TOPGRADE 2023 PREDICTION

KCSE ALL SUBJECTS

1st Series of Possible KCSE 2023 Questions and Testable Areas likely to be Examined in the forthcoming Final Examinations scheduled for November 2023

SUBJECTS PREDICTED;

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

CONFIDENTIAL

For Marking Schemes

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

SUCCESS TO ALL CANDIDATES

TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

CHRISTIAN RELIGIOUS EDUCATION

313/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your name and admission number in the spaces provided above.*
- *This paper consists of six questions.*
- *Answer any **FIVE** questions in the answer sheet provided*
- *Each Question carries 20 marks*

Questions No.	1	2	3	4	5	6	GRAND TOTAL
Marks							

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*Answer any **FIVE** questions*

1. **(a) Give** reasons why reading the bible is important to Christians **(7mks)**
   (b) Identify **five** examples of Historical books in the bible **(5mks)**
   (c) Outline the Comparison between traditional African and Jewish circumcision practices and believes. **(8mks)**

2. **(a) Give** reasons why God rescued the Israelites from Egypt **(8mks)**
   (b) In what ways did God show concern for the Israelites as they traveled in the wilderness? **(5mks)**
   (c) Explain how the Ten Commandments apply to Christians today **(7mks)**

3. **(a) Outline** ways in which King David strengthened the faith of his people. **(7mks)**
   (b) Explain ways in which King Solomon went against the covenant demands. **(7mks)**
   (c) Give reasons why some leaders are rejected in the society. **(6mks)**

4. (**a) Outline** the characteristics of the true prophets in Israel. **(7mks)**
   (b) Describe the visions of Amos **(8mks)**
   (c) Explain the relevance of the Old Testament prophets to Christians today. **(5mks)**

5. **(a) Describe** the final reforms of Nehemiah in Nehemiah: 13 **(8mks)**
   (b) Explain Nehemiah's good leadership qualities. **(7mks)**
   (c) Identify the relevance of Nehemiah's good leadership qualities to Christians today **(5mks)**

6. **(a) Give 6** ways in which Africans venerated ancestors **(6mks)**
   (b) Outline the Roles played by ancestors in African traditional communities. **(7mks)**
   (c) State how the introduction of money has affected traditional African societies.**(7mks)**

All the Best!

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

CHRISTIAN RELIGIOUS EDUCATION

313/2

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 in the spaces provided above.*
- *This paper consists of six questions.*
- *Answer any **FIVE** questions in the answer sheet provided*
- *Each Question carries 20 marks*

Questions No.	1	2	3	4	5	6	GRAND TOTAL
Marks							

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*Answer any **FIVE** questions*

1. **(a) Describe** the characteristics of the suffering of servant of Yahweh as prophesied by prophet Isaiah**.** **(8mks)**

   (b) From the story of the annunciations of Jesus birth **identify** the Angel's message to Mary. **(5mks)**

   (c) Outline the relevance of God's promises to David to Christians today. **(7mks)**

2. **(a) Explain** the reasons why Jesus used parables in his teachings. **(8mks)**

   (b) Why were people amazed or astonished at the way Jesus taught? **(6mks)**

   (c) What lessons can Christians learn from the parable of the mustard seed. **(6mks)**

3. **(a) Relate** the parable of the widow and the unjust judge. **(Luke 18: 1-8).** **(6mks)**

   (b) State the occasions when Jesus prayed. **(8mks)**

   (c) Why do Christians find it difficult to pray? **(6mks)**

4. **(a) Give** the teaching of Jesus on the role of the Holy Spirit. **(7mks)**

   (b) Identify the problems which resulted from the gift of talking in tongues at Corinth. Giving Paul's solutions. **(8mks)**

   (c) How does the Holy Spirit manifest itself in our churches today? **(5mks)**

5. **(a)** Explain Christian teachings on work **(8mks)**

   (b) Give ways in which the Kenya Government is alleviating levels of poverty in the society. **(6mks)**

   (c) State the contribution of Christians in the General elections. **(6mks)**

6. **(a) Give** the reasons why a Christian should obey the law of the state. **(7mks)**

   (b) What are the obstacles to the maintenance of the law and order in the society today? **(7mks)**

   (c) Identify how law breakers are punished in Kenya today. **(6mks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

HISTORY AND GOVERNMENT

311/1

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			

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SECTION A (25 marks)

*Answer **all** the questions in this section.*

1. Give **two** economic reasons for the migration of the Luo from their cradleland into Kenya **(2 marks)**

……

……

2. Give two roles of council of elders among the Agikuyu in the pre-colonial period **(2 marks)**

……

……

3. What important event did the Eunoto ceremony mark among the Maasai? **(1mark)**

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4. Identify **two** documentary sources of information on the early visitors to the East African Coast **(2 marks)**

……

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5. Give **one** way in which the use of national language promotes national unity in Kenya**(1 mark**

……

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6. Name the method used to resolve the 2007 post-election violence in Kenya **(1 mark)**

……

7. Give **two** values of a good Kenyan citizen **(2 marks)**

……

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8. State **two** constitutional changes introduced in Kenya by the first constitutional amendment in 1964 **(2 marks)**

……

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9. Identify the treaty that partitioned East Africa in **1886** **(1 mark)**

……

10. Give **one** political reason for the construction of the Kenya Uganda Railway **(1mark)**

……

……

11. Give **two** problems faced by the independent churches and schools during the colonial period in Kenya **(2 marks)**

……

……

12. Name the Governor who declared a State of Emergency in Kenya in 1952 **(1 mark)**

……

13. State **one** function of the Director of Public Prosecutions in **Kenya** **(1 mark)**

……

14. State **one** recommendation of the Presidential Working Party on the Second University (1982) which was chaired by Professor Mackay **(1mark)**

……

15. Give **two** sources of Nyayoism as a national philosophy in **Kenya** **(2 marks)**

……

……

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16. Give the **main** function of Kenya Defence Forces. **(1 mark)**

……

17. State the **two** types of cases the Judiciary deals with in Kenya**.** **(2marks)**

……

……

SECTION B (45 MKS)

Answer THREE questions from this section

18. a) State **three** social reasons for the migration of the plain Nilotes **(3marks)**

b) Explain the political organization of the Nandi during the pre-colonial period **(12marks)**

19. a) State the reasons for the success of Portuguese conquest along the East Coast of Africa **(5marks)**

b) Explain the effects of the long distance trade **(10marks)**

20. a) State **five** factors that led to the growth of Nairobi as a modern urban centre **(5marks)**

b) Describe the features of the independence constitution **(10marks)**

21. a) Identify the reasons for the Maasai collaboration in the pre-colonial period **(5marks)**

b) Explain **five** reasons why armed resistance failed in Kenya during the colonial period **(10marks)**

SECTION C (30 MARKS)

Answer Any Two Questions in This Section

22. a). Give three cases that may lead to the revocation of one's citizenship **(3marks)**

b). Explain **six** civic responsibilities of a Kenyan citizen **(12marks)**

23. a). State **three** organs of the National Security in Kenya **(3marks)**

b). Explain **six** challenges facing correctional services in Kenya. **(12marks)**

24. a). State **five** duties of a county governor. **(5marks)**

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

All the Best!

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

HISTORY AND GOVERNMENT

311/2

PAPER 2

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			

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SECTION A (25 MARKS)

Answer all the questions in this section.

1. Identify two sources of information which historians use to write the history of Africa **(2 mks)**

……

……

2. State two reasons that explain why agriculture began along river-valley in Egypt and Mesopotamia **(2 marks).**

……

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3. Identify two factors that led to the growth of Athens as an urban Centre **(2 marks)**

……

……

4. Give one use of wind as a source of energy apart from pumping water our out of ponds **(1 mark)**

……

5. Identify two scientific discoveries which improved food preservation in the 19th century **(2 marks)**

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……

6. Give one material on which the earliest messages were recorded **(1 mark)**

……

7. Identify one trade route that connected trading centers in Western Sudan and North Africa during the Trans-Saharan trade **(1 mark)**

……

……

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8. Outline two factors which facilitated the acquisition of slaves from the interior of the West Africa during Trans-Atlantic trade **(2marks)**

……

……

9. What was the main role of the Lukiko among the Buganda in the pre-colonial period **(1 mark)**

……

10. State the main political factor that sparked off the scramble and partition of Africa. **(1 mark)**

……

11. Give two factors that contributed to success of assimilation policy in four communes in Senegal **(2 marks)**

……

……

12. Identify two types of Nationalism in South Africa **(2 marks)**

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13. Give the main reason why the League of Nations was established **(1 mark)**

……

14. State one major threat to the world peace **(1 mark)**

……

15. Identify the main factor which brought the cold war to an end **(1 mark)**

……

16. Identify two united Nations organization agencies in the developing world **(2 marks)**

……

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17. Name one major political party in the United States of America.(USA) **(1 mark)**

……

……

SECTION B(45MARKS)

Answer any three questions from this section

18. (a) Give **five** reasons why Africa is considered as the cradle of mankind. **(5 marks)**

(b) Describe the way of life of man during the Early Stone Age period. **(10 marks)**

19. (a) Give f**ive** advantages of human transport. **(5 marks)**

(b) Explain **five** disadvantages of air transport. **(10 marks)**

20. (a) State **five** functions of London as an urban centre. **(5 marks)**

(b) Explain **five** factors responsible for the growth of early urban centres in Africa. **(10 marks)**

21. (a) Identify **five** reasons for the growth of nationalism in Mozambique. **(5 marks)**

(b) Explain **five** reasons for the slow decolonization process in Mozambique. **(10 marks)**

SECTION C(30 marks)

Answer any two questions from this section

22. (a) State three reasons why the Ashanti leaders of National Liberation Movement differed with Kwame Nkrumah in Ghana**.** **(3 Marks)**

(b) Explain six problems nationalists encountered in their war against the Portuguese colonialism in Mozambique. **(12 Marks)**

23. (a) Identify three countries that were part of the Central powers during World War **I (3 Mks)**

(b) Explain six reasons for the Allied Forces' victory in the 1st World War. **(12 Marks)**

24. (a) Give three ways through which one can become a member of House of Lords in Britain. **(3 Marks)**

(b) Explain six functions of the queen of Britain **(12 Marks)**

All the Best!

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

GEOGRAPHY

312/1

PAPER 1

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *This paper has two sections **A** and **B.***
- *Answer **all** the questions in section **A**, in section **B** answer question 6 and any other two questions.*
- *All answers must be written in the answer sheets provided.*

FOR EXAMINER'S USE ONLY

Section	Question	Maximum Score	Score
A	1 – 5	25	
B	6	25	
		25	
		25	
Total score			

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SECTION A

1. a) Explain the origin of the earth and the solar system according to the Nebular cloud theory. **(4mks)**

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b) Name **two** other theories that explain the origin of the earth and the solar system apart from the Nebular cloud theory. **(2mks)**

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2. a) List **two** zones of transition in the atmosphere. **(2mks)**

……

……

b) Give **three** evidences that the interior of the earth is hotter. **(3mks)**

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3. a) Define the following terms.

i) River divide **(1mk)**

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ii) A confluence **(1mk)**

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iii) A river profile **(1mk)**

……

……

b) List **three** factors that influence the formation of a river. **(3mks)**

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4. How is an oasis formed? **(4mks)**

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5. List **four** characteristics of Mediterranean climate. **(4mks)**

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SECTION B

Answer Question 6 And Other Two Question From This Section

6. Study the map of **Kisumu East 1:50,000 (Sheet 116/2)** provided and answer the following questions.

(a) (i) What is the vertical interval of the map extract? **(1 mark)**

(ii) Using the marginal information, give the magnetic variation of the area when the map extracts was drawn. **(1 mark)**

(i) Measure the length of the regional boundary from the map edge at grid square 9999 to Northing 97. Give your answer in kilometres. **(2 marks)**

(ii) What is the approximate height of the seasonal swamp in the Kano plains? **(2 marks)**

(b) (i) Using a vertical scale of 1 centimetre to represent 50 metres draw a cross section from grid reference 080920 to grid reference 080980. **(4 marks)**

On it, mark and label the following:

I. Sugarcane plantation **(1 mark)**

II. Steep slope **(1 mark)**

III. All weather road bound surface C543/1. **(1 mark)**

(ii) **Calculate** the vertical exaggeration of the cross section. **(2 marks)**

(c) Describe the characteristics of the big profile of river Luando **(6 marks)**

(d) Citing evidence from the map, explain two factors that favour trade in the area covered by the map. **(4 marks)**

7. a) i)What is faulting? **(1mk)**

ii)With the use of a well labeled diagram explain how a reverse fault occurs. **(5mks)**

iii) State **two** other types of faults apart from reverse faults. **(2mks)**

b) Describe how a rift valley forms through tensional forces. **(4mks)**

c) Explain **three** ways in which features resulting from faulting are of economic importance to man. **(6mks)**

d) You intend to carry out a field study of the landforms around your school.

i. State **two** hypotheses you are likely to formulate for the study. **(2mks)**

ii. Apart from dividing your class into groups, in what three other ways will you prepare for the study. **(3mks)**

iii. In what **two** ways is dividing the class into groups important? **(2mks)**

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8. a)i) Differentiate between intrazonal and azonal soils. **(2mks)**

ii) Give **three** examples of a zonal soils **(3mks)**

b) i) Explain **four** factors that influence soil formation. **(8mks)**

ii) Give **two** factors that determine the colour of soil **(2mks)**

c) i) What is soil erosion. **(2mks)**

ii) Explain **four** ways in which vegetation prevents soil erosion. **(8mks)**

9.a) i) Name a country in Africa where temperate grassland is found. **(1mk)**

ii)State four characteristics of temperate grasslands. **(4mks)**

b) i)Explain **four** ways in which trees in the coniferous forests have adapted to the environmental conditions of the region**.** **(8mks)**

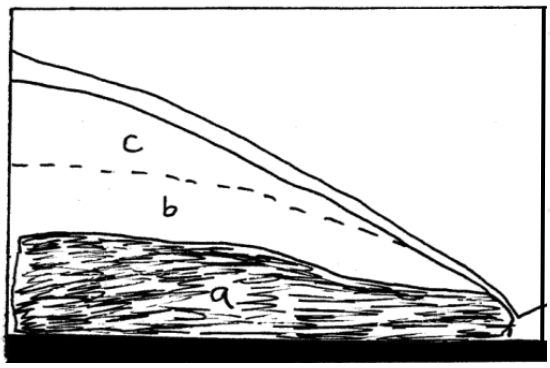
c) You are required to carry a field study on a forest near your school. Describe the methods you would use to determine each of the following aspects of the trees in the forest.

i) Age of the trees. **(3mks)**

ii) Height of the trees. **(3mks)**

iii) Tree species **(3mks**

10. The figure below shows underground zones of saturation. Use it to answer question a (i)



a) i) Identify the zones marked a, b, and c. **(3mks)**

ii) Name **four** sources of groundwater. **(4mks)**

b) Explain **four** ways in which groundwater is of significance to human activities. **(8mks)**

c) i) Give **two** examples of lakes in East Africa that have formed due to crustal warping. **(2mks)**

ii) Describe how the process of crustal warping leads to formation of lakes. **(5mks)**

iii) State **three** other processes that lead to formation of lakes apart from crustal warping. **(3mks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

GEOGRAPHY

312/2

PAPER 2

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *This paper has two sections **A** and **B.***
- *Answer **all** the questions in section **A**, in section **B** answer question 6 and any other two questions.*
- *All answers must be written in the answer sheets provided.*

FOR EXAMINER'S USE ONLY

Section	Question	Maximum Score	Candidate's Score
A	1 – 5	25	
B	6	25	
		25	
		25	
Total score			

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SECTION A

Answer all questions in this section

1. a) Differentiate between mining and quarrying. **(2mks)**

……

……

……

b) List down three oil producing countries in the Middle East **(3mks)**

……

……

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2. a) Name two forest reserves in Kenya **(2mks)**

……

……

b) State three characteristics of equatorial rainforest **(3mks)**

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3. a) What is meant by the term ranching **(2mks)**

……

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……

b) State three conditions which favour cattle ranching in Kenya **(3mks)**

……

……

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4. a) Give two factors that determine the amount of water for irrigation. **(2mks)**

……

……

b) State three methods used to reclaim land in Kenya. **(3mks)**

……

……

……

5. a) Name two major regions with high cottage industrial concentration in India **(2mks)**

……

……

b) State three reasons why new county government system in Kenya should encourage the Jua Kali industries in their region **(3mks)**

……

……

……

……

SECTION B

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

6. The table below shows crop production in Kenya in tonnes for a period of five years.

Crop/Year	2007	2008	2009	2010
Maize	600	800	700	800
Peas	400	600	400	700
Onions	300	400	300	600
Cabbages	100	200	200	400

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a) i) Using a vertical scale of 1cm represent 200 tonnes present the above data using a compound bar graph. **(9mks)**

ii) State three advantages of using compound bar graph as a method of data presentation.**(3mks)**

b) Explain how the following factors influence horticultural farming in Netherlands

i) Technology **(2mks)**

ii) Marketing **(2mks)**

c) State three features of horticultural farming in Netherlands. **(3mks)**

d) Explain three difficulties that farmers in Kenya experience in marketing horticultural produce. **(6mks)**

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

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

b) Name three exotic species of trees planted in Kenya. **(3mks)**

c) State four ways in which the clearing of the forests has affected the natural environment in Kenya. (**4mks)**

d) Discuss 3 challenges experienced in the exploitation of tropical hardwood forests in Kenya. **(6mks)**

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

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

ii) Distribution of softwood. **(2mks)**

8. a) i) Name two countries found in the North West Pacific fishing ground. **(2mks)**

ii) Explain four physical factors that favour fishing in the above fishing ground. **(8mks)**

b) Describe the following methods of fishing

i) Drifting **(4mks)**

ii) Purse seining **(4mks)**

c) Compare fishing in Kenya and Japan under the following sub-headings

i) Fishing ground **(2mks)**

ii) Climate **(2mks)**

d) State three significance of fishing to the economy of Kenya. **(3mks)**

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9. a) i) What is wildlife? **(2mks)**

ii) Name three natural habitats for wildlife. **(3mks)**

b) Explain three human factors that favour tourism in Kenya. **(6mks)**

c) Explain four roles played by the Kenya Tuorism Development Corporation in promoting tourism in Kenya **(8mks)**

d) Explain three factors that hinder domestic tourism in Kenya. **(6mks)**

10. a) Name four geothermal power sites in Kenya **(4mks)**

b) State four factors that influenced the location of Olkaria Geothermal unit. **(4mks)**

c) i) State four factors that limit the expansion of Geothermal power production in Kenya. **(4mks)**

ii) Explain five ways in which Kenya has benefited from development of the Seven Forks Dam H.E.P. projects. **(10mks)**

d) State three benefits of rural electrification in Kenya. **(3mks)**

All the Best!

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

ENGLISH

101/1

PAPER 1

(Functional Writing, Cloze Test and Oral Skills)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO STUDENTS

- *Write your **name, admission number** and **class** in the spaces provided.*
- *Sign and write the date of the examination in the spaces provided.*
- *Answer **all** questions in the spaces provided*
- *Candidates must answer all questions **in English***

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	STUDENT'S SCORE	EXAMINER'S INITIALS
1	20		
2	10		
3	30		
TOTAL	60		

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1. During the End of Term two break, you read an interesting novel known as **Blosssoms of the Savannnah** by **Henry Kulet** and you would like to recommend it to one of your classmates. Write a **book review** of the novel. **(20 marks)**

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2. *Fill in the blanks in the passage below with an appropriate word.* **(10 marks)**

Four weeks to the Africities Summit, **(i)** …….. the host city of Kisumu is bristling **(ii)** ……. excitement and anticipation, with good reason. **(iii)** …….. 10,000 visitors are expected to converge on the lakeside city, drawn **(iv)** ……. By a continental summit that happens one every three **(v)** …… About 5,000 of them will be foreign delegates keen to join in a discourse that African cities and how they evolving into a truly unpredictable **(vi)** …… The other 4000 will be exhibitors at a gigantic exhibitions centre and service providers to ensure that the **(vii)** ……. do not lack anything. Many have been skeptical **(viii)** …….. Kisumu could handle such a large influx of people even if it is the third largest city in the country. Well, the city is well-prepared in all aspects. It has been for a while. Significant investments have been made in infrastructure and **(ix)** ……. is still going on to complete roads around and near the Mambolea ASK Showground where the event will be held. The major streets are spruced up, as they have been for many months, thanks to the work done **(x)** ……. the County Government of Kisumu.

3. Oral Skills **(30 marks)**

(a) ***Read the following narrative and answer the questions that follow.*** ***(8 Marks)***

One afternoon, a big wolf waited in a dark forest for a little girl to come along carrying a basket of food to her grandmother. Finally the little did come along and she was carrying the basket of food. Are you carrying the basket to your grandmother? asked the wolf. The little girl answered,

" "Yes I am." So the wolf asked the girl where her grandmother lived. When the girl told him, he disappeared to the woods.

When the little girl opened the door of her grandmother's house, she noticed there was somebody in bed with a night cap and a night gown. She realized that it was the wolf, so the little girl took a gun from her basket and shot the wolf dead.

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i) If you were narrating this story, how would you ensure your audience remains glued to the story? **(3 marks)**

……

……

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……

i) How would you say the words of the girl and the wolf in your narration? **(2 marks)**

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ii) How would you prepare yourself to effectively tell the story? **(3 marks)**

……

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b) Your class wants to put up a play. You have to decide which of the two plays among your setbooks to perform. Your teacher has asked you to lead a group discussion to choose one. What will you do to make sure the discussion remains calm and constructive? **(4 marks)**

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……

c) For each of the following words, write another that is **pronounced the same way** but is spelt differently and has a different meaning. **(3 marks)**

i) Know ……..

ii) Gate ……..

iii) Bare ……..

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d) Indicate the **appropriate intonation** at the end of each sentence**.** **(4 marks)**

i) Have all the students been registered? ……...

ii) Stop wasting time. …….

iii) That was superb! …….

iv) There is hope for Cancer patients. …….

e) *Mary cannot bear children*

i) Identify the above genre. **(1 marks)**

ii) Give the **two** possible meanings of the above **(2 marks)**

……

……

iii) Give **one** function of the above genre. **(1 marks)**

……

f) Complete the telephone conversation below with appropriate responses. **(7 marks)**

You: ……... **(1 mark)**

Teacher: Yes, you may come in. How can I help you, Maria?

You: Sorry to bother you, Sir. Could you please show me Mr. Karanja's desk?

Teacher: …… **(1 mark)**

You: He has sent me to pick a Geography textbook from his desk and to ask you to assist us with a pair of binoculars.

Teacher: The desk is over there. The book should just be on the table.

You: ……... **(1 mark)**

Teacher: …… **(1 mark)**

You: Oh, here it is. You were right, Sir, it must have fallen from the desk.

Teacher: Now hurry up. The lesson is almost over and the teacher must be waiting for the book.

You: ……... **(1 mark)**

Teacher: Oh, sorry. Here is the pair of binoculars. Be careful as you handle since its casting is broken.

You: …… **(1 mark)**

Teacher**:**…… **(1mark)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

ENGLISH

101/2

PAPER 2

(Comprehension, literary Appreciation and Grammar)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS

i. *Write your name and index number in the spaces provided above.*

ii. *Answer ALL the questions in this question paper in the spaces provided*

FOR EXAMINER'S USE ONLY

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

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1.COMPREHNSION 20 MARKS

Read the passage below and answer the questions that follow

When God made women out of man according to the biblical story of creation, He did not restrict her from doing certain type of jobs, nor did He forbid man from doing any king of chores. The only problem with us today is that we think like those who lived in age where men's roles and women's roles were clearly specified.

Consequently, it is rare to find a man at home doing chores like washing the dishes , preparing supper for the family or even cleaning the house while women of the house sits to watch the news or a programme she enjoys on television. This mindset has also been passed down to children, where you will find a girl working tirelessly around the house while her brother is comfortably stretched out on the sofa watching a movie. Why can't we train our children to do what needs to be done irrespective of their gender?

Personally, I was brought up in a home where chores are divided equally among those present, and no amount of protesting could **exonerate** me from my assigned chores, which is why I find this gender sensitive somewhat discriminative. I once broached the issue of sharing chores with a friend of mine and his reaction was unpredictable, "You expect me to cook, wash dishes, clean the house and look after the baby? These are things I can't do no matter how much I love her! My job is to put the food on the table and secure my children's future," he responded passionately. These are biases so deeply **ingrained** that it seems odd if a man tells he is a nurse. The question that naturally comes to mind will be, "Isn't that a woman's job?" because you expect a nurse to be a woman in pretty white or small stripped dress and white cap. However, the truth is that men are just capable of providing nursing care as female counterparts.

And turning to politics, how many of our constituencies have female representatives in parliament? Just a handful. And how many countries in the world have women presidents or prime ministers? Another handful. Many women have joined politics hoping to succeed where men have failed but quit after being frustrated by men's obvious lack of trust in their abilities. But from those who have persevered, we can see that women do better than men since they start from basic level of the home, where they take care of their families and do everything to keep them going.

Another very **peculiar** field is football. Fans flock pub to watch male players juggle the ball and make their fancy moves and sometimes fight erupt after heated arguments about football games like world cup, premier League and other tournaments. But I have never heard people fight over Women's World Cup or anybody disappointed after a women's team he supports took a thrashing from an opponent.

Careers like engineering have also been affected by this negative trend. It is getting increasingly rare to find a woman in overalls lying under a heavy truck checking for engine trouble or repairing the brakes. This is considered a man's job and many people believe cannot do it properly.

I believe it is time we got rid of those outdated beliefs and started appreciating women for who they are. We should give them a chance to prove themselves and open up more opportunities. Men should also realize that to do perfectly, one requires brain, not brawn, and if this continues, it will

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do more than good. Besides, what a man can do, a woman can do, sometimes even better. Giving women an opportunity, will create a balance and bring the best in everyone.

(Adapted from: *Daily Nation*24thFebruary2010, *Living Magazine* page 2 – Gichuru Hesbon)

QUESTIONS

a) According to the passage, what seems to cause conflicts in gender roles today? **(1mark)**

……

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b) What is the author's opinion on defined gender roles? **(2marks)**

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c) How has upbringing contributed to this opinion? **(2marks)**

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d) Make notes on duties of men and women as brought out in passage. **(5marks)**

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e) According to the passage, why are some careers considered male dominated in our society today?

(2 marks)

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f) In your opinion, should there be gender defined duties for boys and girls? **(2 marks)**

……

……

……

g) According to the passage, what should be done to get rid of outdated practice of defined gender roles**?** **(2 marks)**

……

……

……

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

I. Exonerated

II. Ingrained

III. Peculiar

IV. Brawn

2. <u>Read the excerpt below and answer the questions that follow(25 marks)</u>

Nora: (*meditatively, and with a half-smile*) Yes – someday, perhaps, after many years, when I am no longer as nice-looking as I am now. Don't laugh at me! I mean, of course, when Torvald is no longer devoted to me as he is now; when my dancing and dressing-up and reciting have palled on him, then it may be a good thing to have something in reserve – (*breaking off*) What nonsense! That time will never come. Now, what do you think of my great secret, Christine? Do you still think I am of no use? I can tell you, too, that this affair has caused me a lot of worry. It has been by no means easy for me to meet my engagements punctually. I may tell you that there is something that is called, in business, quarterly interest, and another thing called payment in instalments, and it is always so dreadfully difficult to manage them. I have had to save a little here and there, where I could, you understand. I have not been able to put aside much from my housekeeping money, for Torvald must have a good table. I couldn't let my children be shabbily-dressed; I have felt obliged to use up all he gave me for them, the sweet little darlings!

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Mrs. Linde: So it has all had to come out of your own necessaries of life, poor Nora?

Nora: Of course. Besides, I was the one responsible for it. Whenever Torvald has given me money for new dresses and such things, I have never spent more than half of it; I have always bought the simplest and cheapest things. Thank Heaven, any clothes look well on me, and so Torvald has never noticed it. But it was often very hard on me, Christine – because it is delightful to be very well dressed, isn't it?

Mrs. Linde: Quite so.

Nora: Well, then I have found other ways of earning money. Last winter I was lucky enough to get a lot of copying to do; so I locked myself up and sat writing every evening until quite late at night. Many a time I was desperately tired; but all the same it was a tremendous pleasure to sit there working and earning money. It was like being a man.

Mrs. Linde: How much have you been able to pay off in that way?

Nora: I can't tell you exactly. You see, it is very difficult to keep an account of a business matter of that kind. I only know that I have paid every penny that I could scrape together. Many a time I was at my wits' end. (*smiles*) Then I used to sit here and imagine that a rich old gentleman had fallen in love with me –

Mrs. Linde: What! Who was it?

Nora: Be quiet! – that he had died; and that when his will was opened, it contained, written in big letters, the instruction: "The lovely Mrs. Nora Helmer is to have all I possess paid over to her at once in cash."

Mrs. Linde: But, my dear Nora – who could the man be?

Nora: Good gracious, can't you understand? There was no gentleman at all; it was only something that I used to sit here and imagine, when I couldn't think of any way of procuring money. But it's all the same now; tiresome old person can stay where he is, as far as I am concerned; I don't care about him or his will either, for I am free from care now. (*jumps up*) My goodness, it's delightful to think of, Christine! Free from care! To be able to be able to play and romp with the children; to be able to keep the house beautifully and have everything just as Torvald likes it! And, think of it, soon the spring will come, and the big blue sky! Perhaps we shall be able to take a little trip – perhaps I shall see the sea again! Oh, it's a wonderful thing to be alive and be happy. (*A bell is heard in the hall.*)

Mrs. Linde: (*rising*) There is the bell; perhaps I had better go.

QUESTIONS

(a) What is Nora's immediate reaction when Mrs. Linde announces that she wants to go**? (2 mks)**

……

……

……

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(b) Give evidence from the excerpt that shows that this society is patriarchal**.** **(4 marks)**

……

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……

(c) In **note form**, outline Nora's sacrificial nature**.** **(3 marks)**

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(d) What issues are addressed in this excerpt**?** **(4 marks)**

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(e) Describe the character of Mrs. Linde as brought out in the excerpt. **(2 marks)**

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(f) Describe the **mood** in this excerpt**.** **(2 marks)**

……

……

……

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(g) Comment on any **two** stylistic devices used in the excerpt**.** **(4 marks)**

……

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……

(h) Based on your knowledge from the rest of the play, explain how the guest who has just arrived finally leads to the marriage collapse of the Helmer's. **(4 marks)**

……

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……

……

3. **Read the poem below and then answer the questions that follow.** **(20marks)**

No coffin, No grave **by Jared Angira**

He was buried without a coffin
Without a grave
The scavengers performed the post-mortem
In the open mortuary
Without sterilized knives
In front of the night club

Stuttering rifle put up
The gun salute of the day
That was a state burial anyway
The car knelt
The rad plate wept, wrapped itself in blood its
Master's

The diary revealed to the sea
The rain anchored there at last
Isn't our flag red, black and white?
So he wrapped himself well

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Who could signal yellow
When we had to leave politics to the experts
And brood on books
Brood on hunger
And school girls
Grumble under the black pot
Sleep under torn mosquito net
And let lice lick our intestines
The Lord of bar, money speaks madam
Woman magnet, money speaks madam
We only cover the stinking darkness of the cave of our mouths
And ask our father who is in hell to judge him
The quick and the good.

Well, his diary, submarine of the third world
War
Showed he wished
To be buried in a golden-laden coffin
Like a VIP
Under the Jacaranda tree beside his palace
A shelter for his grave
And much beer for the funeral party

Anyway one noisy pupil suggest we bring
Tractors and plough the land.

QUESTIONS;

a) Who is being referred as "we" in the 4th stanza**?** **(1mark)**

……

……

b) Briefly explain what this poem is about. **(3marks)**

……

……

……

……

……

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c) Comment on the use of two stylistic devices in the above poem. **(6marks)**

……

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d) Explain the tone of the poem. **(2marks)**

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……

e) What is the attitude of the persona toward his or her subject? **(2marks)**

……

……

……

f) In your own words, suggest ways people can changes in the society without assassinating politicians. **(2marks)**

……

……

……

g) Explain the following lines **(2marks)**

Who could signal yellow

……

……

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Submarine of the Third World War

……

……

h) Explain the meaning of the following words as used the poem**.** **(2marks)**

i. Anchored**……..**

ii. Brood**……..**

4. **GRAMMAR (15 MARKS)**

1. **Fill in the blank with the correct forms of the words in brackets. (3 Marks)**

i) The tragedy was beyond everyone's ……(comprehend)……..

ii) The driver of the lorry declined to accept……(liable)……..

iii) She filed a……(sue) against her employer.

2. **Choose the right word to from the options given to fill the blanks.** **(3 Marks)**

i) We went home before it ……..(begun/began) to rain.

ii) Doctor Rank always…… (visit/visits) Torvald and family.

iii) Always do the right thing to avoid……

(embarrasing/embarrassing/embarassing)

iv) Punctuate the following sentences correctly. **(3 Marks)**

i) I need a copy of memories we lost and other stories.

……

ii) Why does he James like chicken?

……

iii) Everyone knows hard work pays.

……

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3. Explain the ambiguity in the following sentences. **(3 Marks)**

i) The tourist saw the monkey with a telescope.

---

ii) He narrated to him his success story.

---

iii) Valentine spent all the money he had set aside for emergency.

---

4. Supply the correct question tag. **(3 Marks)**

i) Let us go.

……

ii) You had some coffee before assembly

……

iii) We have a lot to do.

……

All the Best!

KCSE 23

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

ENGLISH

101/3

PAPER 3

(Creative Composition and Essays Based On Set Texts)

TIME: 2½ 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 three questions only
- Each essay must not exceed 450 words

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1	20	
2	20	
3	20	
Total Score		

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*Answer **three** questions only*

1. Imaginative Composition (COMPULSORY) (20 marks)

Either

a) Write a composition that has the following words: *friends, police, court, jail.*

Or

b) Write a composition on the following statement:

"Technological advancement has impacted negatively on the society, especially the youth."

2. The Compulsory Text: Blossoms of the Savannah – *Henry Ole Kulet.* (20 marks)

The Nasila culture is not entirely harmful. Justify this statement with reference to Blossoms of the Savannah by Henry Ole Kulet

3. Optional Text:

A Silent Song and other short stories – *Godwin Siundu*

Basing your argument on '*The Sins of the Fathers'* by Charles Mungoshi, show how Rondo's scars are as a result of his father's wrongdoings. **(20 marks)**

Or

Drama

***Inheritance* by David Mulwa**

Closely referring to David Mulwa's text *Inheritance*, illustrate how most citizens in most African countries suffer because of the behaviour of their leaders**.** **(20 mks)**

All the Best!

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

102/1

KISWAHILI

KARATASI YA 1

INSHA

MUDA: SAA 1¾

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO KWA MTAHINIWA:

a) *Andika jina lako, nambari ya usajili na tarehe katika karatasi ya majibu.*
b) *Karatasi hii ina maswali manne.*
c) *Jibu maswali mawili pekee. Kila swali lina alama ishirini.*
d) *Swali la kwanza ni la lazima.*
e) *Chagua swali lingine lolote moja kutoka yale matatu yaliyosalia.*
f) *Majibu yote yaandikwe katika karatasi ya majibu uliyopewa.*

Sehemu hii imehifadhiwa kwa matumizi ya mtahini pekee.

