NAIROBI CLUSTER 2024 MOCK

ALL SUBJECTS

Annual Joint Evaluation exam for Select National Schools in Nairobi in preparation for Final KCSE 2024 Examination.

SUBJECTS TESTED;

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

SERIES 1

For Marking Schemes

Mr Isaboke 0746 222 000 / 0742 999 000

MWALIMU CONSULTANCY

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

231/1

BIOLOGY

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. *Write your name and admission number in the spaces provided above.*
2. *Sign and write date of examination in spaces provided.*
3. *Answer all questions in the spaces provided*
4. *Mathematical tables and silent electronic calculators may be used*
5. *All working must be clearly shown where necessary*

FOR EXAMINERS USE ONLY

QUESTIONS	NAXIMUM SCORE	CANDIDATES SCORE
1 - 29	80 marks	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

Answer all questions in the spaces provided

1. State the name given to the study of: **(2marks)**

(i) Chemical changes in living organisms.

……

(ii) Insects.

……

2. State the category of variation into which the following traits fall. **(2marks)**

a)(i) Skin pigmentation.

……

(ii) Blood group .

……

b) Give two possible genotypes of blood group A. **(2marks)**

……

……

3. Give two differences between scientific names and common names. **(2marks)**

Scientific Names	Common Names

4. Explain two adaptation that enable the halophytes to survive in their habitats. **(2marks)**

……

……

……

……

5.(i) What is parthenogenesis. **(1mark)**

……

……

(ii) Monocotyledonous plants do not undergo secondary growth. Explain, **(1mark)**

……

……

6. Name two classes of Phylum Arthropoda whose members' head is fused with the thorax. **(2marks)**

……

……

7. Name two excretory products produced by both plants and animals. **(2marks)**

……

……

8. The shirt of a student was stained by a solution of DCPIP. A friend advised him to wash with lemon juice. Explain. **(1mark)**

……

……

9. Two freshly cut banana peels A and B measuring 4cm long were cut, which were later placed in solutions of different concentrations in two separate beakers for 30minutes. The appearance after 30minutes is as shown below.



(a) What is the nature of the solution in which piece B was placed. **(1mark)**

……

(b) Account for the appearance of piece A. **(3marks)**

……

……

……

……

……

10.I The ovum is fertilized only by one sperm yet there is millions of sperm surrounding the ovum. Explain. **(1mark)**

……

……

II Give the role of the following parts of the male reproductive system.

(a) Epididymis **(1mark)**

……

……

(b) Prostate gland **(1mark)**

……

……

11. When a person has oxygen debt the heart beat increases. Give two importance of the increase in heart beat. **(2marks)**

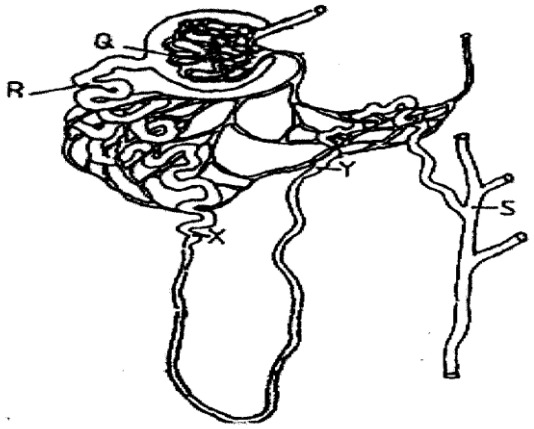
……

……

……

……

12. The diagram below shows part of a nephron from the human kidney.



a) Give two factors that lead to creation of higher pressure in the structure labelled Q. **(2marks)**

……

……

b) **On the diagram above label the part** where the sodium ions are reabsorbed and write down the hormone involve in regulating the level of this ions **(2marks)**

Name of the hormone;

……

13. Explain how the following parts of a light microscope are modified to perform their function

(i) Diaphragm **(1mark)**

……

……

(ii) Mirror. **(1mark)**

……

……

14.a) Explain two adaptations of cell membrane to its function. **(2marks)**

……

……

……

……

b) Why is oxyhaemoglobin formation is highly preferred during transportation of oxygen in the body. **(2marks)**

……

……

……

15. I Explain how smoking of tobacco lead to lung cancer. **(1mark)**

……

……

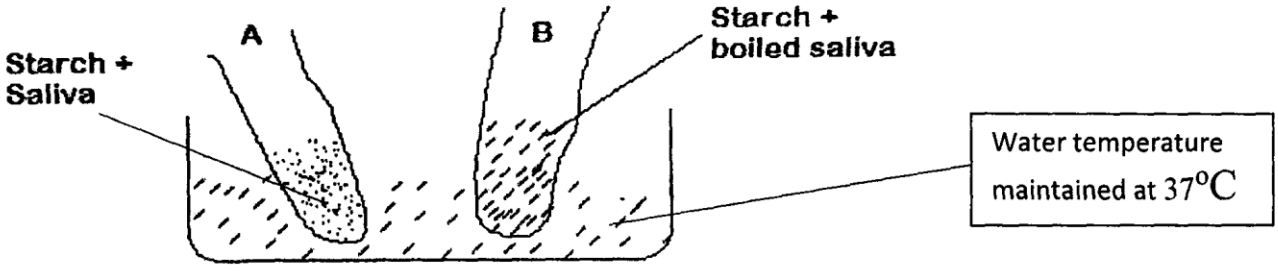
II. How does age affect the breathing rate in human? **(2marks)**

……

……

……

16. In an experiment to investigate an aspect of digestion, two test tubes A and B were set as shown below. The set up was left for 30 minutes and the temperature of water was maintained at 37^0C.



The resulting content in each test tube A and B were placed into two separate visking tubing which were then placed in a beaker containing iodine solution, for 20 minutes.

(a) What was the observation that was made in the visking tubing containing contents of test tube A. **(1mark)**

……

……

(b) Account for the result in visking tubing which was containing contents of test tube B.

(3marks)

……

……

……

……

17. During a biological excursion a group of form 4 students collected plant specimen whose reproductive organ is shown below.



(i) Name the sub-division of the plant in which the above specimen was obtained. **(1mark)**

……

(ii) Other than the presence of the above characteristics, state two characteristics of plants in the sub-division named above. **(2marks)**

……

……

18. Enzymes are important in various physiological processes in living things.

(a) Differentiate between an enzyme and a hormone **(1mark)**

……

……

……

(b) Name one property of an enzyme exhibited by the lock and key hypothesis **(1mark)**

……

19. I The transverse section of a young dicotyledous root was cut and iodine solution was applied. One of the part of the section turned to blue-black colour. Identify the part of the root and give a reason for your answer.

Par**t** …… **(1mark)**

Reason **(1mark)**

……

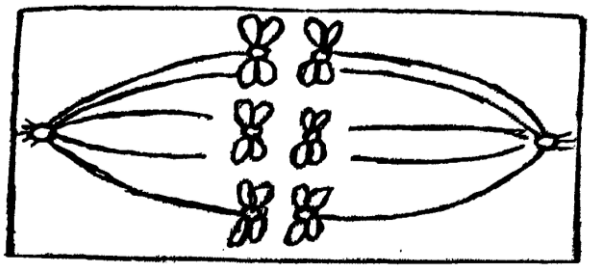
II. Distinguish between transpiration and guttation. **(1mark)**

……

……

……

20. The diagram below shows a cell undergoing a stage in cell division.



With a reason, identify this stage **(2mark)**

Identify

……

Reason

……

21.a) Define the term immunity. **(1mark)**

……

……

b) Identify one immunizable disease in Kenya **(1mark)**

……

c) State two ways in which lymphocytes kill disease causing microorganism. **(2marks)**

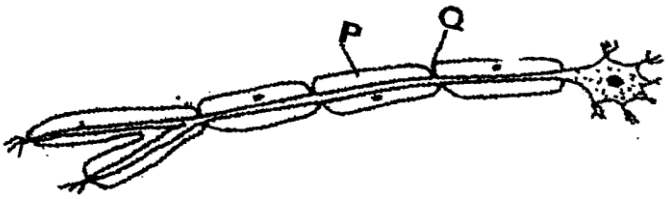
……

……

……

……

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



(i) With an arrow, **indicate on the diagram** the direction of the impulse through the neuron.

(1mark)

(ii) State the function of the parts labelled P **(1mark)**

……

23. Name the type of response exhibited by;

(i) Sperm cell when it swims towards the ovum. **(1mark)**

……

(ii) Leaves of Mimosa pudica when they fold their leaves after being touched. **(1mark)**

……

24.a) Distinguish between hypogeal and epigeal germination. **(1mark)**

……

……

……

b) State two internal factors necessary for germination **(2marks)**

……

……

25.a)Give two importance of divergent evolution to animals **(2marks)**

……

……

……

b) Explain two limitations of fossil record as an evidence for evolution **(2marks)**

……

……

……

……

26. What causes the following diseases?

a) Diabetes mellitus **(1mark)**

……

b) Diabetes inspidus **(1mark)**

……

27. Study the diagram below and answer the questions that follows.



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

……

b) Give a reason for your answer in 27(a) above **(1mark)**

……

c) State two mineral ions deposited on the bones to harden them. **(2marks)**

……

……

28. I. The following is food chain that was presented by a student in class.

Grasshopper ⟶ Lizard ⟵ Chicken ⟶ Hawk

State two errors that are made in the food chain **(2marks)**

……

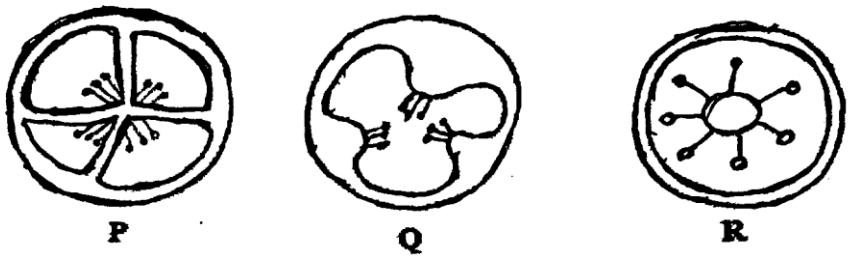
……

II. Give a reason why pyramid of biomass is considered to be more accurate over the pyramid of numbers. **(1mark)**

……

……

29. Below are cross section of diagrams of fruits.



Identify the type of placentation present in the three diagrams **(3marks)**

P …….

Q …….

R …….

THIS IS THE LAST PRINTED PAGE!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

231/2

BIOLOGY

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

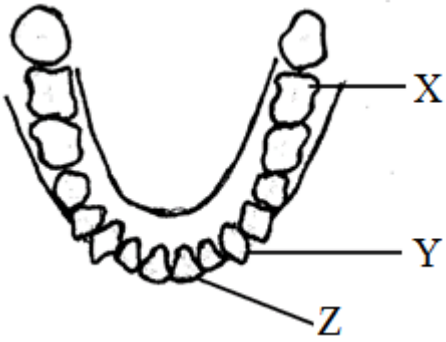
1. Write your name and Index number in the spaces provided above.
2. Sign and write date of examination in spaces provided.
3. Answer ALL questions from Section A, Question 6 and Either Question 7 or 8 from Section B.
3. All working must be clearly shown where necessary.
4. Answer all questions in English.

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1	8	
2	8	
3	8	
4	8	
5	8	
6	20	
7	20	
8	20	
TOTAL	80	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

SECTION A: 40 MARKS

1. The figure below shows the teeth in the lower jaw of an adult human



a)(i) Name the teeth labelled X and Z **(2marks)**

……

……

(ii) Describe the functions of teeth Y and Z **(2marks)**

……

……

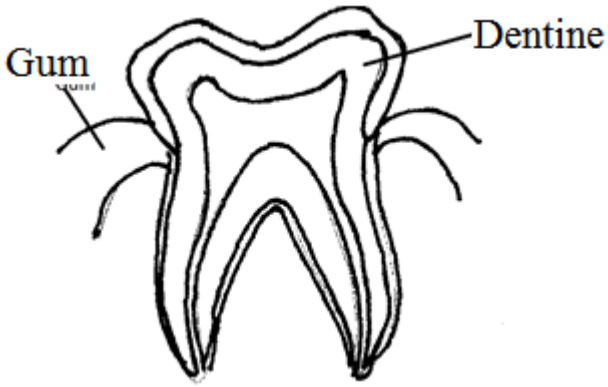
……

……

b) Name **one** mineral and one vitamin that are essential for the healthy development of teeth **(1mark)**

……

c) The figure below shows a section through a tooth.



(i) Tooth decay is caused by bacteria getting into the dentine. Explain how bacteria can enter the dentine **(2marks)**

……

……

……

(ii) List **one** action you could take to reduce the risk of tooth decay **(1mark)**

……

2. a) What are the analogous structure as used in evolution **(1mark)**

……

……

b) How do disease causing micro-organisms become resistant to drugs **(3mark)**

……

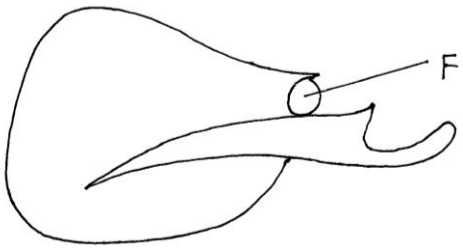
……

……

……

……

c) The diagram below represents a bone of a mammal



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

……

(ii) Name the bone that articulate at the point labelled F **(1mark)**

……

(iii) Explain two adaptations of the bone identified in (i) above **(2marks)**

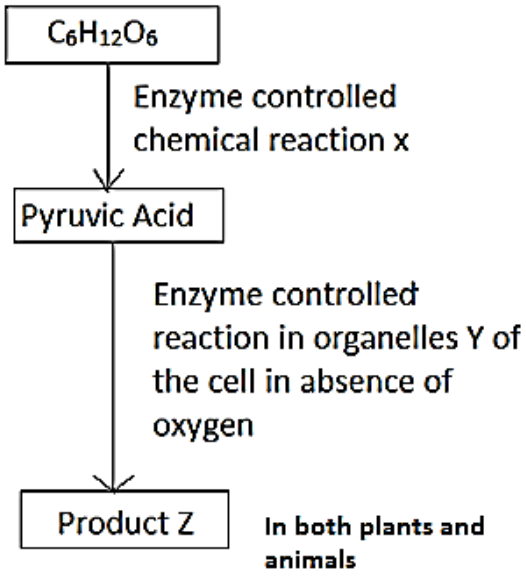
……

……

……

……

3. Study the flow chart below of a process that takes place in both plants and animals



a) Name the above process **(1mark)**

……

b)(i) In the above process name the chemical reaction represented by X **(1mark)**

……

(ii)Name the part of the cell where the enzyme controlled reactions in b(i) above takes place **(1mark)**

……

c) Name the product Z in

(i) Plants **(1mark)**

……

(ii) Animals **(1mark)**

……

d) What would be the fate of pyruvic Acid if oxygen supply is availed in the mitochondria of an animal cell **(2marks)**

……

……

e) What is meant by the term oxygen debt **(1mark)**

……

……

4.a) Differentiate between the following terms

(i) Dominant gene and recessive gene **(1mark)**

……

……

(ii) Continuous variation and discontinuous variation **(1mark)**

……

……

b) In *Drosophila melanogaster* the gene for eye colour is sex linked. The gene for red eye is dominant. A cross was made between homozygous red eyed female and a white eyed male. Work out the phenotypic ration of the F_1 generation.(use R to represent the gene for red eyes) **(4marks)**

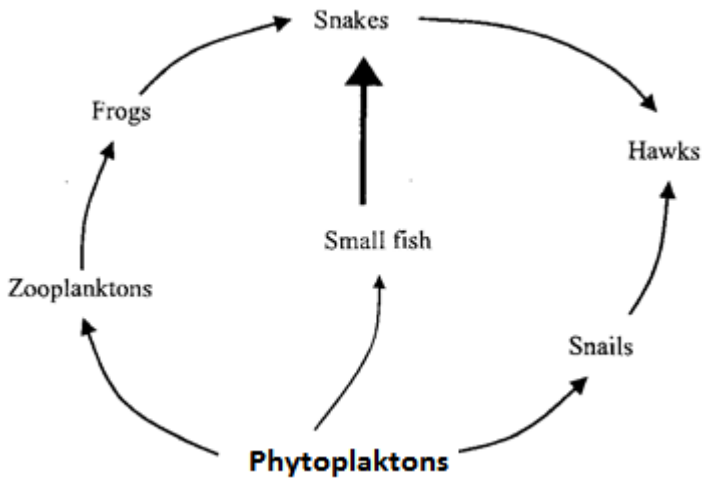
c) Suggest two reasons to explain why *Drosophila melanogaster* is most preferred for studies in modern genetics. **(2marks)**

……

……

……

5. The diagram below represents a feeding relationship in an ecosystem



a) Name the type of ecosystem represented by the above food web **(1mark)**

……

b) Name the organism in the food web that:

(i) Are producers **(1mark)**

……

(ii) Occupies the highest trophic level **(1mark)**

……

c)(i) Write a food chain that ends with the hawk as quaternary consumer **(1mark)**

……

……

(ii) State two short term effects on the above ecosystem if all the small fish were killed

(2marks)

……

……

d) How does oil spills lead to death of fish **(1mark)**

……

……

e) Name one other cause of water pollution apart from oil spills **(1mark)**

……

SECTION B: 40 MARKS

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

6. Two species of parasitic wasps X (*Vespula vulgaris*) and Y (*Vespula acadica*) were introduced in an orchard in order to control the population of aphids. The numbers of each species of wasps were counted at two-month intervals and recorded. The table below shows the population of the two wasps over a 18-month period in the orchard.

Time		0	2	4	6	8	10	12	14	16	18
Population	Species X	40	100	280	440	540	600	640	640	620	640
	Species Y	40	180	240	220	180	140	80	60	40	60

a) Plot a graph of population of wasp against time **(7marks)**

b) State the type of relationship between the two wasps population **(1mark)**

……

c) Account for the differences in population of the two wasp populations:

(i) 0 – 3 years **(3marks)**

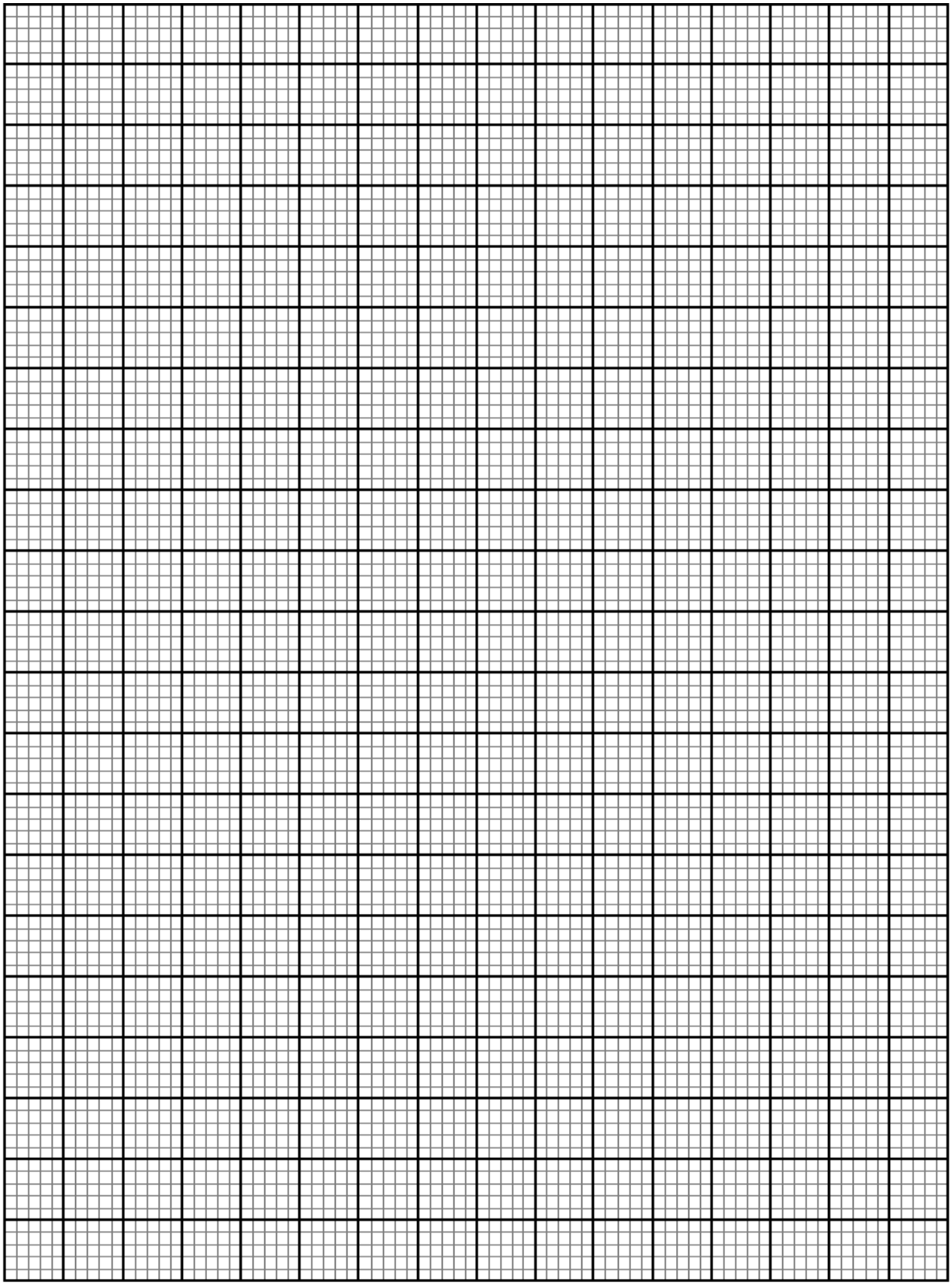
……

……

……

……

……



(ii) 4 – 14 years **(3marks)**

……

……

……

……

……

d) The experiment was continued for another 8 months. On the 18th month the population of species X increased and surpassed that of Y. Account for this observation **(3marks)**

……

……

……

……

……

e) Explain how the population of the wasps was determined **(3marks)**

……

……

……

……

……

7. Describe how the structure of mammalian eye is adapted to its function **(20marks)**

8. a)State four characteristics of gaseous exchange surfaces **(4marks)**

b) Describe the mechanism of gaseous exchange in a mammal **(16marks)**

THIS IS THE LAST PRINTED PAGE!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

231/3

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

SCHOOL…… SIGN……

CONFIDENTIAL INSTRUCTIONS

These instructions are to enable the head of institution and the teacher in charge of biology to make adequate preparations for 231/3 Biology Practical

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

Each candidate requires the following

- 30 ml of solution K (mixture of starch and albumin)
- 3 ml of solution M3 (enzyme diastase)
- 3 ml of solution M4 (boiled enzyme diastase)
- Iodine solution (100ml)
- 6 test tubes in a test tube rack
- Specimen X (Thoracic vertebrae)
- Test tube holder
- Means of timing
- Thermometer
- Water bath (to hold two 100ml beakers simultaneously)
- Two visking tubings (each 6cm long) and threads to tie their ends
- Two 100 ml beakers

Access to

- Means of heating
- Sodium hydroxide solution (10%)
- Copper (II) sulphate solution (1%)
- Iodine solution
- Benedict's solution

For Marking Schemes Contact 0746 222 000 / 0742 999 000

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

231/3

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATE

1. *Write your name and admission number in the spaces provided above.*
2. *Sign and write date of examination in spaces provided.*
3. *Answer all questions in the spaces provided in the question paper*
4. *You are not allowed to start working with the apparatus for the first 15 minutes of the 1 & ¾ hours allowed for this paper. This time is to enable you to read the question paper and make sure you have all the chemicals and apparatus that you may need.*

For Examiners Use Only

Section	Question	Maximum score	Candidates score
	1	15	
	2	15	
	3	10	
	TOTAL SCORE	40	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

1. **You** are provided with three solutions K, M3 & M4. M3 is the same as M4 except that M4 is boiled. You are also provided with 2 visking tubing, piece of thread, two beakers, 6 test tubes in a rack, thermometer, test tube holder and the following solutions; iodine, sodium hydroxide, copper(II) sulphate and Benedict's.

(a) Tie one end of the visking tubing tightly using a thread. Put 10ml of solution K and 1 ml of solution M3 into the visking tubing. Tie the other end of the visking tubing. Place the visking tubing in a beaker half filled with iodine solution. Take a second visking tubing and repeat the same using M4. Place the beakers containing the visking tubing in a water bath maintained between $(35 - 38)^0$C. Allow the set-ups to stand for 30minutes. Then after 30 minutes remove the visking tubings and test their contents and those of the beakers.

SAMPLE 1 (K + M3) (6 MARKS)

CONTENTS IN	**TEST**	**OBSERVATION**	**CONCLUSION**
VISKING TUBING	Iodine test		
	Benedict's test		
	Biuret's test		
BEAKER	Iodine test		
	Benedict's test		

	Biuret's test		

SAMPLE 2 (K + M4) **(6MARKS)**

CONTENTS IN	TEST	OBSERVATION	CONCLUSION
VISKING TUBING	Iodine test		
	Benedict's test		
	Biuret's test		
BEAKER	Iodine test		
	Benedict's test		
	Biuret's test		

(b) Account for the results in:

(i) Table 1 **(1mark)**

……

……

(ii) Table 2 **(2marks)**

……

……

……

……

2. You have been provided with specimen labelled X. The specimen and the photograph of Y are obtained from the same animal. Use them to answer the question that follow.

PHOTOGRAPH Y



a) Giving two reasons identify Y.

(i) Identity **(1mark)**

……

(ii) Reasons **(2marks)**

……

……

……

b) Give two adaptations of the specimen labelled X **(2marks)**

……

……

……

……

c) State two observable differences between X and Y **(2marks)**

……

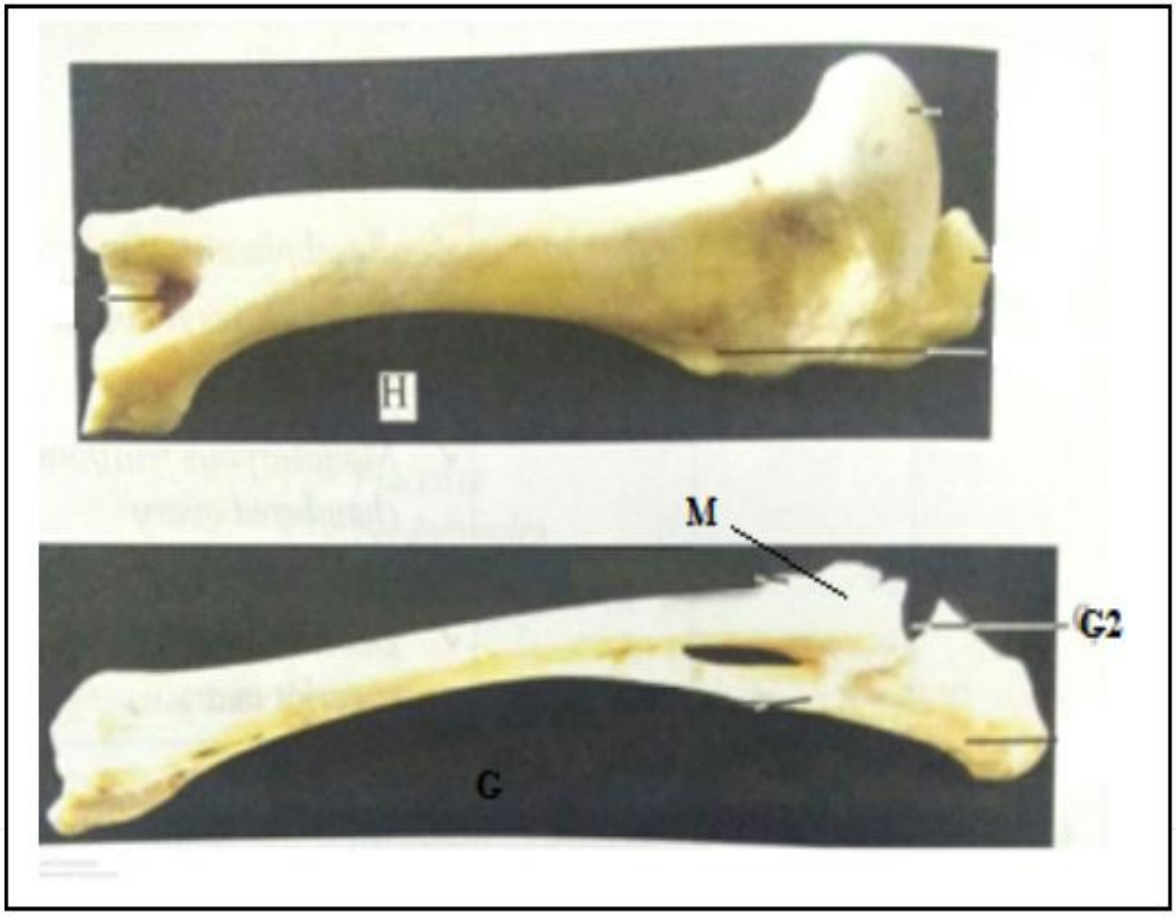
……

……

……

d) Make a drawing showing the anterior view of X and label all the parts **(4marks)**

e) The photograph below shows bones from another animal



(i) Which part of the body was H obtained from **(1mark)**

……

(ii) Identify G2 **(1mark)**

……

(**iii)** With a reason name the type of joint at the proximal end of specimen H **(2marks)**

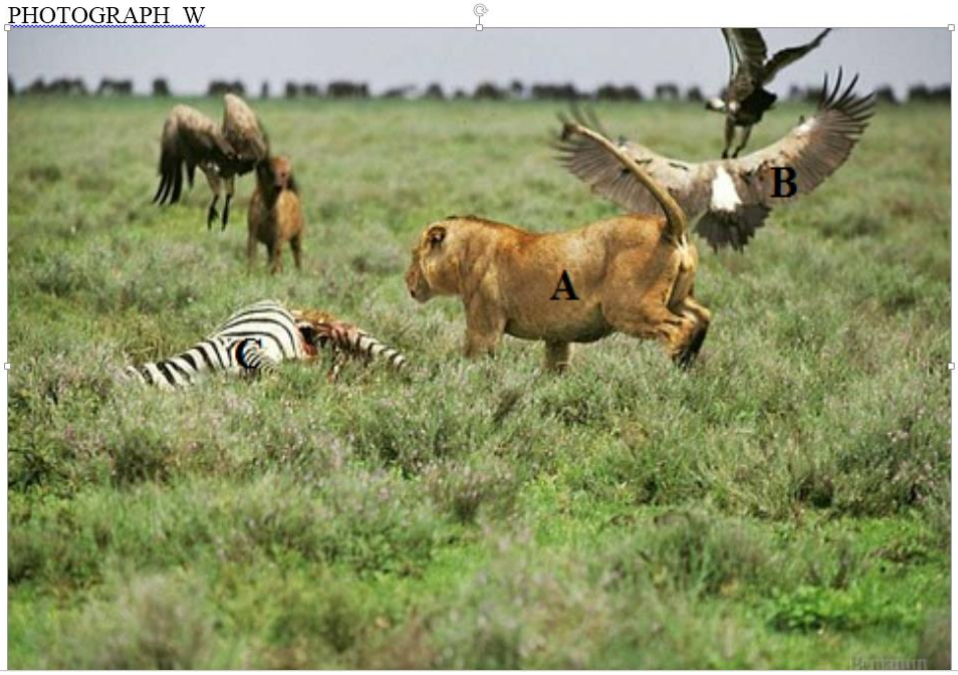
……

……

……

3. Study the photographs below and answer the questions that follow

PHOTOGRAPH W



PHOTOGRAPH M



a) Name the type of relationship in:

(i) Photograph W **(1mark)**

……

(ii) Photograph M **(1mark)**

……

b) Explain your answer in a(ii) above **(2marks)**

……

……

……

c) What is the importance of the relationship taking place in the photograph W **(1mark)**

……

……

d) Using observable feature only explain two ways in which the flower is adapted for the activity taking place in photograph M **(2marks)**

……

……

……

……

e).(i) Give the biological term used to refer to the phenomenon captured in photograph W between organisms A and B towards C **(1mark)**

……

(ii) State two implications of the phenomenon mentioned in d(i) above **(2marks)**

……

……

……

THIS IS THE LAST PRINTED PAGE!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

233/1

CHEMISTRY

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. *Write your name and index number in the spaces provided above*
2. *Sign and write date of examination in the space provided.*
3. *All working must be clearly shown where necessary.*
4. *Mathematical tables and silent electronic calculations may be used*
5. *Answer all questions in English.*

FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-26	80	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

1. Give two difference between a thistle funnel and a dropping funnel **(2marks)**

……

……

……

2. Give names of the following processes used to

a) Separate calcium carbonate from water **(1mark)**

……

b) Separate a mixture of nitrogen and Helium **(1mark)**

……

3. The table below shows some solutions and their pH value

Solution	**pH values**
P	**1.5**
Q	**6.0**
R	**14.0**
S	**8.0**

Which of the above solutions is likely to be of

a) Sodium carbonate **(1mark)**

……

b) Solution with high concentration of Hydrogen ions **(1mark)**

……

4. In the laboratory preparation of oxygen gas, Hydrogen peroxide is used.

a) Name the catalyst used **(1mark)**

……

b) Write a balanced chemical equation for the reaction **(1mark)**

……

5) State three observation made when a piece of potassium metal is dropped into cold water giving a reason for each. **(3marks)**

……

……

……

……

6. In the extraction of iron, the iron ore is reduced to iron in a blast furnace

a) Name the main ore used in extraction of iron **(1mark)**

……

b) What is the main reducing agent in the blast furnace **(1mark)**

……

c) Write the equation for the reaction through which the iron ore is reduced to iron in the blast furnace (**1mark)**

……

7. Draw the structure of the following

a) Mg^{+} (**1mark)**

b) Hydroxonium ion **(1mark)**

8. When 27.8g of hydrated aluminium oxide $(Al_2O_3 \bullet XH_2O)$ was heated to a constant mass 20.6 g of aluminium oxide was obtained. Determine the value of X (Al=27, O=16, H=1**(3marks)**

9. In the haber process, the industrial manufacture of ammonia is given by the following equation

$N_{2(g)} + H_{2(g)} \rightleftharpoons 2NH_{3(g)} \quad \Delta H = -97kJ/mol$

a) Name one source of nitrogen gas used in this process **(1mark)**

……

b) Name the catalyst used in the above reaction **(1mark)**

……

c) What is the effect of increasing temperature on the yield of ammonia? Explain **(2marks)**

……

……

……

……

10. Describe the correct process of heating a liquid in a test-tube using a bunsen burner.

(3marks)

……

……

……

……

……

11. Draw a labelled diagram of a set up that can be used to prepare dry sample of carbon (IV) oxide using calcium carbonate **(3marks)**

12.a) Draw structural formulae of two positional isomers with molecular formula C_4H_8 **(2marks)**

b) Study the equation below and answer the questions that follow

$$C_6H_{14} + Cl_2 - C_6H_{13}Cl + HCl$$

i) State the condition under which this reaction occurs **(1mark)**

……

ii) Give the general name of this type of reaction **(1mark)**

……

13.a) Define hydration energy **(1mark)**

……

……

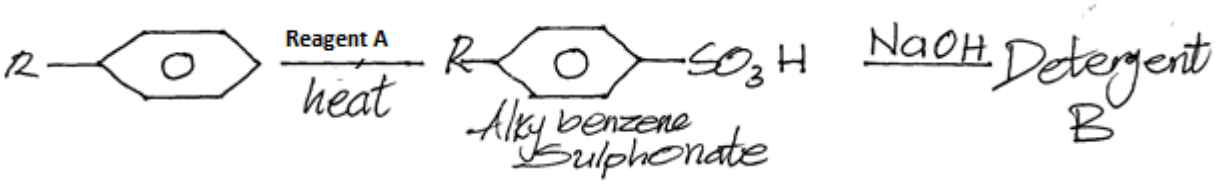
……

b) Given that the lattice energy of NaCl is +781kJ/mol and hydrated energy of Na^+ and Cl^- are -390kJ/mol and -384kJ/mol respectively. Calculate the heat of solution of one mole of $NaCl_{(s)}$ using energy cycle. **(3marks)**

14. $240cm^3$ of nitrogen (I) oxide gas takes 16 seconds to diffuse through a certain porous pot. $300cm^3$ of x takes 12 seconds to diffuse through the same pot calculate the relative molecular mass of gas x. (N=14, O=16) **(3marks)**

