KCSE 2024 PREDICTION

ALL SUBJECTS

SERIES 3

A Confidential Preview of questions we expect in the Final KCSE 2024 Examinations. A Projection of what is likely to be tested in the much-awaited KNEC Exams scheduled for November 2024.

SUBJECTS PREDICTED;

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

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CONFIDENTIAL

For Marking Schemes

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

THE PASSWORD TO SUCCESS!

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KCSE 2024 PREDICTION EXAM

SERIES 3

BIOLOGY

231/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

1. *Write your **Name**, **Index Number** and **School** in the spaces provided above.*
2. ***Sign** and write the **DATE** of examination in the spaces provided above.*
3. *Answer **all** the questions in the spaces provided.*
4. *Answers must be written in the spaces provided in the question paper.*
5. *You will be **penalized** for wrong spelling especially technical terms.*

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-27	80	

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

1. State **two** characteristics of living organisms that are specific to plants. **(2marks)**

……

……

2. State **one** use for each of the following apparatus in the study of living organisms.

a) Pooter. **(1mark)**

……

b) Bait trap. **(1mark)**

……

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

……

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

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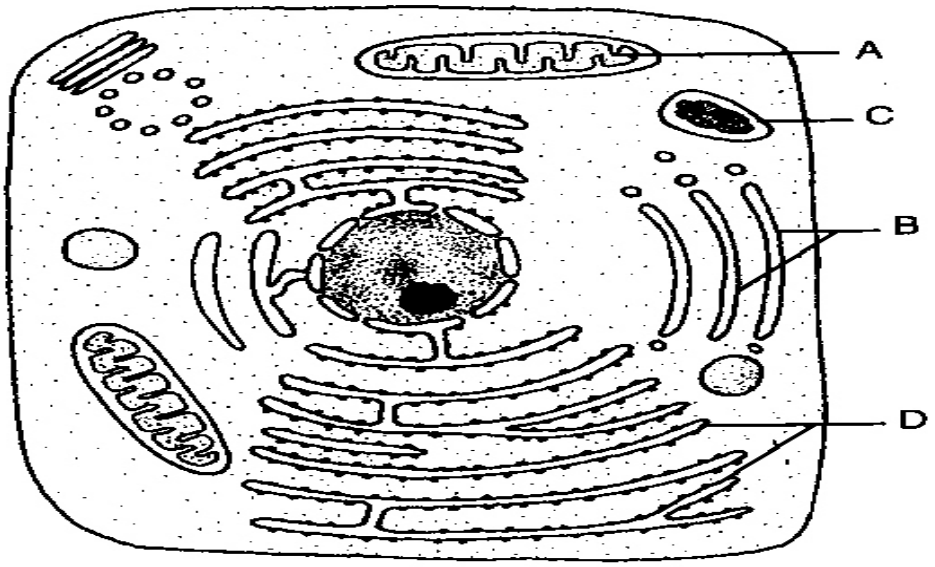
……

4. The diagram below represents a cell as seen under an electron microscope.



a)

Identify the parts labeled **A** and **D**. **(2marks)**

i) A ……..

ii) D ……..

b) State the function of the structures found on the part labeled **D**. **(1marks)**

……

……

5. a) Using a microscope, a student counted 55 cells across a field of view whose diameter was 6000µm. Calculate the average length of the cells. **Show your working**. **(2marks)**

c) State the function of the following parts of a light microscope

i) Fine adjustment knob. **(1mark)**

……..

ii) Condenser **(1mark)**

……..

6. (a) Name the fluid that is produced by sebaceous glands. **(1mark)**

……

(b) What is the role of sweat on the human skin? **(2marks)**

……

……

7. What is the importance of the following in an ecosystem? **(2marks)**

a) Decomposers

……

……

b) Predation

……

……

8. (a) State **two** functions of bile juice in the digestion of food. **(2marks)**

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……

(b) How does substrate concentration affect the rate of enzyme action? **(1mark)**

……

……

……

9. Name the features that increase the surface area of small intestines. **(2marks)**

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10. Describe what happens during the light stage of photosynthesis. **(3marks)**

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……

11. (a) Define the following terms. **(2marks)**

i. Population

……

……

ii. Community

……

……

(b) Name a method that could be used to estimate the population size of the following organisms.

i. Fish in a pond. **(1mark)**

……

ii. Black jack in a garden. **(1mark)**

……

12. (a) What is meant by the term allele? **(1mark)**

……

……

(b) Explain how the following occur during gene mutation.

(i) Deletion. **(1mark)**

……

……

(ii) Inversion. **(1mark)**

……

……

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

……

……

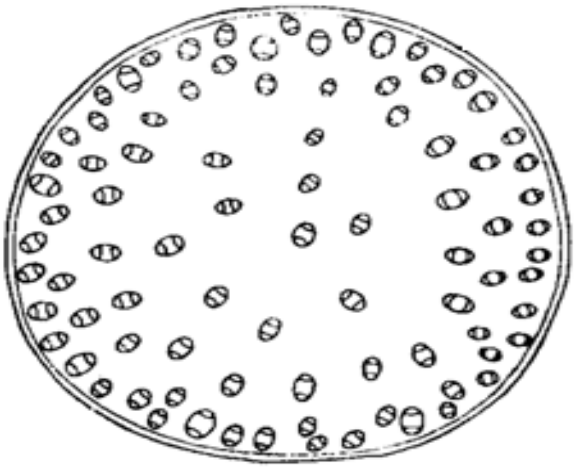
13. Explain what happens when there is oxygen debt in human muscles. **(2marks)**

……

……

……

14. The diagram below shows a transverse section of a plant organ.



a) Name the class to which the plant organ was obtained. **(1mark)**

……

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

……

……

15. Giving a reason in each case, name the class to which each of the following organisms belong: **(4marks)**

Pea plant

……

Reason

……

……

Bat

……

Reason

……

……

16. (a) Name the causative agents of the following diseases in humans. **(2marks)**

Typhoid

……

Amoebic dysentery

……

(b) Name the disease in humans caused by *Plasmodium falciparum*. **(1mark)**

……

17. State **three** differences between Chilopoda and Diplopoda. **(3marks)**

……

……

……

……

18. What are the limitations of fossil records as evidence of organic evolution? **(1mark)**

……

……

19. The diagram below represents a member of the kingdom Animalia.



i) Name the phylum to which the organism belongs. **(1mark)**

……

ii) Using observable features in the diagram, give three reasons for the answer in (i) above.

(3marks)

……

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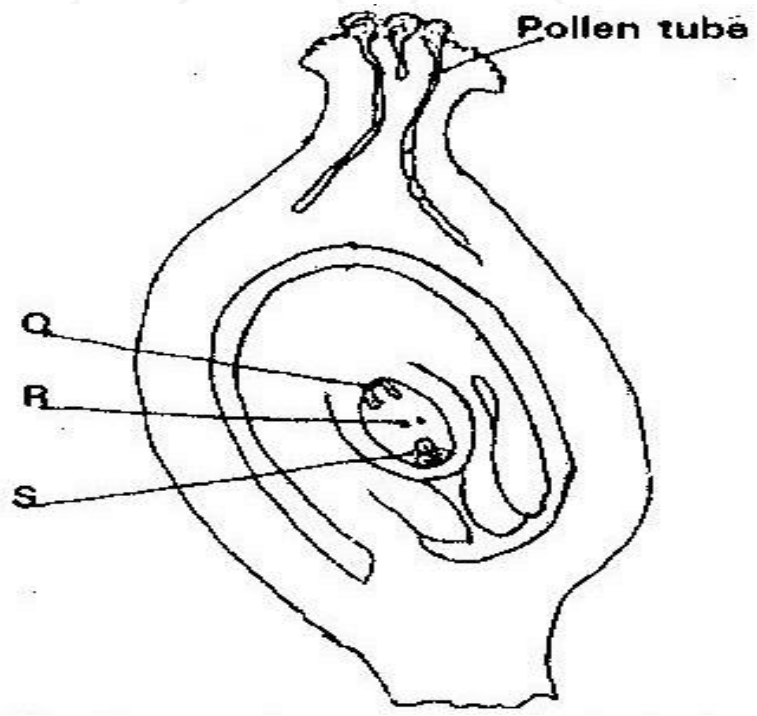
……

20. The diagram below shows a stage during fertilization in plants.



a) Name the parts labeled **Q** and **R**. **(2marks)**

Q ……

R ……

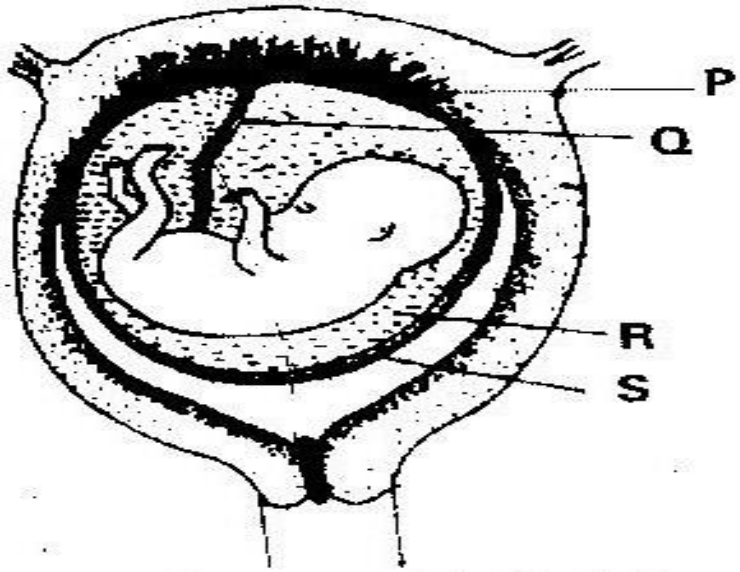
b) State the function of the pollen tube. **(1mark)**

……

……

c) On the diagram, label the micropyle. **(1mark)**

21. The diagram below represents a human foetus in a uterus.



a) Name the types of blood vessels found in the structure labeled **Q**. **(2marks)**

……

b) Name **two** features that enable the structure labeled **P** carry out its function. **(2marks)**

……

……

22. Name the type of skeleton that makes up each of the following animals. **(3marks)**

a) Cockroach

……

b) Bird

……

c) Earthworm

……

23. (a) Highlight **two** survival values of tropic response. **(2marks)**

……

……

……

(b) What is a klinostat? **(1mark)**

……

……

24. Name:-

a) The pressure sensitive swellings at the base of some leaves and petals which through loss or gain of turgidity bring about nastic movements. **(1mark)**

……

……

b) The structure in cockroach used for detecting stimuli. **(1mark)**

……

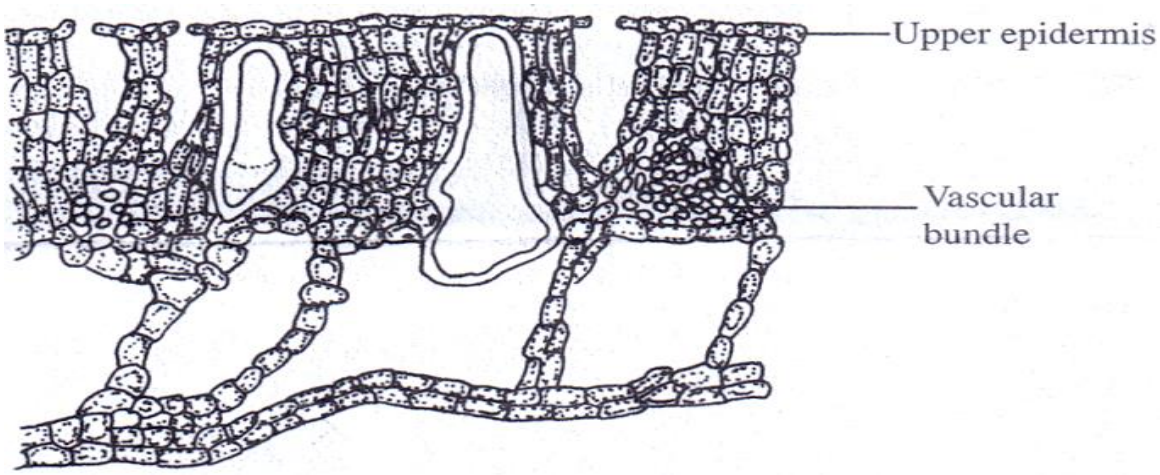
……

c) The growth movement of part of plants in response to a unidirectional external stimulus. **(1mark)**

……

……

25. The diagram below shows a transverse section of a leaf. Study it carefully then answer the questions that follow.



a) Name the habitat of the plant from which the leaf was obtained. **(1mark)**

……

b) Give **two** reasons for your answer in (a) above. **(2marks)**

……

……

26. (a) Name the gaseous exchange surface in insects. **(1mark)**

……

(b) How is the surface named in (a) above suited to its function. **(2marks)**

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……

27. Most carbon (IV) oxide is transported from tissues to the lungs within the red blood cells and not in the blood plasma. Give two advantages of this mode of transport. **(2marks)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

BIOLOGY

231/2

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

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

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

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

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

FOR EXAMINER'S USE ONLY

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

SECTION A

1. (a) State the role of the following parts of a light microscope. **(2mks)**

(i) Diaphragm

……

……

ii) Revolving nosepiece

……

……

(b) During preparation of temporary slides, the following procedures are carried out, state the importance of each.

i) Staining **(2mks**

……

……

ii) Cutting very thin sections

……

……

(c) Name the cell organelle that: **(2mks)**

i) Forms secretory vesicles

……

ii) forms site of protein synthesis

……

(d) Name the tissue that carry out the following functions in plants: **(2mks)**

i) Filling the spaces between other tissues.

……

ii) Manufacture of food substances.

……

……

2. (a) Describe the following chromosomal mutations. **(2mks)**

(i) Inversion

……

……

(ii) Deletion.

……

……

(b) In humans, the disease phenylketonuria is inherited through a recessive gene. A phenotypically normal couple produced one normal child and one phenylketonuric child.

(i) Using a symbol **A** for normal gene and **a** for phenylketonuric gene, write down the genotypes of the parents. **(2mks**

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(ii) Work out the possible genotype of the normal child. **(3mks)**

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(c) What is meant by genetic engineering? **(1mk)**

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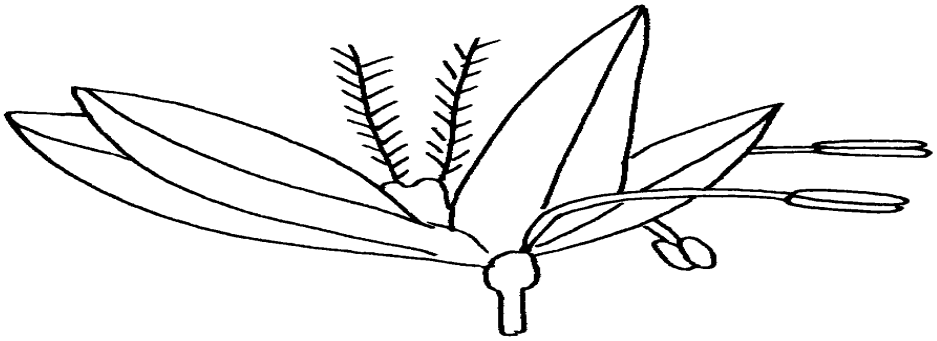
3. The diagram below shows the structure of a flower.



(a) To what family does the flower belong? **(1mk)**

……

(b) (i) Suggest the agent of pollination of the flower. **(1mk)**

……

……

(ii) Give reasons for your answer in (b) (i) above. **(2mks)**

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(c) Name the parts of the flower that develops into each of the following **(2mks)**

(i) Seed coat

……

(ii) seed

……

(d) Pregnancy will continue normally even if the ovaries of an expectant mother are removed after 4 months. Explain. **(2mks)**

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4. (a) Distinguish between single circulatory and double circulatory system. **(2mks)**

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(b) A person of blood group **O** requires a transfusion. Name the blood group (s) of the possible donor. **(1mk)**

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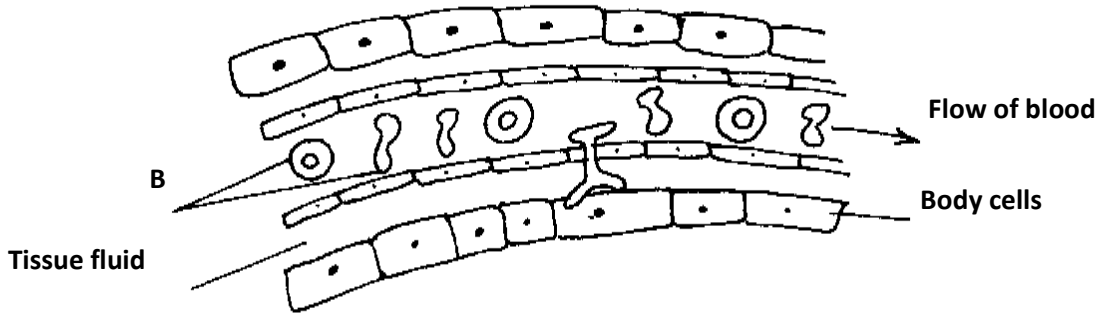
(c). The diagram shows the exchange site between circulatory system and body cells.



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

……

(ii) State the difference between blood and tissue fluid. **(2mks)**

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……

……

(d) State **two** environmental factors that cause a decrease in rate of transpiration in leaves. **(2mks)**

……

……

5. (a) What are the analogous structures as used in evolution? **(1mk)**

……

……

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

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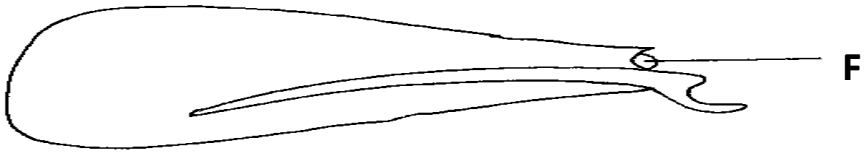
(c) The diagram below represents a bone of a mammal.



(i) Identify the bone. **(1mk)**

……

(ii) Name the bone that articulates at the point labelled **F**. **(1mk)**

……

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

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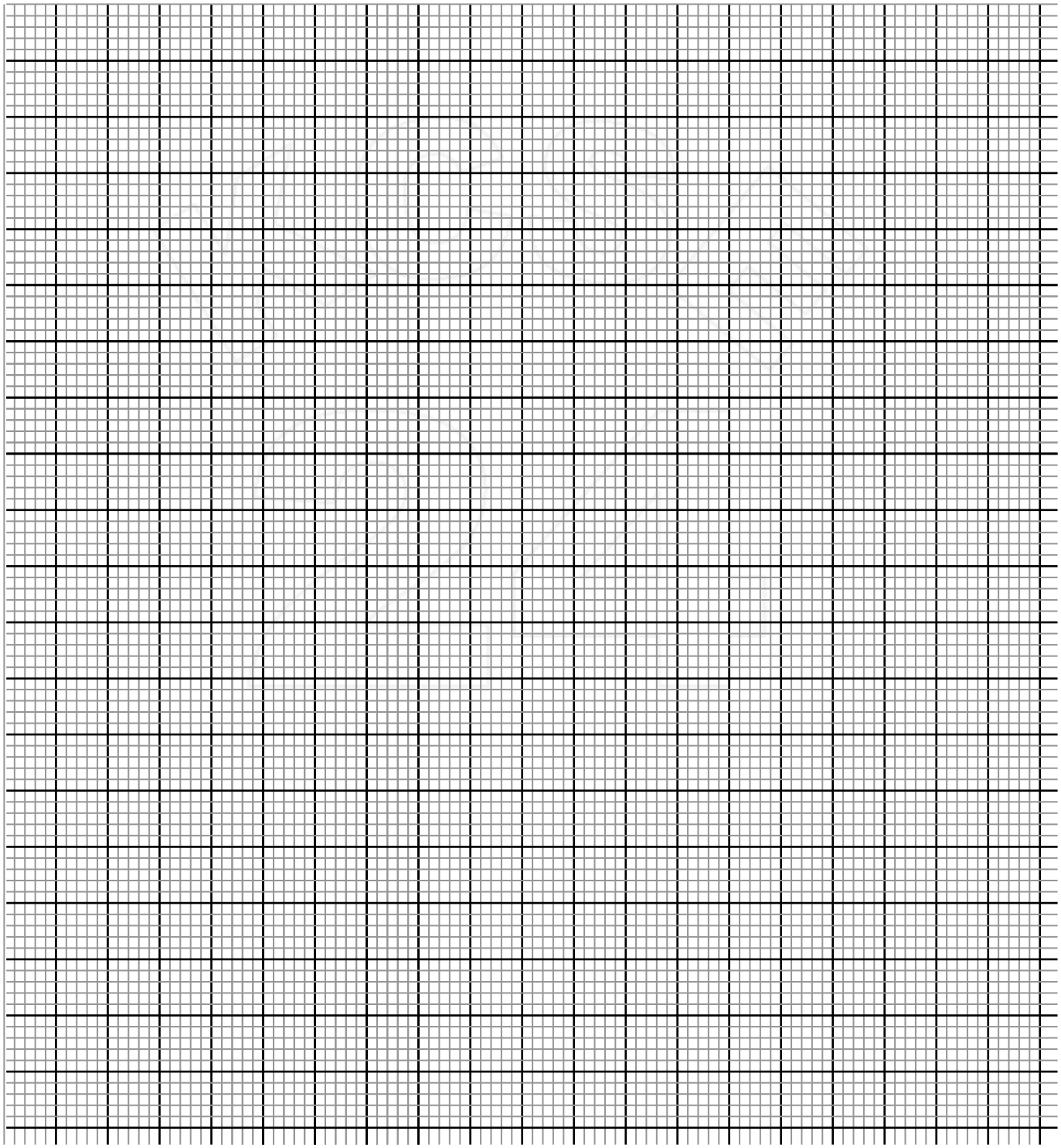
SECTION B (40 MARKS)

Answer all question 6 (compulsory) and either question 7 and 8

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

Relative number of microorganisms	**M**	40	40	180	280	1200	1720	1600	1840	1560	600
	N	40	40	120	200	680	560	560	600	600	400
Time in hours		0	5	10	15	23	30	35	42	45	60

(i) On the same axes, draw the graphs of relative number of microorganisms against time on the grid provided. **(7mks)**



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

……

……

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

……

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(iv) With a reason state the effect on the population of microorganisms in petridish **M** if the temperature was raised to 60^0C after 20hours. **(2mks)**

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(v) Account for the shape of the curve for population in petridish **N** between 46 hours and 59 hours. **(3mks)**

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(b) Explain how the osmotic pressure of the mammalian blood is maintained constant. **(5mks)**

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7.Explain how the mammalian eye is adapted to its functions **(20mks)**

8.Explain how abiotic factors affect plants. **(20mks)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

BIOLOGY

231/3

PAPER 3

TIME: 1¾ HOURS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education.

CONFIDENTIAL

(Practical)

The teacher in-charge of Biology to provide the following specimens and apparatus to each candidate.

1. A piece of Lung (about 20 cm^3) obtained from a mammal like a cow or goat labeled specimen T. Provide specimen T on a Petri-dish or on a flat surface.

2. A gill obtained from a bony fish like Tilapia labeled specimen R.

3. Partially unripe pawpaw (small size) labeled specimen K.

4. Means of cutting e.g. sharp Knife/sharp scalpel/surgical blade.

5. Tap water labeled solution X. (Provide 100 ml for each candidate)

6. Concentrated salt solution labeled solution Y. (Provide 100ml per candidate)

7. A transparent ruler.

8. A pair of forceps.

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KCSE 2024 PREDICTION EXAM

SERIES 3

BIOLOGY

231/3

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO THE CANDIDATES

- *Write your name, Admission Number in the spaces provided above*
- *Write the date of examination in the space provided above*
- *Answer ALL the questions*

FOR EXAMINER'S USE ONLY

QUESTION	SCORE	CANDIDATES SCORE
1	13	
2	12	
3	14	
TOTAL	40	

1. You are provided with two specimens labeled T and R. Study each of the specimens carefully and use them to give accurate responses to the questions and procedures below.

(a) Take the whole of specimen T. Softly press it downwards on the petri-dish using your first finger, and then remove your finger. Observe and record what happens to the specimen.

(i) Observation **(2 marks)**

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……

(ii) Explain the observation recorded in (a) (i) above. **(2 marks)**

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(b) (i) Specimens T and R perform some functions in the organisms from which they were removed from. State one function which is common to both specimen T and R. **(1 mark)**

……

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(ii) Using observable features only on specimen R, describe how it is adapted to the function named in (b) (i) above. **(3 marks)**

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(c) Explain the main features that adapts specimen T to the function named in (b) (i) above.

(4 marks)

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(d) Identify the group of organisms that use specimen R. **(1 mark)**

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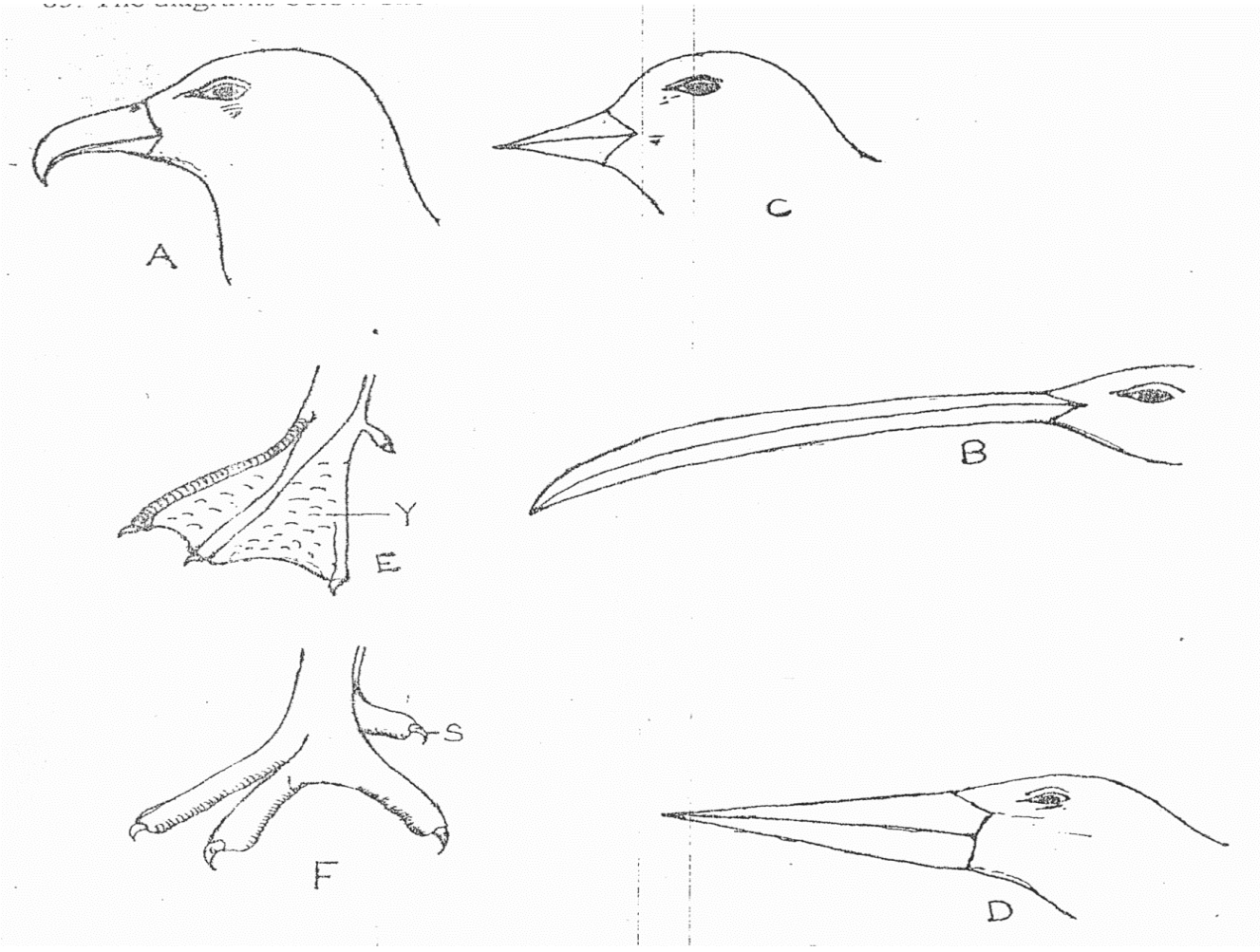
2. The picture below shows series of beaks in birds.



(a) State the type of evolution that may have led to the emergence of the different beaks shown on the pictures above. **(1 mark)**

……

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(b) Name the type of evolution structure represented by the beaks shown on the pictures above. **(1 mark)**

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(c) Observe the pictures carefully. From your observations, what features are responsible for the different types of beaks? **(3 marks)**

……

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……

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……

(d) Suggest the type of food likely eaten by birds whose beaks are shown in pictures A, B, C and D. **(4 marks)**

A ……

B ……

C ……

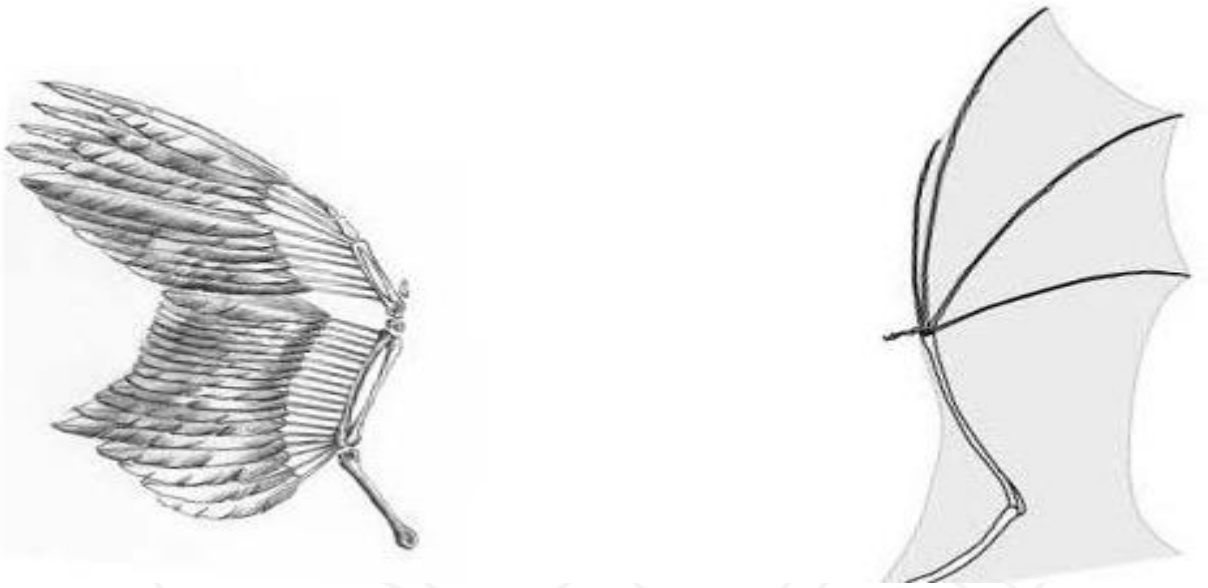
D ……

(e) Briefly state how beak shown in picture A is adapted to feeding. **(1 mark)**

……

……

(f) Below are pictures from two different organisms.



(i) What is the specific function of the two structures shown in the pictures? **(1 mark)**

……

……

(ii) What type of structures is represented by the two structures shown on the pictures?**(1 mark)**

……

3. You are provided with a specimen labeled K.

(a) (i) With a reason, identify the part of the plant represented by the specimen. **(2 marks)**

……

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……

(ii) Cut the specimen into two halves transversely. Observe the arrangement of seeds inside the specimen. Suggest its placentation. **(1 mark)**

……

……

(b) (i) Suggest the mode of dispersal for specimen K. **(1 mark)**

……

……

……

(ii) Give one reason for your answer in (b) (i) above. **(1 mark)**

……

……

(c) (i) Specimen K in its raw state has an excretory substance in its skin. Name the excretory substances. **(1 mark)**

……

(ii) How is the excretory substance named in (c) (i) importance to human? **(2 mark)**

……

……

……

……

(d) From the remaining parts of specimen K, cut out thin strips measuring 1cm wide and 5cm long. Place two of the stripes in tap water (solution X) and the other 2 in concentrated salt solution (solution Y). Allow the set ups to stand for 30 minutes.

(i) After the 30 minutes, remove the stripes from the two solutions. Observe and record the shape of the strips from each solution. **(2 marks)**

Solution X

……

……

Solution Y

……

……

(ii) Using your fingers, feel the texture of the strips from the two solutions. **(2 marks)**

Texture

Solution X

……

……

Solution Y

……

……

(e) Explain the observations made in (d) (i) and (ii) for stripes in solution X. **(3 marks)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

CHEMISTRY

233/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTION TO CANDIDATES:

1. *Answer ALL the questions in the spaces provided.*

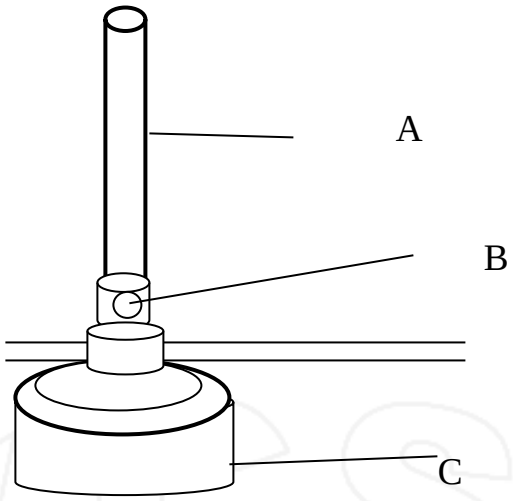
2. *Mathematical tables and silent electronic calculators may be used.*

3. *All working must be clearly shown where necessary.*

FOR EXAMINER'S USE ONLY.

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-27	80	

1. The diagram below shows parts of a Bunsen burner.



a) Name the parts labelled **(½ mark)**

A .....

B .....

b) Give one use of the part labelled B **(1 mark)**

.....

.....

2. Hydrated copper (II) sulphate exists as blue crystals while anhydrous copper (II) sulphate is a white powder. Describe a laboratory experiment that can be used to show that the action of heat on hydrated copper (II) sulphate is a reversible reaction **(2 marks)**

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3. A piece of burning magnesium ribbon was placed in a gaSs jar full of Nitrogen gas. The product Q formed was then reacted with water.

a) Write the chemical formula for the product Q **(1 mark)**

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b)Write the equation for the reaction between product Q and water **(1 mark)**

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……

c) Using dot (•) and cross (x) diagrams to represent electrons, draw the structure to show bonding in nitrogen molecule **(1 mark)**

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4. (i) What are isotopes **(1 mark)**

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……

(ii) Element Y (not the actual symbol of the element) has two isotopes with mass number 6 and 7. If the relative atomic mass of Y is 6.94, determine the percentage abundance of each isotope **(2 marks)**

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……

5. Given zinc oxide, dilute nitric (V) acid and sodium carbonate solution. Briefly describe how you can prepare zinc carbonate **(3 marks)**

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6. The elements shown in the table below (not actual symbols) belong to a certain family of metals in the periodic table. Study the information and answer the questions that follow.

Element	Atomic size (nm)
S	0.160
T	0.180
V	0.930

(i) Define the term ionization energy **(1 mark)**

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……

(ii) Which element is likely to have the highest ionization energy. Explain **(2 marks)**

……

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……

7. A certain mass of copper (II) carbonate was strongly heated.

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

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……

b) Given that 300cm^3 of carbon(IV) oxide gas was collected at s.t.p. and this represents 83% yield, determine the mass of copper (II) carbonate heated. (molar gas volume = 22.4dm^3, Cu=64, 0=16, C=12) **(3 marks)**

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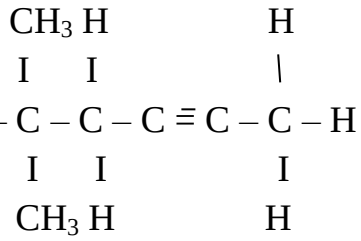
8. (i) Give the IUPAC names for the following organic compounds

a)



(1 mark)

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b)

(1 mark)

.....