SWALI	1	2	3	4
UPEO	20	20	20	20
ALAMA				

UPEO	40
ALAMA ZA MTAHINIWA	

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MASWALI

1. Gavana wa Gatuzi la Kazimoto ameng'atuliwa madarakani baada ya kashifa ya ufisadi. Ungetaka kuwania kiti hicho cha ugavana. Andika tawasifu itakayosomwa katika mkutano wa kampeni mwezi ujao.

2. Matumizi ya mihadarati ni kikwazo kikuu cha maendeleo nchini. Jadili

3. Dua la kuku halimpati mwewe. Tunga kisa kinachothibitisha ukweli wa methali hii.

4. Andika insha inayoishia kwa maneno**…** Kicheko kikubwa cha ghafla kilianguka ubavuni mwa Sarima. Alishtuka na kumwona mumewe katwaliwa na furaha ya ajabu.

KCSE 23

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

102/2

KISWAHILI

KARATASI YA 2

LUGHA

MUDA: SAA 2½

JINA……

SHULE…… **SAHIHI**……

NAMBARI YA USAJILI…… **MKONDO**……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO

- *Andika **jina lako** na **namba yako** katika nafasi ulioachiwa hapo juu.*
- *Jibu maswali yote.*
- *Andika majibu yako katika nafasi ulizoachiwa katika kijitabu hiki cha maswali.*

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
1	15	
2	15	
3	40	
4	10	
Jumla	80	

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1. UFAHAMU – (ALAMA 15)

Soma taarifa ifuatayo kisha ujibu maswali yanayofuatia.

Takwimu za tafiti za umaskini kila mara huonyesha kuwa bara la Afrika ndilo bara maskini kabisa kote duniani. Takriban wakaazi kiasi cha asilimia themanini hawawezi kumudu kutumia dola moja kwa siku. Toka kaskazini hadi kusini. mashariki hadi magharibi mwa bara, makaazi ya vibanda yametamalaki. Wakaazi wengi hulala njaa kutokana na ukosefu wa chakula. Watu wa mitaani waliovaa mararuraru wamejaa katika miji ya bara hili. Swali ni: Je, kwa nini umaskini umeliganda bara la Afrika hivi mithili ya kupe? Kwa nini bara huselelea katika lindi la uchochole?

Ili kuelewa sababu za umaskini kuganda barani Afrika, yampasa mtu ima fa ima kurejelea historia ya bara hili. Kwa kipindi cha karne nyingi, Afrika ilidhibitiwa na walowezi pamoja na mabeberu. Wanawake ambao wangelistwawisha bara hili kiuchumi walitwaliwa kimabavu na kupelekwa, huku wamefungwa minyororo, kustawisha uchumi wa mabara mengine. Afrika ikaporwa nguvu ambayo ni rasilmali kuu katika ustawishaji wa uchumi. La kusikitisha ni kuwa Afrika haikufidiwa kutokana na wizi huu. Badala yake iliongezewa mizigo mingine.

Baada ya kipindi cha biashara ya utumwa kumalizika, Afrika ilijipata katika janga jingine. Wakoloni wakaliingilia bara kwa pupa. Wakaligawanya katika koloni mbalimbali miongoni mwao. Wakaingiwa na wendawazimu kuiba malighafi ya bara hili. Wakaiba mashamba, madini, miti na chochote cha maana walichokipata. Badala ya malighafi haya kutumika kunawirisha bara la Afrika, yalitwaliwa kustawisha chumi za walikotoka wakoloni. Afrika ikaachwa kuzidi kudidimia katika lindi la umaskini.

Wakoloni walipotoka barani Afrika na kuzipa dola nyingi za Afrika ‘uhuru’, waliacha mkururo wa madhila. Madhila haya hayangeikubalia Afrika kujikomboa kutoka katika biwi la uchochole. Tatizo la kwanza na kubwa zaidi ni wakoloni kugawanya na kukatakata Afrika katika mataifa mengi. Mgawanyo huu ukawa haukufuata utaratibu wowote. Kwa sababu hii, watu wa nasaba moja wakawekwa katika nchi tofauti. Mathalani , watu wa nasaba ya Kisomali waligawanywa na kuwekwa chini ya nchi huru ya Somali, wengine chini ya dola la Uhabeshi, huku wengine wakiwa nchini Kenya na Jibuti. Watu kama hawa hawakutaka mpango huu. Waliokuwa Kenya na Uhabeshi wakachukua silaha na kupigana ili warejeshwe chini ya himaya moja ya taifa huru la Somali. Watu kama hawa wakatumia muda mwingi kupigana; muda ambao ungetumika kuinua Afrika kiuchumi. Mapigano haya ya wenyewe kwa wenyewe yamekithiri kote katika bara la Afrika.

Halikadhalika, mkoloni hakufanya juhudi zozote za kuanzisha viwanda ambavyo vingenyanyua uchumi wa Afrika na kuwatoa Waafrika katika biwi la ufukara. Palipokuwa na ari yoyote ya kuanzisha kiwanda, kilipoanzishwa hakikusaidia Afrika kiuchumi. Vilikuwa viwanda vya kupunguza zigo la bidhaa na kuzifanya kuwa nyepesi ili zisafirishwe kwa ajili ya viwanda vya nchi walizotoka wakoloni.

Kwa kipindi cha muda ambao mkoloni amekuwa na maingiliano na wakaazi wa Afrika, amehakikisha kuwa mwafrika amekuwa mtegemezi wake. Malighafi ya Afrika yalipelekwa kutayarishiwa viwanda vya wakoloni. Kisha mwafrika alirudishiwa zikiwa bidhaa kamili za kutumiwa. Mwafrika akaonyeshwa kuwa chochote kilichotoka kwa wakoloni ni bora zaidi ya chake alichozalisha. Hii

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ikawa ni mbinu moja ya wakoloni kuwafukarisha Waafrika. Hata sasa, kilichotoka Ulaya, hata kama ni cha hali ya chini, huonekana bora zaidi kuliko alichozalisha Mwafrika

Kwa upande mwingine, inadhihirika kuwa wakoloni hawajawahi kuondoka na kuwaachia Waafrika jukumu kamili la kuendesha uhuru wao kisiasa, kijamii na kiuchumi. Waliondoka kupita mlango mmoja na kurudi kwa wa pili. Mlango wa pili ukawa ni ukoloni kuchukua sura nyingine, sura ya ukoloni mamboleo. Kupitia ukoloni huu, wakoloni hudhibiti uchumi na maendeleo ya Afrika kupitia asasi mbili walizozianzisha, yaani Benki Kuu ya Dunia na Shirika la Fedha Duniani. Ili kupata mikopo ya maendeleo, asasi hizi hutoa masharti ambayo hukwamiza badala ya kuchangia kuleta maendeleo barani Afrika.

Sasa hivi pana haja ya wana wa Afrika kufanya vikao vya dhurura ili kujadiliana kuhusu suluhisho la tatizo hili sugu la umaskini barani. Lazima wawahimize Waafrika wote kujikomboa kiakili na kung'amua kuwa maendeleo ya bara lazima yaongozwe na yadhibitiwe na Waafrika wenyewe. Wawahimize kuacha hulka za kukimbilia mataifa yaliyowafanya watumwa na kuwakalia kikoloni kwa misaada ya maendeleo. Misaada hii si ya dhati bali ni ya chati na hailengi kuondoa umaskini barani bali kuuendeleza.

Pana haja pia Waafrika kuwa na miungano ya kiuchumi. Miungano hii husaidia katika uteteaji wa soko pamoja na bei za bidhaa zao ikilinganishwa na taifa moja kuyaendeleza mambo haya. Halikadhalika, Waafrika wanapaswa kutambua kile wanachotaka na kupanga mikakati ya kufikia mahitaji ya kimsingi kwa wananchi wake. Kwa mfano, uimarishaji wa mbinu msingi ambazo zitachangia kuimarisha uchumi wa mataifa wahitaji kuwa mstari wa mbele badala ya ununuzi wa magari na ndege za hadhi za kuwabebea viongozi.

(a) Ipe taarifa uliyoisoma anwani mwafaka. **(alama 1)**

……

(b) Kutamalaki kwa umaskini barani Afrika kunadhihirishwa na nini. **(alama 2)**

……

……

……

(c) Onyesha jinsi ambavyo wakoloni wameendeleza umaskini barani Afrika. **(alama 4)**

……

……

……

……

……

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(d) Thibitisha kwa kutoa hoja tatu, dhana ya kuwa "Waafrika wenyewe ndio wamechangia kuwepo kwa umaskini wa bara la Afrika." **(alama3)**

……

……

……

……

(e) Umaskini barani Afrika unaweza kukabiliwa vipi kwa mujibu wa makala haya? **(alama 3)**

……

……

……

……

(f) Eleza msamiati ufuatao kama ulivyotumika katika taarifa: **(alama 2)**

(i) kuselelea……..……

(ii) mabeberu……..……

2. UFUPISHO: (ALAMA 15)

Soma kifungu kifuatacho kasha ujibu maswali.

Katika ulimwengu huu tunaoishi wenye hekaheka nyingi, mwanadamu anaendeshwa na maisha mfano wa gurudumu la gari. Kwa watu wenye kufanya kazi katika mazingira ya ofisi ambapo wanaketi mchana kutwa, mazoezi ni muhimu sana. Baadhi ya watu huona fahari wapigapo tai na kuelekea au kutoka kazini kwa gari. Tabia hii ya mwanadamu inamsahaulisha kuwa mwili wake ulidhamiriwa kufanya mazoezi ya viungo kwa kutembea au kufanya kazi zenye kuhitaji misuli kuoashwa moto. Watu wengi hawana habari kuwa mazoezi yana faida tele kwao.

Wataalamu wa sayansi wamebainisha kuwa watu wanaoidhiki miili yao kwa mazoezi ya mara kwa mara huishi zaidi kuliko wasiofanya mazoezi. Watu hawa huwa wamo katika hali nzuri ya afya na wenye nguvu kuliko wale ambao hawaishughulishi miili yao kwa mazoezi au kazi zinazohitaji utumiaji nguvu.

Ni dhahiri kwamba mazoezi huchochea kuundwa kwa seli mpya za ubongo. Utafiti wa kisayansi umebainisha kuwa sehemu za ubongo zenye kusisimuliwa kwa mazoezi ndizo hutekeleza jukumu

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la kukumbuka na kujifunza. Bila mazoezi sehemu hizi zitashindwa kukumbuka au kujifunza maarifa mapya. Vile vile, imethibitishwa kwamba watu wanaoshiriki shughuli zenye kuwahitaji kutumia nguvu hutia fora katika mambo yanayowahitaji kukumbuka, kufanya maamuzi, pamoja na kusuluhisha matatizo.

Hali kadhalika, mazoezi huimarisha siha ya binadamu. Mathalani, matatizo ya moyo yanaweza kukabiliwa kwa kufanya mazoezi ya viungo. Kufanya mazoezi mara kwa mara huufanya moyo kuwa imara na kuuwezesha kutekeleza jukumu lake ipasavyo. Ifahamike kwamba moyo wenye siha huweza kupiga kiasi kikubwa cha damu bila ya juhudi kubwa. Hili bila shaka litamkinga binadamu dhidi ya kulemewa na kazi.

Isitoshe, kushiriki mazoezi au shughuli zenye kutumia nguvu mara kwa mara huuweka mwili katika hali nzuri ya kupambana na magonjwa. Utafiti wa kisayansi umeonyesha kuwa shughuli kiasi zinazomhitaji mtu kutumia nguvu, pamoja na upunguzaji wa uzito, na uzingatiaji wa lishe bora, huweza kupunguza uwezekano wa kupata ugonjwa wa kisukari kwa baina ya asilimia 50 na 60. Mazoezi hayapunguzi tu shinikizo la damu, bali pia hatari ya kupata kiharusi. Aidha, kufanya mazoezi mara kwa mara husaidia kuthibiti uzani wa mwili. Mtu anapokula kiasi cha chakula kinachozidi mahitaji yake ya kimwili huweza kujinenepea na kushindwa kutekeleza majukumu ya kimsingi. Mazoezi husaidia kuzichoma kalori zisizohitajika mwilini. Hatua hii, licha ya kusaidia kupunguza uzani, huvisisimua viungo vya mwili. Matokeo ya haya ni utendakazi wa hali ya juu bila kuchoka. Vilevile mwili unaofanya mazoezi haudorori. Umbo la mtu anayefanya mazoezi hupendeza.

Juu ya hayo, kufanya mazoezi mara kwa mara husaidia kujenga misuli yenye nguvu. Misuli inapokuwa na nguvu tunaweza kulifanya jambo kwa muda mrefu bila kuchoka. Mbali na misuli kuimarika, mazoezi na shughuli zinazohitaji utumiaji nguvu husukuma hewa na virutubisho kwenye viungo mahususi vya mwili na kuvisaidia kufanya kazi vyema zaidi.

Hali kadhalika mazoezi husaidia kujenga mifupa. Kadri binadamu anavyoshiriki katika shughuli kama vile kuruka, ndivyo anavyoimarisha mifupa yake. Shughuli ya aina hii huipa mifupa uzito ambao unaiwezesha kukua na kujengeka ikiwa na nguvu. Mazoezi pia hukawiza kudhoofika kwa mifupa.

Kunyooshanyoosha viungo nako huchangia kuufanya mwili kuwa imara na wenye kunyumbuka. Hali hii ya mwili hupunguza uwezekano wa kupata majeraha. Mwili usionyumbuka humfanya mtu ashindwe kutekeleza hata shughuli nyepesi zinazomhitaji kutumia nguvu. Si ibra kupata kwamba kuitekeleza shughuli ndogo tu humfanya mtu kupata maumivu.

Utulivu wa akili nao huweza kupatikana kwa kufanya mazoezi. Imebainishwa kwamba kufanya mazoezi kwa angalau dakika thelathini kwa muda wa baina ya siku tatu na tano kwa wiki hupunguza kwa kiasi kikubwa, dalili za unyong'onyevu. Na je, wajua kwamba kufanya mazoezi husaidia kupata usingizi? Mazoezi ni mfano wa bembea inayokutuliza na kukupa usingizi.

Mke ni nguo, mgomba kupaliliwa. Nao mwili wa binadamu, kama mgomba, unahitaji kushirikishwa katika mazoezi ili kuuwezesha kuwa na hamu ya kutenda kazi.

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Maswali

a) Kwa kurejelea aya **tano** za kwanza, eleza matatizo ya kiafya yanayoweza kupatikana kwa kutofanya mazoezi. (maneno 100) (al.9, 1 ya mtiririko)

Matayarisho

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Nakala safi

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b) Fupisha ujumbe wa aya tano za mwisho kwa maneno 80. (al. 6,1 ya mtiririko)

Matayarisho

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Nakala safi

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3. MATUMIZI YA LUGHA

(a) Tumia neno Kamene kama yambiwa katika sentensi. **(alama 2)**

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……

……

(b) Taja misingi ya upangaji wa irabi za Kiswahili. **(alama 3)**

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(c) Huku ukitoa mfano mmoja, eleza maana ya mofimu ya kimsamiati. **(alama 2)**

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(d) Vitambue vijenzi vya kimsingi vya lugha ya Kiswahili. **(alama 2)**

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(e) (i) Eleza maana ya kishazi. **(alama 1)**

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(ii) Tunga sentensi moja yenye kishazi tegemezi kinachovumisha. **(alama 2)**

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(f) Badilisha kitenzi kisaidizi kilicho kwenye sentensi ifuatayo kiwe kishirikishi. **(alama 2)**

Mvule alikuwa akilala bwenini.

……

(g) Taja majukumu ya vipengele vilivyopigwa kijistari. **(alama 4)**

Nanyi nendeni haraka au muadhibiwe kinyama kwa utundu wenu.

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(h) Andika sentensi ifuatayo katika ukubwa. **(alama 2)**

Uteo alionunuliwa umezeeka sana.

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(i) Tunga sentensi moja mwafaka kudhihirisha matumizi ya kiunganishi madhali. **(alama2)**

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(j) Onyesha minyambuliko ya maneno yafuatayo katika kauli zilizotolewa mabanoni. **(alama 2)**

(i) ja (tendewa)

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……

(ii) cha (tendeka)

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(k) Katika sentensi moja, onyesha matumizi mawili ya kibainishi. **(alama 2)**

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(l) Yakinishi **(alama 2)**

Usipolipa usiingie ndani

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(m) Neno ‘gofu’ linapatikana katika ngeli gani? **(alama 1)**

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(n) Geuza sentensi ifuatayo iwe katika usemi halisi. **(alama 2)**

Kassim alimwomba Hirshi aende mahali alipokuwa ili amtume.

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(o) Changanua sentensi ifuatayo kwa kutumia kielelezo matawi. **(alama 4)**

Japo Mutiso anasinzia darasani hajamaliza kazi yake.

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(p) Iandike upya sentensi ifuatayo kwa kutumia visawe vya maneno yaliyo katika italiki. **(alama 3)**

Mdarisi aliwashauri wanafunzi kuwa *bidii* huzaa *ufanisi*

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(q) Unda kitenzi kutokana na kivumishi jasiri. **(alama1)**

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(r) Andika maana ya nahau: kunjua jamvi **(alama 1)**

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4. ISIMU JAMII

(a) Eleza hali ya lugha ya Kiswahili nchini Kenya baada ya uhuru **(alama.10)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

102/3

KISWAHILI

KARATASI YA 3

FASIHI

MUDA: SAA 2½

JINA……

SHULE…… **SAHIHI**……

NAMBARI YA USAJILI…… **MKONDO**……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO

(a) *Jibu maswali* ***manne*** *pekee.*
(b) *Swali la kwanza ni la* ***LAZIMA.***
(c) *Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki; yaani: tamthilia, Riwaya, hadithi Fupi, shairi 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	

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SEHEMU A: RIWAYA (CHOZI LA HERI)

Jibu swali la 1 au 2

1. "Kumbe hata mja akafanikiwa vipi kielimu na kitaaluma, maisha yake huwa ombwe bila mwana, awe wa kuzaa au wa kulea?"

(a) Eleza muktadha wa dondoo hili **(alama 4)**

(b) Taja tamathali moja iliotumika katika dondoo **(alama 1)**

(c) Onyesha ukweli wa kauli hii ukirejelea wahusika wowote **watano** riwayani **(alama 5)**

(d) Fafanua umuhimu wa elimu katika jamii ukirejelea riwaya nzima. **(alama 10)**

SEHEMU YA B - FASIHI SIMULIZI

2. Niaje wazungu wanaweza kutunza vitu vikajaa kwenye friji. Yani nimeweka soda mbili tu kwenye friji lakini haitulii hadi nizinywe. Niko sebuleni nazunguka tu. Najaribu kuwaza vitu vingine lakini wapi akili inaniambia *"My friend kunywa soda".*

(a) Taja na ueleze maana ya kipera hiki **(alama 4)**

(b) Utanzu wa kipera hiki huweza kuchukua nafasi muhimu katika fasihi simulizi. Thibitisha kwa hoja zozote sita. **(alama 6)**

(c) Ufanisi wa uwasilishaji wa utanzu huu unategemea fanani. Tetea kauli hii. **(alama 4)**

(d) Ni changamoto gani zinaweza kumkabili mwanafasihi nyanjani? **(alama 4)**

(e) Dokeza umuhimu wa kukusanya data nyanjani. **(alama 4**

SEHEMU YA C - TAMTHILIA: BEMBEA YA MAISHA na *Timothy Arege*

3. (a) 'Hizo juu-chini chini-juu ndizo utamu wake. Ni kama maisha kwa jumla. Yana pandashuka ndiyo lakini pandashuka hizo ndizo hutupa kuridhika hatimaye tunapozishinda.'

Thibitisha kuwa maisha yamejaa pandashuka ukirejelea tamthilia: *Bembea ya Maisha* **(alama 10)**

(b) 'Umenirudisha nyuma kweli katika siku zile za ujana wangu. Asubuhi niko skuli majira ya alfajiri…''

i. Eleza mbinu ya kimtindo inayojitokeza katika dondoo hili. **(alama 2)**

ii. Fafanua mifano mingine minane (8) ya matumizi ya mbinu hii katika tamthilia **(alama 8)**

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4. "Mwenyewe ona ulivyokonda kama ng'onda!"

(i) Yaweke maneno haya katika muktadha wake. **(alama 4)**

(ii) Tambua mbinu **mbili** za lugha katika dondoo hili. **(alama 4)**

(iii) Eleza umuhimu wa msemaji wa maneno haya. **(alama 6)**

(iv) Fafanua umuhimu wa mandhari ya dondoo hili. **(alama 6)**

SEHEMU YA D HADITHI FUPI YA MAPAMBAZUKO YA MACHWEO

5. Fafanua nafasi ya dini kwa mujibu wa hadithi ya 'Fadhila za Punda' **(al.20)**

Robert Oduori: Kidege

YUSSUF SHOKA HAMAD: ***Mzimu wa Kipwerere***

6. …akikiomba radhi kile kitawi cha mti kilichonasa kwenye kazu yake ya rangi ya udongo iliyoficha kiwingu cha nongo kwa kukosa kuoshwa tangu ainunue! Nikauacha mpambano ule kati ya mzimu na mwenye dhamana ya mzimu ambao sina shaka ulidumu hadi asubuhi pale wanakijiji walipofika kushuhudia siri nzito iliyomezwa na mzimu ule waliokuwa wakiogopa na kuamini kiasi cha kuabudu kwa unyenyekevu na uchaji uliotukuka!

(a) Eleza muktadha wa dondoo. **(alama 4)**

(b) Fafanua umuhimu wa mandhari katika dondoo hili. **(alama 4)**

(c) Fafanua mbinu za kimtindo katika dondoo. **(alama 4)**

(d) Onyesha jinsi itikadi ilivyomwezesha 'mwenye dhamana ya mizimu' na wenzake kuwafanya wanakijiji kuogopa na kuamini mzimu wa Kipwerere kiasi cha kuabudu kwa unyenyekevu na uchaji uliotukuka. **(alama 8)**

SEHEMU D:USHAIRI

Jibu swali 7 au 8

7.Soma shairi lifuatalo kisha ujibu maswali.

Hizi bombo mwaanika, wa ndizini nashtuka,
Peupe mwazianika, kwenye jua kukauka,
Zingine zimeraruka, aibu zinatufika,
Anikeni kwa kuficha, za ndani mkisafisha.

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Nako kule kwenye bafu, mwaziweka hizo chafu,
Hilo nalo nakashifu, mkitoa nitasifu,
Kuziweka maji chafu, hilo ndilo ninahofu,
Anikeni kwa kuficha, za ndani mkisafisha.

Kwenye meza wazileta, wana wenu wakipata,
Wageni wakijateta, aibu haitatupata?
Muondoeni utata, hizo zenu twazipata,
Anikeni kwa kuficha, za ndani mkisafisha.
Kwa heshima tudumuni, tufaapo za mwilini,
Tamaduni jifunzeni, msiige uzunguni,
Za bafuni zi jikoni, zi watoto makononi,
Anikeni kwa kuficha, za ndani mkisafisha.

Wino wangu kibindoni, nitatua tamatini,
Za ndani ziwe za ndani,msonyeshe hadharani,
Za bafuni si jikono, msiweke kabatini,
Anikeni kwa kuficha, za ndani mkisafisha.

MASWALI

a) Pendekeza kichwa mwafaka katika shairi hili**.** **(alama 1)**

b) Eleza toni ya shairi hili**.** **(alama 1)**

c) Tambua nafsineni katika shairi. **(alama 1)**

d) Jadili matumizi ya mitindo ifuatayo ya lugha katika shairi hili.

i. Kinaya **(alama 2)**

ii. Usambamba **(alama 2)**

iii. Balagha **(alama 1)**

e) Onyesha kuwepo kwa uhuru ufuatao katika shairi**.** **(alama 3)**

i. Tabdila

ii. Kubananga sarufi

iii. Inkisari

f) Andika ubeti wa mwisho kwa lugha mjazo. **(alama 4)**

g) Eleza muundo wa shairi hili**.** **(alama 5)**

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8. YALIMWAGIKA

Lilianza kama wazo, nikawaza,
Niwe na watoto,
Si vikwazo, ghafla mama yao akapatikana,
Kwa rutuba yake,
Akavimba
Kumbe ni mapacha,
furaha!

Majina walishapewa,
Imani kudumu, watazaliwa,
Tungo wakatungiwa,
Amani na Imani,
Baba yao ni malenga
Anatayeita maneno.
Maneno yanaitika.
Nikasubiri.

Wazazi walitamani kupakata,
Amani na Imani
Iwe yao burudani, siyo kama zamani
Wachezee zuliani.
Baba niwaweke kifuani
Na migongoni bila susu, kwa mama yao
Si mtoto hutizama kisogo cha ninake?
Tukangoja!
Furaha kote nyumbani iliwatanda,
Kuyaona makinda yao, kwa kitanda,
Wadondokwe udende, wawapende!
Mama anyonyeshe, kiwatazama machoni,
Kuwagusa mashavuni, waliapo.
Watulie Amani na Imani.

Ukutani ni kiwimbo, baba alishawatungia,
Kushotoni ni wa kike, kuumeni kijanadume
Watulie, Baba yao aliwazia
Wazo likaanza kupokwa.
Hospitali wakiwasili.

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Wiki zikajenga miezi
Tamati ikajongea
Kawanunulia mavazi
Walifaa kuvaa
Hawakuvaa!
Vijulanga miezi saba, pukachaka!
Kifo ni mwewe, kikaninyakulia.
Amani na Imani.
Tunalia!
Pema peponi wanetu!

MASWALI

a) Eleza jinsi usimulizi ulivyotumika kwenye shairi. **(alama 1)**
b) Eleza sifa tatu zinazoafiki shairi hili kuwa huru. **(alama 3)**
c) Shairi hili ni la tanzia. Thibitisha**.** **(alama 1)**
d) Tambua mandhari ta tanzia. **(alama 1)**
e) Tambua nafsineni kwenye ubeti wa kwanza. **(alama 1)**
f) Eleza toni ya shairi. **(alama 2)**
g) Onyesha mifano miwili ya matumizi ya sadfa katika shairi**. (alama 3)**
h) Andika ubeti wa mwisho kwa lugha tutumbi. **(alama 4)**
i) Eleza maana ya msamiati huu kulingana na shairi. **(alama 4)**

i.Vijulanga
ii.Susu
iii. Akavimba
iv ..Kiwimbo

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

AGRICULTURE

443/1

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 spaces provided above*
2. *Sign and write the date of examination in the spaces provided above.*
3. *This paper consists of three sections: A, B and C*
4. *Answer all the questions in section A and B and any two questions from section C*
5. *Do not remove any pages from this booklet*

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1 – 18	30	
B	19 – 23	20	
C		20	
		20	
	Total Score	**90**	

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SECTION A (30 MARKS)

Answer all the questions in this section in the spaces provided.

1. State **two** ways in which agriculture contributes directly to the development of industries. **(1mk)**

……

……

……

2. What is a micro catchment ? **(½ mk)**

……

……

3. State any three details contained in a delivery note. **(2mks)**

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4. **Outline** any four problems farmers face when marketing their products. **(2mks)**

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5. Name three sites for agro forestry trees. **(1 ½ mks)**

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……

6. State **two** ways in which land consolidation improves farm management. **(1mk)**

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b) State four advantages confers to a farmer with land title **deed** **(2mks)**

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7. Give four reasons for earthing up some crops. **(2mks)**

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8. Give two reasons for testing soil in the farm. **(1mk).**

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9. List **four** examples of variable inputs in maize production. **(2mks)**

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10. Name four books of account kept by a farmer **(2 mks)**

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11. Give **two** functions of the Agricultural Finance corporation (AFC) **(2mks)**

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……

12. State **two** common symptoms of viral infection in crop **(1mk)**

……

……

13. State four conditions under which opportunity cost equals to zero **(2mks)**

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14. Name **four** factors that may affect the selectivity and effectiveness of herbicides. **(2mks)**

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15. Give **two** means by which water can be conveyed from the place of storage to where it is needed on the farm. **(1mk)**

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16. List **four** pieces of information likely to be found in a field operation record. **(2mks)**

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17. Give four qualities of good silage. **(2mks)**

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18. A farmer was advised to apply 200kg of CAN/ha, while top dressing bean crop.

CAN contains 21% N. Calculate the amount of CAN applied per hectare. **(2mks)**

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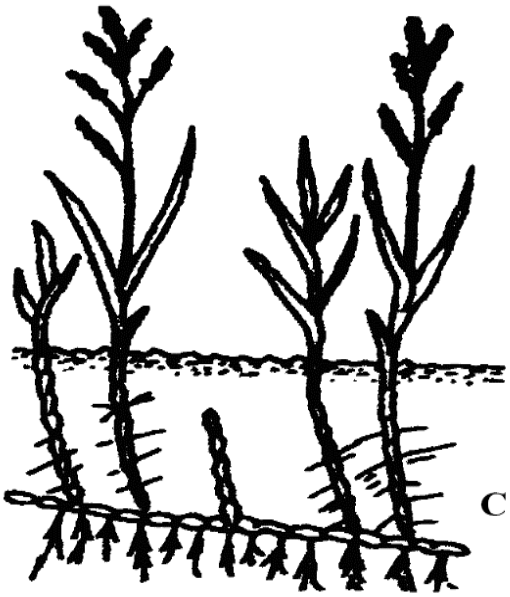
SECTION B (20 MARKS)

Answer all the questions in this section in the spaces provided.

19. Below are diagrams of common weeds on the farm. Use them to answer the questions that follow.



A



C

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B



D

a) Identify the weeds A, B, C and D **(1mks)**

A……

B……

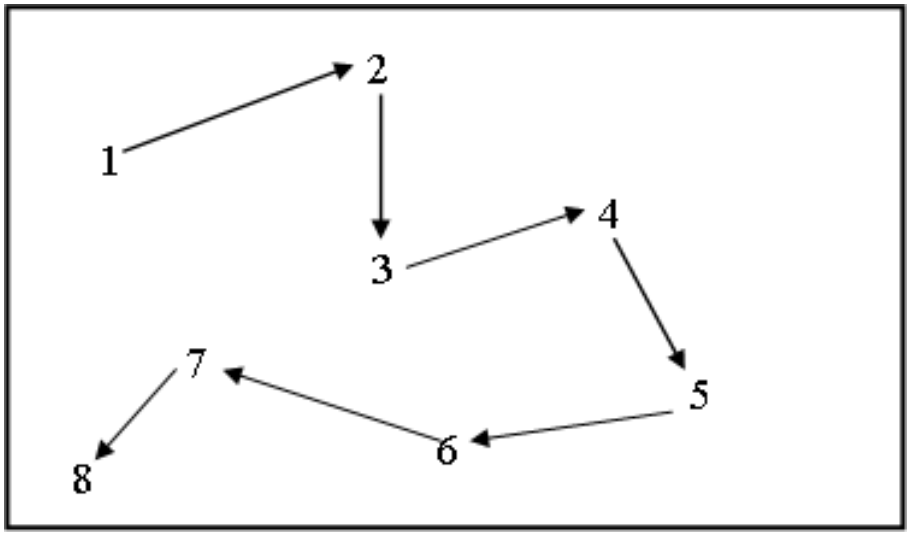
b) Give **one** negative effect of weed labeled B in livestock. **(1mk)**

……

c) Suggest the most appropriate method of controlling weed labeled **D** **(1mk)**

……

20. The diagram below illustrates a method of collecting soil samples from a field



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a) Identify the method illustrated above. **(1mk)**

……

b) Describe four steps that should be followed when collecting soil samples. **(2mks)**

i)……

ii)……

iii)……..

iv)……..

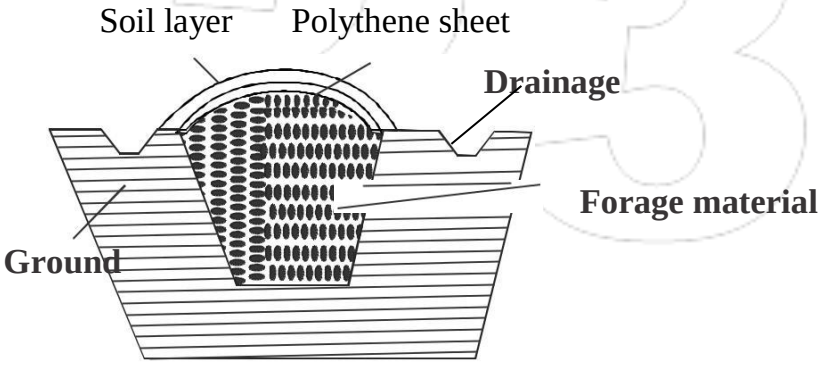
c) State **two** precautions a farmer should take when collecting a representative soil sample from the field for testing. **(1mk)**

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21. The diagram below shows a method of forage preservation



a) Identify the structure above **(1 mk)**

……

b) State the form in which the forage is preserved as illustrated above **(1 mk)**

……

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c) Give the role played by each of the following in the structure above

i) Polythene sheet **(1 mk)**

……

……

ii) Drainage **(1 mk)**

……

……

d) Name two other methods of forage conservation **(1 mk)**

……

……

22. The document shown below is a sample of a delivery note. Study it carefully and answer the questions that follow:

DELIVERY NOTE

NO.1236

Date…….

FROM……..

TO……

Please receive the following goods

Item	A	B
1.	Chick mash	20 bags
2.	Dairy Meal	10 bags
3.	CAN fertilizer	4 bags (50kg)

Received the above goods in good condition and order.

Delivered by……

Received by……

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a) Name the column labeled A and B **(1mk)**

A……..

B……..

b) What is the purpose of this document in business transaction? **(1mk)**

……

……

c) Outline **four** details that the document should contain for it to be complete. **(2mks)**

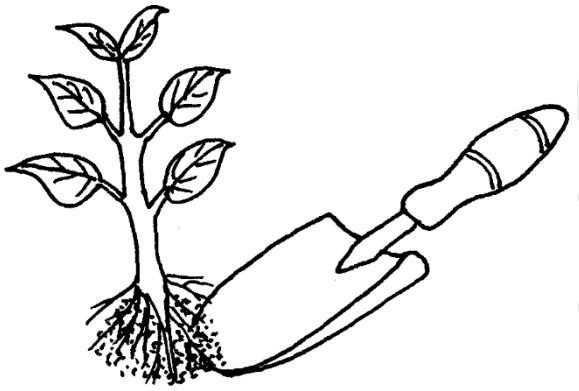
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23. Study the illustration in the diagram below and answer questions that follow.



a) Identify the practice being illustrated above. **(1mk)**

……

……

b) State **three** activities that should be carried out for successful results in the practice shown above. **(3mks)**

……

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SECTION C (40 MARKS)

Answer any two questions from this section.

24. a. Explain the terms risks and uncertainties in farming **(2 mks)**

b. State the various risks and uncertainties farmers face in fanning **(12 mks)**

c. Explain various ways in which farmers adjust to risks and uncertainties in farming **(6mks)**

25. a) Describe the characteristics of ideal agroforestry tree species **(10mks)**

b) Explain **five** physical methods of pest control (**10mks)**

26. a) he following information was extracted from Bidii farm's book records as at 31st December 2022. The farm had borrowed a long term loan of 1 million from the co-operative bank and owed Ksh.10,000 to the co-operative society shop for coffee sprays and cattle feeds. The farm is owed Ksh.10,000 for milk delivered to New KCC. Salaries amounting to Ksh.9,500 had not been paid. The valuations of the farm were as follows.