15. Draw a well labelled diagram that can be used during electrolysis of molten sodium chloride in the laboratory **(3marks)**

16. The figure below describes the manufacture of detergent B



a) What type of detergent is B (1mark)

……

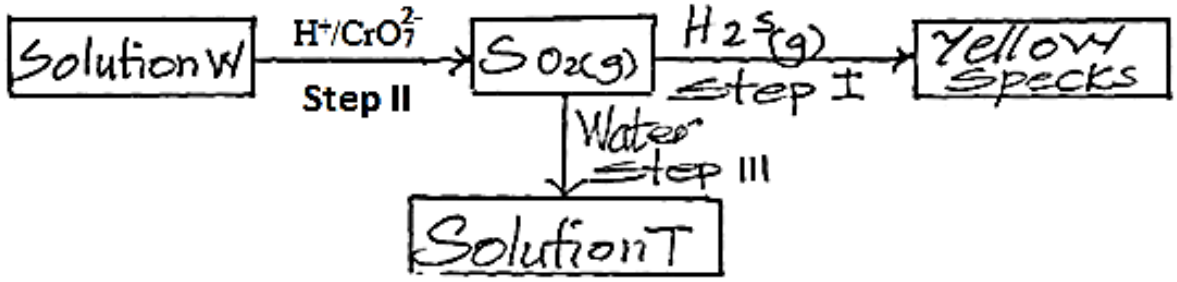
b) Draw the structure of detergent B **(1marks)**

c) State two disadvantage of using detergent B **(2marks)**

……

……

17. Use the flow chart below to answer the question below



a) Explain the observation in step II **(1mark)**

……

……

b) Name the process that takes place when flower petals are put into solution T (1mark)

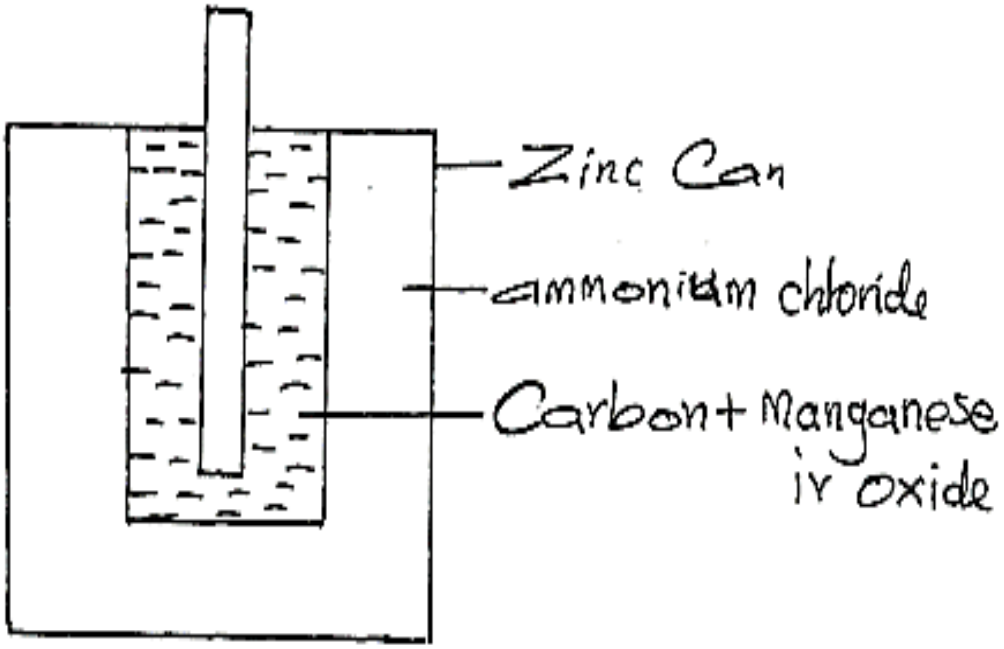
……

c) Reaction in step I takes place only in presence of moisture. Give a reason for this**(1mark)**

……

……

18. The diagram below represent a dry cell with Zinc can and graphite as the electrodes and ammonium chloride paste as an electrolyte



a) Write an ionic equation for the reaction taking place at

i) Anode **(1mark)**

……

……

ii) Cathode **(1mark)**

……

……

b) State the property of carbon powder that make it suitable for use in the cell **(1mark)**

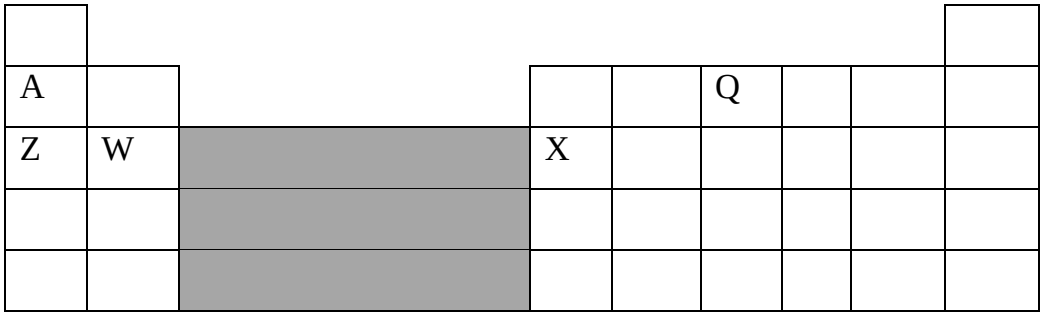
……

c) State one other substance that could be used in place of manganese (IV) oxide **(1mark)**

……

……

19. The diagram bellow represents part of periodic table. Use it to answer the question that follow



a) Write the electronic arrangement for the stable ion formed by X **(1mark)**

……

b) Write an equation for the reaction between W and Q **(1mark)**

……

c) Compare the ionization energy of element A and Z. Explain. **(2marks)**

……

……

……

20. Write equations to show the effect of heat on each of the following

a) Ammonium nitrate **(1mark)**

……

b) Potassium nitrate **(1mark)**

……

c) Anhydrous iron (II) sulphate **(1mark)**

……

21. When excess chlorine gas is bubbled through diluted sodium hydroxide solution; the resulting solution act as a bleaching agent

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

……

b) Name the bleaching agent **(1mark)**

……

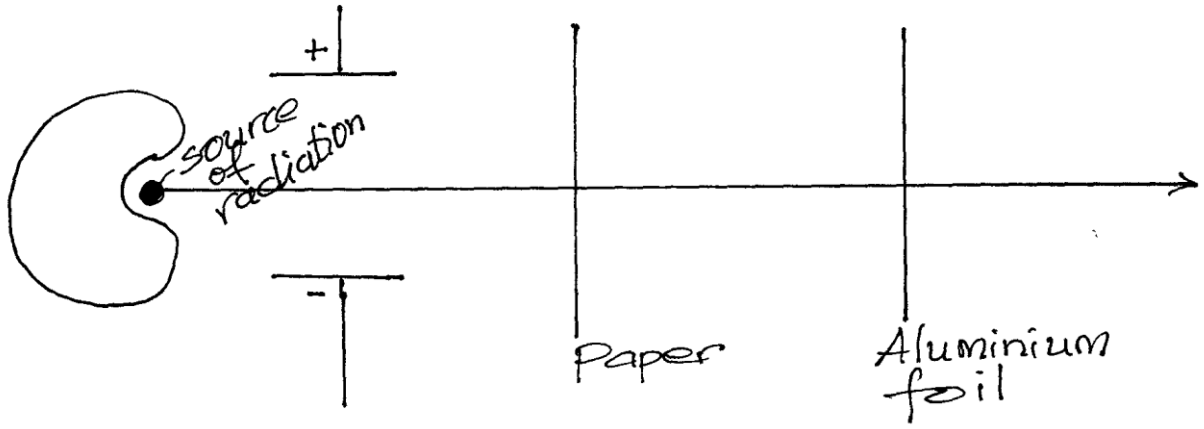
c) Write an equation to show the bleaching and explain how it occurs **(2marks)**

……

……

……

22. Alpha (α)and beta (ß) particles can be distinguished using papers, aluminium foil and an electric field complete the diagram below to show how this is done **(3marks)**



23. During electrolysis of magnesium sulphate, a current of 0.3A was passed for 30 minutes calculate the volume of gas produced at the anode (molar gas volume =24dm^3 IF=96500C **(3marks)**

24. Starting with sodium metal, describe how a sample of crystal of sodium hydrogen carbonate may be prepared **(3marks)**

……

……

……

……

……

25. When $20cm^3$ of 0.5M sulphuric (VI) acid was mixed with $20cm^3$ of 1M NaOH, the temperature of the solution rose from 24.0°C to 32.0°C calculate the molar heat of neutralisation (Specific heat capacity of the solution is $4.2Jg^{-1}$ density is $1g/cm^3$ **(3marks)**

26. The table below shows the test carried out on a sample of water and results obtained

Sample	**Test**	**observation**
A	Addition of NaOH solution drop wise until in excess	White precipitate souble in exess
B	Adding of $NH_{3(aq)}$ solution	White precipitate
C	Addition of dilute HNO_3 followed by $Ba(NO_3)_2$	White precipitate

a) Identify the anion present in the water **(1mark)**

……

b) Write the ionic equation for the reaction in C **(1mark)**

……

c) Write the formula of the complex ion in A **(1mark)**

……

THIS IS THE LAST PRINTED PAGE!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

233/2

CHEMISTRY

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

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

2. Sign and write date of examination in the space provided.

3. All working must be clearly shown where necessary.

4. Mathematical tables and silent electronic calculations may be used

5. Answer all questions in English.

For examiners use only

Question	Candidates Score	Students Score
1	14	
2	13	
3	13	
4	11	
5	14	
6	15	
Total	80	

1. The grid below represents part of the periodic table. Study it and answer the questions that follow. The letters do not represent the actual symbol of elements.

G							
					I		**V**
K							
J	**L**		**M**				

a)i) Select elements which belong to the same chemical family **(1mark)**

……

……

ii) Write the formulae of ions for two elements in the same period **(1mark)**

……

b) The first ionization energies of two elements K and M at random are 577kJ/mol and 494kJ/mol.

i) Write equations for the 1st ionisation energies for elements K and M and indicate their energies **(2marks)**

……

……

……

ii) Explain the answer in b (i) **(1mark)**

……

……

iii) Write the formula of the compound formed when I and L react **(1mark)**

……

……

iv) Give one use of element L **(1mark)**

……

c) I) How do the reactivity of elements K and L compare? Explain **(2marks)**

……

……

……

II) Element L and M form chlorides. Complete the table by writing the formulae of each chloride and state the nature of the solutions **(2marks)**

Element	Formula of chloride	Nature of chloride solution
L		
M		

III) The chloride of element M vaporizes easily while its oxide has a high melting point. Explain **(2marks)**

……

……

……

IV) Which elements forms a trivalent:

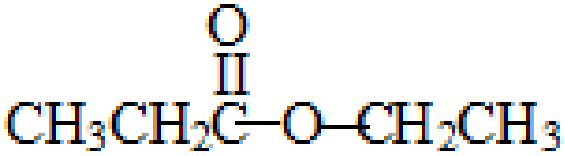
a) Cation **(½mark)**

……

b) Anion **(½mark)**

……

2. i) The following is a structure of an organic compound.



a) Which organic series does the compound belong? **(1mark)**

……

……

b) Give the structures and names of the reactants that form the above compound **(2marks)**

……

……

……

ii) The table shows structural formula of some organic compounds

Compound	**Structural formula**
A	$CH_3CH_2CH_2CH_3$
B	CH_3CH_2COOH
C	CH_3CHCH_2
D	$CHCCH_3$
E	$CH_3CH_2CH_2CH_2OH$

a) Give the chemical test that can be used to identify compound C. **(1mark)**

……

……

b) Compare the boiling points of compound E and A **(2marks)**

……

……

……

c) State and explain the observation made when Sodium carbonate is added to compound G.

(2marks)

……

……

……

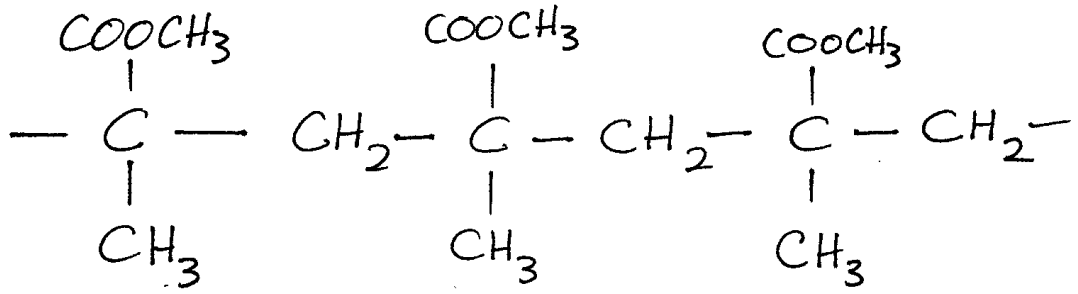
d) Write an equation to show the reaction between compound E and magnesium metal and give the name of the product formed. **(2marks)**

……

……

……

e) The following is a structure of a section of a polymer



i) Draw the structure of the monomer **(1mark)**

ii) Give the name of the polymer **(1mark)**

……

iii) State one use of the polymer. **(1mark)**

……

3.a) Dry chlorine gas was passed over heated iron resulting in P. P was dissolved in water resulting in the formation of a solution of P. To a little of the solution P a few drops of Sodium hydroxide were added and solid Q was obtained.

I) Name substance **(2marks)**

i) P –……

ii) Q – ……

II Write equations to show how substances P and Q were formed. **(2marks)**

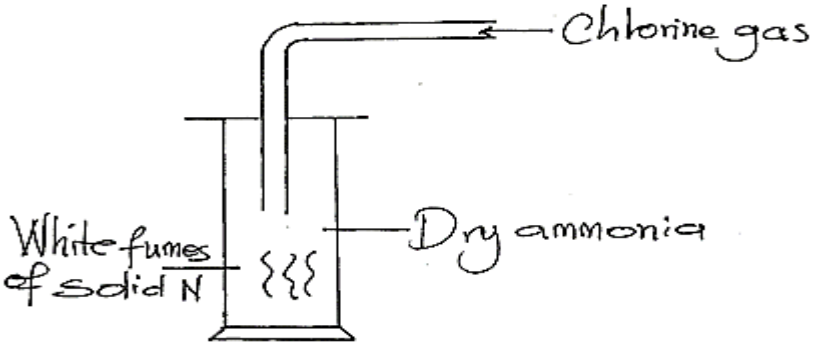
……

……

III) Name a suitable drying agent for chlorine gas **(1mark)**

……

b) Chlorine burns in dry ammonia gas as shown in the diagram below



i) Identify solid N **(1mark)**

……

ii) A colourless and odourless gas is produced. Identify the gas **(1mark)**

……

iii) Write the equation for the burning of chlorine in dry ammonia gas **(1mark)**

……

iv)3g of divalent metal X (atomic mass=24) react with dilute hydrochloric acid.Calculate the volume of hydrogen gas produced at STP. (X=12, H=1 molar gas volume at STP=22.4dm^3

(3marks)

……

……

……

……

……

v) When excess chlorine was bubbled into hot concentrated sodium hydroxide, the following reaction occurred.

$3Cl_{2(g)} + 6NaOH_{(aq)} \rightarrow NaClO_{3(aq)} + 5NaCl_{(aq)} + 3H_2O_{(l)}$. In which product did chlorine under oxidation. Explain **(2marks)**

.....

.....

.....

4a) Aqueous potassium sulphate was electrolysed using platinum electrodes in a cell.

i) Shows the product formed at the anode and cathode with the help of an equation (2marks)

Anode

.....

Cathode

.....

ii) Why would it not be advisable to electrolyse aqueous potassium sulphate using potassium metal electrodes? **(1mark)**

.....

.....

b) **Use** the standard electrode potential for elements A, B, C, D and F given below to answer that follow;

	E^0 (volts)
$A^{2+}_{(aq)} + 2e^-$ ⇌	-2.90
$B^{(2+)}_{(aq)} + 2e^-$ ⇌	-2.38
$C^{+}_{(aq)} + e^-$ ⇌	0.00
$D^{2+}_{(aq)} + 2e^-$ ⇌	-0.34
$\frac{1}{2}F_{2(g)} + e^-$ ⇌	$+2.87$

I) Which element is likely to be hydrogen? Explain **(1mark)**

……

……

II) What is the E^o value of the strongest reducing agent? **(1mark)**

……

……

III) In the space provided draw a labelled diagram of the electrochemical cell that would be formed when the half cells of elements B and D are combined. **(3marks)**

IV) Calculate the E^o value of the electrochemical cell constructed in (III) above **(1mark)**

c) During electrolysis of aqueous copper (ii) sulphate using copper electrodes, a current of 0.2 amperes was passed through the cell for 5 hours.

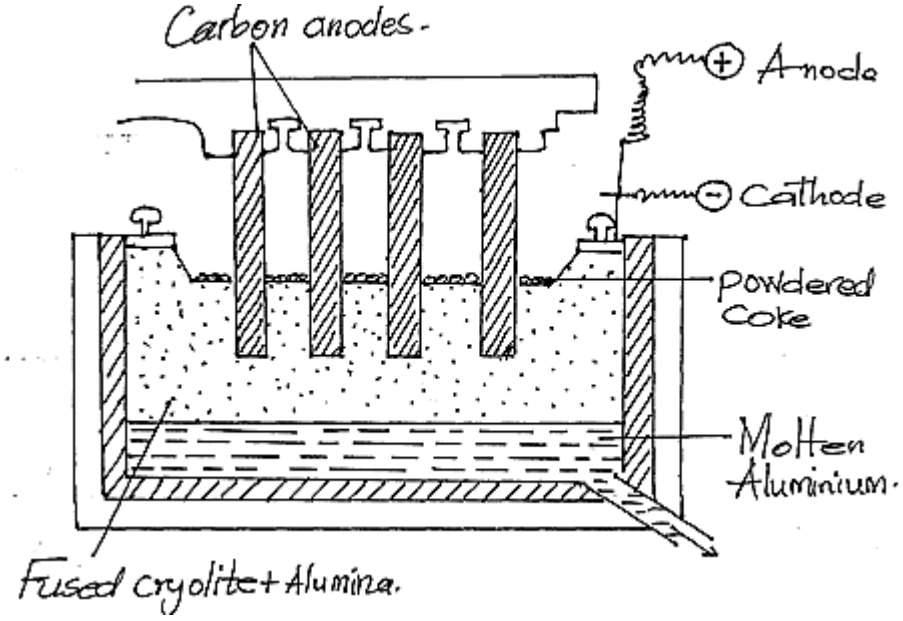
i) Write an ionic equation for the reaction that took place at the anode (**1mark**

……

……

ii) Determine the change in mass of the anode which occurred as a result of electrolysis $[Cu = 63.5, I\ Faraday = 96500C]$ **(1mark)**

5.a) The diagram below represent the electrolytic cell used for extraction of aluminium.



i) Write the formula of the main ore in which aluminium is extracted **(1mark)**

……

……

ii) Explain why the ore is first dissolved in hot concentrated sodium hydroxide. **(2maks)**

……

……

……

iii) Write equations for the reactions that takes place at

I) The anode **(1mark)**

……

II) The cathode **(1mark)**

……

iv) State why the graphite lining is used as the cathode **(1mark)**

……

……

v) Give two reasons for mixing aluminium oxide with cryolite in the electrolyte cell**(2marks)**

……

……

……

b) Aluminium is resistant to corrosion while iron corrodes very fast.

I) Why is aluminium not used to make window frames? **(1mark)**

……

……

II) State one reason why galvanised iron is resistant to corrosion even when the protective surface of zinc is broken? **(1mark)**

……

……

III) Write an equation to show the reaction between aluminium and concentrated sodium hydroxide solution **(1mark)**

……

IV) Explain how one word obtain aluminium oxide given the following; aluminium chloride solid, sodium hydroxide solid and distilled water. **(3marks)**

……

……

……

……

……

6.a) What are isotopes **(1mark)**

……

……

b) The table below shows the isotopic composition of naturally occurring neon

particle	$^{22}_{10}Ne$	$^{21}_{10}Ne$	$^{20}_{10}Ne$
% Abundance	9.2	0.3	90.5

i) Which is the most stable isotope of Neon? Explain **(2marks)**

……

……

……

ii) Calculate the relative mass of Neon **(2marks)**

iii) Balance the nuclear equation below

$^{14}_{6}C \rightarrow ^{14}_{7}N +$ _____ **(1mark)**

iv) Distinguish between nuclear fission and nuclear fusion. **(1mark)**

……

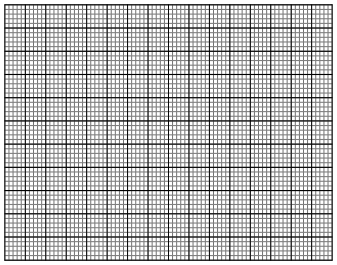
……

……

c) Bismuth undergoes radioactive decay. The table below shows the mass of Bismuth remaining at different times.

Time (min)	0	6	12	22	38	62	100
mass of Bismuth remaining (g)	50	41.5	32.5	23	14.5	6	1.5

i) Plot a graph of mass of bismuth remaining (vertical axis) against time. **(3marks)**



ii) From the graph determine

I) Mass of Bismuth remaining after 30 minutes **(1mark)**

II) The half life of bismuth **(1mark)**

III) What would happen to the rate of disintegration of bismuth if the temperature is increased? Explain **(2marks)**

……

……

……

……

d) State one application of radio isotopes in agriculture **(1mark)**

……

……

THIS IS THE LAST PRINTED PAGE!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

233/3

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

SCHOOL…… SIGN……

(Kenya Certificate of Secondary Education)

CONFIDENTIAL / REQUIREMENTS

1. Solid E
2. 50cm^{3}of solution F
3. 80cm^{3}of solution H
4. 0.5g of solid K
5. 0.5g of solid L
6. Distilled water
7. Burette
8. Pipette
9. Pipette filter
10. Label
11. 250ml volumetric flask
12. Two 250ml conical flasks
13. Test tube holder
14. 2 boiling tube
15. 6 test tubes
16. Stopwatch
17. 10ml measuring cylinder
18. Spatula
19. 0.5g sodium hydrogen carbonate
20. 5cm^{3}of ethanol
21. Filter paper – 3 pieces
22. Filter funnel
23. Blue and red litmus paper

Access to

1. 0.1M $BaCl_2$
2. 2M HCl
3. 2M Ammonia solution
4. 2M NaOH
5. 2M H_2SO_4 acid
6. Source of heat
7. Phenolphthalein indicator

Preparations

1. Solid E – 5cm magnesium ribbon
2. Solution F – 2M HCl
3. Solution H – 0.375M NaOH
4. Solid K – sodium benzoate
5. Solid L-Ammonium aluminium sulphate

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

233/3

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. *Write your name, admission number in the space provided.*
2. *Answer all the questions in the spaces provided*
3. *All working must be clearly shown where necessary.*
4. *You are not allowed to start working with the apparatus for the first 15 minutes. This time is to enable you read the question paper and make sure you have all the requirements.*

FOR EXAMINERS USE ONLY

QUESTION	MARKS	CANDIDATES SCORE
1	24	
2	6	
3	10	
TOTAL	**40**	

1. You are provided with:

- Magnesium ribbon solid E
- 2M hydrochloric acid, solution F
- 0.375M sodium hydroxide, solution H

You are required to determine

i) The rate of reaction between magnesium and hydrochloric acid

ii) The mass of 1cm length of magnesium ribbon

PROCEDURE 1

Step 1:Cut out five pieces of exactly 1cm length of magnesium ribbon solid E. Carefully fill the burette with solution F.

Step 2:Drain from the burette 10cm^3 solution F into a test tube. Put one piece of magnesium ribbon into the tube and immediately start a stopwatch. Record the time taken for the magnesium ribbon to completely react.

Step 3: Transfer all the contents of the test tube into a 250ml volumetric flask. Rinse the test tube with distilled water and put in into the volumetric flask.

Step 4:Repeat step 2 and 3 by placing 9cm^3 of solution F and 1cm^3 of distilled water shake the contents before use. After each experiment transfer the mixture into the volumetric flask. Repeat the procedure using contents in test tube 3, 4 and 5 as shown in the table below.

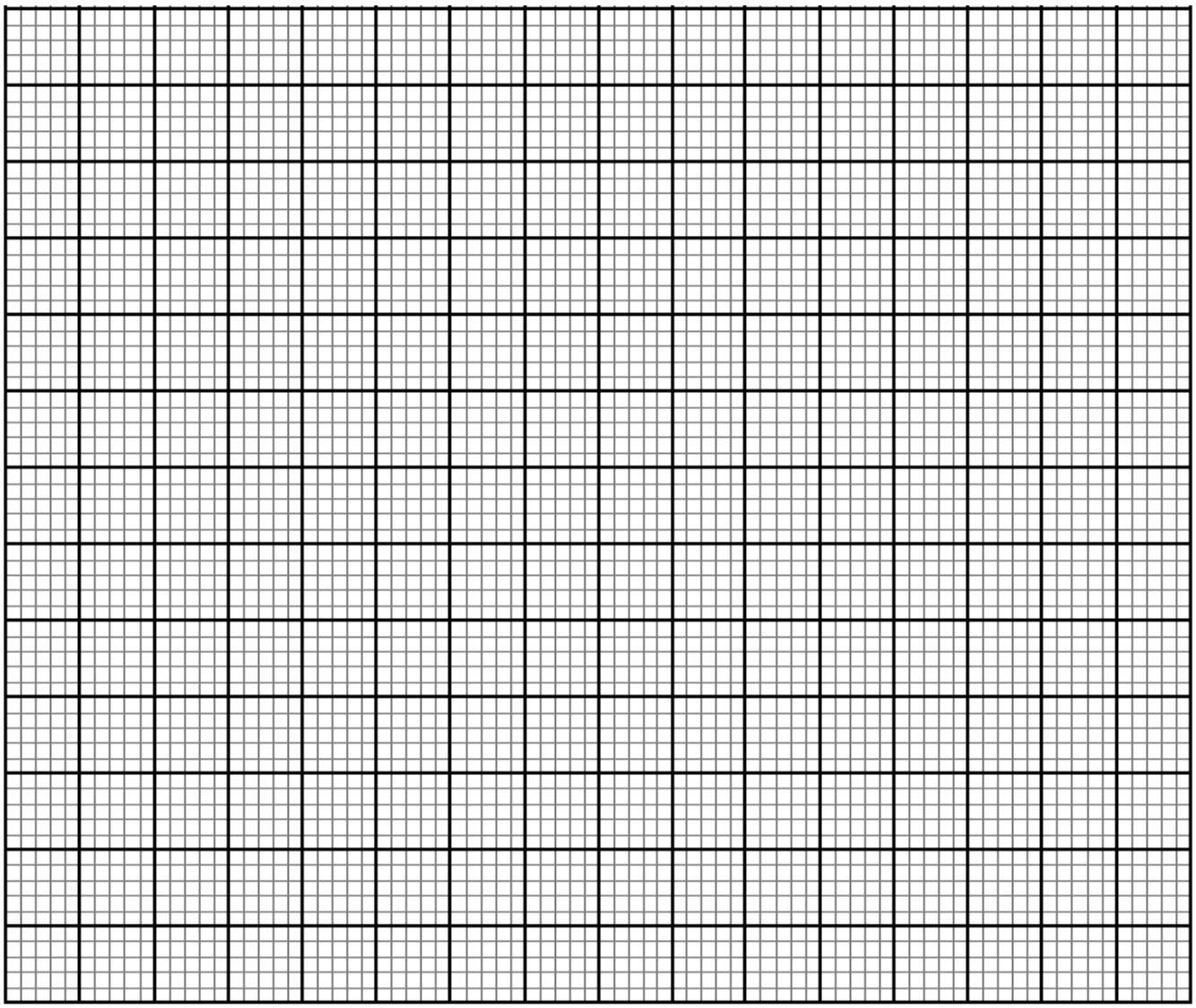
RETAIN THE SOLUTION IN THE VOLUMETRIC FLASK FOR USE IN PROCEDURE II

Table I

Test tube number	1	2	3	4	5
Volume of solution F(cm^3)	10	9	8	7	6
Volume of water added (cm^3)	0	1	2	3	4
Time taken (seconds)					
$\frac{1}{t}$(sec^{-1})					

(5mks)

a)i) Plot a graph of rate $\left(\frac{1}{t}\right)$, against volume of solution F. **(3mks)**



ii) Use the graph to determine the time taken for 1cm length of magnesium to dissolve if volume of water added is $1.5cm^3$. **(2mks)**

iii)a) In terms of rate of reaction, explain the shape of the graph **(2mks)**

……

……

……

PROCEDURE II

Add distilled water into the solution in the 250ml volumetric flask up to the mark. Label it as solution G.

Clean the burette and fill it with Sodium hydroxide, solution H.

Pipette 25cm^3 of solution G into 250ml conical flask. Add 2 drop of phenolphthalein indicator and titrate it with solution H from the burette.

Record your results in table below

Table II

	I	II	III
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution H used (cm^3)			

(4mks)

b) Determine the

i) Average volume of solution H used. **(1mk)**

ii) Number of moles of hydrochloric acid in 250cm^3 of solution G. **(2mks)**

iii) Number of moles of hydrochloric acid solution F that reacted with solid E. **(2mks)**

iv) The mass of magnesium ribbon that reacted. (Mg=24). **(2mks)**

v) Mass of 1cm length magnesium ribbon. **(1mk)**

2. You are provide with solid K. Carry out the following tests and record your observations and inferences in the spaces provided.

a) Place all solid K into a boiling tube. Add about $5cm^3$ of distilled water and shake the mixture.

Observation	Inferences
(1mk)	(1mk)

b) To about $2cm^3$ of the solution K , add half a spatula of sodium hydrogen carbonate.

Observation	Inferences
(½mk)	(½mk)

c) To the remaining solution K, add about $10cm^3$ of dilute hydrochloric acid. Shake thoroughly. Filter the mixture then wash the residue with distilled water. Dry the residue with filter paper.

i) Place one third of the residue into a test tube. Add about $10cm^3$ of distilled water and shake the mixture. Add half a spatula sodium hydrogen carbonate.

Observation	Inferences
(½mk)	**(½mk)**

ii) To the remaining residue add $5cm^3$ of distilled water then $5cm^3$ of sulphuric (VI) acid, followed by $5cm^3$ of ethanol and warm the mixture.

Observation	Inferences
(1mk)	**(1mk)**

3. You are provided with solid L carry out the following test and record your observations and inferences in the space provided.

a) Place one third of the solid L in a dry test tube. Heat it and test any gas produced with blue and red litmus paper.

Observation	Inferences
(2mks)	**(1mk)**

b) Place the remaining solid L in a boiling tube. Add about $10cm^3$ of distilled water and shake. Divide the solution in to four portions.

i) To about $2cm^3$ of solution L add 2 drops of barium chloride solution

Observation	Inferences
(1mk)	**(1mk)**

ii) To about $2cm^3$ of solution L add 5 drops of dilute hydrochloric acid

Observation	Inferences
(1mk)	**(½mk)**

iii) To $2cm^3$ of solution L add ammonia solution drop wise until in excess

Observation	Inferences
(1mk)	**(1mk)**

iv) To $2cm^3$ of solution L add sodium hydroxide drop wise until in excess

Observation	Inferences
(1mk)	**(½mk)**

THIS IS THE LAST PRINTED PAGE!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

232/1

PHYSICS

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

Instruction to The Candidates

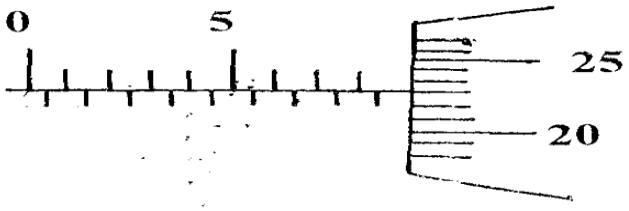
a) *Write your* ***name*** *and* ***ADM number*** *in the spaces provided above.*
b) *Sign and write the* ***date*** *of examination in the spaces provided above.*
c) *This paper consists of* ***two*** *Sections* ***A*** *and* ***B****.*
d) *Answer* ***all*** *the questions in sections* ***A*** *and* ***B*** *in the spaces provided.*
e) *All working must be clearly shown in the spaces provided.*
f) *Mathematical tables and electronic calculators* ***may be*** *used.*

For Examiners Use Only

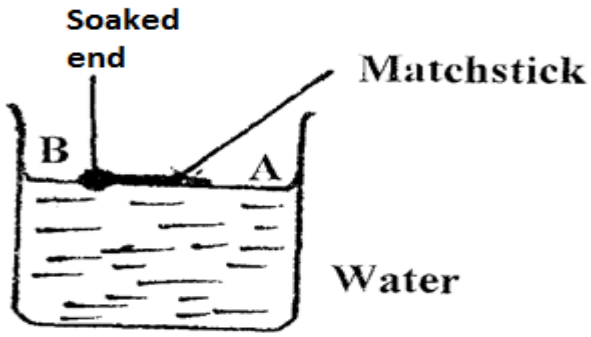
Section	Question	Total Score	Candidates Score
A	1-12	25	
B	13	09	
	14	09	
	15	09	
	16	10	
	17	09	
	18	09	
Total		80	

SECTION A (25 MARKS)

1. The figure shows the reading of micrometre screw gauge that has a zero error of -0.25mm. What is the actual length of the object being measured **(2marks)**



2. The figure below shows a matchstick soaped on one end and placed on the surface of clean water as shown.



The matchstick is observed to move towards a certain direction

i) State the direction (A or B) **(1mark)**

……

ii) Explain **(1mark)**

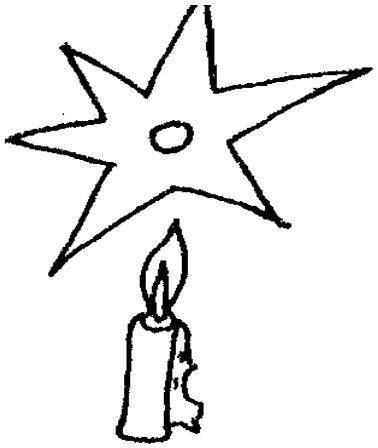
……

……

3. Two liquid X and Y have density 1.25g/cm^3 and 1.5g/cm^3 respectively. Calculate to 2d.p the density of the mixture containing 40% by mass of X the rest being Y **(3marks)**

4. A uniform meter rule pivoted at its 15cm mark is balanced by a 200g mass suspended at the 5cm mark. Determine the weight of the meter rule **(3marks)**

5. A paper windmill in a horizontal axis was placed about a candle as shown in the figure



When the candle was lit the paper windmill began to rotate. Explain this observation.**(2marks)**

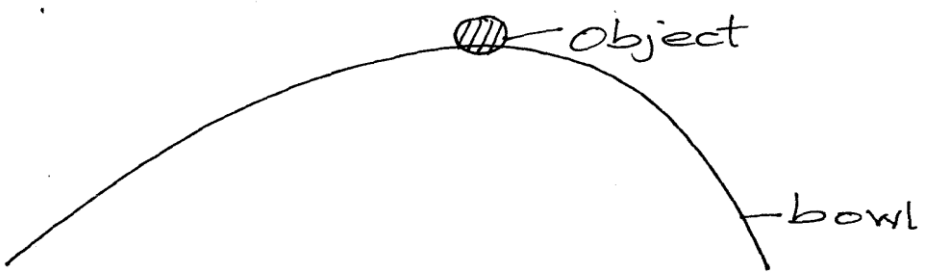
……

……

……

……

6. An object was placed on an inverted bowl as shown.



i) State the type of stability above. **(1mark)**

……

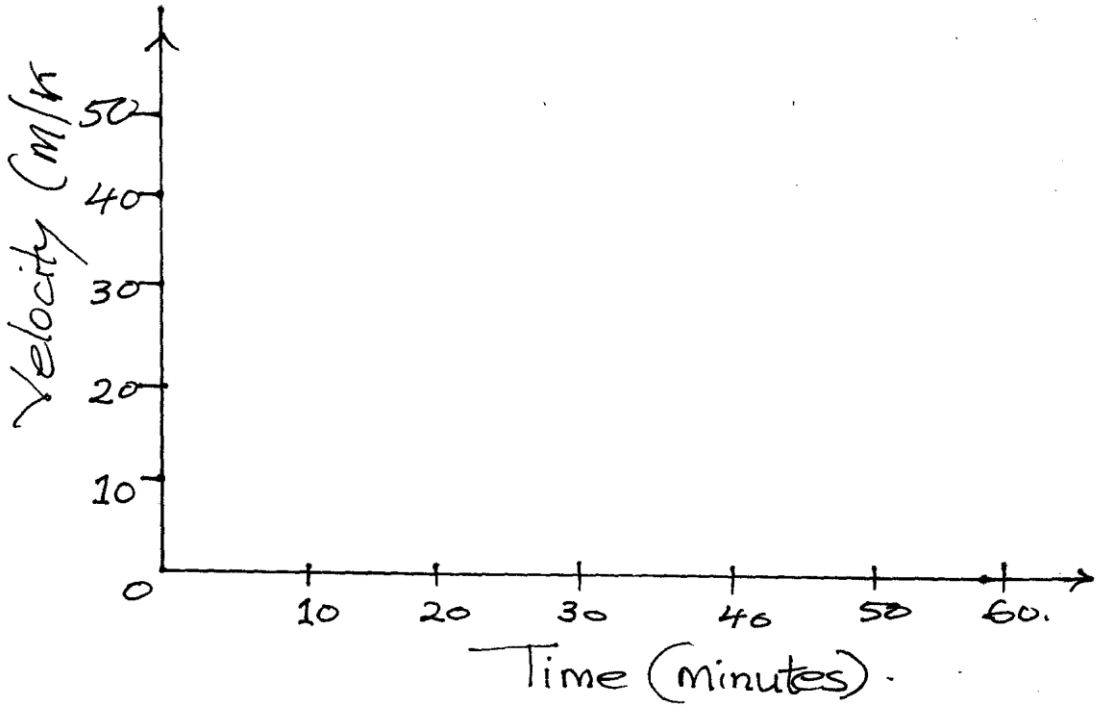
ii) Define the type stability above. **(1mark)**

……

……

7. A pipe of diameter 12mm is connected to another pipe of radius 9mm. if water flows in the wider pipe at the speed of 2m/s what is the speed in the narrow pipe. **(3marks)**

8. A car starting from rest accelerates uniformly for 5minutes to reach 30m/s. It continues at this speed for the next 20minutes and then decelerates uniformly to come to stop in 10 minutes. On the axes provided sketch the graph of velocity against time for the motion of the car**(1mark)**



9. A diver was swimming in a swimming pool of uniform depth of 0.8m from the surface of water. If atmospheric pressure acting on the surface of water is 103000pa calculate the total pressure experienced by the diver. (density of water = $1g/cm^3$, g= $10m/s^2$) **(2marks)**

10. The boiling point of water is known to be at 100^oC. A student heated some water and noticed that it boiled at 101^oC state two possible reasons for this observation. **(2marks)**

……

……

……

11. Explain the difference between a liquid and a gas in terms of intermolecular distance and force. **(2marks)**

……

……

……

12. State the source of energy for gases in the atmosphere. **(1mark)**

……

……

SECTION B 55 MARKS

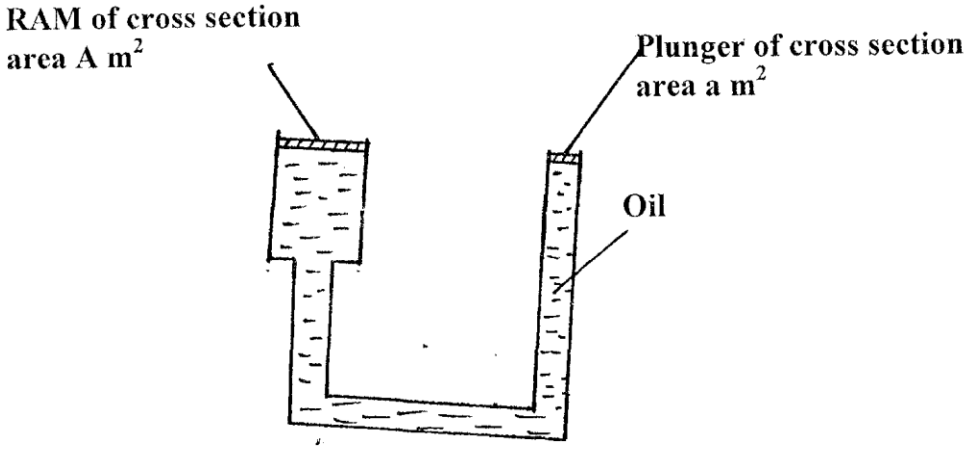
13. Define the term velocity ratio of a machine **(1mark)**

……

……

……

b) Figure below shows part of a hydraulic press. The plunger is the position where effort is applied while the ram piston is the position where load is applied. The plunger has a cross-section area a m^2 while the ram piston has a cross-section area Am^2



When the plunger moves down a distance d, the ram piston moves up a distance d.

i) State the property of liquid on which the working of the hydraulic press works **(1mark)**

……

……

ii) Derive an expression for the velocity ratio (V.R) in terms of A and a **(3marks)**

……

……

……

……

c) A machine of velocity ratio 45, overcome a load of 4.5×10^3N, When an effort of 135N is applied.

