ACHIEVERS 2025 PREMOCK

KCSE FOCUS SERIES

ALL SUBJECTS

This compilation presents a meticulously organized collection of PREMOCK examinations tailored for the KCSE 2025. Each examination is designed to adhere to curriculum standards, providing students with comprehensive practice. The detailed format and structured layout enhance learning, ensuring effective preparation for the KCSE 2025 examinations.

SUBJECTS COMPILED;

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

FOCUS SERIES

For Marking Schemes

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MWALIMU CONSULTANCY

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

CHRISTIAN RELIGIOUS EDUCATION

313/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

a) *Candidates must check the paper to ascertain that all pages are printed and no question is missing*

b) *Answer any five questions in the foolscaps provided.*

c) *All answers must be written in English.*

FOR EXAMINER'S USE ONLY

Question	1	2	3	4	5	6	Totals
Maximum Score	20	20	20	20	20	20	100
Candidate's Score							

Answer any five questions

1. State seven reasons why Christian Religious education is taught in secondary schools **(7mks)**

b) Give six reasons why the bible is referred to as the word of God. **(6mks)**

c) Mention ways in which the Bible is misused in Kenya today. **(7mks)**

2. Describe the covenant ceremony between God and Abraham in Genesis 15:1-19. **(8mks)**

b) State seven promises that God made to Abraham **(7mks)**

c) Explain how modern marriage qualifies to be covenant **(5mks)**

3. Identify ways in which King Jeroboam contributed to religious schism between Judah and Israel. **(7mks)**

b) State the role of Judges in Israel **(6mks)**

c) Identify causes of power struggles in Kenya today. **(7mks)**

4. Outline the role of prophets in the old testaments **(7mks)**

b) Describe the call of prophet Amos to become a prophet in Israel **(Amos 1:1, 3:8, 7:10 – 15)** **(5mks)**

c) State eight factors that hinder Christians from accepting the call to serve God. **(8mks)**

5. Describe the dedication of the wall of Jerusalem during the time of Nehemiah. **(8mks)**

b) Identify reforms carried out by Nehemiah to restore the worship of God in Judah. **(5mks)**

c) Give seven ways in which the government of Kenya supports church leaders in their work. **(7mks)**

6. Describe the traditional African understanding of Hierarchy of beings. **(7mks)**

b) List eight places for worship in Traditional African Communities. **(8mks)**

c) What change has taken place in the rite of initiation in Kenya today? **(5mks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

CHRISTIAN RELIGIOUS EDUCATION

313/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

a) *Candidates must check the paper to ascertain that all pages are printed and no question is missing*

b) *Answer any five questions in the foolscaps provided.*

c) *All answers must be written in English.*

FOR EXAMINER'S USE ONLY

Question	1	2	3	4	5	6	Totals
Maximum Score	20	20	20	20	20	20	100
Candidate's Score							

Answer any five questions

1. Outline Nathan prophesy concerning the Messiah **(2 Samuel 7:3-17)** **(6mks)**

b) Mention the events that took place on the night Jesus was born. **(Lk 2:6-22)** **(7mks)**

c) Give seven ways through which church leaders prepare for the second coming of Christ. **(7mks)**

2. With reference to the sermon on the plain state seven teachings of Jesus on how human beings should relate to one another. **(7mks)**

b) Describe the incident in which Jesus Christ calmed the storm (Lk 8:22-25) **(8mks)**

c) State five Christian values that can be learnt from Centurion whose servant Jesus healed in **(Lk 7:1-10)** **(5mks)**

3. Describe the triumphant entry of Jesus into Jerusalem. (Lk 19:28-40) **(6mks)**

b) Outline the events that took place from the time Jesus was arrested up to the time he was sentenced to die. **(7mks)**

c) State seven lessons Christians learn from the suffering and death of Jesus. **(7mks)**

4. Describe how Peter's life was transformed on the day of Pentecost. **(7mks)**

b) Explain how the unity of believers is expressed in the church as the body of Christ. **(6mks)**

c) How can Christians promote unity in the workplace? **(7mks)**

5. Outline the sources of Christian ethics. **(7mks)**

b) State six similarities between the traditional African and Christian view on human sexuality. **(6mks)**

c) How is responsible parenthood demonstrated by Christians in Kenya today? **(7mks)**

6. Outline seven Christian teaching on marriage. **(7mks)**

b) State seven reasons why some young people remain unmarried in Kenya. **(7mks)**

c) In what ways is the church helping to solve the problems of domestic violence today? **(6mks)**

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KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

HISTORY AND GOVERNMENT

311/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

- *This paper consists of three sections A,B,C*
- *Answer all questions in section A, choose three questions in section B and two questions in section C*
- *Answers to all questions must be written in the answer booklet provided*
- *Candidates should answer questions in English.*

FOR EXAMINER'S USE ONLY

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

SECTION A-25 MARKS

Answer all questions in this section in the spaces provided

1. **Identify two** ways through which archaeologists obtain information on the history of Kenya. **(2 mks)**
2. **Name** one sub-group of Eastern Cushites. **(1 mk)**
3. **Identify** the title given to council of elders among the Agikuyu. **(1 mk)**
4. **Give two** missionary societies that operated in Kenya. **(2 mks)**
5. **Give one** way in which African communities in Kenya reacted to British Invasion**.(1 mk)**
6. **Identify the** main reason why *Kipande* system was introduced in Kenya during the colonial period. **(1 mk)**
7. **Give two** challenges faced by independent schools in Kenya. **(2 mks)**
8. **Give two** reasons why orating was administere4d to Mau Mau fighters. **(2 mks)**
9. **Identify one** commission on education constituted during the colonial period. **(1 mk)**
10. **Identify two** ways in which the colonial government encouraged settler farming**.(2 mks)**
11. **Name one** founder member of Kenya African Democratic Union. **(1 mk)**
12. **Give** the main reason why the Second Lancaster House conference was convened in 1962. **(1 mk)**
13. **List two** ways in which Kenyan citizens exercise direct democracy. **(2 mks)**
14. **Outline two** functions of the deputy speaker of the National Assembly. **(2 mks)**
15. **Give one** way in which the government has promoted the culture of the people in Kenya since independence. **(1 mk)**
16. **State** one challenge facing Harambee spirit in Kenya. **(1 mk)**
17. **Give two** ways in which one can become a member of county assembly of Kenya. **(2 mks)**

SECTION B: (45 MARKS)

Answer any three questions from this section.

18. **(a)State five** reasons which influence migration of the Cushites into Kenya during the Pre-colonial. **(5 mks)**

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

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19. (a) Give five reasons that enabled the *Akamba* to successfully participate in the Long Distance trade. **(5 mks)**

(b) Explain five factors that influenced the growth of Nairobi as an urban centre**.** **(10 mks)**

20. (a) State five roles of Africans in provision of health services during colonial rule in Kenya. **(5 mks)**

(b) Explain five roles of women in the *Mau Mau* uprising during the struggle for Independence in Kenya. **(10 mks)**

21.(a) State five reasons for the Maasai collaboration. **(5 mks)**

(b) Explain five challenges facing culture and sports in Kenya since independence. **(10 mks)**

SECTION C: (30 MARKS)

Answer any two questions from this section.

22. (a) Give three factors that promote National Unity. **(3 mks)**

(b) Explain six importance of National Integration. **(12 mks)**

23. (a) Identify three special groups given special rights in the Kenyan Constitution of 2010. **(3 mks)**

(b) Explain six functions of the Kenya National Human Rights and Equality Commission **(KNHREC)** **(12 mks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

HISTORY AND GOVERNMENT

311/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

- *This paper consists of three sections A,B,C*
- *Answer all questions in section A, choose three questions in section B and two questions in section C*
- *Answers to all questions must be written in the answer booklet provided*
- *Candidates should answer questions in English.*

FOR EXAMINER'S USE ONLY

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

SECTION A-25 MARKS

Answer all questions in this section in the spaces provided

1. Give two limitations of using written sources of information of History. **(2 mks)**
2. **Give one** reason why Homohabilis was referred to as 'man with ability"**.** **(1 mk)**
3. **Give the** main reason why early agriculture developed in Egypt. **(1 mk)**
4. **Give two** limitations of barter trade. **(2 mks)**
5. **Give one** result of the invention of the wheel in Mesopotamia. **(1 mk)**
6. **Name two** disadvantage of using a messenger to pass information. **(2 mks)**
7. **State** the main contribution of the discovering of chloroform in the field of medicine. **(1 mk)**
8. **State one** political effect of the development of iron technology in Africa. **(1 mk)**
9. **Give two** reasons that led to decline of Meroe as an early urban centre. **(2 mks)**
10. **State** the role of golden stool in the Asante Kingdom during the 19th century. **(1 mk)**
11. **State** one function of the *Bataka* among the *Baganda* in the pre-colonial period**.(1 mk)**
12. **Name** two African countries that were not colonized. **(2 mks)**
13. **Give** the administrative applied by British in Zimbabwe. **(1 mk)**
14. **Name** one political party that fought for independence in Ghana. **(1 mk)**
15. **Give** two reasons why USA was reluctant to join the first world war. **(2 mks)**
16. **Name** one place in Africa where the cold war was witnessed. **(1 mk)**
17. **Identify two** houses that constitute the United States of America Congress. **(2 mks)**

SECTION B: 45 MARKS)

Answer any three questions from this section.

18. **(a) Give** three functions of *Kabaka* of *Baganda* in the pre-colonial period. **(3 mks)**

    (b) Describe the political organization of the Shona Kingdom during the pre-colonial period. **(2 mks)**

19. **(a)** State five factors that led to the emergence of trade. **(5 mks)**

    (b) (b) Explain five challenges faced by the Trans-Saharan traders. **(10 mks)**

20. **(a)** Give five terms of the Berlin conference of 1884 to 1885. **(5 mks)**

    (b) Explain five factors that influenced King *Lewanika* to collaboration with the Europeans. **(10 mks)**

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21. (a) Give three reasons for use of assimilation policy in Senegal. **(3 mks)**

(b) Discuss six reasons why Ghana attained independence earlier than African countries. **(12 mks)**

SECTION C: (30 MARKS)

Answer any two questions from this section.

22. (a) Outline five objectives of the League of Nations. **(5 mks)**

(b) Why did the League of Nations fail to maintain word peace? **(10 mks)**

23. (a) Name any three French speaking West African states that are members of the economic community of West African States (ECOWAS). **(3 mks)**

(b) Explain six problems which have plagued the East African Community since its rebirth in 2001. **(12 mks)**

24. (a) Give five sources of the British constitution. **(5 mks)**

(b) Describe five functions of the Monarch in Britain. **(10 mks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

GEOGRAPHY

312/1

PAPER 1

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

- *This paper has **two** sections: **A** and **B***
- *Answer **ALL** the questions in **section A.***
- *In section **B,** answer **questions 6** and any other **TWO** questions.*
- *All the answers must be written on the foolscaps provided/attached after page 4.*
- *Candidates must answer the questions **in English**.*

FOR EXAMINER'S USE ONLY

Section	Questions	Maximum Score	Candidate's Score
A	1 - 5	25	
B	6	25	
		25	
		25	
Total Score			

SECTION A

Answer all questions in this section

1a Define the term environment **2mks**

b. Name two divisions of physical geography **3mks**

2.a Give the forces responsible for the spherical shape of the earth **2mks**

b. State reasons why the interior of the earth is still hot **3mks**

3 a. Highlight the characteristics of the **troposphere** **2mks**

b.state the factors that influence the amount of sunshine received on the earths surface **3mks**

4 a what is zero lapse rate **2mks**

b. give the main zones of the atmosphere **3mks**

5a.Give two types of igneous rocks **2mks**

b.State any 3 uses of rocks **3mks**

SECTION B

6. Study the map of **TAMBACH** 1:50,000 (**sheet 90/3**) provided to answer the following questions.

(a) (i) Identify two relief features found in the area covered by the map. **(2 marks)**

(ii) Give the latitudinal extent of the area covered by the map. **(2 marks)**

(iii) Give the six figure grid reference of the cattle dip at Singore (to the north western side of the area covered by the map). **(2 marks)**

(b) (i) Calculate the approximate area of Kaptagat forest. **(2 marks)**

(ii) Measure the distance of road C51 from the junction at the mining camp to Kabarnet. Give your answer in kilometres. **(2 marks)**

(iii) Calculate the bearing air photo principal point 039 (at grid reference 9478), from the photo principal point 038 (at grid reference 9481). **(2 marks)**

(c) Describe the characteristics of the long profile of R. Kerio. **(5 marks)**

(d) Citing evidence from the map, state four social functions of Tambach. **(8 marks)**

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7.(a) Give **three** ways in which rocks are classified. **(3 marks)**

(b) Describe how the following rocks are formed.

(i)Igneous rocks. **(6 marks)**

(ii)Chemically formed sedimentary rocks. **(6 marks)**

(c) Explain **two** reasons why sedimentary rocks are widespread at the coast of Kenya. **(4 marks)**

(d) Explain **three** economic importance of sedimentary rocks to Kenya. **(6 marks)**

7a.i.Define a lake **2mks**

ii. State reasons why some lakes are salty **4mks**

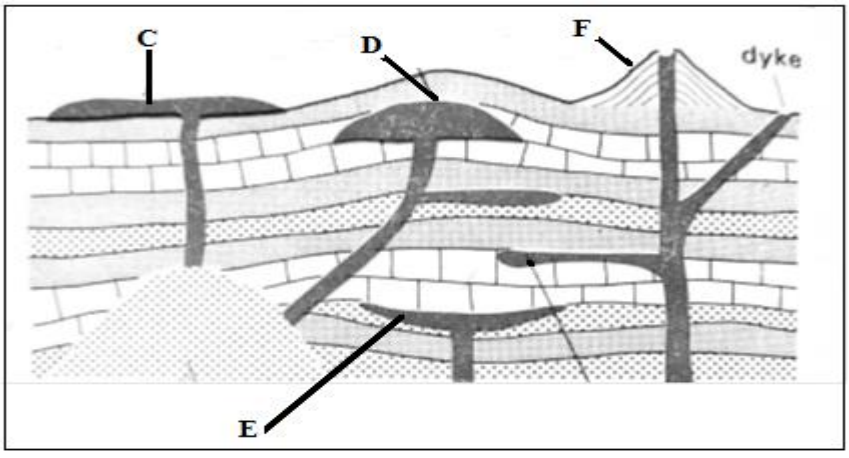
b.Explain the formation of a lake by faulting **6mks**

c.Explain any 4 negative effects of human activities on **lakes** **\8mks**

D. Identify the significance of lakes **5mks**

8 a. Differentiate between magma and lava**.** **2mks**

.The diagram below shows some festures of vulcanicity



i Identify the features marked C,D **and E** **3mks**

(ii) Give three examples of the feature marked F in Kenya**.** **3mks**

b.Describe how a lava plateau is formed **7mks**

c.Explain the positive significance of vulcanicity to man **10mks**

9.a What is weathering **2mks**

b.Explain how the following factors affect weathering **6mks**

i Nature of parent rock

ii.plants

iii.rock texture

c.Describe how exfoliation process occurs **7mks**

d. suppose you are to carry a field study on weathering

i state three objectives you would formulate for the study **3mks**

ii.Give three methods you would use to record data **3mks**

iii.identify any problems you are likely to face during the field study **4mks+**

10.a i What is glaciation **2mks**

Ii Describe the formation of glacier **7mks**

b.Explain 3 types of moraine **6mks**

c. Explain any 3 conditions that lead to glacial deposition **6mks**

d. identify 4 positive significance of glaciation **4mks**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

GEOGRAPHY

312/2

PAPER 2

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

- *This paper has **two** sections: **A** and **B***
- *Answer **ALL** the questions in **section A.***
- *In section **B,** answer **questions 6** and any other **TWO** questions.*
- *All the answers must be written on the foolscaps provided/attached after page 4.*
- *Candidates must answer the questions **in English**.*

FOR EXAMINER'S USE ONLY

Section	Questions	Maximum Score	Candidate's Score
A	1 - 5	25	
B	6	25	
		25	
		25	
Total Score			

SECTION A

Answer all questions in this section

1a. Define forestry **2mks**

b.Give 3 factors that determine the type and distribution of forests **3mks**

2 a.Name two rivers that supply water to mwea Tebere irrigation scheme **2mks**

b. State the significance of an irrigation scheme **3mks**

3 a .Define the term fishing **2mks**

b.State any 3 factors influencing fishing **3mks**

4 a. What is a game sanctuary **2mks**

b. Name three marine national park at the coast of kenya **3mks**

5 a. What is land dereliction **2mks**

b. State 3 measures that the kenya government has undertaken to rehabilitate derelict land in the country. **3mks**

SECTION B

ANSWER QUESTION 6 AND ANY OTHER TWO QUESTIONS FROM THIS SECTION

6. The table below shows the production of maize in tones between 2010 and 2014 in four divisions of Baringo County.

Division	2010	2011	2012	2013	2014
Bartabwa	200	240	250	280	285
Barwesa	116	135	138	170	275
Kabartonjo	100	80	60	50	45
kipsaraman	40	30	45	30	25

(a)(i) Calculate the percentage increase of the total maize production in the four divisions between 2012-2013. **2mks**

(ii) What is the difference in kilograms between the highest production and the lowest in five **years.** **2mks**

(b)(i) Using a vertical scale of 1cm represents 50 tonnes, draw a group line graph to represent the data above. **7mks**

ii) state three advantages of using group line graph. **3mks**

(c) State three climatic conditions favoring the growing of maize. **3mk**

(d) Explain four problems facing small scale maize farmers in Kenya**.** **8mks**

7. a I what are derived forests **2mks**

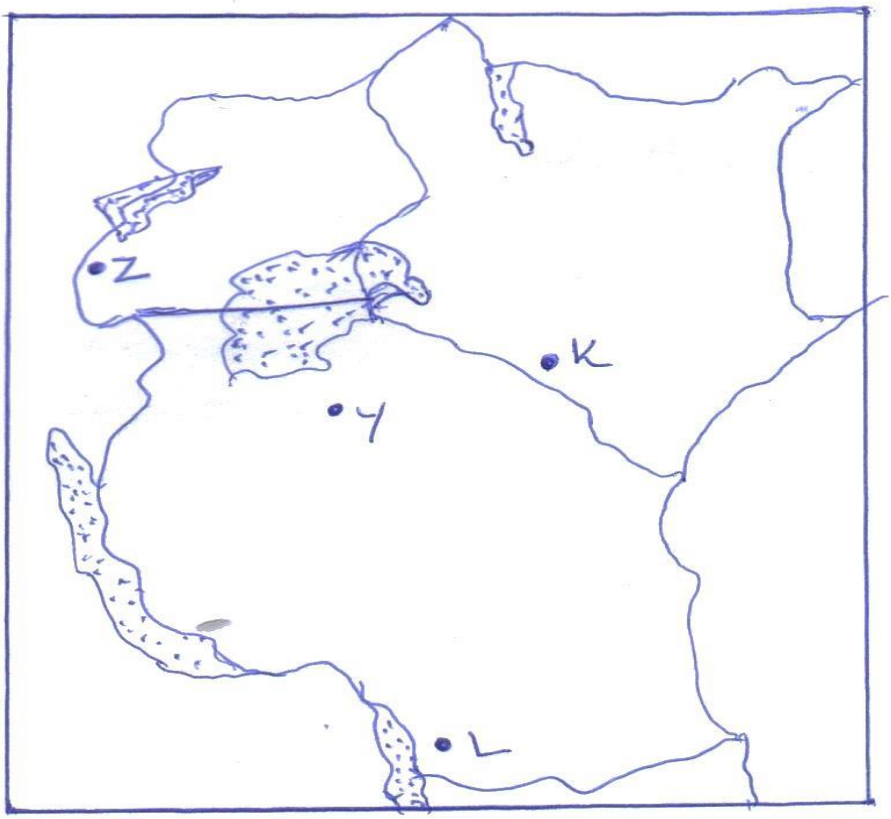
ii state the characteristics of planted forests **4mks**

b..Explain 4 the similarities between soft wood forests in kenya and Canada **8mks**

C .Explain 4 problems facing forestry in both kenya and canada **8mks**

d. State measures taken by the government of kenya to conserve forests **3mks**

8. The map below shows the location of some minerals in East Africa.



a.Name the minerals mined in the areas marked K,L,Y. and Z. **4mks**

(i) State two conditions that are necessary for the formation of petroleum**.** **2mks**

(ii) List three ways in which open cast mining affects the **environment.** **3mks**

(a) (i) Give two uses of diamond. **2mks**

(ii) Explain three ways in which mining promotes industrialization in Kenya. **6mks**

(b) Apart from industrialization, explain four ways in which mining contributes to the economy of Kenya. **8mks**

9. Define industrial inertia **2mks**

b. Explain 5 importance of industrialization to the economy of the country **10mks**

C.Explain any 4 negaive effects of industrialization **8mks**

d Your class intends to have a field study in one of the industries,outline ways in which you will prepare for the study **5mks**

10.a i. Define Agriculture **2mks**

ii. Give the characteristics of dairy farming **5mks.**

iii. state the advantages of mixed farming **3mks**

b. Explan how the following factors influence Agriculture **8mks**

Variation inTemperature

Sunshine

Winds

Variation in rainfall

b. Describe the cultivaton of cocoa **7mks**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

BIOLOGY

231/1 (THEORY)
PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTION TO CANDIDATES

a) *Write your name and admission number in the spaces provided above.*

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

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

d) *Answers must be written in the spaces provided*

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

FOR EXAMINER'S USE ONLY

Question	Maximum Score	Candidate's Score
1 – 29	**80**	

1. The table below shows concentration of some minerals inside the cells of a water plant and in the surrounding water.

Mineral	Sodium	Magnesium	Calcium
Cell sap	631	202	318
Surrounding water	28	293	47

a) Name the process by which magnesium is taken up by the plant. **(1mrk)**

……

b) Explain why maize plant take up calcium minerals quicker in well aerated soils than in water logged soil**.** **(3mrks)**

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2. Give a reason why a mature plant cell does not lose its shape even after losing water. **(1mrk)**

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3. i) State the function for co-factors in cell metabolism**.** **(1mrk)**

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ii) Give one example of a metallic co – factor**.** **(1mrk)**

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4. Name the features that increase the surface area of the small intestines**.** **(2mrks)**

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5. a) Name three characteristics that are used to divide the members of phylum Arthropoda into classes**.** **(3mrks)**

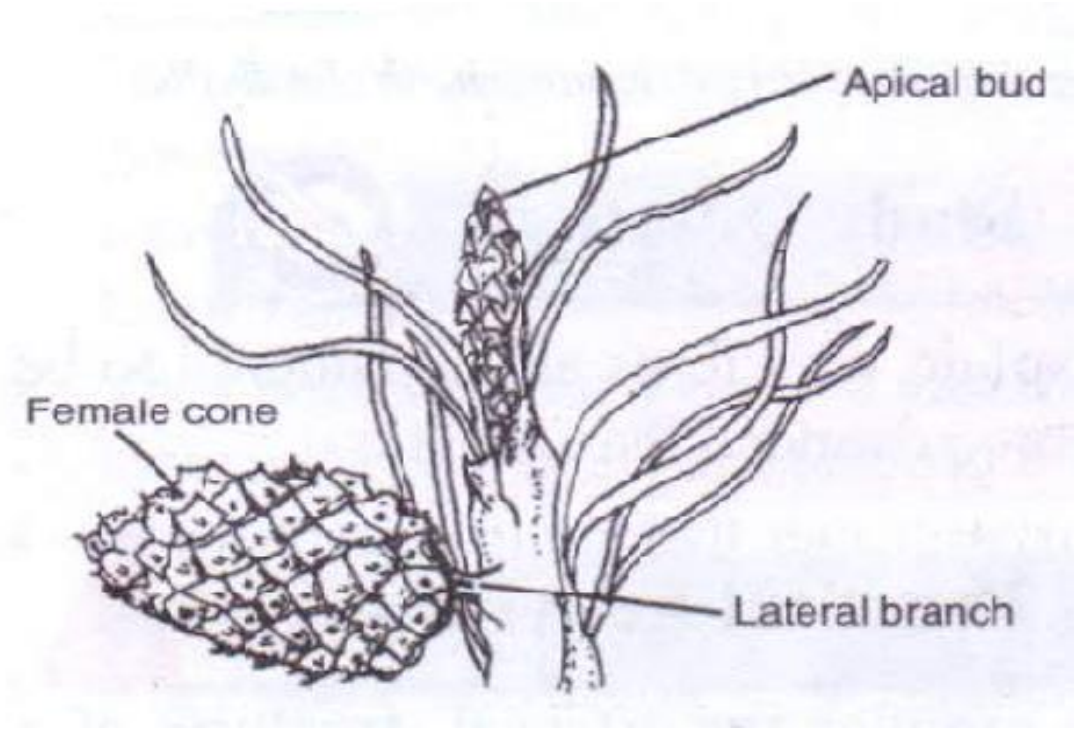
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b) The diagram below represents a certain plant species.



i) State the class to which the plant belongs**. (1mrk)**

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ii) State one observable xerophytic characteristic seen in the diagram above**?** **(1mrk)**

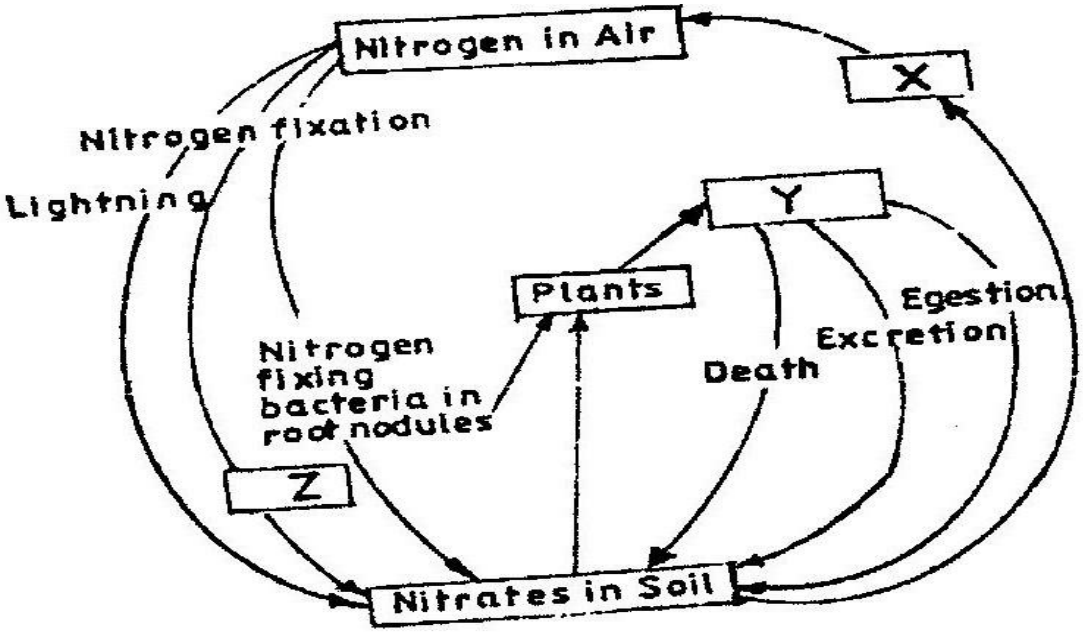
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6. The chart below represents a simplified nitrogen cycle.



What is represented **by X, Y and Z.** **(3mrks)**

X……

Y……

Z……

7. People can die when they inhale gases from aburning charcoal stove in a poorly ventilated room. What compound is formed in the human body that lead to such deaths?. **(1mrk)**

……

8. Explain why blood from a donor whose blood group is A cannot be transfused into a recipient whose blood group is B. **(2mrks)**

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In an experiment, a student covered one of the leaves of a potted plant on both upper and lower surfaces with blue cobalt chloride paper. The plant was exposed outside for 45 minutes.

Observation: The cobalt chloride on the undersurface of the leave changed into pink in the first 20 minutes only as the upper surface remained blue. However at the end of the experiment, after 45 minutes, the upper surface also turned pink.

i) State the aim of the experiment. **(1mrk)**

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ii) Give one significance of the results obtained**.** **(1mrk)**

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9. When transplanting seedlings, it is advisable to remove some leaves. Explain **(1mrk)**

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10.a) Describe the path taken by carbon (IV)oxide released from the tissue of an insect to the atmosphere. **(3mrks)**

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b) Name two structures for gaseous exchange in plants**.** **(2mrks)**

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c) What is the effect of contraction of the diaphragm muscles during breathing in mammals?. **(2mrks)**

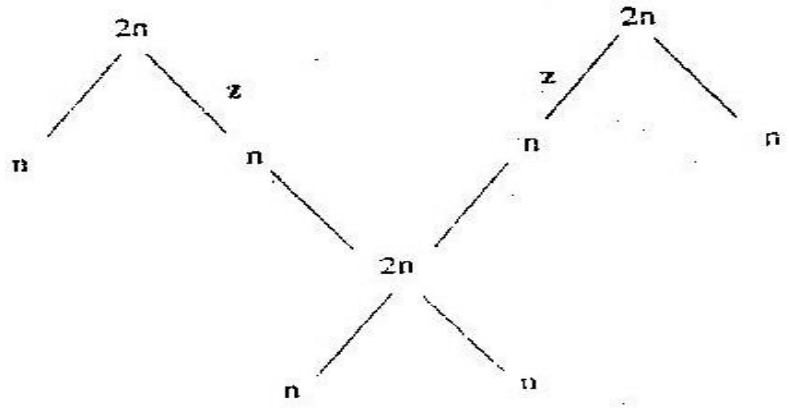
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11. The chart below shows the number of chromosomes before and after cell division and fertilization in a mammal.



a). What type of cell division takes place at Z**.** **(1mrk)**

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b) Where in the female body of humans does process Z occur**?.** **(1mrk)**

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c) Name the process that leads to addition or loss of one or more chromosomes**.** **(1mrk)**

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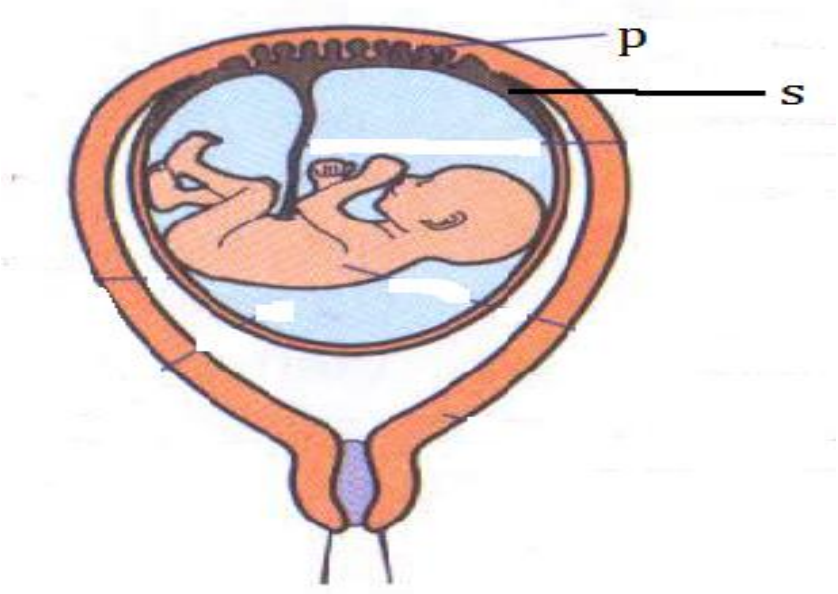
13. State three benefits of polyploidy in plants to a farmer. **(3mrks)**

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14. The diagram below represents human foetus.



a) Name the part labelled **S** **(1mrk)**

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b) Give the roles of structure P in; **(2mrks)**

i) Nutrition.

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ii) Protection.

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d) What is the function of the following in the human male reproductive system**?.** **(2mrks)**

i) Epididymis.

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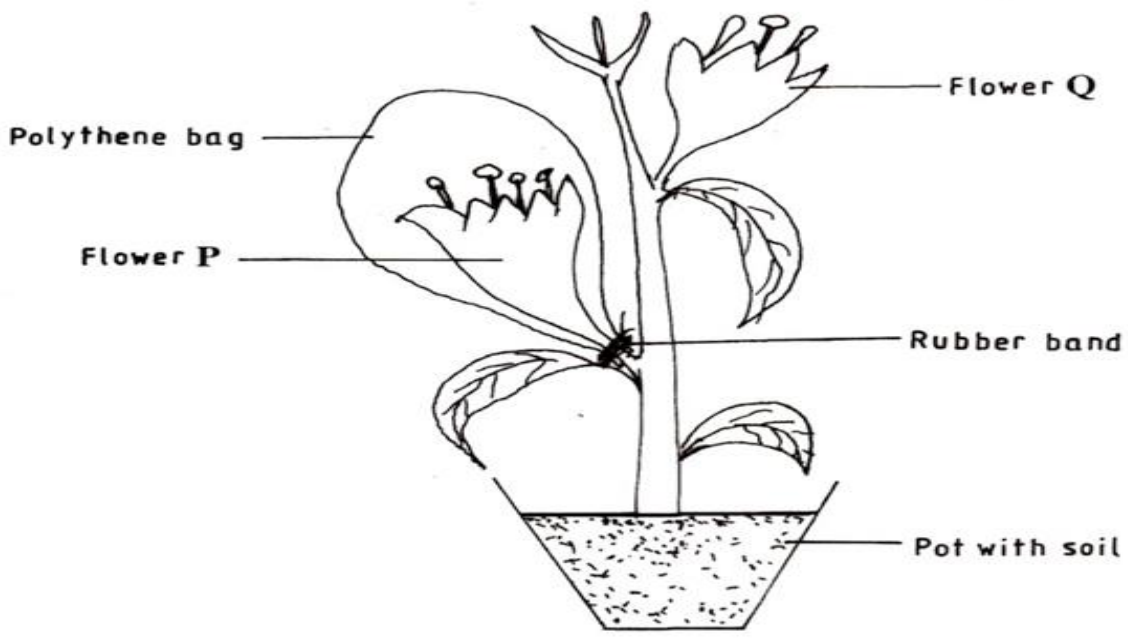
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ii) Scrotal sac.

