KCSE 2024 PROJECTION

ALL SUBJECTS

An Appendage of Questions Speculated to be Tested in the Final KCSE Examinations Predicted by a Team of Experienced KNEC Examiners & Professionals Scheduled for November 2024.

SUBJECTS PREDICTED;

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

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CONFIDENTIAL!

For Marking Schemes

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THE GATEWAY TO SUCCESS

KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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:

a) *There are **six** questions in this paper.*

b) *Answer any **five** questions.*

c) *Each student must verify that all pages and questions are present in the paper.*

d) *All answers must be in the answer sheets provided.*

e) *All answers must be in English.*

FOR EXAMINERS' USE ONLY

QUESTION	1	2	3	4	5	6	TOTAL
SCORE							

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Answer Any Five Questions

1) (a) Describe 7 teachings about human beings from the biblical creation accounts. **(7 marks)**

(b) Give f**ive** causes of the original sin from the book of Genesis. **(5 marks)**

(c) What are the consequences of breaking taboos in the traditional African society? **(8 marks)**

2) (a) Describe **four** ways in which the ordination of church leaders in Kenya is a covenant. **(8 marks)**

(b) Outline **six** moral teachings from the 10 commandments. **(6 marks)**

(c) Identify **seven** challenges Christians face while practicing their faith in Kenya today. **(7 marks)**

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

(b) Outline the roles of judges in Israel. **(6 marks)**

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

4. (a) Describe how the prophetic messages were written down. **(6 marks)**

(b) State the differences between Old Testaments prophets and traditional African prophets. **(8 marks)**

(c) Outline **five** methods religious leaders use today to spread the gospel. **(5 marks)**

5. (a) Give **six** reasons why Jeremiah was not willing to accept the call of God to become a prophet. **(6 marks)**

(b) Explain four reasons why Nehemiah introduced the policy of separation of Jews from foreigners. **(8 marks)**

(c) Why do political leaders in Kenya today fail to perform their duties efficiently? **(6 marks)**

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6. (a) What changes have taken place in the rite of initiation in Kenya today? **(8 marks)**

(b Identify moral values taught to the youths during initiation to adulthood in traditional African communities. **(6 marks)**

(c) Give reasons why female circumcision is being discouraged in Kenya today.

(6 marks)

All the Best!

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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:

a) *There are **six** questions in this paper.*

b) *Answer any **five** questions.*

c) *Each student must verify that all pages and questions are present in the paper.*

d) *All answers must be in the answer sheets provided.*

e) *All answers must be in English.*

FOR EXAMINERS' USE ONLY

Question	1	2	3	4	5	6	TOTAL
SCORE							

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Answer Any Five Questions

1. (a) With reference to the stories of the birth and infancy of Jesus, describe the occasions when the angel of the Lord appeared. **(8 marks)**

(b) Describe the visit of the angel of the Lord to the shepherds on the night Jesus was born **(7 marks)**

(c) State **five** ways in which Christians celebrate Christmas today. **(5 marks)**

2. (a) Describe **four** teachings of John the Baptist. **(8 marks)**

(b) Identify **five** teachings of Jesus about John the Baptist. **(5 marks)**

(c) Identify ways in which the church wins people for the kingdom. **(7 marks)**

3. (a) Describe the incident in which Jesus forgave the sinful woman in Luke 7:36-50.**(8 marks)**

(b) Give **six** reasons why Jesus chose the twelve Disciples. **(6 marks)**

(c) State ways in which Christians show their belief in God? **(6 marks)**

4. (a) Explain the unity of believers as expressed by the image of the bride. **(7 marks)**

(b) How was the life of Peter transformed on the day of Pentecost? **(6 marks)**

(c) What are the qualities of an evangelist in Kenya today? **(7 marks)**

5. (a) Discuss the Christian teachings on marriage. **(6 marks)**

(b) Explain the circumstances under which divorce may be allowed in Traditional African society. **(7 marks)**

(c) Identify **seven** ways through which Christians minimize conflict between parents and children today. **(7 marks)**

6. (a) Discuss the importance of leisure in life of a Christian. **(7 marks)**

(b) Outline Christian criteria for evaluating the use of leisure. **(7 marks)**

(c) Give reasons why people abuse alcohol and other drugs. **(6 marks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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

(a) *Write your* ***name, index number*** *and the* ***name*** *of your school in the spaces provided above.*

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

(c) *This paper consists of THREE sections A, B and C*

(d) *Answer all questions in section A, choose three questions in section B and two questions in section C*

(e) *Answers to all questions must be written in the answer booklet provided*

FOR EXAMINER USE ONLY

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

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SECTION A (25MKS)

Answer all questions in this section

1) Identify two ways through which archaeologists obtain information on the history of Kenya. **(2mks)**

2) What was the original homeland of the Eastern Cushites. **(1mk)**

3) Give two reasons why Kenyan communities fought against each other during the Pre-colonial period. **(2mks)**

4) State the role of the age set among Kenyan communities. **(1mk)**

5) State the main reason why slaves were on high demand along the East African coast in the 19th century. **(1mk)**

6) State two reasons for the coming of Christian missionaries in East Africa in the 19th century. **(2mks)**

7) State two ways in which the Constitution can be amended in Kenya. **(2mks)**

8) Give two functions of the Legislative Council (Legco) during the colonial period. **(2mks)**

9) State two functions of the African welfare organizations in urban centres during the colonial period **(2mks)**

10) Mention one contribution of Daniel Arap Moi towards Nations Building. **(1mk)**

11) One parliamentary election held in Kenya **(1mk)**

12) State two ways in which the government has promoted the culture of the people of Kenya since independence**.** **(2mks)**

13) What is the main purpose for the establishment of the equalization fund in Kenya **(1mk)**

14) State one way through which the opposition political parties in Kenya check on the government's excesses. **(1mk)**

15) State two feature of African socialism in Kenya **(2mks)**

16) Name the education commission that recommended the introduction of 8.4.4 education **(1mk)**

17) Identify one type of public revenue expenditure by the national government **(1mk)**

SECTION B: (45 MARKS)

Answer Any Three Questions In This Section.

18) (a) Outline five reasons for the migration of the Luo form their original homeland. **(5mks)**

(b) Describe the political organization of the luo during the pre-colonial period. **(10mks)**

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19)(a) State three terms of the Anglo-German Agreement of 1886. **(3mks)**

(b). Explain six problems experienced by the imperial British East Africa company to establish colonial rule in Kenya **(12mk)**

20)(a) Give five factors that undermined the activities of the Kenya African union in the struggle for independence **(5mks)**

(b) Describe five political roles played by African elected members of parliament during the struggle for independence **(10mks)**

21)(a) State three challenges that hinder government effort to eradicate illiteracy in Kenya **(3mks)**

(b) Explain six factors which have undermined the provision of the health services by the government of Kenya **(12mks)**

SECTION C (30 MARKS)

Answer Any Two Questions from This Section

22) (a) give three circumstances in which ones right of life may be taken away **(3mks)**

(b) Explain six civil responsibilities of Kenya citizen **(12mks)**

23)a). Give three reasons why elections are regularly held in Kenya. **(3mks)**

b). Describe the process of law-making in Kenya. **(12mks)**

24)a). State three roles of the Commission on Revenue Allocation (CRA) **(3mks)**

(b) Explain six ways in which the county government raise their revenue **(12mks)**

All the Best!

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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

(a) *Write your* ***name, index number*** *and the* ***name*** *of your school in the spaces provided above.*

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

(c) *This paper consists of THREE sections A, B and C*

(d) *Answer all questions in section A, choose three questions in section B and two questions in section C*

(e) *Answers to all questions must be written in the answer booklet provided*

FOR EXAMINER USE ONLY

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

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SECTION A (25MKS)

Answer all questions in this section

1. Give **two** types of monarchical government **(2marks)**

2. Name the earliest ancestor of man whose skull was discovered in the Fayum valley in Egypt **(1mark)**

3. State the **main** reason why agriculture developed in Egypt **(1mark)**

4. Identify **one** invention that revolutionilised food preservation in the 19th century **(1mark)**

5. What was the **main** item of trade during the Trans-Saharan trade? **(1mark)**

6. Identify **two** historical documents that are sources of the British constitution **(2marks)**

7. Give the **main** contribution of William Morton to surgical science **(1mark)**

8. Name the founders of the early urban centre of Kilwa? **(1mark)**

9. State **one** problem that the city of London experienced in the pioneering years **(1mark)**

10. Give **one** non-peaceful method used by Europeans to occupy Africa **(1mark)**

11. Name **two** African countries that were under Italian colonial rule **(2marks)**

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

13. State **two** external factors that facilitated the growth of African nationalism. **(2marks)**

14. Give **one** way in which colonial rivalries between European nations contributed to outbreak of world wars. **(1mk)**

15. State **two** political functions of the Kabaka before the 20th century **(2marks)**

16. Identify **two** treaties signed by Lewanika of Lozi that permitted British occupation of Lozi territory **(2marks)**

17. Identify **two** European powers that participated in World war I on the side of the Central powers **(2marks)**

SECTION B (45 MARKS)

Answer any THREE questions in this section

18. (a) State **three** ways employed by the early man to domesticate animals. **(3marks)**

(b) Explain **six** problems associated with open field system of farming **(12marks)**

19. (a) Identify **five** disadvantages of human porterage **(5marks)**

(b) Explain **five** impacts of telecommunication to the growth of the social-economic sphere of life **(10marks)**

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20. (a) Give **five** reforms introduced by the Germans in Tanganyika after the Maji Maji rebellion. **(5marks)**

(b) Explain **five** reasons for the failure of the Maji Maji uprising **(10marks)**

21.(a) State **three** factors that enabled European powers to colonise Africa in the late 19th century. **(3marks)**

(b) Explain **six** political effects of the partition of Africa to the African people **(12marks)**

SECTION C (30 MARKS)

Answer any TWO questions in this section

22.(a) State **three** reasons why the British used direct rule in Zimbabwe. **(3marks)**

(b) Describe the structure of British colonial rule in Northern Nigeria. **(12marks)**

23.(a) State **three** economic reasons for the rise of nationalism in Ghana. **(3marks)**

(b) Discuss **six** factors that favoured FRELIMO in the war against colonial government **(12marks)**

24.(a) State **three** reasons for the entry of U.S.A in the world war I. **(3marks)**

(b) Explain **six** reasons why the Allied won the World War I. **(12marks)**

All the Best!

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

GEOGRAPHY

312/1

PAPER 1

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

b) *Answer **all** the questions in section **A**.*

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

d) *Each question in section B must be answered in separate foolscaps.*

FOR EXAMINERS ONLY

QUESTION	A	6	7	8	9	10	TOTAL
MARKS							

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SECTION A

Answer all the questions in this section.

1) (a) What is a Land Breeze **(2mks)**

(b) Give three ways in which sea breeze influence the adjacent land. **(3mks)**

2) State 5 characteristics of the mantle **(5mks)**

3) (a) Differentiate between magnitude and intensity of an earthquake. **(2mks)**

(b) State three precautions which can be taken against earthquake destruction? **(3mks)**

4) (a) Give two causes of Ocean currents **(2mks)**

(b) List three reasons why Oceans tend to heat more slowly than land masses. **(3mks)**

5) (a) What is humus **(2mks)**

(b) State three ways through which humus improve the quality of a soil. **(3mks)**

SECTION B

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

6) Study the map of Mumias (1:50 000) provided and answer the following questions.

(a)(i) Identify ***two*** types of scales used on the map extract. **(2 marks)**

(ii)Measure the length of the Dry Weather Road C532 from the junction at grid square 6434 to the edge of the map to Likonga. Give your answer in kilometres. **(2 marks)**

(iii)Give ***three*** physical features found at grid square 5829. **(3 marks)**

(iv)Give the longitudinal extent of the area covered by the map. **(2 marks)**

(b) Draw a rectangle 14cm by 10cm to represent the area enclosed by Eastings 50 and 64 and Northings **30** and **40**. On it mark and name; **(1 mark)**

- River Nzoia **(1 mark)**
- Papyrus swamp **(1 mark)**
- All Weather Road Loose Surface **C528.** **(1 mark)**

(c)(i) Citing evidence from the map, give ***four*** social services provided in Mumias town. **(4 marks)**

(ii) Name ***two*** districts found in the area covered by the map**.** **(2 marks)**

(d) Describe the drainage of the area covered by the map. **(6 marks)**

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7) (a) (i) State two processes of wind erosion in the desert areas **(2mks)**

(ii) Give three reasons why wind action is effective in the hot deserts. **(3mks)**

(iii) With aid of well labelled diagrams describe the formation of Yardangs. **(7mks)**

(b) i) State two factors that influence the transportation of materials in the desert by wind **(2mks)**

(ii) Give three processes through which wind transport materials in desert **(3mks)**

(iii) Name two features that are formed due to action of water in deserts. **(2mks)**

c) Explain three positive effects of desert landforms to human activities **(6mks)**

8) (a) i) List two effects of horizontal earth movements **(2mks)**

(ii) Give three causes of earth movements **(3mks)**

b) i) Name and describe three types of plate tectonic boundaries **(6mks)**

(ii) Name three types of folds **(3mks)**

c) With aid of well labelled diagrams, describe the formation of fold mountains **(7mks)**

d) State four significance of folding to the human and physical environment. **(4mks)**

9) a) Define the following term;

water table – **(2mks)**

aquifer – **(2 mks)**

b) Explain how the following factors influence the occurrence of underground water.

i) Nature of the rock **(2mks)**

ii) Gradient of the land **(2mks)**

c) State four conditions that are necessary for the formation of an artesian well **(4mk)**

d) (i) Explain three conditions that are necessary for development of Karst Scenery **(6mks)**

(ii) Give two reasons why there are few settlements in karst region **(2mks)**

Students carried out a field study in a karst landscape.

i. State two methods they would have used to record data **(2mks)**

ii. State three importance of studying a karst landscape through field work. **(3mks)**

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10) **(a) i)** What is ice sheet **(2mks)**

(ii) Explain the reason why there are no ice -sheets in Kenya **(2mks)**

b) Describe the formation of a pyramidal peak. **(5mks)**

C) i) Name three types of moraine **(3mks)**

(ii) Explain four effects of glaciated features in upland areas. **(8mks)**

d) Students from a school near Mt. Kenya were planning to carry out a field study on the glaciated features on the mountain

i) Give three reasons why it would be difficult to undertake the field study on glaciated features on the mountain **(3mks)**

ii) Highlight two methods of collecting data they would have used **(2mks)**

All the Best!

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

GEOGRAPHY

312/2

PAPER 2

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

b) *Answer **all** the questions in section **A**.*

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

d) *Each question in section B must be answered in separate foolscaps.*

FOR EXAMINER USE ONLY

QUESTION	A	6	7	8	9	10	TOTAL
MARKS							

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SECTION A

Answer all questions in this section

1) a) Define the term "derelict land". **(1mk)**

b) State **three** ways in which mining can pollute the environment. **(3mks)**

2) a) State **two** causes of food shortage in Kenya. **(2mks)**

b) State **three** social factors affecting agriculture in Kenya. **(3mks)**

3) a) Name the **three** main towns that form the cocoa triangle in Ghana. **(3mks)**

b) State **three** physical conditions favouring cocoa growing in Ghana. **(3mks)**

4) a) i) Name **two** varieties of coffee grown in Kenya **(2 marks)**

b) ii) Explain how the following factors favour coffee growing in the central Highlands of Kenya.

High Altitude **(2 marks)**

High Population **(2 marks)**

5) a) State **two** physical factors influencing beef farming in Argentina. **(2mks)**

b) State **two** differences between beef farming in Argentina and Kenya. **(2mks)**

SECTION B

Answer question 6 and any other two questions in this section

6) Study the photograph shown below and use it to answer the following questions.



a) i) Identify the type of the photograph shown above. **2mks**

ii) Identify **one** characteristic of the photograph shown above. **2mks**

iii) Give **three** parts of a photograph. **3mks**

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b) Name the type of mining method shown above. **2mks**

c) Explain how the method named above (b) is carried out. **6mks**

d) Explain **three** negative effects of the above method of mining on the environment. **6mks**

Draw a sketch diagram to represent the photograph shown above. **4mks**

7) (a) Differentiate between land reclamation and land rehabilitation. **(2mks)**

(i) List **three** ways in which tsetse fly menace has been controlled in the Lambwe Valley**.** **(3mks)**

(ii) Name **two** areas in Kenya where swamps have been reclaimed. **(2mks)**

(iii) State **four** factors which influenced the establishment of Perkerra Irrigation Scheme. **(4mks)**

You intend to carry out a field study on Budalangi Flood control.

(i) Name **two** methods that have been used to control flooding in Budalangi. **(2mks)**

(ii) Give **three** reasons why flood control in Budalangi is important. **(3mks)**

(iii) List **three** activities that you would undertake prior to the study. **(3mks)**

(iv) Explain **three** methods that you would use to present your findings after the study**.** **(6mks)**

8) a) (i) Differentiate horticulture from market gardening. **(2mks)**

(ii) State **three** features of horticulture. **(3mks)**

(b) Explain **three** differences between horticulture in Kenya and Netherlands. **(6mks)**

c) (i) Give **three** livestock breeds of beef cattle found in Kenya. **(3mks)**

(ii) Explain **three** human factors that favour beef production in Argentina. **(6mks)**

d) Give **five** steps that the government of Kenya has taken to improve beef farming. **(5mks)**

9) a) (i) Name **two** types of fishing. **(2mks)**

(ii) State **three** factors that influencing fishing. **(3mks)**

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b) Explain **three** reasons why the North East Atlantic fishing ground is extensively and highly developed. **(6mks)**

c) (i) What is fish farming? **(2mks)**

(ii) Describe harpooning as a method of fishing. **(4mks)**

d) (i) State **two** problems facing fishing in Japan. **(4mks)**

(ii) Explain **two** similarities between fishing in Kenya and Japan. **(4mks)**

10) a) (i) Define a forest. **(2mks)**

(ii) State any **four** characteristics of Tropical Hardwood forests **(4mks)**

b) Explain how each of the following factors influence the distribution and types of natural forests.

(i) Soils **(2mks)**

(ii) Altitude **(2mks)**

c) (i) State **five** importance of forest products in Kenya. **(5mks)**

(ii) List **four** measures that have been taken to conserve forests in Kenya. **(4mks)**

d) Compare softwood forests in Kenya and Canada under the following sub-headings

(i) Tree species **(2mks)**

(ii) Processing **(2mks)**

(iii) Marketing **(2mks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

ENGLISH

101/1

PAPER 1(Functional Skills)

TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:-

a) *Write your* ***Name, Admission number*** *and* ***Class*** *in the spaces provided above.*

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

c) *Answer* ***all*** *questions in this question paper.*

FOR EXAMINER'S USE ONLY:

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	**20**	
2	**10**	
3	**30**	
TOTAL SCORE	**60**	

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FUNCTIONAL WRITING **(20MARKS)**

There has been a change over in the Administration of your school. The chairperson of the school Student Council Executive which comprises of eight members calls for a familiarization meeting with the Principal.

The Executive has the following members: The School Chair the Deputy, the Dining Hall Prefect, the Games Captain, the Medical Prefect and three Dorm Prefects.

The following issues were addressed in the meeting:

(i) Introduction of members
(ii) Election of Council Members
(iii) The Role of Council in School
(iv) Motivation of members
(v) Discipline of members
(vi) Any other Business

During the meeting, the Dining Hall prefect sends his apology due to an on-going exam, while two Dorm Prefects are away due to fees.As the Secretary of the Student Council Executive Committee, write the Minutes of your first meeting with the new Principal.

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CLOZE TEST (10 MARKS)

Read the passage below and fill in each blank space with an appropriate word.

Although the government has--1----------a number of county schools to national status, most of them have not shown any--2----------achievement to warrant their newly-acquired title. Thus, the-3---------- is for government to provide adequate resources to prepare the schools to take their rightful place and ultimately-4----------alternative centers of excellence. The reason for elevating more schools to national status is-5----------just in name, but to offer opportunities for more primary school leavers to benefit--6---------- the resources in these institutions. ---7----------that is not achieved, and then the drive to expand national schools will become an academic exercise. After form four, the -8----------will be looking for progression to universities or other tertiary institutions. Statistics indicate that about-9----------third of the candidate, 149,717 out of 482,133 who registered for the exams, scored grades C+ and above, --10----------for university admission.

Read the poem below and then answer the questions that follow.

When, in disgrace with Fortune and men's eyes,

I all alone beweep my outcast state,
And trouble deaf heaven with my bootless cries,
And look upon myself and curse my fate,
Wishing me like to one more rich in hope,
Featured like him, like him with friends possessed,
Desiring this man's art and that man's scope,
With what I most enjoy contented least,
Yet in these thoughts myself almost despising;
Haply I think on thee, and then my state,
(Like to the lark at the break of day arising)
From sullen earth sings hymns at heaven'ss gate,
For thy sweet love remembered such wealth brings
That then I scorn to change my state with kings.

(*William Shakespeare's Sonnet 29*)

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QUESTIONS

i) Identify any **four** pairs of words that rhyme in this poem. **(2 marks)**

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(ii) Give **two** instances of allite3E4Eration **in** this poem. **(2 marks)**

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iii) Imagine you are performing this poem to learners who are visually impaired. Explain four ways in which you would ensure that they get the message effectively. **(4mks)**

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Identify any five pairs of homophonesin the list below. **(5 marks)**

phloem	mad	heir
floors	flaws	berry
hair	coarse	flame
clause	mud	
course	cause	
close	cloze	
bold	bald	
floss	air	
phlegm	bury	

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(i)…….. ……

(ii)…….. ……..

(iii) …… ……..

(iv)…….. ……..

(v)……. …….

Provide two words for each of the following sounds. **(2 marks)**

/a:/ **/ɜ:/**

I) I)

II) II)

The underlining indicates the stressed word in the sentences below.

Briefly explain what each sentence means. **(3 mks)**

<u>Mary</u> bought a present for John.

Mary <u>bought</u> a present for John.

Mary bought a present for <u>John.</u>

Using a riddle of your choice, explain the riddling process. **(6 mks)**

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Classify the following sub-genre. **(2 marks)**

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The following is a conversation between a father and his daughter.

DAUGHTER: (*shortly having arrived home from school*) Good afternoon, Daddy

FATHER: *(Sitting complacently in the sofa, reading a newspaper. Looking up…..)* Good afternoon *(Resumes reading)*

DAUGHTER: (*Holding out her school report form)* Daddy, I'm excited. My teacher said I was the best improved. I was……..

FATHER: Oh, you were? Me, I used to be number one. I was absolutely unbeatable.

DAUGHTER: Chemistry has been a particular headache *(now looking at the report form which she thought her father would want to see)*, but this time…….

FATHER: (*Stretching his arms, looking preoccupied)*

Chemistry for me was particular easy.

I never scored anything less than 90%

DAUGHTER: Dad, I was going to tell you that this time…….

FATHER: *(Absent minded)* by the way, where is your mum?

DAUGHTER: Mum is in the garden picking vegetables. But dad, you're not listening to my story. I was telling you about Chemistry

FATHER: You mean you have a story about chemistry? Chemistry is not about stories. It is hard science.

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DAUGHTER: It's about my improvement……..

FATHER: (laughing*)* me, it wasn't matter of improvement. I was always at the top of the class

DAUGHTER: Daddy, I give up. You're not listening

FATHER: *(looking surprised)* Listening? I heard you: you were talking about improvement in chemistry, weren't you?

DAUGHTER: anyway, Dad. Thank you for paying attention. Enjoy your newspaper.

FATHER: Oh yes, I'm reading an interesting story about politics

Question

Identify four ways in which the father can improve hislistening skills **(4mks)**

……

……

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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 to candidates

a) *Write your name and index number in the spaces provided at the top of this page.*

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

c) *Answer ALL the questions in this question paper.*

d) *All your answers must be written in the spaces provided in this question paper.*

e) *Candidates must answer all the questions in English.*

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1	20	
2	25	
3	20	
4	15	
	TOTAL SCORE	

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COMPREHENSION

1. **Read the following passage and answer the questions that follow: (20 Marks)**

When in early 1970s ultrasound confronted me with the sight of the embryo in a womb, I simply lost my faith in abortion on demand. I did not hold onto my old convictions. The change was in its way a clean and surgical conversion. I am by nature one that works out the conflicting data, weighs the opposing argument with great care, makes a decision and then acts upon it with no lingering backward glances.

By 1984 however, I had begun to ask myself more questions about abortion: What actually goes on in an abortion? I had done many but abortion is a blind procedure. The doctor does not see what he is doing. He puts an instrument into a uterus and he turns on a mortar and a suction machine goes on and something is vacuumed out; it ends up as little pile of meat in a gauze bag. I wanted to know what happened, so in 1984 I said to a friend of mine who was doing fifteen or maybe twenty abortions a day:' Look ,do me a favour,Jay .Next Saturday when you are doing all these abortions put an ultra sound on the mother and tape it on me."

He did, and when he looked at the tapes with me in the editing studio, he was so affected that he never did another abortion. Although I had not performed an abortion in five years, I was shaken to the very roots of my soul by what I saw. The tapes were shockingly amazing. Some of the tapes weren't of very good quality but I selected one that was of better quality than the others and began to show it at pro- life gatherings around the country.(I had my first contact with pro-life movement in 1981 when the then president of the National Right to Life Committee, Carolyn Gerster, had gotten in touch with me).

At the time, I was speaking at a pro-life meetings around the country in weekends, and the response to the tape was so intense and dramatic that finally I was approached by a man named Don Smith, who wanted to make my tape into a film. I agreed that it would be good idea. That is how *The Silent Scream*, which was to generate so many furore, came to be made. We showed it for the first time in Fort Lauderdale, Florida, on January3, 1985. The reaction was instantaneous. Everybody was up in arms because *The Silent Scream* represented an enormous threat to the abortion forces, and because it escalated the war (it is not really a debate- we don't debate with each, we scream at one another). For the first time, we had the technology, and they had nothing.

The *Silent Scream* depicted a twelve- week- foetus being torn to pieces in the uterus by the combination of suction and crushing instrumentation by the abortionist. It was so powerful that pro choicers trotted out their heaviest hitters to denounce the tape. They very cleverly deflected the impact of the film into an academic cul- de- suc: a dispute regarding whether the foetus feels pain during an abortion. The impetus for the debate came from an on – the- record musing by the then President, Ronald Reagan, as to how much pain the foetus feels during an abortion.

(Source: *The hand of God: A journey from death to life by the Abortion doctor who changed his mind- Bernard N. Nathanson, MD)*

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a) Based on your understanding of the entire passage, comment on the nature of the writer's 'old convictions'. **(2 marks)**

……

……

……

……

b) Explain why it was easy for doctors such as the writer to carry out abortions prior to introduction of ultrasound technology? **(2 marks)**

……

……

……

c) What are the names that are commonly used to refer to the two opposing groups mentioned in the passage **(2 marks)**

……

……

……

d) Briefly describe, in your own words, how those who supported abortion tried to undermine the impact of ' ***The Silent Scream'***. **(2 marks)**

……

……

……

e) " I was shaken to the very roots of my soul by what I saw''. Rewrite this sentence beginning: **(What…)** **(1 mark)**

……

……

……

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f) Make notes on the way abortion is carried out according to this passage **(4 marks)**

……

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g) Identify and illustrate the use of parenthesis in the passage, give two examples. **(2 marks)**

……

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……

h) Provide one example from the passage to illustrate the need for leaders to weigh their words carefully. **(2 marks)**

……

……

……

i) Explain the meaning of the following words as used in the passage. **(3 marks)**

i)convictions……

……

ii)escalated……

……

iii)impetus……

……

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2. Read the excerpt below and then answer the questions that follow.

First, there was a loud crash. Some moving object had hit another moving object. A trailer hooked to a truck negotiating a turn at a roundabout had broken free, spun outward, and ended up on top of a minibus in an adjacent lane.

The drivers of both vehicles had then run away. They had done so to avoid mob justice. Now the passengers in the unlucky minibus were struggling to get out, except for one—a woman trapped in a seat.

A man had seen her on his way out. He tried to go back in and get her out, but all doors had jammed. He pulled a mobile phone out of his pocket and called the mystical number — 999 — to report distress and request help.

The hour was ten in the morning. Onlookers started arriving. First, they only gawked, fascinated by the spectacle of a trailer sitting on top of a minibus. Goodness, how did it get there! Later, their attention moved down to the woman trapped inside the minibus. "Look," said one onlooker. A beautiful girl was trapped in her seat.

She was still conscious. "She is fine, then," said another onlooker. "Come on," said the first onlooker. "A heavy trailer is sitting on her minibus, so how can she be fine?" When the onlookers became a crowd, they tried to push the trailer off the minibus.

They failed. Then a big van appeared...

QUESTIONS

a) Put this excerpt in its immediate context. **(4 marks)**

……

……

……

……

b) Give the character traits of the following: **(6 marks)**

The man

……

……

The onlookers

……

……

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The drivers

……

……

c) From elsewhere in the novel, how does conflict arise between Kimani and Asiya over the death of their daughter? **(4 marks)**

……

……

……

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……

d) How is dialogue significant in this excerpt? **(4 marks)**

……

……

……

……

……

……

e) Identify and explain one stylistic device used in the extract. **(3 marks)**

……

……

……

……

f) "The hour was ten in the morning." Rewrite this statement beginning with**:** **(1 mark)**

It_____

_____

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

Gawked

_____

_____

Fascinated

_____

_____

Conscious

_____

_____

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

Long ago, there was famine in Gikuyu land. This famine had made the cows and goats to die. Only human beings were left and even them, it could be seen that they were not going to live much longer. Now the people asked themselves, "What shall we do?" It was decided that the most beautiful girl, one called Wanjiru should be sacrificed to god so that the rain could fall. She was brought to a place where there was a big river. She started to sing:

Rain fall and make this ridge green
Make this ridge green
My father said I should be lost. I should be lost
My mother said I should be lost. I should be lost

Rain fall and make this ridge green
Make this ridge green
She went down on her knee, she sang:
Rain fall and make this ridge green
Make this ridge green
My father said I should be lost, I should be lost
Rain fall and make this ridge green
Make this ridge green
The water reached the waist, she sang
Rain fall and make this ridge green
Make this ridge green
My father said I should be lost, I should be lost
My mother said I should be lost, I should be lost
Rain fall and make this ridge green
Make this ridge green

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The water reached the neck, she sang
Rain fall and make this ridge green
Make this ridge green
My father said I should be lost, I should be lost
My mother said I should be lost, I should be lost
Rain fall and make this ridge green
Make this ridge green
The head went in

Very heavy rains fell on this land. The grass grew, a lot of food and the people began to feel better. Now where Wanjiru went she found her people who had died before her. These people had a lot of cows and goats. Now they asked her what she would like. She said she wanted cows and goats. She was given many goats and cows and then she was told to lie down in a place. When she woke up she found that she had returned back to her people. She woke up at a place where there was a river and she had her cows and goats. Now when the people saw her they rejoiced greatly.

The story ends there.

Adapted from: The Oral Literature of the Gikuyu by WanjikuKabira and Karega Mutahi.

QUESTIONS

(a) Why do you think this community makes the choice of a beautiful girl such as Wanjiru to sacrifice to god so as to get rain? **(1 mark)**

……

……

(b) Which functions does this song serve in this narrative? **(2mark)**

……

……

(c) Describe one character trait of the villagers in this narrative**.** **(2marks)**

……

……

(d) In point form, list how events follow each other in this story. **(3 marks)**

……

……

……

……

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(e) Identify and explain **two** features of oral narration employed in this narrative.**(4 marks)**

……

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……

……

(f) Identify two elements of fantasy in this story. **(2 marks)**

……

……

(g) Describe Wanjiru's tone in the song. **(3marks)**

……

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……

(h) Which social/cultural practices of the Gikuyu are brought out in this narrative? **(2 marks)**

……

……

……

(i) What does this phrase mean? "My father said I should be lost." **(1 mark)**

……

4(a) Rewrite the following sentences according to the instructions. Do not alter the meaning.

(3 marks)

(i) Muli could have passed the examination. Muli was regularly absent from school. (Join into one sentence beginning: Were it not.....)

……

……

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(iii) The nurses agreed to work after signing an agreement with the government. (Begin: Only…)

……

……

……

(ii) This is the boy. His father is a generous man. (Join into one sentence using a relative pronoun).

……

……

(b)Replace the phrasal verbs underlined in the sentences below with one word that means the same. **(3marks)**

i)It is wrong to <u>look down</u> on students from other schools.

……

(ii) Teachers should not <u>give into</u> their students' unreasonable demands.

……

(iii) The delegates <u>came up</u> with ten rules to guide our response to globalization.

……

(c) Complete the following passage with the most appropriate forms of the words in brackets. **(3marks)**

The Tsunami ……(cruel) destroyed lots of lives and property. For days, the survivors …….. (agony) searched for their missing relatives. The whole experience was ……. (horrible) traumatizing.

(d) Fill in the blanks with the appropriate prepositions. **(2 marks)**

(i) He was charged …….forging property inheritance document.

(ii) Kamau deals…….groceries

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(e) Fill the blank spaces with the correct article **(2 marks)**

i) The students said they wanted……union.

ii) What is ……. Ewe?

(f) Explain the meaning of the following sentences **(2marks)**

i. Lydia found the empty room.

……

……

……

ii. Lydia found the room empty.

……

……

……

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

ENGLISH

101/3

PAPER 3

(Creative Composition and Essays Based On Set Books)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO THE CANDIDATES

a) *Answer three questions only.*
b) *Questions 1 and 2 are compulsory*
c) *In question 1, choose either (a) or (b)*
d) *In question 3, choose only one of the optional text you have prepared on.*
e) *Where a candidate presents work on more than one optional text, the first one to appear will be marked.*
f) *Each of your essays must not exceed **450** words (2 pages).*

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QUESTION	MAXIMUM SCORE	STUDENT'S SCORE
1	20	
2	20	
3	20	
TOTAL	60	

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1. Imaginative Composition **(20marks)**

Either

a) Write a story to illustrate the saying: A bird in hand is worth too in the bush.

Or

b) Write a composition to show how children can be of help to their parents during school holiday.

2. The Samaritan; John Lara **(20marks)**

When a society elects selfish leaders, they bear the full brunt. Using examples from the Play *The Samaritan*, write a composition to show the truth of this statement.

3. Optional Set Texts **(20marks)**

*Answer one question only ;***Either**

Short Story; Siundu Godwin; A Silent Song and Other Stories

a) Traditional practices are meant to create order and harmonious co-existence. When anyone defies them, they bound to suffer. Drawing illustrations from Ng'maryo's story *Ivory Bangles*, write an essay to show the truth of this statement.

Or

b) Play: Adipo Sidang'; Parliament of Owls

Using specific examples from *Parliament of Owls*, write a composition to show that propaganda is a tool used by the leaders to perpetuate impunity.

Or

c) The Novel; Kazuo Ishiguro; An Artist of the Floating World

You cannot run away from your past. Drawing specific illustrations from the Kazuo's *An Artist of the Floating World*, write an essay to show the truth of this statement.

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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

(a) *Andika insha **mbili**.*

(b) *Insha ya kwanza ni ya **lazima** kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia*

(c) *Kila insha isipungue maneno **400***

(d) *Kila insha ni alama 20*

(e) *Kila insha **lazima** iandikwe kwa lugha ya Kiswahili*

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
1	20	
	20	
JUMLA	40	

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1. LAZIMA

Serikali ya Kenya kupitia Wizara ya Elimu imeanzisha mfumo mpya wa elimu ya Umilisi. Mwandikie mhariri wa gazeti la Darubini ukitoa maoni yako kuhusu changamoto zinazotokana na mfumo huu. **(alama 20)**

2. Utelekezaji wa mtoto wa kiume nchini ni janga kuu. Jadili **(alama 20)**

3. Tunga kisa kitakachodhihirisha maana ya methali ifuatayo.

``Mchelea mwana kulia hulia mwenyewe'' **(alama 20)**

4. Anza kwa kifungu kifuatacho.

... Hapo ndipo iliponibainikia kuwa nilikuwa nikiogelea baharini pekee kinyume na wenzangu wote. **(alama 20)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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

*1. Andika **jina lako** na **namba yako** katika nafasi ulioachiwa hapo juu.*

*2. Weka **sahihi yako** na **tarehe** ya mtihani katika nafasi ulizoachiwa.*

3. Jibu maswali yote.

4. Majibu yaandikwe katika nafasi zilizoachwa wazi katika kijitabu hiki cha maswali.

Kwa matumizi ya mtihani pekee.