Determine **i)**The efficiency of the machine **(3marks)**

ii) The percentage of work that goes to waste **(1mark)**

14.a) Define specific latent heat of fusion of a substance **(1mark)**

……

……

b) Water of mass 200g at a temperature of 60^{o}C is put in a well lagged copper calorimeter of mass 80g. A piece of ice at 0^{o}C and mass 20g is placed in the calorimeter and the mixture stirred gently until all the ice melts. The final temperature T of the mixture is then recorded. (Take; specific latent of fusion of ice=334000J/kg, s.h.c of water =4200j/kg^{-1}k$^{-1,}$ s.h.c of copper =900J/kg^{-1}k^{-1}

Determine: i) The heat absorbed by the melting ice at 0^{o}C **(1mark)**

ii) The heat absorbed by the melted ice (water) to rise to temperature T. (answer may be given in terms of T) **(2marks)**

iii) The heat lost by the warm water and the colorimeter (answer may be given in terms of T)

(2marks)

iv) The final temperature of the mixture **(3marks)**

15.a) State Newton's second law of motion **(1mark)**

……

……

b) A matatu starts from rest and accelerates to cover a distance of 49m in 7seconds. Determine its acceleration. **(2mks)**

(c)A trolley moving on a horizontal bench of height 1.2m strikes a barrier at the edge of the bench. The brass mass on the top of the trolley flies off on impact and lands on the ground 2.5m from the edge of the bench. Determine

i) The time taken by the brass mass to reach the ground. **(2marks)**

ii) The speed at which the trolley struck the barrier **(2marks)**

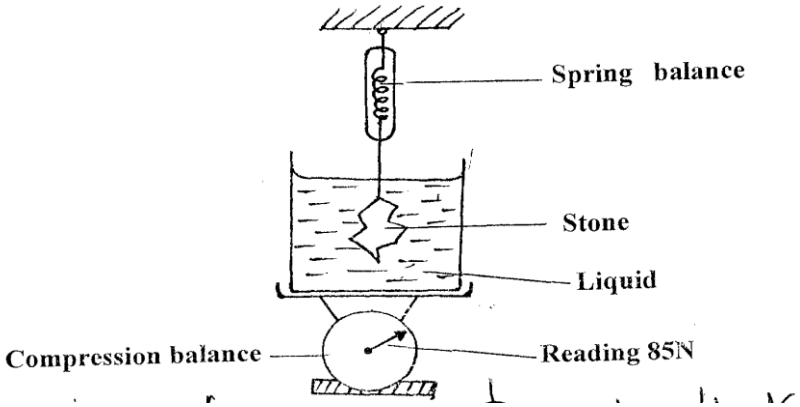
d) A passenger dropped a coin held at his hands in a stationary bus and it landed at his feet. State and explain the position it will land if he repeat it once again and the bus was assumed to be moving in a straight line at constant speed **(2marks)**

……

……

……

16. Figure below shows of mass 4kg immersed in liquid and suspended from a spring balance with a string. The beaker was placed on a compression balance and shown the reading of 85N. The density of the stone was 3000kg/m^3 while the density of the liquid was 800kg/m^3



a) State Archimedes principle **(1mark)**

……

……

b) Determine

i) Volume of the liquid displaced **(2marks)**

ii) Up thrust on the stone **(2marks)**

iii) Reading of the spring balance **(2marks)**

c) Find the volume of hydrogen gas filled balloon that will carry a 300kg load in air (density of air =1.3kg/m^3 while that of hydrogen =0.9kg/m^3) **(3marks)**

17.a) State Boyles law **(1mark)**

……

……

b) State the measurements taken in verifying the law above **(2marks)**

……

……

c) Explain how measurement above are used to verify Boyles law. **(3marks)**

……

……

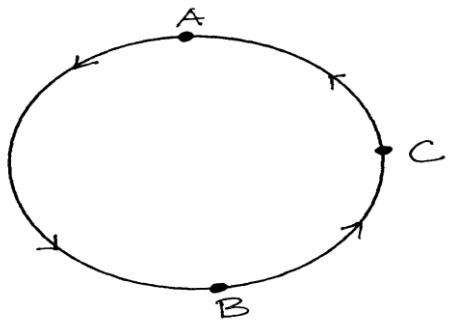
……

……

d) At 30^{o}C, pressure of a gas is 60cmHg. At what temperature would the pressure of the gas rise to 100cmHg if the volume is kept constant. **(3marks)**

18.a) A car of mass 1500kg moves round a circular track of radius 1200m at a constant speed of 20m/s what is the centripetal force action on the car. **(3marks)**

b) The figure below shows a stone of mass 10kg being whirled using a rope in a vertical circle of radius 2.5m



State what provides the centripetal force at points.

i) A **(1mark)**

……

ii) B **(1mark)**

……

iii) C **(1mark)**

……

c) Calculate the maximum tension on the body if it was moving ate a linear velocity of 10m/s. **(3marks)**

($g=10m/s^2$)

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

232/2

PHYSICS

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

Instruction to The Candidates

*a) Write your **name** and **ADM 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 working must be clearly shown in the spaces provided.
*f) Mathematical tables and electronic calculators **may be** used.*

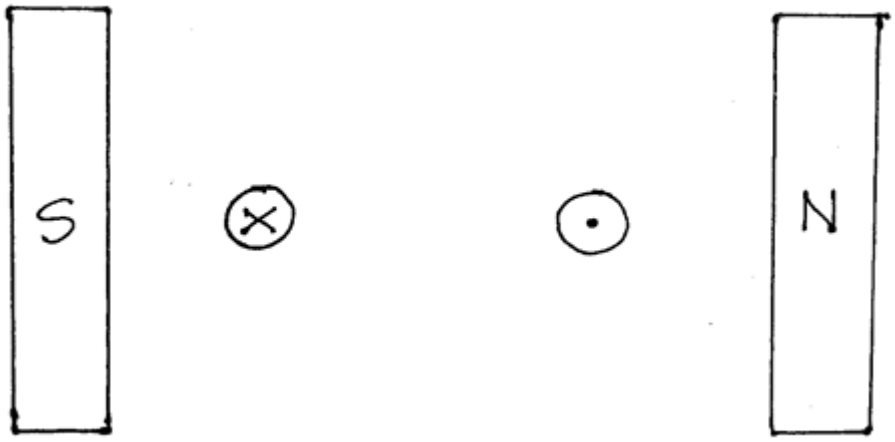
For Examiners Use Only

Section	Question	Total Score	Candidates Score
A	1-12	25	
B	13	08	
	14	09	
	15	11	
	16	11	
	17	08	
	18	08	
Total		80	

SECTION A (25 MARKS)

Answer all the question in this section in the space provided.

1. Sketch the magnetic field pattern given by a current carrying conductor in the magnetic field shown in the figure below. Also show the direction of the forces produced on the conductor **(2 mks)**



2. State any two ways in which energy is lost in a transformer, and briefly explain each loss can be minimised. **(2 mks)**

……

……

……

3. Below is part of the electromagnetic spectrum in order of increasing wavelength

A	B	C	Visible light	infrared	D	C

How are waves A Produced **(1 mk)**

……

……

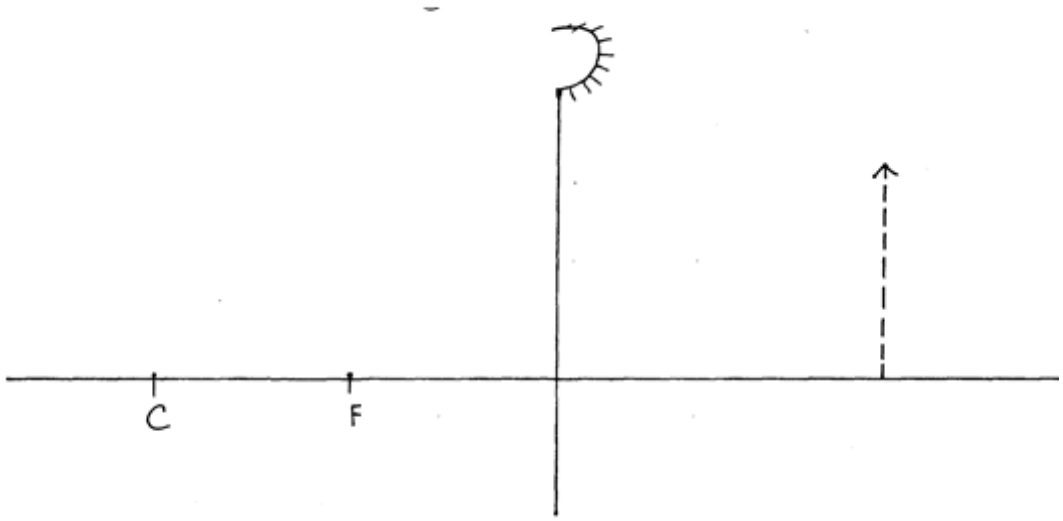
4.a) State one similarity and one difference between a camera and a human eye. **(2 mks)**

……

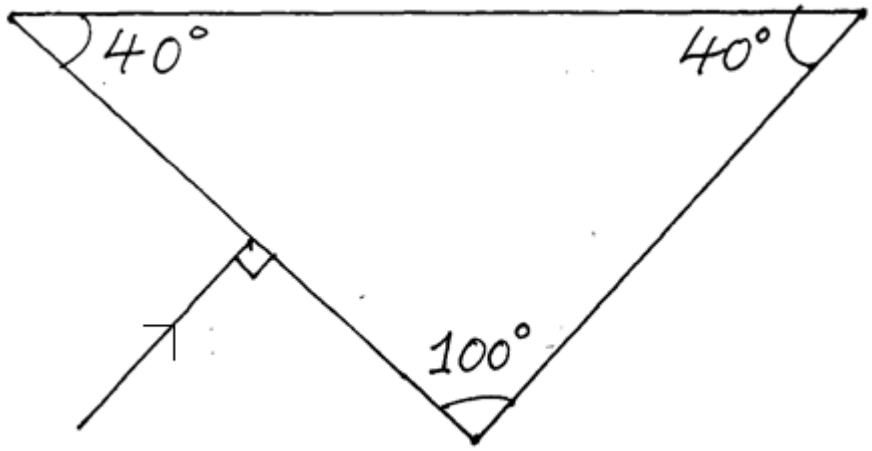
……

……

b) The figure below is a concave mirror used to form a virtual, magnified image. Complete the ray diagram to show the position of the object **(3 mks)**



5) The figure below shows a ray of light incident on a glass prism



Given that the critical angle of the glass is 39^0, sketch on the diagram the path of ray through the prism until it exits the prism **(2mks)**

6. A sharp point of a pin is held over a positively charged electroscope. State and explain the observation made on the electroscope **(2mks)**

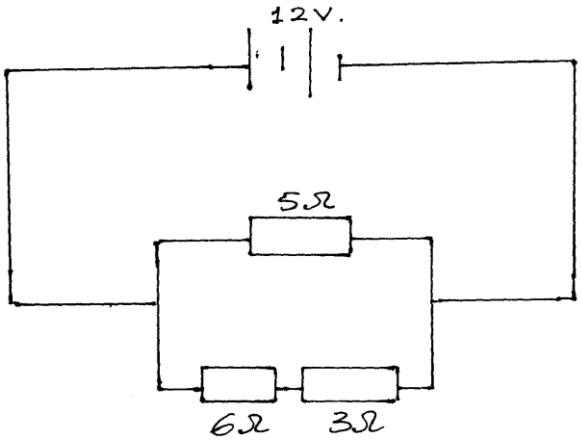
……

……

……

……

7. The figure below is a circuit of 3 resistors connected to a 12v battery

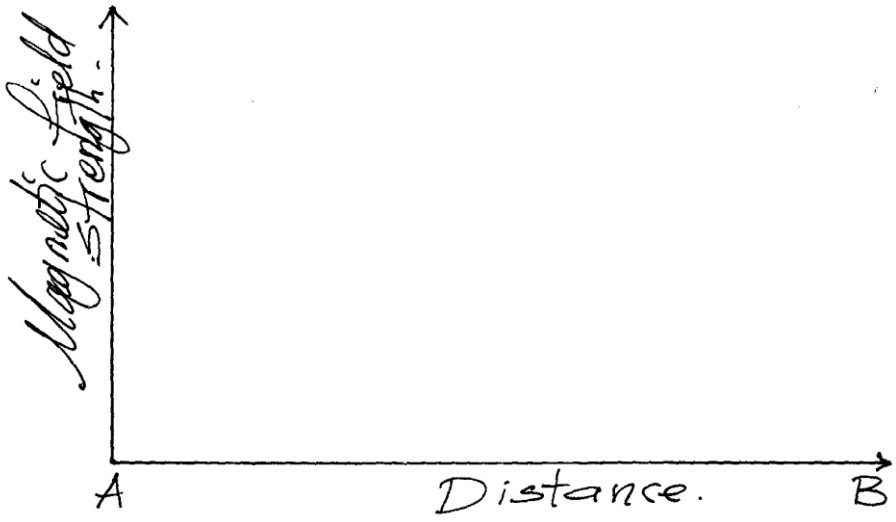


Determine the P.d across the 3Ω resistor **(3mks)**

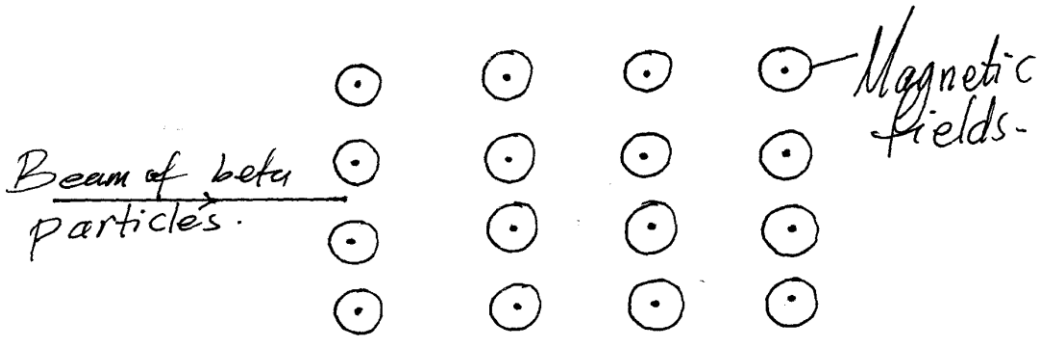
8. The figure below shows a magnet. Point A and B are in front of the magnet



On the axis provided sketch a graph showing how the magnetic field strength changes the A to B **(2mks)**



9. The figure below shows a beam of beta particles entering a magnetic field whose direction below



Complete the diagram to show the path of the beta particles as they pass through magnetic field and out of it **(1mk)**

10.A girl standing 400m from the foot of a high cliff claps her hand and the echo reaches her 2.32 seconds later. Calculate the velocity of sound in air using this observation. **(2mks)**

11. Explain two of ways of dealing with defect of polarisation in a simple cell **(2mks)**

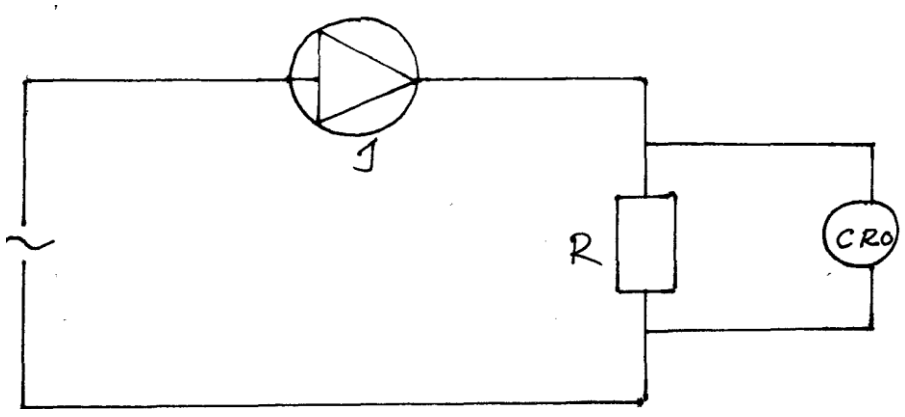
……

……

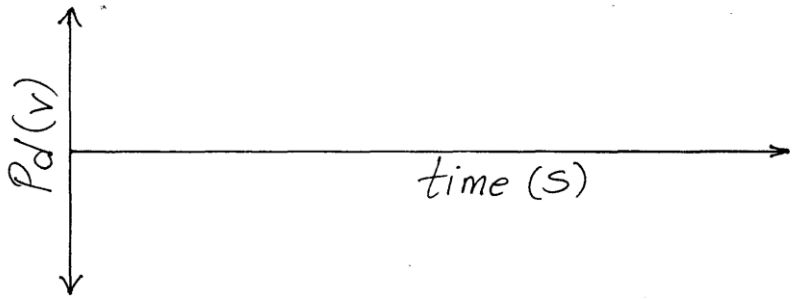
……

……

12. The figure below shows an a.c source connected across diode D and Resistor R

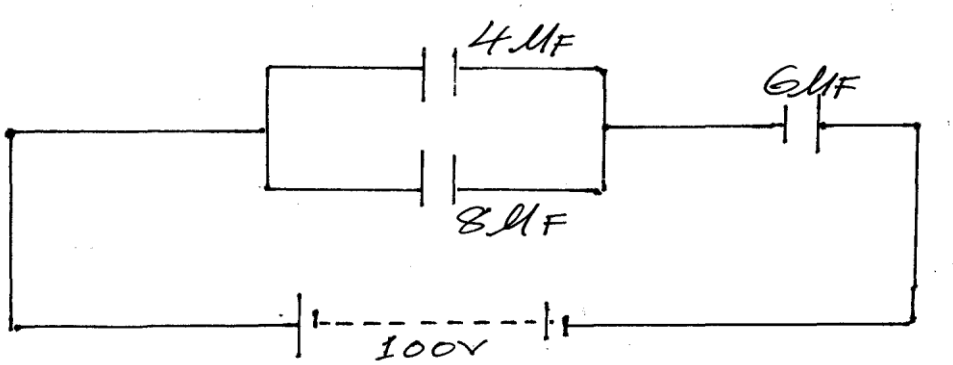


On the axis provided sketch the output voltage as observed in the CRO **(1mk)**



SECTION B (55 MARKS)

13.a) The figure below shows a system of capacitor connected to a 100v d.c supply.



From this circuit determine:

i) Its effective capacitance **(2mks)**

ii) The charge through the $6\mu F$ capacitor **(2mks)**

iii) The p.d across $8\mu F$ capacitor **(2mks)**

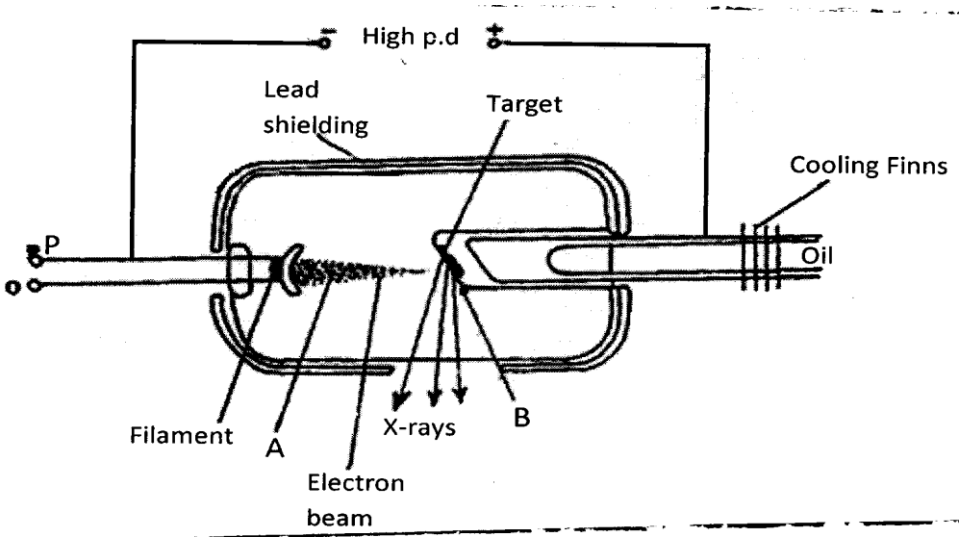
b) State any two factors that affects the capacitance of a parallel plate capacitor **(2mks)**

……

……

……

14.a) The figure below shows the features of an x-ray tube



i) Name the parts labelled A and B **(2mks)**

A……..

B……..

ii) Explain the effect of increasing the potential P on x-rays produced **(2mks)**

……

……

……

iii) During the operation of the tube, the target become very hot. Explain how this heat is caused **(2mks)**

……

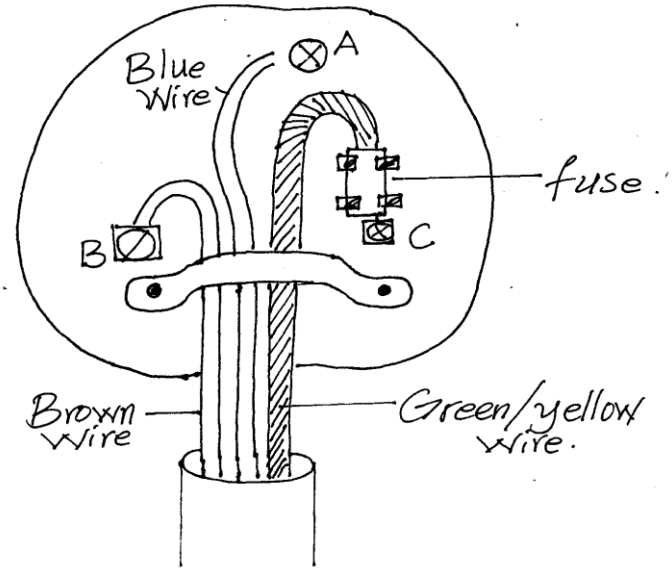
……

……

……

b) In a certain x-ray tube, the electrons are accelerated by a p.d of 12kv. Assuming that all energy goes to produce x-rays, determine the frequency of x-ray produced ($h=6.62\times10^{-34}$Js and $e^{-}=1.6\times10^{-19}$C) **(3mks)**

15. The figure below shows a connection to a 3 pin plug as viewed from its back



i) Name the terminal pin labelled A **(1mk)**

……

ii) State any two mistakes with wiring of his 3pin plug **(2mks)**

……

……

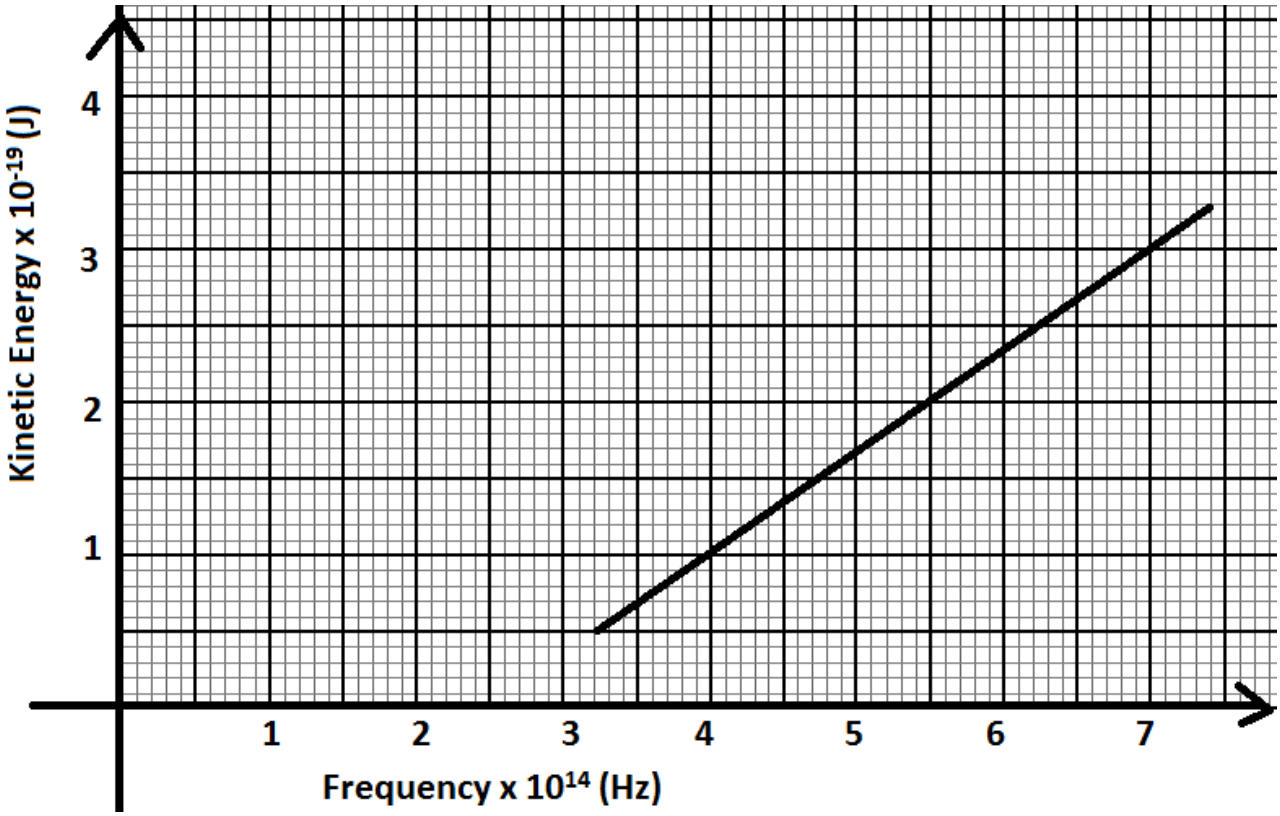
iii) Give any two reasons why the earth pin is normally longer than the other two pins **(2mks)**

……

……

……

b) The figure below is graph of K.E of electrons against frequency of radiation in photo – electric effect in cathode metal plate



From the graph, determine

i) Threshold wavelength (λ)of the cathode metal surface **(2mks)**

……

……

……

ii) Plancks constant (h) of cathode **(2mks)**

……

……

……

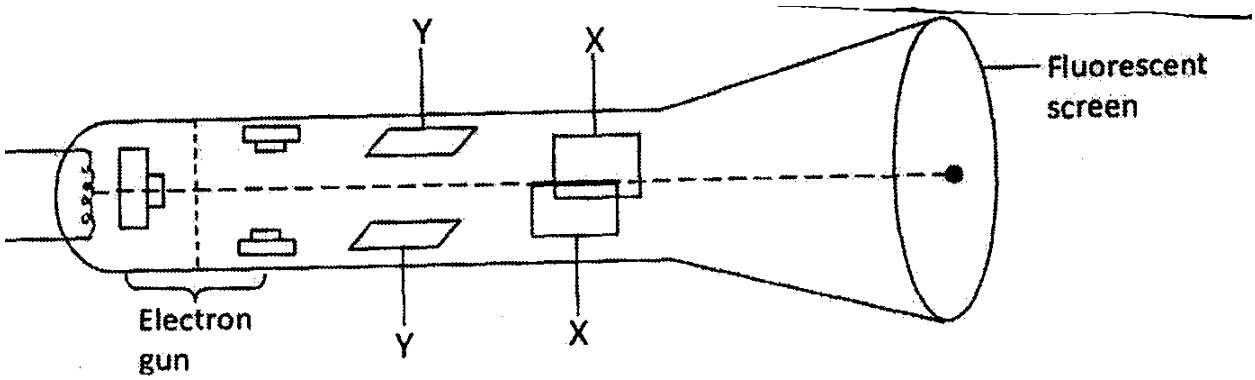
iii) Work function of cathode in ev **(2mks)**

……

……

……

16.a) The figure below shows a simple cathode ray tube



i) Explain how the electrons are produced in the tube **(2mks)**

……

……

……

ii) State one function of the anode **(1mk)**

……

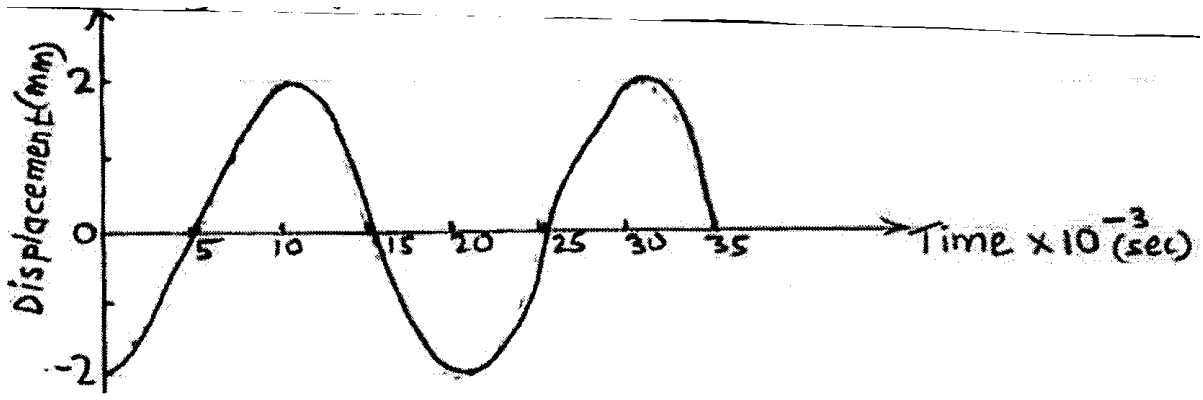
……

iii) At what part of the cathode tube would the time base be connected? **(1mk)**

……

……

b) The figure below represent a displacement time graph for a wave moving with a velocity of 80cm/s

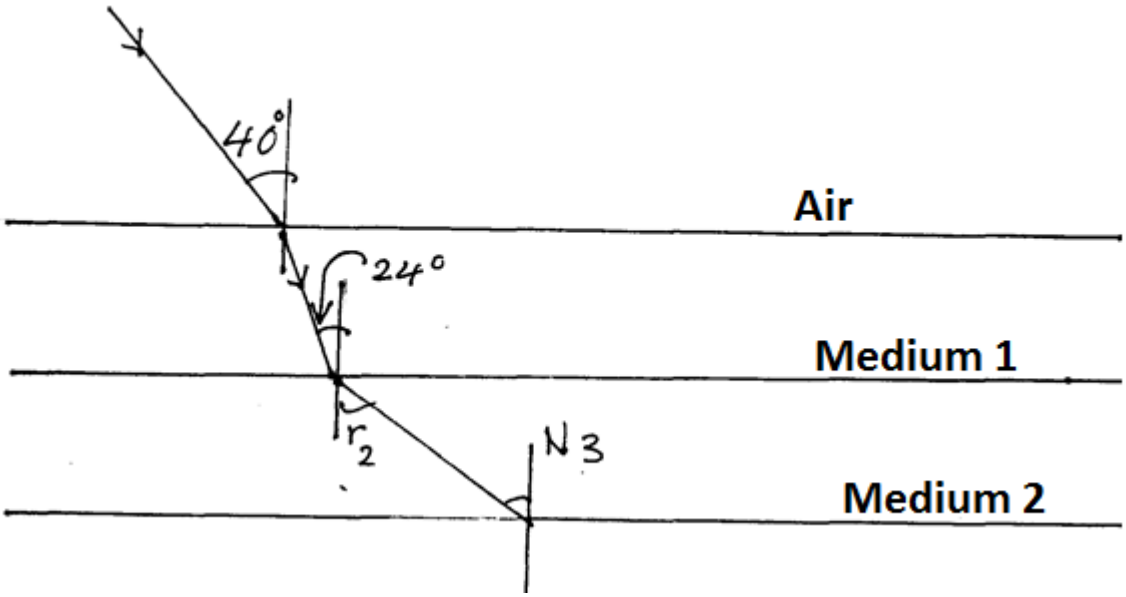


Determine the wave

i) Frequency (f) **(2mks)**

ii) Wavelength (λ) **(2mks)**

c) A ray of light traveling through air in to medium 1 and 2 as shown in the figure below.