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15. The diagram represents an experimental set up used by students to investigate a certain process.



Flower Q produced seeds, while P did not. Account for the **results** **(3mrks)**

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16. Name any two branches of microbiology**.** **(2mrks)**

……

……

17. Which biological tool would a scientist require to collect rats to be used for study? **(1mrk)**

……

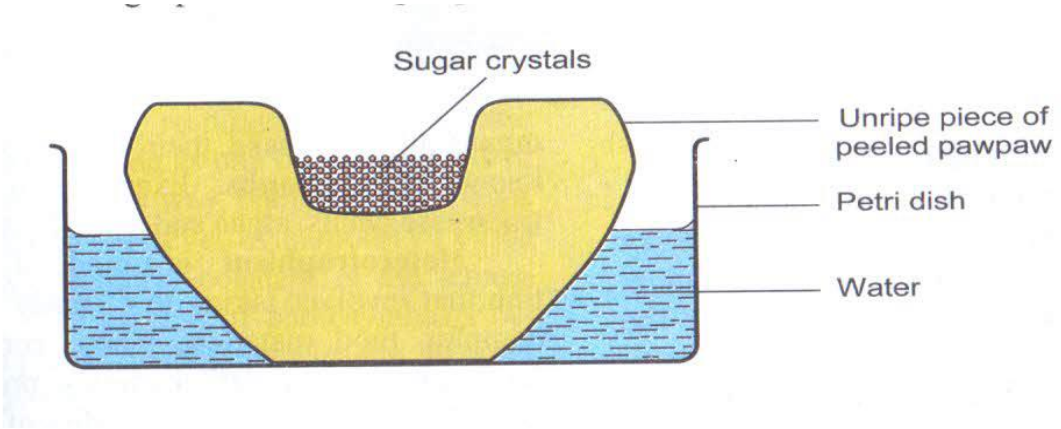
18. Distinguish between magnification and resolution as used in microscopy**.** **(1mrk)**

……

……

……

19. A group of students set up an experiment to investigate a certain physiological process.The set up was as shown below.



a) Name the physiological process being investigated. **(1mrk)**

……

b) Account for the formation and rise in the level of sugar solution at the end of the experiment.

(3mrks)

……

……

……

……

20. The scientific name of a blackjack is <u>bidens pilosa.</u> Identify two mistakes in the written name.

(2mrks)

……

……

……

21. State two advantages of natural selection to organisms. **(2mrks)**

……

……

22. a) Give two ways in which sexual reproduction is important in the evolution of plants and animals. (**2mrks)**

……

……

……

b) Explain why it is only mutations in genes of gametes that influence **evolution** **(1mrk)**

……

……

23. Give the role of the following hormones during menstrual cycle. **(3mks)**

a) Follicle stimulating hormone.

b) Oestrogen.

c) Luteinizing hormone.

24. The chart below represents the result of successive crosses, staring with red- flowered plants and white flowed plants and in which both plants are pure breeding.

Parental genotypes: Red flowers x white flowers



First filial generation

Selfed

Second filial generation

3 red flowers: 1 white flower

Phenotypic ratio 3: 1

(a) What were the parental genotypes? Use letter R to represent the gene for red colour and r for white colour**.** **(1mrk)**

……

(b) (i) What was the colour of the flowers in the first filial generation?. **(1mrk)**

……

ii) Give a reason for your answer in b (i) above. **(1mrk)**

……

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(c) What is a test- cross?. **(1 mark)**

……

……

25. a) Name two tissues in plants which are thickened with lignin. **(2 marks)**

……

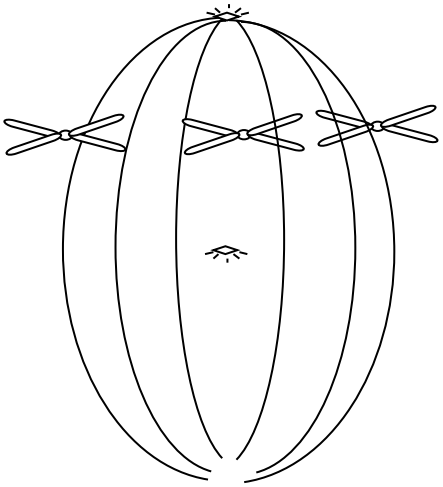
……

b) How is support attained in herbaceous plants? **(1 mark)**

……

……

26. The diagram below shows a stage of a certain type of cell division.



a) Identify the stage and type of the cell division the above cell is undergoing. **(2mks)**

b) State two importance of the above type of cell division. **(2mks)**

27. The photograph below shows the effects of certain pollutant in Nairobi dam. Study it carefully and use to answer the questions that follow.



i) Suggest the main pollutant in the **dam** **(1mark)**

……

ii) What are the possible effects of pollution illustrated in the photograph **(2mrks)**

……

……

……

iii) Suggest one possible pollution control measure that can be put in place to save aquatic organisms in the dam. **(1mark)**

……

……

28. In a capture-recapture exercise to estimate population size of dragon flies on a stretch of rivers, 250flies were first caught and marked. Two days later 500 flies were caught in the second capture and out of this, 50 flies had marks on their bodies. Estimate the population size of the flies. (show your working) **(3mks)**

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KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

BIOLOGY

231/2

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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

INSTRUCTIONS TO CANDIDATES

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

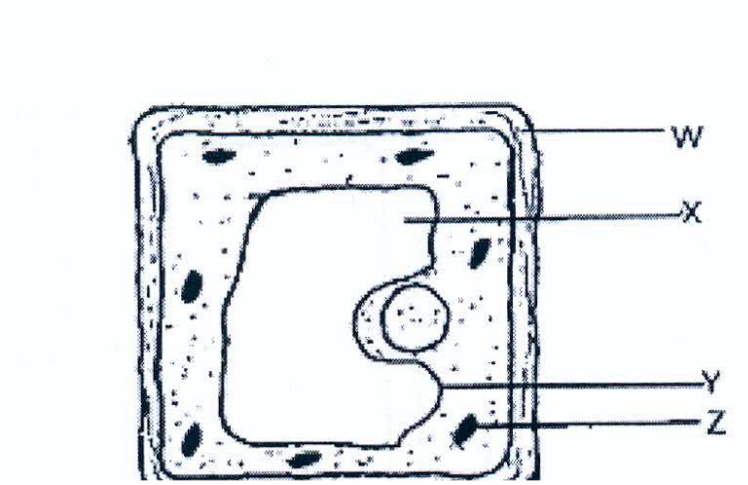
For Examiners use only.

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

SECTION A (40 MARKS)

Answer all the questions in this section.

1. Examine the diagram below carefully and use it to answer the questions that follow.



(a) Name the parts X, Y and Z. **(3 mrks)**

X: ……

Y: ……

Z: ……

(b) State the main substance which make-up the part labeled W. **(1 mark)**

……

(c) Name the process through which mineral salts move into the structure labeled X. **(1 mark)**

……

(d) Explain what happens to a red blood cell when placed in distilled water. **(3 mrks)**

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2. (a) What is meant by natural selection? **(4 marks)**

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(**b) State four** sources of evidences that support the theory of organic evolution. **(4 marks)**

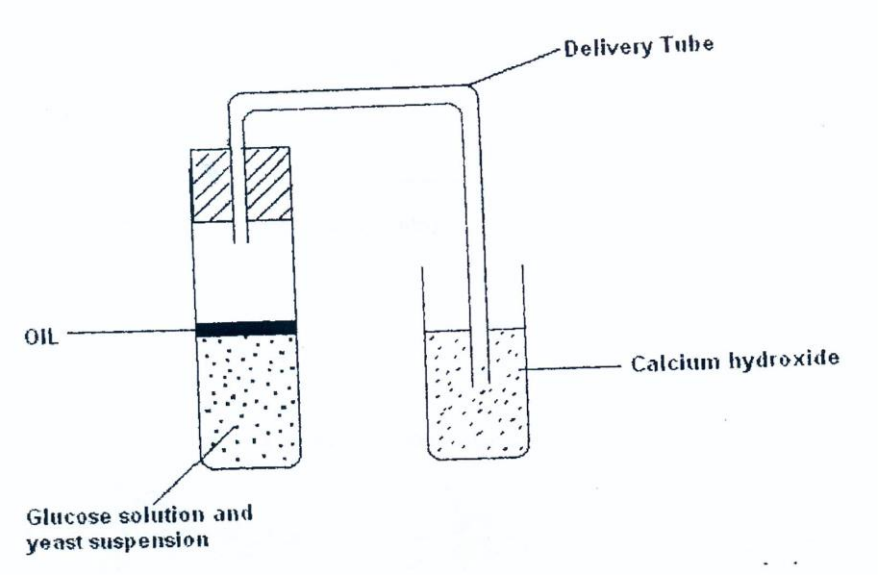
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3. The diagram below shows a set up that was used to demonstrate a certain physiological process.



The glucose solution was boiled and oil added on top of it. The glucose solution was then allowed to cool before adding yeast suspension.

(a) Identify the physiological process that was being investigated using the above set up. **(1 mark)**

……

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

……

……

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

……

……

(d) What observation would be made in test tube at the end of the experiment? **(1 mark)**

……

……

(e) How would the observation made in (d) above be affected if oil was not added on top of the yeast suspension during the experiment? **(1 mark)**

……

……

(f) In another investigation, a bird was found to use 10 litres of oxygen to give a respiratory quotient of 0.7 during period of flight. Name the type of food that was being respired by the bird and determine the amount of carbon (IV) oxide produced during the same flight.

Type of food …….. **(1 mark)**

Volume of carbon (IV) oxide produced. **(2 marks)**

……

……

……

……

4. Pure breed of red cows and pure breed of white bulls were crossed to give F_1 calves which had a mixture of red and white coat known as roan. The F_1 were selfed.

(a) Using letter R to represent gene for red colour and W to represent gene for white colour work out the phenotypic ratio of F_2. **(4 marks)**

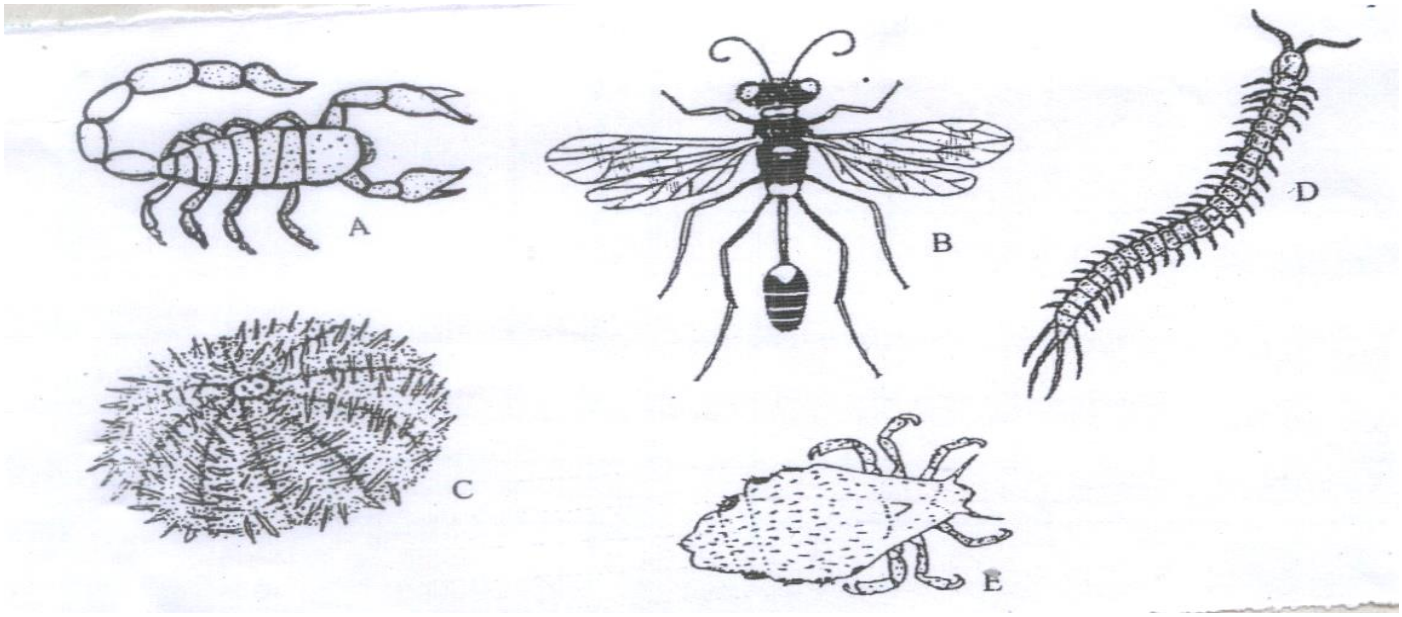
(b) Work out the genotypic ratio of a cross between F_1 offspring and white bull. **(3mks)**

(c) Comment on the gene(s) controlling the colour of coats in cattle mentioned above. **(1mk)**

……

……

5. You are provided with photographs of animals. Study the photographs and the dichotomous key below to enable you identify the taxonomic group to which each animal belongs.



KEY

1. a) Jointed legs present ……go to 2
   b) Jointed legs absent……..go to 7
2. a) Three pairs of legs ……..go to3
   b) More than 3 pairs of legs…….go to5

3. a) Wings present ……go to4
   b)Wingabsent……Anoplura
4. a) One pair of wings……Diptera
   b)Two pairs of wings……Hymenoptera
5. a) Four pairs of legs ……Arachnida
   b) More than ten pairs of legs …… go to 6
6. a) One pair of legs in each body segment…… Chilopoda
   b) Two pairs of legs in each body segment …… Diplopoda
7. a) Body partially enclosed in a shell…… Mollusca
   b) Body surface has spiny projection…….Echinodermata

a) Using the key, identify the following organisms to their taxonomic groups. In each case, give the sequence of steps which you followed in identifying them. **(4 marks)**

Animal	Identity	Steps followed
A		
B		
D		
E		

b) i) Using observable features only, state the class to which the animal labeled A and B on the photographs above belong **(2 marks)**

A ……..

B……..

State two observable features on B, that enabled you to arrive at that answer in (b (i) above**.(2mks)**

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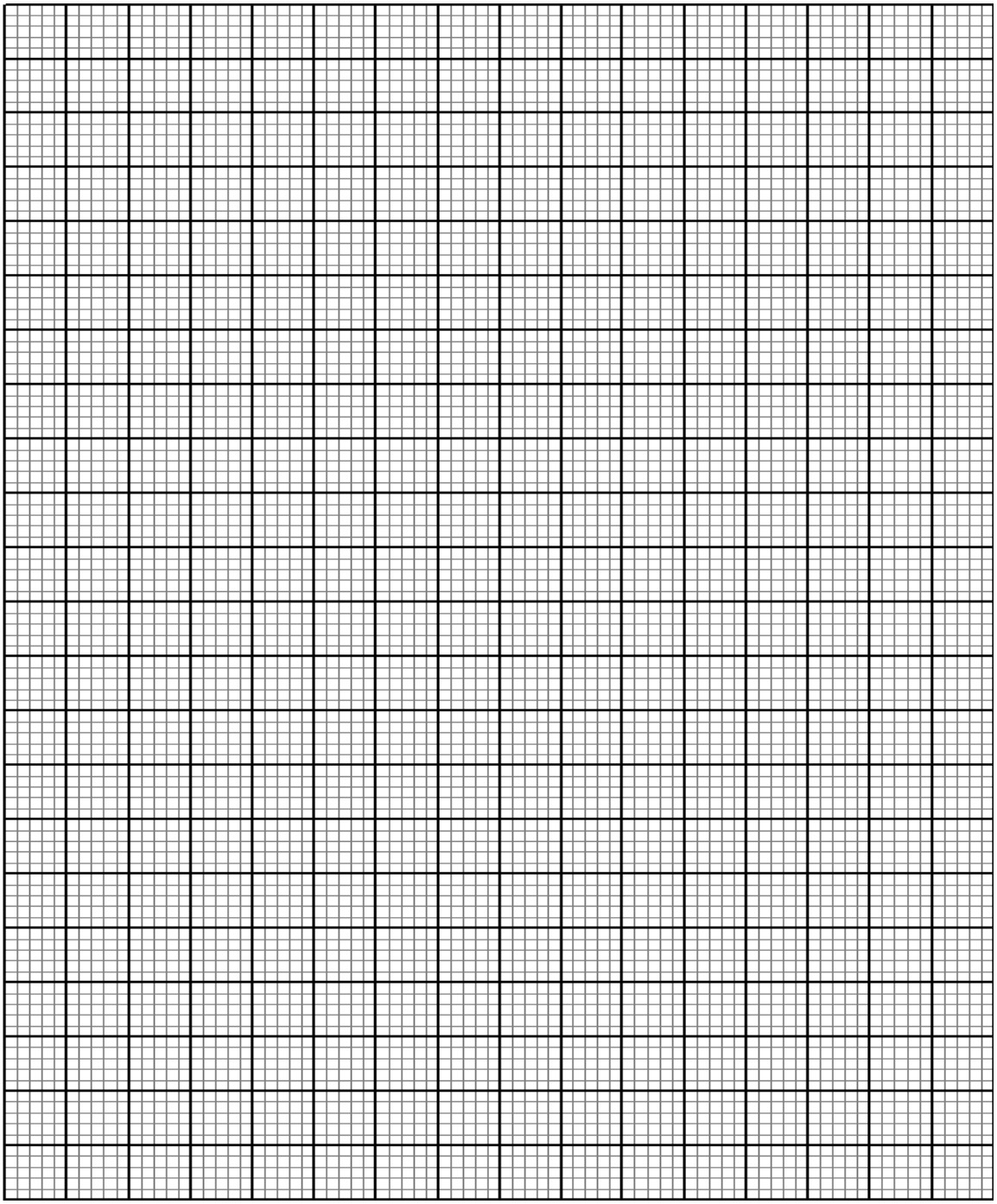
SECTION B

Answer question 6 and either question 7or 8

6. Two sets of a pea seeds were germinated, set A was placed in normal daylight conditions in the laboratory while set B was placed in a dark cupboard. Starting a few days later the shoots lengths were measured twice daily and their means lengths recorded as shown in the table below.

Time in hours	0	12	24	36	48	60	72	84
Set A length(mm)	12	14	20	23	28	31	47	54
Set B length (mm)	17	23	28	35	48	62	80	94

a. Using suitable scale draw the graphs of the mean lengths in set A and B against time on the grid provided **(8marks)**



b. From the graph state the mean shoot length of each of seedling at the 66th hour **(2marks)**

……

……

c. Account for the difference of curve B and A **(3marks)**

……

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……

……

d. Explain what would happen to set up B if it were allowed to continue to grow under conditions of darkness **(4marks)**

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……

e. State three external conditions which should be constant for both set ups **(3marks)**

……

……

……

……

7. Describe the role of the following parts in human reproduction

i. Testes **(4marks)**

ii. Ovary **(6marks)**

iii. Sperm and ovum **(6marks)**

iv. Uterus wall/endometrium **(4marks)**

8.Discuss how the mammalian heart is adapted to its functions **(20marks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

BIOLOGY

231/3

PAPER 3

TIME: 1¾ HOURS

SCHOOL…… SIGN……

CONFIDENTIAL

1. **Each candidate should be supplied with the following**

(i) 3 test tubes in test tube rack.

(ii) Iodine solution – supplied with a dropper

(iii) Adequate distilled water

(iv) Benedicts solution– supplied with a dropper

(v) Means of heating

(vi) 10% Sodium Hydroxide– supplied with a dropper

(vii) 1% Copper (II) Sulphate– supplied with a dropper

(viii) DCPIP– supplied with a dropper

(ix) 12cm^3 of solution M in a boiling tube labeled as **solution M**

solution M is prepared by mixing starch and egg albumen.

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

BIOLOGY

231/3

PAPER 3

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

- *Write your Name, Class and Adm No. in the spaces provided above*
- *Answer ALL the questions in the spaces provided*
- *You are required to spend the first **15 minutes** of the **1 ¾ hours** reading the whole paper carefully before commencing your work.*
- *This paper consists of **6** printed pages*
- *Candidates should answer the questions in English*

FOR EXAMINERS USE ONLY

For Examiners Use Only

Question	Maximum score	Candidate's score
1	16	
2	11	
3	13	
Total Score	40.	

1. You are provided with a suspension labelled M.

a) Using the reagents provided only, test for the food substances present in the suspension. In the table below, record the food tested, procedure, observation and conclusions. **12 marks.**

Food TEST	**Procedure**	**Observation**	**Conclusion**

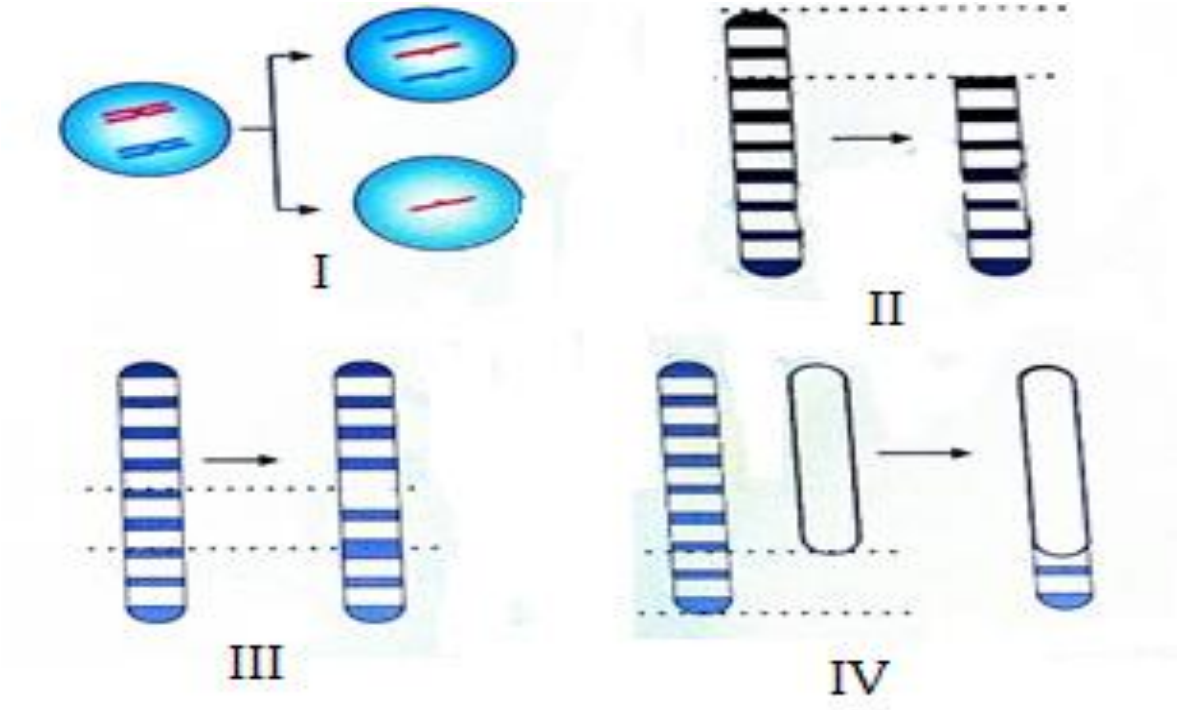
b) Name two enzymes that may be required to digest suspension M in the alimentary canal in human. **(2mark)**

c) State role of the following in the experiment. **(2mrks)**

(i) Sodium hydrogen carbonate

(ii) Dilute hydrochloric acid

2. Experimental evidence shows that most mutations results to variations among organisms. The illustrations I, II, III and IV below show different possible types of chromosome mutations. Study them keenly.



a) Identify the types of chromosome mutations illustrated. **(4 marks)**

Illustration	Name of mutation
I	
II	
III	
IV	

b) State the effect of the mutation illustrated in III**.** **(1 mark)**

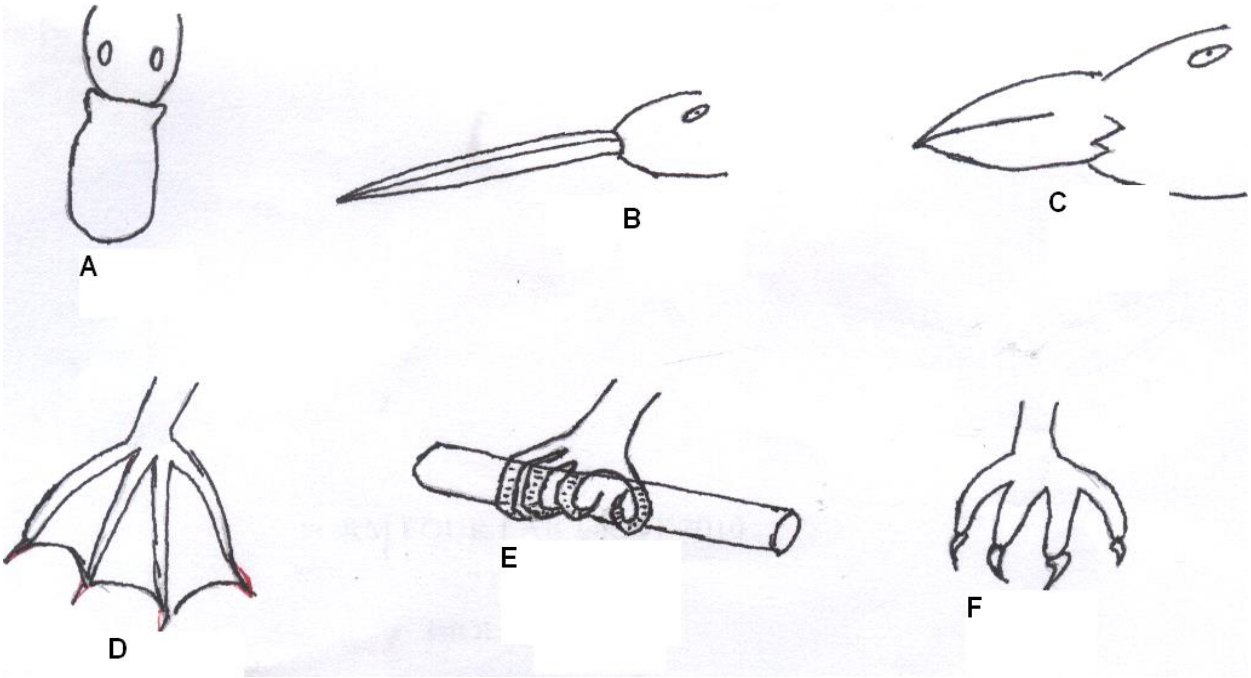
c) In most cases, the mutation in II could be lethal. Explain. **(2 marks)**

d) During which stage of mitosis does the mutation in I above occur**?** **(1 mark)**

e) i) Define a **mutation** **(1 mark)**

ii) Give two possible environmental mutagens. **(2marks)**

3. The diagrams below represent body parts of some organisms (animals). Study them and answer the question that follow



a. (i) Suggest the type of food eaten by organisms with the parts labeled A, B, C and F **(4mks)**

	Food	**Reason**
A		
B		
C		
F		

(ii) With reasons, suggest the likely habitat of the organism from which the parts labeled D and E were obtained

(4mks)

Part	**Habitat**	**Reason**
D		
E		

b. (i) Suggest the type of evolution that is exemplified by the organisms labeled D, E and F. Give reason for your answer.

The type of evolution **(2mks)**

Reason

(ii) Suggest the significance of the above named type of evolution for the organism **(1mk)**

c. **(i)** Explain briefly the meaning of analogous structures **(1mk)**

(ii) Give one example of analogous **structure** **(1mk)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

CHEMISTRY

233/1 (THEORY)
PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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 silent non- programmable electronic calculators may be used.*

(e) *All working must be clearly shown where necessary.*

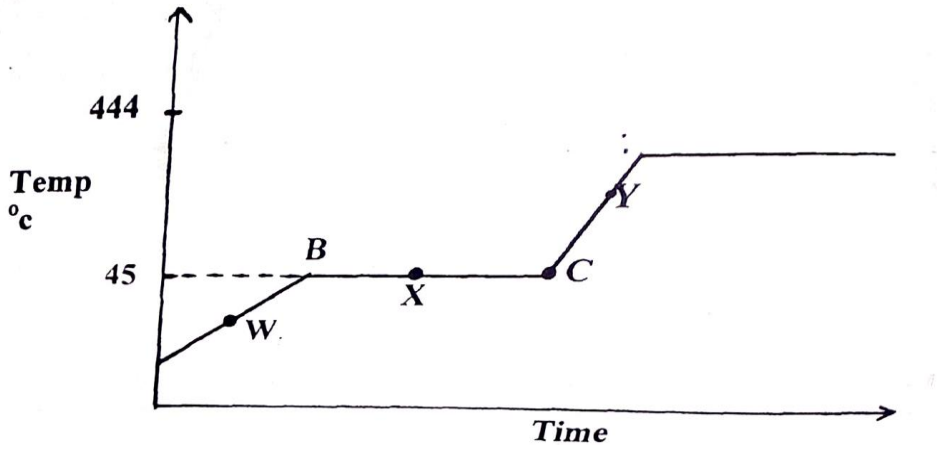
(f) *Candidates should answer the questions in English.*

For Examiner's Use Only

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Grand Total	18	19	20	21	22	23	24	25	26	27	28	

1. The diagram below shows the heating curve of a pure substance. Study it and answer the questions that follow.



a) What are the physical states of the substances at point W and Y. **(2mks)**

……

……

……

b) Explain why the temperature remains constant between point B and C. **(2mks)**

……

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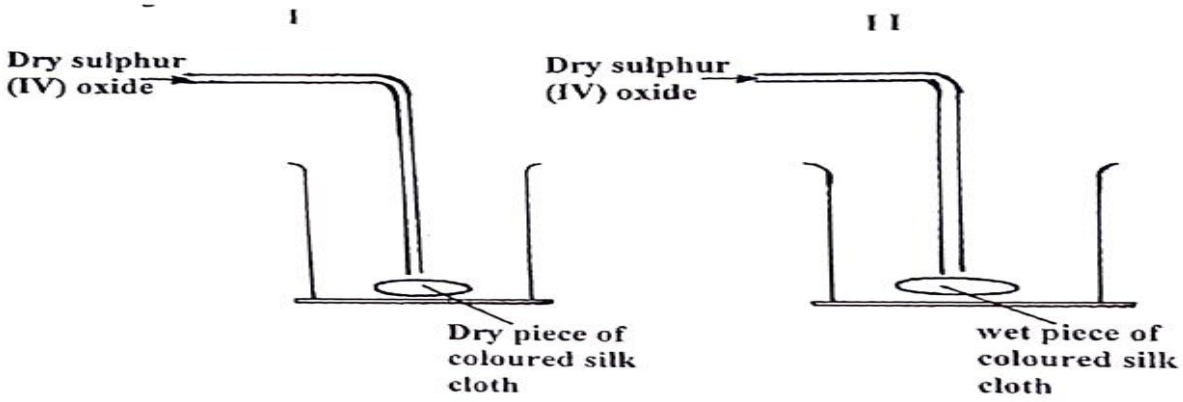
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2. Consider the reaction below.

$Cr_2O_7(aq) \rightleftharpoons CrO^{2-}{}_4(aq) + 2H^+(aq)$

Using oxidation numbers explain whether the above reaction is a redox reaction or not. **(3mks)**

3. Dry sulphur (IV) oxide was passed through two pieces of coloured silk both in a gas jar as shown in the diagram.



a) State the observation in the gas jars. **(2mks)**

……

b) Write equations to explain your observations in flask II. **(2mks)**

……

……

4. The equations show some reactions. Use the equations to answer the following questions.

$CH_3CH_2OH \xrightarrow{\text{Step I}} CH_2=CH_2 \xrightarrow{\text{Step II}} CH_3CH_3$

a) Name the type of reaction in step I and II. **(2mks)**

b) Explain why ethane burns with a more smoky flame than ethane. **(2mks)**

5. The third number of the alkenes is converted to its corresponding saturated hydrocarbon by hydrogenation. Using the bond energy values given below, answer the questions that follow.

