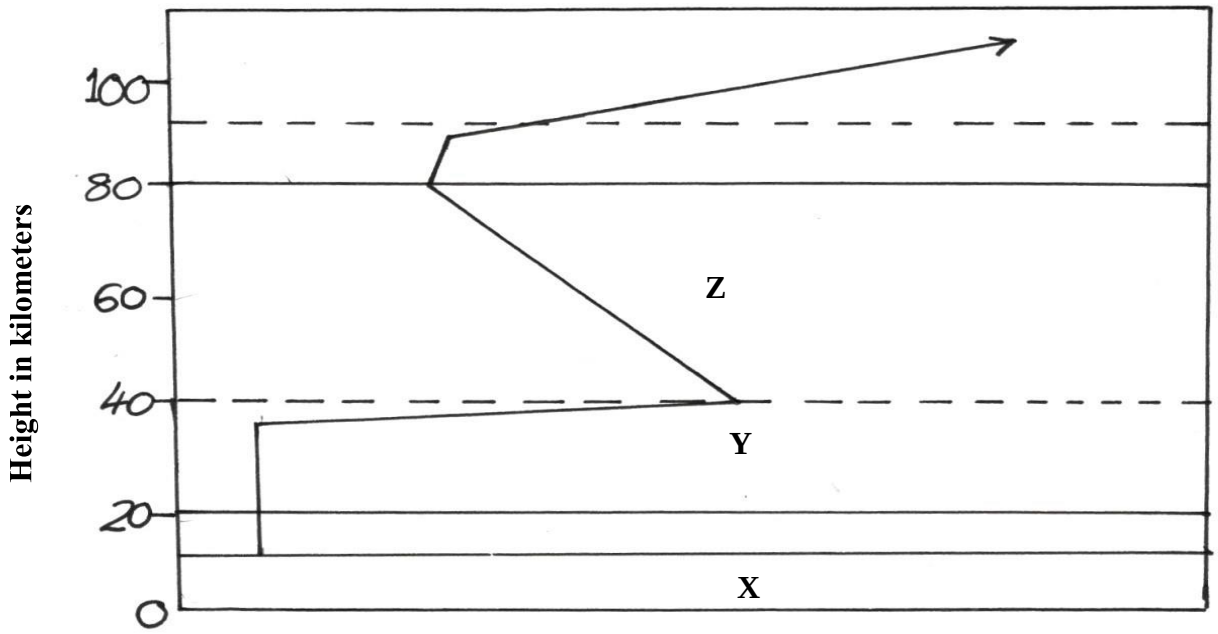
1. **(a)** State how each of the following forces influence the shape of the earth.

(i) Gravitational force **(1mk)**

(ii) Centrifugal force **(1mk)**

(iii) Centripetal force **(1mk)**

2. The diagram below depicts the structure of the atmosphere. Study it and answer the questions that follow.



Identify the marked parts. **(3mk)**

State any two characteristics of layer marked X above. (ii) **(2mks)**

3. List three importance of the carbon dioxide found in the atmosphere. **(3mks)**

4. **(a)** Define the term lake. **(2mks)**

State and explain any four reasons why most of the lakes in Rift-valley are saline. **(8mks)**

5. Give ways in which a lake acquires its load. **(2mks)**

SECTION B

Answer Question 6 and Any Other Two Questions from this Section.

6. Study the map of KISUMU EAST 1:50,000provided and answer the following questions.

(a) i) Convert the ratio scale into statement scale. **(2 marks)**

ii) Identify two methods that have been used to represent relief on the map. **(2 marks)**

iii) Name three physical features found in grid square 0298. **(3 marks)**

(a) **i)** Give the six figure grid reference of the Air Photo Principal point to the East of Obumba School. **(2 marks)**

(c) Describe the drainage of the area covered by the map. **(4 marks)**

(d) i) Citing evidence, name three social services offered in the area covered by the map.**(6 mks)**

ii) Explain three factors that may have influenced the distribution of settlements in the area. **(6 marks)**

7. (a) (i) Distinguish between a solfafara and a mofelfe. **(2mks)**

(ii) Name two areas in Kenya where geysers are found. **(2mks)**

(iii) State two economic benefits of geysers. **(2mks)**

(b) (i) With the aid of well labelled diagrams, describe how a caldera is formed by violent explosion. **(8mks)**

(ii) Explain three negative effects of volcanicity in Kenya. **(6mks)**

(d) Your class intends to carry out a study on a volcanic landscape.

State two objectives of the study. **(2mks)**

State three follow-up activities you are likely to carry out. **(3mks)**

8. (a)(i) What is a continental shelf? **(3mks)**

(ii) State three characteristics of a continental shelf. **(3mks)**

(b) (i) Distinguish between a constructive and destructive wave. **(2mks)**

(ii) Explain three processes of a wave erosion. **(6mks)**

With the aid of well labelled diagrams, describe the formation of the following features;

(i) An offshore bar **(4mks)**

(ii) Tombolo **(4mks)**

Suppose you carried out a field study along the Kenyan coast.

List two features of coastal emergence you are likely to have identified. **(2mks)**

State three benefits of emerged coastal features to man you are likely to have identified. **(3mks)**

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9. (a) (i) Distinguish between natural vegetation and derived vegetation. **(2mks)**

(ii) State two reasons why mountain tops have no vegetation. **(2mks)**

(b) Give four advantages of coniferous forests to the climatic conditions. **(2mks)**

(i) Explain three factors that have led to the decline of natural grasslands in Kenya. **(6mks)**

(ii) Identify four areas which experience Mediterranean climate. **(4mks)**

You are to carry out a field study on a forest around your school.

(i) State three advantages of rampling part of the forest. **(3mks)**

(ii) Give reasons why you would require a working schedule. **(4mks)**

10. (a) Explain why the following factors influence rainfall:

(i) Air masses **(2mks)**

(ii) Forests **(2mks)**

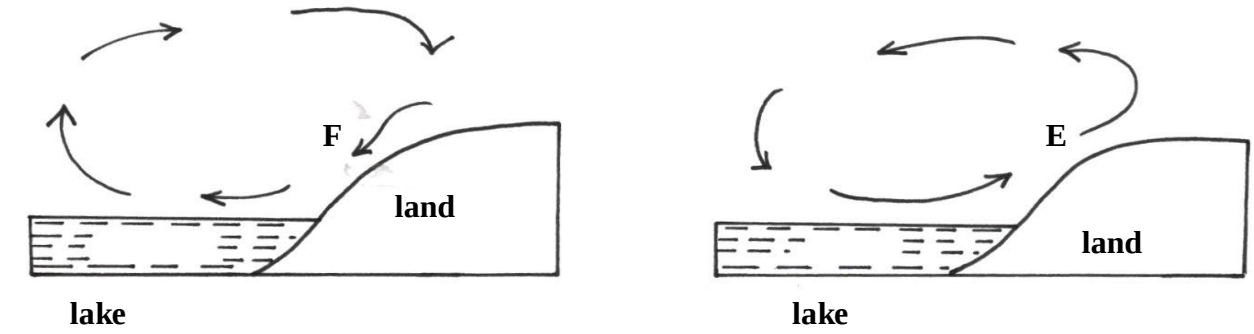
(iii) Water bodies **(2mks)**

Give four reasons why the recording of data at a school weather station may be inaccurate. **(4mks)**

(i) What is the Inter tropical Convergence Zone (ITCZ)? **(2mks)**

(ii) State the characteristics of the ITCZ**.** **(5mks)**

The diagram below represents the flow of air currents. Use them to answer the question a.



Name the air current marked F. **(1mk)**

Why does the air current marked E blow during the day? **(2mks)**

Explain the problems associated with convectional rainfall in the lake region of Kenya**.** **(2mks)**

Explain how air cools as it rises into the atmosphere. **(3mks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

312/2 **Geography** Paper 2

Time: 2¾ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

(a) *This paper has two sections: A and B.*

(b) *Answer all questions in section A*

(c) *Answer question 6 and any two other questions from section B.*

FOR EXAMINER'S USE ONLY

SECTION A

Question number	1	2	3	4	5	Sub total
Marks						

Question number	6	7	8	9	10	Sub total
Marks						

Grand total

SECTION A.

Answer All the Questions in the Section

1. (a) Name **two** provinces in Canada where wheat is grown in large scales. **(2 marks)**

(b) List **three** economic factors that influence agriculture. **(3 marks)**

2. (a) Name **two** horticultural crops grown in Kenya. **(2 marks)**

(b) State **three** reasons why horticulture is more developed in the Netherlands than in Kenya. **(3 marks)**

3. (a) State **three** reasons why marine fisheries in Kenya are underdeveloped. **(3 marks)**

(b) State **three** ways through which fish farming contributes to the economy of Kenya. **(3 marks)**

4. (a) Differentiate between transport and communication. **(2 marks)**

(b) State **three** modern means of communication used in Kenya besides cellphones. **(3 mrks)**

5. The table below represents information on population change in Kenya by region between years 2000 and 2005.

Region	Population in Millions	
	Years	
	2000	2005
Nairobi	2.229	2.751
Central	3.882	4.038
Coast	2.662	2.927
Eastern	4.840	5.120
North-Eastern	1.054	1.438
Nyanza	4.598	4.916
Rift-Valley	7.386	8.366
Western	5.532	3.885
Total	**30.183**	**33.441**

(a) Which region had the highest change in population between 2000 and 2005? **(2 marks)**

(b) Calculate the percentage increase in population in Kenya between 2000 and 2005. **(2 mrks)**

SECTION B

Answer Question 6 and any other two questions from this section.

6. Study the photograph below and use it to answer question (a).



(a) (i) Name the type of photograph shown. **(1 mark)**

(ii) Draw a rectangle measuring 15cm by 10cm to represent the area of the photograph. **(1 mrk)**

(iii) On the rectangle, draw a sketch of the photograph and label three physical features. **(3 mrks)**

(iv) Explain **two** physical conditions that would discourage setting up of a game park in the area shown on the photograph. **(4 marks)**

(b) Apart from national parks, outline **four** other ways in which wildlife is conserved in Kenya. **(4 marks)**

(c) Give **four** reasons why domestic tourism is being encouraged in Kenya. **(4 marks)**

(d) Explain **four** factors which make switzerland receive more tourists than Kenya. **(8 marks)**

7. (a) (i) What is forestry? **(2 marks)**

(ii) Explain **three** factors that favour the growth of natural forests on the slopes of Mt. Kenya. **(6 marks)**

(iii) State **five** factors that have led to the reduction of the area under forest on the slopes of Mt. Kenya. **(5 marks)**

(b) Explain **four** measures that the govrnment of Kenya is taking to conserve forests in the country. **(8 marks)**

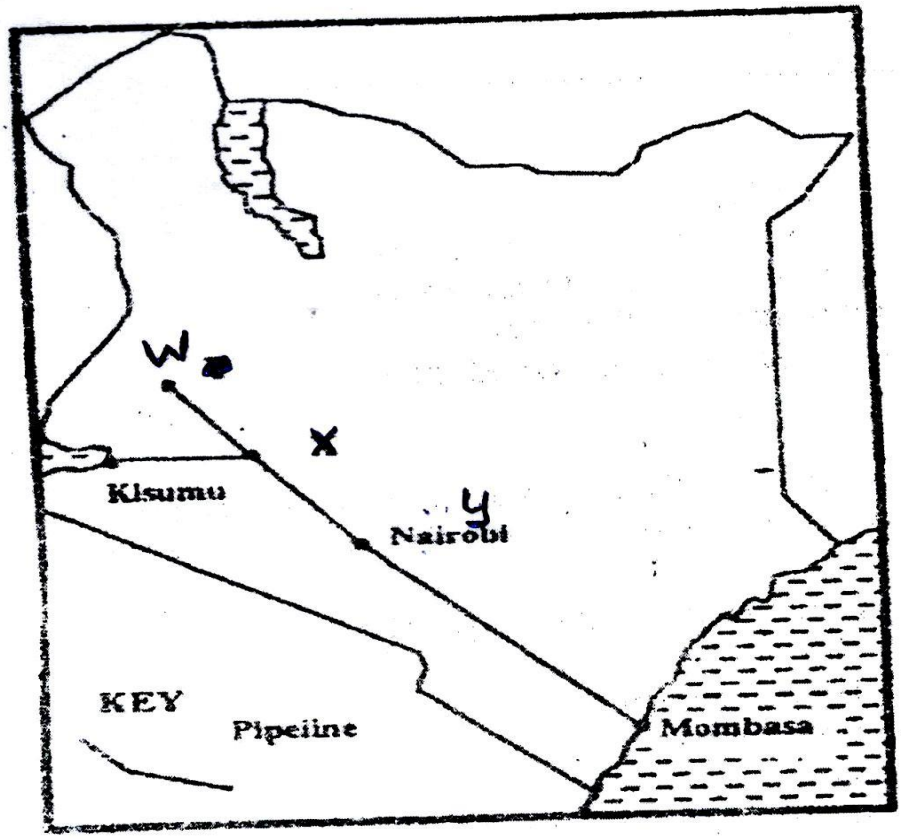
(c) Give the differences in the exploitation of softwood forests in Kenya and Canada under the following sub-headings:

(i) Period of harvesting **(2 marks)**

(ii) Transportation **(2 marks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

8. (a) The map below shows some major tea growing areas in Kenya.



(i) Name the areas marked W, X and Y. **(3 marks)**

(ii) State **four** physical conditions that favour tea growing in Kenya. **(4 marks)**

(b) The table below shows tea production in Kenya for two years.

Years	Tea Produced (in tonnes)
1975	56,000
1985	137,000

(i) Calculate the percentage increase in tea production over the ten years period between 1975 and 1985. **(2 marks)**

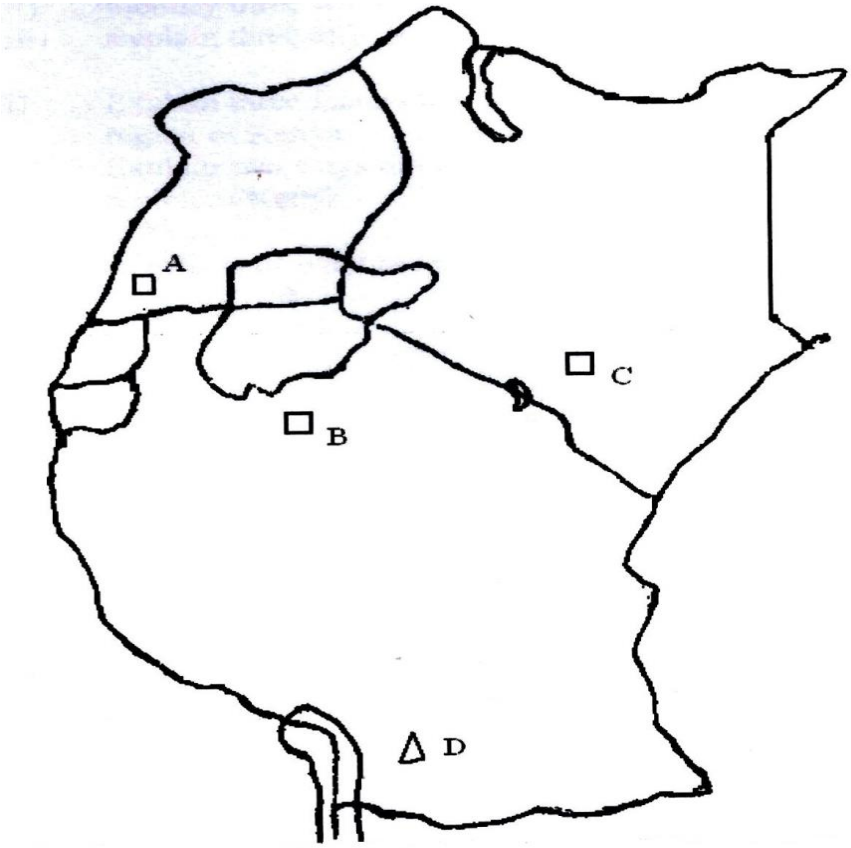
(ii) Give **two** reasons why there was such an increase in tea production over the given period. **(2 marks)**

(c) Describe the stages through which tea is processed from picking to the time its ready for marketing. **(6 marks)**

(d) Explain **four** problems experienced in small scale farming in Kenya. **(8 marks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

9. A map of East Africa showing minerals distribution.



Use the map of East Africa above to answer question (a).

(a) (i) Name the mineral mined at points A, B, C, D. **(4 marks)**

(ii) Give **three** by products obtained when crude oil is refined. **(3 marks)**

(b) (i) Explain how trona is processed after reaching the factory. **(7 marks)**

(ii) List **three** uses of soda ash. **(3 marks)**

(c) Explain **four** effects of the rising prices of crude oil in the economy of Kenya. **(8 marks)**

10. (a) (i) Apart from water and air pollution, name **two** other types of pollution. **(2 marks)**

(ii) Identify **three** ways through which water is polluted **(3 marks)**

(iii) Explain **three** effects of air pollution on the environment. **(6 marks)**

(b) (i) Explain **three** factors that lead to frequent flooding in the lake region of Kenya. **(6 marks)**

(ii) Explain **two** ways through which floods are controlled in the lake region of Kenya. **(4 marks)**

(c) State **four** effects of wind as an environmental hazard in Kenya. **(4 marks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

101/1 **English** Paper 1

(Functional Skills, Cloze Test and Oral Skills)

Time: 2 Hours

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

Instructions to the Candidates

- Write your full name and admission number in the spaces provided above.
- Sign and write the date of examination in the spaces provided above.
- Answer **ALL** the questions in this paper.
- All your answers must be written in the spaces provided in this paper.

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1 2 3	20 10 30	
Total Score		

For Marking Schemes Contact 0746-222-000 / 0742-999-000

1. You are the secretary of ***Tujitahidi Drama Club.*** The club has just had its second meeting in which members discussed new member registration, upcoming drama festivals and end of the year party among others. During the meeting, two issues from the previous meeting came up. Seven members attended the meeting and two of them including the club treasurer sent apologies. No one knows the whereabouts of two other members. The patron of the club also attended the meeting. Write the minutes. **(20 marks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

2. CLOZE TEST

Most parents innocently believe_____(i)__ parental guidance with regard to television watching means making sure that your child does not sit close to the set. They believe that sitting close to the TV _____(ii)__ hurt their eyes. Unfortunately, the harmful effects of electronic media go much deeper _____(iii)_ just physiological damage of X-rays on the brain and eyes. This is especially so with children under the _____(iv)__ of seven whose senses are only _____(v)___ beginning to develop. Electronic media has been discovered to hamper young children's _____(vi)__ to create their own inner pictures which is the foundation of all creativity. Imitation is the key _____(vii)__ this early age. A child can only be truly human from human beings themselves; not from electronic gadgets _____(viii)_ do faithfully represent humanness. Studies show consistently how watching TV slants creative play in young children. Nightmares _____(ix)__ ensue from the violent scenes watched. Television anaesthetizes our higher brain function _____(x)_ disrupts the balance and interaction between left and right hemispheres.

3. ORAL SKILLS

A. *Read the short story below and answer the questions that follow.*

One day, an eagle with great and strong wings saw a lamb. He swooped down and with great ease grabbed the hapless animal off its nest. A crow witnessed the deed and thought he could also do the same. So filled with this idea, he flew into the air and came rapidly on the back of a ram and fluttered desperately. The ram simply rolled over and crushed it.

QUESTIONS

(i) Mention two things you would do in order to capture the audience's attention before you begin to narrate this story. **(2 marks)**

……

……

(ii) In which two ways would you know that the audience is fully participating in the performance? **(2 marks)**

……

……

……

(iii) Identify one onomatopoeic word employed in this narrative. **(1 mark)**

……

B. The underlining indicates the stressed word in the sentences below. Briefly explain what each sentence means **(3 marks)**

(i) David hit Joan today.

_____

_____

(ii) David hit Joan today.

_____

_____

(iii) David hit Joan today.

_____

_____

C. You recently attended an interview which you failed. Mention some of the reasons that could have contributed to your failure. **(4 marks)**

……

……

……

……

……

D. For each of the following utterances indicate whether you would say it with rising or falling intonation. **(4 marks)**

(i) Which factory does John work?

_____

(ii) Did you say you are moving out?

_____

(iii) How do you rate your parents?

_____

(iv) They offer very delicious food in that hotel.

_____

E. For each of the following words, write another word pronounced the same way as the ones given below: **(4 marks)**

(i) Ate _____

(ii) Queue _____

(iii) Heard _____

(iv) Weak _____

F. In the following sets of words, identify speech sound that is odd. **(3 marks)**

(i) Gas, Germinate, Grace, Guise.

(ii) Warm, Way, Wrist, Wage.

(iii) Supper, Cut, Luck, Super.

G. She sells sea shells at Seychelles shore.

(i) Identify the above genre **(1 mark)**

_____

(ii) Give three functions of the genre. **(3 marks)**

……

……

……

H. Give three instances in which you can tell it's your turn to speak in a discussion. **(3 marks)**

……

……

……

……

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

101/2 **English** Paper 2

(Comprehension, Literary Appreciation and Grammar)

Time: 2½ Hours

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) *Write your full name and admission number in the spaces provided above.*
b) *Sign and write the date of examinations in the spaces provided above.*
c) *Answer **all** questions in this paper.*
d) *All your answers must be written in the spaces provided in this question paper.*

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	25	
3	20	
4	15	
Total score	**80**	

Read the passage provided below and answer the questions that follow: (20 marks)

At the start of this week, 1.3 million people had officially died on account of Covid-19 worldwide. According to the World Health Organization, another 55 million people had contracted the virus. It was a bitter-sweet week as far as efforts to battle the virus are concerned. On one hand was the great news of a second vaccine with a 95 per cent efficacy rate. We also saw leading capitals tighten travel, school ban and other containment measures as the second wave of the pandemic batters many regions.

Locally, the situation seems to mirror the global positions, albeit on a less scale, but the numbers of fatalities and infections are rising. We have lost 1,300 compatriots, with 73,000 more having encountered the virus. A casual glance on our neighbourhoods, social media and obituary pages back this, suggesting the official tally might be conservative due to unreported cases. The occasional infection of a public figure reminding usthat we are not out of the woods yet. Medics and scientist continue burning the midnight oil to understand Covid-19 better and its symptoms, or lack of them witnessed in different people.

Though clear patterns of symptoms in fever, fatigue, breathing difficulty and loss of taste and smell were identified early, the last few months have seen some patients report a wide range of unexplained signs like longer infection periods and mental challenges such as anxiety, memory problems even depression. Even more intriguing has been the asymptomatic cases and cases of certain people in a family contacting illness while others remain healthy. Add that to the fact that, Africa appears to suffer disproportionately lower rates of infection and mortality, its dilapidated health systems notwithstanding.

It is going to take time before someone can explain this incongruent picture. What is clear in the interim is that our world has dramatically changed, perhaps for the better. Traditionally, counties have spent colossal amounts of money building armies to deter global bullies. Now it appears potential threats to humanity must be re-assessed and budgets adjusted. It might be an unknown virus and not a nuclear bomb that will bring the world to its knees. The most secure nations are likely to be those with highly diversified risk registers and commensurate investment to build capacity to confront such.

The early travel bans and overflowing hospitals in the developed world was another rebuke to developing nations to priorities health. The fact that some regions have been affected more than others is another sobering lesson. With the 21st century having experienced its fair share of protectionist tendencies and inward-looking policies; the pandemic has highlighted the need for concerted effort to ensure no part of the globe is left behind in modernising is health systems. Who knows, a future pandemic, may see the less affected regions serving as refuge centres and provided manufacturing hubs for drugs.

Perhaps it is time o build longer bridges and not towing walls. The pandemic has shown the spotlight on the place and role of global information systems and co-operation among nations. The future will likely be more secure if pandemics and other threats are reported early and containment measures quickly activated Covid-19 has painfully reminded us of the dividend of tackling a problem early and at source, before it grows wings.

Questions

a) Why are the efforts to battle the virus bitter-sweet? **(2 marks)**

……

……

……

b) What measures were put in place to contain the 2nd wave of infection? **(2 marks)**

……

……

……

c) Explain these expressions as used in the passage; **(2 marks)**

i) Not out of the woods yet

……

……

ii) Burning the midnight oil.

……

……

d) What are the symptoms of Covid-19. **(3 marks)**

……

……

……

……

e) Identify 2 instances of irony in the passage. **(4 marks)**

……

……

……

……

f) In point form, summarise the lessons the pandemic has highlighted. **(4 marks)**

……

……

……

……

……

g) Explain the meaning of the following words as used in the passage; **(3 marks)**

efficacy

……

……

Asymptomatic

……

……

Colossal

……

……

2. EXCERPT (25 MARKS)

Read the excerpt below and answer the questions that follow

Mrs. Linde: I think I have the right to be.

Nora: I think so, too. But now, listen to this; I too have something to be proud and glad of.

Mrs. Linde: I have no doubt you have. But what do you refer to?

Nora: Speak low. Suppose Torvald were to hear! He mustn't on any account – no one in the world must know, Christine, except you.

Mrs. Linde: But what is it?

Nora: Come here (*pulls her down on the sofa beside her*)

Now I will show you that I too have something to be proud and glad of. It was I who saved Torvald's life

Mrs. Linde: " saved"? how?

Nora: I told you about our trip to Italy. Torvald would never have recovered if he had not gone there-

Mrs. Linde: Yes, but your father gave you the necessary funds
Nora: (*smiling*) yes, that is what Torvald and all the others think, but-
Mrs. Linde: But –
Nora: Papa didn't give us a shilling. It was I who procured the money,
Mrs. Linde: You? All that large sum?
Nora: Two hundred and fifty pounds. What do you think of that?
Mrs. Linde: But, Nora how could you possibly do it? Did you win a prize in the Lottery?
Nora: (*contemptuously*) In the Lottery? There would have been no credit in that.
Mrs. Linde: But where did you get it from, then?
Nora: (*humming and smiling with an air of mystery*)
Hm,hm! Aha!
Mrs. Linde: Because you couldn't have borrowed it.
Nora: Couldn't I? why not?
Mrs. Linde: No, a wife cannot borrow without her husband's consent.
Nora: (*tossing her head*) Oh, if it is a wife who has any head for business – a wife who has the
wit of be a little bit clever, -
Mrs. Linde: I don't understand it at all, Nora.
Nora: There is no need you should. I never said I had borrowed the money. I may have got it
some other way. (Lies back on the sofa) perhaps I got it from some other admirer. When anyone is as attractive as I am.
Mrs. Linde: You are a mad creature
Nora: Now you know you're full of curiosity, Christine
Mrs. Linde: Listen to me, Nora dear, haven't you been a little bit imprudent?
Nora: (Sits up straight) Is it imprudent to save your husband's life?
Mrs. Linde: It seems to me imprudent, without his knowledge to –

Questions

a) What happened just before this excerpt? **(4 marks)**

……

……

……

……

……

……

b) Highlight two major themes that come out in the excerpt. **(4 marks)**

……

……

……

……

……

c). From this excerpt

Identify and illustrate any one-character traits of **(4 marks)**

i). Nora

……

……

ii). Mrs. Linde

……

…

……

d). Compare the life experience of both Nora and Mrs. Linde and comment on what it reveals about women in society. **(4 marks)**

……

……

……

……

……

e). Explain the effectiveness of dramatic irony in Nora's revelation. **(4 marks)**

……

……

……

……

……

f). I think I have the right to be. (Add *a question tag)* **(1 mark)**

……

……

g) Explain the meaning of the following words as used in the excerpt. **(3 marks)**

(i) Contemptuously

……

……

(ii) Consent

……

……

(iii) Imprudent

……

……

Q3. Read the narrative below and answer the questions that follow. (20 marks)

At the beginning of creation, Mwene Nyaga. Ngai, the creator and provider for all mankind called one of his servants Gikuyu. He said to him, "My son Gikuyu, I am going to give you your share of land. The land I am going to give you is full of ravines, rivers, valleys, forests and plenty of game for you to hunt for your food. The land is fertile and your children andyour children's children will never go hungry if you tilt it well.

Gikuyu stood still with disbelief. Mwene Nyaga saw Gikuyu's hesitation. He took him to his residence on top of the mountain of mystery, "kirinyanga" where He resided. From here, he commanded a good view of all his lands. He therefore, wanted Gikuyu to see for himself all the land he had been given. He showed him all the land and its beauty. He said, "My son, all this is yours.". Then He sat back and watched Gikuyu's happiness as he moved from place to place, trying to locate the boundaries to his land. But no matter how hard he looked, his land seemed to roll for miles and miles. Having inspected the panorama of his land, he quickly composed himself and ran to Mwene Nyaga's feet and cried with happiness thanking Him for the great gift. He was sure that he would be happy ever after. But then, he felt a kindof loneliness and his happiness subsided. What would he do with all that land all by himself? Mwene Nyaga knew what was going on in Gikuyu's mind. As he was leaving, Mene Nyaga called him back and pointed to him a spot far, far off in the middle of the country, where a it tree, Mukuyu, grew. He ordered Gikiyu to settle there and call this place; "Mukurwe wa Nyagathanga". Whenever Gikuyuj was in need of Mwene Nyaga's help in whatever way, he should offer sacrifice to Him at the fig tree. He should raise his hands towards Kiringaga, Mwene Nyaga's residence, and

state all his problems. Mwene Nyaga will definitely see him and come to his rescue. He also told him that he had given him a present, the most precious present in his life and that he would get

he presents on his arrival home, his new home.

Gikuyu thanked Mwene Nyaga and being unable to contain is curiosity any longer, he hurried straight to Mukurwe wa Nyagathanga. To his surprise, seatedthere was a young beautiful woman whom he called Mumbi (Moulder or creator). They lived together as man and his wife and were blessed with nine daughters but no sons. The daughters were: Wachera, Wanjiku, Wairimu, Wambui, Wangari, Wanjiru, Wangui, Mwithaga and Waithera. Gikuyu needed an heir and his not having a son disturbed him. he then remembered Mwene Nyaga's advice, "I'll come to your rescue".

He organized a sacrifice at the Mukuyu tree. He slaughtered a ram and a kid from his flock and poured their blood and fat on the trunk of a sacred tree. He went to his house and called Mumbe and their daughters. They roosted some meat and offered it to Mene Nyaga. They raised their hands towards Kiringaga and prayed, "Thaai thathaiya Ngai thaai…… "He later left and went home.

Mwene Nyaga quickly answered Gikuyu's prayers. On the following morning Gikuyu went to the sacred tree and he couldn't believe his eyes when he found seated near the tree, nine strong young men. He was overcome with joy and he looked up to the mountain and thanked Mwene Nyaga, his benefactor. He welcomed the nine young men and he took them to his home where he introduced them to his wife and daughters. Food was cooked for them and a after bathing and eating they went to sleep.

The next morning, the nine men woke up early in the morning havinghad a good night's sleep. After the morning meal, Gikuyu called them outside to discuss marriage. He told them they would marry his daughters on one condition: they had to live with them in his land. By this time, the men had already made their choices. They were so fascinated by the daughter's beauty and the father's kindness that they agreed to his proposal. Gikuyu and Mumbi were overjoyed for they now had sons to inherit their vast lands. The daughters, on the other hand had already started to show their preference of the men. They were also happy when the men agreed to their father's wish for, they knew they now had men to protect them and give them company.

Gikuyu did not wait long before making arrangements for his daughters' wedding according to the Gikuyu customary laws. He did not ask for bride wealth from the young men for he knew they did not have any and in actual fact they were a blessing to him. They were, however, united der one name "Mbari ya Mumbi" which means Mumbi's family group. This was in honour of their mother Mumbi.

Gikuyu and Mumbi were the heads of "Mbari ya Mumbi" and the nine families remined under them. They are the mother and father of the Gikuyu people.

As the years passed, Gikuyu and Mumbi become older and older and eventually the died. Before they died, Gikuyu called all his daughters and their husbands. He told them, "My children, as you can see, your mother and I are about to leave you but before we go, we would like to leave

you wit these words. All the land and whatever else we possess is yours. Divide if equally among yourselves.

Remember that on finger cannot kill a louse"

With these words, Kikuyu and Mumbi breathed their last breath.

The nine families continued to live together but the number of their children and grandchildren were increasing. They become so many that it was impossible for the families to live together anymore. They called a meeting where they resolved that each family should call together all its children and grandchildren and live together as one clan (Muhiriga). The clans were to be called after the nine daughters of Gikuyu and Mumbi. This decision is the basis of the nine principal Gikuyu clans. They are Acheera, Atachiko, Airimo (or Agathigia), Ambui, Agari, Anjiru,Ethaga, and Aitherando. The nine clans lived in Gikuyu's land but they occupied different parts of it.

Questions

(a) Classify the above narrative fully. **(2 marks)**

……

……

……

(b) Gikuyu received his gift with mixed feelings. Why? **(4 marks)**

……

……

……

……

……

(c) "Divine intervention is real" how true is this statement in light of what happens in the narrative. **(3 marks)**

……

……

……

……

……

(d) Comment on the use of at least one feature of style in this narrative **(2 marks)**

……

……

……

(e) Gikuyu thanked Mwene Nyaga and being unable to contain his curiosity any longer, he hurried straight to MukurwowaNyagathanga

(Begin: **(1 mark)**

Having

……

……

……

(f). Give and illustrate at least two-character traits of Mwene Nyaga. **(4 marks)**

……

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……

(g). With illustrations, identify two themes evident from this tale. **(4 marks)**

……

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……

Q. 4GRAMMAR (15 MARKS)

(a) *Rewrite the following sentences according to the instructions given* ***(3 marks)***

(i) if I were the president, I would ensure all the bandits were rounded up. (Begin 'Were….)

……

……

(ii) I like Nairobi more than Machakos (Use prefer)

……

……

(iii) The army has rounded all the bandits (Rewrite in passive)

……

……

(b) Use the correct form of the words in brackets. **(3 marks)**

(i) The rebels were subjected to **…….** (relent) bombarding by the loyal soldiers.

(ii) The **…….**(certain) of the petition outcome has made him very nervous.

(iii) No single female candidate won the **……..**seat in the recently conducted elections (Governor)

(c) Replace the following phrasal verbs with one word **(2 marks)**

(i) Mosonik rarely had fare home because he was wasteful in spending

……..

(ii) Take care of the utensils, they are easily broken

……

(d) Fill in the blanks spaces in each sentence with the most appropriate choices of word from those Provided **(3 marks)**

(i) Odongo introduced Apundo and ……..(her/she) to his father

(ii) Mrs. Swazuri sent two students …….(i/me) and John out of her class.

(iii) We are better than ……..(they/them)

(e) Complete the following sentences with the correct from of the verbs in bracket. (3 marks)

(i) A concerted effort from all stakeholders ……..needed for good parenting. (be)

(ii) The tour ……the luggage amid protests (fling)

(iii) The counselors have …….an extensive healing programme (Begin)

(f) Rewrite the following sentences according to the instructions given after each. Do not change the meaning of the sentence.

(i) Taiyo was very beautiful and permuat could not help admiring her. (Begin so…..)

……

……

……

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

101/3 **English** Paper 3

Time: 2½ Hours

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

(a). Answer three questions only
(b). Question 1 and 2 are compulsory
(c). In question three answer only one of the optional texts you have prepared on.
(d). Where a candidate presents work on more than one optional text only the first one to appear will be marked.
(e). Each of your essay must not exceed 450 words.