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

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1. UFAHAMU: (Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali yanayofuatia

Mateso ya wanawakiwa ni suala la kijamii linalofaa kutazamwa kwa darubini kali. Hata hivyo wanaoathirika zaidi ni watoto ambao bado wako katika umri unaohitaji kulelewa na kupewa mahitaji ya msingi kama mavazi, malazi, elimu na mengine anuwai. Hali ya kuachwa na wazazi imekuwa ikizikumba jamii tangu enzi za mababu na kila itokeapo, wanajamii huipokea kwa mitazamo tofautitofauti, hivyo kuwafanya wanawakiwa kuathirika sana.

Baadhi ya jamii zina imani za kijadi pamwe na mila zilizochakaa zinazozifanya kuamini kuwa baadhi ya vifo hutokana na laana. Wengine huchukulia kuwa mwendazake ameondolewa na ulozi. Imani kama hizi huifanya jamii kuwatia watoto walioachwa katika mkumbo ule ule, hivyo kuwaangalia kwa macho yasiyo ya kawaida. Hili husababisha dhana gande. Hali hii husababisha kuwachukulia watoto kama wanaotoka katika kizazi kilicholaaniwa. Jamii basi hukosa kuwapa watoto hawa stahiki yao. Hata wanapojitahidi kuiwania nafasi yao, waliowazunguka huwavunja mioyo. Jitihada zao huishia kuwa si chochote kwa kuwa jamii inawatazama kama waliolaaniwa.

Punde baada ya mzazi mmoja au wote wawili waendapo wasikorudi, inatarajiwa kwamba aliyeachiwa mtoto, awe mzazi wake, mwanafamilia au jirani awajibike na kumtunza mwanamkiwa. Kunao kadha wa kadha wanaowajibika – ninawavulia kofia. Hata hivyo wengi hutelekeza jukumu hili walilopewa na Muumba. Si ajabu basi kuona kuwa idadi ya watoto wanaozurura mitaani inazidi kuongezeka kila uchao. Ukichunguza utakuta kuwa wengi wa watoto hawa ni waliopotelewa na wazazi wao. Inakera zaidi kugundua kuwa baadhi ya watoto hawa wana mzazi mmoja. Kwamba mke au mume wa mtu ameaga, au iwe kwamba mzazi mmoja alimzaa mtoto na kumwachia mwenzake mzigo wa ulezi, aliyeachiwa ana jukumu la kumpa mwanawe mahitaji ya msingi. Machoni pa Jalali, kila anayeupuuza wajibu huu ana hukumu yake siku ya kiama!

Ni haki ya kila mtoto kupata elimu. Katika katiba ya Kenya mathalan, elimu ya msingi, yaani kuanzia shule ya chekechea had kidato cha nne ni ya lazima. Tangu hapo hata hivyo, jamii zimekuwa zikiwanyima wanawakiwa wengi elimu. Kwamba kunao wachache wanaowaelimisha baadhi ya wanawakiwa, ni kweli. Hata hivyo, wengi hukosa hata wa kuwapeleka katika shule ya chekechea, hivyo kuishia kutojua hata kuandika majina yao. Mfikirie mtu katika karne ya 21, asiyejua kusoma wala kuandika! Nani ajuaye, huenda huyo mwanamkiwa asiyepelekwa shuleni ndiye angalikuwa profesa, daktari, mwalimu, rubani au msomi mtajika na mtaalamu wa uwanja muhimu katika jamii!

Kila mtoto ana haki ya kulelewa hadi kufikia utu uzima kabla ya kupewa majukumu mazito. Katika katiba ya Kenya, utu uzima, ulio umri wa kuanza kufanya kazi huanzia miaka 18. Wanaohakikisha watoto hawa wametimiza utu uzima kabla ya kufanyishwa gange ngumu wanafaa pongezi. Hata hivyo wanawakiwa wamekuwa wakitumiwa na wengi kama punda wa huduma. Wanaaila wengine huwachukua wanawakiwa kwa machozi mengi wazazi wao waagapo nakuapa kuwahifadhi na kuwatunza wana wale wa ndugu zao, kumbe ni machozi ya simba kumlilia swara! Hata kabla ya mwili wa mzazi mhusika kuliwa na viwavi, mateso kwa mtoto yule huanza, akawa ndiye afanyaye kazi zote ngumu. Utakuta watoto wao wamekaa kama

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sultan bin jerehe huku mwanamkiwa yule akiwapikia, kuwafulia nguo, kudeki, karibu hata awaoshe miili! Kazi kama zile za shokoa huwa za sulubu na aghalabu husindikizwa kwa matusi yasiyoandikika.

Baadhi ya waja walionyimwa huruma huwahadaa wanawakiwa na kuwapeleka ng'ambo wakitumia vyambo, kuwa wakifika kule watapata kazi za kifahari. Maskini wale hushia kushikwa shokoa, wakawa watumwa katika nyumba za waajiri wao, bila namna ya kujinasua. Wengine hushia kutumiwa kama watumwa wa 'kimapenzi' katika madanguro, miili yao ikawa ya kuuziwa makahaba waroho wasiojali utu. Kujinasua kule huwa sawa na kujitahidi kuokoa ukuni uliokwishageuka jivu, maadamu wanawakiwa aghalabu hukosa watu wenye mioyo ya huruma ya kuwashughulikia. Wengi huitumia methali 'mwana wa ndugu kirugu mjukuu mwanangwa' kuwapuuzilia mbali wanawakiwa ambao hukimbiliwa tu wabinafsi hawa wanapofaidika wenyewe.

Maswali

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

_____

b) Eleza dhana ya mwanamkiwa kwa mujibu wa kifungu. **(alama 2)**

_____

_____

_____

c) Eleza imani za kijadi kuhusiana na wanawakiwa. **(alama 2)**

_____

_____

_____

d) Jadili masaibu yanayowakumba wanawakiwa. **(alama 4)**

_____

_____

_____

_____

_____

e) Eleza haki mbili za kikatiba zilizokiukwa kuhusiana na wanawakiwa. **(alama 4)**

_____

_____

_____

_____

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_____

f) Eleza maana ya msamiati ufuatao kulingana na kifungu. **(alama 2)**

i) Inakera

_____

_____

ii) Majukumu

_____

_____

2. <u>UFUPISHO: (Alama 15)</u>

<u>Soma kifungu kifuatacho kisha ujibu maswali</u>

Runinga kama kifaa kingine chochote cha mawasiliano kina manufaa yake. Kwanza kabisa, ni nyenzo mwafaka ya kufundishia. Vipindi vinavyopeperushwa katika runinga huwa na mafunzo kemkemu kwa mtu wa kila rika. Halikadhalika, runinga huweza kuleta vipindi ambavyo huwafahamisha watu mambo yanayoendelea katika mazingira yao na duniani. Aidha, runinga ikitumika pamoja na michezo ya video huauni katika ukuzaji na ustawishaji wa stadi ya kujifundisha au kujielimisha. Michezo ya video, hasa ya kielimu, huwafanya watu kujenga umakini pamoja na kuchua misuli ya ubongo na kuwafanya watu kuwa macho wanapofanya kazi.

Fauka ya hayo, televisheni ni chemchemi bora ya kutumbuiza na kuchangamsha. Hakuna mtu asiyependa kuchangamshwa. Televisheni ni mojawapo ya vyombo mwafaka vya kutekeleza hayo kutokana na vipindi vyake. Uburudishaji huu huwa ni liwazo kutokana na shinikizo na migogoro tunayokabiliana nayo kila siku. Uburudishaji huu hupatikana kwa urahisi majumbani mwetu.

Vivyo hivyo, runinga hutumika kama nyenzo ya kuendeleza utamaduni, kaida na amali za jamii. Vingi vya vipindi vya runinga huwa ni kioo ambacho huakisi mikakati na amali za jamii.

Kwa upande mwingine, hakuna kizuri kisichokuwa na dosari. Licha ya manufaa yake, televisheni imedhihirika kuwa na udhaifu wake. Kwanza, baadhi ya vipindi vya runinga na video hujumuisha ujumbe usio na maadili, kama vile matumizi ya nguvu za mabavu, ngono za kiholela, lugha isiyo ya adabu, ubaya wa kimavazi na maonevu ya rangi, dini, jinsia, kabila na utamaduni. Si ajabu kuwa baadhi ya vijana wetu wanaiga baadhi ya mambo haya. Vijana wetu siku hizi wameingilia ulevi wa pombe na afyuni, ngono za mapema kabla ya ndoa na mavazi yanaowaacha takribani uchi wa mnyama. Wengi wamekopa na kuyaiga haya kutoka katika runinga. Ukiwauliza wafanyacho, watakujibu kuwa ni ustaarabu kwani wameupata katika runinga.

Matumizi ya runinga na michezo ya video yasiyodhibitiwa huweza kuwa kikwazo cha mawasiliano bora miongoni mwa familia. Matumizi kama haya huwapa wanafamilia fursa ya kujitenga. Imedhihirika kuwa runinga haichangii kujenga uhusiano bora wa kijamii. Ukilinganisha na vyombo vingine vya burudani ambavyo hutoa nafasi ya watu kutangamana na kujenga uhusiano bora, televisheni haichangii haya. Badala yake, tajriba ya televisheni huwa ya kibinafsi. Hali hii inapotokea katika kiwango cha familia, televisheni inaweza kutenganisha wazazi na watoto wao.

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Halikadhalika, runinga na video aghalabu hueneza maadili yasiyofaa. Mathalani, baadhi ya vipindi vya televisheni huendeleza hulka ya kuhadaa, ngono za kiholela, kuvunjika kwa ndoa, n.k. Hulka hizi zisizoendeleza maadili ya kijamii huchukuliwa kama zinazofaa na zinazofuatwa na waliostaarabika. Huu ni upotovu.

Isitoshe, baadhi ya matangazo huhimiza matumizi ya dawa za kulevya kama tembo na sigara. Vitu hivi vinapotangazwa, hupambwa kwa hila na udanganyifu mwingi ambao huwavutia vijana na watoto wengi. Si ajabu mtu anapouliza wanaotumia vileo hivi walivyoanza, watajibu kutokana na athari za matangazo katika runinga na vyombo vingine.

Utafiti umeonyesha kuwa vipindi vya runinga na video ni chanzo cha matumizi ya nguvu za mabavu miongoni mwa wanafunzi. Wazazi wengi huchukulia vibonzo katika televisheni kuwa vinalenga kuburudisha tu na havina ubaya wowote. Lakini ukweli ni kuwa vipindi vingi vya vibonzo hushirikisha matumizi ya hila na nguvu za mabavu. Haya huibusha hamu ya vijana na watoto huyaiga.

Kwa hivyo, ni muhimu wazazi na jamii kutambua madhara ya televisheni. Utambuzi huu utawafanya wawaelekeze vijana na watoto jinsi ya kutumia televisheni na video ili kuepukana na madhara yake.

a) Fupisha aya tatu za kwanza za (maneno 70 – 75) **(alama 7, 2 za utiririko)**

Matayarisho

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Jibu

b) Eleza udhaifu wa runinga na video. (maneno 50 – 51) **(alama 5, 1 ya utiririko)**

Matayarisho

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Jibu

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3. <u>MATUMIZI YA LUGHA:</u> **(alama 40)**

a) Taja aina mbili kuu za ala za kutamkia sauti **(alama 2)**

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_____

b) Taja mfano mmoja mmoja wa sauti zifuatazo **(alama 2)**

Kimadende_____

Kipasuo kwamizo_____

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c) Huku ukitoa mfano, eleza maana ya sentensi sahili **(alama 2)**

_____

_____

_____

_____

d) Ainisha mofimu katika neno lifuatalo **(alama 3)**

Tulimpikia_____

e) Ainisha vitenzi katika sentensi: Kitabu anachotaka kusoma ki mezani **(alama 3)**

_____

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f) Tunga sentensi moja ukitumia kiunganishi kiteuzi **(alama 2)**

_____

_____

_____

g) Nomino zifuatazo zimo katika ngeli gani? **(alama 2)**

a) Uzi_____

b) Muda_____

h) Tumia ‘o’ rejeshi ya kati katika sentensi ifuatayo **(alama 2)**

Watu ambao walifika jana ni wale ambao walitoka mbali

_____

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i) Onyesha shamirisho kipozi na ala katika sentensi ifuatayo **(alama 2)**

Mwindaji haramu alimuua ndovu kwa bunduki

_____

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j) Changanua sentensi ifuatayo ukitumia mistari au mishale **(alama 3)**

Kilipikwa jana jioni

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k) Andika sentensi ifuatayo katika hali yakinishi **(alama 2)**

Msingesoma kwa bidii, msingepita

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l) Tunga sentensi moja kudhihirisha dhamira/jukumu hili **(alama 2)**

Rai/ombi

_____

m) Ainisha vishazi katika sentensi ifuatayo **(alama 2)**

Mtoto ambaye alianguka jana ana maumivu mengi

_____

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n) Onyesha matumizi yoyote mawili ya kiwakifishi: koma/kituo **(alama 2)**

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o) Tumia neno 'Nairobi' kama **(alama 2)**

a) Nomino

_____

_____

b) Kielezi

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p) Tunga sentensi moja kutofautisha maana ya kuku na gugu **(alama 2)**

_____

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_____

q) Onyesha matumizi ya kiambishi -ji- katika sentensi **(alama 2)**

Mwongeleaji stadi anajishaua sana.

_____

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r) Andika katika usemi wa taarifa **(alama 2)**

"Wageni wangu watafika saa ngapi? Mama aliuliza

_____

_____

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s) Unda nomino kutokana na kitenzi **(alama 1)**

Safari

_____

4. <u>ISIMUJAMII:</u> **(alama 10)**

Nipe chai, andazi mbili na egg moja…….

a) Taja sajili inayorejelewa na maneno haya **(alama 2)**

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b) Fafanua sifa nne zinazohusishwa na sajili hiyo **(alama 8)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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

(i) *Andika jina lako, nambari ya usajili, mkondo, sahihi na tarehe katika nafasi ulizoachiwa hapo juu.*

(ii) *Jibu maswali manne pekee.*

(iii) *Swali la kwanza ni la lazima.*

(iv) *Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki Riwaya, Tamthilia na Fasihi Simulizi.*

(v) *Usijibu maswali mawili kutoka sehemu moja.*

(vi) *Maswali yote ni sharti yaandikwe kwa lugha ya Kiswahili.*

Kwa matumizi ya mtahini pekee

SWALI	UPEO	ALAMA
1	20	
	20	
	20	
	20	
JUMLA	80	

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SWALI LA LAZIMA

1. SEHEMU YA A: USHAIRI

Soma shairi lifuatalo kisha ujibu maswali yanayofuata.

Amka amsha mwili,ukanyage ardhini
Amka pia akili,usingie mashakani
Amka kiwiliwili,usingizi ulaani
Amka fanya shughuli,nchi ipo hatarini

Amka wewe jasiri,hivi unalala nini?
Amka sio kuzuri,umetegemea nini?
Amka kuna dosari ,mchanga kitumbuani
Amka fanya shughuli,nchi ipo hatarini

Amka wewe jen Zi,amsha pia jirani
Amka kipya kizazi ,usikubali uhuni
Amka ufanye kazi,mkono wende kinywani
Amka fanya shughuli, nchi iko hatarini.

(Chotara Mswahili)

Maswali

a)Liweke shairi hili katika bahari tatu huku ukidhibitisha. **(alama 3)**
b)Eleza dhamira ya mshairi. **(alama 3)**
c)Eleza muundo wa shairi hili. **(alama 4)**
d)Eleza mbinu ambazo mshairi ametumia kukidhi mahitaji ya kiarudhi**.** **(alama 3)**
e)Tambua mbinu tatu za lugha alizotumia mshairi. **(alama 3**
f)andika ubeti wa pili kwa lugha ya nathari. **(alama4)**

SEHEMU YA B: Tamhilia –Timothy M Arege:Bembea ya Maisha

Jibu swali la 2au la 3

2. Soma dondoo lifuatalo kisha ujibu maswali yanayofuata:

...lakini ndio tabia yenu wanawake.Miaka inaposonga kama hivi mnatuona kama... kama... kama... kama... kama vile tambara bovu.

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

b) Eleza umuhimu wa msemaji katika kukuza ploti. **(alama 4)**

c)Tambua mbinu nne za kimtindo katika dondoo hili. **(alama 4)**

d)Kwa kutoa hoja nane kutoka kwa Tamthilia eleza ni vipi utamaduni ulivyothaminiwa katika jamii hii ya Bembea ya Maisha. **(alama 8)**

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AU

3.Jadili nafasi ya mwanamke katika jamii ya Bembea ya Maisha. **(alama 20)**

SEHEMU YA C:Riwaya ya Nguu za Jadi-Prof Clara Momanyi

Jibu swali la 4 au la 5

4.Soma dondoo kisha ujibu maswali yanayofuta ;

Watategemewa na nani maishani? Hiki ndicho kizazi cha kesho au kizazi kilichopotea tayari?

a)Weka dondoo hili katika muktadha wake. **(alama 4)**

b)Tambua toni katika mazungumzo haya. **(alama 2)**

c)Onyesha ni vipi kizazi cha leo na cha kesho kilivyopotea. **(alama 12)**

AU

5.Fafanua ufaafu wa anwani ya ,'Nguu za Jadi'. **(alama 20)**

SEHEMU YA D: Diwani ya Mapambazuko ya Machweo na Hadithi zingine.

Jibu swali la 6 au la 7

6.Soma dondoo kisha ujibu maswali yanayofuata.

Akainama chini kwenye tendeguu moja la kitanda cha besera.Akachukua kibatari cha kiberiti ili awashe taa.Mimi,nikiwa mle mvunguni.sasa kwa hakika nilishamjua shetani wa mzimu ule ni nani.Kumbe hakuwa shetani wala Kipwerere!

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

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

c)Onyesha umuhimu wa mandhari katika dondoo hili. **(alama 4)**

d)Wanakijiji waliuogopa mzimu wa Kipwerere kiasi cha kuuabudu na kutoufanyia mzaha. Thibitisha kauli hii. **(alama 8)**

AU

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7. Kimyakimya analikariri;

Mteule nimechoka ,kila siku kusikiya,

Vyereje nchi hakika,visanga kupindukiya,

*Tunazidi filisika ,**<u>walaji kujijaziya</u>***

Msiba kujitakia, kweli hauna kiliyo.

a)Huu ni ubeti wa shairi katika hadithi"Msiba wa Kujitakia'.Eleza sababu ya mwandishi kutumia mbinu hii katika usimulizi. **(alama 6)**

b)Thibitisha ukweli wa kauli iliyopigiwa mstari katika dondoo. **(alama 8)**

c)Bainisha maudhui mbalimbali yanayojitokeza katika kifungu hiki. **(alama 6)**

SEHEMU YA E :FASIHI SIMULIZI

8). (a) Huku ukitoa mifano, eleza maana ya vitanza ndimi. **(alama 2)**

(b) Fafanua majukumu sita ya vitanza ndimi katika jamii. **(alama 6)**

(c) Eleza mbinu sita utakazotumia katika kukusanya na kuhifadhi habari kuhusu vitanza ndimi. **(alama 12)**

MWISHO

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

AGRICULTURE

443/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTION TO CANDIDATES

a) *Write your name and index number in the spaces provided above*
b) *Sign and write the date of examination in the space provided*
c) *This paper consists of THREE section A, B, and C*
d) *Answer ALL questions in section A and B*
e) *Answer any TWO question in section C*

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE SCORE
A	1-15	30	
B	16-17	20	
C	18-20	40	

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SECTION A- (30 MARKS)

Answer all questions in the spaces provided

1) State the **three** forms in which horticulture is practiced in Kenya **(1½ marks)**

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2) Identify **two** ways in which agriculture support agro based industries **(1 mark)**

……

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…

3) List down **three** biotic factors that influence agriculture negatively **(1½marks)**

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4) Name any **three** crops that can be propagated by use of suckers **(1½marks)**

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5) Outline **four** roles of trees in soil conservation **(2 marks)**

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6) Identify **two** examples of intensive farming systems practiced in crop production**(1 mk)**

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7) Outline **four** ways in which living organisms contribute to soil formation **(2 marks)**

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8) Give **four** reasons that may necessitate sub soiling to be carried out on a piece of land **(2 marks)**

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9) Name any **four** physical methods of water treatment **(2 marks)**

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10) Give **three** reasons why green manure is not commonly used **($1\frac{1}{2}$marks)**

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11) Name **two** types of labour records that can be kept by a large scale plantation farmer. **(1 mark)**

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12) Outline **four** areas that should be avoided when collecting a soil sample for testing **(2 marks)**

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13) Differentiate between a seed bed and a seedling bed **(1 mark)**

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14) Name **three** field practices that are used to support weak stemmed crops **($1\frac{1}{2}$marks)**

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15) Give **four** reasons that would make a farmer chose a jembe during land preparation over a disc plough **(2 marks)**

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16) Give a reason why use of organic manure is discouraged in carrot production **(1 mark)**

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17) Outline **four** advantages of zero grazing as a system of grazing **(2marks)**

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18) Identify **four** sources of credit facilities where one can get capital to carry out crop production **(2 marks)**

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19) Name any **three** fertilizer elements **($1\frac{1}{2}$ marks)**

……

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……

SECTION B (20 MARKS)

Answer all questions in this section.

20) The following are photographs of weeds obtained from the farm

A  **B** 

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C  **D** 

i) Identify the weeds **(2 marks)**

……

……

……

……

ii) State **one** major disadvantage of weed labeled A **(1 mark)**

……

iii) Give **two** reasons why weed C is difficult to control. **(1 mark)**

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iv) State **one** economic importance of the weed labeled (B) to human beings**(1 mark)**

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21) The table below shows weekly demand for rice in am market

Price (ksh)	Quantity demanded (kgs)
10	250
9	350
8	550
7	600
6	700
5	1000
4	1500

a)Calculate the elasticity of demand (Ed) for rice when the price falls from Kshs. 10 to Kshs. 9 per Kg. (show your working) **(3 marks)**

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……

b)Other than price state any other factor that may factor that may increase the demand for rice in the market **(2 marks)**

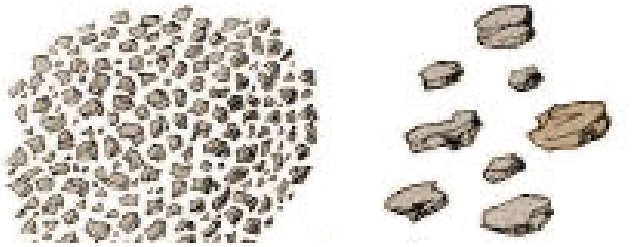
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……

……

22) The following diagrams shows various samples of soil aggregates

P



Q



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R



S



a) Identifythe type of soils structures **(2marks)**

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……

b) Briefly explain how soil structures P can be improved **(1mark)**

……

……

c) Name two places where soil structure labeled S can be found **(2 marks)**

……

……

23) Study the following photographs and use them to answer the question that follows



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a) Identify the type of irrigation shown in the photograph **(1 mark)**

……

……

b) State any **two** advantages of the above method of irrigation **(2 marks)**

……

……

c) Other than the one shown above identify any other **two** methods that a farmer can use to irrigate his crops **(2 marks)**

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SECTION C – 40 MARKS)

Answer any two questions and answer them in the spaces provided after question 26

24) a) A farmer has 30 hectares of arable land,20 hectares of which is planted withmaize and 10hectares with grass hay. He wishes to replace 10 hectares of maize with Irish potatoes next year. The fertilizer rate will have to be increased from 2 bags per hectare for maize to 4 bags per hectare for potatoes. As a result of the change extra 40 men days of casual labour per hectare will be necessary at the rate of Kshs.100 per man a day. The average yield per hectare of maize is 35bags and for potatoes 120bags.The price paid is Kshs.1, 000 per bag of maize and Kshs.600 per bag of potatoes. Maize seeds cost Kshs.750 per hectare and potatoes cost Kshs.800 per hectare. Fertilizer costs are Kshs. 650 per hectare.

i)Draw up a partial budget and advice the farmer accordingly. **(9 marks)**

ii) Name the other type of budget that can be prepared by a farm manager **(1 mark)**

b)Discuss the various problems associated with land fragmentation **(6 marks)**

c)Explain **four** environmental factors that affect the effectives of herbicides **(4 marks)**

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25.a) Discuss the various cultural practices carried by farmers to control pests **(10marks)**

b) Discuss the production of dry beans under the following headings

(i) Varieties **(2 marks)**

(ii) Section of planting materials **(3 marks)**

(iii) Postharvest practices of dry beans **(5 marks)**

26 a) Describe harvesting of pyrethrum under the following subheading

i) Method and procedure **(3 marks)**

ii) Precautions **(3 marks)**

b) State **five** characteristics of nitrogenous fertilizers **(4marks)**

c) Explain **five** factors to consider when designing a crop rotation programme **(10 marks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

AGRICULTURE

443/2

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES.

a) *Write your name & Index Number in the spaces provided.*

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

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

d) *Answer **ALL** the questions I Section **A** and **B***

e) *Answer two question from Section **C.***

FOR EXAMINERS USE ONLY

SECTION	MAXIMUM SCORE	CANDIDATE SCORE
A	30	
B	20	
C	40	

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SECTION A (30MKS)

Answer ALL the Questions in this section

1. Give the meaning of the following terms as used in livestock health. **(1mk)**

a) Incubation period

……

……

b) Mortality rate.

……

……

2. State **four** physical characteristics of a dairy cow. **(2mks)**

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3. Name the **two** different types of rabbit houses. **(1mk)**

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4. What is the role of a footbath in a poultry house? $(\frac{1}{2}mk)$

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5. State **four** care and maintenance practices carried out on a tractor water cooling system. **(2mks)**

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6. State **four** factors that affect the digestibility of a feed. **(2mks)**

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7. Give **four** factors that should be considered when siting a beehive on the farm. **(2mks)**

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8. Name the complementary tool for each of the tools named below: **(2mks)**

a) Trochar ……..

b) Hand drill……...

c) Elastrator……

d) Bull ring…….

9. State **four** advantages of embryo transplant when breeding livestock. **(2mks)**

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10. Give **two** reasons why sows may eat piglets immediately after farrowing. **(1mk)**

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11. State **three** reasons for docking in rams. $(1\frac{1}{2}mks)$

……

……

……

12. Name **four** components of a building truss. **(2mks)**

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13. Differentiate between **strategic** and **tactical** treatment as used in the control of endoparasites.

(1mk)

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14. Name **four** diseases in poultry that are controlled by vaccination. **(2mks)**

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15. List **four** vices that may be developed by birds kept under total confinement. **(2mks)**

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……

……

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16. Give **three** reasons for steaming up an in-calf heifer**.** $(1\frac{1}{2}\boldsymbol{mks})$

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17. State **four** factors that influence the respiration rate in livestock**.** **(2mks)**

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18. Name **three** dual purpose breeds of sheep**.** $(1\frac{1}{2}\boldsymbol{mks})$

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19. Give **two** reasons why proper nutrition is important in livestock health. **(1mk)**

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SECTION B (20MARKS)

20. The diagrams below illustrate ectoparasites.Study them and answer the questions that follow.



A



B

a) Identify the parasites labelled A and B. **(1mk)**

A……

B……

b) Name the livestock affected by the parasite labelled A. **(1mk)**

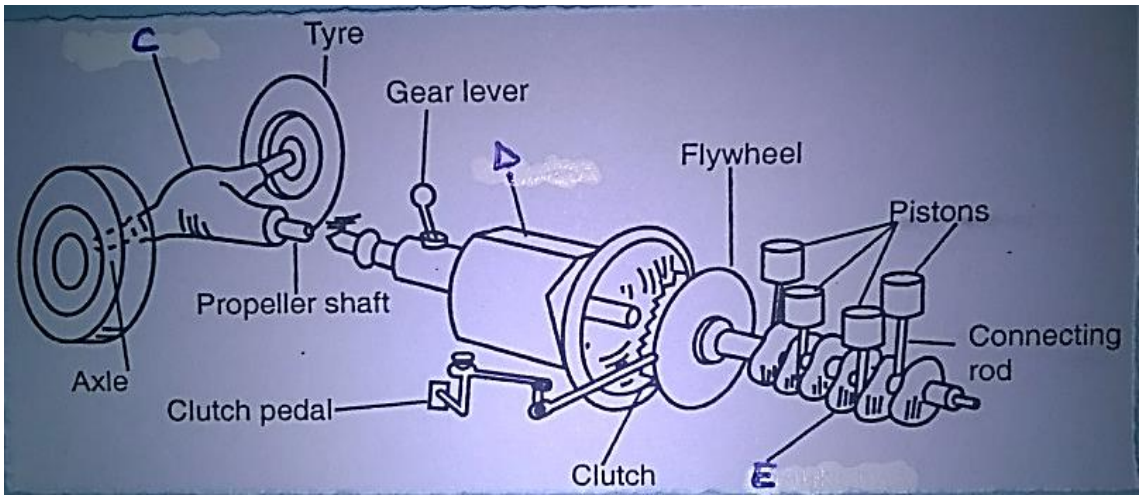
……

c) State **two** harmful effects of parasites A and B in livestock production. **(2mks)**

……

……

21. Below is a diagram of the power transmission system of a tractor engine. Study it and answer the questions that follow.



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a) Name the parts labelled C, D and E. **(3mks)**

C……

D……

E……

b) State the functions of parts C, D and E. **(3mks)**

C……

D……

E……

22. a) Outline the procedure of castrating a male piglet**.** **(4mks)**

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b) At what age should the male piglet be castrated? **(1mk)**

……

23. Study the tools below and answer the questions that follow.



F



G

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H



I

a) Identify the tools labelled F, G, H and **I.** **(2mks)**

F……

G……

H……

I……..

b) Give the uses of each of the tools labelled H and I. **(2mks)**

H……

I……..…

c) Name the part of the animal where tool F is placed when in use. **(1mk)**

……

SECTION C (40MARKS)

24. a) Explain the management practices that a farmer should carry out to improve milk production in a low dairy herd. **(10mks)**

b) Describe the rearing of one day old chicks to 8 weeks. **(10mks)**

25. a) Describe coccidiosis disease under the following sub-headings:

i. Causal organism **(1mk)**

ii. Pre-disposing factors. **(3mks)**

iii. Symptoms. **(4mks)**

iv. Control measures. **(2mks)**

b) Describe **five** parts of a piggery unit. **(10mks)**

26. a) Give **five** functions of water in livestock. **(5mks)**

b) State and explain **five** essentials of clean milk production. **(10mks)**

c) Give **five** operational differences between a disc pough and a mouldboard plough. **(5mks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

BUSINESS STUDIES

565/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Answer **all** the 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
Marks														

Questions	15	16	17	18	19	20	21	22	23	24	25
Marks											

Total Marks

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QUESTIONS

1. State four advantages of a partitioned office layout to the office staff. **(4mks)**

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……

2. For each of the farm resources given below, identify the appropriate factor reward **(4mks)**

RESOURCE		**FACTOR REWARD**
i.	Farm yard	……..
ii.	Farm guards	……..
iii.	Farm owner	……
iv.	Livestock	……

3. List the principle of insurance that was violated in each of the following instances given below **(4mks)**

	INSTANCE	**PRINCIPLE**
	A car owner was paid ksh. 400,000 when his car worth ksh. 390,000 was stolen	……..
	Okado insured his neighbors retail shop against robbery	……..
	A school was compensated when its bus got burnt by rioting students yet it had been insured against a road accident	……..
	A hotel owner took away remains of items destroyed by fire being fully paid for the damages	……...

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4. Give four reasons why business firms participate in conserving the environment **(4mks)**

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5. State four measures that a county government may take to improve the quality of its services to the residents of the county **(4mks)**

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6. Outline four reasons that make human wants difficult to satisfy **(4mks)**

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7. Give four types of small scale retail businesses that can operated without shops. **(4mks)**

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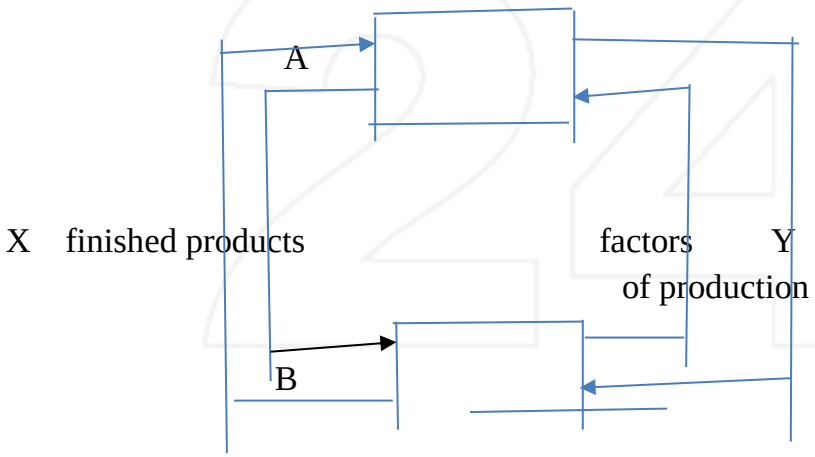
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8. The information below was extracted from the books of Khadudu Hardware's for the year 2019

	Ksh.
Capital (31/12/2019)	980,000
Investment	300,000
Monthly drawings	10,000
Capital (01/01/2019)	600,000

Required; determine the net profit for the **year** **(3mks)**

9. The diagram below shows the circular flow of income in a two sector economy



a. Name the economic agent marked A and B

i. **A ……**

ii. **B……** **(2mks)**

b. Identify the expenditure represented by the arrows X and Y

i. **X……**

ii. **Y……** **(2mks)**

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10. Highlight four advantages of a private warehouse to a manufacture **(4mks)**

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11. Give four disadvantages of using mobile phones for communication in an organization **(4mks)**

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12. Outline three differences between monopoly and oligopoly as product markets. **(3mks)**

MONOPOLY	**OLIGOPOLY**

13. State four measures that the Central Bank can take to reduce inflation in the country **(4mks)**

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14. Give four reasons why governments impose taxes on incomes **(4mks)**

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15. The diagram below shows a change in the supply of a farm products in a market



Outline four circumstances under which the supply curve would shift from S_1S_1 to S_2S_2 **(4mks)**

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16. For each of the business transactions given below name the ledger account to be debited and to be credited **(4mks)**

TRANSACTION	DR.	CR.
Proprietor took goods worth Ksh. 2000 for family use		
Goods valued at Ksh. 4500 were sold on credit		
A cheque of Ksh. 8000 was issued by the business in payment of rent		
The business withdrew Ksh. 15,000 from the bank account for office use		

17. State **FOUR** disadvantages of pipeline transport **(4mks)**

……

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18. The information below relates to Musoma Bookshop for the year ended 30.09.2020

Sales	Ksh. 1,500,000
Opening stock	Ksh. 250,000
Purchases	Ksh. 1,300,000
Mark up	25%

Determine:

i. Gross profit **(2mks)**

ii. Cost of sales **(2mks)**

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19. Mrs. Obote sells a variety of fruits, vegetables and cereals in a market stall located in an urban market. Identify four methods that she may use to increase her volume of sales **(4mks)**

……

……

……

……

20. List the type of unemployment that suits each of the descriptions below **(4mks)**

Description	**Type of unemployment**
A large number of laborers crowded on a small piece of work.	
School leavers without information on where to get a job.	
Many people kept out of employment because of physical disabilities.	
A female job seeker opting to get married instead of being idle.	

21. Highlight four population characteristics of a country that is economically underdeveloped

(4mks)

……

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……

22. Give four reasons why some producer firms carry out production close to the product market

(4mks)

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23. Outline four circumstances under which a manufacturer would not require the services of middlemen **(4mks)**

……

……

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……

24. List four ways used to classify partners in a business **(4mks)**

……

……

……

……

25. The two column cash book below is incomplete

Date	Details	F	Cash	Bank		Date	Details	F	Cash	Bank
2020			(Ksh.)	(ksh.)		2020			(ksh)	(ksh)
Jan1	Capital		350,000	150,000		Jan3	Rent			T
10	Sales		Q			4	Purchases		200,00	
18	Cash	C1		250,000		18	Bank	C1	P	
28	Debtors		70,000			25	Electricity			15,000
						31	balance	c/d	R	345,000
			600,000	400,000						
									600,000	S

Determine the missing values represented by letters P, Q, R, S and T

i) P……

ii) Q……

iii) R……

iv) S……

v) T……

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

BUSINESS STUDIES

565/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES.