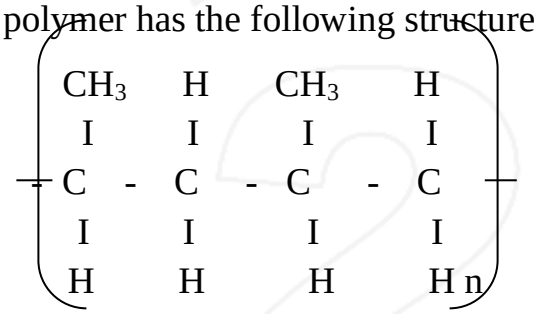
c)



(1 mark)

.....

(ii) A polymer has the following structure



A sample of this polymer is found to have a molecular mass of 2184. Determine the number of monomers of the polymer. (C = 12, H = 1) **(3 marks)**

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.....

9. During an experiment, chlorine was bubbled into a solution of sodium bromide in a beaker

a) State and explain one observation made **(2 marks)**

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.....

.....

b) Write an ionic equation for the reaction that took place in the beaker **(1 mark)**

.....

10. Hardness of water may be removed by either boiling or addition of chemicals.

a) Write down an equation to show how boiling removes hardness of water **(1 mark)**

.....

.....

b) Name two chemicals that are used to remove hardness of water **(2 marks)**

.....

.....

11. i)Define solubility **(1 mark)**

.....

.....

ii) 115g of a saturated solution at 65°C is found to contain 65g of potassium nitrate. Calculate the solubility of potassium nitrate at 65°C. **(2 marks)**

.....

.....

.....

.....

12. The equation for the reversible reaction of Bismuth (III) chloride in water is

$BiCl_{3(s)} + H_2O_{(l)} \rightleftharpoons BiOCl_{(s)} + 2H^+_{(aq)} + 2Cl^-_{(aq)}$

a) State Le chatelier's principle **(1 mark)**

.....

.....

b) What would be the effect of adding NaOH pellets to the equilibrium mixture. Explain.

(2 marks)

……

……

……

13. In the equation, below identify the reagent that acts as an acid in the forward reaction. Give a reason.

$NH^{+}_{4(aq)} + H_2O_{(l)} \rightleftharpoons NH_{3(aq)} + H_3O^{+}_{(aq)}$ **(2 marks)**

……

……

14. In preparation of oxygen gas, a student used hydrogen peroxide and added a black solid and collected the gas over water.

a) What is the name of the black solid and what is its function **(1 mark)**

……

b) During collection of the gas, why should the first bubbles be allowed to escape **(1 mark)**

……

……

c) Give one main advantage of collecting a gas over water. **(1 mark)**

……

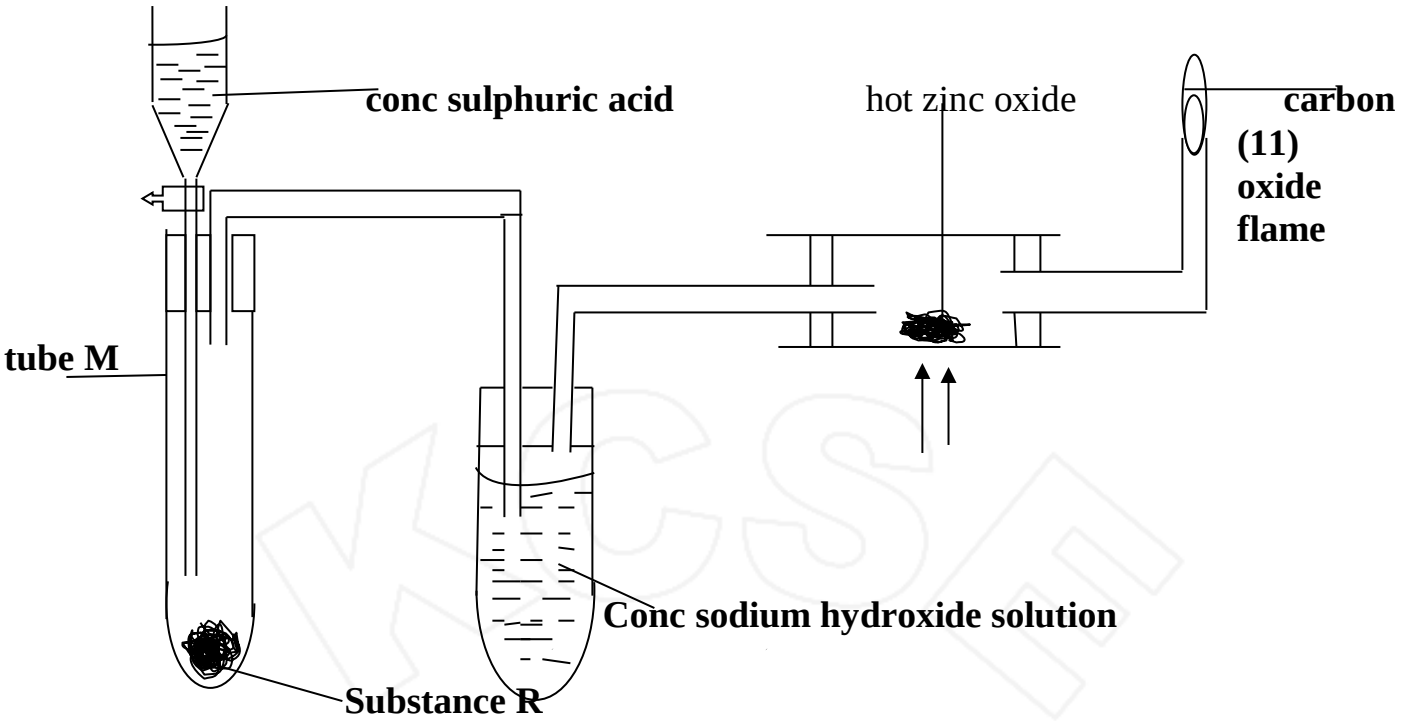
15. Explain the following observation, a one molar solution of nitric (III) acid (1M HNO_2) has a pH of 2 where as a one molar solution of chloric(I) acid (IM HOCl) pH of 4.**(2 marks)**

……

……

……

16. a) Study the set-up below and use it to answer the questions that follow.



a) Identify substance R **(1 mark)**

.....

b) State the function of concentrated sodium hydroxide solution **(1 mark)**

.....

.....

c) State the property of carbon (II) oxide gas demonstrated in the above set-up **(1 mark)**

.....

d) Write a balanced chemical equation for the reaction occurring in tube M. **(1 mark)**

.....

17. 200cm^3 of oxygen diffused through a porous plug in 60 seconds. How long will it take 300cm^3 of sulphur (IV) oxide to diffuse through the same plug? (S = 32, O = 16) **(3 marks)**

.....

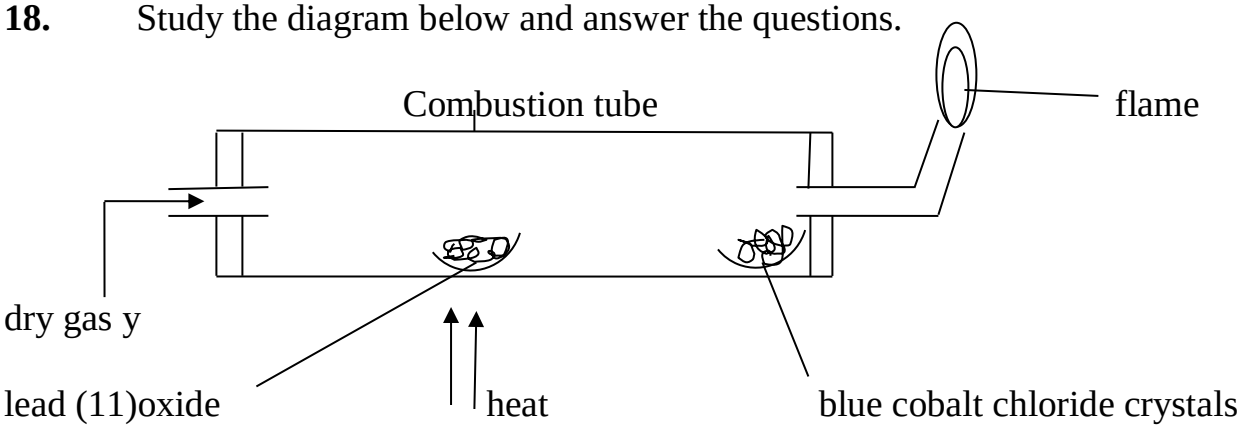
.....

.....

.....

.....

18. Study the diagram below and answer the questions.



(i) Identify gas Y **(1 mark)**

.....

(ii) State and explain two observations made in the combustion tube. **(2 mark)**

.....

.....

.....

.....

(iii) Write a chemical equation for the reaction between lead (II) oxide and gas Y **(1 mark)**

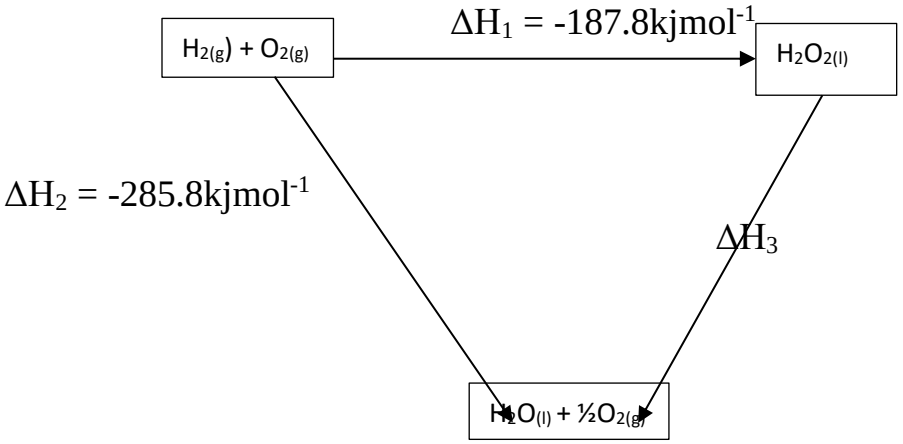
.....

19. **i)** State Hess's law. **(1 mark)**

.....

.....

(ii) The figure below shows an energy cycle diagram.



a) Give the name of the enthalpy change ΔH_1 **(1 mark)**

.....

b) Determine the value of ΔH_3 **(1 mark)**

.....

.....

20. The table below shows the pH values of some solutions.

Solutions	A	B	C	D
pH values	13.0	7.0	2.0	6.5

a) Which solution reacts vigorously with magnesium metal? Explain. **(1 mark)**

.....

.....

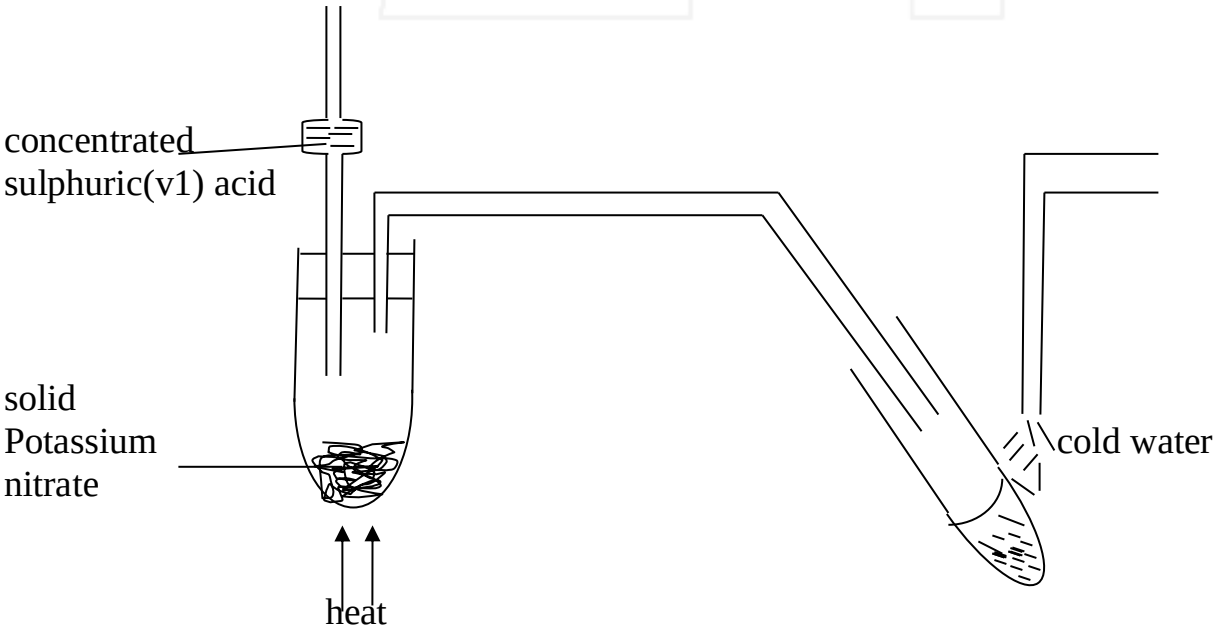
b) Which solution is likely to be that of lemon juice? **(1 mark)**

.....

c) Which solution is likely to produce green colour with the universal indicator. **(1 mark)**

.....

21. The diagram below shows a set-up that was used to prepare and collect a sample of nitric (V) acid in the laboratory.



a) Give a reason why it is possible to separate nitric acid from the sulphuric (VI) acid in the set-up **(1 mark)**

.....

.....

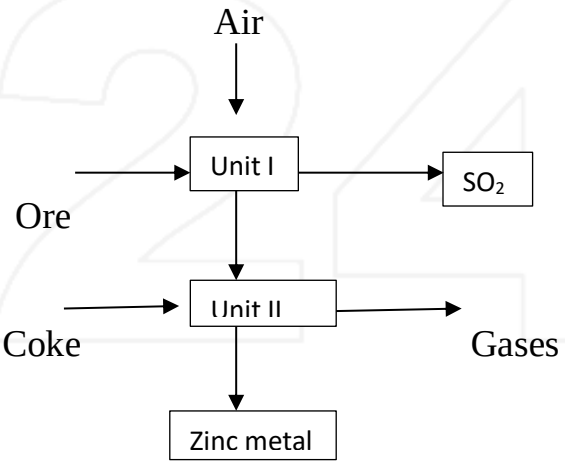
b) Name another substance that can be used instead of potassium nitrate **(1 mark)**

.....

c) Give one use of nitric (V) acid **(1 mark)**

.....

22. The flow chart below shows some processes involved in the industrial extraction of zinc metal.



a) Name one ore from which Zinc is extracted **(1 mark)**

.....

b) Write the equation of the reaction taking place in unit II **(1 mark)**

.....

c) Name two uses of Zinc metal **(1 mark)**

.....

.....

23. Thorium $^{232}_{90}Th$ undergoes two consecutive alpha decays followed by two consecutive beta decays to form the nuclide $^{x}_{y}R$. Identify the values of $x$and y. **(2 marks)**

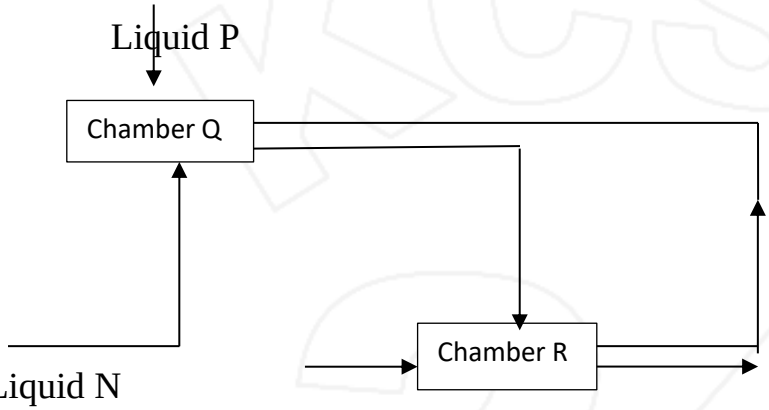
.....

.....

.....

.....

24. Below is part of the flow diagram of the contact process



SO_3 Liquid N Conc Sulphuric (VI) acid

a) Identify

(i) Liquid P **(1 mark)**

.....

(ii) Liquid N **(1 mark)**

.....

b) Write the equation for the reaction taking place in chamber R **(1 mark)**

.....

.....

25. a)Define the term oxidation state **(1 mark)**

.....

.....

b) Calculate the oxidation states of manganese and chromium in:

(i) MnO_2 **(1 mark)**

.....

.....

(ii) CrO^-_4 **(1 mark)**

.....

.....

26. When hydrogen sulphide gas is bubbled through a solution of iron (III) chlorides, a green solution and a yellow solid are formed. Explain the observations **(2 marks)**

.....

.....

.....

.....

27. During purification of copper by Electrolysis, 1.48g of copper were deposited when a current was passed through copper (II) sulphate solution for 2½ hours. Calculate the amount of current that was passed **(3 marks)**

(Cu = 63.5, IF = 96500C)

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

CHEMISTRY

233/2

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

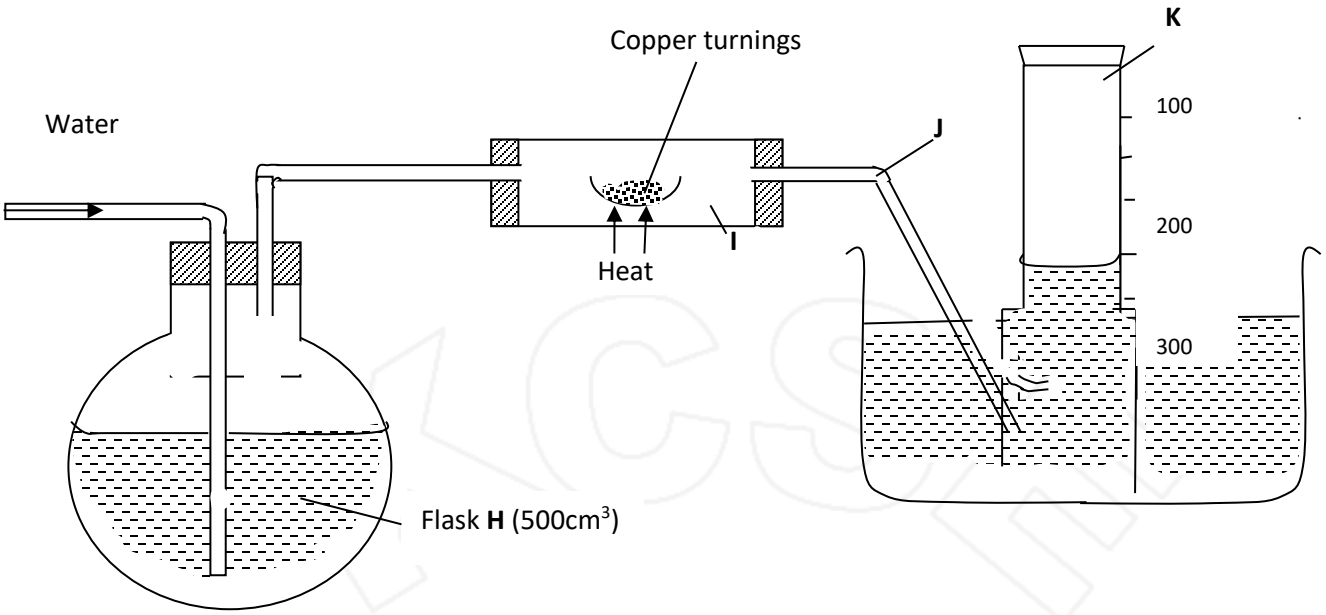
INSTRUCTIONS TO CANDIDATES

- *Write your name, admission number, date and school in the spaces provided.*
- *Answer **all** the questions in the spaces provided.*
- *All working must be clearly shown where necessary.*
- *Scientific calculators may be used.*

FOR EXAMINERS' USE ONLY

Questions	Maximum Score	Candidate's Score
1	10	
2	12	
3	10	
4	12	
5	13	
6	12	
7	11	
TOTAL	**80**	

1. A. In an experiment to determine the percentage of oxygen in air, the apparatus below were set up. Study the set up and the information provided to answer the questions that follow.



A 500cm^3 measuring cylinder **K** was filled with water and assembled for gas collection. Copper turnings were heated red hot and water was slowly passed into 500cm^3 flask **H** until it reached the 500cm^3 mark. A colourless gas was collected in **K**.

(i) What was the purpose of passing water into flask **H**? **(1 mark)**

……

……

(ii) What observations were made in the tube **I**? **(1 mark)**

……

……

(iii) Name one of the gases that is likely to be found in **J**. **(1 mark)**

……

(iv) What was the volume of the gas collected in the measuring cylinder at the end of the experiment? **(1 mark)**

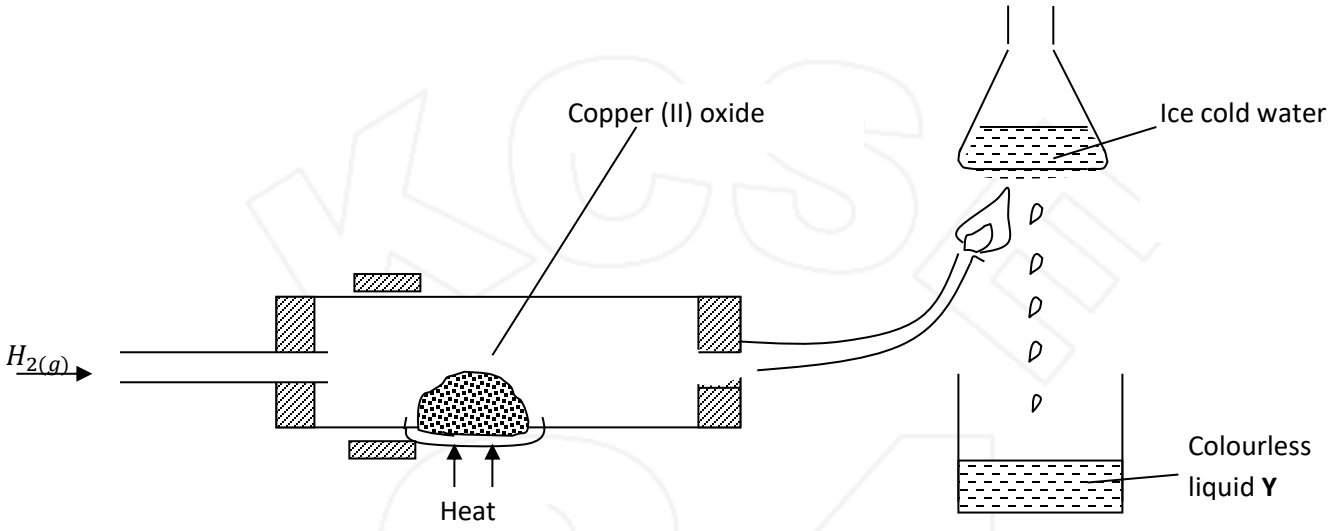
……

……

……

(v) Calculate the percentage of oxygen in air using the above results. **(2 marks)**

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



(a) Give ***one*** observation made in the combustion tube after some time. **(1 mark)**

……

……

(b) Write an equation for the formation of the colourless liquid **Y**. **(1 mark)**

……

……

(c) What was the aim of the above experiment as demonstrated in the combustion tube? Explain. **(2 marks)**

……

……

……

……

2. Use the information below to answer the questions that follow. The letters are not the actual symbols of the elements.

Element	Atomic No.	M.P^{0}C	B.P^{0}C	Ionic radius (nm)
P	11	98	890	0.095
Q	12	650	1110	0.065
R	13	660	2470	0.050
S	14	1410	2360	0.041
T	15	44.2 & 590	280	0.034
U	16	113 & 119	445	0.184
V	17	-101	-35	0.181
W	18	-189	-186	-

(a)(i) Write the electronic configuration of the atoms represented by letters **T** and **W**. **(1 mark)**

(ii) State the nature of the oxides of the elements represented by **Q** and **U**. **(2 marks)**

……

……

……

(b) Why does the elements represented by the letters **T** and **U** have two values of melting points? **(1 mark)**

……

……

……

……

(c) Explain the following observations in terms of structure and bonding.

(i) There is an increase in boiling point from **P** to **R**. **(2 marks)**

……

……

……

(ii) Element **S** has a high boiling point. **(2 marks)**

……

……

……

(iii) There is a decrease in boiling points from **U** to **W**. **(2 marks)**

……

……

……

(d) (i) Compare the atomic radius of **U** and **V**. **(1 mark)**

(ii) Why is there no ionic radius for **W** reported in the table? **(1 mark)**

……

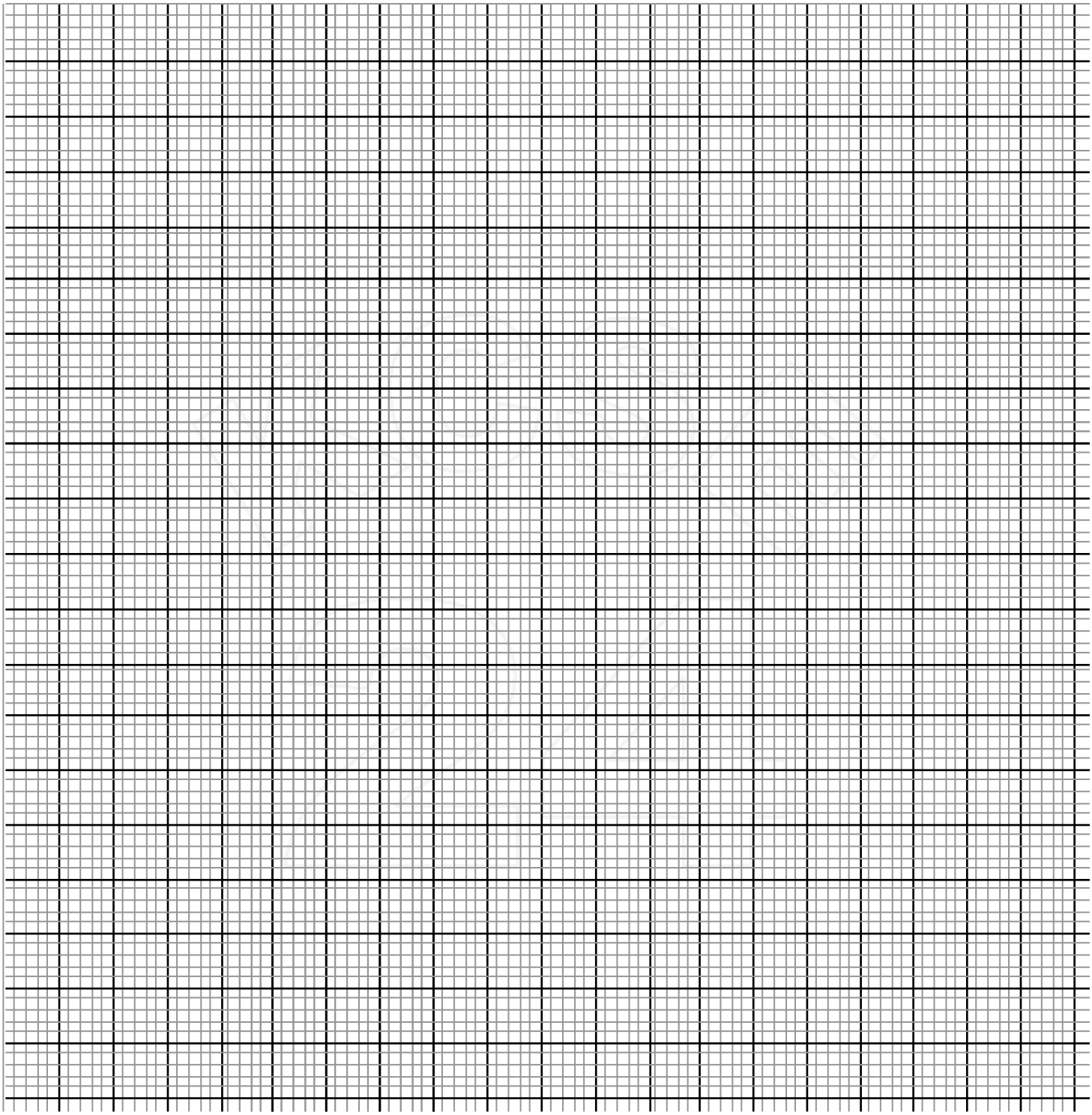
……

……

3.(a)The solubilities of potassium nitrate and potassium bromide at different temperatures was determined. The following data was obtained.

Temperature ^0C		0	10	20	30	40	50	60	70	80
Solubility g/100g H_2O	KNO_3	5	15	26	43	61	83	105	135	165
	KB_r	50	55	60	65	70	77	85	90	95

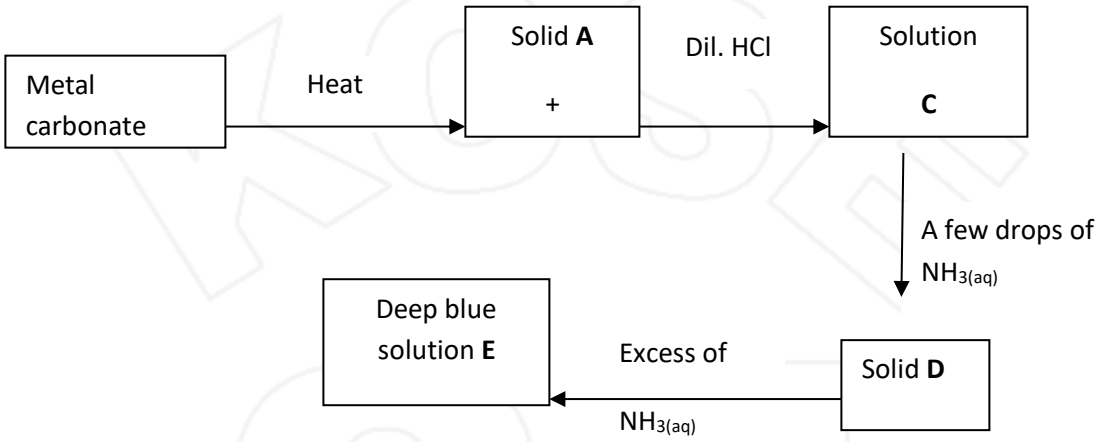
(i) Draw solubility curves for both salts on the same axis. **(3 marks)**



(ii) What was the solubility of each salt at 65^0C? **(1 mark)**

(iii) 100g of a saturated solution of potassium nitrate at 70^0C was cooled to 20^0C. What mass of the crystals will be crystallized? **(2 marks)**

(b) Study the flow chart below and answer the questions that follow.



(i) Write an equation for the formation of solid **A** and gas **B**. **(1 mark)**

……

……

(ii) Name;

Solution **C** - …….. **(1 mark)**

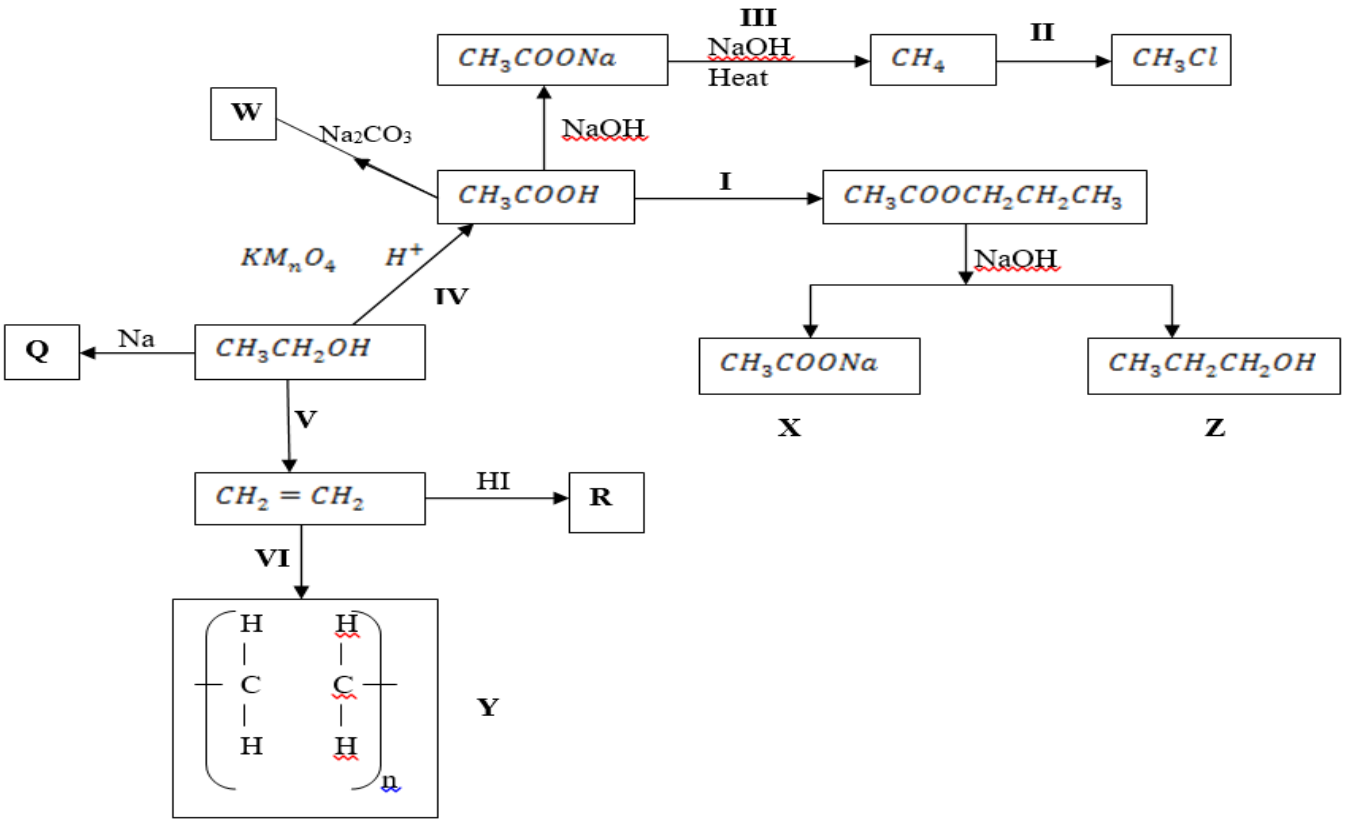
Solid **D** - …….. **(1 mark)**

(c) Write the formula of the complex ion in solution **E**. **(1 mark)**

……

……

4. Study the flow chart below and answer the questions that follow.



(a) Name substance. **(3 marks)**

W ……

Q - ……

R - ……

(b) Write down an equation for the reaction represented by step III. **(1 mark)**

……

(c) What are the conditions and reagent required for steps?