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	20	
3	20	
Total score	60	

1. IMAGINATIVE COMPOSITION (20 Marks)

Either

(a). Write a composition beginning with:

Visiting a children's home was not my idea of spending my birthday, but I was determined to make the day interesting.

Or

(b). Write a story to illustrate the proverb:

A bird in hand is worth two in the bush.

2. COMPULSORY SET TEXT (20 Marks)

Blossoms of The Savannah by Henry Ole Kulet.

"Self-interest is a vice that whoever engages in it is bound to fail." Using Blossoms of The Savannah, write an essay to support this assertion.

3. OPTIONAL TEXT (20 Marks)

(a). Drama " David Mulwa Inheritance

"Lacuna Kasoo is a callous man devoid of any moral values." Discuss this statement using illustrations from Inheritance by David Mulwa.

(b). The Short Stories:

"A Silent Songs and Other Stories: Godwin Siundu (ed)

"When one is given power, he/she should use it only for good but more often than not, people use it for wrong purpose." Support this statement basing your argument from Nagulb Mahfouz's A man of Awesome Power.

(c) Novel "Artist of the Floating World: Kazuo Ishiguro

Discuss the use of Noriko's marriage negotiation as a means to drive this novel's plot forward while revealing Ono's past in the text An **Artist of The floating world** by **Kazuo Ishiguro** .

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

102/1 **Kiswahili** Paper 1

Time: 1¾ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

MAAGIZO

a) *Andika insha* ***mbili****. Insha ya kwanza ni ya* ***lazima*** *kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.*

b) *Kila insha isipungue maneno 400.*

c) *Kila insha ina alama 20.*

d) *Kila insha* ***lazima*** *iandikwe kwa lugha ya Kiswahili.*

Kwa Matumizi ya Mtahini Pekee

SWALI	UPEO	ALAMA
1	20	
	20	
Jumla	**40**	

For Marking Schemes Contact 0746-222-000 / 0742-999-000

MASWALI

1. Umetangazwa kuwa mwanafunzi bora katika mtihani wa kitaifa. Mwalimu Mkuu wa shule ya upili ya Tuamke amekualika katika shule hii yake kuwahutubia wanafunzi kuhusu kilichochangia ufanisi wako. Andika hotuba yako.

2. Fafanua hatua ambazo jamii imechukua kuimarisha maisha ya wanawake katika jamii.

3. Andika kisa kinachodhihirisha maana ya methali; Mui huwa Mwema.

4. Andika insha itakayomalizia kwa: Nilijitazama na kujidharau kwa nini sikuwafahamisha walimu jambo hilo mapema.

For Marking Schemes Contact 0746-222-000 / 0742-999-000

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

102/2 **Kiswahili** Paper 2

Time: 2½ Hours

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

MAAGIZO

- *Andika **Jina lako** na Nambari yako katika nafasi ulizoachiwa hapo juu.*
- *Tia**sahihi yako**kisha **tarehe** ya mtihani katika nafasi ulizoachiwa*
- *Jibu maswali yote katika nafasi ulizoachiwa katika kijitabu hiki cha majibu.*
- *Hakikisha kwamba kurasa zote zimepigwa chapa.*
- *Majibu yote ni lazima yaandikwe kwa lugha ya **Kiswahili.***

KWA MATUMIZI YA MTAHINI PEKEE

Swali	Upeo	Alama
1	15	
2	15	
3	40	
4	10	
JUMLA	**80**	

For Marking Schemes Contact 0746-222-000 / 0742-999-000

1. UFAHAMU: (Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali.

Tumeshuhudia baadhi ya ndugu wa familia moja wakiishi bila maelewano na wakati mwingine kukata kabisa kabisa mawasiliano. Hivi leo kuna familia ambazo haziwezi kuketi pamoja na kumaliza matatizo yao, na badala yake huchukua njia za vita ugomvi na hata pengine mauaji kama suluhisho la migogoro yao.

Kawaida maisha sio mstari mnyoofu. Kuna milima,mabonde,kona na hata mashimo. Ndiposa migogoro ni sehemu ya maisha yetu! Mara nyingi **haiepukiki**, isipokuwa kuipitia na kupata suluhisho. Ipo migogoro baina ya ndugu ambayo huleta kutoelewana,kukosesha amani nahata pengine kupoteza kabisa mahusiano. Ni wazi kuwa mahali popote wanapoishi watu au kufanya kazi pamoja, hapakosekani migogoro kwani hata vikombe vinapokuwa kabatini, havikosi kugongana.

Ukweli ni kwamba sote tunazaliwa na tabia tofauti, uwezo tofauti wa kuvumilia na hata kuamua kutenda. Katika mazingira yoyote ya kutoelewana, kiasi kikubwa cha busara, upendo, amani na imani huhitajika ili kuiondoa migogoro hiyo. Isipotafutiwa suluhisho ama utatuzi wake ukatendeka kwa jazba na chuki, migogoro ya ndugu katika familia hukua na kuzaa madhara makubwa.

Kuanzia utotoni au hadi uzimani, kunaweza kuwa na sababu nyingi ambazo huweza kupelekea kuleta tofauti baina ya ndugu. Kwa ujumla, ndugu ni watu unaowaamini, ambao hawatakupa kisogo. Walakini, hii sio wakati wote. Kwa bahati mbaya ukweli umetuonyesha kuwa kuna uhusiano wa kindugu ambao huisha vibaya. Sababu kubwa zikiwa ni mazingira ambayo ndugu wameishi ambayo wakati mwingine kuna upendeleo wa mzazi kwa mtoto au watoto fulani na kuwafanya wengine wahisi wivu, kutopendwa na kutengwa.

Zipo sababu za kiuchumi ambapo ndugu wengine katika familia wanafanikiwa zaidi kuliko wengine na kuwa na maisha bora zaidi kuliko wengine. Hali hii pia inaweza kuleta mfarakano kwa wale ambao hali zao ni tofauti na wengine, hasa iwapo hakukuwa na mazingira ya utangamano katika familia tangu awali.

Ndugu wa familia moja huzaliwa wakiwa na tabia tofauti. Kila mshiriki wa familia ana **haiba** na mtazamo wake tofauti katika masuala mbalimbali. Wengine hukasirika mara kwa mara, wengine ni wakimya sana, wapo walio wakorofi na wengine wanaopenda amani, hivyo jambo hili ni muhimu mno kulielewa mara inapotokea migogoro ili kutamua namna ya kupata suluhisho.

Jambo la kusikitisha zaidi ni kwamba migogoro hii wakati mwingine hupelekea kuvuruga mwelekeo wa maisha ya watoto hasa wakati wa ukuaji, kwani kulingana na tofauti zao, wapo wale wanaoamua kuondoka nyumbani wakiwa bado na umri mdogo na kuhamia mitaani.

Pamoja na migogoro kuwepo katika familia zetu ni vyema wazazi ama walezi waelewe tofauti za kifamilia zinavyoweza kuchangia mfarakano baina ya ndugu wa familia moja. Kwamba mzazi ama mlezi anapompendelea mtoto mmoja na kutokuwa karibu na mwingine, anatengeneza mazingira ya tofauti baina ya watoto wake. Ni vyema kuweka uwiano sawa baina ya watoto na familia ili kuweza kupunguza tofauti zinazoweza kujitokeza.

MASWALI

(a). Onyesha athari **tatu** za migogoro miongoni mwa ndugu katika familia. **(Alama 3)**

……

……

……

……

……

(b). Eleza mambo **matano** yanayochangia kuwepo kwa watoto wanaorandaranda mitaani kwa kurejelea kifungu. **(Alama 5)**

……

……

……

……

……

……

……

(c). Malezi yanachangia migogoro baina ya ndugu. Thibitisha kwa kurejelea kifungu. (**alama. 1)**

……

……

……

(d). Taja na ueleze mbinu nne za kimtindo zilizotumika katika kifungu. **(alama. 4)**

……

……

……

……

……

……

……

(e). Andika visawe vya maneno yafuatayo kama yalivyotumika katika kifungu. **(alama.2)**

(i) haiepukiki

……

(ii). haiba

……

2. MUHTASARI

Soma taarifa ifuatayo kisha ujibu maswali.

Migongoni mwa starehe ambazo Waswahili wamezihifadhi mpaka leo ni kutoleana hadithi na kutegeana vitendawili. Starehe hizo ambazo kwa kawaida hufanywa nje huwa njiani au uani, ama ndani chumbani au ukumbini, aghalabu hufanywa wakati wa magharibi au usiku baada ya kila mtu kumaliza kazi ya nyumbani,dukani,shambani,ofisini na kadhalika. Mambo haya yakitazamwa sana itaonekana kuwa hayakufanywa vivi hivi.

Tangu zamani wazee wa Kiswahili waliwakataza wana wao kucheza mchana. Hawakupenda vijana wajizoeshe uvivu kwa kupiga malapa. Walisadiki kuwa mwana ambaye hakukanywa dhidi ya utiriri huu hangeweza kujifaa yeye mwenyewe na wala hata watu wengine. Isitoshe nani

Asiyejua kuwa ajizi ninyumba ya njaa:Vijana walilimizwa kusaidia katika makazi mbali mbali yanayofanywa majumbani, mashambani na mahali popote palipohisiwa kuwa mtu angalifanyiwa jambo la kumpa riziki. Ndiposa ungesikia wazee wakiwaambia watoto wao, ‘ukisimulia hadithi mchana utaota mkia’. Ingawa kwa watu wazima maneno haya yangekuwa masihara,kwa watoto yaliaminika sana kwa hivyo wazazi wakapata mradi wao. Hi ndiyo maana Waswahili wanasimuliana hadithi na kutegeana vitendawili jioni au usiku.

Wazazi ambao hawataki watoto wao watembeetembee au wacheze michezo ambayo itawafanya wakimbiekimbie na kujihasiri huwatia ndani ili wawe nao kuanzia magharibi. Waswahili wana itikadi nyingi zinazohusiana wakati wa magharibi. Ni ajabu kuwasikia wakisema kuwa magharibi huwaleta pamoja na kutoleana hadithi. Na hata kama si hivyo hii ni fursa nzuri kwa wazazi kuzungumza na watoto wao ambao kutwa nzima huwa hawakupata nafasi kuwa nao.

Starehe hizi pia huongeza elimu, na kama wahenga wasemavyo, elimu ni mwanga uangazao.. Kwa mfano watoto watategewa vitendawili, jambo hili litawafanya wafikiri. Na kufikiri huku kutawafanya wavumbue mambo mengi ambayo mengine hapo awali hawakuyajua na kuyathamini. Vile vile huwafunza werevu wa kufumba na kufumbua mafumbo ambayo elimu inayohitaji kiwango kikubwa cha busara.

Kutoleana hadithi ni miongoni mwa starehe ambazo kwazo hujifunza mambo mengi sana. Katika hadithi watoto wanaweza kujifunza mambo yanayohusu mila na desturi, katika mambo haya watu hujifunza tabia nzuri, heshima na uvumilivu. Pia katika hadithi mtu anaweza kujifunza mambo ya historia na pia ya mazingira aliyoyazoea na hata mambo ambayo hayajui.

Aidha hadithi ni chombo ambacho wazee hukitumia kuwafundisha watoto mbinu za kuzungumzia. Wazee wenye busara aghalabu huwapa nafasi watoto wao wabuni na wasimulie hadithi zao. Wakati mwingine jamaa mbili jirani huweza kukutana kufanya mashindano ya kutambiana hadithi. Mazoezi kama haya huwawezesha vijana kufikia viwango vya juu vya ufasaha na matumizi ya lugha na ujasiri na ukakamavu wa kuweza kusema mbele za hadhira kubwa katika maisha yao. Baadhi ya watambaji wakubwa waliopata kusifiwa haikosi mwanzo wao ulikuwa wa namna hii. Hadithi pia huwafundisha watu kuhusu maisha duniani. Zinaweza kuwafunza jinsi ya kuishi na ndugu, majirani, marafiki, wake au waume. Ulimwenguni humu tunamoishi na mambo mengi yanoyomtatiza binadamu kwa namna mbalimbali. Hadithi zinaweza kupendekeza mambo ya kufanya na kuonyesha njia zenye mapato mema tunapofikiwa na hadhaa kadhaa. Zinaweza pia kukanya kiburi na kuonyesha faida ya kutosema uwongo ama kuishi katika maisha yasiyo muruwa, yaliyojaa kiburi na majivuno. Hapana shaka hadithi zinaweza kuongoza na kuwafanya wawe watiifu na raia wema katika nchi zao.

Maswali

(a). Kwa nini mwandishi akaoanisha utambaji wa hadithi na wakati wa jioni? (Maneno 40)

(alama 5, alama 1 ya mtiririko)

Nakala chafu

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Nakala safi

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(b). Kwa maneno kati ya 70 na 90 eleza umuhimu wa kutambiana hadithi na kutegeana vitendawili,kulingana na mwandishi. **(Alama 8, 1 ya mtiririko)**

Nakala chafu

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Nakala safi

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3. MATUMIZI YA LUGHA **(Alama 40)**

(a). Andika neno lenye kikwamizo sighuna cha ufizi, irabu ya mbele wastani, nazali ya midomo na irabu ya chini kati. **(alama 2)**

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(b). Eleza muundo wa silabi katika neno <u>mbilikimo.</u> **(Alama1)**

……

……

(c). Andika upya kwa kutumia ‘o’-rejeshi tamati.

Majarida ambayo yatasomwa yameagizwa **(alama. 1)**

……

……

(d). Tunga sentensi zifuatazo **(alama 2)**

i) Arifu

……

……

ii) Rai

……

……

e) Tunga sentensi moja yenye kiwakilishi cha A-unganifu,kitenzi kishirikishi kipungufu na kijalizo **(alama.2)**

……

……

f) Andika sentensi zifuatayo katika hali ya udogo **(Alama 2)**

Mbuzi wake amekaata kamba akaingia shambani na kula mahindi.

……

g). Andika katika usemi wa taarifa **(Alama 2)**

"Wanasiasa hawa wenu wakipigana hivi wataharibu nchi" Rais alisema.

……

……

h). Changanua sentensi kwa jedwali. **(alama.4)**

Jirani aliyenisaidia juzi ataondoka mwakani.

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i). Onyesha yambwa katika sentensi ifuatayo

Alawi alifumiwa mkeka mzuri na shangaziye kwa miyaa. **(alama 3)**

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j). Eleza tofauti ya kisarufi ya maneno yaliyopigia mstari (alama.2)

i) Duka <u>la mwalimu</u> limechomeka

……

……

ii) Duka <u>la</u> mwalimu limechomeka

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……

k). Tunga sentensi kuonyesha wakati ujao, hali ya mazoea **(Alama 2)**

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l(I). Tumia neno pongezi katika sentensi kama **(Alama 2)**

i). Nomino

……

……

(ii). Kihisishi

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……

m). Eleza matumizi ya ‘na’ katika sentensi ifuatayo:Ridhaa na Mwangeka walikuwa wameketi karibu na jumba lakifahari walipoitwa na Apondi. **(alama.3)**

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n). Andika sentensi zifuatazo upya kulingana na maagizo

(i). Mwana <u>mwadilifu</u> huwaletea wazaziwe fahari. **(alama 1).**

(Badilisha neno lililopigiwa mstari kuwa nomino.)

……

(ii). <u>Nyota nyingi</u> ziliipamba anga usiku huo. **(alama 1)**

(Tumia nomino ya jamii badala ya maneno yaliyopigiwa mstari)

……

(iii). Makokha ni mkakamavua Onyango ni mkakamavu pia. **(alama 1)**

(Unganisha iwe sentensi moja yenye kihusishi cha kulinganisha.)

……

(iv). ‘Kibali,nionyehse ulipoandika zoezi hilo.’Mwalimu alisema. (**alama.1)**

(Tumia kiwakilishi nafasi badala ya nomino ya pekee.)

……

o). Kwa kutunga sentensi, onyesha ngeli mbili za neno ‘**upwa**’ **(alama.2).**

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p). Andika maana mbili zinazojitokeza katika sentensi hii. **(alama.2)**

Selume alimsimulia Ridhaa kisa chake.

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q). Tunga sentensi moja kubainisha maana mbili za neno. **(alama.2)**

Kina

……

……

r). Rubani ni kwa ndege**,…….**ni kwa meli na**…….....**ni kwa matwana. **(alama 2)**

ISIMU JAMII **(Alama 10)**

Wewe ni mtaalamu wa maswala ya usalama. Umepewa fursa kuhutubia warsha inayojumuisha maafisa wa usalama kutoka katika vikosi mbalimbali kuhusu jukumu lao katika kudumisha usalama,amani na maridhiano nchini.

(a). Taja sajili ambayo utatumia kisha ueleze sababu ya jibu lako. **(alama 2)**

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(b). Andika huku ukifafanua vipengele vinane vya kimtindo utakavyotumia kufanikisha mazungumzo yako. **(alama 8)**

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KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

102/3 **Kiswahili** Paper 3

(Fasihi)

Time: 2½ Hours

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

MAAGIZO:

a) Jibu maswali manne pekee
*b) Swali la kwanza ni la **lazima***
c) Maswali hayo mengine yachaguliwe kutoka sehemu nne zilizobaki, yaani Riwaya, Tamthilia, Hadithi fupi na Fasihi Simulizi.
d) Usijibu maswali mawili kutoka sehemu moja.
e) Majibu yote lazima yaandikwe kwa lugha ya Kiswahili.

KWA MATUMIZI YA MTAHINI PEKEE

Swali	Upeo	Alama
1	20	
	20	
	20	
	20	
Jumla	80	

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SEHEMU YA A: USHAIRI

Swali la Lazima

1. ***Soma shairi hili kisha ujibu maswali yanayofuata:***

Shimo: Ali Salim Zakwany

1. Mwambieni kibushuti, asiruke shimo lile
Kimo chake kama goti, kwenda ng'ambu sifikile
Mtu haoli bahati, akasahau umbile
Kila muwania mbele, na nyuma 'sisahawile

2. Afanyayo ni hatari, sijitie mpulele
Mambo yote ajasiri, shari asithibutile
Mjalia watu kheri, shairi ni yake vivile
Kila muwania mbele, na nyuma 'sisahawile

3. Asambe ndiyo busara, kutenda kitendo kile
Itamuwia hasara, na madhara kama yale
Mola mwingi wa subira, ajapo chomwa vidole
Kila muwania mbele, na nyuma 'sisahawile

4. Licha na yeye nyadungo, chuya katika mchele
Hata warefu ja pondo, hawatusi shimo lile
Walojaribu kitendo, shimoni watumbukile
Kila muwania mbele, na nyuma sisahawile

5. Nimefika kituoni, nasema mumuwasile
Mfua maji ngamani, ili kwamba sizamile
Chombo huungia mwambani, na nahodha ni yuyule
Kila muwania mbele, na nyuma 'sisahawile

MASWALI

a) Lipe shairi hili kichwa mwafaka. **(alama 1)**

b) Fafanua toni ya shairi hili. **(alama 4)**

c) Taja na utoe mifano ya tamathali za usemi mbili zinazopatikana katika shairi. **(alama 4)**

d) Eleza umbo la shairi hili. **(alama 4)**

e) Kwa kutoa mifano minne, eleza aina moja ya idhini ya kishairi iliyotumika zaidi katika shairi. **(alama 3)**

f) Andika ubeti wa tano kwa lugha ya nathari. **(alama 4)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SEHEMU YA B: RIWAYA – CHOZI LA HERI (ASSUMPTA MATEI)

2. "Jua linalochomoza halina ule wekundu wa jua la matlai ambao huleta haiba ya uzawa wa siku yenye matumaini. Naona wingu kubwa angani likitembea kwa kedi na madaha na kulifunika jua..... Mawingu yaliyoshiba yakataka kutapika yanagooka, yanakaribiana, kupigana busu na kusababisha mwanguko wa matone mazito ya mvua..."

(i) Eleza aina za taswira zinazojitokeza katika dondoo hili **(alama 8)**
(ii) Eleza mbinu nyingine ya kimtindo inayojitokeza katika dondoo hili. **(alama 2)**
(iii) Eleza sifa na umuhimu wa msimulizi wa dondoo hili. **(alama 10)**

3. Lakini itakuwaje 'historical injustice' nawe Ridhaa hapo ulipo sicho kitovu?
(i) Eleza muktadha wa dondoo hili. **(alama 4)**
(ii) Tambua mbinu mbili za lugha zilizotumiwa katika dondoo hili. **(alama 2)**
(iii) Eleza sifa nne za mzungumzaji wa maneno haya. **(alama 8)**
(iv) Eleza mambo matatu yaliyowakumba walioishi penye kitovu kisicho chao. **(alama 6)**

SEHEMU YA C: TAMTHILIA - BEMBEA YA MAISHA (Timothy Arege)

4. Ukirejelea Anwani ya Tamthilia ya Bembea ya Maisha, onyesha namna wahusika wanavyobembea maishani mwao. **(alama 20)**

5. Maskini mke wangu! Kumbe ugonjwa haukumsaza mwaka baada ya mwaka. Umemla bila huruma. Awali niliona kuwa mchezo kumbe ilikuwa kweli yake ninaona imesimama. Ni mwele hakika. Laiti ningejua, jana ningeishi tofauti. Silezi zetu za maisha tungezila zilivyokuja kwa furaha. Siku hazigandi wala jana hairudi. Sasa jana imebaki kumbukizi baada ya kusombwa na wakati mfano wa mafuriko msimu wa masika."

a) Yaweke maneno haya katika muktadha wake **(alama 4)**
b) Eleza kwa mfano mbinu nne za kimtindo zilizotumika **(alama 4)**
c) Barusha toni katika dondoo hili. **(alama 2)**
d) Ni maudhui gani yanayojitokeza katika dondoo hili? **(alama 4)**
e) Onyesha sifa za mzungumzaji zinazodhihirisha kuwa silezi zao hawakuzila kwa furaha. **(alama 6)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SEHEMU YA D: HADITHI FUPI - MAPAMBAZUKO YA MACHWEO NA HADITHI ZINGINE.

6. (a) Fafanua mbinu za kimtindo katika dondoo lifuatalo. **(alama 6)**

"Jimbo la matopeni lilikuwa limegeuzwa ngome ya watu fulani binafsi. Watu wenye ushawishi mkubwa serikalini! Watu wasiojali maisha ya wapiga kura kama Machoka na Zuhura. Wapiga kura walioamka siku hiyo asubuhi ya majogoo, wakastahimili baridi kali ya bukrata. Wakavumilia jua kali la mchana. Zuhura alikumbuka namna yeye na wenzake walivyotunga foleni ndefu kwenye vituo vya kupigia kura. Yote haya wakiwa na matumaini ya maisha bora ya baadaye, si bora maisha! Kumbe wajinga ndio waliwao! Mzigo mzito wa maisha haukuwatisha wala kuwakosesha usingizi viongozi wao. Ama kweli, mzigo wa mwenzio ni kanda la usufi. "

(b) Onyesha namna wanamatopeni wanavyokumbwa na madhila kwa kurejelea hadithi ya "Msiba wa kujitakia" **(alama 14)**

7. "Katika hali ile ya uchungu, kilio na mtanziko wa mawazo, akaiona simu yake imeanguka chini ya kitanda….. Haidhuru hata kama atamuunga mkono mwanawe."

(i) Eleza muktadha wa maneno haya. **(alama 4)**

(ii) Fafanua mbinu ya kimtindo inayojitokeza katika dondoo hili. **(alama 2)**

(iii) Eleza sifa nne za anayerejelewa katika dondoo hili. **(alama 4)**

(iv) Eleza jinsi "taasubi ya kiume" inavyoshughulikiwa na mwandishi wa "fadhila za punda". **(alama 10)**

SEHEMU YA E: FASIHI SIMULIZI

8. Ewe Mainga wa Ndumi
Siwe uloambia akina mama
Siku tulopiga foleni
Chakula cha msaada kupata
Turudishe vifaranga kwenye miji
Wageuke vijusi tena
Njaa isiwaangamize?

Siwe ulopita
Matusi ukitema
Chumvi na sukari kuturushia ja samadi?
Uhitaji wetu ukatutuma
Kuokota vihela uloturushia
Ukatununua, kura ukapata?

Sasa miaka mitano imetimia
Waja tulaghai tena
Mainga wa Ndumi huna lolote safari hii
Ubunge umekudondoka ukitazama
Wanyonge tumeamua
Kwingine kujaribu.

MASWALI

a) Eleza aina ya kipera hiki. **(alama 2)**

b) Huku ukitoa mifano, tambua mbinu za lugha nne zilizotumiwa katika utungo huu. **(alama 8)**

c) Tambua nafsineni katika utungo huu. **(alama 2)**

d) Fafanua toni ya utengo huu. **(alama 2)**

e) Fafanua umuhimu wa kipera hiki. **(alama 6)**

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

443/1 **Agriculture** Paper 1

Time: 2 Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your **name, index number** in the spaces provided.*
- *This paper has three sections A, B and C.*
- *Answer **all** the questions in section **A** and **B** in the spaces provided.*
- *Answer any **two** questions in section **C.***

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 13	30	
B	14 – 17	20	
C	18	20	
	19	20	
	20	20	
	Total Score	**90**	

SECTION A (30 MARKS)

Answer All the Questions in This Section in the Spaces Provided

1. State **two** biotic factors that are useful in agricultural production. **(1 mark)**

……

……

……

2. Give **four** reasons why it is important to stake tomatoes. **(2 marks)**

……

……

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……

3. State **two** methods of utilizing sorghum as a forage crop. **(1mark)**

……

……

4. Give **four** signs that could enable a farmer to identify compost manure that is ready **(2 marks)**

……

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5. List **four** farming practices that may help to achieve minimum tillage on a farm**. (2 marks)**

……

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6. Give **four** reasons why seed selection is important in the establishment of crops**. (2 marks)**

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7. Give **four** reasons for keeping breeding records in a dairy farm. **(2 marks)**

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8. State **two** characteristics of shifting cultivation. **(1 mark)**

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9. State **four** factors that determine spacing of crop. **(2 marks)**

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10. Differentiate between olericulture and pomoculture as used in crop production**. (1 mark)**

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11. State **two** characteristics of a large scale farming system. **(2 marks)**

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12. State **four** steps followed in land adjudication. **(2 marks)**

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13. State **two** physical agents of weathering. **(1 mark)**

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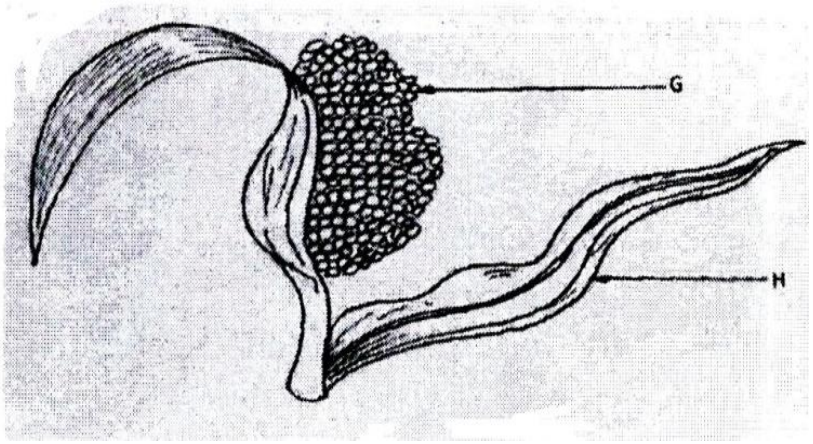
……

SECTION B (20 MARKS)

Answer All the Questions in the Spaces Provided

14. The diagram below illustrates one of the arable field crops. Study it carefully and answer the questions that follow.



a) Identify the field crop. **(1 mark)**

……

b) State the common disease that attack the parts labeled **G and H** **(2 marks)**

G……..……..

H……..…….

c) Name a variety of the crop that is resistant to birds attack. **(1 mark)**

……

d) State one cultural method to control the diseases named in (b) above. **(1 mark)**

……

15. (a) Name the deficient nutrient element in plants showing the following symptoms;

(i) Stunted growth, die back of the plant tips, leaves roll up and chlorosis along margins of younger leaves. **(1 mark)**

.....

(ii) Yellowing of leaves appears first on lower leaves; leaves turn brown and fall prematurely, stunted growth. **(1 mark)**

.....

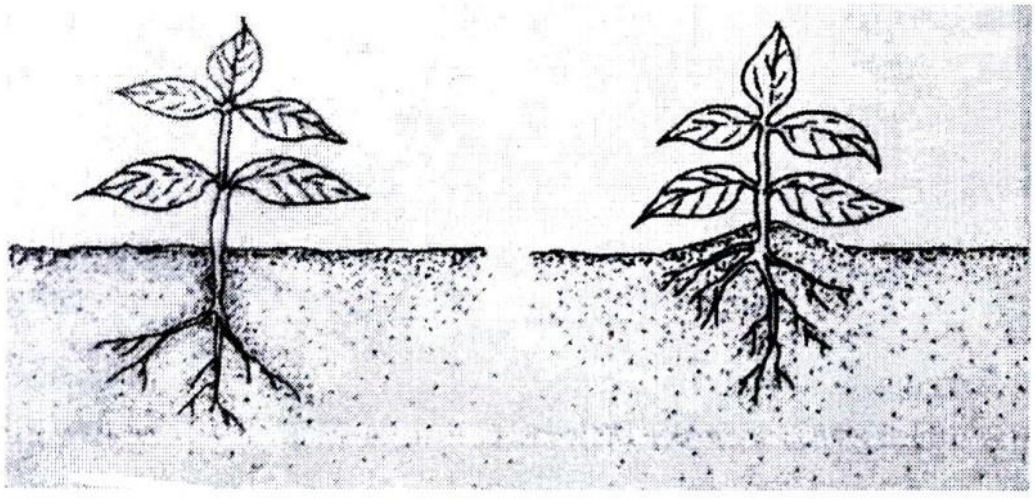
(iii) Leaf curling, yellowing of leaves tips and edges of leaves scorched and has small mottles. **(1 mark)**

.....

(iv) Purpling of leaves, stunted growth, slender stalks and lateral buds remain dormant. **(1 mark)**

.....

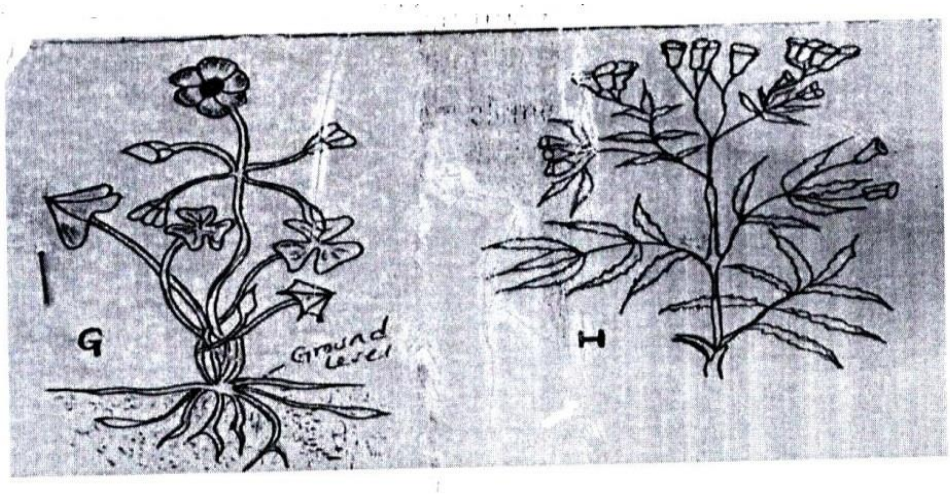
(b) The diagram below show a practice out on various crops on the farm. Study them carefully and answer the questions that follow.



Identify the practice in the diagram above. **(1 mark)**

.....

16. Diagram G and H below show some weeds.



a) Identify the weeds G and H. **(2 marks)**

G .....

H.....

b) State one economic importance of weed H **(1 mark)**

……

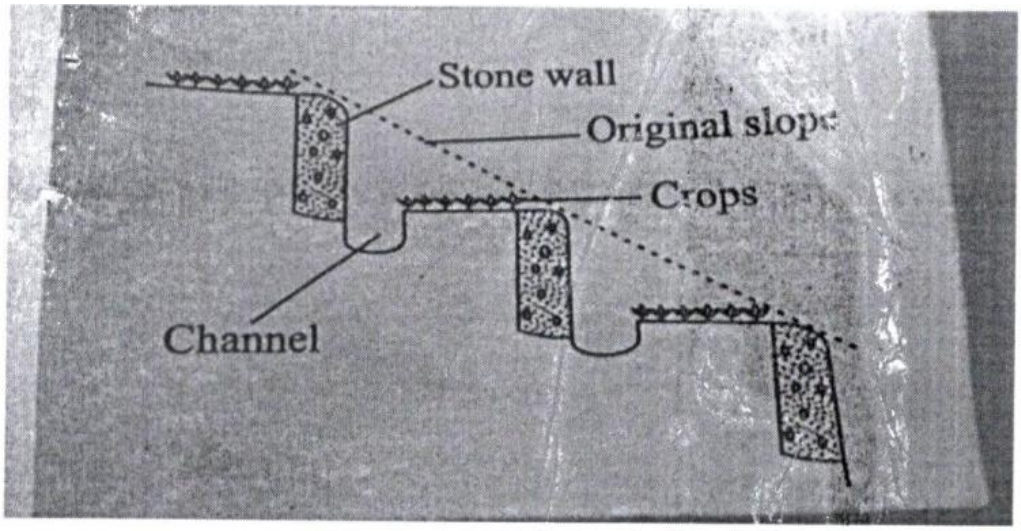
c) Why is it difficult to control weed G? **(1 mark)**

……

d) Name an example of a systematic herbicide which can be used to control weed G **(1 mrk)**

……

17. Study the structure below and answer the questions that follow.



a) Identify the type of terrace illustrated above **(1 mark)**

……..

b) Under what **two** circumstances should the construction of the above terrace be justified?

……

……

c) Name **two** other types of terraces.

……

……

SECTION C (40 MARKS)

Answer Any Two Questions From This Section In The Spaces Provided.

18. (a) Describe the production of tomatoes under the following;

(i) Transplanting. **(5 marks)**

(ii) Field management practices. **(5 marks)**

(b) Give **six** advantages of drip irrigation. **(6 marks)**

(c) Describe the precautions a farmer should put into consideration when harvesting cotton. **(4 marks)**

19. (a) Outline various ways through which vegetation cover reduces soil erosion. **(4 marks)**

(b) Outline various conditions which necessitate land clearing. **(4 marks)**

(c) Give **six** benefits of planting annual crops early. **(6 marks)**

(d) Describe **six** practices carried out in a vegetable nursery to ensure healthy seedlings at transplanting **(6 marks)**

20. (a) Describe **eight** cultural methods of controlling diseases in crop production. **(8 marks)**

(b) Explain **three** ways in which biotic factors discourages agricultural production. **(3 marks)**

(c) State **four** effects of high temperature in crop production. **(4 marks)**

(d) Describe **five** ways through which a farmer can maintain soil fertility in his coffee farm. **(5 marks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

443/2 **Agriculture** Paper 2

Time: 2 Hours

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

a) *Write your name and index number in spaces provided above*
b) *This paper consists of **THREE** sections: A, B and C*
c) *Answer all questions in Section A and B.*
d) *All answers should be written in the spaces provided on this question paper.*
e) *Candidates should answer the questions in English.*
f) *Answer any two questions in section C*

FOR EXAMINER'S USE ONLY

Section	Questions	Maximum Score	Candidate's Score
A	1 – 20	30	
B	21 - 24	20	
C	25	20	
	26	20	
	27	20	
TOTAL SCORE		90	

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SECTION A [30 MARKS]

Answer All The Questionsin The Spaces Provided.