Bond	**Bond energy kJ/mol**
H-H	432
C=C	610
C-C	346
C-H	413

Determine the enthalpy change for the conversion of the third member of the alkenes to its corresponding saturated hydrocarbon by hydrogenation. **(3mks)**

6. a) Graphite is a non metal most commonly used as an electrode. State two properties that make it suitable for use as an electrode. **(2mks)**

……

……

b) Graphite is an allotrope of carbon. Distinguish between allotropes and isotopes. **(2mks)**

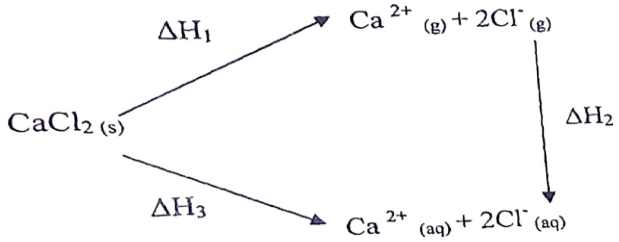
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7. Use the information in the energy cycle below to answer the questions that follow.



i. What is the name given to the energy changes? **(3mks)**

H_{1}- Δ

H_{2}- Δ

H_{3}- Δ

ii. Given H_1= 2237KJ/Mol and H_2 -2378KJ/Mol, calculate the value of ΔH_3. **(1mk)**

8. The 1st 2nd and 3rd ionization energies in KJ/Mol of element G and R are given below.

Element	**1st I.E**	**2nd I.E**	**3rd I.E**
G	520	7,300	9,500
R	420	3,100	4,800

i. Define the term 1st ionization energy. **(1mk)**

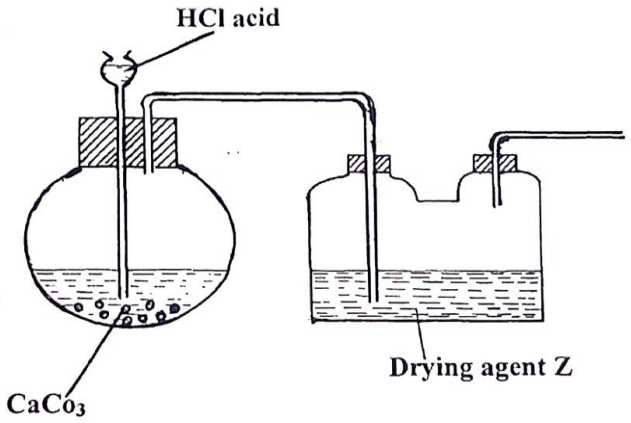
ii. Apart from the decrease in energy levels, explain the big difference between the 1st and 2nd ionization energies. **(1mk)**

iii. Calculate the amount of energy for the process. **(1mk)**

$R(g) \longrightarrow R(g) + 3e$

9. When solid Zinc carbonate was added to a solution of hydrogen chloride in methylbenzene, there was no observable change. On addition of some water to the mixture to the mixture there was effervescence. Explain theses observation. **(2mks)**

10. a) The diagram below represents an incomplete set-up of apparatus that can be used to prepare dry carbon (iv) oxide gas. Complete the diagram and answer the questions that follow.

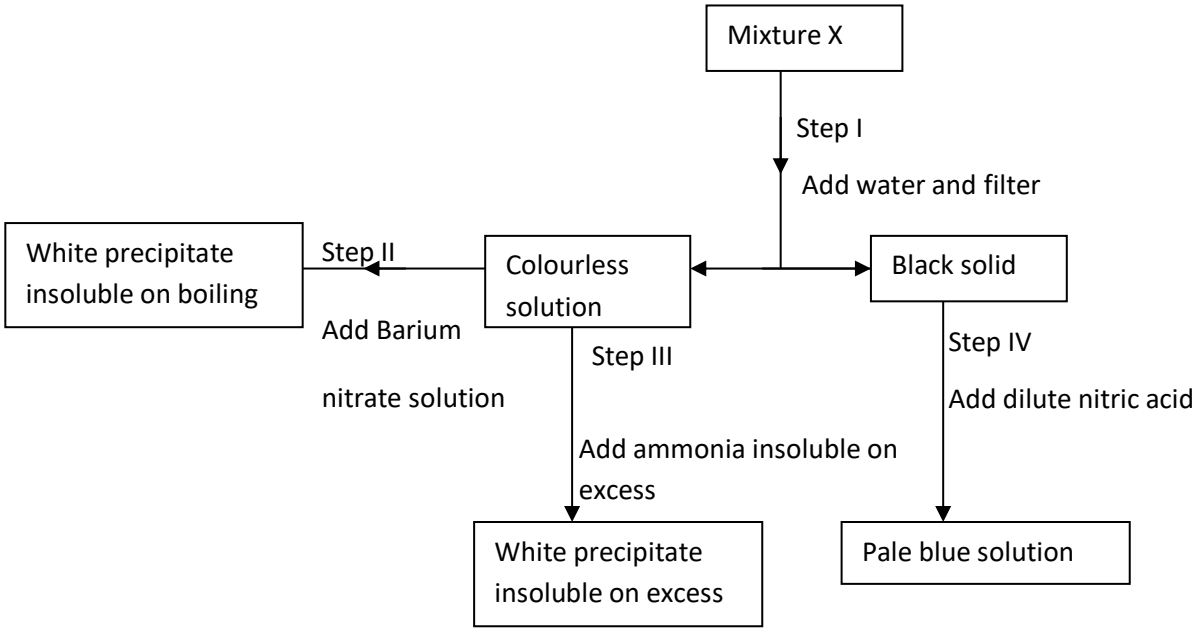


i. Write an equation for the reaction that takes place. **(1mk)**

ii. Name liquid Z. **(1mk)**

iii. State two advantages of using 'dry ice' over ordinary ice as a refrigerant. **(2mks)**

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



a) Name:

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

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

b) Write an equation to show how the white precipitate in step III dissolves. **(1mk)**

c) Name the process outlined in step IV above. **(1mk)**

12. i) A student intending to prepare lead (II) sulphate reacted lead metal with dilute sulphuric acid. However, he was not successful. Explain why he was not successful. **(1mk)**

ii) Suggest a method the student could have used to prepare lead (II) sulphate. **(2mks)**

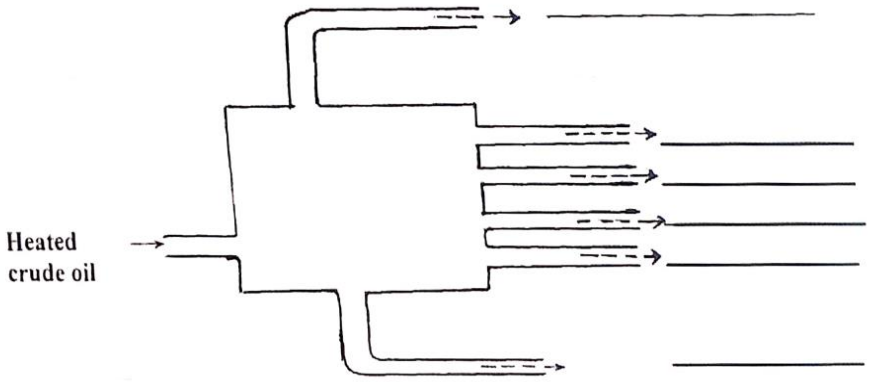
iii) Write an ionic equation that would take place in (ii) above. **(1mk)**

13. In an experiment, ammonium chloride was heated in a test-tube. A moist red litmus paper placed at the mouth of the test-tube first changed blue then red. Explain these observations. **(2mks)**

14. An element X has two naturally occurring isotopes X-22 and X-20. If its relative atomic mass is 21.8, calculate the percentage abundance of the more stable isotope. **(2mks)**

15. Fractional distillation of crude oil used to produce the following fractions; petrol, diesel, petroleum gases, kerosene, naphtha and bitumen. Below is a simplified diagram of a fractionating column used during the refining of crude oil.

i. On the diagram, write the names of theses fractions in their correct positions. **(3mks)**



ii. Which fraction is used as a jet fuel? **(1mk)**

iii. What process is used to convert higher fractions to lower fractions? **(1mk)**

16. Carbon (iv) oxide and silicon (iv) oxide are both covalent oxides but carbon is a gas whereas silicon (iv) oxide is a solid with high melting point. Explain. **(2mks)**

17. The ability of hard water to conduct electricity falls when water is boiled but is not much affected when the water hardness is removed by addition of washing soda (sodium carbonate). Explain. **(2mks)**

18. When sulphur is heated in a boiling tube in absence of air, the yellow crystals melts into golden yellow mobile liquid at 113^{o}C. The liquid changes at 180^{o}C into a dark brown very viscous liquid. More heating to about 400^{o}C, produces a brown less viscous liquid.

a) Draw the molecular structure of sulphur in the yellow crystals. **(1mk)**

b) Explain why the molten liquid becomes viscous. **(1mk)**

c) If the brown liquid at 400^{o}C is cooled rapidly by pouring it into cold water, which form of sulphur is produced? **(1mk)**

d) State the observation made when sulphur is heated in a deflagrating spoon. **(1mk)**

19. The table below gives some information about certain chemical substances. The letters used are not the actual chemical symbols or formulae.

Substance	**Melting point (^{o}C)**	**Boiling point (^{o}C)**	**Electrical conductivity**		
			Of solid	**Of liquid**	**In water**
A	1540	3000	Good	good	Insoluble
B	-114	-85	Poor	poor	good
C	712	1418	Poor	good	good
D	-39	357	Good	good	insoluble
E	2045	3000	Poor	good	insoluble
f	1700	2776	Poor	good	insoluble

a) From the table, select;

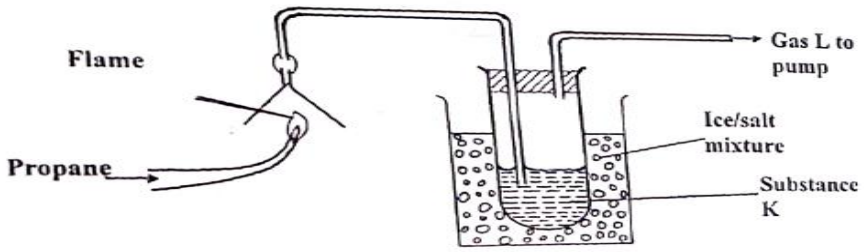
i. Two substances that cannot be elements. **(1mk)**

ii. A substance that is likely to have giant atomic structure. **(1mk)**

iii. A substance that is likely to consist of molecules and which produce ions when added to water.

(1mk)

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



i. Write the equation for the combustion of propane. **(1mk)**

ii. The pH of substance K was found to be less than 7. Explain this observation. **(1mk)**

21. Explain how you would separate a mixture of nitrogen and oxygen gases given that their boiling points are -196^{o}C and -183^{o}C respectively. **(2mks)**

22. Dry carbon (iv) oxide gas reacts with heated lead (ii) oxide as shown in the equation below.

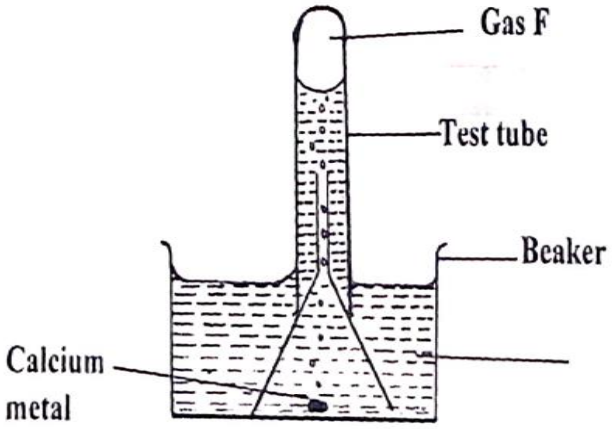
$$PbO(s) + CO(g) \longrightarrow Pb(s) + CO_2(g)$$

a) Name the process undergone by the lead (ii) oxide. **(1mk)**

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

c) Name another gas that can be used to perform the same function as carbon(IV) oxide gas in the above reaction. **(1mk)**

23. The set-up below was used to collect gas F, provided by the reaction between water and calcium metal.



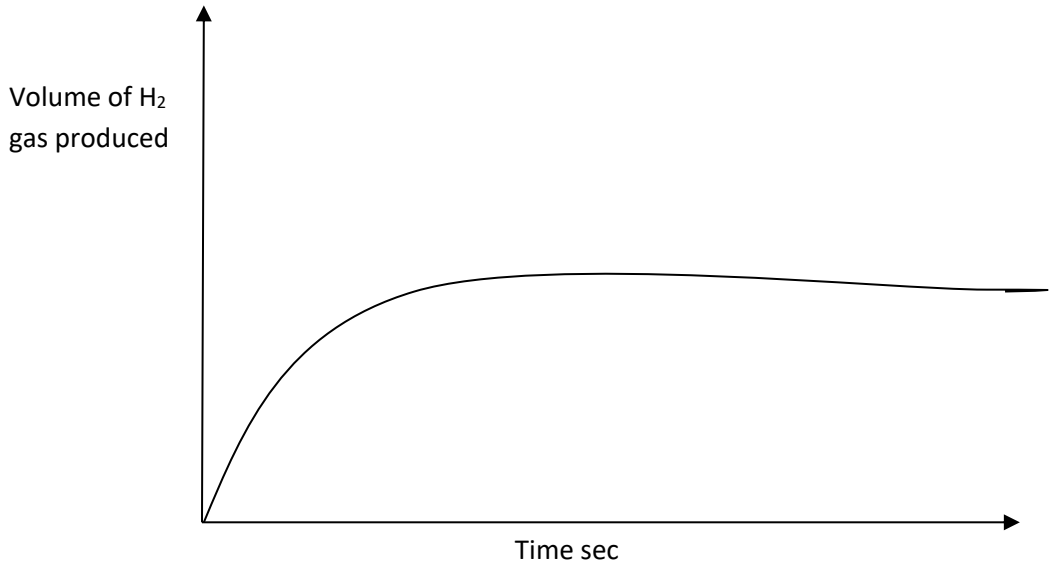
a) Name gas F. **(1mk)**

b) At the end of the experiment the solution was found to be a weak base. Explain why the solution is a weak base. **(2mks)**

c) Give one laboratory use of the solution formed in the beaker. **(1mk)**

24. In terms of structure and bonding, explain why graphite is used as a lubricant. **(2mks)**

25. The reaction between a piece of magnesium ribbon with excess 2M hydrochloric acid was investigated at 25^{o}C by measuring the volume of hydrogen gas produced as the reaction progressed. The sketch below represents the graph that was obtained.



a) Name one piece of apparatus that may be used to measure the volume of hydrogen gas produced. **(1mk)**

b) On the same diagram the curve that would be obtained if the experiment was repeated at 35^{o}C. **(1mk)**

26. Methane reacts with oxygen according to the equation given below;

$CH_4(g) + 2O_2(g) \longrightarrow CO_2(g)\ 2H_2O(g)$ $\quad H = -890KJMol^{-1}$

Calculate the volume of methane whoch would produce 11.25KJ when completely burnt at r.t.p (molar volume of a gas at r.t.p = 24litre) **(2mks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

CHEMISTRY

233/2 (THEORY)
PAPER 2
TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the spaces provided above
3. Answer all the questions in the spaces provided
4. All working **must** be clearly shown where necessary.

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's score
1		
2		
3		
4		
5		
6		
7		
TOTAL	80	

QUESTIONS

1. The grid shown below represents the periodic table. Study it and answer the questions that follow (the letters do not represent actual symbols of the element)

	K							S
G							T	
	H							
L								

a) Which element exists naturally as a; **(2mks)**

i. Diatomic gas

ii. Monoatomic gas

b) Write down the formula for the most stable ion of K and its electronic arrangement. **(1mk)**

c) How do the atomic radii of G and L compare? Explain. **(2mks)**

d) How do the first ionization energies of G and L compare? Explain. **(2mks)**

e) Which two electrons would react most vigorously with each other? **(1mk)**

f) Give an equation for the reaction between the elements you have given in (e) above. **(2mks)**

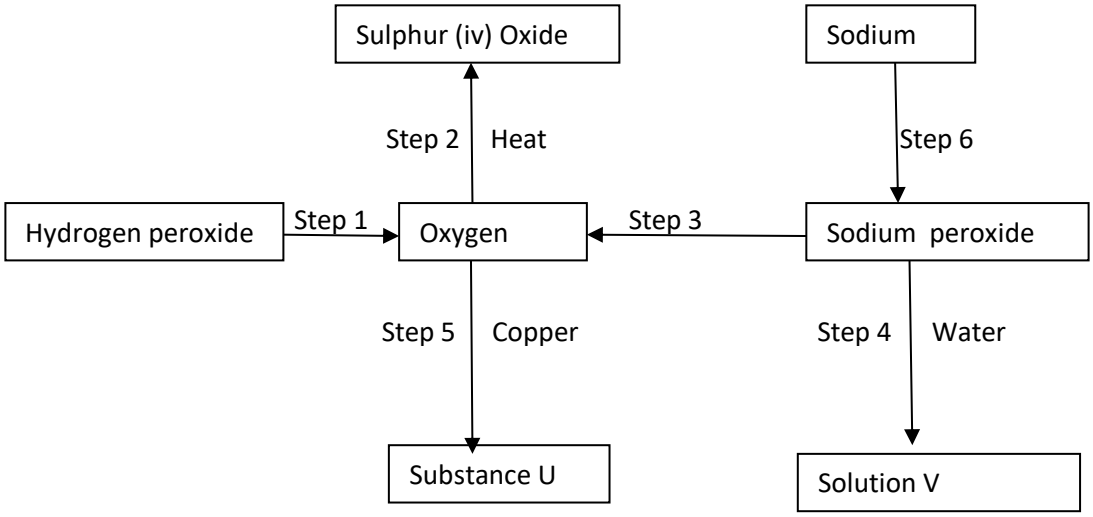
g) Which element has the smallest atomic radius? Explain. **(2mks)**

h) Give the number of valence electrons in; **(2mks)**

i. K

ii. T

2. Study the reaction scheme below and answer the questions that follow.



a) Identify substance U and solution V. **(2mks)**

b) Name the reagents necessary for the reactions in the following steps. **(2mks)**

i. Step 1

ii. Step 2

iii. Step 3

iv. Step 6

c) Give the condition necessary for the reaction in step 5 to take place. **(1mk)**

d) Write equations for the reactions in the following steps. **(3mks)**

i. Step 1

ii. Step 2

iii. Step 5

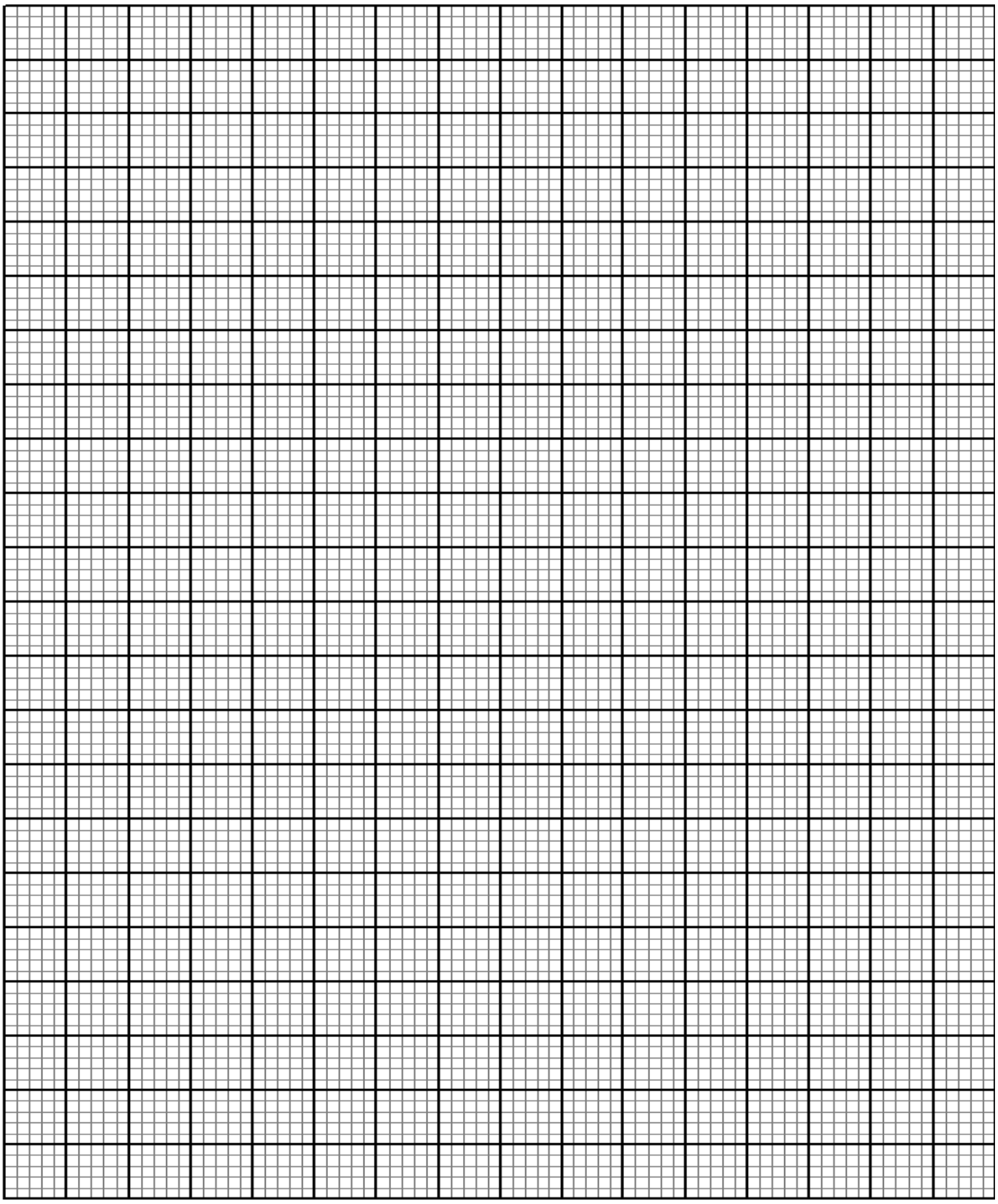
e) State and explain the observation made in step 5. **(2mks)**

3. The table shows the variation of volumes at different amounts of pressure.

Pressure in atmosphere	10	8	5	2	1
Volume (cm^3)	160	200	320	800	1600
Reciprocal of pressure ($^1/_p$)					

i. Complete the table by determine the reciprocal of pressure. **(2mks)**

ii. Plot a graph of volume against reciprocal of pressure. **(3mks)**



iii. Use the graph to determine the volume of gas P at a pressure of 3.2 atmosphere. **(1mk)**

iv. Calculate the pressure of gas P which has a volume of 5 litres. **(2mks)**

v. A given volume of nitrogen gas requires 68.3 seconds to diffuse through a tinny hole in a chamber. Under the same conditions another unknown gas requires 85.6 seconds for the same volume to diffuse. What is the molecular mass of this gas?(r=14) **(3mks)**

4. In an experiment to determine the molar heat of neutralization of hydrochloric acid with sodium hydroxide, students of Anestar Secondary school reacted $100cm^3$ of 1M hydrochloric acid with $50cm^3$ of 2M sodium hydroxide solution. They obtained the following results.

Initial temperature of acid=25.0^oC

Initial temperature of base = 25.0^oC

Highest temperature reached (acid +alkali mixture) = 34.0^oC

a) Define the term molar heat of neutralization. **(1mk)**

b) Write an ionic equation for the neutralization reaction between hydrochloric acid and sodium hydroxide. **(1mk)**

c) Calculate:

i. The change in temperature(T)△

ii. The amount of heat produced during the reaction (specific heat capacity = $4.2KJkg^{-1}k^{-}$)

iii. The molar heat of neutralization of sodium hydroxide.

d) Write the thermochemical equation for the reaction. **(1mk)**

e) Draw an energy level diagram for the reaction. **(2mks)**

f) Explain why the enthalpy of neutralization of ethanoic acid with sodium hydroxide

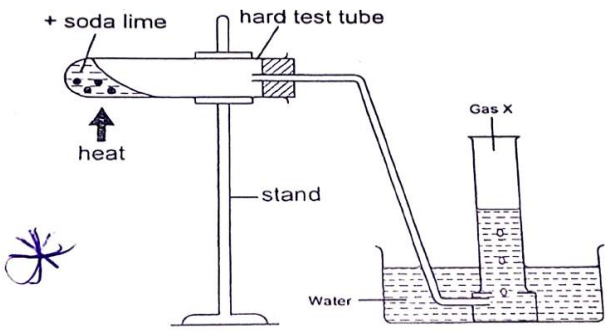
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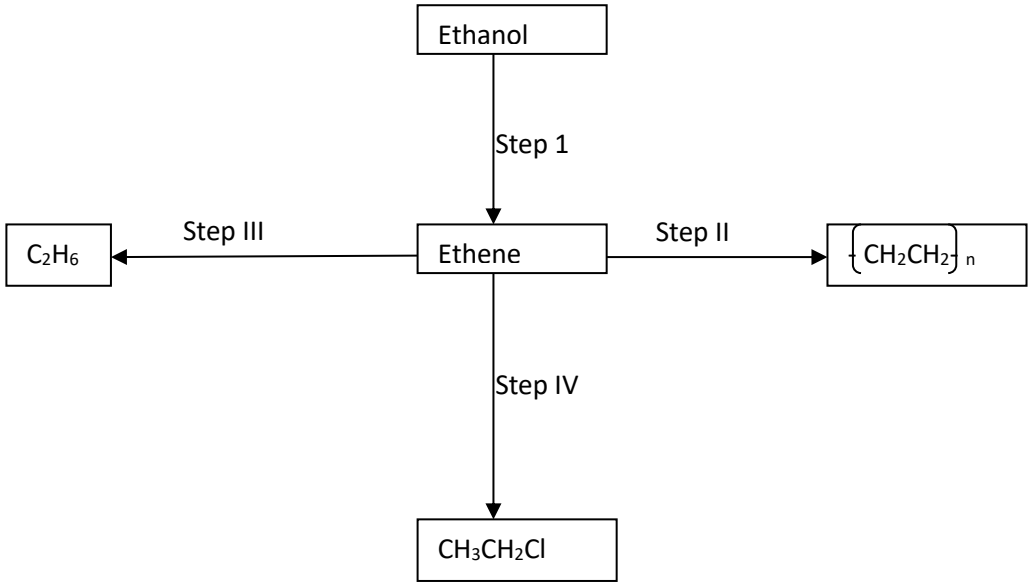
5. a) The diagram below was used to prepare a gas X in the laboratory. Study it answer the questions that follow.



i. Name gas x. **(1mk)**

ii. Write an equation to show the production of gas x. **(1mk)**

b) Study the scheme diagram below and answer the questions that follow.



i. Name the catalyst that is suitable to carry out the reaction in step 1. **(1mk)**

ii. Name the process that takes place in step II. **(1mk)**

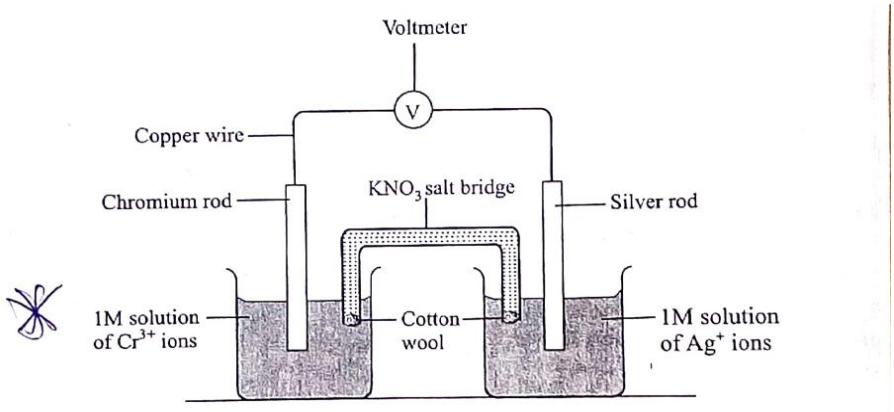
iii. State the conditions necessary for the reaction in step III to occur. **(1mk)**

iv. Write down the equation for the reaction that takes place in step IV. **(1mk)**

c) Other than using burning, describe how you would distinguish between ethane and ethayne.

d) Draw and name all structures of the isomers of the compound with molecular formula C_4H_8. **(3mks)**

6. The diagram below shows a voltaic cell formed between half cells $Cr^{3+}(aq)/Cr(s)$ $E^{e}=+0.80$ Study it and answer the questions that follow.



a) What is the e.m.f of the cell? **(1mk)**

b) State the direction of movement of electrons. **(1mk)**

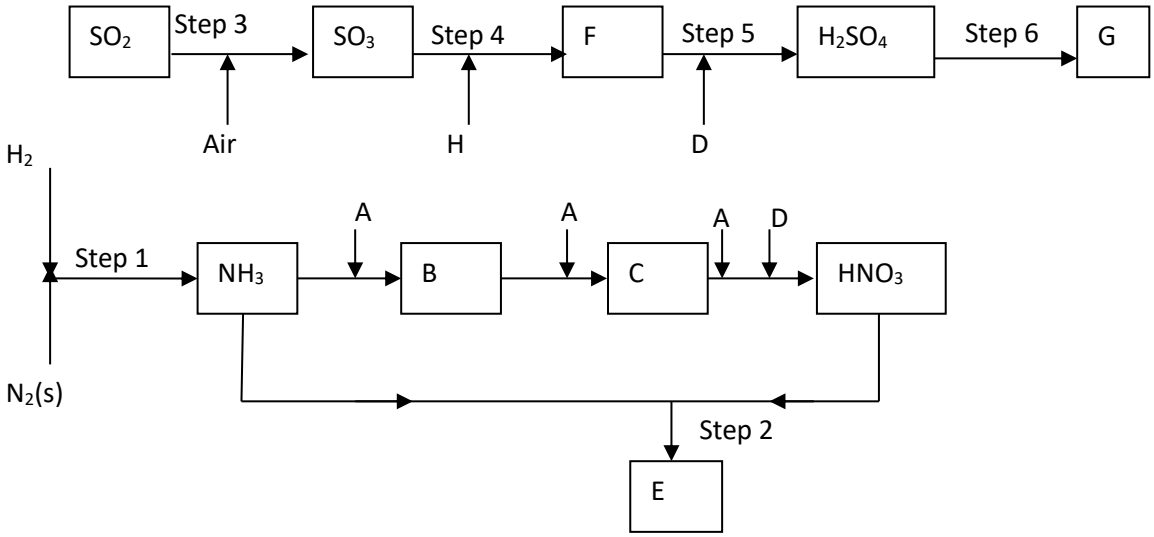
c) Which electrode is the anode? Explain. **(1mk)**

d) State the half cell in which reduction occurs and give the equation for the reaction. **(2mks)**

e) What will happen to the electrodes during the operation of the cell? **(2mks)**

f) State two function of the salt bridge. **(2mks)**

7. Study the flow chart below and use it to answer the questions that follow.



a) Name substance A,B,D, and F. **(2mks)**

b) Substance E and ammonium sulphate have one common use. State the use. **(1mk)**

c) Name the suitable catalyst in step 3. **(1mk)**

d) Write the chemical equation in step 4. **(1mk)**

e) Identify two gaseous environmental pollutants from the above flow chart. **(1mk)**

f) State the observation when potassium hydroxide is warmed with substance G. **(1mk)**

g) Write a chemical equation where concentrated sulphuric (VI) acid is used as an oxidizing agent. **(2mks)**

h) Write type of reaction is shown in the equation: **(1mk)**

$KNO_3(aq) + H_2SO_4(l) + HNO_3(g)$

i) Carbon (IV) oxide reacts with red hot carbon to produce a colourless gas P. Name gas P and state and explain the precaution you take when preparing this colourless gas P. **(2mks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

CHEMISTRY

233/3

PAPER 3

TIME: 2½ HOURS

SCHOOL…… SIGN……

CONFIDENTIAL

(a) Each student should be supplied with the following

1. Burette
2. Pipette
3. Pipette filler
4. Filter funnel
5. White tile
6. Clamp and stand
7. **2** conical flask
8. **100 cm^3**glass Beaker (empty)
9. Stop watch
10. **100cm3** measuring cylinder
11. **10cm^3**measuring cylinder
12. **250 cm^3**volumetric flask
13. Metallic spatula
14. **6** clean test tubes
15. Test tube holder
16. **500ml** distilled water
17. White piece of paper or filter paper
18. **1** filter paper
19. **1** labelling paper
20. Phenolphthalein indicator
21. About **90cm^3** solution **K**
22. About **100cm^3** solution **L**
23. About **70cm^3** solution **N**
24. About **90cm^3** solution **P**
25. About **0.5g$NaHCO_3$**
26. About **1.0g** solid **Q**

(b) Each student should have access to the following solutions:

1. Mean of heating
2. 2M NaOH
3. 2M HNO_3
4. $Pb(NO_3)$
5. Acidified $KMNO_4$
6. Potassium iodide solution

NB: the above solutions should be supplied with a dropper each.