i) Calculate the refractive index of medium 1 **(1mk)**

ii) Angle of refraction r_2 in medium 2 **(2mks)**

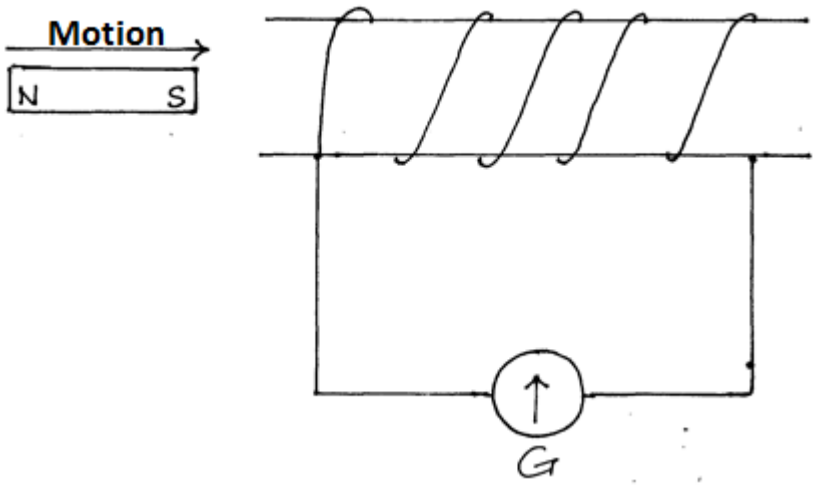
17.a) State the lenz's law of electromagnetic induction. **(1mk)**

……

……

……

b) A bar magnet is moved into a coil of insulated copper wires connected to a centre zero – galvanometer (G) as shown in the figure below



i) With arrows show the direction of induced current in the coil **(1mk)**

ii) Explain clearly what is observed on the galvanometer when the south pole of a magnet is moved into the coil and then withdrawn **(2mks)**

……

……

……

……

c) A transformer has 1600 turns in the primary coil and 80 turns in the secondary coil. If the transformer is 80% efficient and its primary coil is 240v with a current of 0.75A, determine

i) The secondary e.m.f of its coil **(2mks)**

ii) The output power in its secondary coil **(2mks)**

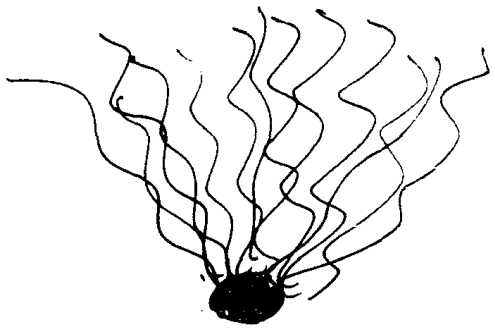
18.a) Define the term radioactivity **(1mk)**

……

……

……

b) The figure below shows tracks formed in a diffusion cloud chamber given by a certain radioactivity sample



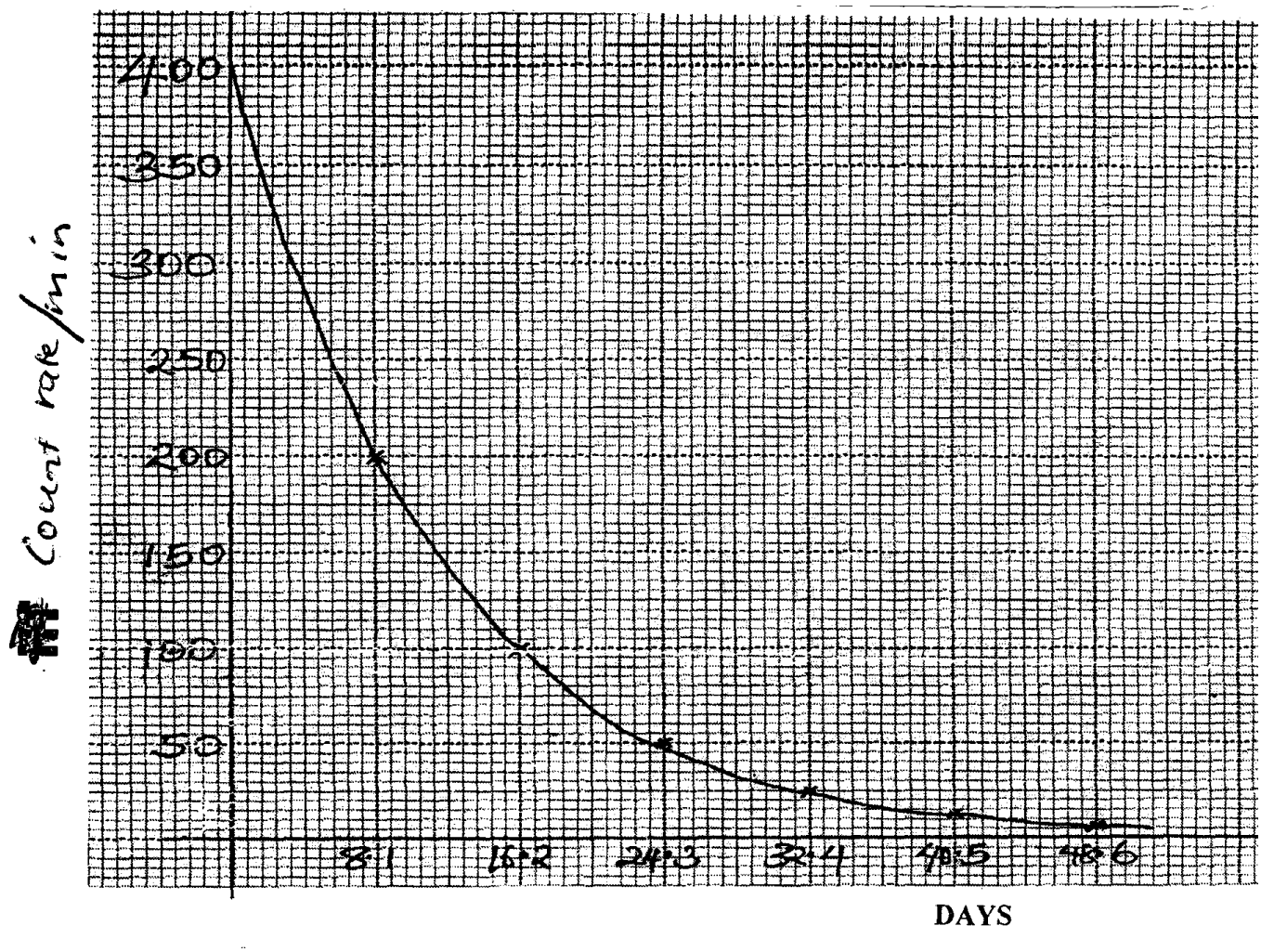
State the type of radiations emitted by this sample, explain your answer **(2mks)**

……

……

……

c)i)The figure below shows radioactive decay of iodine



ii) What fraction of this iodine will have decayed after 3 half – lifes **(2mks)**

d) The average count rate of a radioactive material sample is 92 counts per second. After 420 seconds, the count rate had dropped to 29 counts per second. Given that the background count rate was 20 counts per second, determine the half life of this sample. **(3mks)**

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

232/3

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

SCHOOL…… SIGN……

(Kenya Certificate of Secondary Education)

CONFIDENTIAL

1. -two diconcave lences 1st and 2nd (f=10cm)
-Two lens holder
- A white screen, I (with cross – wire)
- A white screen, II without cross wire
- A meter rule
- A plane mirror- With ≥ surface area of the lens
- A piece of cellotape
- A lit candle/ source of light

2. A) Voltmeter
Ammeter (0 -1)A
Switch
2 – dry cells
Cell holder
Resistor R=10Ω
Nichrome wire 0.3±0.02mm
7 connecting wire
Micrometer screw gauge (to be shared)

2. B) Measuring cylinder atleast 40cm
Glycerine to fill the cylinder to 37cm
Two rubber bands
Tissue paper
One ball bearing (diameter 6mm ±1)
A magnet (any permanent magnet)
A micrometer screw gauge
A stop watch (digital)

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

232/3

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Instruction to The Candidates

(a) Write your name and Index number in the space provided above.
(b) Answer all questions in the space provided in the question paper
(c) You are supposed to spend the first 15 minutes of the 2½ hours allowed for this paper reading the whole paper carefully before commencing your work.
(d) Marks are given for clear record of the observation made, their suitability accuracy and the use made of them.
(e) Candidates are advised to record their observation as soon as they are made.
(f) Non-programmable silent calculators and mathematical tables may be used.

For Examiners Use Only

Question 1

Part	h(iii)	V	Vi	V(I)	V(II)	Total
Max score	1	6	5	3	3	18
score						

Question 2 A

part	a	b	C(i)	C(ii)	e	f	g	h	Total
Max score	1	2	1	2	2	1	3	3	15
score									

Question 2(B)

part	c	e	f	g(I)	g(II)	Total
Max score	1	1	1	2	3	7
score						

1. You are provided with the following:

a) Two biconcave lenses,

b) Two lens holders

c) lit candle

d) White screen, I (with cross-wire)

e) White screen (II)

f) A meter rule

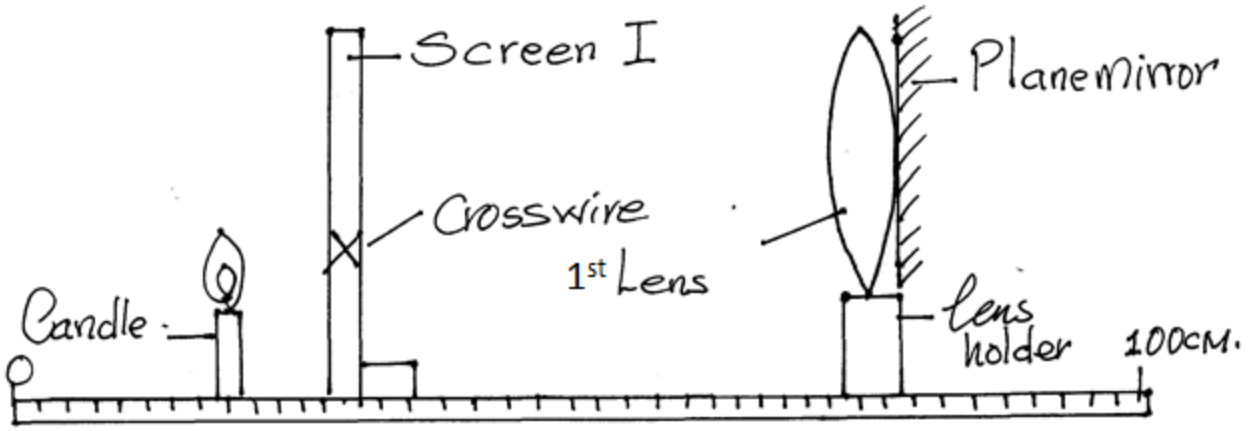
g) A plane mirror

h) Cellotape

Procedure

i) Mount 1st lens in the lens holder. Fix the plane mirror at the back of the lens using cellotape

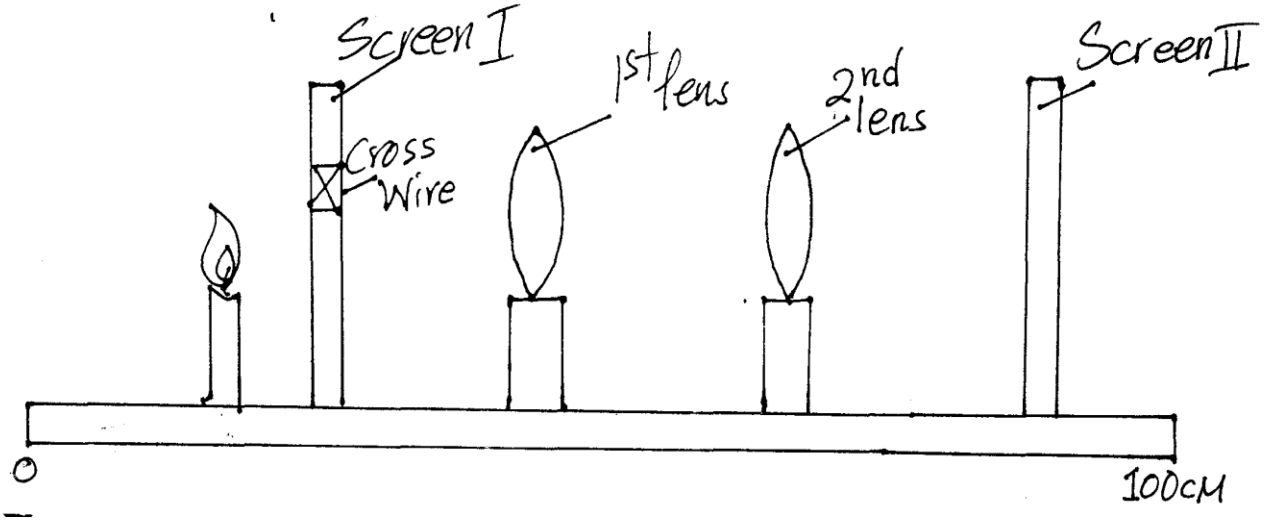
ii) Arrange the setup as shown in figure below.



iii) Adjust the position of the lens with the mirror using a sharp image of the cross-wire is formed on the screen I beside the cross-wires, measure the distance L_1 between screen I and lens A

L_1 ……. **(1mk)**

iv) Remove the mirror from the lens. Re-arrange the candle, screen I, screen II 1st lens and 2nd lens as in the figure below.

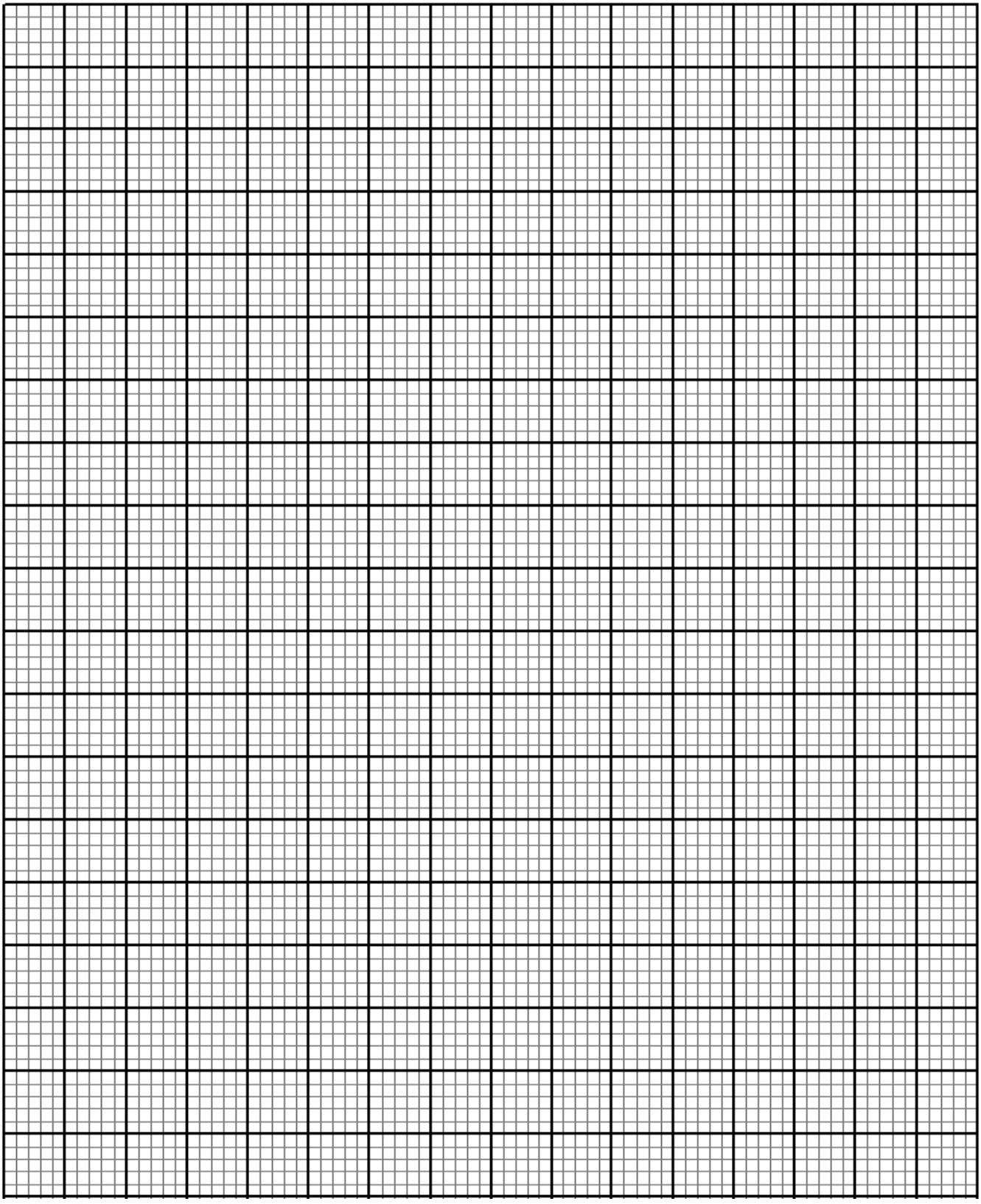


v) Set the distance between screen I and 1st lens to be 40cm ensure this distance is maintained throughout the rest of the experiment. Set the distance between 1st and 2nd lens to be 30cm. Adjust the position of the screen II to obtain a sharp image of the cross – wire on it. Measure the distance V between 2nd lens and screen II. Record values in the table below.

d(cm)	30	35	40	45	50	55	60	65	70
V(cm)									

(6mks)

vi) Plot a graph of V against d **(5mks)**



vii) From the graph, at d=50cm, determine

I) The slope s of the graph **(3mks)**

II) The value of k, given that $K(s-60)^2 = -590$ **(3mks)**

2.A) You are provided with the following.

- A voltmeter
- An ammeter
- A switch
- 2 dry cells
- Cells holder
- Resistor R
- A nichrome wire mounted on mm scale
- 7 connecting wires
- Micrometer screw gauge

Proceed as follows

a) Measure the E.M.F**, E** of a cell **(1mk)**

E=……..

b) Draw the set up you have used to measure the E.M.F. **(2mks)**

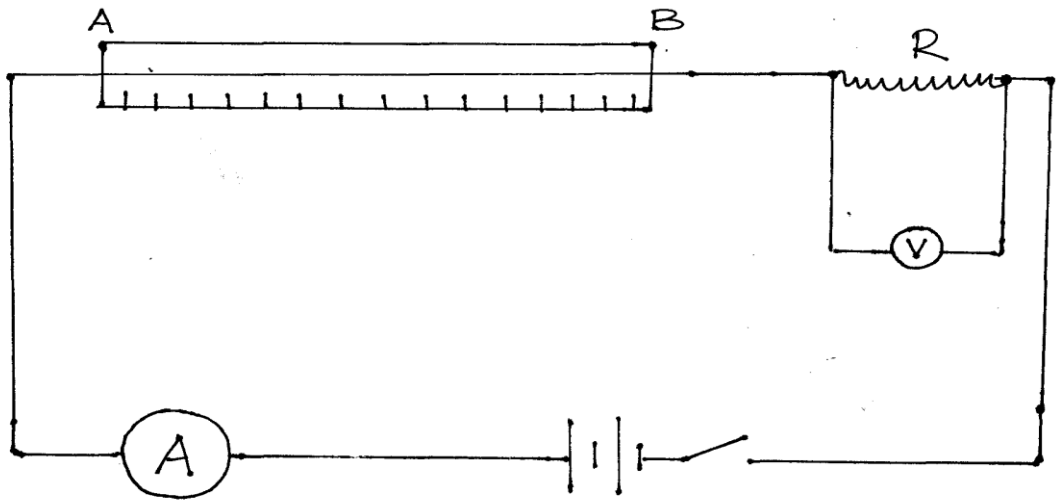
c)I Using micrometer screw gauge provided measure the diameter d of the nichrome wire

d=……mm **(1mk)**

II Determine the radius r of the nichrome wire **(2mks)**

r=……..m

d) Arrange the apparatus as shown below



e) Close the switch and record V_R, the pd across resister and I_R, the current in the circuit

V_R…… **(1mk)**

I_R…… **(1mk)**

f) Connect the voltmeter across nichrome wire AB and record the pd, V_N

V_N…… **(1mk)**

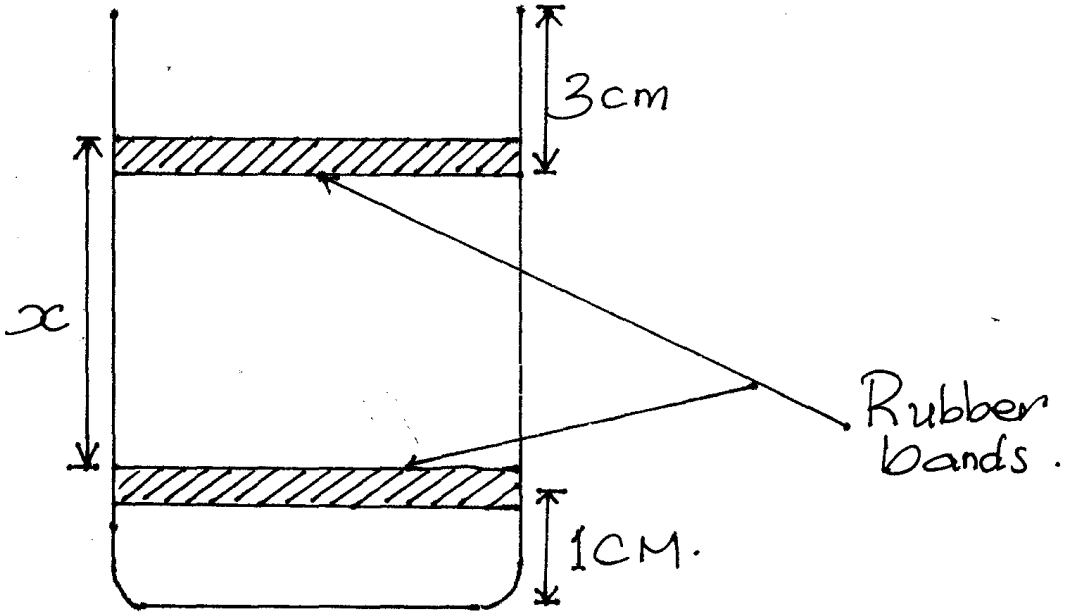
g) Determine the value of resistance R **(3mks)**

h) Calculate the value of constant Q given that $\frac{QRL_0}{V_N} = 100$ **(3mks)**

2.B) You are provided with the following set of apparatus.

- measuring cylinder
- Glycerine
- Two rubber bands
- One meter rule
- Steel ball bearing
- A magnet
- A micrometer screw gauge
- A stop watch
- A piece of tissue paper

a) Set the apparatus as shown



b) Adjust the lower ruber band so that x=25cm.

c) Release the steel ball from the surface of the liquid and obtain the time, t it takes to travel the distance x =25cm

t_1……. **(1mk)**

d) Use The magnet provided to remove the steel ball from the liquid.

e) Repeat procedure b, c and d for x= 15cm to obtain t_2

t_2=……. **(1mk)**

f) Measure the diameter, D of the steel ball using micrometer screw gauge.

D=……..m **(1mk)**

g)I Calculate the average value of x and t

t_{av} = **(1mk)**

x_{av} = **(1mk)**

II) Using the average value obtained above, determine the viscosity of the glycerine using the equation below

$$n = \frac{D^2 tg(\rho - 6)}{18x}$$ **(3mks)**

Where g=acceleration due to the force of gravity =10m/s^2

ρ =density of steel bell = 7.0×10^3kg/m^3

D= Density of glycerin =1.26×10^3kg/m^3

THIS IS THE LAST PRINTED PAGE!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

443/1

AGRICULTURE

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. *Write your name and admission number in the spaces provided above.*
2. *Sign and write date of examination in spaces provided.*
3. *This paper consists of three sections A, B and C.*
4. *Answer all questions in section A and B and any other two questions in section C.*
5. *Candidates must answer the questions in English.*
6. *All answers should be written in spaces provided.*

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE SCORE
A	1-17	30	
B	18-21	20	
C	22-24	40	
TOTAL		90	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

SECTION A: 30 MARKS

Answer all questions in this section in the spaces provided

1. Give four reasons why farmers are encouraged to practice organic farming **(2marks)**

……

……

……

……

2. Distinguish between GDP and GNP **(2marks)**

……

……

……

……

3. What is meant by the following terms **(2marks)**

(i) Seed inoculation

……

……

(ii) Seed dressing

……

……

4. Name four types of terraces **(2marks)**

……

……

……

……

5. Name the routine field practice done by;

(a) Removal of extra suckers in a banana stool **(1mark)**

……

(b) Removal of old stems down to level of top foliage in pyrethrum **(1mark)**

……

(c) Removal of suckers from coffee bushes **(1mark)**

……

6. State three characteristics of phosphatic fertilizers **(1.5marks)**

……

……

……

7. Explain the relationship between scarcity and choice as used in agricultural economics**(1mark)**

……

……

……

8. Outline four ways by which crop pests are classified **(2marks)**

……

……

……

……

9. State four advantages of land consolidation **(2marks)**

……

……

……

……

10. Outline three benefits derived from trees used in agroforestry **(1½marks)**

……

……

……

11. State four practices which improve light intensity in crop production **(2marks)**

……

……

……

……

12. Give four factors that influence the quality of hay **(2marks)**

……

……

……

……

13. Outline two other methods of conserving forage in the farm **(1mark**)

……

……

14. State four factors that determine the demand of a commodity in a free market **(2marks)**

……

……

……

……

15. Give four varieties of tomatoes grown for processing **(2marks)**

……

……

……

……

16. State two advantages of mixed farming **(1mark)**

……

……

17. Name any two land tenure systems practiced in Kenya **(1mark)**

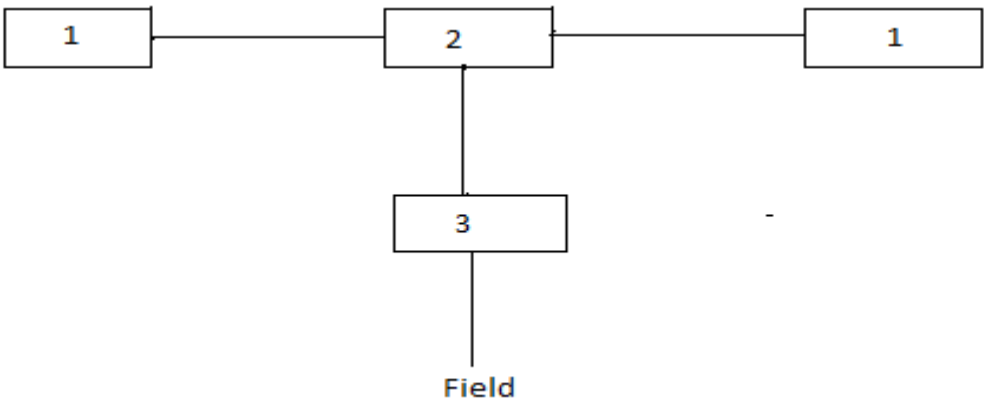
……

……

SECTION B: 20 MARKS

Answer all questions in the spaces provided

18. Illustrated below is a method of turning compost. Study the method and answer the questions that follow.



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

……

(b) Using arrows in the diagram, show how the turning is done before the manure can be taken to the field **(2marks)**

(c) After how long should the compost be ready for use **(1mark)**

……

(d) Apart from the above named type of organic manure, name any other two types of organic manure **(1mark)**

……

……

19. Below is a diagram of a tertiary operation. Study it and answer the questions that follow.



(i) Name the operation **(1mark)**

……

(ii) Explain the process of performing the operation **(1mark)**

……

……

(iii) Name the implement that can be used to achieve the operation **(1mark)**

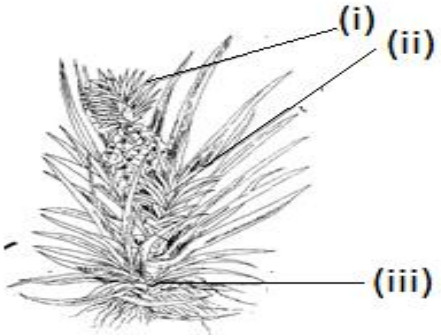
……

(iv) State the importance of carrying out the operation **(2marks)**

……

……

20. Below is the diagram of a planting material. Study it and answer the questions that follow.



(a) Label the parts labelled i, ii and iii **(3marks)**

……

……

……

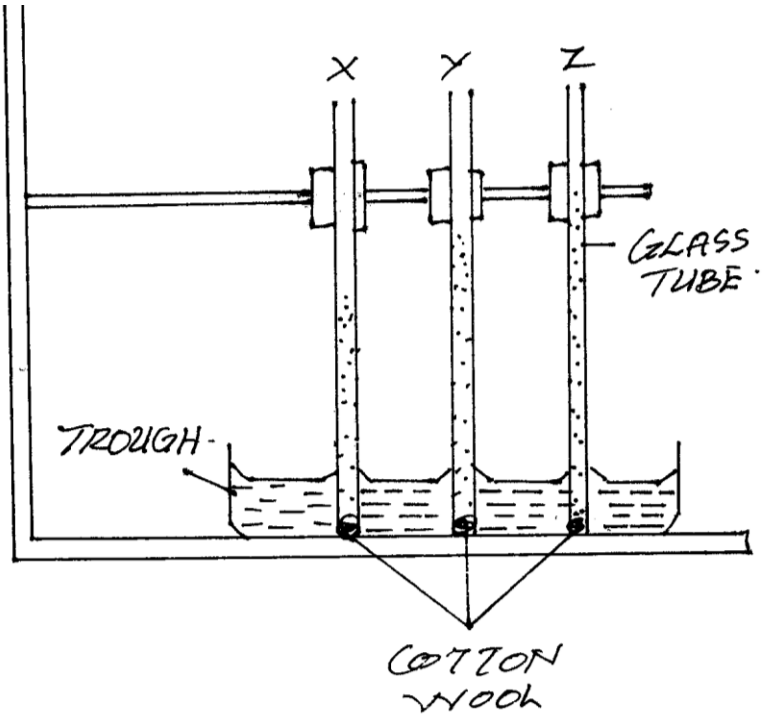
(b) State two factors that determine seed rate **(2marks)**

……

……

……

21. Below is the set up of three different types of soil.



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

……

(b) State two ways of improving the soil structure labelled Z **(1mark)**

……

……

……

(c) Name three processes of rock weathering **(3marks)**

……

……

……

SECTION C: 40 MARKS

Answer any two questions from this section.

22. Study the following information which was extracted from Mr Kibui's farm records on 30th November 2023 and answer the questions that follow.