1. Mention **four** control measures undertaken to control brucellosis in cattle. **[2 marks]**

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2. State **four** breeds of rabbits **[2mark]**

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3. List any **two** physiological condition s of livestock that may be assessed to determine the health status of the animal. **[1 ½ mark]**

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4. State **two** ways of preventing predation in a fish pond. **(1 mark)**

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5. State **four** factors considered when selecting eggs for sale **[2 marks]**

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6. State **four** observations on behavior of chicks under excess heat in the brooder that a farmer may notice. **[2marks]**

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7. State **four** advantages of embryo transplant **(2 mark)**

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8. Differentiate between mothering ability and prolificacy **[2 marks]**

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9. Name **four** practices carried out in the crush **(2 marks)**

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10. Give **four** reasons why young rams should be docked. **[2marks]**

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11. Give any **two** methods of selection done on livestock **[1 mark]**

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12. List **four** mechanical methods of tick control in a farm **[2 marks]**

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13. State **two** factors that determine the quality of honey **[1mark]**

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14. Give the terms used to describe the following

(i) Mature male pig **(1 mark)**

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(ii) Sterilised male birds **($^1/_2$ mark)**

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(iii) Mature female goat **($^1/_2$ mark)**

……...

15. State **four** qualities considered when selecting a heifer for dairy purpose**s** **[2 marks]**

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16. Give **one** role of a damp proof course in the foundation of a farm building. **(1 mark)**

(i) …….

17. State any four causes of cannibalism in poultry production. **(2 marks)**

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18. Name the breed of camel with two humps **($^1/_2$ marks)**

(i) ……..

19. Give the functional difference between a ripsaw and atenon saw. **(1 mark)**

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20. Define the term steaming up as used in livestock production **(1 mark)**

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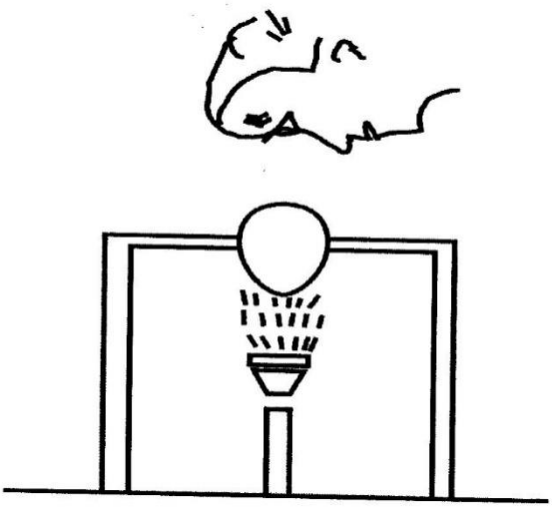
SECTION B [20 MARKS]

Answer all questions in this section

21. Below is an activity carried out in poultry production? Study it carefully then answer the questions that follow



a) Identify the practice being carried out ……..**(1 mark)**

b) State **three** defects that can be detected by this practice. **(3 marks)**

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c). State **one** disadvantage of artificial incubation. **(1 mark)**

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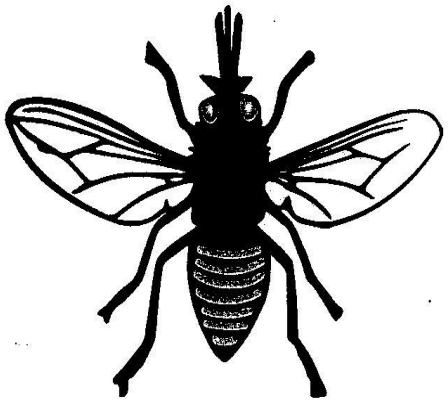
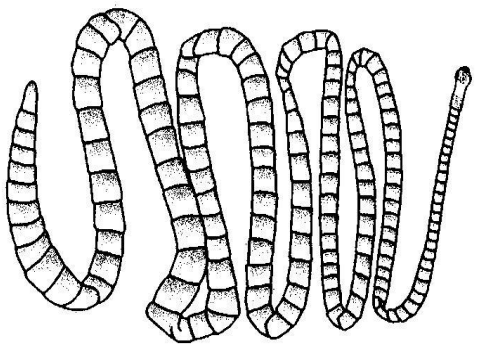
22. The diagram below represents livestock parasites

Y



Z



(a) Identify the parasites Y and Z **(1 mark)**

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(b) In which organ in livestock is parasite Z found? **(1mark)**

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(c) How is parasite Z passed from livestock to human being (**1 mark)**

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(d) Give a control measure of each parasite Y and Z **(2 marks)**

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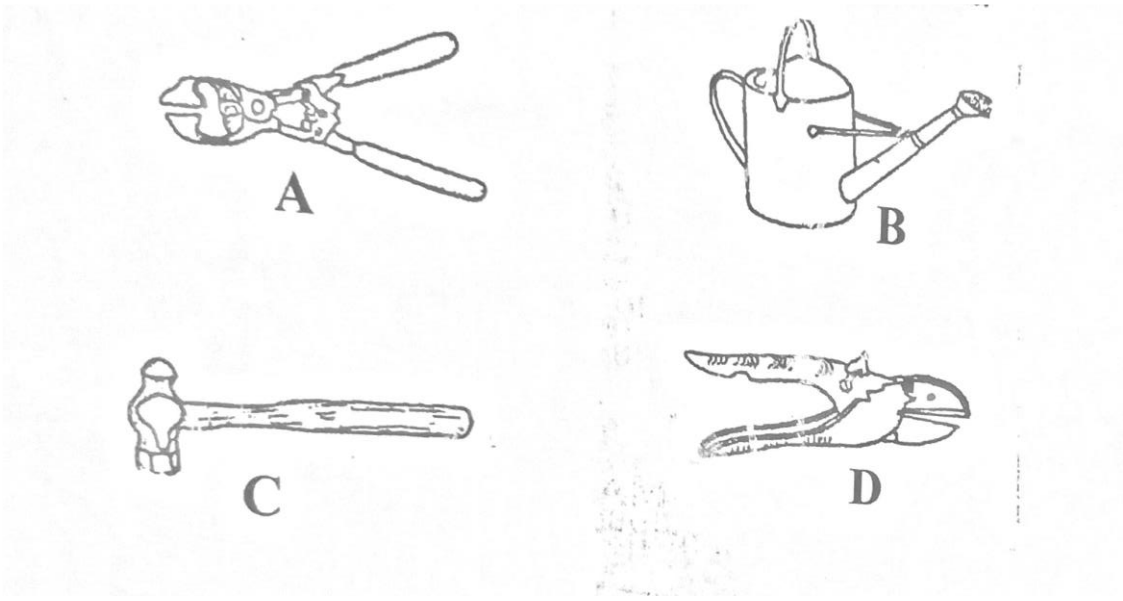
23. Below are illustrations farm tools and equipment



(a). Identify the tool/equipment labelled A and B **(2 marks)**

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(b). State **two** appropriate uses of the tools labelled C **(1 mark)**

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(c). Explain **two** maintenance practices of the tool labelled D. **(2 mark)**

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24. A farmer wants to prepare a ration for layers containing 18% DCP. Using maize germ 20% DCP and a wheat grain 10% DCP

(a). Calculate using peason's square method the amount of each food stuff needed in order to prepare 100kg of feeds. **(4 marks)**

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(b).State any other method used in computation of food ratio. **(1mark)**

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SECTION C [20 MARKS]

Answer all questions in this section

25. (a). Describe conditions under which bees abscond the hive. **(5 marks)**

(b). Describe the causes of stress in poultry management. **(10 marks)**

(c). Describe the uses of fences on the farm. **(5 marks)**

26. (a). Explain **four** factors that affect digestibility of food in livestock. **(8 marks)**

(b). Explain the essentials of clean milk production. **(7 marks)**

(c). State the disadvantages of clean natural method of mating. **(5 marks)**

27. (a). State four advantages of using a sub soiler in seedbed preparation. **(4 marks)**

(b). Give **six** advantages of artificial insemination in cattle management. **(6 marks)**

(c). Explain ten function of water in animal's body. (**10 marks)**

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

565/1 **Business Studies** Paper 1

Time: 2 Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

(a) Write your name, index number in the spaces provided above.
(b) Sign and write the date of examination in the spaces provided above.
(c) Answer all questions in the spaces provided in the questions paper.
(d) Non-Programmable silent electronic calculators may be used.

FOR EXAMINER'S USE ONLY (100 MARKS)

Question No	1	2	3	4	5	6	7	8	9	10	11	12	13
Marks													

14	15	16	17	18	19	20	21	22	23	24	25

ACHIEVED

For Marking Schemes Contact 0746-222-000 / 0742-999-000

Answer all questions in the spaces provided

1. Identify the environmental factor affecting business operations as described by the following statements. **(4 marks)**

S.no	Statement	Factor
a	Skills and methods used by workers in production.	
b	Affects buyer's ability to buy products offered by a business	
c	Firms selling similar products trying to outdo each other in their efforts to maximize profits	
d	Formal arrangement of activities carried out by employees at various levels in an organization.	

2. Give **four** items of information that can be found in an insurance policy. **(4 marks)**

(4 marks)

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3. Highlight **four** factors considered when planning the location of an office. **(4 marks)**

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4. Outline **four** reasons for collapse of small scale business units. **(4 marks)**

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5. Many changes have taken place in the transport sector. Identify any four of such changes.**(4 m)**

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6. Mention **four** costs that are incurred by middlemen while distributing goods. **(4 marks)**

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7. For each of the following transactions indicate in the appropriate columns the source documents and the books of original entry in which the transactions should be recorded **(4 marks)**

	Transaction	Source document	Book of original entry
(a)	Goods returned by a customer		
(b)	Purchase of goods on credit		

8. Outline **four** circumstances when high population is desired in a country **(4 marks)**

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9. Globalization is a term often used to denote business ownership and spread. Outline four merits of globalization of business units. **(4 marks)**

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10. Give the term that best suit each of the statements described below. **(3 marks)**

	Statement	Term
a	List of wants starting from most pressing to the least pressing	
b	Limited or not enough in supply of something	
c	Value of the best next forgone alternative	

11. The following assets and liabilities belong to Longisa Traders as at 31.12.20

Stock sh. 90,000

Equipment sh. 130,000

Creditors sh.65,000

(a). Work out the net worth of Longisa Traders (**1 mark)**

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12. The following balance were extracted from the books of Bomet East traders on 31st July 2022

Items	Amount
Capital	500000
Cash in hand	20000
Buildings	20000
Furniture	25000
Motor vehicle	137000
Creditor	8000
Debtors	36000
bank	100000

Required: Prepare Bomet East traders trial balance as at 31st July 2022. **(5marks)**

13. The following balances were extracted from the books of Suswa Traders on 31st December 2001

	Shs.
Gross profit	400,000
Salaries	160,000
Returns outwards	4,500
Telephone	40,000
Commission received	16,000
Sales	200,000
Commission	30,000
Repairs	15,000

Prepare a profit and loss account for the period ended 31st December 2001. **(4 marks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

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14. Outline **four** essentials of a bill of exchange. **(4marks)**

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15. On 2nd November 2022 Ongengo received an invoice of Ksh. 12000. Terms of payment were: Trade discount of 5% and cash discount of 10%. If payment is made within 30 days. Determine the amount paid if payment was made on 27th November 2022. **(4 marks)**

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16. Identify the product promotion method described by each of the statement below**.(4 marks)**

	Statement	Method
a	Selling a product below its market price so as to entice customers to enter the shop.	
b	Process of passing information with a view of creating and promoting a favourable image of the organization to the public	
c	Paid form of impersonal presentation of a product through mass communication media.	
d	Reduction in the sales price of a product by the seller so that the buyer ends up paying less.	

17. Highlight any **four** services offered by commercial banks to their clients. **(4 marks)**

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18. State **four** emerging trends in communication. **(4 marks)**

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19. Give **four** characteristics of oligopoly market structure. **(4 marks)**

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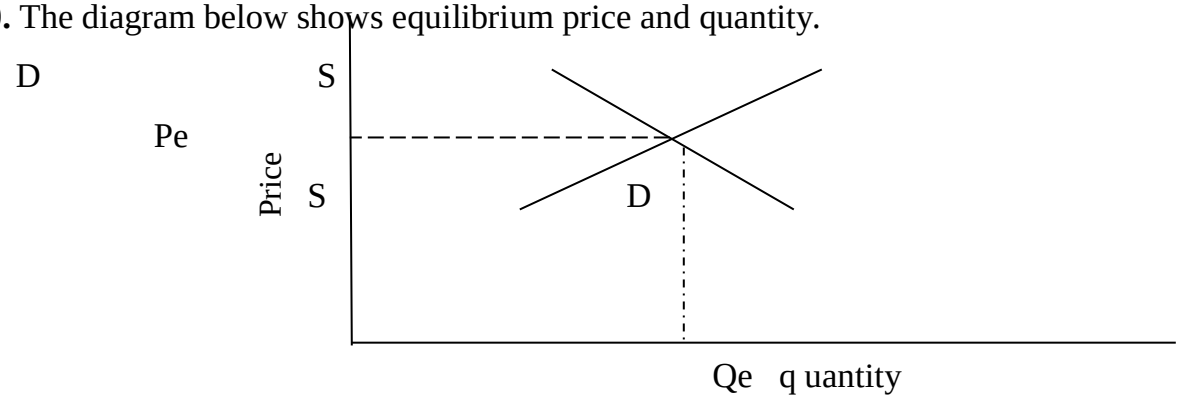
20. The diagram below shows equilibrium price and quantity.



Draw a new demand curve on the diagram above showing a decrease in demand and the effect on:

(4 marks)

(a). Equilibrium price (Pe)

(b). Equilibrium quantity (Qe)

(c). Equilibrium point (E)

21. Highlight **four** reasons why a country would rely more on primary level of production. **(4 marks)**

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22. State **four** importance of computing national income statistics in a country such as Kenya**. (4 marks)**

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23. From the transactions below, state the accounts to be debited and to be credited. **(4 marks)**

	Transactions	**Debit**	**Credit**
i	Begun a business with Ksh 10,000 in the bank		
ii	Bought equipment by cheque for Ksh. 8,000		
iii	Transferred Ksh 60,000 to the bank from the cash till		
iv	Took cash Ksh.7,000 to pay hospital bill		

24. Outline four advantages of a systematic arrangement of goods in a warehouse. **(4 marks)**

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25. Name four factors considered when determining size of the firm. **(4 marks)**

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KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

565/2 **Business Studies** Paper 2

Time: 2½ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

1. *This paper consists of six questions*
2. *Answer any **five** questions.*
3. *Write your answers in the answer booklet provided*
4. *All questions carry equal marks*

FOR EXAMINER'S USE ONLY

QUESTION	1	2	3	4	5	6	TOTAL
MARKS							

Answer Any Five Questions

1. (a) Explain **five** benefits that may accrue to a firm that adopts division of labour.**(10 marks)**

(b) Discuss **five** problems that a country may face when measuring her national income using output approach. **(10 marks)**

2. (a) Explain **five** measures that a business may take to safeguard and control its property.

(10 marks)

(b) Discuss five factors that a manufacturer should consider when choosing a distribution channel. **(10 marks)**

3. (a) Describe **five** circumstances under which a bank may dishonor a cheque. **(10 marks)**

(b) On 1st January, 2012 Chumo Traders had the following balances:

Cash	15,000
Bank	40,000

During the month, the following transactions took place.

Jan 2	Maritim, a debtor, settled his account of sh.10,000 by a cheque of sh.8,000.
5	Deposited sh.4,000 into the business bank account from the cash till.
9	Paid wages by cash sh.5,000
14	Sold goods in cash sh.14,000
17	Purchased office equipment worth sh.3,000, paying by cheque.
18	Settled Korir's account, sh.10,000 by cash after being allowed a discount of 5%.
21	Received sh.6,000 cash from Kolongei, a debtor.
23	Tangus, a debtor settled his sh.4000 account by cheque having been allowed a discount of 20%.
27	Deposited sh.17,000 in the business bank account from private sources.
30	Banked all the cash in the till except sh.1000.

Prepare a three column cash book for Chumo Traders duly balanced at the end of the month.

(10marks)

4. (a) Outline **five** reasons why a wholesaler may decide to construct its own warehouse instead of hiring storage space. **(10 marks)**

(b) Describe **five** features of human wants. **(10 marks)**

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5. (a) Small scale businesses in Kenya has been struggling over the years, explain **five** reasons behind this. **(10 marks)**

(b) Explain **five** factors to consider when choosing a method of product promotion. **(10 marks)**

6. (a) Describe **five** steps to be followed when obtaining an insurance policy. **(10 marks)**

(b) The following information relates to Jambo Entreprises for the year ended 31st December 2022.

Item	**Shs**	
Stock on 1st Jan 2022		75,000
Furniture	2,000,000	
Motor vehicles	4,000,000	
Purchases	1,500,000	
Carriage on Purchases		50,000
Sales	3,000,000	
Carriage on Sales	15,000	
Discount received		25,000
Debtors	400,000	
Creditors		635,000
Discount allowed	10,000	
Lighting & Heating	15,000	
Water	5,000	
Rent and rates	30,000	
Repairs	50,000	
Salaries	100,000	
General expenses	70,000	
Cash in hand	90,000	
Cash at Bank	450,000	
Capital		5,230,000
Commissions paid	30,000	

Additional information:

Stock on 31st Dec 2022 was 105,000.

Prepare;

(i) Trading Profit & Loss account for the year ended 31st Dec 2022.

(ii) Balance sheet as at 31st December 2022.

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

231/1 **Biology** Paper 1

Time: 2 Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

Instructions

1. *Write your name, Index Number and School in the spaces provided above.*
2. *Sign and write the date of the examination in the spaces provided above.*
3. *Answer all the questions in the spaces provided.*
4. *Additional pages must not be inserted.*
5. *All answers should be written in English*

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-25	80	

1. Name the branch of biology that involves the study of:

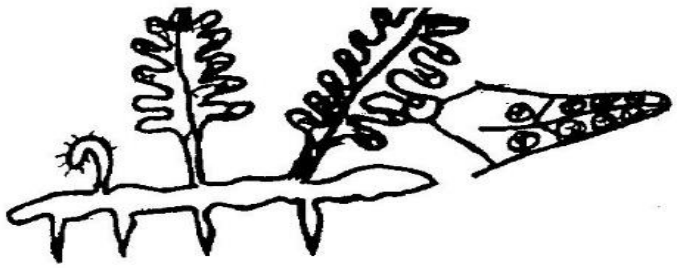
(a) Organism for the sake of classifying them **(1mark)**

……

(b) Microscopic organisms. **(1 mark)**

……

2. The diagram below represents a plant



(a) Name the division to which the plant belongs **(1 mark)**

……

(b). Give three reasons for your answer in (a) above **(3 marks)**

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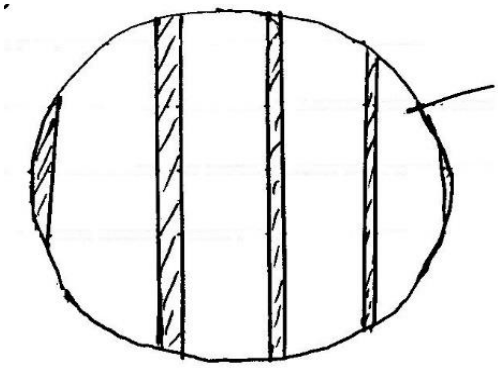
3. A student estimating a cell of an onion epidermal cell observed the following on the microscope field of view using a transparent ruler.



The student identifies 20 cells across the field of view. Calculate the size of the cell in micrometres. **(3 marks)**

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4. State the functions of centrioles in a cell. **(2 marks)**

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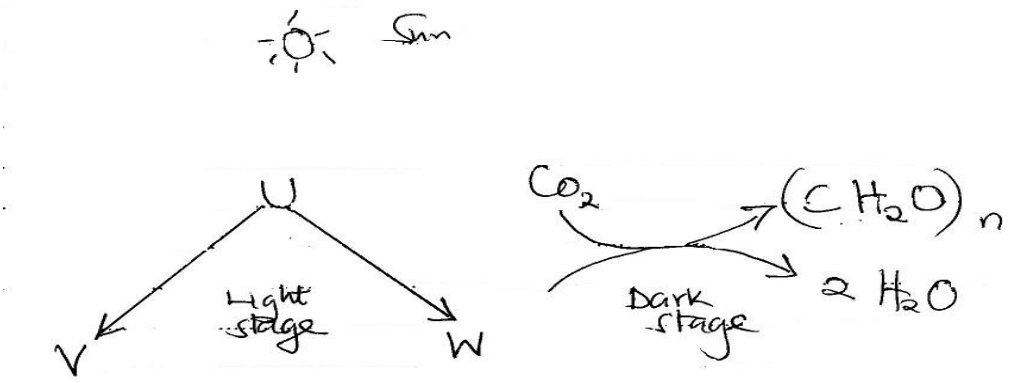
5. Study the flow diagram below



Name the substance U, V and W. **(3 marks)**

U……

V ……

W ……..

6. (a). State the deficiency diseases of each of the following vitamins. **(3 marks)**

(i). B_1 …….

(ii). B_2 …….

(iii). B_6……..

(b). What is the role of roughage in a diet? **(1 mark)**

……

……

6. State two differences between osmosis and Active transport. **(2 marks)**

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7. In a certain experiment, the following observation was made:

When red blood cell was placed in certain solution, the solution exerted more osmotic pressure leading to cell losing water molecules to become (crenated/shrunk)

(a). What type of solution was the cell placed in respect to the cell's cytoplasms? **(1 mark)**

……

(b). By which physiological process did the cell lose water molecules? **(1 mark)**

……

(c).Name two substances that make a cell membrane. **(2 marks)**

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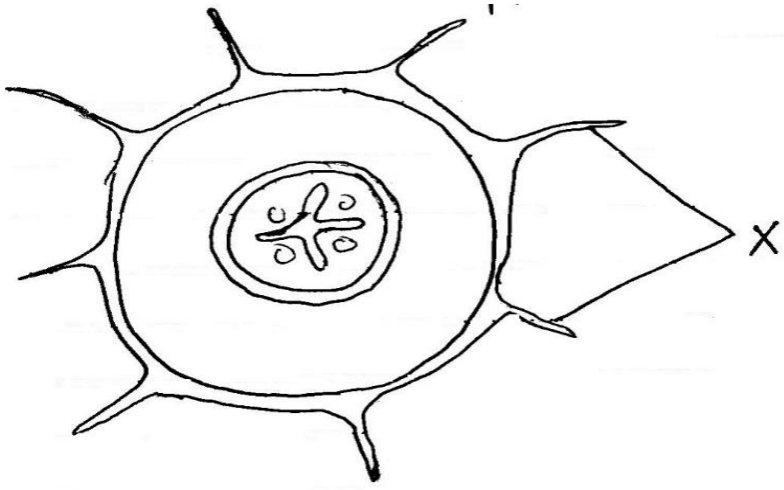
8. The diagram below represents a transverse section of a plant part. Study it and answer the questions that follow.



(a). Name the class in which the plant belongs. **(1 mark)**

……

(b). Give a reason for answer (a) above. **(1 mark)**

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(c). State three adaptations for the structure labeled X to their functions. **(3 marks)**

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9. State THREE structural differences between arteries and veins in mammals. **(3 marks)**

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10. (a). Why does carboxyhaemoglobin lead to death? **(3 marks)**

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(b). Name two gaseous exchange sites in higlier plants. **(2 marks)**

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11. State the importance of the following features in gaseous exchange

(i) cartilage in the trachea **1 mark)**

……

……

(ii) (ii) Moisture on the surface of the alveoli. **(1 marks)**

……

……

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

$$5C_{51}H_{98}O_6 + 145O_2 \rightarrow {}^{102}CO_2 + 98H_2O + Energy$$

(i) (a) Determine respiratory quotient of the Oxidation of the food substance above **(3 marks)**

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……

(ii) Identify the food substance. **(1 mark)**

……

13. (a). A dog weighing 15.2kg requires 216kg while a mouse weighing 50g

Explain. **(2 marks)**

……

……

……

(b). Under what condition is lactic acid formed in human muscles? **(1 mark)**

……

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15. Equal amounts of crushed Irish potato were placed in equal volumes of hydrogen peroxide solution at indicated PH. The volume of the gas produced was measured and recorded as shown in the table below. **(3 marks)**

PH	4.0	7.0	9.0
Volume of gas (cm^3)	2.7	7.0	9.0

(a). Name the gas that was produced. **(1 mark)**

……

(b). Account for the difference in the volume of the gas produced in PH 4.0 and PH 9.0 **(3 marks)**

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(c). Name two components of blood that are not present in the glomerular filtrate**. (2 marks)**

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(16). Define the following terms **(2 marks)**

(a) Entomology

……

……

(b) Sensitivity

……

……

(17). Give two examples of continuous variations in humans. **(2marks)**

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……

(18). (a) State the causative agent of the following diseases **(2 marks)**

(i). Typhoid ……

(ii). Pneumonia …….

(b). State three preventive measures of schistosomiasis in human beings **(3 marks)**

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19. Describe capture-recapture method of estimating population. **(3 marks)**

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20. State three advantages of asexual reproduction in organisms. **(3 marks)**

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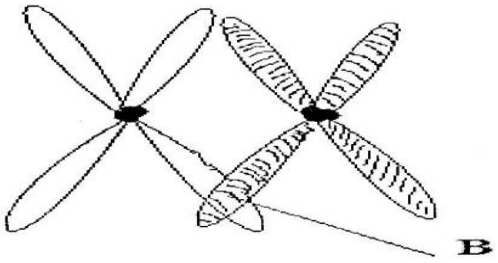
21.The diagram below shows a phenomenon which occurs during cell division.



(a). Identify the stage of cell division in which the phenomenon occurs. **(1 mark)**

……

(b). State the importance of phenomenon taking place in the part labelled **B.** **(2 marks)**

……

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22. Name the region in plants where the following take place

(a). Primary growth **(1 mark)**

……

(b). Secondary growth **(1 mark)**

……

23. State three parameters that can be used to estimate growth in seedlings. **(3 marks)**

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24. State three reasons for classifying organism. **(3 marks)**

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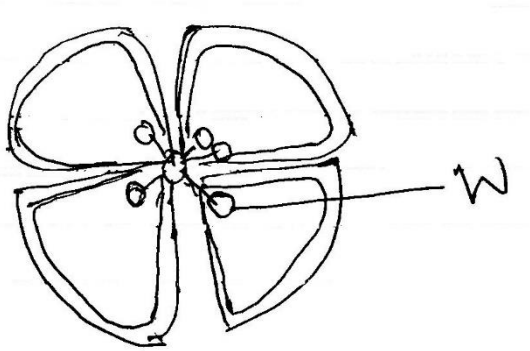
25. The diagram below represents a transverse section of an ovary from certain flower.



(i) Name the structure labeled W. **(1 mark)**

……

(ii). Name the type of placentation illustrated in this diagram. **(1 mark)**

……

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

231/2 **Biology (Theory)** Paper 2

Time: 2 Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your name and Index Number in the spaces provided above.*
- *This paper consists of **two** sections. Section **A** and section **B.***
- *Answer **ALL** questions in section **A** in the spaces provided. In section **B** answer question **6** (compulsory) and either question **7** or **8** in the spaces provided after question 8*

FOR EXAMINERS USE ONLY.

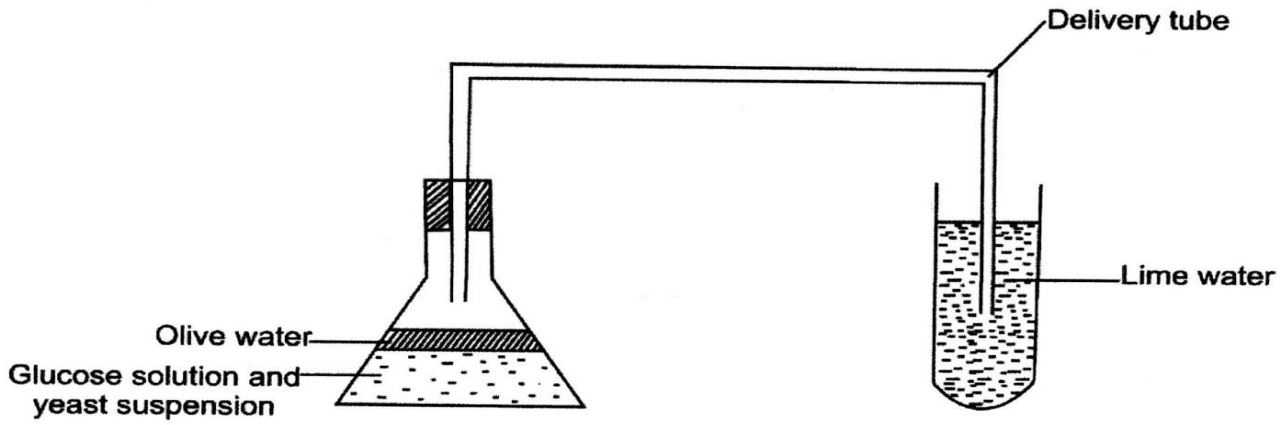
Section	Question	Maximum score	Candidates score
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7/8	20	
	Total score	80	

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SECTION A – (40 MARKS)

Answer All Questions In This Section In The Spaces Provided.

1. The set up below was used to investigate a certain process.



Glucose solution was boiled and olive oil added on top. It was then allowed to cool before the yeast suspension was added.

a) Name the biological process being investigated. **(1 mark)**

……

b) Why was the glucose solution boiled? **(1 mark)**

……

……

c) What is the importance of cooling the glucose solution before adding the yeast**? (1 mark)**

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d) What is the role of olive oil in the experiment? **(1 mark)**

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e) What will be observed in the lime water at the end of the experiment? **(1 mark)**

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f) Suggest what would be observed if a thermometer reading 25^0C was inserted in the glucose solution with the yeast suspension **(2 marks)**

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g) Suggest a control experiment for this set up. **(1 mark)**

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……

2. In maize the gene for Green colour is dominant to the gene for white colour. A pure breeding maize plant with green grains was crossed with heterozygous plant.

a) (i) Using letter G to represent the gene for green colour, work out the genotypic ratio of the offspring. **(5 marks)**

(ii) State the phenotype of the offspring. **(1 mark)**

……

b) What is genetic engineering? **(1 mark)**

……

……

c) What is meant by hybrid vigour? **(1 mark)**

……

……

3. (a) Briefly discuss how the following gives evidences on specification:

(i) Cell biology **(2 marks)**

……

……

……

(ii) Comparative embryology **(2 marks)**

……

……

……

(b) State **one** limitation of using fossil records as an evidence of organic evolution. **(1 mark)**

……

(c) (i) What is meant by the term vestigial structure. **(1 mark)**

……

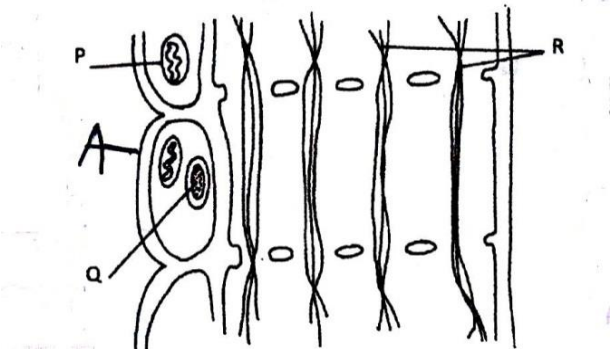
……

(ii) Name **two** examples of vestigial structures in man. **(2 marks)**

……

……

4. The diagram below shows a tissue in a plant.



a) (i) Identify the tissue shown in the diagram above. **(1 mark)**

……

(ii) State the function of the tissue shown above. **(1 mark)**

……

……

b) State **two** functions of the part labeled A. **(2 marks)**

……

……

c) Name the **two** compounds or substances transported by the tissue from the leaf to other parts of the plant. **(2 marks)**

……

……

d) Explain the role of xylem in plant nutrition. **(2 marks)**

……

……

……

5. The results in the table below shows the effects of some conditions on seed germination. In each experiment, all other environmental conditions were kept constant except for the one being investigated.

Experiment	**Treatment**	**% Germination**
I	Seeds placed in a tightly closed container with pyrogallic acid.	0
II	(i) Seeds kept in source of light. (ii) Seeds kept in dark cupboard.	96 97
III	(i) Seeds kept in refrigerator 4^0C. (ii) Seeds kept in oven 60^0C. (iii) Seeds kept at 35^0C.	0.5 0 92
IV	Dry seeds in closed container. Moist seeds in a closed container.	0 87

a) (i) What was the purpose of pyrogallic acid in experiment (i) **(1 mark)**

……

……

(ii) State the aim of the experiment (ii) **(1 mark)**

……

b) (i) Account for the results obtained in experiment set-up (iii) **(3 marks)**

……

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(ii) State why 100% germination was not achieved in experiment (ii) and (iv). **(1 mark)**

……

……

c) Of what biological significance is the condition necessary for germination been investigated by experiment (iv)? **(2 marks)**

……

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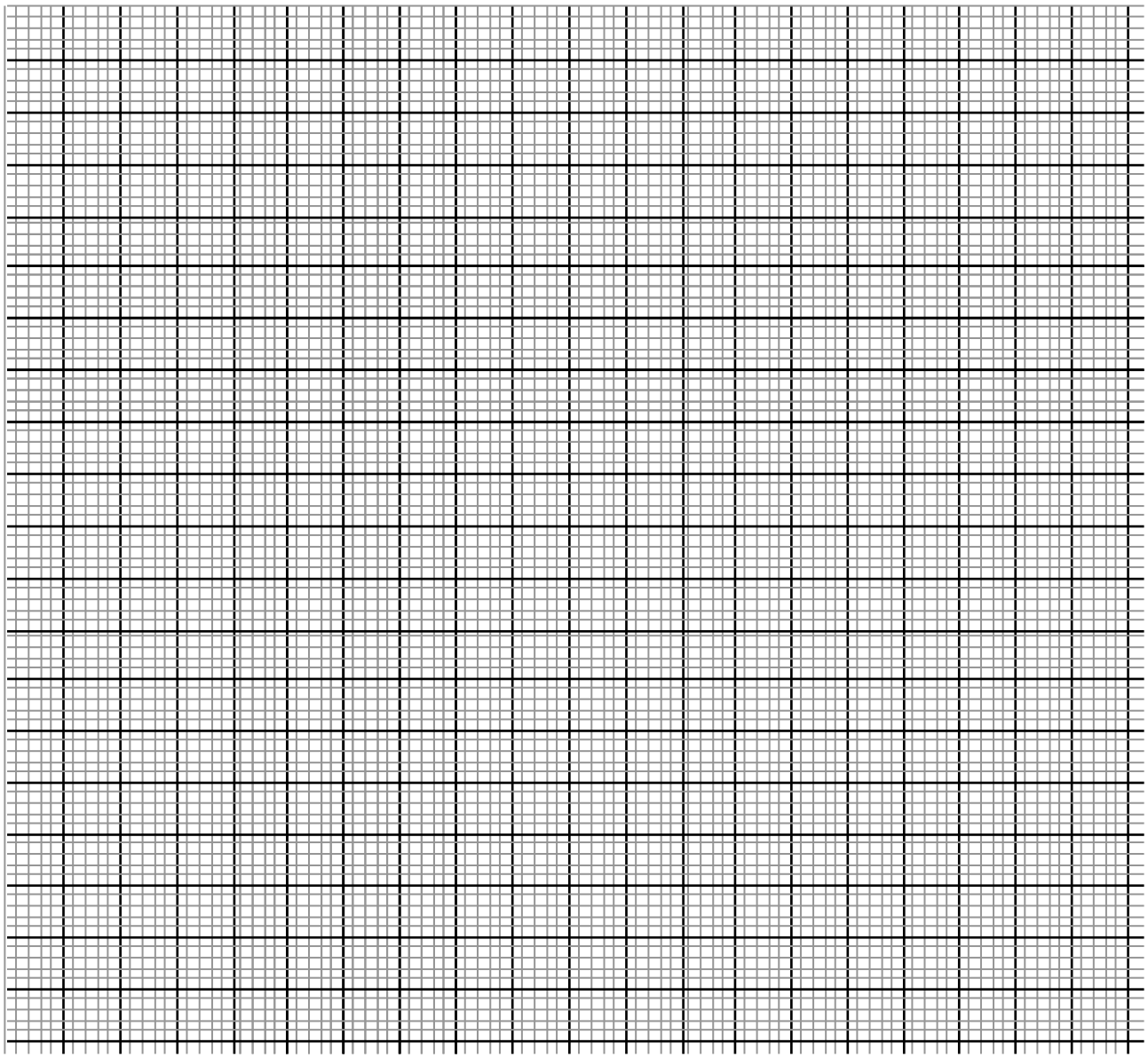
SECTION B – 40 MARKS

Answer Question 6(Compulsory)

6. (a) An experiment was carried out to investigate the population of a certain micro-organism. Two petri dishes were used. Into the petri dish labeled M $30cm^3$ of a culture medium was placed while $30cm^3$ of the same culture was placed in petri dish labeled N. Equal numbers of micro-organisms were introduced in both petri dishes. The set-ups were then incubated at 35^0C. The number of micro-organisms in each petri dish were determined at equal intervals for a period of 60 hours. The results were as shown in the table below.