Item	**Ksh**.
Cattle	125,000
Goats	19,000
Poultry	35,000
Coffee trees	95,000
Equipment	40,000
Farm buildings	145,000
Stored cattle feed	4,000
Stored cattle spray	21000
Money in cash box	2,000
Land valued at	600,000

i) Prepare a balance sheet for Bidii farm as at 31st December, 2022 **(7mks)**

ii) Show whether Bidii farm was solvent or insolvent **(1mk)**

iii) Explain your answer in (ii) above. **(1mk)**

(b) Explain principles governing formation of cooperatives **(8mks)**

(c) Describe three advantages of mixed stand of pastures. **(3mks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

AGRICULTURE

443/2

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.*
- ***Sign** and **write the date** of examination in the spaces provided*
- *This paper consists of **three** section **A,B** and **C***
- *Answer **all** the questions in section **A** and **B***
- *Answer any **two** questions in section **C***
- *All the questions should answered in the spaces provided*

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAX SCORE	CANDIDATES SCORE
A	1-18	30	
B	19 - 23	20	
C		20	
		20	
	TOTAL	90	

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SECTION A (30 MARKS)

Answer all the questions in this section in the spaces provided.

1. (a) What is a notifiable disease **(1mk)**

……

……

(b) Name **two** notifiable diseases of cattle **(1mks)**

……

……

2. Give **four** faults in the eggs that are detected during egg candling **(2mks)**

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3. Give **two** reasons for maintaining farm tools **(lmk)**

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4 (a) Give **two** roles of litter in a deep litter poultry house **(1mk)**

……

……

(b) State **one** role of footbath in a poultry house **(½ mk)**

……

……

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5. Mention **four** advantages of embryo transplant **(2mks)**

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……

6. Give functional difference between the following tools **(2mks)**

(a) Stock and die and pipe cutter

……

……

(b) Ball pein hammer and claw hammer

……

……

7. State **four** features of an ideal calf pen **(2mks)**

……

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8. State **four** signs of furrowing observed in pigs **(2mks)**

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9. State **three** methods of restraining cattle **(1 ½ mk)**

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10. Give **four** ways of stimulating milk let down in a dairy **cow** **(2mks)**

……

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11. Differentiate between cropping and harvesting in fish keeping. **(1 mark)**

……

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……

12. Name the dairy breed of cattle which **(lmk)**

(a) Produces the highest yield of milk

……

(b) Produces milk with the highest butterfat content

……

13. State **four** pre-disposing factors of mastitis **(2mks)**

……

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14. Name any **two** renewable sources of power in the farm **(lmk)**

……

……

15. State **four** factors considered when computing a ration for livestock on the farm **(2mks)**

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16. State **two** ways in which digestion of food in pigs differs from that in Ruminants **(2mks.)**

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17. State **two** conditions, which would make it necessary to feed bees **(lmk)**

……

……

18. State **two ways of** caponization in poultry **(2mks)**

……

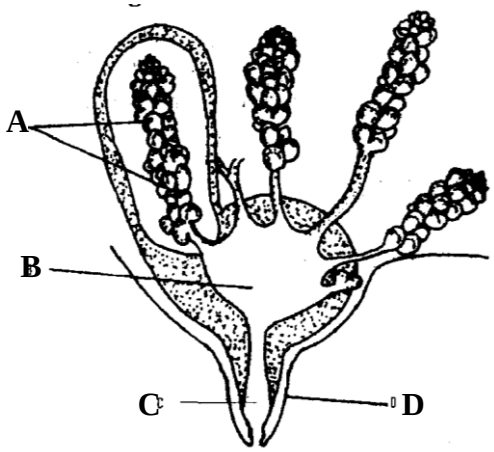
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SECTION B (20 MARKS)

Answer all questions in this section in the spaces provided

19. The diagram below is a cross section of part of a cow's udder.



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a) Label the parts marked **A**,**B**,**C** and **D** **(2mks)**

A……

B……

C……

D……

b) Name two hormones that control milk - let down in a dairy cow. **(2mks)**

……

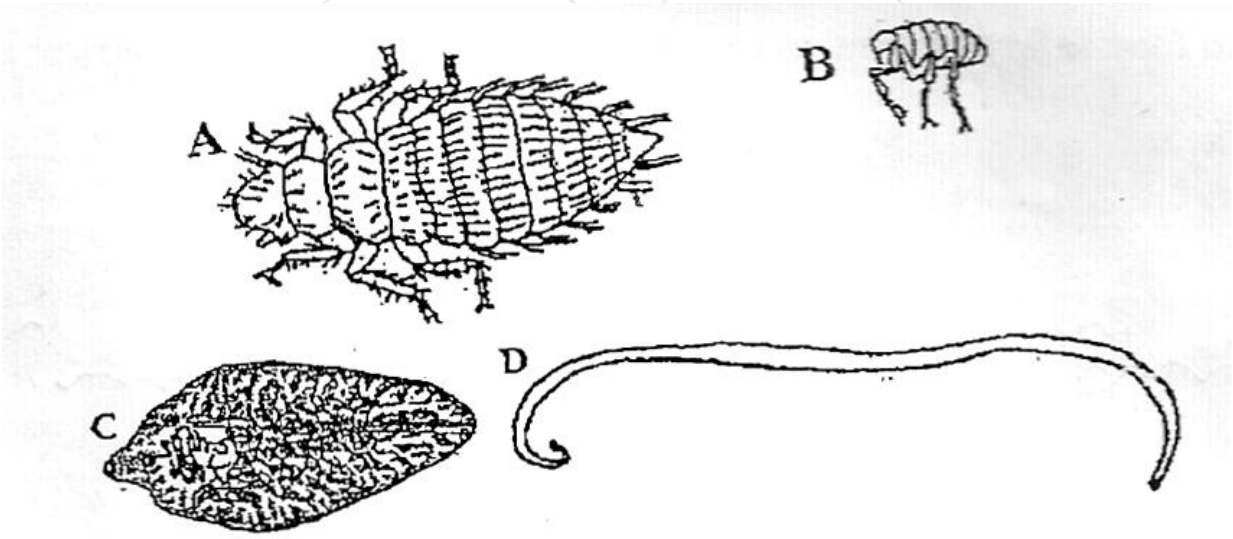
……

c) What is a dry cow therapy **(1mk)**

……

……

20.(a) Identify each of the parasites of livestock shown below. **(2marks)**



A……

B……

C……

D……

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(b) What is the difference between parasites **A** and **B**and parasites **C** and **D**? **(1mark)**

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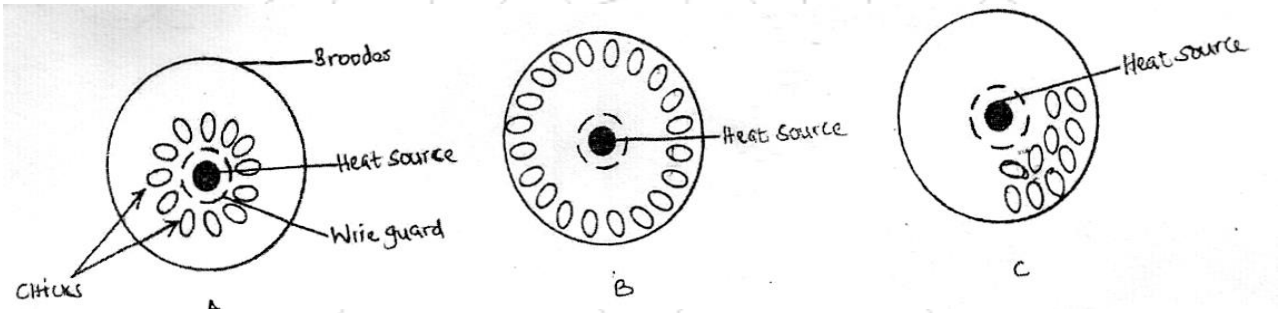
……

(c) Suggest an effective control measure of the parasites labelled **C** **(1mark)**

……

……

21. Below are illustrations showing the behavior of chicks in various brooders. Study the diagrams and answer the questions that follow.



(i) State the environmental problem in each brooder as illustrated by the behavior of the chicks **(3marks)**

A……

B……

C……

(ii) State **two** ways of overcoming the problem in **B** **(2marks)**

……

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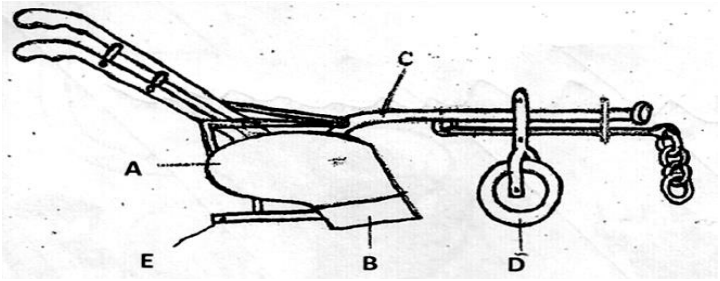
(iii)Why brooder is recommended to be round in shape **(1mks)**

……

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22. Below is a diagram of a farm implement



(a)Identify the implement **(½ mark)**

……

(b) Label the parts marked **A, B, C, D** and **E**. **(2 ½ marks)**

A……

B……

C……

D……

E……

(c) State the functions of the parts labelled**C** and **E** **(2mks)**

……

……

SECTION C (40 mks)

Answer any two questions from this section in the spaces provided after question

23. (a) Discuss the management of layers from one day old to the start of laying in a deep litter System. **(14mks)**

(b) Explain management practices that would improve fish production. **(6mks)**

24 (a) State the daily maintenance and servicing of a **tractor** **(10marks)**

(b)Describe the structural requirement to be considered when constructing a calf pen **(10marks)**

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

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

c) State five disadvantages of natural method of mating. **(5mks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

BUSINESS STUDIES

565/1

PAPER 1

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 the spaces provided above.*

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

(c) *This paper consists of **25** questions.*

(d) *Answer ALL questions in the spaces provided*

FOR EXAMINER'S USE ONLY

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

Questions	16	17	18	19	20	21	22	23	24	25
Marks										

TOTAL MARKS

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Answer ALL questions in the spaces provided

1. Outline **four** benefits that a business gain from its environment. **(4mrks)**

……

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2. Highlight **four** limitations that small scale retailer operators face. **(4mrks)**

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4. Outline **four** ways in which inflation can be controlled by the government. **(4mrks)**

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5. The following items belong to Mlamba Wholesalers as at 31st Dec 2018

Motor vehicle	75,000
Stock	4,000
Overdraft	11,100
Creditors	5,740
Debtors	6,200
Commission paid	2,000
Cash	10,000
Returns Outwards	3,400
Returns Inwards	1,400
Capital	78,360

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Required, draw Mlamba's trial balance as at 31st December 2018. **(5mks)**

6. The bodaboda motorcycles are very popular both in urban and rural environment. Highlight **four** disadvantages of this method of transport. **(4mks)**

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7. Lopez who completed building a house has insured it against the risk of fire. State **four** circumstances that may prevent her from being compensated in an event of loss occurring.
Outline **four** benefits that a business gain from its environment. **(4mrks)**

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8. Outline **four** characteristics of economic resources. **(4mks)**

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9. Outline **four** disadvantages of division of labour. **(4mks)**

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10. Give **four** benefits one gets from self-employment. **(4mks)**

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11. Shaban started a shop dealing in ladies clothing but failed after two years. Outline ***four*** factors that may have caused this failure. **(4mks)**

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12. Highlight **four** challenges passed to a country by a rapidly growing population. **(4mks)**

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13. State the type of utility created by each of the following activities: **(4mks)**

i)Delivery Milk to a customer ……

ii)Keeping money in the bank……

iii)Selling bread to a student……

iv)Making uniform for students……

14. Highlight **four** factors which hinder economic development in a country. **(4mks)**

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15. Outline **four** means used by commercial banks to transfer money**.** **(4mks)**

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16. Mention **four** unethical Practices in product promotion. **(4mks)**

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17. State **four** reasons why the volume of exports from less developed countries to the developed countries tend to be low**.** **(4mks)**

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18. The average consumer price for a commodity for various years is shown below

Year	**Consumer price**	**Consumer price index**
	shs	
2004	120	100
2005	145	a.
2006	160	b.
2007	170	c.
2008	175	d.

Calculate the consumer price index using year 2004 as the base year. **(4mks)**

19. State four benefits that consumers get from small scale retailers. **(4mrks)**

……

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20. The following information was obtained from the books of Okame Traders on 30th June 2018.

Opening stock	8,000
Purchases	53,000
Sales	62,900
Returns outwards	2,700
Closing stock	12,700

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Prepare Okame Trading Accounts for the year ended 30th June 2018. **(4 marks)**

21. Give four features that differentiate a public corporation from a public limited company.

(4marks)

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22. Highlight four features that should be observed when coming up with a good tax system

(4mks)

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23. Give four advantages of landscape office layout **(4mks)**

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24. State four importance of balance sheet. **(4marks)**

……

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……

25. The following balances were extracted from Mwangaza traders' books of accounts.

	Shs.
Opening stock	25,000
Closing stock	35,000
Purchases	190,000
Mark - up	20%

Calculate:

a) Cost of sales **(1mark)**

b) Gross profit **(1 mark)**

c) Sales **(1 mark)**

d) Rate of stock turnover(ROSTO) **(1 mark)**

KCSE 23

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

BUSINESS STUDIES

565/2

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 spaces provided above.*

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

(c) *This paper consists of **6** questions.*

(d) *Answer ANY FIVE questions in the spaces provided*

FOR TEACHER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
	20	
	20	
	20	
	20	
	20	
	Total Score	

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Answer ANY FIVE questions in the spaces provided

1. (a) **Explain** negative effects of any five macro environmental factors on a business.

(10 marks)

(b) Explain five uses of National Income statistics to an economy. **(10marks)**

2. (a) Explain **any five** features of a good filing system. **(10 marks)**

(b) The following transactions relate to Koko Traders for the month of September 2010.

Sept. 2 Sold goods on credit to Chui Shs. 12,000 and Jane Shs.16,000

Sept. 8 Bought goods on credit from Shah Traders Shs. 40,000.

Sept. 12 Chui returned goods worth Shs. 2,000.

Sept. 15 Purchased goods on credit from Tanui Shs. 34,000 and Peter Shs. 31,050.

Sept. 20 Goods worth Shs. 6,000 were returned to Shah Traders and goods worth Shs. 3,000 to Tanui.

Sept. 23 Goods sold on credit to Chui Shs. 8,000, Tom Shs. 11,000 and Joseph Shs. 13,000.

Sept. 27 Goods returned by Tom Shs. 2,000.

Required:

Prepare the relevant Journals and balance them off. **(10marks)**

3. (a) Explain five principles of insurance. **(10marks)**

(b) Explain five problems a developing country will encounter in the implementation stage of development planning. **(10marks)**

4. (a) Kenya experienced a general increase in prices of goods and services due to Covid-19 pandemic. Explain **five** negative effects of this to the Kenyan economy **(10 marks)**

(b) Explain five causes of unfavourable balance of payment for most developing countries.

(10 marks)

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5. (a) With the aid of a suitable diagram, explain the effects of a decrease in supply on the equilibrium price and quantity of a product **(10 marks)**

(b)Explain **five** roles of central bank in an economy **(10 marks)**

6. (a) Explain **five** Benefits of an enclosed office plan. **(10 marks)**

(b) On 1st July, 2016 Ekalale Traders had cash in hand sh. 85,200 and cash at bank sh.40,000

(Cr). During the month, the following transactions took place:

July

2 cash sales sh. 42,630 was paid directly into the bank

5 Received a cheque of sh. 14,100 from Ruth in full settlement of her account.

9 Bought goods worth sh. 26,240 cash.

12 Cash sales sh. 42,950 payment received by cheque

15 Paid Ndoigo's account of sh. 25,000 in cash less 5% cash discount.

17.Paid wages sh. 24,000 in cash

18 Withdrew sh. 16,000 from bank for office use.

20 Bought stationery sh.850 cash

22 Cheque received from Ruth was dishonoured.

28 Received a cheque of sh. 9,500 from Kemamo after he deducted a 5% cash discount

31 All cash was banked except sh.10,000.

Required:

Prepare a three column cash book duly balanced. **(10 marks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

BIOLOGY

231/1

PAPER 1

(Theory)

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 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 this booklet.*

For Examiner's Use Only

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

17	18	19	20	21	22	23	24	25	Grand Total	

Turn over

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QUESTIONS

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

1. a) Photosynthesis takes place in two stages. Name the part of the chloroplast where the light stage occurs. **(1mark)**

……

b) How is the dark stage dependent on the light stage of photosynthesis **(2marks)**

……

……

……

2. a)Name the enzyme that speeds up transport of Carbon (IV) Oxide in the red blood cells.**(1 mk)**

……

b) Explain the role of haemoglobin in transport of Carbon (IV) Oxide in the body. **(2 marks)**

……

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3. a) Explain why excessive use of pesticides in the soil lowers concentration of nitrates. **(1 mark)**

……

……

……

b) It has been observed that 1000 wild animals including giraffes, Lions, zebras and hyenas can occupy 10 acres of land without depletion of the available food. However, 1000 cattle will deplete the available resources in the same piece of land. Explain. **(2 marks)**

……

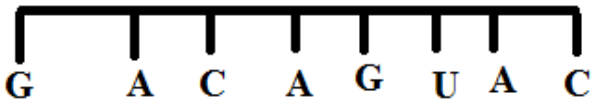
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4. The illustration below represents the base sequence of a section of a nucleic acid.



a) i) Identify the nucleic acid whose section is represented by the illustration. **(1 mark)**

……

……

ii) Give a reason for your answer in (a) (i). **(1 mark)**

……

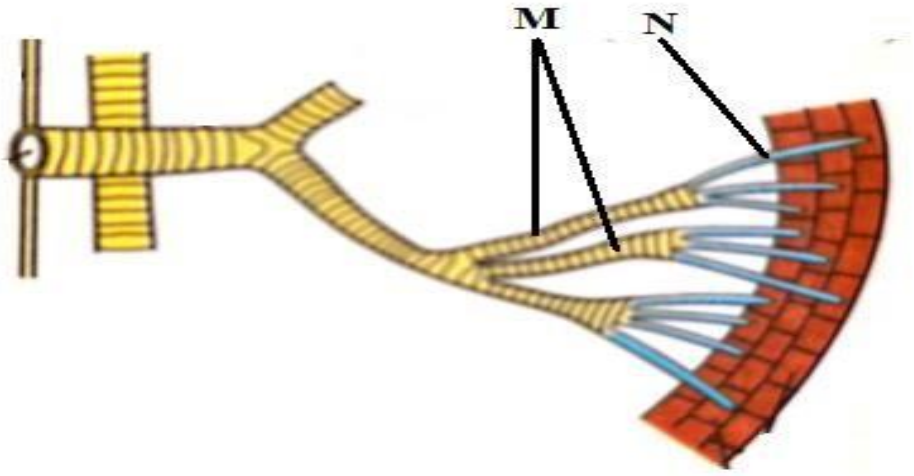
……

b) Name the part of the cell where the section of the nucleic acid shown would be used. **(1 mark)**

……

……

5. The diagram below shows part of the gaseous exchange system of a given animal.



a) What is the importance of the bands of chitin observed in the part labelled M? **(1 mark)**

……

……

……

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b) How is the part labelled N adapted to it`s function. **(2marks)**

……

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……

6. The paddles of a whale and the fins of fish are both used for swimming in water.

a) i) Name the evolutionary phenomenon that may have given rise to the two structures.

(1 mark)

……

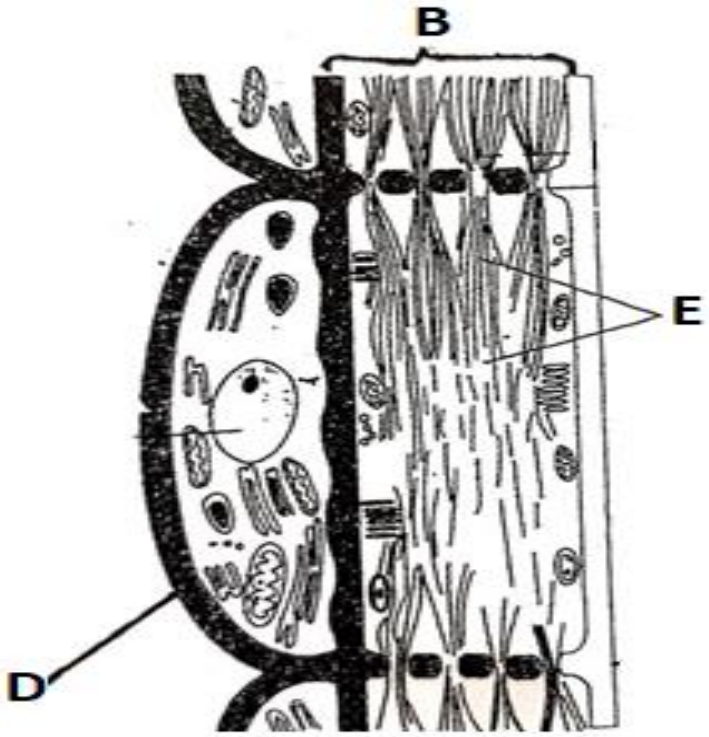
ii) What name is given to such structures**?** **(1 mark)**

……

b) Give **one** example of a vestigial structure in human beings. **(1 mark)**

……

7. Below is a diagram of a plant tissue. Use it to answer the questions that follow.



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a) Identify the tissue. **(1 mark)**

……

b) Name the specialized cell marked **B**. **(1 mark)**

……

c) Explain how the parts labelled **D** and **E** adapt the tissue to their functions. **(2 marks)**

D .....

.....

E .....

.....

8. State the functions of the following parts of a tooth.

i) Enamel. **(1 mark)**

……

ii) Pulp cavity. **(1 mark)**

……

9. State and explain what happens to the thigh muscles in case of oxygen debt when one is running. **(2marks)**

……

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……

10. a) Name the method by which the following excretory products are removed from plants.

i) Excess water..... **(1 mark)**

ii) Carbon (IV) Oxide from respiration..... **(1 mark)**

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b) Identify the plant excretory product obtained from raw paw paw fruits and used as a meat tenderizer. **(1 mark)**

.....

11. An experiment was carried out to study the effect of pH on hydrolysis of starch by saliva. The results are shown in the table below.

Test tube	pH	Time taken (Min)
1	8	1
2	7	4
3	6.5	12
4	6	10
5	3	

a) At what PH value was hydrolysis of starch most rapid? **(1 mark)**

.....

b) What is likely to be the time taken to hydrolyse starch in test tube 5. **(1mark)**

.....

c) Starch is hydrolysed by Ptyalin present in the saliva. Explain why the activity of ptyalin stops in the stomach. **(2marks)**

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12. Explain how the human sperm cell is structurally adapted to perform its function. **(2marks)**

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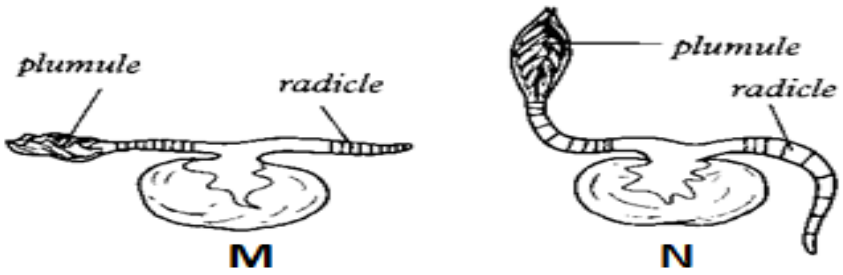
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13. In an experiment, a seedling was placed in a horizontal position as shown if figure **M** below. After 48 hours, the set up was as shown in figure **N**.



a) Name the response exhibited by the radicle of the seedling. **(1 mark)**

……

b) Explain how the plumule formed a curvature upwards. **(3 marks)**

……

……

……

……

14. a) If fruit flies with broad abdomens were crossed with those having narrow abdomens, all the offspring in F1 generation had broad abdomens. Using letter **A** to represent the gene for abdomen size, write the genotypes of the parents. **(2 marks)**

……

……

……

……

……

b) In the F2 generation, 150 fruit flies had narrow abdomens. How many fruit flies with broad abdomen were in the same generation? (Show your working) **(2 marks)**

……

……

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15. The diagram below shows a state of the mammalian heart during a heartbeat.



a) i) Identify the stage of the heart beat cycle illustrated in the diagram. **(1 mark)**

……

……

ii) Give **two** reasons for your answer. **(2 marks)**

……

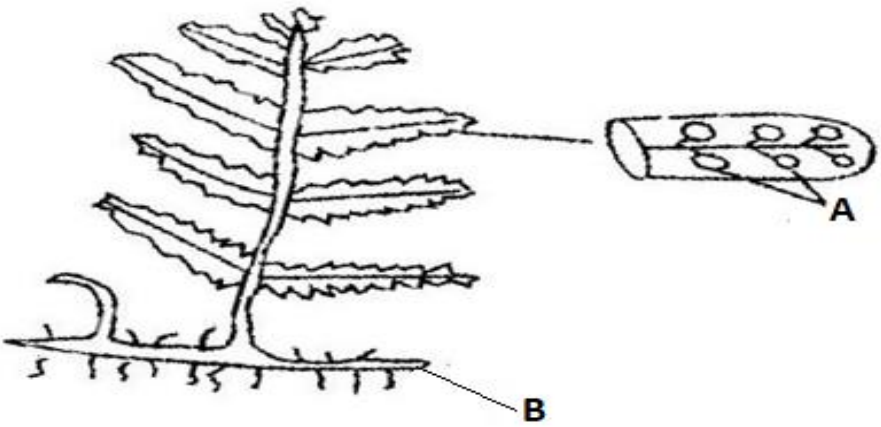
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b) Name the valve labelled **S**. **(1 mark)**

……

16. The diagram below represents a fern plant.



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a) To which division does the plant belong? **(1 mark)**

……

b) Name the parts labelled **A** and **B**. **(2 marks)**

A ……

B……

c) Give **two** differences between a fern plant and a moss plant**.** **(2 marks)**

Fern plant	**Moss plant**

17. During germination of seeds, there is production of heat.

a) Name the process that leads to heat production in the seeds. **(1 mark)**

……

b) Describe how heat is produced by germinating seeds. **(3 marks)**

……

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18. Below are photographs of plants taken at different times of the day.



6:00 am



12:00 pm

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a) Give a term used to describe the nature of cells obtained from the plant at:

i) At 6.00am **(1 mark)**

……

ii) At 12.00pm **(1 mark)**

……

b) Explain the significance of drooping of leaves in plants. **(2 marks)**

……

……

……

c) Name the tissue that provides support in herbaceous plants. **(1 mark)**

……

19. a) Apart from protection of underlying tissues, give **two** other functions of the mammalian skin. **(2 marks)**

……

……

b) Explain what makes the cornified layer of the skin to offer protection against mechanical injury. **(1 mark)**

……

……

20. Name **two** mechanisms that hinder self-fertilization in flowering plants**.** **(2 marks)**

……

……

21. Explain why growing grass dies a few days after salt is sprinkled on it. **(2 marks)**

……

……

……

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22. List **three** differences between the nervous system and endocrine system. **(3 marks)**

Nervous system	Endocrine system

23. Name the tissue in plants that carries out the following functions:

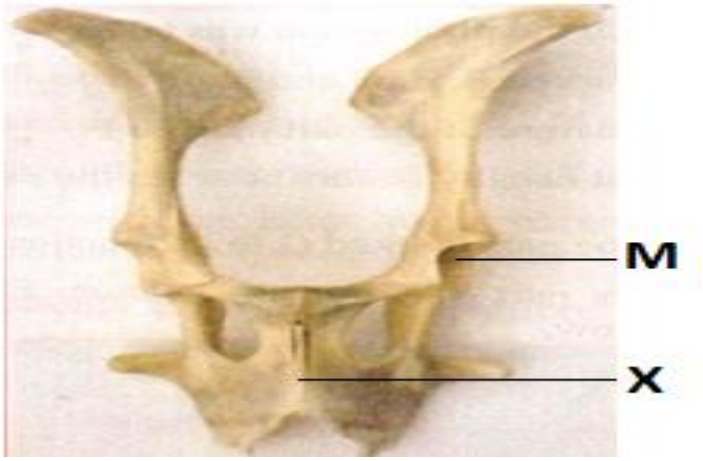
a) Leads to primary growth. **(1 mark)**

……

b) Manufacture of food. **(1 mark)**

……

24. The diagram below represents a mammalian bone from the appendicular skeleton.



a) Identify the bone **(1 mark)**

……

b) State the function of the part labelled **M**. **(1 mark)**

……

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c) Explain how the part labelled **X** is adapted to its function. **(2 marks)**

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25. Give **three** functions of diffusion in living organisms. **(3marks)**

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KCSE 23

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

BIOLOGY

231/2

PAPER 2

(Theory)

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.*
- *Sign and write the date of examination in the spaces provided.*
- *Question **six** is compulsory.*
- *Choose either question 7 or 8*

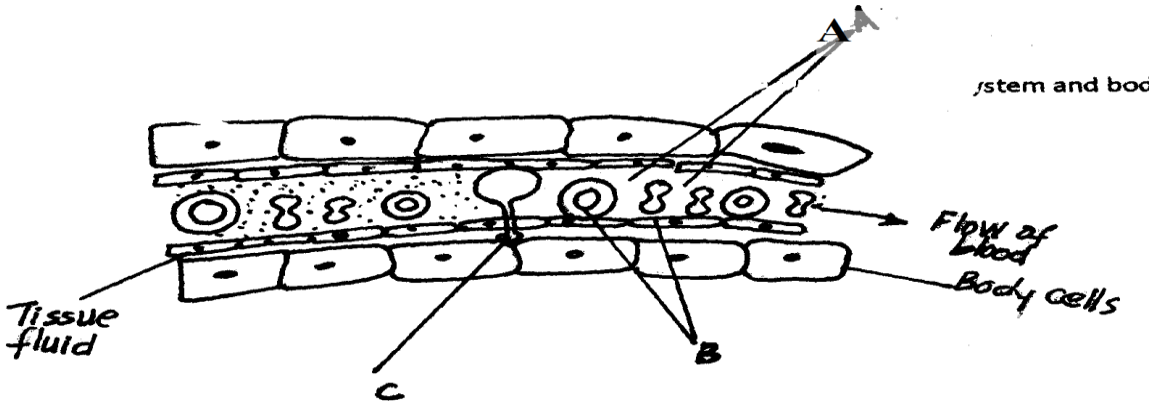
FOR EXAMINER'S USE ONLY

QUESTION NUMBER	QUESTION	MAXIMUM SCORE	SCORE
SECTION A	1-5	40	
SECTION B	6	20	
	7	20	
	8	20	
TOTALSCORE		**80**	

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QUESTIONS

1. The diagram below shows the exchange site between circulatory system and body cells.



a) State **two** adaptations of the capillaries. **(2mks)**

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b) (i) Name the blood cells labeled B. **(1mk)**

……

(ii) State the gas that diffuses from B to the tissue cells. **(1mk)**

……

c) State **two** functions of the part labeled A. **(2mks)**

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d) Name the blood vessel with the highest concentration of;

Oxygen. (1mk)

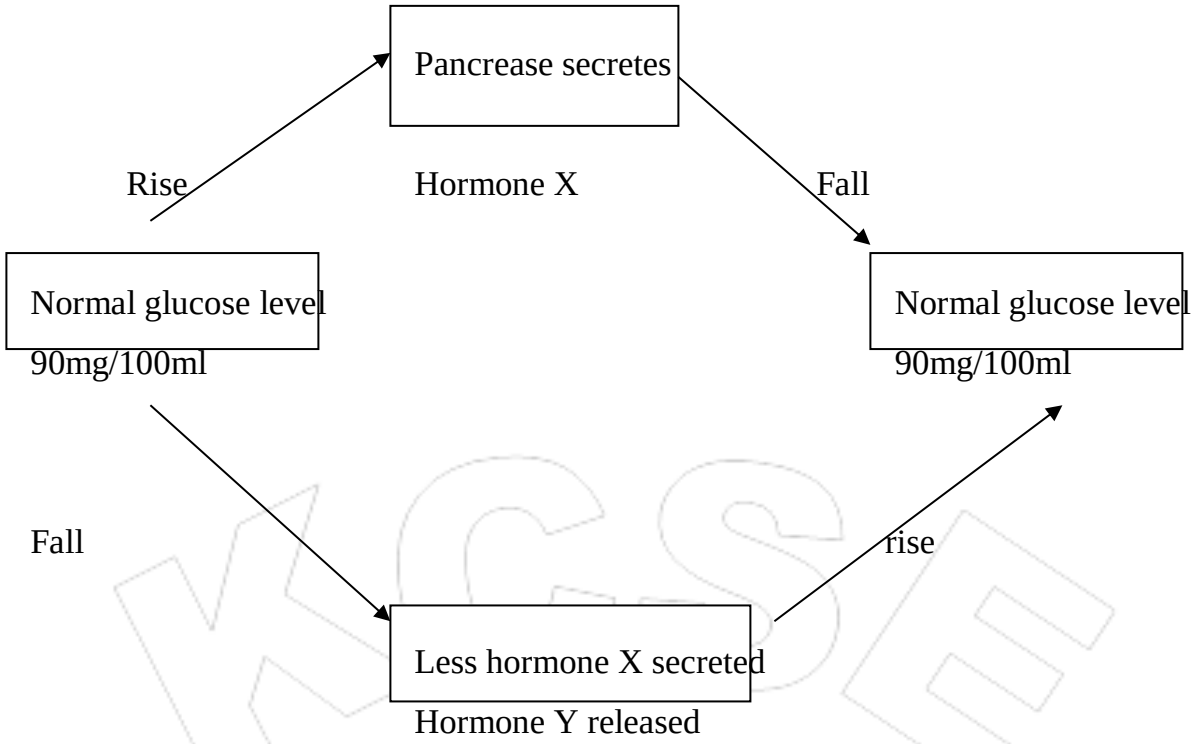
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Urea. (1mk)

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2. The diagram below shows how blood glucose in mammalian body is regulated.



(a) Name the hormone X and Y **(2mks)**

X _____

Y _____

(b) State two ways by which hormone X lowers glucose level in the blood when it rises above 90mg/100ml **(2mks)**

……

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(c) Name the organ that produces hormone Y **(1mk)**

……

(d) Suppose there is deficiency of hormone X, state the disease the person would suffer from **(1mk)**

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(e) Explain how the disease mentioned in (d) above can be controlled. **(2mks)**

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3. In human beings, a downward pointed frontal hairline ("windows peak") is a heritable trait. A person with windows peak always has at least one parent who has his trait; whereas persons with frontal hairline may occur in families in which one or even both parents have windows peak. Using B and b to symbolize genes for this trait.

a) Determination the f1 generation if a homozygous windows peak male parent is married to a Homozygous frontal hairline female parent. **(4mks)**

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b) State two causes of variations. **(2mks)**

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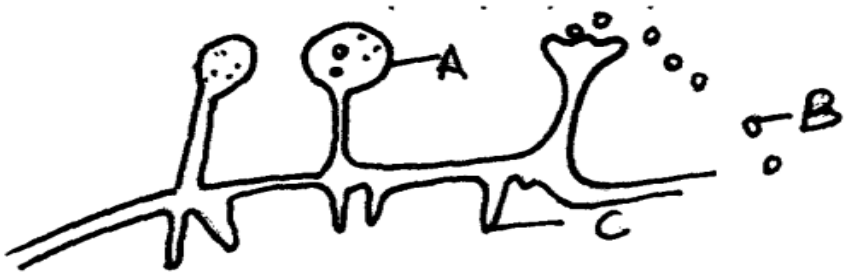
c) Name two examples of discontinuous variation. (**2mks)**

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4. The drawing below represents a mature bread mould (rhizopus).Study it and answer the questions which follow.



a) Name the structures labeled A, B and C. **(3mks)**

A.....