Loans payable to bank	Ksh.300,000
Five milking cows	Ksh.250,000
400 layers	Ksh.80,000
20 goats	Ksh.30,000
Debts payable to cooperative	Ksh.20,000
Buildings and structures	Ksh.600,000
Bonus payable to workers	Ksh.19,000
Cattle feed in store	Ksh.10,000
Animals drugs in store	Ksh.4,000
Breakages to repair	Ksh.30,000
Cash at hand	Ksh.20,000
Cash in bank	Ksh.30,000
Spray equipment	Ksh.12,000
Debts receivable	Ksh.18,000

(a) Prepare a balance sheet for Mr Kibui's farm using the information above **(8marks)**

(b) Was Mr Kibui's business concern solvent or insolvent **(1mark)**

(c)Name any other financial statement that can be found in Mr Kibui's farm **(1mark)**

(d)Describe five factors to consider in siting farm structures **(10marks)**

23.(a) Describe the procedure of silage making **(5marks)**

(b)State five effects of wind on crop production **(5marks)**

(c)State five precautions that should be observed when harvesting cotton **(5marks)**

(d)Why should it be advisable to use a nursery in crop production **(5marks)**

24. State five ways through which a farmer can adjust to risks and uncertainties in farming **(5marks)**

(b) Describe the marketing functions in agricultural economics **(5marks)**

(c) Describe the safety precautions a farmer should take when using herbicides **(5marks)**

(d) Explain five physical methods of pest control **(5marks)**

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

443/2

AGRICULTURE

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATE

1. *Write your name and admission number in the spaces provided above.*
2. *Sign and write date of examination in spaces provided.*
3. *This paper consists of three sections A, B and C.*
4. *Answer all questions in section A and B and any other two questions in section C.*
5. *Candidate must answer the questions in English.*

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE SCORE
A	1-16	30	
B	17-20	20	
C	21	20	
	22	20	
	23	20	
TOTAL		90	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

SECTION A: 30 MARKS

Answer ALL questions in this section in the spaces provided

1. State four features of a good pig house **(2marks)**

……

……

……

……

2. State four features of large white breed of pigs **(2marks)**

……

……

……

……

3. Name three stages of liver fluke which occurs in the fresh water snail **(1½marks)**

……

……

……

4. State four reasons for controlling livestock diseases **(2marks)**

……

……

……

……

……

5. Name four factors which determine the maintenance requirements of an animal **(2marks)**

……

……

……

……

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

……

……

……

……

……

7. Distinguish between the following pair of terms as used in livestock production

(a) Ringing and crutching **(1mark)**

……

……

……

(b) Steaming up and flushing **(1mark)**

……

……

……

8. Give four reasons for maintaining a wheel barrow in good working condition **(2marks)**

……

……

……

……

9. State four symptoms of Newcastle disease in poultry **(2marks)**

……

……

……

……

……

……

10. State four disadvantages of a tractor as a source of power **(2marks)**

……

……

……

……

11.Give four conditions that reduces the quality of eggs for hatching **(2marks)**

……

……

……

……

12. Name three methods that are used in selection of breeding stock in livestock production **(1½marks)**

……

……

……

13. State four construction features necessary in a fish pond **(2mark)**

……

……

……

……

14. Give an appropriate terms that refers to each of the following

(i) Castrated chicken **(½mark)**

……

(ii) Young one of a rabbit **(½mark)**

……

15. State four methods of dehorning **(2marks)**

……

……

……

……

16. State four disadvantages of in breeding **(2marks)**

……

……

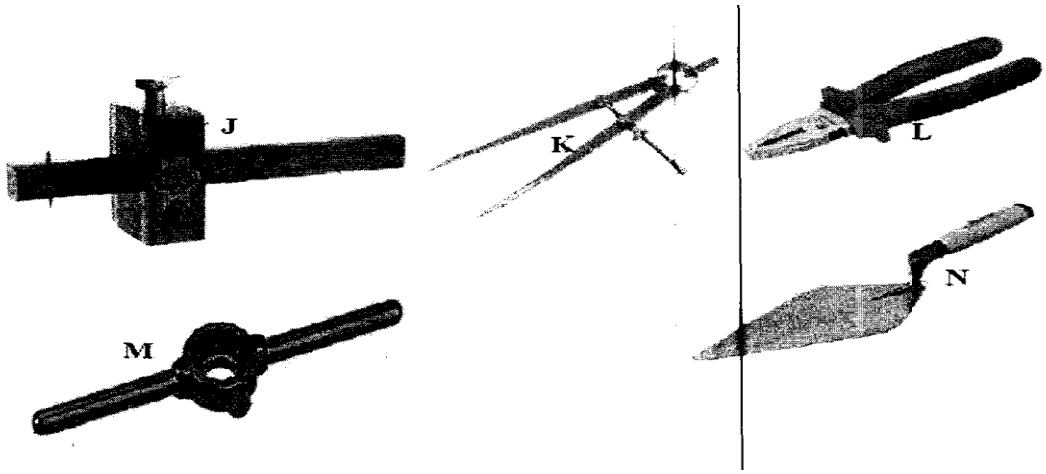
……

……

SECTION B: 20 MARKS

Answer ALL questions in the spaces provided

17. The diagram below represents farm tools and equipment. Study them and answer the questions that follow



(a) Identify the tools and equipment J and K **(2marks)**

J……

K……

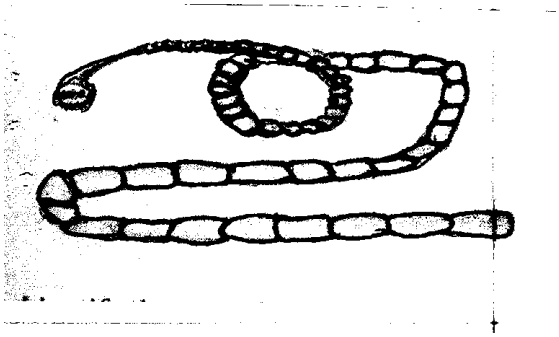
(b) State the uses of tools labelled L, M and N **(3marks)**

L……

M……

N……

18. The diagram below shows a livestock parasite



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

……

(b) Explain how the parasite can be passed from;

(i) Livestock to human beings **(1mark)**

……

……

(ii) Human beings to animals **(1mark)**

……

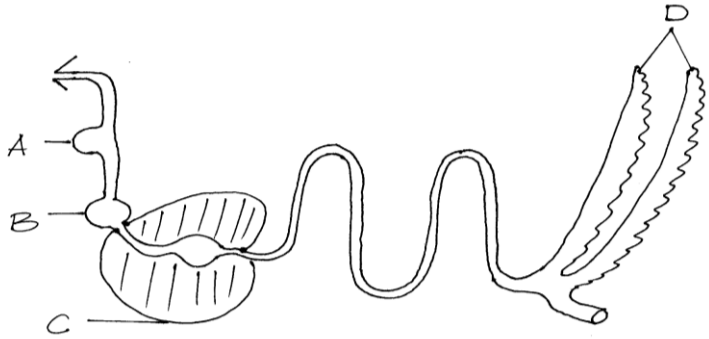
……

(c) State two control measures for the parasite in a zero grazing unit **(2marks)**

……

……

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



(a) Identify the parts labelled **(2marks)**

B……

D……

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

……

……

(c) State two adaptations of parts labelled C to its function **(2marks)**

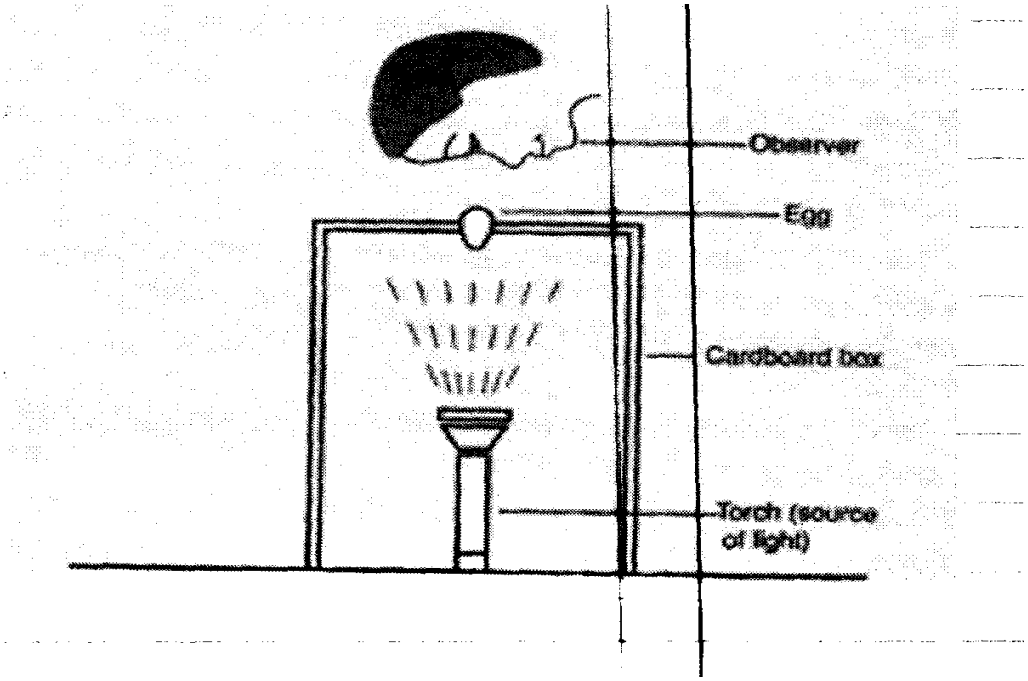
……

……

……

……

20. Below is an illustration of an activity carried out by a poultry farmer keeping layers



(a) Give one reason for carrying out the practice in poultry layering **(1mark)**

……

……

(b) State two faults which can be detected using the method illustrated above **(2marks)**

……

……

……

(c) How can a farmer improve the following in poultry production

(i) Hardness of egg shell **(1mark)**

……

……

(ii) Yellowness of egg York **(1mark)**

……

……

SECTION C: 40 MARKS

Answer any TWO questions from this section in the spaces provided after question 23

21.(a) Describe **Ten** causes of low egg production in layers **(10marks)**

(b) Discuss foot and mouth disease under the following headings:

(i) Causal organism **(1mark)**
(ii) Livestock species attacked **(2marks)**
(iii) Symptoms of attack **(4marks)**
(iv) Control measures **(3marks)**

22.(a) Outline **five** advantages of artificial insemination in cattle management **(5marks)**

(b)Explain **five** factors that a farmer should consider when sitting a bee hive to prevent swarming **(5marks)**

(c)Explain **five** precautions taken by dairy farmer to ensure clean milk production **(10marks)**

23.(a) State **five** characteristics of light breed of poultry **(5marks)**

(b) Describe the operation of a four stroke cycle engine **(12marks)**

(c) State three good hygiene practices in livestock feeding **(3marks)**

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

565/1

BUSINESS STUDIES

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

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.***

For Examiner's Use Only

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

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

Total marks

1. Name four skills that a student acquires by learning business studies. **(4marks)**

……

……

……

……

2. Highlight four possible contents of a business plan. **(4marks)**

……

……

……

……

3. Outline four benefits of the improved road network in Kenya. **(4marks)**

……

……

……

……

4. Nacada began a business on 1st Jan 2023. With capital of sh 650,00 which he deposited in the business bank account. During the year the following transaction took place

i) Brought into the business equipment valued at sh. 50,000

ii) Made a profit of sh. 120,000

iii) Withdrew sh, 80,000 from the business bank account to pay for his son's university fee.

Determine Nacada final capital

5. State four incentive that a government may give investors to locate their firms in rural area **(4marks)**

……

……

……

……

6. The gap in incomes between the rich and the poor is so wide in Kenya. Highlight four factors that have contributed to this. **(4marks)**

……

……

……

……

7. Outline four features of a sole proprietorship form of business unit. **(4marks)**

……

……

……

……

8. Give four advantages of using M-pesa as a means of payment. **(4marks)**

……

……

……

……

9. Outline four circumstances under which downwards communication may be used. **(4marks)**

……

……

……

……

……

……

10. Mention the principle of insurance involved in the following statement. **(4marks)**

a) One cannot insure the neighbor's house

……

b) Compensation is paid out by an insurance company only if the loss is as a direct result of happening of the event insured against

……

c) After having been compensated the insured is not allowed to take the scrap

……

d) The aim of the insurance company is to put back the insured to his original material financial position and not to profit him

……

11. For each of the following daybooks, State the relevant source document

a) Sales journal……

b) Cash receipt journal……

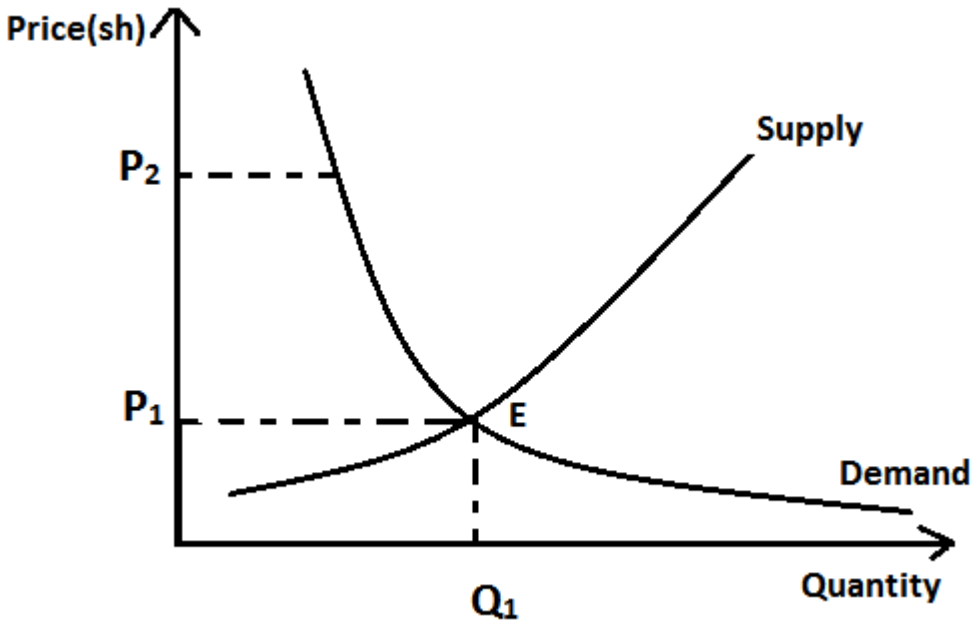
c) Purchases return journal……

d) Sales return journal……

12. On 1.5.2015 Kui traders bought 240 carton of battery at ksh.1000 each . Terms of sale were 20%trader discount and cash discount if payment was made on 29.4.2015

Calculate the amount paid if payment was done on 26.4.2015 **(4 marks)**

13. Hadjia has an intention of starting a business in the local market. The demand and supply is represented in the diagram below



State four consequences of selling the cabbages at p2 **(4marks)**

……

……

……

……

……

……

14. Outline four circumstances under which a trade would advertise his products over the radio instead of television **(4marks)**

……

……

……

……

……

……

14. Outline four ways in which the physical environment may lead business failure **(4marks)**

……

……

……

……

……

……

16. Give four types of errors that are not disclosed in a trial balance. **(4marks)**

……

……

……

……

17. Highlight four reasons for dishonoring a properly drawn cheque **(4marks)**

……

……

……

……

18. In each of the following cases,state the type of inflation described. **(4marks)**

a) The unrest in Ukraine has resulted to an increase in the price of fertilizers…….

b) The price of bread has gone up to sh.60 due increase in the price of fertilizers……

c) A lot of money in circulation has led to the general increase of price……

d) Arise in price due to uneven growth in some sectors of the economy

…….....

19. The following information relates to average price of exports and imports in 2021 and 2022 of country k

Year	**Average price of export**	**Average price of imports**
2021	100,000	400,000
2022	120,000	650,000

Required:

a) Calculate the terms of trade **(3marks)**

b) Comment on the term of trade calculated **above** **(1mark)**

20. **Rufus trader**

Dr **Three column cash book** **cr**

Date	Details		Cash	Bank	D .All	DATE	Details	f	Cash	Bank	D.REC
22/1/01	Capital		20,000			22/1/01	Capital				
22/1/08	Cash			10,000		2/1/08	Bank		10,000	1000	
22/1/12	Drawings		2000								

From the above cashbook state the transactions that took place on

a) 22.1.01 **(2marks)**

b) 22/1/08 **(1mark)**

c) 22/1/12 **(1mark)**

21. Outline four problems that the Kenyan government may experience in implementing her vision 2030 **(4marks)**

……

……

……

……

……

22. State four types of business activities in central Kenya **(4marks)**

……

……

……

……

……

……

23. Outline the significance of the following international terms of sale. **(4marks**)

i) Ex-works

ii) Free on rail

iii) Free on board

iv) Cost and freight

24. State four types of direct taxes **(4marks)**

……

……

……

……

25. The following transactions took place in the business of Kua traders during the first week of March 2024.

March 2 issued an invoice no. 840 to Karen sh.80,000

March 3: Received an invoice no 940 from Mugera Traders sh 50,000 **(4marks)**

Record the above information in the relevant ledger accounts.

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

565/2

BUSINESS STUDIES

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

a) Write your name, and Index number in the spaces provided above
b) Sign and write the date of examination in the spaces provided above
*c) This paper consists of **Six** questions.*
*d) Answer **any five** questions in the spaces provided after questions 6.*
e) All questions carry equal marks
f) Candidates should answer the questions in English.

For Examiner's Use only

Question	Maximum Score	Candidates Score
	20	
	20	
	20	
	20	
	20	
	TOTAL SCORE	

1. a) Describe the procedure of making an insurance claim. **(10marks)**

b) Outline five factors to consider when selecting means of reproducing documents.

(10marks

2 .a) Explain five disadvantages that a developing country may suffer by liberalizing foreign trade **(10marks)**

b) Explain five factors that may hinder economic development in Kenya. **(10marks)**

3. a) Explain four resources found in a business enterprise. **(8marks)**

b) Mworia limited operates a whole sale business. During the month of March 2023, the company carried out the following transactions;

March 1 Credit sales to Mwikali and Njeri were shs. 200,000 and shs.180, 000 respectively.

March 2 Credit purchases from chebet shs.150, 000 wanbui shs, 700,000, Alfred shs.185,000. They also paid advertisement expenses by cash sh.48, 000.

March 5 Credit sales to Abdallah shs.175, 000,Mwangi shs.320,000 and Mwikali shs.135,000

March 8 Goods returned by Mwikali shs. 2, 800 and Njeri shs. 3,100

March 12 Goods returned by Mworia Limited to Chebet shs. 30,000 and Alfred shs.25, 000

March 27 Paid Wambui her debt in cash after deducting a cash discount of 5%

March 28 Receive rent of shs.5, 200

March 29 Sold goods on credit to Njeri shs. 220,000 and Phiniah shs.150, 000

March 30 Goods returned by Phiniah shs.2, 300

Required:

From the information given, prepare

a) Sales journal

ii) Sales returns journal **(12marks)**

4. a) Explain five forms of economic integration. **(10marks)**

b) Describe five channels of distribution that Hannan manufacturer's ltd can use to distribute their products in Kenya

5.a) The following transactions were extracted from the books of Memsi Traders on 1st January 2023

	shs
Capital	600,000
Creditor	180,000
Motor van	200,000
Furniture	200,000
Stock	60,000
Debtors	80,000
Cash	240,000

The following transactions took place during the year ended 31st January 2023

i. Sold furniture worth sh. 60,000 for which sh.40,000 Cash was received and the balance was due at the end of the month.

ii. Purchased goods worth sh.100,000 for which cash of shs.70,000 was paid and the balance was still outstanding at the end of the month

iii. Cash of shs. 10,000 was taken from the business by the proprietor for personal use

Required: Prepare Memsi's balance sheet as at 31st January 2023 **(10marks)**

b) Distinguish between perfect competition market structure and oligopolistic market structure. **(10marks)**

6. a) In the recent past celebrities and other social influencers have been instrumental in promoting products over the TIK TOK social media platform. Explain five benefit that business enterprise may enjoy by using social media platform in sales promotion. **(10marks)**

b) Explain five purposes of public finance. **(10marks)**

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

313/1

CHRISTIAN RELIGIOUS EDUCATION

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

a) Write your Name and Index Number in the spaces provided above.

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

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

d) *Answer any five questions in the answer booklet provided.*

e) *Each question carries 20 marks.*

f) Candidates must answer the questions in English.

FOR EXAMINER'S USE ONLY.

Question	1	2	3	4	5	6	TOTAL SCORE
Candidates Score							

Answer any five questions in the answer booklet provided

1(a)Identify seven reasons why the Bible is considered the word of God. **(7marks)**

(b) State reasons why the Bible had to be compiled into its present form by early Christians. **(6marks)**

(c)Give seven versions of the Bible used in Kenya today. **(7marks)**

2(a) Describe the call of Abraham **(8marks)**

(b)Give seven similarities between the Jewish and the African Traditional practice of circumcision **(7marks)**

(c) Identify the challenges that Christians face while practising their faith **(6marks)**

3(a) State seven characteristics of the Canaanite religion **(7marks)**

(b)State seven factors which led to the widespread of idolatry in Israel during the time of prophet Elijah **(7marks)**

(c) State six challenges faced by church leaders in carrying but their work. **(6marks)**

4(a) State the teachings of prophet Amos on the Day of the Lord **(7marks)**

(b)Give seven reasons why prophet Amos was against the way the Israelites worshipped God **(7marks)**

(c) Identify ways in which the church in Kenya is promoting justice in the society **(6marks)**

5(a)Outline the measures taken by Nehemiah to restore the Jewish community after the completion of the wall of Jerusalem **(8marks)**

(b)State six reasons why Nehemiah introduced the policy of separation of Jews from foreigners **(6marks)**

(c)State six importance of prayer in the life of a Christian **(6marks)**

6(a) Identify seven responsibilities of living towards the ancestors in traditional African communities **(7marks)**

(b)Give seven reasons why oaths were administered in traditional African communities **(7marks)**

(c)State six factors that have affected the traditional African people's dependence on God **(6marks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

313/2

CHRISTIAN RELIGIOUS EDUCATION

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

a) Write your Name and Index Number in the spaces provided above.

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

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

d) *Answer any five questions in the answer booklet provided.*

e) *Each question carries 20 marks.*

f) ***Candidates must answer the questions in English.***

FOR EXAMINER'S USE ONLY.

Question	1	2	3	4	5	6	TOTAL SCORE
Candidates Score							

Answer any five questions in the answer booklet provided

1.(a)Explain ways in which Jesus fulfilled the Old Testament prophesies about the Messiah **(7marks)**

(b)State six differences between the annunciation of Jesus and John the Baptist. **(6mark**

(c) Identify **seven** lessons Christians learn from the annunciation of the birth of John the Baptist **(7marks)**

2.(a) Describe the healing of the man with a withered hand in Luke 6:6-11. **(7marks)**

(b)With reference to the sermon on the plain. State Jesus teachings on how human beings should relate with one **another**. **(7marks)**

(c)Identify six ways through which the church in Kenya is continuing with the healing ministry of Jesus Christ. **(6marks)**

3. (a) Describe the events that took place from time Jesus was arrested up to when he was sentenced to death. **(7marks)**

(b) Outline **six** Jesus teachings on the power of faith. **(6marks)**

(c) Give ways through which Christians demonstrate their faith in God. **(7marks)**

4(a) Explain how the unity of believers is expressed in the image of the bride. **(7marks)**

(b)Identify **six** examples of relationships based on false love in Kenya today. **(6marks)**

(c)Outline the role played by the youth in the church in Kenya today. **(7marks)**

5.(a) Outline **seven** causes of homosexuality in Kenya today. **(7marks)**

(b)State the Christians teaching on marriage. **(7marks)**

(c)How is the government assisting in the Jua Kali sector as a way of solving the problem of unemployment. **(6marks)**

6.(a) Give **seven** negative effects of the introduction of money economy on traditional African communities. **(7marks)**

(b)What are the effects of pollution on the environment. **(7marks)**

(c)Identify reasons why Christians should donate blood. **(6marks)**

THIS IS THE LAST PRINTED PAGE!

For Marking Schemes Contact 0746 222 000 / 0742 999 000

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

311/1

HISTORY AND GOVERNMENT

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

- *This paper consists of three sections A,B,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. Define the term legitimacy in relation to government. **(1mark)**

2. State the first settlement area of the Luo during their migration from Sudan. **(1mark)**

3. State **one** economic activity that the Kwavi Maasai acquired as a result of interacting with the Agikuyu **(1mark)**

4. State the **main** reason why early visitors from Arabia came to the Kenyan coast before 1500 **(1mark)**

5. Identify **two** items of trade which were transported from the Kenyan coast during the long distance trade. **(2marks)**

6. Identify the provision in the Kenyan Bill of Rights that protects an individual from unlawful detention **(1mark)**

7. Identify **two** activities that promote National Unity in Kenya. **(2marks)**

8. State **two** provisions of the National Accord and Reconciliation Act (2008) **(2marks)**

9. Give **two** reasons that can lead the revocation of presumed citizenship by birth in Kenya **(2marks)**

10. State **two** terms of Anglo- German Agreement of 1886 **(2marks)**

11. State the **main** importance of Eliud Mathu in the history of Kenya **(1mark)**

12. State **two** recommendations of the Lennox-Boyd constitution of 1958. **(2marks)**

13. Name **two** independent churches that emerged in Central Kenya during the colonial period **(2marks)**

14. Identify **two** members who are elected to represent a county in the parliament in Kenya **(2marks)**

15. Who is the administrative head of the Parliamentary Service Commission? **(1mark)**

16. State the significance of the repeal of section 2A of the constitution in 1991**.(1mark)**

17. Identify the education commission that recommended the Competency Based Curriculum **(1mark)**

SECTION B (45 MARKS)

Answer any three questions from this section in the answer booklet provided

18.a) Give **five** social effects of the migration of River Lake Nilotes into Kenya during the pre-colonial period. **(5 marks)**

(b) Describe **five** similarities in the political organization of the Ameru and the Abagusil during the pre-colonial period. **(10 marks)**

19.a) State **five** reasons for the Maasai collaboration with the British during the British invasion of Kenya **(5 marks)**

(b) Describe **five** ways in which land policies in colonial Kenya undermined the African economy **(10marks).**

20.a) Give **five** recommendations of the Devonshire White Paper of 1923 **(5 marks)**

(b) Describe **five** ways through which the African elected members of the Legislative Council contributed to the struggle for independence in Kenya. **(10 marks)**

21.a) Give **five** social effects of national philosophies in Kenya **(5 marks)**

(b) Describe **five** factors that have influenced industrialisation in Kenya since 1963 **(10 marks)**

SECTION C (30 MARKS)

Answer any two questions from this section in the answer booklet provided

22.a) Give **five** stages in the preparation of a bill before its tabled in parliament for debate in Kenya **(5 marks)**

(b) Explain **five** functions of the Senate in Kenya **(10 marks)**

23.a) Give **five** components of the Executive arm of Government in Kenya **(5marks)**

(b) Explain **five** challenges facing the Judiciary in Kenya **(10marks)**

24.a) State **five** ways in which the County government relates to the National government in Kenya **(5 marks)**

(b) Explain **five** measures used to ensure proper utilization of public funds by the County government **(10 marks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

311/2

HISTORY AND GOVERNMENT

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

- *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 from this section

1. Give the relationship between History and Government. **(1mark)**

2. Identify the **main** method used by Anthropologists to obtain information in History and Government **(1mark)**

3. Give **two** reasons that made early Human beings to live in groups during the Stone Age perio **(2marks)**

4. State **one** ways in which the Sumerians in Mesopotamia reclaimed land for Agriculture. **(1mark)**

5. Identify **two** traditional forms of water transport. **(2marks)**

6. Give the **main** advantage of the mobile phone **(1mark)**

7. State **two** factors that contributed to the decline Meroe as an early urban centre **(2marks)**

8. Identify **one** type of spirit associated with the Shona kingdom **(1mark)**

9. State **two** ways European nations maintained peace among themselves during the process of partitioning Africa **(2marks)**

10. Name **two** treaties signed between Lobengula and the British during the process of colonization of Africa. **(2marks)**

11. State **two** events that marked the end of the first world war **(2marks)**

12. Give **two** economic benefits enjoyed by members of Commonwealth **(2marks)**

13. Name the military alliance formed by capitalist nations during the cold war. **(1mark)**

14.Give the **main** reason why the Pan African movement was formed at the beginning of the 20th century **(1mark)**

15. Name **one** financial institution established by the African union. **(1mark)**

16. State **two** aims of the Arusha declaration **(2marks)**

17.Name **one** house of parliament in India. **(1mark)**

SECTIOM B (45 MARKS)

Answer any three questions from this section

18.a) State **three** physical characteristics of homo-habilis **(3marks)**

b)Describe **six** ways of life of early man during the Mesolithic period **(12marks)**

19.a) State **three** port towns that developed in West Africa as a result of the Trans-Atlantic Slave trade **(3marks)**

b)Explain **six** factors that led to the decline of the Trans-Saharan trade. **(12marks)**

20.a) Outline **Five** challenges facing industrialization in Brazil. **(5marks)**

b)Explain **six** positive effects of scientific inventions on Agriculture **(10marks)**

21.a) Highlight **five** reforms that were introduced by the Germans in Tanganyika after the Majimaji rebellion. **(5marks)**

b) Explain five disadvantages of Samori Toure's second empire at Dabakala **(10marks)**

SECTION C (30 MARKS)

Answer any two questions from this section

22.a) State **three** symbols of Royal Authority in Buganda Kingdom **(3marks)**

b) Describe **six** aspects of the political organization of the Asante during the pre-colonial period **(12marks)**

23.a) State **three** ways in which the rise of dictatorship in Europe contributed to the outbreak of world war II **(3marks)**

b) Explain **six** political effects of World War I **(12 marks)**

24.a) State **five** roles that the monarch plays in relation to the British Government **(5marks)**

b) Explain **six** merits of a federal system of government with references to the United States of America **(USA)** **(12marks)**

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

312/1

GEOGRAPHY

PAPER 1

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

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

2. *Sign and write date of examination in the space provided.*

3. *This paper consists of* ***TWO*** *sections A and B*

4. *Answer* ***ALL*** *questions in Section A. In section B answer* ***QUESTION 6*** *and any other* ***TWO.***

5. *All answers* ***MUST*** *be written in the spaces provided at the end of question 10.*

6. *Answer all questions in English.*

For Examiners Use Only

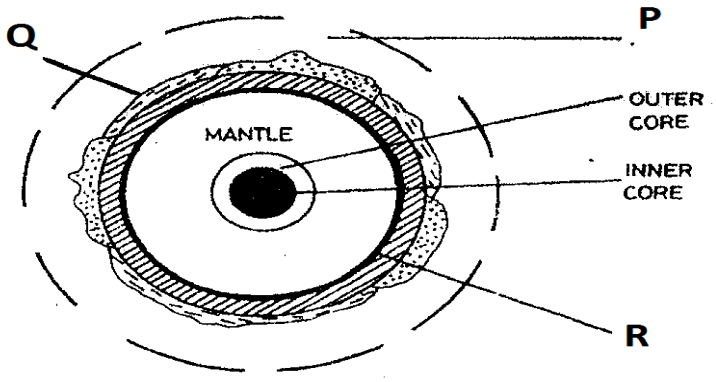
Section	Questions	Maximum Score	Candidates Score
A	1 – 5	25	
B	6	25	
		25	
		25	
	TOTAL SCORE	100	

SECTION A

1. (a) What is geography **(2marks)**

(b)Give **two** types of environment **(2marks)**

2. The diagram below represents the structure of the earth. Use it to answer the questions.



(a) Name:

(i) the part marked P and R **(2marks)**

(ii) **three** features that makes up part marked Q **(3marks)**

3. (a) Differentiate between folding and faulting **(2marks)**

(b) Name **three** relief features formed as a result of folding **(3marks)**

4. (a) Apart from physical weathering, give **two** other types of weathering **(2marks)**

(b) List **four** physical weathering processes that takes place in Arid areas **(4marks)**

5. (a) What is drainage pattern **(2marks)**

(b) Give **three** types of drainage system **(3marks)**

SECTION B

Answer question 6 and any other TWO questions from this section

6. Study the map provided of Mumias (1:50,000) sheet 101/2 and answer the following questions.

(a) i) What was magnetic variation when the map was prepared in 1965? **(1mk)**

ii) Identify **three** districts represented by the area covered by the map. **(3mks)**

iii) What is the altitude of the highest point in the area covered by the map**?** **(1mk)**

iv) Give **two** methods of showing relief that have been used on the area Covered by the map. **(2mks)**

v) State **two** types of rivers found in the area covered by the map. **(2mks)**

(b) (i) Give the longitudinal extent of the area covered by the map. **(2mks)**

(ii) Give the six figure grid reference of Buhuyi Dam. **(2mks)**

(c) (i) Citing evidence, give **three** social services provided by Mumias municipality. **(3mks)**

(ii) Describe the vegetation distribution of the area covered by the map**.** **(4mks)**

Draw a rectangle measuring126cm by 10cm to represent the area enclosed by easting 47 and 51 and Northing 37 and 41 **(1mk)**

On the rectangle show:

- Seasonal swamp **(1mk)**
- Dry weather road **(1mk)**
- Riverine vegetation on R.Akonyo **(1mk)**
- Wood land **(1mk)**

7(a)(i) Give **two** examples of non-metallic minerals **(2marks)**

(ii)Describe the following characteristics of minerals

Colour **(2marks)**

Hardness **(2marks)**

Lustre **(2marks)**

(b) (i) Give **two** forms of metamorphism **(2marks)**

(ii) List **three** examples of metamorphism **(3marks)**

(c) (i) Describe the formation of plutonic rocks **(3marks)**

(ii) State **two** conditions necessary for the growth of coral polyps **(2marks)**

(d) You are planning to carry out a field study on study on rocks within the local environment

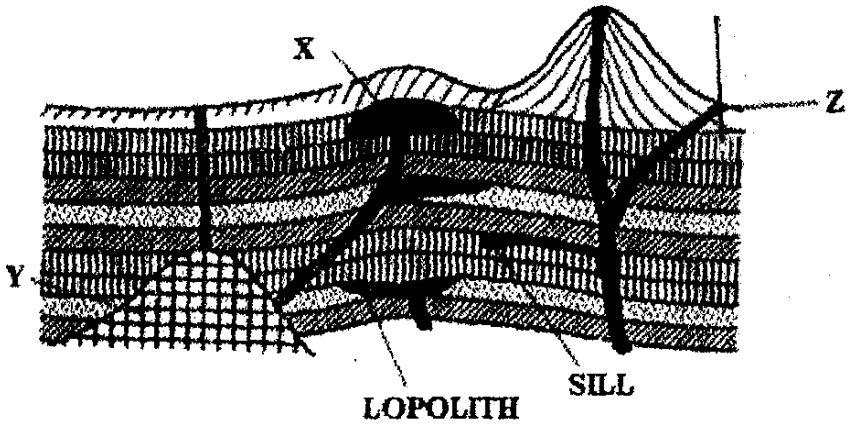
(i) Formulate **three** objectives of your study **(3marks)**

(ii) For your field study, you have prepared a work schedule. State **two** items you would include in the schedule **(2marks)**

(iii) Give **two** methods of data collection you will use while in field **(2marks)**

8 (a) what is lava **(2marks)**

(b) The diagram below shows some intrusive volcanic features



(i) Name the features marked X, Y and Z **(3marks)**

(ii) Describe how the following features are formed

Sill **(4marks)**

Lopolith **(4marks)**

(c) Describe the composition of composite volcano **(4marks)**

(d) Explain **four** ways in which volcanic features influence human activity **(8marks)**

Q9 (a) Define an ocean **(2marks)**

(ii) State **three** types of seas **(3marks)**

(b) (i) Give **three** characteristics of the continental shelf **(3marks)**

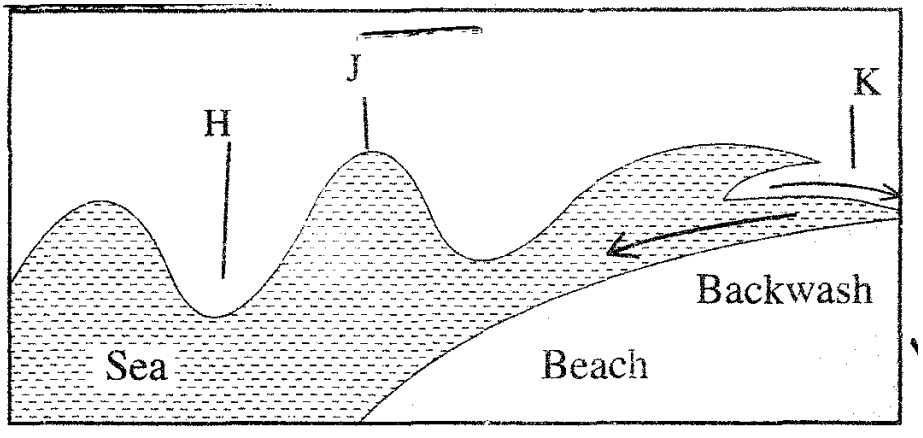
(ii) Describe the following processes of wave erosion along the coast

Abrasion **(2marks)**

Hydraulic action **(2marks)**

Solution **(2marks)**

(c) The diagram below shows a breaking sea wave; use it to answer the questions below



(i) Name the features marked H, J, K **(3marks)**

(ii) With the aid of well labeled diagrams describe the process through which a stack is formed **(8marks)**

Q10 (a) what is soil **(2marks)**

(b) (i) List **three** components of soil **(3marks)**

(ii) Explain how the following factors influence soil formation

Parent rock **(4marks)**

Topography **(4marks)**

(c) Draw a well labeled diagram of mature soil profile **(4marks)**

(d) Explain **four** ways in which human activities may lead to soil erosion **(8marks)**

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

312/2

GEOGRAPHY

PAPER 2

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. *Write your name and index number in the spaces provided above*
2. *Sign and write date of examination in the space provided.*
3. *This paper consists of **TWO** sections A and B*
4. *Answer **ALL** questions in Section A. In section B answer **QUESTION 6** and any other **TWO.***
5. *All answers **MUST** be written in the spaces provided at the end of question 10.*
6. *Answer all questions in English.*

FOR EXAMINERS USE ONLY

Section	Questions	Maximum Score	Candidates Score
A	1 – 5	25	
B	6	25	
		25	
		25	
	TOTAL SCORE	100	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

SECTION A (25mks)

Answer all questions in this section

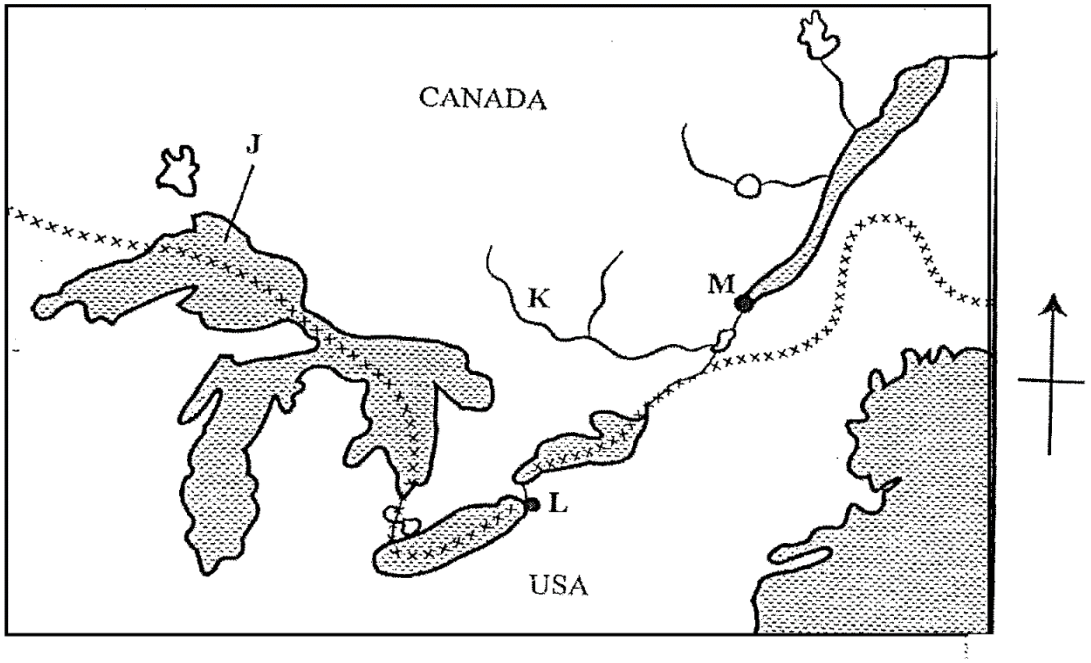
1(a). Differentiate between forestry and agro forestry **(2mks)**

(b) State three significance of forest products to Kenya **3mks)**

2(a). Give two ways in which fertility influence population **(2mks)**

(b) State three consequences of high population growth rate **(3mks)**

3 The sketch map below shows the Great Lakes and ST. Lawrence Seaway. Use it to answer question a



(a) Name;

(i)The lake marked J **(1mk)**

(ii)The river marked K **(1mk)**

(iii)the port marked L and M **(2mks)**

(b) Give two reasons why it is difficult to transport goods from Mombasa to Lagos by road **(2mks)**

4(a). What is geothermal power? **(2mks)**

(b) Name two areas in Kenya which is potential for producing geothermal power **(2mks)**

5(a) Give two causes of floods **(2mks)**

(b)State three measures which can be undertaken to reduce the destruction caused by floods **(3mks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

SECTION B

Answer question 6 and any other two questions in this section

6. The table below shows the value in terms of billions US Dollars of Kenya's Import and Export between the year 2003 and 2008. Use it to answer the questions bellow