Relative number of micro-organisms	M	40	40	180	280	1200	1720	1600	1840	1560	600
	N	40	40	120	200	680	560	560	600	600	400
Time in hours		0	5	10	**7.**	23	30	35	42	45	60

a) (i) On the same axes draw the graphs of relative number of micro-organisms against time on the grid provided.



(ii) After how many hours was the difference between the two populations greatest**?** **(1 mark)**

……

(iii) Work out the difference between the two populations at 50 **hours** **(2 marks)**

……

……

……

……

……

……

(iv) With a reason state the effect on the population of micro-organisms in petri dish M if the temperature was raised to 60^0C after 20 **hours** **(2 marks)**

……

……

……

(v) Account for the shape of the curve for population in petri dish N between 46 and 59 hours **(3 marks)**

……

……

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……

b) Explain how the osmotic pressure in the human blood is maintained at normal level **(5 marks)**

……

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……

7. (a) Describe how budding takes place in **yeast** **(5 marks)**

(b) Discuss the economic importance of **bacteria** **(10 marks)**

(c) Describe the methods of excretion in **plants** **(5 marks)**

8. (a) Describe the process of photosynthesis in green **plant** **(10 marks)**

(b) Explain the various conditions necessary for germination **(10 marks)**

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

231/3 **Biology** Paper 3

SCHOOL…… SIGN……

PRACTICAL CONFIDENTIAL

Each Candidate Requires The Following:

1. *About 5g(small)piece of specimen Y.*
2. *4 test tubes in a test tube rack and 2 droppers.*
3. *10ml of 20% hydrogen peroxide solution in a test tube.*
4. *100ml empty beaker – 2.*
5. *10ml measuring cylinder.*
6. *A pair of forceps.*
7. *Access to hot water maintained at 80°C from a hot water bath.*
8. *2 wooden splints.*
9. *(1 ripe orange fruit labeled specimen K).*
10. *Scalpel.*
11. *Access to:*

(i) Sodium hydroxide solution - 4ml per candidate.
(ii) Copper (II) sulphate solution - 2ml per candidate.
(iii) Dilute hydrochloric acid - 2ml per candidate.
(iv) Sodium hydrogen carbonate solution - 2ml per candidate.
(v) Benedict's solution - 4ml per candidate.
(vi) Source of heat.

Note:

- *5g (small) piece of fresh liver labeled as specimen Y.*
- *1 ripe orange fruit labeled specimen K.*

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

231/3 **Biology (Practical)** Paper 3

Time: 1¾ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO THE CANDIDATES.

a) *Write your name and index number in the spaces provided above.*
b) *Sign and write the date of the examination in the spaces provided above.*
c) *Answer **all** the questions in the spaces provided.*
d) *You are required to spend the first 15 minutes of the 1 ¾ hours allowed for the paper reading the whole paper carefully before commencing your work.*
e) *Additional pages **must not** be inserted.*

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	14	
2	13	
3	13	
Total Score	**40**	

For Marking Schemes Contact 0746-222-000 / 0742-999-000

*Answer **all** the questions in the spaces provided.*

1. You are provided with specimen K. Use it to answer the questions that follow.

(i) Cut a traverse section of specimen K and draw a well labeled diagram of the cut surface.

(4 marks)

(ii) State the type of placentation of specimen K **(1 mark)**

……

……

(iii) Apart from the placentation named in (ii), name two other form of placentation.

(2 marks)

……

……

……

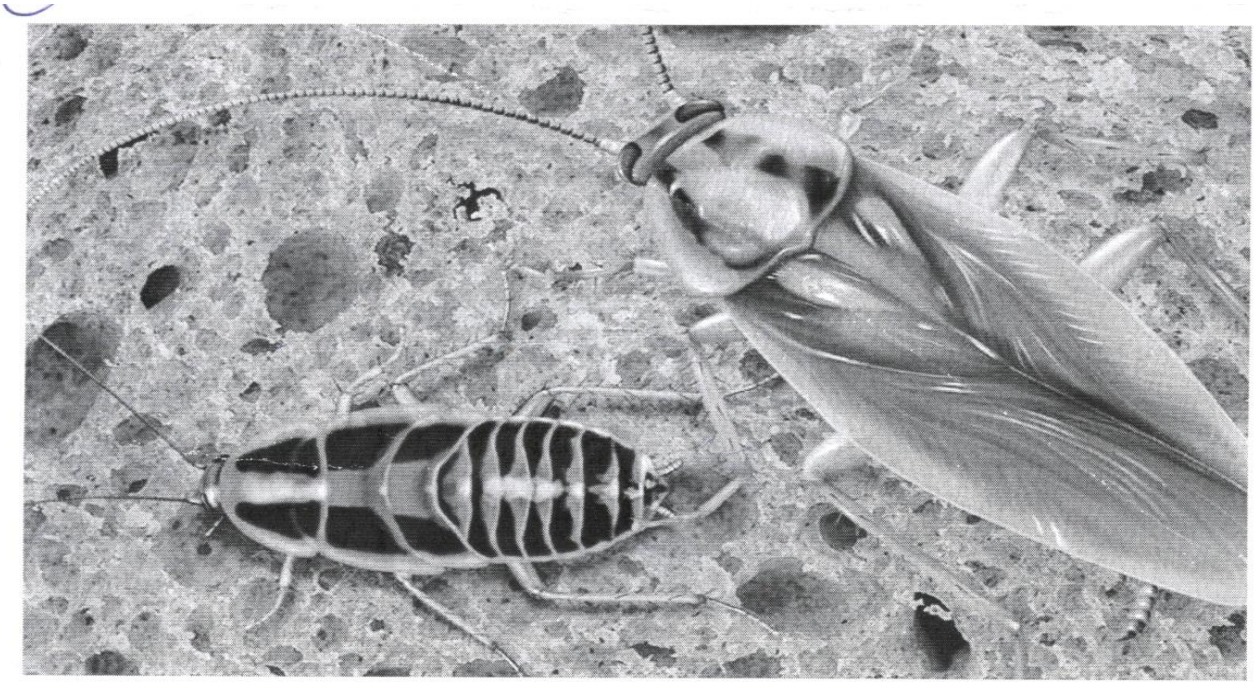
(iv) Squeeze out the juice from one of the halves of the specimen K and put it in a beaker.

Using the reagents provided, carry out test to identify the food substances present in the juice.

(7 marks)

Food substance	Procedure	Observation	Conclusion

2. The diagram represents organisms in a certain habitat.



a) State **two** observable characteristics of living things displayed by the organisms. **(2 marks)**

……

……

b) (i) Name the respiratory surface used by the organism. **(1 mark)**

……

(ii) State three adaptations of the respiratory surface named in (b) (i) above**.** **(3 marks)**

……

……

……

……

……

c) The organism is found in Kingdom Animalia. Giving two external features, identify the phylum to which it belong.

Phylum **(1 mark)**

……

……

External features **(2 marks)**

……

……

……

d) By use of arrows, show the life cycle of this organism. **(1 mark)**

e) Complete the table shown below on the hormones, site of production and the functions played by these hormones in metamorphosis. **(3 marks)**

Name of Hormone	**Site of Production**	**Function of the Hormone**
……	Corpus allatum	Formation of larval cuticle
Ecdysone	……	……

3. You are provided with the following:

- \specimen Y
- Hydrogen peroxide
- 2 test tubes in a test tube rack.
- 2 labels
- 10ml measuring cylinder.
- A scalpel.
- 2 wooden splints.
- 100ml beaker.

PROCEDURE

(i) Label two test tubes A and B.

(ii) Measure $2cm^3$ of hydrogen peroxide and put in test tube A. Repeat the same procedure for test tube B.

(iii) Cut a small piece of specimen Y to two smaller pieces using a scalpel. Place one of the pieces in test tube A and retain the other piece for the subsequent procedure for test tube B.

(iv) Immediately, introduce a glowing splint into the mouth of the test tube. Record your observations in the table below.

(v) Put the other piece of specimen Y in an empty 100ml beaker then add 50ml boiling water from a hot water bath maintained at 80^0C. Leave the set up for 5 minutes

(vi) Remove specimen Y from the boiling water using a pair of forceps and place in test tube B. Immediately, introduce a glowing splint at the mouth of the test tube. Record your observations in the table below.

a) Record your observations in this table **(5 marks)**

Test tube	**Observations**	
	On placing specimen Y	**On introducing a glowing splint**
A	**(i)** **(ii)**	
B		

b) Explain your answers in (a) above.

(i) A **(3 marks)**

……

……

……

……

……

(ii) B **(1 mark)**

……

……

c) State the role of experimental set up in test tube B. **(1 mark)**

……

……

d) Specimen Y is an organ in animals. Name the organ and state **two** other functions apart from detoxification.

Name of organ **(1 mark)**

……

Functions **(2 marks)**

……

……

……

……

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

233/1 **Chemistry (Theory)** Paper 1

Time: 2 Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

1) *Write your **NAME** and **INDEX NUMBER** in the space provided above*
2) *Sign and write the date of examination in the spaces providedabove*
3) *Answer **ALL** the questions in the spaces provided*
4) ***ALL** working must be clearly shown where necessary.*
5) *Mathematical tables and silent electronic calculators may be used.*

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's score
1 −28	80	
Total	80	

QUESTIONS

1.In the industrial preparation of oxygen, state:

(a) How dust particles are removed from air. **(1 mark)**

……

……

(b) Why carbon (IV) oxide is removed before the mixture is cooled to -25^0C **(1 mark)**

……

……

2. A form four student accidentally mixed Sodium Carbonate and Calcium Carbonate.

Describe how he would obtain a dry sample of Sodium Carbonate from the mixture.**(3 marks)**

……

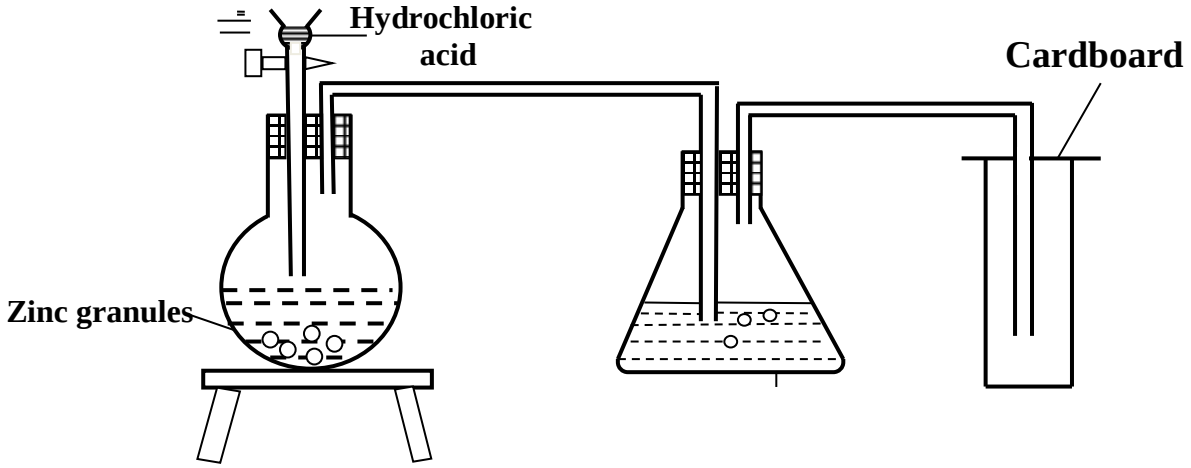
……

……

……

……

3. The set up below was used to prepare dry hydrogen gas. Study it and answer the questions that follow.



(i) Identify a mistake in the set up **(1 mark)**

……

……

(ii) Write an equation for the reaction for the reaction that produces hydrogen gas **(1 mk)**

……

……

(iii) State the chemical test for hydrogen **(1 mark)**

……

……

4. When air is bubbled through pure water (pH 7), the pH drops to 6.0.Explain **(2mks)**

……

……

……

5.Explain why iron III chloride is fairly soluble in methylbenzene while Magnesium chloride is insoluble. **(2 mks)**

……

……

……

6.Describe how a solid sample of Lead(II) Chloride can be prepared using the following Reagents:Dilute Nitric Acid, Dilute Hydrochloric Acid and Lead Carbonate**.** **(3marks)**

……

……

……

……

……

7.50cm^3 of Carbon (IV) Oxide diffuses through a porous plate in 15 seconds. Calculate the time taken by 75cm^3 of Nitrogen (IV) Oxide to diffuse through the same plate under similar conditions. (C = 12, 0 = 16, N = 14) **(2marks)**

……

……

……

8.(a). Carbon (IV) oxide is bubbled through Calcium hydroxide until there is no further change. Explain using equations the changes observed. **(2 marks)**

……

……

……

(b) Explain why diamond is used in cutting of glass and drilling. **(1 mark)**

……

……

9.Study the table for certain properties of substances A, B, C and D.

	Melting point ^{0}c	Solubility in water	Electrical conduct
A	-119^{0}c	Soluble	Solution does not conduct
B	1020^{0}c	Soluble	Solution conducts
C	1740^{0}c	Insoluble	Doesn't not conduct
D	1600^{0}c	Insoluble	Conducts at room temperature

Which of the substances A, B, C and D: **(4 mks)**

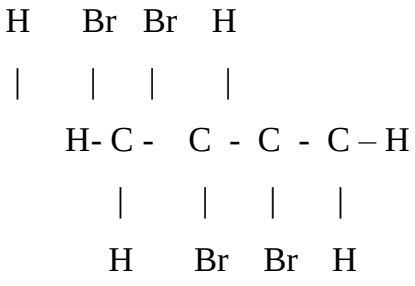
(i) Is a metal

(ii) Has a simple molecular structure……

(iii) Has a giant ionic structure……

(iv) Has a giant covalent structure……

10.A compound G reacts with 2 moles of bromine to form another compound whose structural formula is.



i) What is the formula and name of compound **G** **(2 marks)**

……

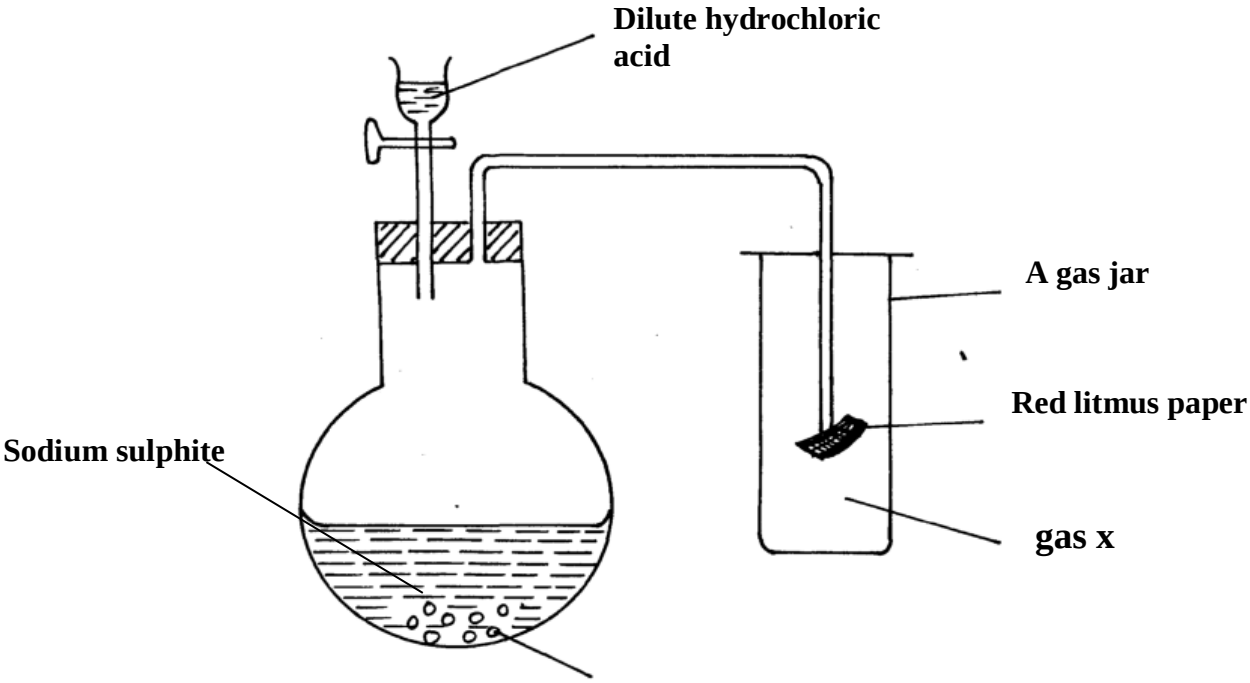
……

ii) State the observations made when acidified potassium chromate (VI) is added to compound G **(1 mark)**

……

……

11.Study the set-up below and answer the questions that follow



(a) Identify gas **(1 mark)**

……

(b) Write an equation for the reaction that produces gas **x**. **(1 mark)**

……

(c) What is the effect of the gas **x** above on the red-litums paper **(1 mark)**

……

……

(d) State and explain two observations made when hydrogen sulphide is bubbled through a solution containing iron (III) chloride. **(2mks)**

……

……

……

12. Aluminium (III) chloride sublimes. Explain why this is possible. **(2mks)**

……

……

……

13. The table below shows the solubility of a substance at various temperatures. Study it and answer the questions that follow.

Temperature (^{0}C)	Solubility in g/100g of water
0	36
40	30
80	25
110	20

(a) What is the meaning of solubility? **(1 mark)**

……

……

(b) What is the physical state of the substance? **(1 mark)**

……

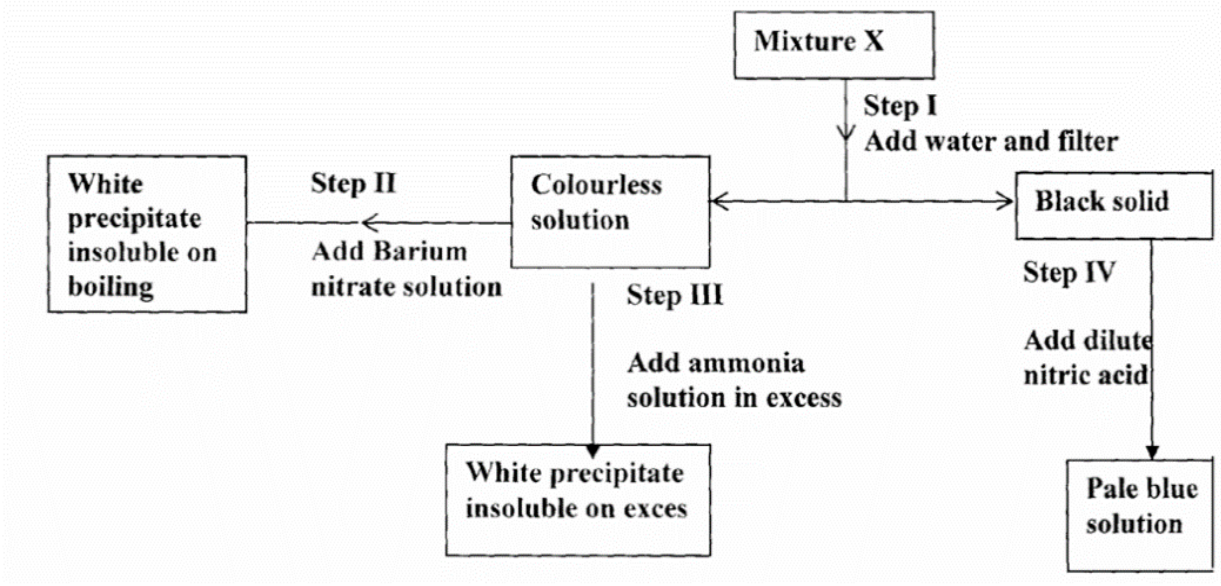
(c) State and explain what would happen if a sample of a saturated solution of the substance at 40^0C was heated to 110^0C. **(1mark)**

……

……

……

14. Study the chart below and answer the questions that follow.



(a) Name:

(i) Cations present in mixture X. **(1mark)**

……

(ii) Anions present in the solution. **(1mark)**

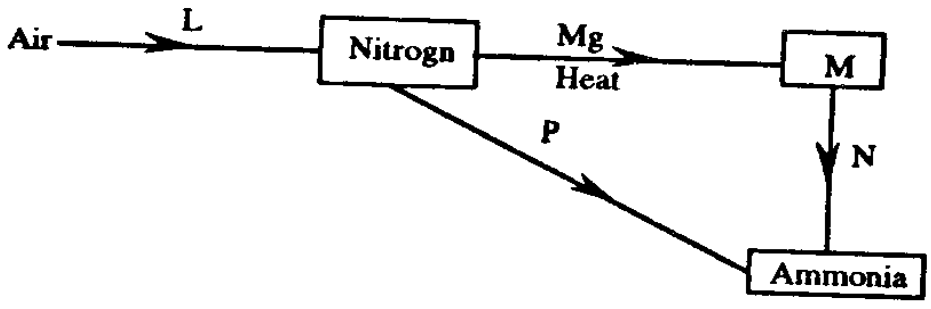
……

(b) Write an equation to show how the white precipitate in step III is formed. **(1mark)**

……

……

15. Study the diagram below and answer the questions



(i) What is the process involved in step L **(1mark)**

……

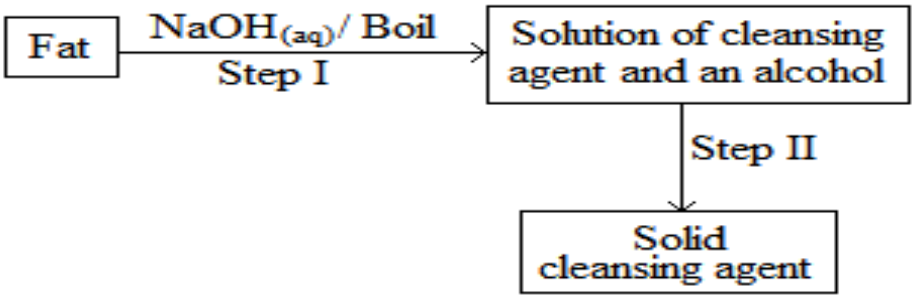
(ii) Explain how process N and P can be affected **(2marks)**

……

……

……

16. The scheme below was used to prepare a cleansing agent. Study it and answer the questions that follow.



(d) Given to the type of cleansing agent prepared by the method above? **(1 mark)**

……

……

(ii) Name one chemical substance added in step II **(1 mark)**

……

(iii) What is the purpose of adding the chemical substance named in c (ii) above?**(1 mark)**

……

……

17. Nitrates of metals A, B, C were heated and the products of the reactions recorded in the table below.

Nitrate of metal	Products
A	Metal nitrate and oxygen
B	Free metal, nitrogen (IV) Oxide and oxygen gas
C	Metal oxide, nitrogen (IV) oxide and oxygen gas

a) Name two possible identities of metal A. **(1mk)**

……

……

b) Name the two possible identity of metal B **(1mk)**

……

……

c) Calcium nitrate is one of the nitrate which forms the products in C. Using chemical equation show how the products are formed. **(1mk)**

……

……

18. State and explain what happens to the masses of the following substances when they are separately heated in open crucibles **;** **(3mks)**

(i)copper metal

……

……

……

(ii) Sulphur powder

……

……

……

19. The table below gives the first ionization energies of the alkali metals.

Element	1st ionization energy kJ mol^{-1}
A	494
B	418
C	519

a) Define the term ionization energy. **(1mk)**

……

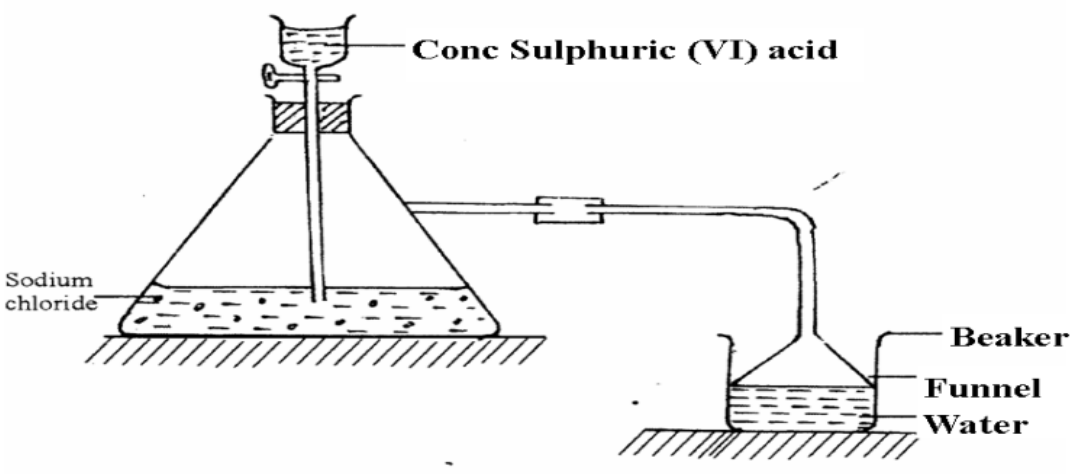
……

b) Which of the three metals is the least reactive? Give a reason. **(2mks)**

……

……

20. Study the set-up below and answer questions that follow.



i) Name the gas that is produced when concentrated sulphuric (VI) acid reacts with the Sodium chloride **(1mark)**

……

ii) Why is it necessary to use a funnel in the beaker? **(1mark)**

……

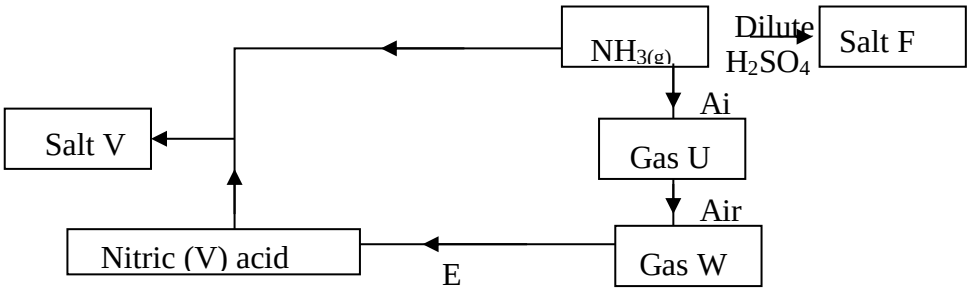
……

iii) How does the gas affect the P^H of the water in the beaker? **(1mark)**

……

……

21. The flow chart/diagram below outlines a method of preparing a fertilizer



i) Identify U and W

U …… **(½mark)**

W …… **(½mark)**

ii) Give the names of salt F and V

F …… **(½mark)**

V …… **(½mark)**

iii) Write a balanced equation for the formation of salt F **(1 mark)**

……

……

22.(a) Draw a dot (•) and a cross (**x**) diagram to show bonding in Cl_2O. **(1 mark)**

b) Explain why the compound Cl_2O has a very low melting and boiling point. **(1 mark)**

……

……

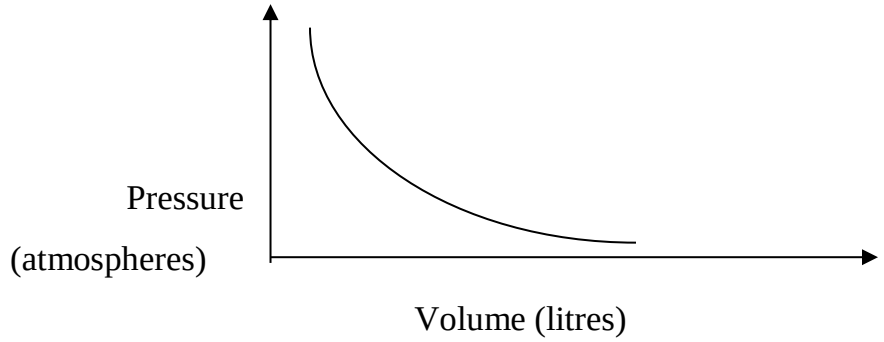
……

23. Ethene reacts with oxygen according to the equation.

$$C_2H_{4(g)} + 3O_{2(g)} \longrightarrow 2\ C0_{2(g)} + 2H_2O_{(g)}$$

15.0 cm^3 of ethene were mixed with 50cm^3 of oxygen and mixture was sparked to complete the reaction. If all the volumes were measured at a pressure of one atmosphere and 25^0C. **Calculate** the volume of resulting gaseous mixture. **(3 marks)**

24. The graph below shows the behavior of a fixed mass of a gas at constant temperature.



(a) What is the relationship between the volume and the pressure of the gas? **(1 mark)**

……

……

……

(b) 3 litres of oxygen gas at 1atm atmosphere pressure were compressed to 2atm at constant temperature. Calculate the volume occupied by the oxygen gas. **(2marks)**

25. Temporary water hardness can be removed by boiling

(a) What is hard water. **(1 mark)**

……

……

(b) Write a chemical equation to show how temporary hardness is removed by boiling.

(1 mark)

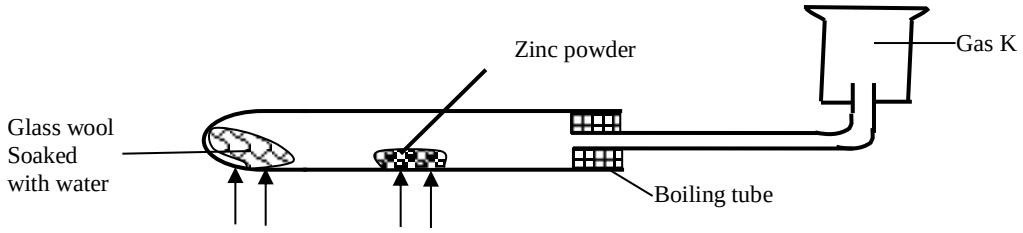
……

(c) State **one** advantage of hard water. **(1 mark)**

……

……

26.A student set-up the experiment below to collect gas K. The glass wool was heated before heating the zinc powder.



Heat Heat

(a) Why was it necessary to heat the moist glass wool before heating the zinc powder?
(1 mark)

……

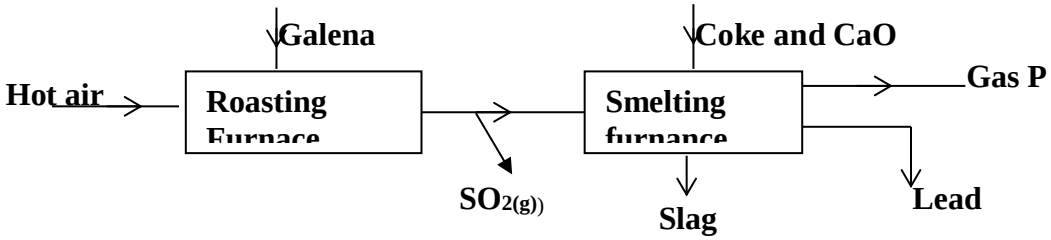
……

(b) What observation was made in the boiling tube. **(1 mark)**

……

……

27. During the extraction of lead from its ores one of the main ore used is Galena



(i) Write an equation for the reaction in roasting furnace. **(1 mark)**

……

……

(ii) Name gas **P** **(1 mark)**

……

(iii) State **one** use of lead metal. **(1 mark)**

……

……

28. The empirical formula of a compound is CH_2 and it has a molecular mass of 42.

(a) What is the molecular formula of this compound? **(1 mark)**

……

(b) Write the general formula of the homologous series to which the compound belongs.

(1mk)

……

……

(c) Draw the structural formula of the third member of this series and give its IUPAC name.