(i)**I** **(2 marks)**

Reagent - ……

Condition -……

(ii) **IV** **(2 marks)**

Reagent - ……

Condition -……

(b) Name the process represented by: **(4 marks)**

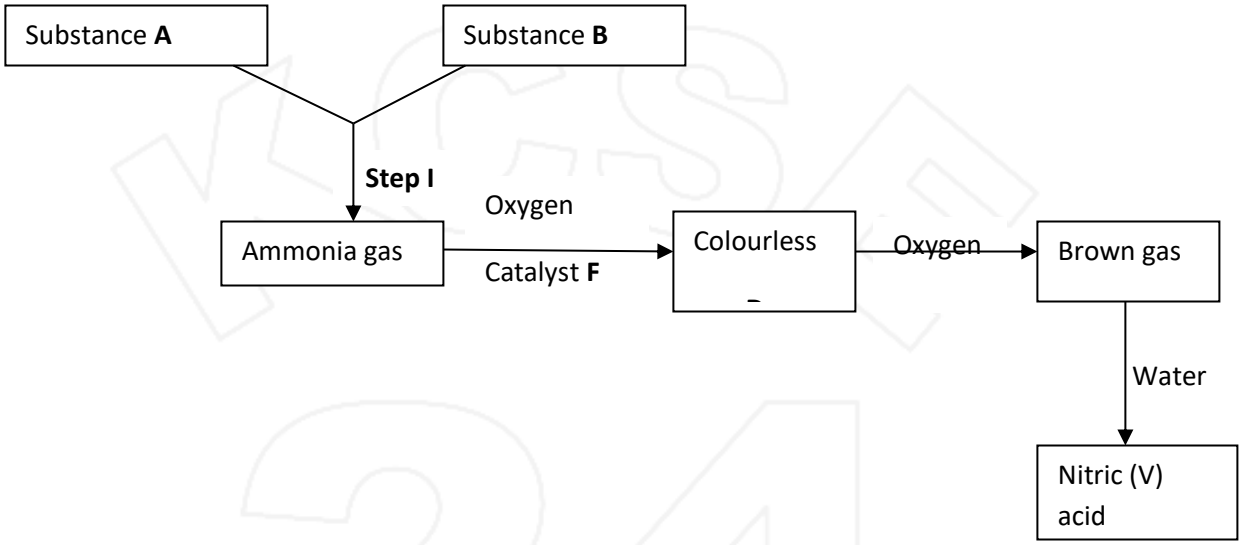
I - ……

II - ……

IV - ……

V - ……

5. I. Study the scheme below and answer the questions that follow.



(a) Identify substances. **(3 marks)**

A - ……..

B - ……..

D - ……..

(b) State the catalyst necessary for; **(2 marks)**

Step **I** - ……

Step **II** -……

(c) Write an equation for the reaction taking place in step **II**. **(1 mark)**

……

……

(d) Write two balanced chemical equations for the reaction between chlorine gas and;

(i) Hot and concentrated sodium hydroxide. **(1 mark)**

……

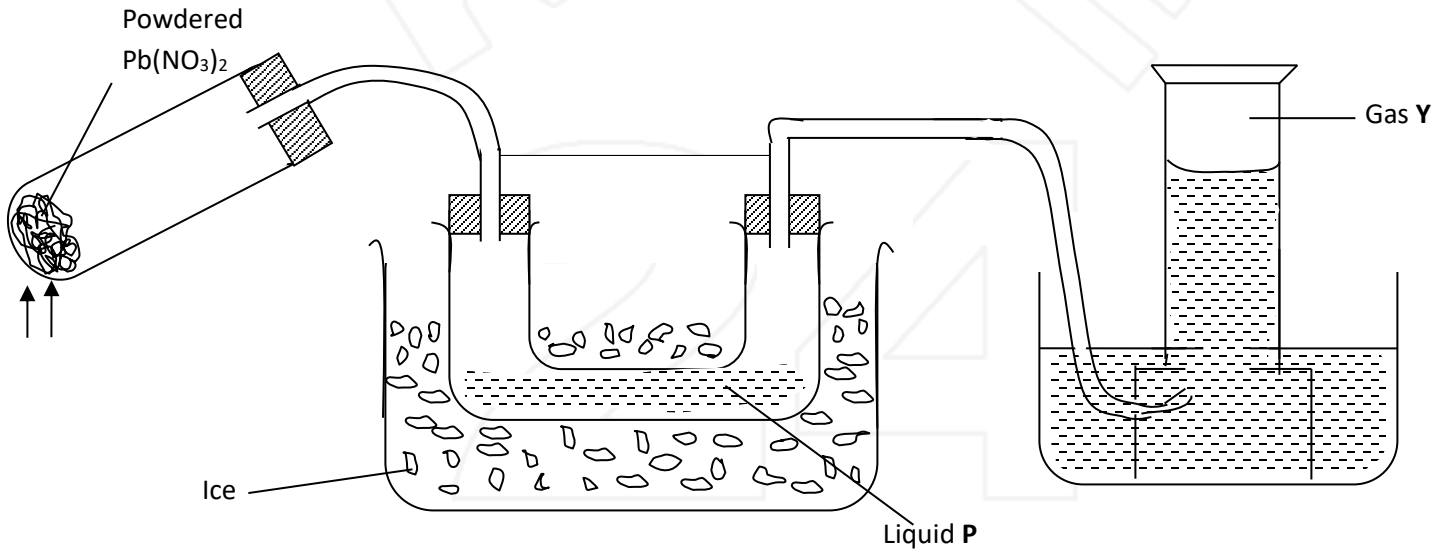
……

(ii) Dilute and cold sodium hydroxide. **(1 mark)**

……

……

II. The diagram below shows an experiment in which the Lead (II) nitrate crystals are heated.



(a) Name; **(2 marks)**

(i)Liquid **P** - ……..

(ii) Gas **Y** - ……..

(b) Write a balanced chemical equation for the decomposition of Lead (II) nitrate.

(1 mark)

……

(c) Explain how you can distinguish between nitrogen (II) oxide and nitrogen (I) oxide.

(2 marks)

……

……

……

……

6. **I.**Study the standard electrode potentials given below and answer the questions that follow.

$D^{2+}_{(aq)} + 2e^- \rightleftharpoons D_{(s)} \quad E^\theta = -2.92V$

$G^{2+}_{(aq)} + 2e^- \rightleftharpoons G_{(s)} \quad E^\theta = -2.36V$

$\frac{1}{2}J^{2+}_{(g)} + e^- \rightleftharpoons J_{(s)} \quad E^\theta = 0.00V$

$M^{2+}_{(aq)} + 2e^- \rightleftharpoons M_{(s)} \quad E^\theta = +0.34V$

$\frac{1}{2}R^{2+}_{(aq)} + e^- \rightleftharpoons R_{(s)} \quad E^\theta = 2.87V$

(a) Identify the strongest:

(i) Reducing agent …….. **(1 mark)**

(ii) Oxidizing agent …….. **(1 mark)**

(b) Calculate the e.m.f of a cell made of G and M. **(2 marks)**

(c) Write the cell representation for the above cell in (b). **(1 mark)**

(d) Draw a cell diagram for the cell in (b) above. **(2 marks)**

(e) Write the cell reaction for the drawn cell diagram in (d) above. **(1 mark)**

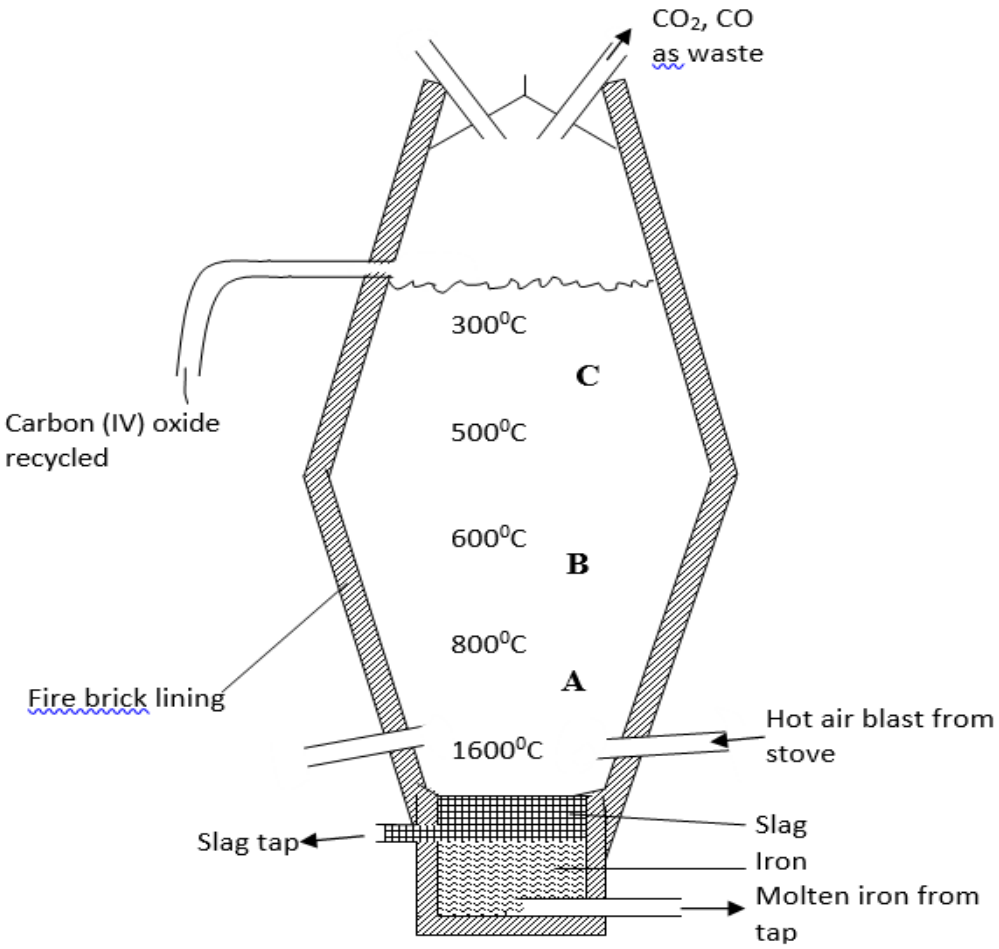
II. Electrolysis of aqueous solution of metal M resulted in the deposition of 1.07g of metal upon passage of a current of 1.32 amperes for 75 minutes.

(M = 52, 1F = 96500C)

(i) Calculate the quantity of electricity passed through the cell. **(1 mark)**

(ii) Calculate the charge on the metal ion. **(3 marks)**

7. Extraction of iron involves two main processes, smelting and refining. Below is the blast furnace which is used to smelt iron from its ore.



(a) (i) What does the word smelt mean? **(1 mark)**

……

(ii) Name the reducing agent in the process. **(1 mark)**

……

(iii) What is the role of the hot air blast in the process? **(2 marks)**

……

……

(b) Write equations for the reactions that take place at the region marked A, B and C.

(3 marks)

A -

……

B -

……

C -

……

(c) What is the purpose of limestone in the extraction process? **(1 mark)**

……

(f) Write equations to show how impurities are removed from the ore. **(3 marks)**

……

……

……

KCSE 2024 PREDICTION EXAM

SERIES 3

CHEMISTRY

233/3

PAPER 3

TIME: 2¼ HOURS

SCHOOL…… SIGN……

(CONFIDENTIAL)

In addition to the apparatus found in the laboratory each candidate will require the following;

- *About 0.5g of solid F*
- *About 1g of solid G*
- *6 clean test-tubes*
- *Universal indicator solution and a pH chart*
- *Ethanol supplied with a dropper*
- *Clean dry metallic spatula*
- *1 boiling tube*
- *Distilled water*
- *Solution J, about 130cm^3*
- *Solution Q, about 160cm^3*
- *Solution R, about 30cm^3*
- *Screened methyl orange indicator*
- *Methyl orange indicator*
- *100ml measuring cylinder*
- *Filter paper*
- *Means of labeling*
- *Solid P*
- *Thermometer*
- *100ml beaker*

Access to the following;

- ❖ *Ethanol supplied with a dropper*
- ❖ *Concentrated sulphuric (VI) acid supplied with a dropper bottle*
- ❖ *Acidified Potassium dichromate (VI) solution*
- ❖ *Acidified Potassium Manganate (VII) solution.*
- ❖ *2M $Ba(NO_3)_2$ solution.*
- ❖ *2M NaOH solution.*
- ❖ *2M HCl acid.*
- ❖ *Source of heat.*

Preparation

- ✓ Solurion J is 0.12M HCL, prepared by adding about 800cm^3 of distilled water to 4.05$cm^3$of concentrated HCL of density 1.08gcm^{-3} and making it to one litre of solution.
- ✓ Solution Q is prepared by dissolving 5.3g of anhydrous sodium carbonate in enough distilled water and making up to one litre of solution.
- ✓ Solution R is prepared by dissolving 15.75g of hydrated barium hydroxide in enough distilled water and top up to one litre of solution.
- ✓ Solid P is 2.0g of oxalic acid weighed accurately and supplied in a stoppered container
- ✓ Solid F is maleic acid
- ✓ Solid G is sodium sulphite

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KCSE 2024 PREDICTION EXAM

SERIES 3

CHEMISTRY

233/3

PAPER 3

TIME: 2¼ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

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

INSTRUCTIONS TO CANDIDATES:

(a) Write your name and index number in the spaces provided.
(b) Sign and write the date of examination in the spaces provided
(c) Answer ALL the questions in the spaces provided in the question paper
(d) You are NOT allowed to start working with the apparatus for the first 15 minutes of the 2 ¼ hours allowed for this paper. This time is to enable you to read the question paper and make sure you have all the chemicals and apparatus you may need.
(e) All working MUST be clearly shown where necessary.

For Examiner's Use Only:

Question	Maximum score	andidates score
1	22	
2	8	
3	10	
otal score	40	

1. You are provided with:

- A monobasic acid HA, solution J.
- Sodium carbonate solution, solution Q, containing 1.325g in 250cm^3 of solution.
- Solution R, containing 15.75g of $M(OH).8H_2O$ per litre.
- Screened methyl orange indicator.

You are required to:

- Standardize solution J.
- Determine the relative atomic mass of element M in $M(OH)_2.8H_2O$.

Procedure 1

Fill the burette with solution J. Pipette 25cm^3 of solution Q into a clean 250ml conical flask and add 2 – 3 drops of screened methyl orange indicator. Titrate this solution with the solution in the burette and record your results in table 1 below. Repeat this procedure and complete the table. **Retain solution J in the burette for use in procedure II**.

Table 1

Titre	I	II	III
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of J used (cm^3)			

(4 marks)

a) Calculate the average volume of solution J used. **(1 mark)**

……

……

b) Determine the concentration of solution Q in moles per litre (Na=23, C=12, O=16 **(1 mark)**

……

……

……

c) (i) Determine the number of moles of the monobasic acid solution, HA, that are in the averaged value calculated in (b) above. **(1 mark)**

……

……

……

(ii) Determine the concentration of solution J in moles per litre **(1 mark)**

……

……

……

PROCEDURE 2

- Using a 25cm^3 measuring cylinder, transfer 25cm^3 of solution R into a clean 250ml conical flask. Using a 100ml measuring cylinder, transfer 75cm^3 of solution Q into the flask with solution R. Boil the mixture for about 5 minutes. After cooling filter into a conical flask and transfer the filtrate into a clean 100ml measuring cylinder and add distilled water to make exactly 100cm^3 of solution. Label this solution as solution S.

Pipette 25cm^3 of solution S into a conical flask and titrate it with solution J using 2 drops of screened methyl orange indicator. Record your results in table 2 below. Repeat this to complete the table.

Table 2

Titre	I	II	III
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of **J** used (cm^3)			

(4 marks)

d) Calculate the average volume of solution J used. **(1mark)**

……

……

……

……

e) Determine the number of moles of:

(i) The monobasic acid, HA, in the average volume. **(1 mark)**

……

……

……

(ii) Sodium carbonate in $25cm^3$ of solution S. **(1 mark)**

……

……

……

(iii) Sodium carbonate in $75cm^3$ of solution S. **(1 mark)**

……

……

……

iv) Sodium carbonate in the original $75cm^3$ of solution S. **(1 mark)**

……

……

……

v) Sodium carbonate that reacted with solution R. **(1 mark)**

……

……

……

vi) $M(OH)_2.8H_2O$ in $25cm^3$ of solution R. **(1 mark)**

(1 mole of $M(OH)_2.8H_2O$ reacts with one mole of sodium carbonate)

……

……

……

f) Determine

(i) the concentration of solution R in moles per litre. **(1mark)**

……

……

……

……

(ii) the relative formula mass of $M(OH)_2.8H_2O$. **(1 mark)**

……

……

……

……

(iii) the relative atomic mass of M (O=16.0, H=1.0) **(1mark)**

……

……

……

2. You are provided with:

Solid P, 2.0 g of a dibasic acid H_2X.

You are required to determine the molar heat of solution of solid P.

PROCEDURE

Place 30cm^3 of distilled water into a 100ml beaker. Measure the initial temperature of the water and record it in the table below. Add all the solid P at once and stir the mixture carefully with the thermometer until all the solid dissolves. Measure the final temperature reached and record it in table.

Final temperature (^oC)	
Initial temperature (^oC)	

(3 mks)

a) Determine the change in temperature, ΔT. **(1 mk)**

……

……

……

b) Calculate the:

i) heat change when H_2X dissolves in water. (Assume the heat capacity of the solution is 4.2 $Jg^{-1}{}^{o}C^{-1}$ and density is $1g/cm^3$) **(2 mks)**

ii) number of moles of the acid that were used. (Relative formula mass of H_2X is 126) **(1mk)**

iii) molar heat of solution, ΔH, of the acid H_2X. **(1mk)**

3. You are provided with solid **G**. Place all solid **G** in a boiling tube. Add distilled water and shake. Divide the resulting solution into three portions.

INFERENCES	**0BSERVATIONS**
(½ mk)	(½ mk)

i)To the first portion add drops of 2M sodium hydroxide.

INFERENCES	0BSERVATIONS
(½ mk)	(½ mk)

ii)To the second portion dip a metallic spatula in the solution and burn it directly on a non-luminous flame.

INFERENCES	0BSERVATIONS
(½ mk)	(½ mk)

iii)To the third portion add three drops of barium nitrate solution followed by $2cm^3$ of 2M hydrochloric acid.

INFERENCES	0BSERVATIONS
(½ mk)	(½ mk)

iv) To the fourth portion add three drops of acidified potassium dichromate (VI) solution.

Inferences	0bservations
(½ mk)	(½ mk)

b)You are provided with solid **F.** Carry out the tests below and record your observations and inferences in the spaces provided

(i) Using a metallic spatula, heat half of solid F in a non-luminous bunsen burner flame .

INFERENCES	**0BSERVATIONS**
(½ mk)	(½ mk)

(ii) Put a half spatula endful of solid **F** into a boiling tube. Add about $10cm^3$ of distilled water and shake.

INFERENCES	**0BSERVATIONS**
(½ mk)	(½ mk)

Divide the resulting solution from a(ii) above into two portions

(i) To the first portion,2 -3 drops of universal indicator and determine its pH.

INFERENCES	0BSERVATIONS
(½ mk)	(½ mk)

(ii) To the second portion, add two drop of acidified potassium Manganate (VII) solution and shake.

INFERENCES	0BSERVATIONS
(½ mk)	(½ mk)

(c) Put half spatula endful of solid **F** into a boiling tube and add 5 drops of ethanol followed by 2 drops of concentrated sulphuric (VI) acid.warm the mixture.

Inferences	0bservations
(½ mk)	(½ mk)

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KCSE 2024 PREDICTION EXAM

SERIES 3

PHYSICS

232/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

*a) Write your **name, admission number** and **class** 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.*

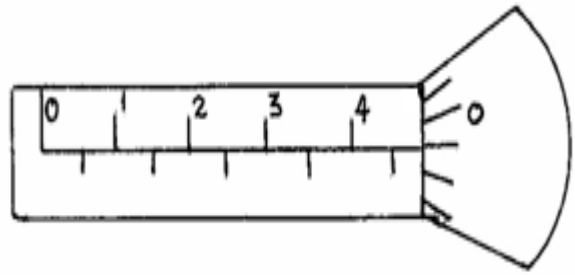
FOR EXAMINER'S USE ONLY

Section	Question	Maximum Score	Candidate's Score
A	1 – 8	25	
B	9	09	
	10	12	
	11	10	
	12	10	
	13	07	
	14	07	
	Total Score	80	

SECTION A (25 MARKS)

Answer all questions in this section in the spaces provided:

1. The diagram **below** shows a micrometer screw gauge used by a student to measure the thickness of a wire. If it has a zero error of 0.06mm, what is the actual thickness of the wire? **(2mks)**



2. (a). State two differences between heat transfer by convection and radiation **(2mks)**

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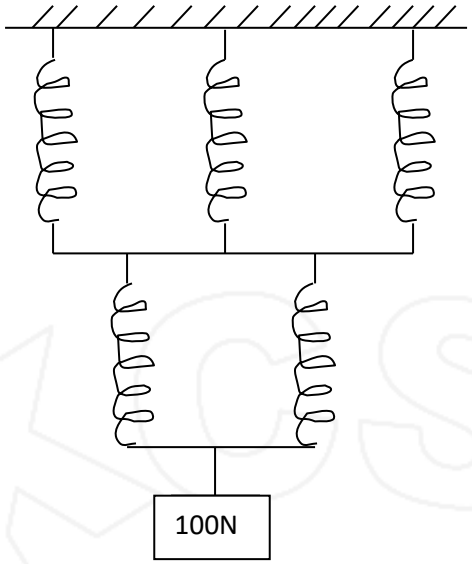
(b). Give a reason why a thick glass bottle cracks when boiling hot water is suddenly poured inside it **(1mk)**

3. An aircraft 300m from the ground, travelling horizontally at 400 m/s releases a parcel. Calculate the horizontal distance covered by the parcel from the point of release. (Ignore air resistance) **(2mks)**

4. A single spring stretches by 2.0 cm when supporting a load of 50N. If in the system below the springs are identical and have negligible weight;



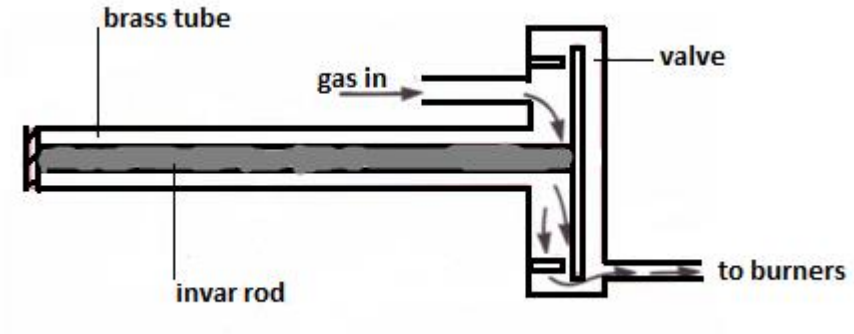
Find:

a) The total extension of the system. **(2mks)**

b)The total spring constant. **(2mks)**

5. (a) The distance between the ice point and steam point on a liquid in glass thermometer is 30cm. what temperature is recorded when the mercury thread is 12cm above the ice point? **(2mks)**

b) The diagram below shows a gas cooker thermostat



Briefly explain how the thermostat works **(3mks)**

6. The figure below shows a uniform plank AB of length 10m weighing 500N. Two masses measuring 25kg and 60kg are loaded on its ends.



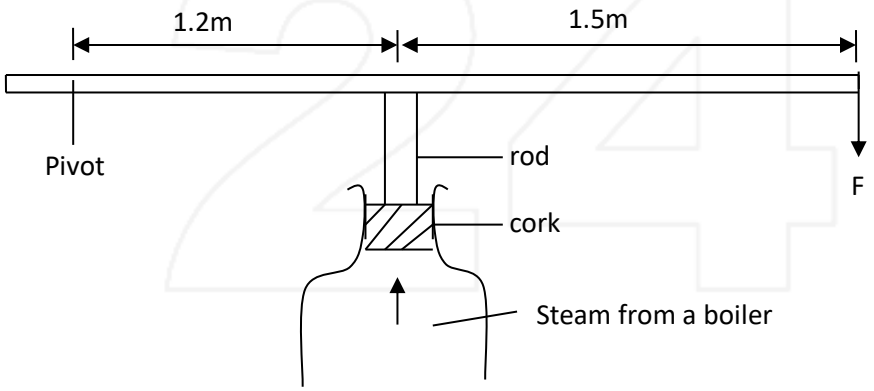
Determine the distance from point A where a support should be placed for the plank to balance horizontally. **(3mks)**

7. In an experiment to determine the thickness of an oil molecule, an oil drop of volume 3.60×10^{-6} m^3 was observed to form a circular patch of diameter 0.016m on the surface of water covered with lycopodium powder

i**).** Explain why the oil drop forms a circular patch. **(1mks)**

ii) Determine the thickness of the oil molecule **(2mks)**

8. A cork enclosing steam in a boiler is held down by the system shown.



If the area of the cork is 15 cm^2 and a force (F) of 500N is needed to keep the cork in place, determine the pressure of the steam in the boiler. **(3mks)**

SECTION B

Answer all questions in this section in the spaces provided:

9. (a) An electric crane lifts a load of 2000kg through a vertical distance of 3.0m in 6s.

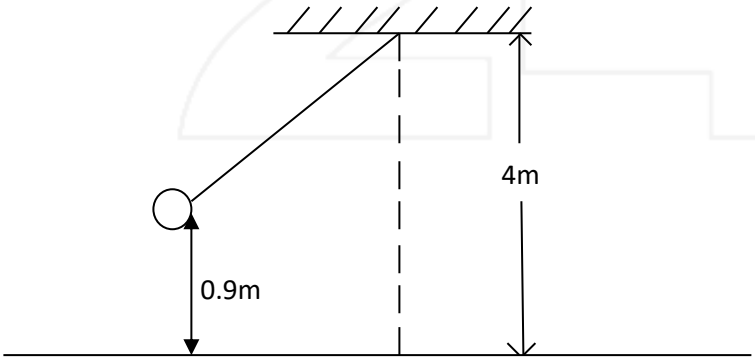
Determine:

i) Work done **(1mk)**

ii) Power developed by the crane **(2mks)**

iii) Efficiency of the crane if it is operated by an electric motor rated 12.5 Kw **(2mks)**

b) A bob of mass 20kg is suspended using a string of 4m from a support and swings through a vertical height of 0.9m as shown below:

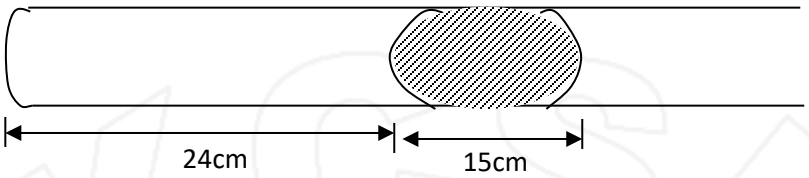


Determine:

i) The potential energy of the body at its position. **(2mks)**

ii) Speed of the body when passing through the lowest point. **(2mks)**

10. (a) A glass capillary contains enclosed air by a thread of mercury 15cm long when the tube is horizontal, the length of the enclosed air column 24cm as shown.



i) What is the length of the enclosed air column when the tube is vertical with the open end uppermost if the atmosphere pressure is 750mmHg? **(2mks)**

ii) Explain why the mercury does not run out when the tube is vertical with the closed end uppermost. **(1mk)**

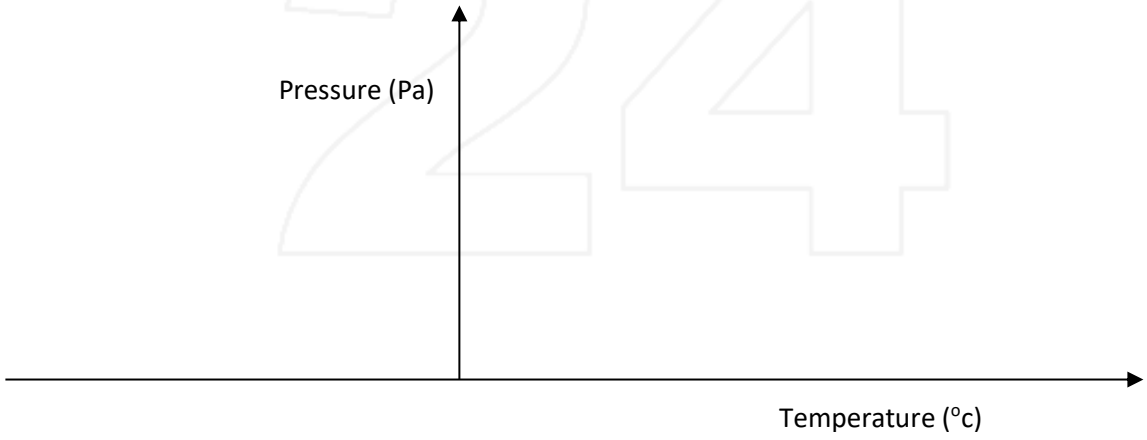
b) Explain why an air bubble increase in volume as it rises from the bottom of a lake to the surface. **(1mk)**

c) When an inflated balloon is placed in a refrigerator it is noted that its volume reduces, use the kinetic theory of gases to explain this observation. **(2mks)**

d) A certain mass of hydrogen gas occupies a volume of $1.6m^3$ at a pressure of 1.5×10^5 Pa and a temperature of 22^0c. Determine the volume when the temperature is 0^0c at a pressure of 0.8×10^5 Pa. **(3mks)**

e) i)State the pressure law **(1mk)**

ii)On the axis provided, sketch a graph of pressure against temperature on the celcius scale. On the same axis sketch another graph for a gas of a larger volume. **(2mks)**



11 (a) in a hydraulic press, a force of 200N is applied to a master piston of area $25cm^2$. If the press is designed to produce a force of 5000N, determine the area of the slave piston. **(2mks)**

(b) The barometric height in a town is 70cmHg. Given that the standard atmospheric pressure is 76cmHg and the density of mercury is 13600kg/m^3, determine the altitude of the town. (density of air is 1.25kg/m^3) **(3mks)**

(c) In an experiment to determine atmospheric pressure, a plastic bottle is partially filled with hot water and the bottle is then tightly corked. After some time the bottle starts to get deformed.

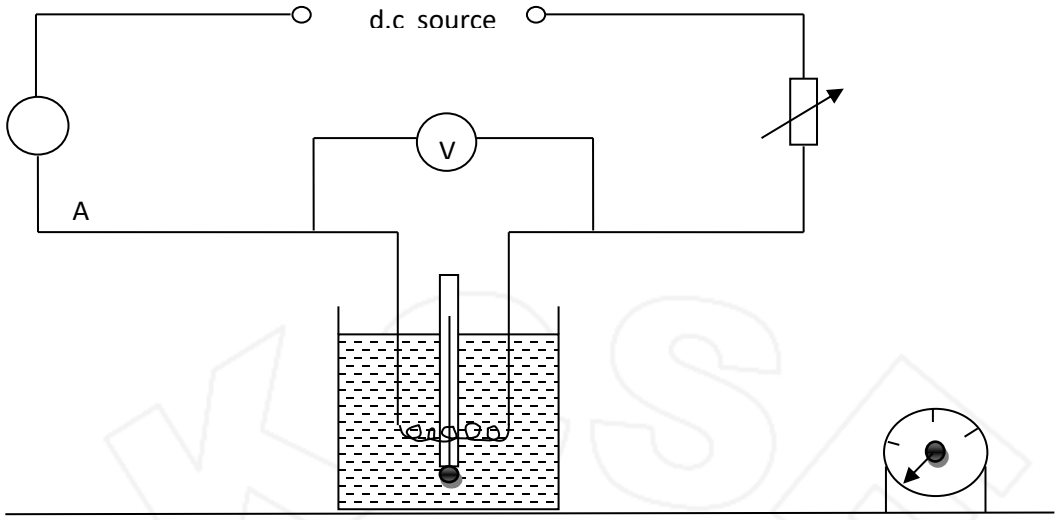
(i) State the purpose of the hot water. **(1mk)**

(ii) State the reason why the bottle gets deformed. **(2mks)**

(d) A hole of area 2.0cm^2 at the bottom of a tank 5m deep is closed with a cork. Determine the force on the cork when the tank is filled with sea water of density 1.2g/cm^3. **(2mks)**

12. **(a)** Define specific latent heat of vaporization **(1mk)**

b) The illustration below is used to produce a measured rise in temperature of a liquid using electrical energy.



Explain why;

(i)The liquid will tend to be warmer at the top of the container than at the bottom. **(1mk)**

(ii) The temperature will eventually stop rising even though the current is still passing through the heating coil. **(1mk)**

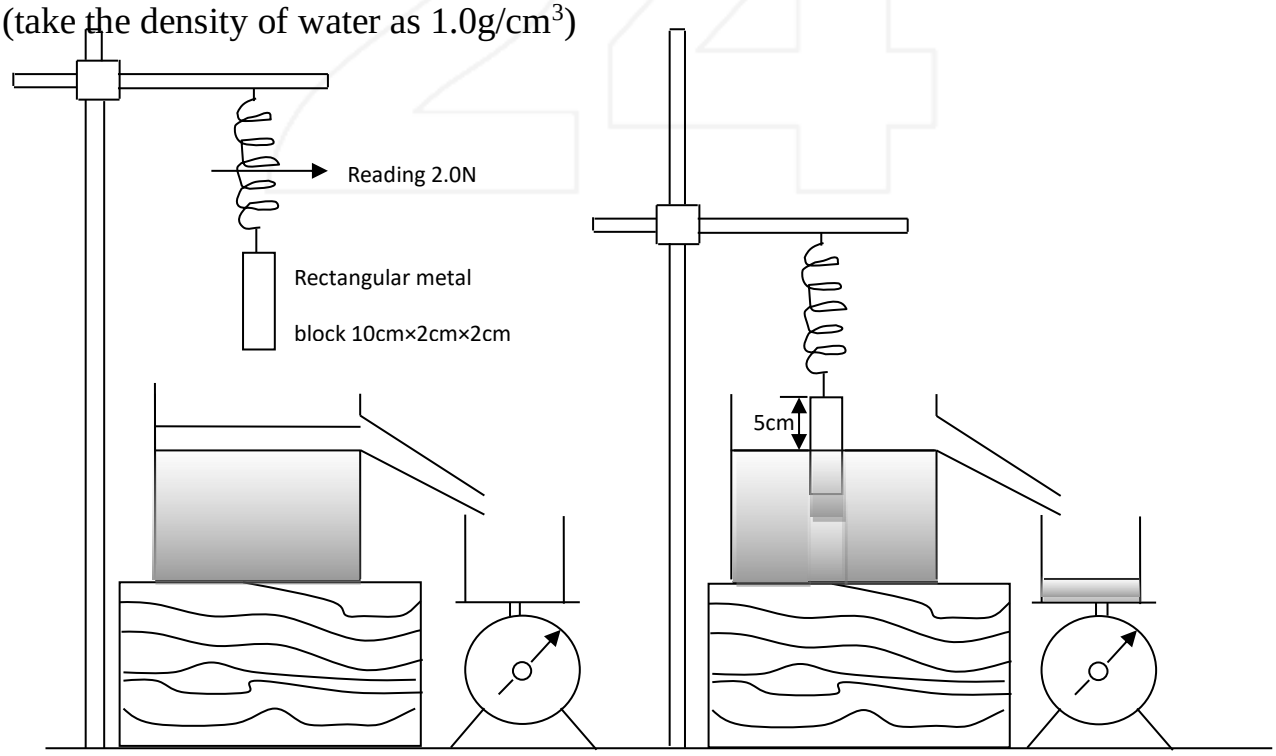
iii) if the apparatus is used to determine the specific heat capacity of the liquid, the accuracy of the experiment will be increased if the liquid is first cooled to about $5^{o}c$ below room temperature and the current passed until the temperature is about $5^{o}c$ above room temperature. **(2mk)**

(c). A 50W heating coil is totally immersed in100g of water contained in an insulated flask of negligible heat capacity. The initial temperature of water in the flask is 20°c.