(c) <u>SOLUTIONS PREPARATION AND SOLID MEASUREMENTS</u>

1. Solution **K** IS **1M H_2SO_4**
2. Solution **L** IS **0.36 M NaOH** containing **14.4g** OF **NAOH** in **1 litre** of the solution
3. Solution N IS **2M HCl**
4. Solution P IS **0.16 M $Na_2S_2O_3$**(***Sodium thiosulphate***)
5. Solid Q is a mixture of sodium sulphite(**Na_2SO_3)** and lead (II) carbonate (**$PbCO_3$)** mixed in the **ratio 1:1 (*should be thoroughly mixed*)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

CHEMISTRY

233/3

PAPER 3

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES:

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

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

*(iii) Answer **ALL** the questions in the spaces provided.*

*(iv) Mathematical tables and silent electronic calculators **may be** used.*

*(v) All working **must be** clearly shown where necessary.*

(vi) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing

FOR EXAMINER'S USE ONLY:

Question	Maximum Score	Candidate's Score
1	15	
2	12	
3	13	
Total Score	40	

QUESTION 1

- You are provided with solution **K** and **L**
- **S**olution **K** is 1M H_2SO_4
- Solution **L** contains 8.7g of the hydroxide of metal **M** (with formulae MOH) in 600cm^3 of the solution
- You are required to carry out the experiment to determine;

i. Concentration of solution L

ii. R.A.M of metal **M**

Procedure

1. Measure 75cm3 of solution K and put into a clean 250cm3 volumetric flask and add distilled water up to the mark

-label this solution **W**

2. Fill a clean burette with solution W

3. Pipette 25cm3 of solution L into a clean conical flask and add 2 drops of phenolphthalein indicator

4. Titrate the solution **W** in the burette against solution **L** in the conical flask and record the results in the table below

5. Repeat {3} and {4} above as you fill the table below.

TABLE 1

	I	**II**	**III**
Final burette reading {cm^3}			
Initial burette reading {cm^3}			
Volume of solution W used {cm^3}			

(4mks)

{a} Calculate the;

(i) Average volume of solution W used **(1mk)**

……

……

……

(ii) Concentration of solution **W** **(1mk)**

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(iii) Number of moles of solution W that reacted with each 25cm3 portion of solution L **[2mks]**

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{b} Calculate the;

{i} Number of moles of the metal hydroxide {MOH} in solution L that reacted with each portion of solution **W** **[2mks]**

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……

{ii} Concentration of solution **L** **[1mk]**

……

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{iii} Number of moles of the metal hydroxide [MOH]in 600cm3 of solution L **(2mks)**

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(iv) R.A.M of metal M [0=16, H=1**]** **(2mks)**

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QUESTION 2

You are provided with solution N and P

- Solution N is 2M HCl
- Solution P is 0.16M sodium thiosulphate
- You are required to carry out the experiment below to determine how concentration affects the rate of reaction between HCl and sodium thiosulphate solutions

PROCEDURE

1. Fill a clean burette with solution P.

Measure 25cm^3 of the solution P from the burette into a clean 100cm^3 glass beaker and place on a white piece of paper with a cross[x] marked on it

2. Add 10cm^3 of solution N into it and immediately start a stop watch and note the time taken for the cross beneath the mixture to become invisible

3. Clean the 100cm^3 beaker and measure into it 20cm^3 of solution P form the burette, and add 5cm^3 of distilled water into the solution solution

4. Repeat step [2] above and note the time taken for the cross to become invisible

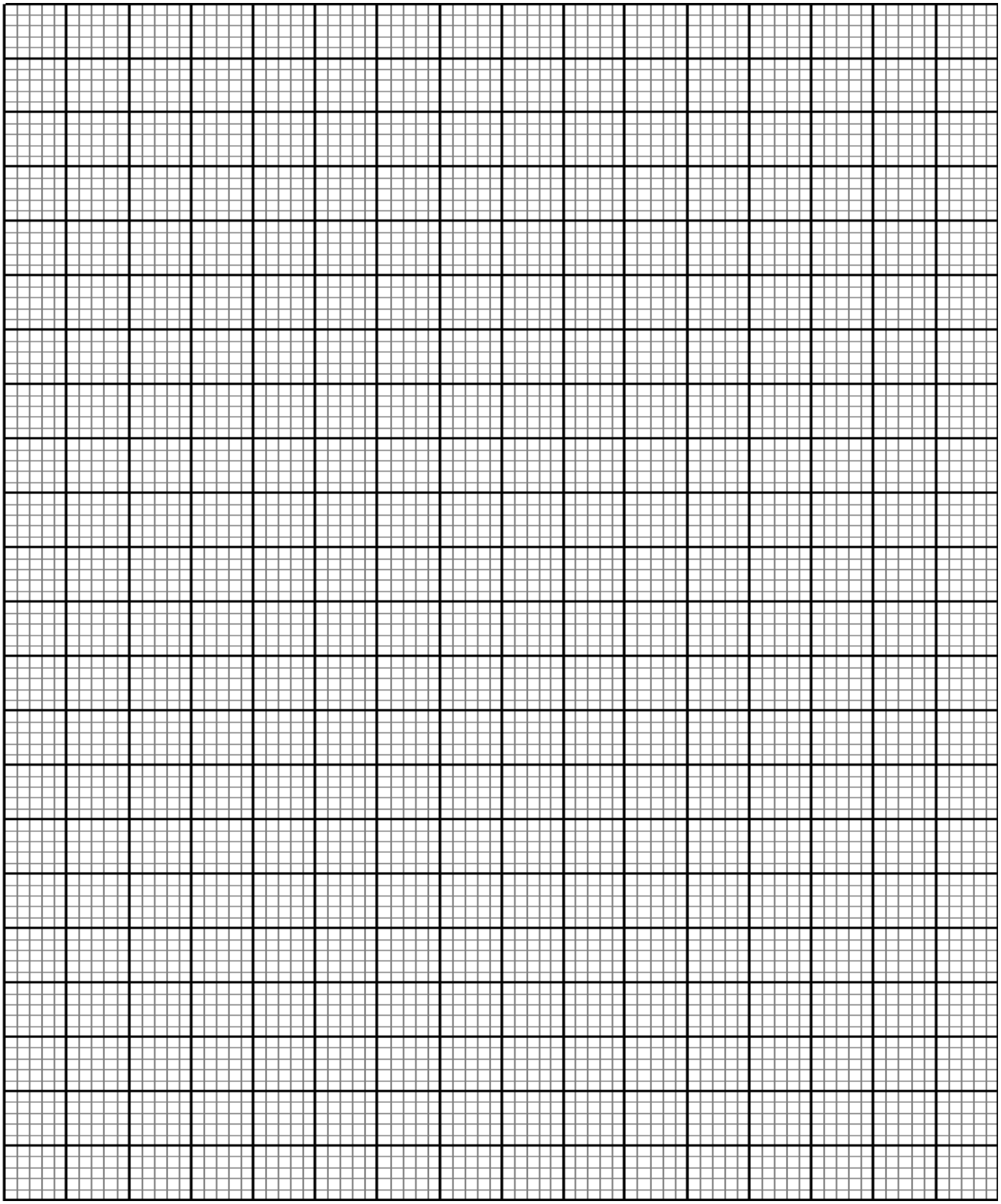
5. Repeat the experiment using volumes indicated on the table below and as you record the results

TABLE 2

Expt	1	2	3	4	5
Volume of solution p(cm^3)	25	20	15	10	5
Volume of water added to solution p{cm3}	0	5	10	15	20
Volume of solution N	10	10	10	10	10
Time taken for the cross to become invisible [in seconds]					
$\frac{1}{t}$ S^{-1}					

(4mks)

(a) Plot a graph of $\frac{1}{t}$ against volume of solution P on the grid **provided** **(4mks)**



{b} From the graph

(i) Determine the time taken for the cross to become invisible when 12.5cm^3 of solution P is used **(2mks)**

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……

……

{ii}Explain the effect of concentration on the rate of reaction between HCl and sodium thiosulphate **solution** **(2mks)**

……

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QUESTION 3

- You are provided with solids Q
- You are required to carry out the tests below as you record your observations and inferences

(i) SOLID Q

-Add about 5cm^3 of distilled water to solid Q, shake the mixture thoroughly for a while and then filter it

NOTE: Retain both the filtrate and the residue for the tests below

Divide the filtrate into 4 portion

A) (i) To the first portion, add 4 drops of NaOH

OBSERVATIONS	**INFERENCES**
(1mk)	**(2mk)**

ii) Scoop the 2nd portion on a metallic spatula and ignite on a non-luminous flame

OBSERVATIONS	**INFERENCES**
(1mk)	**(1mk)**

iii) To the 3rd portion, add 2 drops of $Pb\{NO_3\}_{[aq]}$

OBSERVATIONS	**INFERENCES**
(1mk)	**(1mk)**

iv) To the 4th portion, add acidified $KmnO_4$

OBSERVATIONS	**INFERENCES**
(1mk)	**(1mk)**

B (i) Put the residue in a test tube and add about $2cm^3$ of HNO_3

OBSERVATIONS	INFERENCES
(1mk)	**(1mk)**

(ii) To the mixture in b{i} above, add 2 drops of KI solution

OBSERVATIONS	INFERENCES
(1mk)	**(1mk)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

PHYSICS

232/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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 and B
e) All working and answers must be written on the question paper in the spaces provided below each question.
f) Non-programmable silent electronic calculators and KNEC mathematical tables may be used.

Constants

i) Density of water = $1g/cm^3$ or $1000kg/m^3$.
ii) Gravitational acceleration = $10m/s^2$.

For Examiner's Use Only

Section	Question	Maximum	Candidate's
A	1 - 12	25	
B	13	10	
	14	12	
	15	11	
	16	12	
	17	10	
Total Score		80	

SECTION A (25 MARKS)

1. The figure below shows a Vernier caliper scale.

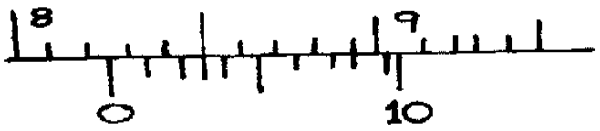


Fig. 1

If the Vernier calipers used had a zero error of -0.02 what is the actual reading of the scale.

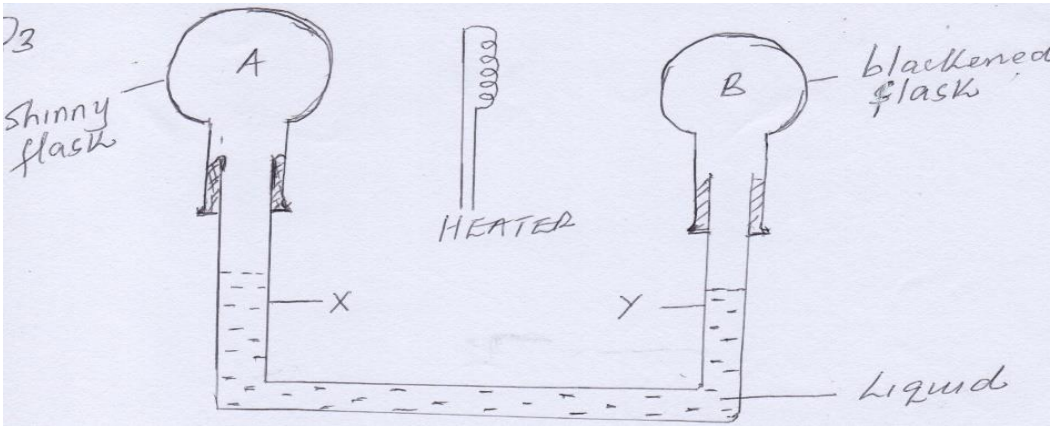
(2mks)

2. Find the total pressure experienced by a diver 8 meters below the sea surface. **(3mks)**

Take; *Atmospheric pressure = 103360N*

Density of sea water = 1030 kg/m^3

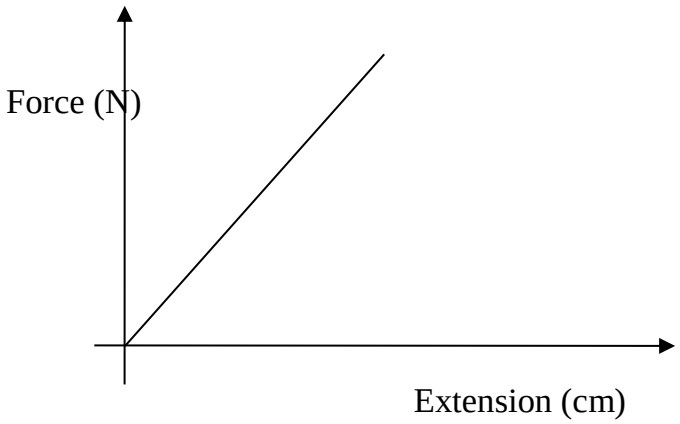
3. The figure below shows an electric heater placed midway between flask A and B. flask A is shinny on the outside and flask B is blackened on the outside.



a) Name the process by which heat travels from heater to the flask. **(1mk)**

b) State the observation that will be made. **(1mk)**

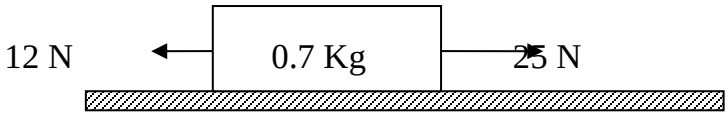
4. The following is a graph of force against extension for a spring



On the same axes, sketch a graph of force against extension for a spring double the length, same thickness, same material as the spring above **(1mk)**

5. Water flows steadily along a horizontal pipe at a volume rate of 8.0×10^{-3} m^3/s. if the area of cross section of the pipe is $20cm^2$. Calculate the velocity of the fluid. **(3mks)**

6. Two parallel forces are acting on a body of mass 0.7 kg as shown in the figure below.



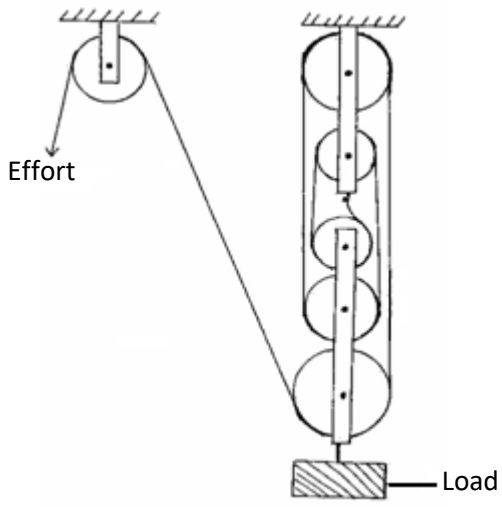
Calculate the acceleration of the 0.7Kg mass **(3mks)**

7. (a) State pressure law. **(1mk)**

b) Air is compressed at a constant temperature until its pressure rises from 82cmHg to 140cmHg. If the initial volume of air is $85cm^3$, find the final volume of air. **(3mks)**

8. Explain the cause of random motion of particles as observed in Brownian motion in a smoke cell experiment. **(1mk)**

9. The figure **below** shows a machine being used to raise a load. Use the information given in the figure to answer questions **below**.



(a) Determine the velocity ratio (V.R) of the machine. **(1 mark)**

(b) If a load of 800N is raised by applying an effort of 272N, determine the efficiency of the machine. **(3 mark)**

10. Figure below shows a liquid in a long cylindrical tube closed at one end with a cork. The cork is tight fitting but movable.

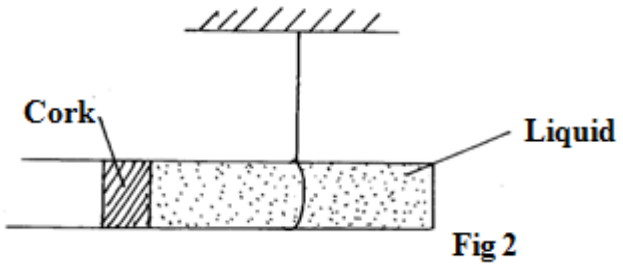


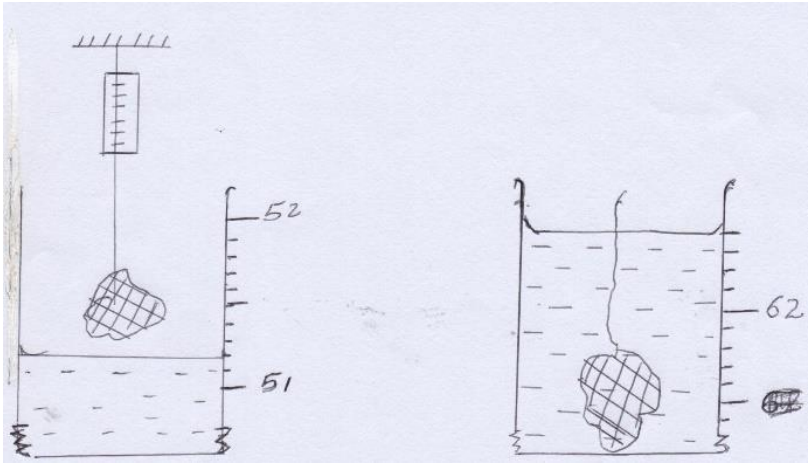
Fig 2

State and explain the observation that would be made when the tube is heated uniformly**. (2mks)**

SECTION B (55 MARKS)

11. A) state Archimedes principle. **(1mk)**

b) Figure below shows an experiment used to determine the density of an irregular piece of metal. The mass of metal in air is 200g.



i) Determine the volume of the stone in cubic metres. **(2mks)**

ii) Calculate the density of the metal to 3 significant figure. **(2mks)**

c) Given that the density of water is $1g/cm^3$, determine;

i) The mass of water displaced. **(2mks)**

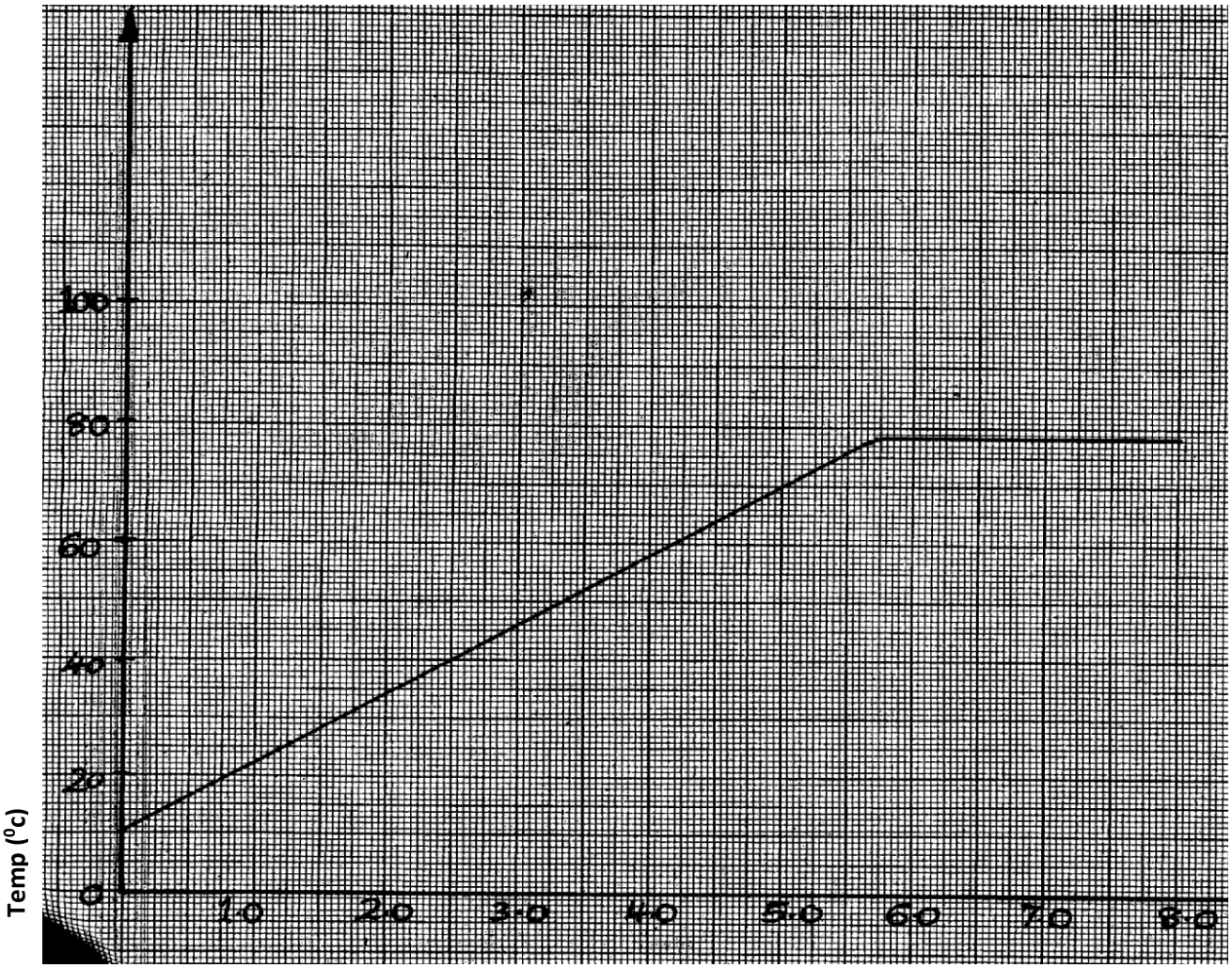
ii) The upthrust acting on water. **(2mks)**

iii) The relative density of the metal. **(2mks)**

d) A solid displaces 5.5cm3 of paraffin when floating and $20.5cm^3$ when fully immersed. Given that the density of paraffin is $800kg/m^3$, determine the density of the solid. **(3mks)**

12. a) State **one** factor that affect the boiling point of a liquid. **(1mk)**

b) 100g of a liquid at a temperature of 10°C is poured into a well lagged calorimeter. An electric heater rated 50W is used to heat the liquid. The graph in Figure 8 below shows the variation of the temperature of the liquid with time.



i) From the graph, determine the boiling point of the liquid. **(1mk)**

ii) I) Determine the heat given out by the heater between the times t=0.5 minutes and t=5.0 minutes. **(2mk)**

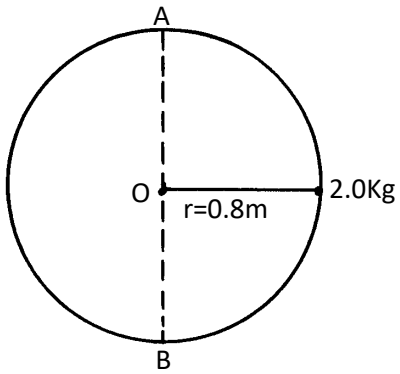
II) From the graph determine the temperature change between the times t=0.5 minutes and t=5.0 minutes. **(1mk)**

III) Hence determine the specific heat capacity of the liquid. **(3mk)**

iii) 1.8g of vapor was collected from the liquid between the times t=6.8 minutes and t=7.3 minutes. Determine the specific latent heat of vaporization of the liquid. **(4mks)**

13. a) Define angular velocity. **(1mk)**

b) The diagram below shows an object of mass 2.0kg whirled in a vertical circle of radius 0.8m at a uniform speed of $50ms^{-1}$.



Determine;

i) The centripetal force on the object. **(3mks)**

ii) The tension in the string when the object is at **A.** **(2mks)**

iii) The tension in the string when the object is at **B**. **(2mks)**

c) The speed of rotation is gradually increased until the string snaps. At what point is the string likely to snap? Explain. **(2mks)**

14. a) State the principle of parallel forces. **(1mk)**

b) A uniform plank of wood weighing 50N and of length 5m is suspended by two ropes A and B, 1.5m a part A is 2m from end and B is 1.5m from the other end, as shown in fig. 1 below. A concrete block of weight 100N is suspended from the center of the plank.

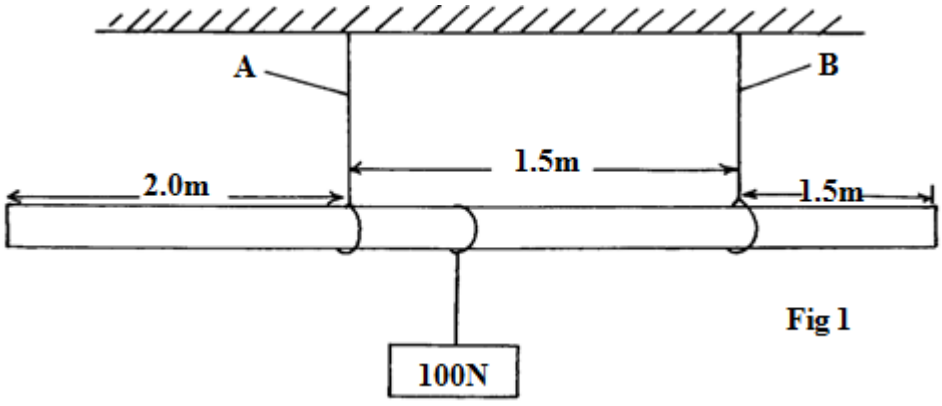


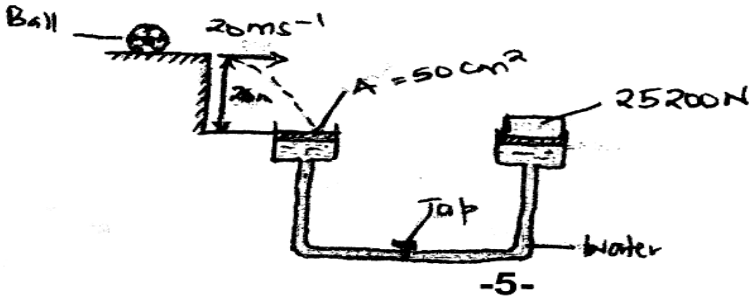
Fig 1

Calculate the tension, $\mathbf{T_A}$ on the string **A** **(3mks)**

c) I) state two ways in which the stability of a body can be increased. **(2mks)**

II) State one way in which vehicle assembling companies enhances stability in vehicles. **(1mks)**

15. The figure below shows a ball of mass 50kg being thrown from a top of wall 20m high with a horizontal velocity of 20m/s. It stuck the piston A of hydraulic lift and no water splashed out. The other piston B had a weight of 25200N placed on it. Assuming the tap was opened at the time the ball stuck the piston A.



Determine;

(i) The time taken by the ball to strike the surface of piston A. **(3 mks)**

(ii) The distance from the foot of the wall to where it hit piston A. **(2 mks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

(iii) The vertical velocity with which the ball struck piston A. **(2 mks)**

(iv) The force with which the ball struck piston A. **(2 mks)**

(v) The area of piston B if the load on the piston B did not move and that the two pistons were initially at the same level. **(3 mks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

PHYSICS

232/2 (THEORY)
PAPER 2
TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

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 sections **A** and **B** in the spaces provided.

(e) All workings must be clearly shown.

(f) Non-programmable silent electronic calculators and KNEC Mathematical tables **may be** used.

Constants

i) Density of water = $1g/cm^3$ or $1000kg/m^3$.

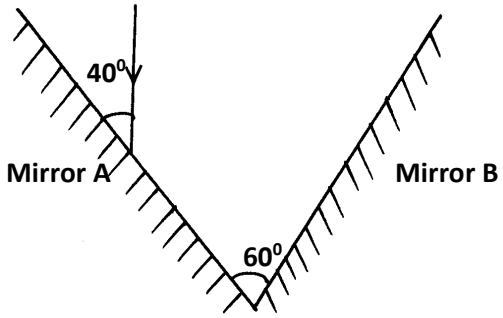
ii) Gravitational acceleration = $10m/s^2$.

FOR EXAMINER'S USE ONLY:

Section	Question	Maximum Score	Candidate's Score
A	1 – 13	25	
	14	10	
	15	13	
B	16	12	
	17	8	
	18	12	
Total Score		80	

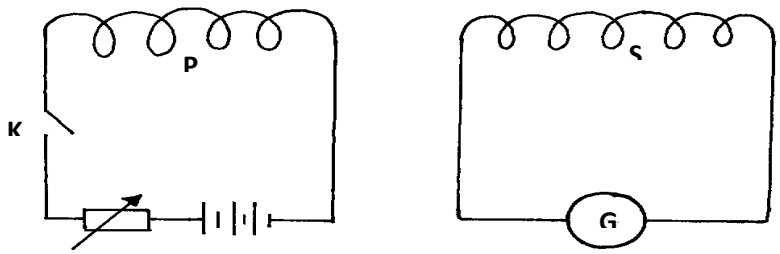
SECTION A (25 MARKS)

1. A ray is incident on two mirrors inclined at 60^0 as shown in the diagram below. **(3mks)**



Determine the angle of reflection on mirror **A**, hence trace the path of the ray as it leaves mirror **B.**

2. a) The coils **P** and **S** are connected as shown below. **P** is connected to a battery, rheostat and a switch **K**. **S** is connected to a galvanometer **G**.



State the behavior of the pointer on **G** in the following cases;

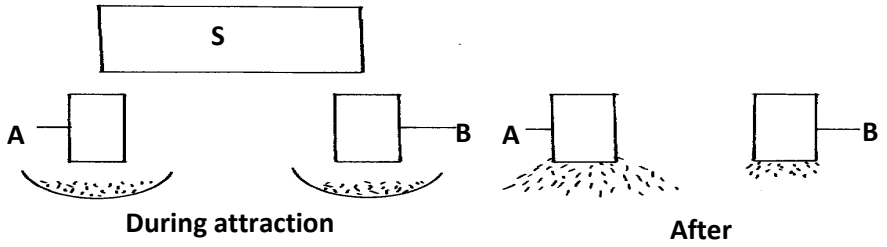
i) When **K** is switched on (closed) **(1mk)**

II) When **K** is opened. **(1mk)**

b) A transformer has 200 turns in the primary coil and 1000 turns in the secondary coil. If the transformer is 100% efficient and the current in the secondary coil is 0.15A, determine the current in the primary coil. **(3mks)**

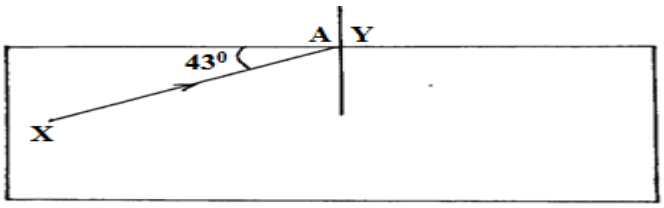
3. Figure below shows a simple experiment using a permanent magnet and two metal bars **A** and **B**

Put close to the iron filings.



State with a reason which bar is made from a soft magnetic material. **(2mks)**

4. The diagram below shows a ray of light **xy** traveling through a glass block of critical 42^0 to point **A**

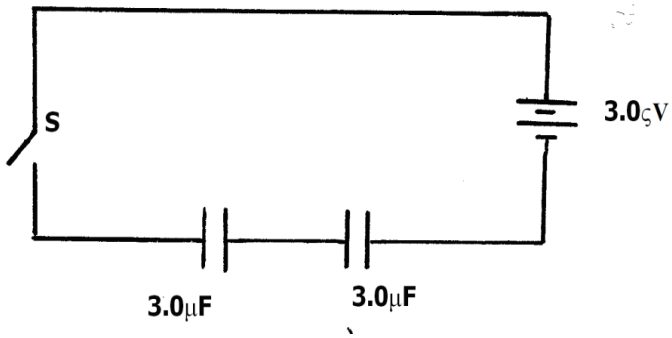


a) Calculate the refractive index of the glass block. **(3mks)**

b) On the same diagram, draw the path of the ray as it travels past point **A**. **(1mks)**

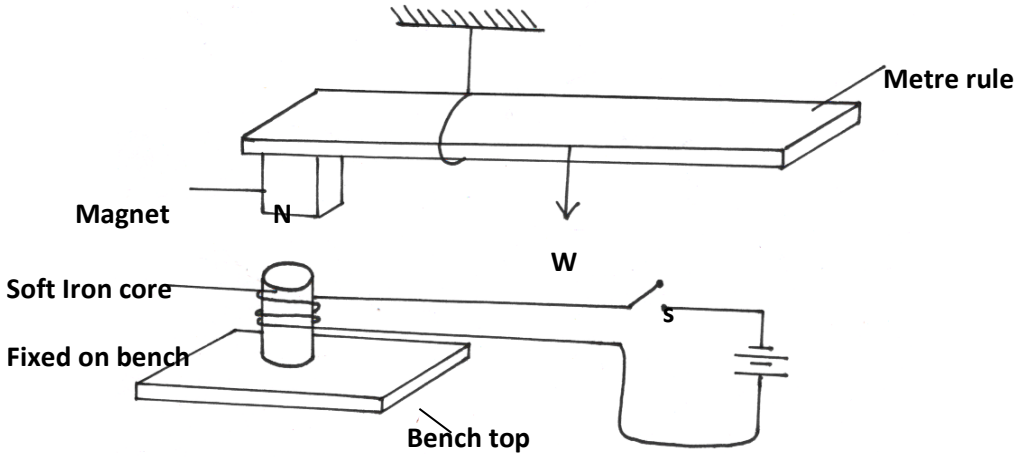
5. The photoelectrons liberated from an illuminated metal surface constitute a photoelectric current. What is the effect of decreasing the intensity of illumination on the magnitude of the photoelectric current? **(1mk)**

6. Figure below shows a battery of e.m.f 3.0v connected in series will two capacitors.



Determine the energy stored in the combined capacitors when the switch is closed. **(3mks)**

7. The figure below shows a meter rule in equilibrium with the magnet and weight W. The Soft iron core is fixed to the bench.