B .....

C.....

b) Identify the type of asexual reproduction represented in the diagram **(1mk)**

.....

c) Give one function of structure C. **(1mk)**

.....

d) Define the term fertilization. **(1mk)**

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e) Compare an ovum cell and a zygote. **(2mks)**

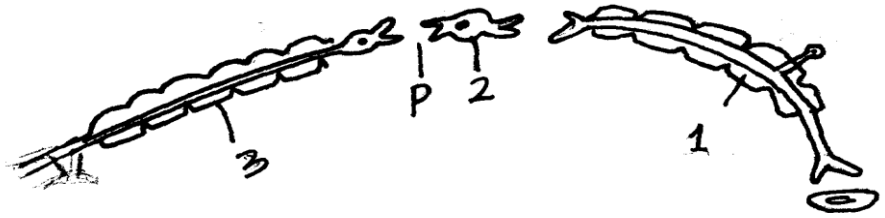
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5. The diagram below shows three different types of neurons along a reflex.



a) Identify the neuron labeled 1, 2 and 3 **(3mks)**

1.....

2.....

3.....

b) Using arrow show the direction of impulse transmission on the diagram. **(1mks)**

c) Name the part of the spinal cord where the cell bodies of neuron 2 and 3 are located. **(1mk)**

.....

d) Describe the transmission impulses across the part labeled P. **(3mks)**

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SECTION B

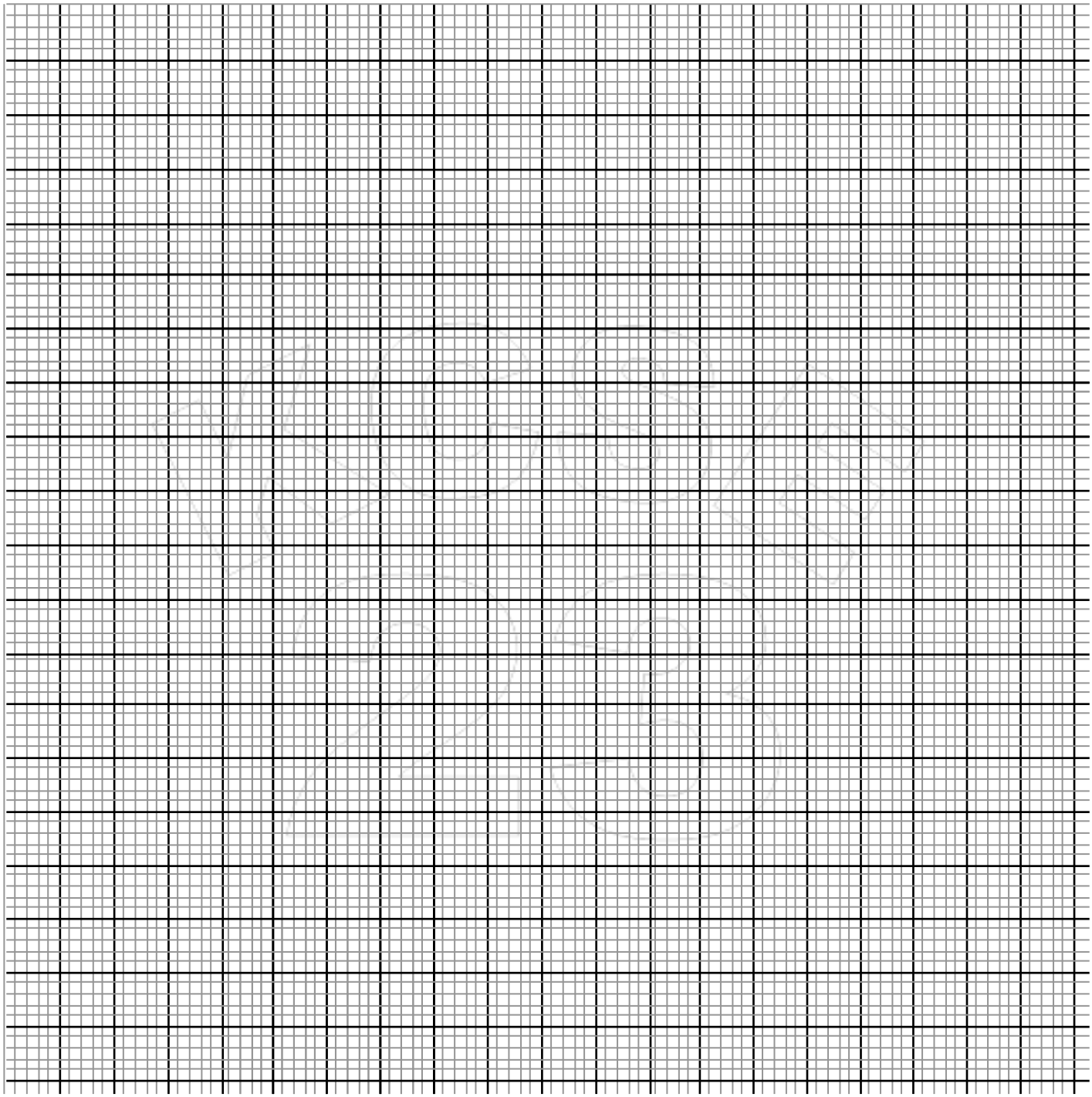
Answer question 6(compulsory) in the spaces provided and either question 7 or 8 in the spaces provided after 8.

6. During germination and growth of a cereal, the dry weight of endosperm, the embryo and the total dry weight were determined at two day intervals. The results are shown in the table below:

Time after planting (days)	Dry weight of endosperm (mg)	Dry weight of embryo (mg)	Total dry weight (mg)
0	43	2	45
2	40	2	42
4	33	7	40
6	20	17	37
8	10	25	35
10	6	33	39

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a) Using the same axes, draw graphs of dry weight of endosperm, embryo and the total dry weight against time. **(7marks)**



b) What was the total dry weight on day 5 **(1mark)**

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c) Account for

i. Decrease in dry weight of endosperm from 0 to 10 **(2marks)**

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ii. Increase in dry weight of embryo from day 0 to day 10 **(2marks)**

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iii. Decrease in total dry weight from day 0 to day 8 **(1mark)**

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iv. Increase in total dry weight after day 8 **(1mark)**

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d) State two factors within the seed and two outside the seed that cause dormancy

i. Within the seed. **(2marks)**

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ii. Outside the seed **(2marks)**

……

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e) Give two characteristics of meristematic cells **(2marks)**

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7. Explain how <u>abiotic</u> factors affect plants. **(20marks)**

8. (a) Discuss eye accommodation. **(10mks)**

(**b)** Discuss the process of hearing in man. **(10mks)**

KCSE 23

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

BIOLOGY

231/3

PAPER 3

(Practical)

TIME: 1¾ HOURS

INSTRUCTIONS TO SCHOOL (CONFIDENTIAL)

Each student shall be provided with the following

- Specimen P: A quarter piece of ripe medium size pineapple
- 10ml of Solution Y: Commercially prepared pineapple juice diluted with water at the ratio of 1:2 (e.g. quencher, highlands or any other)
- Specimen D and E: Are from the same Dicotyledonous plant with herbaceous stem and roots ;Specimen D is fresh while E should have been uprooted and exposed to sunlight for at least 24hrs to wilt.
- *10ml measuring cylinder*
- *A filter paper*
- *A filter funnel*
- *5 test tubes in a rack*
- *A 50ml empty beaker*
- *3 droppers*
- *Test tube holder*

Access to the following:

- *Benedict's solution*
- *1% copper (II) Sulphate solution with dropper*
- *10% Sodium Hydroxide solution with dropper*
- *0.01% DCPIP solution with dropper*
- *0.1 % Ascorbic acid*
- *Distilled water in a wash bottle*
- *Source of heat*

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

BIOLOGY

231/3

PAPER 3

(Practical)

TIME: 1¾ 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*
- *Sign and write the date of examination in the spaces provided above.*
- *Answer all questions in the spaces provided in the question paper.*
- *You are required to spend the first 15 minutes of the time allowed for this paper reading the whole paper before commencing your work.*
- *Answers **MUST** be written on the spaces provided after each question.*

FOR EXAMINERS USE ONLY

QUESTION	Max Score	Candidate Score
1	20	
2	11	
3	09	
TOTAL SCORE	40	

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1. (a) You are provided with:

- ❖ Specimen **P**,
- ❖ Solution **Y**,
- ❖ DCPIP,

i) 0.1 percent Ascorbic acid.
To 1 cm^3 of DCPIP in a test tube, add 0.1 percent solution of Ascorbic acid dropwise; shake the test tube after addition of each drop until color of DCPIP disappears. Record the number of drops used in the table below.

ii) Repeat the procedure using solution **Y** and record the number of drops used in the table below.

iii) Squeeze out the juice from specimen **P** into a beaker, decant, and discard the residue.To another 1cm^3 of DCPIP, add the juice from specimen **P** drop by drop until the color of DCPIP disappears. Record the number of drops used. Spare the remaining juice of Specimen **P** for procedure (c) below. **(3marks)**

Substance	**Number of drops**
Ascorbic acid	
Solution Y	
Specimen P	

iv) From the results obtained in a (i) and (iii) above, calculate the percentage of ascorbic acid in the juice obtained from specimen P. Show your working. **(2 marks)**

v) State two factors that would influence the accuracy of the results **(2 marks)**

vi) Suggest the expected results if the juice from specimen P was boiled for 40 min, cooled and added drop by drop to DCPIP solution. **(1 mark)**

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vii) Explain the expected results in (vi) above **(2 marks)**

(b). Between Specimen P and solution Y, which do you recommend for treatment of scurvy. Give a reason for your answer. **(2marks)**

(c). i) Using the reagents provided carry out food test to determine other food present in juice of **P** besides Ascorbic acid. **(6marks)**

Food substances	**Procedure**	**Observations**	**Conclusion**
Proteins			
Reducing sugars			

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ii) In which regions of alimentary canal will juice of specimen P be absorbed. **(2marks)**

2. You are provided with specimen **D** and **E** that are specimens of the same plant

a) Using observable features group the specimen into

i) Division**…….. (1mark)**

Reason**……..…….(1mark)**

ii)Class**……(1mark)**

Reason**……..…… (1mark)**

b) Press the stem of specimen **D** hard with a finger repeatedly until the stem is crushed. Record the observation.

i) Observation **(1mark)**

ii) Name the type of stem in specimen D **(1mark)**

c) Specimen **D** is the same plant as specimen **E**. E has been exposed to sunlight for 24hrs.

i) Name the phenomenon in exhibited by **E** **(1mark)**

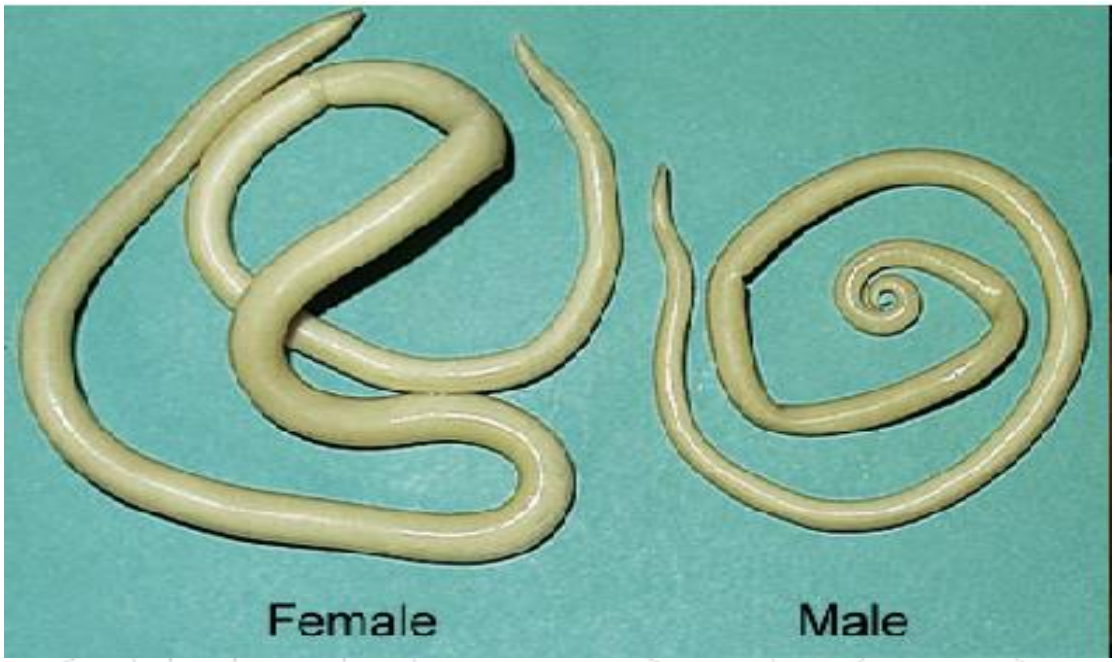
ii) Explain how the phenomenon occurred. **(2marks)**

iii) Name the support tissue in the specimens D and E **(1mark)**

iv) Other than the support tissue mentioned in (iii) above, how else do plants with this type of stem obtain mechanical support. **(1mark)**

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3.Below are images of parasite that infest human body. Use it to answer the question that follow.



i) Name the parasite and give a reason. **(2marks)**

ii) Which part of alimentary canal does the mature parasite infest? **(1mark)**

iii) State two effects of the above parasite infestation to humans. **(2marks)**

iv) How is the parasite adapted to the parasitic mode of nutrition? **(3marks)**

v) Name any other parasitic worm in human beings **(1mark)**

END

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

CHEMISTRY

233/1

PAPER 1

(Theory)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

- *Write your **name and ADM NO** in the spaces provided above.*
- *Answer **All** the questions in the spaces provided below each question.*
- *All working **MUST** be clearly shown where necessary.*
- *Sign and write the date of examination in the spaces provided above.*
- *Electronic calculators may be used.*

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's score
1- 29	80	

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

1. State two laboratory rules that should be followed to avoid contamination and wastage of chemicals. **(2 marks)**

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2. Describe one method used to distinguish between sodium sulphate and sodium sulphite.**(2 mks)**

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3. A gaseous compound consists of 86% carbon and 14% hydrogen by mass. At s.t.p 3.2 dm^3 of the compound has a mass of 6 grams. Calculate:

a) Its empirical formulae (C=12,H=1, MGV=at stp 22.4dm^3 **(2 marks)**

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b) its molecular formulae **(2 marks)**

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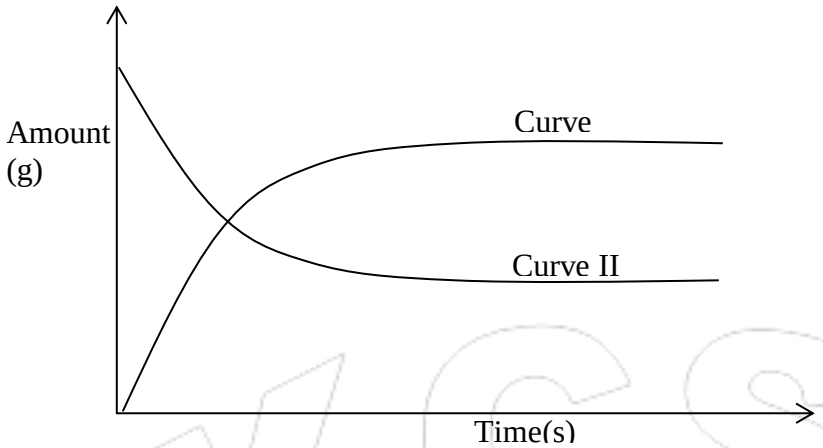
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4. The graph below shows amount of calcium carbonate and calcium chloride varying with time in the reaction.

$CaCO_3 + 2\ HCl \longrightarrow CaCl_2 + H_20 + CO_2$



a) Which curve shows amount of calcium chloride varying with time **(1 mark)**

……

……

b) Explain why the two curves become horizontal after given period of time **(1 mark)**

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c) Sketch on graph curve II would appear if the experiment was repeated using more dilute hydrochloric acid solution **(1 mark)**

5. The thermal chemical equation for the reaction between X and Y are shown below.

$2X_{2\ (g)} + Y_{2(g)} \longrightarrow 2X_2Y_{(g)} \quad \Delta H = -197KJ/mol$

a) Other than change in temperature, suggest two ways in which yield of X_2Y can be increased **(1 mark)**

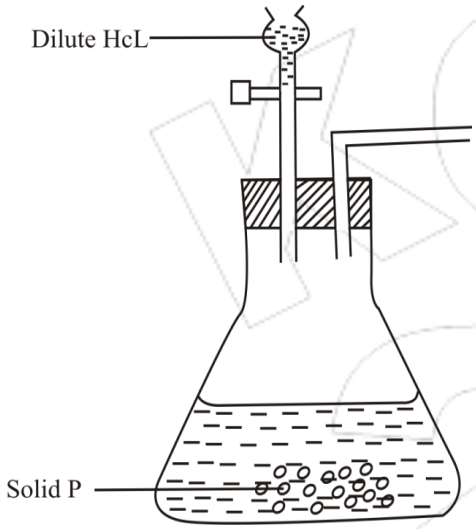
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b) draw a well labeled energy level diagram for the forward reaction **(2 marks)**

6. The diagram below was used by a form two student at Kimuchul secondary school to prepare and collect dry carbon IV oxide.



a) Name suitable solid p **(1 mark)**

……

b) Complete the diagram above **(3 marks)**

7. The melting point of Nitrogen is -196^0c while that of sodium is 98^0 c. In terms of structure and bonding explain the difference in the melting point of Nitrogen and sodium **(2 marks)**

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8. The following tests were carried out on three separate portion of colourless solution P.

TEST	OBSERVATION
)Addition of dilute hydrochloric acid to the first portion of solution P	Formation of effervescence
i)Addition of aqueous potassium sulphate solution to the second portion of solution P	No white precipitate
ii)Addition of acqueous sodium hydroxide to the third portion to portion of solution P till in excess	White precipitate formed which dissolved in excess to form colorless solution

a) From information in test(i),name two anions that are likely to be present in solution P **(1 mark)**

……

……

b) Identify cations that are likely to be present in solution P **(1 mark)**

……

c) Write an ionic equation for the reaction which takes place in test (i) **(1 mark)**

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9. Describe how you would prepare crystals of potassium sulphate starting with 100cm^3 of 0.5M Potassium hydroxide **(3 marks)**

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10. use dot(.) and cross(x) diagram to show bonding in magnesium fluoride (Mg=12 , F=9)

(1 mark)

11. An element R has a relative atomic mass 88. When a current of 0.5A were passed through fused chloride of R for 32 minutes and 10 seconds, 0.44g of R were deposited at cathode. Determine charge of ion Q (I F– 96500C) **(3 marks)**

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12. a) Define the term isomerism **(1 mark)**

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b. Draw and name two positional isomers of butanol **(2 marks)**

13. During the extraction copper and zinc from their ores, some processes include:

a) Crushing **(1 mark)**

……

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b) Mixing of the crushed one with oil and water and bubbling air through it.

i) Name the process (b) above **(1 mark)**

……

ii) What is the purpose of(b) above **(1 mark)**

……

……

14. Write an equation when the following compounds are heated

a) zinc nitrate **(1 mark)**

……

b) silver nitrate **(1 mark)**

……

15. The table below gives solubilities of potassium bromide and potassium sulphate at 0^0c and 40^0c.

	Solubility g/100g H_2O at	
	0^0c	40^0c
Potassium bromide	55	75
Potassium sulphate	10	12

When an aqueous mixture containing 60g of potassium bromide and 7g of potassium sulphate in 100g of water at 40^0c was cooled to 0^0c some crystals were formed.

a) identify the crystal **(1 mark)**

……

b) Determine the mass of the crystal **(1 mark)**

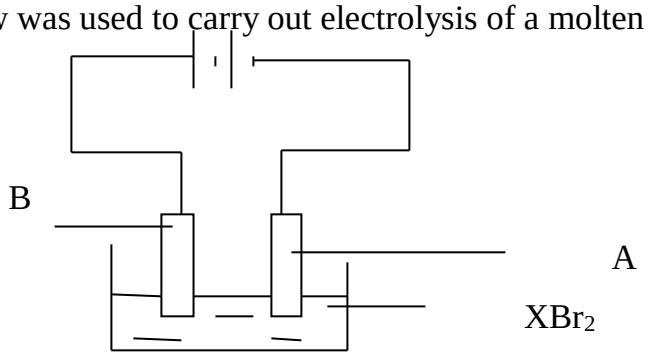
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16. The set up below was used to carry out electrolysis of a molten bromide of metal X,XBr_2.



a) write equations for reaction taking place at:

i) Anode : …… **(1 mark)**

ii) Cathode …… **(1 mark)**

b) Give reason why experiment should be carried out in fume chamber **(1 mark)**

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17. below are the standard electrode for electrodes X and Y

$X^{2+}_{(aq)}$ + 2e _____ X(s) -2.92 V

$Y^{2+}_{(aq)}$ + 2e _____ Y(s) + 0.34 V

a) Identify the electrode which is the least reducing agent **(1 mark)**

……

b) calculate the e.m.f of the cell formed when the two electrodes are connected **(2 marks)**

……

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……

c) write cell representation for the cell above **(1 mark)**

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18. a) Give two differences between a nuclear reaction and a chemical reaction **(2 marks)**

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b. complete the nuclear equation below **(1 mark)**

$$^{230}_{90}Th \longrightarrow {}^{230}_{92}Pa + \ldots\ldots\ldots\ldots\ldots\ldots$$

19. Explain why the boiling point of ethanol is higher than that of hexane (R.m.m of ethanol 46 while that of hexane is 86. **(2 marks)**

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20. The atomic number of element Q is 8 and that of P is 11.

a) Write down the formulae of compound formed between Q and P **(1 mark)**

……

b) Name the type of bond formed by compound given in (a) above .Explain. **(2 marks)**

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21. a) State charles' law **(1 mark)**

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b. sketch a graph to represent Charles law **(1 mark)**

c. A gas occupied a volume of $250cm^3$ at -23^0c and atmosphere. Determine volume at $107\ ^0c$ when pressure kept constant. **(2 marks)**

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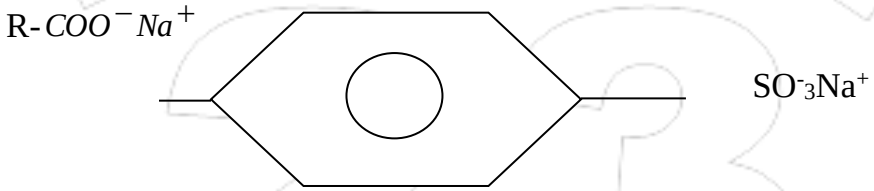
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22. The structures shown below represent two cleansing agent A and B.

A **B**



(a) Name the type of cleansing agent **A** **(1 mark)**

……

(b) Which of the **two** cleansing agents is more suitable for washing in water containing calcium chloride? Give a reason. **(2 marks)**

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23. a) Define the term enthalpy of formation of a compound. **(1 mark)**

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b)Use the information below to answer the questions that follow:

	Equation	**Enthalpy of formation**
(i)	$H_{2(g)} + ½\ O_{2(g)} \longrightarrow H_2O_{(l)}$	$\Delta H_1 = -286kJmol^{-1}$
(ii)	$C_{(s)} + O_{2(g)} \quad CO_{2(g)} \longrightarrow$	$\Delta H_2 = -394kJmol^{-1}$
(iii)	$2C_{(s)} + 3H_{2(g)} + ½\ O_{2(g)} \quad C_2H_5OH_{(l)}$	$\Delta H_3 = -277kJmol^{-}$

Calculate the molar enthalpy of combustion of ethanol. Given that:

$C_2H_5OH_{(l)} + 3O_{2(g)} \longrightarrow 2CO_{2(g)} + 3H_2O_{(l)}$ **(3mks)**

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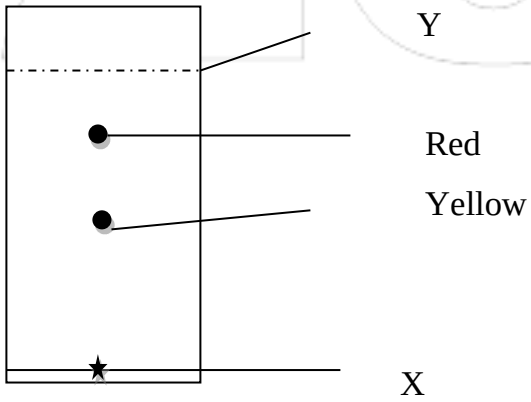
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24. The chromatogram below shows the constituents of a flower extract. Study it and answer the questions that follow



a) Explain the different positions of red and yellow pigments. **(2 marks)**

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b) Describe how the solid yellow pigment can be obtained in the chromatogram **(2 marks)**

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25. When excess chlorine gas is bubbled through cold dilute sodium hydroxide solution, the resulting solution acts as a bleaching agent.

(a) Write an equation for the reaction between chlorine gas and sodium hydroxide solution. **(1 mark)**

……

(b) Explain how the resulting solution acts as a bleaching agent. **(2 marks)**

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26. The table below gives some properties of four substances. Study it and answer the questions that follow:

Substance	M.P ^{0}C	B.P ^{0} C	Electrical Conductivity	
			Solid	Liquid
W	1723	2230	Poor	Good
X	993	1695	Poor	Poor
Y	- 183	- 164	Poor	Poor
Z	1083	2567	Good	Good

(a) Which substance is suitable for making cooking pans? Explain. **(1½ marks)**

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(b) Which substance is likely to have a giant atomic structure? Explain. **($1\frac{1}{2}$ marks)**

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27. 17g of Zinc carbonate was reacted with 50 cm^3 of 4M nitric acid .Calculate the mass of Zinc Carbonate that remained unreacted. (Zn = 65, C = 12, O = 16) **(3 marks)**

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28. A certain element Z forms an ion of type Z^{3-}. If the element is in period 3.

(a) Write the electronic configuration of Z^{3-}. **(1 mark)**

……

(b) How do the sizes of Z and Z^{3-} compare. Explain your answer. **(2 marks)**

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29. A sample of copper turnings was found to have contaminated with copper II oxide .Describe how a sample of copper metal can be separated from the mixture. **(2 marks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

CHEMISTRY

233/2

PAPER 2

(Theory)

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 the spaces above.*
(b) *Sign and write the date of examination in the spaces provided above.*
(c) *Answer all questions in the spaces provided.*
(d) *KNEC Mathematical tables and silent non-programmable electronic calculators may be used.*
(e) *All working MUST be clearly shown where necessary.*

FOR EXAMINER'S USE ONLY

QUESTION	Maximum Score	Candidate's Score
1	12	
2	12	
3	13	
4	10	
5	10	
6	10	
7	13	
Total Score	**80**	

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Answer all questions in the spaces provided.

1. Use the table below to answer the questions that follow.

(The letters are not the actual symbols of the elements)

Element	Atomic number	Melting point (^{0}C)
A	11	97.8
B	13	660
C	14	1410
D	17	-101
E	19	63.7

(a) Write the electronic arrangement for the ions formed by the elements B and D

B …… **(½ mark)**

D…….. **(½ mark)**

(b) Select an element which is

(i) a poor conductor of electricity **…… (½ mark**)

(ii) most reactive metal **……. (½ mark)**

(c) Explain briefly how the atomic radii of element B and C compare. **(2 marks)**

……

……

……

(d) Use dots (•) and crosses (x) to represent outermost electrons and show the bonding in the compound formed between C and D. **(2 marks)**

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(e) Explain why the melting point of element B is higher than that of element A. **(2 marks)**

……

……

……

(f) Write an equation for the reaction that takes place between element A and water. **(1 mark)**

……

(g) Describe how a solid mixture of the sulphate of element E and lead (II) sulphate can be separated into solid samples. **(3 marks)**

……

……

……

……

2. (a) (i) State Hess's law. **(1 mark)**

……

……

(ii) Use the thermochemical equations given below to calculate the enthalpy of formation of ethane.

(3 marks)

$C_2H_{6\,(g)} + 7/_2\ O_{2\,(g)} \longrightarrow 2CO_{2\,(g)} + 3H_2O_{\,(g)}$ $\Delta H = -1560\ kJmol^{-1}$

$C_{\,(graphite)} + O_{2\,(g)} \longrightarrow CO_{2\,(g)}$ $\Delta H = -394\ kJmol^{-1}$

$H_{2(g)} + ½\ O_{2\,(g)} \longrightarrow H_2O_{\,(g)}$ $\Delta H = -286\ kJmol^{-1}$

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(b) The table below gives the volumes of oxygen gas produced at different times when hydrogen peroxide solution decomposed in the presence of a catalyst.

Time in seconds	0	10	20	30	40	50	60
Volume of oxygen (cm^3)	0	66	98	110	119	120	120

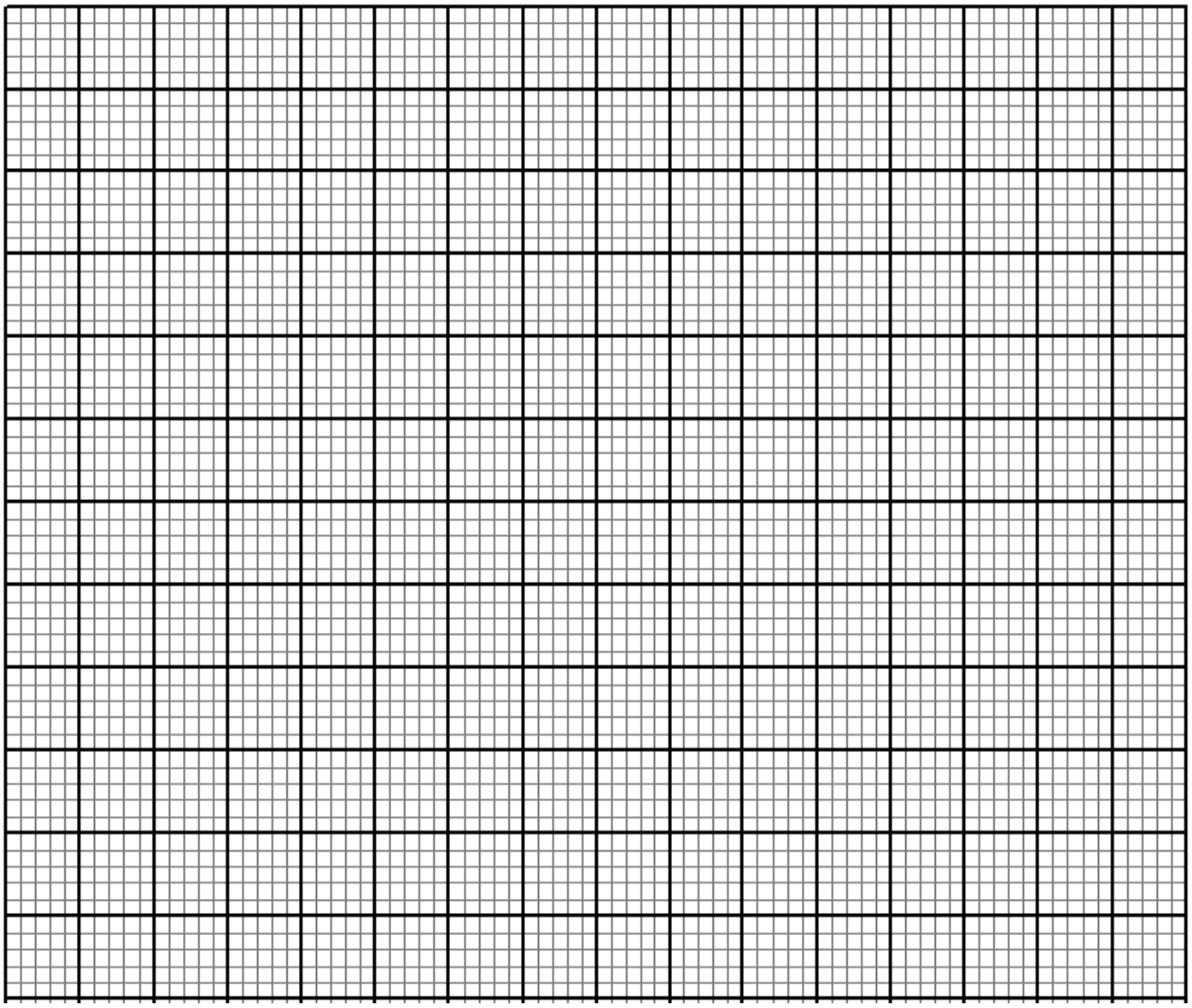
(i) Name the catalyst used for this reaction. **(1 mark)**

……

(ii) Write the chemical equation for the decomposition of hydrogen peroxide. **(1 mark)**

……

(iii) On the grid provided, draw the graph of the volume of oxygen gas (vertical axis) against time (horizontal axis). **(3 marks)**



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(iv) Using the graph, determine the rate of decomposition of hydrogen peroxide 24th second and 34th second. **(2 marks)**

……

……

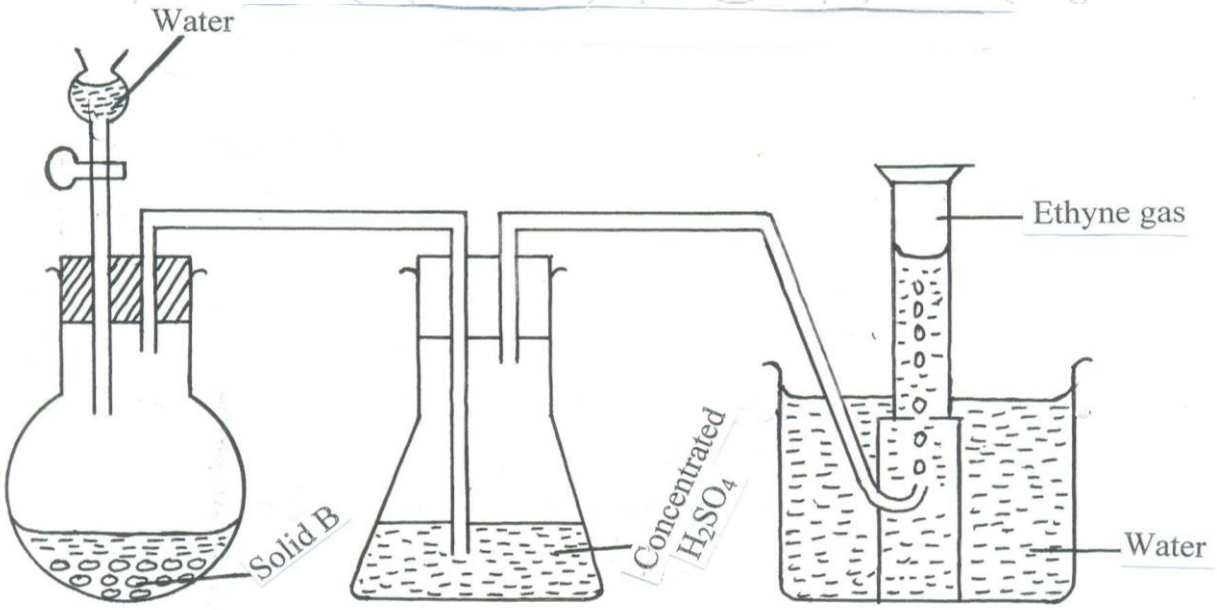
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(v) Give a reason why the total volume of oxygen gas produced after 50 seconds remain constant. **(1 mark)**

……

……

3. (a) The diagram below is a set-up to prepare ethyne gas.