(i) Determine how long it takes for the water to boil at 100°C when the heater is switched on **(2mks)**

(ii) After the water has been boiling for 15 minutes, it is found that the mass of water in the flask has decreased to 80g. Assuming no external heat losses, calculate a value for the specific latent heat of vaporization of water **(3mks)**

13. (a) The figure below shows details of an experiment performed by a student and the results taken. (take the density of water as 1.0g/cm^3)



Compression balance reading 4N

i) Calculate the volume of the metal block below the water **(1mk)**

ii) Calculate the new reading on the compression balance after the block is halfway immersed **(2mks)**

iii) Calculate the reading you would expect to obtain on the spring balance **(2mks)**

iv) Give a statement of the principle you have used in part (iii) above **(1mk)**

b). Explain why the narrow stem of a hydrometer provides greater sensitivity than a wide one **(1mk)**

14 (a) (i) A car goes round a flat circular bend whose radius is 100m at a constant speed of 30m/s. Calculate its acceleration **(2mks)**

(ii) if the mass of the car is 1500kg, calculate the frictional force required to provide this acceleration. **(2mks)**

(b) (i) Calculate the maximum speed at which the car can go round the bend without skidding if the coefficient of friction between the tyres and the ground is 0.5. **(2mks)**

(ii) Give a reason why the driver of the car has to move through the same bend at a lower speed during a rainy day. **(1mk)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

PHYSICS

232/2

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) *Write your* ***name, index no*** *and* ***class*** *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.*

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1 – 8	25	
B	9	12	
	10	12	
	11	12	
	12	12	
	13	07	
	Total Score	80	

SECTION A (25 marks)

1. Describe the changes that can be observed during discharging process of a lead –acid accumulator **(2mks)**

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2. a) Define power of a lens and give its units **(2mks)**

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b) An object whose height is 24cm is placed 20cm in front of a diverging lens of focal length 20cm.Determine the image distance **(3mks)**

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3. a) Give one property of sound waves **(1mk)**

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b) a person claps his hands at approximately 0.5s intervals in front of a wall 90m away. He notices that each echo produced by the wall coincides with the next clap.

i) Calculate the approximate speed of sound **(3mks)**

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ii) if the results obtained above were used as a basis for an experimental method to determine the speed of sound, what procedure should be adopted to obtain high accuracy in the timing part of the experiment? **(1mk)**

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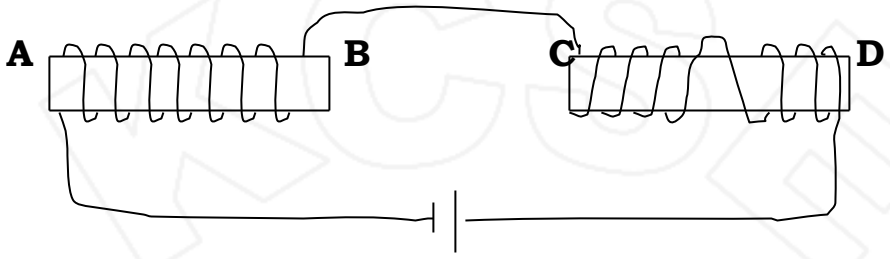
4. Identify the magnetic poles A, B, C and D in the diagram below. **(2mks)**



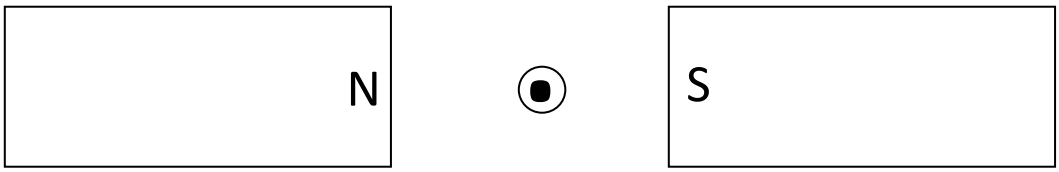
A ……

B ……

C ……

D ……

5. The diagram below shows a current carrying conductor placed in a magnetic field.



i)show on the diagram the direction of force on the conductor **(1mk)**

ii) if the current through the conductor is reduced, state and explain what happens to the force in (i) above. **(2mks)**

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6. Gamma, radio, infrared, x-rays are part of the electromagnetic spectrum.

i) Arrange these radiations in order of increasing energy **(1mk)**

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ii) State how radio waves are detected **(1mk)**

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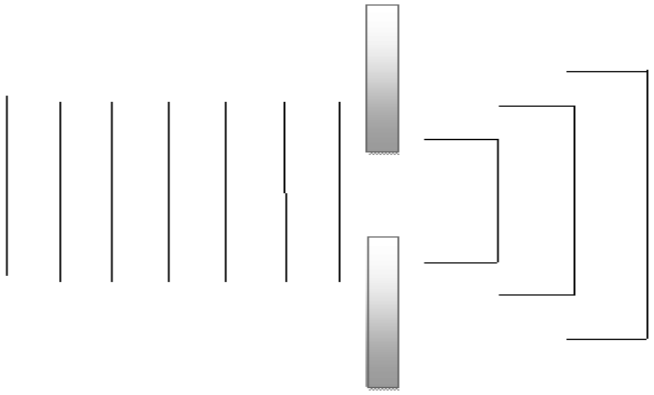
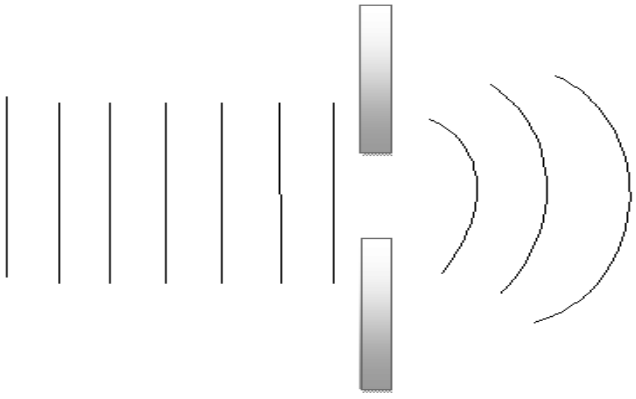
7. The diagram below shows waves being diffracted.



What adjustments should be done to obtain the wave form below? **(2mks)**



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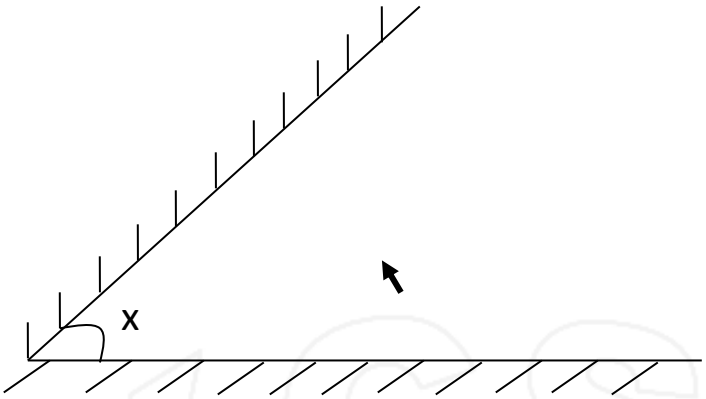
8. The diagram below shows an object placed in front of two mirrors inclined to each other at an angle x



An observer sees five images, determine the value of angle x? **(2mks)**

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SECTION B (55 MARKS)

9. a) State Snell's law **(1mk)**

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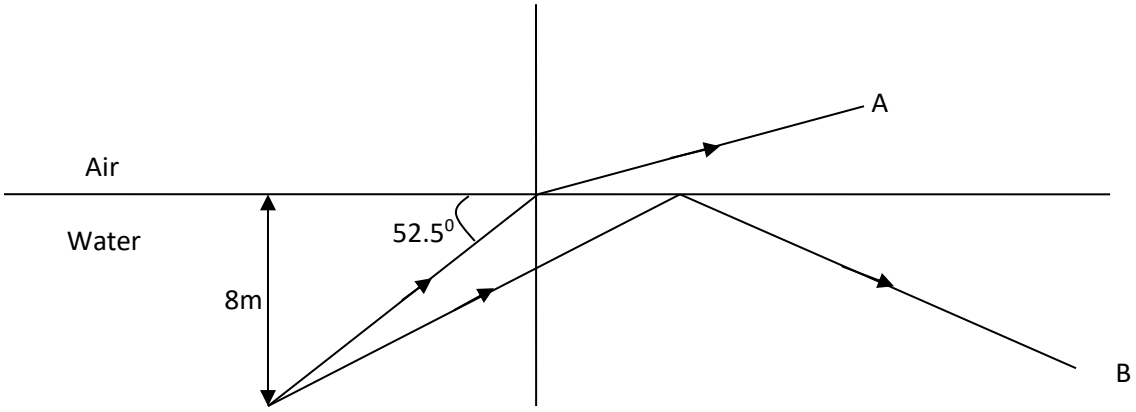
b) The figure below shows a ray of light incident on a water-air interface from a source 8m deep.



i) Ray A is observed to bend as it enters the air. Give a reason why this occurs **(1mks)**

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ii) If the refractive index of water is 1.35, calculate the angle of refraction of ray A **(3mks)**

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iii) Find the critical angle of water **(3mks)**

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iv) Give a reason why ray B is not travelling out of water **(1mk)**

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v) a fish is placed at the source of light ray. Calculate the maximum area of view on the surface of water **(3mks)**

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10. a) define local action **(1mk)**

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b) a charge of 4.8C flows through a lamp every second. Calculate the number of electrons involved per second. **(3mks)**

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c) Give two differences between a primary and a secondary cell **(2mks)**

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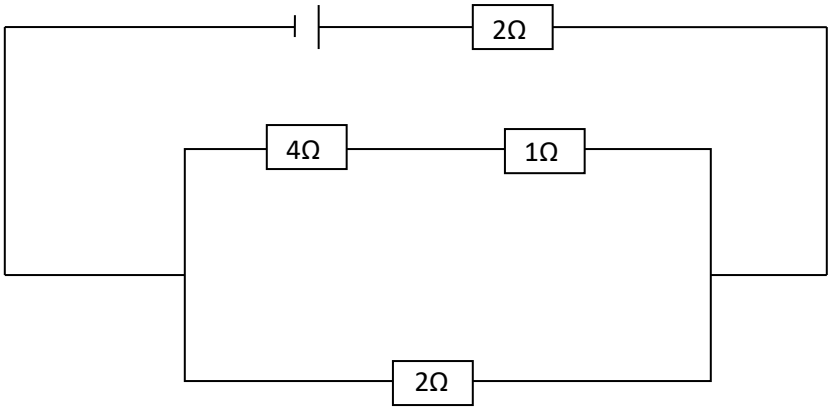
d) The circuit set up shown below makes a current of 1A to flow through the 4Ω resistor



2Ω

Calculate;

i) The current through the resistor **(3mks)**

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ii) the E.M.F of the cell given that the internal resistance is negligible **(3mks)**

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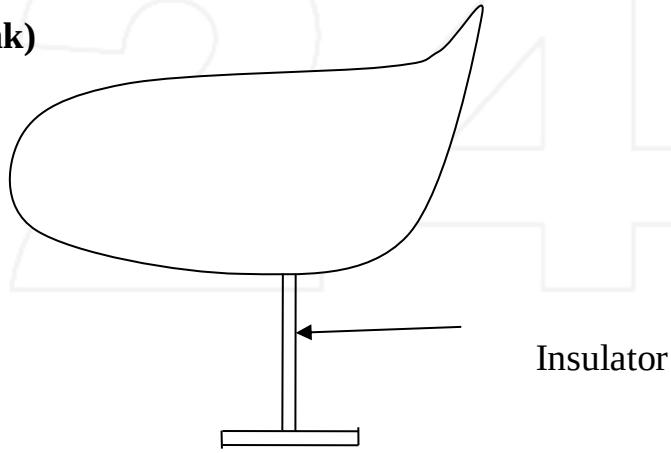
11. Show the charge distribution on the hollow conductor shown below if it is positively charged. **(1mk)**



b. State three factors affecting capacitance of a parallel plate capacitor. **(3mks)**

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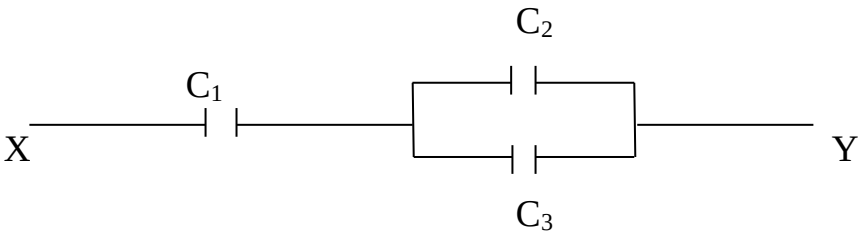
c) The diagram below shows a circuit containing three capacitors.



i) Write an expression for effective capacitance between X and Y. **(2mks)**

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i) If c_1=6µF, c_2=4.5µF and c_3=5 µF, calculate the charge stored when point XY is connected in series with a battery of 6V **(3mks)**

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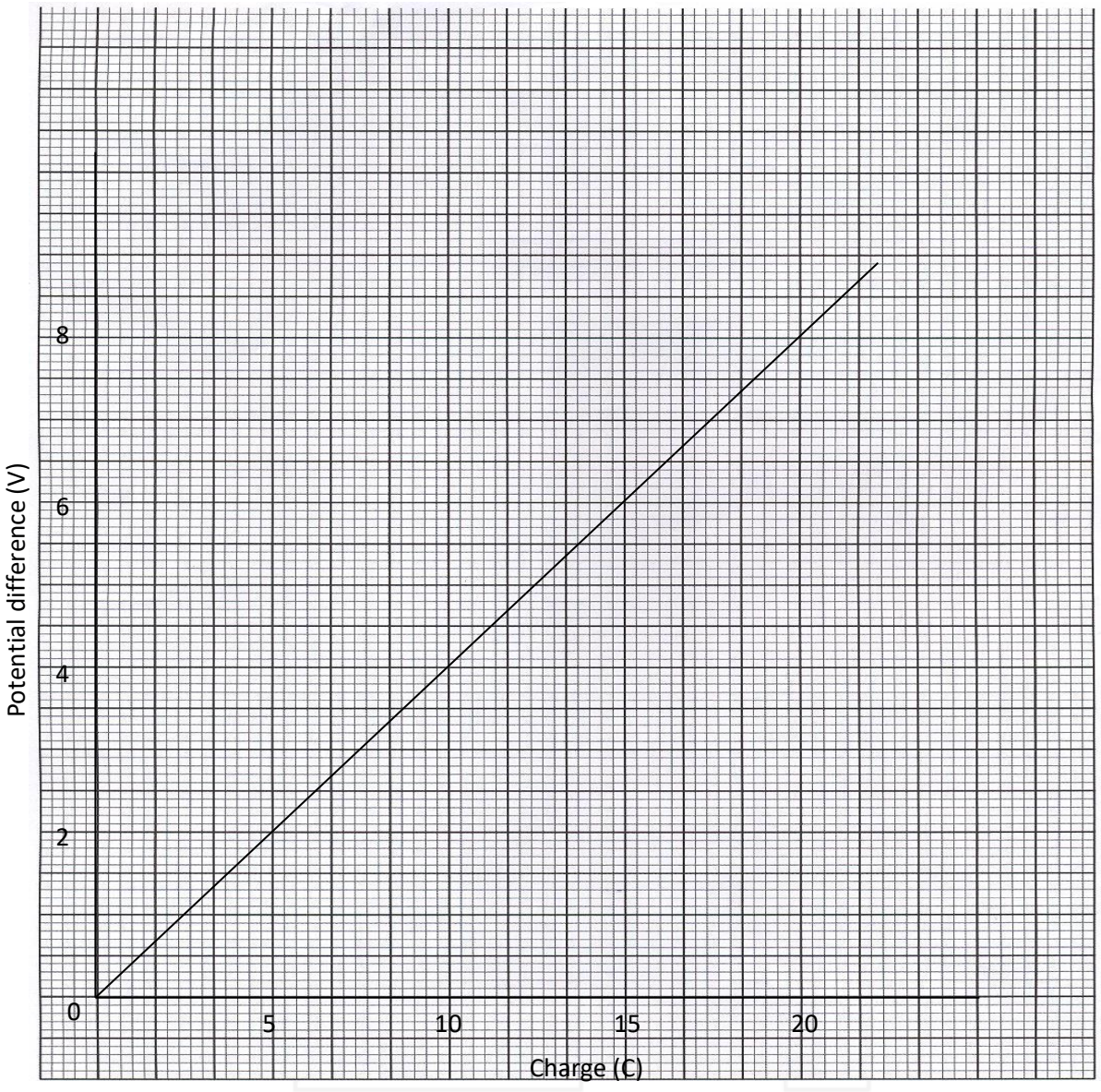
d) The graph below shows the relationship between the voltage drop across a certain capacitor and the charge stored in the capacitor.



From the graph calculate the capacitance of the capacitor. **(3mks)**

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12. a) State two factors that determine the magnitude of an induced e.m.f in a conductor **(2mks)**

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(b) A Power station has an input of 30kw at a potential difference of 5kv.A transformer with a secondary coil of 1000 turns is used to step down the voltage to 1000v for transmission along a grid .Assuming there are no power loses in the transformer .calculate.

(i) current in the primary coil **(3mks)**

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(ii) the number of turns in the primary coil **(3mks)**

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(iii) The current in the secondary coil **(2mks)**

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(iv) State which of the coils is thick and why **(2mks)**

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13. a) Define magnification **(1mk)**

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b) State two differences between a concave and a convex reflectors **(2mks)**

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c) a concave mirror of focal length 20 cm forms a real image three times the size of the object. If the object height is 4cm; determine, using graphical method, the:

(i)object distance **(3mks)**

(ii) The image distance **(1mk)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

PHYSICS

232/3

PAPER 3

TIME: 2½ HOURS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education.

CONFIDENTIAL

QUESTION 1

- *Two new dry cells size D*
- *An ammeter 0 – 1 A*
- *Voltmeter 0 – 5 V*
- *A resistance wire labeled XY (30 gauge) on mm scale*
- *Jockey*
- *cell holder*
- *switch (one way)*
- *six connecting wires at least three with crocodile clips at one end*

QUESTION 2

- *A glass block*
- *Soft board*
- *4 optical pins*
- *Plain paper*
- *Four thumb pins*
- *A protractor*
- *30 cm ruler*

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KCSE 2024 PREDICTION EXAM

SERIES 3

PHYSICS

232/3

PAPER 3

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

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

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

4. *You are supposed to spend the first 15 minutes of the 2¼ Hrs. allowed for this paper reading the whole paper carefully before commencing your work.*

5. *Candidates are advised to record their observations as soon as they are made.*

Mathematical tables and silent electronic calculators may be used.

For Examiner's Use only

Question 1

	Table	d	e	F(i	F(ii	Total
Maximum Score	7	5	3	2	3	20
Student score						

Candidates Grand Total	

Question 2

	Table	O(i	O(i	p	q	Total
Marks	8	5	3	2	2	20
Student score						

QUESTION 1

You are provided with the following:

- *Two new dry cells*
- *An ammeter 0 – 1A*
- *A voltmeter 0 – 5V*
- *A resistance wire labelled XY on mm scale*
- *Jockey or crocodile clip*
- *Cell holder*
- *Switch*
- *Six connecting wires at least three with crocodile clips at one end*

(a) Set up the circuit as shown in figure 4

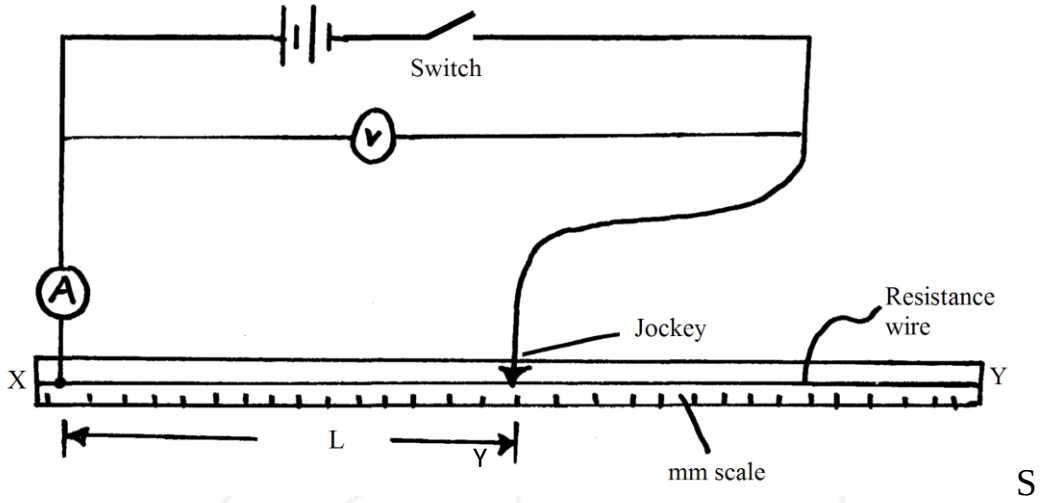


Figure 4

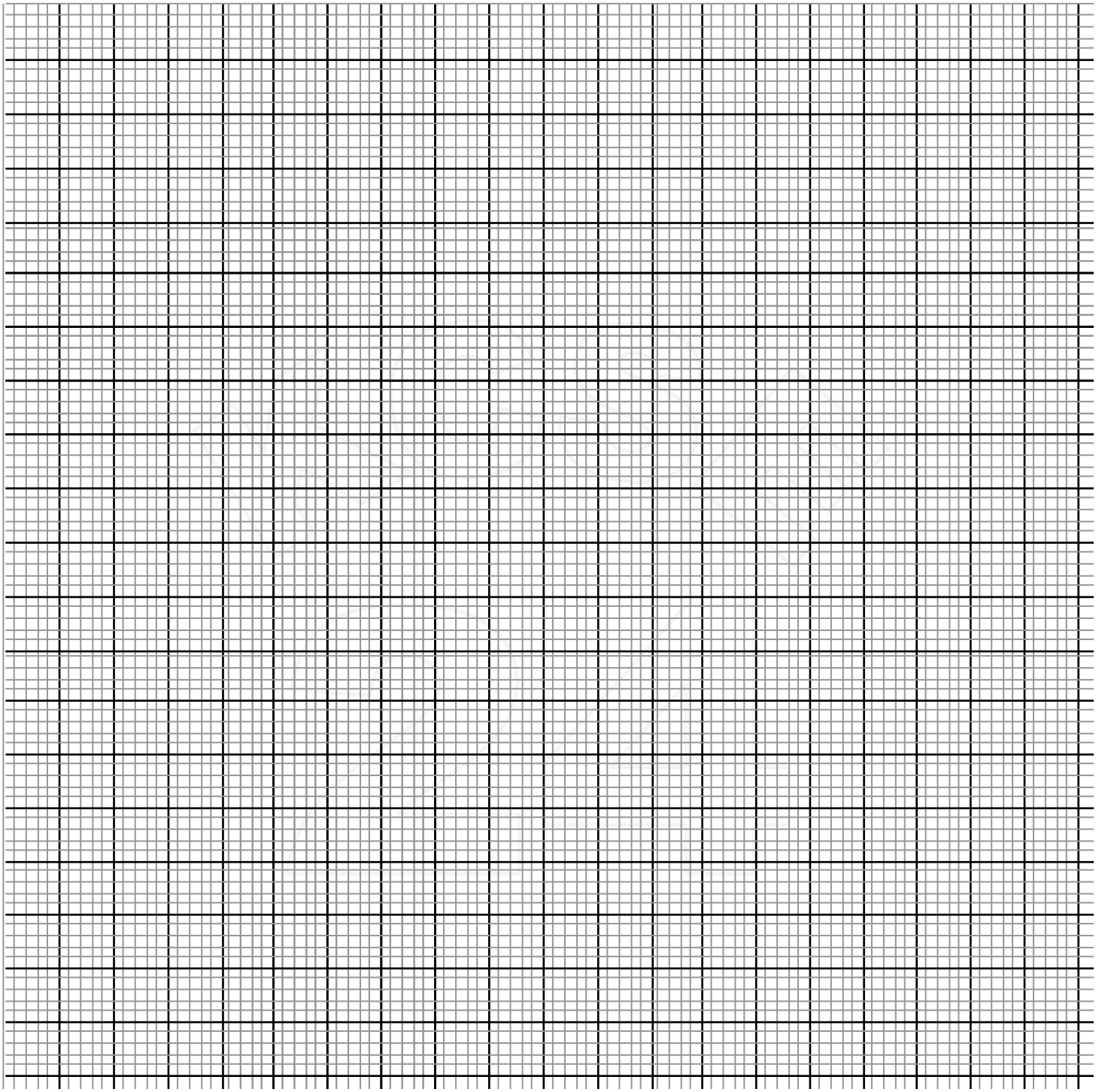
(b) Close the switch and place the jockey in contact with the resistance wire such that the length, L, of the wire XY = 0.20m. Measure and record the current, I, through the wire XY and the p.d., V, across it and enter the results in table 1

(c) Repeat procedure (b) above for the other values of L given. Read and record the corresponding values of I and V.

L (cm)	0.2	0.4	0.5	0.6	0.7	0.9	1.0
p.d. (V)							
I (A)							
R (Ω)							
$\frac{1}{I}$ (A^{-1})							

(7MKS)

(d) Plot a graph of $\frac{1}{I}$ (y axis) against R **(5mks)**



(e) Determine the slope, S, of your graph **(3mks)**

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(f) Given that I and R of the graph are related by the equation $\frac{1}{I} = \frac{R}{E} + \frac{r}{E}$, use your graph to determine the values of :

E = **(2mks)**

……

……

……

r = **(3mks)**

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QUESTION 2

You are provided with the following apparatus

- *A glass block*
- *Soft board*
- *Plain paper*
- *Four optical pins*
- *Four thumb pins*
- *A protractor*
- *A ruler*

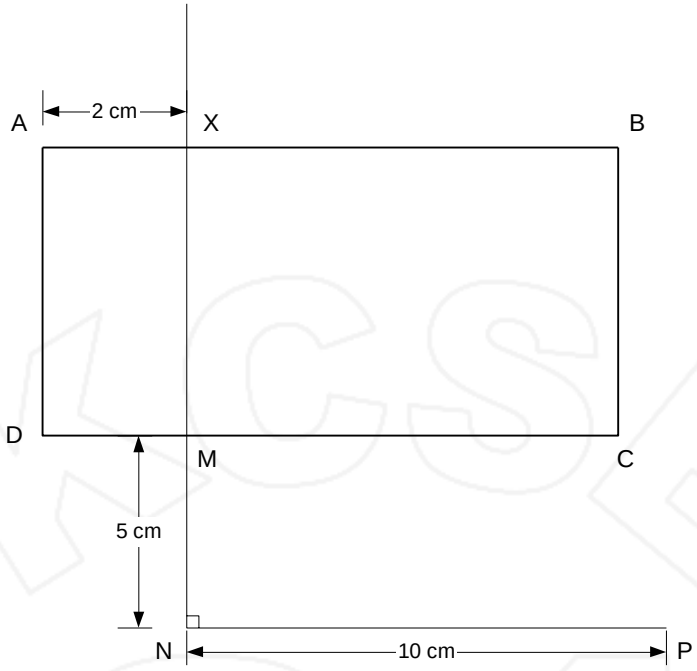
a. Fix the plain paper on the soft board using the four thumb pins.

b. Place the glass block on the plain paper (that is fixed on the soft board) Let the glass block rest on the paper from the broader face.

c. Trace the glass block using a pencil.

d. Remove the glass block.

Mark point X on one of the longer side of the traced glass block as shown in the diagram below. Point X should be 2 cm from edge A.



e. Construct a normal at X, to emerge through line DC. Let this normal meet line DC at point M.

f. Mark point N along the emergent normal, 5 cm from M.

g. Construct line NP to meet the normal at N at 90^0. Line NP is 10 cm.

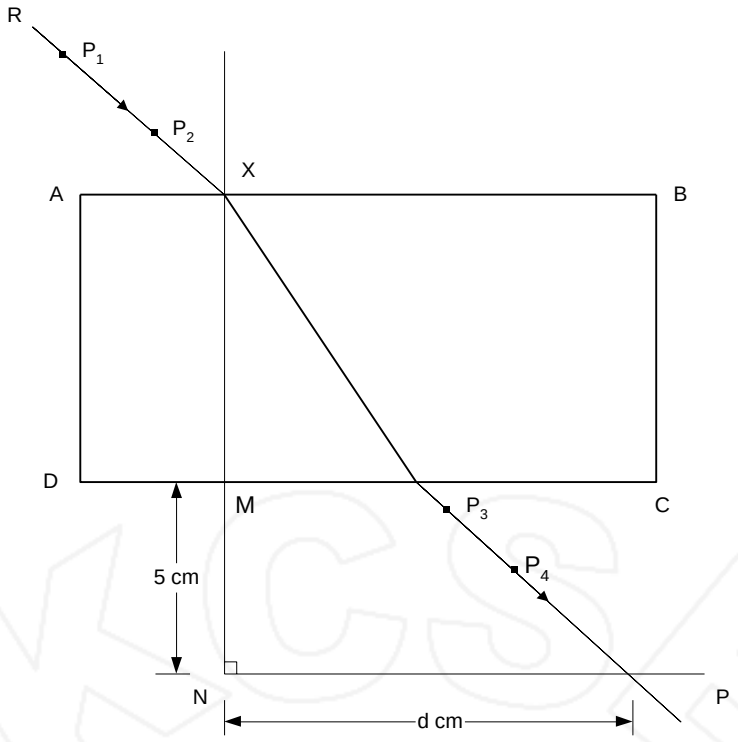
h. Using a protractor, construct an incident ray RX at an angle of incidence **i** = 10^0. Fix two pins P_1 and P_2 along RX.

i. Replace the glass block to the traced figure.

j. View the path of the incident ray RX through the glass block from face DC. Using other two pins P_3 and P_4, fix them to seem to align themselves with images of P_1 and P_2.

k. Remove the glass block and draw the emergent ray through P_3 and P_4.

l. Measure the distance of the emergent ray from point N along line NP as shown in the diagram below.

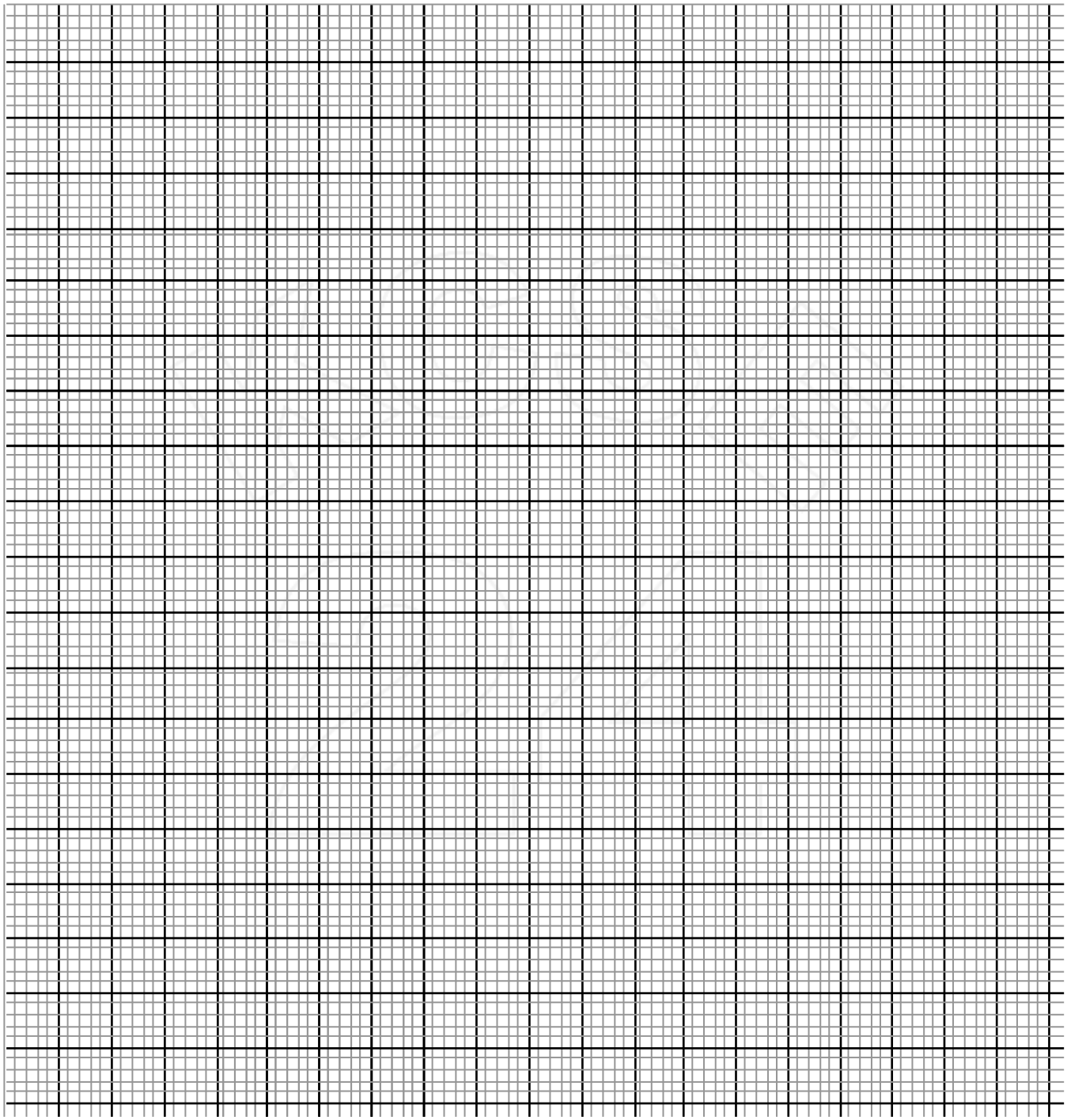


m. Record the corresponding values of d, Sin **i** and Sin^2 **i** in the table below.

n. Repeat the procedure for other values of **i**. **(8 marks)**

Angle of incidence **i** ^{0}	10	20	30	40	50	60
Distance d (cm)						
Sin **i**						
Sin^2 **i**						

o. (i) On the grid provided, plot the graph of $Sin^2 i$ (vertical axis) against d. **(5 marks)**



(ii) Calculate the gradient of the graph. **(3 marks)**

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p) what is the equation of the graph **(2mks)**

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q) Give the value of d when $i=80^0$ **(2mks)**

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For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

AGRICULTURE

443/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) *write your name and index number in the spaces provided above.*
b) *Sign and write the date of examination in the spaces provided above.*
c) *This paper consists of three sections:* ***A, B*** *and* ***C.***
d) *Answer all the questions in sections* ***A*** *and* ***B****.*
e) *Answer any* ***two*** *questions in section* ***C.***

FOR EXAMINER'S USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-15	30	
B	16-20	20	
C		20	
		20	
Total Score		90	

SECTION A (30 Marks)

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

1. State **four** advantages of organic farming. **(2marks)**

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2. Give **four** factors that can increase seed rates in crop production. **(2marks)**

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3. State **four** roles of organic matter in sandy soils. **(2marks)**

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4. State **four** reasons for practicing minimum tillage. **(2marks)**

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5. What is meant by each of the following in crop production?

a) Crop rotation **(1mark)**

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b) Mulching **(1mark)**

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6. Give **four** reasons for inverting soil (furrow) slices during primary cultivation. **(2marks)**

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7. State **four** cultural ways of controlling couch grass *Digitaria scalarum.* **(2marks)**

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8. a) Name **three** vegetative parts that can be used to propagate pineapples. **(1½marks)**

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b) State **three** disadvantages of vegetatively propagating pineapples. **(1½marks)**

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9. Name **three** sources of underground water **(1½marks)**

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10. What is meant by each of the following in agro-forestry?

a) Pollarding **(1mark)**

b) Coppicing **(1mark)**

c) Lopping **(1mark)**

11. State the **information** included in a sales receipt when a farmer is selling eggs **(2½marks)**

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12. State **two** reasons for practicing agro-forestry on a;

a) River bank **(1mark)**

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b) Steep slope **(1 mark)**

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13. State **three** disadvantages of using plastic pipes to convey water. **(1½marks)**

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14. State **three** causes of Blossom End Rot in tomatoes. **(1½marks)**

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15. What is **meant** by the term preference and choice as used in agricultural economics?