State and explain the effect on the meter rule when the switch S is closed **(2mks)**

8. State how polarization is reduced in a dry cell. **(1mk)**

9. State two differences between the cathode ray tube (CRT) of a T.V and the cathode ray oscilloscope (CRO). **(2mks)**

10. Distinguish between a P-type and a N-type extrinsic semiconductors. **(2mks)**

SECTION B (55 MARKS)

11. (a) Students set up a mass attached to a spring such that when it oscillates it taps on water surface in a wide shallow tank as in figure 11 below.

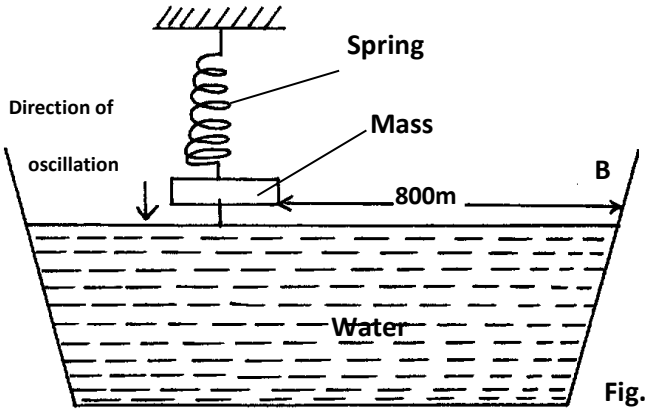


Fig. 11

The students measured time for 20 oscillations and found that the mass takes 36 seconds.

Determine:

(i) The periodic time of the mass **(2mks)**

(ii) The frequency of the waves produced on the water surface **(2mk)**

(iii) The speed of the waves if the students counted four ripples between the mass and end **B** of the tank **(3mks)**

(b) State any **two** factors that would increase the speed of sound in air **(2mks)**

(c) An echo sounder of a ship received the reflected waves from a sea bed after 0.20s.

(i) Determine the depth of the sea bed if the velocity of sound in water is 1450m/s **(2mks)**

(ii) When the ship above passes over a sunken reef, the echo sounder receives an echo after 0.16s. Determine the height of the sunken reef **(2mks)**

12.(a) An experiment was performed in the laboratory in the sequence described

I. Brought a positively charged plastic ruler near to the cap of an uncharged leaf electroscope

II. Touched the cap momentarily with the finger

III. Removed the ruler

Draw diagram to show charge distribution on the cap and leaf of the electroscope and the position of the leaf after each of the above procedure. **(3mks)**

(b) What will be the effect observed if the ruler is removed before removing the finger? **(1mk)**

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(c) In a separate experiment, the charged plastic ruler was allowed to touch the cap of electroscope. State giving a reason whether or not there will be any difference in the results obtained in (a) above **(2mks)**

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(d) In a nylon manufacturing factory heavy rubber units were put under the spinning machines which were made of metal to absorb the noise. The following effects were observed

A. Workers sometimes received electric shock when there was no leakage of charge from the main cable.

B. Small pieces of nylon stuck to the thread but whenever the room was moist this did not occur

(i) State and explain the reasons for the observation in **A and B** above. **(4mks)**

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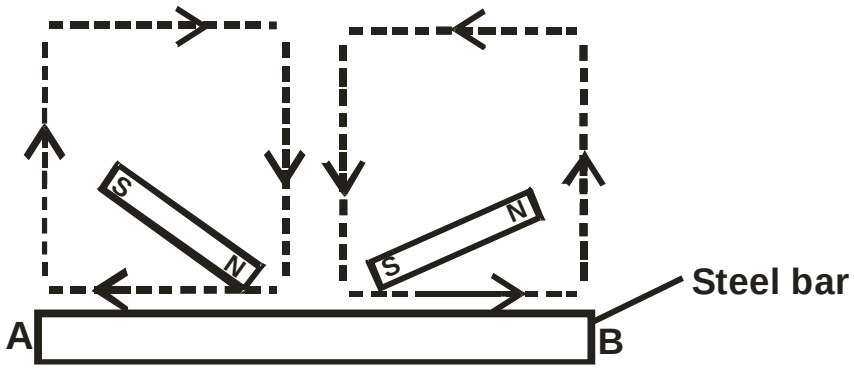
(ii) How would the effect in **(d) A** be corrected **(1mk)**

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13. a) The figure below shows a method of magnetization used in making magnets.



i) Name the method. **(1 mark)**

……

ii) Identify the polarities A and B of the magnet produced. **(2 mrks)**

A _____

B _____

iii) Apart from this method, state any other method used in magnetization. **(1 mark)**

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b) In demagnetization by electrical method:

i) State the type of current used. **(1 mark)**

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ii) Explain your answer in (i) above. **(2 mrks)**

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a) Explain why when demagnetizing a magnet, the magnet should be held in the East-West direction. **(2 marks)**

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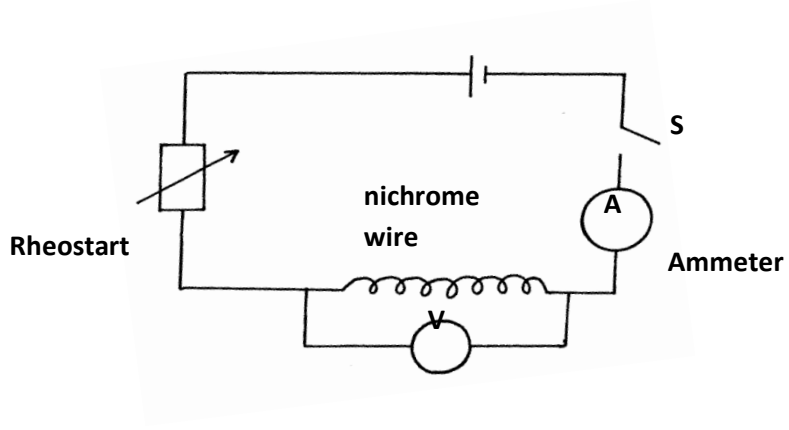
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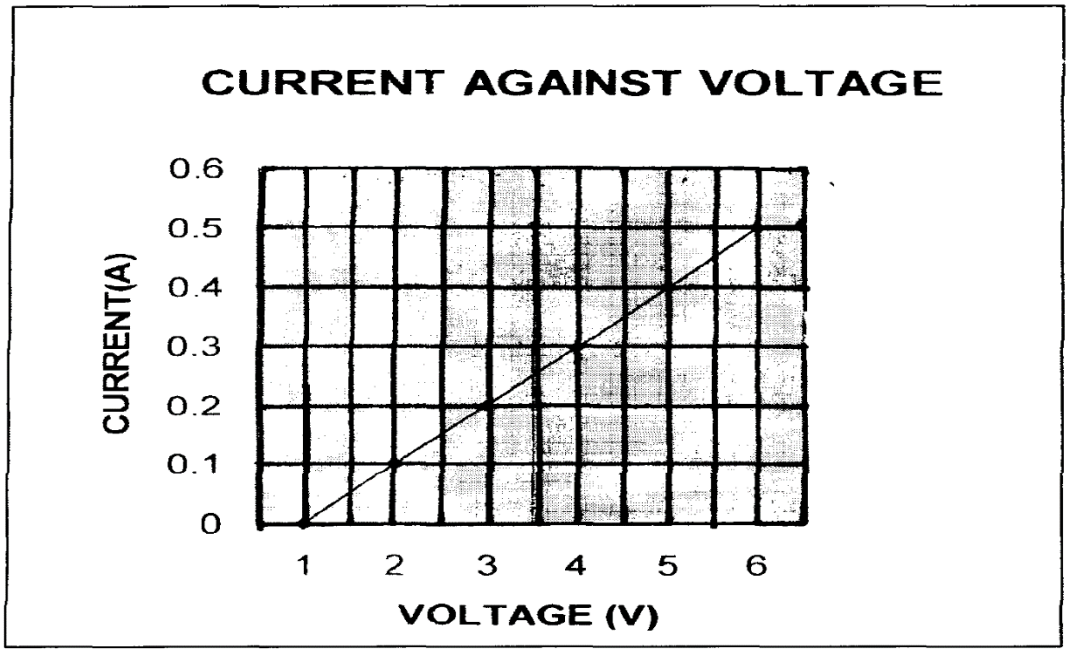
14. a) State Ohm's Law. **(1mk)**

b) The figure below shows a circuit that can be used to verify Ohm's law



Explain briefly how the setup can be used to verify ohm's law **(3mks)**

c) The graph below was obtained from experiment to determine the effective resistance of two resistors connected in parallel. If the value of one resistor is 50 ohms. determine the value of the other resistor.



From the graph, determine

i) effective resistance of the two resistors **(2mk)**

ii) the value of the other resistor **(3mks)**

15. (a) An object **O** stands on the principal axis of a concave mirror as shown in figure 9 below.

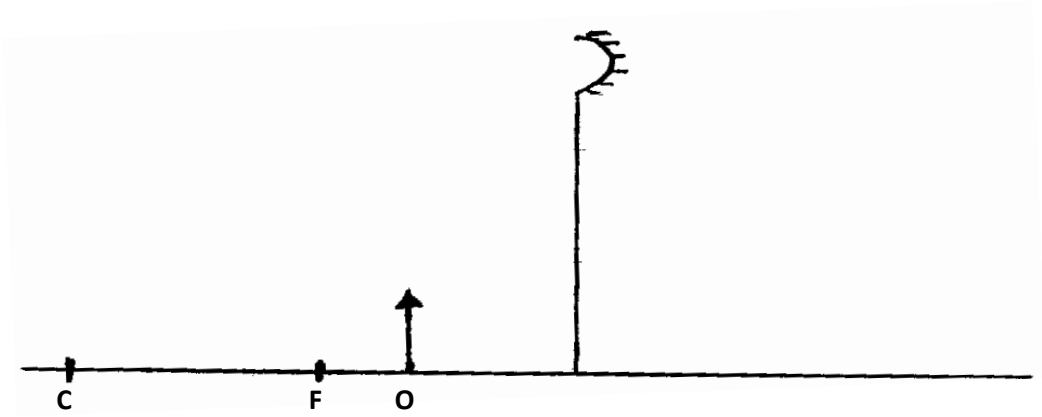
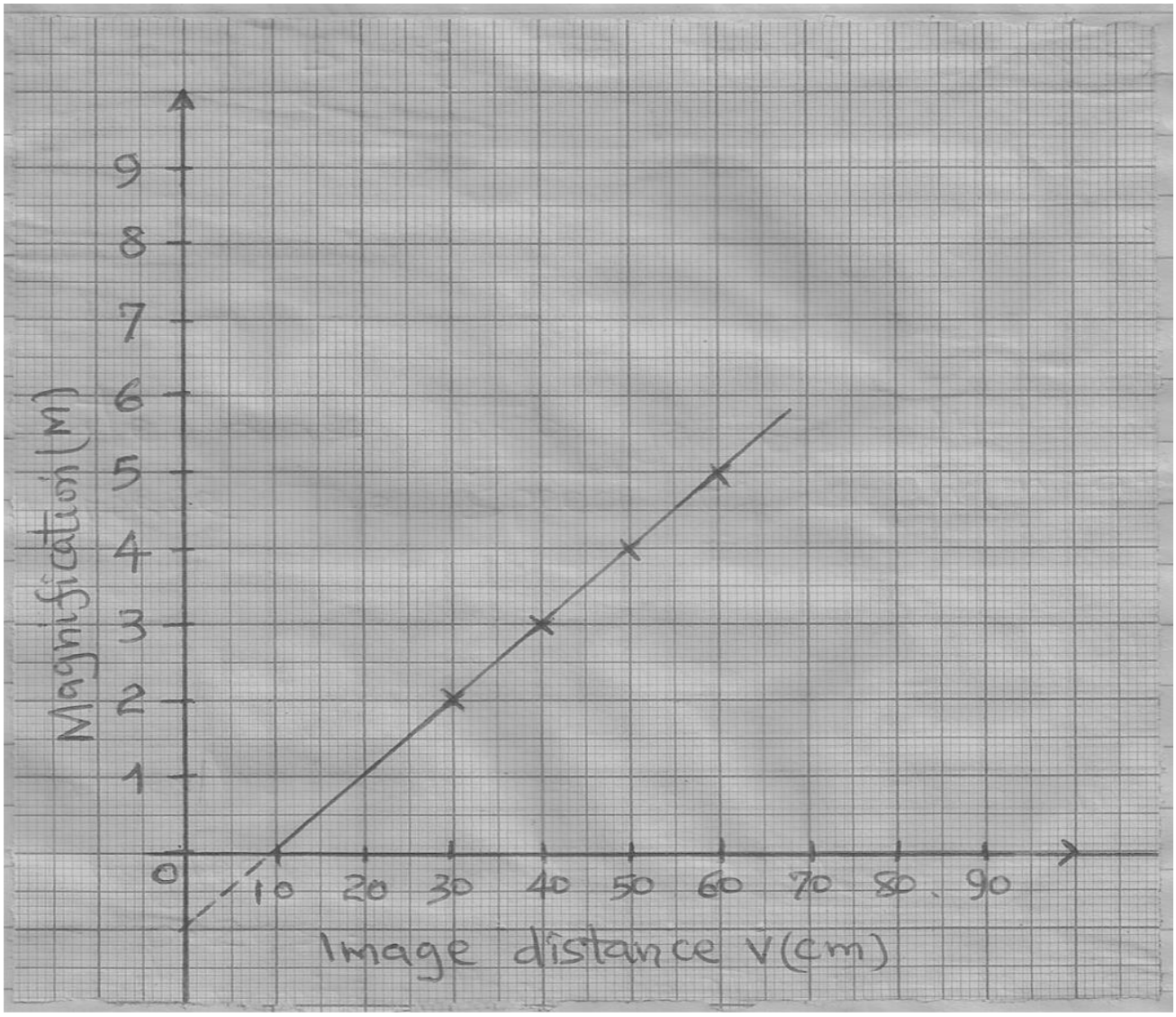


Fig. 9

(i) By drawing suitable rays, show the position of the image **(3mks)**

(ii) Determine the magnification of the image formed **(2mks)**

(b) In an experiment to determine the focal length of a converging lens, a group of form four students collected some data and used the results to plot the graph shown in figure below.



Using the graph above, determine:

(i) The object position when the image position is 45 cm **(2mks)**

(ii) Slope of the graph. **(2mks)**

(iii) The focal length of the lens given **m = $\frac{v}{f}$ - 1**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

PHYSICS

232/3

PAPER 3

TIME: 2½ HOURS

SCHOOL…… SIGN……

Physics Practical Confidential

School should provide the following apparatus for questions 1 and 2.

Question 1

- Stopwatch
- Cotton thread at least 120cm long
- Stand and a clamp
- Pendulum bob
- Metre rule

Question 2

- Convex lens
- A candle
- White screen
- Lens holder
- Metre rule
- 2 New dry cells
- An ammeter
- A mounted wire labelled AB
- A cell holder
- A switch
- Connecting wires

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

PHYSICS

232/3

PAPER 3

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS

i) Answer All questions in the spaces provided.

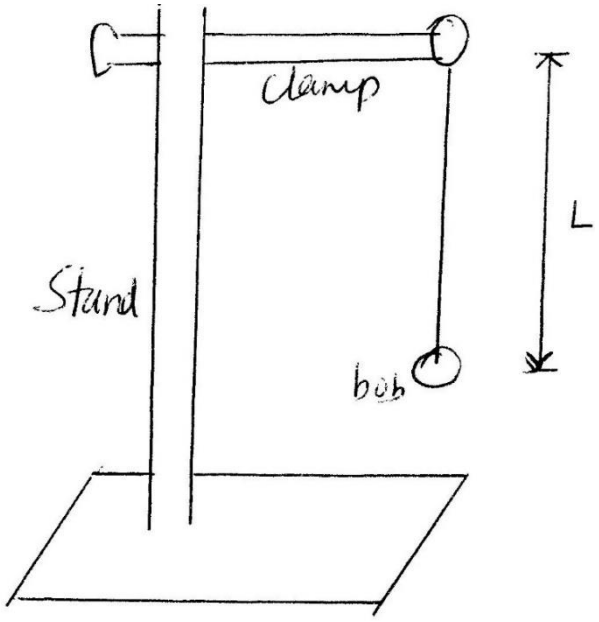
iii) All working must be clearly shown for numerical questions.

iv) Candidates should check to ascertain that all questions are printed as indicated in the table below.

1. You are provided with the following;

- A stopwatch
- Cotton thread at least 120cm long
- Stand and a clamp
- Pendulum bob
- Metre rule

Arrange your apparatus as shown



Proceed as follows;

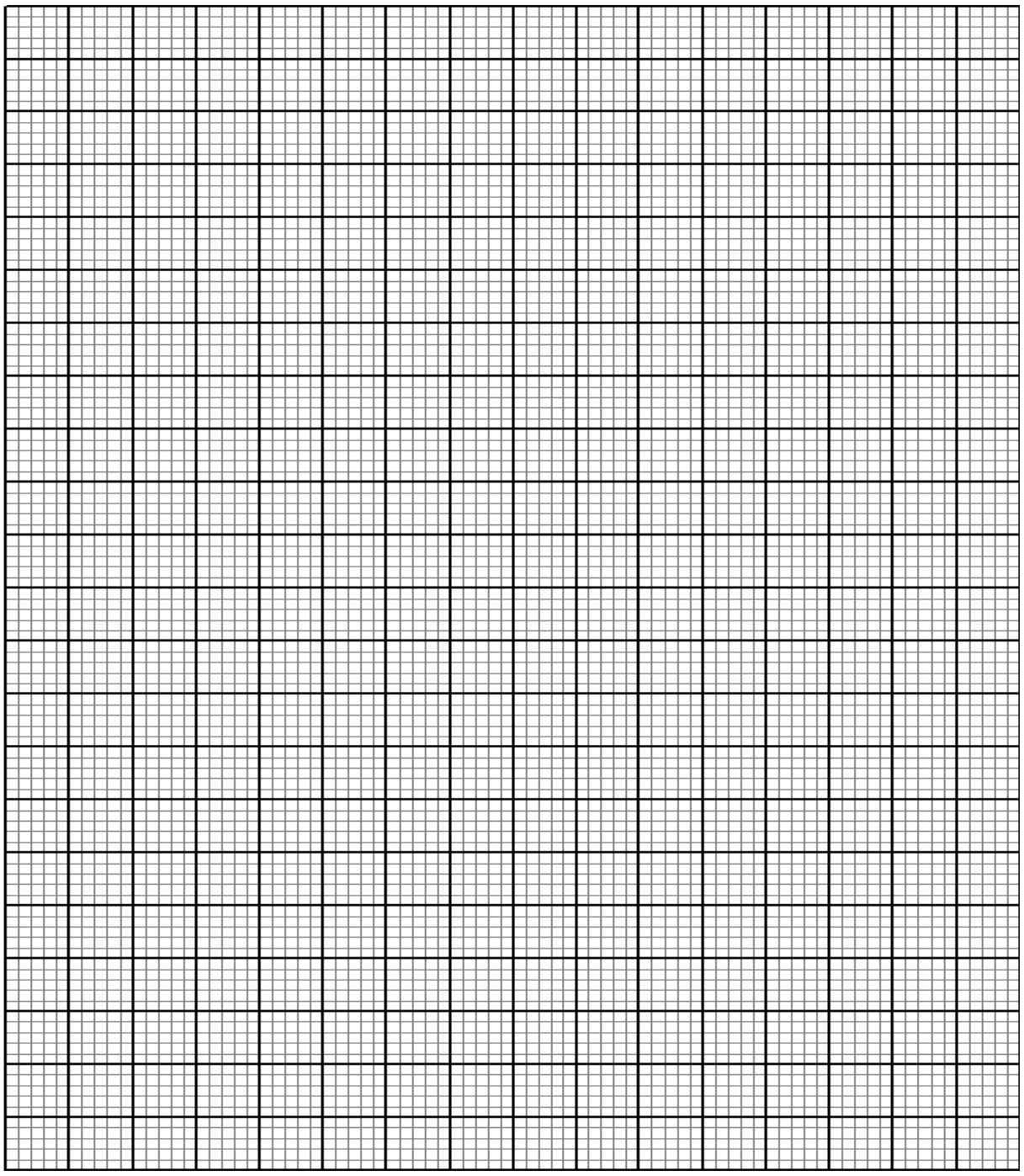
i) Adjust the length of the pendulum to 1meter.

ii) Displace the bob side ways to an angle of about 45^{o} (estimate) and let the pendulum switching for 10 oscillations and record the time, t, take for the ten oscillations.

iii) Repeat the same for other values of L as shown in the table below and fill in the columns of the table as indicated. **(8 Marks)**

Length L(in m)	Time for 10 oscillations (in sec)	Periodic time (T)	(Periodic Time)^2 T^2 (in 2 d.p.)
1.0			
0.8			
0.7			
0.6			
0.5			
0.4			
0.3			

iv) Plot a graph of T^2 against L. **(5 Marks)**



v) Determine the gradient **(3 Marks)**

vi) Given that period (T) of a pendulum and the length (L) are related by the equation

$T = 2\pi\sqrt{\frac{l}{g}}$,

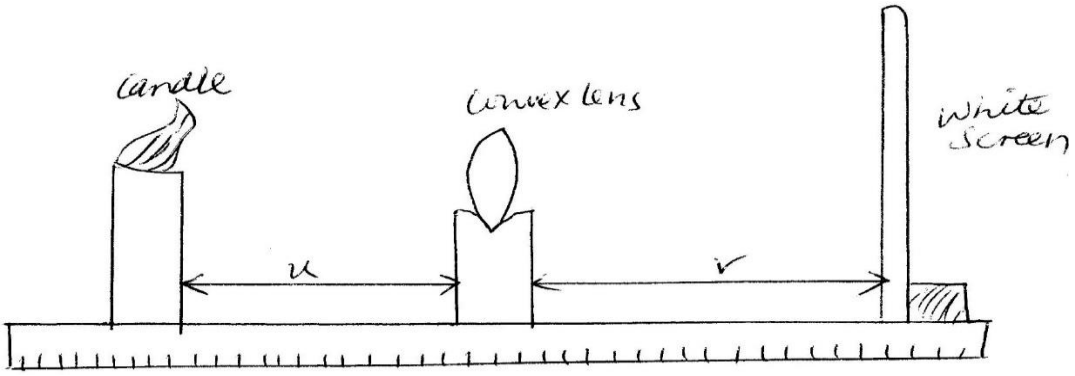
Where g is the gravitational pull, use your graph to determine the value of g. **(4 Marks)**

2. PART A

You are provided with the following apparatus.

- A Convex lens
- A candle
- White screen
- Lens holder
- Metre rule

a) Set up the apparatus as shown in the figure below.

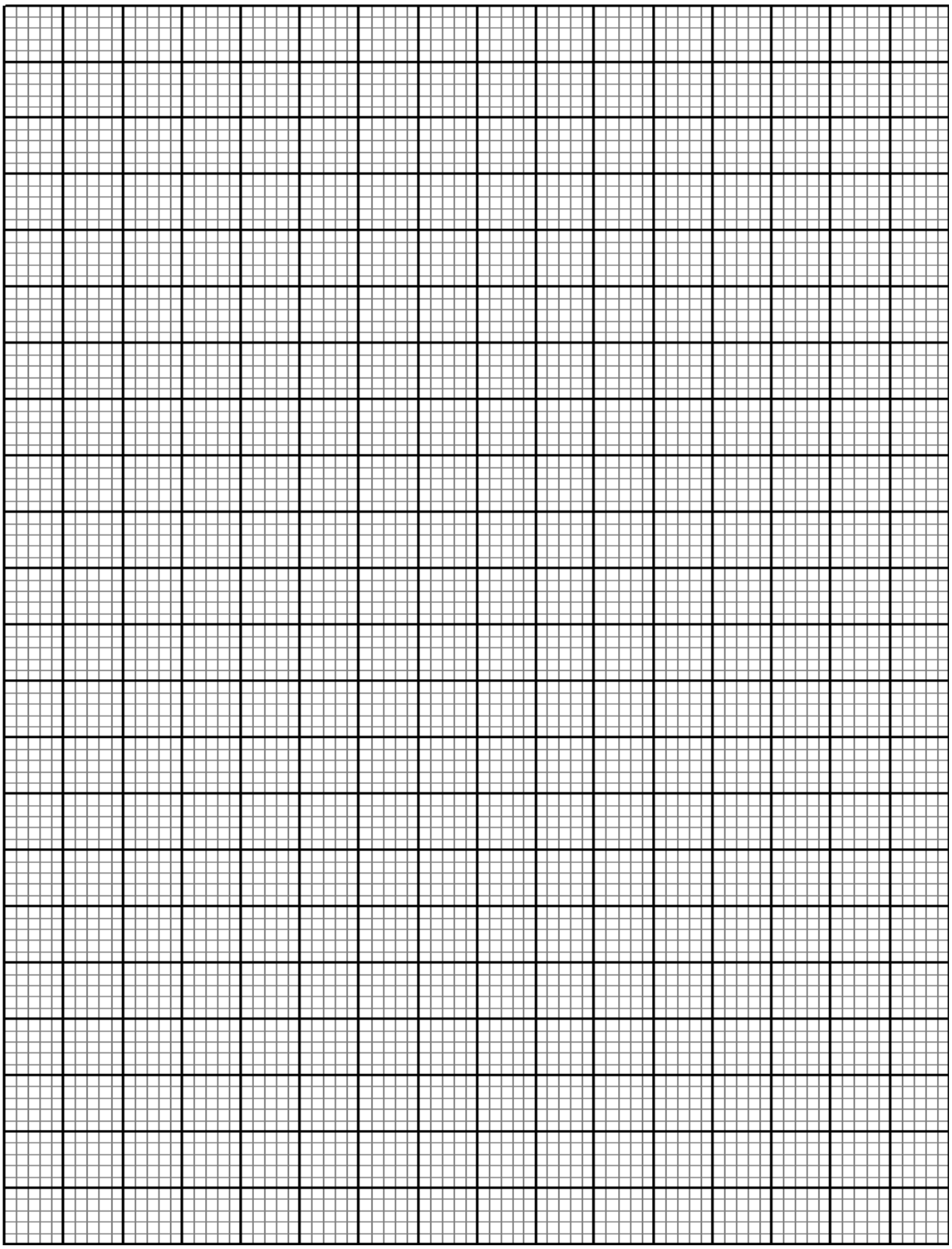


b) Place a lighted candle at object distance, U = 20cm. Move the screen, towards or away the lens until a sharp image of the candle flame is obtained on the screen. Measure the distance V and record the results in the table below.

c) Repeat the same for other values of U as shown in the table and fill their respective values of V. **(5mks)**

Object distance U (in cm)	Image distance V(in cm)	U + V (cm)	UV (cm^2)
20			
30			
45			
60			
75			
90			

d) Plot a graph of UV (cm^2) against (U + V) (cm). **(5 Marks)**



e) Determine the slope of the graph **(2 Marks)**

f) Determine the power of the lens used in the experiment. **(2 Marks)**

PART B

You are provided with the following apparatus

- 2 New dry cells
- An ammeter
- A mounted wire labelled AB
- A cell holder
- A switch
- Connecting wires

a) Draw a circuit that can be used to determine the resistance of the wire AB. **(2 Marks)**

b) Set up the apparatus as in your circuit diagram and tabulate two set of values. **(2 Marks)**

c) Calculate the resistance of the wire **(2 Marks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

AGRICULTURE

443/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES:

- *Write your name and index number in the spaces provided above.*
- *Sign and write the date of examination in the spaces provided above.*
- *This paper consists of three sections A, B and C.*
- *Answer all the questions in section A and B.*
- *Answer any two questions in section C.*
- *All answers should be written in the spaces provided.*
- *Candidates should answer all the questions in English.*

FOR EXAMINER'S USE ONLY:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-19	30	
B	20-23	20	
C		20	
		20	
	TOTAL SCORE	**90**	

SECTION A (30 MARKS)

1. Give **two** factors which characterize small scale farming. **(1mk)**

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2. State **four** farming practices which help to improve soil structure**.** **(2mks)**

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3. Give **four** steps followed in land adjudication. **(2mks)**

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4. Name the vegetative part of each of the following crops which is propagated**.** **(1mk)**

a) Sweet potatoes.

……

b) Sugarcane.

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5. Name **two** viral diseases which attack citrus plants**.** **(1mk)**

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6. State **three** advantages of single stem pruning over multiple stem pruning. $(\mathbf{1\frac{1}{2}}\boldsymbol{mks})$

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7. Give **two** methods of applying nitrogenous fertilizers to crops**.** **(1mk)**

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8. State **four** factors one should consider when siting a nursery for kales**.** **(2mks)**

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9. State **four** reasons why staking as a field management practice should be carried out in tomatoes**.** **(2mks)**

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10. Give **four** problems associated with the use of herbicides in crop production. **(2mks)**

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11. State **four** factors that influence spacing when planting a pure stand of maize. **(2mks)**

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12. Give **four** activities that may be undertaken in organic farming. **(2mks)**

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13. State **four** reasons for ridging in potato production. **(2mks)**

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14. State **four** characteristics that make a crop suitable for green manuring. **(2mks)**

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15. State three factors to consider when grading tomatoes for fresh market. $(\mathbf{1\frac{1}{2}}\boldsymbol{mks})$

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16. Give **four** advantages of using grafting and budding as methods of improving the production of citrus fruits. **(2mks)**

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17. State **three** advantages of using metal pipes to convey water on a farm. $(\mathbf{1\frac{1}{2}}\boldsymbol{mks})$

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18. Why is it not advisable to use manure in carrot production? $(\frac{1}{2}mk)$

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19. Give **two** conditions in agricultural production under which opportunity cost is zero. **(1mk)**

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SECTION B (20 MARKS)

20. The diagram below illustrates a method of irrigation. Observe it carefully and answer the questions that follow.



a) Identify the method of irrigation**.** **(1mk)**

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b) Give **four** disadvantages of using the above method of irrigation. **(4mks)**

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21. A member of the young farmers' club was advised to apply a complete compound fertilizer 30-20-10 in a tomato plot measuring 10m long by 5m wide at the rate of 300kg per hectare.

a) State the percentage of $P_2\ O_5$ in the complete compound fertilizer

……

……

(1mk)

b) What does $P_2\ O_5$ refer to. **(1mk)**

……

c) Calculate the amount of fertilizer the member would require for the plot. **(3mks)**

22. The photograph below shows a method of forage conservation.



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

……

a) Give **four** factors that determine the quality of the above forage. **(4mks)**

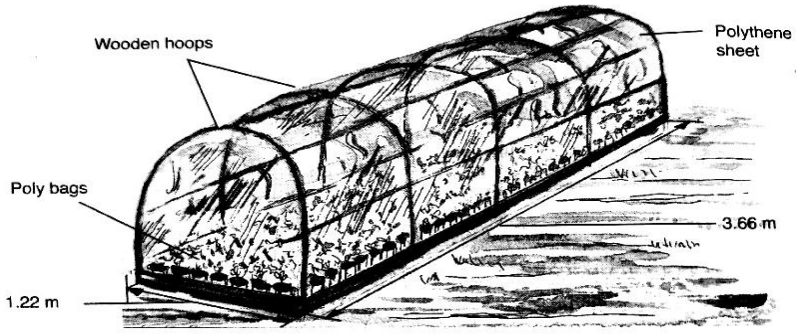
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23. The diagram below illustrates a vegetative propagation unit. Study it carefully and answer the questions that follow.



a) What is the function of the polythene sheet**?** **(1mk)**

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b) Give **four** management practices carried out on the above structure. **(4mks)**

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SECTION C (40 MARKS)

24. a) Describe the production of dry beans (*Phaseolus vulgaris*) under the following sub headings.

i) Varieties common in Kenya. **(2mks)**

ii) Selection and preparation of planting materials**.** **(3mks)**

iii) Planting and weeding. **(5mks)**

b) Give **five** entries that can be made on a cattle breeding record. **(5mks)**

c) State **five** reasons for pruning coffee. **(5mks)**

25. a) Explain the precautions that should be observed during harvesting of pyrethrum. (5mks)

b) State **six** effects of fragmentation and sub division of land. **(6mks)**

c) List **four** effects of high temperature on crops. **(4mks)**

d) Explain **five** cultural methods of soil and water conservation. **(5mks)**

26. a) State and explain **five** factors influencing soil erosion. **(5mks)**

b) Describe **ten** cultural measures of controlling pests. (**10mks)**

b) Explain **five** ways in which plant morphology and anatomy influence the selectivity and effectiveness of herbicides. **(5mks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

AGRICULTURE

443/2

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

- Write your name, Admission number and class, in the spaces provided above.
- This paper consists of three sections: A, B and C.
- Answer **all** the questions in section **A** and **B** and **any two** questions from section **C**
- All answers must be written in the spaces provided in this paper

FOR EXAMINERS USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE SCORE
A	**1-16**	**30**	
B	**17-20**	**20**	
C	**21-23**	**20** **20**	
TOTAL SCORE		**90**	

Answer all questions in the spaces provided

1. Distinguish between Apiculture and aquaculture as used in animal production. **(2mks)**

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2. Name animal disease that it is transmitted by the following parasite

i.Brown ear tick **(½mk)**

ii. Tse tse fly **(½mk)**

3. State the secondary and intermediate host for liver fluke (Fasciola lepatica) **(1mk)**

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4. State four breeds of goats. **(2mks)**

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5. Outline the function of the Crop in the digestive system of hen. **(1mk)**

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6. Give reasons why animal are restrained. **(2mks)**

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7. Outline four viral disease in livestock. **(2mks)**

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8. State three method of selection in livestock. **(2mks)**

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9. Explain how to prevent cannibalism among poultry. **(3mks)**

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10. Give the importance of additives in livestock feeds. **(2mks)**

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11. Outline three types of calf pen. **(2mks)**

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12. State four advantages of movable calf pen. **(2mks)**

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13.

i. Explain mating in livestock. **(3mks)**

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ii. Outline three methods of mating in livestock. **(3mks)**

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14. Explain the reason why scrotal sac should distend an contract in various temperature state. **(2mks)**

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15. Define the following terms

i. Mothering ability. **(1mk)**

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ii. Prolificacy in livestock. **(1mk)**

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16. Explain what is pre-disposing factor. **(1mk)**

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17. Name four pre-disposing factors that pre-disposes livestock to diseases. **(2mks)**

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18. Give functional differences between rumen and abomasum. **(2mks)**

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19. Which equipment is used to administer:

i. Solid taplet during deworming. **(1mk)**

ii. Liquid drug during deworming. **(1mk)**

SECTION B(30MKS)

20.

i. Briefly explain how three-host tick completes it life cycle. **(4mks)**

ii. Why is controlling tick using acaridae not efficient in hand in hand spraying method. **(2mks)**

21. Name the common parts of animal that ticks are likely to be found. **(2mks)**

22. State the diseases that ticks causes in livestock. **(2mks)**

23.

i. State the process of ascertaining whether egg are viable for incubation. **(1mk)**

ii. Briefly explain the procedure of the named process above. **(4mks)**

24.

i. Give a reason why should calf pen have slatted floor. **(2mks)**

ii. Outline the features of calf pen. **(4mks)**

25. Explain the reason why calf houses should be singly. **(2mks)**

26.

i. Explain what is milk secretion process. **(1mk)**

ii. Identify the structure of the mammary gland of a cattle. **(4mks)**

SECTION C(Answer any two questions)

27.

i. Explain the process of milk-let down process in livestock. **(10mks)**

ii. Outline factors that influence milk let down in animals. **(5mks)**

iii. Outline factors that determine the cleanliness of milk. **(5mks)**

28.

i. Outline the signs of heat in cattle. **(5mks)**

ii. State five causes of stress in poultry. **(10mks)**

iii. Using Pearsons square compute a ration with 20% DCP.
Show your working. **(5mks)**

29.

i. Explain farming practices that contributes to minimum tillage. **(5mks)**

ii. Give the limitation of using artificial insemination in cattle. **(5mks)**

iii. State and explain factors to be considered in selection of animals for breeding purposes. **(10mks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

BUSINESS STUDIES

565/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS

Answer ALL the questions in the spaces provided.