(1mark)

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

233/2 **Chemistry (Theory)** Paper 2

Time: 2 Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

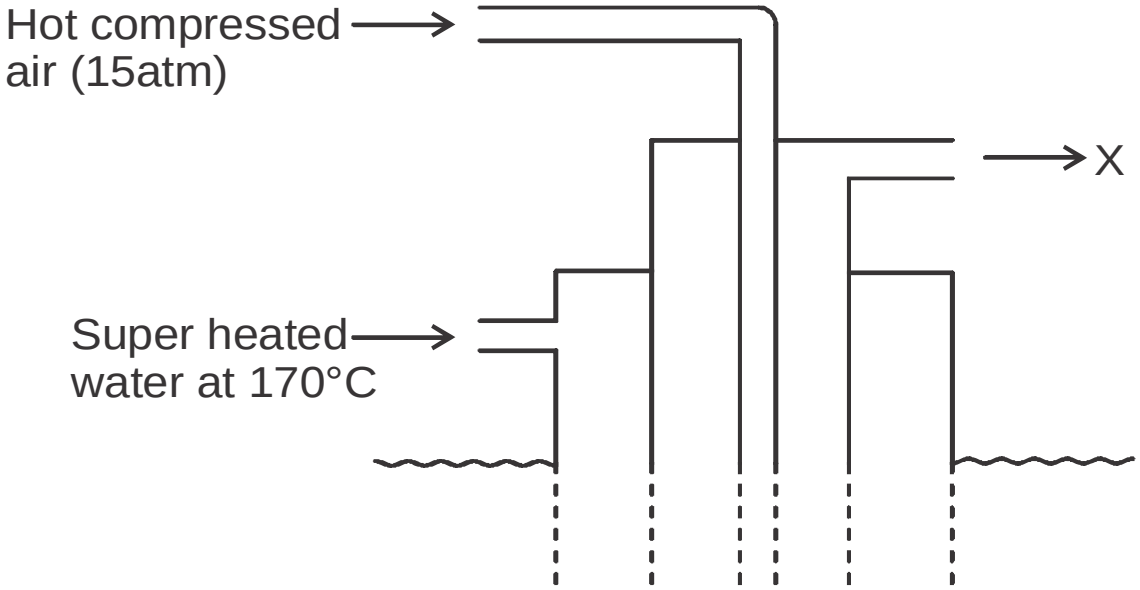
- *Write your name and index number in the spaces provided.*
- *Answer **ALL** the questions in the spaces provided.*
- *Electronic calculators and Mathematical tables **may** be used.*
- *All workings **must** be clearly shown where necessary.*

FOR EXAMINER'S USE ONLY

Questions	Maximum Score	Candidates Score
1	16	
2	13	
3	13	
4	11	
5	13	
6	14	
	80	

*Answer **ALL** the questions in the spaces provided.*

1. The diagram below shows part of the Frasch process used for extraction of sulphur. Use it to answer the questions that follow.



i) Identify **(1mark)**

X…….....

ii) Why is it necessary to use superheated water and hot compressed air in this process **(2mark)**

……

……

……

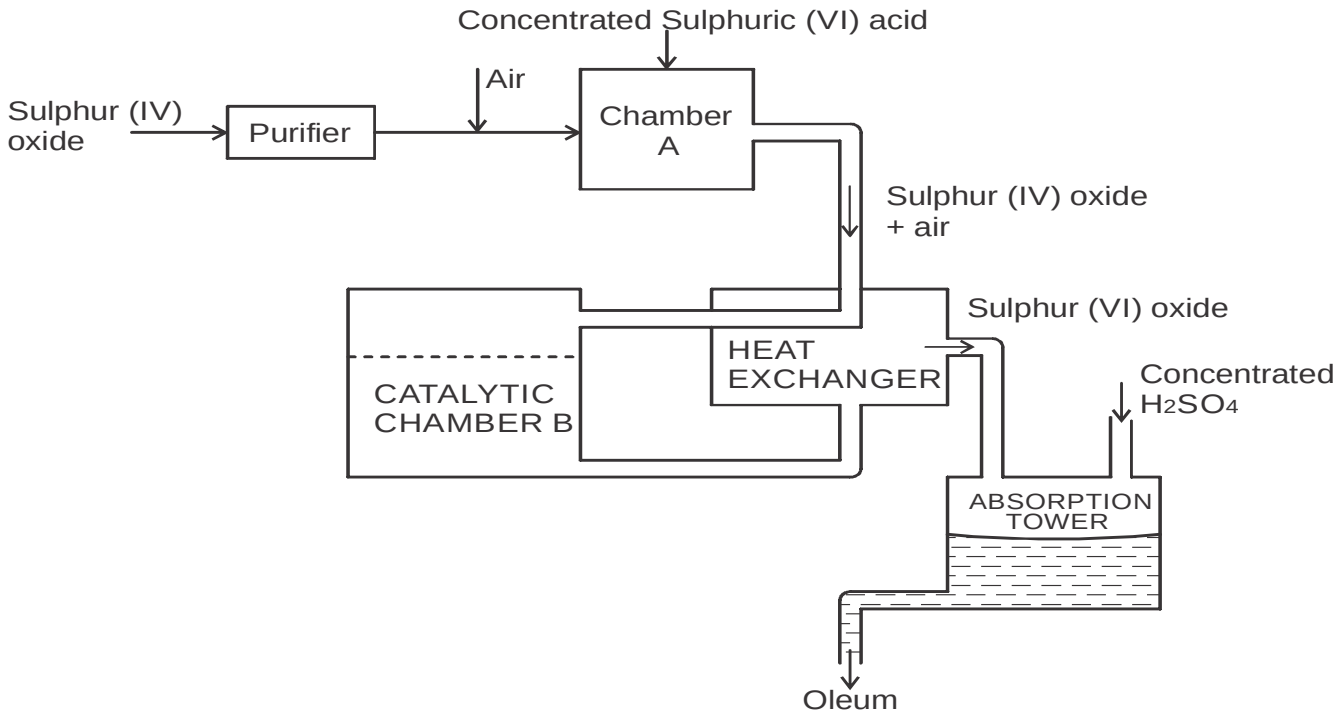
iii) State two physical properties of sulphur that makes it possible for it to be extracted by this method **(2marks)**

……

……

……

b) The diagram below shows part of the process in the manufacture of sulphuric (VI) acid. Study it and answer questions that follow



i) Give two reasons why air is referred to as a mixture **(2 marks)**

……

……

……

ii) What is the role of concentrated sulphuric (VI) acid in chamber A **(1mark)**

……

……

iii) Name two catalysts that can be used in the catalytic chamber B **(2marks)**

……

……

iv) State two roles of the heat exchanger **(2marks)**

……

……

……

v) Describe the test for a Sulphite anion SO_3^{2-} **(2 mark)**

……

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vi) Explain the observation made when a few drops of concentrated sulphuric (VI) acid are added to crystal of hydrated copper II sulphate? Explain your answer **(2mks)**

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……

2. Use the standard electrode potential for elements G,H,J, K and L given below to answer the questions that follow

Half reactions		Electrode potential (volts)
$G^{2+}_{(aq)} + 2e^- \rightarrow$	$G_{(s)}$	-2.90
$H^{2+}_{(aq)} + 2e^- \rightarrow$	$H_{(s)}$	-2.38
$J^+_{(aq)} + e^- \rightarrow$	$\frac{1}{2}J_{2(g)}$	0.00
$K^{2+}_{(aq)} + 2e^- \rightarrow$	$K_{(s)}$	+0.34
$\frac{1}{2}L_{2(g)} + e^- \rightarrow$	$L^-_{(aq)}$	+2.87

i) Which element could be hydrogen. Explain **(1mark)**

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……

ii) Which two half cell would produce the highest potential difference (e.m.f) when combined **(1mark)**

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iii) In the space provided below construct a well labelled electrochemical cell obtained when G^{2+}/G and K^{2+}/K half cells are combined **(3marks)**

iv) Calculate the E^{Θ} value of the electrochemical cell constructed in (iii) above **(2marks)**

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v) It is advisable to store a nitrate solution of K in a container made f H. Explain. **(2marks)**

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b) During electrolysis of aqueous copper (II) sulphate using copper electrodes a current of 0.4 ampheres was passed through the cell for 5 hours

i) Write an ionic equation of the reaction that occurred at the cathode **(1mark)**

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ii) Determine the change in mass of the anode which occurred as a result of the electrolysis process (Cu= 63.5 1 Faraday= 96500 coulombs) **(3marks)**

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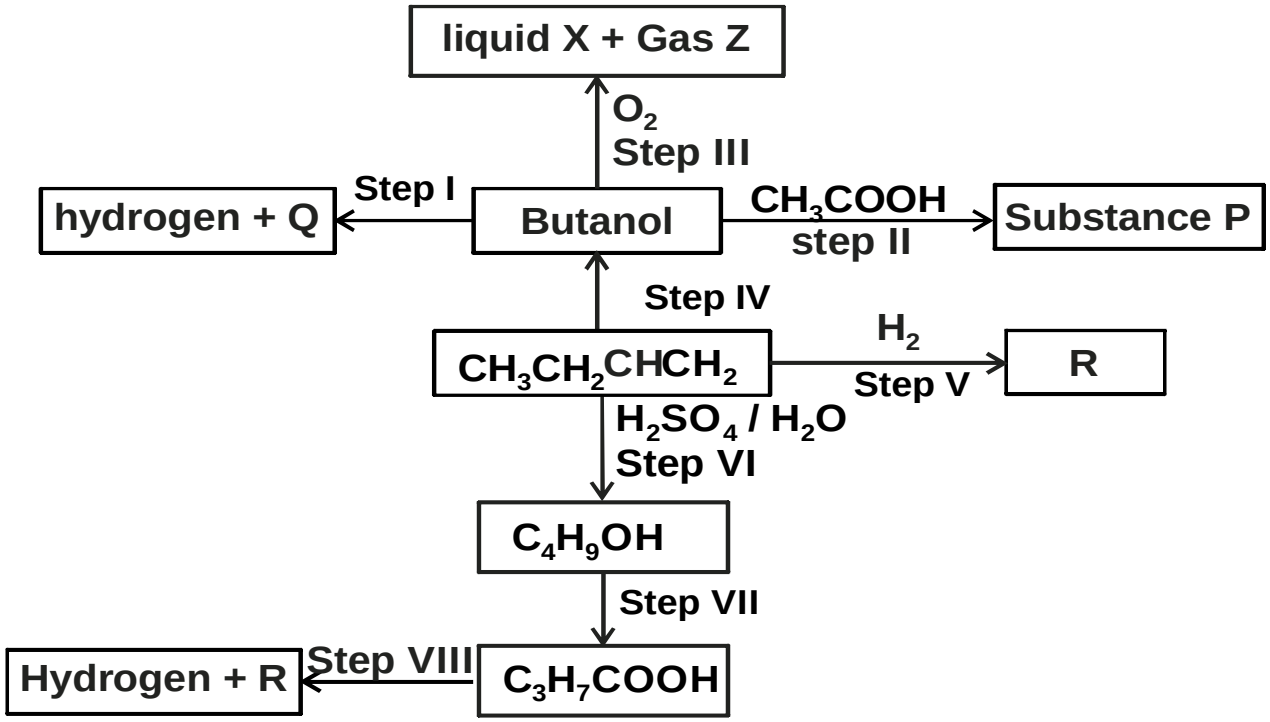
3. Study the reactive scheme below and answer the questions that follow.



i) What is the distinguished physical property of substance P **(1mark)**

……

ii) Identify a suitable reagent that can be used in step I . **(1mark)**

……

iii) Describe how C_3H_7COOH can be distinguished from C_4H_9OH **(2marks)**

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iv) Write an equation for the reaction that takes place in step III. **(1 mark)**

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v) **Name** the type of reaction that occurs in steps II and VII. **(2 marks)**

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vi) If 7.4g of butanol completely underwent step III, determine the volume of gas Z produced at **STP (MGV = 22.4L , C= 12.0, H=1.0 O=16.0)** **(3 marks)**

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vii) Write an equation for the reaction between R and one mole of fluorine. **(1 mark)**

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viii) Describe a chemical test for liquid X. **(2 marks)**

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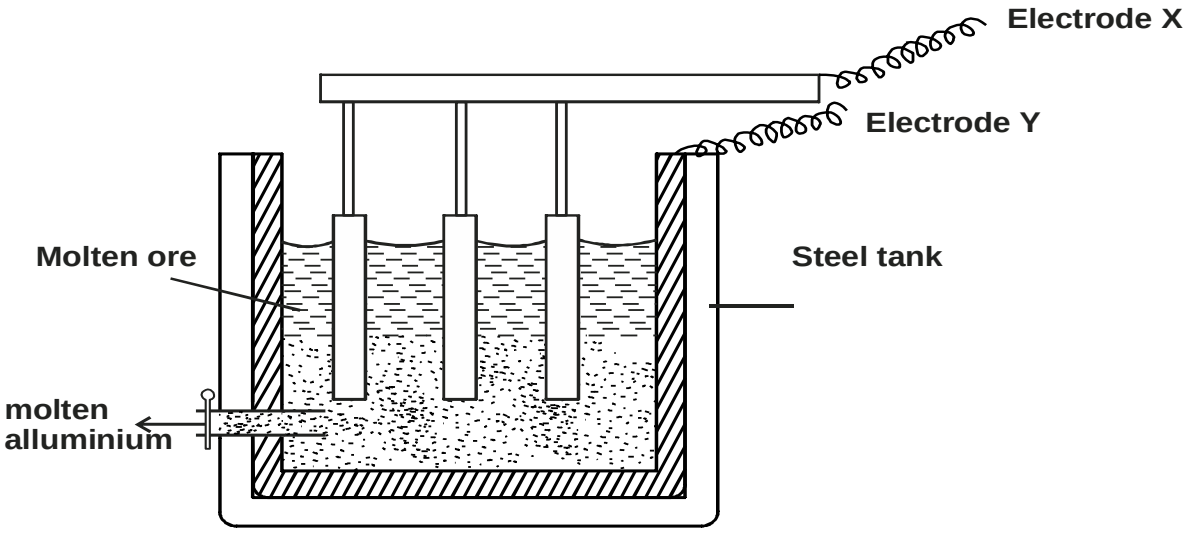
4. Aluminium is extracted using the electrolytic cell represented by the diagram below



i) Why is aluminium extracted by electrolytic method? **(1 mark)**

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ii) Name the electrodes labelled X and Y **(2marks)**

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……

iii) The chief ore from which aluminium is extracted is bauxite.

a)Name **two** main impurities present in bauxite. **(2 marks)**

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b) Aluminium oxide is the main component in bauxite with a melting point of 2015°C but electrolysis of molten aluminium oxide is carried out at 800°C. Explain how this is achieved. **(2mks)**

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iv) Write the equations for the reaction taking place at the anode. **(1 mark)**

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v) One of the electrodes is replaced periodically. Which one and why? **(2 mark)**

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vi) Duralumin (an alloy of copper, aluminium and magnesium) is preferred to pure aluminium in the construction of aeroplane bodies. Give **one** property of duralumin that is considered. **(1 mark)**

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5. The grid below represents part of the periodic table. Study it and answer the questions that follow. The letters do not represent the actual symbols of the elements

C				**F**	**G**		**I**	
						H		**K**
D	**E**							
							J	

i) Identify the most reactive non-metal. Explain. **(2 marks)**

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ii) What is the name given to the family of elements of which I and J belong? **(1 mark)**

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iii) Using dots (•) and crosses (×) to represent electrons, show bonding in the compound formed between C and H. **(2 marks)**

iv) How does the atomic radius of F compare with that of I. Explain. **(2 marks)**

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b) Study the table below and answer the questions that follow.

Substance	M	N	O	P	Q	R
M.P. °C	801	1356	-101	26	-39	113
B.P °C	1410	2850	-36	154	457	445
Electrical conductivity in solid state	Poor	Poor	Poor	Poor	Good	Poor
Electrical conductivity in molten state	Good	Poor	Poor	Poor	Good	Poor

i) Explain why substance M is a good conductor in molten state and not in solid state. **(2marks)**

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ii) What is the most likely structure of substance N. Explain. **(2 marks)**

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iii) Identify, with reasons, a substance that exists as a liquid at room temperature. **(2 marks)**

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6. A piece of marble chip (calcium carbonate) is put in a beaker containing excess of dilute hydrochloric acid which is placed on a reading balance. The mass of the beaker and its contents is recorded every two minutes as shown in the table.

Time (min)	0	2	4	6	8	10	12
Mass (g)	126.4	126.3	126.2	126.1	126.0	126.0	126.0

i) Why is there a continuous loss of mass of the reaction mixture. **(1 mark)**

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……

ii) Write an equation for the reaction taking place. **(1 mark)**

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iii) State two different ways by which the reaction could have been made more rapid. **(2 marks)**

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iv) Why does the mass remain constant after 8 minutes **(1 mark)**

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v) State the observations that would be made if a few drops of lead II nitrate solution was added to 1cm^3 of the resulting solution followed by excess ammonia solution. **(2 marks)**

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vi) State one environmental effect that excess carbon (IV) oxide in the air causes. **(1 mark)**

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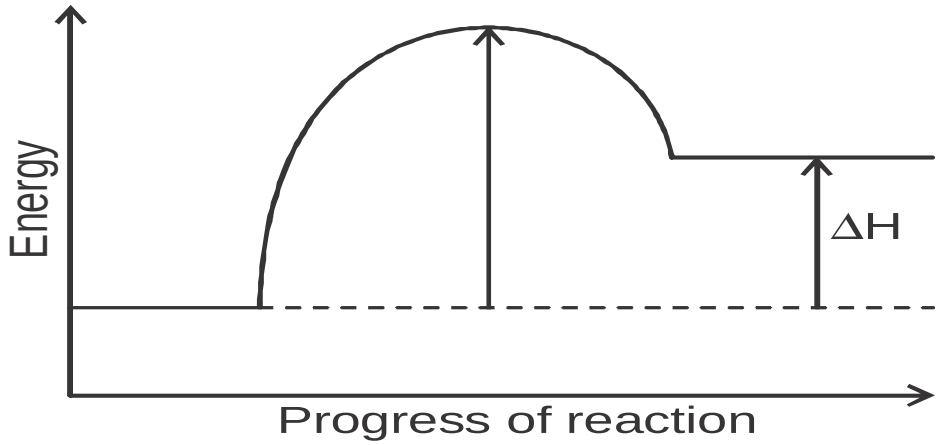
vii) The energy profile for the forward direction of a reversible reaction is shown.



Sketch on the diagram the path for a catalysed reaction. **(2 mark)**

viii) What do you observe when you introduce the following substances in this equation

$2CrO^{2-}_{4(aq)} + 2H^{+}_{(aq)} \rightleftharpoons Cr_2O^{2-}_{7(aq)} + H_2O_{(l)}$ $\Delta H = -477Kj/Mol$

Yellow Orange

i) Dilute hydrochloric acid solution **(2 mark)**

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ii) Increase heat **(2 mark)**

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KCSE 2023 MOCK EXAMINATIONS

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SERIES 2

233/3 **Chemistry (Practical)** Paper 3

Time: 2¼ Hours

SCHOOL…… SIGN……

CONFIDENTIAL

1. *Apart from the laboratory fittings supply the following*

(i). 100cm^3 solution A - 0.02M Acidified potassium manganite (VII) ($H^+/KMnO_4$)

(ii). 100cm^3 Solution B - 0.05M Oxalic acid

(iii). 100cm^3 Solution C - containing 4.9g of $(NH_4)_2SO_4$ $FeSO_4.6H_2O$ in 250cm^3 of solution)

(iv). 50ml measuring cylinder

(v). 5 Test tubes

(vi). 1 boiling tube

(vii). 250ml glass beaker

(viii). Thermometer

(ix). Stopwatch

(x). Burette

(xi). Pipette

(xii). Two conical flasks

(xiii). About 1g of solid Q ($ZnSO_4$)

(xiv). Distilled water

(xv). About 0.5g of solid L (oxalic acid)

(xvi). Litmus papers

(xvii). Metallic spatula

(xviii) Means of Heating

(xix) 1g sodium carbonate

Access to

i. *1 M Sodium hydroxide solution*

ii. *1M Ammonia solution*

iii. *0.5M Barium Nitrate solution – Acidified*

iv. *1M sulphuric (VI) acid*

v. *Acidified potassium Manganate (VII)*

NB

0.02M of $H^+/KMnO_4$ is prepared by dissolving 3.16g of $KMnO_4$ in 400cm^3 of 2M H_2SO_4. Add distilled water to make 1 litre of solution.

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

233/3 **Chemistry (Practical)** Paper 3

Time: 2¼ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

INSTRUCTIONS:

- *Answer **ALL** questions in the spaces provided.*
- *You are **NOT** allowed to start working with the apparatus for the first 15 minutes of the 2 ¼*
- *Hours allowed for this paper. This time will enable you read through the question paper and make sure you have all the chemicals and apparatus required.*
- *Mathematical tables and electronic calculators may be used*
- *All working must be clearly shown where necessary.*

FOR EXAMINER'S USE ONLY.

Question	Maximum score	Candidate's score
1	20	
2	12	
3	8	
Total score	**40**	

For Marking Schemes Contact 0746-222-000 / 0742-999-000

*Answer **ALL** questions in the spaces provided.*

1. You are provided with:

- Solution A of Potassium manganate (VII).
- 0.05M solution B of oxalic acid.
- Solution C containing 4.9g of ammonium iron (II) Sulphate, $(NH_4)_2\ SO_4.FeSO_4.6H_2O$, in $250cm^3$ of water.
- You are required to:

i) Determine the rate of reaction between oxalic acid and Potassium manganate (VII).

ii) Standardize the solution A.

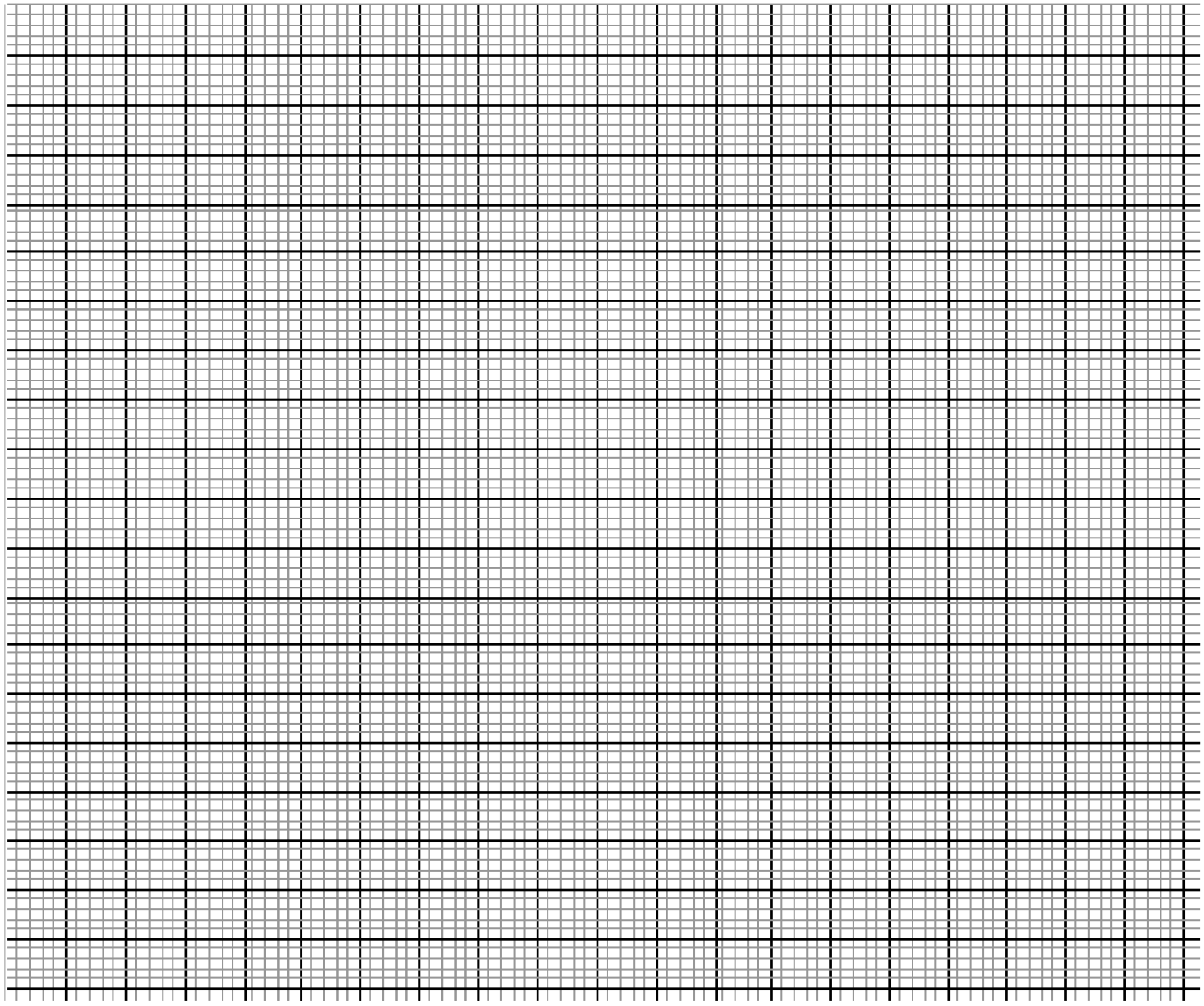
PROCEDURE I:

Using a measuring cylinder, place 1 cm^3 of solution A into each of the five (5) test-tubes in a rack. Clean the measuring cylinder and use it to place $19cm^3$ of solution B into a boiling tube. Prepare a water bath by placing about $200cm^3$ of water into a beaker and start to heat. Place a thermometer into solution B and place it in the warm water until it attains a temperature of 40^oC. Remove the boiling tube from the water-bath and place it in the test-tube rack. Add the first portion of solution A immediately and at the same time start a stop watch. Record the time taken of solution A to be decolourised in table I below. Repeat the procedure at temperatures of 50^oC,60^oC,70^oC and 80^oC to complete the table.

Temperature of solution B (^oC)	40	50	60	70	80
Time taken for decolourisation (tsecs)					
$^I/_{t\ sec^{-1}}$					

(3 marks)

i) Plot a graph of $^1/_t$ against temperature (X-axis) **(3 marks)**



ii) From the graph determine the time taken for the mixture to decolourise at 65°C **(2 marks)**

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iii) How does the rate of reaction between oxalic acid and Potassium manganate (VII) vary with temperature? **(1 mark)**

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PROCEDURE II

Fill a burette with solution A. Pipette 25cm^3 of solution C into a conical flask and titrate the solution A against solution C until a permanent pink colour just appears. Record your results in table II below and repeat the procedure to fill the table.

	I	II	III
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution A used (cm^3)			

(4 marks)

i) Determine the average volume of A used **…….cm^3**

(Show how you arrive at your answer) **(1 mark)**

ii). Calculate the concentration of solution C in moles per litre (Fe, = 56, S = 32, O = 16, N =1 4, H = 1) **(2 marks)**

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iii) Find the number of moles of solution C used. **(1 mark)**

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iv) Given the ionic equation for the reaction is

$5Fe^{2+}_{(aq)} + MnO_4^-{}_{(aq)} + 8H^+_{(aq)} \longrightarrow 5Fe^{3+}_{(aq)} + Mn^{2+}_{(aq)} + 4H_2O_{(l);}$

Find the number of moles of solution A used. **(1 mark)**

(v) Determine the concentration of the Potassium manganate (VII), solution A in moles per litre.

(2 marks)

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2. You are provided with solid Q. Carry out the tests below and record your observations and inferences in the table below.

i) Place half a Spatula full of solid Q in a clean dry test-tube and heat gently then Strongly.

Observations	**Inferences**
(1 mark)	**(1 mark)**

ii). Place the remaining solid Q in a boiling tube and add about $5cm^3$ of distilled water and shake well. Divide the resulting mixture into four portions for the tests below.

Observations	**Inferences**
(1 mark)	**(1 mark)**

a). To the first portion add Sodium hydroxide solution dropwise until in excess.

Observations	Inferences
(1 mark)	**(1 mark)**

b). To the second portion add 2-3 drops of dilute Sulphuric (VI) acid

Observations	Inferences
(1 mark)	**(1 mark)**

c). To the third portion add aqueous ammonia dropwise until in excess

Observations	Inferences
(1 mark)	**(1 mark)**

d). To the fourth portion add 2-3 drops acidified barium nitrate solution

Observations	**Inferences**
(1 mark)	**(1 mark)**

3. You are provided with solid L. carry out the tests below on L and record the observations and inferences in the spaces provided.

(a) Place half of solid L in a boiling tube and add about $5cm^3$ of distilled water

(i)

Observations	**Inferences**
(1 mark)	**(1 mark)**

Divide the solution into two portions and carry out the tests below.

(ii). To the first portion add 2-3 drops of acidified potassium manganate (VII).

Observations	Inferences
(1 mark)	**(1 mark)**

(iii). To the second portion add Sodium carbonate provided **(1 mark)**

Observations	Inferences
(1 mark)	**(1 mark)**

(b). Place the remaining solid L in metallic spatula and ignite it.

Observations	Inferences
(1 mark)	**(1 mark)**

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

232/1 **Physics (Theory)** Paper 1

Time: 2 Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO THE CANDIDATES:

a) *This paper consist of two Section A and B*

b) *Answer all questions in section A and B in the spaces provided*

c) *All working **must** be clearly shown, and use the CONSTANTS given,*

d) *Ensure that the paper has all the questions*

Take g = 10N/kg, Atmospheric pressure = 760mmHg, density of mercury = 13600Kg/m^3

FOR EXAMINERS' USE ONLY

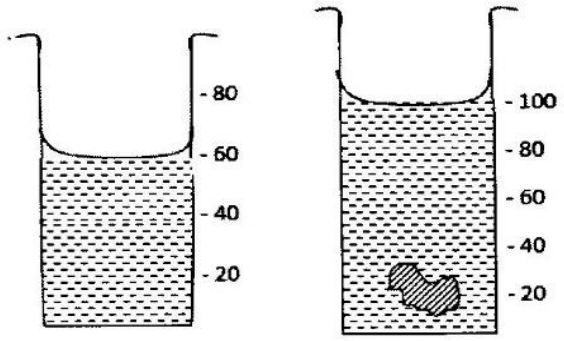
SECTION	QUESTION	MAX SCORE	CANDIDATE'S SCORE
A	1-11	25	
B	12	15	
	13	11	
	14	10	
	15	10	
	16	09	
	TOTAL	80	

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SECTION A (25 MARKS)

Answer All Questions in This Section in the Spaces Provided

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



Given that the mass of the solid is 567g determine the density of the solid in Kg/m^3. **(3 marks)**

2 in a ball and ring experiment, the ball goes through the rings at room temperatures. When it is heated it does not go through the ring, but when left on the ring for some time, it goes through. Explain this observation. **(2marks)**

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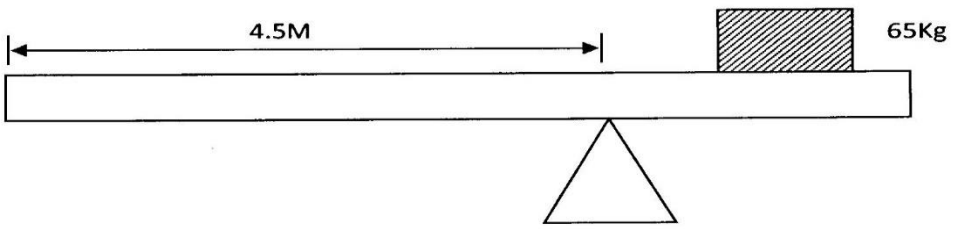
3 The diagram below shows a uniform wooden beam of length 6m and mass 30kg pivoted as shown below.



How far from the pivot will the 65kg mass be placed for the beam to be in equilibrium?**(3 marks)**

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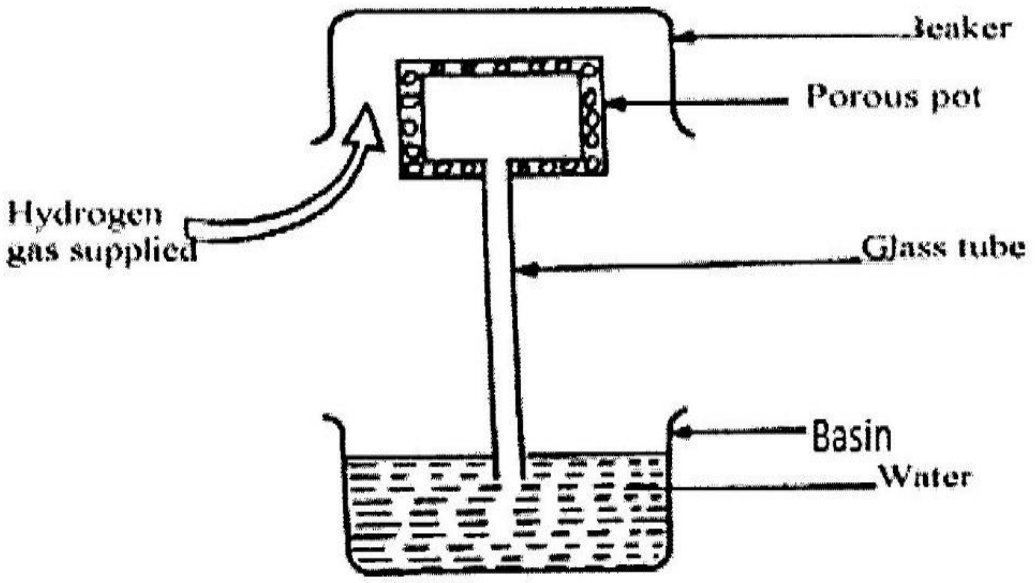
4. The figure 3 below shows an arrangement to demonstrate diffusion through solids:-



The hydrogen gas is supplied for sometimes then stopped and the beaker removed. State and explain what is likely to be observed when the hydrogen gas supply is stopped. **(3 marks)**

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5. State how the pressure in a moving fluid varies with speed of the fluid. **(1 mark)**

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6. A piece of metal weighs 3N in air and 2N when totally immersed in water. Calculate the volume of the metal. (density of water = 1000kg/m^3) **(3 marks)**

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7. Explain how a person is able to drink a soda using a drinking straw. **(2 marks)**

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8. A needle may float on clean water but sinks when a detergent is added. Explain. **(1 mark)**

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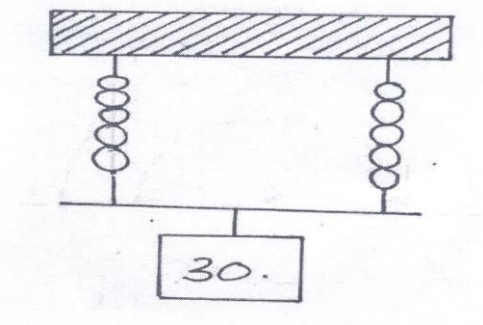
9. The identical springs of spring constant 3N/cm are used to support a load of 30N as shown.