(1mark)

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SECTION B (20 Marks)

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

16. a) **Distinguish** between straight and compound fertilizers. **(1 mark)**

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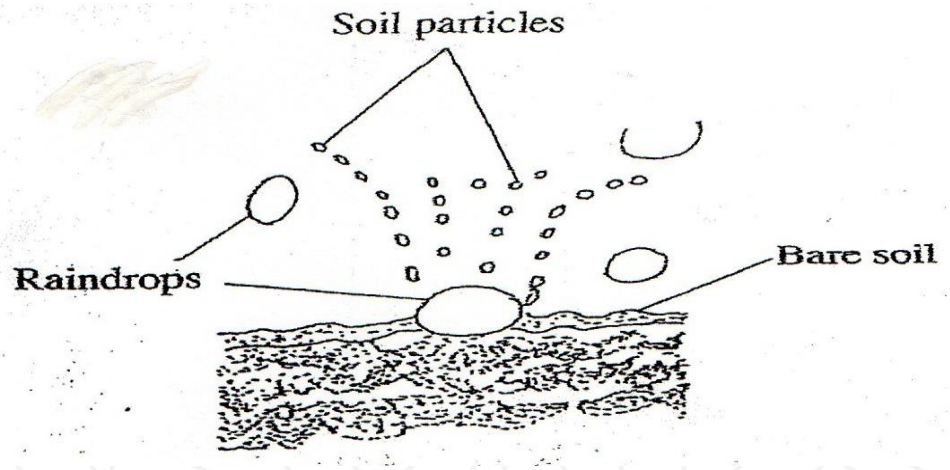
b) A farmer applied **200kg** of CAN (**20% N**) per hectare on his **five** hectares maize crop.

Calculate the **amount of nitrogen** the farmer applied on his crop. Show your working.

(4 marks)

17. The diagram below illustrates a type of soil erosion.



a) Identify the **type** of soil erosion **(1 mark)**

b) How does the type of erosion shown above **occur**? **(2marks)**

c) How does **cover cropping** help to control the type of erosion shown above? **(2marks)**

18. The table below shows the population and gross domestic products of countries A and B

Country	Gross Domestic Product (million Ksh)	Population (million)
A	1800	36
B	1200	15

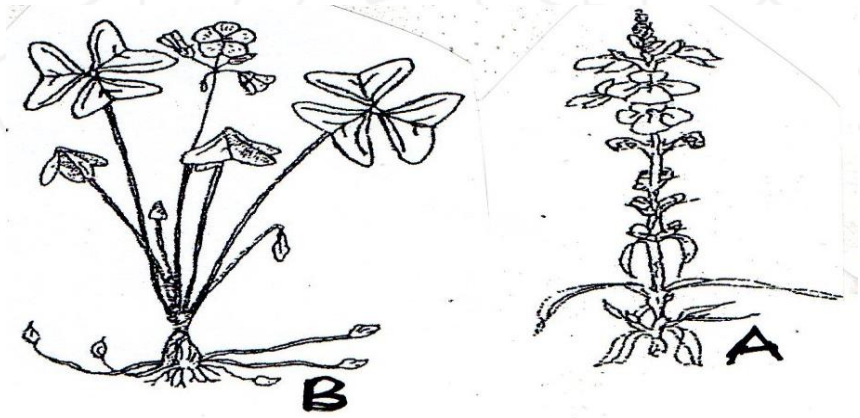
a) Calculate the **per capita** income for each country. Show your working. **(2marks)**

b) Which of the two countries is **more developed** economically? **(1mark)**

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

d) How can **agriculture** increase the gross domestic product of an economy? **(1mark)**

19. The diagrams below show weeds **A** and **B.**



a) Identify weed **A** **(1mark)**

b) State one reason why weed **A** is referred to as a parasitic weed. **(1mark)**

c) Give a reason why it is **difficul**t to control weed **B.** **(1mark)**

d) Which **category** of herbicide will be most suitable for controlling weed B.?**(1mark)**

e) Name a disease that weed **B** can transmit to cereal crops. **(1mark)**

SECTION C (40 marks)

Answer any two Questions from this section in the spaces provided after Question 22.

20. a) **Describe** the various risks and uncertainties in crop farming. **(10 marks)**

b) **State** the functions of young farmers clubs in Kenya. **(5 marks)**

c) **Give** the reasons for land registration in Kenya. **(5 marks)**

21. a) **Explain five** ways in which the Kenyan government can improve maize production to ensure food security in the country. **(10 marks)**

b) **Why** is pruning done in crop production? **(10 marks)**

22. a) The table below gives information on the supply and demand schedules for tomatoes on a market.

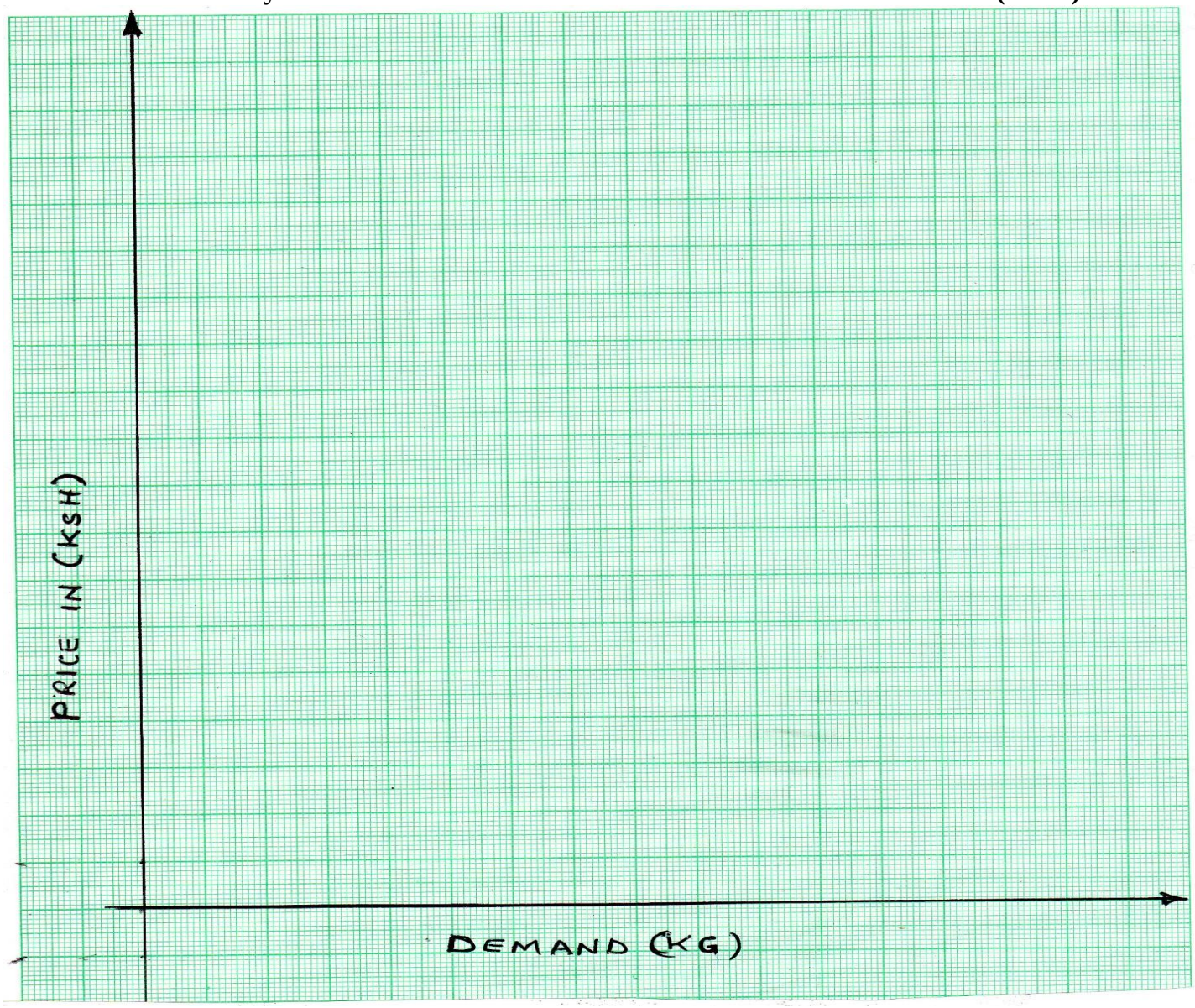
Table 1: Prices and Quantities of tomatoes supplied.

Tomatoes (Kg)	Price per Kg (Ksh)
150	16.00
130	14.20
125	13.80
112	13.00
106	12.70
85	11.80
50	10.60
42	10.40
30	10.20
25	10.10

Table 2: Prices and Quantities of tomatoes demanded.

Tomatoes (Kg)	Price per Kg (Ksh)
80	18.00
87	16.70
101	15.50
119	14.10
135	13.20
155	12.40
171	11.80
185	11.30
191	11.10
205	10.84

i. Using the above data, **plot supply and demand curves** on the same axes. The axes have been labelled for you. **(7mks)**



ii. Determine the price at which **120kg** of tomatoes were supplied on the market.**1mark)**

iii. How many kilograms of tomatoes were bought at the market price of **Ksh13.00?(1mark)**

iv. What was the **equilibrium price** for tomatoes on the market? **(1mark)**

b) Describe the production of **maize** under the following subheadings:

i. Seedbed preparation **(4marks)**

ii. Planting **(3marks)**

iii. Harvesting **(3marks)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

AGRICULTURE

443/2

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

- *Write your **name** and **index number** in the space provided.*
- ***Sign** and **write the date** of examination in the space provided*
- *This paper consists of three section **A, B** and **C**.*
- *Answer all questions in section **A** and **B**.*
- *Answer any two questions in section C*

FOR EXAMINERS USE ONLY

SECTION	QUESTIONS	MAX SCORE	CANDIDATES SCORE
A	1-21	30	
B	22-24	20	
C	25	20	
	26	20	
	27	20	
TOTAL		90	

SECTION A (30MARKS)

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

1. Give **four** signs of ill health in livestock. **(2mks)**

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2. List **four** materials that can be used in the construction of Kenya top bar hive. **(2mks)**

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3. State **four** management practices carries out on a cows during parturition. **(2mks)**

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4. Name four methods of controlling Newcastle disease in chicken **(2mks)**

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5. State the role of the following practices when rearing piglets

(i) Iron injection. **(½mks)**

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(ii) Tooth clipping **(½mks)**

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6. State **two** functions of fats and oils in animals body. **(1mk)**

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7. State **two** functions of a queen bee in a colony **(1mk)**

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8. Name **four** species of fresh water fish reared in Kenya. **(2mks)**

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9. State **two** forms in which tapeworms are found in livestock **(1mk)**

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10. Give the distinguishing colour for each of the following breeds of livestock

(i) Chinchilla rabbit **(½mks)**

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(ii) Toggen burg goat **(½mks)**

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11. State **two** functions of ventilation in an animal house **(2mk)**

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12. Give **two** reasons for using litter in a poultry house. **(2mk)**

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13. State **one** role of each of the following ingredients as used in preparation of artificial colostrums. **(2mks)**

Castor oil

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(a) Cod liver oil

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14. State four reasons for breeding animals. **(2mks)**

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15. State the functions of each of the following

(a) Shovel **(½mks)**

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(b) Strip cup **(½mks)**

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16. Why is it necessary to have guard rails in a farrowing pen? **(1mk)**

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17. Distinguish between the following practices as used in livestock production.

(a) Cropping and harvesting in fish farming **(1mk)**

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(b) Crutching and ringing in sheep management **(1mk)**

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18. State three instances when a bee keeper may handle bees. **(1½mks)**

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19. State three functions of rumen in ruminant animals **(1½mks)**

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20. Give two signs that indicate that a cow has died of anthrax. **(1mk)**

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21. Why is it raddling essential in sheep management. **(1mk)**

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SECTION B (20 MARKS)

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

22.

(a) If the maize meal contains 60% digestable crude protein (DCP) and Fish contains (64% DCP, calculate the amount of each feed stuff in Kilogrammes required to prepare 200kg of chickmash containing 18% DCP. **(4mks)**

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(b) Name two other feed ingredients which should be added to the chickmash to make it a balanced diet. **(2mks)**

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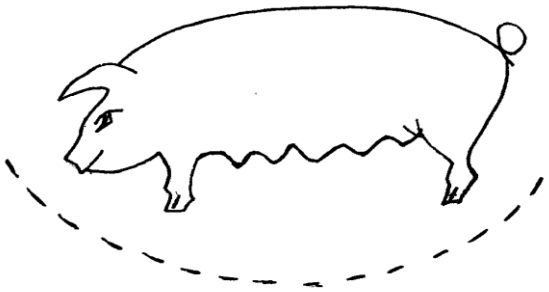
23. The figure below is a pig with some body paints. Study it and answer the questions that follow.



(i) A farmer wants to select a breeding stock. State the three physical qualities the farmer should asses in order to select a pig. **(3mks)**

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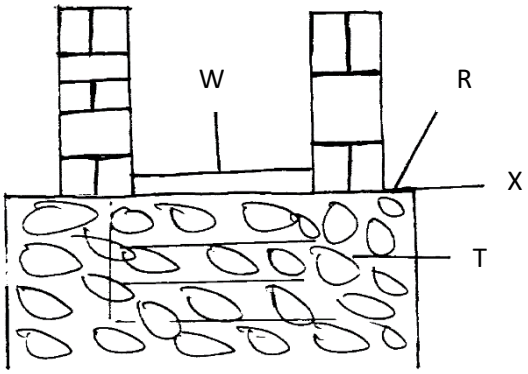
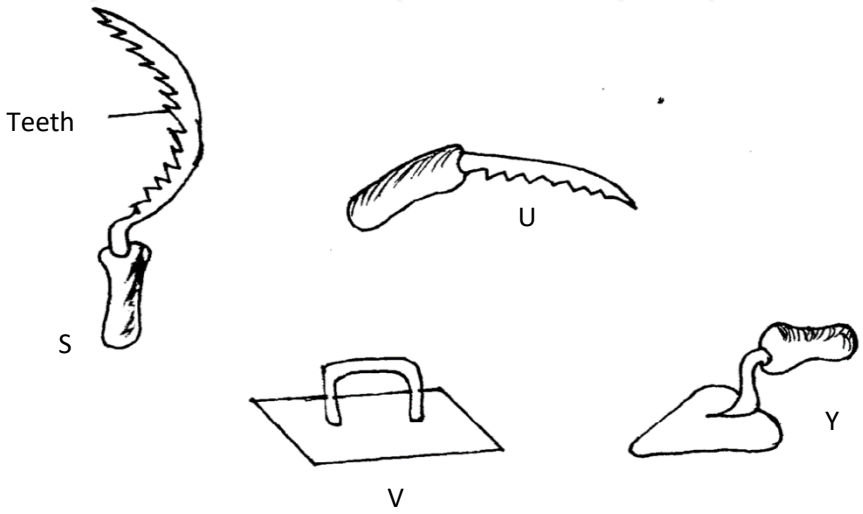
b) Study the illustration below of a hard flow foundation in a farm structure.



i) Name the parts labeled Rand T **(2mks)**

ii) State three advantages of concrete floor. **(3mks)**

24. The diagram below represents some farm tools



(a) State the use of each tool on the farm. **(4mks)**

S……..

U……..

V…….

Y……..

(b) Explain two maintenance practices that should be carried out on the teeth of tools in the diagram. **(2mks)**

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SECTION C

Answer any two questions in this section in the spaces provided after question 26.

25.

(a) Explain the factors considered when culling livestock. **(5mks)**

(b) Explain five factors considered when siting a cattle dip. **(5mks)**

(c) Give four conditions necessary for artificial incubation. **(4mks)**

(d) Outline the factors a farmer should consider to ensure fast and efficient cultivation by oxen. **(6mks)**

26.

(a) Describe East Coast Feaver (ECF) under the following sub headings.

(i) Animal attacked **(1mk)**

(ii) Causal organism **(1mk)**

(iii) Signs of infection **(5mks)**

(iv) Control measures **(3mks)**

(b) Explain seven factors that affect milk composition in a dairy farming. **(7mks)**

(c) State the advantages of a four stroke engine over a two stroke engine oil. **(3mks)**

27.

(a) Describe the feeding practices in artificial rearing of a dairy calf. **(10mks)**

(b) Describe the life cycle of a three host tick. **(10mks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

BUSINESS STUDIES

565/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

FOR EXAMINER'S USE ONLY

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

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

Total Marks

1. Highlight **four** reasons why public relations is a popular way of product promotion among banks. **(4mks)**

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2. Mention **four** non-tax internal sources of revenue to the government. **(4mks)**

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3. Outline **four** measures that an employer can put in place to improve the performance of her human resource. **(4mks)**

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4. State whether each of the following transactions will increase, decrease or have no effect on the Balance Sheet **totals** **(4mks)**

Transaction	**Effect on Balance sheet totals**
a) Sold a private car and deposited the money in business bank account	
b) Withdrew money from bank for office use	
c) Paid Mr. Kimeli, a creditor in cash	
d) Purchased a Motor car by cheque	

5. Highlight **four** conditions that must be met in order for an insurance contract to be valid. **(4mks)**

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6. Enter the following transactions in the relevant book of original entry **(4mks)**

2014 June 1. Made cash purchases worth sh. 25,000

,, 5. Paid sh.38,000 by cheques in full settlement of a debt owed to Kibogong after deducting a 5% cash discount.

,, 12. Bought stationery and paid by cash sh.19,000.

,, 19. Settled a debt of sh.90,000 owed to Yatich stores by cheque after deducting a 3% cash discount.

,, 28. Paid the month's salaries of sh 80,000, by cash, sh. 30,000 and the balance by cheques.

7. Outline **four** ways which the government can use to influence the supply of maize in Kenya.**(4mks)**

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8. Outline **four** negative effects of inflation to an economy. **(4mks)**

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9. Highlight **four** benefits enjoyed by a holder of a credit card **(4mks)**

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10. The following balances relate to the business of Roba Traders during the period ended 31st March 2023.

	Shs.
Cash at bank	680,000
Premises	500,000
Machinery	175,000
Creditors	190,000
Furniture	85,000
Motor van	200,000
Cash in hand	50,000

Extract the trial balance of Roba Traders as at 31st March 2023. **(4mks)**

11. Highlight **four** circumstances under which air transport can be preferred to transport goods from one place to another. **(4mks)**

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12. Study the following document used in home trade.

SIRO TRANSPORTERS CO. LTD
SIRO BUILDING,
OLOO STREET, NANDI ROAD
P.O BOX 100, ELDORET

SUPPLIER'S NAME & ADDRESS BUYER'S NAME & ADDRESS

HANDLING INFORMATION

QUANTITY	DESCRIPTION	WEIGHT(KGS)	COMMODITY /ITEM NUMBER
		TOTAL	

RANSPORT CHARGES PAID

……

……

SIGNATURE OF TRANSPORT CO. SIGNATURE OF SELLER

……

DATE ……. DATE

……..

I. Name the document shown above **……**

(1mk)

II. Name two uses of the document **(2mks)**

a)……

b)……

13. List **four** costs incurred by intermediaries in the chain of distribution **(4mks)**

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14. Prepare ledger accounts from the following transactions relating to Tito Traders for the month of January 2015 **(4mks)**

January 5th sold goods for Shs 20,000 cash

10th bought furniture for Shs 50,000 on credit from Jamwal Traders

21st Paid Shs 10,000 cash to Jamwal traders

21st Returned furniture worth Shs 6,000 found damaged to Jamwal Traders

15. Highlight any **four** features of time deposit account **(4mks)**

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16. Name **four** commercial services that facilitate trade. **(4mks)**

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17. The following balances were extracted from the books of Njoro Traders for the period ended 31st December 2023

	Ksh.	
Gross profit	10,000	
Salaries	2,000	
Commission income	4,000	
Rent received		3,000
Electricity		2,000
Carriage outwards		4,000

Prepare a profit and loss account **(4mks)**

18. Highlight **four** factors that determine the National income of a country. **(4mks)**

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19. Highlight **four** causes of demand pull inflation **(4mks)**

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20. Outline **four** ways in which the problem of scarce resources can be addressed by a consumer. **(4mks)**

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21. Highlight **four** ways in which local resources can be managed to alleviate unemployment problems in Kenya. **(4mks)**

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22. Outline **four** factors that comprise a negative internal environment in a business. **(4mks)**

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23. The following information relates to Waruhio Traders as at 31st December 2023.

Waruhio Traders
Balance Sheet
As at 31st December 2023

Fixed Assets:	Shs.		Sh.
Furniture	203,000	Capital	359,000
		Plus Net profit	114,000
			473,000
Current Assets:			
Stock	174,000	Less Drawings	73,000
Debtors	113,000		400,000
Cash at Bank	53,000	Short term liabilities:	
		1 year Loan	79,000
		Creditors	64,000
	543,000		543,000

a) Calculate the total current assets. **(1mk)**

b) Determine the capital owned. **(2mks)**

c) Calculate the working **capital** **(1mk)**

24. Given below are functions of office equipment. Identify the name of the equipment against the rightful use. **(4mks)**

Functions of the Machine	**Office Equipment**
a) Used in posting information to ledgers and preparing payrolls	
b) To transmit printed messages such as photographs, letters, and maps	
c) Usually fire proof where important documents in an organization are stored	
d) Used to carry out many functions such as storing information, typing and performing complex calculations	

25. Outline **four** factors that may give rise to monopoly power in an economy. **(4mks)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

BUSINESS STUDIES

565/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES.

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

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

3. Indicate clearly the questions answered

For examiner's use only

QUESTION	1	2	3	4	5	6
SCORE						

TOTAL	

1. (a) Explain **five** measures put in place by the government to bring order in road transport sector in Kenya today. **(10 marks)**

(b) Explain **five** reasons why per capita income is not a good indicator of standards of living. **(10 marks)**

2. (a) On 1st November 2013:Tabagon Co. Ltd. had a balance of shs. 12,000 at the bank and shs. 2500 in hand. During the month, the following transaction took place;

Nov. 1 Cash sales Shs. 2500, cash purchase Shs. 1750

Nov. 3 Paid the following accounts by cheque.

Kirop Shs. 1500 less 5% cash discount

Kirui Shs. 2000 less 5% cash discount

Nasimiyu shs. 2100 less 3 % cash discount

Nov. 5 Received the following amounts from debtors,

Ondiek shs. 1200, Jane shs. 3850 and Mueni by cheque shs. 2050 after allowing her shs. 300 cash discount.

Nov. 14 Paid office cash to the bank shs. 2000

Nov. 17 Cash sales 8500

Nov. 22 Mueni paid her account of shs. 5000 by cheque less 10% cash discount

Nov. 28 Withdrew all the money from the bank for office use except shs. 1000

Nov. 29 Paid salary cash shs. 8000

Nov. 30 A cheque received from Mueni on Nov. 5th was dishonoured.

Prepare Tabagon Co. Ltd. three column cash book. **(10 marks)**

(b)Describe the procedure of obtaining an insurance claim. **(10 marks)**

3.(a) Explain the meaning of the following terms as used in business ownership. **(10 marks)**

(i) Franchising

(ii) Merger

(iii) Holding company

(iv) Front Office Savings Account (FOSA)

(v) Globalization

(b) Explain **five** features of a hypermarket. **(10 marks)**

4. (a) Explain **five** emerging issues in office practice today. **(10 marks)**

(b) Explain **five** reasons that account for the existence of small firms in an economy. **(10 marks)**

5. (a) Explain **five** ways in which communication enhances trading activities. **(10 marks)**

(b) Highlight **five** factors that facilitate entrepreneurial development in an economy. **(10 marks)**

6. (a) The following trial balance was extracted from the ledgers of Gathioro's mobile phones business for the year ended 31st Oct 2013.

Gathioro's mobile phones
Trial Balance
As at Gathiro's 31st Oct 2023

Details	Dr. (Shs)	Cr. (Shs)
Sales		855,000
Purchase	420000	
Sales returns	12000	
Purchase returns		20000
Creditors		165000
Debtors	63000	
Motor vehicle	480000	
Cash in hand	65000	
Furniture	190000	
Carriage inwards	14000	
Stock	280000	
Capital		626250
Drawing	88000	
Telephone	6400	
Insurance	8200	
Postage	3850	
Rent	19600	
Discounts received		4000
Advertising	12900	
Discount allowed	7300	
	1670250	**1670250**

On 31st Oct. 2023, the business had closing stock valued at Shs. 60,000

Required

(i) The trading, profit and loss a/c for the year ended 31st Oct 2023. **(8 marks)**

(ii) A balance sheet as at that date. **(4 marks)**

(b) Explain **five** services rendered by the Central Bank to the government. **(10 marks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

ENGLISH

101/1

PAPER 1*(Functional Skills)*

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

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

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

FOR EXAMINER'S USE ONLY

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

FUNCTIONAL WRITING **(20MKS)**

You are the secretary of Debating Club in your school, recently the club held a meeting and the following issues were discussed;

- Election of officials
- Income generating activities in the club
- Preparation for the great debate.

In the meeting, 8 members were present, 3 including the vice chairperson sent apologies and the whereabouts of 2 members were unknown. The club patron also attended the meeting. Apart from the main issues, members raised some issues from the previous meeting. Write down the minutes of the meeting.

CLOZE TEST **10 MARKS**

There is this bizarre preoccupation with 1…… class among us such 2……. what happened at Langa'ta was bound to happen. Our greed 3…… wealth and standing considers nothing sacred, nothing immoral, nothing offensive to everyone, which is why some people were wondering why the children were protesting 4…… they were supposed to be in class! Our preoccupation with private academies for our children is partly what made the "private developer" target public school 5……., only that for the "developer'", the police who came to secure the interests of one against many used tear gas on children.

If most of us decided to 6……. our children to public schools and worked collectively to make them better, chances are this particular "private developer" and many 7…….. would avoid school land for fear of reaction. But many of us have 8……. to this mess by avoiding public facilities— schools, hospitals 9……. even parks — because using them does not speak 10……..of our social standing.

ORAL SKILLS **30 MARKS**

a). Read the following poem and then answer the questions that follow. (8marks)

The Bride.

Why do you wear that dress so white?
Why do you wear that veil so light?
Why do your young eyes shine so bright?
Is it your wedding?

I wear dress and veil to show
That gladly to my love I go
My young eyes shine because I know
It is my wedding.

(i) Identify the rhyme scheme of this poem? **(2 marks)**

……

……

……

……

(ii) Using illustrations show how rhythm has been achieved in the poem. **(3 marks)**

……

……

……

……

(iii) Would you use the rising or the falling intonation in reading line 3 in stanza one in this poem? Give reason. **(1 mark)**

……

……

(iv) How would you say the last line of the second stanza? **(2 marks)**

……

……

……

b). Identify the silent letters in the following words **(6 marks)**

i) Practically

ii) Ballet

iii) Bristle

iv) Guilt

v) Baguette

vi) Psychotic

c). Underline the stressed syllables in the following words**.** **(3marks)**

i) Palatial

ii) Rejuvenation

iii) Police

d). Underline the stressed syllable of the following words when used as verbs**. (2marks)**

i) Ridicule

ii) Suspect

e). You are going to attend an interview for your first job in a bank. You want to look presentable to create a good impression. What would you do before and during the occasion to achieve this? **(4marks)**

……

……

……

……

……

f). Complete the telephone conversation below between a parent and a student acting as a receptionist at her school.

Mrs. Wanjau**……1mark**

Joan: Hallo. Yes, this is Makutano High School. How can I help you?

Mrs. Wanjau:

……

……

……

2marks

Joan: I am sorry the Principal is not in at the moment. Can you leave a message?

Mrs. Wanjau:

……

……

……

1mark

Joan: I am Joan, a form 4 student stepping in for the receptionist who has gone out shortly.

Mrs. Wanjau: ……

……

……

1mark

Joan: Yes once in a while students of office practice and typing are allowed to step in for the receptionist as part of their practice.

Mrs. Wanjau:

……

……

……

2marks

Joan: Thank you very much. I will let the Principal know that you will call tomorrow.

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KCSE 2024 PREDICTION EXAM

SERIES 3

ENGLISH

101/2

PAPER 2

(Comprehension, Literary appreciation & Grammar)

TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- *Write your name and index number in the spaces provided.*
- *Answer all the questions in the 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
1		
2		
3		
4		
TOTAL SCORE		

1. *Read the following passage and answer the questions that follow.*

At length the air began to grow grey with light, then swift golden arrows came slashing across the snow, and at last the glorious sun peeped up above the lava wall and looked upon – frozen forms and upon Vent Rogel, sitting there among us stone dead. No wonder his back had felt cold, poor fellow. He had died when I heard him sigh, and was now almost frozen stiff. Shocked beyond measure we dragged ourselves from the corpse (strange, the horror we all have of the companionship of a dead body), and left it still sitting there with its arms clasped round its knees. By this time the sunlight was pouring its cold rays (for here they were cold) straight in at the mouth of the cave. Suddenly I heard an exclamation of fear from someone, and turned my head down the cave.

And this is what I saw. Sitting at the end of it, for it was more than twenty feet long, was another form, of which the head rested on the chest and the long arms hung down. I stared at it, and saw that it too was a dead man, and what was more, a white man.

The others saw it too, and the sight proved too much for our shattered nerves, one and all we scrambled out of the cave as fast as our half-frozen limbs would allow. Outside the cave, we halted, feeling rather foolish "I am going back'" said Sir Henry. "Why?" asked Good.

"Because it has struck me that – what we saw – may be my brother. This was a new idea, and we re-entered the cave to put it to the proof. After the bright light outside, our eyes, weak as they were with staring at the snow, could not for a while pierce the glooms of the cave. Presently however we grew accustomed to the semi-darkness, and advanced on the dead form, Sir Henry knelt down and peered into its face

"Thank God", he said, with a sigh of relief, "it is not my brother". Then I went and looked. The corpse was that of a tall man with aquiline features, grizzled hair, and a long black moustache, the skin was perfectly yellow, and stretched tightly over the bones. Round the neck hung a yellow ivory crucifix. The corpse was frozen perfectly stiff.

Who on earth can it be? Said I. "Can't guess?"
asked Good. I shook my head. 'Why, the old
Don Jose da Silvestra, of course who else?"
"Impossible, ' I gasped, "He died three hundred years ago,"
"And what is there to prevent his lasting for three hundred years in this atmosphere. I should like to know?" asked Good. "If only the air is cold enough, flesh and blood will keep fresh forever, and Heaven knows it is cold enough here. The sun never gets in here, no animal comes here to tear or destroy and no doubt his slave of whom he speaks on the map took off his clothes and left him. He could not have buried him alone. "Look here he went on, stooping down and picking up a queer-shaped bone scraped at the end into a sharp point, "here is the "clef-bone" that he used to draw the

map". We gazed astonished, for a moment forgetting our own miseries, at this extraordinary and, as it seemed to us, semi miraculous sight.

'Ay' said Sir Henry, and here is where he got his ink from, and he pointed to a small wound on the dead man's left arm.

'Did ever man see such a thing before?'

There was no longer any doubt about the matter, there he sat, the dead man, whose directions, written some ten generations ago, had led us to this spot. There in my own hand was the rude pen with which he had written them, and there round his neck was the crucifix his dying lips had kissed.

Questions

(a) From your reading of the passage how can you tell where the man spent the night **(2mks)**

……

……

……

(b) How can you tell that the writer had been together with Vent Rogel? **(2mks)**

……

……

……

(c) What caused the state of excitement or fear? **(1mk)**

……

……

(d) What hindered them from rushing out fast? **(2mks)**

……

……

……

(e) How according to the passage did the people know about the stare of the dead man **(2mks)**

……

……

……

(f) Identify and explain the significance of the figure of speech employed in paragraph one **(3mks)**

……

……

……

……

(g) Did the man ever see such a thing before? (Re-write the sentence beginning). He …….. **(1mk)**

……

(h) Give one synonym for the word 'directions' as it is used in the passage. **(1mk)**

……

……

(i) What evidence in the passage suggests why the body of Dan Jose da Silvestra remained intact for ten generations? **(2mks)**

……

……

……

……

(j) Explain the meaning of the following words and phrases as used in the passage **(4mks)**

i.shattered nerves_____

ii.clasped_____

iii.accustomed_____

iv.grizzled_____

2. Read the Excerpt below and answer the Questions that follow. ***(25marks)***

The visitor reached for his coffee and took a sip. "More like it!" he said. "Nice and hot," he added. Then he turned to Comrade Melusi. "Your new business, how did it do?"

"I can't say it did well. Inflation was eroding incomes faster than they could grow. But I survived. I didn't live and work in as clean a suburb as I did before. I just could not afford the rent there anymore. No, I had relocated to a slum in a poor part of Harare. But, hey, I was alive."

He laughed, falsely. Sorrow was in his eyes. "Then there came Murambatsvina"

"Then there came what?" asked the visitor.

"Murambatsvina. It is Shona, meaning expelling the trash."

"Please go on."

"Bulldozers went from slum to slum evicting residents by tearing their homes to the ground. Murambatsvina expelled us, the trash, all right. We got no advance warning before or alternative accommodation after. Nobody cared whether we lived or died. We had to go. It did not matter where. Just go!"

"Did anyone explain why you had to leave?"

"The bomber tried to . Murambatsvina's real aim, he said, was to prevent disease and curb crime."

"Was that its aim?"Comrade Melusi belched. "Disease and crime increased instead. No, Murambatsvina had nothing to do with curbing of disease or crime. Its true aim was to punish us, the urban poor, for supporting opposition parties."

"Waiter come!"

a) What happened immediately after this excerpt? **(4 Marks)**

……

……

……

……

b) Identify two thematic concerns evident is the excerpt. **(4 marks)**

……

……

……

……

c) What was the visitor's name? **(1 Mark)**

……

d) Apart from irony, identify and illustrate two styles used in the excerpt. **(4Marks)**

……

……

……

……

e) Describe the mood in the excerpt. **(3 Marks)**

……

……

……

……

f) Who is Melusi? **(2 Marks)**

……

……

g) Identify two character traits of the visitor. **(4 Marks)**

……

……

……

h) 'Please go on.' Add a question tag. **(1 Mark)**

……

i) Explain the meaning of the following words as used in the excerpt. **(2 Marks)**

Curb:

……

……

Inflation:

……

……

2. POETRY

Read the poem below and answer the questions that follow.

THE BREWING NIGHT

It was that memorable night when I heard it

Yes, I heard it all
That night sleep deserted me,
Mocked at me and tantalized me,
So I lay awake, sharp in all my senses.
It was long past midnight:
Time dragged on, the clock chime;
The dog wouldn't bark, nor the baby cry;
It was a moonless and windless night;
The whole universe seemed to stagnate
In dark, dreary, dead slumber.
What was amiss? I knew not.
The dead quietness and solitude
Seemed to be eternal, but
Waves of babbling and muttering
Began to trickle through the streets;
A distant roaring of heavy trucks filled the air,
Hurried footsteps eroded through the street.
What was a miss? I knew not.

I pulled my curtain
And there I saw it all
Heavy boots thick uniforms and solid helmets
Dimly discernible under the pale street lamp
The atmosphere stood stiff and solid with
Brawny- faced and clenched –teeth determination

The night had pulsed with passion high and wild;
The streets were stained with new portraits framed;
The wheel changed hands and new plans were filed.
The morning saw the country strangely dresses
And everyone attended the rally.
To hear the eloquence from a strange face,
And everyone quietly nodded and said, 'yes'
(By Yusuf O. Kassam, in Poems from East Africa.)