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

16	17	18	19	20	21	22	23	24	25

TOTAL

INSTRUCTIONS

a) *Write your name and admission number in the spaces provided above.*

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

c) *Answer all the questions.*

d) *All answers should be written in the spaces provided in this booklet.*

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

QUESTIONS

1. Highlight four factors that may positively influence the operations of a business. **(4marks)**

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2. In the spaces provided below, indicate the type of utility created by each of the following activities**.** **(4marks)**

Activity	**Type of utility**
a) Store keeping	-
b) Selling goods to a customer	-
c) Making a chair	-
d) Transporting goods	-

3. Outline four differences between a good and service. **(4marks)**

Good	**Service**
i)	**i)**
ii)	**ii)**
iii)	**iii)**
iv)	**iv)**

4. Outline four factors that may encourage entrepreneurship in Kenya. **(4marks)**

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5. Highlight four benefits of using electronic filing system. **(4marks)**

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6. Outline four considerations that a seller should take into account before giving credit to a customer. **(4marks)**

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7. Outline four circumstances under which a cooperative society may be dissolved.**(4marks)**

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8. State four reasons why the government should create an enabling environment for investors. **(4marks)**

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9. Name the essential elements of transport. **(4marks)**

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10. Give four reasons why one would prefer a letter to a telephone to send a message.**(4marks)**

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11. Outline four characteristics of property insurance. **(4marks)**

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12. Outline four benefits to a business that uses its own warehouse. **(4marks)**

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13. Give four advantages of personal selling as a method of sales promotion. **(4marks)**

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14. Give the meaning of the following terms as used in business. **(4marks)**

a) Law of demand –

b) Law of supply –

15. Highlight four benefits that would accrue to a firm located near other existing firms.**(4marks)**

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16. State features of a monopoly market. **(4marks)**

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17. Outline four ways in which households contribute to national income of a country.**(4marks)**

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18. State four types of unemployment in an economy and give the cause of each. **(4marks)**

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19. State the effects of each of the following transactions on the balance sheet totals by writing increase or decrease or no effect in each case. **(4marks)**

Transaction	Effect on Balance sheets totals
a) Brought machine on credit	
b) Withdrew cash from the business for personal use	
c) Purchased stock in cash	
d) Paid outstanding loan by cheque	

20. Identify the ledger in which the following accounts are maintained;

Account	Ledger
a) Commission income a/c	
b) Supplier a/c	
c) Machine a/c	
d) Cash a/c	

21. Give two reasons why a three column cash book is used both as a journal and a ledger.**(4mrks)**

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22. Indicate the type of journal in which each of the following transactions would be recorded.

(4marks)

transactions	Journal
a) Goods previously sold on credit were returned	
b) goods bought on credit	
c) Goods sold for cash	
d) Motor vehicle sold on credit terms	

23. Outline four benefits that accrue to a business that uses automated teller machine (ATM) banking services. **(4marks)**

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24. Outline four benefits of direct taxation to the government. **(4marks)**

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25. State four forms of economic integration that may exist between countries. **(4marks)**

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KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

BUSINESS STUDIES

565/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

- *This paper consists of **six** questions.*
- *Answer any **five** questions in this paper*
- *Answers should be written in the foolscaps provided*
- *Clearly indicate the question number on the foolscaps*
- *Ensure you write your class and admission number.*
- *All questions carry equal marks.*

For Examiners Use Only

QUESTION	1	2	3	4	5	6	TOTAL
MARKS							

*Answer any **five** questions in this paper*

1. a) Explain five indicators of a high population growth. **(10mks)**

b) Explain the factors that can hinder effective communication. **(10mks)**

2 a) Menengai Manufacturers who have been producing product X stopped its production and instead embarked on the production of another product. Explain five factors that may have led to this decision. **(10mks)**

b) Situma intends to invest money he has acquired from a bank in form of loan into a retail business. Explain five factors that he should considered before implementing his decisions. **(10mks)**

3. a) Describe five channels that can be used to distribute locally manufactured goods. **(8mks)**

b) The following trial balance was extracted from the books of Rafiki Traders for the year ended 31/12/2019.

Rafiki Traders
Trial Balance
As at 31st Dec 2019

	Dr (sh)	Cr (sh)
Capital		270,000
Drawings	30,000	
Opening stock	50,000	
Purchases	255,000	
Sales		400,000
Returns	4,000	7,000
Carriage inwards	28,000	
Carriage outwards	8,000	
Discount	12,000	5,000
Insurance	25,000	
Commission	3,000	
Rent		18,000
Furniture	50,000	
Land	155,000	
Premises	110,000	
Debtors	40, 0000	
Creditors		70,000
	770,000	770,000

Closing stock was valued at shs. 58,000.

Required ;

i) Prepare a trading and profit and losses a/c for the year ended 31st Dec, 2019. **(10mks)**

ii) Calculate ;

a) Mark up **(1mk)**

b) Rate of stock turn over. **(1mk)**

4. a) On 1st January 2018 Mambo Traders had sh 90,000 cash in hand and a bank credit balance of 124,000. During the month, the following transactions took place.

2018

Jan 2 Cash sale sh 189,000

" 4 A debtor settled his account of sh 7,000 by cheque less 5% cash discount.

" 12 Paid salaries sh 50,000 in cash.

" 16 Settled a creditors account of sh 86,000 by cheque less 2% cash discount.

" 23 Deposited sh 120,000 into bank from office cash.

" 26 Cash sales banked directly shs 350,000.

" 27 A cheque received on 4th January from a debtor was dishonoured.

" 31 Banked all cash except sh 40,000.

Prepare a three column cash book dully balanced. **(10mks)**

b) With the aid of a diagram, explain how equilibrium price and quantity are established in a free market**.** **(10mks)**

5a) Safaricom ltd intends to prepare its products by encouraging a price-winning competition through the media. Prices can be won through buying of products. Explain five benefits that that the company would get by using this method of sales promotion. **(10mks)**

5. b) Discuss four functions of money. **(10mks)**

6. a) Explain five ways in which inflation may be found to be useful in an economy. **(10mks)**

6 b). Explain five activities that may be carried out in the process of distribution of goods.**(10mks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

ENGLISH

101/1

PAPER 1

TIME: 2 HOURS

Functional Skills, Cloze Test and Oral Skills

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES.

1) *Write your name and index number in the spaces provided.*
2) *Answer all questions in this question paper.*
3) *All your answers should be written in the spaces provided in this question paper.*
4) *Contains six printed pages.*
5) *All answers should be written in English.*

FOR EXAMINER'S USE ONLY.

Question	Maximum Score	Candidate's Score
1	20	
2	10	
3	30	
Total	60	

1. FUNCTIONAL WRITING **(20 MARKS)**

Your school drama club has produced *The Samaritan*, a play by John Lara. You wish to stage it for public viewing at a nearby social hall. As the secretary of the club,

a) Write an EMAIL addressed to the hall administrator enquiring about the conditions for being allowed to use the hall. Give reasons why you think it's important to stage the play. Do not forget to copy in your principal. **(13 marks)**

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b) Assuming that the hall administrator permitted your club to use the hall, write a NOTICE to the public informing them of the planned performance. **(7 marks)**

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2. CLOZE TEST **(10 MARKS)**

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

We all have certain goals in life. Goals vary among people. For someone, a goal would be to get …(1)…… of debt, while for another person it would be to …(2)…….. a house, while for someone else, it could be a …3…… in an exotic location. …(4)……, a bad goal can sap your energy and distract you …(5)……... making progress. A good goal, on the other hand, can provide the clarity and motivation you need to …(6)……. your dreams. …(7)……., people confuse a goal …(8)……. a wish. A goal is …(9)…….. from a wish. For example you may want to be a rich person; this is a wish and not a goal. A goal has to be realistic, measurable and has to be achieved….(10)…….. a specific time frame.

3. ORAL SKILLS **(30 MARKS)**

a) Read the following poem and answer the questions that follow.

The Seed Shop

Here in a quiet and dusty room they lie,
Faded as crumbled stone or shifting sand,
Forlorn as ashes, shriveled scentless dry,
Meadows and gardens running through my hand.
In this brown husk a dale of hawthorn dreams,
A cedar in this narrow cell is thrust,
That will drink deeply of century's streams,
These lilies shall make summer on my dust.
Here in their safe and simple house of death,
Sealed in their shells, a million roses leap,
Here I can blow a garden with my breath,
And in my hand a forest lie asleep.

Questions

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

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ii. What is the effect of the rhythm in the poem**?** **(1 marks)**

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iii. How else has the poet achieved the effect in (ii) above**?** **(4 marks)**

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iv. Which words would you stress in the last line of stanza 1 and why? **(3 marks)**

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b) Write another word pronounced as the ones given below**.** **(3 marks)**

i. Wait ……

ii. Sew ……

iii. Grown …….

c) Indicate the silent letters in the following words. **(3 marks)**

i. champagne ……

ii. parliament ……

iii. apostle ……

d) Group the words below under the column containing the sound that the highlighted letter(s) bear. **(2 marks)**

An example has been done for you

Ti**ss**ue, Cauca**s**ian , Divi**s**ion, Pa**ss**ion, Cau**t**ious, Lei**s**ure, Solu**t**ion, Vi**s**ion, Expo**s**ure, **Ch**ef

/ʃ/ /ʒ/

Tissue Caucasian

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e) A teacher of English was in class and after some time he realized that the learners had lost concentration. What cues made him to arrive at this conclusion**?** **(3 marks)**

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f) What should the above teacher do to regain the students' concentration? **(2 marks)**

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g) You are having a group discussion with your colleagues on the set text "Fathers of Nations." One of your group mates is contributing to the discussion but you are eager to chip in with something. State any three cues that would tell you that it is your turn to make a contribution. **(3 marks)**

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h) Read the telephone conversation below and answer the question that follows.

(A Mr. Kamau calls wishing to speak to Mr. Onyango, the store-keeper, who is not in at the time of the call. Mr. Mwema receives the call and records the message for Mr. Onyango.)

Miss Mwema: Good morning, Homebased Care for Youth Counselling,
How may I help you?

Mr Kamau: Good morning to you. May I speak to Mr Onyango please?

Miss Mwema: I 'm afraid he is not in at the moment. May I take a message for him?

Mr Kamau: Yes please. Tell him that Mr Kamau of Graphic Designs Centre called to Confirm the order for the display posters.

Miss Mwema: I will. May I have your contact please?

Mr Kamau: My telephone number is 0711200232

Miss Mwema: 0-7-1-1-2-0-0-2-3-2 (As she writes down)

Mr Kamau: Yes, that is the number. Who am I speaking to?

Miss Mwema: Miss Mwema the receptionist.

Mr Kamau: Thank you Miss Mwema. Have a good day.

Miss Mwema: Have a good day too and thank you for calling.

a) Identify four telephone conversation skills that have been exhibited by the speakers in the conversation above to make it successful. **(4 marks)**

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KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

ENGLISH

101/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Instructions to students

- *Write your **name, admission number** and **class** in the spaces provided.*
- *Sign and write the date of the examination in the spaces provided.*
- *Answer **all** questions in the spaces provided*
- *All your answers must be written in the spaces provided in this question paper.*
- *Candidates must answer all questions in English*

Question	Maximum Score	Student's Score	Examiner's Initials
1. COMPREHENSION	*20*		
2. EXCERPT	25		
3. ORAL LITERATURE	20		
4. GRAMMAR	15		
TOTAL	**80**		

1. COMPREHENSION

Read the following passage and then answer the questions that follow

At the head of the court is a high seat where the judge sits. Down below it is a table for officers of the court and o the left and to the right of the table are other seats. Some of these seats form a block that is enclosed, and they are for the jury if there is a jury. In front of the table are other seats arranged in arcs of circles, with curved tables in front of the seats, and it is there that the lawyers sit. And behind them is the dock, with a passage leading to some place that is underground, and from this place that is underground will be brought the men that are judged. At the back of the court there are seats rising in tiers, those on the right for Europeans, those on the left for non-Europeans, according to the custom.

You may not smoke in this court, you may not whisper or speak or laugh. You must dress decently and if you are a man, you may not wear your hat **unless such is your religion**. This is in honour of the judge and in honour of the king whose officer he is; and in honour of the law behind the judge and in honour of the people behind the law. When the judge enters you will stand and you will not sit till he is seated. When the judges leaves you will stand and you will not move till he has left you. This is in honour of the judge and of the things behind the judge.

The judge is entrusted a great duty and pronounce sentence even sentence of death. Because of their high office, judges are called honourable **and precede most other men** on great occasions. And they are held in great honour by men both white and black. Because the land is a land of fear, a judge must be without fear, so that justice may be done according to the law; therefore a judge must be incorruptible.

The judge does not make the law. It is the people that make the law. Therefore, if a law is unjust, and if the judge judges according to the law, that is justice, even if it is not just. It is the duty of a judge to do justice, but it is only that the people that can be just. Therefore, if justice be not just, that is not to **be laid at the door of the judge** but at the door of the people, which means at the door of the white people for it is the white people that make the law.

In South Africa men are proud of their judges because they are incorruptible. Even the black men are proud of their judges because they believe they are incorruptible. Even the black men have faith in them, though they do not always have faith in the law. In a land of fear this incorruptibility is like **a lamp set upon a stand** giving light to that are in the house.

QUESTIONS

1. What factors determine where you may sit near the front of the court? **(2mks)**

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2. What does the seating arrangement at the back of the court reveal about the society? **(2mks)**

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3. Certain rules must be strictly observed inside the court. What would non-observance of the rules imply? **(2mks)**

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4. Why must a judge be fearless? **(2mks)**

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5. How have judges in South Africa earned respect and admiration? **(2mks)**

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6. Although the judge has great responsibilities and power, he has limitations. What are his limitations**?** **(4mks)**

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7. What does the second last paragraph reveal about the status of the black people? **(2mks)**

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8. Explain the meaning of each of the following expressions as used in the passage**:** **(3mks)**

i. Unless such is your religion

ii. and precede most other men

iii. Laid at the door of the judge

iv. a lamp set upon a stand

2. Read the following excerpt and then answer the questions that follow (25 mks)

Bembe: *(Interrupting Nicole)* The matter of *The Samaritan* is weighty. It can destroy lives.it is threatening the lives of many powerful people. They are fighting back and they will destroy your life. I am giving you a chance to secure your life. I am an officer whose duty is to protect lives. Just do what the Mayor told you. You should never fight a losing battle.

Nicole: *(Firmly)* I have made a choice to do what is right. That is not negotiable. And besides, I have no control over the App. The National Information and Communications Technology Corporation is now in charge of that App.

Bembe: *(Interrupting Nicole)*I understand that to mean you are ready for a fight. And to get us started, are you aware that the signal of your phone was at one time located at the scene of murder?

Nicole*: (In horror and rising to her feet)* That`s preposterous! *(Moves towards the door)* I need to see the Principal now!

Bembe: *(Blocking the way)* And what about last night?

Nicole: What?

Bembe: The school generator.

Nicole: School generator? What about it?

Bembe: Who sold it?

Nicole: That is ridiculous!

Bembe: I thought so, too.

Nicole: *(Trying to find a way past Inspector Bembe)* I have nothing to do with the school generator!

Bembe: *(Blocking her every move)* The generator has been stolen, and you and I know who stole it!

Nicole: Listen, Mr. Officer, do not try to fabricate anything against me. It will get you nowhere. And if you insist, this will become the darkest day in your career!

Bembe: What? Are you threatening a police officer?

Nicole: *(With a sharp and firm voice)* You must not break the law by accusing me of crimes I have not committed!

Bembe: You`re just confirming some of the other accusations that have been made against you.

Nicole: Which allegations?

Bembe: You have a reputation for being too strong-willed to be suitable for a school teacher. You`re as stubborn as a mule.

Nicole: What crime is that?

Bembe: Well, it is not a crime as such; but don`t you think it is a bad influence to the students? *(Bangs the table violently and shouts an order. Two police officers enter.)* Handcuff her! *(There is a commotion as the officers reach out to Nicole. She resists but is overpowered. There is an interval of silence as Bembe begins to rummage through papers on Nicole`s table. Nicole refuses to move and sits down on the floor. The officers drag her on the floor)* Stop. *(The officers stop. There is silence Then Bembe moves behind Nicole`s table and starts pulling the drawers open, one after the other, removing and throwing papers all over the floor.)* Where have you hidden it?

Nicole: Hidden What?

Bembe: The Samaritan! *(Nicole is visibly surprised at the answer but remains silent.)* I will tell you this, whenever you see me personally involved in an arrest, you must know it`s a serious matter, as serious as death. And you should be afraid. Very afraid!

Nicole: I am not guilty of anything, and I refuse to be intimidated!

Bembe: *(Inspector Bembe bangs the table violently with his gun. Nicole recoils with a start.)* Woman! Show some seriousness! This is no laughing matter. Are you willing to talk?

Nicole: About what? *(There is silence as Inspector Bembe wears his beret and places his scepter under his armpit.)*

1. Briefly explain what Nicole was told to do by the Mayor. **(3marks)**

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2. Summarize the circumstances that makes Bembe interrupt Nicole at the beginning of the excerpt **(3marks)**

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3. Describe the following characters as seen in the excerpt **(4marks)**

i) Bembe

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ii) Nicole

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4. Describe the mood portrayed in the excerpt. **(3 marks)**

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5. From your knowledge of the text, explain how the Samaritan works **(3 marks)**

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6. Identify and state the effectiveness of two styles used in the excerpt**.** **(4 marks)**

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7. Identify and illustrate one theme from the excerpt. **(2 marks)**

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8. You cannot fabricate crimes against me! (Begin: Crimes …) **(1 mark)**

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9. Explain the meaning as used in the excerpt**.** **(2 marks)**

i) a losing battle ……

ii) prepositions ……

3. Read the following poem and then answer the questions that follow **(20mks)**

Poem for my sister (Liz Lochhead)

My little sister likes to try on my shoes,
to strut in them,
admire her spindle-thin twelve-year-old legs
In this season's styles.
She says they fit perfectly,
but wobbles
on their high heels, they're
hard to balance.

I like to watch my
little sister playing
hopscotch, admire the
neat hops-and skips
of her, their quick
peck.
Never miss their
mark, not over-
stepping the line.

She is competent at peever.
I try to warn my little sister
about unsuitable shoes
point out my own distorted feet, the
callouses, odd patches of hard skin.
I should not like to see her

in my shoes.
I wish she would stay
sure footed,
sensibly shod.

QUESTIONS

1. Why does the little sister try the persona's shoes? **(3mks)**

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2. How do we know from the first stanza that the shoes don't fit? **(1mk)**

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3. Why does the persona like watching her young sister play hopscotch? **(4mks)**

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4. In the third stanza, the persona gives us new reasons why her little sister should not wear her shoes. What are these reasons? **(2mks)**

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5. What is the message of this poem? **(5mks)**

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6. Describe the tone of the poem. **(3mks)**

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7. Explain the meaning of the following lines: **(2mks)**

I should not like to see her

in my shoes

4. GRAMMAR (15MKS)

1. Rewrite the following sentences according to the instructions given after each. Do not change the meaning.

I. my brother turned forty four yesterday (Punctuate correctly)

ii. They were unaware that the children were playing behind the house. (Begin: Little…)

Iii. Mwita served the food because he had finished cooking. (Begin with a participle phrase.)

iv. Nobody did the work. (Change into the passive voice)

v. I have some duties. I must perform them. (Combine into one sentence with an infinitive)

vi. We are hosted by _____ (tall, nigerian, charming, three) gentlemen**.**
(Arrange the adjectives in order**)**

2. Fill in the blanks with the correct form of the word in brackets

i. His punishment will be a _____to the others. (deter)

ii. Miriam is an _____ girl. (adventure)

3. Combine each of the following pairs of sentences into one sentence by making one of them a relative clause.

i. Martin joined our school this term. He is very good at grammar.

ii. The elephant is a very big animal. It is also very strong.

iii. The generator has not been on the whole night. It broke down in the morning.

4. Complete the following sentences with a phrasal verb starting with the word in brackets.

i. She looked carefully at the documents but could not _____ what it meant. (make)

ii. I could not _____ the situation much longer. (put)

5. Fill in the gaps with the most appropriate collective nouns

i. A _____ of soldiers received medals from the president.

ii. A _____ of islands were submerged in the ocean recently.

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

ENGLISH

101/3

PAPER 3

TIME: 2½ HOURS

(Creative writing and Essays from the Set Texts)

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Instructions to students

- *Write your **name, admission number** and **class** in the spaces provided*
- *Sign and write the date of the examination in the spaces provided*
- *Answer **all** questions in the spaces provided in **blue ink**.*
- *All your questions must written in spaces provided in this paper*
- *Students must answer all questions in **English***

FOR EXAMINER'S USE ONLY

QUESTION	TOTAL MARKS	SCORE
1.Imaginative Composition	20	
2.The Compulsory Set Text	20	
3.The Optional Set Text	20	
TOTAL	**60**	

1. IMAGINATIVE COMPOSITION (20 marks)

Either

(a) Write a composition beginning:

As the man approached, I knew I had seen him somewhere…

Or

(b) Write a composition on the following topic:

Ways of eliminating drug abuse among the youth.

2. FATHERS OF NATIONS By PAUL B. VITTA (20 marks)

Individuals' tribulations in a country are usually caused by inept leadership. With clear illustrations from Paul B. Vitta's *Fathers of Nations*, write a composition to validate this statement.

3. The Optional Set Text (20 marks)

Answer any one of the following three questions.

Either

a) A SILENT SONG AND OTHER STORIES Edited by Godwin Shiundu

Urban people face various challenges. Prove how true this statement is basing your illustrations on Meja Mwangi's *Incident in the Park.*

Or

b) AN ARTIST OF THE FLOATING WORLD By Kazuo Ishinguro

Write an essay on the negative effects of war as portrayed in the novel.

Or

c) PARLIAMENT OF OWLS By Adipo Sidang

Write an essay on oppression as brought out in Parliament of Owls.

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

102/1

KISWAHILI

KARATASI YA 1 (INSHA)

MUDA: SAA 1¾

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

MAAGIZO

a) *Andika jina lako na nambari ya usajili kwenye nafasi ulizoachiwa hapo juu.*

b) *Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.*

c) *Andika insha **mbili**. Insha ya kwanza ni ya **lazima.***

d) *Kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.*

e) *Kila insha isipungue maneno **400**.*

f) *Kila insha ina alama **20.***

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

h) *Insha zote sharti ziandikwe katika nafasi ulizoachiwa kwenye kijitabu hiki cha maswali.*

Kwa matumizi ya mtahini pekee

SWALI	UPEO	ALAMA
1	20	
	20	
JUMLA	40	

MASWALI

1. Andika ratiba ya kutoa Zawadi shuleni. **(alama 20**

2. Usalama umekuwa changamoto nchini kwa muda sasa. Pendekeza hatua serikali itachukua kuimarisha usalama. **(alama 20)**

3. Mvumilivu hula mbivu. Jadili. **(alama 20)**

4. Andika insha itakayo malilzikia ……. Niliyakumbuka maneno ya mwalimu mkuu, machozi yalinotoka njia mbili. Hayawi hayawi huwa. **(alama 20)**

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KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

102/2

KISWAHILI

KARATASI YA 2 (LUGHA)

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

MAAGIZO

I. *Andika jina lako,nambari ya usajili na darasa*

II. *Jibu maswali yote*

III. *Karatasi hii ina kurasa 11 zilizopigwa chapa*

IV. *Maswali yote ni sharti yaandikwe kwa lugha ya kiswahili*

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
1. UFAHAMU	15	
2. UFUPISHO	15	
3. LUGHA	40	
4. ISIMU JAMII	10	
JUMLA	80	

SEHEMU YA A. UFAHAMU (ALAMA 15)

Soma kifungu kifuatacho kisha ujibu maswali yanayofuata.

Suala la mahusiano ya wanadamu katika jamii, uainishaji wake na udhihirikaji wake limewashughulisha wataalamu wa elimu jamii kwa dhari ya miaka. Suala huwatafakarisha wataalamu hao kutokana na umuhimu wake katika maisha ya binadamu. Msingi mkuu wa uainishaji wa mahusiano hayo ni kukichuza kipindi cha mahusiano yenyewe. Yapo mahusiano baina ya waja ambayo yanachukua muda mfupi, kwa mfano saa au dakika chache, na mengine ambayo huenda yakachukua miaka ayami.

Mahusiano ya muda mrefu kabisa ni yale yanayojulikana kama mahusiano ya kudumu. Inamakinika kudai kuwa miundo ya kijamii, kisiasa na kiuchumi huweza kuyadhibiti mahusiano hayo kwa kiasi kikubwa. Watu wengi huitakidi kuwa uhusiano uliopo baina ya mtu na jamaa yake utachukua muda mrefu, na kwa hiyo ni uhusiano wa kudumu. Hali hii utokana na uhalisi kuwa tunahusiana na jamaa zetu kwa kipindi kirefu labda tangu ukembe hadi utu uzima wetu. Uhusiano huu hautarajiwi kuvunjwa na umbali wa masafa baina yetu; tunaendelea kuwasiliana kwa barua au katika enzi hii ya utandawazi, kwa kutumia nyenzo za teknohama kama mtandao na simu za mkononi, na kudumisha uhusiano wetu wa kijamaa. Hata hivyo, inawezekana baadhi ya mahusiano ya kijamaa yasiwe ya kudumu. Mathalan, uhusiano uliopo baina ya mke na mume, na ambao unatarajiwa kuwa wa kudumu au wa kipindi kirefu, unaweza kuvunjwa kwa kutokea kwa talaka. Talaka hiyo inavunja ule uwezekano wa uhusiano wa kudumu unaofumbatwa na sitiari ya pingu za maisha.

Katika ngazi ya pili, mahusiano ya kipindi cha wastani, kuna mahusiano yanayohusisha marafiki zetu maishani, shuleni au kwenye taasisi zote zile, majirani zetu, wenzetu katika mwahali mwa kazi, washiriki kwenye sehemu za ibada au za burudani na wenzetu kwenye vyama tofauti na makundi ya kujitolea. Inawezekana kudahili kuwa baadhi ya mahusiano haya, hususan baina ya marafikina majirani huweza kuwa yamiongo na daima. Hali hii huweza kutegemea muundo na mfumo wa jamii. Kwa mfano, kwa wanajamii wanaoishi kwenyejanibu fulani mahsusi, na kwa miaka tawili bila ya kuhajiri, uhusiano wao na majirani huwea kuwa wa kudumu. Hali hii inasigana na hali iliyoko kwenye maisha ya mijini. Maisha ya mijini yana sifa ya kubadilikabadilika. Isitoshe, kutokana na mfumu wa maisha ya kibepari yameghoshi ubinafsi mwingi. Mawimbi ya mabadiliko na ubinafsi huweza kumomonyoa ukuta wa uhusiano wa kudumu.

Mwelekeo wa maisha ya siku hizi ya uhamaji kutoka maeneo au viambo walikoishi watu unasababisha kupombojea kwa mahusiano ya kudumu baina yao na majirani zao. Uhusiano kati ya wenza katika mazingira ya kazi unahusiana kwa kiasi fulani na ule wa majirani. Vimbunga vya ufutwaji kazi, ubadilishaji wa kazi, hali zisizotegemewa na mifumo yua kimataifa pamoja na hata mifumo ya kisiasa huweza kuathiri mshikamano wa wanaohusika kazini. Kiwango cha mwisho cha mahusiano ni uhusiano wa mpito au wa muda mfupi. Mahusiano ya aina hii hujiri katika muktadha ambapo pana huduma fulani. Huduma

Mwelekeo wa maisha ya siku hizi ya uhamaji kutoka maeneo auviambo walikoishi watu unasababisha kupombojea kwa mahusiano ya kudumu baina yaona majirani zao. Uhusiano kati ya wenza katika mazingira ya kazi unahusiana kwa kiasi fulani na ule wa majirani. Vimbunga vya

ufutwaji kazi, ubadilishaji wa kazi, hali zisizotegemewa na mifumo yua kimataifa pamoja na hata mifumo ya kisiasa huweza kuathiri mshikamano wa wanaohusika kazini. Kiwango cha mwisho cha mahusiano ni uhusiano wa mpito au wa muda mfupi. Mahusiano ya aina hii hujiri katika muktadha ambapo pana huduma fulani. Huduma hizi zinaweza kuwa za kukani, kwenye sehemu za ibada, kwenye kituo cha mafuta, kwa kinyozi, kwa msusi na kadhalika. Kuna sababu kadha zinazotufanya kuyazungumzia mahusiano ya aina hii kama ya mpito. Kwanza, uwezekano wa mabadiliko ya anayeitoa huduma hiyo ni mkubwa. Si ajabu kuwa unaporudi kwa kinyozi aumsusi unatambua aliyekushughulikia hayupo. Hata hivyo, kuna vighairi hususan pale ambapo mtoa huduma ayanayehusika ni Yule Yule mmoja.

Mahusiano ya mpito yanatawaliwa na 'uhusiano wa chembe chembe'. Uhusiano wa chembe chembe, bidhaa ya mfumo wa kibepari, unamaanisha kuwa kinachomshughulisha mtu ni chembe ndogo tu ya mwenzake. Chembe hiyo inaweza kuwa huduma, kwa mfano, gazeti analokuuzia mtu, viatu anavyokushonea, nguo anazokufulia, ususi anaokufanyia n.k. Mahusiano ya aina hii yametovukwa na hisia za utu na ni zao la mirumo ya kisasa ya kiuchumi na kijamii. Mtu anayehusiana na mwenzake kwa misingi ya chembe ndogo tu, huenda asijali kama mwenzake amekosa chakula, amefutwa kazi, amefiliwa, ameibiwa na kadhalika.

Suala kuu tunalopaswa kujiuliza ni: Je, tunahusiana vipi na jamaa zetu taasisi zetu marafiki zetu na majirani zetu? Je, uhusiano wetu na raia wenzetu ni wa aina gani? Je, uhusiano wetu na nchi yetu ni wa mpito au ni wa kudumu?