(i) Name solid **B** ……. **(1 mark)**

(ii) Write an equation for the reaction taking place between solid B and water. **(1 mark)**

……

……

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(iii) State the property that makes the gas to be collected by the method shown in the diagram.
(1 mark

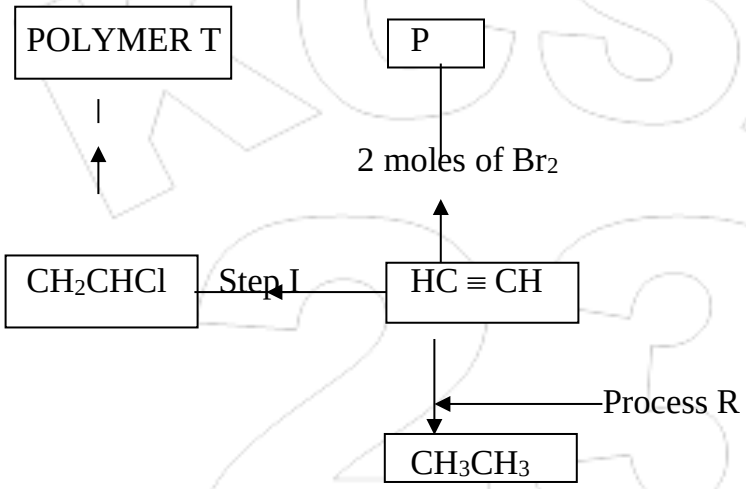
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(iv) State the main commercial use of ethyne. **(1 mark)**

……

(b) The scheme below represents some reactions of ethyne. Study it and answer the questions that follow.



(i) Name compound P and draw it's structural formula. **(1 mark)**

(ii) Name the reagents used in:

I) Process **R** …….. ……**(½ mark)**

II) Step **I** …… **(½ mark)**

(iii) Draw the repeating unit in polymer **T.** **(1 mark)**

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(iv) Name polymer **T** …… **(1 mark)**

(v) Give one use of T **(1 mark)**

……

(c) Ethanol and ethanoic acid react according to the following equation under condition M and process N to form product Z.

$$CH_3CH_2OH_{(l)} + CH_3COOH_{(aq)} \longrightarrow Z_{(l)} + H_2O_{(l)}$$

Name:

(i) Condition **M** …… **(½ mark)**

(ii) Product **Z** …… **(½ mark)**

(iii) Draw the structural formula of product Z. **(1 mark)**

(iv) State any 1 difference between the above reaction and that of an hydroxide and an acid.

(1 mark)

……

……

……

(v) Butane is often used as the main component in domestic gas fuels. Calculate it's heating value **(H = 1, C = 12, $\Delta H^{\theta}C$ (C_4H_{10}) = 2877.0 k Jmol^{-1})** **(1 mark)**

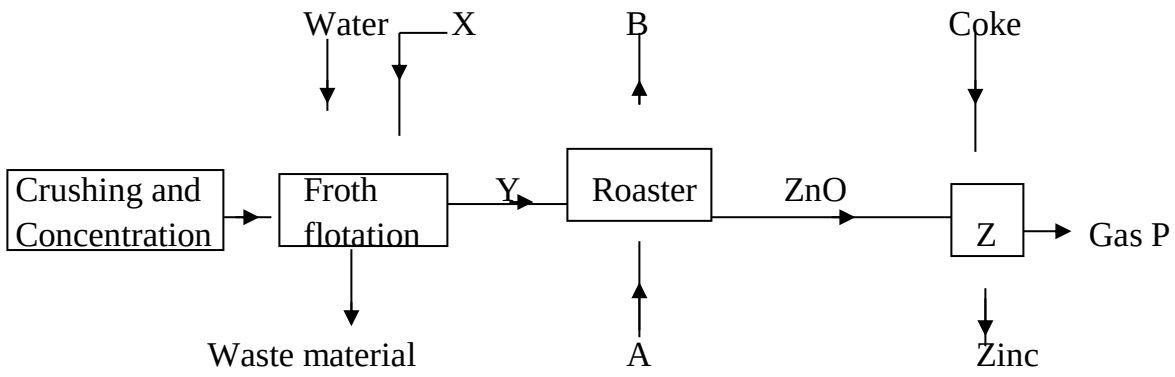
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4. The flow chart below shows the extraction of zinc. Study it and answer the questions that follow.



(a) **(i)** Identify substance **X** …… **(1 mark)**

(ii) Give one waste material of the froth flotation process. **(1 mark)**

……

(iii) Identify substances **A and B.**

A …… **(½ mark)**

B …… **(½ mark)**

(iv) Write equation for the reaction taking place in the roaster. **(1 mark)**

……

(v) Identify gas P and write an equation for it's formation. **(1 ½ marks)**

……

……

(b) Use the standard electrode potentials given below to answer the questions that follow.

Half reactions	Electrode potential, E^{θ} (V)
$D^{+}_{(aq)} + e^{-} \longrightarrow D_{(s)}$	+ 0.80
$E^{2+}_{(aq)} + 2e \longrightarrow E_{(s)}$	+ 0.34
$F^{2+}_{(aq)} + 2e^{-} \longrightarrow F_{(s)}$	-0.13
$G^{2+}_{(aq)} + 2e^{-} \longrightarrow G_{(s)}$	-0.76

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(i) Construct an electrochemical cell that will produce the lowest emf. **(3 marks)**

(ii) Calculate the emf of the cell constructed in (i) above. **(1 mark)**

……

……

……

(iii) From the half reactions listed in the table in (b) above select strongest oxidizing agent.**(½ mark)**

……

……

5. (a) Fractional distillation of liquid air is mainly used to obtain nitrogen and oxygen.

(i) Name one substance that is used to remove carbon (IV) oxide from the air before it is changed into liquid. **(1 mark)**

……

(ii) Describe how nitrogen gas is obtained from the liquid air.

(Boiling points nitrogen = -196^0C, Oxygen = -183^0C) **(3 marks)**

……

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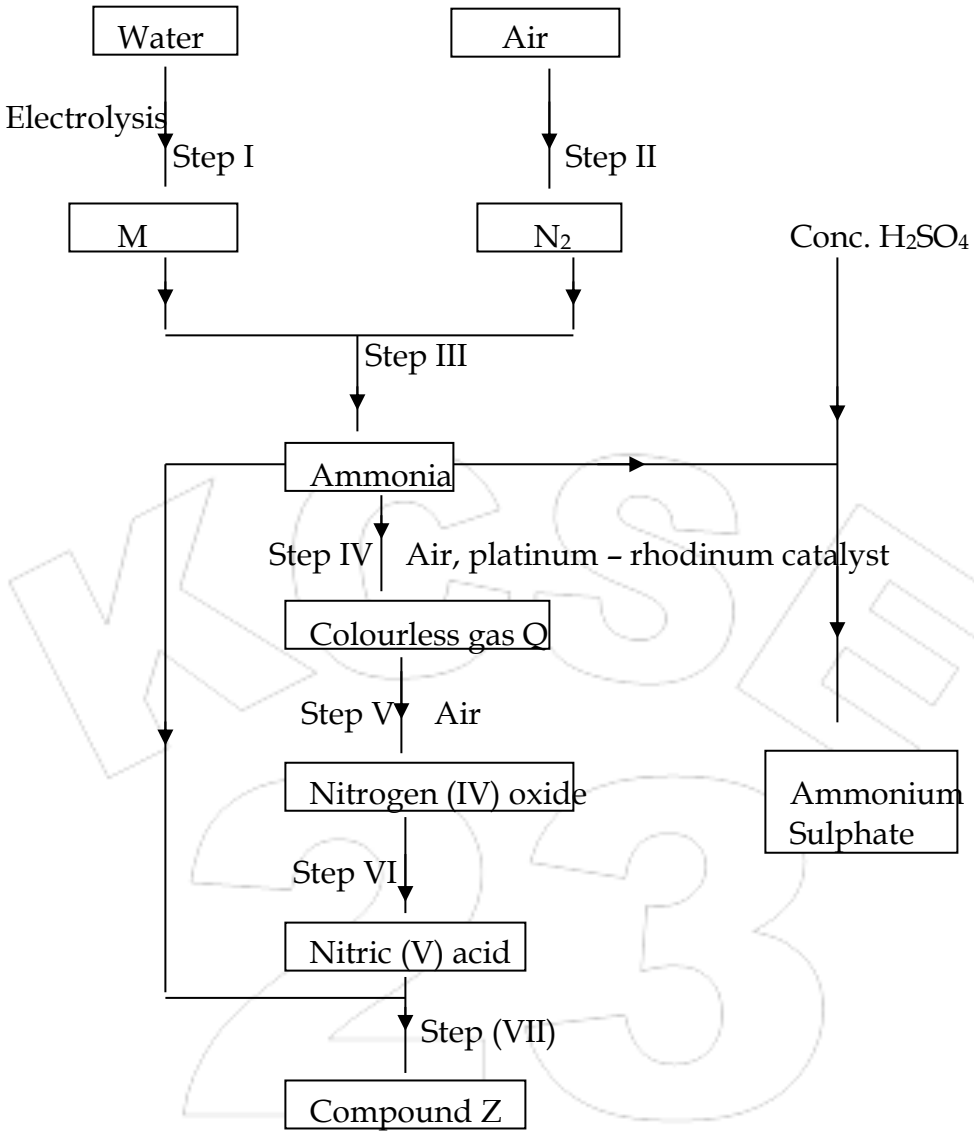
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(b) Study the flow chart below and answer the questions that follow.



(i) Name substance **M** ……**(1 mark)**

(ii) Identify gas **Q** ……**(1 mark)**

(iii) State one use of compound Z **(1 mark)**

……

……

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(iv) A fertilizer manufacturing industry uses 1400dm^3 of ammonia gas per hour to produce ammonium sulphate. Calculate the amount of ammonium sulphate produced in kg for one day if the factory operates for 18 hours.

(N = 14, H = 1, S = 32, O = 16, 1 mole of gas = 24dm^3) **(3 marks)**

……

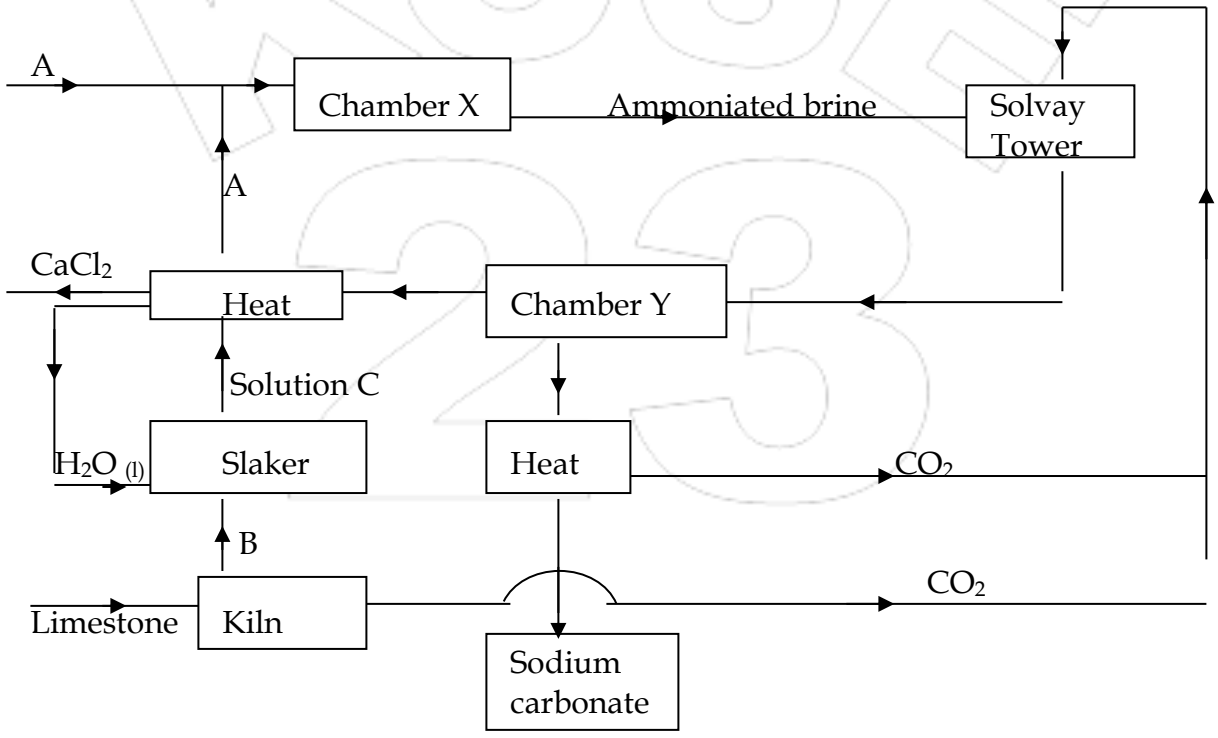
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……

6. The chart below represents the main steps in the large-scale manufacture of sodium carbonate.



(a) Name substances A and B.

A …… **(1 mark)**

B …… **(1 mark)**

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(b) Write down the chemical equation leading to formation of C. **(1 mark)**

……

……

(c) A stream of cold water is made to circulate around chamber X. What does this suggest about the reaction taking place. **(1 mark)**

……

……

(d) Name the process that takes place in chamber Y. **(1 mark)**

……

(e) State any 2 by-products recycled in the process. **(2 marks)**

……

……

(f) In an experiment, wood charcoal was mixed with concentrated sulphuric (VI) acid in a test-tube. The mixture was then placed over a Bunsen-burner flame for some time.

(i) Write down the chemical equation of the reaction that takes place. **(1 mark)**

……

(ii) State the property of concentrated sulphuric (VI) acid investigated in (i) above**.** **(1 mark)**

……

……

(g) Mention any 2 uses of sodium carbonate. **(1 mark)**

……

……

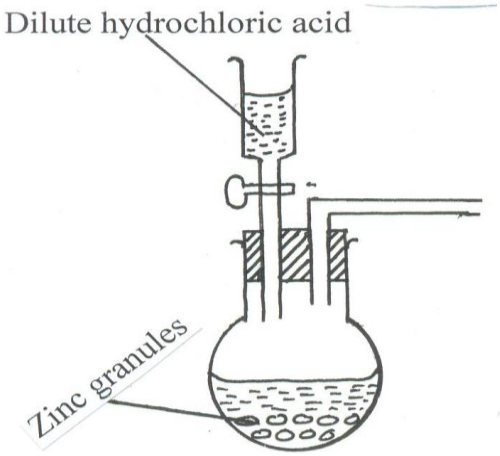
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7.The set up below shows the reagents that can form hydrogen gas in a laboratory.

(a) Complete the diagram to show how a dry sample of hydrogen gas can be collected.

(3 marks)



(b) Write the chemical equation for above reaction. **(1 mark)**

.....

(c) Why is it not advisable to use calcium in this method to prepare hydrogen? **(1 mark)**

.....

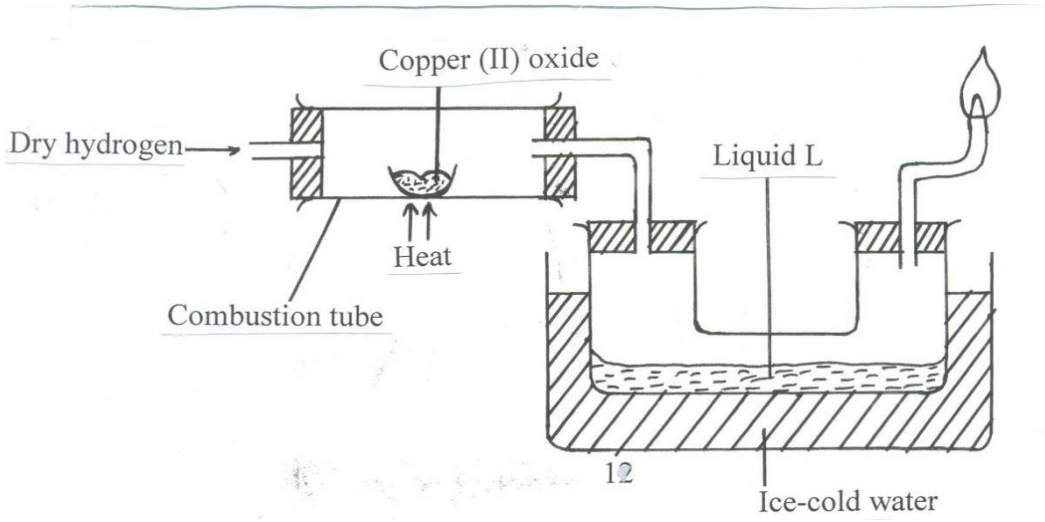
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(d) Why is it advisable to discard the first jar of the gas collected? **(1 mark)**

.....

.....

(e) The set-up below was used to investigate the properties of hydrogen gas.



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(i) State the observation made in the combustion tube. **(1 mark)**

……

(ii) Write down the equation leading to formation of liquid L. **(1 mark)**

……

(iii) What property of hydrogen is being investigated? **(1 mark)**

……

(iv) Why is potassium oxide not used to investigate this property of hydrogen gas. **(1 mark)**

……

……

(v) Hydrogen gas is used in hydrogenation of oils. What do you understand by the term hydrogenation? **(1 mark)**

……

……

(vi) Give any 2 other industrial uses of hydrogen gas. **(2 marks)**

……

……

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

CHEMISTRY

233/3

PAPER 3

(Practical)

TIME: 2¼ HOURS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education.

CONFIDENTIAL

In addition to the fittings and apparatus normally found in a chemistry laboratory each candidate will require the following;

A

1. *Exactly 4.0g of* ***solid P***
2. *100cm^3 of* ***solution X***
3. *About 0.5g of* ***solid R***
4. *About 0.5g of* ***solid S***
5. *6 dry test-tubes (in a test tube rack)*
6. *2 dry boiling tubes*
7. *50ml burette*
8. *25ml pipette*
9. *100ml or 150ml glass beaker*
10. *10ml measuring cylinder*
11. *One red and one blue litmus papers*
12. *500cm^3 distilled water in a wash bottle*
13. *One thermometer 10^0C-110^0C*
14. *One 250ml volumetric flask*
15. *One label*
16. *Phenolphthalein indicator*
17. *Three conical flasks*
18. *A metallic spatula*

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B

Access to;

1. *Bunsen burner*
2. *2M NaOH(aq) in a dropper bottle*
3. *Aqueous ammonia $NH_{3(aq)}$ in a dropper bottle*
4. *2M $HCl_{(aq)}$ in a dropper bottle*
5. *0.2M $Ba(NO_3)_2$ solution in a dropper bottle*
6. *PH chart*
7. *Universal indictor solution in a dropper bottle*
8. *Acidified $KMnO_4$ solution supplied with a dropper*
9. *Acidified $K_2 Cr_2 O7$ solution supplied with a dropper*

Preparations

1. Acidified potassium manganate (VII) $KMnO_4$ is prepared by placing 2.0g of solid $KMnO_4$ in one litre of volumetric flask, adding $200cm^3$ of 2M H_2SO_4 to dissolve and diluting with distilled water.
2. Acidified potassium dichromate (VI) $k_2Cr_2O_7$ is prepared by placing 25.0g of solid in a one litre volumetric flask and adding $200cm^3$ of 2M H_2SO_4 to dissolve then adding distilled water to the mark.
3. Solution X is prepared by placing 8.0g of solid X in a one litre volumetric flask and adding $800cm^3$ of distilled water shake to dissolve and add distilled water to the mark. Label this as solution X
4. Solid P: oxalic acid
5. Solid X: sodium hydroxide NaOH
6. Solid R: a mixture of ammonium sulphate and aluminium sulphate in the ratio 1:1 by mass
7. Solid S – Maleic acid

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

CHEMISTRY

233/3

PAPER 3

(Practical)

TIME: 2¼ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

Instructions to candidates

*(a) Write your **name, adm no, class,** and **school** in the spaces provided above.*
(b) Sign and write the date of examination in the spaces provided above.
*(c) Answer **all** the questions in the spaces provided.*
(d) You are not allowed to start working with the apparatus for the first 15 minutes of the 2¼ hours allowed for this paper. This time is to enable you to read the question paper and make sure you have all the chemicals and apparatus that you may require.
*(e) All working **MUST** be clearly shown where necessary.*
(f) Mathematical tables and electronic calculators may be used.

For Examiner's Use Only

Questions	Maximum Score	Candidate's score
1	22	
2	10	
3	08	
Total Score	**40**	

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1. You are provided with;

- **4.0g** of solid **P.** Hydrated dibasic acid $\mathbf{H_2C_2O_4.nH_2O}$
- **0.2M** sodium hydroxide Solution **X**

You are required to determine the;

(i) Solubility of solid **P**

(ii) Value of n in the formula $\mathbf{H_2C_2O_4.nH_2O}$

Procedure

(i) Fill the burette with distilled water

(ii) Place all solid **P** in a boiling tube

(iii) Transfer **4cm^3** of distilled water from the burette into the boiling tube containing solid **P**

(iv) Heat the mixture while stirring with the thermometer to a temperature of about 80^0C.

(v) Allow the mixture to cool while stirring with a thermometer. You may use cold water in a beaker to enhance cooling.

(vi) Record the temperature at which the crystals start to form in table **1** below.

(vii) Add a further **2cm^3** of distilled water from the burette to the mixture in the boiling tube.

Repeat procedure (iv) and (v) above and record the crystallization temperature. Complete the table below by adding the volumes of distilled water as indicated. (***Preserve the contents of the boiling tube to be used in procedure II)***

(viii) Calculate the solubility of solid P in g/100g of water and complete **table 1.**

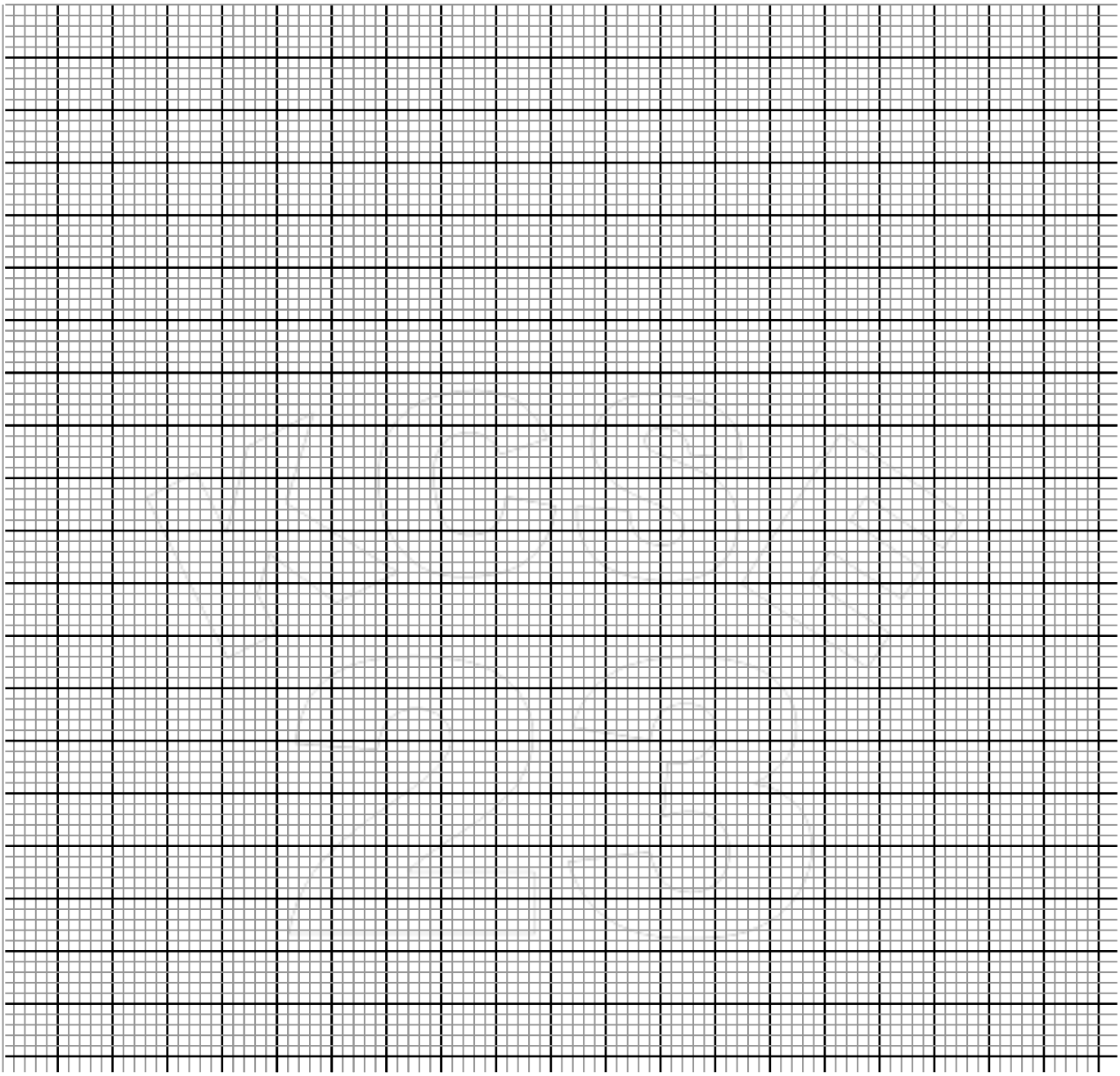
Table 1

Volume of distilled water	*Crystallization temperature*	*Solubility of solid P in g/100g of water*
4		
6		
8		
10		
12		

(7 marks)

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(a) On the grid provided, plot a graph of solubility of solid $\boldsymbol{P}(\boldsymbol{y-axis})$ against crystallization temperature. **(3 marks)**



(b) From the graph determine;

(i) The solubility of solid **P** at **60^0C.** **(1 mark)**

……

(ii) The temperature at which **40g** of **P** dissolves in **50g** of water. **(1 mark)**

……

(iii) The mass of **P** that crystallizes out when the mixture is cooled from **55^0C** to **45^0C**. **(1 mark)**

……

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Procedure II

(i) Transfer all the contents of the boiling tube in procedure 1 to a clean 250ml volumetric flask.

(ii) Add distilled water to the mark, shake thoroughly.

(iii) Label the resulting solution as **Q**.

(iv) Fill the burette with solution **Q.**

(v) Pipette **25cm^3** of solution **X** into a clean conical flask. Add three drops of phenolphthalein indicator.

(vi) Titrate **Q** against **X** to an accurate end point.

Record your results in table II below.

Table II **(4 marks)**

	I	**II**	**III**
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution Q used in (cm^3)			

Calculate;

(a) Average volume of Q used. **(1 mark)**

……

……

(b) i) Moles of solution **X** used. **(1 mark)**

……

……

ii) Moles of solution **Q** used. **(1 mark)**

……

……

……

iii) Concentration of solution **Q** in moles per litre. **(1 mark)**

……

……

……

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(c) Determine the value of **n** in the formula $\mathbf{H_2C_2O_4.\ nH_2O}$ **(2 marks)**

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

……

……

……

……

2. You are provided with solid **R**. Carry out the following tests and record the observations and inferences in the spaces provided.

(a) Place about one-third of solid **R** in dry test-tube. Heat the solid strongly and test any gas with both blue and red litmus papers.

Observations	*Inferences*

(1½ marks) **(1 mark)**

(b) Place the remaining amount of solid **R** in a boiling tube. Add about **15cm^3** of distilled water and shake. Divide the mixture into four test tubes each containing about **2cm^3.**

(i) To the first portion, add four drops of dilute hydrochloric acid.

Observations	**Inferences**

(1 mark) **(2 marks)**

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(ii) To the second portion, add two or three drops of aqueous barium nitrate.

Observations	*Inferences*

(½ mark) **(½ mark)**

(iii) To the third portion, add aqueous sodium hydroxide dropwise until in excess.

Observations	*Inferences*

(1 mark) **(1 mark)**

(iv) To the fourth portion, add aqueous ammonia dropwise until in excess.

Observations	*Inferences*

(1 mark) **(½ mark)**

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3. You are provided with **solid S**. carry out the following tests and record the observations and inferences in the spaces provided.

(a) Place about one-third of solid **S** on a clean metallic spatula and burn it in a Bunsen burner flame.

Observations	*Inferences*

(1 mark) **(1 mark)**

(b) Place the remaining amount of solid **S** in a boiling tube. Add about **10cm^3** of distilled water and shake. Use the mixture for tests (i) and (iii) below.

Observations	*Inferences*

(½ mark) **(½ mark)**

(i) Using about **2cm^3** of the mixture in a test-tube, determine the PH using universal indicator paper and chart.

Observations	*Inferences*

(½ mark) **(½ mark)**

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(ii) To about **2cm^3** of the mixture in a test-tube, add two or three drops of acidified potassium manganate (VII).

Observations	*Inferences*

(1 mark) **(1 mark)**

(iii) To about **2cm^3** of the mixture in a test-tube add **two** drops of acidified potassium dichromate (VI).

Observations	*Inferences*

(1 mark) **(1 mark)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

PHYSICS

232/1

PAPER 1

(Theory)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your name, admission number, class and date in the spaces provided at the top of the page.*
- *This paper consists of two sections A and B.*
- *Answer all the questions in the two sections in the spaces provided after each question*
- *All working must be clearly shown.*
- *Electronic calculators, mathematical tables may be used.*
- *All numerical answers should be expressed in the decimal notations.*

SECTION	QUESTION	MAX MARKS	SCORE
A	1 – 11	25	
B	12	10	
	13	11	
	14	13	
	15	10	
	16	11	
TOTAL		80	

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SECTION A: (25 MARKS)

1. The figure7 below shows a soap film in a loop of wire.

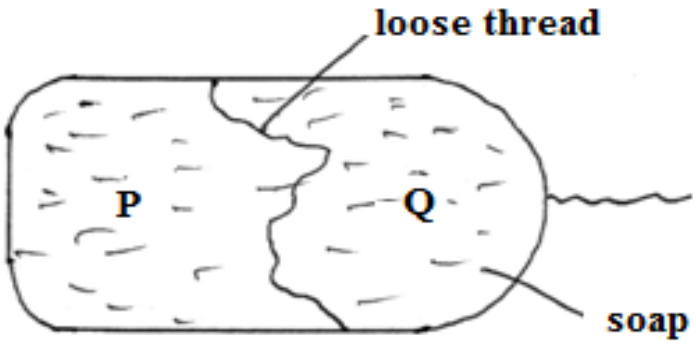


Figure7

Sketch a diagram to show the behaviour of the film when punctured at P. **(1 mark)**

2. A toy boat containing a leaking container of oil was placed on the surface of still water as shown in figure 9 below.

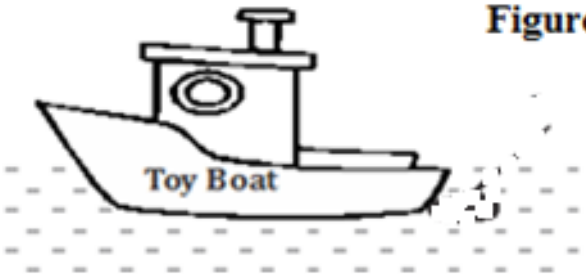


Figure9

The boat was seen moving forward due to the leakage.

(i) On the diagram, indicate the point of the leakage **(1mark)**

(ii) Explain your indication in (i) above. **(1mark)**

……

……

……

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3. The figure below shows a vernier caliper scale.



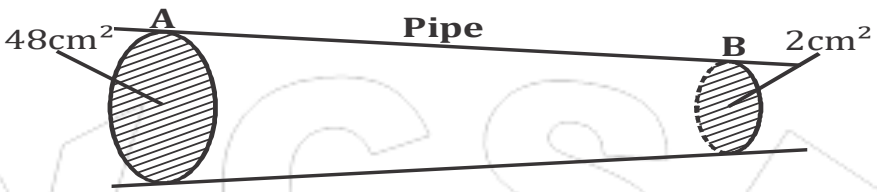
Fig. 1

If the vernier calipers used had a zero error of -0.02 what is the actual reading of the scale. **(2mks)**

……

……

4. The diagram in fig 5.0 shows a section of a pipe with different cross-sectional area.



If water flows with a velocity of 10m/s in section A, what would be the velocity of water in section B? **(3 marks)**

……

……

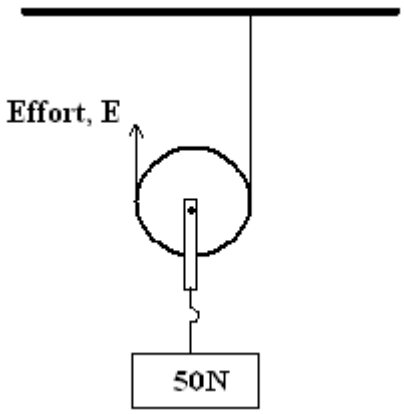
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5. State a reason why transfer by radiation is faster than by conduction. **(1 mark)**

……

6. The pulley system in the figure below supports a load of 50N.



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Given that the efficiency of the system is 80% calculate the effort, E. **(3 marks)**

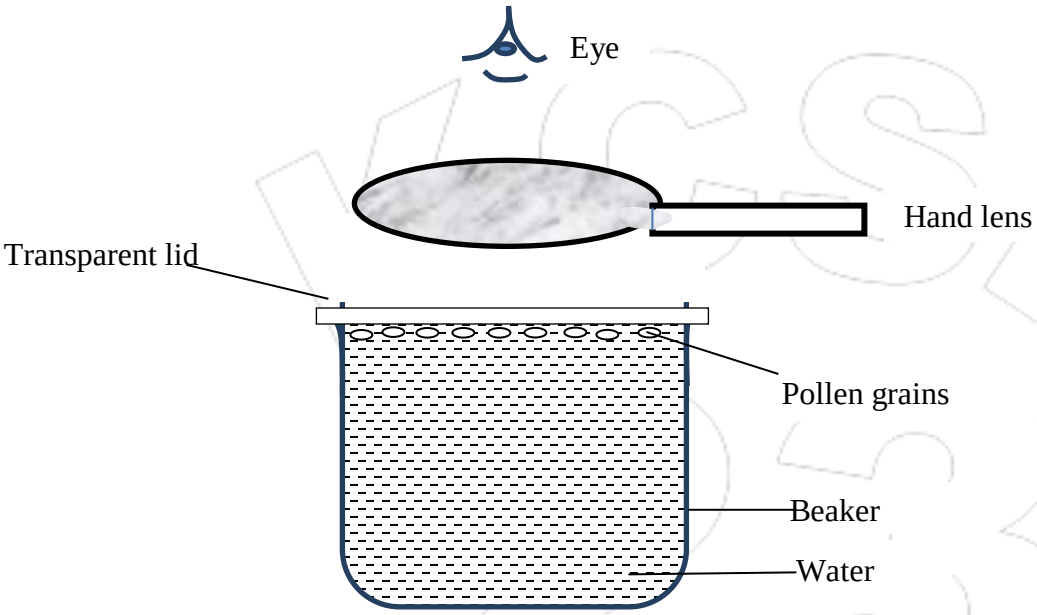
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……

……

7. A student observed some pollen grains on the surface of water in a beaker with the help of hand lens as shown figure below.