Questions

(a) Explain what the poem is about. **(3 mks)**

……

……

……

……

(b) In what ways was the night described in the poem peculiar? **(2 mks)**

……

……

……

(c) What was a miss? I knew not. (rewrite as one sentence beginning I did……) **(2 mks)**

……

……

……

(d) Paraphrase in one sentence what the persona saw when he or she pulled the curtain to see. **(1 mk)**

……

……

(e) What is the significance of stanza two? **(3 mks)**

……

……

……

……

(f) Identify and explain any one personification in the poem. **(2 mks)**

……

……

……

(g) Explain in your own words what happens in the last stanza. **(5 mks)**

……

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(h) Explain the meaning of the title. **(2 mks)**

……

……

……

4. GRAMMAR

(a) **Fill in the blank spaces with most appropriate words** **(3mks)**

i. My uncle, _____ I am sure you remember, flew to Britain yesterday.

ii. The Principal, _____ is out at the moment, will see you when he comes back.

iii. _____ of the students is brighter?

(b) **Rewrite the following sentences according to the instructions after each. (2mks)**

i. He was the wisest man (Rewrite using "wiser")

……

ii. There is no excuse for rudeness. (Rewrite to end with 'exclusable')

……

(c)**Fill in the blank spaces below with the correct form of the verb in brackets (3mks)**

i. The team was _____ for coming late (qualify)

ii. They were _____ attacked by the gangsters (vicious)

iii. The _____ of the matter brought the president to their county. (grave)

(d) **Use the correct collective nouns in the following sentences (3mks)**

i. The evening party was beautiful by the _____ of colours.

ii. The guest of honour was given a _____ of flowers.

iii. She put a _____ of salt in her food.

(e) Complete the sentences below by changing the verb in brackets, in each case, into the form indicated in the instructions after each.

i. _____ (lie) to your parents is a bad practice. (infinitive)

ii. John considers _____ (work) very seriously. (gerund)

iii. Farida expected _____ find everyone settled. (infinitive)

iv. _____(prefer) tilapia to mudfish is understandable in your circumstances (gerund)

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

ENGLISH

101/3

PAPER 3

(Creative Composition and Essays Based On Set Books)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO THE CANDIDATES:

a) *Answer **three** questions only.*

b) *Question **one** and **two** are **compulsory**.*

c) *In question **three** choose **only one** of the **optional set text** you have prepared on.*

d) *Where a candidate presents work on more than one optional text. Only the **first one** to appear will be marked.*

FOR EXAMINER'S USE ONLY:

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

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

Either

a) Write a composition beginning with the following:

As I handed over the money I had a feeling this was not going to go well

Or

b) Write a composition on the following topic: Ways of eliminating drug abuse among the youth

2. The Compulsory Set Text – The Samaritan by John Lara

Using specific examples from Lara's **The Samaritan,** write a composition to show that one cannot escape from the consequences of their actions. **(20marks)**

3. The Optional Set Text **(20 marks)**

Either

(a) **The short story: A Silent and Other Stories**.

Urban life can sometimes be hard. Using examples from Meja Mwangi's An Incident in the Park, write a composition to show the truth of this statement

Or

(b) **Drama: Adipo Sidang, Parliament of Owls**

Bad governance can lead to the downfall of a government. Write an essay to support this statement citing illustrations from Adipo Sidang's play Parliament of Owls.

Or

(c) **An Artist of the Floating world by Kazuo Ishiguro**

War and conflict can have long lasting effects in the life of an individual. Write an essay to bring out the truth in this statement. Use happening in the text an Artist of the Floating World by Kazuo Ishiguro for your illustrations.

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

102/1

KISWAHILI

KARATASI YA 1 (INSHA)

MUDA: SAA 1¾

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

MAAGIZO

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

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

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

(d) *Kila insha ni alama 20*

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

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
1	20	
	20	
Jumla	40	

MASWALI

1. Lazima

Kumekuwa na ongezeko la migomo ya wafanyakazi nchini katika siku za hivi karibuni. Wewe ni katibu wa tume iliyobuniwa na rais kusimamia suala hili. Andika ripoti

2. Ufisadi umechangia pakubwa kuwepo kwa maendeleo duni nchini. Jadili.

3. Andika insha inayoafikiana na methali Baniani mbaya kiatu chake dawa.

4. Andika insha itakayomalizikia kwa;

…walipofungua mlango huo hatimaye,wengi hawakuweza kuzuia hisia zao.Waliangua vilio kwa maafa waliyoshuhudia.

KCSE 2024 PREDICTION EXAM

SERIES 3

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 yako ya mtihani katika nafasi ulizoachiwa hapo juu.*

(b) *Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu*

(c) *Jibu maswali* ***yote.***

(d) *Majibu yako yaandikwe katika nafasi ulizoachiwa katika kijitabu hiki cha maswali.*

KWA MATUMIZI YA MTAHINI PEKEE

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

UFAHAMU: (Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali.

Tokea muundo mpya wa serikali ya ugatuzi uanze kutekelezwa miaka miwili iliyopita, kumeendelea kushuhudiwa matatizo mengi hali iliyopelekea kushuhudiwa kwa msururu wa migomo na maandamano ya raia.Fujo za karibuni kabisa ni zile zinazoshuhudiwa katika miji mikubwa za wachuuzi na wafanyibiashara wakipinga hatua za serikali za kaunti kuwatoza ushuru takribani kwa kila huduma na bidhaa ikiwemo wanyama,kuku na ndege.La kuhuzunisha zaidi katika baadhi ya majimbo imeripotiwa kuwa raia wamelazimishwa kulipa ushuru kwa kutaka tu kuona maiti za jamaa zao kwenye vyumba vya kuhifadhia maiti!

Wanasiasa wameonekana kuwa na wakati mgumu kutetea mfumo huu mpya wa ugatuzi huku baadhi wakisema kwamba matatizo yanayoshuhudiwa kwa sasa yametokana na ugeni wa mfumo huo.Wengine wameinyoshea kidole serikali ya kitaifa kwamba ndiyo inayosambaratisha muundo huu.Wengine wanahoji kuwa bado ni mapema na kwamba kunatajika muda mrefu ili kufaulu

Ni wazi kwamba kumekosekana nidhamu bora ya kusimamia maisha ya raia nchini Kenya.Matatizo yanayokumba raia kwa sasa ni dalili kuwa mfumo wa serikali ya ugatuzi umeongezea chumvi kwenye kidonda badala ya kutibu.Swali ni je,hadi lini nidhamu ya kusimamia raia itakuwa ni suala la majaribio na makosa?

Hatua ya kuwarundikizia raia ushuru mkubwa ni kitendo cha unyonyaji na cha dhuluma kinachofaa kupingwa. La kufahamishwa hapa ni kwamba ushuru ndio njia kubwa ya kuzalisha mapato ya serikali zinazojifunga na mfumo wa kimagharibi wa kiuchumi wa kibepari ikiwemo Kenya.Asilimia 90 ya mapato ya serikali za kibepari huegemea ushuru. Kwa hivyo hatua ya serikali za kaunti katika kuwanyonya raia kwa kuwalipisha ushuru si ajabu bali ni thibitisho kuwa jamii ya Kenya inaongozwa na nidhamu ya kiuchumi ya ubepari mfumo wa unyonyaji na ukandamizaji.Ukweli unabakia kuwa ndani ya serikali za kibepari raia ndio hubebeshwa mzigo wa ushuru unaoishia matumboni mwa viongozi!

Miito ya mabadiliko ya katiba na ya miundo mipya ya kiutawala si lolote ila ni moja tu ya hatua za mfumo wa kibepari kujipa muda wa kuishi na kuziba aibu zake za kushindwa kusimimia maisha ya watu.Kufeli huku kwa mfumo huu kunashuhudiwa hadi kwenye nchi kubwa za kibepari kama Marekani na Uingereza hivyo nazo zimekumbwa tele na maandamano na fujo za raia wakilalamikia hali ngumu ya maisha.

Maswali

a) Yape makala haya anwani mwafaka. **(alama 1)**

.....

b) Eleza mtazamo wa wanasiasa kuhusu utepetevu wa mfumo huu. **(alama 3)**

.....

.....

.....

.....

c) "Ugatuzi nchini Kenya ni mfumo wa kibepari" Thibitisha kauli hii kwa kurejelea makala **(alama 3)**

.....

.....

.....

.....

d) Migomo ni zao la matatizo yaliyogatuliwa kutoka serikali kuu. Toa sababu nyingine zinazosababisha migomo katika serikali za ugatuzi **(alama 4)**

.....

.....

.....

.....

.....

.....

e) Thibitisha jinsi mfumo wa ugatuzi umeongeza chumvi kwenye kidonda badala ya kutibu **(alama2)**

.....

.....

.....

.....

f) Eleza maana ya maneno yafuatayo **(alama 2)**

(i)Ugatuzi

.....

.....

(ii) Kibepari

.....

.....

UFUPISHO (Alama 15)

Soma makala yafuatayo na ujibu maswali.

Mojawapo kati ya misingi na nguzo za maendeleo ulimwenguni ni viwanda. Viwanda ni muhimu kwa kuwa ndivyo vinavyoigeuza malghafi yanayopatikana na kuwa bidhaa zinazoweza kutumiwa na watu. Katika nchi zinazoendelea, ambazo hazina uwezo mkubwa wa mitaji, viwanda vinavyoimarika ni vile vidogo. Hivi ni viwanda ambavyo huhusisha amali za mikono. Kuimarika kwa viwanda hivi vidogo kunatokana na sababu mbalimbali.

Nchi zinazoendelea huwa na masoko finyu hasa kwa kuzingatia uwezo wa ununuzi wa wanaolengwa na bidhaa za viwanda. Katika msingi huu, viwanda vikubwa vitawiwa vigumu kufanya biashara katika mazingira ambako masoko yake ni finyu au utashi wa bidhaa zake sio mkubwa. Viwanda vidogo pia vina uwezo wa kuwaajiri wafanyakazi wengi hasa kwa kuwa havina uwezo wa kugharamia mashine.Uajiri huu wa wafanyakazi wengi ni muhimu katika maeneo mengi ambako tatizo la uajiri ni mojawapo wa matatizo sugu. Tofauti na mataifa ya kitasnia, mataifa yanayoendelea hayana mifumo imara ya kuwakimu watu wasiokuwa na kazi. Utegemezi wa jamaa wanaofanya kazi kwa hivyo unakuwa nyenzo ya pekee ya kuyamudu maisha.

Kuanzisha viwanda vidogo vidogo hakuhitaji mtaji mkubwa tofauti na viwanda vikubwa. Hali hii inasahilisha uwezekano wa watu wengi kujasurisha shughuli yoyote ile. Sambamba na suala hili ni kuwa ni rahisi kujaribisha bidhaa mpya kwa kiwango kidogo cha kiwanda kidogo. Ikiwa mzalishaji yeyote atazalisha bidhaa mpya kwa mapana, kwa mfano kama ilivyo kwa viwanda vikubwa, pana uwezekano wa kupata hasara kubwa. Huenda utashi wa bidhaa hizo uwe mdogo ukilinganishwa na ugavi wa bidhaa zenyewe.

Majaribio mazuri huwa ni kwa kiwango kidogo. Kuwepo kwa viwanda vidogo huwa ni chocheo kubwa la usambazaji wa viwanda hadi maeneo ya mashambani. Hali hii inahakikisha kuwa nafasi za ajira zimesambazwa nchini hali ambayo inasaidia kuhakikisha kuwa pana mweneo

mzuri wa kimapato nchini. Mweneo huu wa mapato unachangia katika kuboresha uwezo wa kiununuzi wa umma. Huu ni msingi muhimu wa maendeleo. Upanuzi na ueneaji wa viwanda vidogo vidogo ni msingi mkubwa wa kujitegemea kiuchumi. Aghalabu viwanda vikubwa huegemea kwenye mitaji ya mashirika ya kimataifa na huwa msingi wa kuendelezwa kwa utegemezi wa kiuchumi.

Licha ya faida zake, ueneaji au kutanda kwa viwanda hukabiliwa na matatizo mbalimbali. Tatizo la kwanza linahusiana na mtaji. Lazima pawepo na mbinu nzuri za kuweka akiba ili kuwa na mtaji wa kuanzishia biashara. Njia mojawapo ya kufanya hivi ni kwa kutegemea masoko ya mitaji ambayo katika mataifa mengi hayajaendelezwa vyema. Inakuwa vigumu katika hali hii basi kupata pesa kwa uuzaji wa hisia kwenye masoko hayo.

Tatizo jingine linalotokana na ukosefu wa mikopo ya muda mrefu ya kibiashara kwa wenye viwanda vidogo vidogo. Mikopo ya aina hii huwa muhimu hasa pale ambapo anayehusika ana mradi wa kununua vifaa kama mashine. Mikopo ya muda mfupi inayopatikana kwenye mabenki huweza kuwashinda wengi kutokana na viwango vya riba kuwa juu. Haimkiniki kwa viwanda kama hivi kukopa kutoka nje ya nchi zao. Juhudi za kuendeleza viwanda hivi huweza pia kukwamizwa na tatizo la kawi kama vile umeme. Gharama za umeme huenda ziwe juu sana. Isitoshe, si maeneo yote ambayo yana umeme. Matatizo mengine huhusiana na ukosefu wa maarifa ya kibiashara, ukosefu wa stadi za ujasiriamali au kuwa na ujasiri wa kujiingiza kwenye shughuli Fulani na miundo duni.

Ili kuhakikisha kuwa viwanda vimekuzwa na kuendelezwa pana haja ya kuchukua hatua kadha. Kwanza, kuwepo na vihamasisho kwa wanaoanzisha viwanda vidogo vidogo kama vile punguzo la kodi, kuhimiza kuanzishwa kwa viwanda vidogo vidogo na kusaka kuyapanua masoko kwa ajili ya bidhaa zinazozalishwa na viwanda hivyo. Aidha kuanzishwa na kupanuliwa kwa taasisi za kuendeleza upanuzi huo. Pana haja ya kuwekeza kwenye rasilimali za kibinadamu; kuelimishwa na kupanua uwezo wao wa kuyaelewa mambo mbalimbali. Miundo msingi haina budi nayo kupanuliwa na kuimarishwa.Upo umuhimu pia wa kuongeza kasima inayotengewa maendeleo na ukuzaji wa viwanda ili kuharakisha maendeleo yake pana umuhimu wa kupambana na ufisadi unaoweza kuwa kikwazo kikubwa. Inahalisi kutambua ikiwa viwanda vitatanda nchini, uchumi wa nchi nao utawanda.

(a) Kwa **maneno 65-75,** eleza ujumbe muhimu unaopatikana katika aya ya pili hadi ya nne. **(alama 8,1 utiririko)**

Maandalizi

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(b) Kwa **maneno (50-55)** fafanua mambo yanayotinga ukuaji wa viwanda. **(alama 5, 1 utirirko)**

Maandalizi

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MATUMIZI YA LUGHA (alama 40)

a) Andika sentensi ifuatayo katika hali ya ukubwa **(alama 2)**

Nyuso za vijana wale zilichujuka walipoanguka

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b) Tumia **KI** katika sentensi kuonyesha masharti yanayowezekana **(alama 2)**

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c) Tunga sentensi sahihi ukitumia kitenzi **'abudu'** katika kauli ya kutendesheana **(alama 2)**

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d) Akifisha **(alama 4)**

aisee yale mawimbi ya tsunami yaliyotokea bahari hindi yaliangamiza biashara nyingi sana alisema bomet

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e) Changanua sentensi hii kwa njia ya mstari. **(alama 4)**

Rais alihutubu lakini walimpuuza

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f) Huku ukitolea mfano eleza tofauti kati ya kishazi huru na kishazi tegemezi **(alama 3)**

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g) Ainisha sentensi ifuatayo kwa kuzingatia jukumu lake **(alama 2)**

Pika ugali kwa kuku kila Jumamosi ukitumia gesi

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h) Tunga sentensi moja ya kuonyesha rai **(alama 1)**

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j) i Eleza maana ya chagizo **(alama 2)**

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ii. Bainisha chagizo katika sentensi ifuatayo **(alama 1)**

Shamba lilipaliliwa haraka na mkulima

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k).Andika katika usemi wa taarifa **(alama 3)**

“Hicho kijicho cha paka cheupe leo marufuku kwangu” alisema Mzee Kambumbu

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l)Tunga sentensi moja ukitumia kitenzi kimoja kilichoundwa kutokana na nomino **zawadi** **(alama 2)**

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m). Tambua matumizi ya kiambishi **ji** katika sentensi ifuatayo **(alama 2)**

Jino la jitu hilo lililiwezesha kujilia chakula kingi kuliko mkimbiaji yule

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n) Tunga sentensi moja kuonyesha maana ya neno: **ilmradi.** **(alama 2)**

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o) Andika sentensi moja ukitumia kihisishi cha bezo **(alama 1)**

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p) Ainisha viambishi katika neno **waliibiana** **(alama 2)**

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q) Nini maana ya kiimbo? **(alama 1)**

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r) (i) Vokali ni nini? **(alama 1)**

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(ii) Eleza sifa mbili za sauti ifuatayo **/i/** **(alama 2)**

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s) Panda ni kuatika mbegu ardhini au kuparaga mti. Andika maana nyingine mbili **(alama 2)**

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ISIMU JAMII (Alama 10)

a. Eleza nadharia tatu kuhusu chimbuko la Kiswahili. **(alama6)**

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b. Fafanua istilahi zifuatazo: **(alama 4)**

i. UwiliLugha

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ii. LinguaFranka

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iii. Misimu

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iv. Sajili

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KCSE 2024 PREDICTION EXAM

SERIES 3

102/3

KISWAHILI

KARATASI YA 3 (FASIHI)

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Kisomo cha Sekondari (KCSE)

1. *Jibu maswali **manne** pekee.*
2. *Swali la kwanza ni la **lazima.***
3. *Maswali mengine matatu yachaguliwe kutoka sehemu zilizozalia: **Hadithi Fupi, Tamthilia, Ushairi na Fasihi Simulizi.***
4. *Usijibu maswali **mawili** kutoka sehemu **moja.***
5. *Majibu yote lazima yaandikwe kwa lugha ya Kiswahili.*
6. *Watahiniwa lazima wahakikishe kwamba kurasa zote za karatasi hii zimepigwa chapa sawa sawa na kuwa maswali yote yamo.*
7. ***Karatasi hii ina kurasa sita za maswali.***

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
1	20	
	20	
	20	
	20	
JUMLA	**80**	

1) SEHEMU YA A- <u>LAZIMA</u>

RIWAYA YA NGUU ZA JADI NA PROFESA CLARA MOMANYI

"Samahani… Nina shida kidogo. Ninaomba usaidizi. Sikuwa nikilipa ushuru katika biashara zangu. Sasa wanataka kuzifunga na kunipeleka kotini."

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

b) Bainisha toni katika dondoo hili **(alama 2)**

c) Eleza sifa nne za msemewa (alama 4)

d) Msemaji wa maneno haya na wengine ni adui ya wananchi wa Matuo. Eleza ukweli wa kauli hili. **(alama 10)**

<u>SEHEMU B: TAMTHILIA: BEMBEA YA MAISHA – TIMOTHY AREGE</u>

Jibu swali la 2 au la 3.

2.Basi tu!Wenzenu ndio **<u>waliioniingiza kwenye mkondo huu.</u>**Kama unakumbuka nilikuwa miongoni mwa vijana kwanza kuingia kwenye dini.Hata tulikuwa tunahubiri.

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

(b).Tambua kwa kutolea mfano wa toni inayojitokeza katika muktadhaa huu**.** **(alama 2).**

(c).Tambua mbinu za kimtindo zilizotumika katika dondoo hili**.** **(alama 2).**

(d).Kwa kurejelea mifano mbalimbali eleza madhara au matokeo ya maneno yaliyopigiwa mstari katika tamthilia hii kwa jamii husika**.** **(alama12)**

Au

3. Fafanua mabadiliko yanayojitokeza katika tamthilia ya Bembea ya maisha **(alama 20)**

SEHEMU YA C :HADITHI FUPI;***MAPAMBAZUKO YA MACHWEONA HADITHI NYINGINE***

Jibu swali La 4 au 5

WINNIE NYARURI OGENCHE:SABINA

4 .Maneno ya ripota huyo yalimwiingia Ombati maskioni yakasalia huko.Hayakufika akilini.Mwalimu mkuu alipenya kwenye umati uliokuwa umeanza kuwa mkubwa na kumtaka Ombati awaelekeze alikokuwa Sabina .Kabla ya Ombati kuwajibu,Sabina alifika nyumbani amevaa rinda kuukuu huku harufu ya samadi inamvuka.Watu waliokuwa wakimngoja walimzoa juujuu na kuanza kuimba tena. Ombati aliwafurusha wageni waliokuja kumwoa Sabina pamoja na mifugo wao.Baada ya kufanya hivyo,alijiunga na Sabina kuhojiwa na kupigwa picha.Alijitanua jinsi alivyotunukiwa kumlea mwana mwepesi masomoni.

a)Eleza umuhimu wa mhusika Sabina katika **kukuza hadithi husika.** **(alama 6)**

b)Kwa kutoa mifano mwafaka kutoka kifunguni,onyesha **aina nne za taswira** zilizojitokeza. **(alama 4)**

c)Fafanua **changamoto** zinazokabili jinsia ya kike kwa mujibu wa hadithi hii. **(alama 10)**

AU

5. Kwa kurejelea hadithi zozote tano jadili changamoto zinazoikabili sekta ya elimu. **(alama 20)**

SEHEMU YA D USHAIRI

Jibu swali la 6 au la 7

6 Soma shairi lifuatalo kasha ujibu masuali

Naogopa, kukupa wangu mtima, sitaki mie nilie
Naogopa, kutoa yangu kalima, eti wewe utulie
Naogopa, ninashindwa kusimama, wewe pete unitie
Naogopa, wanaume wanauma, ja panya wapulizie.

Naogopa, kwita wako mama mama, nami anikaripie
Naogopa, sipendi nyingi dhuluma, za wanaume nilie
Naogopa, kushinda nimeinama, goti mume nipigie
Naogopa, za mkemwenza hujuma, matusi anipatie.

Naogopa, uchungu ukiniuma, mwana nikakuzalie
Naogopa, kupigwa kama ngoma, ndiposa nikatulie
Naogopa, kila kitu kunisoma, ndo hela unipatie
Naogopa, kuitwa mwizi wa sima, ila nikuandalie.

Naogopa, dadazo kuwaandama, udaku wakanitie
Naogopa, kuuleta uhasama, mimi mnipiganie
Naogopa, koritini kusimama, mali tukashindanie
Naogopa, kumwaga wenu mtama, kuku niwamiminie,

Naogopa, naogopa ninasema, yabidi uvumilie
Naogopa, nawe babu kusimama, eti ndoa niingie
Naogopa, ndoto zangu kuzizima, hili doa nijitie
Naogopa, taa yangu kuizima, mwingine jitafutie.

MASWALI

a) Lipe shairi hili anwani mwafaka. **(Alama 1)**
b) Eleza dhamira ya mtunzi wa shairi hili. **(Alama 1)**
c) Nani nafsi nenewa katika shairi hili? **(Alama 1)**
d) Taja tamathali za lugha zilizotumika katika shairi hili**. (Alama 2)**
e) Fafanua uhuru wa ushairi alioutumia malenga. **(Alama 2)**
f) Weka shairi hili katika bahari mbalimbali. **(Alama 3)**
g) Andika ubeti wa tatu kwa lugha nathari. **(Alama 4)**
h) Kwa nini nafsi neni anasita kuchukua hatua? **(alama 4)**
i) Vifungu vifuatavyo vina maana gani katika shairi? **(alama 2)**
- **i.** Taa yangu kuizima
- **ii.** Dhuluma

Au

7. Soma shairi lifuatalo kisha ujibu maswali

Ee mpwa wangu,
Kwetu hakuna muoga,
Uoga ukikufikia, huenda ni wa akina mamayo,
Fahali tulichinja ili uwe mwanamume,
Eewe mpwa wangu, kisu kikali ajabu!
Iwapo utatingisha kichwa,
Uhamie kwa wasiotahiri.

Wanaume wa mbari yetu,
Si waoga wa kisu,
Wao hukatwa kuanzia macheo hadi machweo,
Wewe ndiye wa kwanza,
Iwapo utashindwa,
Wasichana wote,
Watakucheka,
Ubaki msununu,
Simama jiwe liwe juu,
Ndege zote ziangamie.

Simu nimeipokea,
Ngariba alilala jikoni,
Visu ametia makali,
Wewe ndiye wangojewa,
Hadharani utasimama,
Macho yote yawe kwako,
Iwapo haustahimili kisu,
Jiuzulu sasa mpwa wangu,
Hakika sasa mpwa wangu,
Hakika tutakusamehe, mwaka kesho unakuja.

Asubuhi ndio hii,
Mama mtoto aamushwe,
Upweke ni uvundo,
Iwapo utatikisa kichwa,
Iwapo wewe ni mume,
Kabiliana na kisu kikali,
Hakika ni kikali!

Kweli ni kikali!
Wengi wasema ni kikali!
Fika huko uone ukali!
Mbuzi utapata,
Na hata shamba la mahindi,
Simama imara,
Usiende kwa wasiotahiri

Maswali

(a) Hili ni shairi la aina gani? Thibitisha. **(alama 2)**
(b) Ni nani anayeimba shairi hili na analiimba kwa nani ? **(alama 2)**
(c) Toa ithibati kwenye shairi hili kuthibitisha kuwa msimulizi ana taasubi ya kiume. **(alama 2**
(d) Taja kwa kutolea mifano mbinu zozote nne za uandishi katika shairi **hili** **(alama 4)**
(e) Taja shughuli zozote **mbili** za kiuchumi za jamii inayorejelewa katika shairi hili. **(alama 2)**
(f) **Eleza** kwa mifano, uhuru wa kishairi katika shairi hili **(alama 4)**
(g) Msamiati ufuatao umetumika kwa maana gani katika shairi hili? **(alama 4)**

(i) Mbari
(ii) Msununu
(iii) Ngariba
(iv) Uvundo

1) FASIHI SIMULIZI.

Soma kifungu kifwatacho kisha ujibu maswali yanayofuata.

Mwanangu, masomo ni jambo muhimu sana. Utakapofika chuoni na kuanza maisha ya chuo kikuu, tafadhali usijiingize katika mambo ya dunia; anasa na raha nyingi. Vitabu view rafiki wa karibu. Jaribu kusaidiana na wenzako na utie bidii za mchwa masomoni.

Mwanangu kumbuka elimu ndio ufunguo wa maisha mema hapo usoni. Isitoshe safari yako ya maisha mema usoniunaanza uifikapo kule. Jiepushe na mambo mabaya ili usiangukiwe na mti.

Maswali

a) Kwa kutolea mifano, tambua kipera hiki. **(alama 2)**
b) Bainisha sifa za kipera hiki **(alama 5)**
c) Tambua nafsi neni na nenewa katika kipera hiki. **(alama 2)**
d) Fafanua vipengele muhimu katika kufanikisha uwasilishaji wa fasihi simulizi. **(alama 5)**
e) Wewe ni kati ya wanaotambiwa hadithi katika mandhari maalum. Fafanua mambo ambayo wewe na wenzako mnaweza kuchangia wakati wa utambaji. **(alama 6)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

CHRISTIAN RELIGIOUS EDUCATION

313/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

1. *Write your name and index number in the spaces provided above.*
2. *This paper consists of **SIX** questions.*
3. *Answer any **FIVE** questions.*
4. *Candidates should answer all the questions in English.*

FOR EXAMINER'S USE ONLY.

MARKS	1	2	3	4	5	6
TOTAL						

*Answer any **FIVE** questions.*

1.(a) Identify **six** deuterocanonical books found in the Catholic bible. **(6 marks)**

(b) Give **six** reasons why Christians use the bible in worship. **(6 marks)**

(c) With reference to the creation stories, state eight teachings on the relationship between human beings and God. **(8 marks)**

2.(a) With reference to Genesis 12 : 1 – 9, outline **seven** promises given to Abraham by God at the time of his call. **(7 marks)**

(b) Identify **seven** events that took place during the Passover night. **(7 marks)**

(c) Mention **six** lessons that Christians can learn from the incident when Abraham was willing to sacrifice his son Isaac. **(6 marks)**

3.(a) Outline **six** roles played by Prophet Samuel in Israel. **(6 marks)**

(b) Explain how King Ahab contributed to the spread of idolatry in Israel. **(7 marks)**

(c) Identify **seven** ways in which the church supports political leaders in Kenya. **(7 marks)**

4.(a) Outline **four** differences between the Old Testament and Traditional African prophets. **(8 marks)**

(b) Describe the religious background to the call of prophet Amos. **(6 marks)**

(c) Give **six** ways in which Christians are preparing for the day of the Lord today. **(6 marks)**

5.(a) With reference to the teachings of Jeremiah, describe how the Israelites were encouraged to live in hope during Babylonian exile. **(7 marks)**

(b) Give **seven** problems that Nehemiah encountered in the rebuilding of the wall of Jerusalem. **(7 marks)**

(c) Outline **six** ways in which Christians resolve conflicts among themselves. **(6 marks)**

6.(a) Give **seven** ways in which traditional African communities show respect for the unborn child. **(7 marks)**

(b) Outline **seven** moral values acquired during marriage in traditional African communities. **(7 marks)**

(c) State **six** responsibilities of priests in traditional African communities. **(6 marks)**

KCSE 24

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KCSE 2024 PREDICTION EXAM

SERIES 3

CHRISTIAN RELIGIOUS EDUCATION

313/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

b) *This paper consists of **SIX** questions.*

c) *Answer any **FIVE** questions.*

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

FOR EXAMINER'S USE ONLY.

MARKS	1	2	3	4	5	6
TOTAL						

1.a) Outline Nathan's prophecy to King David about the Messiah (2Samuel 7:3-17). **(6mks)**

b) Outline the activities that took place during the presentation of Jesus in the temple. **(7mks)**

c) Give **seven** ways in which Christians show respect to places of worship in Kenya today. **(7mks)**

2.a) Outline Jesus' teaching in the parable of the sower. **(8mks)**

b) How did the disciples react to Jesus' use of parables in his teachings? **(6mks)**

c) Outline **six** lessons Christians learn about Jesus from the healing miracles. **(6mks)**

3.a) With reference to the parable of the mustard seed and the leaven, identify **six** teachings about the kingdom of God. **(6mks)**

b) State **seven** causes of conflict between Jesus and the Jewish religious leaders during the Jerusalem ministry. **(7mks)**

c) Identify **seven** reactions of various people who witnessed Jesus' crucifixion. **(7mks)**

4.a) Describe the unity of believers as illustrated in the image of 'the bride'. **(8mks)**

b) Outline **six** leadership qualities demonstrated by Peter on the day of Pentecost. **(6mks)**

c) Mention **six** ways in which the gifts of the Holy Spirit are abused in the Church today. **(6mks)**

5.a) Explain the Christian teaching on irresponsible sexual behavior. **(8mks)**

b) Identify **six** problems experienced by a family living with a person suffering from HIV/AIDS. **(6mks)**

c) State **six** ways in which the church can help eradicate idleness among the youth in Kenya today. **(6mks)**

6.a) Outline the Biblical teaching on poverty. **(6mks)**

b) List **seven** obligations of citizens to the state. **(7mks)**

c) Give **seven** reasons why pollution is a threat to human life. **(7mks)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

HISTORY AND GOVERNMENT

311/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

(a) *Write your* ***name, index number*** *and the* ***name*** *of your school in the spaces provided above.*
(b) ***Sign*** *and* ***write*** *the* ***date*** *of examination in the spaces provided above.*
(c) *This paper consists of THREE sections A, B and C*
(d) *Answer ALL questions in section A (25 marks)*
(e) *Answer any THREE questions in section B (45 marks)*
(f) *Answer any TWO questions in section C (30 marks)*

FOR EXAMINER'S USE ONLY

SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	25	
B	45	
C	30	
TOTAL SCORE	100	

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SECTION A (25 MARKS)

Answer all questions in this section in the answer booklet provided

1. Name ***one*** remnant of the hunter and gatherer community in Western Kenya. **(1 mark)**

2. State ***two*** economic results of the migration and settlement of the Kenyan communities during the pre-colonial period. **(2 marks)**

3. Give ***one main*** reason why the Portuguese conquered East Africa so easily? **(1 mark)**

4. State ***two*** ways in which East African slave trade undermined local industries. **(2 marks)**

5. Name the treaty that marked the end of the scramble and partition of East Africa.**(1 mark)**

6. State ***two*** methods used by the colonial government to promote settler farming in Kenya. **(2 marks)**

7. What was the ***main*** outcome of the Devonshire White Paper of 1923? **(1 mark)**

8. Give ***two*** common characteristics of the political parties formed after 1945. **(2 marks)**

9. State ***two*** ways in which the trade union movement contributed to the struggle for independence. **(2 marks)**

10. What ***major*** political change was introduced during the Limuru Conference of 1966?**(1 mark)**

11. Give ***two*** militant ways of solving conflicts. **(2 marks)**

12. Give the first step that is taken when solving conflicts by negotiation. **(1 mark)**

13. State how the citizens of Kenya participate in their government. **(1 mark)**

14. Give ***one*** political right of the youth guaranteed in the New Constitution of Kenya. **(1 mark)**

15. State ***two*** functions of the Judiciary in Kenya. **(2 marks)**

16. Identify ***two*** political events that threatened the stability of Kenya between 1975 and 1978. **(2 marks)**

17. Name the fund into which all government revenue is paid. **(1 mark)**

Section B (45 marks)

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

18. (a) Give ***five*** reasons for the migration of Somali into Kenya. **(5 marks)**

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

19. (a) State **three** functions of fort Jesus during the Portuguese rule . **(3 marks)**

(b) Explain ***six*** positive effects of missionary activities in East Africa. **(12 marks)**

20. (a) Give ***three*** ways in which the Kenya Uganda railway promoted economic growth in colonial Kenya. **(3 marks)**

(b) Apart from independent Churches and Schools, explain ***six*** other factors that speeded the achievement of independence in Kenya after 1945 **(12 marks)**

21. (a) State ***three*** roles of Wangari Maathai in the history of Kenya. **(3 marks)**

(b) Explain ***six*** reasons why the Nandi resistance to the British was protracted. **(12 marks)**

SECTION C (30 MARKS)

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

22. (a) Identify ***three*** importance of democracy in Kenya. **(3 marks)**

(b)Explain ***six*** rights of an accused person in Kenya. **(12 marks)**

23. (a)State ***five*** features of the Independence constitution of 1962. **(5 marks)**

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

24. (a) State ***five*** reforms which have been introduced to improve the conditions of Correctional Services. **(5 marks)**

(b) Explain ***five*** factors which undermine free and fair elections in Kenya. **(10 marks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

HISTORY AND GOVERNMENT

311/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

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

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

(d) *Answer ALL questions in section A (25 marks)*

(e) *Answer any THREE questions in section B (45 marks)*

(f) *Answer any TWO questions in section C (30 marks)*

FOR EXAMINER'S USE ONLY

SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	25	
B	45	
C	30	
TOTAL SCORE	100	

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SECTION A (25 MARKS)

Answer all questions in this section in the answer booklet provided

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

2. Give ***two*** factors which influenced early man to begin domesticating animals**. (2 marks)**

3. Identify the ***main*** source of industrial energy from the mid 20th century. **(1 mark)**

4. Identify ***two*** scientific discoveries during the 19th century which contributed to food preservation. **(2 marks)**

State ***two*** characteristics of Macadam roads. **(2 marks)**

5. State the ***main*** function of the Golden Stool in the Asante Empire during the pre-colonial period. **(1 marks)**

6. Identify the method used to plant cereal crops when early agriculture began.**(1 marks)**

7. State ***one*** main limitation of barter trade during Trans-Saharan trade. **(1 mark)**

8. Give ***one*** way in which the Agrarian Revolution in England affected the lives of small scale farmers. **(1 mark)**

9. Identify ***one*** way in which Africans reacted to European colonization of Africa. **(1 marks)**

10. State ***two*** results of the construction of the Suez Canal. **(2 marks)**

11. Identify ***two*** chartered companies which were used to administer European colonial possessions in Africa. **(2 marks)**

12. Name ***one*** political party that fought for independence in Ghana. **(1 mark)**

13. Give the ***main*** reason for the failure of the League of Nations. **(1 mark)**

14. What was the immediate cause of the World War One? **(1 mark)**

15. Identify ***one*** method used by the French to administer their colonies in Africa. **(2 marks)**

Give ***two*** principal organs of the United Nations Organization (UNO). **(2 marks)**

SECTION B (45 marks)

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

18. (a) State ***three*** physical changes of early man according to Charles Darwin. **(3 marks)**

(b) Explain ***six*** common factors that led to the development of early agriculture in Mesopotamia and Egypt. **(12 marks)**

19. (a) Mention any ***three*** factors that led to the spread of iron working in Africa. **(3 marks)**

(b) Describe the social organization of the Shona during the pre-colonial period.**(12 mks)**

20.(a) State ***three*** social factors that led to the scramble for and partition of Africa.**(3 mks)**

(b) Describe ***six*** effects of the scramble for and partition of Africa. **(12 marks)**

21. (a) Give ***three*** reasons why the Lozi collaborated with the British. **(3 marks)**

(b) Explain the importance of the Buganda agreement of 1900. **(12 marks)**

SECTION C (30 Marks)

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

22. (a) Name ***three*** communes of Senegal where Assimilation policy was successfully applied. **(3 marks)**

(b) Explain ***six*** reasons why indirect rule failed in southern Nigeria. **(12 marks)**

23. (a) Identify ***three*** methods used by nationalists in Ghana during their struggle for independence. **(3 marks)**

(b) Describe ***six*** factors that contributed to the struggle for independence in South Africa. **(12 marks)**

24. (a) Give ***three*** reasons why the United States of America (USA) was reluctant to join the First World war **(3 marks)**

(b) Explain ***six*** social effects of the Second World War. **(12 marks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

GEOGRAPHY

312/1

PAPER 1

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) *This paper has **two** sections: **A** and **B**.*
b) *Answer **all** the questions in section **A**.*
c) *Answer question **6** and any other **two** questions from Section **B**.*
d) *Each question in section B must be answered in separate foolscaps.*
e) *Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.*

FOR EXAMINER'S USE ONLY

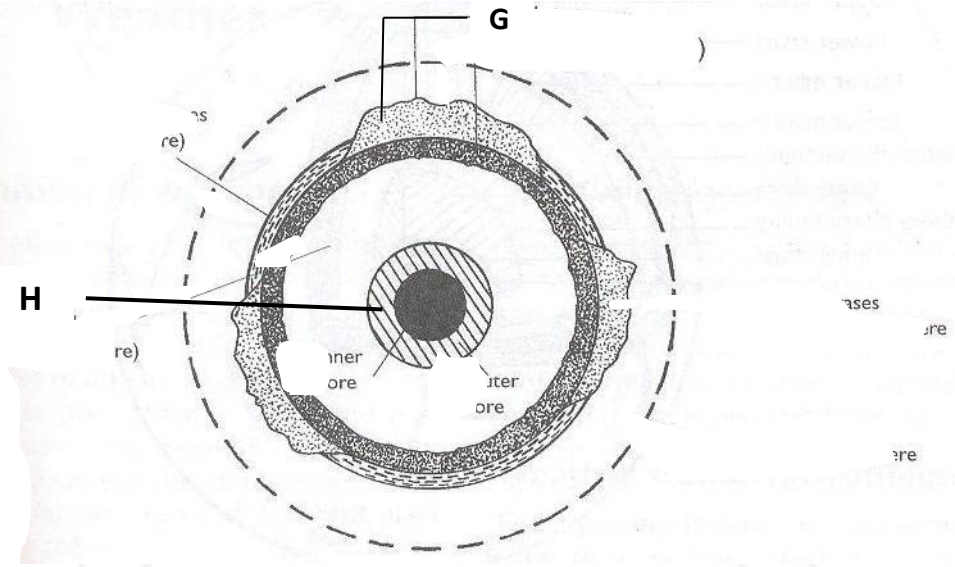
QUESTION	A	6	7	8	9	10	TOTAL
MARKS							

SECTION A

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

1. (a) What is the relationship between Geography and Chemistry? **(2 marks)**

(b) The diagram below shows the internal structure of the earth.