MASWALI:

(a) Taja kigezo muhimu cha kuzungumzia mahusiano. **(alama 1)**

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(b) Eleza imani ya watu kuhusu uhusiano baina ya jamaa. **(alama 1)**

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(c) Fafanua athari ya teknolojia kwenye mahusiano ya watu. **(alama 2)**

……

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(d) Taja sifa kuu yamahusiano yamuda mfupi. **(alama 2)**

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(e) Eleza sababu nne kuu za kuharibika kwa mhusiano katika maisha ya leo. **(alama 4)**

……

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(f) Je, kifungu, hikikin aujumbe gani mkuu? **(alama 2)**

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……

(g) Eleza maana ya maneno yafuatayo kama yalivyotumiwa katika kifungu. **(alama 3)**

(i) Inasigana –

(ii) Yameghoshi –

(iii) Vighairi –

<u>SEHEMU YA B: UFUPISHO: (ALAMA 15)</u>

<u>Soma makala haya kasha ujibu maswali yanayofuatia.</u>

Mwelekeo wa utoaji mafunzo kwa mwaloimu wa shule za sekondari nchini unazua mjadala. Hatua katika Nyanja hizi zinaonekana kuchukuliwa bila kutilia maanani utabili wa idadi katika siku za usoni.

Hapo miaka ya tisini, walimu wengiwaliohitimukatika shahada za diggrii na diploma hawakuegemea upande wa hisabati, sayansi na lugha (Kiingereza na Kiswahili) Hivyo

kukazuka kampeni za chini kwa chini katika vyuo vya nchi ambayo walimu – wanafunzi walihimizwa kusomea, Hesabati, Sayansi na lugha. Hili lilionekana kuwa suluhu kwa wakati ule kwani punde idadi ya marupurupu maalum maarufukwa jina "Special allowance" kwenye mishahara yao.

Idara za Dini, Historia na masomo mengine husika zilipuuzwa na idadi ya wanafunzi waliojisajili hapa kupunguka kabisa. Wanafunzi katika idara hizi walionekana kutokuwa na matumaini ya kuajiriwa kwani wenzao waliokwisha hitimu walikuwa wengi kupindukia.

Hali hii ilidumishwa na miaka ya karibuni imeshuhudia tatizo linguine tofauti; ubabe wa walimu wa Dini na Historia na ongezeko kubwa la walimu wa Hesabati, Sayansi na lugha. Dalili zake ni ukweli kwamba shule nyngi hazina walimu wa kutosha katika Dini na Historia na zinapotangaza nafasi hizi kuwa wazi hukuwa wanaojitokeza kuzichukua. Miongoni mwa walimu waliohitimu na wanaosaka nafasi za kazi, asilimia kubwa zaidi ni wa Hesabati, Sayansi au lugha. Swali ni je, kwa nini mambo yabadilike haraka jinsi hii"?

Lawama zote zafaa kuandikiwa wizara ya Elimu hasa idara zinazohusika na tarakimu na utoaji wa mafunzo kwa elimu hasa idara zinazohusika na tarakimu na utoaji wa mafunzo kwa walimu. Kwa kufuata njia za kitaalamu, inawezekana kukadiria idadi ya walimu watakaohitajika katika masomo mbalimbali kwa kipindi cha miaka hamsini au hata zaidi. Maafisa katika idara hizi wafaa kuajibika na kutoa mwelekeo dhabiti ili kuiepusha nchi matatizo kama hayo.

MASWALI:

(a) Fupisha aya ya kwanza na ya pili kwa maneno 50. (alama 6, mtiririko 1)

Nakala chafu

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Nakala safi

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(b) Ni hoja zipi muhimu zinazojitokeza katika aya ya tatu hadi ya mwisho? alama 7, mtitiriko 1)

Nakala chafu

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Nakala safi

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SEHEMU YA C: MATUMIZ YA LUGHA

1. (a) Haya ni maneno gani?

(i) Hazari ya ufizi, herufi ya chini hati, herufi ya chini kati, nazari ya midomo. **(alama 1)**

(ii) Mbele juu, mbele hati, nyuma juu na mbele kati. **(alama 1)**

(b) Eleza sifa bainifu za sauti /h/ **(alama 2)**

(c) Andika mifano ya sauti za mdomo-meno.

(i) _____

(ii) _____

2. Andika sentensi moja na "vile" kama kitenzi na kivumishi. **(alama 2)**

3. Yahinisha sentensi hii: **(alama 2)**

Jambazi baya halikuuawa kwa kupigwa risasi.

4. Ainisha vishazi katika sentensi ifuatayo: **(alama 2)**

Ingawa shamba lake si kubwa, linatoa mazao tele.

5. Onyesha matumizi ya **PO** katika sentensi:

(i) Alipoketi pana vumbi. **(alama 2)**

(ii) Aketipo pana vumbi. **(alama 2)**

6. Andika ukubwa wingi wa:

Mbuzi alitoka katika shamba la mwanamke. **(alama 3)**

……

……

……

7. Kanusha sentensi ifuatayo. **(alama 2)**

Nyumba yake ina milango mikubwa na mapamba mengi.

8. Eleza maana nne za sentensi ifuatayo. **(alama 4)**

Alinunuliwa ng'ombe na mtoto wake.

(i)

(ii)

(iii)

(iv)

9. Changanua sentensi kwa visanduku. **(alama 4)**

Wanafunzi wasiofanya mitihani watapata alama za kuudhi.

10. Iunde upya sentensi hii ukigeuza shamirisho kitondo kuwa kiima. **(alma 2)**

Tuna mwandalia mgeni chakula saa hivi.

11. Andika kwa udogo. **(alma 2)**

Tulipoyaona yalikuwa yakisoma majitabu.

12. Neno “furaha” liko katika ngeli gani? **(alama 2)**

13. Andika kinyume cha sentensi hii. **(alama 2)**

Watoto wanaombwa waanike nguo.

14. Onyesha na uainishe mofimu katika neno: **(alama 2)**

Tulipowapitisha

SEHEMU YA D: ISIMU JAMII

(a) Eleza maana ya istilahi zifuatazo. **(alama 2)**

(i) Sajili –

(ii) Lahaja –

(b) Taja nadharia tatu za chimbuko la Kiswahili. **(alama 3)**

(c) (i) Eleza maana ya dhana usanifishaji. **(alama 2)**

(ii) Eleza dhima mbili za lugha rasmi. **(alama 2)**

(iii) Fafanua sababu mbili za usarufishaji wa Kiswahili. **(alama 2)**

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KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

102/3

KISWAHILI

KARATASI YA 3 (FASIHI)

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

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, Ushairi, 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	

SEHEMU YA A: NGUUU ZA JADI (CLARA MOMANYI)

1. Fafanua ufaafu wa anwani "Nguu za Jadi".. **(alama 20)**

SEHEMU YA B: BEMBEA YA MAISHA

2. Eleza umuhimu wa mhusika Sara katika kujenga vipengele vifuatavyo. **(alama 20**

(i) Ploti

(ii) Maudhui

au

3. "Maisha ya sasa hayana fundi. Yanamwendesha mtu kama tawi lililosukumwa hadi likang'oka kutoka Tagani na kupeperushwa na upepo.

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

(ii) Tambua vipengee vya kimuundo katika dondoo. **(alama 2)**

(iii) Eleza sifa nne za msemewa. **(alama 4)**

(iv) Thibitisha kauli ya msemaji ukirejelea tamthilia nzima. **(alama 10)**

SEHEMU YA C: FASIHI SIMULIZI

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

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

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

5. SEHEMU YA D: USHAIRI

Soma shairi lifuatalo kisha ujibu maswali yanayofuata.

Daima alfajiri na mapema
Hunipitia na jembe na kotama
Katika njia iendayo kondeni
Kama walivyofanya babuze zamani;
Nimuonapohuwa anatabasamu
Kama mtu aliye na kubwa hamu
Kushika mpini na kutokwa jasho
Ili kujikimu kupata malisho.

Anapotembea anaskiliza
Videge vyaanga vinavyotambuiza

Utadhani huwa vimemngojea
Kwa usikukucha kuja kumwimbia;
Pia pepo baridi kumpepea
Rihi ya maua zikimletea
Nao umande kumbusumiguu'
Na miti yote hujipinda migongo
Kumpapasa, kumtoa matongo;
Na yeye kuendelea kwa furaha
Kuliko yeyote anayemjua
Akichekelea ha ha ha ha ha ha …..

Na mimi kubaki kujiuliza
Kuna siri gani inayomliwaza?
Au ni kujua au kutojua?
Furaha ya mtuni furaha gani
Katika dunia inayomhini?
Ukali wa jua wamnyima zao
Soko la dunia lamkaba koo;
Dini za kudhani zamsonga roho
Ayalimia matumbo ya warobo;
Kuna jambo gani linamridhisha?
Kama si kujua ni kutokujua
Laiti angalijua, laiti angalijua!

MASWALI:

(a) Eleza hali ya mzungumziwa katika shairi. **(alama 4)**

(b) Huku ukitoa mfano, onyesha aina mbili za uhuru wa Kishairi uliotumiwa katika shairi. **(alama 2)**

(c) Fafanuaa ina tatuza taswira ukirejelea ubeti wa pili. **(alama 3)**

(**d)** Eleza umuhimu wa maswali yabalagha katika shairi hili. **(alama 2)**

(e) Bainisha vipengele vifuatavydo vya kimtindo katika shairi hili. **(alama 3)**

(i) Tashhisi –
(ii) Kinaya
(iii) Tashbihi

(f) Eleza toni ya shairi hili. **(alama 2)**

(g) Bainisha nafsi neni katika shairi hili. **(alama 1)**

(h) Changanua muundo wa shairi hili. **(alama 3)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

MATHEMATICS

121/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Instructions to candidates

(a) Write your name and admission number in the spaces provided above.

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

(c) This paper consists of two sections: **Section I** and **Section II**.

(d) Answer all questions in **section I** and **only five** questions from section **II**.

(e) **Show all the steps in your calculations, giving the answers at each stage in the spaces provided below each question.**

(f) Marks may be given for correct working even if the answer is wrong.

(g) **Non-programmable** silent electronic calculators and KNEC mathematical tables may be used, except where stated otherwise.

(h) **Candidates should answer the questions in English.**

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

SECTION I (50 MARKS)

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

1. Evaluate without using a calculator. **(3 Marks)**

$$\frac{\frac{5}{6} of \left(4\frac{1}{3} - 3\frac{5}{6}\right)}{\frac{5}{12} x \frac{3}{25} + 1\frac{5}{9} \div 2\frac{1}{3}}$$

2. Without using a calculator or mathematical tables simplify. **(3 Marks)**

$$\sqrt{\frac{0.504\ X14.3\ X910}{0.28\ X\ 1.17\ X\ 28.6\ X7}}$$

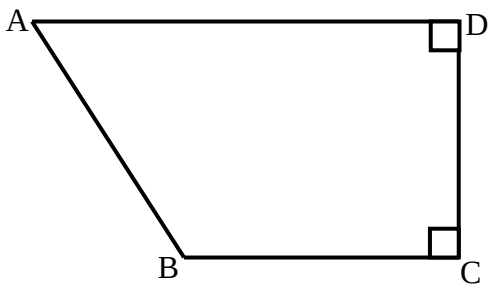
3. Find the value of x if **(3 Marks)**

$\left(\frac{27}{8}\right)^{x+7} = \left(\frac{4}{9}\right)^{-3x}$

4. Three sirens wail at intervals of thirty minutes, fifty minutes and thirty minutes. If they wail together at 7.18 a.m. on Monday, what time and day will they wail together? **(3 Marks)**

5. A two-digit number is such that the sum of the ones digit and the tens digit is 10. If the digits are reversed, the number exceeds the original number by 54. Find the number. **(3 Marks)**

6. The figure below shows quadrilateral ABCD in which AB = 6cm. BC = $\frac{1}{2}$CD, CD = DA and angle ADC = angle BCD = 90^0.



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Calculate the area of the quadrilateral ABCD. **(4 Marks)**

7. The interior angle of a regular polygon is 108^0 larger than the exterior angle. How many sides has the polygon? **(3 Marks)**

8. A salesman is paid a salary of Sh. 10,000 per month. He is also paid a commission on sales above Sh. 100,000. In one month he sold goods worth Sh. 500,000. If his total earning that month was Sh. 56,000. Calculate the rate of commission. **(3 Marks)**

9. A cylinder of radius 14cm contains water. A metal solid cone of base radius 7cm and height 18cm is submerged into the water. Find the change in height of the water level in cylinder**.(3 Marks)**

10. Simplify the following. **(3 Marks)**

$\frac{2x-4}{12-3x^2} - \frac{1}{3x+6}$

11. A mother is now $2\frac{1}{2}$ times as old as her daughter Mary. Four years ago the ratio of their ages was 3:1. Find the present age of the mother. **(3 Marks)**

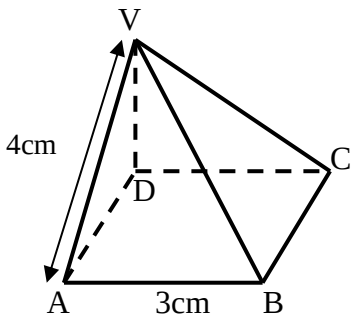
12. The line which joins the point A (3, k) and B (-2, 5) is parallel to the line whose equation is $5y + 2x - 7 = 0$. Find the value of k. **(3 Marks)**

13. A Kenyan bank buys and sells foreign currencies at the exchange rates shown below.

	Buying (KShs.)	Selling (KShs.)
1 Uuro	147.86	148.00
1 US Dollar	74.22	74.50

An American arrived in Kenya with 20 000 Euros. He converted all the Euros to Kenya shillings at the bank. He spent KShs. 2,512,000 while in Kenya and converted the remaining Kenya shillings into US Dollars at the bank. Find the amount in Dollars that he received. **(3 Marks)**

14. The diagram below represents a right pyramid on a square base of side 3cm. The slant edge of the pyramid is 4cm.



(a) Draw a labelled net of the pyramid. **(2 Marks)**

(b) On the net drawn, measure the height of a triangular face from the top of the pyramid. **(1 Mark)**

15. Using logarithms tables only, evaluate. **(4 Marks)**

$$\sqrt[3]{\frac{849.6\ X\ 2.41}{3941}}$$

16. Use reciprocal and square tables to evaluate, to 4 significant figures, the expression.**(3 Marks)**

$$\frac{1}{0.3654} - 4.151^2$$

SECTION II (50 MARKS)

Answer only five questions in this section in the spaces provided.

17. A group of people planned to contribute equally towards buying land at a price of Shs 180,000. However 3 members of the group withdrew from the project. As a result, each of the remaining members were to contribute KShs. 3000 more.

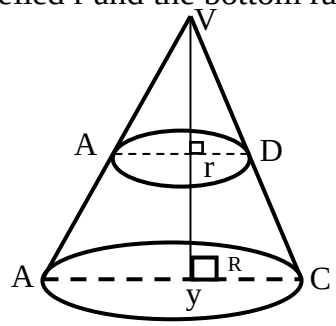
(a) Find the original number of members in the group. **(6 Marks)**

(b) How much would each person have contributed if the 3 people had not withdrawn. **(2 Marks)**

(c) Calculate the percentage increase in the contribution per person caused by the withdrawal.

(2 Marks)

18. The figure below shows a cone from which a frustum is made. A plane parallel to the base cuts the cone two thirds way up the vertical height of the cone to form frustum ABCD. The top surface radius of the frustum is labelled r and the bottom radius R.



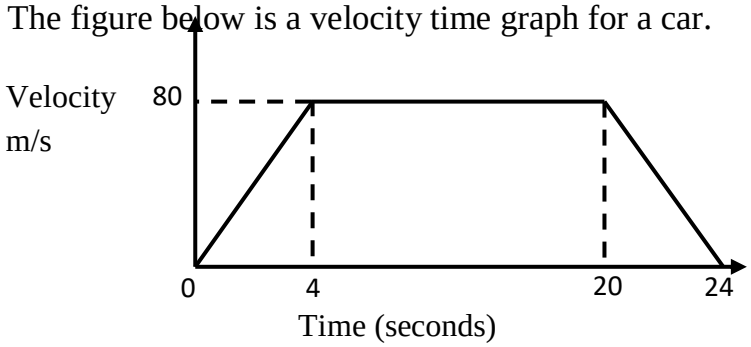
(a) Find the ratio r:R. **(1 Mark)**

(b) Given that r = 7cm, find R. **(2 Marks)**

(c) If the height VY of the original cone is 45cm. Calculate to the nearest whole number the volume of the frustum. (Take $\pi = \frac{22}{7}$) **(4 Marks)**

(d) The frustum represents a bucket which is used to fill a rectangular tank measuring 1.5m long, 1.2m wide and 80cm high with water. How many full buckets of water are required to fill the tank. **(3 Marks)**

19. (a) The figure below is a velocity time graph for a car.



(i) Find the total distance travelled by the car. **(2 Marks)**

(ii) Calculate the deceleration of the car. **(2 Marks)**

(b) A car left Nairobi towards Eldoret at 7.12 a.m. at an average speed of 90km/h. At 8.22 a.m, a bus left Eldoret for Nairobi at an average speed of 72km/hr. The distance between the two towns is 348km. Calculate:

(i) the time when the two vehicles met. **(4 Marks)**

(ii) the distance from Nairobi to the meeting place. **(2 Marks)**

20. The following distribution shows the marks obtained by 82 students in a Mathematics test.

Marks	20-29	30-39	40-49	50-59	60-69	70-79	80-89
Frequency	3	18	13	14	17	12	5

(a) State the modal class. **(1 Mark)**

(b) Calculate to 2 decimal places:

(i) the mean mark **(4 Marks)**

(ii) the difference between the median and the mean marks. **(5 Marks)**

21. John bought 3 brands of tea; A, B and C. The cost price of the three brands were Sh. 25, Sh. 30 and Sh. 45 per kilogram respectively. He mixed the three brands in the ratio 5:2:1 respectively. After selling the mixture, he made a profit of 20%.

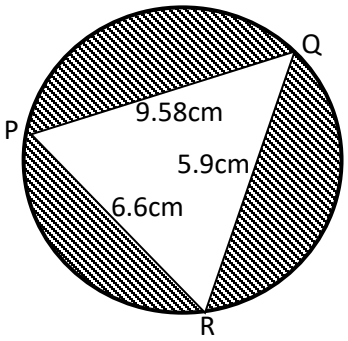
(a) How much profit did he make per kilogram of the mixture? **(4 Marks)**

(b) After one year the cost price of each brand was increased by 10%.

(i) For how much did he sell one kilogram of the mixture to make a profit of 15%?
(Give your answer to the nearest 5 cents) **(3 Marks)**

(ii) What would have been his percentage profit if he sold one kilogram of the mixture at Sh. 45.
(3 Marks)

22. Triangle PQR is inscribed in the circle. PQ = 7.8cm, PR = 6.6cm and QR = 5.9cm.



Find;

(a) size of angle QPR **(3 Marks)**

(b) the radius of the circle. **(3 Marks)**

(c) the area of the shaded region. **(4 Marks)**

23. P, Q and R are three villages such that PQ = 10km, QR = 8km and PR = 4km are connecting roads.

(a) Using a scale of 1cm to represent 1km, locate the relative positions of the three villages. **(2 Marks)**

(b) A water tank T is to be located at a point equidistant from the three villages. By construction locate water tank T and measure its distance from R. **(2 Marks)**

(c) Determine the shortest distance from T to the road PQ by construction. **(2 Marks)**

(d) Determine the area enclosed by the roads PQ, QR and PR by calculation. **(3 Marks)**

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

(a) (i) Draw triangle PQR and $P^IQ^IR^I$ on the grid provided. **(2 Marks)**

(ii Describe fully a single transformation which maps triangle PQR onto triangle $P^IQ^IR^I$. **(1 Mark)**

(b) (i) On the same grid, draw triangle $P^{II}Q^{II}R^{II}$ the image of PQR under a reflection on the line $y + x = 0$ **(2 Marks)**

(ii) Describe fully a single transformation which maps triangle $P^{II}Q^{II}R^{II}$ onto triangle PIQIRI. **(1 Mark)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

MATHEMATICS

121/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INSTRUCTION TO CANDIDATE'S:

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

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

*(c) This paper consists of **TWO** sections: **Section I** and **Section II**.*

*(d) Answer **ALL** the questions in **Section I** and any **five** questions from Section **II**.*

*(e) **Show all the steps in your calculation, giving your answer at each stage in the spaces provided below each question**.*

(f) Marks may be given for correct working even if the answer is wrong.

*(g) **Non-programmable** silent electronic calculators and **KNEC** Mathematical tables may be used, except where stated otherwise.*

*(j) **Candidates should answer the questions in English**.*

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

SECTION I (50 MARKS)

Answer ALL questions in the spaces provided.

1. Agotho has a rectangular plot that was measured to the nearest meter and found to be 80m in length and 60m in width. Determine the percentage error in its perimeter. **(3 marks)**

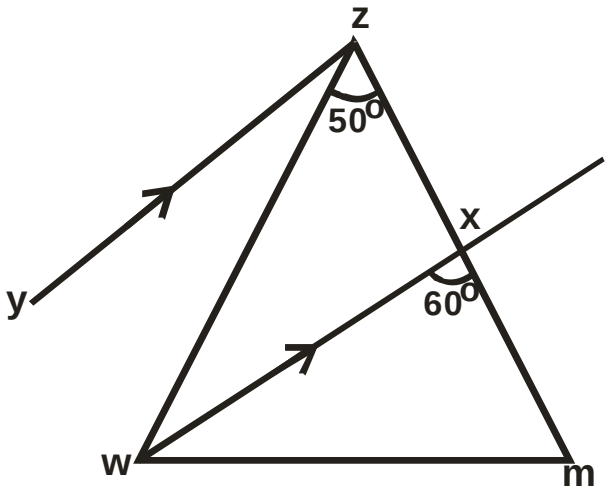
2. Determine the inverse of the matrix $\begin{pmatrix} 4 & 3 \\ 5 & -2 \end{pmatrix}$. Hence find the coordinates of the point at which the two lines $4x - 18 = -3y$ and $5x - 2y = 11$intersect. **(4 marks)**

3. Solve the equation.

$5^{2x+1} - 3(5^{x+1}) + 10 = 0$ **(4 marks)**

4. Solve for x in the equation cos x = sin (3x – 30). Hence determine the value of tan x leaving your answer in surd form. **(3 marks)**

5. In the figure below, yz is parallel to wx. Angle wzx = 50^o and angle wxm = 60^o. Determine the size of angle yzw. **(2 marks**



6. Kaula has two types of coffee, costing Ksh.120 and Ksh.200 respectively. He mixed them in the ratio 6 : 5 by weight.

a) Determine to the nearest shilling the cost of one kilogramme of the mixture. **(2 marks)**

b) Find the percentage profit on the cost price if the mixture was sold at Ksh 250.(give your answer in 2 d.p). **(2 marks)**

7. Rationalise the denominator and simplify leaving your answer in the form $\sqrt{a} + b$. **(3 marks)**

$$\frac{\sqrt{2} + 2\sqrt{5}}{\sqrt{5} - \sqrt{2}}$$

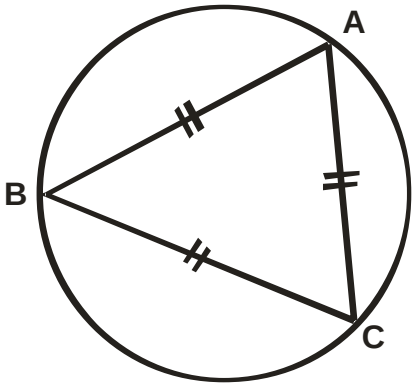
8. Use squares, square roots and reciprocals tables only to evaluate;

$\frac{3}{\sqrt{42.15}} + \frac{4}{(3.152)^2}$ **(4 marks)**

9. Make h the subject of the formula in

m = $\frac{p}{\sqrt{h}+k^2}$ (**3 marks)**

10. The diagram below shows an equilateral triangle ABC inscribed in a circle of radius 9cm. Calculate the length of the sides of the triangle (2 d.p) **(2 marks)**



11. Simplify $\frac{9x^2-1}{3x^2+2x-1}$ **(3 marks)**

12. Use the trapezium rule to estimate the area bounded by the curve $y + x^2 = 4$ and the lines $y = 0$, $x = -2$ and $x = 2$ using four strips. **(3 marks)**

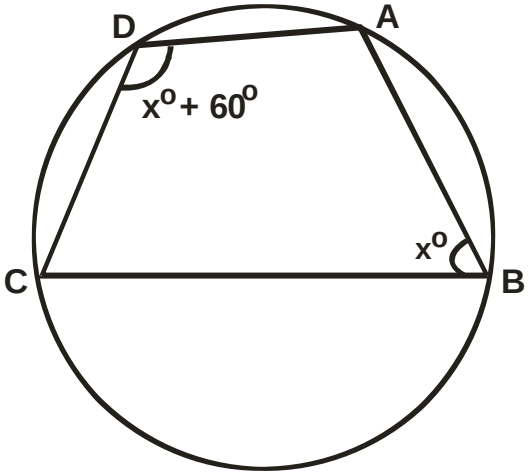
13. A circle of radius 3cm has its centre at (3, −2). Express the equation of the circle in the form $x^2 + y^2 + mx + ny + c = 0$. Where m, n and c are **constants.** **(3 marks)**

14. Find the equation of the normal to the curve $y = (x^2 + 1)(x - 2)$ when $x = 2$. **(4 marks)**

15. a) Expand $\left(1-\frac{1}{2}x\right)^5$ **(1 mark)**

b) Use the expansion upto x^3 in (a) above to evaluate $(0.98)^5$ correct to 4 d.p **(2 marks)**

16. The figure below shows a quadrilateral ABCD which is cyclic. Solve for x. **(2 marks**



SECTION II (50 MARKS)

*Answer only **FIVE** questions from this section in the spaces provided.*

17. Mr. Kobe is a civil servant who earns a monthly salary of Ksh.21200. He has a house allowance of Ksh.12000 per month, other taxable allowances are commuter Ksh.1100, medical allowance Ksh.2000. He is entitled to a personal relief of Ksh.1240 per month.

Using the income rates below, solve the questions that follow.

Income in Ksh. per month	Rates in Ksh per sh 20
1 – 8,400	2
8401 – 18,000	3
18001 – 30,000	4
30001 – 36,000	5
36001 – 48,000	6
Above 48,000	7

Determine;

a) i) His monthly taxable income. **(2 marks)**

ii) Net tax (PAYEE) **(5 marks)**

b) In addition to the PAYEE, the following deductions were made. Ksh.250 for NHIF, Ksh.120 service charges,he repays a loan at sh.4500 and contributes towards savings at sh.1800 every month. Calculate his net salary per month. **(3 marks)**

18. A triangle ABC has vertices A(-2, 6) B(2, 3) and C(-2, 3). Triangle $A^1B^1C^1$ is the image of triangle ABC under a reflection in the line x = -3.

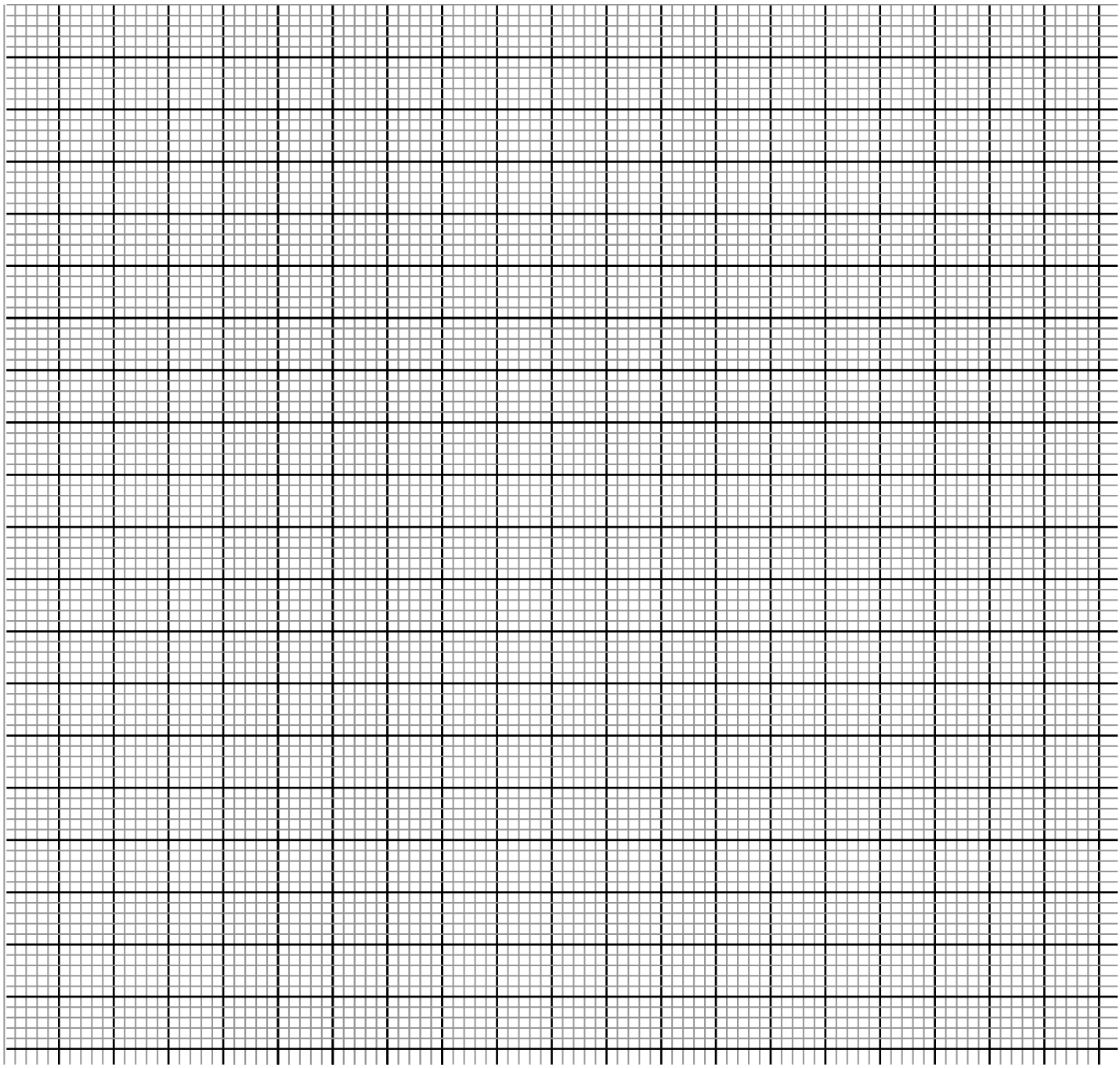
a) Draw triangle ABC and its image $A^1B^1C^1$ on the same axis. **(2 marks)**

b) Triangle $A^1B^1C^1$ is mapped onto $A^{11}B^{11}C^{11}$ under a translation vector $\begin{pmatrix}10\\2\end{pmatrix}$. Given that A^{111}(6,-6) B^{111}(2, -3) and C^{111}(6, -3) are the images of $A^{111}B^{111}C^{111}$ under another translation.

i) Draw triangle $A^{11}B^{11}C^{11}$ **(2 marks)**

ii) Determine and describe fully the transformation that maps triangle $A^{11}B^{11}C^{11}$ onto triangle $A^{111}B^{111}C^{111}$ **(3 marks)**

iii) Describe fully the transformation that would map triangle ABC onto triangle $A^{111}B^{111}C^{111}$ **(3 marks)**



19. a) From whole numbers 1 to 10, a number is selected at random, find the probability that, the number selected is a prime or a multiple of 3. **(2 marks)**

b) A tetrahedron is thrown and a coin is tossed.

i) List down all the possible events in the probability space. **(1 mark)**

ii) Find the probability of getting atleast 2 and a head. **(2 marks)**

c) i) A bag contains 6 white marbles and some brown ones. If the probability of picking a brown marble is 0.6, find the number of marbles in the bag. **(3 marks)**

ii) Two marblesare then picked, one at a time from the bag in c(i) above, with replacement. Find the probability that the marbles picked are of different colours. **(2 marks)**

20. Three villages PQR are located from central town X which is on a bearing of 340^{o} from another town Y. Village Q is east of town X and 6km from town Y, on the bearing of 040^{o} while village P is on a bearing of 045^{o} from town X. Village R and P are due north of town Y. Village R is on a bearing of 250^{o} from village Q.

a) By scale drawing represent the above information in a diagram. **(7 marks)**

b) From the diagram find;

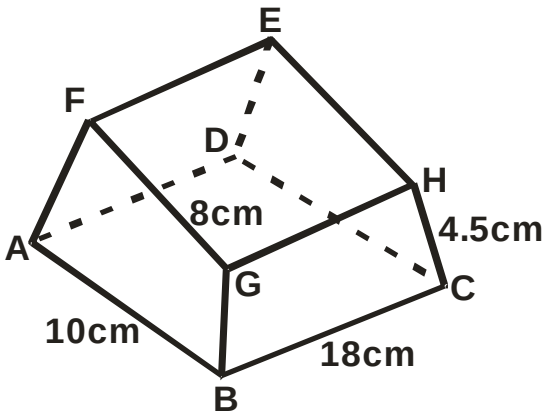
i) The bearing of village R from town X. **(1 mark)**

ii) The distance between;

Village P and Q **(1 mark)**

Village R and town Y **(1 mark)**

21. ABCDEFGH is a prism where ABCD, FGHE, BCHG and ADEF are rectangles while AFGH and DCHE are trapezia. AB = 10cm, FG = 8cm, BC = 18cm and CH = 4.5cm.