1. This paper consist of six questions with section a and b.

2. Answer only five questions, both a and b in the writing material provided.

3. Indicate clearly the questions answered

FOR EXAMINER'S USE ONLY

QUESTION	1	2	3	4	5	6
SCORE						

TOTAL	

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QUESTIONS

1. a) Explain five factors to consider when choosing office equipment. **(10marks)**

b)Explain the causes and remedies of the following types of unemployment.**(10 marks)**

i) Seasonal unemployment
ii) Structural unemployment
iii) Disguised unemployment
iv) Residual unemployment
v) Involuntary unemployment

2. a) Explain **five** importance of insurance to an economy. **(10marks)**

b) On 1st march 2019, Ukwala traders had ksh 95,000 in hand and a bank overdraft of ksh 15,000. During the month, the following transactions took place.

March 2: Bought goods for resale in cash ksh 68,000.
March 3: Cash sales banked, ksh 22,000
March 9: Paid Anyang' a creditor ksh, 12,880 by cheque in full settlement of his account after deducting 8% cash discount.
March 11: Paid salaries ksh 14,000 in cash.
March 16: Received a cheque of ksh 40,200 from Sakaya after allowing him a cash discount of ksh 1,800.
March 20: Shamim, a debtor paid her account of ksh 55,000 by cheque less 10% cash discount.
March 24: Withdraw 26,000 from bank for office use.
March 27: Took ksh 9,000 cash to pay his brother's medical bill.
March 28: Deposited all the cash into bank except ksh 14,400.

Required: prepare a three-column cashbook and balance it off. **(10 marks)**

3. **a)**Explain **five** features of oligopoly. **(10 marks)**

b)Explain the difference between partnerships and cooperative societies forms of business units. **(10marks)**

4. a) Explain **five** reasons for continued existence of small firms in an economy. **(10marks)**

b) Outline **five** channels that can be appropriate for the distribution of exporting tea to France. **(10marks)**

5. a) Explain **five** reasons for government involvement in business. **(10 marks)**

b) Explain **five** documents sent by the buyer to the seller in Home trade. **(10marks)**

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6. a) Explain **four** unethical practices in product promotion. **(8marks)**

7.

b) The following trial balance relates to the business of OMASAJA Traders for the period ended 31st March 2019.

OMASAJA TRADERS

TRIAL BALANCE

AS AT 31ST MARCH 2019

	Dr	Cr
	Shs.	Shs.
General expenses	120,000	
Rent expenses	46,000	
Telephone expenses	20,000	
Carriage inwards	28,000	
Salaries	360,000	
Sales		4,000,000
Purchases	2,400,000	
Discount received		36,000
Sales returns	40,000	
Motor vehicle	500,000	
Debtors	300,000	
Stock (1st April 2018)	200,000	
Land and buildings	2,000,000	
Cash at bank	120,000	
Cash in hand	12,000	
Capital		1,850,000
Drawings	80,000	
Creditors		240,000
	6,226,000	6,226,000

Additional information

Stock as at 31st March 2019 was valued at ksh. 100,000

Prepare:

i) A Trading profit and loss **(7marks)**

ii) A Balance sheet **(5marks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

BIOLOGY

231/1

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

1. *Write your **name, index number** and the **name** of your school in the spaces provided above.*
2. ***Sign** and **write** the **date** of examination in the spaces provided above.*
3. *Answer **all** questions in this question paper.*

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QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1-29	80	

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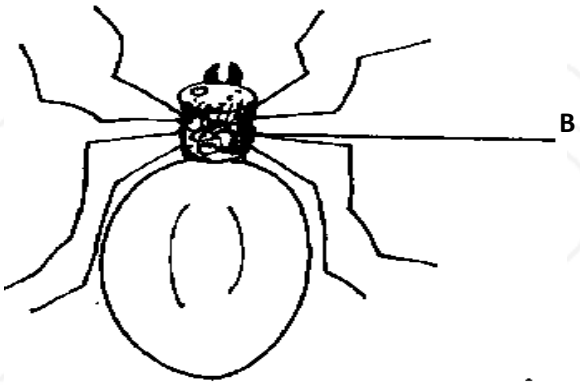
SECTION A

Answer all questions in the spaces provided after each question.

1 Name the bond that exists between amino acids during condensation process of forming proteins? **(1mk)**

……

2. A student discovered the organism below moving about on the teacher's desk



(a) Name the class of which the organism belongs. **(1mk)**

……

(b) Name the part labelled **B**. **(1mk)**

……

3. A certain plant has the following characteristics: presence of roots, steams and the leaves, life cycle in saprophyte and gametophyte generation. Saprophyte generation being the dominant type. Name the division to which the plant belongs. **(1mk)**

……

4. State the biological significance of each of the following.

(a) Thick muscular walls and narrow lumen in arteries. **(1mk)**

……

(b) Narrow xylem vessels in flowering plants. **(1mk)**

……

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5. What are **two** source of genetic diversity in meiosis ? **(2mks)**

……..……

..……

6. Explain why primary productivity decreases with depth in aquatic environment. **(2mks)**

……..……

……..……

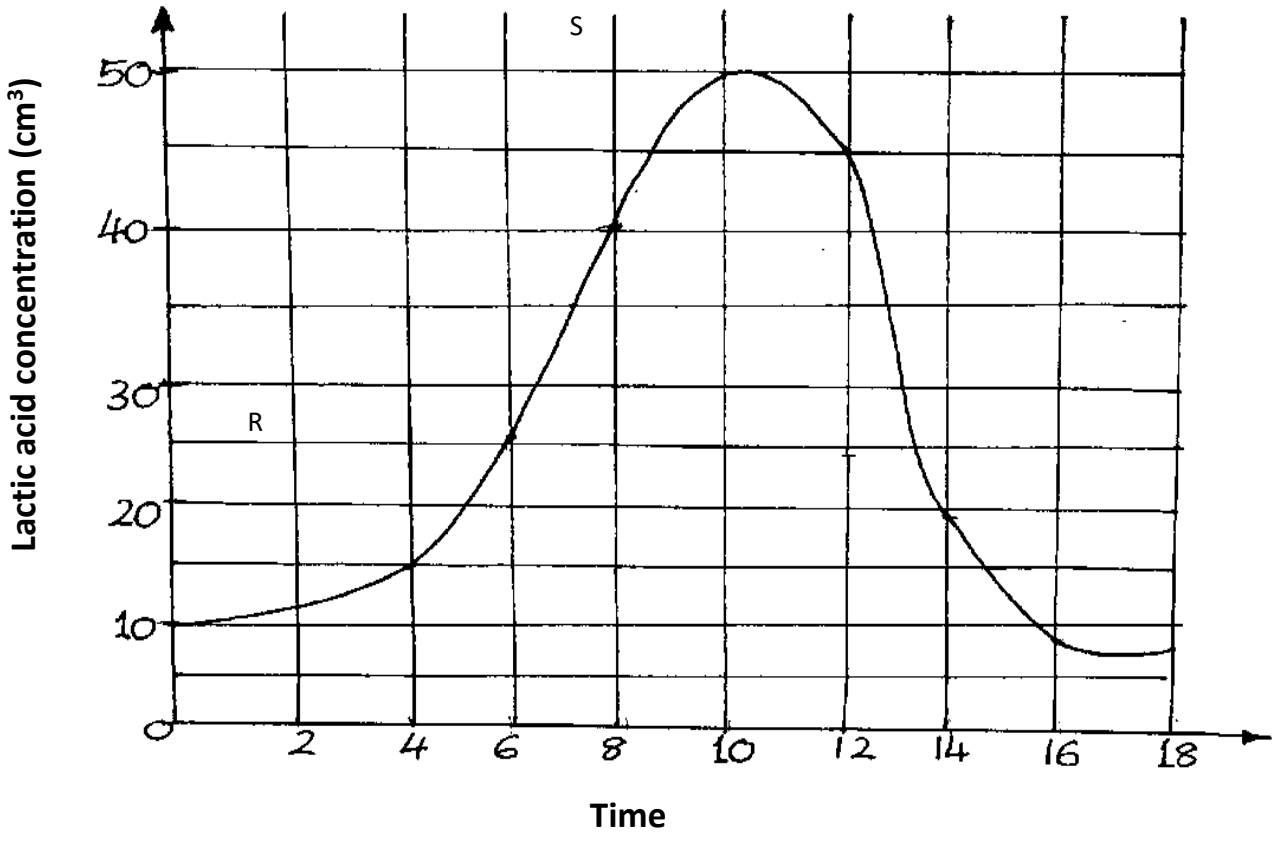
……..……

7. Name **two** regions in higher plants where cells actively undergo mitosis. **(2mks)**

……..……

……..……

8. The diagram below shows the general appearance of lactic acid in the blood of an athlete after an exercise. Study it carefully and answer the questions that follow.



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(a) Name the physiological process represented by the above diagram **(1mk)**

……..……

(b) Explain what was happening in the body between points: **(2mks)**

……..……

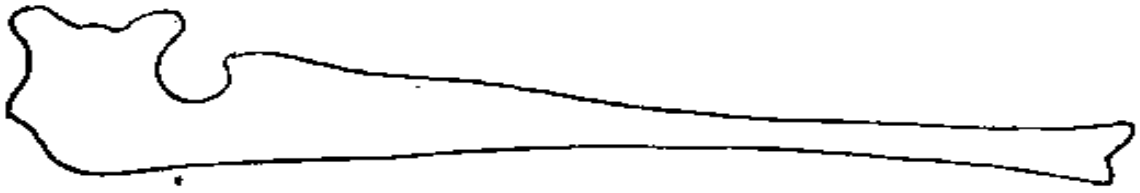
…..……

……..……

9. Name the class in the phylum arthropoda which has the larger number of individuals. **(1mk)**

……..……

10. A bone obtained from a mammal is represented by the diagram below.



(a) Name the bone **(1mk)**

……..……

……..……

(b) Which bones articulates with the bone shown in the diagram at the notch? **(2mks)**

……..……

..……

11.(a) (i) What is meant by vestigial structures? **(1mk)**

……..……

……..……

……..……

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(ii) Give an example of a vestigial structure in any other organism other than human?

(1mk)

……..……

(c) Explain why certain drugs become infective in curing a disease after many years of use

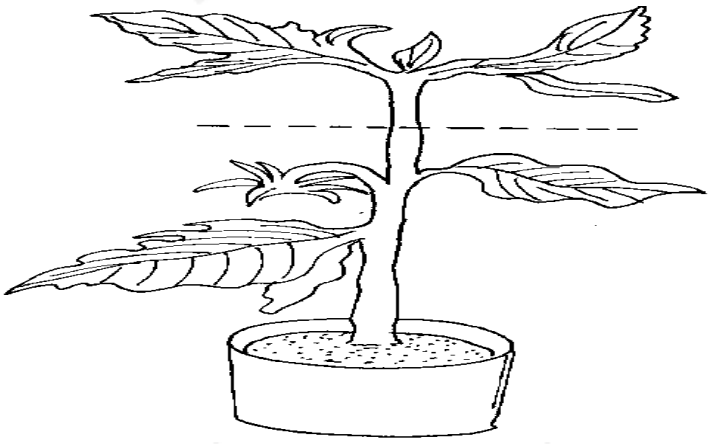
(2mks)

……..……

……..……

……..……

12. In an experiment the shoot tip of a young tomato plant decapitated as shown in the diagram below.



(a) State the expected results after 2 weeks **(1mk)**

..……

…..……

(b) Give a reason for your answer in (a) above **(2mks)**

……..……

……..……

……..……

……..……

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13. State **three** structural differences between Deoxynbonocleic acid (**DNA**) and Ribonucleic acid (**RNA**) ?

……..……

..……

…..……

……..……

……...……

14. Explain why plants do not require specialized excretory organs. **(3mks)**

……..……

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…..……

……..……

……...……

15. Explain how the following factors affect the rate of photosynthesis

(a) Concentration of carbon (iv) oxide. **(1mk)**

……..……

……..……

(b) Light intensity **(1mk)**

……..……

..……

…..……

16. Name **three** distinguishing characteristics that make man more developed and superior to all other mammals. **(3mks)**

..……

…..……

……..……

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17. State **two** advantages of cross-pollination. **(2mks)**

……..……

……..……

18. State the role of the following parts in the mammalian intestine

(a) Lacteal in the villi **(1mk)**

..……

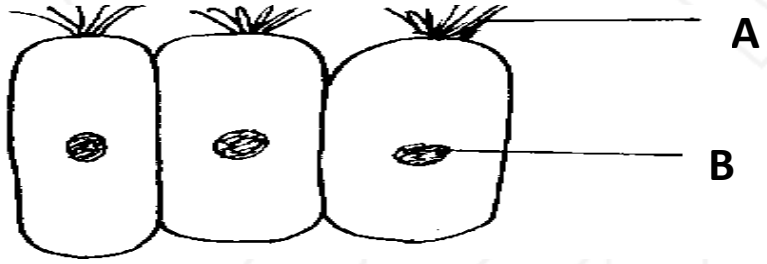
……..……

(b) Goblet cells **(1mk)**

……..……

……..……

19. Study the figure below which shows a type of epithelial tissue



(a) State the name of structure **A**. **(1mk)**

……..……

(b) Give an example in humans where this epithelium is found **(1mk)**

……..……

20. A mother of blood group **AB** was married to a man of blood group **B**. What is the probability that one of their children would be blood group **A**. Show your workings. **(3mks)**

……..……

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21. Name the substance in plasma and red blood cells that transport carbon (iv) oxide. **(2mks)**

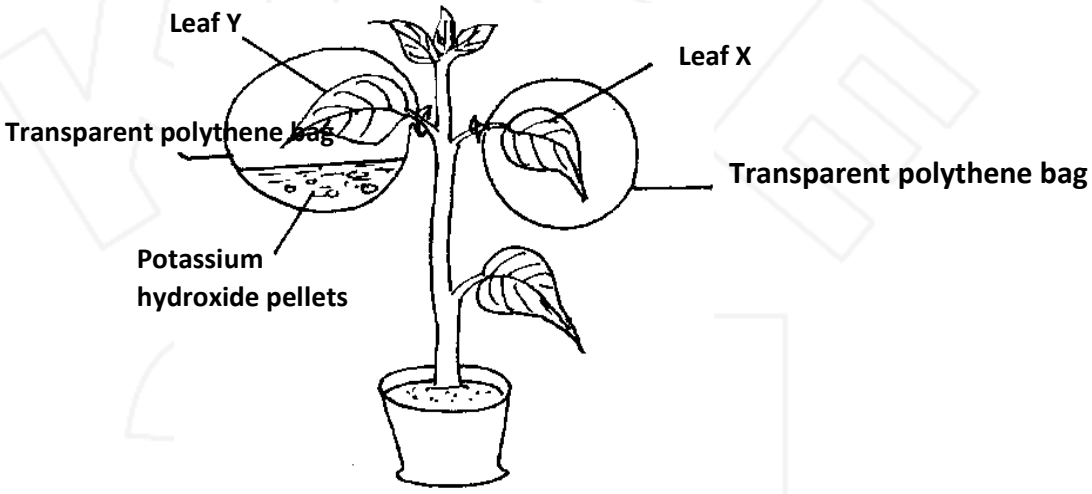
(i) Plasma

……..……

(ii) Red blood cells

..……

22. A potted plant was kept in dark for 48 hours. Two leaves **X** and **Y** were treated as shown in the diagram below.



The experimental set up was kept in the sunlight for 6 hours after which a starch test was carried out on the two leaves.

(a) What were the results of the starch test on leaves **X** and **Y**? **(2mks)**

……..……

..……

…..……

(b) Give reasons for your answers in (a) above **(2mks)**

……..……

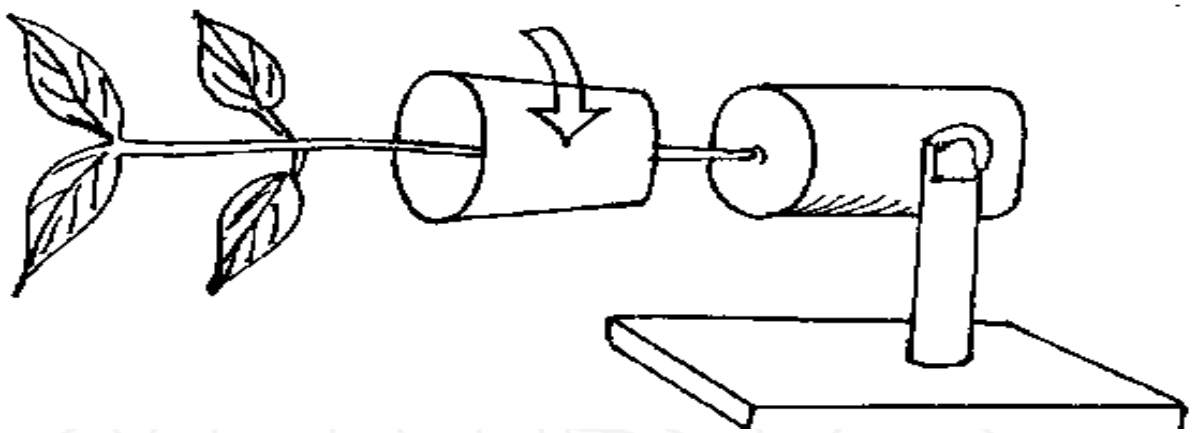
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23. Carefully study the figure which rotates making one resolution in 15 minutes. A seedling with a straight radicle and plumule was attached to the apparatus as shown below.



(a) What is the name of the apparatus shown **(1mk)**

……

(b) Make a drawing of how the seedling might have appeared after one week. **(1mk)**

24.(a) What is meant by the term non-disjunction? **(1mk)**

……

……

(b) Give an example of genetic disorders caused by:

(i) Non-disjunction **(1mk)**

……

(ii) Gene mutation

……

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25. To estimate the population size of crabs in a certain lagoon, traps were laid at random, 400 crabs were caught, marked and released back into the lagoon. Four days later traps were laid again and 374 crabs were caught. Out of the 374 crabs, 80 were found to have been marked.

(a) Calculate the population size of the crab in the lagoon using the formula below:

$$N = \frac{n \times M}{m}$$

Where:

N *= Total population of crabs in the lagoon*

n *= Total number of crabs in the second catch*

M *= Number of marked crabs during the first catch*

m *= Number of marked crabs in the second catch.* **(2mks)**

(b) State the assumptions that were made during the observation **(2mks)**

……..……

…..……

……..……

(c) What is the name given to this method of estimating the population size **(1mk)**

……..……

26. State the role of light in the process of photosynthesis. **(1mk)**

……..……

27. When are the **two** organisms considered to belong to the same species. **(1mk)**

……..……

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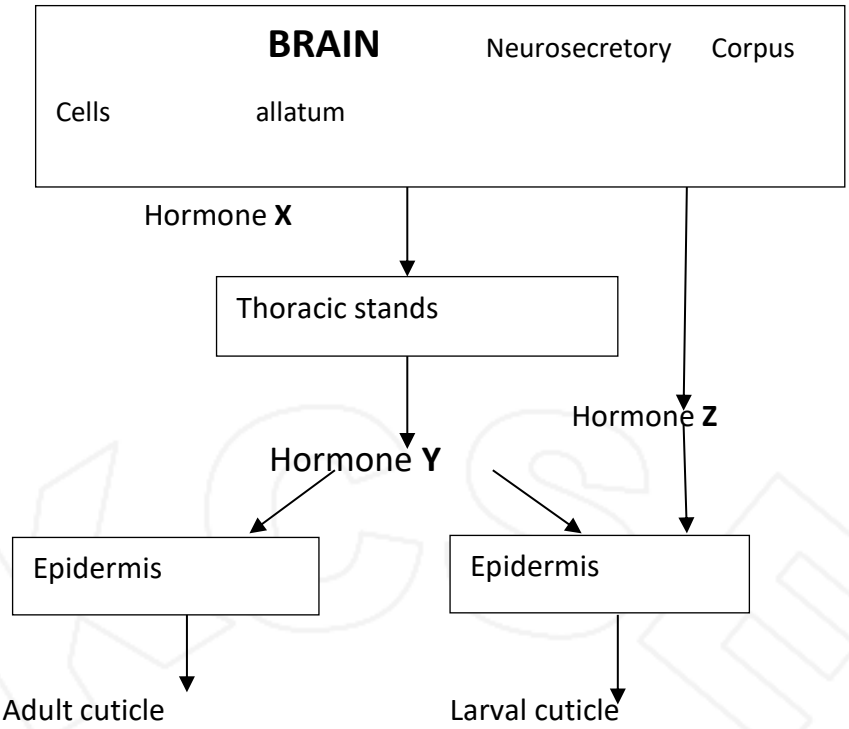
28. State the role of insulin in the human body **(1mk)**

……..……

…..……

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29. The chart below is a summary of the role of hormones in insect metamorphosis



(a) Name each of the hormones represented by letters **X** and **Y.** **(2mks)**

……..……

……..……

(b) State the function of hormone **Z** **(1mk)**

……..……

(c) What is the advantage of production of hormone **Y** alone without the secretion of hormone **Z**. **(1mk)**

……..……

……..……

30. Give **two** ways in which the mammalian uterus becomes adapted to implantation of zygote **(2mks)**

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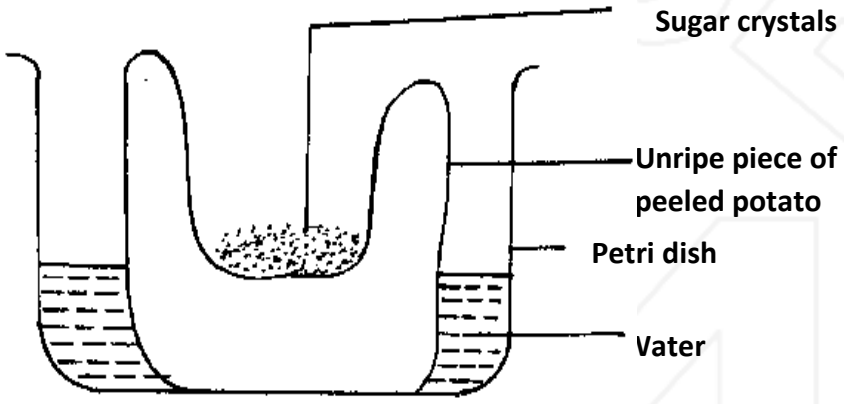
31. A form one student trying to estimate the size of onion cells observes the following on the microscope's field of view. He counts 20 cells across the field of view which is 3mm.Calculate the size of one cell in micrometers. **(3mks)**

……..……

..……

……..……

32. An experiment to investigate a certain physiological process was set up a shown below. After three (3) hours it was observed that the level of the sugar solutions had risen.



(a) Name the physiological process being investigated? **(1mk)**

……..……

(b) Account for the rise of the level of sugar solution in the experiment **(3mks)**

……..……

…..……

……..……

……..……

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

BIOLOGY

231/2

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 provided above.*

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

c) *This paper consists of two sections **A** and **B**.*

d) *Answer* **all** *the questions in Section* **A** *in the spaces provided.*

e) *In section **B** answer questions **6 (compulsory)** and either question **7** or **8** in the spaces. provided.*

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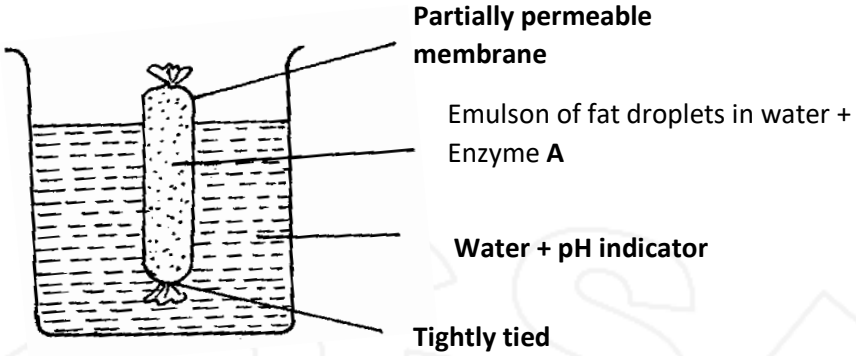
SECTION	QUESTION	MAX SCORE	SCORE
A	1-5	40	
B	6	20	
	7	20	
	8	20	
	TOTAL	**80**	

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SECTION A (40 MARKS)

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

1. The figure below shows apparatus at the start of an experiment to investigate the digestion of an emulsion of fat droplets in water by enzyme **A**.



The pH indicator is green in a pH of 7, blue when the pH is above 7 and red when it is below 7. The apparatus is kept at 40°C for 20 minutes during which time the indicator changes from green to red.

(a) Describe how the products of fat digestion enter a person's blood. **(1mk)**

……

……

……

(b) (i) State the identity of enzyme **A**. **(1mk)**

……

(ii) Explain why the apparatus was kept at 40°C. **(1mk)**

……

……

……

(c) Name the products of digestion of the emulsion by enzyme **A**. **(2mks)**

……

……

……

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(d) Describe the process which led to the change in pH **(3mks)**

……

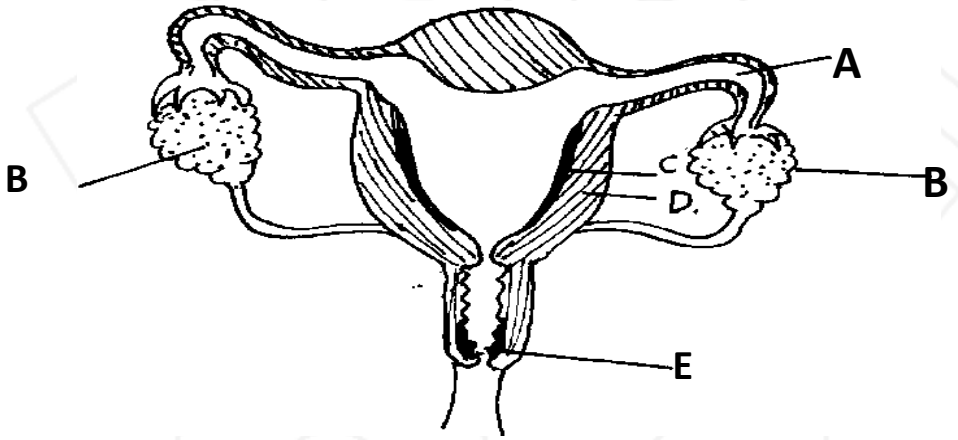
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2. Study the diagram below and answer the questions that follow.



(a) Name the part labelled **E**. **(1mk)**

……

(b) What are the functions of the part labelled **A**. **(2mks)**

……

……

(c) Which part of the structure responds to:

(i) Progesterone **(1mk)**

……

(ii) Oxytocin **(1mk)**

……

(d) Which type of cell division occurs in structure **B** and not structure labeled **E**. (**1mk)**

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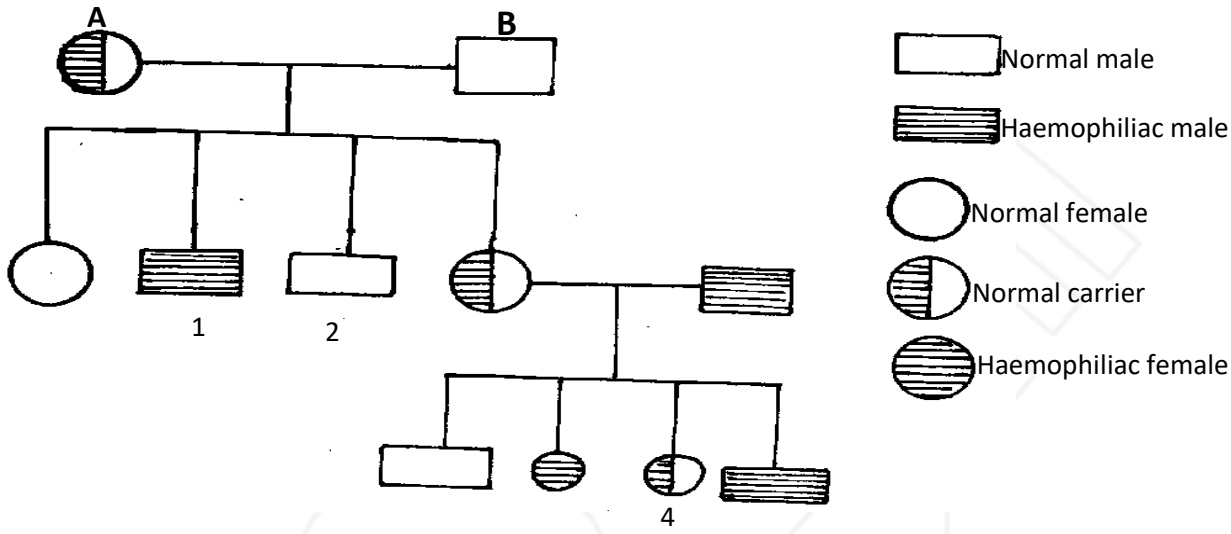
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(e) State **two** functions of testosterone **(2mks)**

……

……

3. The hemophilia is an **X**- linked recessive condition. The following pedigree shows a portion of a family in which members have hemophilia. Use **H** for non-hemophilia **h** for hemophilia.



(a) Identify the genotypes of parents **A** and **B**.

……

……

(b) What is the genotype of offspring number 1 **(1mk)**

……

(c) A carrier woman marries a hemophiliac man. What is the probability that the couple will have a son who is hemophiliac show your working. **(4mks)**

……

……

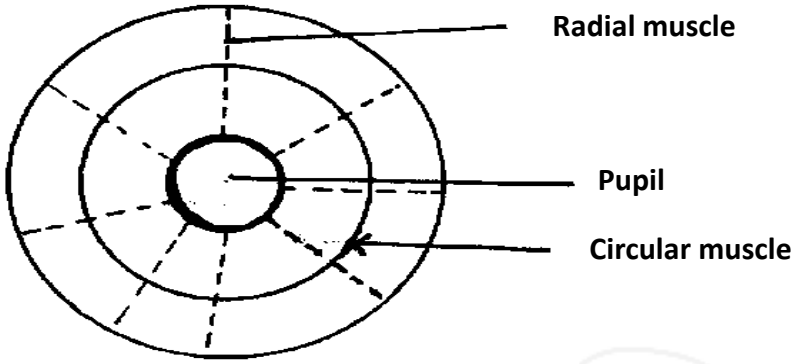
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(d) Name **one** defect of non-disjunction chromosomal mutation **(1mk)**

……

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4. The diagram below shows a front view of the iris and pupil of the eye.



(a) Complete the table below to show what happens to the structure shown when the eye is in. **(6mks)**

Structure	Darkness	Bright light
Radial muscles		
Circular muscles		
Size of pupil.		

(b) Explain how myopia can be corrected. **(2mks)**

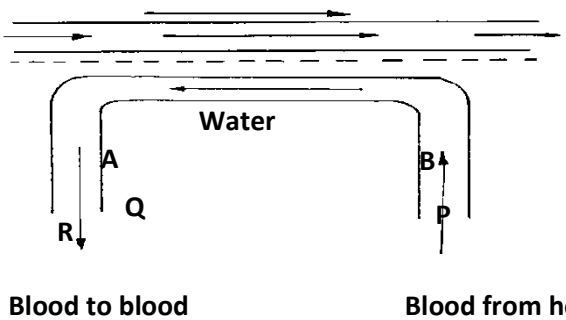
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5. The diagram below represents the direction of flow of water over the gills of a fish and the flow of blood in a capillary in the gills the percentage oxygen in solution at points **A**, **B**, **P**, **Q** and **R** is given in the table below the diagram. The percentage hemoglobin saturation is also given at positions **P**, **Q** and **R**.



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Position	% oxygen in solution	% Hb saturation with O_2
A	10	____
B	7	____
P	4	55
Q	7	85
R	6	95

(a) Why is the percentage of oxygen lowest at **P**? **(1mk)**

……

(b) State with reasons, what this data suggest what will happen to oxygen in the water at position **B ?** **(2mks)**

……

……

……

(c) Why is the percentage of oxygen, in solution lower at **R** than at **Q** ? **(1mk)**

……

(d) Suppose the direction of blood was opposite the above, suggest the disadvantage of this arrangement as compared to the one above. **(1mk)**

……

(e) The principle whereby the blood flows in the opposite direction to that of another fluid is known as counter-current effect (flow). Give **two** examples where this effect occurs in the human body **(2mks)**

……

……

(f) Name any structure of gaseous exchange in the leaves of plants? **(1mk)**

……

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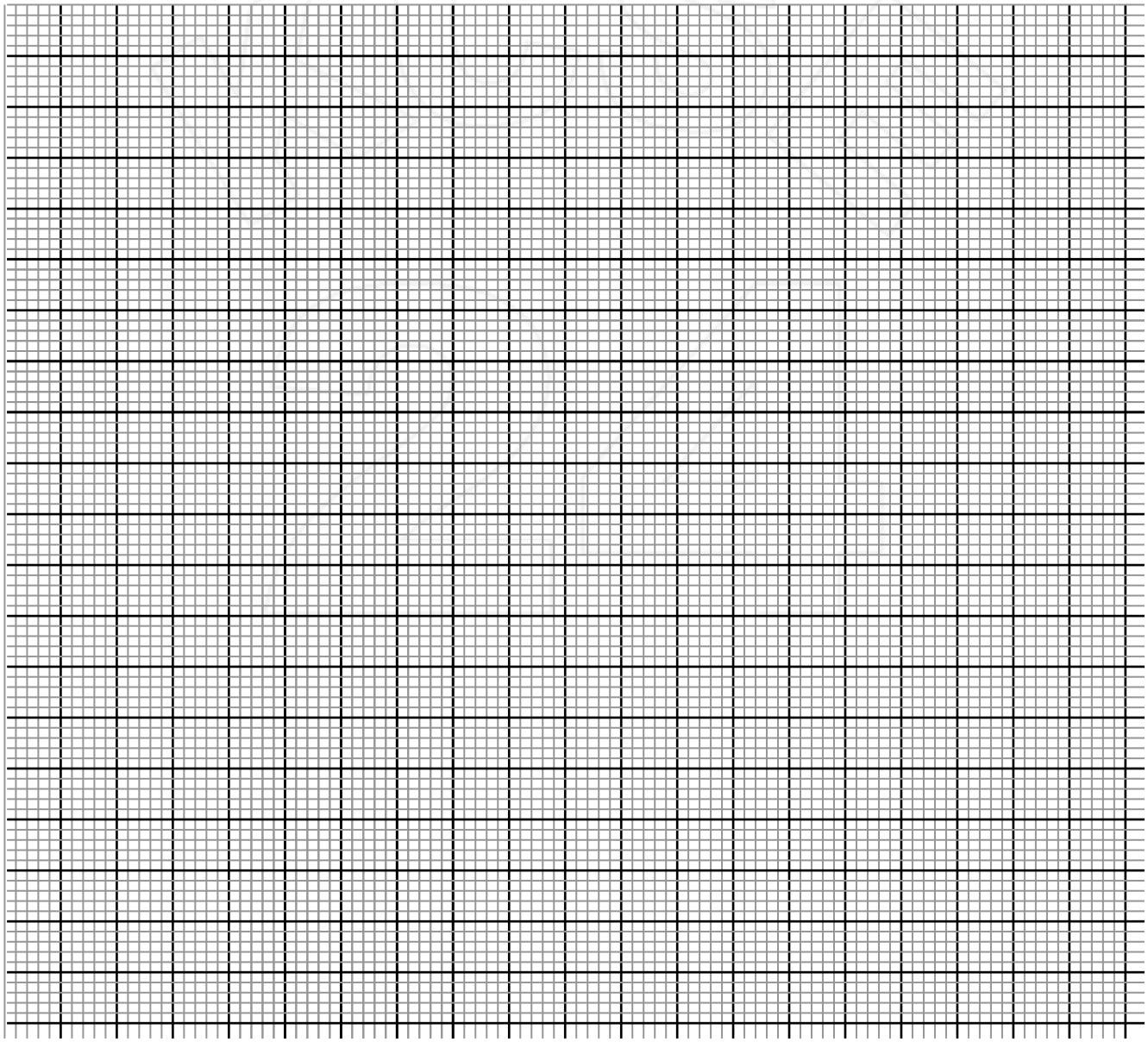
SECTION B (40 MARKS)

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

6. The relationship between oxygen concentration, sugar consumption and potassium ion uptake in isolated wheat roots was determined. The results obtained were tabulated as shown below. The loss of sugar and potassium uptake or gain are in arbitrary units.