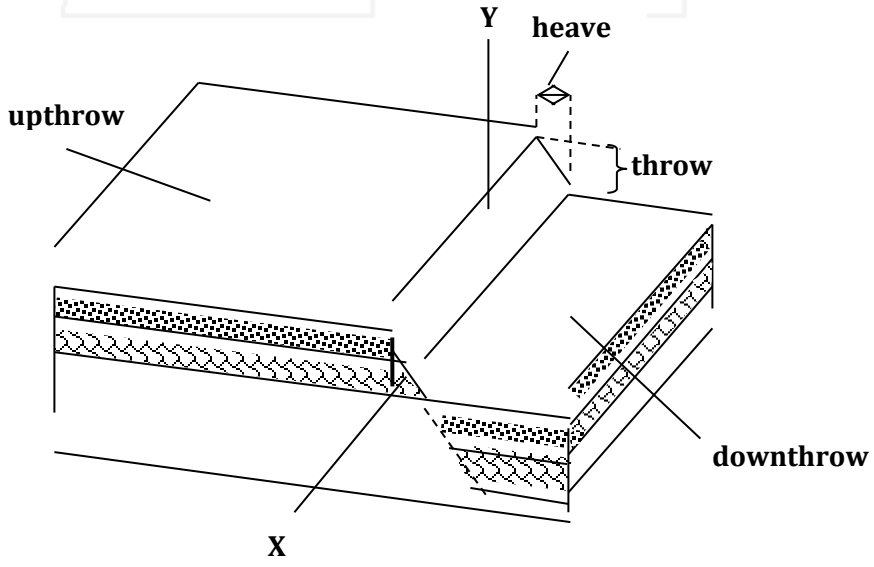
(i) Name the parts marked **G** and **H**. **(2 marks)**

(ii) Name the dominant mineral in the mantle. **(1 mark)**

2. (a) Differentiate between absolute and relative humidity. **(2 marks)**

(b) State the significance of humidity in the atmosphere. **(3 marks)**

3. The diagram below shows some features formed by faulting. **(2 marks)**



(a) Name the parts marked **X** and **Y**. **(2 marks)**

(b) State ***three*** effects of faulting on drainage of an area. **(3 marks)**

4. (a) Identify ***two*** scales used to measure the intensity of an earthquake. **(2 marks)**

(b) Give ***three*** major earthquake zones of the world. **(3 marks)**

5. (a) State ***two*** ways in which plants cause weathering. **(2 marks)**

(b) Describe the process of weathering through oxidation. **(3 marks)**

SECTION B

*Answer question **6** and any other **TWO** questions from this section.*

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

(a) (i) Identify two types of scales that have been used in the map extract. **(2 marks)**

(ii) What was the magnetic declination of Mumias as at January 1965? **(2mks)**

(iii) Name three districts covered by the map of Mumias. **(2mks)**

(iv)Measure the length of the dry weather road from the junction at grid reference 6028 up to the bridge at grid reference 6434. Give your answer in KM **(2mks)**

(b) (i) Reduce by two, the area to the East of Easting 50 and enclosed by Northing 30 to 40. **(2 marks)**

On it mark and name;

- River Nzoia **(1mark)**
- All weather road loose surface **(1mark)**
- District boundary **(1mark)**
- Seasonal swamp **(1mark)**

(ii) Calculate the scale of the reduced area **(2marks)**

(c) Describe the drainage of the area covered by the map. **(5 marks)**

(d) Citing evidence from the map, identify two economic activities carried out in the area covered by the map. **(4marks)**

7. (a)(i) Describe the following characteristics of minerals:

- Texture **(1 mark)**
- Tenacity **(1 mark)**

(ii) Describe how extrusive igneous rocks are formed. **(4 marks)**

(b) For each of the following rocks, name the resultant rock that forms after metamorphism.

(i) Sandstone **(1 mark)**

(ii) Limestone **(1 mark)**

(iii) Granite **(1 mark)**

(c) Explain ***three*** economic significance of rocks in Kenya. **(3 marks)**

(d) Students carried out a field study on rocks around their school.

(i) State ***two*** importance of stating the objectives for their study. **(2 marks)**

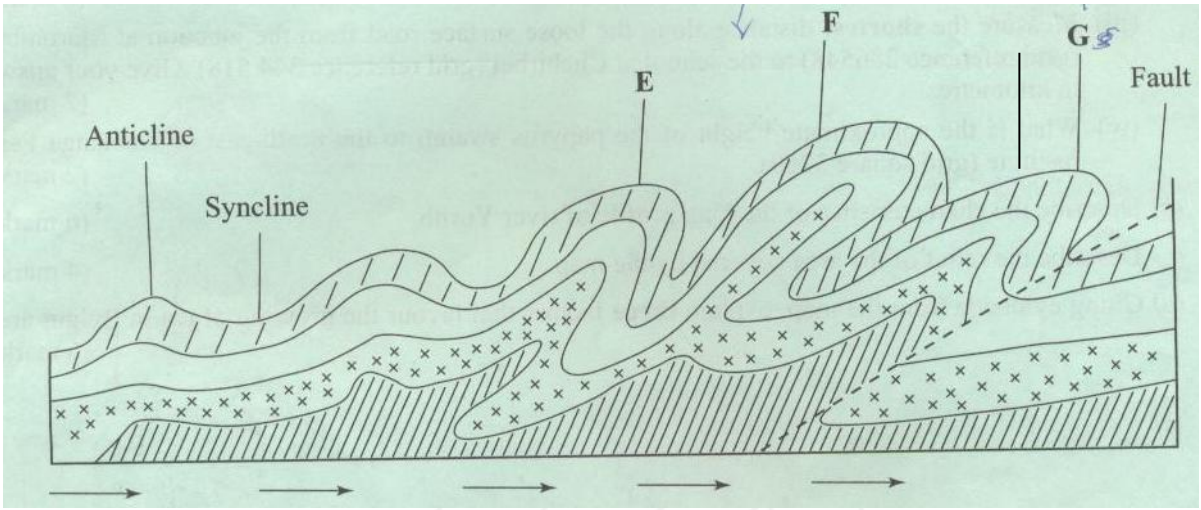
(ii) Give ***three*** reasons why they prepared a route map of the study area. **(3 marks)**

(iii) Give ***three*** activities that the students where involved in during the field study. **(3 marks)**

8.(a)(i) What is an orogeny? **(2 marks)**

(ii) Give ***two*** factors that influence the folding process of rocks. **(2 marks)**

(b) The diagram below shows some types of folds. Use it to answer the question (i) and (ii).



(i) Name the types of folds marked **E** and **F**. **(2 marks)**

(ii) Describe how an overthrust fold is formed. **(4 marks)**

(c) Name the countries in which the following fold mountains are found.

(i) Atlas **(1 mark)**

(ii) Alps **(1 mark)**

(iii) Himalayas **(1 mark)**

(iv) Andes **(1 mark)**

(d)(i) Apart from fold mountains, name ***three*** other features resulting from folding. **(3 marks)**

(ii) Explain ***four*** ways in which fold mountains influence climate. **(8 marks)**

9. (a)(i) Differentiate between a marine delta and a Lacustrine delta. **(2 marks)**

(ii) Explain ***three*** conditions necessary for the formation of a delta. **(6 marks)**

(iii) State ***three*** significance of deltas to man. **(3 marks)**

(b)(i What is a braided channel? **(2 marks)**

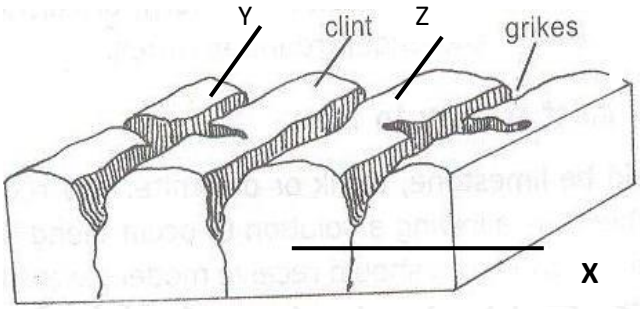
(ii) State ***four*** conditions necessary for the formation of a braided channel. **(4 marks)**

(c) With the aid of well labelled diagrams, describe how an ox-bow lake is formed. **(8 marks)**

10.(a) What is Karst scenery? **(2 marks)**

(b) State ***four*** factors which influence the development of a karst landforms. **(4 marks)**

(c) The diagram below shows a feature in a Karst landscape. Use it to answer question (i) and (ii).



(i) Name the parts marked **X, Y** and **Z**. **(3 marks)**

(ii) Describe how the features marked **Y** and **Z** are formed. **(5 marks)**

(d) (i) Define a lake. **(2 marks)**

(ii) Name ***two*** types of lakes which are formed by volcanic activity. **(2 marks)**

(iii) State ***three*** reasons why some lakes are salty. **(3 marks)**

(iv) Explain ***four*** ways in which lakes are of significance to human activities. **(4 marks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

GEOGRAPHY

312/2

PAPER 2

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- ***a)*** *This paper has **two** sections: **A** and **B.***
- ***b)*** *Answer **all** the questions in section **A**.*
- ***c)*** *Answer question **6** and any other **two** questions from Section **B**.*
- ***d)*** *Each question in section B must be answered in separate foolscaps.*
- ***e)*** *Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.*

QUESTION	A	6	7	8	9	10	TOTAL
MARKS							

SECTION A:

Answer ALL the questions in this section.

1. a) State **two** ways in which minerals occur **(2 marks)**

b) Describe panning as a method of mining **(3 marks)**

2. a) Differentiate between a Forest and forestry **(2 marks)**

b) Give **three** characteristics of Tropical hard-wood forest **(3 marks)**

3. a) Name **two** main rivers which supply water to Mwea-Tebere irrigation scheme **(2 marks)**

b) State **three** environmental problems faced by farmers in Mwea-Tebere irrigation scheme **(3 marks)**

4. a) Give **two** methods used to rehabilitate land in Kenya **(2 marks)**

b) State **three** benefits of Perkerra Irrigation scheme **(3 marks)**

5. a) What is a game sanctuary **(2 marks)**

b) State **three** reasons for encouraging domestic tourism in Kenya **(3 marks)**

SECTION B:

*Answer question **6** and any other **TWO** questions from this section*

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



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

(ii) What time of the day was the photograph taken if the camera was held facing South? **(1 mark)**

iii) Draw a rectangle measuring 16cm by 9cm to represent the area of the photograph. On it sketch and label the main features shown on the photograph **(5 marks)**

iv) Describe the landscape of the area represented by the photograph. **(3 marks)**

b) (i) Identify **two** counties in the Rift Valley where ranching is practiced. **(2 marks)**

(ii) Name **one** exotic breed of beef cattle reared in Kenya **(1 mark)**

c) State **four** physical factors which favour beef farming in Argentina **(4 marks)**

d) Explain **four** benefits of beef farming to the economy of Argentina **(8 marks)**

7. a) Define agro-forestry **(2 marks)**

b) State **three** benefits of agro-forestry **(3 marks)**

c)i) Explain how the following factors have influenced distribution of natural forests in Kenya

- Aspect **(2 marks)**
- Soils **(2 marks)**

ii) Explain **four** ways of managing forests in Kenya **(8 marks)**

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

- Transportation **(2 marks)**
- Harvesting **(2 marks)**
- Climate **(2 marks)**
- Distribution **(2 marks)**

8. a) What is mixed farming? **(2 marks)**

b)State **three** economic factors influencing agriculture **(3 marks)**

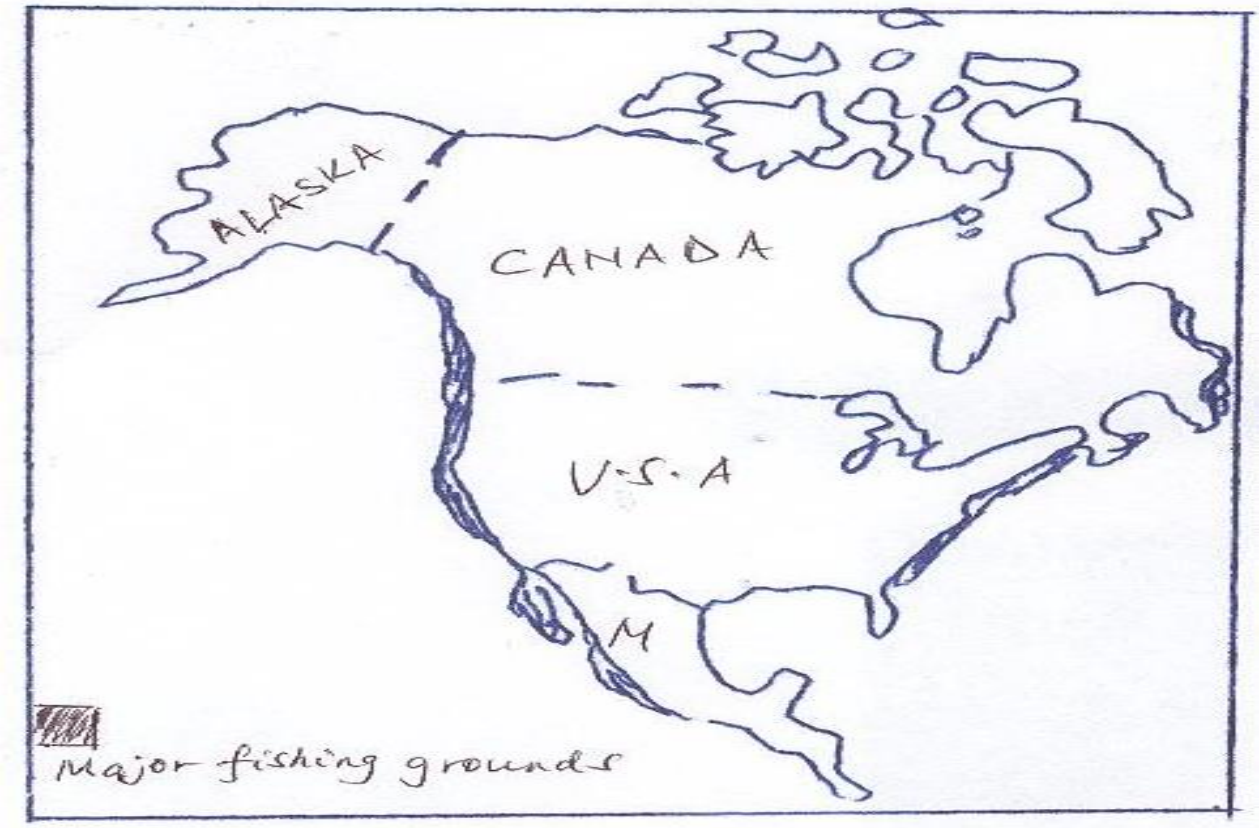
c)i) Give **four** physical factors influencing coffee growing in Kenya **(4 marks)**

ii) Describe coffee productions in Kenya from harvesting to marketing **(8 marks)**

iii) Give **three** differences between coffee farming in Kenya and Brazil **(6 marks)**

d) You intend to carry out a field study on coffee growing in a farm near your school. State **two** disadvantages of using secondary data during data collection **(2 marks)**

9. Use the map of North America below to answer questions (a) and (b)



a) Name

(i) The fishing ground shaded **(1 mark)**

(ii) The ocean current marked (b) **(1 mark)**

b) Explain **four** physical conditions necessary for fishing in the fishing ground shaded. **(8 marks)**

c) Describe trawling method of fishing **(6 marks)**

d)i) Explain **three** ways in which overfishing can be controlled in Lake Naivasha **(6 marks)**

ii) State **three** significance of fish farming **(3 marks)**

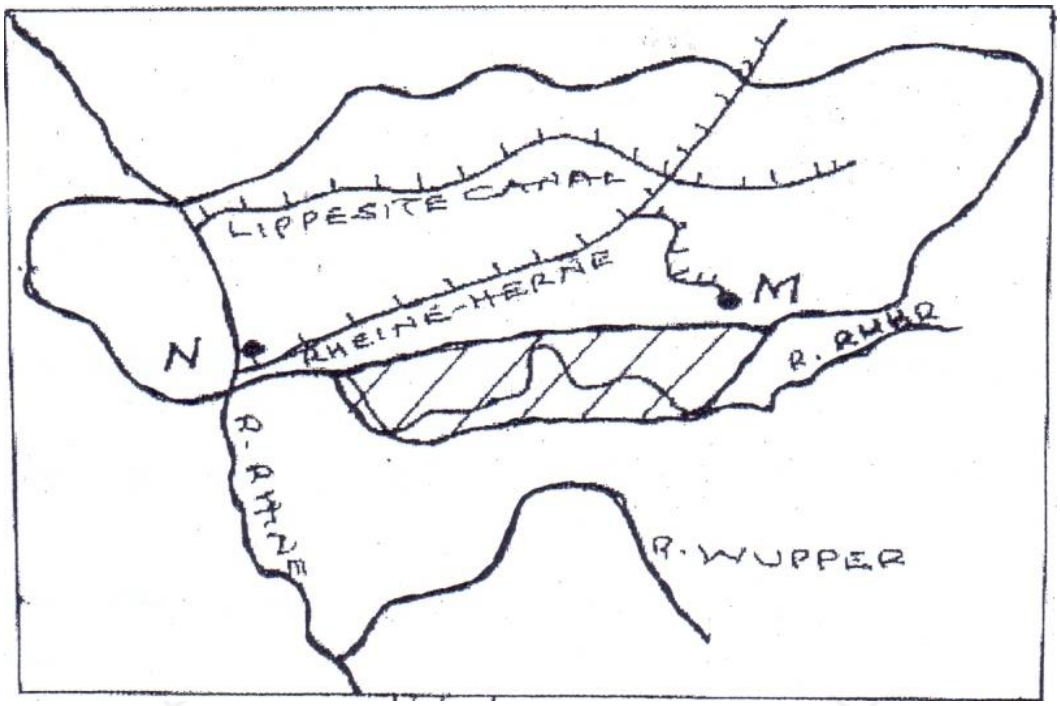
10.a)i) Apart from coal, name three other non-renewable sources of energy **(3 marks)**

ii) State **four** reasons why there has been a decline in the use of coal as a source of energy **(4 marks)**

iii) Give **three** advantages of using wind energy **(3 marks)**

b) Name **two** examples of agricultural non-food processing industries in Kenya **(2 marks)**

c) Below is a sketch map of the Ruhr Industrial Region. Use it to answer question (i)



(i) Name:

- The canal market U **(1 mark)**
- The river marked V **(1 mark)**
- The town marked W **(1 mark)**

(ii) Explain **three** factors which led to the growth of iron and steel industry in the Ruhr region of Germany **(6 marks)**

d) Explain **two** environmental problems which have resulted from the development of car manufacturing industry in Japan **(4 marks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

MATHEMATICS

121/1

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, signature and date in the spaces provided at the top of this page.

*2. The paper contains two sections: Section I and Section II. Answer **ALL** the questions in Section I and **ANY FIVE** from Section II.*

3. Show all the steps in your calculations, giving your answers at each stage in the spaces provided below each question.

4. Marks may be given for correct working even if the answer is wrong.

5. Silent non - programmable electronic calculators and KNEC Mathematical tables may be used unless otherwise stated.

Section I

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

Section II

17	18	19	20	21	22	23	24	TOTAL

GRAND TOTAL

SECTION 1(50MARKS)

1. Points S(-2,2) and T(-3,7) are mapped onto $S^1(4,-10)$ and $T^1(0,10)$ by an enlargement . Calculate the enlargement scale factor. **(3marks)**

2. Given that $\frac{1}{2x} = (0.732)^3 + \sqrt[3]{85.3}$, use mathematical tables to find the value of x in standard form correct to 3 significant figures **(3marks)**

3. Simplify $\frac{12x^2+ax-6a^2}{9x^2-4a^2}$ **(3 marks)**

4. All prime numbers less than ten are arranged in ascending order to form a number.

(a) Write down the number formed **(1 mark)**

(b) Express the number in (a) above in expanded form **(2 marks)**

5. A two digit number is such that the one's digit is four more than the tens digit, and the sum of the digits is 14. Find the number **(3 marks)**

6 Paul bought a refrigerator on hire purchase by paying monthly instalments of Ksh. 2000 per month for 40 months and a deposit of Ksh. 12,000. If this amounted to an increase of 25% of the original cost of the refrigerator, what was the cash price of the refrigerator? **(3 marks)**

7. Find all the integral values of x which satisfy the inequality **(3 marks)**

$3(1 + x) < 5x - 11 < x + 45$

8. Without using calculator, evaluate

$$\left(\frac{7}{3}\left[\frac{2}{5}of\,1\frac{2}{3}-\frac{1}{2}\left(\frac{1\frac{2}{3}-2\frac{1}{2}}{\frac{1}{3}-\frac{19}{27}}\right)^{\frac{1}{2}}+\frac{2}{3}\right]\right)^{\frac{1}{2}}$$ leaving the answer as a mixed fraction.**(4 marks)**

9. During a certain month, the exchange rates in a bank were as follows;

	Buying (Ksh.)	Selling (Ksh.)
1 US $	91.65	91.80
1 Euro	103.75	103.93

A tourist left Kenya to the United States with Ksh.1 000,000.On the air port he exchanged all the money to dollars and spent 190 dollars on air ticket. While in US he spent 4500 dollars for upkeep and proceeded to Europe. While in Europe he spent a total of 2000 Euros. How many Euros did he remain with**?** **(3marks)**

10. A school decided to make a beautiful picnic site to be used by students and teachers as a resting point. The site was designed to be triangular in shape measuring 40 metres, 60 metres and 80 metres. Calculate the area of the picnic site. (Answer correct to 1 d.p) **(3 marks)**

11 A regular *n*-sided polygon has its interior angle equal to 4 times its exterior. Find *n.*

(3 marks)

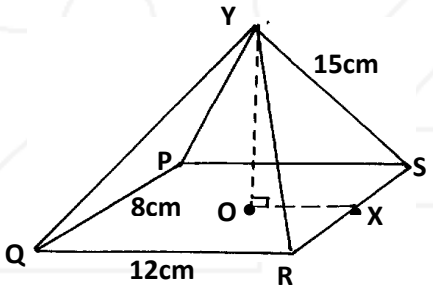
12. The ratio of the lengths of the corresponding sides of two similar rectangular petrol tanks is 3:5.The volume of the smaller tank is $8:1m^3$.Calculate the volume of the larger tank.**(3 marks)**

13.ABCD is a rhombus. A is the point (2, 1) and C is the point (4, 7). Find the equation of the diagonal BD in the form ax + by = c. **(3marks)**

14. A man walks directly from point A towards the foot of a tall building 240m away. After covering 180m, he observes that the angle of elevation of the top of the building is 45^0. Determine the angle of elevation of the top of the building from A. **(3 marks)**

15. The G.C.D. and L.C.M. of three numbers are 3 and 1008 respectively. If two of the numbers are 48 and 72, find the least possible value of the third number. **(3 marks)**

16. An ant moved from Y to X the midpoint of RS through P in the right pyramid below



Draw the net of the pyramid showing the path of the ant hence find the distance it moved. **(4marks)**

SECTION II (50 marks)

17. Three warships A,B and C are at sea such that ship B is 500km on a bearing N30E from ship A. Ship C is 700km from ship B on a bearing of 120°.An enemy ship D is sighted 800km due south of ship B.

a)Taking a scale of 1cm to represent 100km, locate the positions of ships A, B ,C and D.**(4 marks)**

KCSE 24

b) Find the bearing of:

i) Ship A from D **(1 mark)**

ii)Ship D from C **(1 mark)**

c) Use scale drawing to determine the distance between

i) D and A **(1 mark)**

ii) C and D. **(1 mark)**

d) Measure angle DAC and angle BCD **(2 marks)**

18.a) A rectangular tank of base 2.4m by 2.8m and a height of 3m contains 3600litres of water initially. Water flows into the tank at the rate of 0.5litres per second. Calculate:

i) The amount needed to fill the tank **(2marks)**

ii) The time in hours and minutes required to **fill** **(3marks)**

b). Pipe A can fill an empty tank in 3hours while pipe B can fill the same tank in 6hours .When the tank is full, it can be emptied by pipe C in 8hours .Pipes A and B are opened at the same time when the tank is empty .If one hour later pipe C is also opened, find the total time taken to fill the tank. **(5marks)**

19.A solid is made up of a conical frustum and a hemispherical top. The slant height of the frustum is 8cm and its base radius is 4.2cm.If the radius of the hemispherical top is 3.5cm

a) Find the area of:

i) the circular base. **(2 marks)**

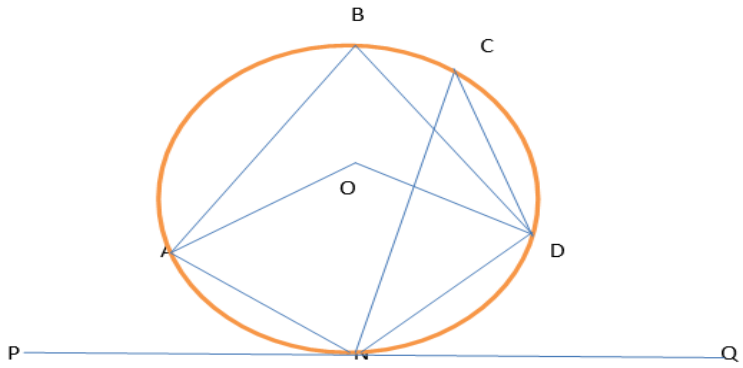
ii) the curved surface of the frustum **(3 marks)**

iii) the hemispherical surface **(3marks)**

b) A similar solid has a total surface area of 81.51cm^2.Determine the radius of its base.

(2marks)

19. In the figure below, O is the center of the circle. PQ is a tangent to the circle at N. Angle NCD is 10° and angle ANP is 30°



Giving reasons find;

a) Angle DON **(2marks)**

b) Angle DNQ **(2marks)**

c) Angle DBA **(2marks)**

d) Angle ONA **(2marks)**

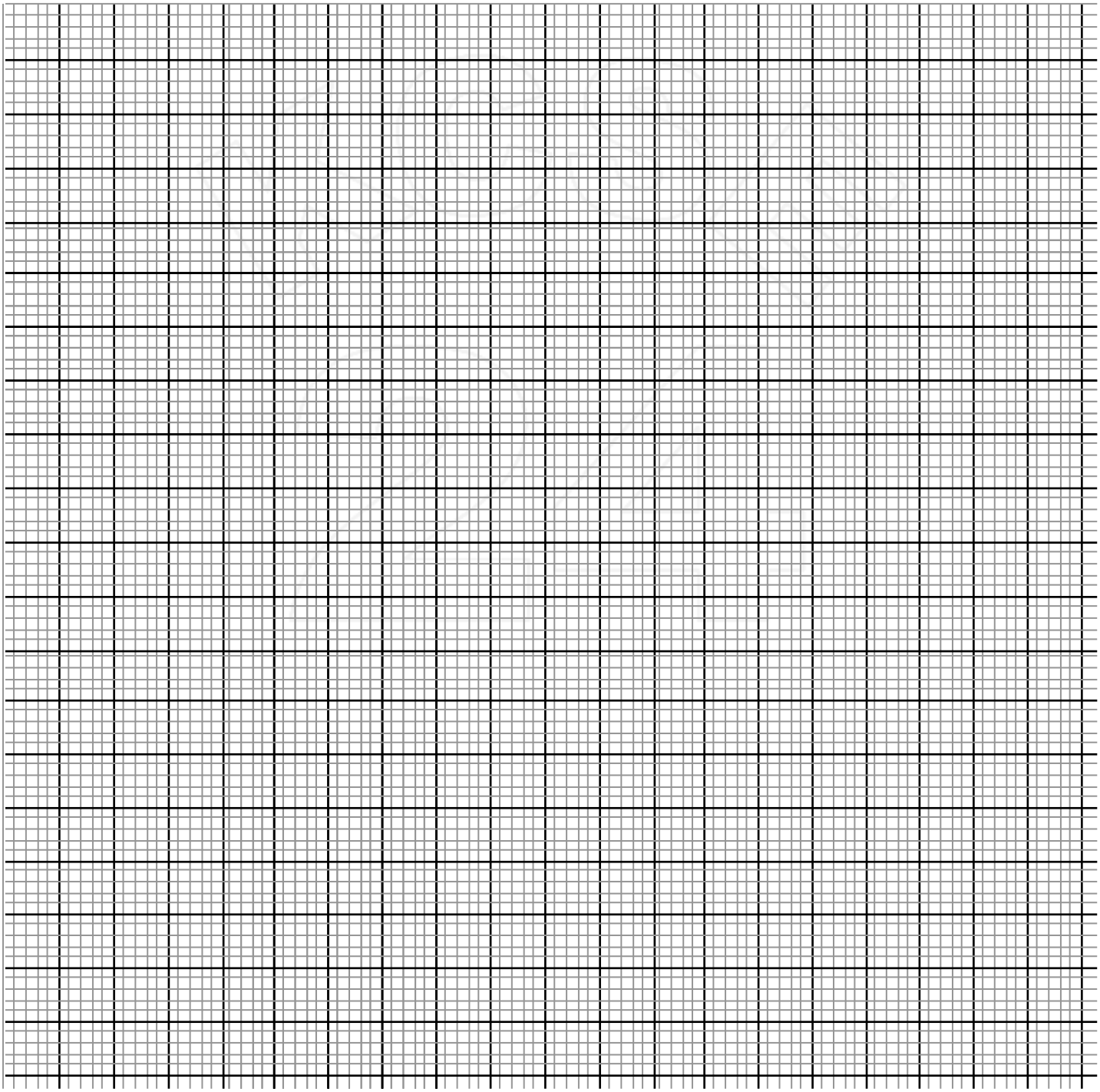
e) Angle ODN. **(2marks)**

20. Two quantities P and Q are connected by the equation $\mathbf{P= KQ^n}$. The table below gives the values of P and Q

P	1.2	1.5	2.0	205	3.5	4.5
Q	1.58	2.25	3.39	4.74	7.86	11.5

a) State the linear equation connecting P and Q **(1 mark)**

b) Using a scale of 1cm to represent0.1 units in both axes, draw a suitable straight line graph on the grid provided **(5 marks)**



c) Use your graph in b) above to determine the approximate values of **K** and **n. (2 marks)**

d) From the graph, find the value of Q when P=3 **(2 marks)**

KCSE 24

22. The displacement h metres of a particle moving along a straight line after t seconds is given by $h=-2t^3+\frac{3}{2}t^2+3t$.

a) Find its initial acceleration **(3 marks)**

b) Calculate;

i) The time when the object was momentarily at rest **(3 marks)**

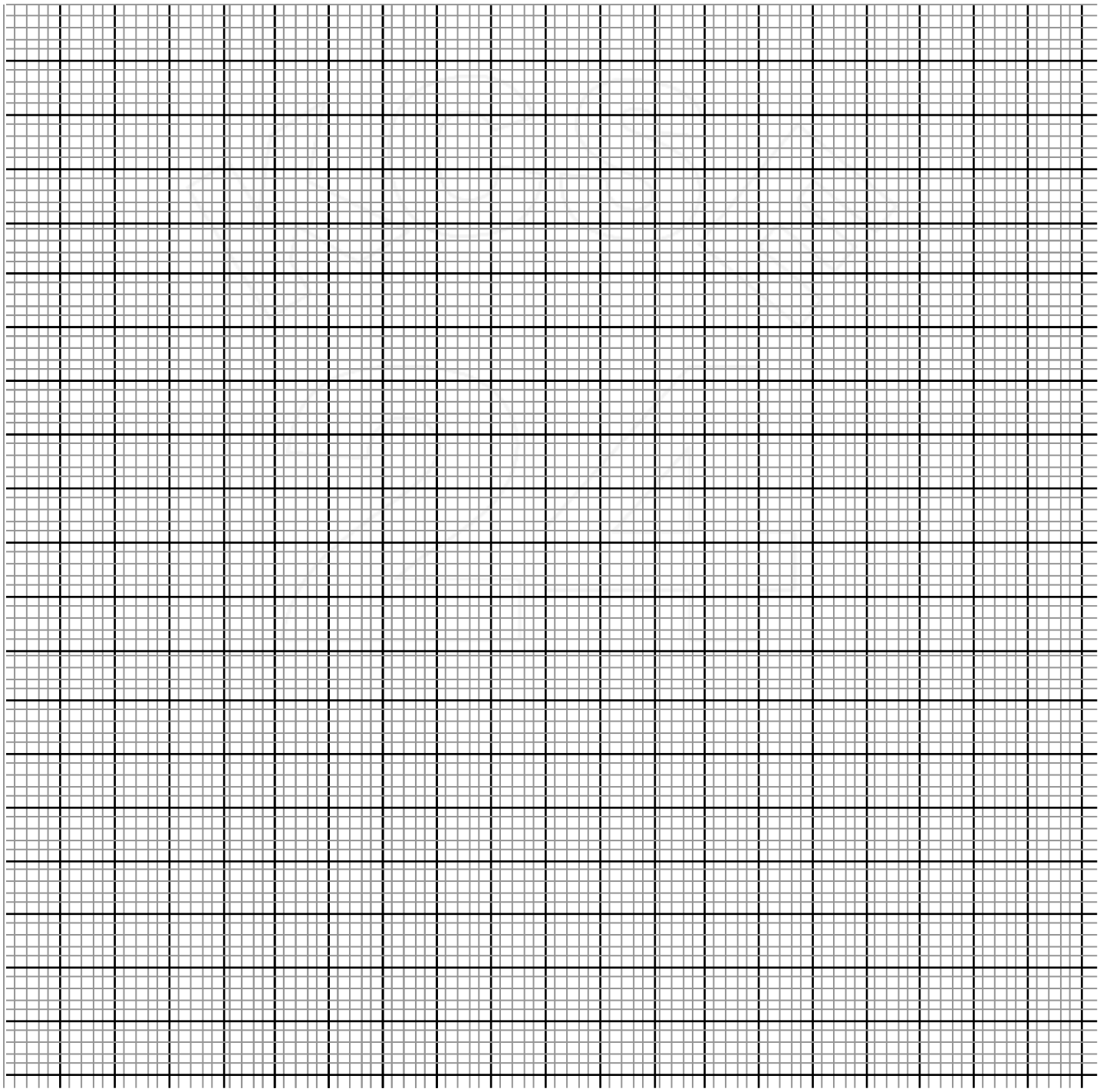
ii) Its displacement by the time it comes to rest **(2 marks)**

c) Calculate the maximum speed attained **(2 marks)**

23.a) Complete the table below for graphs of y=sinx and y=2sin(x+30) **(2 marks)**

x	o	30	60	90	120	150	180	210	240	270	300	330	360
sin x	0		0.87			0.5			-0.87			-0.5	
2sin (x +30)	1	0.5		1.74		0	-1				-1		

e) Using a suitable scale on the grid below draw the graphs of y = sin x and y = 2sin (x +30) for $0 \leq x \geq 360^0$ **(4 marks)**



c) State the transformations that would map y= sinx onto y=2sin(x+30). **(2 mark)**

d) Find the values of x which satisfy the equation sin x – 2sin (x +30) =0. **(2 marks)**

24. A trailer moving at a speed of 80km/h is being overtaken by a car moving at 100km/h in a clear section of a road. Given that the bus is 21m long and the car is 4m long.

a) How much time (in seconds) will elapse before the car can completely overtake the bus?