(a) State the observation made. **(1 mark)**

……

……

(b) Explain the observation in (a) above. **(1 mark)**

……

……

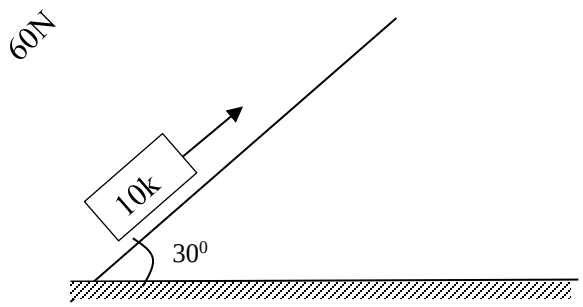
(c) What conclusion can be drawn from the above experiment? **(1 mark)**

……

……

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8. A smooth wooden plane is inclined at an angle of 30^0 to the horizontal as shown in Figure 5 below. An object of mass 10kg is pulled steadily up the plane by a force of 60N. Determine;



(a) the velocity ratio of the inclined plane. **(2 marks)**

……

……

……

(b) efficiency of the system. **(2 marks)**

……

……

……

9. The Figure 6 below shows a spiral spring when not compressed and when compressed by a mass of 4.0kg.

Fig. 6



(a) uncompressed (b) Compressed.

Determine the elastic potential energy stored by the compressed spring in . **(2 marks)**

……

……

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10. Figure 3 shows a uniform wooden plank which weighs 10N. The plank is balanced at 0.8m from one end by a mass of 2.5Kg.

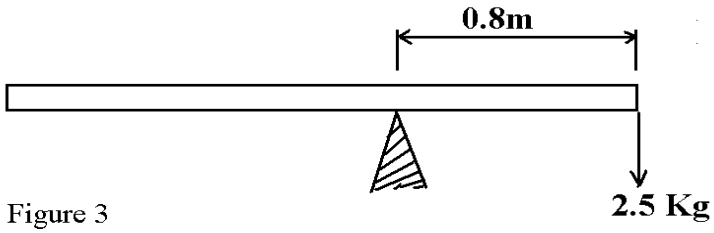


Figure 3

What is the length of the wooden plank in metres. **(2mks)**

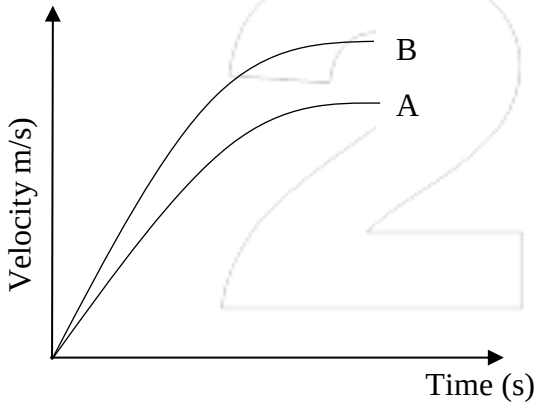
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11. The figure shows the velocity time graph of two identical spheres released from the surfaces of two liquids A and B.



Give a reason why the terminal velocity of the sphere In B is higher than in A. **(1mark)**

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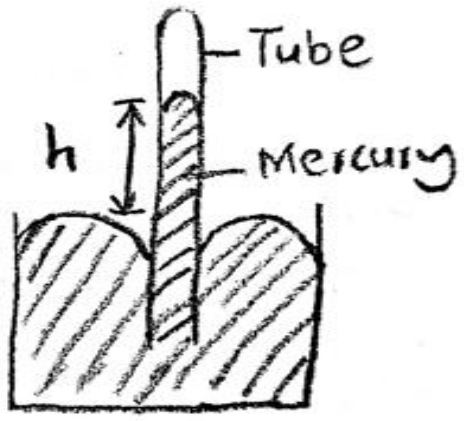
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SECTION B: 55 MARKS

12. a) The figure below shows a simple mercury barometer



=

i. when the tube was tilted mercury did not fill the tube completely. Give areason for the observation **(1 mark)**

……

……

ii. give a reason why mercury is preferred as a liquid in a glass barometer **(1mark)**

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iii. A town at an altitude of 548m has abarometric height of 70cmHg.Given that the standard atmospheric pressure is 76cmHgand that the density of mercury is 13600kg/m^3, determine the density of air **(4marks)**

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b) A student half-filled a container with water, boiled the water for several minutes with the cork removed. Then later replaced the cork and poured some cold water on the container. State and explain the observation made **(2marks)**

……

……

……

c) Determine the pressure on a piston of cross-sectional $20cm^2$ when a force of 50MN is applied to its surface **(2marks)**

……

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……

13. In an experiment to determine the approximate diameter of an oil molecule, the following measurements were obtained:

-diameter of oil drop=0.05cm

-diameter of oil patch=0.2m

Determine:

i. volume of oil drop **(3marks)**

……

……

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……

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ii. area of oil patch **(3marks)**

……

……

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iii. thickness of oil molecule **(3marks)**

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iv. state two assumptions made in the above experiment **(2marks)**

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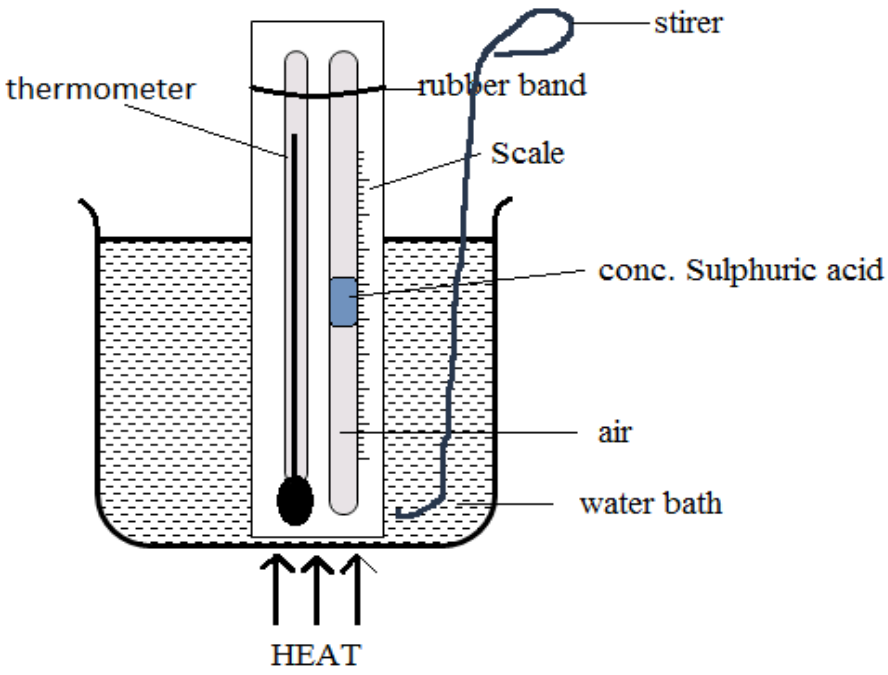
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14. (a) Define absolute zero temperature for an ideal gas **(1 mark)**

……

……

(b) The diagram in figure 12 below shows an experiment to investigate the relationship between volume and temperature of a fixed mass of gas at constant pressure



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Explain the functions of:

(i) Concentrated sulphuric acid **(2 marks)**

……

……

……

(ii) Stirrer **(1 mark)**

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(c) Which measurements are taken in the above experiment **(2 marks)**

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(d) How are the measurements used to verify Charles Law **(3 marks)**

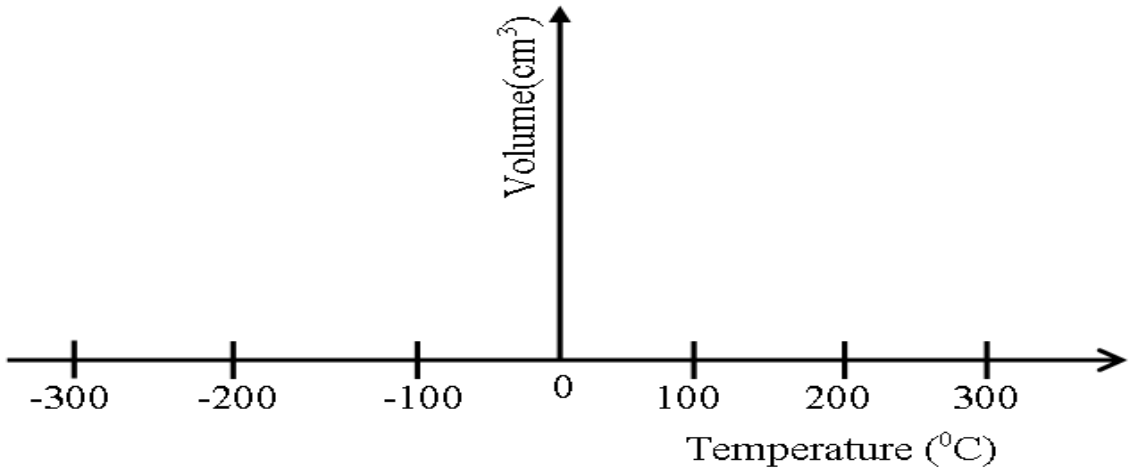
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(e) On the grid shown in the figure below sketch a graph of volume (cm^3) against temperature (^0C) for the experiment above. Clearly mark with the letter T the absolute zero temperature. **(2 mks)**



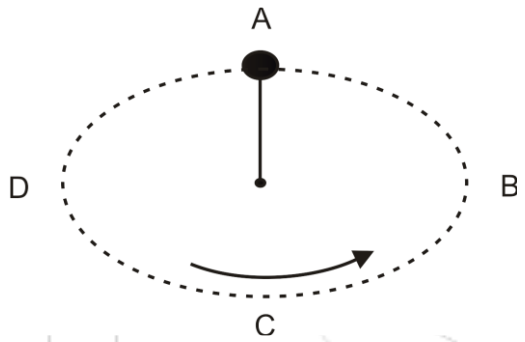
©2023 The Kenya National Examinations Council.

(f) What two assumptions are made in the experiment **(2 marks)**

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……

15. A stone is whirled in a vertical circle as shown below. A, B, C, and Dare various positions of the stone in its motion.



The stone makes 2 revolutions per second in a circle of radius 0.4m, and has a mass of 100g.

i) Calculate the centripetal force acting on the stone **(3marks)**

……

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ii) The string cuts after acquiring constant angular speed. Identify the likely position where this occurred and on the same diagram sketch the new path followed by the stone. **(1 mark)**

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iii) The stone takes 0.5 seconds to land on the ground. How high is this point in (ii) above the ground? **(3marks)**

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iv) How far does it travel horizontally before hitting the ground? **(3marks)**

……

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……

……

16. a)State Newton's second law of motion. **(1 mark)**

……

……

b) The legal speed limit on motorways is approximately 30m/s. In an incident on a motorway, a car of mass 900kg leaves a skid mark 75m long when stopping. The maximum deceleration of the car when skidding is approximately $10m/s^2$.

i) Show that before the incidence, the car must have been travelling above the legal speed limit. **(3 marks)**

……

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ii) Calculate for this skid, the maximum average braking force between each of the four tyres and the road. **(3 marks)**

……

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iii) When the motorway is wet, the braking force provided by each wheel is reduced to 50% of the calculated in (ii) above. What is the effect of this reduced breaking force on stopping distance, explain your answer. Assume that the speed of the car before breaking is the same in both cases.

(2 marks)

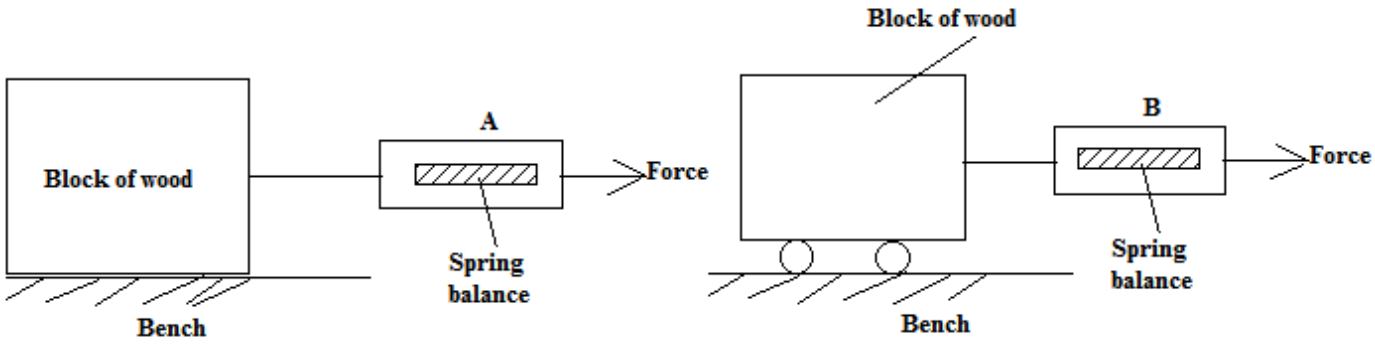
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c) A student carried out an experiment to measure static friction using identical wooden blocks arranged as shown in the figure.



State and explain which spring balance will indicate a smaller reading when the block just starts to move.

(2 marks)

……

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

PHYSICS

232/2

PAPER 2

(Theory)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your name, admission number, class and date in the spaces provided at the top of the page.*
- *This paper consists of two sections A and B.*
- *Answer all the questions in the two sections in the spaces provided after each question*
- *All working must be clearly shown.*
- *Electronic calculators, mathematical tables may be used.*
- *All numerical answers should be expressed in the decimal notations.*

SECTION	QUESTION	MAX MARKS	CANDIDATE'S SCORE
A	1 – 12	25	
B	13	11	
	14	11	
	15	13	
	16	06	
	17	14	
TOTAL		80	

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SECTION A: (25 MARKS)

1. Differentiate between primary and secondary cells **(1mk)**

……

……

2. The diagram in figure 1 below shows the displacement against time for a wave whose wavelength is 4.0mm.

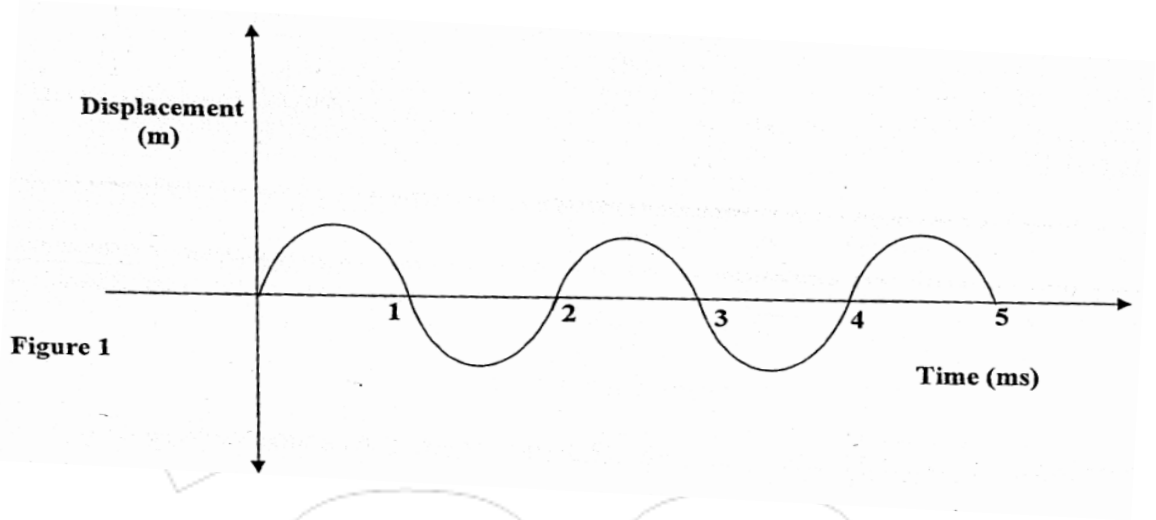


Figure 1

Determine the velocity of the wave. **(3mks)**

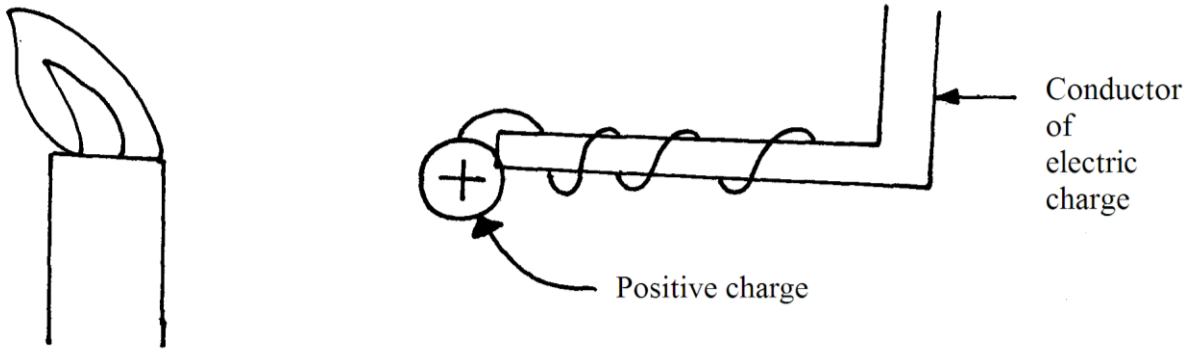
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3. The figure 2 below shows a thin wire connected to a charge generator and placed close to a candle flame.



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Explain why the candle flame is deflected as shown. **(2mks)**

……

……

……

4. What is thermionic emission? **(1 mk)**

……

……

5. Ultraviolet radiation incident on a zinc plate releases electrons from the zinc surface. The energy of each incident proton is 5.4eV. Zinc has a work function of 4.3eV.

(i) State the name given to this effect. **(1 mk)**

……

(ii) What is meant by work function of the metal? **(1 mk)**

……

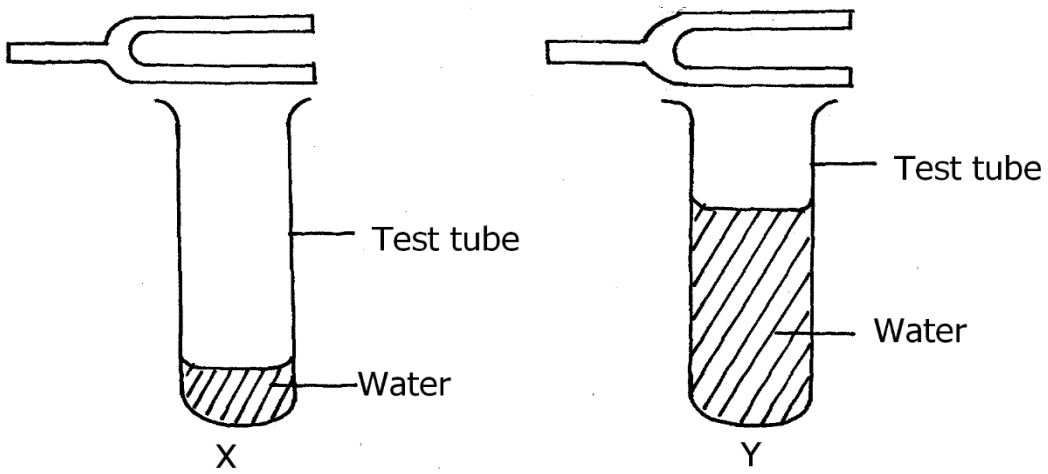
(iii) An electron is emitted from the surface of zinc. Calculate the maximum kinetic energy of the electron in Joules. **(2 mks)**

……

……

……

6. A vibrating tuning fork of frequency 512Hz was brought close to two test tubes X and Y With water levels as shown in fig. 3



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It was observed that loud sound is produced in test tube X but not in Y. Explain this observation.

(2mks)

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……

7. The chart below shows an arrangement of different parts of the electromagnetic spectrum.

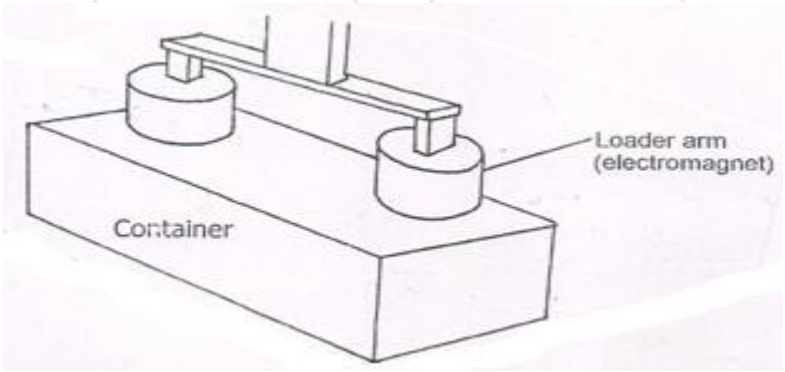
Radio	A	Visible	Ultra-violet	X-rays	Gamma-Rays

Name the radiation represented by A **(1mk)**

……

……

8. The figure 4 below shows a container loader which uses electromagnet to offload containers from a ship.



(i) Why should the container be made of iron. **(1 mrk)**

……

……

(ii) State **two** ways in which the loader can be made to lift a heavier container. **(2 mrks)**

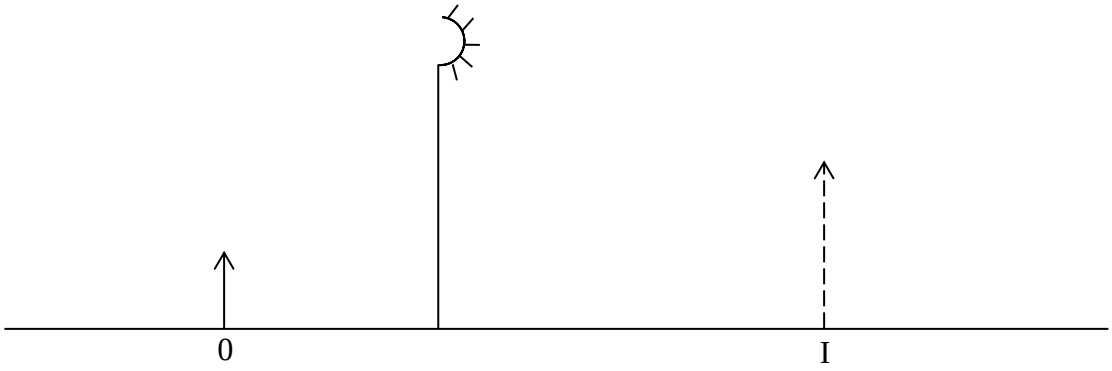
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9. The figure below shows an object O and it's image I formed by a concave mirror. The diagram is drawn to scale.



Using a suitable ray, determine the focal length (f) and the radius of curvature (r) of the mirror. **(3 marks)**

f …… cm

r……. cm

10. State two differences between pinhole camera and the human eye. **(2 marks)**

……

……

……

11. Give a reason why soft iron is used as a core of the coil of an electric bell. **(1 mark)**

……

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12. State two uses of gold leaf electroscope. **(2 marks)**

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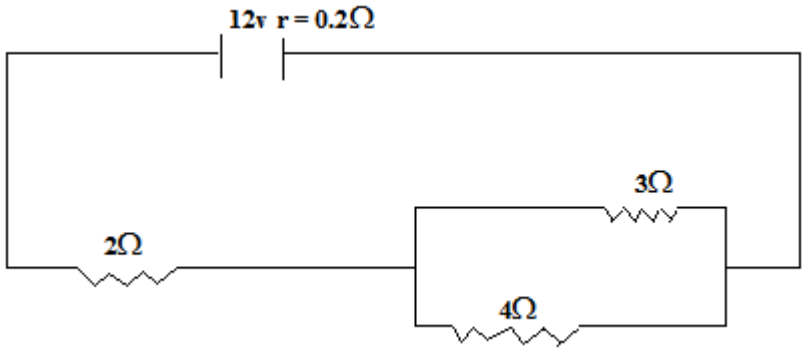
SECTION B: (55 MARKS)

13. a)Define a resistor. **(1 mark)**

……

……

b)The figure below shows three resistors connected to 12v supply of internal resistance of 0.2Ω.



Calculate

i) The effective resistance. **(3 marks)**

……

……

……

……

ii) The total current in the circuit. **(2 marks)**

……

……

……

iii) the current through the 4Ω resistance. **(3 marks)**

……

……

……

……

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c) If the current flows for 2 minutes calculate the total energy dissipated. **(2 marks)**

……

……

……

d) State two applications of resistors in real life situation. **(2 marks)**

……

……

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14.

a) Define the following terms.

i) Capacitor **(1 mark)**

……

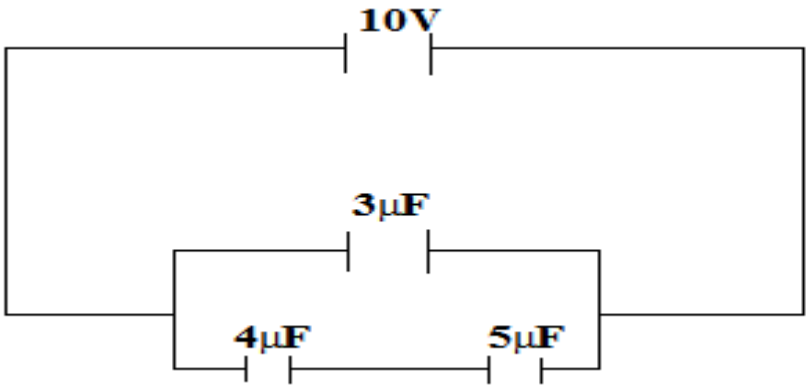
……

ii) Capacitance **(1 mark)**

……

……

b) Three capacitors are connected to a 10v battery.



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Calculate

i) The effective capacitance **(3 marks)**

……

……

……

……

……

ii) The total charge **(3 marks)**

……

……

……

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……

c) State three factors that determine the capacitance of a capacitor. **(3 marks)**

……

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15. (a) X- rays are used for detecting cracks inside metal beams;

(i) State the type of the X- rays used. **(1mark)**

……

(ii) Give a reason for your answer in (i) above. **(1mark)**

……

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(b) **Figure** shows the features of an X- ray tube

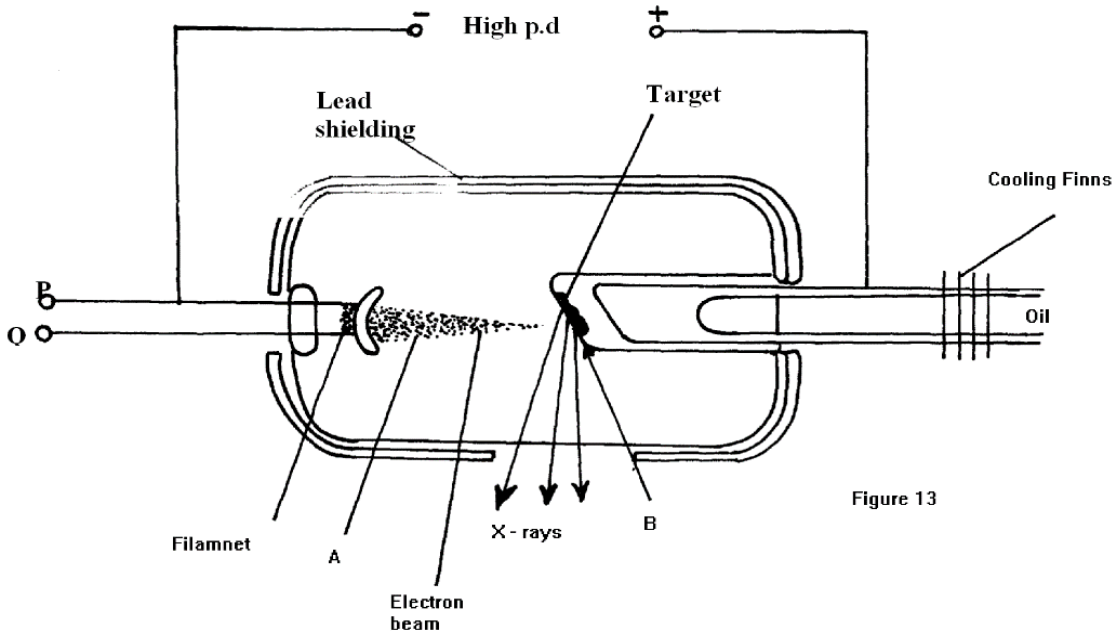


Figure 13

i) Name the parts labelled A and B. **(2marks)**

A……

B……..

(ii) Explain how a change in the potential across P changes the intensity of the X-rays produced in the tube. **(2 marks)**

……

……

……

(iii) During the operation of the tube, the target becomes very hot. Explain how this heat is caused. **(2 marks)**

……

……

……

(iv) What property of lead makes it suitable for use as shielding material?**(1mark)**

……

……

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(c) ln a certain X- ray tube, the electrons are accelerated by a Pd of 12000V. Assuming all the energy goes to produce X- rays, determine the frequency of the X- rays produced. *(Planck's constant h= 6.62 x 10^{-34} JS and charge on an electron, e = 1.6 x 10^{-19}C).* **(4marks)**

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16. A student connected a circuit as shown in figure 16 below hoping to produce a rectified out put

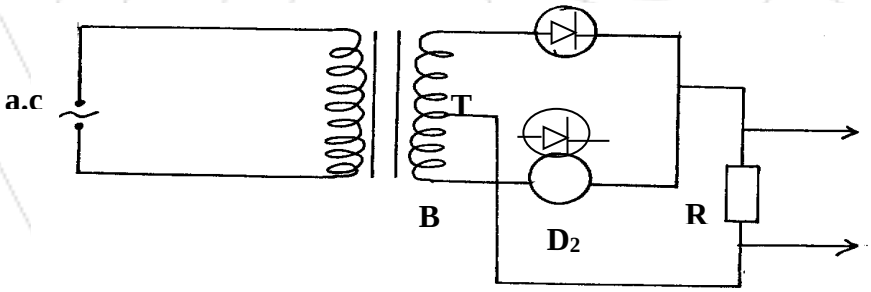


Fig 16.

(a) Sketch the graph of the output on the **CRO** screen **(2mark)**

(b) Explain how the output above is produced **(2marks)**

……

……

……

(c) Name other **two** uses of a junction diode **(2marks)**

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……

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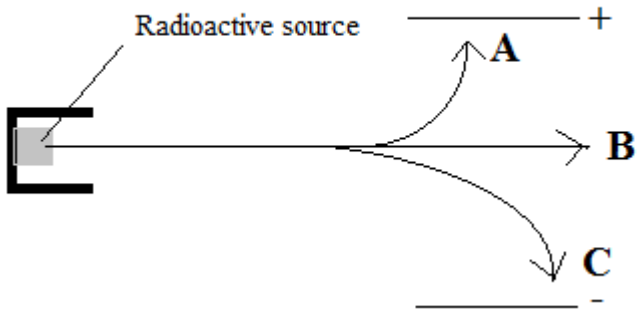
17. (a) Thorium decays to protactinium by emission of a beta particle (β) as shown.

$$Th \xrightarrow{\beta} {}^{234}_{91}Pa$$

Determine the atomic and mass number of thorium

Atomic number ……mass number ……**(2marks)**

(b) The figure 15 below shows the path taken by three radiations A,B and C from a radioactive source through an electric field.



(i) Identify the radiation B **(1 mark)**

……

(ii) Give a reason for the difference in deviation shown by A and C **(2 marks)**

……

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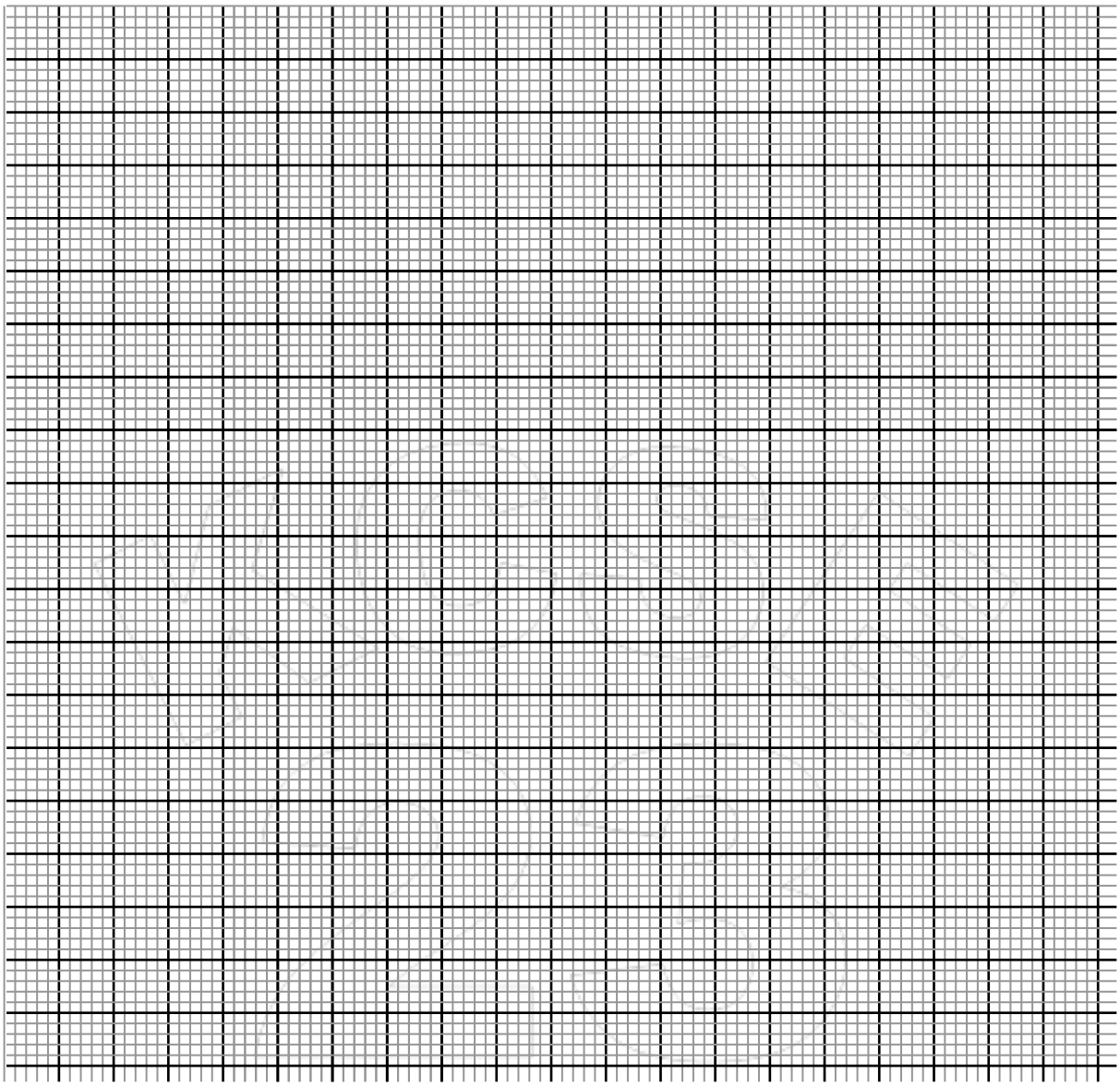
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(c) The table 1.Below shows results obtained from a G-M tube when a radioactive sample was placed near it.

Time (min)	0	1	2	3	4	5	6
Counts per (min)	1048	994	926	838	719	557	330
Correct count							

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(i) Given that the background radiation was 30 counts per minute, fill in the blank spaces in the table**.** **(3mark)**



(ii) Draw a suitable graph on the grid provided. **(5marks)**

(ii) From the graph determine the half-life of the sample. **(1mark)**

……

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……

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

PHYSICS

232/3

PAPER 3

(Practical)

TIME: 2½ HOURS

SCHOOL…… SIGN……

CONFIDENTIAL

Each student will require the following :-

- *A voltmeter*
- *Two dry cells and a cell holder*
- *A switch*
- *A resistor labelled R (3.9Ω)*
- *A nichrome wire (**SWG 26**) mounted on a mm scale and labelled G*
- *A micrometer screw gauge (to be shared)*
- *Six connecting wires with six crocodile clips*
- *A candle*
- *A lens (f = 20 cm) and a lens holder*
- *A screen*
- *A metre rule*
- *Rubber bung (hard).*
- *Vernier calipers (shared).*
- *Electronic beam balance (shared).*

(which records to 1 d.p.)