		Percentage oxygen in aerotun stream						
		0	5	10	15	20	30	100
Sugar loss		15	20	43	45	45	44	43
Potassium ion gain		5	55	70	75	75	72	70

(a) Plot graphs of sugar loss and potassium ions gain against oxygen concentration on the same axes.



(6mks)

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(b) Name the process by which potassium ions is taken by the roots. Give reason for your answer **(4mks)**

……

……

……

……

(d) Account for sugar loss and potassium ions gain.

(i) 0% oxygen concentration **(2mks)**

……

……

……

(ii) Between 5% and 20% oxygen concentration **(2mks)**

……

……

……

(e) Suggest **two** factors necessary for the above process apart from oxygen **(2mks)**

……

……

(f) State **two** ways by which the process above can be stopped **(2mks)**

……

……

……

(g) Name two main areas in a mammalian body where the above process occurs. **(2mks)**

……

……

7. Determine how the differentiated structures in the mammalian skin are adapted to the functions. **(20mks)**

8. State and explain how various hormones regulate growth and development of plants. **(20mks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

BIOLOGY

231/3

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

SCHOOL…… SIGN……

CONFIDENTIAL INSTRUCTIONS TO SCHOOLS

The information contained in this **KCSE Biology Prediction paper** is to enable the head of the school and the teacher in charge of Biology to make adequate preparations for the **231/3 Biology** Practical examination.

No one else should have access to this information either directly or indirectly.

Each candidate should be supplied with the following;

- Four test tubes in a test tube rack
- Visiking tubing
- Two pieces of thread
- Two 50 ml empty beakers
- 10 ml measuring cylinder
- Two labels
- About 20ml Starch solution Labelled Solution Q -Should be prepared using warm water)
- About 50ml Concentrated glucose solution labelled solution W

Each candidate should have access to the following

a) Iodine solution

b) Benedict's solution

c) Source of heat

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

BIOLOGY

231/3

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

1. *Write your name, Index number and your other details in the spaces provided above.*

2. *Spend the first 15 minutes of the time allocated to read through the question paper.*

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

4. *Wrong spelling especially of biological terms will be penalized.*

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	18	
2	10	
3	12	
TOTAL	**40**	

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1. (a) You are provided with solution Q, Solution W, Visiking tubing and a thread. Divide solution Q and W into two halves in separate beakers. Use one half for **Procedure 1** and second half for **Procedure II.**

Procedure 1

- Using reagents provided and one half of solution Q, carry out tests to determine the food substance present in solution Q.
- Record the procedure, observations and conclusions in the table below.
- Repeat the same procedure using the half of solution W. (10mks)

TEST	FOOD SOLUTION	PROCEDURE	OBSERVATION	CONCLUSION
Starch	**Q**			
	W			
Reducing sugars	**Q**			
	W			

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Procedure II

(Clean and rinse properly any of the beakers that contained Solution **W** or Solution **Q** for use in this procedure)

- ❖ Tie one end of visking tubing provided with a thread tightly.
- ❖ Measure about 5ml of solution **Q** into the visking tubing (**Stir the solution thoroughly before use**).
- ❖ Tie the other end tightly to ensure that there is no leakage.
- ❖ Immerse the visking tubing and its content into a beaker containing solution **W.**
- ❖ Allow it to stand for 20 minutes.
- ❖ After 20 minutes empty the content of the visking tubing into a clean empty beaker.

b) Use the solution that was in the visking tube to test for starch and reducing sugars. Record the observations and conclusions in the table below:

Test	**Observations**	**Conclusions**
Starch test		
Reducing sugars test		

(4mks)

i) Name the physiological process being investigated in the experiment. **(1mark)**

……

ii) Which structure in the living organism is represented by the visking tubing? **(1mark)**

……

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iii) Account for the observation made in the table (b) above. **(2marks)**

……

……

……

……

2 a) Study the photograph below. The specimen had been placed in adequate light at a horizontal position for one week.



i) What was the aim of this experiment? **(1 mark)**

……

……

ii) What would be the result if seedling is placed on a working klinostat? **(1 mark)**

……

……

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iii) Explain how the growth curvature occurred. **(3 marks)**

……

……

……

……

……

b) Study the Photographs below and answer the questions that follows :





i) Name the type of relationship in Photograph E and F:

Photograph E ……**(1mk)**

Photograph F ……**(1mk)**

ii)What is the importance of the relationship taking place in Photograph E**.** **(1mk)**

……

……

iii) Using observable features only explain two ways in which the flower is adapted for the activity taking place in Photograph F. **(2mks)**

……

……

……

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3. The photographs below shows bones obtained from different regions of a mammalian body. The photographs are in different views.



Anterior view of bone A



Dorsal lateral view of Bone B



Anterior view of bone C

a) Identify the bones. **(3 marks)**

A……

B……

C……

b) Name the regions from which bone B was obtained from. **(1 marks)**

……

……

c) State **two** distinguishing features of the bone in photograph labeled B. **(2 marks)**

……

……

……

……

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d) State the significance of the part labeled T in the photograph of bone A. **(1 mark)**

……

……

e) With reason state the type of joint formed at the distal and proximal ends of specimen C.

(4 marks)

i) Distal end ……

Reason……

……

ii) Proximal end……

Reason……

……

f) Name the bone that articulates with the proximal end of the bone in photograph labelled C.……

(1 mark)

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

CHEMISTRY

233/1

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** the questions in the spaces provided in the question paper*

(d) *KNEC Mathematical tables and electronic calculators may be used for calculations*

(e) *All working **MUST** be clearly shown where necessary*

(f) ***Candidates should answer the questions in English***

FOR EXAMINER'S ONLY

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1-28	80	

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Answer ALL the questions in the spaces provided

1.In the industrial preparation of oxygen, state:

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

……

……

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

……

……

2.A form four student accidentally mixed Sodium Carbonate and Calcium Carbonate. Describe how he would obtain a dry sample of Sodium Carbonate from the mixture.**(3 mks)**

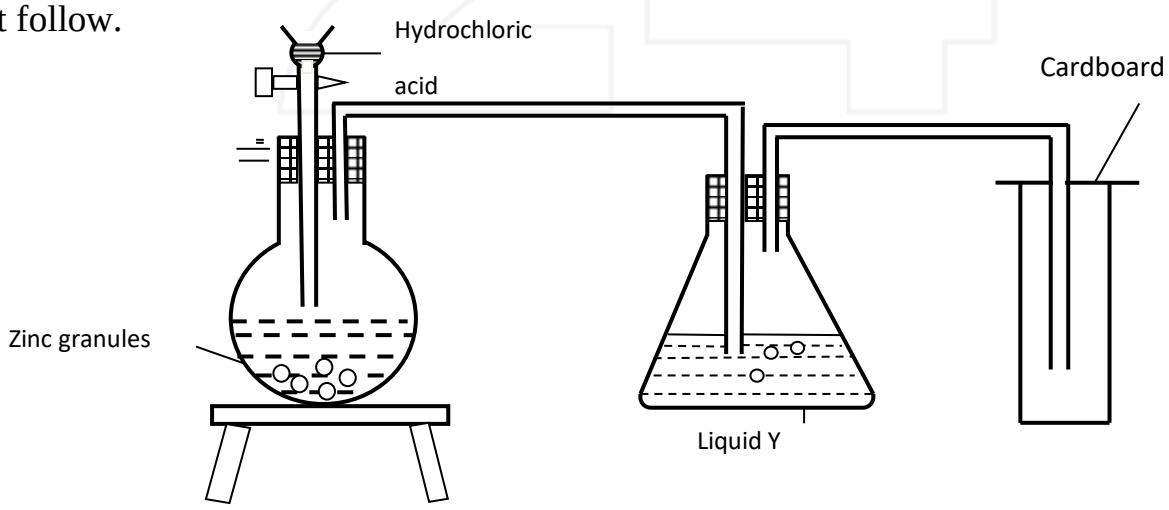
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3. The set up below was used to prepare dry hydrogen gas. Study it and answer the questions that follow.



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

……

……

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

……

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

……..

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

……

……

……

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

……

……

……

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

……

……

……

……

7.$50cm^3$ of Carbon (IV) Oxide diffuses through a porous plate in 15 seconds. Calculate the time taken by $75cm^3$ of Nitrogen (IV) Oxide to diffuse through the same plate under similar conditions. (C = 12, 0 = 16, N = 14) **(2marks)**

……

……

……

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8.(a). Carbon (IV) oxide is bubbled through Calcium hydroxide until there is no further change.

Explain using equations the changes observed. **(2 marks)**

……

……

……

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

……

……

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

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

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

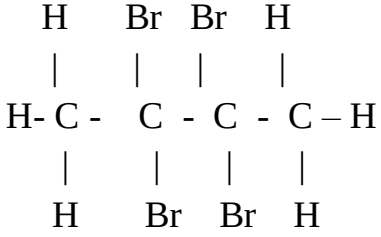
(i) Is a metal **…….**

(ii) Has a simple molecular structure**……**

(iii) Has a giant ionic structure**……..……**

(iv) Has a giant covalent structure**……..**

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



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

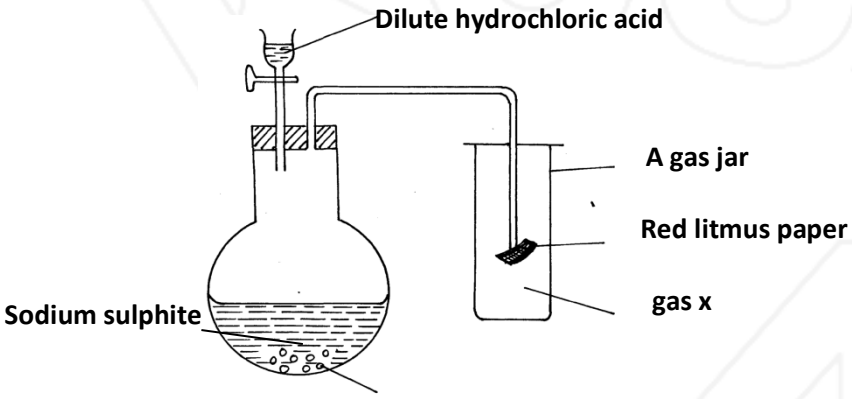
……

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

……

……

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



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

……

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

……

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

……

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

……

……

……

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

……

……

……

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

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

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

……

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

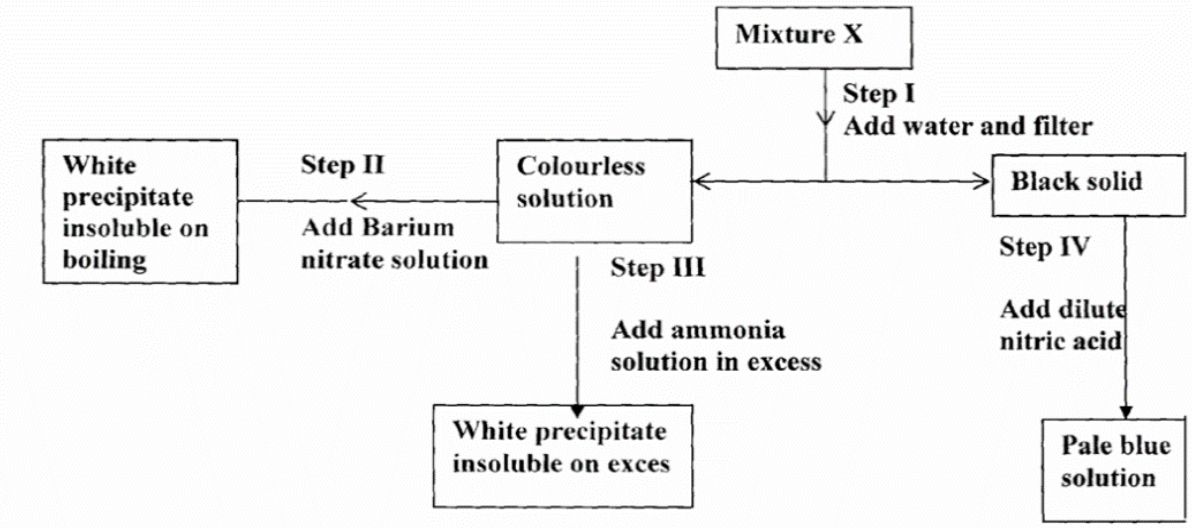
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(c) State and explain what would happen if a sample of a saturated solution of thesubstance at 40^0C was heated to 110^0C. **(1mark)**

……

……

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



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(a) Name:

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

……

……

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

……

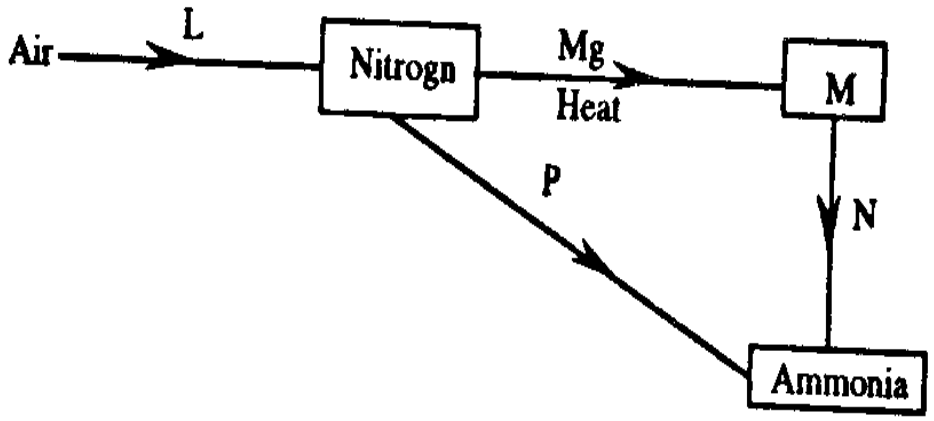
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(b) Write an equation to show how the white precipitate in step III is formed. **(1mark)**

……

……

15. Study the diagram below and answer the questions



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

……

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

N……

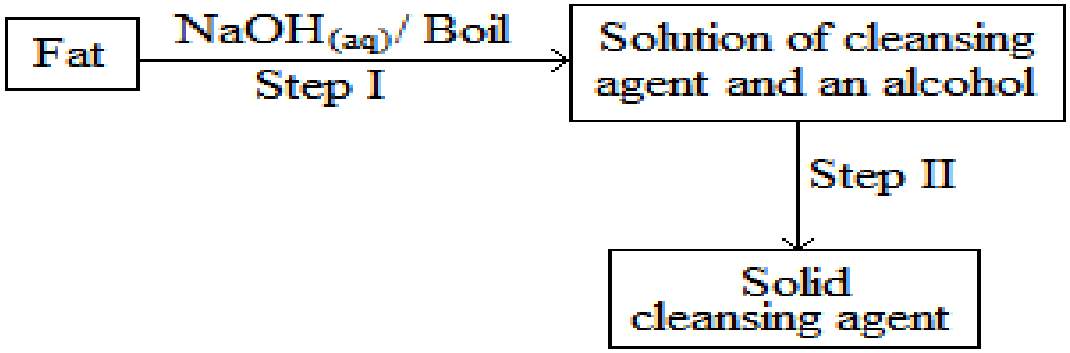
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P……

……

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



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

……

……

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

……

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

……

……

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

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

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

……

……

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

……

……

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

……

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

(i)copper metal

……

(ii) Sulphurpowder

……

……

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

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

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

……

……

……

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

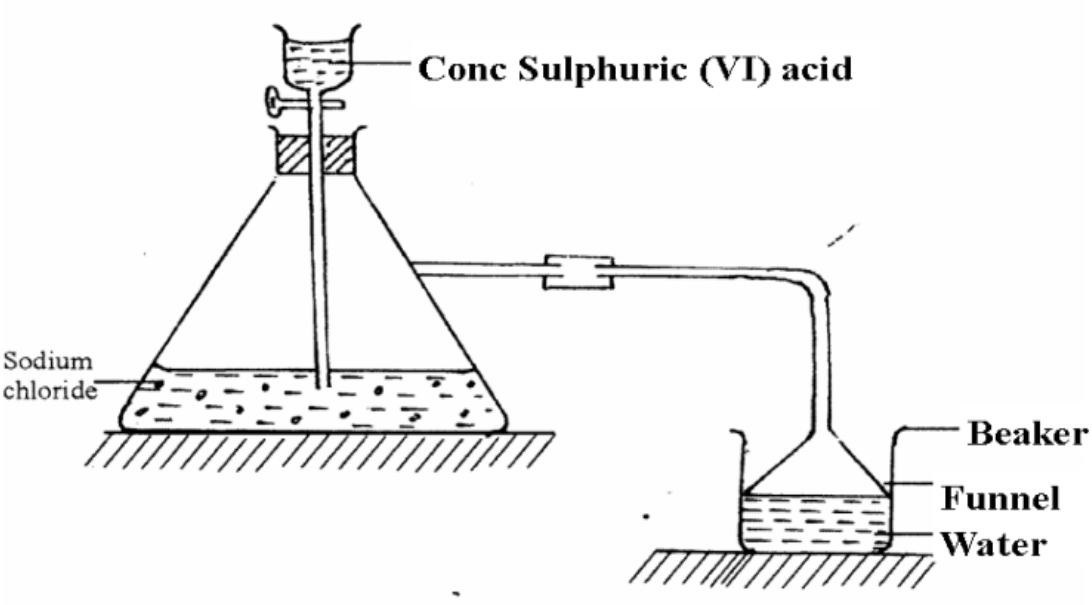
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20. Study the set-up below and answer questions that follow.



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

……

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

……

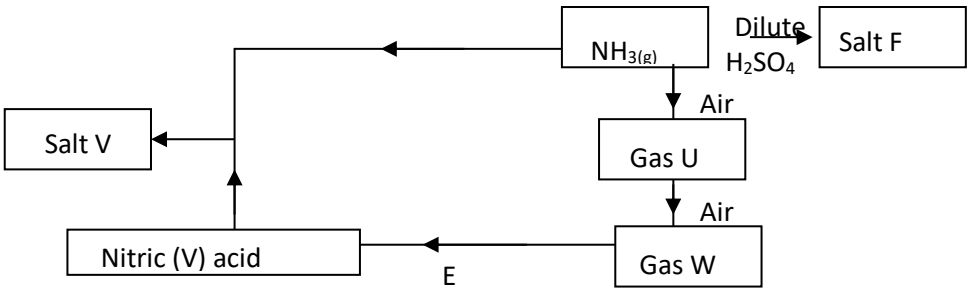
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iii) How does the gas affect the P^H of the water in the beaker? **(1mark)**

……

……

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



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i) Identify U and W

U …… **($\frac{1}{2}$mark)**

W …… **($\frac{1}{2}$mark)**

ii) Give the names of salt F and V

F …… **($\frac{1}{2}$mark)**

V …… **($\frac{1}{2}$mark)**

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

……

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

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

……

……

……

23. Ethene reacts with oxygen according to the equation.

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

15.0 cm^3 of ethene were mixed with 50cm^3 of oxygen and mixture was sparked to complete the reaction. If all the volumes were measured at a pressure of one atmosphere and 25^{0}C**.**

Calculate the volume of resulting gaseous mixture. **(3 marks)**

……

……

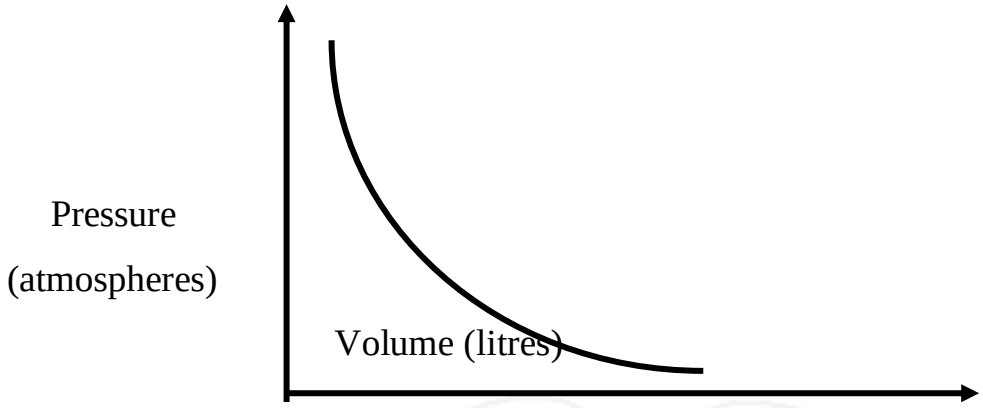
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24. The graph below shows the behavior of a fixed mass of a gas at constant temperature.



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

……

……

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

……

……

25. Temporary water hardness can be removed by boiling

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

……

……

(b) Write a chemical equation to show how temporary hardness is removed by boiling**(1 mk)**

……

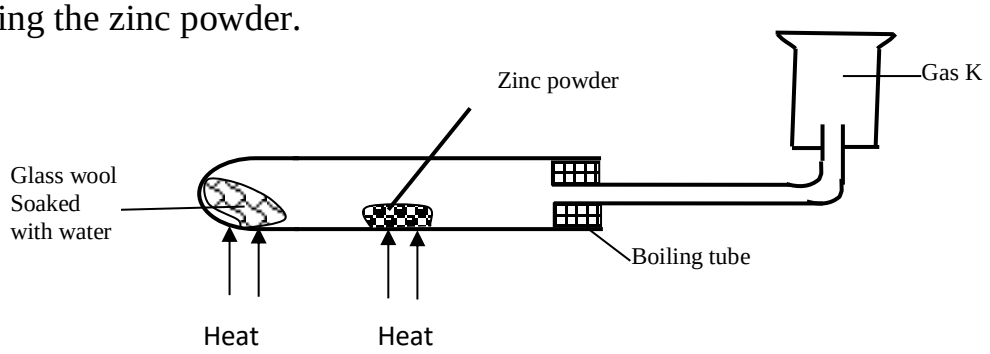
(c) State **one** advantage of hard water. **(1 mark)**

……

……

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



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

(1 mark)

……

……

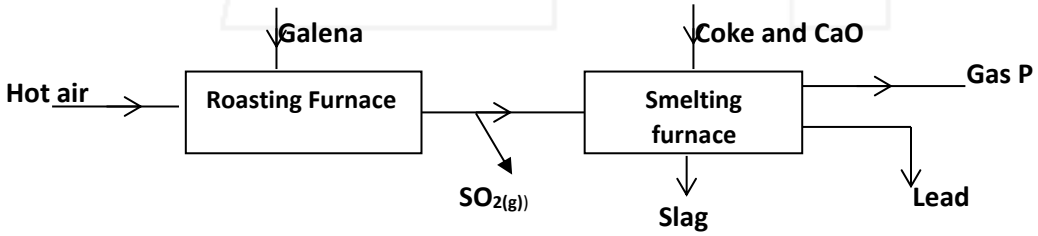
……

(b) What observation was made in the boiling tube. **(1 mark)**

……

……

27. During the extraction of lead from its ores one of the main ore used is Galena



(i) Write an equation for the reaction in roasting furnace. **(1 mark)**

……

(ii) Name gas **P** **(1 mark)**

……

(iii) State **one** use of lead metal. **(1 mark)**

……

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28. The empirical formula of a compound is CH_2 and it has a molecular mass of 42.

(a) What is the molecular formula of this compound? **(1 mark)**

……

……

(b) Write the general formula of the homologous series to which the compound belongs. **(1mk)**

……

……

(c) Draw the structural formula of the third member of this series and give its IUPAC name. **(1mark)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

CHEMISTRY

233/2

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** on the spaces provided above*
- *Answer **all** the questions in the spaces provided.*
- *All working **must** be clearly shown where necessary.*
- *Mathematical tables, Electronic calculators may be used.*

For Examiners Use Only

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	13	
2	13	
3	12	
4	09	
5	13	
6	10	
7	10	
Total	**80**	

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1. (a) The grid below show part of the periodic table.(The letter do not represent the actual Symbols. Use it to answer the questions that follow.

T								**Q**
				S		**R**	**K**	
A	**J**		**Y**		**U**		**L**	
W							**M**	**B**
	C						**N**	
P								

(i) Select the most reactive non-metal. **(1mk)**

……

(ii) Select an elements that forms a divalent cation. **(1mk)**

……

……

(iii) Element **Z** has atomic number 14.Show its position in the grid. **(1mk)**

……

……

(iv) How do the atomic radii of **U** and **J** compare? **(2mks)**

……

……

……

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(v) How do electrical conductivity of **A** and **Y** compare? **(2mks)**

……

……

……

(vi) How does the boiling point of elements **K, L** and **M** vary? Explain **(2mks)**

……

……

……

(b) The table below gives information on four elements by letters V, X, E and G. Study it and answer the questions that follow. The letters do not represent the actual symbols of the elements.

Element	Electron arrangement	Atomic radius	Ionic radius
V	**2:8:2**	**0.136**	**0.065**
X	**2:8:7**	**0.099**	**0.181**
E	**2:8:8:1**	**0.203**	**0.133**
G	**2:8:8:2**	**0.174**	**0.099**

(a) Which two elements have similar properties? Explain. **(2mks)**

……

……

……

(b) Which element is a non-metal? Explain. **(1mk)**

……

……

(c) Which one of the elements is the strongest reducing agent. **(1mk)**

……

……

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2. (a) Petrol is a mixture of several alkane molecules ranging from pentane (C_5H_{12}) to decane ($C_{10}H_{22}$).Name the process by which petrol is obtained from crude oil. **(1mk)**

……

(b) A decane molecule derived from petrol is cracked into hydrocarbon with equal number of carbon atoms in each molecule.

(i) What is cracking? **(1mk)**

……

……

……

(ii) State **two** conditions necessary for the above process. **(2mks)**

……

……

……

……

(iii) Write an equation for the cracking of decane molecule. **(1mk)**

……

……

(iv) Draw and name **two** isomers of molecule with lower molecular mass obtained from cracking of decane as shown in b(iii) above. **(2mks)**

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(v) How would you distinguish the products formed by cracking as shown in b(iii) in the laboratory. **(2mks)**

……

……

……

……

(c) Name the class to which the following cleansing agents belong.

(i) $R\text{-}COONa^+$ **(1mk)**

……

(ii) R-⬭-O-SO_3Na **(1mk)**

……

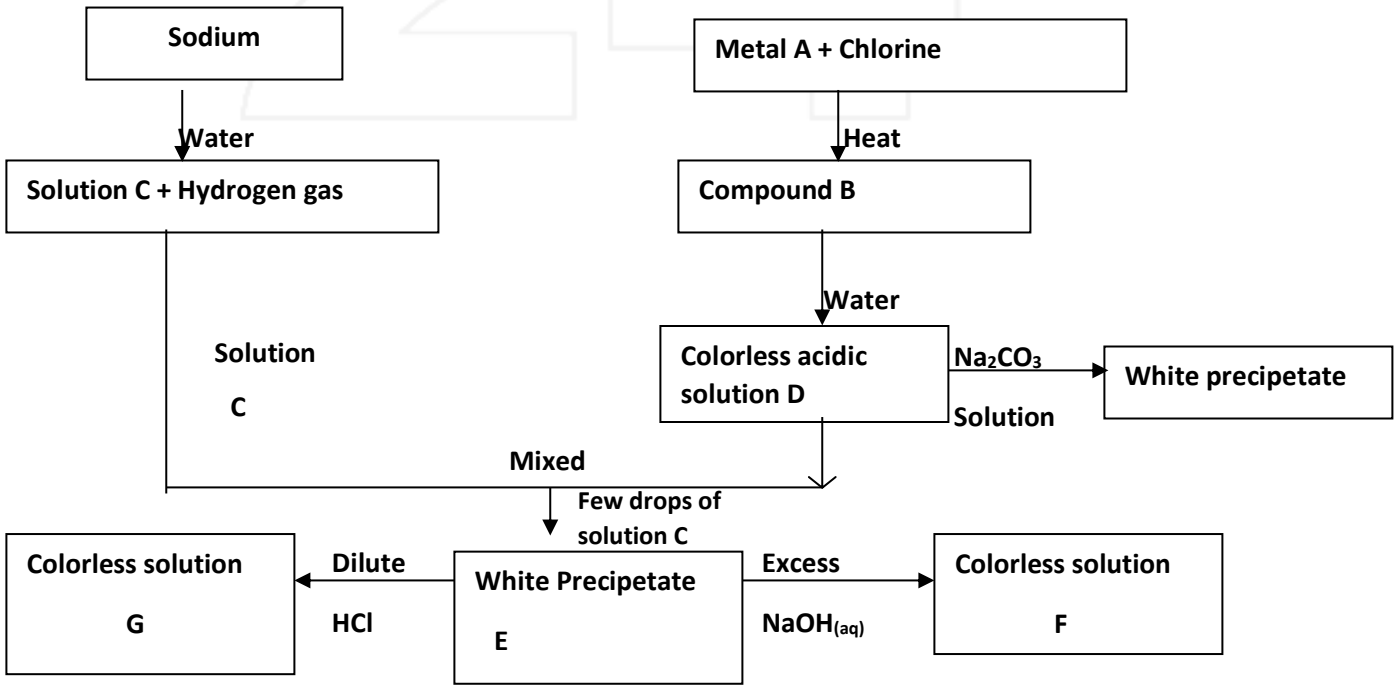
(d) Which cleaning agent above is not environmental friendly? Explain. **(2mks)**

……

……

……

3. Study the flow diagram below and use it to answer the questions that follow.



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(a) Give the name and formula of the following.

(i) White precipitate **E**

Name…….. **(½ mk**

Formula……. **(½ mk)**

(ii) Colourless solution F

Name …….. **(1mk)**

Formula…….. **(1mk)**

(b) What property is exhibited by white precipitate E when it reacts with Sodium hydroxide and HCl acid. **(1mk)**

…….

……

……

(c) Write an ionic equation for the reaction between white precipitate E and excess sodium hydroxide solution. **(1mk)**

…….

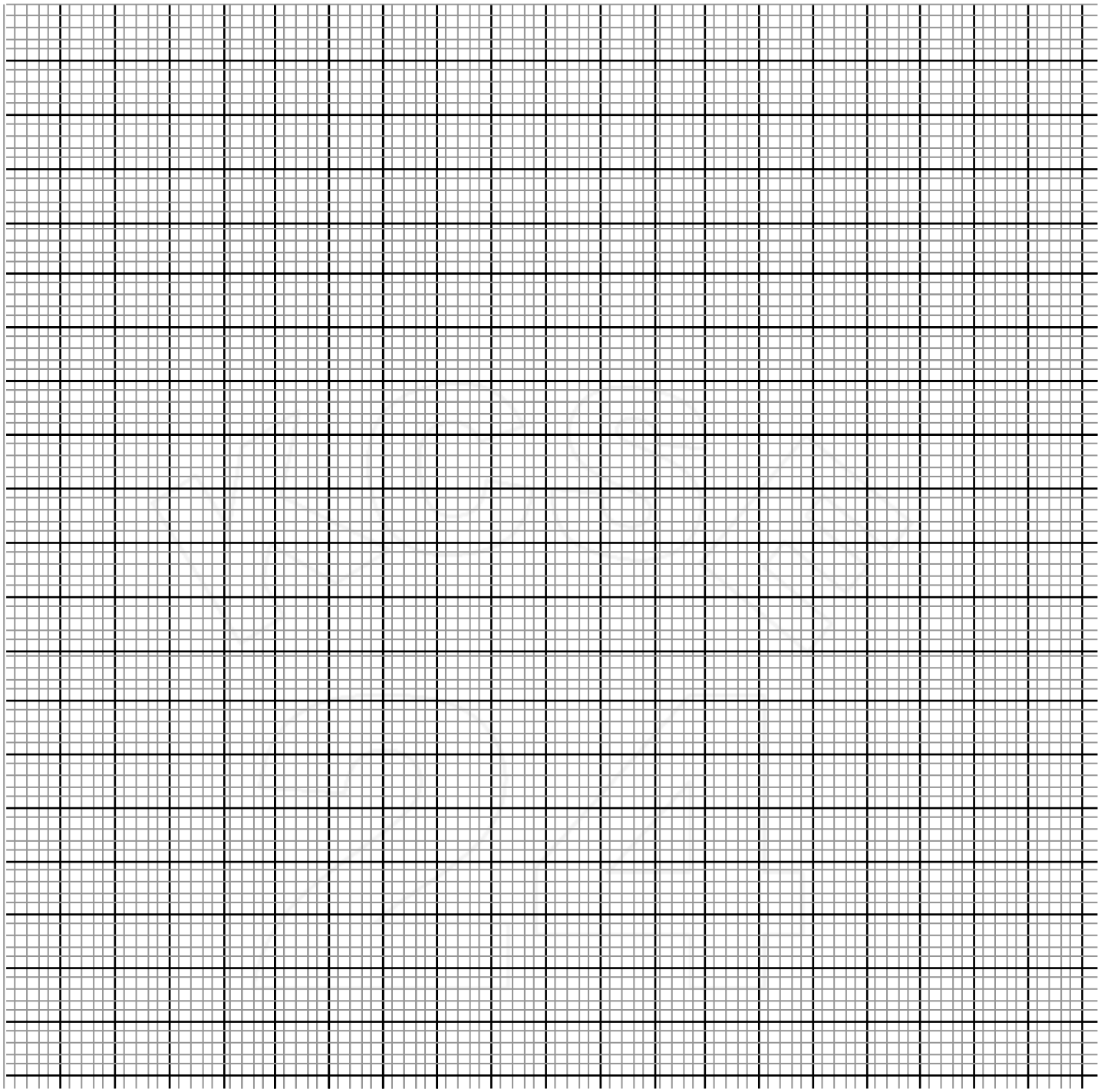
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(d) The information below gives the solubilities (In g/100g of water) of substances X and Y at various temperatures

Temperature		0	20	40	60	80	100
Solubility g/100g of water	X	10	15	26	40	63	100
	Y	30	34	37	40	44	48

(i) Plot a graph of solubility against temperature for the two salts X and y on the same axis. **(4mks)**

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(i) From the graph state:

I The solubility of X at 50^{o}C **(1mk)**

……

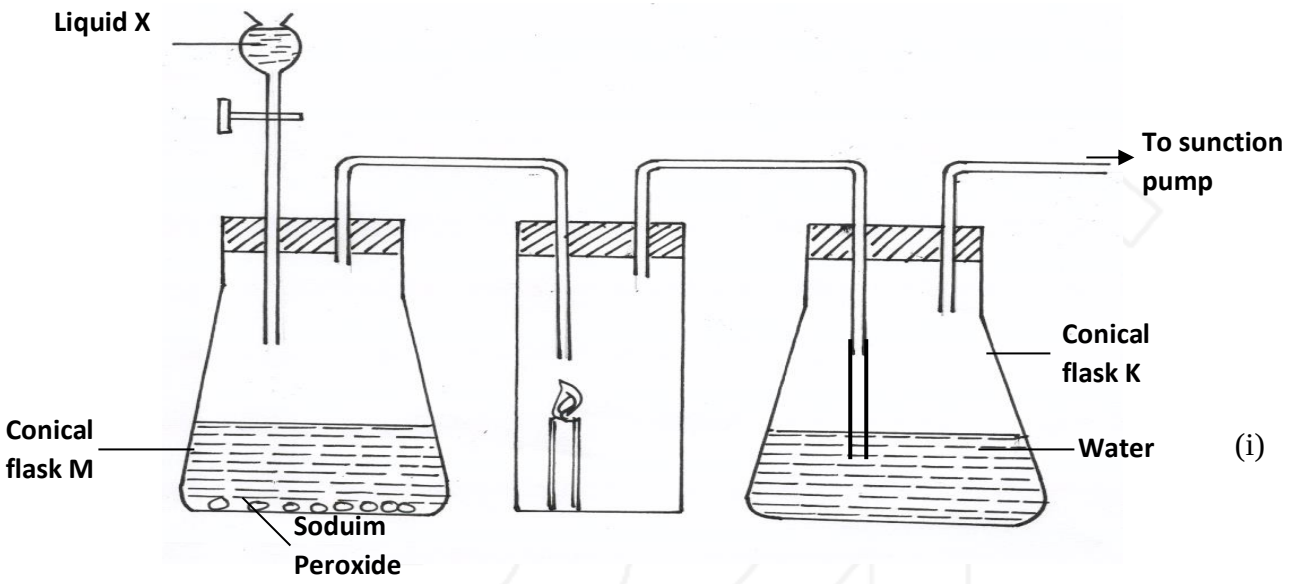
II The temperature at which solubility of Y is 36g/100g of water. **(1mk)**

……

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III Calculate the mass of crystals of substance X which will deposit when a solution containing 50g of X in 100g of water initially at 80^{o}C is cooled to a temperature of 30^{o}C **(1mk)**

4. The diagram below shows a set – up that was used to prepare oxygen gas and passing it over a burning candle. The experiment was allowed to run for some time.