Determine the extension on each spring. **(3 marks)**

10. In a vacuum flask, the walls enclosing there vacuum are silvered on the inside. State the reason for this. **(1 mark)**

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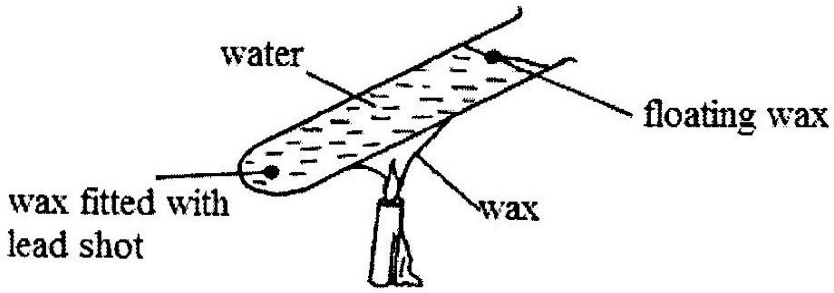
11. A student set up the apparatus as shown below. The boiling tube was heated in the middle as shown



a. State the role of the lead shot in the experiment **(1 mark)**

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……

b. With reason, state the wax that will melt firs. **(2 marks)**

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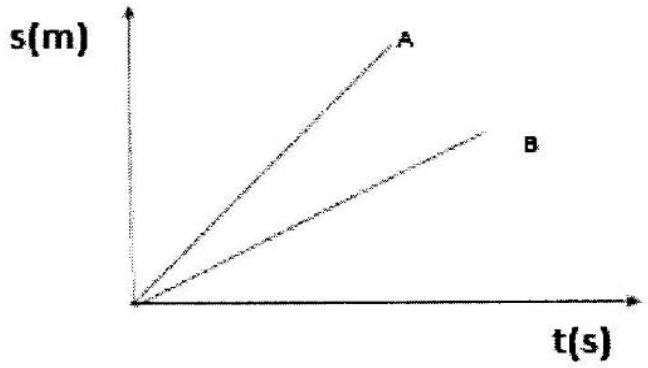
SECTION B (55 MARKS)

Answer all questions in this section in the spaces provided

12. (a). The figure below shows displacement-time graphs of two objects A and B of equal masses drawn on same axes.



i) What does the slope of the graph represent? **(1mark)**

ii) The same size of force is applied against each object. State with a reason which of the two objects stops in a shorter distance. **(2 marks)**

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(b). An object moving at 30m/s starts to accelerate at $5m/s^2$ so that its velocity becomes 50/ms

i) Find the distance moved during this acceleration **(3marks)**

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ii) The object is now braked so that it comes to rest in a time of 5 seconds. Find the braking force if its mass was 2000g. **(3 marks)**

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(c) State the law of conservation of linear of linear momentum. **(1 mark)**

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(d) Anobject of the mass 100kg moving at 20 m/s collides with a stationary object of mass 20kg. They stick together after collision. Determine the:

(i) Total momentum below collision **(2marks)**

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(ii) Total momentum after collision **(1mark)**

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(iii). Their common velocity after collision **(2 marks)**

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13. (a). Explain why an air bubble increasing volume as it rise from the bottom of a lake to the surface. **(2 marks)**

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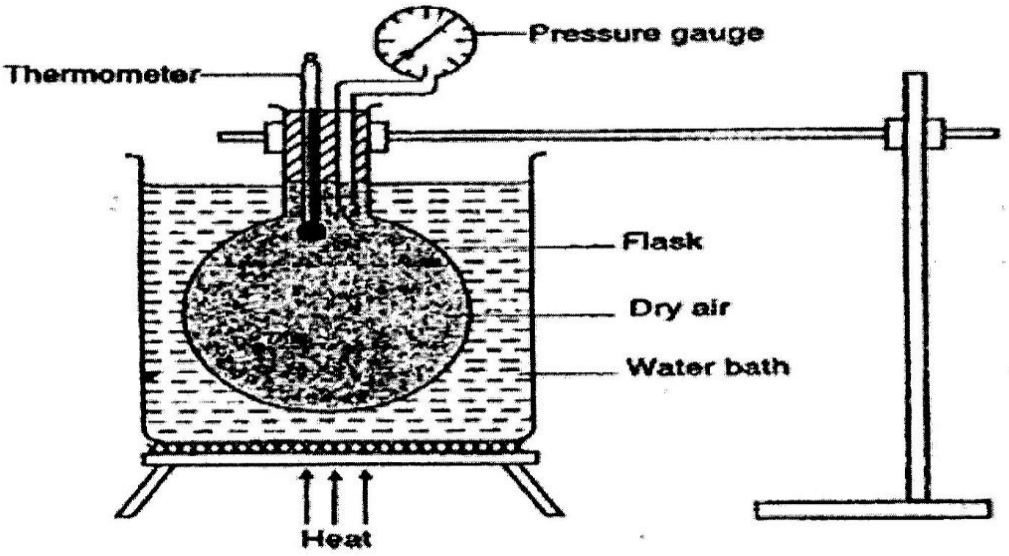
(b) The diagram below shows a set-up used to investigate a particular gas law. Study the diagram and answer the questions that follow.



i. State with a reason which gas law is being experimented by the set-up. **(2 marks)**

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ii. Name the two factors that are held constant in the experiment **(2marks)**

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iii. Give the reason why heating is done through a water bath. **(1 mark)**

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(c) A balloon of volume $1.5m^3$ containing helium gas at a pressure of 3.0×10^6 pa is released from the ground when the temperature is 20^oC. What will be the pressure when it reaches an altitude where the volume becomes $3.0m^3$ and the temperature 5^oC. **(3 marks)**

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(d) State the kinetic theory of gases. **(1 mark)**

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14. (a) An immersion heater rated 2.5W is immersed into a plastic jug containing 2kg of water and switched on for one minute. Determine

(i) The quantity of heat gained by water. **(2marks)**

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(ii) The temperature change for water. (Specific heat capacity of water = $4.2x10^3Jkg^{-1}K^{-1}$(**3 mrks)**

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(b) Explain why a drop of methylated spirit on the back of the hand feels cold. **(2marks)**

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(c) What makes Freon suitable for use as a refrigerant? **(1 mark)**

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(d). State two differences between boiling and melting. **(2 marks)**

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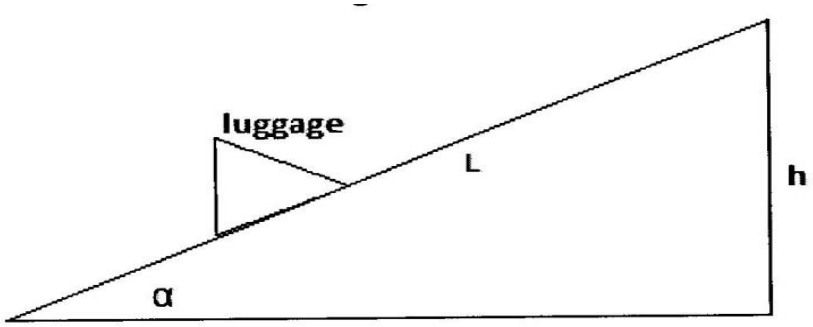
15. The figure below shows an inclined plane used to load heavy luggage's onto a lorry. The length of the place is L metres and the height is h metres, the plane makes angle a with the horizontal



(a) Show that the velocity ratio is given by $^{1}/_{\sin a}$ **(3 marks)**

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(b) A man uses the inclined plane above to lift a 50kg load through a vertical height of 4m. The inclined plane makes an angle of 30° with the horizontal. If the efficiency of the inclined plane is 72%. Calculate

I. The effort needed to move the load up the inclined plane at a constant velocity. **(4 marks)**

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II. The work done against friction in raising the load trough the 4.0 m height. **(3 marks)**

[Take g = 10N/kg]

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16. (a). State what provides centripetal force for the moon moving round the earth. **(1 mark)**

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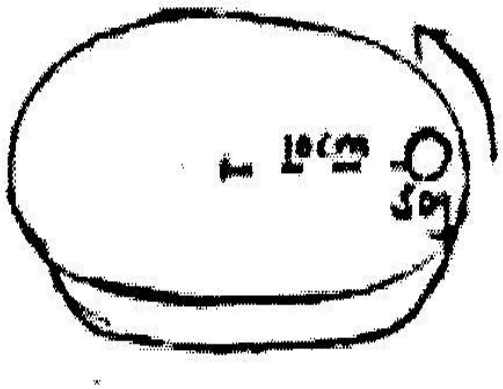
(b). The figure (6) below shows a turnable on which a mass of 50g isplaced 10cm from the center.



The Frictional force between the 50g mass and the turnable is 0.2N. When the turnable is made to rotate with angular velocity of ω rad/sec, the mass tarts to slide off.

i) Determine the

I. Angular velocity **(3marks)**

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II. Time taken to make a complete revolution when moving with the above angular velocity.

(2 marks)

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ii On the figure, draw a path that would be taken by the 50g mass at above position if the turnable suddenly came to stop. **(1 mark)**

(c) State two changes can be made to keep the 50g mass from sliding off. **(2marks)**

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KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

232/2 **Physics (Theory)** Paper 2

Time: 2 Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS

1. *Write your name and your Index number in the spaces provided.*
2. *This paper consists of **two** sections, Section **A** and **B.***
3. *Answer **ALL** the questions in both section in the spaces provided in this paper.*
4. ***ALL** working must be clearly shown.*
5. *Mathematical tables and electronic calculators **may be** used.*

Take: Planck's constant =$6.6x10^{-34}$ Js

FOR EXAMINER'S USE ONLY:

SECTION	QUESTION	MAXIMUM SCORE	STUDENTS SCORE
A	1-12	25	
B	13	11	
	14	09	
	15	15	
	16	10	
	17	10	
	TOTAL	**80**	

*Answer **ALL** the questions*

1. State any 2 ways of in increasing the size of an image formed by a fixed pinhole camera.(**2 mks)**

……

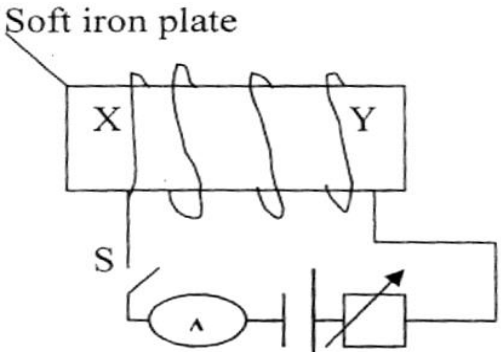
……

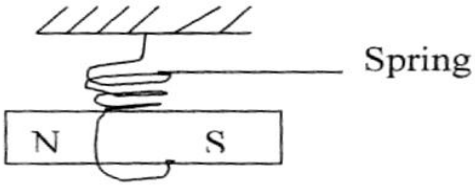
2. State 2 advantages of alkaline battery over a lead acid battery. **(2 mks)**

……

……

3. The diagrams below show a soft iron plate in a solenoid and a permanent magnet suspended by a spring.





State with reason the behaviour of the magnet when the switch S is closed. **(2 mks)**

……

……

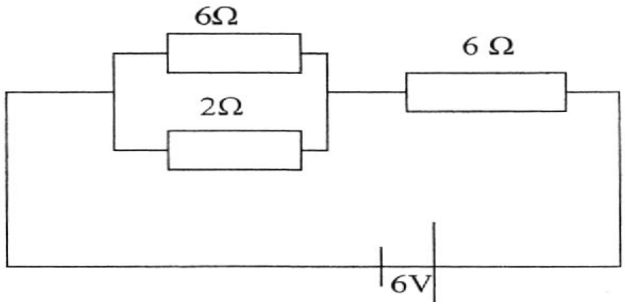
……

4. A man, standing between 2 parallel vertical walls, claps his hands. He hears the first echo 0.3 seconds later and the next echo after a further 0.2 seconds. If the velocity of sound in air is 300m/h. Calculate the distance between the walls. **(3 mks)**

5. The table below shows an electromagnetic spectrum. Complete the table in the order of increasing wavelength from A- B. **(2 marks)**

A			Visible Light			B

6. The figure below shows a 6V battery connected to an arrangement of resistors.



Determine the current flowing through 2 **Ω** resistor. **(4 marks)**

7. State difference between semi conductors and metallic conductors. **(1 mark)**

……

……

……

8. A radioactive sample has a mass of 16g and a half-life of 10 days. How much of the original sample remains after 40 days. **(2 marks)**

9. Negatively charged rod is brought near the cap of a lightly charged electroscope. The leaf divergence first reduces but as the rod comes nearer, it diverges more.

i) State the charge of the electroscope. **(1 mark)**

……

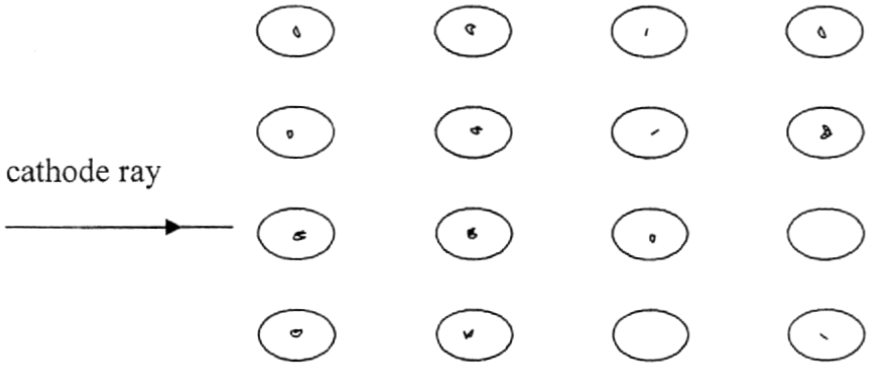
(ii) Explain the behaviour of the leaf above. **(1 mark)**

……

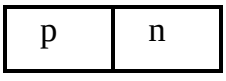
……

10. Water waves pass a point in a swimming pool at the rate of 30 crests per 60 seconds. One of the crests was observed to take 2 seconds to travel between 2 points, 6m apart. Determine the wavelength of the water waves. **(2 marks)**

b. The figure below shows a cathode ray beam entering a magnetic field, perpendicular to the plane of the paper complete the diagram to show the path of the beam in the field. **(1 mark)**



11. The diagram below shows a junction diode.



Complete the diagram to show how the diode can be connected in a reverse bias mode. **(1 mark)**

12. An Uranium 236 isotope has a symbol $^{2361}_{92}U$ when bombarded by a neutron, it splits to give Substances K and L and 2 neutrons. Calculate the values of a and b in the equation below. **(1 mark)**

$$^{236}_{92}U + {}^{1}_{1}n \longrightarrow {}^{95}_{56}K + {}^{a}_{b}L + {}^{+2}_{0}\text{n}$$

SECTION B 55MKS

13a) Explain why a cathode ray tube is evacuated **(1 mark)**

……

……

b) State four properties of cathode rays **(2 marks)**

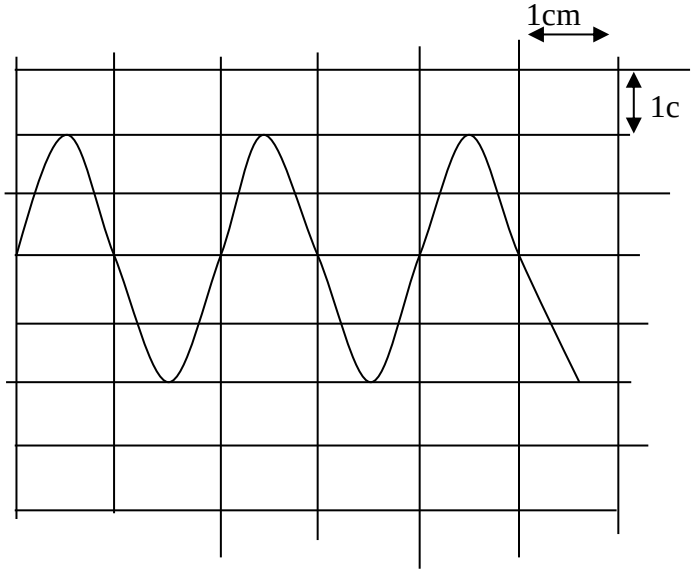
……

……

……

……

c) The figure shows the waveform displayed on the cathode ray oscilloscope screen when an alternating voltage is applied on the Y-input. The time- base is set at 1ms/cm and the Y-gain at 10v/cm



Calculate;

i. The amplitude of the ac input **voltage** **(2marks)**

ii. The frequency of the ac input voltage signal **(2 marks)**

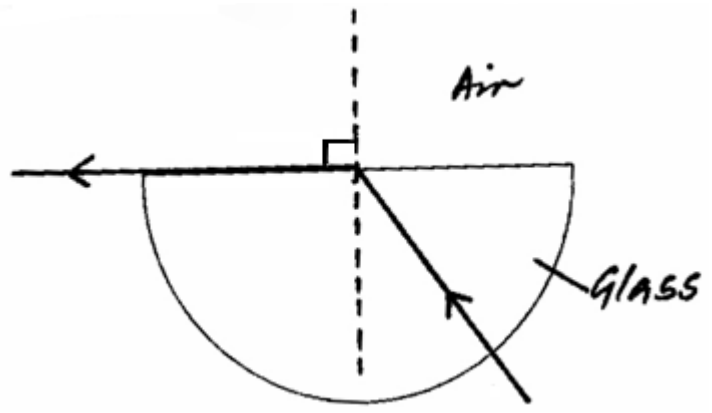
d) The threshold frequency of sodium is $5.6x10^{14}$Hz .Find

i. Work function of sodium **(2marks)**

ii. The kinetic energy of the ejected electrons when sodium is shone with light of frequency $8.6x10^{14}$ Hz **(2 marks)**

14. State the meaning of the term critical angle as applied in refraction of light**.** **(1 mark)**

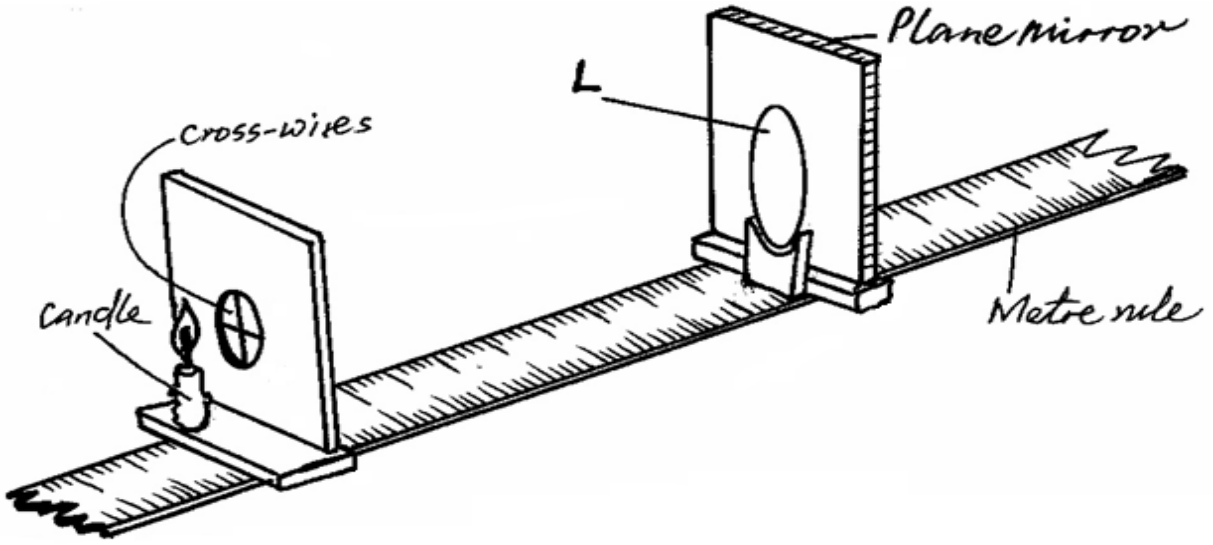
ii) The figure shows a ray of light incident on a glass-air interface.



(i) Show on the diagram the critical angle, **c**. **(1 mark)**

ii) Given that the refractive index of the glass is ${}_a\eta_g$, and that the critical angle **c** = 42°, determine the value of is ${}_a\eta_g$. **(3 marks)**

(b) The figure shows an experimental set up consisting of a mounted convex lens **L**, cardboard screen with cross-wires at the centre, a plane mirror, a metre rule and a candle.



Describe how the set-up may be used to determine the focal length, f, of the lens. **(4 marks)**

……

……

……

……

……

15.a) State one advantage of high voltage transmission. **(1mark)**

……

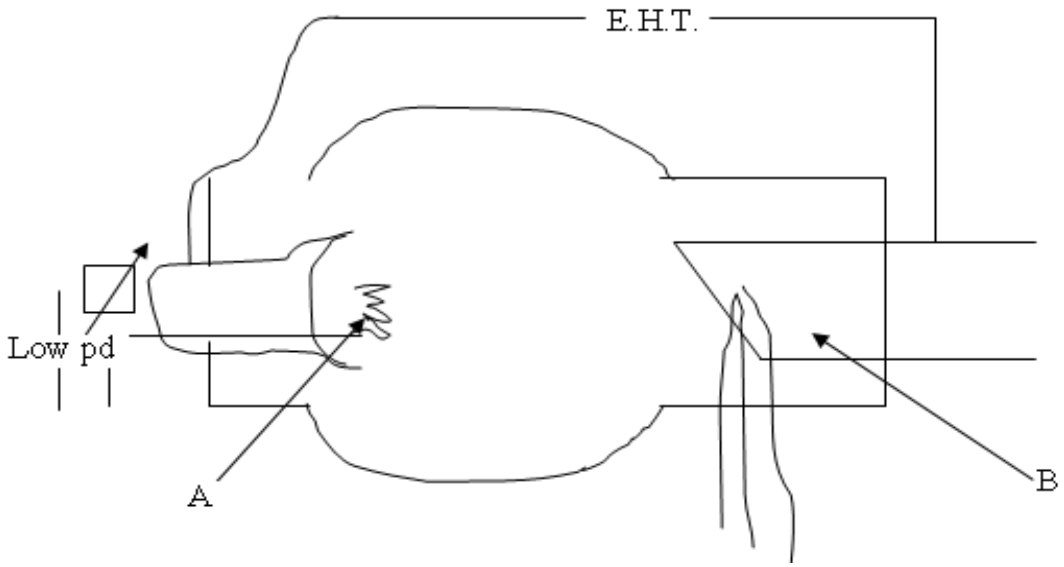
……

(b) A generator produces 150kw at a voltage of 5kv. The voltage is stepped up to 60kv and transmitted through cables of resistance 15Ω to a step down transformer in a substation. If both transformers are 80% efficient, calculate the:

(i) Current through the transmission cables. **(3marks)**

(ii) Power lost during transmission. **(3marks)**

(c) The figure below shows the features of an x ray tube



i)Name the parts labelled A and B. **(2marks)**

……

……

(ii) Explain how change in the potential across PQ change the intensity of the x-rays produced in the tube. **(1marks)**

……

……

(iii) During the operation of the tube, the target becomes very hot. Explain how the heat is caused. **(1mark)**

……

……

……

(iv) What property of lead makes it suitable for use as shielding material? **(1mark)**

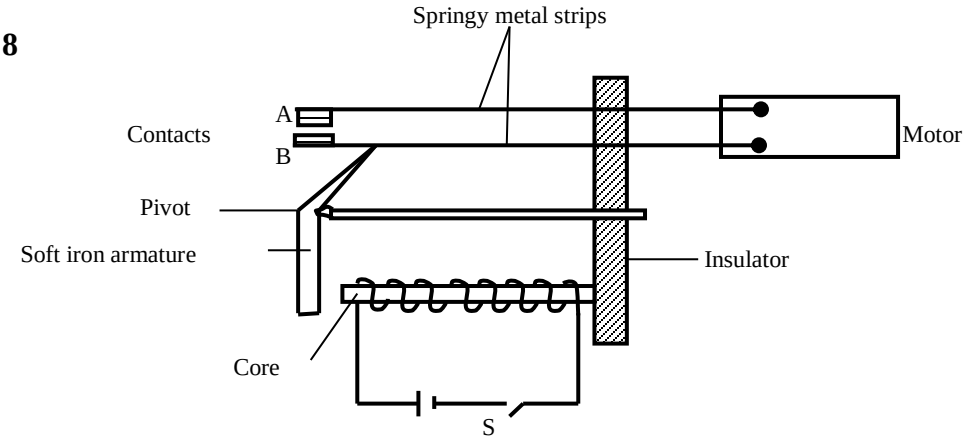
……

……

(b) In a certain X ray tube, the electrons are accelerated by a p.d of 12000v. assuming that all the energy goes to produce x rays, determine the frequency of the x rays produced(take planks constant $h=6.62x10^{-34}Js$, and the charge of an electron $e=1.6x10^{-19}$ **(3marks)**

16.Figure 8 shows an electromagnetic relay being used to switch an electric motor on and off. The electromagnet consists of a coil of wire wrapped around a core. The motor in figure is switched off.

Figure 8



(a) Suggest suitable material for the core. **(1mark)**

(b) What happens to the core when switch S is closed**?** **(2marks)**

……

……

c) Why do the contacts A and B close when the switch S is closed. **(2marks)**

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……

……

(c) When the switch S is opened, what will happen to;

(i) The core **(1mark)**

……

……

(ii) Soft iron armature. **(1mark)**

……

……

(d) Give **one** other application of an electromagnet. **(1mark)**

……

(e) State **two** ways in which an electromagnet could be made more powerful. **(2marks)**

……

……

17. Explain why carbon-14 ($^{14}_{6}C$) is radioactive while carbon $^{12}_{6}C$ is not. **(1 mark)**

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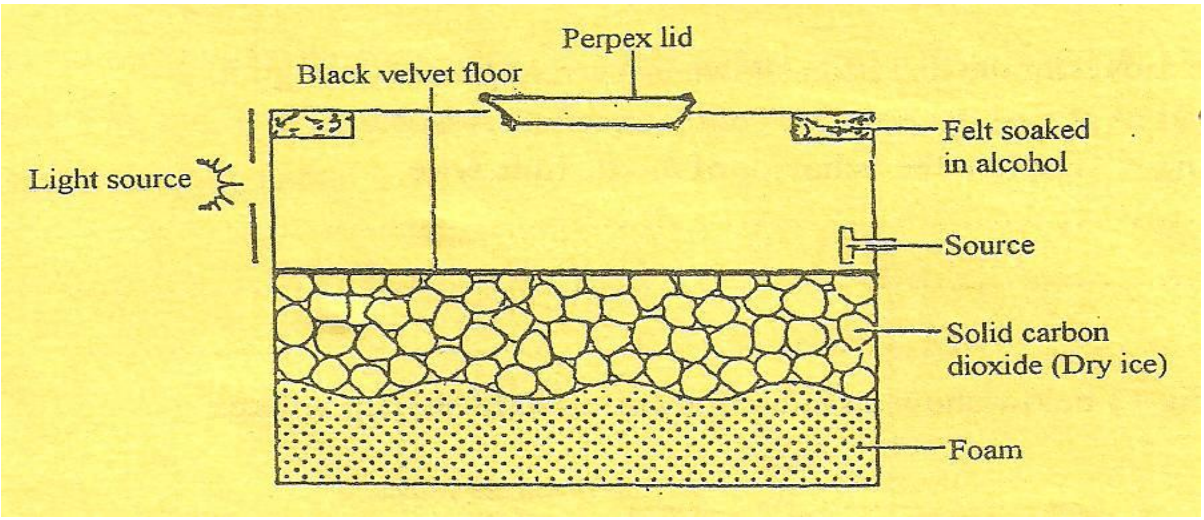
……

(b) The figure below shows features of a diffusion cloud chamber used for detecting radiations from a radioactive source.



Explain how the chamber works when a radioactive particle is introduced at the source. **(2 mks)**

……

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……

(c) (i) What is the purpose of solid carbon (iv) oxide. **(1 mark)**

……

……

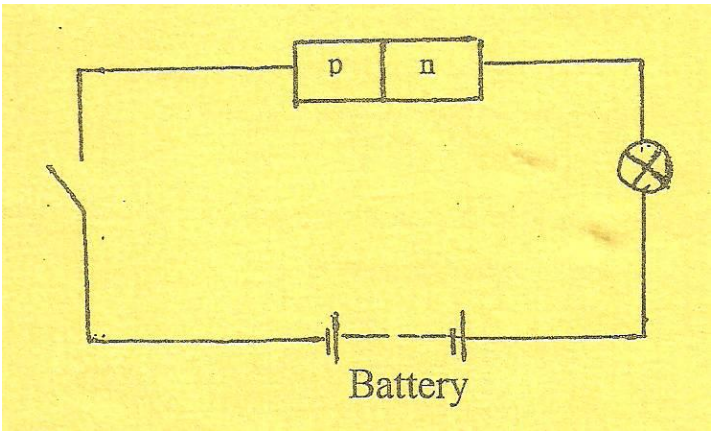
(d) (i) Using a diagram explain how doping produces a p-type semi-conductor. (**3 marks)**

(ii) What is biasing? **(1 mk)**

……

……

(iii) The diagram below shows a circuit with a p-n junction and a very low power bulb.



State with reason the observations made on the bulb when the switch is closed. **(2 marks)**

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KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

232/3 **Physics (Practical)** Paper 3

Time: 2½ Hours

PHYSICS CONFIDENTIAL

Physics teachers to ensure the following apparatus are provide.

QUESTION ONE

- *An ammetre (range 0-1A)*
- *A resistance wire labelled R 28Gw or d = 0.36mm*
- *Two new dry cell (size D) and a cells holder*
- *Six connecting wires at least 3 with crocodile clips at the ends*
- *A switch*
- *A jockey*
- *A micrometer screw gauge (to be shared)*
- *A voltmeter (0-3V)*

QUESTION TWO

PART A

- *A metre rule*
- *Two identical 100g masses (labelled A and B)*
- *Liquid L in 250ml beaker, ¾ full (water)*
- *Three pieces of thread, each 30cm long*
- *Stand with clamps*
- *Tissue paper*
- *Vernier calipers (to be shared)*
- *A glass beaker (500ml)*
- *Metal solid (pendulum bob of about 65g)*
- *Some water*
- *Source of Heat*
- *A piece of cotton thread (30cm)*
- *A plastic beaker wrapped with tissue paper on the outside*
- *Liquid L (water)*

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

232/3 **Physics (Practical)** Paper 3

Time: 2½ Hours

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

a) *Write your **name** and **index number** in the spaces provided above*

b) *Answer **ALL** the questions in the spaces provided.*

c) *You are supposed to spend the first 15 minutes of the 2 ½ hours allowed for this paper reading the whole paper **carefully** before commencing your work.*

d) *Marks are given for **a clear record of the observations** actually made, their suitability, accuracy and the use made of them.*

e) *Candidates are advised to record their observations as soon as they are made.*

f) *KNEC MATHEMATICAL TABLES* AND NON PROGRAMMABLE SILENT CALCULATORS MAY BE USED.

For Examiners' Use Only

Question 1											TOTAL
	b	c	e	f	g	h	i				
Maximum score											20
Candidate's score											
Question 2											TOTAL
	a	b	c	d	e	f	g	h			
Maximum score											20
Candidate's score											

For Marking Schemes Contact 0746-222-000 / 0742-999-000

QUESTION 1

You are provided with the following apparatus.

- An ammeter (range 0 – 1A)√
- A resistance wire labeled R√
- Two new dry cell (size D) √
- Six connecting wires (at least three with crocodile clip) √
- A switch√
- A jockey√
- A micrometer screw gauge (to be shared) √
- A voltmeter (0-3V) √

Proceed as follows:

(a) Assemble your apparatus as shown in **Figure 1**

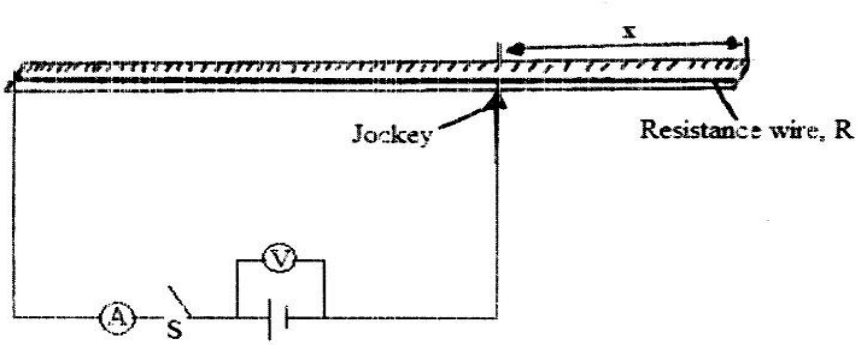


Figure 1

(b). With the switch S open, record the voltmeter reading.

V = ……. Volts **(1 mark)**

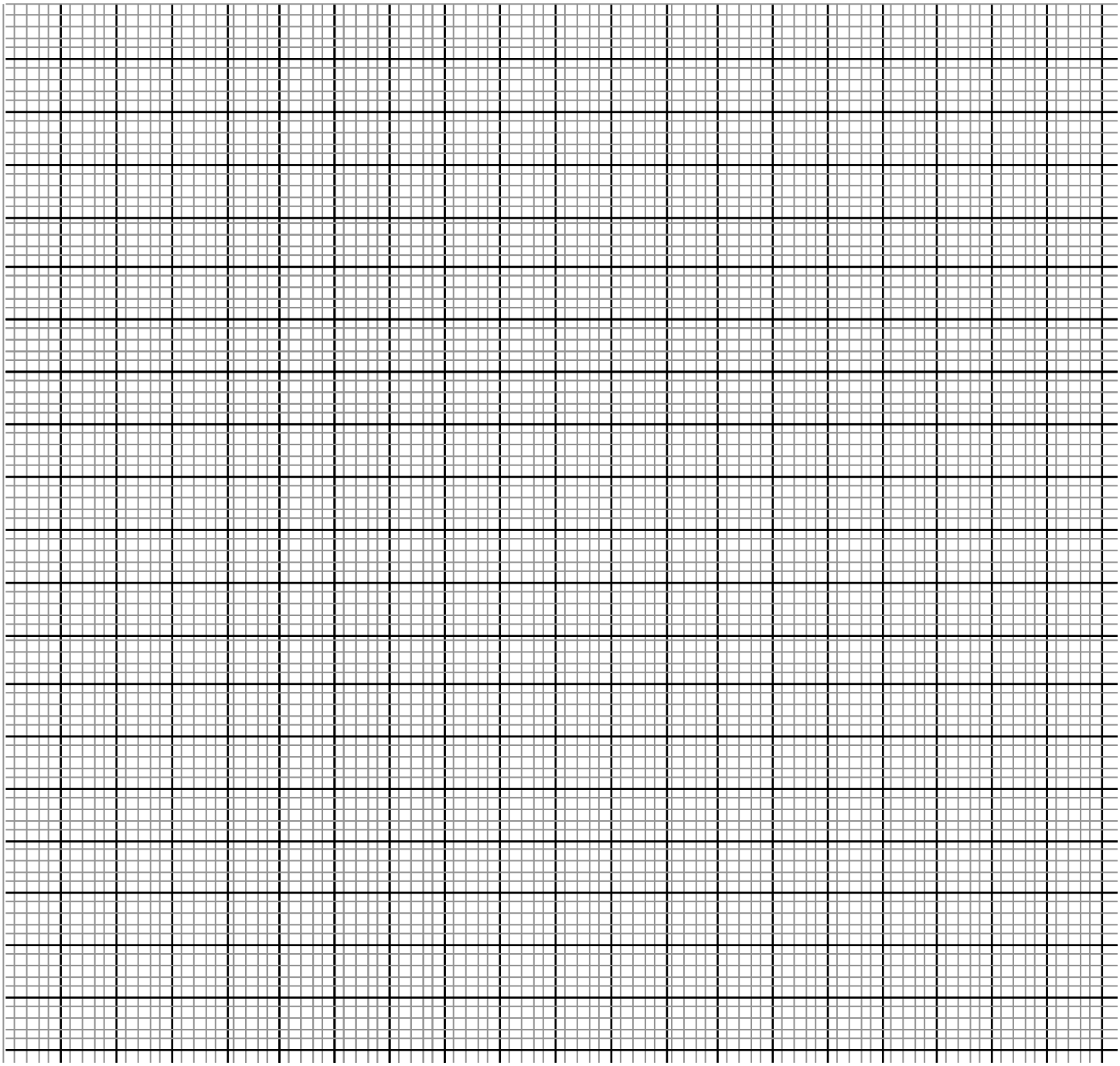
(c). Adjust the length x of the wire to 25cm. Close the switch, read and record the value of current I in Table 1

Table

Length x (cm)	25	35	45	55	65	75
Length (100 – x) cm						
Current I (A)						
$\frac{1}{I}$ (A^{-1})						

(d). Repeat (c) for other values of x given in Table 1. Complete the table. **(5 marks)**

(e) On the grid provided plot a graph of length (100-x) m against $\frac{1}{I}$ (A^{-1}) **(5 marks)**



(f). calculate the slope S of the graph **(3 marks)**

……

……

……

……

……

(g). what does the y-intercept represent? **(1 mark)**

……

……

……

(h). Using the micrometer screw gauge provided measure the diameter t, of the resistance wire R

t = ……mm **(2 marks)**

t = ……..m

(i). Given P = $\frac{SVt^2}{4}$

Determine the value of P **(3 marks)**

……

……

……

……

QUESTION 2

This question has two parts A and B. Answer all the parts

Part A

You are provided with the following:

- A metre rule√
- Two identical 100g masses (labelled A and B) √
- Liquid L in 250ml beaker ¾ full √
- Three pieces of thread, each 30cm long. √
- Stand with clamps√
- Tissue paper√
- Vernier calipers√

Proceed as follows:

(a). Take one 100g mass and measure the diameter d and height h using the Vernier calipers

d = …… M **(1 mark)**

h = …… M **(1 mark)**

b. Determine the volume V given that $\mathbf{V = \pi \left(\frac{d}{22}\right)^2 h}$

V …….m^3 **(1 mark)**

c. Using a stand and one piece of thread, suspend the metre rule in air such that it balances horizontally.