- *a retort stand, one boss, one clamp*
- *One 500ml beaker ¾ full of water*
- *One 100g mass*
- *One 50g mass*
- *3 pieces of thread approximately 30cm long*

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

PHYSICS

232/3

PAPER 3

(Practical)

TIME: 2½ 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.*
- *Sign and write the **date** of the examination in the spaces provided above.*
- *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.*
- *Marks are given for a clear record of the observation actually made, their suitability, accuracy and the use made of them.*
- *Candidates are advised to record their observations as soon as they are made*
- *Non-programmable silent electronic calculators **may be** used.*

For Examiner's Use Only.

Question	Maximum score	Candidate's score
1	20	
2	20	
Total	40	

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QUESTION 1

You are provided with the following

- A voltmeter
- Two dry cells and a cell holder
- A switch
- A resistor labelled R (3.9Ω)
- A wire mounted on a mm scale and labelled G
- A micrometer screw gauge (to be shared)
- Six connecting wires with six crocodile clips

Proceed as follows.

(a) Record the length L_O of the wire labelled G

L_O = ...

Use the micrometer screw gauge provided to measure the diameter of the wire labelled G at two different points and determine the average diameter, d

The diameter d_1 = ... mm, d_2 = ... mm **(1 mark)**

Average diameter d = ... mm **(1 mark)**

.....

.....

.....

Determine the radius r of the wire in metres. **(1 mark)**

Radius r = ... m

.....

.....

.....

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(b) Set up the apparatus as shown in the circuit diagram in figure 1.

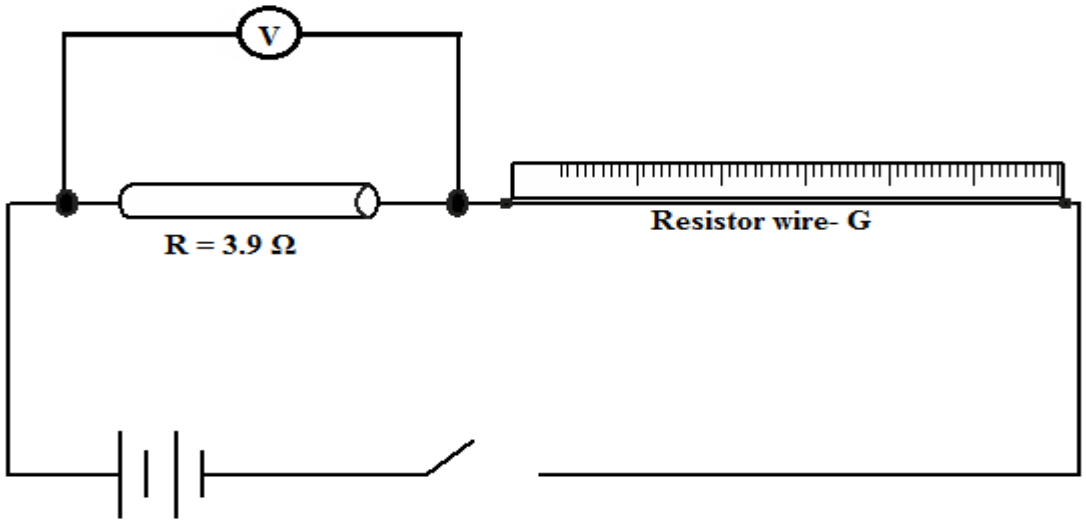


Fig 1

(i) Use the voltmeter provided to measure the p.d. V_R across R and p.d. V_G when the switch is closed.

V_R = ... volts **(1 mark)**

V_G = ... volts **(1 mark)**

Open the switch

(ii) Use the value of R provided and the value of V_R in *b(i)* above to calculate the current I flowing through R when the switch was closed. **(1 mark)**

.....

.....

I = ... Amperes.

(iii) Determine the constant H given that

$$H = \frac{100V_G}{1 \times L_O}$$ **(1 mark)**

.....

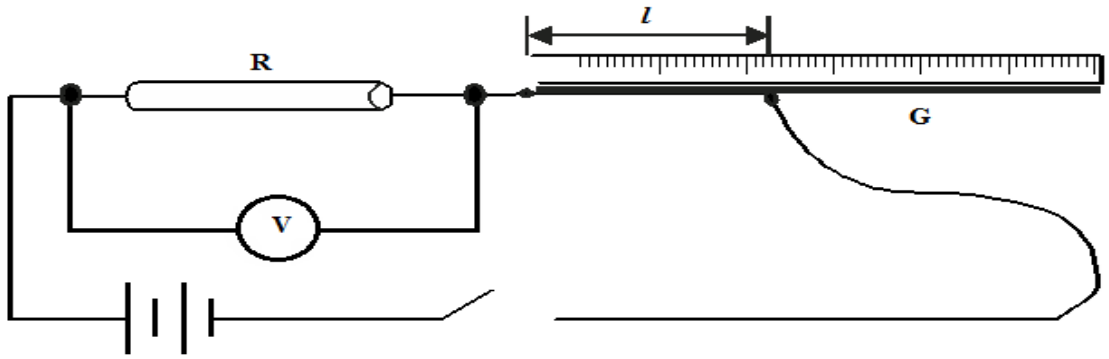
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H = ...Ωm^{-1}

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(c) Connect the voltmeter across R as shown in *figure 2* below.



Adjust the position of one crocodile clip on the wire G to a point such that the length *l*of the wire in the circuit in 5cm*(see figure 2 above)* close the switch.

Read and record in table 1 the value of p.d. across R. Open the switch.

(d) Repeat the procedure in (c) above for the other values of L shown in the table 1. **(3 marks)**

Table 1.

Distance L (cm)	0	2	10	20	30	40	50	70
d. V across RV								

(e)i) On the grid provided next page, plot the graph of V*(y-axis)* against *l*. **(5 marks)**

ii) From the graph, determine l_1, the value of *l* when $V = \frac{V_o}{2}$where V_O is the p.d. where $l = 0$

(1 mark)

(f) Determine the constant D for the wire given that $D = \frac{R}{l_1} \times \frac{300}{V_o}$ **(2 marks)**

……

……

……

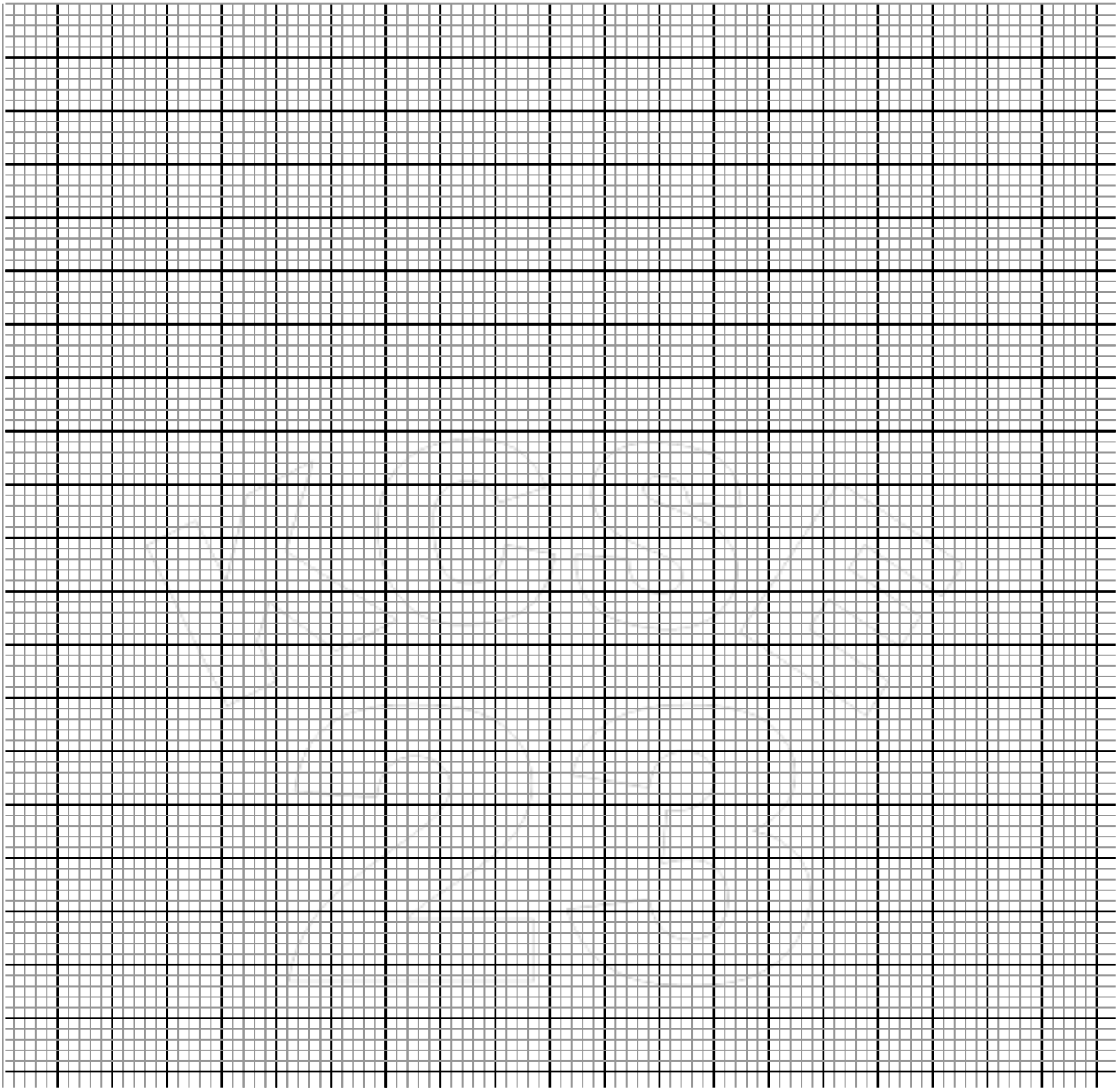
(f) Determine the constant p given that $p = \frac{\pi r^2}{2}(D + H)$, where r is the radius of the wire in metres. **(2 marks)**

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QUESTION 2

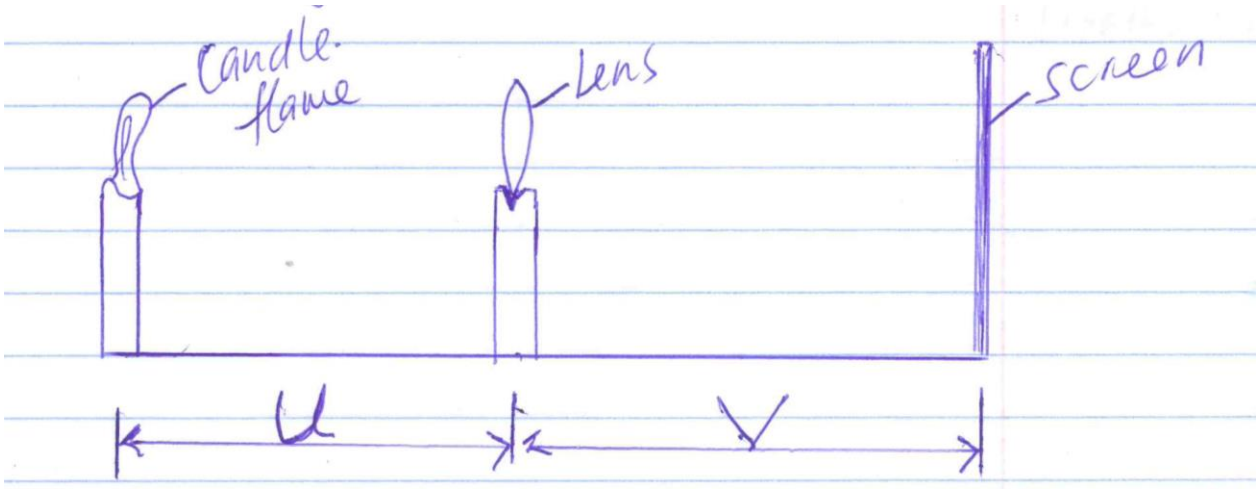
Section A

You are provided with the following

- A candle
- A lens and a lens holder
- A screen
- A metre rule
-

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a) Set up the apparatus as shown in figure below (ensure that the candle flame and the lens are approximately the same height above the bench)



b) Set the position of the lens so that the 40cm from the candle (U=40). Adjust the position of the screen until a sharp image of the candle flame is obtained. Measure the distance, V between the lens and the screen. Record the value of V_1 **V = …… cm)** **1mk)**

c) Repeat the procedures in b) above for other values of U in the table b below.

Table b)

U(cm)	45	50	55
V(cm)			
Magnification (m) $\frac{v}{u}$			

d) Given that f = $\frac{v}{m+1,}$

where f is the focal length of the lens, use the results in table above to determine the average values of f. **4mks)**

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PART B.

You are provided with the following:

- rubber bung.
- vernier calipers.
- beam balance.

Proceed as follows:

a) Using a vernier caliper, measure the lengths D, d, and h as shown in **figure 2.**

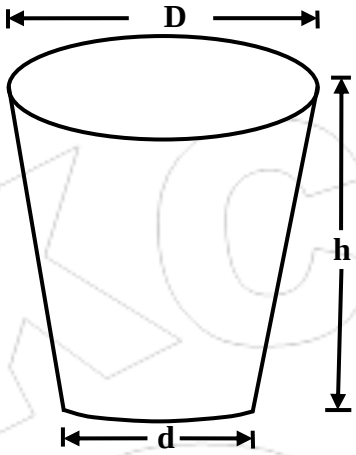


Figure 2

D = ... m **(1 mark)**

d = ... m **(1 mark)**

h = ... m **(1 mark)**

b) **(i)** Measure the mass, M of the rubber bung using the beam balance.

M = ... kg **(1 mark)**

(ii) Given that Q = $\left(\frac{d + D}{4} \right)$, determine the value of Q. **(1 mark)**

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(iii) Determine the value of r given that $\pi rQ^2 = \frac{M}{h}$ **(3mark)**

(iv)what are the units of r **(1 mark)**

(v) what is the significance of r **(1 mark)**

SECTION C

You are provided with the following

- a metre rule
- a retort stand, one boss, one clamp
- One 500ml beaker ¾ full of water
- One 100g mass
- One 50g mass
- 3 pieces of thread approximately 30cm long

Procedure

a) Balance the metre rule horizontally by suspending it from the stand and clamp with one of the threads.

Record the balance point G

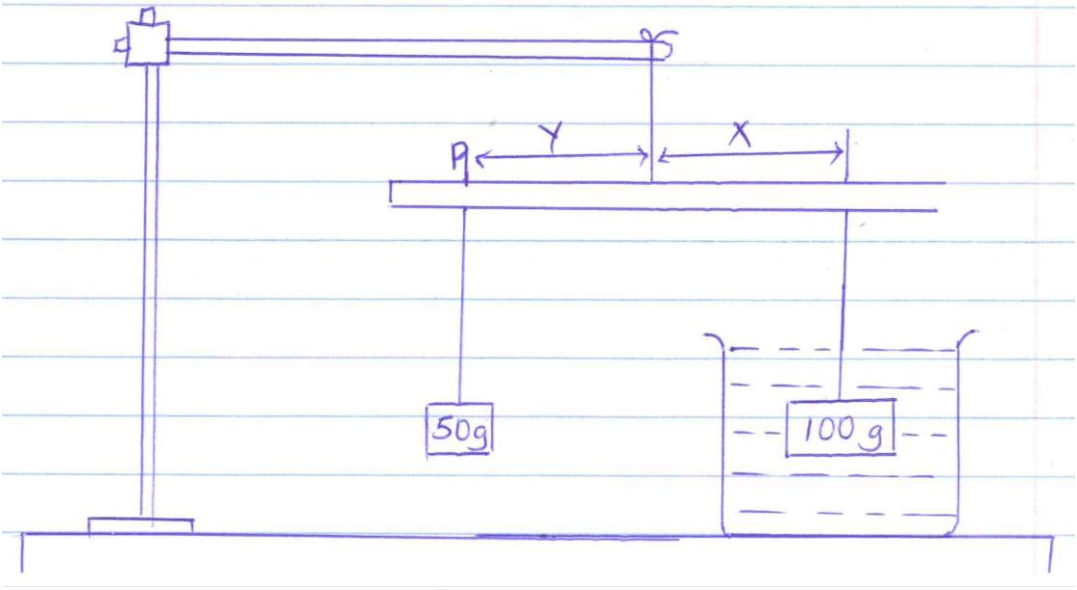
G = _____ cm **(1mark)**

b) suspend the 100g mass from the metre rule at a point such that x =5cm from point G, with the 100g mass completely immersed in water in the beaker hang the 50g mass from the metre rule.

Note the point of suspension (p) of the mass

P=_____ **(1mark)**

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c) Calculate the apparent weight of the 100 g mass in water. **(3mark)**

d)Find the upthrust of 100g mass in water. **(2marks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

MATHEMATICS

121/1

PAPER 1

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 spaces provided above.*

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

(c) *This paper consists of **TWO** sections: **Section I** and **Section II.***

(d) *Answer **ALL** the questions in **Section I** and **only five** questions from **Section II.***

(e) ***Show all the steps in your calculations, giving your answers at each stage in the spaces provided below each question.***

(f) *Marks may be given for correct working even if the answer is wrong.*

(g) ***Non-programmable** silent electronic calculators **and** KNEC Mathematical tables may be used, except where stated otherwise.*

For examiner's use only

Section I

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

Section II

17	18	19	20	21	22	23	24	Total

Grand Total

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1. Without using a calculator evaluate **(3 marks)**

$$\frac{-2(-5+8)-\ 9\div 3-5}{-3\times -5+-2\times 4}$$

2. (a) use mathematical tables to find the:

The square of 86.46 **(1 mark)**

The reciprocal of 27.56 **(1 mark)**

(b) Hence or otherwise calculate the value of; **(2 marks)**

$$\frac{86.46^2}{27.56}$$

3. The image of a point K (1,2) after translation is K^1 (-1,2). What is the coordinate of the point R whose image is R^1 (-3,3) after undergoing the same translation? **(3 marks)**

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4. A triangle ABC is such that AB = 12cm, and AC = 17cm. if its area is 512cm^2, find the size of angle BAC **(3 marks)**

5. (a) Find the greatest common divisor of the terms $9x^3y^2$ and $4xy^4$ **(1 mark)**

(b) Hence factorize completely the expression **(2 marks)**
$9x^3y^2 - 4xy^4$

6. Solve the following inequality and state the integral solutions. **(3 marks)**
$\frac{1}{2}(24-4x) > 6(3x-\frac{4}{3}) \geq -\frac{2}{3}(42+3x)$

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7. Find the value of x if. **(3 marks)**

$$\left(\frac{27}{8}\right)^{x+7} = \left(\frac{4}{9}\right)^{-3x}$$

8. Security light poles have been erected along both sides of a street in Bahati town. The poles are 50m apart along the left-hand side of the road while they are 80m apart along the right-hand side.

At one end of the road the poles are directly opposite each other. How many poles will be erected by time the poles are directly opposite each other at end of the road? **(3 marks)**

9. Using trapezoid rule, estimate the area under the curve $y = \frac{1}{2}x^2 - 2$ bounded by lines, x =2 and x=8 and x –axis use six strips. **(3marks)**

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10. The marked price of a car in a dealer's shop was Ksh.450 000. Kawira bought the car at 7% discount. The dealer still made a profit of 13%. Calculate the amount of money the dealer had paid for the car to the nearest shillings. **(3marks)**

11. Kassim has a money box containing 100 mixed shs 5 and shs 10 coins with a total value of shs 600. How many of each type of coin does the box contain. **(3 marks)**

12. A boy walk directly from point Q towards the foot of a vertical flag post 200m away. After covering a distance of 140m, he observes the angle of elevation of the top of the flag post as 75°. Calculate the angle of depression of point Q from the top of the flag post. **(3 marks)**

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13. A liquid spray of mass 384g is packed in a cylindrical container of internal radius 3.2cm. Given that the density of the liquid is 0.6g/cm^3, calculate to 2dp the height of the liquid in the container.

(3 marks)

14. The table below shows height of 50 students

Height (cm)	Frequency
140 – 144	3
145 – 149	16
150 – 154	20
155 – 159	10
160 – 164	1

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

(b) Calculate the median height. **(3 marks)**

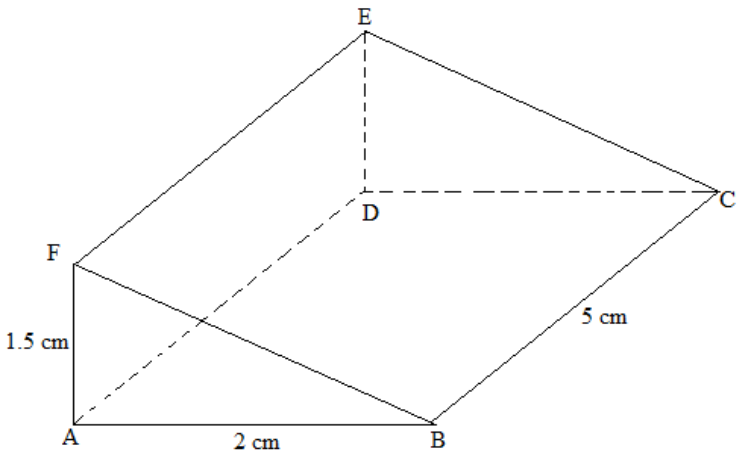
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15. Each exterior angle of a regular polygon is a fifth of the interior angle.

(a) Find the size of the exterior angle **(2 marks)**

(b) Find the number of sides of the polygon **(1 mark)**

16. The diagram below represents a prism whose Cross-section is a right-angled triangle. Draw the net of the solid. **(3 marks)**



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SECTION II

17. A straight line $y = \frac{2}{3}x - \frac{2}{3}$ meets the x – axis at point T.

(a) Determine the coordinates of T. **(2 marks)**

(b) A second line L_2 is perpendicular to line L_1 at T. Find the equation of line L_2 in the form $ax + by = c$ where a, b and c are constants. **(3 marks)**

(c) A third line L_3 passes through $(-4,1)$ and is parallel to L_1. Find;

The equation of line L_3 in the form $y = mx + c$ **(2 marks)**

(d) The coordinates of point S at which L_3 intersects L_2. **(3 marks)**

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18. Nakuru county government is to construct a floor of an open wholesale market whose area is $800m^2$. The floor is to be covered with a slab of uniform thickness of 200mm. In order to make the slab, sand, cement and ballast are to be mixed such that their masses are in the ratio 3:2:3 respectively. The mass of dry mass of dry slab of volume $1m^3$ is 200kg.

(a) Calculate

(i) The volume of the slab. **(2 marks)**

(ii) The mass of the dry slab. **(2 marks)**

(iii) The mass of cement to be used. **(2 marks)**

(b) **If** one bag of cement is 50kg, find the number of bags to be purchased. **(1 mark)**

(c) If a lorry carries 10 tonnes of ballast, calculate the number of lories of ballast to be purchased. **(3 marks)**

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19. The vertices of a triangle ABC are A (2,5) B (4,3) and C (2,3). It rotates half-turn about the origin.

(a)Draw triangle ABC and $A^1B^1C^1$ under it. **(4 marks)**

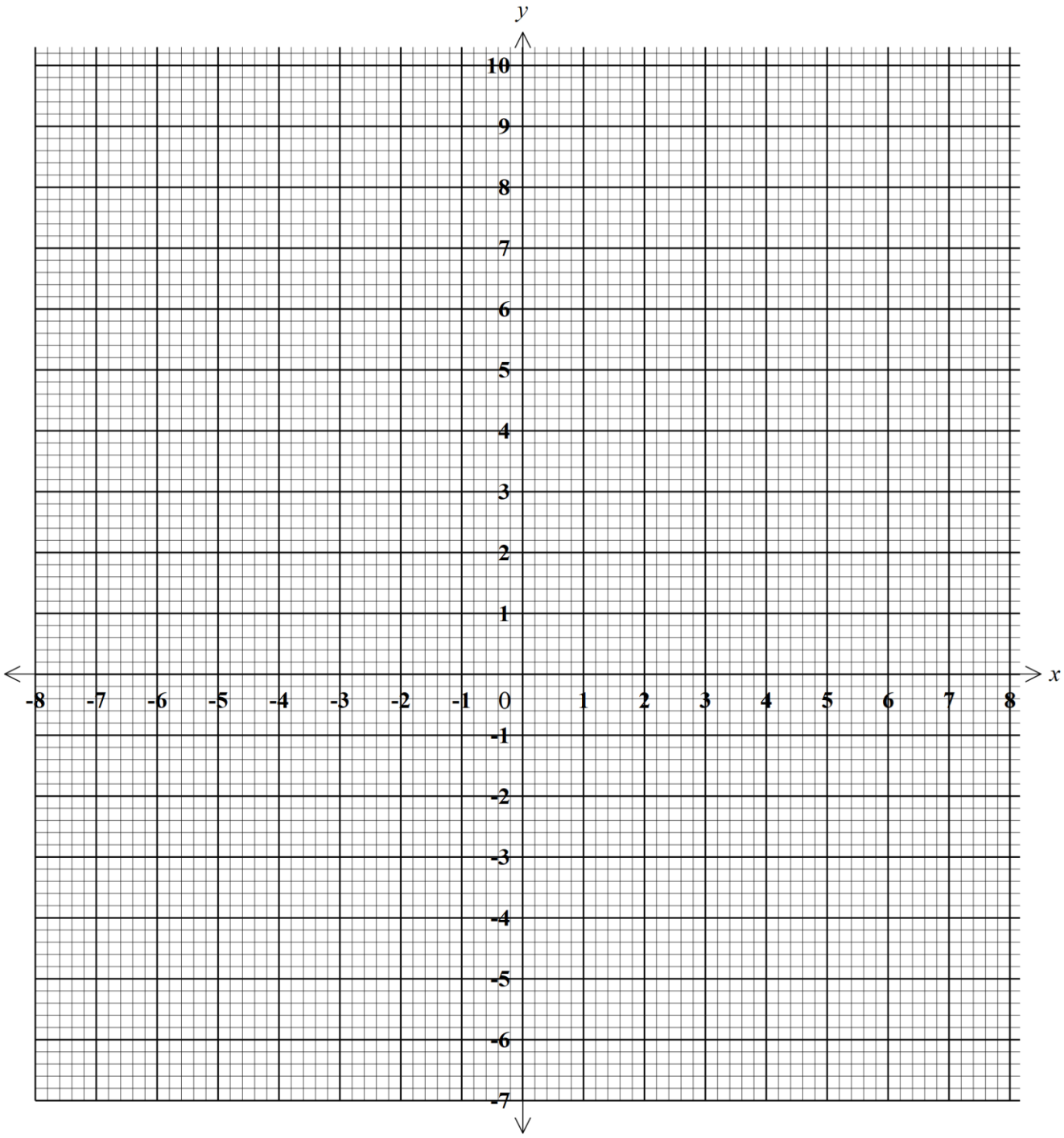
(b) The image A'B'C is mapped onto A''B''C'' under a reflection R in the line x=0 followed by a translation T = $\begin{pmatrix} 0 \\ -2 \end{pmatrix}$. Find the coordinates of A''B'' and C'' and A'''B'''C'''.

Hence draw triangle A'''B'''C'''. **(4 marks)**

(c)Find the area of the triangle A''B''C''. **(2 marks)**

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20. A trader bought 2 cows and 9 goats for a total of Ksh. 98,200. If she had bought 3 cows and 4 goats, she would have spent Ksh. 2, 200 less.

(a) Form two equations to represents the above information. **(2marks)**

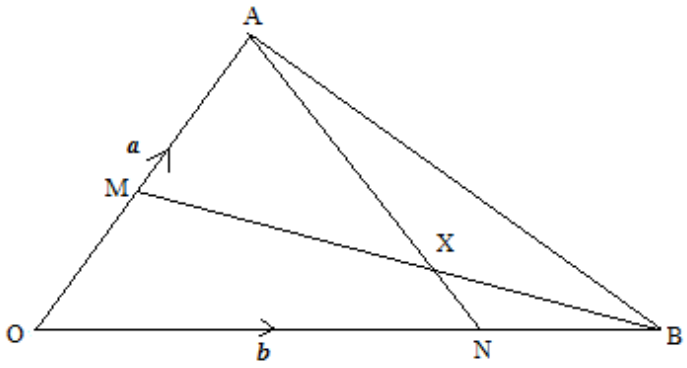
(b) Use the matrix method to determine the cost of a cow and that of a goat. **(4marks)**

(c) The trader later sold the animals she had bought making a profit of 30% per cow and 40% per goats. Calculate the total amount of money she received. **(2marks)**

(d) Determine corrects to 4 significant figures the percentage profit the trader made from the sale of animals. **(2marks)**

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21. In the figure below OAB is a triangle in which M divides OA in the ratio 2:3 and N divides OB in the ratio 4:1. AN and BM intersects at X.



Given that ***OA*** = ***a*** and***OB***=***b*** express in terms of ***a*** and ***b***.

(a) AN **(1 mark)**

(b) BM **(1mark)**

(c) AB **(1mark)**

(d) If **AX**= s**AN** and **BX** = t**BM**wheres and t are constants.

Write two expressing for **OX** in terms of ***a***, ***b***, s and t. **(2marks)**

(e) Find the value of s and t, and hence express **OX** in terms of ***a*** and ***b***. **(5marks)**

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22. Town B is 20km N60^{0}W from village A. Town B is 25km 040^0 from town C. Village D is due East of town C and dues South of village A

(a) Using a scale 1:500,000 draw a diagram showing a relative position of town B, town C, village A and village D **(4 marks)**

(b) Determine;

i. Distance between village A and town C **(1 mark)**

ii. Distance between town C and village D **(1 mark)**

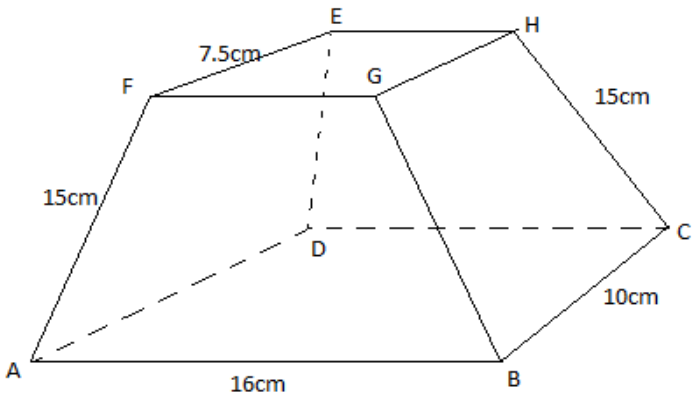
iii. Compass bearing of town C from village A **(1 mark)**

iv. Compass bearing of village D from town B **(1 mark)**

v. Determine the area enclosed by the diagram in (a) above in **hectares** **(2 marks)**

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23. The figure below shows a frustrum made from a right pyramid, such that AB=DC=16cm, BC=AD=10cm, FG=EH=18cm, GH=FE=7.5cm, CH=BG=AF=DE=15cm. If the altitude of the frustrum is 14.6cm, find:



(a) The altitude of the pyramid made from the frustrum. **(2 marks)**

(b) The surface area of the frustrum. **(5 marks)**

(c) The volume of the frustrum. **(3 marks)**

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24. The distance S meters from a fixed point O, covered by a particle after t seconds B given by the equation $S = t^3 - 6t^2 + 9t + 5$

(a) Calculate the gradient of the curve at t = 0.5 seconds **(3 marks)**

(b) Determine the values of S at the turning points of the curve **(3 marks)**

(c) Sketch the curve in the space provided. **(4 marks)**

KCSE 23

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

MATHEMATICS

121/2

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 spaces provided above.*
(b) *Sign and write the date of examination in the spaces provided above.*
(c) *This paper consists of **TWO** sections: **Section I** and **Section II.***
(d) *Answer **ALL** the questions in **Section I** and **only five** questions from **Section II.***
(e) ***Show all the steps in your calculations, giving your answers at each stage in the spaces provided below each question.***
(f) *Marks may be given for correct working even if the answer is wrong.*
(g) ***Non-programmable** silent electronic calculators **and** KNEC Mathematical tables may be used, except where stated otherwise.*

For examiner's use only

Section I

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

Section II

17	18	19	20	21	22	23	24	Total

Grand Total

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1. A rectangular block has a square base whose side is exactly 8cm. Its height measured to the nearest millimetre is 3.1cm. Find in cubic centimetres the greatest possible error in calculating its volume **(3mks)**

2. Simplify $\frac{5}{\sqrt{11}+\sqrt{5}} - \frac{4}{\sqrt{11}-\sqrt{5}}$ **(3mks)**

3. Find the area bounded by the curve $y= x^3 + 5$, the x axis and lines x=1 and x = 3 **(3mks)**

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4. A bag contains 2 green balls, 3 red balls and one blue ball. Another bag contains 4 green balls, 5 red balls and 3 blue balls. A ball is chosen at random from a bag. Find the probability that the chosen ball is blue. **(3mks)**

5. P varies partly as the square of V and partly as the cube of V. When V= 2, P = -20 and when V = -3, P = 135. Find the relationship between P and V. **(3mks)**

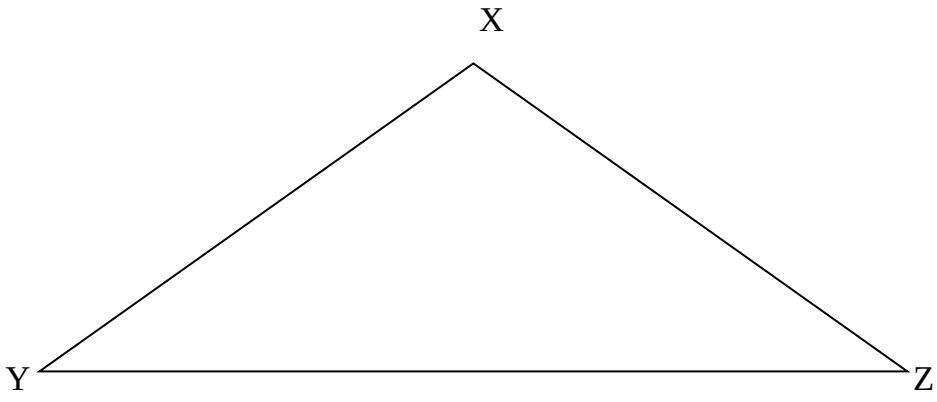
6. The second term of a G.P is 6, and the fifth term is 48, find the common ratio and the 3rd term of the G.P. **(3mks)**

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7. Nancy pays for a car on hire purchase in 15 monthly instalments. The cash price of the car is Ksh. 300,000 and the interest rate is 15% p.a. A deposit of Ksh 75,000 is made. Calculate her monthly repayments. **(4mks)**

8. Solve for θ in the equation $2 \sin (2\theta + 10) = -1$ for $0 \leq \theta \leq 360^0$. **(3mks)**

9. The diagram below shows a garden XYZ



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(a) Draw the locus of points equidistant from sides XY and XZ. **(1mk)**

(b) Draw the locus of points equidistant from points X and Z. **(1mk)**

(c) A bead is lost in the garden within a region which is nearer to point X than to point Z and closer to side XZ than to side XY. Show by shading the region where the bead can be located. **(1mk)**

10. Expand the given binomial up to the term with x^4: $(1+3x)^6$. Use your expansion to evaluate $(1.3)^6$ correct to 4 decimal places. **(4mks)**