(i)

(i) Name liquid **X** **(1mk)**

……

(ii) Suggest the PH of the solution in conical flask **K**. **(1mk)**

……

(iii) Write an equation for the reaction taking place in the conical flask M.**(1mk)**

……

(b) During the extraction of sodium metal from sodium chloride in the Down's cell, calcium chloride is added

(i) Explain why it is necessary to add Calcium chloride **(1mk)**

……

……

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(ii) Explain why sodium metal is not used in making the overhead electric cables yet it is a conductor of electricity **(1mk)**

……

……

(c) (i) Describe a simple chemical test that can be used to distinguish carbon (IV) oxide and Carbon(II) oxide gases. **(1mk)**

……

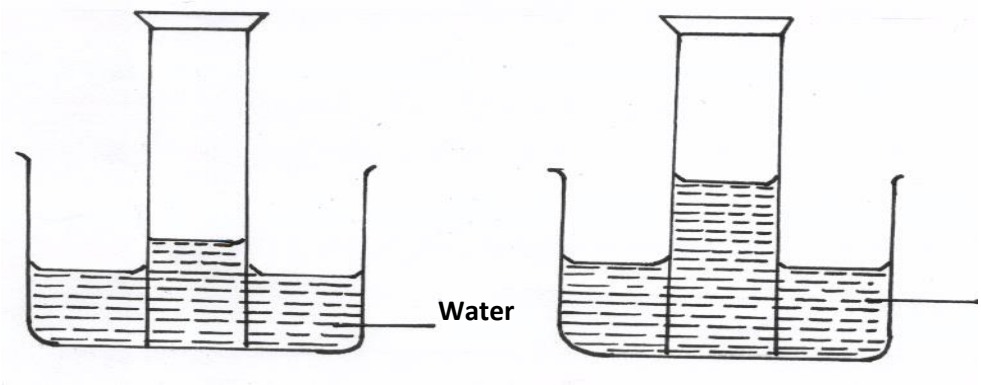
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……

(ii) Give **one** use of carbon (II) Oxide **(1mk)**

……

(d) A form two student inverted a gas jar full of carbon (IV) oxide over water and sodium hydroxide solution separately as shown below



Explain the observations made. **(2mks)**

……

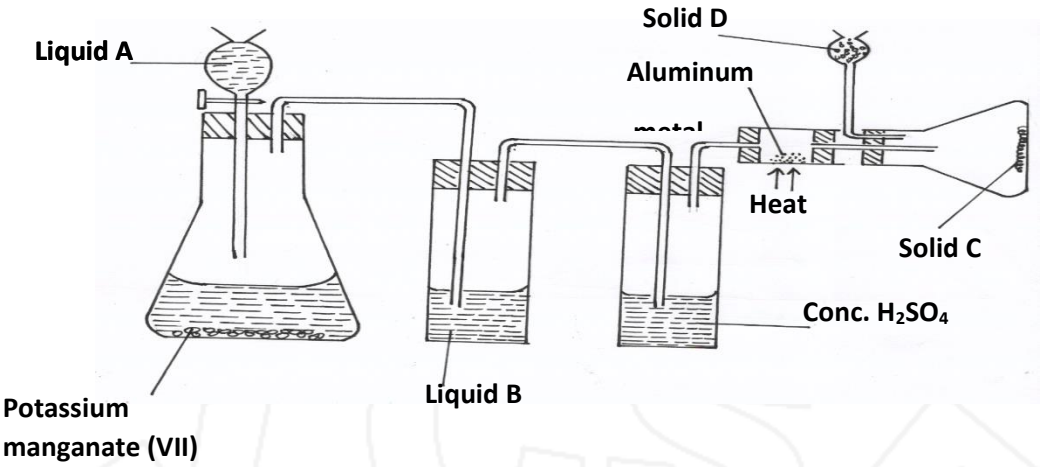
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5.(a) Study the diagram below and use it to answer the questions that follow.



(i) Name liquids **A** and **B**

A…… **(1mk)**

B…… **(1mk)**

(**ii)** Suggest a suitable reagent that can be used as solid **D** **(1mk)**

……

(iii) State the role of Solid **D** **(1mk)**

……

……

(iv) Write a balanced chemical equation for the reaction in the conical flask **(1mk)**

……

(v) Explain why solid C collects further away from the heated aluminium metals. **(1mk)**

……

……

……

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(vi) In the combustion tube above, 0.675g of aluminium metal reacted completely with 1800cm^3 of chlorine gas at room temperature. Determine the molecular formula of Solid C, given that its relative formula mass is 267 (Al= 27.0, Cl= 35.5 molar gas volume at r.t.p = 24.0 litres) **(3mks)**

(b) The reaction between hot concentrated sodium hydroxide and chlorine gas produces Sodium Chlorate (V) as one of the products

(i) Write the equation for the reaction. **(1mk)**

……

……

(ii) Give **one** use of sodium chlorate.(V) **(1mk)**

……

……

(c) Explain the difference between bleaching by chlorine and bleaching by sulphuric (IV)oxide gases. **(2mks)**

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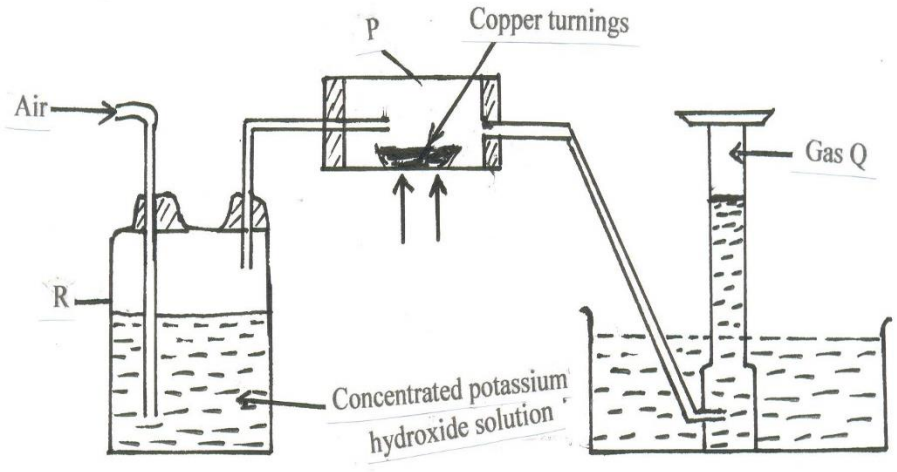
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6.A. Study the diagram below that is used to prepare a gas Q.



(i) (a) What component of air is eliminated in wash bottle labelled R? **(1 mark)**

(b) Write the reaction equation for the reaction that eliminates the component of air in a(i) above. **(1 mark)**

……

……

(ii) What component of air is removed in hard glass tube labelled P? **(1 mark)**

……

(iii) Identify gas Q. **(1 mark)**

……

B.In an experiment 1.54g of nitrogen reacted with 3.53g of oxygen to form a compound.

N = 14, O = 16

(i) Calculate the moles of nitrogen and oxygen that reacted. **(2 marks)**

……

……

……

……

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(ii) Determine the simplest formula of the compound formed between nitrogen and oxygen.

(2 marks)

……

……

……

(iii) Commend on the melting and boiling points of the compound in B(ii) above, explain.

(2 marks)

……

……

……

7. In the preparation of Copper carbonate, copper was burnt in air and the product collected. Dilute sulphuric acid was added and the mixture filtered and cooled. Sodium carbonate was added to the filtrate and the content filtered. The residue was washed and dried to give a white powder.

a) Give the chemical name of the product formed when magnesium burns in air **(1mk)**

……

b) Write a chemical equation for the formation of product. **(1mk)**

……

c) (i) Name filtrate collected after sodium carbonate was added **(1mk)**

……

(ii) Name the white powder. **(1mk)**

……

d) Write chemical equation for the reaction between product in (a) and acid. **(1mk)**

……

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e) Write an ionic equation to show the formation of the white powder **(1mk)**

……

f) Write an equation to show what happened when white powder is strongly heated.

(1mk)

……

……

g) Using a diagram, describe how a salt can be obtained from the filtrate in c(i) above

(3mks)

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

CHEMISTRY

233/3

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

SCHOOL…… SIGN……

Confidential

The information contained in this **KCSE Chemistry Prediction paper** is to enable the head of the school and the teacher in charge of Chemistry to make adequate preparations for the **233/3 Chemistry** Practical examination.

No one else should have access to this information either directly or indirectly.

INSTRUCTIONS

In addition to the laboratory fittings each candidate requires the following:

1. *2.0g of solid **A** weighed accurately and supplied in a stopped container.*
2. *About 150cm^3 of solution **S**.*
3. *250ml beaker*
4. *100ml measuring cylinder*
5. *Two dry boiling tubes*
6. *One 0.50ml burette*
7. *One 25.0ml pipette*
8. *One 10ml measuring cylinder*
9. *One thermometer – 10^0C to 110^0C*
10. *One filter funnel*
12. *One 250ml volumetric flask*
13. *Stopwatch/clock*
14. *Two 250ml conical flasks*
15. *Distilled water in a wash bottle (500ml)*

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16. *6 Dry test-tubes*
17. *One **metallic** spatula*
18. *2 Boiling tubes*
19. *1 Filter paper*
20. *10ml measuring cylinder*
21. *Universal indicator paper*
22. *PH Chart*
23. *About 1g of solid E in a stoppered container.*
24. *About 1g of Solid F in a stoppered container.*
25. *About 0.5g of solid sodium hydrogen carbonate in a stoppered container.*

ACCESS TO:

1. *Methyl orange indicator supplied in a dropper bottle.*
2. *Sodium hydroxide solution supplied with a dropper*
3. *Ammonia solution supplied with a dropper*
4. *Acidified Potassium manganate(VII) solution supplied with a dropper*
5. *Nitric(V) acid solution supplied with a dropper*
6. *Sulphuric(VI) acid solution supplied with a dropper*
7. *Lead (II) nitrate solution supplied with a dropper*
8. *Source of heat like Bunsen Burner*

NOTES

- Solution **S** is prepared by measuring exactly 5.0cm^3 of concentrated hydrochloric acid (specify gravity 1.18g/cm^3) and placing in one litre volumetric flask, and diluting with distilled water to the mark. Label this as solution **S. (0.05M HCL**).
- Solid E is 1g mixture of sodium sulphite and zinc carbonate in a ratio of 1:1.
- Solid F is Maleic acid or any other solid alkanoic acid in your lab.

2. Solids:

A is Borax (Sodium Tetraborate decahydrate, $Na_2B_4O_7.10H_2o$)

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

CHEMISTRY

233/3

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

1. *Write your name, Index number in the space provided.*
2. *Answer all the questions in the spaces provided.*
3. *Mathematical tables and scientific calculators may be used.*
4. *All working must be clearly shown where necessary.*
5. *You are not allowed to start working with the apparatus for the first 15 minutes. This time is to enable you read the question paper and make sure you have all the requirements.*
6. *Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.*

FOR EXAMINERS USE ONLY

SECTION	QUESTION	CANDIDATES SCORE
	1	
	2	
	3	
TOTAL SCORE		

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1. You are provided with:

- *2.0g of substance A labeled solid **A**.*
- *Solution **S** 0.05M hydrochloric acid.*
- *Methyl orange indicator.*

You are required to determine the:

- Solubility of substance **A** in water.
- Relative formula mass of substance **A.**

PROCEDURE 1

(i) Place 200cm^3 of tap water in a 250ml beaker and keep it for use in step (vi)

(ii) Place all of substance **A** in a dry boiling tube.

(iii) Using a burette, measure 10.0cm^3 of distilled water and add it to the substance **A** in the boiling tube.

(iv)While stirring the mixture in the boiling tube with a thermometer, warm the mixture using a Bunsen burner, until the temperatures rises to 65^{0}C. Stop warming the mixture.

(v) Allow it to cool while stirring with the thermometer.

(vi) When the temperature drops to 60^{0}C start the stop watch/clock, place the boiling tube in the beaker with tap water prepared in step (i) above.

(vii)Continue stirring and record the temperature of the mixture after two minutes, then thereafter record the temperature of the mixture after every one minute interval and complete **table 1. Retain the mixture with the thermometer inside for use in procedure II below.**

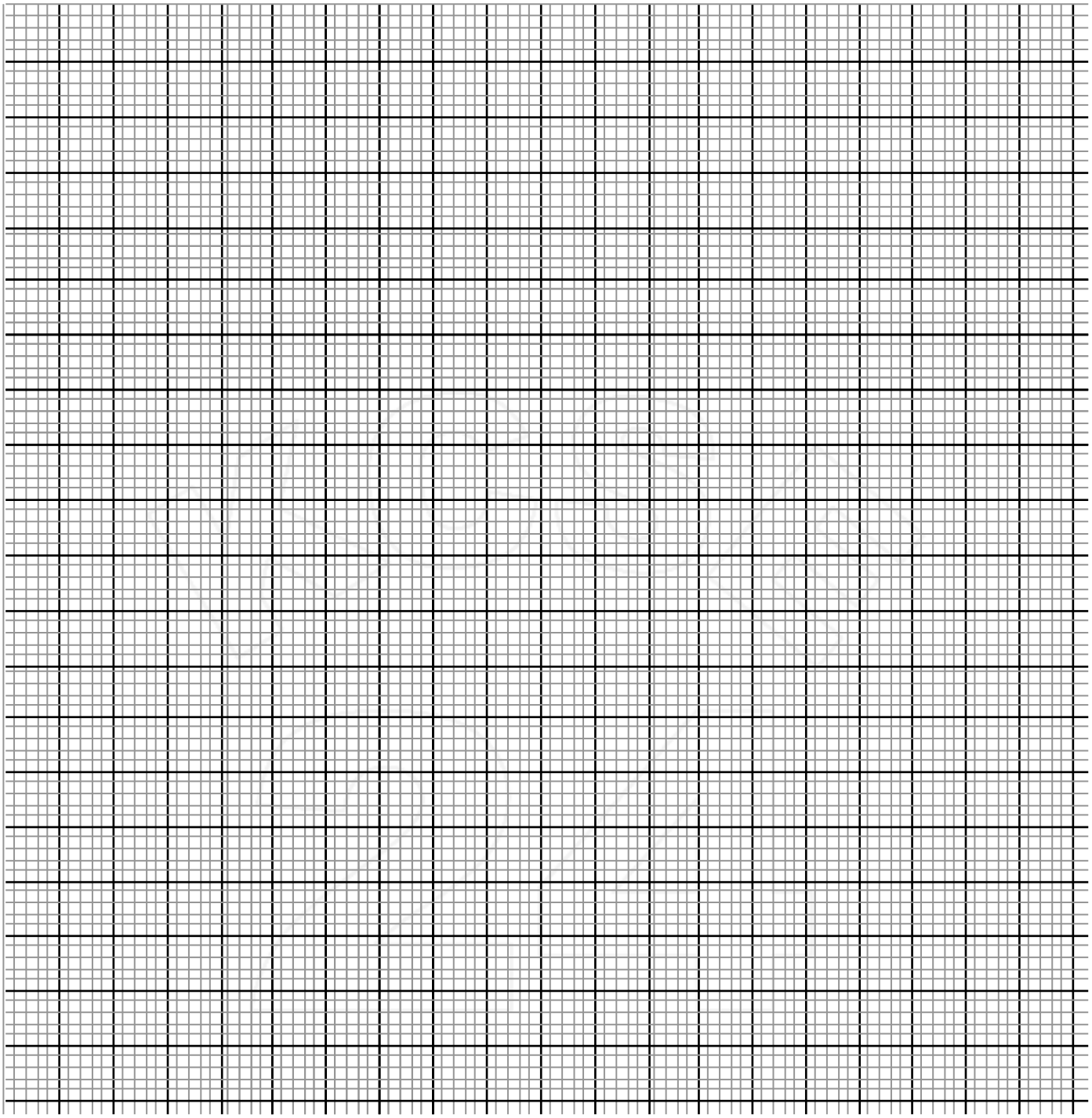
Table 1

Time (minutes)	0	2	3	4	5	6	7	8	9	10
Temperature										

(4 marks)

On the grid provided, plot a graph of temperature (vertical axis) against time.**(3 marks)**

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(a) Using the graph determine the temperature, (T_s) when 2.0g of substance **A** dissolves completely in 10.0cm^3 of distilled water. **(1 mark)**

(b) Calculate the solubility of substance **A** grams per 100g water at temperature, T_s. **(1 mark)**

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PROCEDURE II

Using a funnel, transfer all the mixture obtained from procedure I into 250ml volumetric flask. Rinse the boiling tube and the thermometer with about $20cm^3$ of distilled water and add the rinses into the volumetric flask. Repeat the rinsing two more times.

Add about $100cm^3$ of distilled water to the volumetric flask. Shake until all the solid dissolves. Add more distilled water to the mark. Label this as solution **A**. Fill the burette with solution **A**. Using a pipette and **pipette filler**, place a $25.0cm^3$ of solution **S** into a 250ml conical flask. Record your readings in **table 2** below. Repeat the titration two more times and complete the table.

Table 2

	I	II	III
Final burette reading			
Initial burette reading			
Volume of solution A used (cm^3)			

(4 marks)

(a) Calculate the:

(i) Average volume of solution **A** used. **(1 mark)**

(ii) Number of moles of hydrochloric acid, solution **S** used. **(1 mark)**

(b) Given that two moles of acid react with one mole of substance **A**. Calculate:

(i) Number of moles of substance **A** used. **(1 mark)**

(ii) Concentration of solution **A** in moles per litre. **(1 mark)**

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(iii) Concentration of solution **A** in grams per litre. **(1 mark)**

(iv) Relative formula mass of substance **A**. **(1 mark)**

2. You are provided with solid **E**. Carry out the following tests and write your observations and inferences in the spaces provided.

a) Place all the sold E in a boiling tube. Add about $10cm^3$ of distilled water. Shake well and filter. Divide the filtrate into three portions and keep the residue for use in part (b).

(i)

Observations	**Inferences**
(1 mark)	**(1 mark)**

(ii) To the first portion add aqueous sodium hydroxide drop wise until in excess.

Observations	**Inferences**
(½ mark)	**(1 mark)**

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(iii) To the second portion add three drops of lead (II)nitrate solution followed by $3cm^3$ of dilute nitric(V) acid.

Observation	Inference
(1 ½ marks)	**(1 mark)**

(iv) To the third portion add three drops of acidified potassium manganate (VII) solution.

Observation	Inference
(1 mark)	**(1 mark)**

(b) Place the residue in (a) above in a boiling tube and add $10cm^3$ of dilute nitric (V) acid. Retain the mixture for the tests below:

Observation	Inference
(½ mark)	**(½ mark)**

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(i) To 2cm^3 of the solution, add sodium hydroxide solution dropwise until in excess.

Observation	Inference
(1 mark)	**(1 mark)**

(ii) To 2cm^3 of the solution, add three drops of sulphuric(VI) acid.

Observation	Inference
(½ mark)	**(½ mark)**

(iii) To 2cm^3 of the solution, add ammonia solution dropwise until in excess.

Observation	Inference
(1 mark)	***(½ mark)***

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3. You are provided with solid **F**. Carry out the following tests. Write your observations and inferences in the spaces provided.

a) Place about one third of solid **F** on a clean metallic spatula and burn it in Bunsen burner flame.

Observation	Inference
(1 mark)	**(1 mark)**

b) Place all the remaining solid F in a boiling tube. Add about $10cm^3$ of distilled water and shake until all the solid dissolves. Divide the resulting solution into three portions.

(i) To the 1^{st} portion add two drops of acidified potassium manganate(VII).

Observation	Inference
(1 mark)	**(1 mark)**

(ii) To the second portion, add sodium hydrogen carbonate provided.

Observation	Inference
(1 mark)	**(1 mark)**

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(iii) Determine the pH of the third portion. Describe the procedure followed.

Procedure: **(1 mark)**

……

……

……

……

Observation	Inference
(½ mark)	**(½ mark)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

PHYSICS

232/1

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO THE CANDIDATES:

a) *Write your **Name,Index Number** and **Signature** in the spaces provided above.*

b) *Answer **all** the questions both in section **A** and **B** in the spaces provided below each question*

c) *All workings **must** be clearly shown; marks may be awarded for correct steps even if the answers are wrong.*

d) *Let $g = 10m/s^2$*

For Examiner's Use

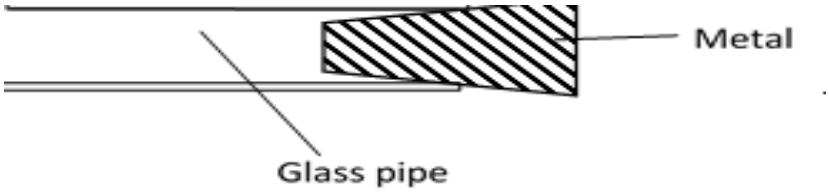
SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-10	25	
B	11	09	
	12	14	
	13	11	
	14	10	
	15	11	
TOTAL		80	

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SECTION A 25 MARKS:

Attempt all the questions in this section

1. The figure below shows a piece of metal stuck in a hollow glass pipe. .Explain how temperature change may be used to separate **them** **(2mark)**



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2. Form four students were playing football game during which the ball got deflated. Explain what happened to its density **(2marks)**

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……
……
……

3. Micrometer screw gauge A has a zero error of – **x** mm. Micrometer screw gauge B has a zero error of **x** mm When used to measure the diameter of a tube the difference between their readings is 0.04mm. If the actual diameter of the tube is 5.56mm determine **x** hence state the reading of micrometer screw gauge A **(3 marks)**

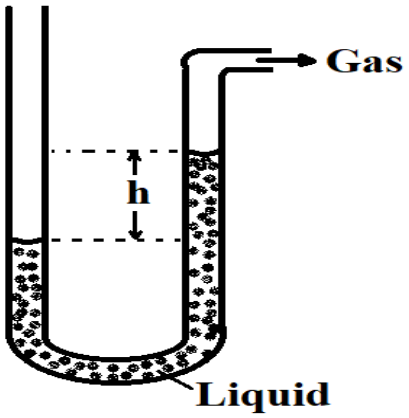
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4. A car of mass 1000kg travelling at a constant velocity of 40m/s collides with a stationary metal block of mass 800kg. The impact takes 3s before the two move together. Determine the impulsive force **(3marks)**

5. The figure below shows a drop of water about to fall from a pipette and after falling. Explain why the shapes of the drop are different **(2 marks)**



6. Figure shows a liquid manometer. The gas pressure is 755mmHg and that of the surround is 760mmHg. The height h is 80mm. Determine the density of the liquid. (Take density of mercury = 13600kgm^{-3} and g =10Nkg^{-1}) **(3 marks)**



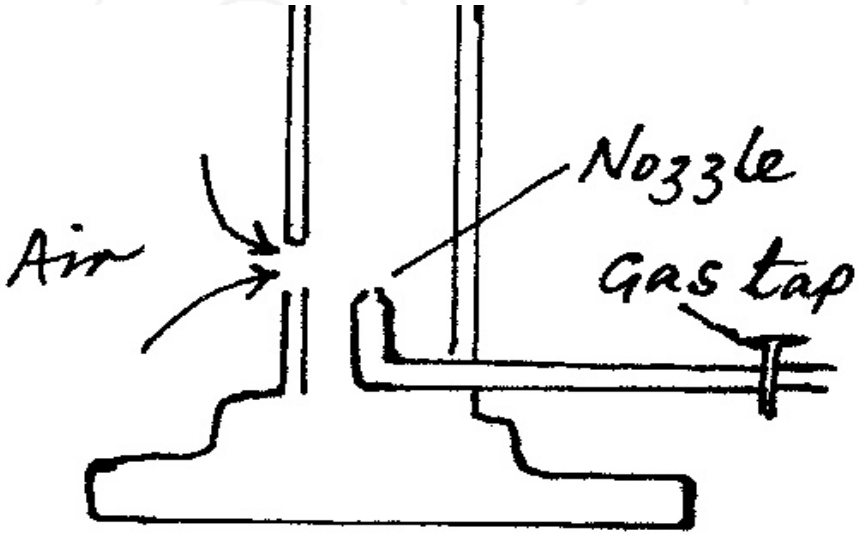
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7. A student balances a V - shaped uniform wire on a tight string as shown in A and B. With reason state the one which is easier to do **(2marks)**



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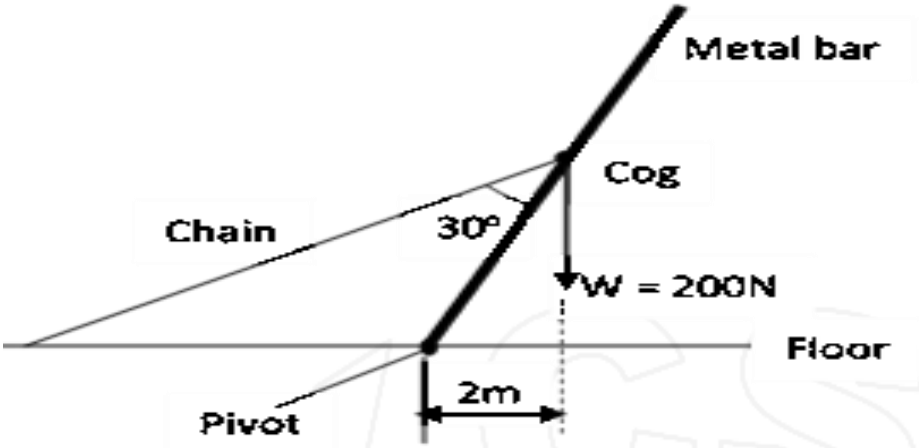
8. The figure below shows a Bunsen burner. Explain how air is drawn into the burner when the gas tap is opened. **(2marks)**



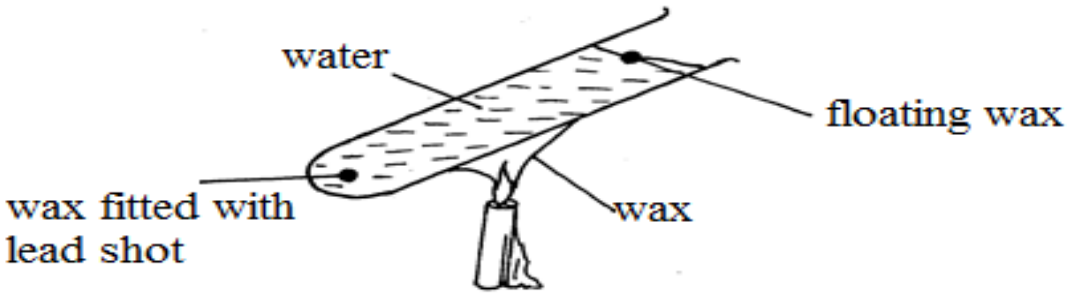
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9. The figure shows a uniform metal bar of length 10m and weight W = 200N held at equilibrium by a light chain fixed at the cog and tethered on the floor using a light chain. Determine the tension of the chain **(3marks)**



10. A student set up the apparatus as shown below. The boiling tube was heated in the middle as shown



a. State the role of the lead shot in the experiment **(1mark)**

……

……

……

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b. With reason, state the wax that will melt first **(2marks)**

……

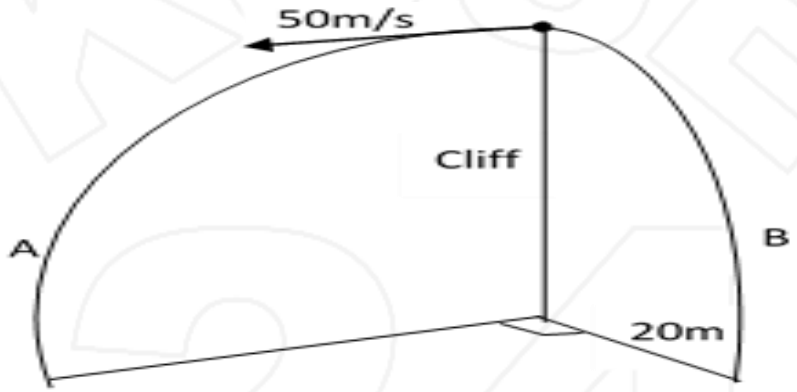
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SECTION B 55 MARKS

Attempt all the questions in this section

11. Marble A is projected horizontally from the top of a cliff at a velocity of 50m/s. The height of the cliff from its foot is 31.25m. At the same time another marble B is projected horizontally from the same point. The figure below shows the trajectories taken by the marbles



Determine

a. The distance of marble A from the foot of the cliff as it hits the ground **(3marks)**

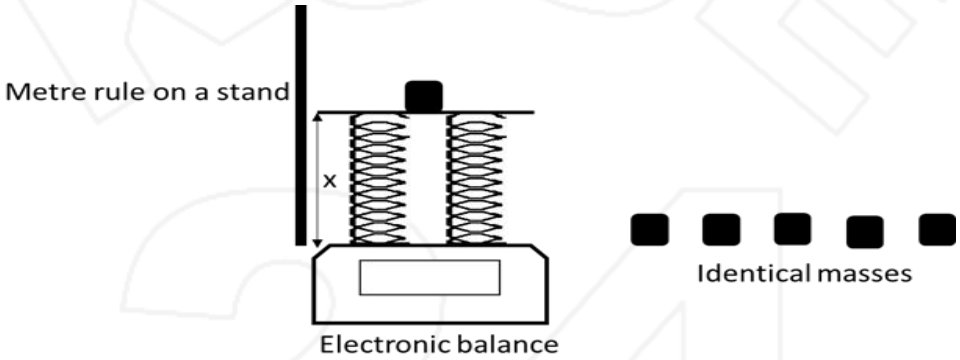
b. Vertical velocity of marble A as it hits the ground **(2marks)**

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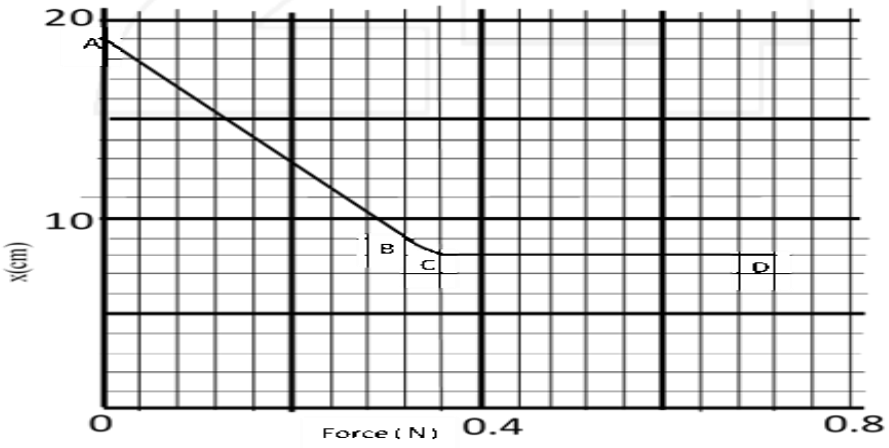
c. Horizontal velocity of marble B as it hits the ground **(2marks)**

d. The shortest distance between the marbles upon hitting the ground **(2marks)**

12. The figure below shows two identical light springsand other apparatus used in an experiment



After the data was collected the following graph was obtained



a. State two measurements taken in the experiment **(2mark)**

……

……

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b. Explain how the measurements can be used to come up with the graph **(2marks)**

……

……

……

c. Explain the graph in sections

i. AB **(2marks)**

……

……

……

……

ii. CD **(2marks)**

……

……

……

d. Determine the spring constant of each spring **(3marks)**

……

……

……

……

……

e. Determine the work done in section CD **(2marks)**

……

……

……

……

f. On the same axes sketch the graph expected when the experiment is repeated using one of the springs only **(1mark)**

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13. The figure **below** shows an inclined plane on which a trolley of mass 30kg is pulled up a slope by a force of 100N, parallel to the slope. The trolley moves so that its centre of mass travels from points A to B.



(i) Determined the work done on the trolley against the gravitational force in moving from **A** to **B**. **(2 marks)**

(ii) Determine the work done by the force in moving the trolley from **A** to **B**. **(3 marks)**

(iii) Determine the percentage of the work input that goes to waste **(3 marks)**

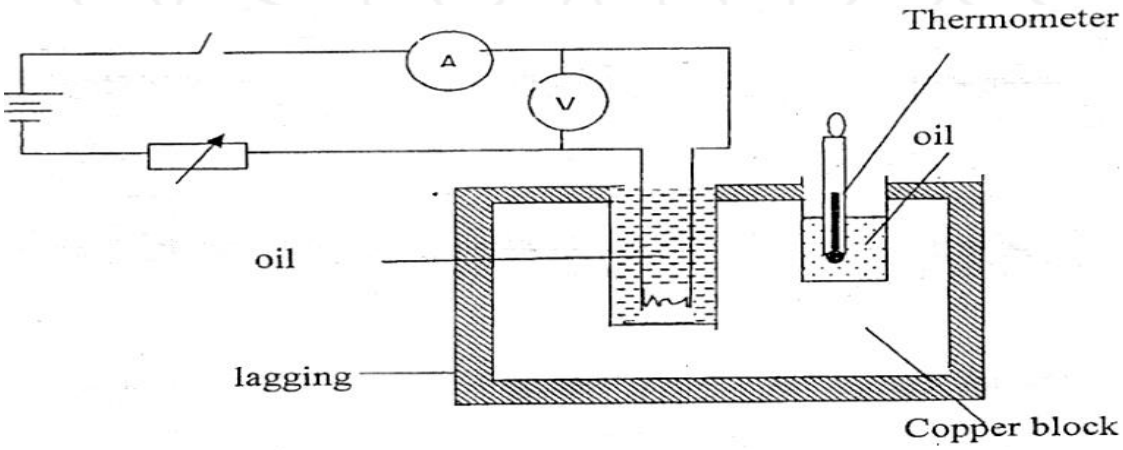
(iii) Determine the frictional force. **(1 mark)**

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(v) Determine the mechanical advantage of the system. **(1 mark)**

(vi) Find the velocity ratio **(1 mark)**

14. a. The figure below shows a set-up that can be used to determine the specific heat capacity of a metal block.



I) Other than temperature and current, state **two** measurements that should be taken in the experiment to determine the specific heat capacity of the block**.** **(2marks)**

……

……

II) Describe how the method can be used to determine the specific heat capacity of the metal block. **(3marks)**

……

……

……

……

……

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III) State the purpose of oil in the set-up. **(1mark)**

……

(ii) A well lagged copper can together with a copper stirrer of total heat capacity $60JK^{-1}$ contains 200g of water at 20^0C. Dry steam at 100^0C is passed in while the water is stirred until the content reach a temperature of 50^0C. Determine the mass of condensed steam. (Specific latent heat of vaporization of water is 2.26×10^6 J/kg and specific heat capacity of water is 4200 J/kgK)

(4marks)

15. a) A uniform metal strip is 3.0cm wide 0.6cm thick and 100cm long. The density of the metal is $2.7g/cm^3$.

I. Determine the weight of the metal strip. **(2marks)**

The strip is used to support two masses in equilibrium by applying force F as shown below.