a) Calculate the length of AH. **(4 marks)**

b) Calculate the angle between planes ABCD and BCHG. **(2 marks)**

c) The angle between the plane ABCD and ABHE **(2 marks)**

d) The volume of the prism. **(2 marks)**

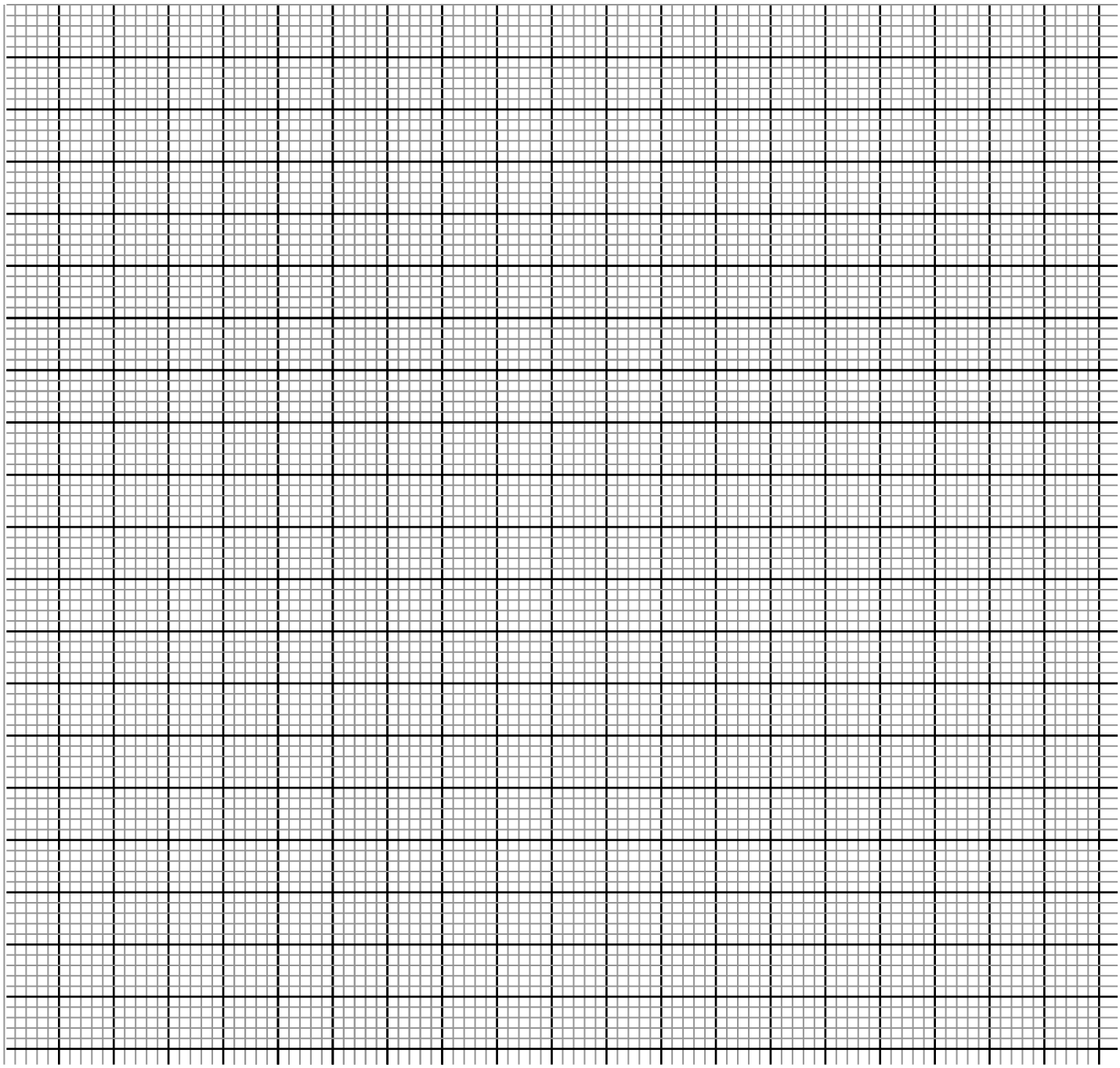
22. a) Complete the table for $0^o \leq x \leq 360^o$ for the functions y = sin x and y = $\frac{1}{2}\sin 2x$ (2 marks)

x	0	30	60	90	120	150	180	210	240	270	300	330	360
$\frac{1}{2}\sin 2x$	0.00		0.43			0.25	0		-0.43		-0.43		0
Sin x	0.00	0.5		1			0	-0.5			-0.87		0

b) Using a scale of 1cm represent 30^o on the x-axis and 4cm to represent 1 unit on the y-axis, draw the graph of y = $\frac{1}{2}\sin 2x$ and y = sin x^o for $0^o \leq x \leq 360^o$ on the same axis.
(5 marks)

c) Use your graph to find the range $\frac{1}{2}\sin 2x \leq \sin x$ **(1 mark)**

d) State the period and amplitude for the curve y = $\frac{1}{2}\sin 2x$ **(2 marks)**



23. The displacement s metres of a particle moving along a straight line after t seconds is given by $s = -2t^3 + \frac{3}{2}t^2 + 3t + 4$

a) Find its initial acceleration. **(3 marks)**

b) Calculate;

i) The time the particle was momentarily at rest. **(3 marks)**

ii) Its displacement by the time it comes to rest momentarily. **(2 marks)**

c) Calculate the maximum velocity attained. **(2 marks**

24. A certain carpenter has been contracted by a college to supply a number of beds and doors. He has to supply almost 100 items. He has a total of 480 man hours to do the work. In addition, the following conditions should be met.

	Beds	Doors
Minimum number of items	10	20
Man hours per item	2	6
Profit per item	200	300

Taking x to represent the number of beds and y the number of doors:

a) Write all the inequalities to represent the above information. **(4 marks)**

b) Represent the inequalities on the grid provided. **(4 marks)**

c) Find the maximum profit that can be got from the supply. **(2 marks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

COMPUTER STUDIES

451/1 (THEORY)
PAPER 1
TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTION TO CANDIDATES

- Write your name and Admission number in the spaces provided above
- *This paper consists of **two** sections A and B.*
- *Answer **ALL** questions in section A.*
- *.Answer question **11** and any other **THREE** questions from section B.*
- *All answers should be written in the spaces provided on the question paper.*

FOR EXAMINERS USE ONLY

SECTION	QUESTIONS	CANDIDATE'S SCORE
A	1-15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

SECTION A

Answer All the questions in this section in the spaces provided

1. State **two** reasons why it is advisable to follows the correct procedure when shutting down the computer at all times. **(2 marks)**

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2. Name and give the function of the following key symbols.

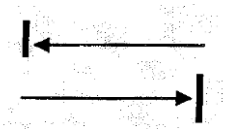
(i) **(1 mark)**



Name……

Function……

(ii) **(1 mark)**



Name……

Function……

……

3. A computer virus is a destructive program that attaches itself to other files and installs itself without permission on the computer when the files are opened for use. Give **three** ways in which computers can protected against virus attack **(3marks)**

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4. State **three** characteristics of computer main memory **(3 marks)**

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5. A printer fails to work as expected when a document is sent to be printed. The user has checked that the on-line light of the printer is on and the printing paper is correctly inserted. Give **two** other possible reasons why the printing process failed. **(2 marks)**

6. Describe the following terms as used in computer data security

a) Firewalls **(1 mark)**

b) Audit trail. **(1 mark)**

7. State **four** ways in which computers are used in banks **(2 marks)**

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8. A student typed a passage in Microsoft word and the last line of the letter flowed to the second page.

a) What name is given to such last line that flowed to the second page **(1 mark)**

b) State **three** ways in which the student could have the letter to fit one page without changing the paper size **(3 marks)**

9. Explain the following terms as used in Microsoft Excel spread sheet package**.** **(3marks)**

a) Range

b) What if analysis

c) Automatic recalculation

10. State the data processing mode most appropriate for the following scenarios: **(4 marks)**

a) To prepare payroll for workers in Central Bank of Kenya

b) For automated production control in a chemical manufacturing industry

c) Managing ATMs transactions for KCB Ltd in different towns in the country

d) Prepare examination report forms at the end of an academic year

11. A school has decided to network its computers so that it can distribute information to all its departments. The school also intends to upload the information to parents. The various services are to be provided by servers. Briefly describe the services provided by **(3marks)**

a) Print server

b) File server

c) Mail server

12. Using an illustration, describe the term text direction as used in DTP **(2 marks)**

13. i) Define the following terms as used in a database

a). Attribute **(1 mark)**

b). Database model **(1 mark)**

ii) State **two** objectives of normalization as used in databases **(2 marks)**

14. Differentiate between a system administrator and a database administrator as used in computers . **(2 marks)**

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15. State **two** advantages of using automated production in industries **(2 marks)**

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SECTION B

Answer **question 16** and any other **three questions from this section**

16 a) State the best application area for the following programming language **(4mrks)**

(i) FORTRAN ……

(ii) Mercury …….

(iii) PHP ……

(iv) C ……..

b) State **two** differences between compiler and interpreter **(2mrks)**

Compiler	**Interpreter**

c) Study the following pseudocode then answer the questions that follow:

```
Start
R =2
While R<=6 Do
Y=2 + (R^R) + 4
Print Y
R = R + 2
End while
Stop
```

(i) Work out the output from the pseudocode **(4marks)**

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(ii) Translate the above pseudocode to a flowchart **(5 mrks)**

17. a) Differentiate between the following:

(i) Intranet and Extranet **(2 marks)**

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(ii) Modulation and demodulation **(2 marks)**

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(iii) Dial-up and direct ISP connection **(2 marks)**

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b) Explain the importance of the following

(i) Web portal **(1mark)**

……

……

(ii) Hyperlink **(1mark)**

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……

(iii) Blog **(1mark)**

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c) Name the parts in the following addresses:

(i) tkariuki@equitybank.co.ke **(2marks)**

……

……

……

(ii) www.starshines.sc.ke **(2marks)**

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d) Explain the concept of teleworking **(2marks)**

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18.a) Fill the gaps in the following table **(6marks)**

Category of software	**Use**	**Example**
DTP		
		AutoCAD
	Used for statistical analysis of values	

b) Name the disk management activity described below **(5 marks)**

(i) Creates logical drives in a disk

……

(ii) Deletes idle files to create more disk space

……

(iii) Aligns tracks and sectors in a disk

……

(iv) Allows contents of a file to occupy contiguous sectors for faster access..……..

(v) Creation of copies of important files on another drive…….

c) Explain what the following commands will accomplish once executed

(i) C: \> Copy S* E: **(2marks)**

……

……

……

(ii) D:\>Deltree Subjects **(2marks)**

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19. a) Using examples of a school setup, explain the following changeover strategies **(9 marks)**

i) Straight change over

ii) Parallel change over

iii) Phased change over

b) Give **two** implications of a poorly implemented system change over **strategy** **(2 marks)**

c) Explain any **two** characteristics of a system **(4 marks)**

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20. a) Give **three** ways of representing signed binary numbers in a computer **(3 marks)**

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b) Perform the following binary arithmetic and leave your answer in denary form **(6 marks)**

i) $1101.101_2+1011.01_2+111.11_2$

ii) $10001.1001_2-1011.111_2$

c) Convert the following:

i) -34_{10} to twos complement **(3 marks)**

ii) $7\ ^4/_{5\ 10}$ to binary **(3 marks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

COMPUTER STUDIES

451/2 (PRACTICAL)
PAPER 2
TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

a) Indicate your name and index number at the right hand corner of each printout

b) Write your name and index number on the CD/removable storage medium provided

c) Write the name and version of the software used for each question attempted in the answer sheet provided

d) Answer all the questions

e) All questions carry equal marks

f) Passwords should not be used while saving in the CD/removable storage Medium

g) Marked printout of the answers on the sheet

h) Arrange your printouts and staple them together

i) Hand in all the printouts and the CD/removable storage medium used

j) All the work should be saved at the desktop of your computer in a folder named with our name and index number. All the work in your folder should be burned to the CD/WR provided.

Q1. a)Type the following passage exactly as it appears and save it as 21CLD **(25 marks)**

21st Century Learning Design

Introduction

Students around the world need advanced skills to succeed in the globalised, knowledge-based world of today. 21st Century Learning Design, or 21CLD, professional development helps teachers redesign their existing lessons and learning activities to build students' 21st century skills.

21CLD online

The 21CLD curriculum - developed to enhance 21st century skills in student learning - builds on the 21CLD research methodology, providing a collaborative, practice-based process that helps educators transform how they design enriching learning activities for their students.

The 21CLD curriculum is based on rubrics,	which have been developed and tested	internationally for the Innovative	Teaching and Learning (ITL)

The 21CLD curriculum describes six rubrics. These are:

1. Collaboration
2. Skilled communication
3. Knowledge construction
4. Self-regulation
5. Real-world problem-solving and innovation
6. Use of ICT for learning

21CLD elements

The core elements of the 21CLD curriculum include:

- A focus on redesigning learning to develop 21st century skills and deepen understanding of 21CLD curricular goals.
- Facilitating educators to use new learning designs within their own teaching and to analyse the impact on student learning.

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21CLD course structure

The 21CLD curriculum consists of the following 8 online courses: The 21CLD introductory course explains the background to the 21st century skills; The 21CLD rubric[i] is used to analyse learning unit examples; The final course brings together all of the 21st century learning design elements

21CLD OneNote

T his OneNote provides all of the resources and reading materials to accompany the 21CLD courses. Under each tab, you will find the 21CLD rubrics, decision trees and anchor lessons used throughout the online course.

b) Insert a table of contents at the beginning of the document showing the topics covered in the 21CLD course as shown below. Save your work as 21CLD TABLE OF CONTENTS (3 marks)

Contents

21st Century Learning Design 1
Introduction 1
21CLD online 1
21CLD elements 1
21CLD course structure 2
21CLD OneNote 2

c) Assessment was done on the application of the 21CLD and results recorded in a table. Design the table exactly as it appears. Save your work as RESULTS (5 marks)

NAME	CLASS	ADMNO	CAT1/30	CAT2/30	EXAM/100	AVERAGE

[i] A **rubric** for **assessment**, usually in the form of a matrix or grid, is a tool used to interpret and grade students' work against criteria and standards.

Mercy Jayden	4 Blue	5068	26	13	70	
Catherine Johns	4 Yellow	5897	14	10	30	
Crystal Evans	4 Purple	5589	19	20	74	
GRAND TOTAL						
Lowest CAT1						
Highest CAT2						

Insert a function to display the:

i) AVERAGE for all the students **(2 marks)**

ii) GRAND TOTAL **(1 mark)**

iii) Lowest score in CAT1 **(1 mark)**

iv) The Highest score in CAT2 **(1 mark)**

d) Insert the following expression **(2 marks)**

$$e^x = 1 + \frac{x}{1!} + \frac{x^2}{2!} + \frac{x^3}{3!} + \cdots, \ -\infty < x < \infty$$

e) Double space the names in the table **(2 marks)**

f) Search and replace the word "Skills" and replace with "Competence" **(2 marks)**

g) Insert a header "Competence Based Curriculum" **(2 marks)**

h) Print the documents on both sides of the paper **(4marks)**

2. The following tables represent data for a video store named Sinai Video store. Study them and answer the questions that follow:

Table 1: MEMBERS

Member No	First name	Last name	Address	Phone	Town	Monthly fee
SVS-0001	Raphael	Mudibo	P.O.Box 343	(020)22112	Nairobi	Kshs 50
SVS-0002	Mary	Musembi	P.O Box 121	(050)34342	Gilgil	Kshs 50
SVS-0003	Bernard	Angaine	P.O Box 441	(038)24242	Naivasha	Kshs 50
SVS-0004	Gabriel	Laisula	P.O Box 134	(020)11445	Nairobi	Kshs 50
SVS-0005	Nelly	Mwangi	P.O Box 989	(038)25423	Naivasha	Kshs 50
SVS-0006	Janet	Mbori	P.O Box 323	(025)45343	Kisii	Kshs 100
SVS-0007	Bruce	Nyaga	P.O Box 544	(050)31322	Gilgil	Kshs 150
SVS-0008	Andrew	Bosibori	P.O Box 331	(025)21423	Kisii	Kshs 50
SVS-0009	Abubakar	Said	P.O Box 900	(028)23432	Isiolo	Kshs 100
SVS-0010	Samantha	Wellings	P.OBox 232	(025)53293	Kisii	Kshs 150

Table 2: RENTAL

Date collected	Member No	Disk No	Due Date	Rental Amount
1-May-2018	SVS-0004	001	5-May-2018	Kshs 20
12-May-2018	SVS-0001	003	16-May-2018	Kshs 20
15-June-2018	SVS-0005	002	19-June-2018	Kshs 20
20-June-2018	SVS-0004	005	24-June-2018	Kshs 50
30-June-2018	SVS-0005	006	04-July-2018	Kshs 50
12-July-2018	SVS-0005	004	16-July-2018	Kshs 25
25-October - 2018	SVS-0001	007	29-October - 2018	Kshs 50

Table 3: Movie

Disk No	Title	Category	Main Actor	Production Year	Rating
001	A Thief in the Night	Thriller	Hoss Baxton	1984	A
002	Nursery Rhymes	Educational	Kerry Kean	1994	A
003	Cartoon 17	General	Jimmy Grant	1994	C
004	Trading places	Comedy	Kim Fields	1995	B
005	When Hatred Came	Thriller	Shalom King	1987	A
006	The Gods must be crazy	Comedy	Mfasa Limpula	1986	B
007	The Gods must be crazy 2	Comedy	Mfasa Limpula	1988	B
008	The Gods must be crazy 3	Comedy	Mfasa Limpula	1991	B
009	The Island	Action	Marie Payton	1992	A
010	Prepare For War	Action	Rebecca	1990	A

a) Create a database for the following tables. Name it as **Sinai Video Store** **(2marks)**

b) Create three Tables for each of the above Tables adding appropriate primary key and other field properties for each **(6marks)**

c) Create relevant relationships among the **Tables** **(2marks)**

d) Create forms for each table and give them appropriate names **(3marks)**

e) Using the forms created above, enter data into each Table **(9marks)**

f) Using a query, add a field named **New Monthly Charges** that calculates the new monthly fee given that there is a 8% increase from current fee. Save it as **New Fee Query** **(6marks)**

g) Create a query that displays all the movies produced **after the year 1990**. Save it as **Latest Movies** **(5marks)**

h) Generate a query that calculates the Total income each Movie has made. Save the Query as **Total gain** **(6marks)**

i) Create a report that:

(i) Groups each of the movies according to category **(2marks)**

(ii) Calculates the income each movie category has made **(2marks)**

(iii) Calculates the total income from all movies **(2marks)**

(iv) Has the heading **Total Income Report** with font size 20 **(2marks)**

(v) Save the report as Total Income Report **(1mark)**

Print **New Fee Query**, **Latest Movies query, Total Gain query** and **Total Income Report**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

HOME SCIENCE

441/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES:

- *Write your **name** and **admission number** in the spaces provided.*
- *This paper consists of three section **A,B** and **C***
- *Answer **all** the questions in section **A** and **B***
- *Answer only **two** questions in section **C.***

For Examiner's Use Only:

QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
1-20	40	
21	20	
22	20	
23	20	
24	20	
Total	**100**	

SECTION A (COMPULSORY) 40 MARKS

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

1. State **two** methods of cooking using dry heat. **(2marks)**

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2. Name **two** types of tacking stitches**.** **(2 marks)**

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3. List **two** types of hand sewing needles. **(2 marks)**

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4. Highlight **two** ways of enhancing personal health**.** **(2 marks)**

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5. Give **two** advantages of baking as a cooking method**.** **(2 marks)**

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6. Give **two** methods of ventilation**.** **(2 marks)**

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7. Mention **two** ways of reducing a bulk in a seam**.** **(2 marks)**

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8. List **four** items in the house that can be recycled. **(2 marks)**

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9. Mention **two** general functions of minerals in the body**.** **(2 marks)**

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10. Give the meaning of Kitchen hygiene**.** **(2 marks)**

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11. Mention the **two** colour schemes that are used for interior decoration**.** **(2 marks)**

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12. State **two** functions of sebaceous glands in the skin**.** **(2 marks)**

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13. Give **two** uses of a seam ripper**.** **(2 marks)**

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14. Give **two** agents used in coating food during deep frying. **(2 marks)**

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15. Give **two** factors that determine size of a patch pocket. **(2 marks)**

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16. State **two** points to be observed when washing articles with non-fast colour. **(2 marks)**

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17. Mention **two** ways to identifying silk using burning test**.** **(2 marks**

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18. Mention **two** ways of enriching leftover foods. **(2 marks)**

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19. Give **two** disadvantages of using candles for lighting. (**2 marks)**

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20. Mention two uses charcoal as fuel**.** **(2 marks)**

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SECTION B (COMPULSORY) 20 MARKS

Give your answers in the space provided after the question

21.) You have been left alone at home and you have decided to do some cleaning,

a) Describe how you would wash a neglected aluminum pan **(4marks)**

b) Explain how to thorough clean an enamel plate**.** **(7marks)**

c) Give the procedure of cleaning a hurricane lamp (omitting the glass**)** **(9 marks)**

SECTION C (40 MARKS)

Answer only two questions from this section and use the spaces provided below. Each question carries equal marks

22 a) Give **five** points on conservation of energy in lighting. **(5 marks)**

b) Explain **three** suitable conditions for the growth of yeast**.** **(6 marks).**

c) Describe how to prepare and attach shaped round patch pocket . **(9 marks)**

23 a) Explain **four** advantages of stewing as a method of cooking. **(8 marks)**

b) Draw and name three different symbols likely to be found on care label of a woolen garment. **(6 marks)**

c) Describe how to prepare a front and back facing using one well labeled diagram. **(6 marks)**

24 a) Explain **four** reasons why hospitals would not use silk fabric for their bed sheets. **(8 marks)**

b) Give **four** precautions to observe when using a micro – wave oven. **(6 marks)**

c) Explain **three** good qualities of a kitchen plan. **(6 marks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

HOME SCIENCE

441/2

PAPER 2

TIME: 2½ HOURS

SCHOOL…… SIGN……

(CLOTHING CONSTRUCTION)

1. A light weight coloured fabric 50cm long by 90cm width
2. Sewing thread to match fabric
3. One large envelope.

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

HOME SCIENCE

441/2 (PRACTICAL)
PAPER 2
TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

HOMESCIENCE [CLOTHING CONSTRUCTION]

Instructions to Candidates

1. This paper consists of 3 printed pages.
2. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

A pattern of a boy's pair of short is provided. You are advised to study the sketches, the instructions and the layout before you begin the test.

MATERIALS PROVIDED

1. PATTERN PIECES

A. Short front. Yoke.

B. Short front.

C. Short back.

D. Back pocket.

E. Back waist band.

F. Front waist band.

G. Back facing.

H. Front facing.

2. Plain lightweight coloured fabric 50cm long by 90cm wide.

3. Sewing thread to match the fabric.

4. One large envelope.

THE TEST

Using the materials provided; lay, cut out and make one half of a pair of shorts to show the following.

a) Cutting out; **(13 marks)**

b) Making of back dart;

c) Preparation and attachment of the back pocket.

d) Working of overlaid seam to join short front yoke to short front.

e) Joining the inner leg seam using double stitched seam.

f) Joining the side seam using French seam.

g) Preparing and attaching the facing at the short lower edge hem.

h) Preparing and attaching the waistband down using even tacking stitches.

i) Finishing the back waistband only using hemming stitches.

j) Overall presentation.

At the end of the examination, firmly sew onto your work on a single fabric, a label bearing your name and index number.

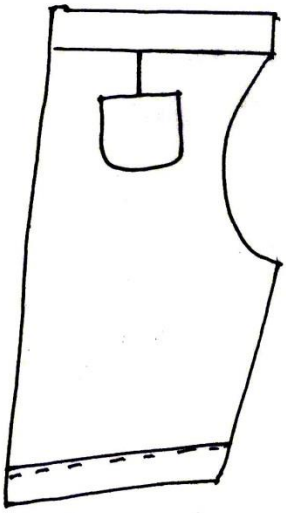
Remove the needles, pins and loose threads from your work.

Fold your work and carefully place it in the envelope provided.

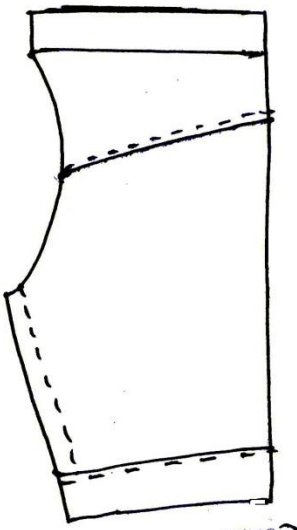
Do not put scraps of fabric in the envelope. Do not seal the envelope.

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BOYS SHORT

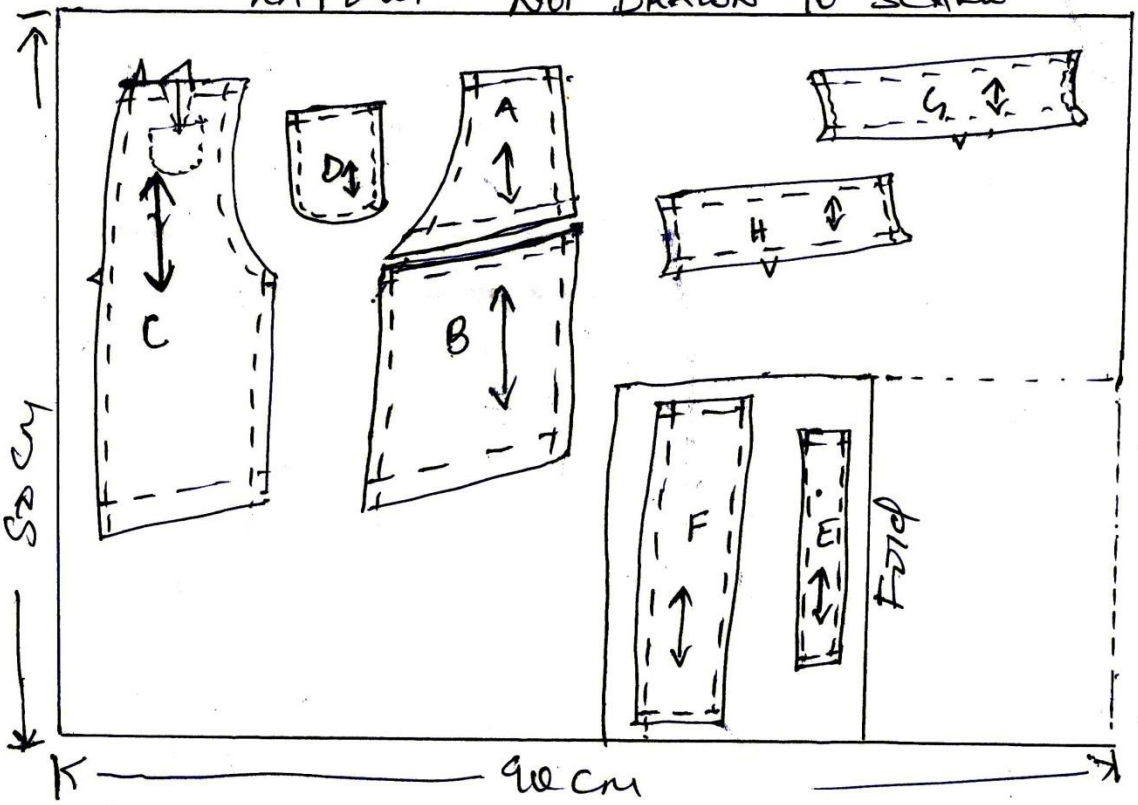


BACK VIEW



FRONT VIEW

LAYOUT NOT DRAWN TO SCALE



KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

HOME SCIENCE

441/3

PAPER 3

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

TIME: PLANNING SESSION -30 MINUTES

PRACTICAL TEST: 1 ¼ HRS

Your aunt whom you stay with in her home has asked you to prepare breakfast while she does some laundry. Using the ingredients listed below, prepare ,cook and serve tea and two tea items. One of the items should be sweet and the second one savoury-

Ingredients

Wheat flour

Sugar

Sausages/minced meat

Eggs

Margarine

Milk

Fat/oil

Tea leaves

Baking powder

Planning session

Use separate sheets of paper for each task below and carbon paper to produce duplicate copies. Then proceed as follows:

1. Identify the dishes and write down their recipes
2. Write down your order of work
3. Make a list of the food stuffs and equipment you will require

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

ISLAMIC RELIGIOUS EDUCATION

314/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTION TO CANDIDATE

a)Write your details in the spaces provided above.

b)This paper consists of two printed pages.

c)Candidates should check to ascertain that all questions are available.

d)Answer any five questions in the spaces provided.

FOR EXAMINER'S USE ONLY

1	2	3	4	5	6	TOTAL

1 a.) Mention the supplication (dua) as stated in Surah Al. Fatiha **(5marks)**

b.) Explain ways in which Allah (SWT) communicated to His prophets **(8marks)**

c.) Give the importance of narratives in the Holy Quran **(7marks)**

2 a.) Highlight the rules to be observed when translating the Quran **(6marks)**

b.) Explain how the Quran was preserved during the time of the companions **(7marks)**

c.) Outline the benefits of memorizing the Quran to Muslims **(7marks)**

3 a.) Identify *SEVEN* characteristics of weak (dhaif) hadith **(7marks)**

b.)Describe ways through which Imam Bukhari ensured authenticity of his collection of Hadith **(8marks)**

c.) The prophet (P.B.U.H) said, "True believer never weaver in their faith and bow in front of other fellow human beings so as to gain favours." In reference to the above hadith, State six ways through which Muslims can show reliance to Allah (SWT) **(5marks)**

4 a.) Highlight situations when life can be taken as a form of punishment in Islam **(6marks)**

b.) What are the social benefits of fasting to Muslims **(6marks)**

c.)State *EIGHT*rights that a Muslim can accord other people **(8marks)**

5 a.) Identify *THREE* Muslim festivals and for each give a reason why it is celebrated**(6marks)**

b.) Explain *FOUR* differences between Jamaa (congregational) and Jum'a (Friday) prayer **(8marks)**

c.) Outline factors that would hinder the application of Islamic Shariah in Kenya **(6marks)**

6 a.) Give the meaning of each of the following attributes of Allah **(6marks)**

i. Ar - Rahman
ii. Al - Malik
iii. As - Swamad
iv. A - Shafii
v. Al – Hayyu
vi. Al - Qayum

b.) Outline lessons that Muslims can learn from the life of prophet Ibrahim (A.S) **(7marks)**

c.) How does the belief in Angels affect the life of a Muslim **(7marks)**

KCSE 2025 ACHIEVERS PREMOCK

SERIES 1 TRIAL

ISLAMIC RELIGIOUS EDUCATION

314/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTION TO CANDIDATES

a)Write your details in the spaces provided above.

b)This paper consists of two printed pages.

c)Candidates should check to ascertain that all questions are available.

d)Answer any five questions in the spaces provided.

FOR EXAMINER'S USE ONLY

1	2	3	4	5	6	TOTAL

1a. What Circumstances is a Muslim allowed to eat haram (prohibited) food **6mks**

b. The rationale for the prohibition of khat (miraa) in Islam **7mks**

c. Impacts of Corona towards the performance of devotion acts **7mks**

2a. Circumstances under which monopoly is practiced in Islam **5mks**

b. Factors that may invalidate a trade contract **7mks**

c. explain 4 reasons for observing eddah **8mks**

3a. Effects of child abuse in the society **8mks**

b. Conditions for the validity of an Islamic marriage **7mks**

c. The Rights of a Muslim husband **5mks**

4a. Differences between the Hijra to Abbysinia and the Hijra to Madina **8mks**

b. Social conditions Prevailing in Makka when the Prophet was born **6mks**

c. Contributions made by sheikh swaleh alfarsy. **6mks**

5a. Reasons why the Madina Constitution was written **7mks**

b. Lessons that Muslims learn from the battle of Uhud **7mks**

c. Contributions of Ali Bin Abu Twalib to the prophets mission **6mks**

6a.Factors that contributed to the fall of the Abassid Dynasty **6mks**

6b. Challenges faced by Muslims in the spread of Islam in East Africa **6mks**

c.Contributions of Muslims to the economy in East Africa **8mks**

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THE END

FOR THE FOLLOWING;

- ✓ ONLINE TUITION
- ✓ REVISION NOTES
- ✓ SCHEMES OF WORK
- ✓ SETBOOKS VIDEOS
- ✓ TERMLY EXAMS
- ✓ QUICK REVISION KITS
- ✓ KCSE TOPICALS
- ✓ KCSE PREMOCKS
- ✓ TOP SCHOOLS PREMOCKS
- ✓ JOINT PREMOCKS
- ✓ KCSE MOCKS
- ✓ TOP SCHOOLS MOCKS
- ✓ JOINT MOCKS
- ✓ KCSE POSTMOCKS
- ✓ TOP SCHOOLS PREDICTIONS
- ✓ KCSE PREDICTIONS
- ✓ KCSE REVEALED SETS

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