Years	Value in Billion US Dollars	
	Imports	Exports
2003	3.00	2.10
2004	3.70	2.50
2005	4.10	2.58
2006	5.10	3.17
2007	6.60	3.60
2008	8.54	4.10
TOTAL	31.04	18.05

Value of Kenya's Import and Export

(a). (i) Calculate the balance of payment in the year 2008 **2mks)**

(ii) Using a scale of 1cm to represent 0.5 billion, draw a simple comparative bar graph on the data above from the year 2005 to 2008 **(8mks)**

(iii) A part from comparative bar graph, name two other methods that can be used to represent the above data **(2mks)**

(iv) State two reasons why Kenya's export is generally low **(2mks)**

(b) (i) List three major imports to Kenya from Japan **(3mks)**

(ii) Explain four measures the Kenyan government is taking to reduce the unfavorable balance of trade **(8mks)**

7. (a) (i) State four characteristics of nomadic pastoralism **(4mks)**

(ii) Name three beef cattle breeds kept in Kenya **(3mks)**

(b) Compare beef farming in Kenya and Argentina **(8mks)**

(c) Explain three problems facing beef farming in Kenya **(6mks)**

(d) State four measures that the government of Kenya has taken to improve beef farming **(4mks)**

8 (a) Distinguish between an urban settlement and rural settlement **(2mks)**

(b)State two factors which influence the development of each the following patterns of settlement **(2mks)**

(i) Dispersed settlement pattern **(2mks)**

(ii) Linear settlement pattern **(2mks)**

(c) Explain four factors that influenced the location of Mombasa town **(8mks)**

(d) (i) Outline four ways in which the port of Mombasa and Rotterdam differ **(8mks)**

(ii) State three benefits of urbanization **(3mks)**

9 (a) (i) What is domestic tourism **(2mks)**

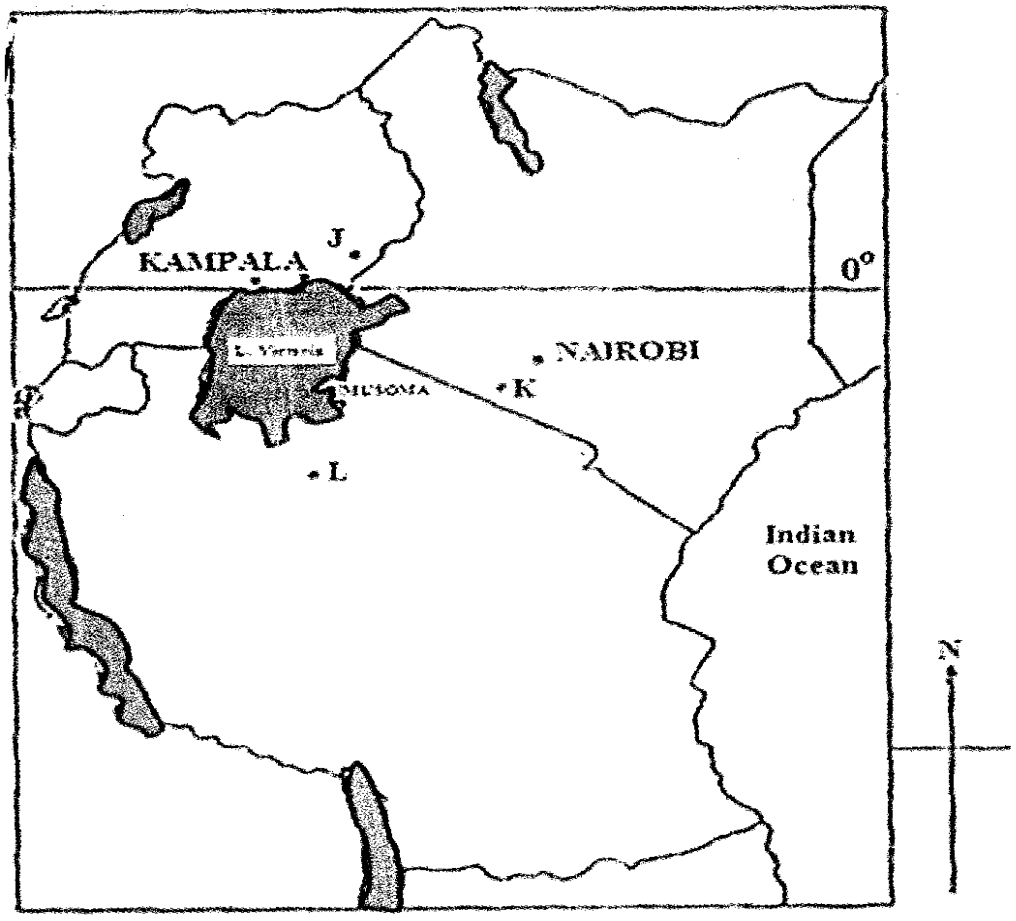
(ii)Explain four factors which are hindering domestic tourism in Kenya **(8mks)**

(b) State five reasons why domestic tourism should be encouraged in Kenya **(5mks)**

(c Explain three factors which have made Switzerland a major tourist destination in Europe **(6mks)**

(d)State four problems associated with tourism in Kenya **(4mks)**

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



(a) Name the minerals mined in the area marked J, K and L. **(3mks)**

(b)(i)Identify two provinces where gold is mined in South Africa **(2mks)**

(ii) Describe the processing of gold from the time the ore is lifted to the surface **(5mks)**

(c)Explain four contribution of gold to South Africa **(8mks)**

(d) State three problems of diamond mining in South Africa **(3mks)**

(e)Explain two effects of mining on the environment **(4mks)**

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

101/1

ENGLISH

PAPER 1*(Functional Skills)*

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO THE CANDIDATES

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

FOR EXAMINERS ONLY

	QUESTION	TOTAL MARKS	SCORE
1	FUNCTIONAL WRITING	20MARKS	
2	CLOZE TEST	10MARKS	
3	ORAL SKILLS	30MARKS	
	TOTAL MARKS	60 MARKS	
	TOTAL SCORE		

1. A local non-governmental organization is looking for people to take up volunteer positions in disaster prone areas. The programme will take place during the August Holidays. You are interested in one of the positions. Write a letter inquiring the following: Age limit, level of education, identification documents required, accommodation availability and whether or not they will pay any allowances. Remember to write your letter through the principal addressed to;

The Director,

Linda Jamii NGO,

P.O. Box 150-00100,

Nairobi. **(20marks)**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

2. Read the passage below and fill in each blank space with the most appropriate word. (10 marks)

There is a growing (a) …….that toxic masculinity, if not (b)……....., will destroy many boys across the globe. Statistics of rape violence and murder crimes often (c) …….an accusing finger to men for their efforts to (d) …….their manhood. There is nothing in the genetic makeup of boys that gives them a bias for social wrongs. The problem is nothing (e)….....the consequence of nurture. As such there is a (f)…….to correct this incongruity and guarantee our boys a stable fatherhood and a happy family life in their later years.

This can only be done through a thorough scrutiny or the socialization (g)……..that boys under go. Boys (h)……be given life lessons to (i)……them with what is expected of a man and a father.

Somebody should also walk them (j)…….the turbulence of adolescence.

3 (a) Read the narrative below and then answer the questions that follow (9marks)

Narrator: Catch a story

Audience: We catch it

Once upon a time, there was an ogre that had eaten many people. One day, some hunters decided to hunt for this animal. It was found sleeping deeply after feeding on a man. When the ogre heard the footsteps of the hunters, it woke up and ran as fast as its legs could carry it. When it reached a garden, it found a woman digging. The ogre told the woman:

'There are people who want to kill me for nothing, Pease help me.' The woman hid the animal until the hunters had gone far away. When they were gone, the woman told the ogre to go away. But when the animal came out of the hiding place, it asked for food. The woman said:

'You asked for protection from the hunters chase. Now you ask for food. There is no food.'

The ogre said:

'If there is no food, you are going to be my food for today.' The animal then ate the woman.

(From: The Oral Literature of the Kalenjin by C. Chesaina, Nairobi EAEP, 1991).

i) What is the function of the salutation at the beginning of this narrative? **(1mark)**

……

……

……

ii) Explain how you would deliver the first utterance of the ogre so as to bring the intended meaning **(2marks)**

……

……

……

iii) What specific gesture would you use to perform the 3rd sentence of the narrative? **(2marks)**

……

……

……

iv) Which tone of voice would you use to say the woman's response when the ogre demanded for food? **(2marks)**

……

……

v) As an audience listening to this story, how would you react to the last 2 lines of the narrative? **(2marks)**

……

……

……

b) Provide homophones for each of the words in bold in the sentence below **(5marks)**

The lesson is taking place on the opposite **side** of the road and the venue is fully packed **so** you have **to** wait in the visitor's **suite**

……

……

……

……

……

……

c) Underline the stressed syllable in each of the following words. **(5marks)**

i) Promote

ii) Treatment

iii) Society

iv) Target

v) Contact

d) You are the school captain and you have been requested to give a Speech during one of the Schools annual general meeting. What challenges are you likely to face **(5mark)**

……

……

……

……

……

e) For each of the following situations below, write what you would say. **(6marks)**

i) You are in a discussion and you wish to interrupt

……

……

ii) The principal has pardoned you for the offence you committed

……

……

iii) You are in a debate and you strongly differ with our opponent

……

……

iv) You were unable to attend a meeting because your child was sick.

……

……

v) Would you mind a cup of coffee?

……

……

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

101/2

ENGLISH

PAPER 2

(Comprehension, Literary Appreciation and Grammar)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO THE CANDIDATES

- *Write your **name**, **index number** and the name of your **school** in the spaces provided above.*
- ***Sign** and write **date** of examination in the spaces provided above.*
- *Answer **all the questions** in this question paper.*
- *All your answers **must** be written in the spaces provided in this question paper.*

For Examiner's Use Only:

Question	Maximum Score	Candidate's Score
Comprehension	20	
Excerpt	25	
Poetry	20	
Grammar	15	
TOTAL SCORE	**80**	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

1. COMPREHENSION (20MARKS)

Read the passage below and answer the question that follow.

America has a long tradition of creativity. The expression Yankee **ingenuity** is an acknowledgement of this trait present Americans with a novel problem, especially technological and they are likely to come up with the solution sooner rather than later.

That is the positive side. The downside is that in policy matters, Americans sometime come up with the solutions and then look for personal problems on which to test them. Washington D.C , perhaps more than any other city in the world, has many solutions seeking problems to lock onto.

If the solution are successful, domestically or internationally, you can expect any amount of excitement and chest thumping, which is another **hallmark** of the American character. Modesty is frowned upon as something for sissies or failures. Countries and people are ready paradigm of winners and losers. Woe unto you if are a 'loser'. You will endure all manner of taunts and putdowns.

To escape this fate, most Americans-including those who are demonstrably poor, call themselves middle class, which probably they are when compared to the poor in other places. But poverty is relative to immediate environment not to some distant places.

One of the more recent American inventions is spinning not as in making clothes (the American textile industry has long being outsourced, notably from China another low wage country), but rather as in using words and other symbols amplified by the media to paint a picture of anything and everything in alight favorable to the presenter's side.

This past week, the world witnessed, yet again this peculiar American habit of hype and more hype, in this instance, designed to drive the point home that America's declared policy to force-feed democracy to recalcitrant societies has just scored a **humongous** victory. Following the Iraqi elections the turn out in particular, has been hailed as a stunning victory of American policy. Pitted against Iraqi Jihadists who are waging a relentless and ruthless insurgency, a scintilla of validation of America's Iraqi policy was all that was all necessary to set off celebratory fireworks.

To those who recount narratives (the spinners), whose job it is to put a bright glass on things a clear picture of winners and losers are the Neanderthals; '' thugs and assassins'' in the words of the newly sworn in secretary of state Condeleeza Rice-the insurgents who threatened to wreak havoc on election day in Iraq but were thwarted.

The high turnout was read as a violation of many things that were most likely absent from the minds of those Iraqi voters who cast their ballots. Before it was even known whom they had voted for and why, the whole enterprise was turned into cause for chest thumping by some American politicians, prompting john Kerry the loser in the November presidential race, to warn against hyping the Iraqi election.

Who will listen to a loser? This is America! By the time Kerry spoke, the spinning was in full gear. It was another turning point, declared elated talking heads. Never mind that there have been numerous'' turning points'' in Iraqi's tortured post-invasion experience. The winners were emerging.

A few voices have urged caution but they are drowned out by the self-congratulation that has **engulfed** just about every major media outlet here.

It is reminiscent of the chatter that followed Saddam Hussein's capture. That was another turning point. The irony is that America has been through this before, in a different place, with almost the exact same headlines. In the late 1967, many American newspapers published flowery and upbeat stories on the elections held in South Vietnam at the height of the war. The turnout was nearly 83% despite Vietcong terror. The election was declared a success and a turning point that would lead to stabilization of the country and eventual defeat of the insurgents. Of course, nothing of the sort happened.

History does not **invariably** repeat itself. Sometimes it does. Whatever one might think of it, history does always serve up many lessons. One of them is that a dose of modesty is always in order when confronted with vast historical forces or when seeking to rearrange complex societies their go hundreds, if not thousands, of years back.

What may look like victory as first sight may turn out to be another opening to a complex and trying situation that control produce winners or losers. It looks like this what is emerging in Iraq. The millions who headed to the polls on the instruction of their electrical leaders (remember Grand Ayatollah Sistani declared it a religious duty to vote? May or may not have had a clear idea of what society were hoping to create. Their leaders probably do.

Iraqis voted and they are justifiably proud of it. However, this should not be made to look like a first in the Islamic world, as it is being painted in the media. Not too long ago, an Islamic party had won a clear and convincing victory in free and fair election in Algeria. It was never allowed to assume power. The international authorities desisted from calling the denial an affront to democratic practice. The man who cancelled the Algerian election results if feted in the very same quarter that now preach democracy.

Society's broken tyranny, war, fragmentation and other ills are not served by putdowns of important segments within them.

The approach may produce winners in the short term but for more losers in the end. Moreover, here we are talking of those who could lose everything, including their lives, on a mass scale. A little modest may just be what is needed to get people across the divide talking. After all, in the end, we are all losers.

<u>Questions</u>

a) What is the negative side of America's long tradition of creativity? **(2marks)**

……

……

b) "Woe unto you if you are a loser." What does the author mean by this statement?**(2marks)**

……

……

c) Identify and explain an instance of irony in this passage. **(3marks)**

……

……

……

d) What is the author's attitude towards the Americans? Give reason for your answer. **(2marks)**

……

……

……

e) '…and the losers are Neanderthals;…' Explain how the Neanderthals became losers according to this passage. **(2marks)**

……

……

……

f) What according to the passage is referred to as spinning? **(2marks)**

……

……

g) Identify one American policy discussed in this passage. **(2marks)**

……

……

……

h) Explain the meaning of the following words as used in the passage. **5marks)**

i)Ingenuity……

ii) Hallmark……

iii) Engulfed……

iv) Humongous……

v) Invariably……

Question 2

Read the excerpt below then answer the questions that follow

"Ms McKenzie!" he said. "What a pleasant surprise!" He ushered her in. "Please come in."
"I hope I'm not interrupting anything," she said. He closed the door then steered her towards a chair.
"Feel at home," he said.
"And I will." She sat. "Mother has a question for her boy. How was your day, young one?"
"It was only so- so, "Mother," he said. "Or, as we say back home, 'Only small- small."'
Mother thinks that's big-big enough. Are you ready for tomorrow?"
As ready as I never will be, I guess, Mother." He went and sat beside her.
"And do you still think the summit will adopt *Way Omega?"*
Only twelve hours. We can wait."
"By the way, guess who I ran into downstairs? Someone by the name Longway. I was tracking down a man they call their guide and thought this fellow might be him. Do you know him?"
Dr Afolabi did not answer.
Well, do you know Mr Longway or not?"
"Yes, Ms McKenzie, I do. You might as well know this now: I am their guide."
"What?"
"Promise you will keep that to yourself, Okay?"
"I promise."
"Apart from Mr Longway , whom you now know, there are four other people I'm working with on the periphery of the summit as their guide. Instead of adopting *way Omega*, this group wants the summit to adopt Path *Alpha."*

a) What happens before this excerpt**.** **(4mks)**

……

……

……

……

b) Comment on any three styles in the excerpt. **(6mks)**

……

……

……

……

……

……

……

c) "Feel at home." He said. (change to reported speech**)** **(1mk)**

……

d) "Are you ready for tomorrow?" what is to happen tomorrow from the rest of the text? **(3mks)**

……

……

……

……

e) Identify and explain two character traits each of: **(4mks)**

I) Dr. Afolabi-

II) Ms. Fiona mckenzie-

f) What is, "this group" and why does it want the summit to adopt, " Path Alpha" and not "Way Omega". **(4mks)**

……

……

……

……

……

……

g) Give the meaning of these words: **(3mks)**

I) Steered-

II) Periphery-

III) Summit-

Question 3;Oral Narrative

Read the following narrative and answer the questions that follows. **(20marks)**

A long time ago, there were two men who had been friends for many years. They were like brothers. Now , there came a time when they both wanted to get married. They decided would marry one woman with whom they had both fallen in love.

Between the two of them they had enough bride wealth to pay for the woman, because each of them had half the required bride price. The woman's father accepted the bride wealth and gave permission for his daughter to get married to the two young men. The made an agreement among themselves and laid down conditions that were going to guide them in sharing this woman as a wife . One of the friends chose to have exclusive right to the woman's **from** the waist to the legs while the other one chose from the waist upwards to the head.

Whenever the man who had chosen the upper part desired the woman, he called her into his house and had a pat on her and that was all. The other man who had chosen the lower parts took the woman to his house for the night.

This arrangement worked until the woman became pregnant.

''After delivery.' The friend who owned the upper part said to the woman, ''I won't allow you to breastfeed because the baby isn't mine.''

The woman objected loudly saying , "But the baby is mine and the breast are also mine so I'll have to breast feed it.

'' No, and yes, the baby is yours and my friends, but the breasts happen to be yours and mine, so you and my friends should try to get milk for your baby from elsewhere. I don't want you to feed it from your breasts,'' The man was serious and the woman got very worried.

"Perhaps my friend who owns your upper part can pay me back the part of the bride wealth I paid for you then he can have you as his wife and you won't have to be a wife to both of us," the other husband offered. However, he knew very well that his friend had neither money, cattle nor anything else which he could refund to him as part of the bride wealth he had paid for their wife.

The matter was taken to the elders for discussion and settlement. After much consultations, it was decided that, that woman should be married to the man who owned the upper part of the body as the baby had to be fed. The friends disagreed and had their first serious quarrel.

The situation was critical, so the father of the baby conceded and allowed his friend to refund the share of the bride wealth he had paid. It was then agreed by the elders that the woman should be exclusively married to the man who owned the breasts. This development marked the end of the friendship between the two young men.

QUESTIONS

a) Classify the above genre **(2marks)**

……

……

……

b) Identify the typical features of oral narrative evident in the genre above. **(4marks)**

……

……

……

……

……

c) What makes relationship between the two friends ironical? **(2marks)**

……

……

……

d) Comment on the character traits of the two husbands. **(4marks)**

……

……

……

……

……

e) Which is the most appropriate audience for the above oral narrative? **(2marks)**

……

……

……

……

f) Highlight two social activities evident in the above oral narrative. **(2marks)**

……

……

……

g) What is the attitude of this society towards women? **(3marks)**

……

……

……

……

h) The situation was critical, so the father of the baby conceded and allowed his friend to refund the share of the bride wealth he had paid. (Begin: So……) **(1mark)**

……

……

GRAMMAR **(15MARKS)**

1. Use the correct form of the words in brackets to fill in the blank space.

(3marks)

i)Jane was……...about taking up the job (decide)

ii)I told her that I was ……for her help. (gratitude)

iii) There is little evidence of …….(diligent)

2. Underline the main clause in the following sentences. ***(2marks)***

i) I saw the woman who gave birth to twins.

ii) If you work hard you will pass your examinations

3 Use the most appropriate choice to fill in the blank spaces. ***(2marks)***

i)Mr Kantai sent two students …….(I, me) and John out of his class.

ii) Kemunto introduced Wafula and ……to his father(her,she)

4. Underline the gerund in the following sentence. ***(1mark)***

Diana is studying but swimming is her hobby.

5 .Rewrite the following sentences as instructed. ***(3marks)***

i). He was obviously angry with you. (Begin His…)

……

ii) He did not apply for the job. He did not get it (Begin: Had……

……

iii) James wondered how the accused will clear their names. (Rewrite in direct speech)

……

6. Explain the difference between the following sentences. ***(2marks)***

Has the donkey eaten Mary?

Has the donkey eaten, Mary?

……

……

……

……

7. Rephrase the phrasal verb underlined with one word similar in meaning. ***(2marks)***

a) The project has really <u>eaten into</u> my savings.

……

b) He had his dog <u>put down</u> because it was in a lot of paint from its tumors.

……

THIS IS THE LAST PRINTED PAGE!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

101/3

ENGLISH

PAPER 3

(Creative composition and essays based on set texts)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDINDATES

a) *Answer three questions only*

b) *Question one and two are compulsory*

c) *In question three, choose only one of the optional texts you have prepared on.*

d) *Where a candidate presents work on more than one optional text, only the first to appear will be marked.*

e) *Each essay should not exceed 450 words.*

FOR EXAMINER'S USE ONLY.

QUESTION	TOTAL MARKS	CANDIDATE'S SCORE
1.Imaginative Composition	20	
2.The Compulsory Set Text	20	
3.The Optional Set Text	20	
TOTAL	60	

For Marking Schemes Contact 0746 222 000 / 0742 999 000

Answer <u>three</u> questions only

1. IMAGINATIVE COMPOSITION (COMPULSORY) 20 MARKS

EITHER

(a) Write a composition ending with the following words

----------since that day, I have always promised myself to remain focused in my studies.

OR

(b) Write a composition explaining what Kenyan youths can do to help in the fight against corruption.

2. (COMPULSORY) 20 MARKS

People who engage in wrongdoing cannot escape from the consequences of their actions.
Write an essay to support this claim basing your illustrations on **John Lara's The Samaritan.**

3. EITHER

(a) The short story (a silent song and other stories)

Some cultural practices do not add value hence should be done away with. Show the truth in this statement basing your illustrations from Eric Ng'maryo's Ivory Bangles..

OR

(b) The novel-Kazuo Ishiguro. An Artist of the Floating World

War has a way of affecting not only property but also people's lives. Drawing examples from the life of Masuji Ono in Ishiguro's An Artist of The Floating World, write an essay to show the truth of this statement.

For Marking Schemes Contact 0746 222 000 / 0742 999 000

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

102/1

KISWAHILI

KARATASI YA 1

INSHA

MUDA: SAA 1¾

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO

a) Andika insha mbili
*b) Swali la kwanza ni la **LAZIMA***
c) Kila insha isipungue maneno 400
d) Chagua insha nyingine moja kutoka kwa hizo tatu zilizosalia
e) Kila insha iandikwe kwa lugha ya Kiswahili
h) Majibu yote yawe katika kijitabu hiki

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	ALAMA
1	
JUMLA	

MASWALI

1. LAZIMA

Wewe ni katibu wa jopokazi lililoteuliwa kuchunguza vyanzo vya ongezeko la umaskini nchini. Andika ripoti ya uchunguzi huo huku ukitoa mapedekezo **(alama20)**

2. Unywaji wa pombe haramu umekithiri miongoni mwa vijana shuleni. Wewe kama kiranja wa ushauri nasaha, waandikie ilani kuhusu madhara ya pombe haramu **(alama20)**

3. Tunga kisa kitakachodhihirisha maana ya methali; Achanikaye kwenye mpini hafi njaa **(alama20)**

4. Tunga kisa kitakachoanza kwa maneno yafuatayo;

Majeruhi walifikishwa hospitalini mmoja baada ya mwingine wakiwa katika hali mahututi. Sauti nzito ya daktari mkuu ilihanikiza hewani baada ya **……** **(alama20)**

HUU NDIO UKURASA WA MWISHO KUPIGWA CHAPA!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

102/2

KISWAHILI

KARATASI YA 2

LUGHA

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO

a) *Andika jina lako na nambari ya mtihani katika nafasi ulizoachiwa hapo juu*

b) Tia sahihi yako na kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu

c) Jibu maswali yote

d) Majibu yote yaandikwe katika nafasi ulizoachiwa katika kijitabu cha maswali

e) Majibu yote ni lazima yaandikwe kwa lugha ya kiswahili

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
Ufahamu	15	
Ufupisho	15	
Matumizi ya lugha	40	
Isimu jamii	10	
Jumla	80	

UFAHAMU

Soma makala haya ujibu maswali yafuatayo

Utotoni niliamini kwamba kusoma ndiko ufunguo wa kila kitu ulimwenguni kwa jinsi kunavyoonekana kuwatoa watu katika uzuzu, ukata na ugonjwa: na kuweka kwenye maisha bora ya mwangaza wa kujua kusoma na kuandika, utajiri wa kuweza kuvaa hata suti ya vipande vitatu, na kuwa na afya ya kuonekana kwa kitambi. Hizo ni zamani zile ambapo shule ya vidudu haikuwa sharti la mtoto kukubaliwa katika darasa la kwanza. Mtoto angelisha ama kusaidia kwa kazi za nyumbani mpaka kufika umri wa miaka kumi kisha, kufumba na kufumbua, afisa wa serikali angeonekana akishauriana na wazazi wa mtoto. Matokeo yangekua mtoto huyo kuanza safari ndefu ya kila siku, apate asipate chakula.

Mimi kwa upande wangu sikujali maisha pata-nenda shule, kosa-bado-neda-shule. Sikujali kero za baridi kali wala karaha za vua la asubuhi. Kuanzia utotoni *niliwahusudu* wenzangu waliokuwa wakirauka kiasi cha kufikiriwa walilala kwa shati na kaptula zao, au kwa blauzi na skati na kaptula zao. Nilipendezwa na unifomu zao nikatamani na hata kuapa kwamba siku moja nitavaa kama wao na kutembea kwa maringo kama wao. Zaidi nilitamani kufika walikokuwa wakienda na kufanya walivyokuwa wakifanya huko.

Penye nia hapakosi njia. Nia yangu ilidhihirika nilipojiunga na darasa la kwanza. Darasa la kwanza lilinisoma kisogo baada ya siku mbili tu. Nalo la pili likanipungia mkono baada ya juma moja. Miaka mitano baadae nilikutana na kiunzi cha kwanza kwenye mtihani wa kitaifa wa chumba cha saba uliokuwa kifungua mlango wa kuingia kidato cha kwanza.

Baada ya miaka minne nilikutana na mlango funge mwingine nilibisha na ukanifungukia kwa *kutia fora* katika mtihani wa kiwango cha elimu ya pili. Katika miaka miwili iliyofuatia nilijiunga na shule maarufu ya kitaifa siku hizo.

Masomo hayakuendelea kuwa mteremko kwangu kwani uchechefu wa karo na masurufu ulimaanisha kuwa siku nyingi nilikuwa nje ya kuta za darasa letu. Hata hivyo *nilijifunga masombo*. Hatimaye nilifunguliwa mlango wa kuingia ndaki.

Baada ya kuhitimu kwa shahada ya kimsingi ya uzamili, kisha uzamifu au daktari falsafa hatimaye, nilifanywa meneja kufikia leo. Hata nikiwa ukubwani bado nazidi kusoma na kutafiti ili nisiote ukurutu wa akili.

Cheo na madaraka haya ya umeneja yamaanisha kila siku nivae suti kamili na shati nyeupe pe, amabayo shingoni imeambatanishwa na kipande maalumu cha kitambaa kinacholewalewa kifuani. Nijiangaliapo kiooni hujifananisha na mtu ambaye amejitia jitanzi shingoni.

Nina kitambi ambacho labda ni *taashira* ya utajiri. Hata hivyo ingawa mimi si mwenye sauti kubwa kiuchumi, ninaweza kujivunia elimu yangu ilivyoniwezwsha kujimudu kidogo maishani. Sasa nina shamba langu mwenyewe, nyumba yangu mwenyewe ambayo imejaa mali yangu mwenyewe. Nina redio yangu mwenyewe, rununu yangu mwenyewe na wanyama wangu mwenyewe.

Lakini mwenzangu ambaye zilimwishia ukingoni katika shule za nasari, hana elimu, pesa wala mahali pa kuzikiwa wakati mpira utakapomwia mwingi.

For Marking Schemes Contact 0746 222 000 / 0742 999 000

MASWALI

a) Eleza imani ya mwandishi kuhusu elimu **(alama3)**

……

……

……

……

……

b) Taja dhiki zilizomkabili mwandishi alipokuwa shuleni **(alama2)**

……

……

……

c) Onyesha uhusiano uliopo kati ya elimu, kazi na ukwasi kwa mujibu wa habari hii**(alama3)**

……

……

……

……

……

d) **Ukirejelea** makala haya, fafanua msemo,'elimu ni bahari haina kikomo' **(alama3)**

……

……

……

……

e) Hatima ya wale ambao hawakupata elimu ni ipi? **(alama2)**

……

……

……

f) Badala ya maneno yafuatayo mwandishi angetumia msamiati gani? **(alama3)**

i) Nilijifunga masombo

.....

ii) Ndaki

.....

iii) Taashira

.....

UFUPISHO (Alama 15)

Dhuluma kwa wanawake sio matokeo ya sasa baada ya uhuru, bali ni matokeo ya hali iliyokuepo tangu enzi za mababu zetu; kabla ya ukoloni. Kubaguliwa na kudhulumiwa kwa wanawake kiasi kunaoana na kunyonywa kwake kijamii kunakoshuhudiwa siku nenda miaka rudi.

Elimu ya jadi ilimwandaa mwanamke kuwa chombo kitiifu cha mwanamume. Mwanamke aliandaliwa katika unyago na katika mfumo mzima wa malezi kuwa chombo cha kutumikia mwanamume-kumstarehesha, kumfariji, kumlisha na kumzalia watoto. Mwanamke tangu jadi hakuruhusiwa kushiriki katika shughuli za kisiasa na utawala wala hakuna mtu aliyeamini kwamba mwanamke angeweza kushikilia wadhifa wowote wa uongozi.

Demokrasia ya jadi naihusudu sana; ambapo wazee walikaa chini ya mbuyu na kuamua mambo ya jumuiya. Mahakama ya kijiji ilikuwa aghalabu ni ya wazee na wanaume peke yao. Hakukuwa na mwaname aliyeshirikishwa, hata kama alikua ajuza. Sifa waliokua nayo wanawake ni ile ya usihiri na uganga. Mwanamke yeyote aliyezeeka alidhaniwa kuwa bingwa wa uchawi, ulozi na ushirikina. Kwa hivyo, wanawake ndio waliokuwa washirikina wakubwa, maana fursa ya kupata elimu pana zaidi hawakuwa nayo. Si ajabu kuwa mwanamke alipojitokeza na kusema jambo la busara, aliuupza na pengine kutukanwa hadharani.

Kwa bahati nzuri, kumezuka mwamko uliotuingiza katika enzi mpya. Vita vya wanawake vya kujihami na kujiendeleza katika ulimwengu unaotawaliwa na wanaume vimetapakaa kote katika kila sehemu ya dunia. Wanawake wengi wamekiuka misingi na mizizi ya utamduni na kung'oa asasi za kijamii na itikadi ambazo daima zimeendelea kumnyanyasa na kumuumbua utu mwanamke tangu jadi. Watetezi wa haki za wanawake zamani walilaumu suala la serikali za mataifa mwaka hadi mwaka. Huku maswala ya wanawake ya kijamii, uut na utamaduni yakishangiliwa kupitishwa, watetezi wameeleza wasiwasi wao ikiwa kupitishwa kwa maazimio kutasaidia kuleta maendeleo ya haraka kwa wanawake kimataifa au katika nchi moja. Fauka ya hayo, baadhi ya wachunguzi wanaonelea kuwa maazimio mengi hayadokezi hatua za kufikiwa haki za wanawake.

Maazimio mengine yanazungumzia juu ya kuondolewa kwa ubaguzi dhidi ya wanawake, kushiriki kwao katika uendelezaji wa amani ya kimataifa, na ushirikiano wa kimataifa, majukumu yao katika jamii, mfuko wa umoja wa Mataifa wa wanaweka (Unifem) na kuimarisha hadhi ya

wanawake katika sekretariati ya Umoja wa Mataifa miongoni mwa shughuli nyingine katika mkabala huu.

Wanawake wameonyesha vipaji vyao katika nyanja mbalimbali za maisha; siasa, uchumi, utawala na kadhalika. Wanawake wamejikakamua na kudhihirisha kuwa wao pia wana jukumu muhimu la kutekeleza ili kuyaongoza maisha yao na ya watu wengi. Wadumishaji wa dhuluma za kijinsia hawana budi kusalimu amri na kuukubali ukweli huu, wapende wasipende. Mtazamo juu ya haki sawa unatokana na kukubaliwa na kuondolewa kwa aina zote za ubaya dhidi ya wanawake wanaojitolea mhanga kutetea hadhi yao pamoja na ya wanyonge wengine. Wao huonekana kama waasi, wapinga mila na watovu wa utii.

MASWALI

a) Bila kubadilisha maana asilia, fupisha aya tatu za kwanza.(Maneno 45-55) **(alama6)**

<u>Matayarisho</u>

……

……

……

……

……

……

……

……

……

<u>Jibu</u>

……

……

……

……

……

……

……

……

……

b) Kwa kurejelea aya tatu za mwisho, pambanua hoja muhimu zinazoguziwa na mwandishi (Maneno 60-65) **(alama9)**

Matayarisho

……

……

……

……

……

……

……

……

……

……

……

Jibu

……

……

……

……

……

……

……

……

……

……

……

MATUMIZI YA LUGHA

a) Andika maneno yenye vitamkwa vya sifa zifuatazo **(alama2)**

Kikwamizo sighuna cha kaakaa gumu, irabu ya nyuma juu, kikwamizo ghuna cha kaakaa laini, irabu ya nyuma juu, kitambaza na irabu ya mbele juu.

……

……

……

ii) Taja sifa zinazonyesha usawa baina ya jozi hizi

/gh/ na /ng'/

……

……

/f/ na /v/

……

……

b) Andika neno lenye muundo ufuatao wa tamko kamili katika neno **(alama2)**

K,KI,KKI

……

KiK

……

c) Ainisha mofimu katika neno hili **(alama2)**

Kifurahieni

……

……

……

……

……

d) Tunga sentensi ukitumia nomino uga (wingi) pamoja na kivumishi cha pekee cha kusisitiza na kielezi cha kiasi **(alama2)**

……

……

……

……

e) Andika katika hali ya ukubwa **(alama2)**

Wanawake wale wana midomo mikubwa inayotisha

……

……

f) Andika sentensi zifuatazo upya kulingana na maagizo **(alama4)**

Mwanafunzi <u>aliadhibiwa</u> kwa kuwa <u>alikosea</u> mwalimu (badilisha maneno yaliyopigwa msitari kuwa nomino)

……

……

ii) Mapambano baina ya mwanadamu na mazingira yalizaa fasihi (anza kwa fasihi)

……

……

iii) Margret ni mkakamavu. Onyi ni mkakamavu pia. (unganisha iwe sentensi moja yenye kihusushi cha kulinganisha)

……

……

iv) Maji ambayo wanakunywa ni hatari (tumia hali ya mazoea bila ‘amba’)

……

……

g) Tunga sentensi ukitumia kishazi tegemezi kinachofanya kazi ya kiwakilishi **(alama2)**

……

……

h) Andika wingi hali katavu **(alama2)**

Nyanya na babu : Sisi ndisi wakulima

……

i) Andika sentensi moja kwa wakati uliopita hali endelevu ukitumia kitenzi – P - katika kauli ya kutendana **(alama2)**

……

……

j) Tumia kijalizo katika sentensi kama: **(alama2)**

i) kiwakilishi

……

……

ii) kielezi

……

……

k) Tunga sentensi moja kutofautisha maneno haya: taka na daka **(alama2)**

……

……

l) Andika kinyume **(alama2)**

Mjomba hakumtwika nyanyake mzigo hivyo akapata laana

……

……

m)Onyesha kiima, chagizo na aina za shamirisho **(alama2)**

Mpodozi ambaye alikuja juzi alipaka kucha rangi jana jioni mara kadha wa kadha

……

……

……

n) Eleza matumizi ya 'KU' katika sentensi hii **(alama2)**

Alikusaidia kwenda kule wakati hukuwa na uwezo wa kusoma

……

……

o) Changanua sentensi hii ukitumia kielelezo cha msitari **(alama2)**

Hasikii la mwadhini wala mtekaji msikitini

……

……

……

……

……

……

p) Bainisha maana mbili zinazojitokeza katika sentensi ifuatayo **(alama2)**

Mwakuona angefuata somo angefaulu

……

……

……

q) Eleza matumizi mawili ya alama ya kibainshi **(alama1)**

……

……

……

r) Tunga mfano mmoja wa sentensi kuzingatia muundo ufuatao **(alama2)**

S - (RH + RH + t + N + V)

……

……

s) Neema amekuwa kiduchu toka utotoni lakini mwenye akili nyingi akitazama unaona kama anayezisoma a akili zako (tumia methali mwafaka kuafiki maelezo hayo) **(alama1)**

……

……

t) Jaza pengo **(alama2)**

i) Mtu ni kwa mja, ukongo ni kwa ..... na kiate ni kwa .....

ii) Tunapotaka kuomba radhi kabla ya kutamka jambo ambalo linaweza kumuudhi mtu tunasema ..... ilhali tunapotamka kuonyesha mshtuko au jambo la hatari tunasema .....