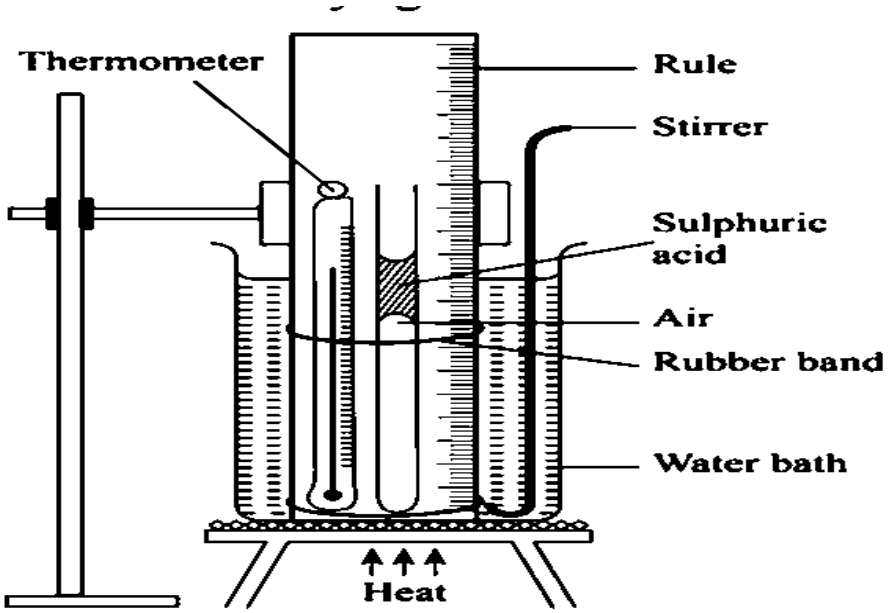


II. Determine the value of F **(3 marks)**

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III. Determine reaction R due to the pivot **(2 marks)**

b) The Figure belowshows a set up that may be used to verify a gas law.



I. State the law being verified **(1mark)**

……

II. State two functions of the concentrated Sulphuric acid in the experiment **(2marks)**

……

……

……

III. State one assumption in the experiment **(1mark)**

……

……

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

PHYSICS

232/2

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS

a) *Write your name and your Index number in the spaces provided.*

b) *This paper consists of **two** sections, Section **A** and **B.** Answer **ALL** the questions in both section in the spaces provided in this paper.*

c) ***ALL** working must be clearly shown.*

d) *Mathematical tables and electronic calculators **may be** used.*

FOR EXAMINERS' USE ONLY.

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1 - 12	25	
B	13	13	
	14	12	
	15	09	
	16	09	
	17	12	
		80	

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SECTION A (25MARKS)

Answer all the questions in this section

1. Figure (1) below shows two rays of light from an object reflected on a plane mirror

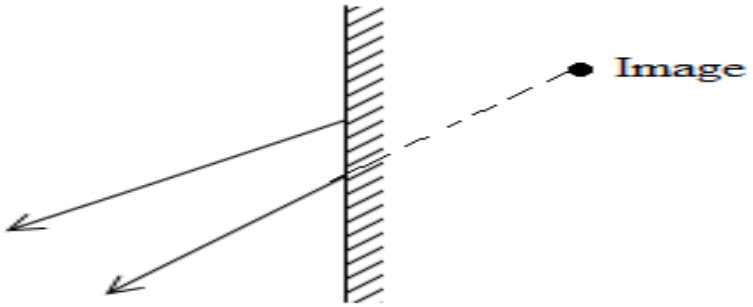


Fig 1.

Using proper ray construction, show the object position **(2marks)**

2. The fig 2 below shows a ray of light incident on a glass prism

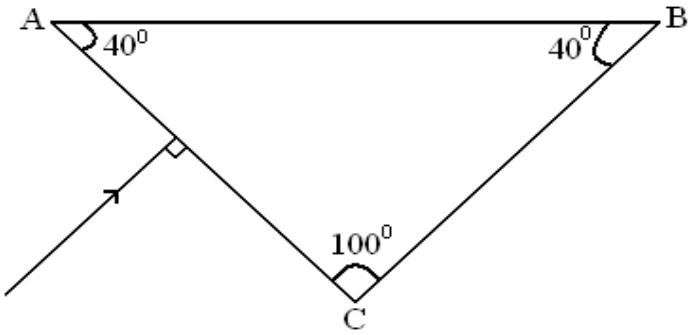


Fig2

Given that the critical angle for the grass is 39^0, **sketch** on the diagram the path of the ray through the prism. **(2 marks)**

3.The diagram on figure 3 shows the National Grid system.

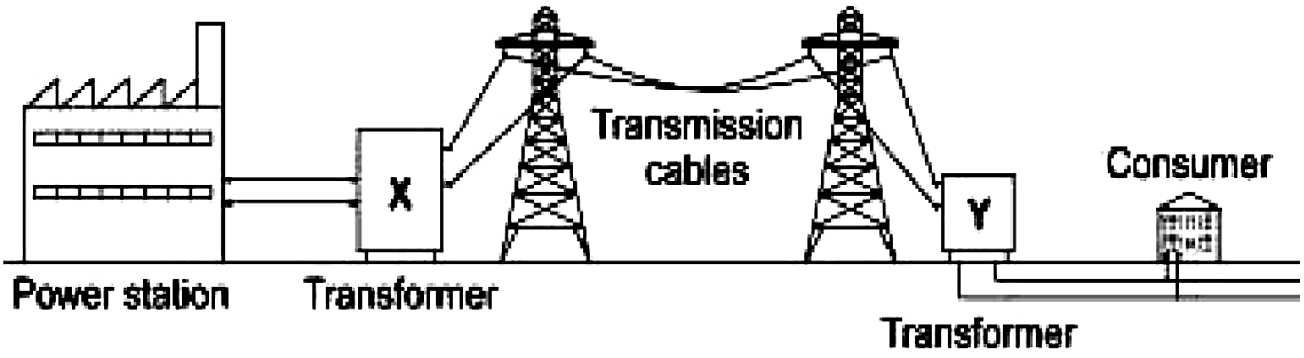


Fig3.

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(a) What type of transformer is;

X…… **(1mark)**

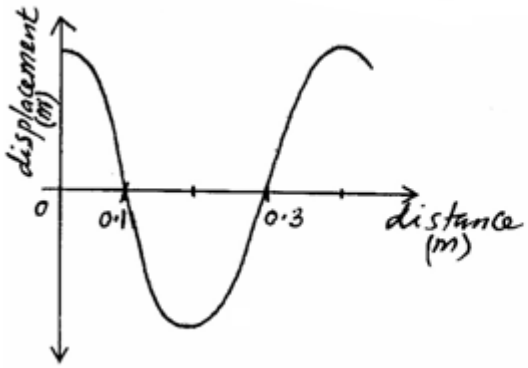
Y…….. **(1mark)**

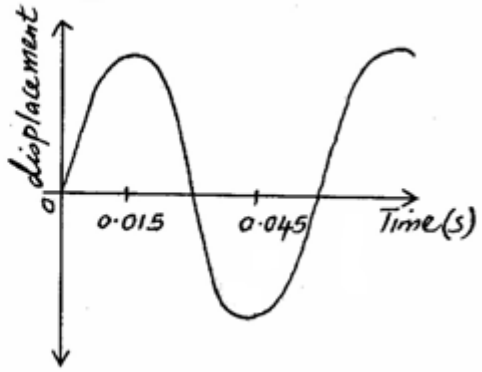
4. State **one** advantages of using circuit breakers in the consumer unit than using fuse wire.

(1marks)

……

5. The figures**below** shows two waveforms representing the same wave motion.





Determine the velocity of the wave. **(3mks)**

6. Figure 4. Below shows a 6V battery connected to an arrangement of resistors. Determine the current flowing through the 2Ω resistor. **(3marks)**

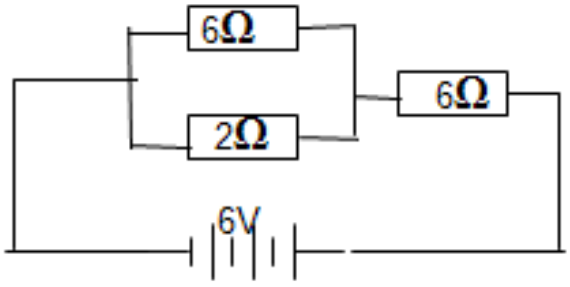


Fig 6.

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7. The figure 7 below shows the electromagnetic spectrum.

Radio waves	Infra-red	A**A**	ultraviolet	B B	Gamma rays

Fig 7.

(a) Identify A **(1 mark)**

……

(b) State one industrial use of B **(1 mark)**

……..

8. The diagram (Fig 8) shows a positively charged acetate strip and a negatively charged polythene strip that are freely suspended.



Fig8.

Two rods X and Y are brought up in turn to these two strips. Rod X attracts the acetate strip but repels the polythene strip. Rod Y does not repel either the acetate strip or the polythene strip.

State the type of charge is on each rod. **(2mks)**

X……

Y……

9. State **<u>two</u>** advantages of an alkaline accumulator over lead acid accumulator. **(2mks)**

……

……

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10. Figure 9 below show a **concave** lens and object.

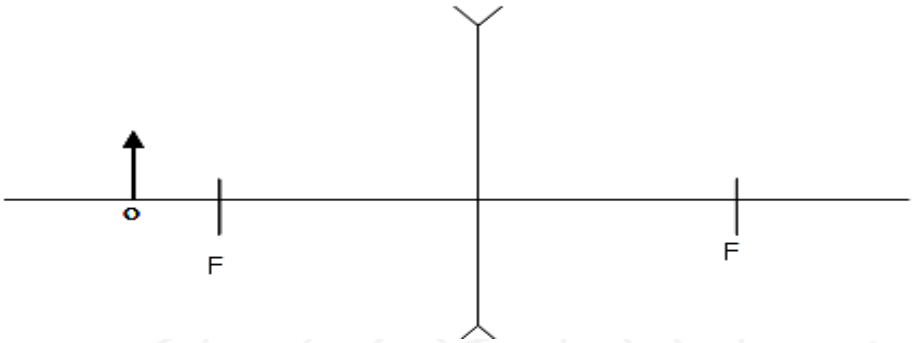


Fig 9.

Sketch the rays to show the image formed. **(2marks)**

11. Two similar razor blades were placed on a wooden block and the other on an iron block as in **figure 10**.

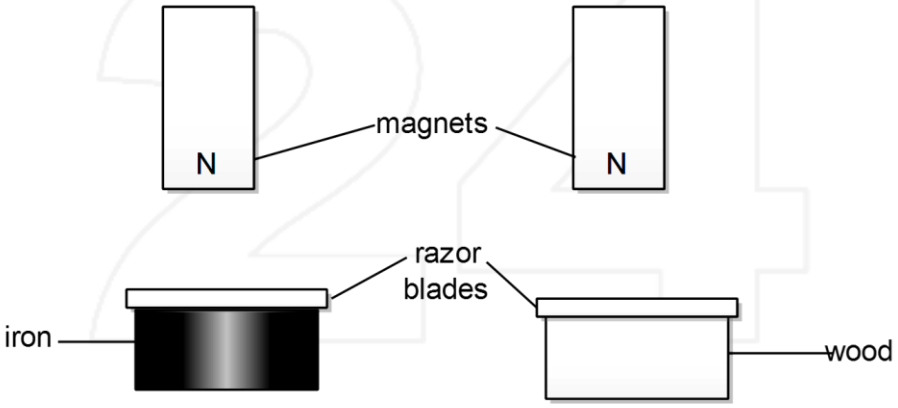


Fig 10.

It was observed that the razor blade on the wooden block is attracted by the magnet while that on the iron block was not.Explain. **(2 marks)**

……

……

……

……

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12. The **figure 11** below shows water waves about to pass through a gap. One wave front is shown after it has passed through the gap.

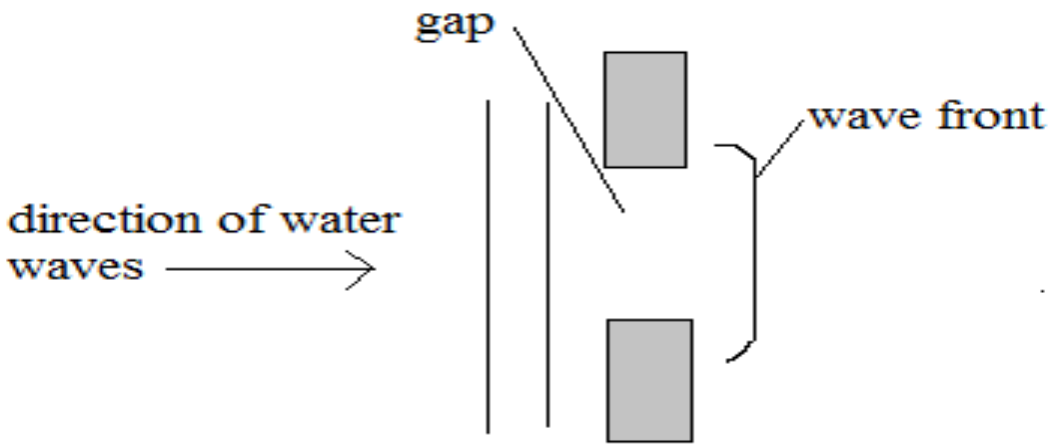


Fig 11

(i) On the diagram, draw two more wave fronts that have passed through the gap. **(1mark)**

(ii) State two changes which would each make the wave fronts become more curved after passing through the gap. **(1 mark)**

……

……

……

SECTION B (55MARKS)

Answer All The Questions In This Section.

13.(a) State what is meant by refractive index of a material. **(1 mark)**

……

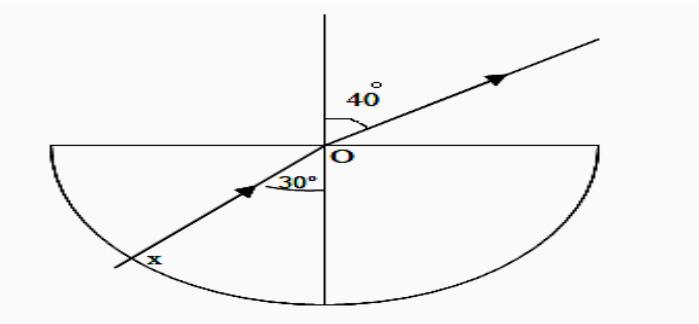
……

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(b) Figure 12 represents a ray of light falling normally on the curved surface of a semi-circular plastic block at X, meeting the opposite face at an angle of incidence of 30^0 and emerging into the air at an angle of 40^0.

Fig 12



(i) State and explain what happens to the ray as it moves from:

I) Air to glass at X. **(1marks)**

……

……

……

II) From glass to air at O. **(1marks)**

……

……

……

(ii) Calculate refractive index of the plastic. **(3marks)**

……

……

……

……

……

(iii) State the conditions to be satisfied for total internal reflection to occur. **(2marks)**

……

……

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(iv) Describe how the apparatus above could be used to find the critical angle experimentally.

(3marks)

……

……

……

……

(v) Calculate the critical angle for this plastic. **(2marks)**

……

……

……

14. (a) State what is meant by the term capacitance. **(1marks)**

……

……

(b) Distinguish between a paper capacitor and an electrolyte capacitor. **(1marks)**

……

……

……

(c) State **two** factors that determine capacitance of a parallel plate capacitor **(2mks)**

……

……

(d) Figure 10 below shows a network of capacitors in series.

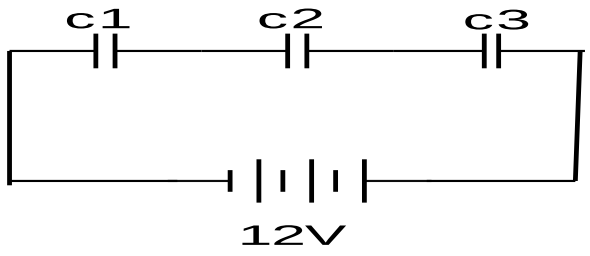


Fig 10.

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(i) Derive an expression for their effective capacitance C_E from first principles. **(3marks)**

……

……

……

……

……

(ii) Given that C_1=10.5μF, C_2 =2μF and C_3= 3μF.

Calculate effective capacitance $C_E$in (2) above and hence

Determine the charge stored on each capacitor. **(3marks)**

……

……

……

……

……

(e) State two applications of capacitors. **(2marks)**

……

……

……

15.(a) Use the **figure 11** below to answer the questions that follows.

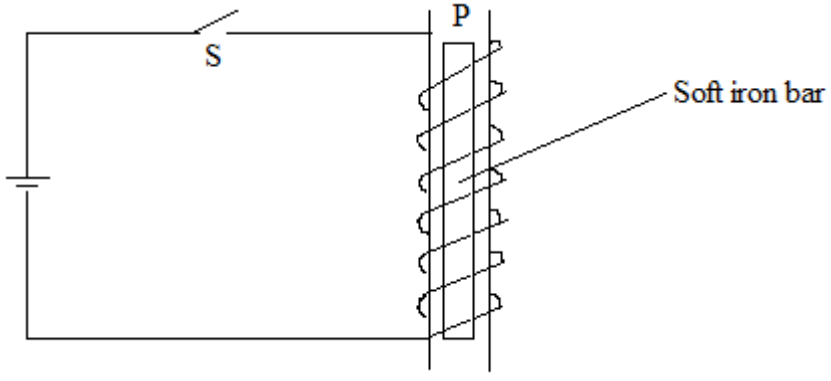


Fig.11

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(i) Show the direction of the current on the turns when the switch S is closed. **(1marks)**

(ii) State the polarity at P **(1marks)**

……

(iii) Explain using domain theory what happens on the soft iron bar. **(1marks)**

……

……

……

(iv). If steel bar was used instead, what could be the difference? **(2marks)**

……

……

……

(b) The following diagram (**figure 12**), shows a part of an electric d.c motor.

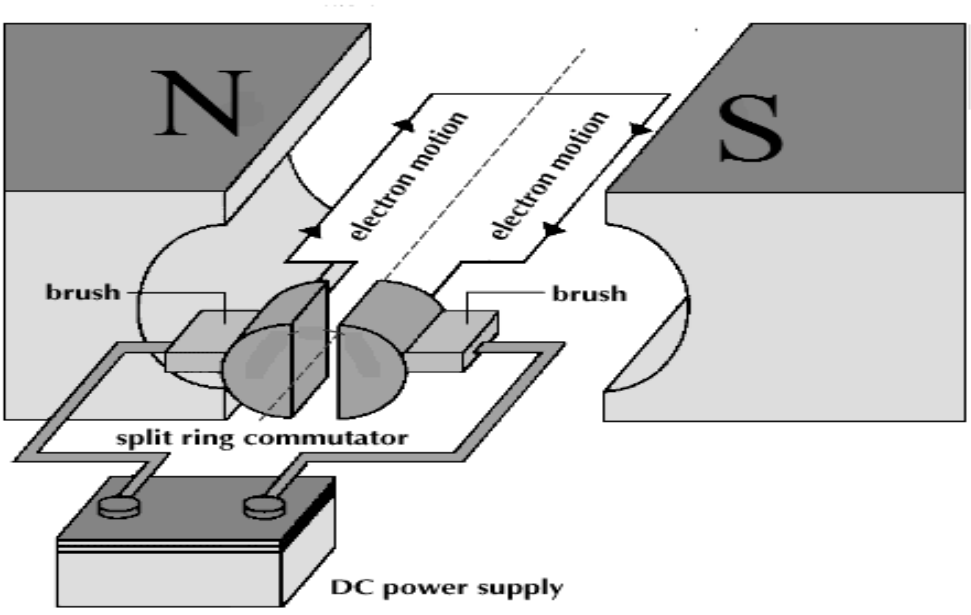


Fig 12.

(i) On the diagram above show the direction of rotation of the coil. **(1marks)**

(ii) State the effect of increasing the number of turns of the rotating coil of an electric motor.

(1marks)

……

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(c) Sketch the magnetic field pattern around the conductor carrying current on figures 13 and 14 shown below. **(2marks)**

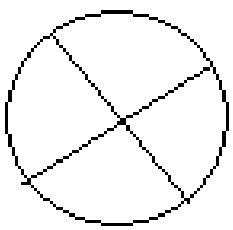


Fig 13.

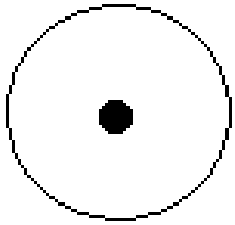


Fig 14

16(a) Distinguish between real image and a virtual image. **(2mks)**

……

……

……

(b) The distance between an objectand itsupright image produced by a curved mirror is 40cm. the image is 3 times as tall as the object

(i) State the type of mirror used. **(1mk)**

……

(ii) Determine the object distance **(2mks)**

……

……

……

……

(iii) Determine the radius of curvature of the mirror **(3 mks)**

……

……

……

……

……

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(iv) State **one** application of the mirror as used in (b) above **(1mk)**

……

……

17(a) State **Ohm's Law**. **(1mk)**

……

……

……

(b) Explain why a 12V car battery is able to start the motor car engine while eight dry cells of 1.5 v each connected in series will not. **(2mks)**

……

……

……

……

(c) In figure 15 the current in the circuit is 1.80A

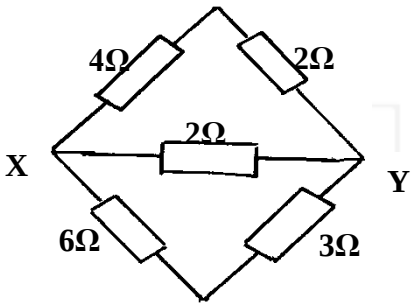


Fig 15

(i) Find the effective resistance between **X and Y**. **(3mks)**

……

……

……

……

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(ii) The p.d of the source. **(2mks)**

……

……

……

……

(iii) Current through the 3Ω resistor **(2mks)**

……

……

……

……

(iv) Give two differences between a primary and a secondary cell **(2mks)**

……

……

……

……

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

PHYSICS

232/3

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

SCHOOL…… SIGN……

Confidential

The information contained in this **KCSE Physics Prediction paper** is to enable the head of the school and the teacher in charge of Physics to make adequate preparations for the **232/3 Physics** Practical examination.

No one else should have access to this information either directly or indirectly.

Each candidate will require the following.

- A milliammeter.
- A voltmeter (0 – 3V) or (0 – 5V).
- A wire mounted on a mm scale (Nichrome wire SWG 32)
- A switch.
- A long wire with a crocodile clip at one end (crocodile clip to be used as a slider or jockey).
- A micrometer screw gauge (may be shared).
- 5 connecting wires, two with crocodile clips at the end.
- One new dry cell size D.
- Cell holder.

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QUESTION 2

EACH STUDENT REQUIRES

- ✓ Micrometer screw gauge (shared between 4 students)
- ✓ Vernier callipers
- ✓ Masses
  - 10g
  - 2 – 20g
  - 50g
  - 100g
- ✓ Helical spring (K = 0.08N/cm)
- ✓ Metre rule or half metre rule
- ✓ Complete retort stand

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

PHYSICS

232/3

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) *Answer all the questions in the spaces provided in this question paper.*

b) *You are supposed to spend the first **15 minutes** of the **2 ½ hrs** allowed for this paper reading the whole paper carefully before commencing your work.*

c) *Marks will be given for clear record of the observations actually made, their suitability, accuracy and the use made of them.*

d) *Candidates are advised to record their observations as soon as they are made.*

e) *Non-programmable silent electronic calculators and KNEC mathematical tables may be used.*

FOR EXAMINERS USE ONLY

QUESTION	MAX. SCORE	CANDIDATES SCORE
1	20	
2	20	
TOTAL	40	

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QUESTION 1 (20 MARKS)

You are provided with the following

-Two dry cell

-One bulb

-Voltmeter (0 – 3V)

-Ammeter (0 – 1A)

-Amounted nicrome wire mounted on a millimeter scale

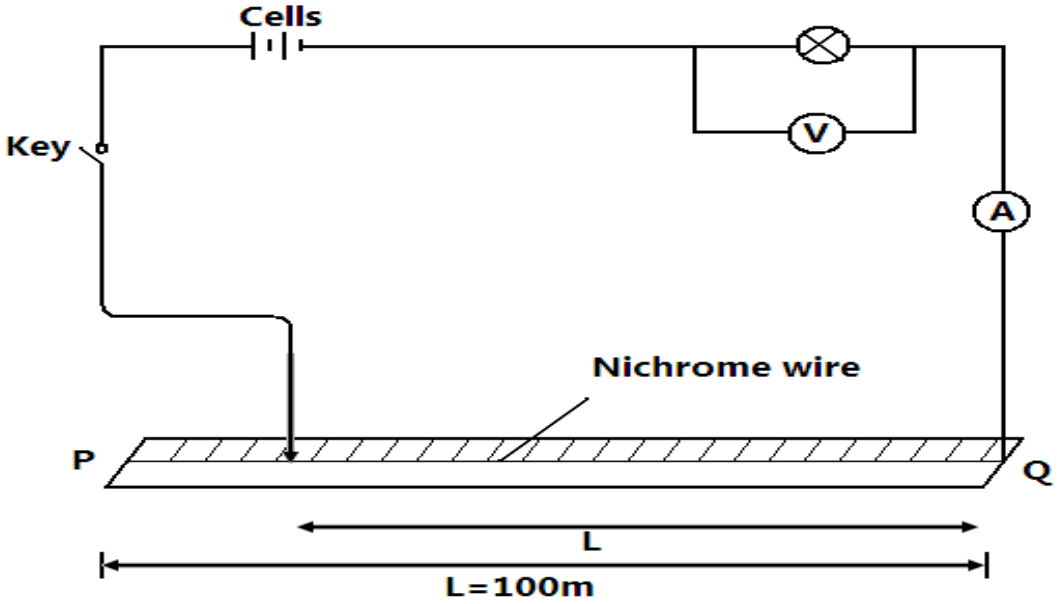
-Switch

-Seven connecting wire at least two with crocodile clips

-Micrometer screw gauge

Proceed as follows:

a) i). Set up the circuit as shown in the figure 1 below.



ii) With the crocodile clip at p, take the voltmeter reading and ammeter reading. Record v and 1 repeat the readings for L=80, 60, 40, 20 and 0cm respectively and complete the table below.

(5mks)

Length, L(cm)	100	80	60	40	20	0
Voltage, V(V)						
Current, I (A)						

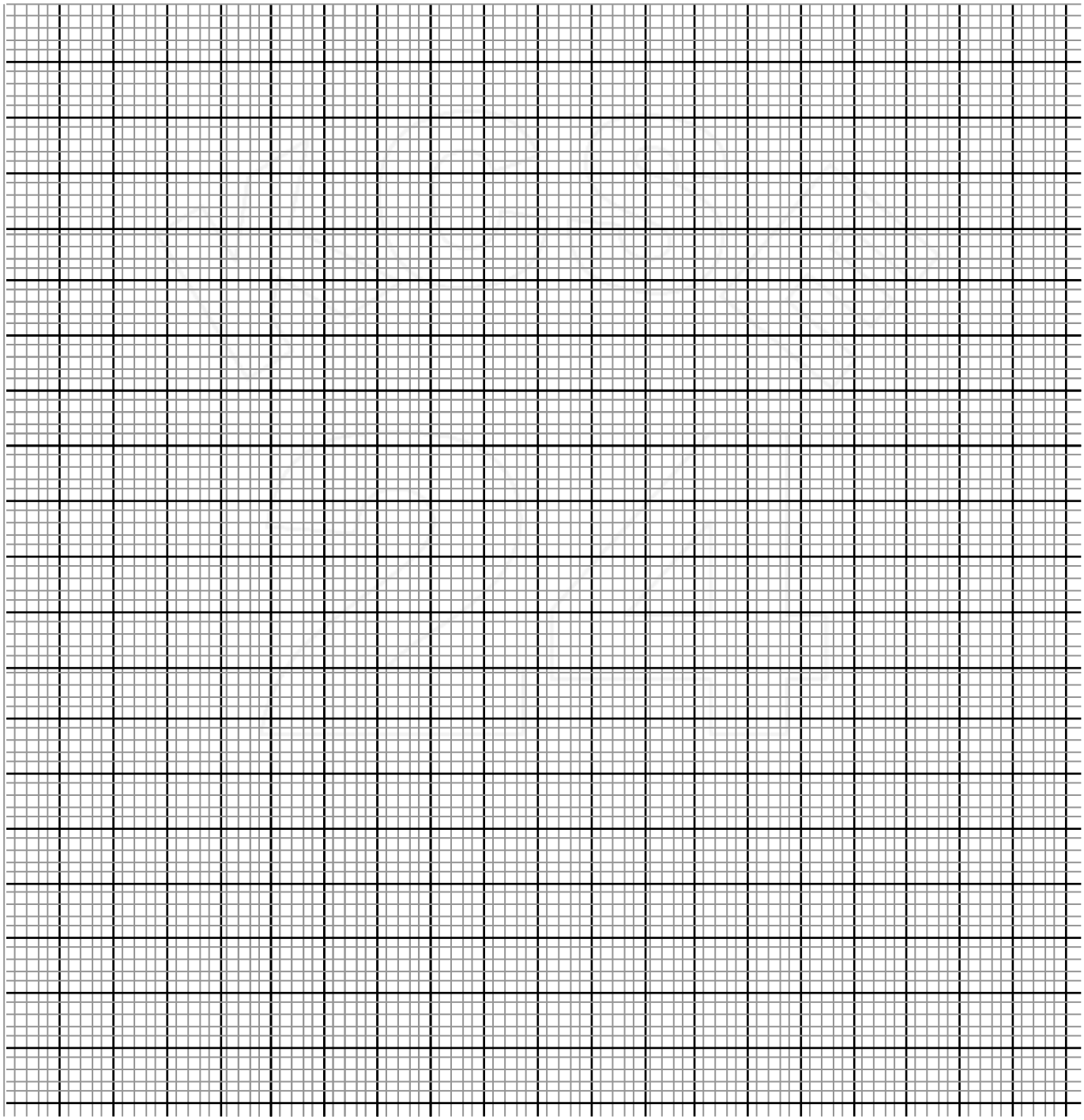
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iii). What changes do you observe on the bulb as L decreases from p? **(1mrk)**

……

……

iv). Plot a graph of ammeter reading (y=axis) against voltmeter readings. **(5mrks)**



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v). Determine the slope of the graph at V=1 volt. **(2mrks)**

vi). What physical quantity is represented by the slope of the graph at any given point?**(1mk)**

b. (i) Given the apparatus in a (i) above, draw a diagram of the circuit you would use to determine the current through the resistant wire and the potential difference across. **(1mrk)**

ii). Set up the circuit you have drawn. Record the ammeter reading I and the wire reading V when L=100cm **(2mks)**

V=…… I=……..

iii). Using a micrometer screw gauge, measure the diameter of the wire. **(1mrk)**

d=……m

iv). Calculate the quantity:

p= 0.785 $\frac{(V)}{I}\frac{d^2}{L}$and give its units, where L is one meter. **(2mrks)**

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Question 2

You are provided with the following:-

- Vernier callipers
- Micrometer screw gauge
- Masses; 10g, 20g, 50g and 100g
- A helical spring
- Metre rule or half metre rule

Proceed as follows

(a) Determine the number of complete turns of the helical spring.

N = _____ **(1 Mark)**

(b) Measure the external diameter of the spring using the vernier calipers

D = _____ m **(1 Mark)**

(c) Use the micrometer screw gauge to determine the diameter of the wire of the spring.

d = _____ m **(1 Mark)**

(d) Determine the value of m **(2 Marks)**

$N = \frac{0.4D}{dm}$

……

……

……

……

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(e) Suspend the helical spring vertically alongside the clamped half metre rule as shown in figure 1 below. Determine the length L_0, of the spring before loading it.

L_0 = _____ cm

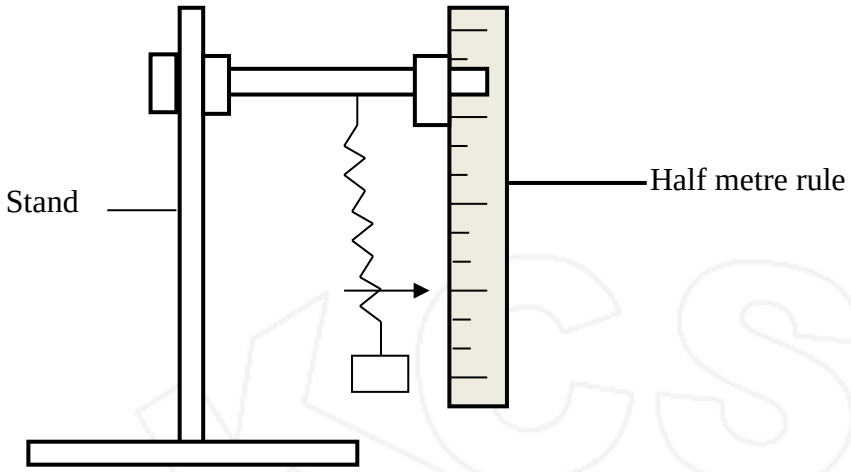


Figure 2

(f) Load the spring with a mass of 20g and determine the new reading on the metre rule. (L) Record this in the table below.

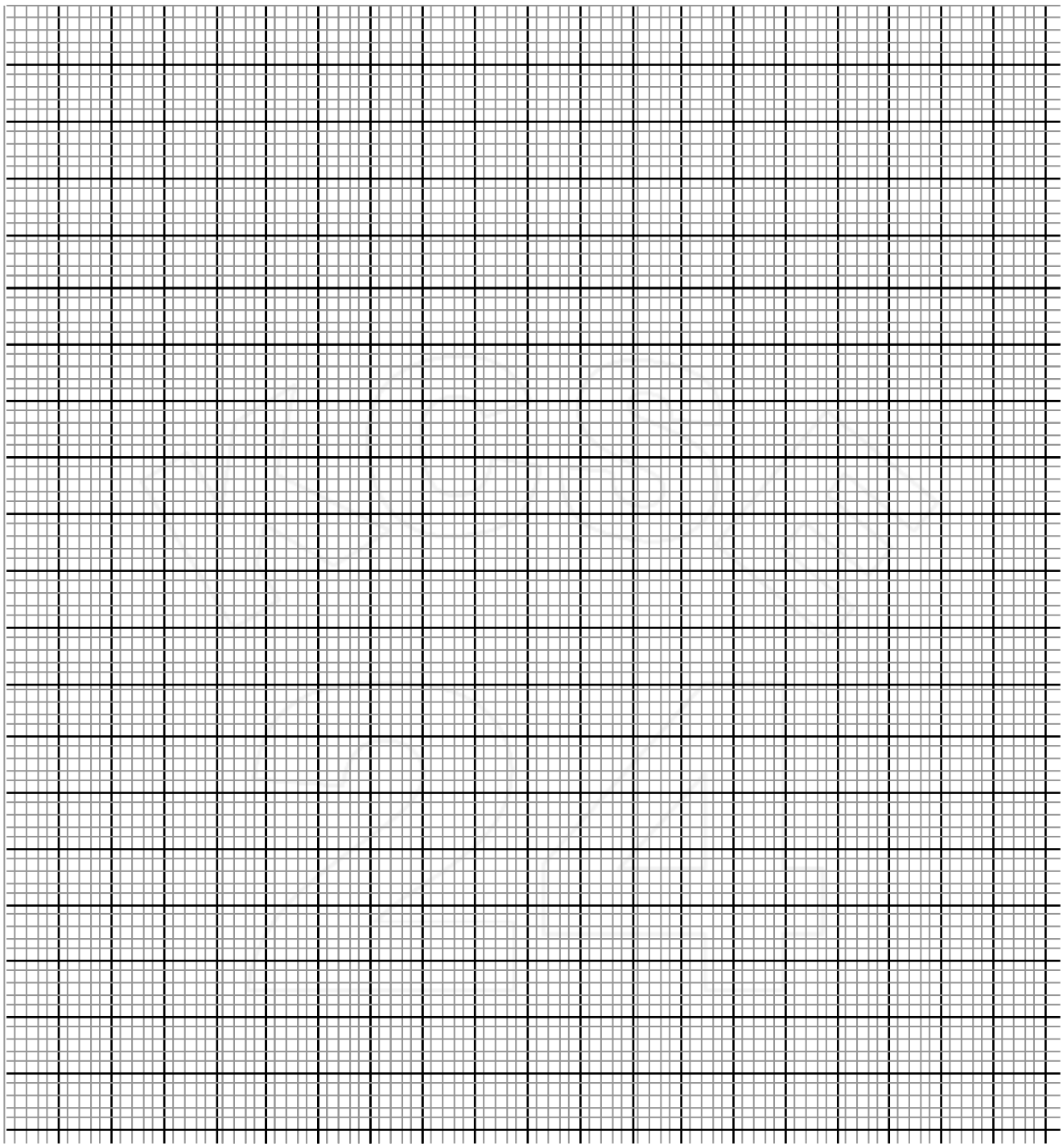
(g) Calculate the extension e = L – L_0 due to the mass of 20g and record the value in the table given below. Repeat step f for other masses and complete the table.