Record the position of the centre of gravity G.

G = ……..cm **(1mark)**

NOTE: the metre rule should remain suspended at this point throughout the experiment.

d. Set up the apparatus as shown in Figure 1 below;

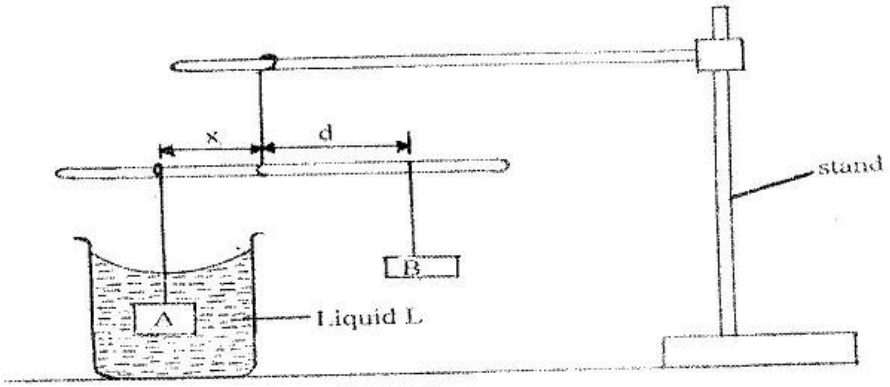


Figure 2

- Suspend the mass A at a distance x = 30cm and completely immerse it in liquid L without touching the sides of the beaker.
- Hang mass B and adjust its position such that the rule is balanced and measure the distance dcm. Tabulate your results in table 1 below;

(i) Table **(3 marks)**

x (cm)	30	35	40
d (cm)			
$\frac{d}{x}$			

(i).(e). Determine the weight F of one of the masses A or B in air. Given that **g = 10N/K g and A = B**

Weight F in air = …….. (1 mark)

(ii). Using the principle of moments, determine the apparent weight P of A when completely immersed

in Liquid L Apparent weight P =

……

……

……

(2 marks)

(iii). Find the up thrust U on A when completely immersed. **(1 mark)**

(iv). Upthrust; U =

……

……

……

(h). Determine the density of liquid L, given that; **(1 ½ marks)**

P = $\frac{Un}{V}$ where n = 0.1 Kg/N **(1 ½ marks)**

PARTTWO

You are provided with the following apparatus

- A glass beaker√
- A metal solid√
- Some water√
- Source of heat√
- A piece of cotton thread√

- A plastic beaker wrapped with tissue√
- Thermometer√
- Liquid L√

Proceed with the experiment as follows:

(f). Fill the glass beaker with the water provided and place it on the fire source. Use the piece of thread to carefully lower the metal solid to the bottom of the beaker.

Heat the water to its boiling point. Use the thermometer to measure its boiling point.

Boiling point of water …….Kelvin **(1 mark)**

(g). (i). Find the following measurements using appropriate instruments

Mass of the solid M_s = ……g **(½ mark)**

Mass of the wrapped empty plastic beaker M_1 ……..g **(½ mark)**

Use the plastic beaker to measure 240ml of liquid L, hence find the joint mass of the plastic beaker and its content liquid L, M_2 = ...(g) **(½ mark)**

: Initial temperature of liquid L, T_1 = ……Kelvin **(1 mark)**

(ii). At boiling point of water; quickly transfer the metal solid into liquid L, stir well and measure the temperature of the mixture immediately.

Temperature of the mixture T_2 ……..Kelvin **(1 mark)**

(h). By using the measurements taken in pars (f) g(i) and g(ii) as well as the equation provided below, determine the specific heat capacity of liquid L. (Take S.H.C of metal solid = 480J/kg/k and S.H.C of plastic = 359 J/kg/k).

(Heat lost by metal) = (heat gained by liquid L) + (heat gained by plastic beaker**). (3 marks)**

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

121/1 **Mathematics** Paper 1

Time: 2½ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

1. *Write your name and admission number in the space 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 provided below each question.*
5. *Marks may be given for correct working even if the answer is wrong.*
6. *Non-programmable silent electronic calculators and 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	17	TOTAL

SECTION I

17	18	19	20	21	22	23	24	TOTAL

Grand total

SECTION II

SECTION I (50 MARKS)

1. Solve for x. **(3 marks)**

$$\frac{x-1}{1} = \frac{1}{2x-3}$$

2. A man left $^1/_5$ of his estate to his wife and $^2/_3$ of the remainder to be divided equally to each of his two sons. The rest was to be shared in the same ratio among his six cousins. If each cousin got sh 60,000, how much money did the son got. **(4 marks)**

3. Solve for x in the equation:

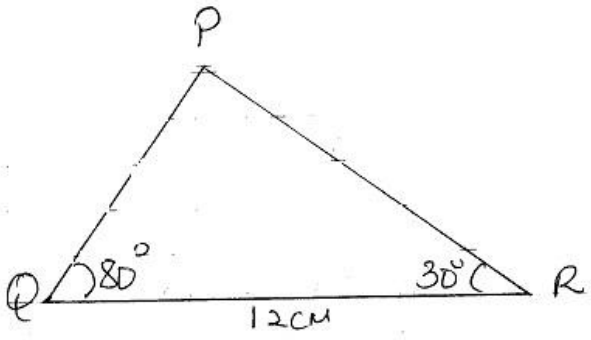
$5^{3y+3} + 5^{3y-1} = 125.2$ **(4 marks)**

4. The average lap time for 3 athletes in a long distance race is 36 seconds, 40 seconds and 48 seconds respectively. If they all start the race at the same time, find the number of times the slowest runner will have been overlapped by the fastest runner at the time they all cross the starting point together again. **(3 marks)**

5. Simplify the expression **(3 marks)**

$$\frac{3x^2 - 4xy + y^2}{18x^2 - 2y^2}$$

6. In a triangle PQR below, QR = 12cm, $\angle PQR = 80^o$ and $\angle PRQ = 30^o$



Calculate, correct to 4 significant figures, the area of triangle PQR. **(3 marks)**

7. Mr. Wanyonyi travelled by train from Butere to Nairobi. The train left Butere on a Sunday 2350 hours and travelled for 7 hours 15 minutes to reach Nakuru. After 45 minutes stop in Nakuru, the train took 5 hours 40 minutes to reach Nairobi. Find the time, in the 12-hour system and the day Mr. Wanyonyi arrived in Nairobi. **(3 marks)**

8. Find the reciprocal of 0.005041 hence evaluate $\frac{3}{0.005041}$ **(2 marks)**

9. Line BC below is a side of triangle ABC and also a side of a Parallelogram BCDE



Using a ruler and a pair of compasses only, construct:

(i) The triangle ABC given that $\angle ABC = 120^{o}$ and AB = 6cm **(1cm)**

(ii) (ii) the parallelogram BCDE whose area is equal to that of the triangle ABC and point E is on line AB

(3 marks)

10. Given that $4\mathbf{p} - 3\mathbf{q} = \begin{pmatrix} 10 \\ 5 \end{pmatrix}$ and $\mathbf{p} + 2\mathbf{q} = \begin{pmatrix} -14 \\ 15 \end{pmatrix}$; find the value of **p** and **q** **(4 marks)**

11. A Kenyan bank buys and sells foreign currencies using the rates shown below.

	Buying (Ksh)	Selling (Ksh)
1 Euro	86.25	86.97
100 Japanese Yen	66.51	67.26

A Japanese travelling from France arrives in Kenya with 5000 Euros, which he converts to Kenya Shillings at the bank while in Kenya he spent a total of Ksh. 289,850 and then converted the remaining Kenya shillings to Japanese Yen at the bank.

Calculate the amount of Japanese that he received. **(3 marks)**

12. From a viewing tower 40 metres above the ground, the angle of depression of an object on the ground is 36° and the angle of elevation of an aircraft vertically above the object is 48°.

Calculate the height of the aircraft above the objet on the ground. **(3 marks)**

13. The interior angle of a regular polygon with 3x sides exceeds the interior angle of another regular polygon having x sides by 40°. Determine the value of x **(3 marks)**

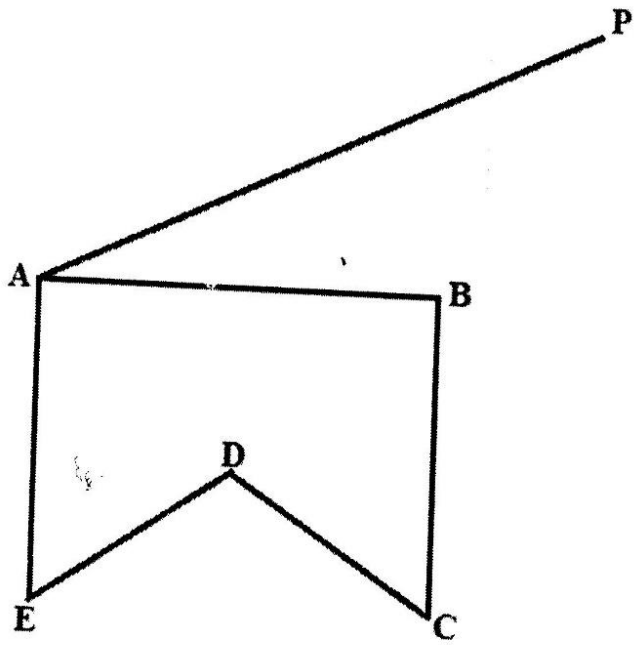
14. The mass of two similar cans is 960g and 15000g. If the total surface area of the smaller can is $144cm^2$, determine the surface area of the larger can. **(3 marks)**

15. The table below show the mean marks in a mathematics test of two classes

Class	Number of students	Mean mark
A	45	62
B	43	65

Calculate, correct to 2 decimal places, the mean mark of the classes. **(2 marks)**

16. The figure below ABCDE is a cross-section of a solid. The solid has a uniform cross-section. Given that AP is an edge of the solid, complete the sketch showing the hidden edges with a broken line. **(3 marks)**



For Marking Schemes Contact 0746-222-000 / 0742-999-000

SECTION II (50 MARKS)

Answer only five questions in this section in the spaces provided.

17. Two lines L_1:$2y - 3x = 6 = 0$ and $L_2 = 3y + x - 20 = 0$ intersect at a point A.

a) Find the coordinates of A **(3 marks)**

b) A third line L_4 is perpendicular to L_2 at point A. Find the equation of L_3 in the form $y = mx + c$, where m and c are constants. **(3 marks)**

c) Another line L4 is parallel to L_1 and passes through (-2, 3). Find the x and y intercepts of L_4 **(4 marks)**

18. One day Mr. Makori bought some oranges worth Ksh 45, on another day of the same week his wife Mrs.Makori spent the same amount of Money but bought the oranges at a discount of 75 cents per orange

a) If Mr.Makori bought an orange at Kshs x, write down and simplify an expression for the total number of oranges bought by the two in the week. **(3 marks)**

b) If Mrs.Makori bought 2 oranges more than her husband, find how much each spent on an orange. **(5 marks)**

d) Find the number of oranges bought by the two. **(2 marks)**

19. Give points P, Q, R, V and T lie on the same plane, Point Q is 53km on the bearing of 055° of P, Point R lies 162° of Q at a distance if 58km. Given that point T is west of P and 114km from R and V is directly South of P and S40^{o}E from T.

a) Using a scale of 1:1,000,000, show the above information in a scale drawing. **(3 marks)**

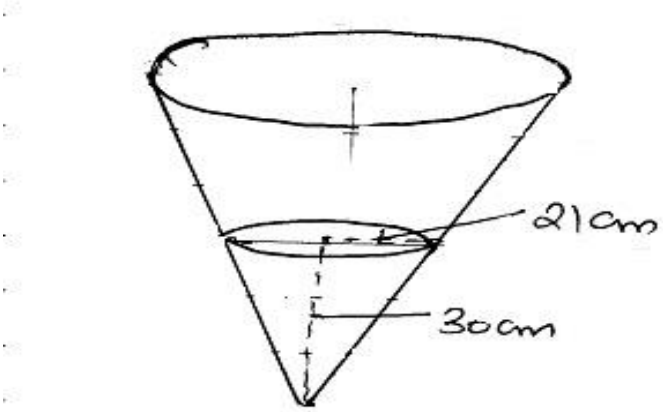
b) From the scale drawing determine

i) The distance in km of point V from R **(2 marks)**

ii) The bearing of V from Q. **(2 marks)**

iii) Calculate the area enclosed by the points PQRVT in squares kilometers. **(3 marks)**

20. The figure below represents a conical vessel which stands vertically. The vessels contain water to a dept of 30cm. the radius of the water surface in the vessel is 21cm (Take $\pi = {}^{22}/_{7}$)



(a). Calculate the volume of the water in the vessel in cm^3. **(2 marks)**

(b) When a metal sphere is completely submerged in the water, the level of the water in the vessel rises by 6cm. calculate:

(i) the radius of the new water surface in the vessel. **(2 marks)**

(ii) the volume of the metal sphere in cm^3 **(3 marks)**

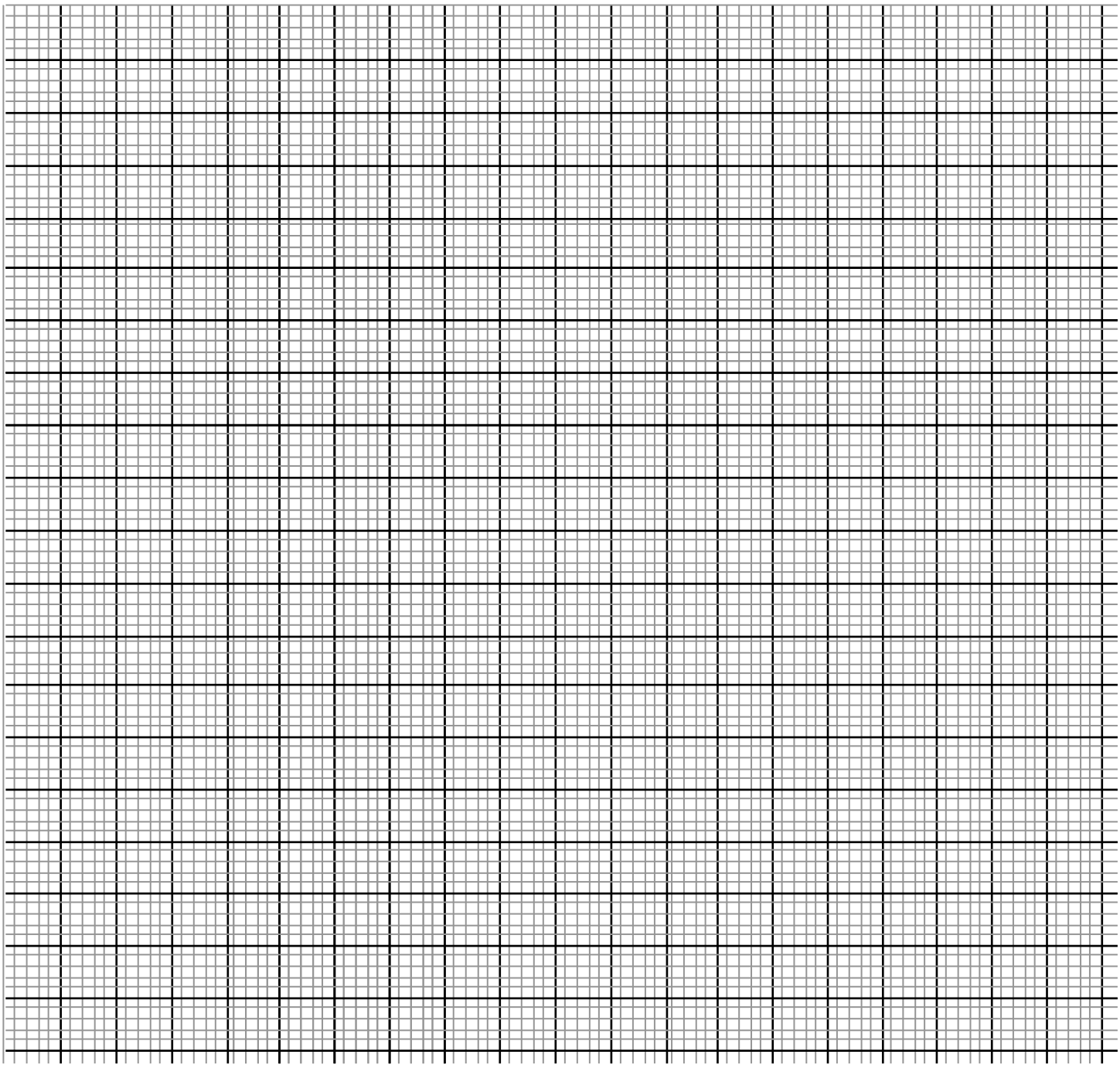
(iii). the radius of the sphere **(3 marks)**

21. The mases to the nearest kilogram of some student were recorded in table below

Mass (kg)	41-50	51-55	56-65	66-70	71-85
Frequency	8	12	16	10	6
Height of rectangle					0.2

a). Complete the table above to 1 decimal **(2 marks)**

b) on the grid provided below, draw a histogram to represent the above **information (3 marks)**



c) Use the histogram to

i) State the class in which the median mark lies. **(1 mark)**

ii) Estimate the median mark **(2 marks)**

iii) The percentage number of students with masses of at least 74kg. **(2 marks)**

22. a) Given that A=$\begin{pmatrix} 3+3x, & 6 \\ x+7, & 2x+2 \end{pmatrix}$ is a singular matrix, find the values of x **(3 marks)**

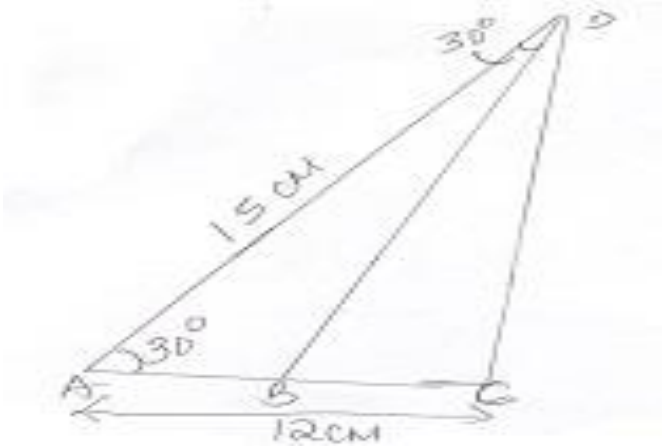
(b) John bought 3 exercise books and 5 pens for a total of Ksh 200. If John had bought 2 exercise books and 4 pens, he would have spent Ksh 60 less. Taking e to represent the price of an exercise.

i) Form two expressions to represent the above information. **(2 marks)**

ii) Use matrix method to find the price of an exercise book and that of a pen. **(3 marks)**

iii) A teacher of a class of 45 students bought 3 exercise books and 2 pens for each student. Calculate the total amount of money the teacher paid for the books and the pens. **(2 marks)**

23. In the figure below, AC = 12cm, AD = 15cm and B is a point on AC ∠BAD = ∠ADB= 30°



Calculate, correct to one decimal place: -

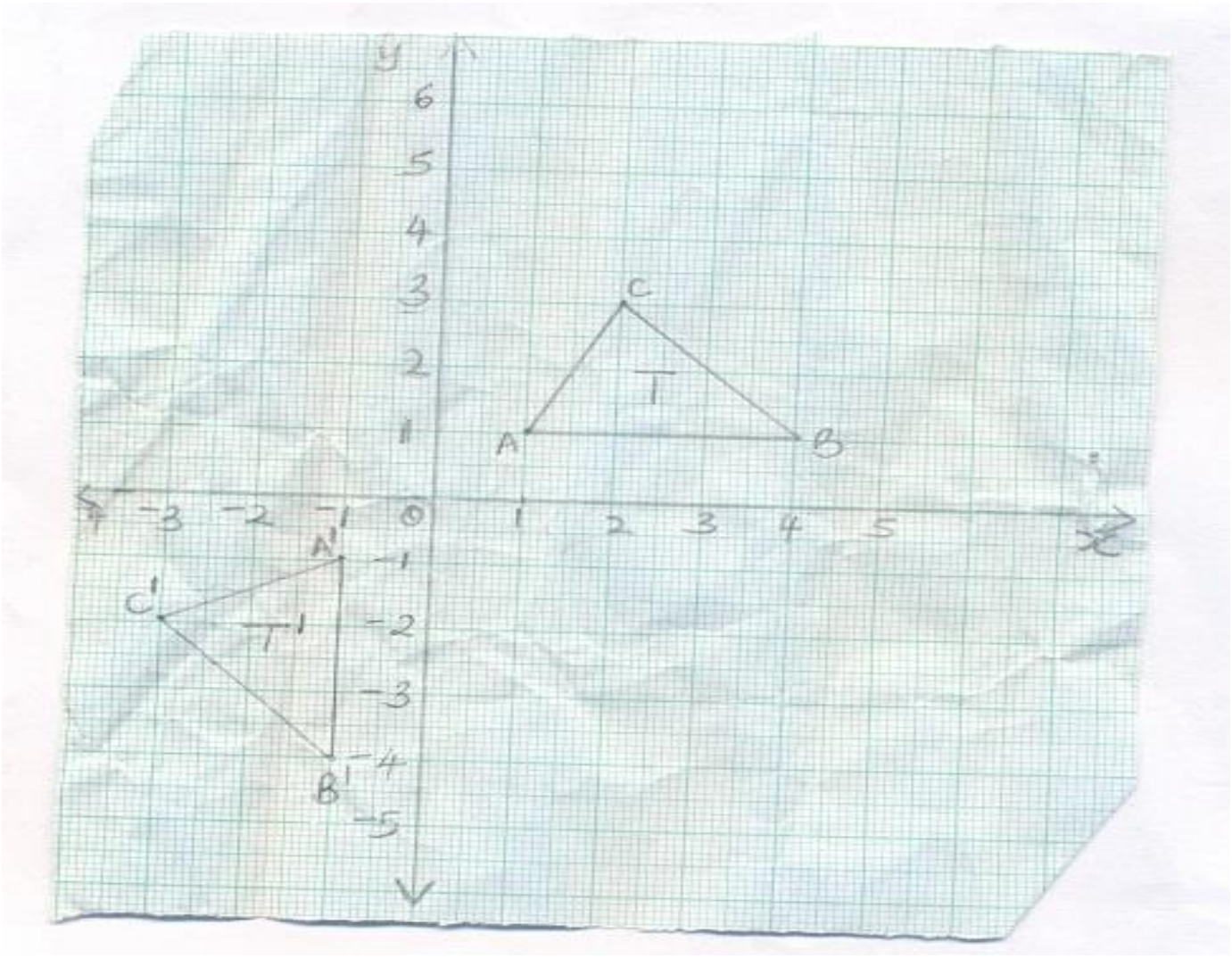
a) the length of CD **(3 marks)**

b) the length of AB; **(3 marks)**

c) the area of triangle BCD **(2 marks)**

d) the size of ∠BDC **(2 marks)**

24. On the grid below, an object T and its image T' are drawn.



a) Find the equation of the mirror line that maps T onto T' **(1 mark)**

b) (i) T' is mapped onto T" by positive quarter turn about (0,0). Draw T" **(2 marks)**

ii) Describe a single transformation that maps T onto T". **(2 marks)**

c) T" is mapped onto T" by an enlargement, centre (2,0), scale factor -2. Draw **T'''** **(2 marks)**

d) Given that the area of T''' is 12cm^2, calculate the area of T. **(3 marks)**

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

121/2 **Mathematics** Paper 2

Time: 2½ Hours

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) *Write your name and index number in the space provided above.*
b) *This paper consists of **TWO** sections: **section I** and **section II.***
c) *Answer **all** the questions in **section I** and only **five** questions from **section II.***
d) *All workings and answers must be written on the question paper in the spaced provided below each question.*
e) ***Non-programmable** silent electronic scientific calculators and KNEC Mathematical tables may be used EXCEPT where stated otherwise*

For Examiner's Use Only

Section I

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**Total**
Candidate's Score																	

Section II

Question	17	18	19	20	21	22	23	24	Total
Candidate's Score									

Grand Total

SECTION I: 50 MARKS

1. Given that the expression $4X^2 + 28x + (K + 37)$ is a perfect square. Find the value of K.

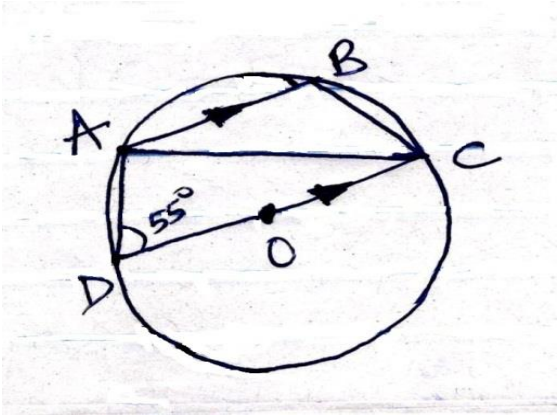
(3 marks)

2. Calculate the percentage error in the volume of a cylinder whose radius 8.75cm and its height 32.5cm. **(3 marks)**

3. Make X the subject of the formula **(3 marks)**

b $= \frac{c\sqrt{X^2-1}}{X}$

4. In the figure, O is the centre of the circle. Line AB is parallel to line DC and angle $\Delta DC = 55^0$ Determine the size of ΔACB. **(3 marks)**



5. Solve for X given that;

$\frac{1}{2} \log_2 9 + \log_2 [5x - 4] = 7$ **(3 marks)**

6. An inlet tap can fill an empty tank in 6 hours. It takes 10hrs ro fill the tank when the inlet tap and outlet tap are both opened at the same time. Calculate the time the outlet takes to empty the full tank when the inlet tap is closed. **(2 marks)**

7. Solve the equation **(4 marks)**

$x + 3y = 13$

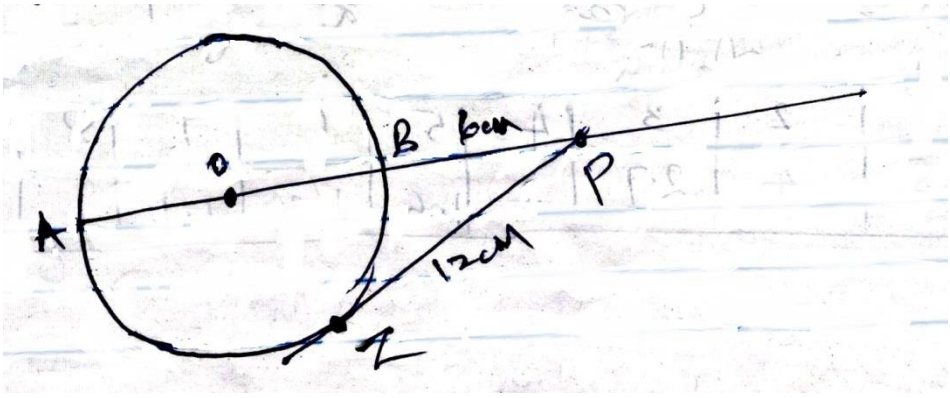
$x^2 + 3y^2 = 43$

8. Simplify $\frac{4}{\sqrt{6}+\sqrt{2}}$ **(2 marks)**

9. The cash price of a TV set is Ksh.20,000. A customer bought it on hire purchase terms by paying a deposit of Sh.10,000 followed by 18 equal monthly installments of Sh.900 each. Annual interest, compounded semi-annually was charged on the balance for the period of 18 months. Determine correct to 1d.p the rate of interest per annum. **(4 marks)**

10. The equation of a circle is given by $X^2 + 4X + y^2 - 2y - 4 = 0$. Determine the centre and radius of the circle. **(3 marks)**

11. In the figure AOBP is a straight line. PZ is a tangent to the circle. If PZ = 12cm and BP = 6cm, find the radius of the circle. **(3 marks)**



12. (a) Expand $\left(1 - \frac{3}{10}X\right)^5$ Leave the co-efficient as fraction in their lowest form. **(2 mks)**

(b) Use the first three terms of the expansion in (a) above to estimate the value

$(0.97)^5$ **(4 marks)**

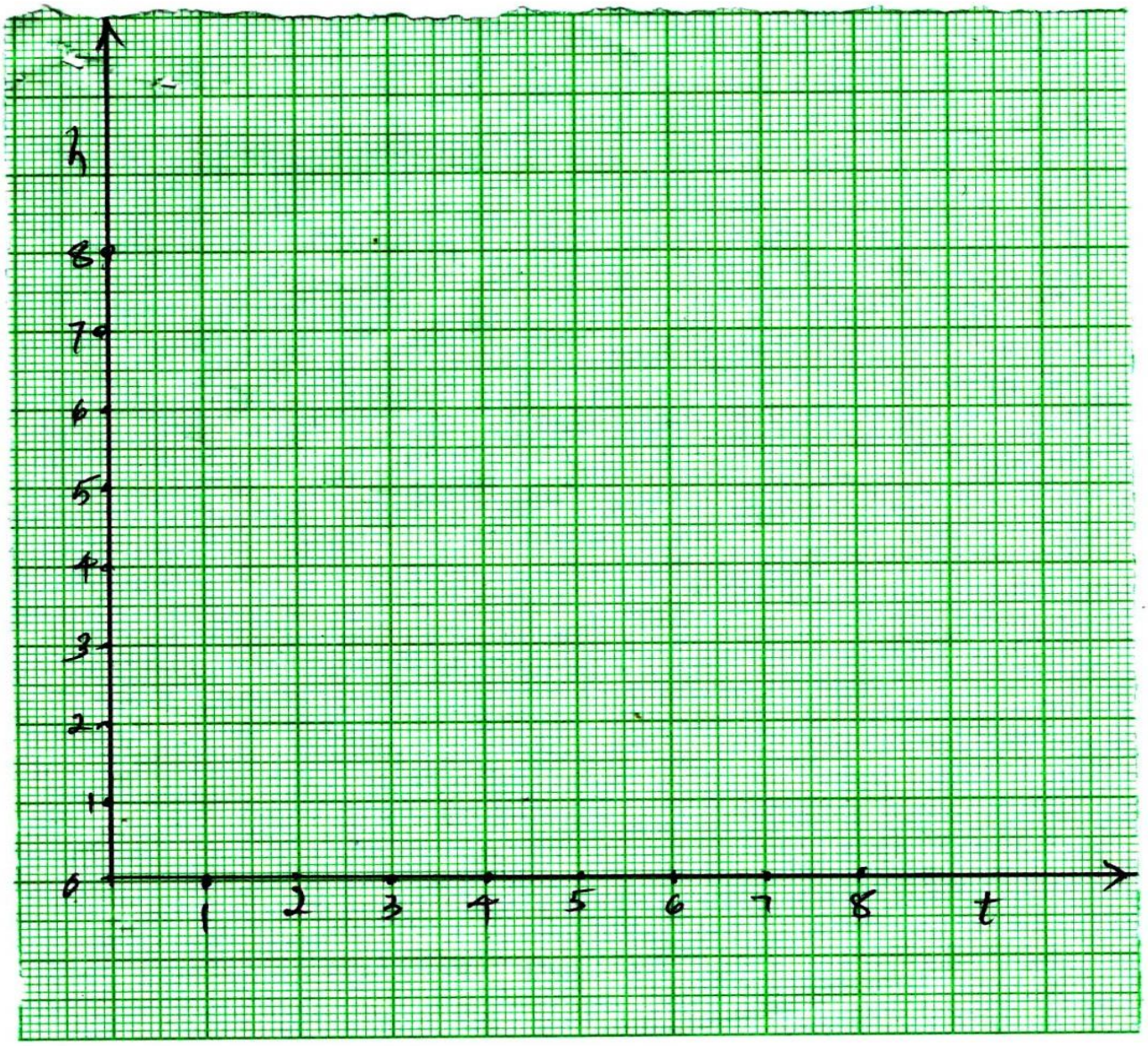
13. Using the assumed mean of 50, determine the variance of the following set of numbers;

52, 45, 42, 59, 56, 46. **(3 marks)**

14. The table below shows the value of t and the corresponding values of h for a given relation.

t	1	2	3	4	5	6	7	8
h	8	4	2.7	2	1.6	1.3	1.1	1

a) On the grid, draw the graph to represent the information on the table given**.** **(2 marks)**



b) Use the graph to determine the rate of change of h at t = 4. **(2 marks)**

15. Given that $\mathbf{P} = 2\mathbf{i} - 3\mathbf{j} + \mathbf{k}$, $Q = 3\mathbf{i} - 4\mathbf{i} - 3\mathbf{k}$ and $\mathbf{R} = 3P + 2Q$, find $|\mathbf{R}|$ correct to 2 decimal places. **(3 marks)**

16. Maize flour and millet flour were mixed. If the maize flour costs sh.60 per kilogram and millet flour sh.90 per kilogram, find the ratio of maize flour to millet flour that gives a mixture costing sh.85 per kilogram. **(3 marks)**

SECTION II: 50 MARKS

Attempt Only Five Questions In This Section

17. A cup has 8 white plates and 4 brown ones all identical in shape and size. Mrs. Kamau selected 3 plates at random without replacement.

a) Draw a tree diagram representing this information. **(2 marks)**

b) Find the probability that she chooses:

(i) Two white plates and one brown in that order. **(2 marks)**

(ii) At least one white plate. **(3 marks)**

(iii) Three plates of the same colour. **(3 marks)**

18. (a) A quantity P varies partly as the square of M and partly a constant. When P = 3.8, M = 2 and when P = -0.2, M = 3.