ISIMU JAMII(alama10)

Jambo Kenya! Nachukua fursa hii kumkaribisha mheshimiwa Profesa Chan kutoka jamhuri ya watu wa Uchina. Kufikia hapo kila kitu ki barabara tunapoendelea kujadiliana kuhusu swala hili la mabadiliko ya hali ya anga ulimwenguni. Suala hili linaendelea kupunguza idadi ya watu duniani. Nawaomba tusimame kuwaheshimu walioondoka.

(anawaashiria wasimame)

Asanteni sana!

a(i) Tambua sajili hii **(alama1)**

……

ii) Eleza sifa za sajili uliotaja hapo juu ukizingatia kifungu **(alama4)**

……

……

……

……

……

……

……

……

……

b) Order! Lazima kutii mpangilio! Katili hauruhusiwi kuongea bila ruhusa. Polisi, mpelekeni nje.

i) Tambua sajili hii **(alama1)**

……

ii) Fafanua sifa zozote nne ambazo zingejitokeza iwapo mazungumzo yangeendelea**(alama4)**

……

……

……

……

……

……

……

……

HUU NDIO UKURASA WA MWISHO KUPIGWA CHAPA!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

102/3

KISWAHILI

KARATASI YA 3 (FASIHI)

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO

a) Andika jina lako na nambari yako ya mtihani katika nafasi ulizoachiwa hapo juu
b) Jibu maswali manne pekee
c) Swali la kwanza ni la lazima
d) Maswali hayo mengine yachaguliwe kutoka sehemu nne zilizobakia yaani : Riwaya, hadithi fupi,ushairi na fasihi simulizi
e) Usijibu maswali mawili kutoka sehemu moja
f) Majibu yote lazima yaandikwe kwa lugha ya Kiswahili
g) Majibu yote sharti yaandikwe kwenye nafasi ulizoachiwa katika kijitabu hiki cha maswali.

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
USHAIRI	20	
TAMTHILIA	20	
RIWAYA	20	
HADITHI FUPI	20	
FASIHI SIMULIZI	20	
JUMLA		

SEHEMU A: TAMTHILIA

Timothy M.Arege :Bembea ya Maisha

1. **LAZIMA**

La! Kila mbegu ipandwayo haina budi kuzaa na izaapo mazao yake huvunwa. Mtu hutakasa sahani akijua itamfaa tena. Kinacholelewa hakina budi kulea.

a) Eleza muktadha wa dondoo hili **(alama4)**
b) Changanua mtindo katika dondoo hili **(alama3)**
c) Kauli iliyopigiwa mstari inaonyesha majukumu ya watoto kwa wazazi. Thibitisha kwa kuonyesha wazi alivyowajibika anayerejelewa na msemaji **(alama4)**
d) Fafanua umuhimu wa msemaji katika kujenga tamthilia ya Bembea ya Maisha **(alama4)**
e) Eleza sifa tano za msemewa **(alama5)**

SEHEMU B: RIWAYA

Clara Momanyi: Nguu za Jadi

Jibu swali la 2 au 3

2. "Tangu lini mke amuulize mumewe kule aendako au atokako?.....Ama kweli, wanawake wa kisasa wanavunja kila mwiko uliowekwa na wazee."

i) Yaweke maneno haya katika **muktadha** wake. **(alama4)**

ii) Kwa kutoa mfano,**taja mbinu ya lugha** iliyotumika**.** **(alama2)**

iii) Eleza **umuhimu wa msemaji** **(alama4)**

(iv) Kwa kutoa mifano **kumi** kutoka riwayani, fafanua jinsi **mwanamke amesawiriwa** katika jamii ya Matuo. **(alama 10)**

3. Jamii ya Matuo katika riwaya ya 'Nguu za Jadi' imekumbwa na **usaliti** si haba. Kwa kutoa mifano mwafaka riwayani, onyesha ukweli wa kauli hii. **(alama20**)

SEHEMU C:HADITHI FUPI
MAPAMBAZUKO YA MACHWEO NA HADITHI NYINGINE
Jibu swali la 4 au la 5

Racheal Wangare:Fadhili za Punda

"Rudi, nyumbani mwanamke wewe! Nitakuja jioni tuyamalize haya."

a)(i)Eleza muktadha wa dondoo hili **(alama4)**
(ii) Fafanua hulka ya msemaji wa kauli hii **(alama4)**
iii) Huku ukizingatia hadithi hii, jadili maudhui ya mabadiliko yanavyojitokeza katika hadithi **(alama7)**

b) Changanua mtindo katika dondoo hili **(alama 5)**

Alasiri ile, baada ya ibada mbili, mhubiri akawa hoi kwa mavune. Akatamani kufika nyumbani apumzike, kazi ya kuwalisha kondoo wa Mungu si kazi rahisi. Wamefika nusu safari, bintiye katulia kama maji ya mtungi. Akimtazama kipembe anamkumbusha marehemu mkewe. Miaka mitatu sasa na dhiki ya kuondokewa haijamwisha. Alihisi ukiwa, akatamani mwenziye. Sasa kazi kukilea kitoto chao, kibinti hiiki kilicho mlanda mamake kama shilingi kwa ya pili. Nyuma ilijaa kicheko alipokua hai mamake. Kama si bintiye ambaye ulimi wake hautulii, kiroho kingemvamia labda hata kumvuta kuelekea kaburini .

AU

5. Winnie Nyaruri Ogenche; Sabina

"Ninaomba wazazi wenzangu muwape watoto wa kike elimu badala ya kuwaoza mapema. Hongera, mwanangu kwa kupata alama mia nne arubaini na saba"

a) Eleza umuhimu wa mrejelewa katika kukuza hadithi husika **(alama5)**

b) Tambua mbinu ya kimtindo iliyotumika katika dondoo hili **(alama1)**

c) Fafanua jinsi mbinu yenyewe ilivyotumika ili kufanikisha utunzi wa hadithi **(alama6)**

d) Fafanua changamoto zinazokabili jinsia ya kike kwa mujibu wa hadithi **(alama8)**

SEHEMU D :USHAIRI

Jibu swali la 6 au la 7

Soma shairi lifuatalo kisha ujibu maswali

Nazuka mtunga mambo, na watunzi watungao
Wafungatao masombo, kushika msu na ngao
Naipiga ya ngambo, sauti ifike kwao
Wawapi wajigambao, tugambiyane vigambo?

Ni siku nyingi kitambo, **ninyemele** naja leo
Kama kweli wana nyimbo, nawaje niimbe nao
Na sababu ni vigambo, vya wale wajitwazao
Wawapi wajigambao,tugambiyane vigambo?

Iwapo mu wana nyimbo, na ungoi upasao
Musingewaonya mambo, waoga mwatishao
Mungefungata masombo, kuteta na wawezao
Wawapi wajigamboa, tugambiayane vigambo?

Wawapi fundi wa nyimbo, malengo wajitwazao
Wasemao kula jambo, kuwa walijua wao
Kuna kipambua pambo, chatafuta wapambao
Wawapi wajigambao,tugambiyane vigambo?

Musidhani ni msimbo, hayano nambano leo
Nawaeleza ni mambo, yamtaka atakao
Ajifungate msombo,mdudoateze nayo
Wawapi wajigambao, tugambiyane vigambo?

Imani wenya utambo, mutambao kwa matao
Muelewao mafumbo, na mbinu za wafumbao
Kuna ‘tomvu za ulimbo, tengani muruke nao
Wawapi wajigambao, tugambiyane vigambo?

Sasa tafunuwa wimbo, takasani masikio
Siimbi la mtu jambo, alojiweka kituo
Hili’ metunga no fumbo, n’ nao niwatakao
Wawapi wajigambao, tugambiyane vigambo?

Tamati enyi warembo, nasubiri matokeo
Hivi sasa sina jambo, ela naaga nendao
Ni mimi simba wa wimbo,marara ningurumao
Wawapi wajingambao, tugambiyane vigambo?

Maswali

a) Lipe shairi hili anwani mwafaka **(alama1)**

b) Eleza muundo wa shairi hili **(alama4)**

c) Taja na utoe mifano ya mbinu nne za kimtindo zilizotumika katika shairi hili **(alama4)**

d) Fafanua uhuru wa kishairi katika ubeti wa nne **(alama3)**

e) Andika ubeti wa pili katika lugha ya nathari **(alama4)**

f) Tambua nafsi nenewa katika shairi hili ` (alama1)

g) Taja toni la shairi hili **(alama1)**

h) Eleza maana ya msamiati ufuatao kama ulivyotumika katika ushairi **(alama2)**

i) Wafungatao masombo

ii) Ninyemele

7. **Soma shairi lifuatalo kisha ujibu maswali:**

Binadamu hatosheki, ni kiumbe chenye zani, kweli mja hapendeki,
Kwa kweli haaminiki, hila ameficha ndani, la wazi ni unafiki
Ukweliwe haafiki, njama zake zi moyoni, usimwone ni rafiki
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka,

Wengine watakuua, wakiona una pesa, hata zikiwa kidogo,
Hizo kwao ni maua, hupupiwa zikatesa, wakazifuata nyago,
Hadi kwenye wako ua, pasipo hata kupesa, wala kukupa kisogo,
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka

Pindi kinunua kitu, hafurahi Shaitani, bali tajawa chukizo,
Mtu kiwa mtukutu, tanuna mtimani, kwalo lako tekelezo,
Tamko lake 'Subutu' Kuondoa tumaini, na kukuulia wazo,
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka,

Aliye na taraghani, taabu kuishi naye, kazi yake kujidai,
Takusema faraghani, asosema kiwa naye, kupendeza maadui,
Hana faida nyumbani,ni mtu akuchimbaye, mradi usitumai,
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka,

Kwa hakika ni balaa, kumkirimu mchawi, aliyejaa uchoyo,
Bahati ina hadaa, kukupa alo sadawi, aibatili rohoyo,
Mipangoyo kwake jaa, na nia ya ustawi, huwiza kuvunja kaninyo,
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka.

Ninacho changu kilio, ninalia sanasana, kinyesi nimetupiwa,
Ningetoa azimio, lakini uwezo sina, kwa matatizo kuambiwa,
Ama nitumie mbio, fuadini ninanena, akilini nazuiwa,
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka.

MASWALI:

a) Lipe shairi hili anwani mwafaka **(alama1)**

b) Fafanua mambo **manne** mabayo nafsineni analalamikia **(alama4)**

c) Ainisha shairi hili kwa kuzingatia vigezo vifuatavyo: **(alama3)**

(i) Idadi ya vipande katika kila mshororo

(ii) Mpangilio wa vina katika kila ubeti

(iii) Idadi ya mishororo katika kila ubeti

d) Andika ubeti wa **nne** katika lugha nathari **(alama3)**

e) Bainisha tamathali **mbili** za usemi zilizotumiwa katika shairi hili **(alama2)**

f) Huku ukitoa mifano, onyesha mbinu **mbili** alizotumia mshairi kutosheleza mahitaji ya kiarudhi **(alama2)**

g) Andika aina **mbili** za urudiaji zilizotumiwa katika shairi hili **(alama2)**

h) Fafanua muundo wa ubeti wa **tano** na **sita** **(alama3)**

SEHEMU E : FASIHI SIMULIZI

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

a) Bainisha kipera cha utungo huu **(alama1)**

b) Fafanua aina tatu za taswira zilizotumika katika kifungu hiki **(alama3)**

c) Utanzu wa kipera hiki huweza kuchukua nafasi muhimu katika fasihi simulizi. Thibitisha kwa hoja zozote sita **(alama6)**

d) Ufanisi wa uwasilishaji wa utanzu huu unategemea fanani. Teteta kauli hii. **(alama5)**

e) Ni changamoto zipi zinaweza kumkabili mwanafasihi mtafiti nyanjani? **(alama5)**

HII NDIO UKURASA WA MWISHO KUPIGWA CHAPA!

For Marking Schemes Contact 0746 222 000 / 0742 999 000

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

121/1

MATHEMATICS

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. Write your name, index number and class in the spaces provided above.
2. The paper contains two sections: **Section I** and **Section II**.
3. Answer **ALL** the questions in **Section I** and **ANY FIVE** questions from **Section II**.
4. All working and answers must be written on the question paper in the spaces provided below each question.
5. Marks may be awarded for correct working even if the answer is wrong.
6. Negligent and slovenly work will be penalized.
7. Non-programmable silent electronic calculators and mathematical tables are allowed for use.

For examiners 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

For Marking Schemes Contact 0746 222 000 / 0742 999 000

SECTION I (50 MARKS)

Attempt All Questions in this section

1. Find the value of y given that **(3 marks)**

$$\frac{-2(5+3)-9\div 3+5}{-3\times -5y+2y\times 4}=1$$

2. The length of a minute hand of a clock is 3.5cm. What will be the time if from 10.15am it sweeps through an area of 19.25cm^2? **(4marks)**

3. Use reciprocal, square and square root table to evaluate to 4 significant figures, the expression

$$\sqrt{\frac{1}{24.56}+4.346^2}$$ **(3marks)**

4. Given that $\sin(90-x)^0 = 0.8$, where x is an acute angle, find without using mathematical table the value of $2\tan x + \cos(90-x)$ **(3marks)**

5. Find the equation of the tangent and the normal to the curve $y = 2x^3 - 3x^2 + 6$ at the point (2,10) **(4marks)**

6. Simplify $\dfrac{2y^2 + 3xy - 2x^2}{x^2 - 4y^2}$ **(3marks)**

7. Find greatest integral value of x which satisfies

$$\frac{2x+3}{2} < \frac{8-3x}{5} < \frac{5x+6}{3}$$ **(3marks)**

8. One of the roots of the equation $x^2 + (k+1)x + 28 = 0$ is 4. Find the values of k and hence the second root **(4marks)**

9. Solve for x in the following without using a calculator or mathematical table.

$9^x\left(27^{(x-1)}\right) = \tan 30^o$ **(3marks)**

10. A shear parallel to the *x*-axis maps point (1, 2) onto a point (5, 2). Determine the shear factors and hence state the shear matrix (invariant line is y=0) **(3marks)**

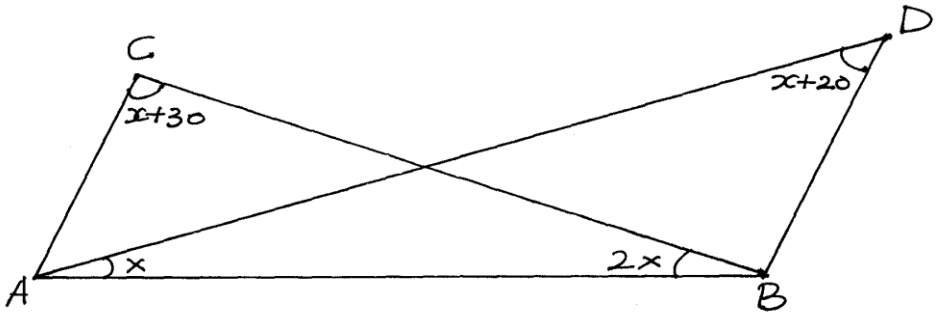
11. A solid is in the shape of a right pyramid on a square base on side 8cm and height 15cm. A frustum whose volume is a third of the pyramid is cut off. Determine the height of the frustum. **(3 marks)**

12. The interior angle of a regular polygon is 20^{o} more than three times the exterior angle. Determine the number of sides of the polygon **(2marks)**

13. Three fifths of work is done on the first day. On the second day $\frac{3}{4}$ of the remainder is completed. If the third day $\frac{7}{8}$ of what remained id done, what fraction of work still remain to be done. **(3marks)**

14. A two-digit number is such that the sum of the digits is ten. If the digits are reversed, the new number formed is less than the original number by 18. Find the number **(3marks)**

15. In the figure bellow, $\angle CBD = 2\angle CAD$. Find the value of x **(3marks)**



16. Two boys, Ababu and Chungwa, on the same side of a tall building are 100m apart. The building and the two boys are in a straight line and the angles of elevation from the boys to the top of the building are 30^o and 20^o respectively calculate the height of the building. **(3marks)**

SECTION II (50 MARKS)

Attempt only five Questions from this section

17. A business lady bought 100 quails and 80 rabbits for sh25600. If she had bought twice as many rabbits as half as many quails she would have paid sh7400 less. She sold each quail at a profit of 10% and each rabbit at a profit of 20%.

a) Form two equations to show how much she bought the quails and the rabbits. **(2marks)**

b) Using matrix method, find the cost of each animal. **(5mrks)**

c) Calculate the total percentage profit she made from sale of the 100 quails and 80 rabbits.

(3marks)

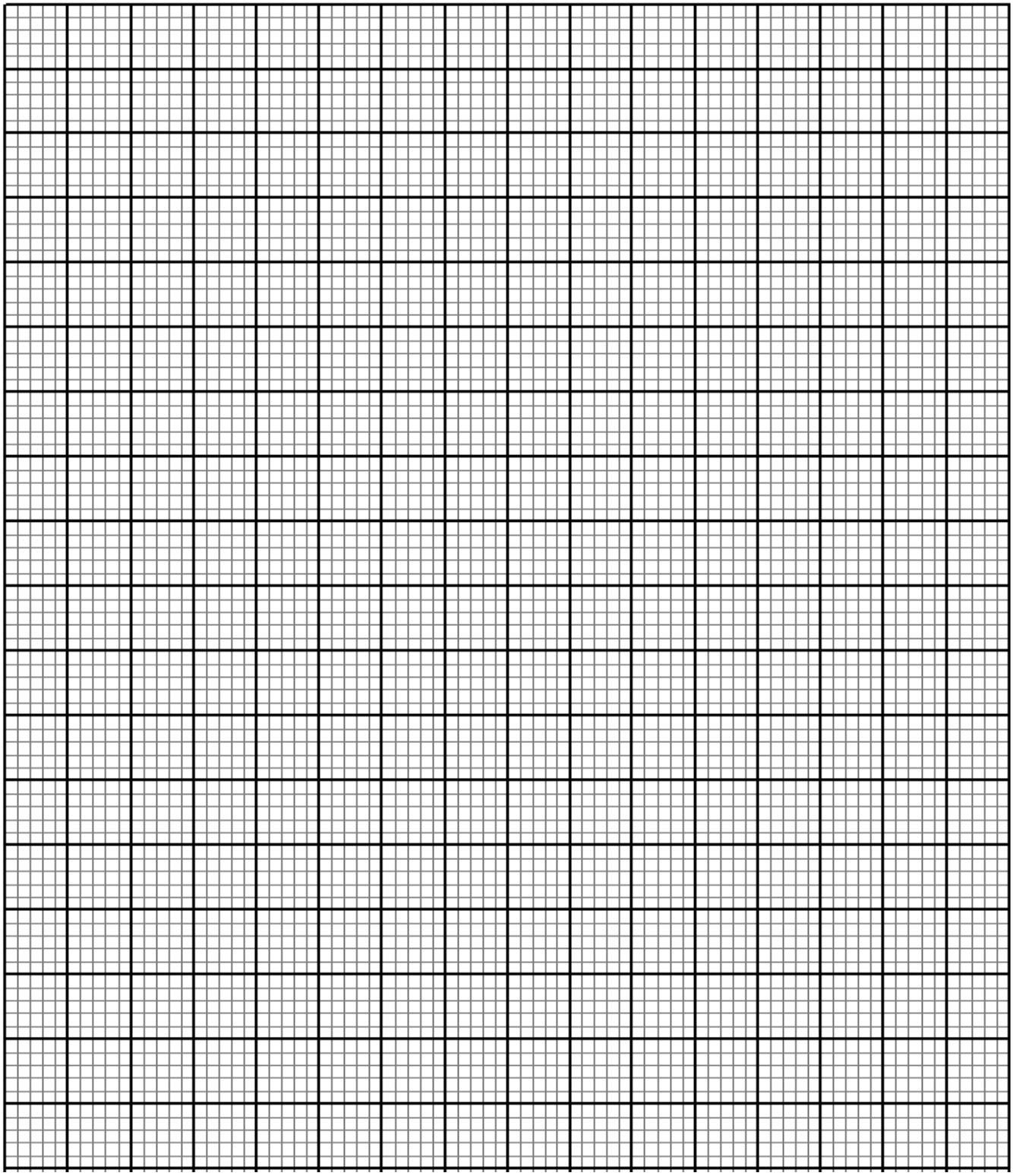
18.A(3,7) B(5,5), C(3,1), D(1,5) are vertices of a quadrilateral

a) On the grid provided below, plot ABCD on a Cartesian plan **(2marks)**

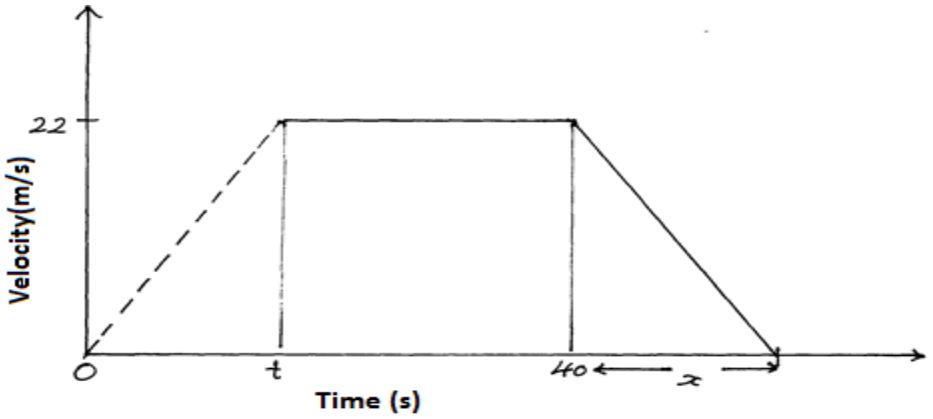
b) $A^1B^1C^1D^1$ is the image of ABCD under a translation T $\begin{pmatrix} -6 \\ -9 \end{pmatrix}$ plot $A^1B^1C^1D^1$and state its coordinates **(2marks)**

c) Plot $A^{11}B^{11}C^{11}D^{11}$ the image of $A^1B^1C^1D^1$ after a rotation about (-1,0) through a positive quarter turn. State its coordinates. **(3marks)**

d) $A^{111}B^{111}C^{111}D^{111}$ is the image of $A^{11}B^{11}C^{11}D^{11}$ after a reflection in the line y=x+2. Plot $A^{111}B^{111}C^{111}D^{111}$ and state its coordinates **(3marks)**



19. The figure below shows a velocity time graph of a journey of a car. The car start from rest and accelerates at $2\frac{3}{4} m/s^2$ for t seconds until it is 22m/s



Brakes are applied bringing it uniformly to rest. The total journey is 847m long. Find.

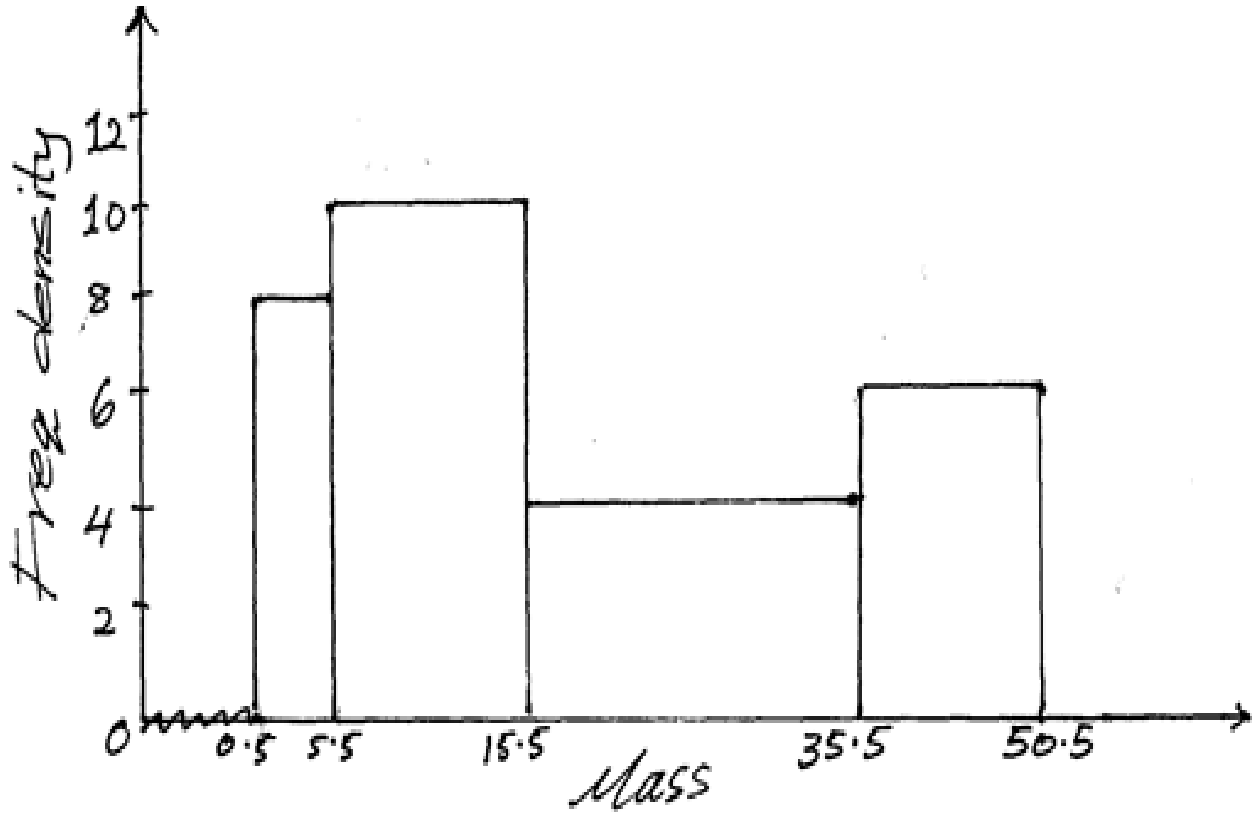
a) The value of t, the acceleration time **(2marks)**

b) The distance travelled during the first t seconds. **(2marks)**

c) The value of *x*, the deceleration time **(4marks)**

d) The rate of deceleration **(2marks)**

20. The diagram below shows a histogram representing the mass of some pupil in a school.



a) Prepare a frequency distribution table of the data **(3marks)**

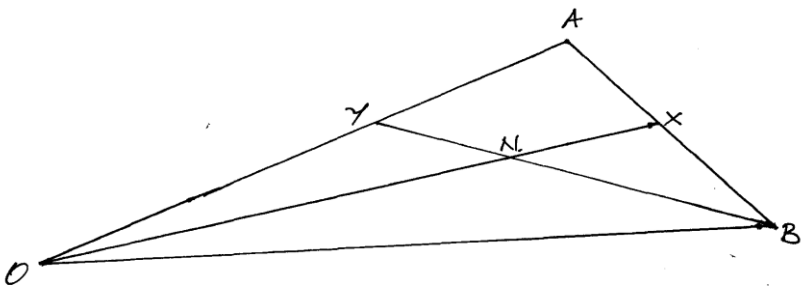
b) From the table above, estimate

i) The mean mass of the pupils to 3 s.f **(3marks)**

ii) The median mass **(3marks)**

iii) How many pupils were 40kg and above **(1marks)**

21. In the figure below **OY**:**YA**=1:3 AX:XB=1:2 **OA**=$\underset{\sim}{a}$ and **OB**= $\underset{\sim}{b}$. N is the point of intersection of **BY** and **OX**



a) Determine

i) **OX** **(2marks)**

ii) **BY** **(1mark)**

b) Give that $\vec{BN} = k\,\vec{BY}$ and **ON**=hOX, express $\vec{ON}$ in two ways in terms of $\underset{\sim}{a}$ $\underset{\sim}{b}, h \text{ and } k$

(3marks)

c) Find the value of h and k and hence show that O,N and X are collinear **(4marks)**

22. Using a ruler and a pair of compass only, construct triangle XYZ where XY is 6cm and XYZ is 135^{o} and YZ=7cm **(2marks)**

a) Measure XZ **(1mark)**

b) Drop a perpendicular from Z to meet line XY at K , measure ZK. **(2marks)**

c) Bisect line XY and let the bisector meet line XZ at Q **(1mark)**

d) Join Q to Y and measure angle XQY **(2marks)**

e) Find the area of triangle XYZ **(2marks)**

23. Four towns are situated in such that a way that town Q is 500km on a bearing of 120^{o} from P. Town R is 240 km on a bearing of 210^{o} from town P, while town S is due north of town Q and due east of town P

a) Draw a sketch diagram showing the relative position of P,Q,R and S (scale:1cm :100km)

(3marks)

b) Find by calculation

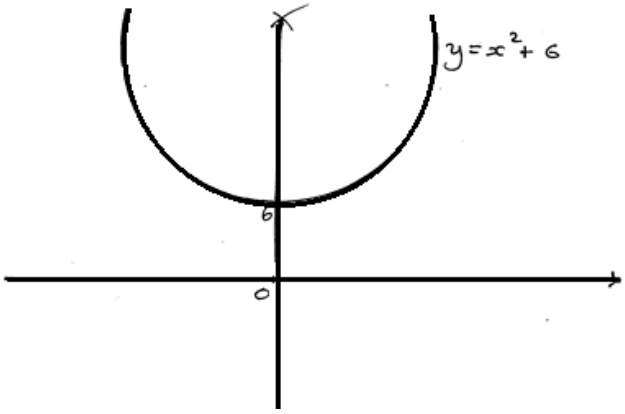
i) The distance QR **(1mark)**

ii) The distance QS **(2marks)**

iii) The angle PRSQ **(2marks)**

iv) The area of triangle PQS **(2marks)**

24. The figure below shows a sketch of the graph of $y = x^2 + 6$.



a) Estimate the area bounded by the curve, the *x*-axis and the line *x* =-4 and *x*=4 using

i) The trapezium rule with 8 sides **(3marks)**

ii) The mid- ordinates rule with and strips **(3marks)**

b) What percentage error is caused by estimating the area of the curve using the mid ordinates rule as in a (ii) above **(4marks)**

THIS IS THE LAST PRINTED PAGE!

For Marking Schemes Contact 0746 222 000 / 0742 999 000

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

121/2

MATHEMATICS

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

1. *Write your name, index number and class in the spaces provided above.*
2. *The paper contains two sections: **Section I** and **Section II**.*
3. *Answer **ALL** the questions in **Section I** and **ANY FIVE** questions from **Section II**.*
4. *All working and answers must be written on the question paper in the spaces provided below each question.*
5. *Marks may be awarded for correct working even if the answer is wrong.*
6. *Negligent and slovenly work will be penalized.*
7. *Non-programmable silent electronic calculators and mathematical tables are allowed for use.*

For examiners 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

For Marking Schemes Contact 0746 222 000 / 0742 999 000

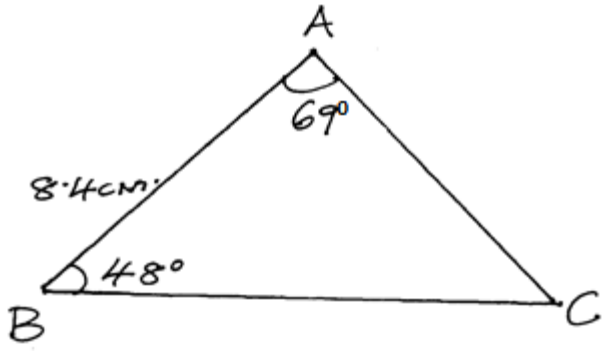
SECTION A (50MARKS)

Answer All Questions in this section

1. The area of a rectangle is 48.4cm^2 and its length is 9.37cm. Calculate the percentage error in width **(3marks)**

2. The base of a triangle is $(3x-2)$cm. The height of the triangle is 5cm shorter than its base. Given that the area of the triangle is 25cm^2. Find length of the base. **(4marks)**

3. Find the area of the triangle shown below **(3marks)**



4. Express the following expression in surd form and simplify by rationalising the denominator

$\frac{2}{1-\tan 30}$ **(3marks)**

5. Solve for x in the expression $(\log_2 x)^2 + \log_2 x^3 = 10$ **(3marks)**

6. The table below is part of the tax for monthly income for the year 2007

Monthly income (ksh)	Rate %
Under ksh 10165	10
From 10165 but under ksh19741	15
From 19741 but under ksh29317	20

In that year, John's monthly gross tax was Ksh 2885. Calculate his monthly income **(3marks)**

7. A quantity E is partly constant and partly variaes as square root of F.

i) Write down an equation connecting E and F where K and C are constants respectively.

ii) If F=25 where E=22 and F=49 when E=28. Find the value of K and C **(3marks)**

8.a) Expand $\left(1+\frac{1}{2}x\right)^7$ in ascending power of x **(1mark)**

b) Using the first four times of the expansion in (a) above estimate the value of $\left(1\frac{1}{30}\right)^7$ **(2marks)**

9. Find the number of terms of the series 5+8+11+14+17+…….. that will give a sum of 2183

(3marks)

10. Find the inverse of the matrix $M = \begin{pmatrix} 4 & -3 \\ 2 & 1 \end{pmatrix}$ hence find the co-ordinates of the point at which line $4x - 3y = 4$ *and* $2x + y = 7$ intersect **(3marks)**

11.A trader mixed grade I, II and III of coffee in the ratio 2:3:5 respectively. Grade I cost Sh650 per kg, grade II costs sh 500 per kg and grade III costs sh 420 per kg.