Mass (g)	0	10	20	30	40	50	60	70	80	90	100
Weight (N)											
Reading (L) (cm)											
Extension e (cm)											
$\frac{1}{e}$ (cm^{-1})											

(6 Marks)

(h) Plot a graph of weight (N) against $\frac{1}{e}$ (cm^{-1}) **(4 Marks)**

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(i) Determine the slope (s) of the graph at a mass of 45g **(2 Marks)**

……

……

……

……

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(j) Given that m = $\frac{-255T}{(S+60)^2}$

Determine the value of T where (S) is the slope at 45g **(3 Marks)**

……

……

……

……

……

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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) *This paper consists of **TWO** sections: **Section I** and **Section II.***

c) *Answer **ALL** the questions in **Section I** only **five** questions from Section II.*

d) ***Show all the steps in your calculations, giving your answers at each stage in the spaces provided below each question.***

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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SECTION A (50 MARKS)

1. Evaluate $\dfrac{\frac{3}{4}+1\frac{5}{7}\div\frac{4}{7}of\,2\frac{1}{3}}{\left(1\frac{3}{7}-\frac{5}{8}\right)x\frac{2}{3}}$ **(3mks)**

2. A fruit juice dealer sell the juice in packet of 300ml, 500ml and 750ml. find the size of the smallest container that can fill each of the packets and leave a remainder of 200ml. **(3mks)**

3. Without using table or calculators, evaluate $\sqrt{\dfrac{0.0032+0.0608}{1.44x0.4}}$ **(3mks)**

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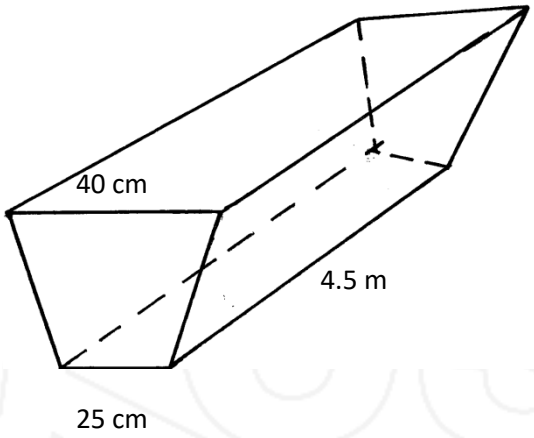
4. Simplify the following quadratic expression. $\frac{8b^2 - 50a}{(2b + 5a)^2}$ **(3mks)**

5. In a fundraising committee of 45 people, the ratio of men to women is 7:2. Find the number of women required to join the existing committee so that the ratio of men to women is changed to 5: 4. **(3mks)**

6. A student expanded $(x + y)^2$ incorrectly as $x^2 + y^2$ calculate the percentage error in the answer if $x = 4$ and $y = 6$ **(3mks)**

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7. The figure below shows a trough which is 40 cm wide at the top and 25 cm wide at the bottom. The trough is 20cm deep and 4.5 m long. Calculate the capacity of the trough in litres. **(3mks)**



8. Jemima's team entered a contest where teams of students compete by answering questions that earn either 3 points of 5 points. Jemima's team scored 44 points after answering 12 questions correctly. How many five-points questions did the team answer correctly **(3mks)**

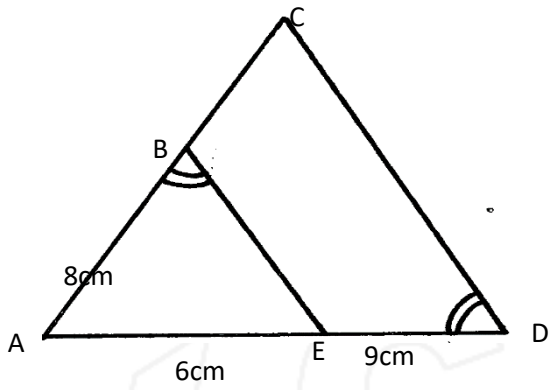
©2024 The Kenya National Examinations Council.

9. Using compass and ruler only construct a triangle ABC such that AB= 6cm ,BC = 5cm and angle ABC = 67.5^{o} measure the length of AC. **(3mks)**

10. Use table of reciprocals only to work out : $\frac{13}{0.156} - \frac{3}{0.6735}$ **(3mks)**

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11. In the figure below, angle ABE is equal to angle ADC AE = 6cm, ED = 9cm and AB = 8cm, calculate the length of BC. **(3mks)**



12. Simplify the expression below leaving your answer in rationalized surd form of $a + b\sqrt{c}$

$\frac{1+\tan 120^{o}}{1+Cos\ 330^{o}}$ **(4mks)**

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13. The two sides of a triangle are given 6 cm and 5 cm. the angle between them is 130^{o}. calculate the area of the triangle (giving your answer to 2 decimal places) **(3mks)**

14. Given that $k\underset{\sim}{m} + h\underset{\sim}{n} = \underset{\sim}{r}$ and that $\underset{\sim}{m} = \begin{pmatrix}-3\\-2\end{pmatrix}$ $\underset{\sim}{n} = \begin{pmatrix}0\\4\end{pmatrix}$ and $\underset{\sim}{r} = \begin{pmatrix}-6\\0\end{pmatrix}$. Find the scalars k and h **(3mks)**

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15. A Kenyan bank buys and sells foreign currencies as shown.

	Buying (Kshs.)	Selling (Kshs.)
1 Euro	84.15	84.26
100 Japanese Yen	65.37	65.45

A Japanese travelling from France to Kenya had 5000 Euros. He converted all the 5000 Euros to Kenya shillings at the bank. While in Kenya, he spent a total of Kshs. 289,850 and then converted the remaining Kenya shilling to Japanese Yen. Calculate the amount in Japanese Yen that he received. **(3mks)**

16. The length of a rectangular mat is 1.5 m longer that its width, Find the length of the mat if its area is 6.5 m^2(give your answer to 4 significant figures) **(3mks**

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SECTION II

Answer only five questions from this section

17. Five towns V,W,X,Y and Z are situated such that W is 200km east of V. X is 300km from W on a bearing of 150°. Y is 350km on a bearing of 240° from X. Z is 150° from V but 200° from X.

Draw the diagram representing the position of the towns. (use a scale of 1cm to represent 50km). **(5mks)**

(b) From the diagram determine

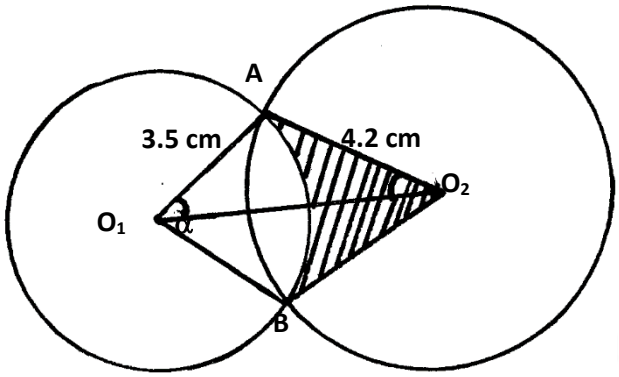
(i) the distance in km of V from Z **(1mk)**

(ii) The bearing of Y from W **(1mk)**

(c) A plane heading to town X takes off from town Y and flies upwards at a constant angle which is less than 90°. After flying a distance of 350km in the air it sees town X at an angle of depression of 50°. Calculate the distance of the plane from X at this point to the nearest km. **(3mks)**

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18. Two circles of radii 3.5 and 4.2 cm with centres O_1 and O_2 respectively intersect at points A and B as shown in the figure below. The distance between the two centres is 6 cm.



Calculate

(a) The size of $\angle AO_1B$ (to the nearest degree) **(3mks)**

(b) The size of $\angle$ A O_2 B (to the nearest degree) **(3mks)**

(c) The area of quadrilateral O_1AO_2B, correct to 2 decimal places. **(2mks)**

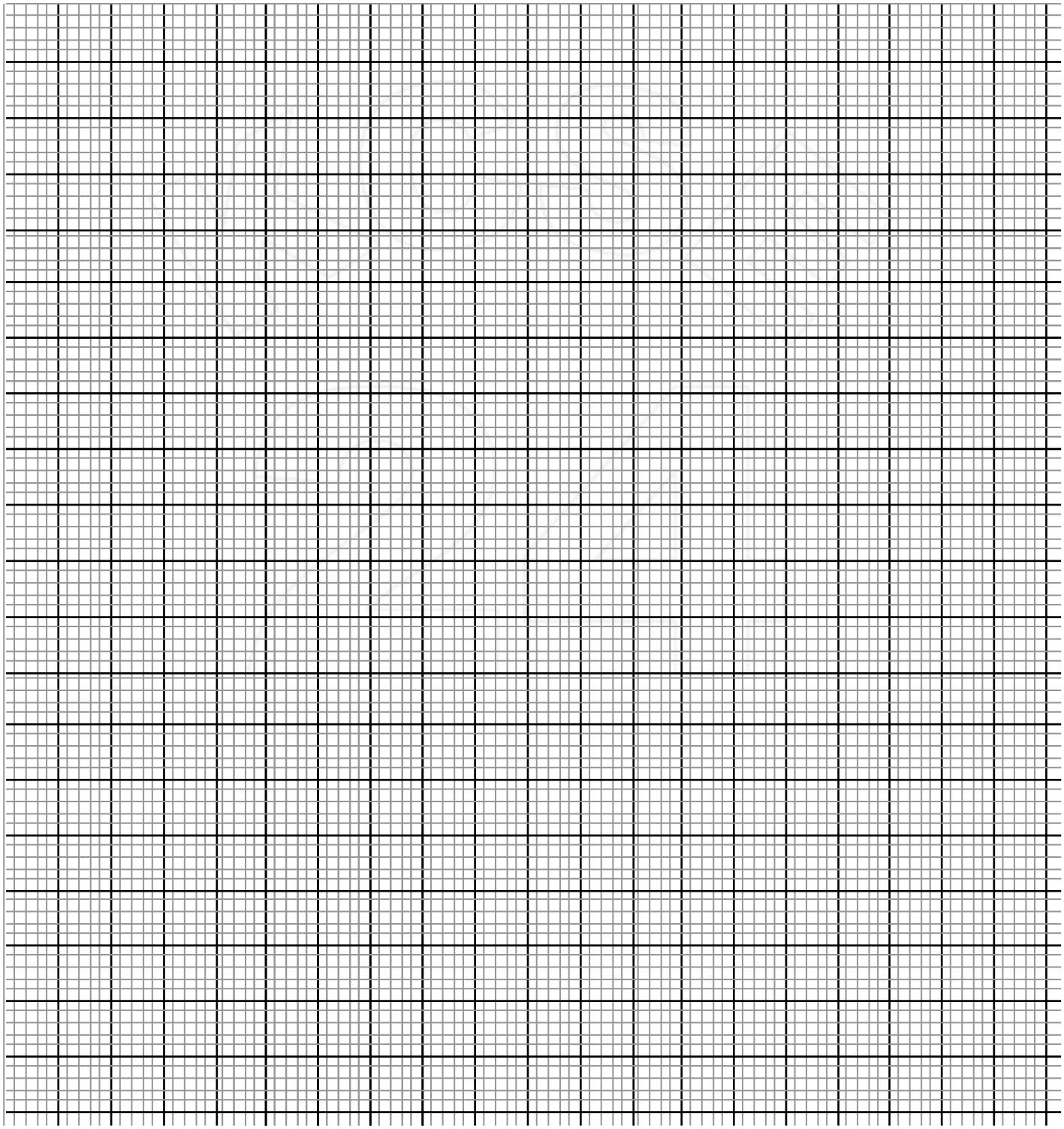
(d) The shaded area correct to 2 significant figures. (take $\pi\ ^{22}/_{7}$) **(2mks)**

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19 (a) Complete the table below for the function $y = 2x^2 + 4X - 3$

X	-4	-3	-2	-1	0	1	2
$2x^2$	32		8	2	0	2	
4x-3			-11		-3		
Y			-3			3	13

(b) Draw the graph of the function $y = 2x^2 + 4x - 3$ on the grid provided. **(3mks)**



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(c) Use your graph to estimate the roots of the equation $2x^2 + 4x - 3 = 0$ **(1mk)**

(d) Use your graph to obtain the roots of the equation $2x^2 + x - 5 = 0$ to 1 decimal place **(3mks)**

(e) Draw the line of symmetry to pass through the turning point of this curve. **(1mk)**

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20. The table below shows patients who attend a clinic in one week and were grouped by age as shown in the table below.

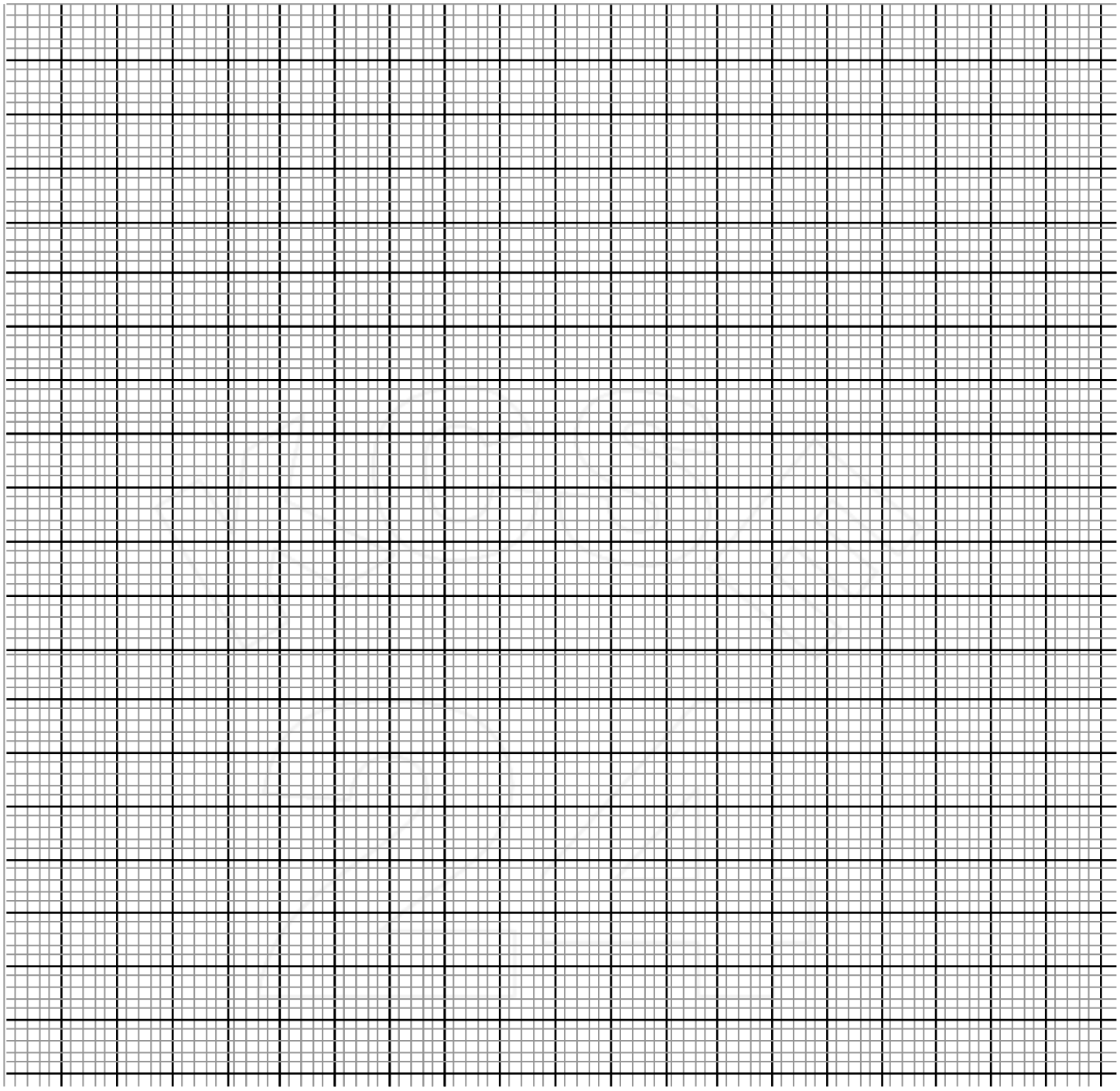
Age x years	$0 \leq x < 5$	$5 \leq x < 15$	$15 \leq x < 25$	$25 \leq x < 45$	$45 \leq x < 75$
Number of patients	14	41	59	70	15

(a) Estimate the mean age **(4mks)**

(b) On the grid provided draw a histogram to represent the distribution. **(3mks)**

Use the scales: 1cm to represent 5 units on the horizontal axis 2 cm to represent 5 units on the vertical axis.

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(c) (i) State the group in which the median mark lies (**1mk)**

(ii) A vertical line drawn through the median mark divides the total area of the histogram into two equal. Using this information estimate the median mark. **(2mks)**

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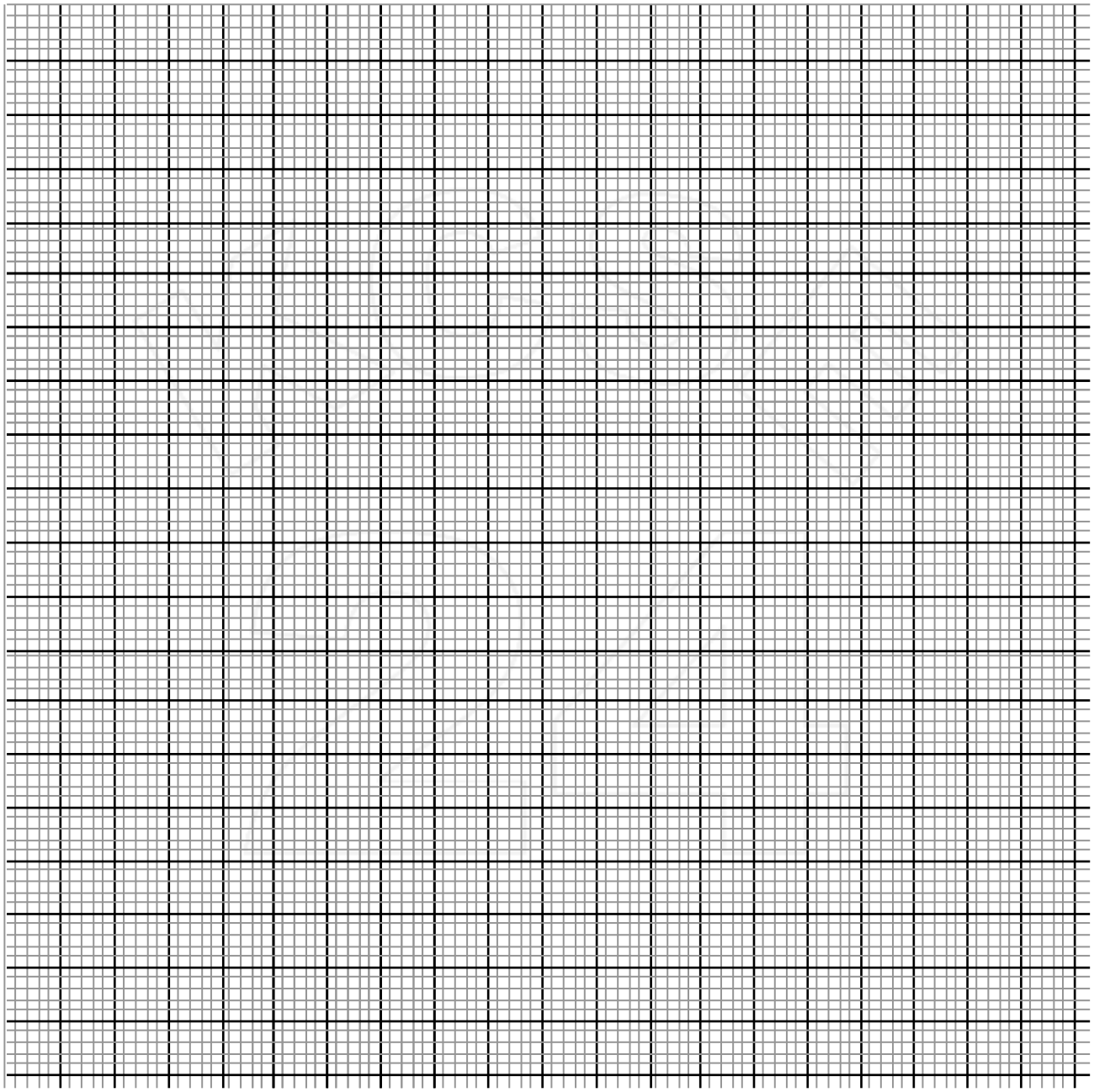
21. (a) Show by shading the unwanted region, the region which satisfies the following inequalities **(8mks)**

$y > -3$

$4y \leq 5x + 20$

$2y < -5x + 10$

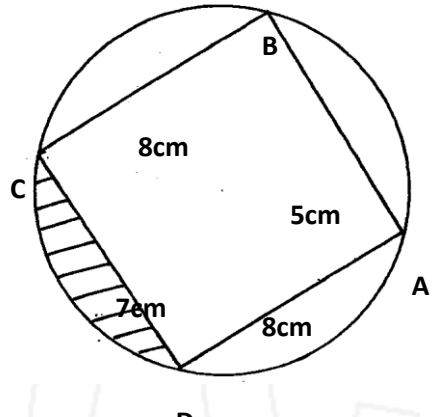
$4y \leq -3x - 12$



(b) Calculate the area of this region in a square units **(2mks)**

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22. The figure below (not drawn to scale) shows a quadrilateral **ABCD** inscribed in a circle. **AB** = 5cm, **BC** = 8cm,**CD** = 7cm and **AD** = 8cm. **AC** is one of the diagonals of length 10cm.



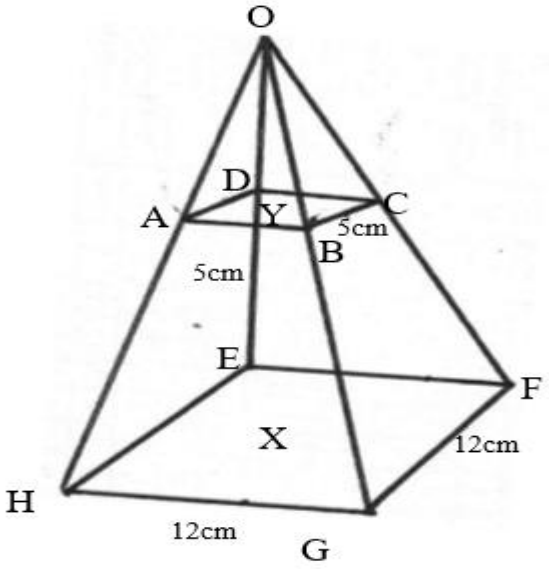
(a) Find the size of angle **ABC**. **(3mks)**

(b) Find the radius of the circle. **(2mks)**

(c) Hence, calculate the area of the shaded region. **(5mks)**

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23. The diagram shows a frustum ABCDEF GH formed from a smaller pyramid ABCDO. The base the top of the frustums are squares of sides 12cm and 5 cm respectively. If Ob = 6cm and each of the slant edges of the frustum is 15 cm long. Calculate to 1 decimal place:



(a) the height OY of the small pyramid **(3mks)**

(b) the vertical height X Y of the frustum **(4mks)**

(c) the volume of the frustum **(3mks)**

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24. The table below shows the income tax rates

Total income per month In Kenya Pounds	Rate in shillings per pound
1 - 325	2
326 - 650	3
651 - 975	4
976 - 1300	5
1301 and above	7

Mr. Musango earned a basic salary of shs. *x* and a house allowance of shs. 3000 per month. He claimed a tax relief for a married person of shs. 455 month. He paid shs. 1794 income tax per month.

a) Calculate Mr. Musango's basic salary in shs. per month **(6mks)**

b) Apart from the income tax, the following monthly deductions are made. Service charge – shs. 100, health insurance fund – shs 280 and 2% of his basic salary as widow and children pension scheme.

Calculate:

i) The total monthly deductions **(2mks)**

ii) Mr. Musango's net income p.m **(2mks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

MATHEMATICS

121/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

f) *This paper consists of* ***TWO*** *sections:* ***Section I*** *and* ***Section II.***

g) *Answer* ***ALL*** *the questions in* ***Section I*** *only* ***five*** *questions from Section II.*

h) Show all the steps in your calculations, giving your answers at each stage in the spaces provided below each question.

For Examiner's Use Only

Section I

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

17	18	19	20	21	22	23	24	Total	Grand total

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SECTION I

1. Use logarithms tables to evaluate

$$\sqrt[3]{\frac{36.72\times(0.46)^2}{185.4}}$$ **(4mks)**

2. T is a transformation represented by the matrix $\begin{pmatrix} 5x & 2 \\ -3 & x \end{pmatrix}$ under T, a square of area 10cm^2 is mapped onto a square of area 110cm^2. Find the value of x **(3mks)**

3. Given that $2\cos(2x-30^0)=-\frac{6}{5}$ find x where $180^0 \le x \le 360^0$ **(3mks)**

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4. Make A the subject of the formula

$$T = \frac{2m}{n}\sqrt{\frac{L-A}{3K}}$$ **(3mks)**

5. A quantity P is partly constant and partly varies inversely as square of t. P = 6 when t = 6 and p = 18 when t = 3. Find t when p = 11 **(3mks)**

6. i) Expand $\left(5+\frac{x}{2}\right)^6$ up to the term in x^3. **(2mks)**

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ii) Use your expansion to estimate the value of $\left(\frac{11}{2}\right)^6$. Correct to one decimal place. **(2mks)**

7. Solve for x in the equation. **(3 Mks)**

$\text{Log}_8 (x + 6) - \text{Log}_8 (x - 3) = \frac{2}{3}$

8. Solve for x and y in the simultaneous equation below. **(3 mks)**

$xy + 6 = 0$

$x - 2y = 7$

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9. The size of each interior angle of a regular polygon is five times the size of the exterior angle. Find the number of sides of the polygon. **(3mks)**

10. If $\frac{1}{3-\sqrt{5}} - \frac{2+2\sqrt{5}}{3+\sqrt{5}} = a + b\sqrt{c}$, find the value of a, b and c **(3 mks)**

11. The data below shows marks scored by 8 form four students in Molo district mathematics contest

44, 32, 67, 52, 28, 39, 46, 64.Calculate the mean absolute deviation. **(3 Mks)**

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12. Steve deposited ksh.50, 000 in a financial institution in which interest is compounded quarterly. If at the end of second year he received a total amount of ksh79, 692.40. Calculate the rate of interest p.a **(3 Mks)**

13. The points with coordinates (5,5) and (-3,-1) are the ends of a diameter of a circle Centre A

Determine:

(a) The coordinates of A **(1mk)**

(b) The equation of the circle, expressing it in form $x^2 + y^2 + ax + by + c = 0$ Where a, b, and c are constants **(2mks)**

14. Pipe x can fill an empty tank in 3 hours while pipe y can fill the same tank in 6 hours. When the tank is full, it can be emptied by pipe z in 8 hours. pipe x and y are opened at the same time when the tank is empty. If one hour later pipe z is also opened, find the total time taken to fill the tank**.** **(3marks)**

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15. Fatima bought maize and beans from Kami. She mixed the maize and beans in the ratio 3: 2 she bought the maize at sh.90 per kg and the beans at sh.150 per kg. If she was to make a profit of 30% what would be the selling price of 1kg of the mixture. **(3mks)**

16. Given $A=\begin{pmatrix}7 & 4\\ 5 & 3\end{pmatrix}$ and $B=\begin{pmatrix}2 & 11\\ 1 & 6\end{pmatrix}$ find $A^{-1}B^{-1}$ **(3mks)**

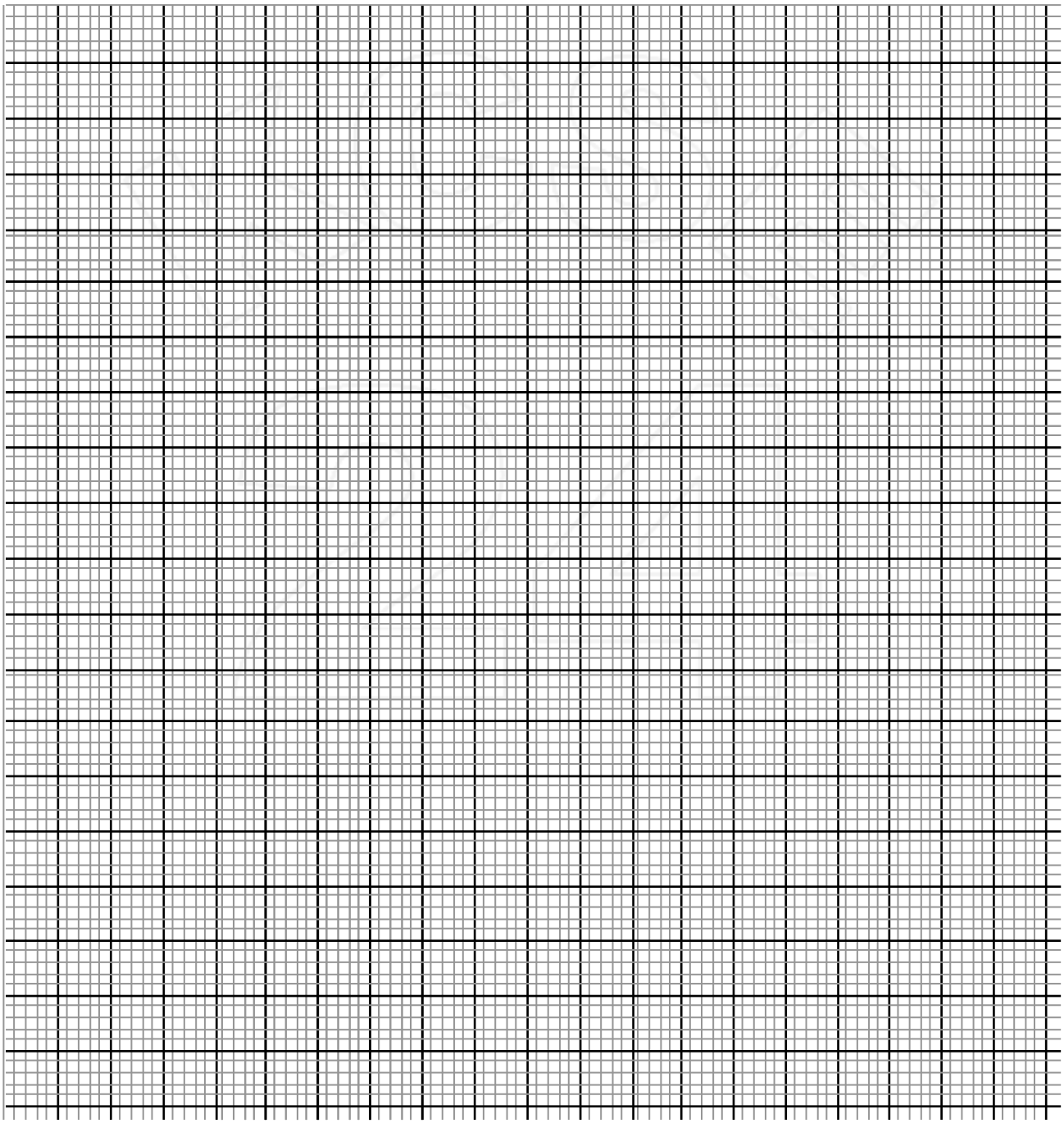
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SECTION II

17. a) A figure whose co-ordinates are A(-2, -2), B(-4, -1), C(-4, -3) and D (-2, -3) undergoes successive transformations ERS; where E, R and S are transformations represented by the matrices,

$$E=\begin{pmatrix}-2 & 0\\ 0 & -2\end{pmatrix}, S=\begin{pmatrix}0 & -1\\ -1 & 0\end{pmatrix} \text{ and } R=\begin{pmatrix}0 & 1\\ -1 & 0\end{pmatrix}$$

On the grid provided, show the figure ABCD and its image under the successive transformations ERS. **(6mks)**



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b)Find the matrix representing the single transformation mapping the image found in (a) above back the object figure ABCD. **(2mks)**

c) Triangle PQR has vertices at P(2, 2), Q(4, 1) and R(6, 4). On the same grid, show the image of triangle PQR under a shear with line y = 2 invariant and point R(6, 4) is mapped onto $R^1(2, 4)$. **(2mks)**

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18. The following are marks by form four students in a mathematics test.

Marks	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99
Frequency	2	6	10	16	24	20	12	8	2

Using an assumed mean of 54.5, calculate the

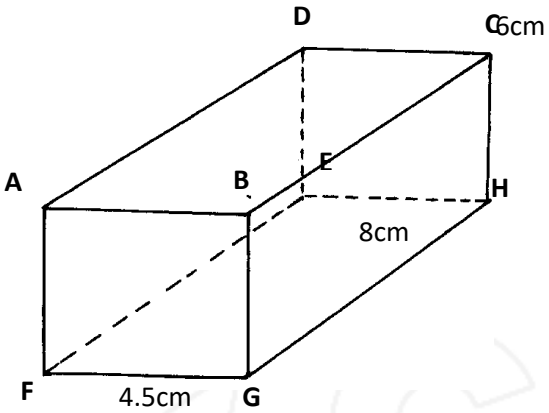
(a) Mean mark **(4mks)**

(b) Variance **(4mks)**

(c) Standard deviation **(2mks)**

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19. The diagram below represents a Cuboid **ABCDEFGH** in which **FG** =4.5cm, **GH** =8cm **HC**=6m



(a) Calculate the length **FC** **(2mrks)**

(b) (i) The size of the angle between the lines **FC** and **FH** **(2mks)**

(ii) Size of the angle between the line **AB** and **FH.** **(2mks)**

(c) The size of the angle between the planes **ABHE** and the plane **FGHE.** **(2mks)**

(d) The total surface area of the cuboid (closed) **(2mks)**

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20. Complete the table below, giving all your values correct to 2 d. p. for the functions $y = cos\ x$ and $y = 2cos\ (x + 30)^0$

x^0	0^0	60^0	120^0	180^0	240^0	300^0	360^0	420^0	480^0	540^0
Cos x	1.00			-1.00		0.50				
2cos(x + 30)	1.73		-1.73		0.00					

(b) For the function $y = 2cos\ (x + 30)^0$

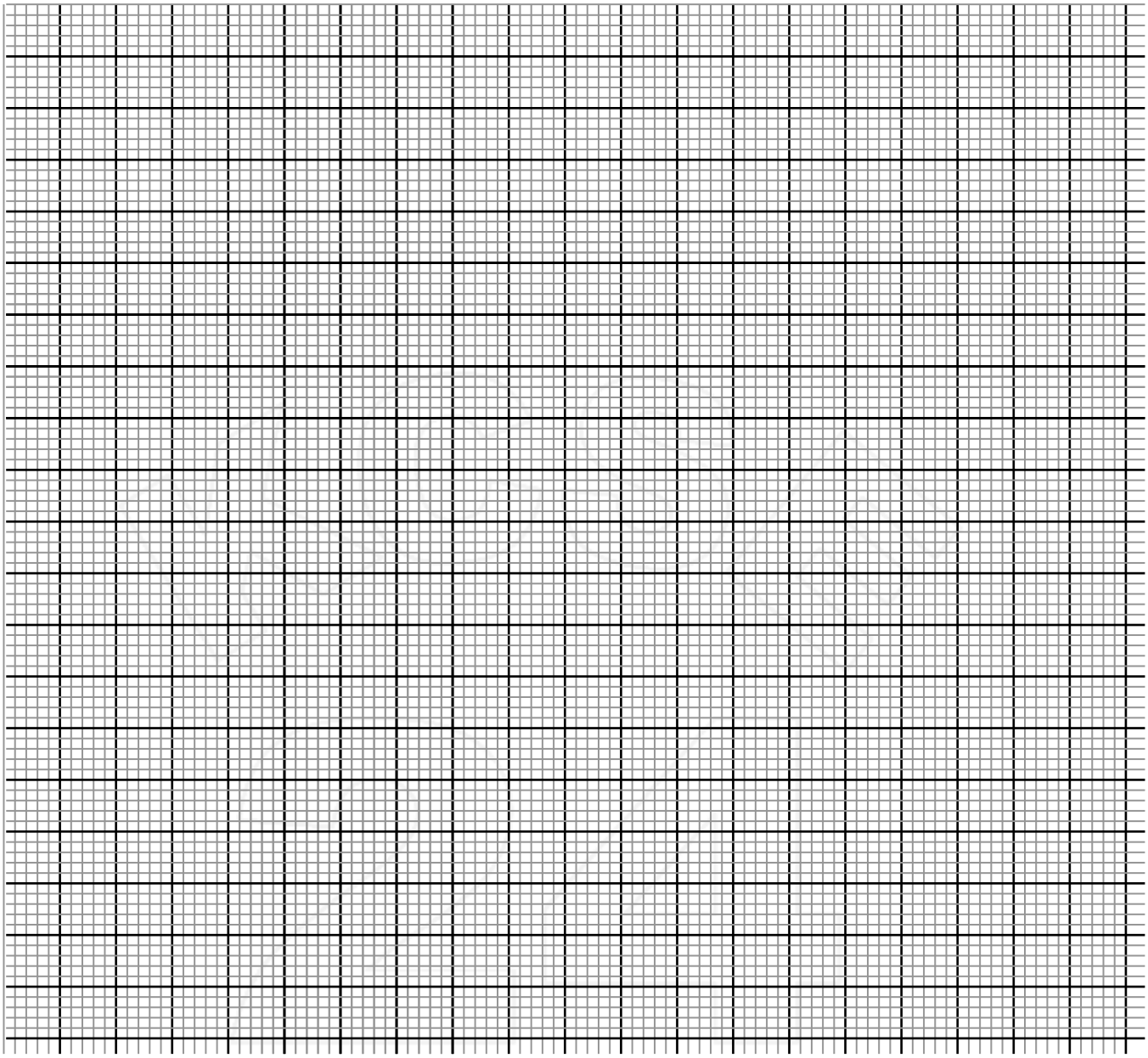
State:

(i)The period **(1mk)**

(ii)Phase angle **(1mk)**

(c) On the same axes draw the waves of the functions$y = cos\ x$ and $y = 2cos\ (x + 30)^0$ for $0^0 \leq x \leq 540$.Use the scale 1cm rep 30^0 horizontally and 2cm rep 1 unit vertically. **(4mks)**

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(d) Use your graph above to solve the inequality $2\cos(x + 30^o) \leq \cos x$ **(2mks)**

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21. A teacher had 5 red, 6 black and 9 blue pens in a box. The pens were all identical except for the colour.