Find:

(i) The equation that connects P and M **(4 marks)**

(ii) The value of P when M = 10. **(1 mark)**

(b) Q varies as the cube of x and inversely as the square root of R. If X is increased by 20% and R is decreased by 36%;

(i) Find the law connecting Q, X and R. **(2 marks)**

(ii) Find the percentage change in Q **(3 marks)**

19. Three consecutive terms of geometric progression are 9^{2x+1}, 81^{x} and 729 respectively. Calculate.

a) The value of x **(3 marks)**

b) Find the common ratio **(2 marks)**

c) Calculate the sum of the first 10 terms of the series. **(2 marks)**

d) Given that the fifth and sixth terms of this G.P forms the first two consecutive of arithmetic sequence; calculate the sum of the first 20 terms of the sequence. **(3 marks)**

For Marking Schemes Contact 0746-222-000 / 0742-999-000

20. The table below shows income tax rates in a certain year.

Monthly taxable income in Kshs	Tax rates
0 – 12298	10%
12299 – 23885	15%
23886 – 35472	20%
35473 – 47059	25%
47060 and above	30%

In the year, the monthly earnings of Mr.Korir

Basic salary Ksh.60,000

Medical allowance Ksh.16,500

Ksh.4,837.50 was erroneously exempted from his taxations.

a) Calculate Mr. Korir taxable income **(2 marks)**

b) Calculate Mr. Korir net tax for that month if his personal tax relief was Sh.1408 per month.

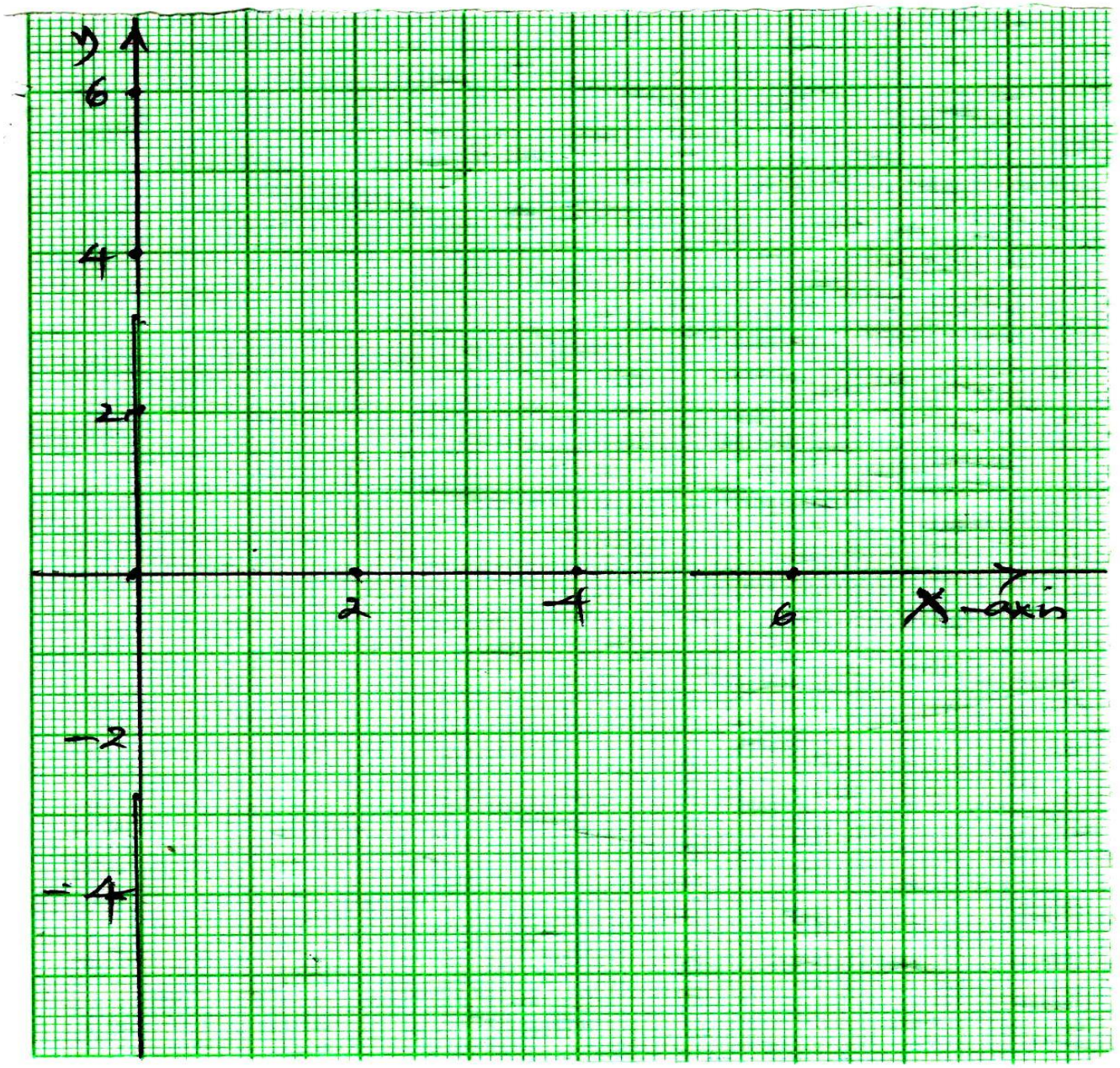
(6 marks)

c) Calculate Mr. Korir net pay for that month. **(2 marks)**

21. The vertices of the triangle ABC are A(3, 3); B(1, 1) and c $[5, 3]$ are mapped onto triangle $A_1B_1C_1$ by a matrix $\begin{pmatrix} 0 & 1 \\ 1 & -2 \end{pmatrix}$

a) (i) Find the co-ordinates of A_1 B_1 and C_1 **(2 marks)**

(ii) On the grid provided below, draw triangle ABC and $A_1B_1C_1$ **(2 marks)**



b) (i) Triangle $A_2B_2C_2$ is the image of the triangle $A_1B_1C_1$ under a transformation matrix.

$$\begin{pmatrix} -2 & 0 \\ 0 & -1 \end{pmatrix}$$

Determine the co-ordinates of A2, B2 and C_2 **(2 marks)**

(ii) Find the area of triangle $A_2B_2C_2$ **(2 marks)**

c) Determine a single matrix that maps ABC onto $A_2B_2C_2$ **(2 marks)**

22. The table below shows the distances in kilometers covered by employees of a certain factory.

Distance (Km)	1 – 5	6 –10	11 –15	16 – 20	21 – 25	26 – 30
Number of workers	3	6	8	7	4	2

If the actual mean of the data above is 14.5km;

a) (i) Fill in the table given below.

Class	Frequency	Midpoint (x)	d = x-14.5	d^2	fd^2	
1 - 5	3					
6 – 10	6					
11 – 15	8					
16 – 20	7					
21 – 25	4					
26 - 30	2					
	$\sum f$ =				$\sum fd^2$ =	

(ii) Use the values obtained from the table above to calculate standard **deviations.(2 marks)**

b) (i) Find upper and lower quartiles. **(2 marks)**

(ii) Hence calculate quartile deviation. **(2 marks)**

23. In this question use a ruler and a pair of compasses.

a) (i) Construct triangle ABC such that AB = 9cm, AC = 7cm and $\Delta CAB = 60^0$ **(2 marks)**

(ii) Construct the locus of point P within the triangle such that P is equidistant from A and B. **(2 marks)**

(iii) Construct the locus of point Q within the triangle such that $CQ \leq 3.5$cm. **(2 marks)**

b) On the diagram in part (a)

(i) Shade the region R, containing all the points enclosed by the Locus of P and Q, such that $AP \geq BP$ **(2 marks)**

(ii) Find the area of triangle ABC **(3 marks)**

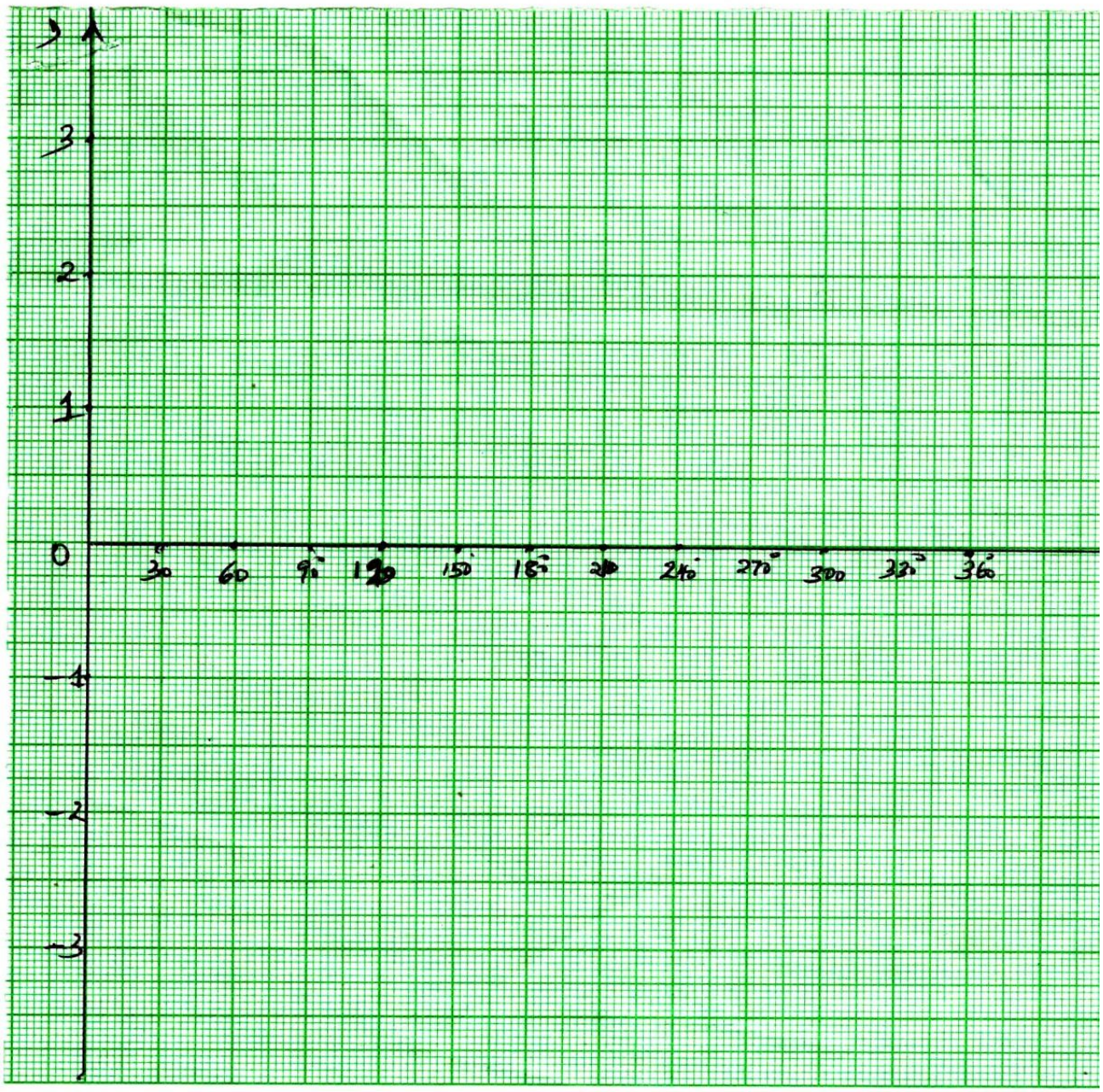
24. The table below shows some values of the curves $y_1 = 2 \cos x$ and $y_2 = 3 \sin x$

a) Complete the table to 1 decimal place **(2 marks)**

X^0	0^0	30	60	90	120	150	180	210	240	270	300	330	360
$Y_1 = 2 \cos x$	2		1	0		-1.7		-1.7	-1		1	1.7	2
$Y_2 = 3 \sin x$	0	1.5		3	2.6		0		-2.6			-1.5	0

b) On the grid provided, draw the graph of $y_1 = 2 \cos x$ and $y_2 = 3 \sin x$ for $0^0 \leq x \leq 360^0$

On the same axes **(5 marks)**



c) Use the graph to find the values of x when $2 \cos x = 3 \sin x$ **(2 marks)**

d) Find the difference of the amplitude of $y = 2 \cos x$ and $y = 3 \sin x$. **(1 mark)**

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

451/1 **Computer Studies** Paper 1

Time: 2½ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTION TO CANDIDATES

a) *Write your name and index number in the space provided above.*
b) *Sign and write the date of examination in the spaces provided above.*
c) *This paper consists of **two** sections **A** and **B**.*
d) *Answer **all** the questions in section **A**.*
e) *Answer question **16** (Compulsory) and any other **three** questions from section **B**.*
f) *All answers should be written in the space provided in the question paper.*

For Examiner's Use Only

Section	Question Number	Candidate's Score
A	1-15	
B	16	
	17	
	18	
	19	
	20	
Total Score		

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SECTION A (40 marks)

*Answer **ALL** the questions in this section in the spaces provided*

1. (a) List four types of publications that can be designed using desktop publishing software.

(2 marks)

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(b) Explain the following graphic terms:

i) Rotate **(1 mark)**

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ii) Crop **(1 mark)**

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2. List **four** input devices that capture data by way of scanning **(2 marks)**

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3. Explain the following operating system functions:

(a) Job scheduling **(1 mark)**

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(b) Interrupt handling **(1 mark)**

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4. Distinguish between a formula and a function as used in spreadsheets. **(2 marks)**

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5. State **two** reasons why it is necessary to use standard furniture in a computer laboratory **(2 marks)**

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6. When purchasing a computer, the clock speed, RAM size, Hard disk size and monitor size are often quoted. State the unit of measuring: **(2 marks)**

a) Clock speed ……

b) RAM size ……..

c) Hard disk size ……

d) Monitor size ……..

7. A computer user typed the name Kajiado as Kajaido and 8726 as 8126.

(a) State the type of each error **(1 mark)**

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(b) Explain how each error can be controlled **(2 mark)**

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8. Explain the functions performed by the following; **(3 marks)**

i) The control unit

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ii) Arithmetic and logic unit

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iii) Main memory

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9. Some of the basic factors one should consider when purchasing a computer include; cost, warranty among others. Explain **three** factors that determine the cost of a computer. **(3marks)**

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10. List **four** stages in data collection. **(2 marks)**

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11. (a) Name the **two** files commonly used in mail merge **(1 mark)**

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b) Name and explain **two** types of drop caps. **(2 marks)**

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12. Differentiate between relative cell referencing and absolute cell referencing. **(2 marks)**

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13. Describe the following types of relationships as used in database design. **(4 marks)**

a) One – to – one;

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b) One – to – many.

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14. (a)Describe the term data integrity. **(2 marks)**

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b) State **four** situations in which data may lose integrity **(2 marks)**

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15. State **two** ways in which one can create a password which cannot be easily accessed by hackers. **(2 marks)**

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SECTION B (60 marks)

*Answer question **16** (Compulsory) and any other **THREE** questions from this section in the spaces provided.*

16. (a) State **two** qualities of a good pseudocode. **(2 marks)**

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(b). Distinguish between and assembler and an interpreter as used in programming. **(2 marks)**

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(c). Explain **two** ways that may be used to identify the existence of errors in a program.

(4 marks)

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(d). Draw a programme flowchart that would accept three numbers and find their sum. If the sum is greater than 200, it adds 30 to the sum otherwise subtracts 20 from the sum. The program should then display the result. **(7 marks)**

17. a) The following are some of the phases in the system development life cycle (SDLC): system analysis, system design, system implementation, system review and maintenance. State **four** activities that are carried out during system implementation phase. **(4 marks)**

(b) Give **three** reasons why system maintenance phase is necessary in SDLC. **(3 marks)**

(c) State **two** instances where observation is not a viable method of gathering information during system analysis stage. **(2 marks)**

(d) Various considerations should be made during input design and output design. State **two** considerations for each case; **(4 marks)**

Input design

Output design

(e) State **two** reasons why an organization may use other strategies of software acquisition other than developing their own. **(2 marks)**

18. (a) State **three** standard coding schemes used in computing and electronic systems. **(3 marks)**

(b) Convert the following numbers:

i) 110.101_2 to decimal; **(3 marks)**

ii) 12.6875_{10} to binary; **(4 marks)**

(c) Subtract 110.01_2 from 11001.0101_2 (2 marks)

(d) Using twos complement, perform the following binary arithmetic leaving the answer in binary notation.

$1101_2 - 100101_2$ **(3 marks)**

19. (a)Using **two** examples, explain the term field properties as used in database design.**(2 marks)**

b) Below is an extract from a hospital database.

Patient No.	Name	Date registered	Amount paid	Remarks
LDK/001	Mathew Olang	04/05/08	2500.00	To go for x – ray
LDK/004	Joy Chelimo	07/06/08	1200.0	Medicine to be Ordered
LDK/008	John Kamau	09/08/08	3500.00	To be admitted for further check up
LDK/002	GaraldWasike	02/04/05	800.00	To come back for review.

i) State with reasons the most suitable data types for the following fields: (**8 marks)**

I. Patient No;

II. Date registered

III. Amount paid

IV. Remarks

ii) Which would be the most appropriate primary key field for the above table? **(1 mark)**

iii) What is the purpose of a primary key field in database design? **(1 mark)**

iv) Describe how information about patients who registered after 09/08/06 can be extracted from the database. **(3 marks)**

20. (a) (i) What is an information system? **(1 mark)**

(ii) State **two** roles of an information system. **(2 marks)**

b) Describe the following file organisation methods:

i) Random file organization **(2 marks)**

ii) Sequential file organization **(2 marks)**

c) The following records were extracted from two files that contained student data

File A:

Reg No.	Student Name		sex	Address
3002	Christine Onyancha	F	Box 8932 Kisii	
3008	John Otieno	M	Box 7222 Nairobi	
3001	Amina Muthee	F	Box 1243 Butere	
3015	Peter Musyoki	M	Box 6621 Nyeri	

File B:

Reg. No	**Fee Payments**	**Date of Payment**
3002	1000	04/09/2011
3008	1500	03/09/2011
3001	900	02/09/2011
3015	400	21/09/2011

i) Which of the two files above represents a Transaction file? **(1 mark)**

ii) Give a reason for your answer in c(i) above **(1 mark)**

iii) Name the other type of file represented above **(1 mark)**

d) An airline uses an information system whereby if a passenger at station A books a plane seat, this transaction is immediately shown at stations A and B such that no other passenger can book the same seat.

i) Identify this data processing mode **(1 mark)**

ii) State **two** advantages and two disadvantages of this processing mode. **(4 marks)**

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

451/2 **Computer Studies (Practical)** Paper 2

Time: 2½ Hours

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES;

- *Write your name and Admission number at the top of the page*
- *Write your name and Admission number on the **CD** provided*
- This paper consists of 5 printed pages. Candidates should check to ascertain that all pages are printed and that no questions are missing.
- *Write the name and version of the software used for each question attempted in the answer sheet*
- *Answer all the questions*
- *All questions carry equal marks*
- *Passwords should not be used while saving your work*

For Marking Schemes Contact 0746-222-000 / 0742-999-000

1. Design a newspaper publication to appear as indicated in the next page using the following instructions.

(a) Launch the **DTP** package and set the preference measurements to centimeters and the document margins to 2 cm on all sides. **(2 marks)**

(b) The heading computer software to have the following styles; **(4 marks)**

- Background colour gray
- Font face Arial
- Font size 18
- centered across the page

(c) The other three headings in the publication to have the styles:

- Font face Arial Narrow
- Font size 15
- Text weight bold
- Character spacing 120%
- Alignment centered **(6 marks)**

(d) The text under heading Computer software to be in two columns and having the following styles:

- First character of the paragraph to have a 3 line drop cap
- Font face Arial Narrow
- Font size 12
- Text weight bold
- Hyphenation disabled
- Fully justify **(2 marks)**

(e) The tree Diagram should be drawn as shown **(10 marks)**

(f)

COMPUTER SOFTWARE

Definition: Software is defined as a set of instructions to the computer to perform some task. For one to use the computer it's essential to know its' utilization.. Software is further classified into system software and application software.

SYSTEM SOFTWARE

› erforms a variety of fundamental operations that avails computer resources to the user. These functions include:

1. Booting the computer and making sure that all the hardware elements are working properly.
2. Performing operations such as retrieving, loading, executing and storing application programs .
3. Storing and retrieving files
4. Performing a variety of system utility functions.

System software include:

- Operating system
- Utility programs
- Translators

APPLICATION SOFTWARE

They are developed to help user accomplish specific tasks.

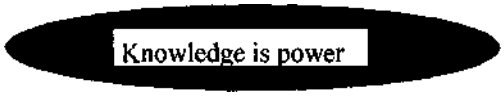
They are classified according to

1. Acquisition
2. In-house developed programs
3. Standard software

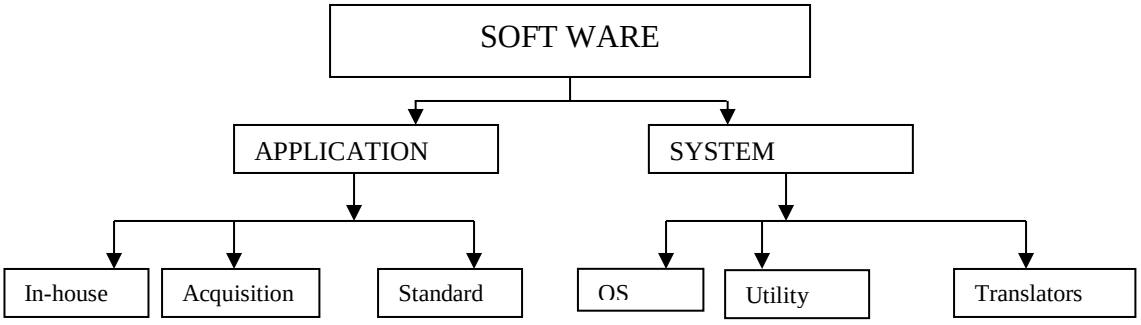
In-house programs are uniquely designed to meet a particular user's needs.

Standard software are developed by software engineers and made available for purchase by a vendor.

Acquisition refers to how the software are obtained i.e. in-house or off the shelf.



STRUCTURED DIAGRAM



2. A Company in Mombasa sells computer spare parts to its customers. The Company wishes to work out the pay details for its employees.

EMPLOYEE NAME	YEARS WORKED	BASIC PAY [KSHS]	DEPARTMENT	SALES [KSHS]	HOURS OF OVERTIME
RUKENYA KWENA	5	24,000	ADMIN	16,000	10
BILLY LUCAS	13	28,000	SALES	25,000	11
LILIAN OKOTH	7	17,000	MARKETING	22,000	12
EVANS ONDIEKI	11	18,000	SALES	12,000	15
GEOFFREY MUTUMA	15	26,000	ACCOUNTS	11,000	22
HUMPHREY LOKI	10	25,000	ADMIN	30,000	12
CEDRIC MUKUI	11	19,000	SALES	35,000	33
FREDRICK CHEGE	15	25,000	MARKETTING	14,000	14
OSMAN HUSSEIN	14	23,000	ADMIN	25,000	0
JEREMY NYAMU	18	27,000	ACCOUNT	14,000	7

(a) Using the information above, design a spreadsheet and enter the given data as it appears. Give it the title "COMPANY PAYMENTS". Save the workbook file as **COMPANY1**

(14marks)

(b) (i) Copy the data into Sheet 2 and rename it as **COMPANY2** and use it to answer the questions that **follows** **(2 marks)**

(ii) Calculate the total sales and give it an appropriate label **(2marks)**

(iii) Rotate the column headings to 45° **(2 marks)**

(iv) The employee's sales commission is calculated as 12% of the employee's sales. Input this commission rate in cell C20 and label it appropriately. Bold the label and change its font to size 16 **(4marks)**

(v) Insert a new column labeled **'Sales commission'** between 'sales' and 'hours of overtime'. **(2marks)**

(vi) Create a formulae to give the amount of sales commission for each employee by making references to sales commission cell. **(3marks)**

(c) (i) Convert the basic pay and sales to **two** decimal places. **(2marks)**

(ii) Use a function in a new column labeled REMARK to put the remark 'EXCELLENT' for only those employees whose sales is greater than or equals to 22,000, 'GOOD' those employees whose sales are between 15000 to 21999 otherwise the remark should be 'LOW SALES. **(6marks)**

(iii) Apply both outline and inside double line border to the worksheet portion with data **(3marks)**

(d) Overtime payment is done by multiplying 5% of sales with the hours of overtime. Use a formula to calculate the overtime pay for each of the employees in a new column labeled "OVERTIME PAY" **(2marks)**

(e) Use a function to compute the Total payment of each employee. It should be summation of Basic pay, Sales Commission and Overtime pay. Give it the heading TOTAL PAYMENT. Save the changes. **(2marks)**

(f) Use an appropriate subtotals function to show how much TOTAL PAYMENT the company gives to employees in each department **(4marks)**

(g) Print **COMPANY1, COMPANY2** and **all the formulas used in company2.** **(3marks)**

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

441/1 **Home Science (Theory)** Paper 1

Time: 2½ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

- *Write your name, Index No in the spaces provided above.*
- *Sign and write the date of examination in the spaces provided above.*
- *This paper consists of 3 sections A, B and C.*
- *Answer all the question in section **A***
- *Section B compulsory question -20 marks*
- *Section C Choose any two questions from this section (20 marks)*
- *Answers to **ALL** Questions **MUST** be written in this booklet*

EXAMINER'S USE ONLY

SECTION	QUESTION	MAX SCORE	SCORE
A	1-23	40	
B	24	20	
C	25-26	40	
TOTAL SCORE		**100**	

For Marking Schemes Contact 0746-222-000 / 0742-999-000

SECTION A (40 MARKS)

1. State three positive effects of advertising to a consumer. **[3 marks]**

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2. Give two reasons for ensuring proper ventilation in a room **[1 mark]**

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3. Identify two functions of openings in garments. **[1 mark]**

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4. State two reasons why stainless steel is the best material for making knives **[1 mark]**

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5. Give two reasons for buffing shoes after polishing. **(1 mark)**

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6. Mention four symptoms of scurvy **[2 marks]**

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7. Name two vaccines that are given to a baby immediately after birth. **[2 marks]**

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8. Identify four problems experienced by mothers while breastfeeding. **[2 marks]**

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9. State three advantages of convenience feeds. **[3 marks]**

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10. Give two reasons why fainting occurs. **[1 mark]**

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11. State four rules to observe when making handmade button holes **[2 marks]**

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12. Give the importance of the 'U' or 'S' bend/trap in a sink. **[1 mark]**

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13. Give four disadvantages of steaming **[3 marks]**

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14. State six factors that determine the repair method on a garment. [**3 marks]**

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15. Identify four reasons for using soft furnishing in homes. **[2 marks]**

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16. Name three common methods of draining waste water from a house. **[1 ½ marks]**

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17. Give three uses of mineral fibres in clothing. **[1 ½ marks]**

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18. Give three qualities of a good tracing wheel. **[1 ½ marks]**

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19. Identify three points to be emphasized in habit training of a child. **[1 ½ marks]**

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20. Name the cause of the following deficiency diseases. **[4 marks]**

(i) Pellagra

(ii) Beri

(iii) Scurvy

(iv) Rickets

21. Name two types of food service. (**1mark)**

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22. Mention three factors that affect a budget. **(3 marks)**

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SECTION B – [20 marks]

COMPULSORY QUESTION

23. You are left at home to perform some tasks in waiting for celebration of your brothers' graduation

(i) Describe a procedure of cleaning an oil painted Dining room wall. **(8 marks)**

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(ii). Outline the procedure of laundering a loose coloured cotton school blouse. **(7 ½ marks)**

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(iii). Explain Outline steps to be taken when cleaning a dressing mirror. **(4 ½ marks)**

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SECTION C

Choose any two questions from this section. (40 marks)

24. (a).(i). Mention two sources of lighting/light **(1 mark)**

(ii). Explain three reasons for providing appropriate lighting ibn a sick room. **(6 marks)**

b). Explain four causes of premature birth **(8 marks)**

(c). Explain reasons for using each of the following ingredients in floor mixtures. **(4 marks)**

(i). Fat

(ii). Sugar

(d). Give a reason for sieving wheat flour before using. **(1 mark)**

25. a). Explain **five** ways of avoiding food wastage in the kitchen. **(10 marks)**

(b). Explain using sketchy labelled diagram the preparation an attachment of squared patch pocket. **(10 marks)**

26 (a). Identify and explain factors to consider when choosing clothes. **(5 marks)**

(b). Give reasons for food fortification. **(4 marks)**

(c). Explain four limitations of buying a house. **(4 marks)**

(d). Explain precautions to taken when making pastries. **(4 marks)**

(e). Mention three ways of improving the efficiency of a detergent. **(3 marks)**

Kenya Certificate of Secondary Education

SERIES 2

441/2 **Home Science** Paper 2

Time: 2½ Hours

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education.

HOME SCIENCE CONFIDENTIAL 441/2

(CLOTHING CONSTRUCTION)

1. A light weight coloured fabric 50cm long by 90cm width
2. Sewing thread to match fabric
3. One large envelope.

For Marking Schemes Contact 0746-222-000 / 0742-999-000

KCSE 2023 MOCK EXAMINATIONS

Kenya Certificate of Secondary Education

SERIES 2

441/2 **Home Science (Practical)** Paper 2

Time: 2½ Hours

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

441/2

HOMESCIENCE

Paper 2

Practical

Time: 2½ Hours

Instructions to Candidates

1. *This paper consists of 3 printed pages.*
2. *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*

For Marking Schemes Contact 0746-222-000 / 0742-999-000

A pattern of a boy's pair of short is provided. You are advised to study the sketches, the instructions and the layout before you begin the test.

MATERIALS PROVIDED

1. PATTERN PIECES

A. Short front. Yoke.
B. Short front.
C. Short back.
D. Back pocket.
E. Back waist band.
F. Front waist band.
G. Back facing.
H. Front facing.

2. Plain lightweight coloured fabric 50cm long by 90cm wide.

3. Sewing thread to match the fabric.

4. One large envelope.

THE TEST

Using the materials provided; lay, cut out and make one half of a pair of shorts to show the following.

a) Cutting out; **(13 marks)**
b) Making of back dart;
c) Preparation and attachment of the back pocket.
d) Working of overlaid seam to join short front yoke to short front.
e) Joining the inner leg seam using double stitched seam.
f) Joining the side seam using French seam.
g) Preparing and attaching the facing at the short lower edge hem.
h) Preparing and attaching the waistband down using even tacking stitches.
i) Finishing the back waistband only using hemming stitches.
j) Overall presentation.

At the end of the examination, firmly sew onto your work on a single fabric, a label bearing your name and index number.

Remove the needles, pins and loose threads from your work.

Fold your work and carefully place it in the envelope provided.

Do not put scraps of fabric in the envelope. Do not seal the envelope.

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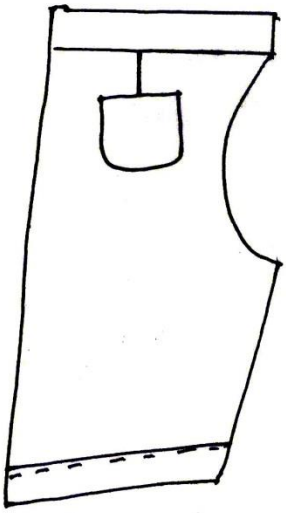
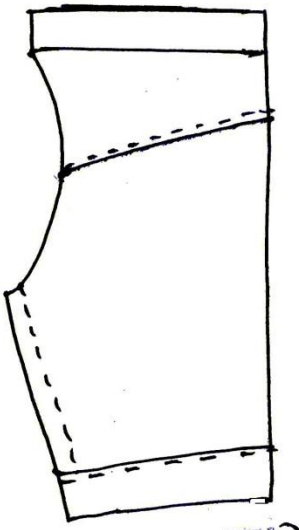
BOYS SHORT

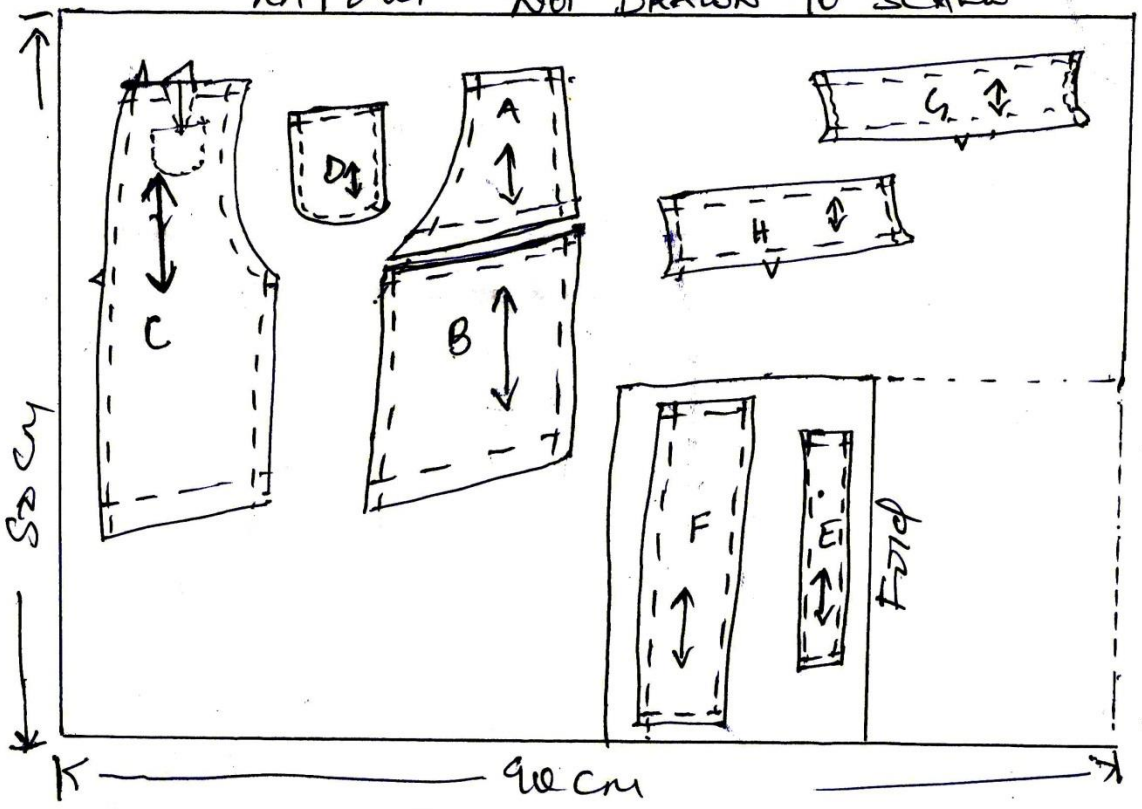


BACK VIEW



FRONT VIEW

LAYOUT NOT DRAWN TO SCALE



THE END

FOR THE FOLLOWING;

- ✓ ONLINE TUITION
- ✓ REVISION NOTES
- ✓ SCHEMES OF WORK
- ✓ SETBOOKS VIDEOS
- ✓ TERMLY EXAMS
- ✓ QUICK REVISION KITS
- ✓ KCSE TOPICALS
- ✓ KCSE PREMOCKS
- ✓ TOP SCHOOLS PREMOCKS
- ✓ JOINT PREMOCKS
- ✓ KCSE MOCKS
- ✓ TOP SCHOOLS MOCKS
- ✓ JOINT MOCKS
- ✓ KCSE POSTMOCKS
- ✓ TOP SCHOOLS PREDICTIONS
- ✓ KCSE PREDICTIONS
- ✓ KCSE REVEALED SETS

CALL/TEXT/WHATSAPP

0746-222-000

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mwalimuconsultancy@gmail.com

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