11. Line PQ is the diameter of a circle. Find the equation of the circle in the form $ax^2+bx+cy^2+dy-e=0$, given the coordinates P(0,2) and Q(6,2). **(3mks)**

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12. Determine the amplitude, the period and phase angle for the graph $y=3\sin(\frac{1}{4}x-90^0)$. **(3mks)**

13. Make x the subject of the formular. **(3mks)**

$$P=\sqrt{\frac{bx^2-ax}{x}}$$

14. Under a transformation represented by a matrix $\begin{bmatrix} 5x & 2x \\ -3 & x \end{bmatrix}$, a triangle of area $10cm^2$ is mapped onto atriangle of area $110cm^2$. Find x. **(3mks)**

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15. Evaluate without using Mathematical tables or a calculator. **(3mks)**

$$2\log 5 - \frac{1}{2}\log 16 + 2\log 40$$

16. A body starts from rest and after t seconds its velocity in ms^{-1} was recorded as shown below;

T in (sec)	0	1	2	3	4	5	6
Velocity	0	0.29	5.4	7.7	9.7	11.4	12.7

Use the trapezoidal rule to estimate the distance covered by the body between 1 and 6 seconds **(3mks)**

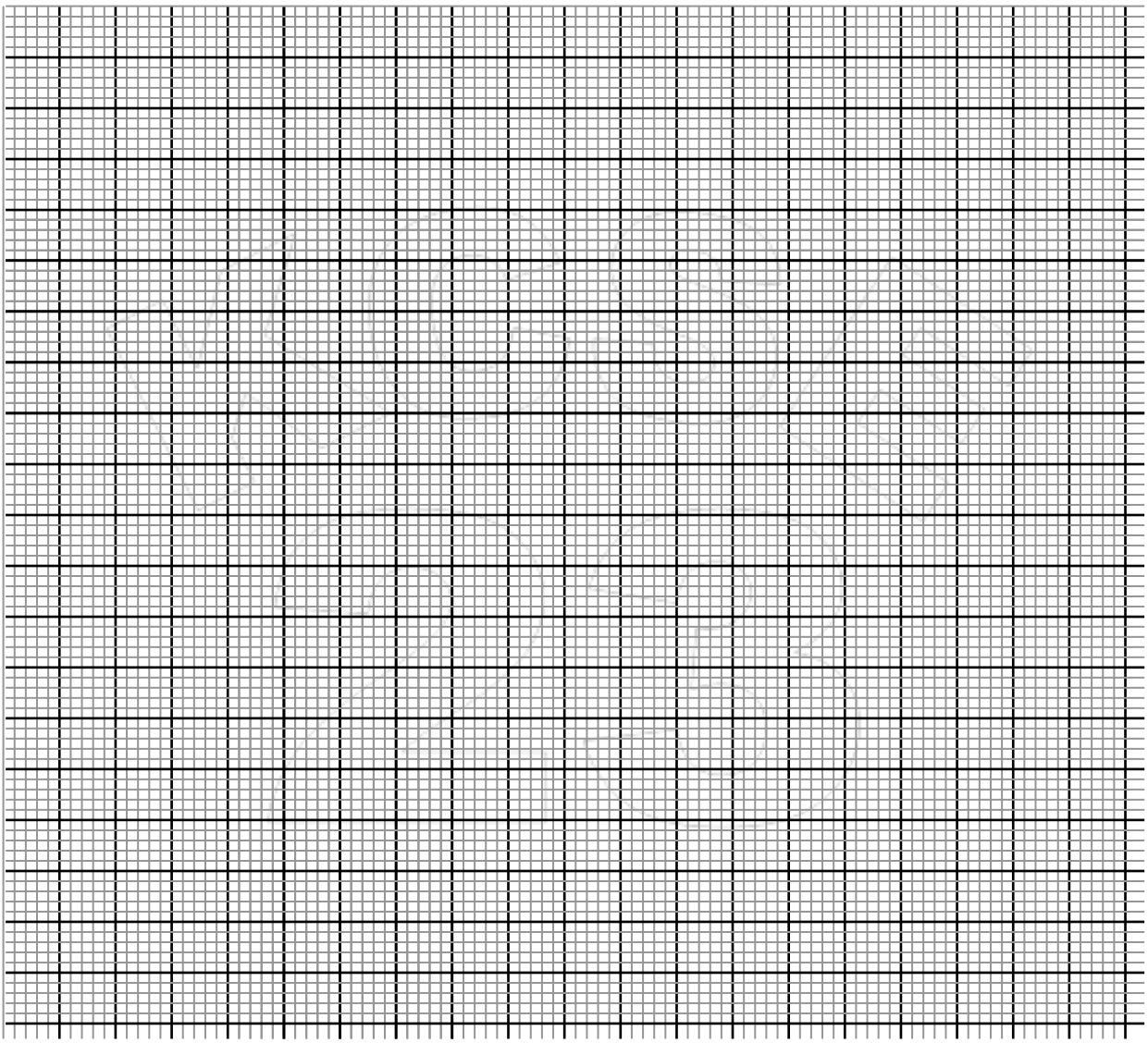
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SECTION II

17. (a) Complete the table below to 2 decimal places. **(2mks)**

X	0^0	30^0	60^0	90^0	120^0	150^0	180^0	210^0	240^0	270^0	300^0	330^0	360^0
– Cos x	– 1		– 0.5		0.5	0.87		0.87			-0.5	0.87	
Sin ($x - 30^0$)		0.0	0.5			0.87	0.5		– 0.5			– 0.87	– 0.5

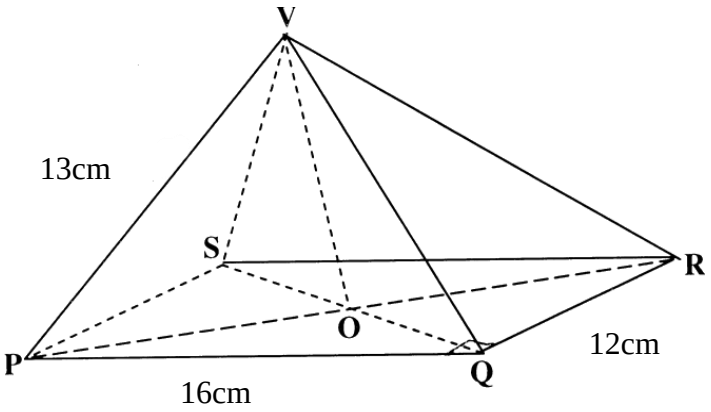
(b) Draw the graphs of $y = \sin (x - 30^0)$ and $y = -\text{Cos } x$ on the same axes, for $0^0 \leq x \leq 360^0$. **(5mks)**



c) Use your graph to solve the equation $\sin (x - 30^0) + \text{Cos } x = 0$. **(3mks)**

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18. Figure below is a pyramid on a rectangular base. PQ=16cm, QR = 12cm and VP = 13cm.



Find

(a) The length of **QS**. **(2mks)**

(b) The height of the pyramid to 1 decimal place. **(2mks)**

(c) **The** angle between **VQ** and the base. **(2mks)**

(d) The angle between plane **VQR** and the base. **(2mks)**

(e) The angle between planes **VQR** and **VPS** **(2mks)**

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19. The following table shows the distribution of marks obtained by 50 students in a test.

Marks	45 – 49	50 – 54	55 – 59	60 – 64	65 – 69	70 – 74	75 – 79
No. of students	3	9	13	15	5	4	1

By using an assumed mean of 62, calculate

(a) The mean **(5mks)**

(b) The variance **(3mks)**

(c) The standard deviation **(2mks)**

KCSE 23

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20. (a Hellen's earnings are as follows:

Basic salary sh. 38000 per month

House allowance sh. 14000 per months

Travelling allowance sh.8500 per month and

Medical allowance Ksh.3300 per month.

She is given a personal relief of Ksh. 12672 per annum

The table for payable tax is shown below

Income in K£ p.a	Payable tax rate in Kshs per K£
0-6000	2
6001-12000	3
12001-18000	4
18001 -24000	5
24001-30000	6
30001-36000	7
36001-42000	8
42001-48000	9
Over 48000	10

Calculate

(i) Hellen's taxable income in K£ p.a **(2mks)**

(ii) Her P.A.Y.E **(5mks)**

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(iii) Hellen is deducted the following items per month

NHIF Ksh.320

Cooperative shares Ksh.2000

Loan repayment Ksh5000

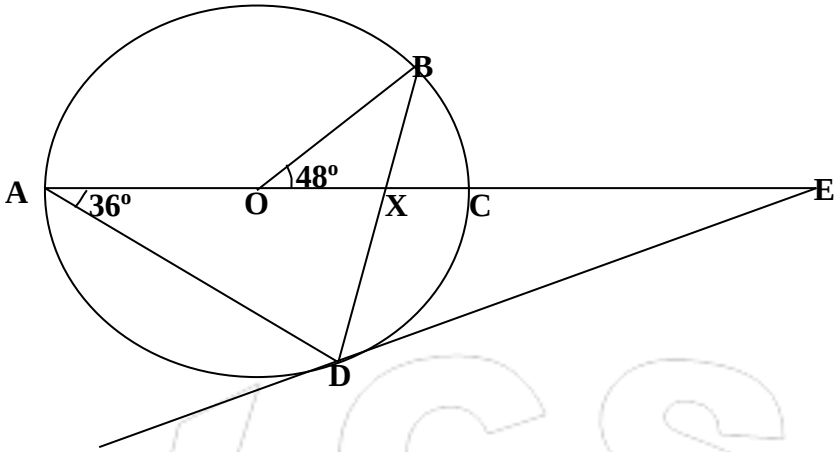
Determine her net salary per month **(3mks)**

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21. In the figure below, O is the centre of the circle. A, B, C and D are points on the circumference of the circle. A, O, X and C are points on a straight line. DE is a tangent to the circle at D.

Angle BOC= 48^0 and angle CAD = 36^0.



(a) Giving reasons or otherwise, find the value of the following angles:-

i. Angle CBA **(1mk)**

ii. Angle BDE **(2mks)**

iii. Angle CED **(3mks)**

KCSE 23

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(b) It is also given that AX = 12 cm, XC = 4 cm, DB = 14 cm and DE = 20 cm.

Calculate:

i. DX **(2mks)**

ii. AE **(2mks)**

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22. The position of two towns A and B on the earths surface are (36^0N, 49^0E) and (36^0N, 131W) respectively.

a) Find the difference in longitude between town A and town B. **(2mks)**

b) Given that the radius of the earth is 6370, calculate the distance between town A and B.

(i) In nm. **(2mks)**

(ii) In kilometers. **(2mks)**

c) Another town C is 840km East of town B on the same latitude as town A and B. Find the longitude of town C. **(4mks)**

KCSE 23

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23. a) Using a ruler and compasses only, construct triangle ABC such that AB=4cm, BC=5cm and $\angle ABC = 120^0$. Measure AC. **(4mks)**

KCSE 23

b) On the diagram, construct a circle which passes through the vertices of the triangle ABC. Measure the radius of the table. **(4mks)**

c) Construct a perpendicular from the centre of the circle to the line BC. Measure the length of the perpendicular. **(2mks)**

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24. A metal sphere has a radius 5cm and a density of 2.4g/cm^3.

(a) Calculate the mass of the ball in kg **(4mks)**

(b) The ball is dropped into a cylindrical container which is partially filled with water.
The ball is fully sub-merged. If the cylinder has a base radius of 8cm, calculate the change in the water level. **(3mks)**

(c) The sphere is melted down to form a metal cylinder of same radius. Calculate the height of the cylinder formed. **(3mks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

COMPUTER STUDIES

451/1

PAPER 1

THEORY

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- ✓ *Write your name , school and index number in the spaces provided above*
- ✓ *This paper consists of TWO sections A and B*
- ✓ *Answer ALL questions in section A*
- ✓ *Answer question 16 and any other THREE questions from section B*
- ✓ *ALL answers should be written on spaces provided on the question paper*

FOR EXAMINERS USE ONLY

SECTION	QUESTION	
A	1-15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL MARKS	

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SECTION A 50 MARKS

1. State ***one*** function for each of the following elements of a computer system: **(3mks)**

a) Hardware

_____

_____

b) Software

_____

_____

c) Live ware

_____

_____

2. Explain ***two*** health issues that could arise from the use of an unsuitable computer desk **(4mks)**

_____

_____

_____

_____

_____

3. List ***two*** categories of system software **(1mrk)**

_____

_____

_____

4. Explain ***two*** contents of a warranty that should be considered when purchasing computer hardware **(4mks)**

_____

_____

_____

_____

_____

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5. Students of a school intend to elect their school captain by secret ballot. State ***three*** ways in which computers can be used to improve the election process **(3mks)**

_____

_____

_____

_____

6. Figure 1 and figure 2 show icons representing commands used to manipulate graphics in a desktop publishing package.

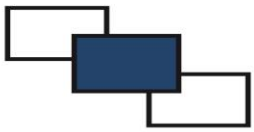


Figure 1

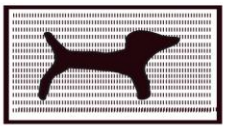


Figure 2

Explain the use of each of the icons labeled **figure 1** and **figure 2**

_____

_____

_____

7. Give two differences between a Graphical User Interface (GUI) and a command line Interface. **(4mrk)**

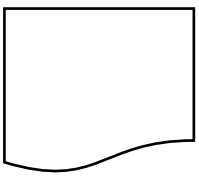
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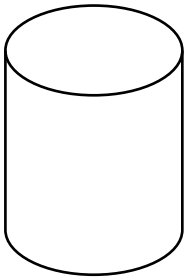
8. Identify each of the following symbols as used in a system flowchart.

a)  **(1mrk)**

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b)

(1mrk)



9. A student typed a letter in a word processor and the last line of the letter flowed to the second page. State three ways in which the student could have adjusted the letter to fit on one page without changing the paper size. **(3mks)**

_____

_____

_____

_____

10. A computer user is unable to retrieve a file stored in a server in an organization. State three reasons why the user would need to contact the network administrator **(3mks)**

_____

_____

_____

_____

11. State three ways in which mobile phones have affected money transactions in the country **(3mks)**

_____

_____

_____

_____

12. State two items that an electronic mail should have for it to be sent. **(2mks)**

_____

_____

_____

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13. List four devices that use scanning technology that would be used to capture data directly from source. **(2mks)**

_____

_____

_____

14. State two ways in which hardware failure is a threat to data security. **(2mks)**

_____

_____

_____

15. Given the binary number 101011101111011, determine the number of:

a) Nibbles **(1mk)**

_____

_____

_____

b) Bytes **(1mk)**

_____

_____

_____

Section B (60 marks)

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

16. a) state the advantages of using low level programming languages **(2mks)**

_____

_____

_____

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b) other than flowcharts, state three tools that can be used to present an algorithm **(3mks)**

_____

_____

_____

_____

_____

_____

_____

_____

c) A form one admission interview consists of four tests: Mathematics, English, Kiswahili, and Science. In order to qualify for admission, an applicant must attain a minimum average of 65% in four tests and not less than 70% in Mathematics. All applicants must for the interview. Draw a flowchart that would read the scores for each applicant and determine whether an applicant is successful or not. **(10mks)**

KCSE 23

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17 a) with the aid of a diagram, describe time sharing mode as used in a computer data processing **(5mks)**

b) A company's management has opted to use computers to process data. State four factors that the management needs to consider when selecting the company data processing mode. **(4mks)**

c) Explain the purpose of each of the following in system documentation:

i. User manual **(1mk)**

ii. Sample data **(1mk)**

iii. Table descriptions **(1mk)**

18. a) State the role of each of the following data communication devices

i. Repeater **(1mk)**

ii. Router **(1mk)**

b) Figure 3 shows a network based on the bus topology.

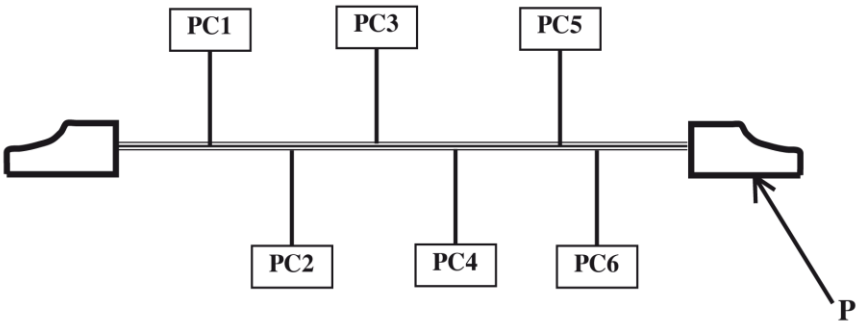


Figure 3

i. Identify the component **P** **(1mk)**

ii. State the function of the component labeled P **(2mks)**

c) Students of Matuga secondary school formed an environmental club with a goal of taking part in environmental conversation activities. Outline three ways in which they can use the internet to achieve this goal. **(3mks)**

d) i) A company has three branches A, B and C where A is the headquarter. The local area network (LAN) at A is directly connected to the LAN at B also directly connected to the LAN at C. Explain two benefits of having the LAN at B also directly connected to the LAN at C. **(4mks)**

ii) State three ways in which a company can protect its computer network from hackers **(3mks)**

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19. (a) The following is an extract from a document created using a word processor.

CHALLENGES FACING THE YOUTH IN TODAY'S SOCIETY

[ostof the problems facing today's youth are not restricted to any one ethnic or religious group, but affects young people generally. Studies have shown that issues such as drug abuse, crime, violence, sexuality and poverty are the most serious challenges afflicting them.

Other challenges include

- Identify crisis: *Who am i?*
- Lack of self-confidence and low esteem: *I am worthless?*
- Sense of hopelessness: *where am I going?*
- Confusion and ambiguity concerning moral issues: *what is right and wrong?*
- Negative impact of electronic media: *Entertainment*?
- Competitiveness in education the even playing field: *Excellence by whom?*

~~Not Me~~

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a) Identify six formats that have been applied on the extract. **(3mks)**

b) State three tools in a word processor that would help a user to minimize spelling mistakes when creating a document **(3mks)**

c) The following is an extract of a spreadsheet created to manage sales. Use it to answer the questions that follow.

	A	B	C	D
1	ITEM NAME	UNIT PRICE	UNITS SOLD	
2	Bed	12,300	2	
3	Wardrobe	16,000	4	
4	Blanket	5,000	4	
5	Mattress	7,000	5	
6	Table	10,000	3	

i) Write a formula that will compute the number of items whose unit price is more than 10, 000. **(3mks)**

ii) if the formula =$B2 * C$2 was placed in D2, state the output if it was copied to D3. **(1mk)**

d) A school administers examinations to all students in science, humanities and languages. Use the entities: EXAMINATIONS, STUDENTS, SCIENCES, HUMANITIES and LANGUAGES to illustrate a network database model. **(4mks)**

20. (a) Describe the octal number system. **(2mks)**

(b) Convert each of the following to the number system indicated:

i. 111.101_2 to decimal **(3mks)**

ii. 14.6875_{10} to binary **(4mks)**

(c) Convert the number -17_{10} into 8-bit:

i. Signed magnitude representation. **(2mks)**

ii. Two's compliment **(2mks)**

(d) Perform the arithmetic operation. **(2mks)**

$110.11_2 + 11.011_2$

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

COMPUTER STUDIES

451/2

PAPER 2

PRACTICAL

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- ✓ *Type your name and index number at the top right hand corner of each printout*
- ✓ *Write your name and index number on the compact disks*
- ✓ *Write the name and version of the software used for each question attempted in the answer sheet*
- ✓ *Passwords should not be used while saving in the compact disks*
- ✓ *Answer all the questions*
- ✓ *All questions carry equal marks*
- ✓ *All answers must be saved in your compact disks*
- ✓ *Make a printout of the answers on the answer sheets provided*
- ✓ *Hand in all the printouts and the compact disks*

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ADM NO.	NAME	STREAM	COMP.	ART.	BUS.	ENG.	MAT	TOTAL MARK	STUDENT MEAN
C001	Barasa	H	56	45	36	56	26		
C002	Wangila	K	58	57	90	54	23		
C003	Wafula	H	48	56	54	45	25		
C004	Wanjala	K	78	95	78	46	24		
C005	Kerubo	H	49	86	68	35	52		
C006	Akinyi	K	56	45	25	63	54		
C007	Odhiambo	H	75	78	45	65	56		
C008	Okunyuk	K	89	69	65	53	51		
C009	Nekesa	H	69	58	45	54	52		
C010	Simiyu	H	85	46	78	52	53		
TOTAL FOR H									
TOTAL FOR K									
	TOTAL								

QUESTION 1

a) Using a word processor, create the following table as it appears and save it as Table1 **(25mks)**

1. Sort the table's content by Stream in ascending order **(1mk)**

2. Merge the cells containing identical streams **(1mk)**

3. Save the changes made to the table as Edited_Table1 **(1mk)**

4. Using appropriate formula, determine: -

- ✓ TOTAL MARK **(4mks)**
- ✓ STUDENT MEAN **(4mks)**
- ✓ TOTAL FOR STREAM H **(4mks)**
- ✓ TOTAL FOR STREAM K **(4mks)**

TOTAL FOR ALL STREAMS **(4mks)**

5. Print: **(2mks)**

- Table1
- Edited_Table1

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Question 2

The following table contains details of Baharini Girls school

ADMNO	Stud name	DOB	KCPE MARKS	RECEIPT NO	Fees Paid(kshs)	Fees Bal(kshs)	House No	House Name	House Capacity
1001	Alice K	7/4/1999	380	101	20000	5000	H20	simba	200
1050	Lilly O	2/3/2002	350	894	18000	7000	S08	chui	150
1202	Mary	8/10/2000	400	500	23000	2000	P30	Kifaru	180
1025	Juliet	4/4/2000	358	258	25000	0	H20	Simba	200
1200	Joan	5/1/2001	398	259	15000	10000	S08	chui	150
1278	Milly	3/4/1998	402	200	15000	10000	H20	simba	200
1201	Linet	2/7/1998	356	205	20000	5000	P30	kifaru	180
1203	Lisper	9/5/2001	403	209	25000	0	S08	chui	150

(50MARKS)

REQUIRED

1) Create a database file that can be used to store the above data. Name the file Baharini school database. **(2mks)**

2) Create Three tables, one for **student details**, **Accounts table** and **dormitory table** **(11mks)**

3) Create a relationship between the three tables **(3mks)**

4) Using appropriate forms, Enter the information given into the three tables **(15mks)**

5) Create a query for "all **students housed in Chui"** **(3mks)**

6) Design a "**current age query"**to display current ages of all the students **(5mks)**

7) Create a report "**Hefty Balances"** showing students with fees balances of more than 10000kshs **(3mks)**

8) Create a report to show all students admitted in the school **(3mks)**

9) Print, Thethreetables,**Hefty balances report**and **all students housed in Chuireport** **(5mks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

HOME SCIENCE

441/1

PAPER 1

THEORY

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *This paper contains 3 sections: A, B and C*
- *Answer **ALL** questions in section A and B and choose any TWO from sectionC.*
- *Write your name and admission number in the spaces provided above.*
- *Sign and write the date in the spaces provided above.*
- *All answers should be written in the spaces provided on the question paper.*

FOR OFFICIAL USE ONLY

SECTIONS	QUESTION	MAX. SCORE	ACTUAL SCORE
A	1 – 23	40 MARKS	
B	24	20 MARKS	
C	25 - 27	40 MARKS	
	TOTAL		

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SECTION A (40MKS)

(Answer all questions)

1. List two water soluble vitamins. **(1mk**

……

……

2. State two possible causes of anaemia other than lack of iron. **(2mks**

……

……

3. State four nutritional disorders associated with change in lifestyles. **(2mks**

……

……

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……

4. State the functions of the following parts of the machine. **(3mks**

i) Tension Disc-

ii) Take up lever-

iii) Balance wheel-

5. State two ways of bleaching clothes other than using commercial bleaches. **(2mks**

……

……

6. State three measures to undertake to prevent the spread of infection when caring for the sick at home. **(2mks**

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7. Distinguish between meal planning and meal management. **(2mks**

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8. List four water borne diseases. **(2mks**

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9. Identify two ways of sterilising a baby's feeding equipment. (2mks

……

……

10. Give the meaning of the term ante-natal care. **(2mks**

……

……

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11. Identify one benefit of increasing iron rich foods in a mother's diet. **(1mk**

……

12. State two advantages of a well-lit room. **(2mks**

……

……

13. Highlight two limitations of burning as a method of refuse disposal. **(2mks**

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14. Defferentiate between loose and fixed dirt. **(2mks**

……

……

15. Highlight the benefit of consumer protection. **(1mk**

……

……

16. State two disadvantages of buying goods by hire purchase. **(2mks**

……

……

17. Identify any two rules for patching. **(1mk**

……

……

18. Identify two categories of bleaches giving an example for each. **(1mk**

……

……

19. State one difference between marasmus and kwashiorkor. **(1mk**

……

……

20. List two factors that can cause premature birth. **(1mk)**

……

……

21. State two functions of the weights and measures department. **(2mks)**

……

……

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22. State two ways one can ensure left-over food retains its freshness. **(2mks)**

……

……

23. Give two ways fruits can be made available as convenience foods. **(2mks)**

……

……

SECTION B (20MKS)(Compulsory)

24. Your friend is celebrating her seventeenth birthday and you are to help in the preparation.

Describe how you would

(a) Launder her woolen shawl she is owing to use that evening. **(8mks)**

(b) Clean her white canvas shoes with laces. **(7mks)**

(c) Clean her plastic chair. **(5mks)**

SECTION C (ANSWER ANY TWO QUESTIONS)

25. a) State four points to consider when buying labor saving cleaning equipment. **(4mks)**

b) Outline five reasons for using soft furnishing in the home. **(5mks)**

c) Discuss three factors that may affect normal foetus development. **(6mks)**

d) Outline five measures to undertake to conserve fuel at home. **(5mks)**

26. a) Giving reasons, state four rules to observe while removing stains from the garment. **(4mks)**

b) Explain four qualities of a good toy. **(4mks)**

c) With the aid of 3 well labeled diagrams explain how to make a double-stitched seam. **(7mks)**

d) Explain five laundry practices that are harmful to woolen fabrics. **(5mks)**

27. a) State four problems related to breastfeeding and give their remedies. **(4mks)**

b) State four rules of first aid. **(4mks)**

c) Discuss any two methods of credit buying. **(4mks)**

d) Give four advantages electric lighting has over the use of hurrican lamp lighting. **(4mks)**

e) Give four ways of conserving energy in the home while cooking. **(4mks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

HOME SCIENCE

441/2

PAPER 2

PRACTICAL

TIME: 2½ HOURS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education.

441/2

HOME SCIENCE

(CLOTHING CONSTRUCTION)

PAPER 2

(PRACTICAL)

CONFIDENTIAL

INSTRUCTIONS TO SCHOOLS

The school is advised to provide the candidates with the following materials.

1. Plain light weight cotton fabric 50cm by 90 cm wide.
2. Sewing thread to match fabric.
3. Sewing machines at least 4 per 10 students.

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

HOME SCIENCE

441/2

PAPER 2

PRACTICAL

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

441/2

HOMESCIENCE (CLOTHING AND TEXTILES)

PAPER 2

PRACTICAL

TIME: 2½ HOURS

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A pattern of a girl's skirt is provided. You are advised to study the sketches, the question paper and lay out carefully before you begin the test.

MATERIALS PROVIDED

1. Pattern pieces

A. Skirt front

B. Skirt back

C. Pockets

D. Front yoke

2. Light weight cotton fabric 50cm by 90cm wide.

3. Sewing thread to match the fabric

THE TEST

a. Using the materials provided, cut and make the right half of the skirt to show the following processes.

b. The preparation of the gathers on the skirt front piece.

c. Attachment of yoke piece to the skirt front piece using a neatened overlaid seam. Use loop stitches.

d. Attachment of front pocket piece to the skirt front and back pocket piece to the skirt back.

e. The making of an unneatened open seam at the side above and below the pocket mouth.

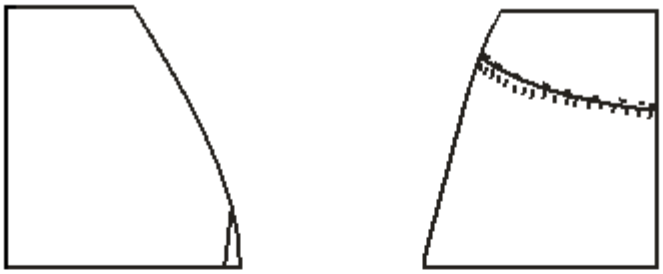
f. The joining of the pocket bag seam (do not neaten)

g. Use preparation of the skirt hem and slip hemming it.

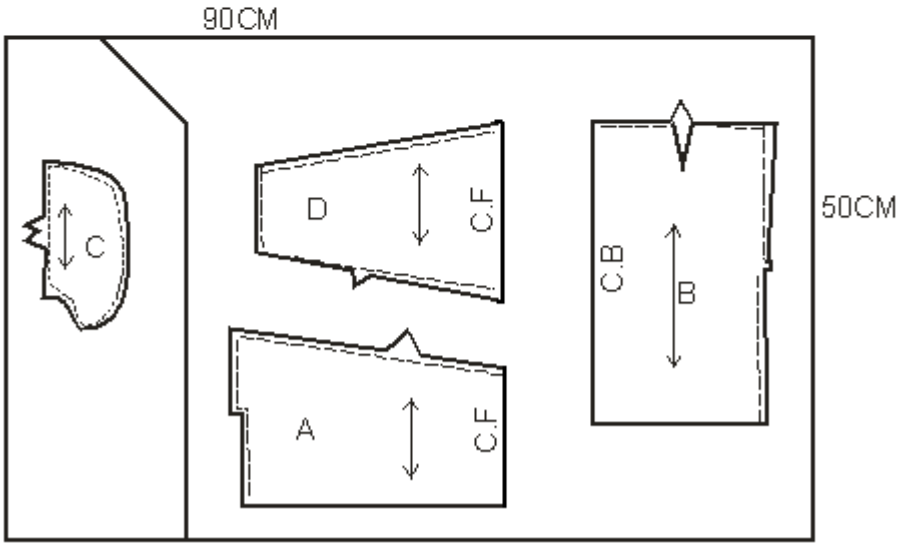
At the end of the examination, firmly sew onto your work on a single fabric a label bearing your **Name** and **admission Number**. Remove the needles and pins from your work then fold it neatly.

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SKIRT VIEW



THE LAYOUT (not drawn to scale)



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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

HOME SCIENCE

441/3

PAPER 3

PRACTICAL

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

441/3
HOME SCIENCE (FOOD AND NUTRITON)
Paper 3
(PRACTICAL)
Time: 1 ¾ HOURS
PLANNING SESSION: 30 MIUTES
PRACTICAL TEST SESSION: 1 ¾ HOURS

INSTRUCTIONS TO CANDIDATES

1. *Read the test carefully.*
2. *Write your name and Index number on every sheet of paper used.*
3. *Text books and recipes may be used during the planning session as reference materials.*
4. *You will be expected to keep to your order of work during the practicalsession.*
5. *You are only allowed to take away your reference materials at the end of the planning session.*
6. *You are not allowed to bring additional notes to the practical session.*

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THE TEST.

The B.O.G chairman has visited the school and you have been put in charge of his lunch.

Using all the ingredients listed below, prepare, cook and present a two course meal for him and the principal of the school.

Ingredients.

1. Rice/ wheat flour/ ugali flour
2. Beef/ chicken/ fish
3. Vegetables in season
4. Pineapples
5. Sweet Bananas
6. Lemon
7. Mellon
8. Sugar
9. Tomatoes
10. Salt
11. Oil/ fat
12. Onions
13. Seasoning (Roiko, mixed spice e.t.c)

1. Identify the dishes and write down the recipe.
2. Write down your order of work.
3. Make a list of the food stuff and equipment you will require.

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

ISLAMIC RELIGIOUS EDUCATION

314/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your name and admission number in the spaces provided above.*
- *This paper consists of six questions.*
- *Answer any **FIVE** questions in the answer sheet provided*
- *Each Question carries 20 marks*

Questions No.	1	2	3	4	5	6	GRAND TOTAL
Marks							

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*Answer any **FIVE** questions*

1. a) Highlight the lessons derived from the first portion of revelation of the Quran **(6marks)**

b) Discuss the rationale for the narratives of the prophets in the Holy Quran **(6marks)**

c) State the modern ways adapted in teaching the Quran **(8marks)**

2 a) Discuss any four differences between the Mas-haf of Abubakar and that of Uthman **(8marks)**

b) Outline the significance of reciting ayatul Kursy **(6marks)**

c) Explain how a Muslim can modify his life according to Suratul Hujurat **(6marks)**

3 a) State any five Shia collections of Hadith **(5marks)**

b) Give reasons why the fourth period of Hadith collection is regarded as the Golden age of Hadith collection **(8marks)**

c) The prophet (S.A.W) said "looking for a lawful earning is an obligatory act next to obligatory worship" With reference to the Hadith explain how Muslims can eradicate poverty in the society **(7marks)**

4 a) Discuss the relevance of punishment according to Shariah law **(8marks)**

b) Outline the features of a Juma'a prayer **(6marks)**

c) Mention six main activities of Hajj **(6marks)**

5a) Discuss the relevance of the sunnah acts observed during the month of Ramadhan **(7marks)**

b) Highlight five ways of asking for tawbah **(5marks)**

c) Discuss the challenges of Zakat collection in Kenya **(8marks)**

6 a) Give the rationale of forbidding Shirk in Islam **(7marks)**

b) Discuss any four stages that a Muslim passes through immediately after death **(8marks)**

c) Explain the incident of Ghadir Khum according to Shia belief **(5marks)**

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TOPGRADE 2023 PREDICTION

KCSE SERIES 1 EXAM

ISLAMIC RELIGIOUS EDUCATION

314/2

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 in the spaces provided above.*
- *This paper consists of six questions.*
- *Answer any **FIVE** questions in the answer sheet provided*
- *Each Question carries 20 marks*

Questions No.	1	2	3	4	5	6	GRAND TOTAL
Marks							

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*Answer any **FIVE** questions*

1 a. State **eight** effects of betting to the Muslim youth **(8 marks)**

b. Suggest ways of preventing zinaa in the community (**6 marks)**

c. Give **six** reasons why it is important for Muslims to conserve the environment **(6 marks)**

2 a. Describe the duties of the extended family members **(6 marks)**

b. Discuss how corruption undermines growth of society **(8 marks)**

c. What is the rationale for Eddat in Islam **(6 marks)**

3 a. Give **seven** reasons why agreements and contracts have to be documented in Islam**(7 marks)**

b. State the rules for jihad in Islam **(8 marks)**

c.Mention measures that can be taken to guard against hoarding (**5 marks)**

4a. State the similarities between the rule of ummayad and Abbasid dynasties **(6 marks)**

b.Give reasons why umar bin abdulaziz's reign is regarded as the heydays of the Umayyad dynasty **(6 marks)**

c.Explain **Four** significance of the battle of Hunain to Muslims (**8 marks)**

5 a. Highlight the human rights issues in madina constitution found in the modern constitutions **(6 marks)**

b.Mention the Contributions of Ali bin Abu Talib to the prophets misson. **(7 marks)**

c.State the achievements of the Abbasid dynasty **(7 marks)**

6 a. Discuss seven contributions made by ibn sina to medicine. **(7 marks)**

b.Mention Lessons a Muslim can learn from Ikhwan al-muslimun **(7 marks)**

c.In what ways can Muslims contribute in eradication of unemployment **(6 marks)**

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THE END

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