(a) If one pen is picked from the box, what is the probability that it is

(i) Red. **(1mk)**

(ii) Not black. **(1mk)**

(a) The teacher asked a student to pick two pens from the box, one at a time, without replacement. Find the probability that

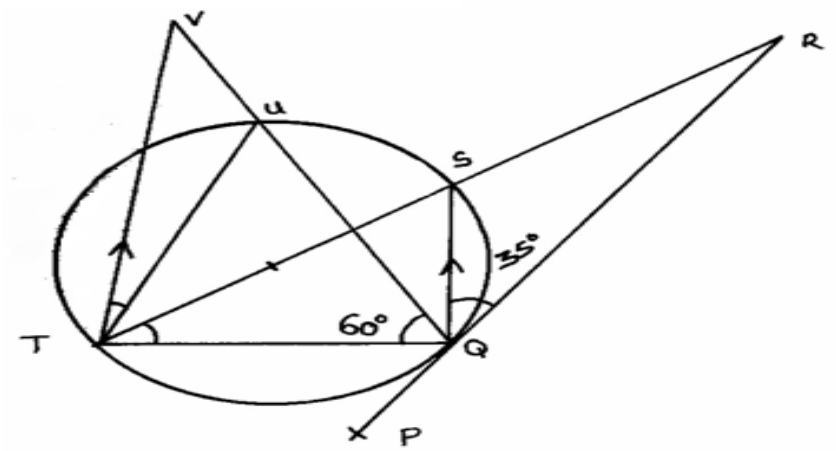
(i) Both pens are of the same colour. **(3mks)**

(ii) They are of different colours. **(2mks)**

(b) If the first student was allowed to take away two blue pens and another student was asked to pick two pens without replacement. What is the probability that the second student picked pens of same colour? **(3mks)**

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22. In the figure below, PQR is the tangent to the circle at Q. TS is a diameter and TSR and QUV are straight lines. QS is parallel to TV. Angle SQR = 35° and TQV = 60°.



(a) Find the following angles, giving reasons for each answer.

(i) QTS. **(2mks)**

(ii) QRS. **(2mks)**

(iii) QVT. **(2mks)**

(iv) UTV. **(2mks)**

(v) QUT. **(2mks)**

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23. Use ruler and a pair of compasses only in this question

a) Construct triangle ABC such that AB = 6cm, AC=BC and angle ACB = 135° **4mks**

b) On one side only construct the locus of P such that:

i) < APB = 67.5° **1mk**

ii) area of triangle , APB = 9cm² **3mks**

c) i) Locate P1 and P2 the two possible positions of P which satisfy the two conditions above **1mk**

ii) Measure the distance between P1 and P2. **1mk**

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24. An arithmetic progression has the first term a and the common difference d.

(a) Write down the third, ninth and twenty – fifth terms of the progression. **(3 Mks)**

(b) The progression is increasing and the third, ninth and twenty-fifth terms form the first three Consecutive terms of a geometric progression. If the sum of the seventh term and twice the sixth term of the arithmetic progression is 78.

Calculate

(i) The first term and the common difference **(5 Mks)**

(ii) The sum of the first nine terms of the arithmetic progression **(2 Mks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

COMPUTER STUDIES

451/1

PAPER 1 (THEORY)

TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

Instruction to Candidates.

(a) *Write your Name and Index Number in the spaces provided at the top of this paper.*
(b) *Sign and write the date of examination in the spaces provided above.*
(c) *This paper consists of **TWO** sections; **A** and **B.***
(d) *Answer ALL the questions in Section **A**.*
(e) *Answer question **16** and any other **THREE** questions from Section **B**.*
(f) *All answers should be written in the spaces provided on the question paper.*

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Section	Question	Score
A	1 - 15	
B	16	
	17	
	18	
	19	
	20	
TOTAL		

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SECTION A (40 MARKS)

Answer ALL Questions from this section

1. State three reasons why it is difficult to control, detect and prevent computer crimes (**3marks)**

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2. Mr. Kala wants to buy a printer to use in his automobile workshop for printing sales orders in duplicates. He has approached you for advice.What printer should he buy? **(1 Mark)**

……

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

3. Last year 2020 when corona virus was declared a pandemic internationally most companies allowed employees to telework or work at home and communicate with the office using the Internet. List the hardware, software and services required to access and use the Internet. **(3 Marks)**

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4. Using a well labelled diagram, describe the fetch and execute cycle. **(3 Marks)**

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5. Ventilation is an important practice in the computer lab because it enhances proper circulation of air. Outline **three** ways in which air is regulated in the computer room. **(3 mks)**

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6. Differentiate between COM ports and LPT ports. **(2 marks)**

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7. State any two advantages of the artificial intelligence. **(2 Marks)**

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8. (a) The word COM appears several times in an essay. Jane would like to change the word to COMPUTER. Advise her on how she can accomplish this task using a word processor. **(2 Marks)**

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9. Anita was working on her computer studies project. She was worried of the media to use for storing her data. She settled on a media that used serial file organization. How are files organized on a storage medium using this method? **(1 mark)**

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(b) List two advantages offered by this type of file organization. **(2marks)**

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10.(a) Rose wants to send an email to Jack. Explain two items that must be present for the mail to be sent. **(2 Marks)**

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(b) (i) Define the term network protocol **(1 Mark)**

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(ii) Name any **two** examples of network protocols **(1 Mark)**

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11.(a) What is the importance of layering in DTP? **(1 Mark)**

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(**b)** Distinguish between column guides and margin guides as used in DTP. **(2 Marks)**

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12. Study the work sheet below and answer the questions that follow:

	A	B	C	D	E	F
1						
2	**MWALIMU CONSULTANCY MIXED HIGH SCHOOL**					
3	**ADM. NO**	**NAME**	**MATHS**	**ENGLISH**	**AVERAGE**	**RANK**
4	1001	Akinyi	78	85		
5	1002	Kamau	89	77		
6	1003	Leila	45	46		
7	1004	Taita	67	69		
8	1005	Mosomtany	98	67		
9	**Highest Score**					
10	**Lowest Score**					
11	**Average Score**					

(a) Write a formula that would be entered in cell E4 to compute the average score for Akinyi.

(1 Mark)

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(b) Write down a formula that used to return the rank of Leila based on average score.

(1 Mark)

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……

(c) Write down a formula that would return the number of students whose score in English is below 70. **(1 Mark)**

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13. The manager of a company wants to improve the security of the computer network. She has decided to use authentication techniques so that employees can identify themselves to the system. Name **two** authentication techniques and describe how each technique would help keep the data more secure. **(3 Marks)**

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14. Mary who works as a systems analyst for JeroKin investments has produced documentation for a newly developed system. State three reasons why both user and technical documentation are needed. (**3 Marks)**

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15. Environmentalists plan to test a fast flowing river for pollution. State two advantages of using a computer to do this rather than doing it manually. **(2 Marks)**

……

……

SECTION B (60 MKS)

Answer question 16 (Compulsory)and any other THREE questions from this Section.

16. To maintain a strategic fit Safaricom is introducing a tariff called the mega tariff that will lower costs to Safricom to Safaricom calls and calls to other networks. Calls to Safaricom networks will be charged according to the time of the day as listed below:

-Between 8am to 12 noon – 6 Ksh

-Between 12 noon to 2pm-0.8 Kshs

-Between 6 to 1 am -4Kshs

-between 1 am t 8am- 1Kshs

Internal calls to other networks are charged at a fixed rate of 7 Kshs between 8am to 8pm and to while international calls are charged at a rate of 25 Kshs between 8am to 8pm and Kshs 35 for the rest of the day. All calls are charged per minute usage.

Mr. Wasswa Bbaale a business man who makes both internal and internal calls would like to make maximum use of this of this tariff.

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a)Write a pseudo code that would show him know the charges of calls with an appropriate label when he the inputs type of call and the time where appropriate. Use a 24 hour clock. **(8mks)**

b)Design a flowchart for the pseudo code in 16(a) above **(7mks)**

17. a) Explain how an operating system controls I/O devices. **(2marks)**

b) Maintaining security is one of the functions the operating system. Explain how the operating system maintains security **(2marks)**

c) Distinguish between Indexed sequential and direct file organizations **(2marks)**

d) i) Using appropriate examples, differentiate between distributed and centralized processing modes **(3marks)**

ii) State one advantage and one disadvantage of distributed processing modes in **17(d) (i)** **(2marks)**

e) i) With reference to an operating system, differentiate between formatting and partitioning. **(2marks)**

ii) List any **TWO** types of user interface. **(2mark)**

18.

a) Using eight bits and twos complement, subtract 78_{10} from 17_{10}. Give your answer in decimal notation **(3marks)**

b) Convert 11011011111.1111_2 to:

i) Octal **(2marks)**

ii) Hexadecimal **(2marks)**

iii) Decimal **(2marks)**

c) State any **Two** methods used to gain illegal access to a computer system **(2marks)**

d) i) Distinguish between peer-to-peer and client –server LANs. **(2marks)**

ii) Atieno was very happy when she bought a Safaricom 2G modem for she was able to easily connect her computer to the Internet. After six months she noticed it was taking her too long to connect to the Internet. State two possible causes of the problem. **(2marks)**

19.a)i) Explain any **two** causes of system change. **(2marks)**

ii) Explain any **THREE** causes of system maintenance. **(2marks)**

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b) i) Use of questionnaire is one of the most popular fact finding method. State any **TWO** advantages and **TWO** disadvantages of using this method to gather data. **(2marks)**

ii) Explain the importance of requirement specification phase of Systems development**.** **(2marks)**

c) Explain **TWO** reasons why a new system is tested before implementation.**(2marks)**

d)i) State two duties performed by a system administrator. **(1mark)**

ii) The principal of a school is attempting to convince his staff to us CAL and CAI software. State one benefit and one limitation of using such software. **(2marks)**

e)State one advantage and one disadvantage of using expert systems in medicine**(2marks)**

20.a) Explain three types of communication links that may be used to get an Internet connection **(3marks)**

b) Differentiate between the Internet and World Wide Web. **(2marks)**

ii) Technology has been blamed for polluting the environment.

Explain how computer technology has contributed to this. **(2marks)**

c)A Company that makes and sells vehicles receives orders from various clients. The company wants to enter their orders into a database. Study the table structure below and answer the questions that follow.

Field Name	Data Type	Field Size
Order Number	Number	Long Intenger
Order Date	Date/Time	
Supply Date	Date/Time	
Product code	Tex	5
Customer ID	Number	Long Integer
Delivery address	Text	30
Product Type	Tex	15
Product Name	Tex	10
Quantity Ordered	Number	Long integer
Product Prize	Number	Long Integer

i) Split the above structure into **THREE** tables and for each table identify an appropriate primary key. **(5marks)**

ii) Design well labeled tables structures and identify foreign keys **(3marks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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

1. *Write your name and index number in the spaces provided above.*
2. *Write the name and version of the software used for each question attempted in the answer sheet.*
3. *Answer all questions.*
4. *All questions carry equal marks.*
5. *Hand in all the printouts and the soft copy of your work on **CD**.*

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QUESTIONS

1. (a)(i) The extract below shows a spreadsheet used to compute the toll charges for a highway based on the type of vehicle, tonnage and charge per kilometer for usage.

	HIGHWAY TOLL CHARGES					
Registration	**Vehicle Type**	**Weight**	**Distance**	**NormalCharge**	**Penalty Charge**	***Total***
KCY 789 M	**PickUp**	**6**	**12**			
KCR 769 L	**Car**	**4**	**40**			
KCF 724 C	**PickUp**	**6**	**32**			
KCM 737 N	**Truck**	**12**	**25**			
KCA 745 W	**Lorry**	**20**	**28**			
KCP 756 H	**Truck**	**10**	**12**			
KCU 778 J	**Car**	**4**	**8**			
KCZ 701 A	**PickUp**	**8**	**25**			
KCB 781 E	**Car**	**6**	**4**			
KCV 743 H	**PickUp**	**4**	**20**			
KCQ 735 X	**Truck**	**8**	**32**			
KCT 721 K	**Lorry**	**10**	**25**			
KCD 792 V	**Truck**	**12**	**28**			
KCZ 784 P	**Car**	**6**	**12**			
KCB 756 C	**Truck**	**10**	**8**			
KCE 734 D	**Car**	**4**	**25**			
KCF779 E	**PickUp**	**6**	**32**			
KCG 700 F	**Lorry**	**12**	**25**			
KCH 723 K	**Truck**	**20**	**28**			
KCJ 711 W	**PickUp**	**10**	**12**			
KCR 712 D	**Car**	**4**	**8**			
KCD 774 B	**PickUp**	**8**	**25**			
KCS 756 M	**Truck**	**6**	**4**			
KCA 745 W	**Car**	**4**	**20**			
			Total			

(ii) Create a workbook and save the workbook as toll. **(2 Marks)**

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(iii) Fill the data in the worksheet1 and rename the worksheet as toll Original. **(14 Marks)**

(b)(i) The NormalCharge column is calculated based on the table below.

(ii)

Vehicle Type	Max AllowedWeight(Tns)
PickUp	6
Car	4
Truck	8
Lorry	10

The PenaltyCharge column is calculated based on the table below. The penalty is based on any weight above Maximum allowed weight for a vehicle type for every kilometer of the the usage.

(8 Marks)

Vehicle Type	Penalty Charge (Ksh)per Km
PickUp	10
Car	5
Truck	15
Lorry	20

(iii) The TotalCharge is based on summation of NormalCharge and PenultyCharge . Create a column TotalCharge and use a function to Calculate the Total Charge **(2 Marks)**

(iv) Create the Running Totals for Normal Charge,Penulty Charge And Totalcharge

(4 Marks)

(b)(i) Copy The data in the OriginalToll to another worksheet rename the workshhet as Sorted

(1 Mark)

(ii)Sort the Data is ascending order of Vehicle type Sorted worksheet. **(4 Marks)**

(iii) Create subtotals based on the vehicle Type **(4 Marks)**

(iv) Draw a column chart based on The Vehicle Type subtotals and Total Charge

(8 Marks)

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2. a) Create a database called **Aberdare bottles ltd** and create the following tables **(15 marks)**

Table 1: Employee

Employee_ID	EmployeeName	Department	YearOfEmployment
101	Kibet Arap Kamau	Human resource	1985
102	Janet Atieno	Procurement	1990
450	Kimani Koigu	Accounts	2000
891	Moraa Kerubo	Human resource	2010

Table 2: Sales

ProductName	Employee_ID	ProductID	SalesAmount	Salary
Tea leaves	101	Xc101	5000	
cocoa	102	Xp105	15500	
coffee	450	Xvb11	9500	
Chocolate	891	X56po	30000	

Table 3: Department

Employee_ID	Department_Name	HeadOfDepartment	NoOfEmployees
101	Human resource	B.N. Komu	52
102	Procurement	J.K. Wanjiru	12
450	Accounts	P.G. Otindo	20
891	Human resource	M.M. Jerotich	10

i) Create **relationship** among the tables **(2 marks)**

ii) Create **three** input screens **(forms)** and use them to enter the data into the tables above **(6 marks)**

iii) Create a query called **Start_K** and use it to display **EmployeeName** that start with letter **K** **(3 marks)**

iv) Display the **no of years** an employee has worked given that the current year is 2018. Save **the report** as **AGE.** **(3 marks)**

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v) Create a query called **Yote** to display the following fields **(2 marks)**

- **Employee_ID**
- **EmployeeName**
- **Department_Name**
- **ProductName**
- **Salary**
- **HeadOfDepartment**

vi) Copy Yote query (**in v above**) and save the new query as **MPYA**:- **(1 marks)**

Use MPYA query to

✓ Calculate the salary given that: salary is 10% of the S**alesAmount** **(2 marks)**

✓ Display salary in ascending order **(2 marks)**

✓ Display employees from **human resource** department whose **SalesAmount** is **greater than 12000.** **(2 marks)**

vii) Create a form called **AberdareForm** using **Yote query** (**in v above**) and use it to answer the questions below:-

✓ Count no of employees **(2 marks).**

✓ Add a title of the form as **"Aberdare bottles ltd-2018"** **(2 marks)**

✓ Insert **date and time** on the form header use **(=NOW( ))** **(2 marks)**

Print Age, Sales table, and AberdareForm **(3 marks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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

(a) *Answer all questions in section A in the spaces provided*

(b) *Section B is compulsory*

(c) *Choose any two questions from section C*

(d) ***Do not remove any pages from this booklet.***

(e) ***Answer all questions in English.***

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
SECTION A	1-39	40	
SECTION B	40	20	
SECTION C	41-43	40	
TOTAL SCORE		100	

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QUESTIONS

1. Give **two** uses of fruits in cake making . ` **(1mark)**

……

……

2. Name **two** types of pleats **(1 mark)**

……

……

3. Name the biological raising agent used in bread making **(1mark)**

……

4. List **two** methods of incorporating air into flour mechanically **(1mark)**

……

……

5. Give **two** functions of sebum **(1mark)**

……

……

6. State **two** ways in which a country with home scientists will benefit **(1mark)**

……

……

7. Mention **two** minerals needed for healthy teeth **(1mark)**

……

……

8. List any two ways of finishing wood **(1mark)**

……

……

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9. Mention two advantages of charcoal as a fuel **(1mark)**

……

……

10. Define the following terms: **(1mark)**

a) Fixed dirt

……

……

b) Fracture

……

……

11. Identify other two causes of anaemia other than nutritional deficiency **(1mark)**

……

……

12. Give two reasons for food fortification **(1mark)**

……

……

13. Highlight two ways of conserving vitamin C during the storage of kales **(1mark)**

……

……

14. Mention two signs and symptoms of marasmus **(1mark)**

……

……

……

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15. Write the following abbreviations in full **(1mark)**

a) AIDS

……

b) TBA

……

16. Give two functions of the S and U bend below every sink in the disposal of waste water from the house **(1mark)**

……

……

17. Detergents are classified into two groups .Name them **(1mark)**

……

……

18. Mention two rules to observe in stain removal **(1mark)**

……

……

19. Name two the stain removal agents used in removing a banana sap stain from your t-shirt **(1mk)**

……

……

20. Identify two methods suitable for disinfecting a kitchen towel **(1mark)**

……

……

21. List two ingredients used in the making of laundry blue **(1mark)**

……

……

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22. Give two points to observe when taking body measurements **(1mark)**

……

……

23. Name two conspicuous seams used to bring out style features in garment construction **(1mark)**

……

……

24. Give two examples of stitches used to neaten raw edges **(1mark)**

……

……

25. Mention two possible causes of stiches looping when sewing with a sewing machine **(1 mark)**

……

……

26. List two examples of haberdashery /sewing notions in garment constuction **(1mark)**

……

……

27. Give two ways you can identify elastofibres physically **(1mark)**

……

……

28. Outline two examples of synthetic fibers **(1mark)**

……

……

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29. Differentiate between aerobic and anaerobic food spoilage **(1mark)**

……

……

……

30. Apart from kitchen knife,identify one other type of knife and give its function.

(1mark)

……

……

31. State two roles of advertisements **(1mark)**

……

……

32. Point out two styles of food service **(1mark)**

……

……

33. Outline two functions of darts in clothing and construction processes **(1mark)?**

……

……

34. List two examples of basic pattern symbols and markings in garment construction **(1mark)**

……

……

35. Identify suitable textile fiber for making lingerie **(1mark)**

……

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36. Mention two methods of treating water at home **(1mark)**

……

……

37. Give two reasons for cleaning a house **(1mark)**

……

……

38. Outline two advantages of flats/apartments type of houses **(1mark)**

……

……

39. Suggest two ways of managing foreign body in the ear **(1mark)**

……

……

40. Mention two dangers that arise from misuse of cosmetics **(1mark)**

……

……

SECTION B

(Answer all the questions)

41. You are doing thorough cleaning at home on a Saturday morning. Describe how to;

a) Clean a white washable cotton mask you had used the previous day. **(8marks)**

b) Sweep an earthen sitting room floor **(7marks)**

c) Wash a Calabash that had been used to take porridge in the morning for breakfast. **(5 marks)**

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SECTION C

(Answer only two questions from this section.)

42.

a) Explain four factors to consider when planning meals

(4marks)

b) Explain three merits of credit cards **(3marks)**

c) Explain four importance of immunization **(4marks)**

d) Describe how to make hand worked gathers **(4marks)**

e) State five points on the choice of brooms and brushes **(5marks)**

43.

a) Outline three steps in preparing a budget **(3marks)**

b) Give the importance of table setting **(4marks)**

c) Explain the importance of breastfeeding to a child **(3marks)**

d) Outline four qualities of a well-made stitch **(4marks)**

e) Explain three ways in which detergents aid in removal of dirt **(6marks)**

44.

a) Explain three reasons for making a shopping list prior to the actual buying **(3marks)**

b) Use the following dishes to organize a breakfast menu **(3marks)**

Tea with milk, Fried liver, Boiled arrowroot, Fresh passion juice, Wimbi porridge

c) Explain four ways of handling temper tantrums during habit training **(4marks)**

d) Describe how to make a plain seam on a skirt yoke **(4marks)**

e) Draw six care labels on drying in laundry work and explain the meaning of each

(6marks)

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

HOME SCIENCE

441/2

PAPER 2

TIME: 2½ HOURS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education.

441/2

CLOTHING AND TEXTILES

PAPER 2

PRACTICAL

CONFIDENTIAL

INSTRUCTIONS TO SCHOOLS

The following materials will be provided by the school:

1. *Plain light weight cotton 55 cm long by 70cm wide*
2. *Cotton sewing thread to match the fabric*
3. *Embroidery thread 130cm long*
4. *A4 envelope*

FABRIC IN EXCESS OF THE AMOUNT SPECIFIED MUST NOT BE SUPPLIED TO THE CANDIDATES.

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

HOME SCIENCE

441/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

441/2

HOME SCIENCE

(CLOTHING CONSTRUCTION)

PAPER 2

PRACTICAL

Time: 2 ½ hours

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A pattern of a girl's dress is provided. You are advised to study the sketches, instructions and layout carefully before you begin the test.

Materials provided

1. Pattern pieces
A - Dress Front
B - Dress Back
C - Yoke
D - Pocket
2. Plain light weight cotton fabric 70cm wide by 55cm long.
3. Cotton thread to match the fabric.
4. Embroidery thread 130cm long.
5. A4 Envelope

THE TEST

Using the materials provided, cut out and make up the **LEFT HALF** of the dress to show the following process.

1. Cutting out.
2. Working of double pointed dart at the dress back.
3. Preparation and attachment of the patch pocket to include the working of satin stitch to fill "O" on the pocket.
4. Preparation of gathers on the dress front. DO NOT REMOVE GATHERING STITCHES.
5. Joining the dress front to the yoke using overlaid seam.
6. Joining the dress front to the dress back at the shoulder using double stitched seam.
7. Working the side seam using an open seam.
8. Managing the hem on the lower edge of the dress by;
(a) Holding the hem using even tackings. (DO NOT REMOVE TACKINGS)
(b) Working hemming stitches at the front part of the dress.
9. Presentation.

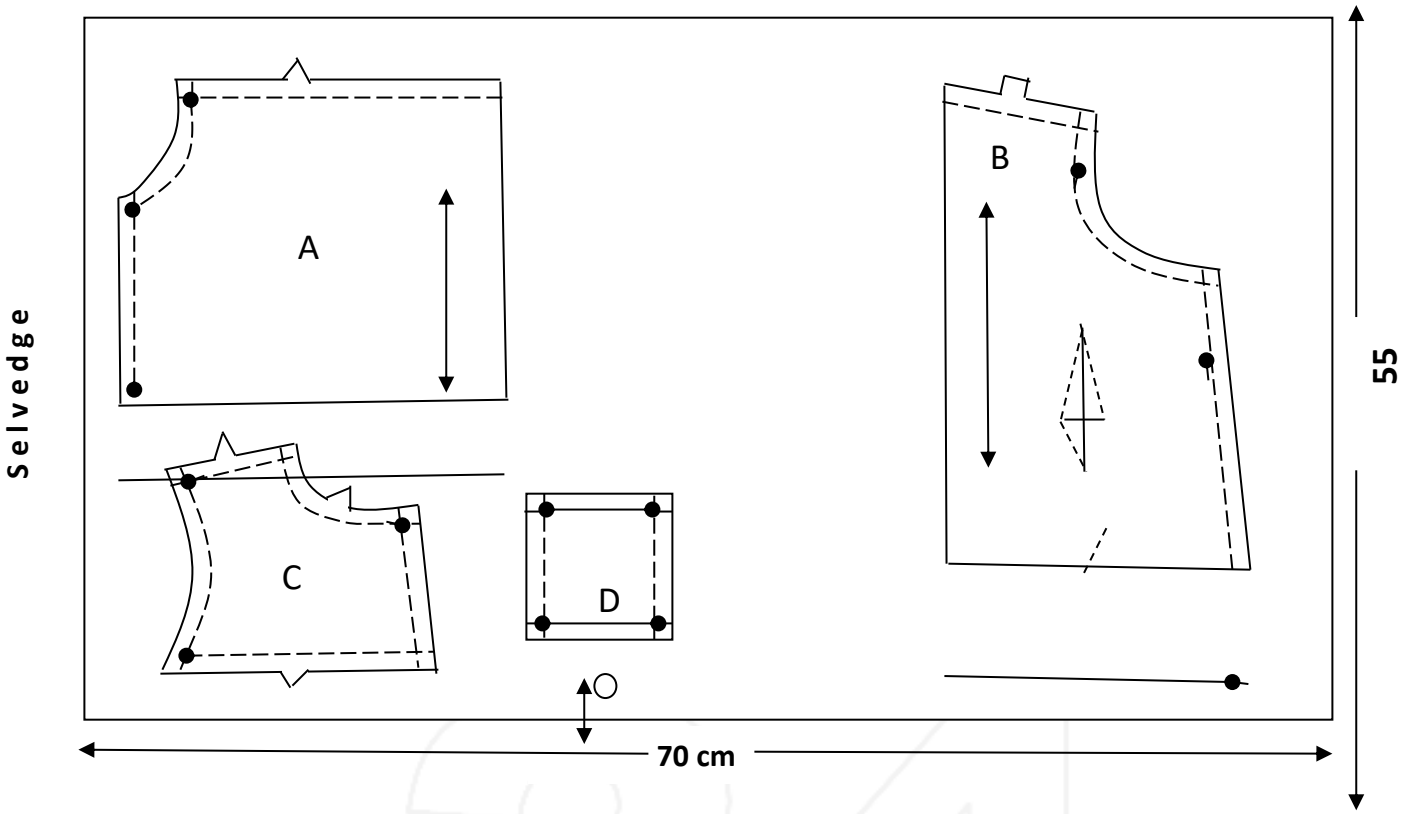
NB:

At the end of the examination, firmly sew on your work on single fabric a label bearing your name, class and admission number. Remove the needles, pins and unnecessary threads from your work. Fold your work neatly and place it in the envelope provided.

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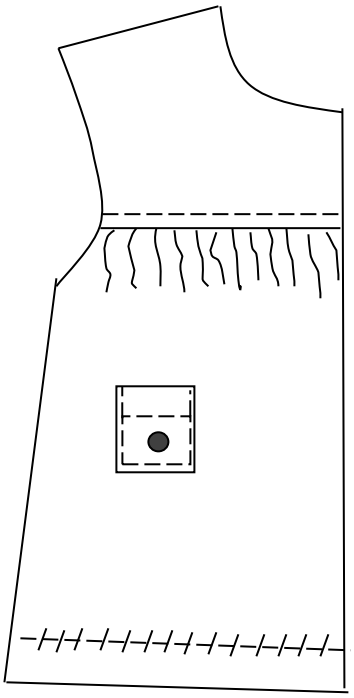
DO NOT PUT SCRAPS OF FABRIC IN THE ENVELOPE AND DO NOT SEAL THE ENVELOPE.

LAYOUT (NOT DRAWN TO SCALE)

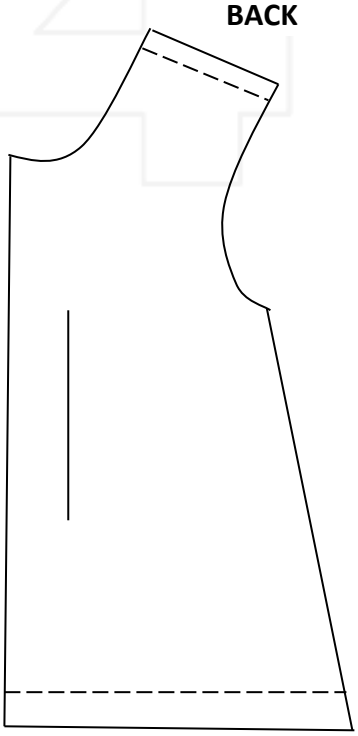


VIEWS

FRONT



BACK



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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

HOME SCIENCE

441/3

PAPER 3

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

(FOODS AND NUTRITION)

Paper 3

(PRACTICAL)

1 ¾ hours

Instructions to candidates

PLANNING SESSION: 30 minutes

PRACTICAL TEST SESSION: 1 ¼ hours

(a) *Read the test carefully.*
(b) *No stationery is provided.*
(c) *Write your name and index number on every sheet of paper used.*
(d) *Textbooks and recipes may be used during the planning session as reference materials.*
(e) *You will be expected to keep your order of work during the practical session.*
(f) *You are only allowed to take away your reference materials at the end of the planning session*
(g) *You are **not** allowed to bring additional notes to the practical session.*

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THE TEST

You are taking care of your nursing Aunt. Use all the ingredients listed below to prepare, cook and serve;

(i) A beverage with an accompanying snack for her 10 o'clock.
(ii) A one-course lunch for both of you.

Ingredients

Rice
Milk
Capsicum
Sugar
Tomatoes
Green leafy vegetable
Cooking oil
Fat
Salt
Tea leaves/cocoa
Onions
Coriander leaves
Minced beef
Ready-made Bread/Scones

PLANNING SESSION – 30 MINUTES

Use separate sheets of paper for each task listed below and carbon paper to make duplicate copies. Then proceed as follows;-

1. Identify the food items and write down their recipes.
2. Write down your order of work.
3. Make a list of foodstuffs, materials and equipment you will require.

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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

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* ***SIX*** *questions*

d) *Answer any* ***FIVE*** *questions in the spaces provided at the end of question six*

e) *Candidates should check the question paper to ascertain that all the questions are available*

f) *Candidates should answer the questions in English*

FOR EXAMINER'S USE ONLY

QUESTION	1	2	3	4	5	6	**TOTAL SCORE**
CANDIDATE'S SCORE							

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Answer any five questions.

1. a) State seven significance of marriage in Islam. **(7mks)**

b) Outline three qualities of a mumin **(3mks)**

c) Explain the effects of corruption in the society. **(10mks)**

2. a) Give reasons why students in Kenya find it important to study I.R.E. **(14mks)**

b) State the teaching of Sura alfatiha on the relationship between man and Allah. **(6mks)**

3. a) Define the term **NISAB** giving five examples. **(7mks)**

b) Identify three officials of the mosque. **(3mks)**

c) What are the conditions under which Tawbah is acceptable according to Islam. **(10mks)**

4. a) Give five qualities of a Muslim witness. **(6mks)**

b) How can a Muslim youth help in the campaign against the spread of HIV and AIDS. **(8mks)**

c) Why is gambling prohibited in Islam. **(6mks)**

5. a) State seven measures taken by Prophet Muhammed (SAW) to discourage slavery. **(7mks)**

b) Outline six factors that would undermine good relationship between people in a given society. **(6mks)**

c) What are the rules regarding the making of a commercial agreement. **(7mks)**

6. a) Outline the groups exempted from fasting. **(6mks)**

b) Explain the need for divine guidance according to Islam. **(5mks)**

c) What are the Shia teachings on the concept of leadership? **(9mks)**

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KCSE 2024 PROJECTION EXAMS

(PREDICTION SERIES)

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

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* ***SIX*** *questions*

d) *Answer any* ***FIVE*** *questions in the spaces provided at the end of question six*

e) *Candidates should check the question paper to ascertain that all the questions are available*

f) *Candidates should answer the questions in English*

FOR EXAMINER'S USE ONLY

QUESTION	1	2	3	4	5	6	**TOTAL SCORE**
CANDIDATE'S SCORE							

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*Answer any **FIVE** questions in the spaces provided*

1. a) State six main themes in the first revelations given to prophet Muhammed. **(12mks)**

b) State four kinds of holy wars. **(8mks)**

2. a) Highlight Muhammed's sermon at Mt. Arafat **(16mks)**

b) State why the Meccans were hostile to Mohammed **(4mks)**

3. a) Explain the importance of Hajj. **(10mks)**

b) Explain the role of Zakat **(10mks)**

4. a) State the role played by Sheikh Abdallah Farsy in the spread of Islam in East Africa**.** **(10mks)**

b) Discuss the contribution of Hassan Al-Banna to Islam. **(10mks)**

5. a) Give the terms of the first Agreement of Aqabah. **(8mks)**

b) Explain the factors which contributed to the fall of Ummayyad dynasty. **(12mks)**

6. a) Give seven reasons why Arabs did not settle in the interior of East Africa before 15th Century. **(7mks)**

b) What were the impacts of Arab settlement along the East Africa coast and interior.**(7mks)**

c) State six factors that helped in the spread of Islam in Mumias in the 19th Century. **(6mks)**

END

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THE END

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TO ALL CANDIDATES;

Incase a Significant Number of these Questions Appear in KCSE Exam, Don't panic!

TAKE IT EASY

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FOR MARKING SCHEMES

CONTACT

0746 222 000

0742 999 000

kcsepredictions@gmail.com

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SUCCESS

TO ALL

KCSE CANDIDATES

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