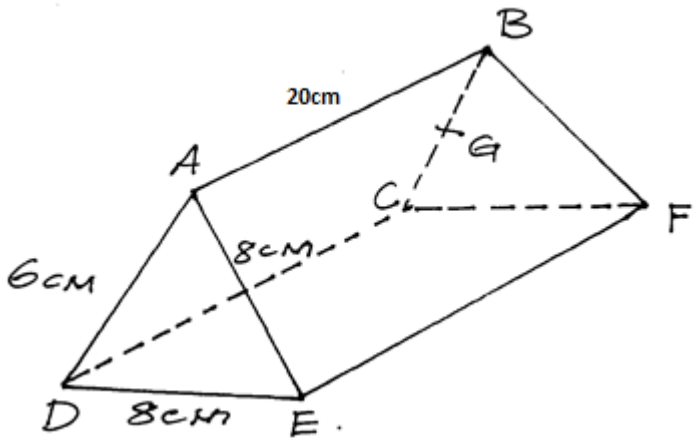
a) Find the cost of one kg of the mixture **(2marks)**

b) If the trader sold the mixture at a profit of 20% calculate the selling price of 3kg of the mixture

(2marks)

12. Solve for the equation $4\cos^2 x = 5 - 4\sin x$ for $0^o \le x \le 360$ **(3marks)**

13. The figure below has a cross-section of the prism which is an isosceles triangle of side AE= 8cm, DE= 8cm and AD=6cm, where AB=20cm



a) If G is the mid- point of side BC find

i) GF **(1mark)**

ii) AG **(1mark)**

b) The angle between line DF and plane ABCD **(2marks)**

14.a) Construct triangle PQR in which PQ=QR=5cm and angle PQR=90^o **(2marks)**

b) Draw the locus of S which moves in such a way that it is always on the same side of PR as Q and angle $P\hat{S}R = 45^o$ **(1mark)**

15. Determine the amplitude and period in the function $y = \frac{1}{2}\sin(3x - 60)$ **(2marks)**

16. Two towns P and Q are located on the equator such that P is due east of Q. The distance between the two towns is 1920nm. If the latitude of p is 50^{o}E. Determine the longitude of Q **(3marks)**

SECTION B (50 MARKS)

Answer any five questions from this section

17. The cost of Jane's car at the beginning of year 2000 was sh 750,000. It depreciated in value by 7% per year for the first 3 years, by 8% for the next two years and 11% per year for the subsequent years.

a) Find the value of the car at

i) The start of the year 2003 **(2marks)**

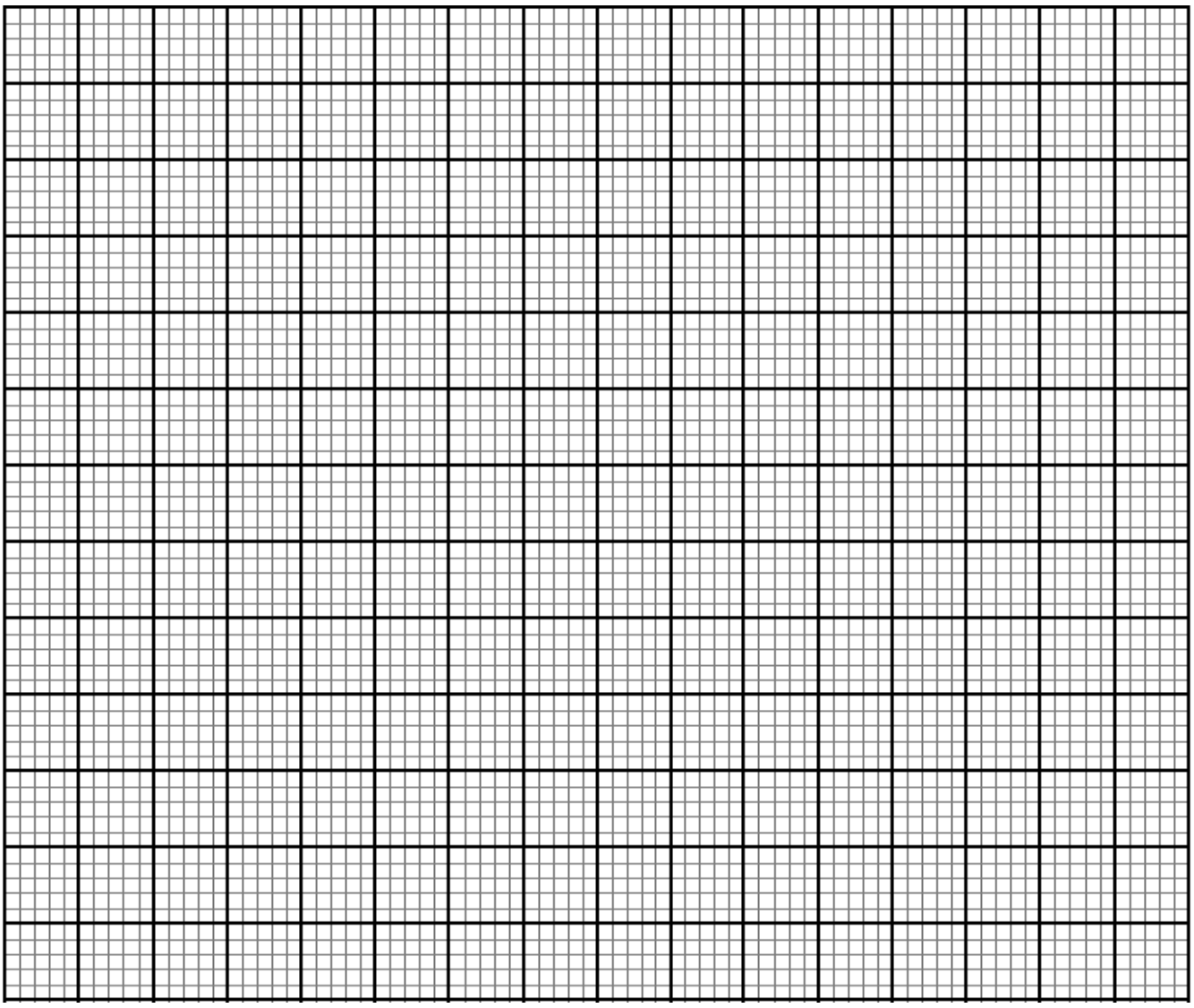
ii) The end of year 2007 **(3marks)**

b) At the beginning of 2008, Jane sold the car through Mary,s dealers at 22% more than its actual depreciated value to Lucy. Taking Mary's sale price as the car's value after depreciation. Find the average monthly rate of depreciation for the 8years. **(5marks)**

18. MNP is a triangle with vertices M,(2,2),N(2,-2) and P(-1,-4). Draw the triangle MNP.

(1mark)

a) If vertex N(2,-2) is mapped to N^1 (5,-2) by a shear with x-axis invariant, draw triangle $M^1N^1P^1$, the image of triangle MNP under the shear. **(2marks)**



b) Find the matrix that represent the shear in (a) above **(2marks)**

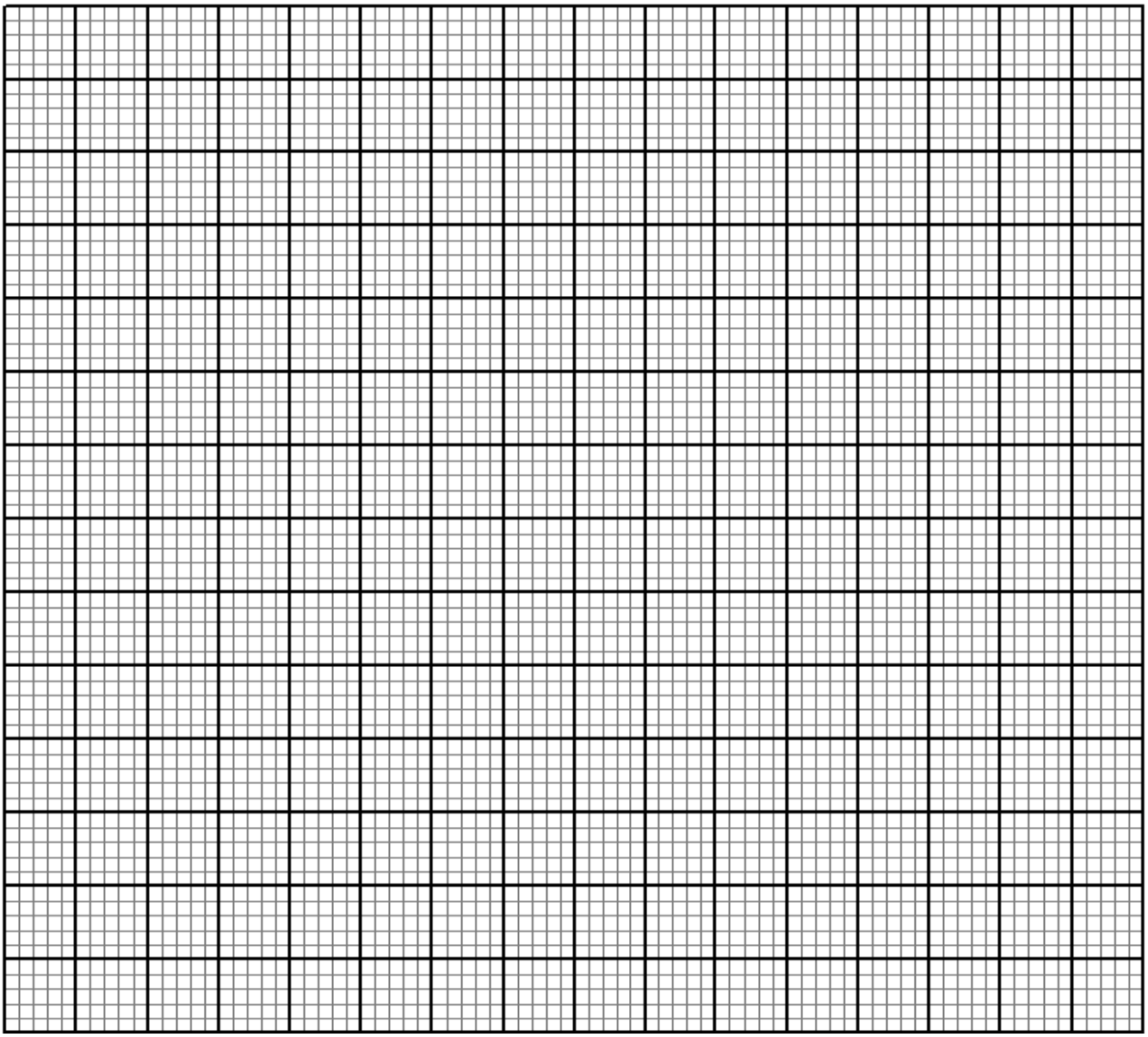
c) A transformation where matrix is $T = \begin{pmatrix} 0 & 1 \\ 1 & 1.5 \end{pmatrix}$ maps triangle $M^1N^1P^1$ onto $M^{11}N^{11}P^{11}$. Draw the triangle $M^{11}N^{11}P^{11}$ **(3marks)**

d) Describe fully a single transformation that maps triangle $M^{11}N^{11}P^{11}$ back onto triangle MNP and give its transformation matrix. **(2marks)**

19. Complete the table below for the equation $y = x^3 - 3x^2 - 5x + 7$ **(2marks)**

x	-3	-2	-1	0	1	2	3	4	5
y	-32		8	7	0		-8		32

b) Draw the graph of $y = x^3 - 3x^2 - 5x + 7$ **(3marks)**



c) Use your graph to estimate the roots of the equation $x^3 - 3x^2 - 5x + 7 = 0$ **(2marks)**

d) Use your graph to solve the equation $x^3 - 3x^2 - 10x + 17 = 0$ **(3marks)**

20. The table below shows marks scored by 40 students in a test

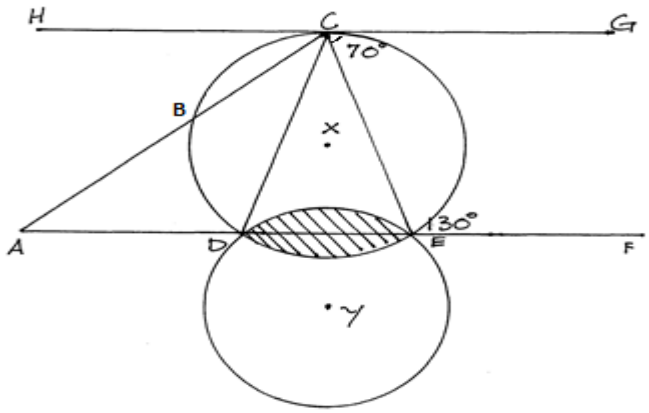
Marks	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90
frequency	1	5	8	12	7	4	2	1

a) Calculate the upper quartile and lower quartile **(4marks)**

b) If 30% of students failed the test, find the pass mark **(3marks)**

c) The pass mark was set at 25 marks. How many students passed the test. **(3marks)**

21.) The diagram below shows two intersecting circles with centres X and Y. HG is a tangent to the circle centre X at C. Angle GCE=70^o and angle CEF=130^o. Given that CB=5cm, BA=4cm, AE=12cm and radius DY=6cm.



a) Determine

i) Angle DXE **(2marks)**

ii) Length DE **(2marks)**

iii) Angle DYE **(2marks)**

b) Calculate the area of the shaded region (take $\pi = \frac{22}{7}$) **(4marks)**

22.a) Wekesa has two fair tetrahedral solids one red and other green. The faces of red solid are numbered 1to 4 while the faces of green solid are numbered 2,3,5 and 6. He tosses the two solids at the same time and recorded the number that is the bottom face of each solid. If **k** is the number that is at the bottom face of red solid while **t** is the number that is at the bottom face of green solid, find the probability that

i) $2k+t=7$ **(1mark)**

ii) $(2k+t)$ is at most 9 **(1mark)**

iii) $2k \geq t$ **(2marks)**

b) In a group of 40 people, 10 are healthy and every person of the remaining 30 has either high blood pressure, a high level of cholesterol or both. Given that 15 have high blood pressure, 25 have high level of cholesterol and x have both. If a person is selected at random from this group. What is the probability that he/ she

i) Has high pressure only **(2marks)**

ii) Has high level of cholesterol only **(1mark)**

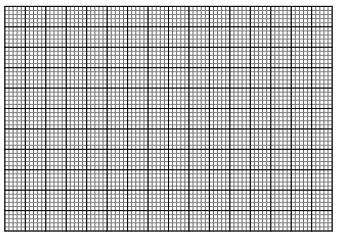
iii) Hass high blood pressure and high level of cholesterol **(1mark)**

iv) Has either high blood pressure or high level of cholesterol **(2marks)**

23.A company was contracted to transport 1200 tonnes of sand. The company used type A and type B trucks to do the job. Each type A truck carries 10 tonnes of sand per trip while B curries 15 tonnes per trip. The total number of trips must not be less than 70 and type B truck must make at least twice as many trips as type A truck while the later must make not less than 10trips. Taking x to represent the number of trips made by type A trucks and y to represent the number of trips made by type B trucks

a) Write down all the inequalities representing the above information **(4marks)**

b) Represent the inequality graphically **(4marks)**



c) The company makes a profit of sh2000 per trip made by each type A truck and sh 3000 per trip made by each type B truck.

i) Using a search line, determine the number of trips each type of truck must be made to maximise the profit **(1mark)**

ii) Hence calculate the maximum profit **(1mark)**

24.a) Find the area of the region bounded by the cuver $y = x^3 - x$ and the axes between the point x=-1 and x=1 **(4 marks)**

b) At a certain instant a body is moving in a straight line at 20cm/s. Its acceleration during the first 5seconds of the subsequent motion is (30-6t) cm/s^2 where t is the time in seconds. After 5 seconds it travels with a constant speed. Find

i) Its velocity after 2seconds **(2marks)**

ii) The greatest velocity attained **(2marks)**

iii) The distance travelled in 10 seconds **(2marks)**

THIS IS THE LAST PRINTED PAGE!

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

451/1

COMPUTER STUDIES

PAPER 1 (THEORY)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

Instructions to candidates

- *Write your name and Index No in the spaces provided above.*
- *Sign and Write the date of the examination in the spaces provided above.*
- *This paper consists of two sections: A and B*
- *Answer all the questions in section A*
- *Answer question 16 and any other three questions from section B*
- *All answers must be written in the spaces provided on the question paper.*

For Examiner's Use Only

Section	Question	Candidate's Score
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	
	Total Score	

1. Identify three advantages of using computers in banking **(3mks)**

……

……

……

2. List three facilities that will ensure proper ventilation in a computer lab **(3mks)**

……

……

……

3. Give two main functions of a computer input device. **(2mks)**

……

……

4. What are turnaround documents? **(1mk)**

……

……

5. Using examples, distinguished between:

(i) Primary and secondary storage **(1mk)**

(ii) Fixed and removable disks **(1mk)**

6. Ann connected new multimedia speakers to her computer and tried to play her favourite music CD, but no sound came out. Suggest two problems that might have occurred **(2mks)**

……

……

……

7. Explain the following considerations when purchasing software **(2mks)**

(i) Authenticity

(ii) Portability

8. Give three ways in which operating systems are classified into **(3mks)**

……

……

……

9. Peter tried to retrieve a document file following all the steps correctly. The filename did not appear in file list box. State three causes for this. **(3mks)**

……

……

……

10. State the use of the following objects in databases. **(3mks)**

i) Tables

ii) Forms

iii) Query

11. i. Explain the meaning of the following as used in computer programming. **(2mks)**

a. Syntax

b. Semantic

ii. List three ways in which data integrity can be compromised. **(3mks)**

……

……

……

12. i. Mobile phones have become common ICT devices. Explain some of the powerful capabilities that come with some of the latest embedded operating systems **(3mks)**

……

……

……

……

……

ii. List two disadvantages of fiber optic cable over twisted wires**.** **(2mks)**

……

……

13. Describe any two types of data processing methods. **(2mks)**

……

……

……

……

14. State two advantages of USB port over the parallel port **(2mks)**

……

……

15. Differentiate between the terms signal Attenuation and Noise as used in data communication. **(2mks)**

……

……

……

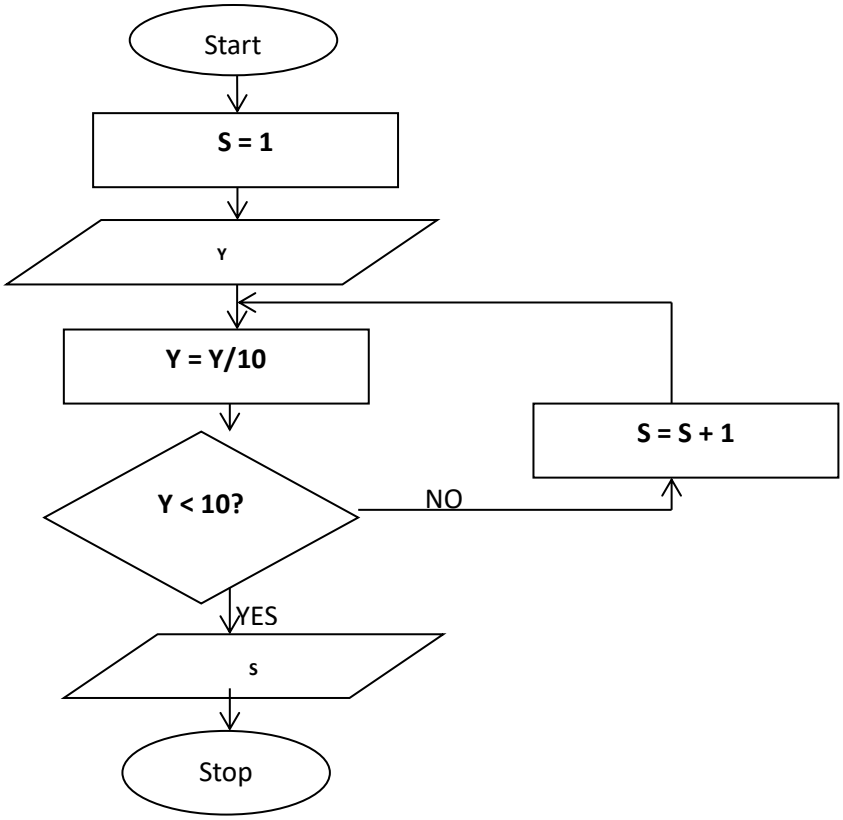
SECTION B

Answer question 16 and any other three questions in this section

16. a) State three advantages of low -level languages **(3mks)**

b) Give two differences between a compiler and an interpreter. **(2mks)**

c) i) Study this flowchart and use it to answer the questions that follow.



I. Give the expected output from the flowchart when the value of Y is:

(i) 48 **(1 marks)**

(ii) 9170 **(2 marks)**

(iii) – 800 **(2 marks)**

II. Write the pseudo code that can be used to create a program represented by the above Flowchart.

17. a. Use two complement to perform the following arithmetic operations

i) $15_{10} - 12_{10}$ **(4mks)**

ii) $10111_2 - 1011_2$ **(3mks)**

b) 1011_2 is a ones complement binary representation of negative number using four bits work out the likely positive equivalent in base 10. **(4mks)**

c) Convert the decimal fraction 10.375_{10} into its binary equivalent **(3mks)**

Whole numbers

d) Assuming the existence of base five, list the numbers used in the number system (**1mk)**

18. a) State and explain two disadvantages that will come about if a network was to be installed in your school. **(4mks)**

b) Discuss two disadvantages of wireless networks. **(4mks)**

c) Write the following abbreviation in full. **(2mks)**

i) F.T.P

ii) H.T.T.P

d) With the aid of a diagram, discuss Hybrid topology. **(4mks)**

e) Discuss four advantages of network. **(2mks)**

19. a) Explain why a computer is able to display the correct time and date when it has just been switched on. **(2mks)**

b) Discuss two types of special memories found in a Computer System. **(4mks)**

c) i) Define a Bus with reference to a computer system. **(1mk)**

ii) List two examples of buses. **(2mks)**

d) Distinguish between a power cable and interface cable. **(2mks)**

e) Differentiate between the different types of RAM. **(4mks)**

20.a) i) Define a system. **(1mk)**

ii) Explain system entropy. **(2mks)**

b) State three circumstances that can lead to development of information systems **(3mks)**

c) Distinguish parallel changes over from straight change over as used in system implementation. **(2mks)**

d) Discuss two fact finding methods. **(4mks)**

e) Differentiate an open system from a closed system. **(2mks)**

f) List two responsibilities of a system analyst. **(2mks)**

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

451/2

COMPUTER STUDIES

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES.

- *Type your name and index number at the top right hand corner of each printout*
- *Sign and write the date of the examination below the name and index number on each printout*
- *Write your name and Admission number on the compact disks*
- *Write the name and version of the software used for each question attempted in the answer sheet.*
- *Passwords should not be used while saving in the compact disks.*
- *Answer all the questions*
- *All questions carry equal marks*
- *All answers must be saved in your compact disks*
- *Make a printout of the answers on the answer sheets provided.*
- *Hand in all the printouts and the compact disks.*

For Marking Schemes Contact 0746 222 000 / 0742 999 000

Question 1

1. Create a folder on the desktop called MAVUNO COMPANY LIMITED**.** **(50 marks)**

(i) Using spreads sheet program enter the following data and Save the file as *mavuno payroll* inside the folder created above**.(10 marks)**

(ii) Insert printable borders**(2 marks)**

(iii) Arrange the department from A to Z **(2 marks)**

(iv) Rename sheet one as ***original*.(1 mark)**

	A	B	C	D	E	F	G	H	I	J	K	L
1	MAVUNO COMPANY LIMITED 2022 PAYROLL											
2	PNO	NAME	GENDER	DEPARTMENT	HOURS WORKED	HOURLY RATE	BASIC PAY	GROSS PAY	TAX DEDUCTIONS	NSSF CONTRIBUTIONS	ALLOWANCES	NET PAY
3	A01	KELLY	M	MARKETTING	12	350						
4	A02	ERICK	M	ACCOUNTING	16	450						
5	A03	SILVER	F	CUTOMER CARE	5	250						
6	A04	WESLEY	M	CUSTOMER CAR	22	250						
7	A05	MONICA	F	MARKETTING	19	350						
8	A06	JUPITER	F	SALES	26	300						
9	A07	BETTY	F	ACCOUNTING	10	450						
10	A08	MARY	F	SALES	7	300						
11	A09	OLSON	M	SALES	13	300						
12	A10	JANE	F	MARKETTING	12	350						
13												
14												

(v) Copy original sheet to sheet two and rename it as payroll, calculate the following ;(12 marks)

(a) Basic pay

(b) Gross pay

(c) Tax deductions

(d) Nssf contributions

(e) Allowances

(f)Net pay

Nb: Use the formula below

BASIC PAY =HOURS WORKED *HOURLY RATE

ALLOWANCE ARE ALLOCATED AS 10% 0F BASIC PAY

Gross pay =BASIC PAY + ALLOWANCE

TAX DEDUCTION is calculates as 20% of the GROSS PAY

NET PAY=GROSS PAY-DEDUCTIONS

(vi) Copy names and basic pay to sheet three rename sheet three as **chart.(2 marks)**

a) Create column chart using employee's names, basic pay and allowances.(3 marks)

b) Set the chart title as payroll at the top 2022(2 marks)

c) Insert legend at the bottom(1 mark)

d) Add data labels at the top(1 mark)

e) Format chart border as; solid line, solid color-red, transparency-50%.(3 marks)

(vii) Copy *pno, name,gender,department and netpay* from payroll sheet to calculate the following ; (2 marks)

a) Calculate the subtotals of each department and grand total, save the sheet as subtotals (4 marks)

b) Freeze the header(1 mark)

(viii) Print the following; (4 marks)

(a) Original worksheet

(b) Payroll worksheet

(c) Chart worksheet

(d) Subtotals worksheet

Basic Pay = Hours Worked * Hourly Rate.

(ii). Allowances are allocated at 10% of the Basic Pay.

(iii). Gross Pay = Basic Pay + Allowances.

(iv). Tax Deduction is calculated at 20% of the Gross Pay.

(v). Net Pay = Gross Pay – Tax Deductions.

Basic Pay = Hours Worked * Hourly Rate.

(ii). Allowances are allocated at 10% of the Basic Pay.

(iii). Gross Pay = Basic Pay + Allowances.

(iv). Tax Deduction is calculated at 20% of the Gross Pay.

(v). Net Pay = Gross Pay – Tax Deductions

Question 2

Design a publication to appear exactly as shown in the next page using the following instructions. (20marks)

a) (i) Launch the DPT package and set measurements to centimeters and the margins 2cm all round

(ii) Paper size A4 portrait.

b) Save your work as "Modern computers" (2marks)

c) The heading "*Introduction to computers The Basics"* to have the following styles. (5marks)

- **Centered across the page**
- **Font face**
- **Font size: 18**
- **Background Texture: Granite**
- **Format the drop cap in the first line as it appears**

d) The heading "Hardware" in the publication to have the styles. (5marks)

- **Font face: Arial Narrow**
- **Font size: 16**
- **Text weight: Bold**
- **Character spacing: 180%**
- **Alignment: Centered**

e) The text under the heading "Hardware" to be in two columns and having the following styles. (3marks)

➢ **Font size: 12**

➢ **Dashed outline on the first column**

➢ **First character of the first column to be dropped by 4 lines as shown.**

f) Insert the banner bearing the text auxiliary as it appears. (3marks)

g) - Enter the text below the banner in three columns as shown (4marks)

- **Insert lines between the three columns (3marks)**
- **Type and format the text below the three columns exactly as it appears (3marks)**

h) Print the publication.

Introduction to Computers The Basics

Many people believe that knowing how to use a computer, is one of the basic skills needed to succeed in the workplace. In order to use the computer it is necessary to understand how the computer works.

Hardware

Computer hardware is made up of the equipment used to make up you computer unit. These parts include your monitor, central processing unit (CPU), keyboard, mouse, printer, and modem.

The computer is an electronic machine that performs the following four general operations:

- Input
- Storage
- Processing
- Output.

Input

The input hardware allows you to enter data into the computer. The primary devices used are the keyboard and mouse.

Processing

The central processing unit or (CPU) is the "brain" of your computer. It contains the electronic circuits that cause the computer to follow instructions from ROM (read only memory) or from a program in RAM (random access memory).

Output

Output devices such as a monitor or printer make information you input available for you to view or use.

Storage

Auxiliary storage devices, also called secondary storage devices, are used to store instructions and data when they are not being used in mem-

AUXILLIARY

Floppy Disks - A floppy disk is a circular piece of oxide-coated plastic

To read data stored one floppy disk or to store data on a floppy disk, you insert the floppy disk in a disk drive. If the disk is unused, you must format or initialize it before your computer will allow you to store data on it. Formatting organizes the tracks around the disk into pie like slices called sectors which make it possible for your computer to save and retrieve information. The density of the bits on the track and

Floppy disks are identified as being double density or high density

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

441/1

HOME SCIENCE

PAPER 1 (THEORY)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTION TO CANDIDATES

- Answer all the questions in sections A and B and any two questions in section C. In the spaces provided.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAXIMUM MARKS	CANDIDATE SCORE
A	1-20	40	
B	21	20	
C	22 23 24	20 20	
TOTAL		100	

SECTION A: 40marks – COMPULSORY

1. Why is breakfast considered the most important meal of the day. **(2marks)**

……

……

……

2. State two conditions necessary for the growth of micro-organisms in food spoilage.**(1marks)**

……

……

3. State three benefits of breastfeeding to a mother. **(3marks)**

……

……

……

4. Give two characteristics of a good laundry basin. **(2marks)**

……

……

……

5. Identify the correct direction the fell of a dart should face in garment construction**(3marks)**

(i) Front shoulder dart

……

(ii)Back waist dart

……

(ii) Bust dart

……

……

6. What is a substitute product in the market. **(1mark)**

……

……

7. State four finishing processes carried out during laundry. **(2marks)**

……

……

……

……

8. State three ways in which waste is disposed economically. **(3marks)**

……

……

……

9. List two common stains which can occur in the kitchen. **(2marks)**

……

……

10Give two points to note when buying baking tins. **(2marks)**

……

……

……

11. Define the term comparative shopping /buying. **(1mark)**

……

……

12. List two qualities of materials used to freeze foods. **(2marks)**

……

……

13. Highlight two precautions to take on a limb after a snake bite. **(2marks)**

……

……

14. State two uses of a fabric conditioner. **(2marks)**

……

……

15. Name the parts of the sewing machine which makes the fabric to move when stitching. **(2marks)**

……

……

16. State two roles of gathering in garment construction. **(2marks)**

……

……

17. Differentiate a casing and a hem. **(2marks)**

……

……

……

18. State two causes of obesity. **(2marks)**

……

……

19. Why is butter unsuitable for frying foods. **(2marks)**

……

……

20. Mention four uses of eggs in cookery. **(2marks)**

……

……

……

……

SECTION B (20MARKS) COMPLUSORY

21. You have been requested by your aunt to assist in carrying out some chores.

(a) Describe how to clean her muddy leather shoes with laces in readiness for polishing. **(10marks)**

(b) Outline the procedure to follow when cleaning the toilet. **(10 mrks)**

SECTION C-40MARKS

ANSWER ANY TWO QUESTIONS FROM THIS SECTION

22(a) Explain four reasons why it is advisable to buy a luxury sofa set using hire purchase. **(8marks)**

(b) Explain three hygiene practices to observe during food storage. **(6marks)**

(c) Highlight six signs of a child suffering from marasmus. **(6marks)**

23(a) Identify six ways of reducing expenditure of food. **(6marks)**

(b) Explain four reasons for ensuring that homes are well lit. **(8marks)**

(c) State six ways of minimizing fatigue while working in the kitchen. **(6marks)**

24(a) State six points to observe when hanging clothes in the wardrobe. **(6marks)**

(b) In each case, explain three principles involved in the following methods of food preservation

(i)Canning and bottling **(3marks)**

(ii)Freezing and refrigeration **(3marks)**

(c) Explain four qualities of a well-made in seam pocket. **(8marks)**

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

441/2

HOME SCIENCE

PAPER 2

TIME: 2½ HOURS

SCHOOL…… SIGN……

(Kenya Certificate of Secondary Education)

HOME SCIENCE

FORM FOUR

PAPER 2

441/2

CLOTHING CONSTRUCTION

CONFIDENTIAL

TO SCHOOLS

Provide the following to the candidates

1. Plain weight cotton fabric 60cm long and 90cm wide
2. Sewing thread to match the fabric

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

441/2

HOME SCIENCE

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

(CLOTHING CONSTRUCTION)

INSTRUCTIONS TO CANDIDATES

A. Candidates should check the question paper to ascertain that all the pages are printed and no questions are missing.

B. Candidates must use machines stitches appropriately in the construction of the garment

C. Hand stitches used instead of machine stitches will not be marked.

D. Hand stitches will only be allowed for the making of loop worked button hole and tacking stitches

A pattern of a skirt is provided. You are advised to study the sketches. Instructions and layout carefully before you begin the test.

For Marking Schemes Contact 0746 222 000 / 0742 999 000

Materials provided

1. Pattern pieces

A.-Skirt back

B-skirt front

C-Skirt frill

D-Pocket

E-Waist band

2. Plain weight cotton fabric 60cm long and 90 cm wide

3. Sewing thread to match the fabric.

THE TEST

Using the materials provided, cut out and make the **RIGHT HALF** of the skirt to show the following process.

(a) Making the back dart

(b) Preparation of the box pleat on the skirt frill

(c) Joining of the skirt front to the front frill using an overlaid seam. Neaten half of the seam using loop stitches.

(d) Attachment of front pocket to the skirt front and back pocket to the skirt back
Do not trim or neaten the seam

(e) Making the side seam using an open seam

(f) Joining of the pocket seam .Do not neaten

(g) Preparing and attaching the waist band and fixing using slip hemming.

At the end of the examination, firmly sew on to your work a single fabric, a label bearing your name and index number.

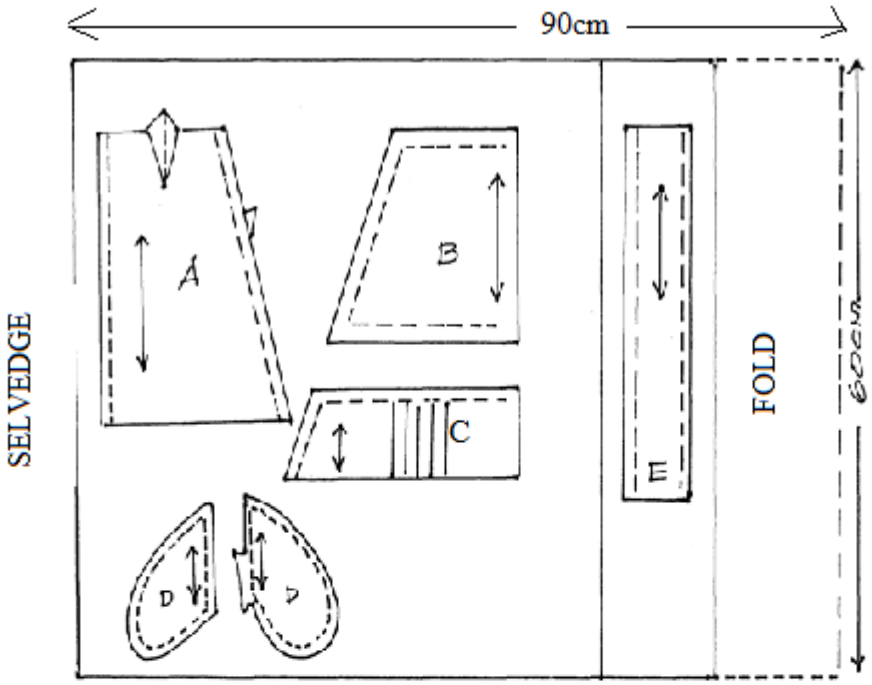
Remove the needle and pins from your work.

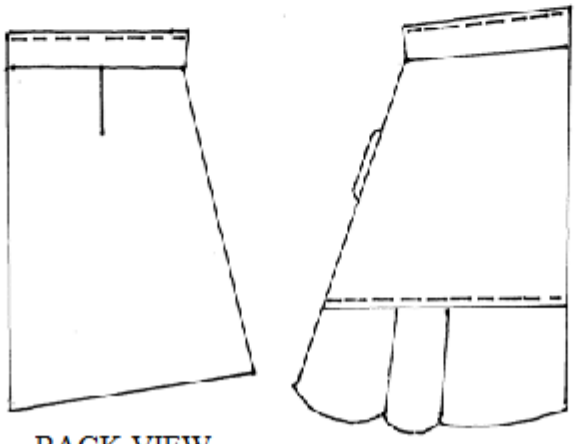
Then fold your work carefully and place it into the envelope provided.

Do not put scraps of materials in the envelope.

For Marking Schemes Contact 0746 222 000 / 0742 999 000

LAYOUT NOT DRAWN TO SCALE





BACK VIEW FRONT VIEW

NAIROBI CLUSTER JOINT MOCK

KCSE 2024 SERIES 1

441/3

HOME SCIENCE

PAPER 3

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

HOME SCIENCE

441/3 (FOODS AND NUTRITION)

FOODS AND NUTRITION

PLANNING SESSION: 30MINUTES

PRACTICAL TEST SESSION: 1¼ HOURS

INSTRUCTIONS TO CANDIDATES

1. Read the test carefully

2. Write your name, index number and class on every sheet of paper used during the planning session

3. Textbooks and recipes may be used during the planning session as reference materials

4. You are only allowed to take away your reference of materials at the end of the planning session

5. You will be expected to keep to your order of work during the practical session

6. You are not allowed to bring additional notes to the practical session.

For Marking Schemes Contact 0746 222 000 / 0742 999 000

THE TEST

You plan to go out on a picnic with your friend. Using all the ingredients listed below, prepare, cook and pack two suitable items for the two of you, include a refreshing drink.

Ingredients.

- Plain wheat flour/self-raising flour
- Salt
- Eggs/sausages
- Sugar
- Fat/oil
- Fruits in season
- Milk
- Margarine

PLANNING SESSION- 30 MINUTES

For each task listed below, use separate sheets of paper and make duplicate copies using carbon paper. Then proceed as follows.

1. Identify the dishes and write down the recipe
2. Write down your order of work
3. Make a list of the food stuff and equipment you will require.

For Marking Schemes Contact 0746 222 000 / 0742 999 000