(3 marks)

b) How much distance (in metres) will the car travel before it can completely overtake the bus?

(2 marks)

c) Given that as soon as the car completed overtaking the trailer, a bus heading towards the trailer and the car and moving at a speed of 90km/h became visible to the car driver. It took exactly 18 seconds for the car and the bus to completely by pass each other from the moment they first saw each other.

i. How far was the tail of the bus from the tail of the car at the instance they first saw each other given that the bus is 12 metres long? **(3 marks)**

ii. How far a part was the trailer and the bus just immediately after the car and the bus had passed each other? **(2 marks)**

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

MATHEMATICS

121/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES.

*1) Write **your name** and **index number** in the spaces provided above.*
2) Sign and write the date of examination in the spaces provided above.
*3) This paper consists of two section **I** and **II**.*
*4) Answer **ALL** questions in section **I** and only **five** questions from section **II**.*
5) Answers and working must be written on the question paper in the spaces provided below each question.

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

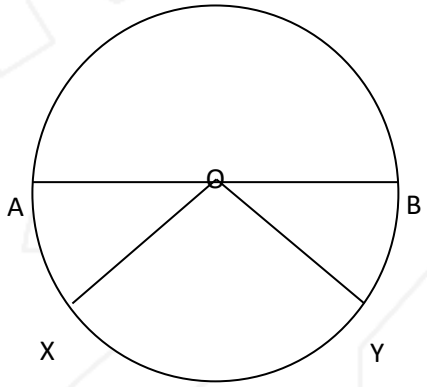
17	18	19	20	21	22	23	24	TOTAL

Grand Total

SECTION A- 50 MARKS

1. The cost of maize flour and millet flour is Ksh.40 and Khs.52 respectively. Calculate the ratio in which they were mixed if a profit of 15% was made by selling the mixture at Ksh.52.90 per kilogram. **(3marks)**

2. In the figure below XY= 8cm and O is the centre of the circle



Determine the area of the circle if angle AOX=15^0 **(3marks)**

3. **OA=3i+4j-6k** and **OB=2i+3j+k** are two position vectors. P divides a line AB in the ratio 3:-2. Write down the coordinates of P. **(3marks)**

4. The table below show tax rates on a certain year

Income (K£ p.a)	Rate (Ksh.per £)
1 – 4200	2
4201 -8000	3
8001 – 12600	4
12601 and above	5

Rose earns a basic salary of ksh. 20,000 per month, she is given allowances amounting to ksh.5000.She is housed by her employer therefore pays a nominal rent of sh. 700 per month and is entitled to a personal relief of Ksh. 1200 per month. Calculate;

i) Her taxable income in Kenya pounds per year. **(2marks)**

ii) Her gross tax per month**.** **(2marks)**

5. Rationalize the denominator and **simplify** **(3marks)**

$$\frac{\sqrt{3}}{\tan 60 - 1}$$

6. Solve for x in **(3marks)**

$$3\log_3 x + 4 = \log_3 24$$

7. The transformation represented by the matrix $\begin{bmatrix} x-1 & x \\ 1 & 2x \end{bmatrix}$ maps a triangle whose vertices are **A (-1, 2), B (4, 1)** and **C (1,-4)** onto a straight line. Find the possible values of x. **(3marks).**

8. Expand $(2 + \frac{1}{4}x)^6$, hence find the value of $(2.025)^6$ rounded off to 3 decimal places.

(4marks)

9. The resistance to the motion of a car is partly constant and partly varies as the square of the speed. At 40km/h^{-1} the resistance is 530 and at 60kmh^{-1} it is 730N. What will be the resistance at 70kmh^{-1} **(4marks)**

10. By completing the square, solve for x in the equation $\mathbf{2x^2 - 6 = x.}$ **(3marks)**

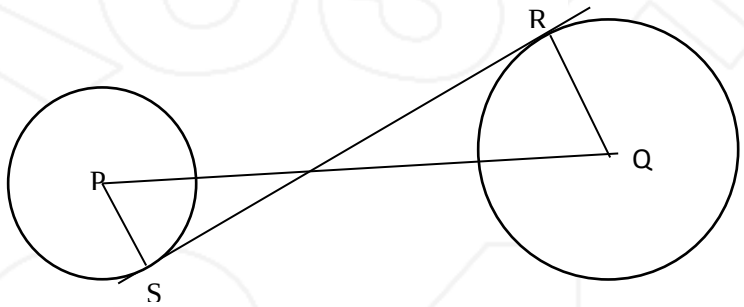
11. A die has two of its faces numbered 3.Calculate the probability of obtaining a 1or a 3 on a single cast. **(3marks)**

12. Solve the equation $4cos(3x - 10)^0 = -3.0640 \ for \ 0^0 \leq x \leq 180^0$ **(3marks)**

13. The top of a table is regular pentagon. Each side of the pentagon measures 40.0cm. Find the maximum percentage error in calculating the perimeter of the top of the table. **(3marks)**

14. The points P(8,4) and Q(2,2) are the ends of a diameter of a circle. Find the equation of the circle**.** **(3marks)**

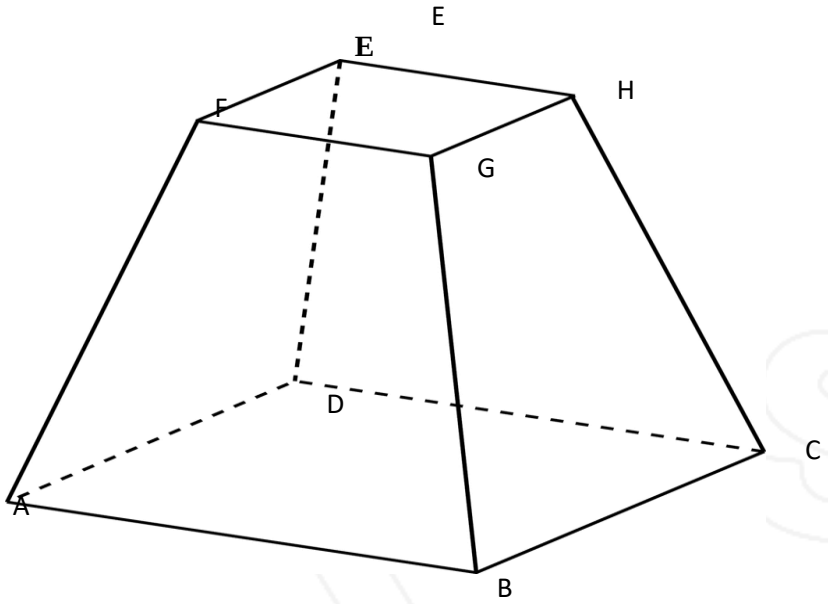
15. In the diagram below, PQ = 10cm,and the radius of the circle centers P and Q are 2cm and 4cm respectively, calculate the length of the transverse common tangent SR. **(3marks)**



16. Line $\mathbf{y=}\frac{3}{5}x$ is parallel to diameter LM of circle $\mathbf{x^2+y^2+6x-8y=0}$. Find the equation of the tangent to the circle at L**.** **(4marks)**

SECTION B 50 MARKS

17. The figure below shows a frustum ABCDEFGH of a right pyramid such that AB=9cm,BC=12cm,FG=6cm,GH=8cm and the height of the frustum is 10cm.



Find the

a) Height of the pyramid **(2marks)**

b) Length of

(i) **AC** **(2marks)**

(ii)AH **(2marks)**

c) Calculate the angle between:

i) Line AH and the plane ABCD **(2marks)**

ii) The planes ABHE and **ABCD** **(2marks)**

18. A and B are two points on the latitude 40^0N. The two points lie on the longitudes 20^0 W and 100^0 E respectively.

(a)Calculate:

(i) The distance from A to B along a parallel of latitude. **(3marks)**

(ii) The shortest distance from A to B along a great circle. **(4marks)**

(b)Two planes P and Q left A for B at 400 knots and 600 knots respectively. If P flew along the great circle and Q along parallel latitude, which one arrived earlier and by how long. Give your answer to the nearest minute (Take R = 6370 km and $\pi = {}^{22}/_{7}$). **3marks)**

19.The following table shows the distribution of marks obtained by 50 students.

Marks	45-49	50-54	55-59	60-64	65-69	70-74	75-79
No of Students	3	9	13	15	5	4	1

a) By using an assumed mean of 62, calculate:

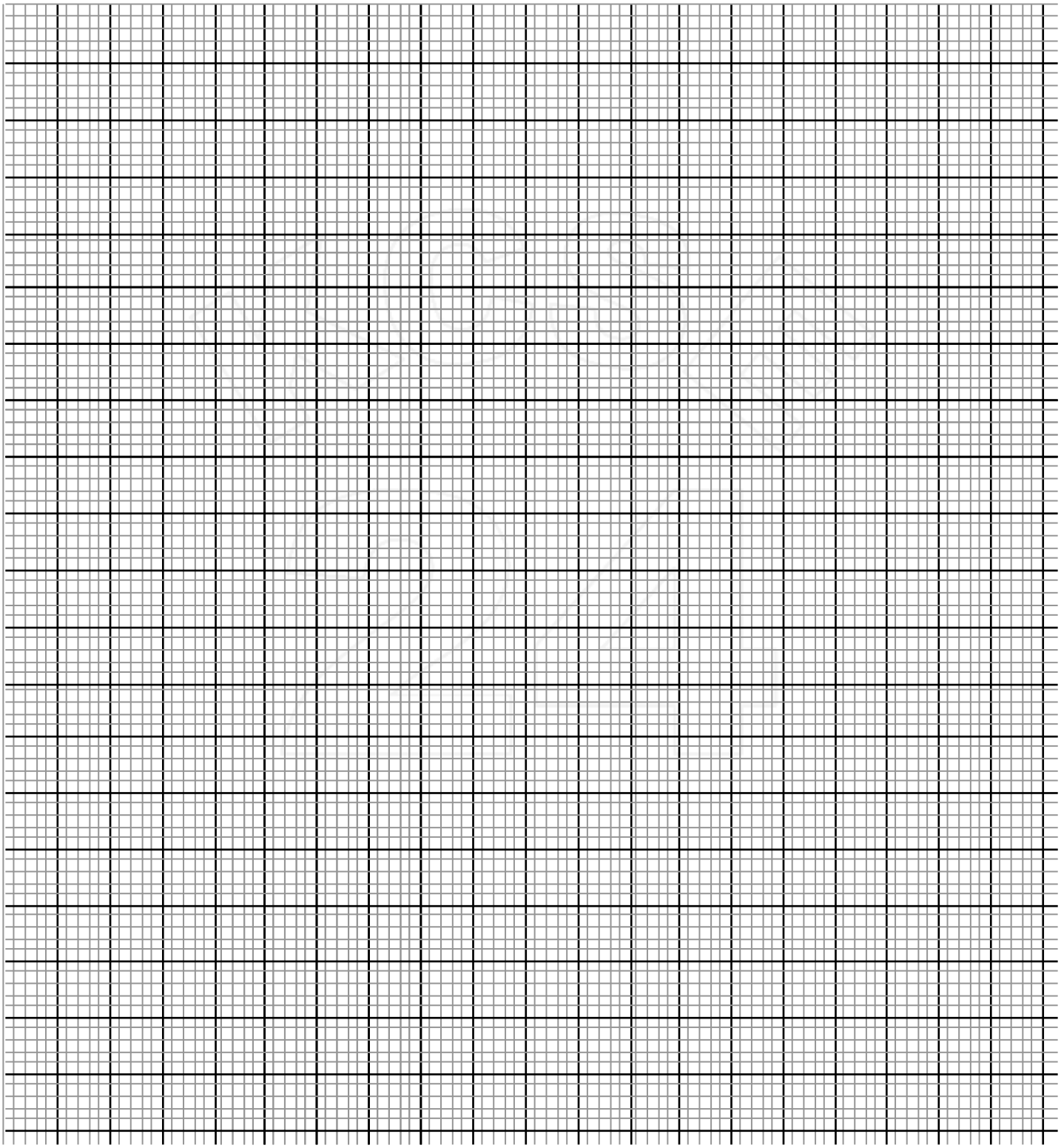
(i) The mean **(5marks)**

b) The variance **(3marks)**

c) The standard deviation **(2marks)**

20. Matrix **S** represents a reflection on line y = x, matrix **T** represents a rotation through positive 90^0 centre (0,0).A triangle whose vertices are A(-2,0), B(1,-2) and C(0,1) is subjected to these transformations, such that :the triangle $A^IB^IC^I$ is the image of ABC under transformation matrix **S** and that $A^{II}B^{II}C^{II}$ is the image of $A^IB^IC^I$ under transformation matrix **T**.

a) Plot the three triangles on the grid provided below. **(4marks)**



b) Find a single matrix that will map $A^{II}B^{II}C^{II}$ onto ABC. **(3marks)**

c) Describe the matrix in b) above**.** **(1mark)**

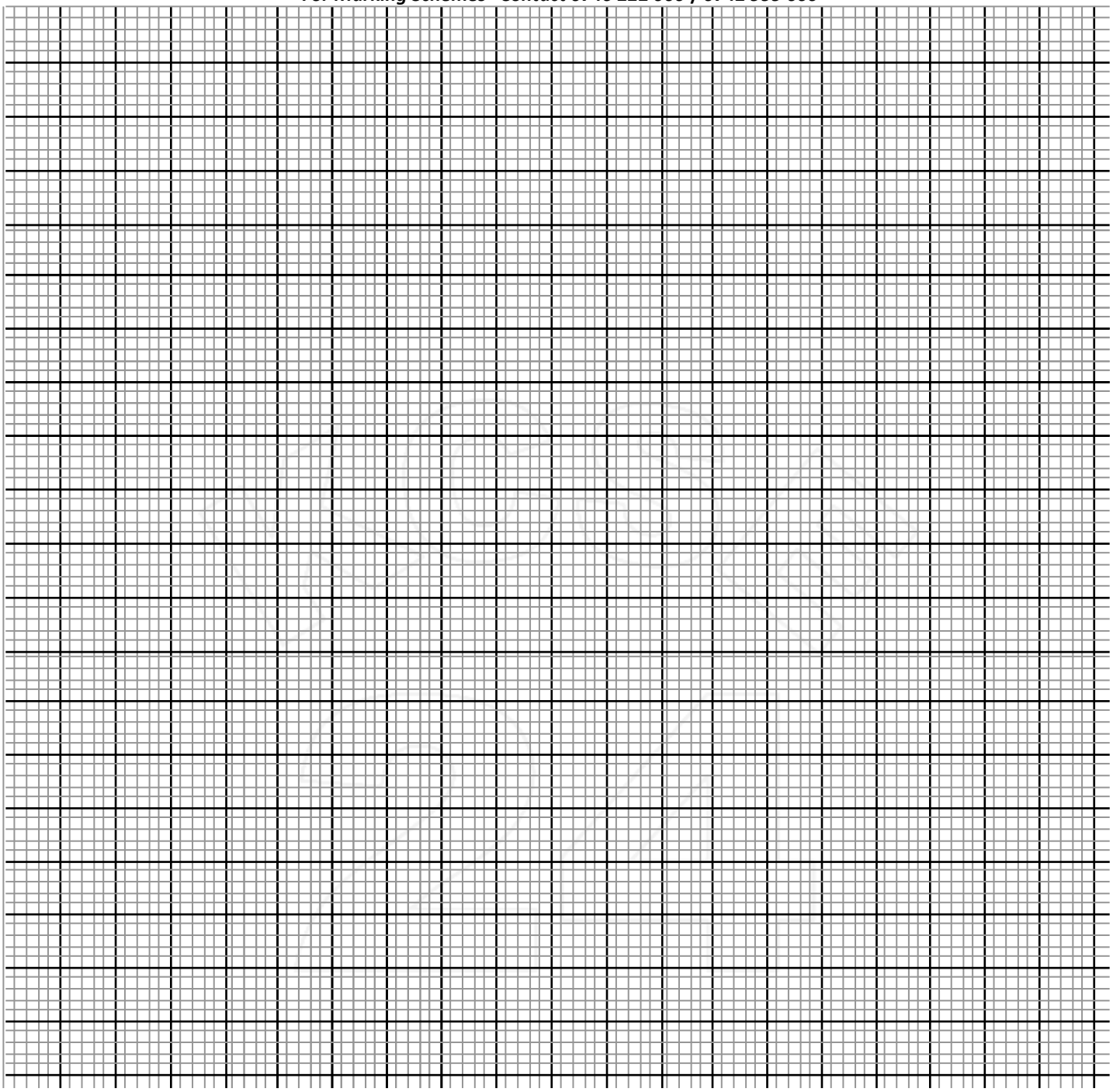
d) If triangle ABC is sheared ,shear factor 2 with the y-axis invariant, find the coordinates of the image. **(2marks)**

21. Sigei's Flower Achievers Company has 36 hectares of land. The company decides to prepare the land for planting wheat and maize. The labour cost of planting maize is Ksh. 300 per hectare while it costs Ksh 900 to plant a hectare of wheat. Maize takes 3 labourers per hectare while wheat takes 6 labourers per hectare. Atleast 72 labourers are to be hired and Ksh. 15,000 is to be spent for labour costs. The company hopes to make a profit of Ksh 2,000 per hectare of maize and Ksh 4,500 per hectare of wheat. $let\ the\ number\ of\ hectares\ for\ maize\ be\ x$

$let\ the\ number\ of\ hectares\ for\ wheat\ be\ y$

(a) Write down inequalities representing the above **information** **(3marks)**

(b) On the grid provided, draw the inequalities by shading unwanted regions **(4marks)**



c)Use the graph to:

(i) determine the number of hectares of maize and wheat that should be prepared in order for the company to maximize **profit** **(2marks)**

(ii) Calculate the maximum profit **(1mark)**

22.a) Using a ruler and a pair of compasses only, construct parallelogram ABCD in which AB=7cm, BC=5cm and angle CBA=45°. **(4marks)**

b) From a point T, 3cm from D on DC, construct the locus of a point Q, 3.5cm from T to intersect AD and DC at V and W respectively. Measure angle VTW. **(4marks)**

c) Find the area of the minor sector TVW in **cm^2** **(2marks)**

KCSE 24

23. The thirteenth term of an arithmetic progression is 27.Given that the seventh term equals to three times the second term, find

a) The first term and the common difference of the progression. **(4marks)**

b) The sum of the first three even numbered terms of the progression. **(3marks)**

c) It's given that $(b-\frac{9}{4})$,b and (b+3.375) are the 2nd,$3^{rd}$and 4^{th}terms of a geometric progression.

Determine the value of b. **(3marks)**

24. The equation of a curve is given by $y = 11x - x^2$

(a) Determine coordinates of the stationary point. **(3marks)**

b) By integration, determine the actual area bounded by the curve $y = 11x - x^2$ and the line $y = 2x$ **(4marks)**

c) Find the equation of the normal to the curve at $x = 2$ **(3marks)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

COMPUTER STUDIES

451/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

Instructions to Candidates

- *Write your Name, Index number and Admission number in spaces provided above.*
- *This paper consists **TWO** sections.*
- *Answer **ALL** 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 this question paper.*

For Examiner's Use Only

Questions	Maximum Score	Actual Score
1-15	40	
16	15	
17	15	
18	15	
19	15	
20	15	
TOTAL		

SECTION A (40 MARKS)

Answer ALL Questions from this section

1. A multi-national company allows employees to telework or work at home and communicate with the office using the Internet. List the hardware, software and services required to access and use the Internet. **(3 Marks)**

……

……

……

2. Mr. Kala wants to buy a printer to use in his automobile workshop for printing sales orders in duplicates. He has approached you for advice. What printer should he buy? **(1 Mark)**

……

Give a reason for your answer. **(1 Mark)**

……

……

3. Explain why a DVD has a high storage capacity compared to a CD. **(2 Marks)**

……

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4. Using a well labelled diagram, describe the fetch and execute cycle. **(3 Marks)**

5. Explain any two factors to consider when evaluating the suitability of a room for a computer laboratory. **(2 Marks)**

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6. Distinguish between OCR and OMR **(2 Marks)**

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7. State any two advantages of the artificial intelligence. **(2 Marks)**

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8. (a) The word COM appears several times in an essay. Jane would like to change the word to COMPUTER. Advice her on how she can accomplish this task using a word processor. **(2 Marks)**

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(b) Differentiate between widows and orphans as used in Word processing. **(2 Marks)**

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9. State the functions of the following word processing editing features. **(2 Marks)**

(a) Thesaurus

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(b) Grammar checker

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10. (a) Rose wants to send an email to Jack. Explain two items that must be present for the mail to be sent. **(2 Mark)**

……

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(b) (i) Define the term network protocol **(1 Mark)**

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……

(ii) Name any **two** examples of network protocols **(1 Mark)**

……

……

11. (a) What is the importance of layering in DTP? **(1 Mark)**

……

……

(b) Distinguish between column guides and margin guides as used in DTP. **(2 Marks)**

……

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……

12. Study the work sheet below and answer the questions that follow:

	A	B	C	D	E	F
1						
2	**ISABOKE MIXED HIGH SCHOOL**					
3	**ADM. NO**	**NAME**	**MATHS**	**ENGLISH**	**AVERAGE**	**RANK**
4	1001	Akinyi	78	85		
5	1002	Kamau	89	77		
6	1003	Leila	45	46		
7	1004	Taita	67	69		
8	1005	Mosomtany	98	67		
9	**Highest Score**					
10	**Lowest Score**					
11	**Average Score**					

(a) Write a formula that would be entered in cell E4 to compute the average score for Akinyi.**(1 Mark)**

(b) Write down a formula that used to return the rank of Leila based on average score.

(1 Mark)

(c) Write down a formula that would return the number of students whose score in English is below 70. **(1 Mark)**

13. The manager of a company wants to improve the security of the computer network. She has decided to use authentication techniques so that employees can identify themselves to the system. Name **two** authentication techniques and describe how each technique would help keep the data more secure. **(3 Marks)**

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14. Mary who works as a systems analyst for JeroKin investments has produced documentation for a newly developed system. State three reasons why both user and technical documentation are needed. **(3 Marks)**

……

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15. Environmentalists plan to test a fast flowing river for pollution. State two advantages of using a computer to do this rather than doing it manually.

(2 Marks)

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……

SECTION B (60 marks)

Answer questions 16 and any other three questions from this section.

16. (a) Name two different types of loop structure in a typical programming language **(1 Mark)**

……

……

(b) For each loop named in (a) above write a pseudocode to illustrate how ten numbers could be input and their average returned using the named loop. **(4 Marks)**

Type 1 loop

Type 2 loop **(4 Marks)**

(c) A school wants to monitor the number of hours spent by a class of 30 students on the Internet.

Using a flowchart write an algorithm which will;

- for each student, record the times logged on and logged off
- calculate the length of time each student spends online
- calculate and output the average length of time per day spent by each student on the Internet

Assume that a student only logs on and off once a day. **(6 Marks)**

KCSE 24

(a) Explain three different types of feasibility that system investigation and system analysis must consider. **.....**

.....

.....(3 Marks)

(b) (i) State the any two reasons of systems maintenance. **(2 Marks)**

.....

.....

(ii) State any two activities involved in systems maintenance. **(2 Marks)**

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.....

(c) A shop owner wants to change from a manual stock control system to a computerised stock control system.

(i) State three reasons why the shop owner would want a computerised system.**(3 Marks)**

.....

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(ii) Describe any two methods of fact-finding that would be used to analyse the manual stock control system. **(2 Marks)**

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(d) (i) State two types of computer crimes. **(1 Mark)**

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……

(b) Describe two ways of protecting against computer crime. **(2 Marks)**

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17. (a) Draw and label a diagram to show the relationship between a root directory, a subdirectory and a file. **(3 Marks)**

(b) State three file management tasks that are carried out by an operating system. **(3 Marks)**

(c**)** Explain how the operating system deals with errors that occur while a program is running. **(2 Marks)**

(d) One purpose of most operating systems is to provide a human computer interface (HCI).

(i) Describe the following HCIs and give an example of an application which would use each:

(i) Menu based **(1 ½ Marks)**

(ii) Natural language **(1 ½ Marks)**

(d) In business, a computer user may use two types of application software; general purpose and special purpose software.

(i) Distinguish between the two. **(2 Marks)**

(ii) An employee uses a special-purpose package. Explain how his subsequent actions will be different from using a general-purpose package. **(2 Marks)**

18.(a) Explain any three methods of representing negative numbers in computers. **(3 Marks)**

(b) Using 8 bits and twos complement, subtract 33_{10} from 12_{10}, giving your answer in decimal notation. **(3 Marks)**

(c) Determine the value of X in the equations: **(1 ½ Marks)**

(i) $1001101_2 - X_2 = 11010_2$

(ii) $X_2 + 11101_2 = 100_{10}$ **(1 ½ Marks)**

(d) (i) Using a well labelled diagram describe timesharing processing mode. **(3 Marks)**

(ii) State two advantages and two disadvantages of centralized processing mode **(2 Marks)**

19. (a) A school has a cabled LAN. The head teacher of the school wants to replace it with a WLAN.

(i) Explain the differences between a cabled LAN and a WLAN. **(2 Marks)**

(ii) State two advantages and two disadvantages of having a WLAN. **(2 Marks)**

(b) (i) Computer networks can be classified according to functional relationships which exist among the network elements. Identify the networks represented below. **(2 Marks)**

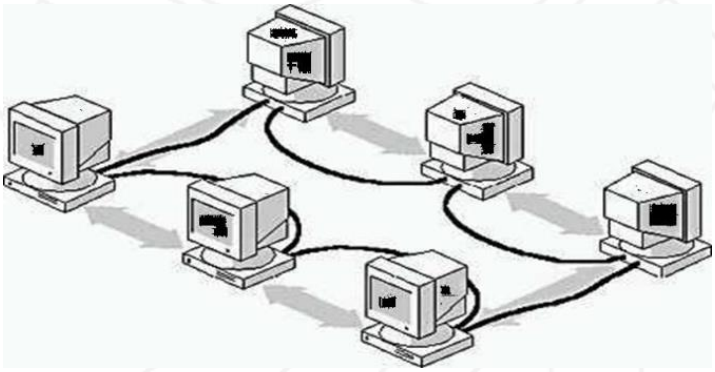

Figure 1_____

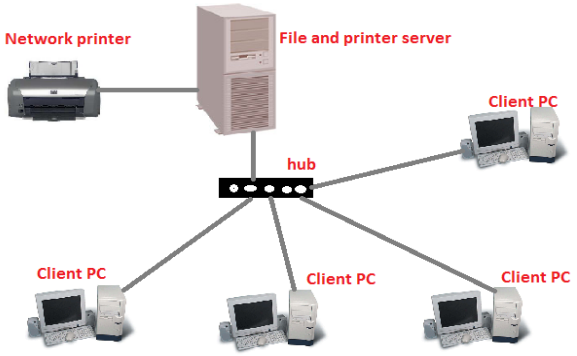

Figure 2_____

(ii) State one advantage and one disadvantage of each of the networks identified in (i) above.

(2 Marks)

(c) ISABOKE library has a file for storing details of the books it has and a file for storing details of its borrowers as shown below. The files are linked using a common field. Use this information to answer the questions that follow.

Book File

BOOK CODE	TITLE	AUTHOR	PUBLISHED	NUMBER IN STOCK	COST
700021	A hoe cannot lie	Sabrina Awuor	2013	45	900
700025	aughter the medicin	Wasswa Bbaale	2012	8	670
700035	Disabled? Not I	Oteng'o Rangaga	2014	9	700
700055	Drama, my passion.	Gatsibwage Chumo	2011	4	800

Borrower File

ADMISSION NUMBER	FIRST NAME	LAST NAME	FORM	BOOK BORROWED	DATE DUE
76002	Mola	Konale	4 S	700021	12/3/2015
77001	Joseph	Magange	4 P	700025	13/3/2015
7709	Georgina	Silwal	4 N	700055	12/3/2015
7800	Harry	Arudhi	4 E	700035	11/3/2015

(i) How many field values are there in the book file? **(½ Mark)**

(ii) What type of database do these two files form? **(½ Mark)**

(iii) State two reasons why this type of database system is used rather than having two flat files. **(2 Marks)**

(d) (i) List any four database models. **(2 Marks)**

(ii) Distinguish between a primary key and a foreign key. **(2 Marks)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

COMPUTER STUDIES

451/2

PAPER 2 (PRACTICAL)

TIME: 2½ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

1. *Type your name and index number at the top right hand corner of each printout.*

2. *Sign and write the date of the examination below the name and index number on each printout.*

3. *Write your name and index number on the compact disks.*

4. *Write the name and version of the software used for each question attempted in the answer sheet.*

5. *Passwords* ***should not be used*** *while saving in the compact disks.*

6. *Answer all the questions.*

7. *All questions carry equal marks.*

8. *All answers must be saved in your compact disks.*

9. *Make a printout of the answers on the answer sheets provided.*

10. *Hand in all the printouts and the compact disks.*

1. (a) Create a folder named **Harper**. Type the document below exactly as it appears using a word processing package and save it as MOCKING_BIRD in the folder created. **(8mks)**

TO KILL A MOCKINGBIRD

To Kill a Mockingbird is primarily a novel about growing up under extraordinary circumstances in the 1930s in the Soutern United States. In To Kill a Mockingbird, author Harper Lee uses memorable characters to explore civil rights and rasism in the segregated Southern United States of the 1930s.

Told through the eyes of Scout Finch, you learn about her father Atticus Finch, an attorney who hopelessly strives to prove the innocence of a black man unjustly accused of rape; and about Boo Radley, a mysterious neighbor who saves Scout and her brother Jem from being killed.

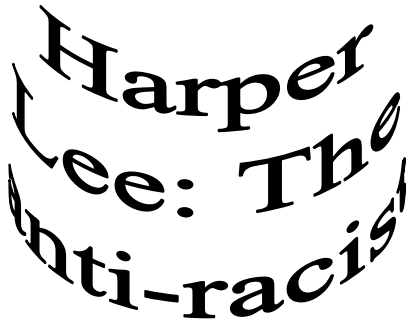
The Three Most Important Aspects Of To Kill A Mockingbird:

The title of To Kill a Mockingbird refers to the local belief, introduced early in the novel and referred to again later, that it is a sin to kill a mockingbird. Harper Lee implies that it's unjust and immoral.

The events of To Kill a Mockingbird take place while Scout Finch, the novel's narrator, is a young child. But the sophisticated vocabulary and sentence structure of the story indicate that Scout tells the story many years after the events described, when she has grown to adulthood.

To Kill a Mockingbird is unusual because it is both an examination of racism and a bildungsroman. Lee examines a very serious social problem. Lee seamlessly blends these two very different kinds of stories.





(b) Save a copy of the document created above as "MOCKING_BIRD 2" in the folder created in (a) above and use to answer parts (c) to (e). **(1mrk)**

(c) (i) Insert a drop cap to the first letter of the first paragraph, dropping it by two lines. **(2mks)**

(ii) Apply bullets to the paragraphs under the second heading. **(3mks)**

(iii) Change the first paragraph under the first heading to three columns. **(3mks)**

(iv) Format the heading "**TO KILL A MOCKINGBIRD**" as follows: **(4mks)**

- **Alignment**: Right
- **Font type**: Arial black
- **Font size**: 18
- **Font style**: Underline

(v) Proofread the document to correct spelling mistakes **(1mrk)**

(vi) Set the page to A4 size, with the following margin specifications: **(3mks)**

- **Top:** 0.63"
- **Bottom:** 0.6"
- **Left:** 0.6"
- **Right:** 0.63"

(vii) Set the line spacing of the last two paragraphs starting with "To Kill a Mockingbird is unusual..." to 2.0. **(2mks)**

(viii) Insert a header bearing your name and admission number. **(2mks)**

(ix)Move the 1st paragraph under the second heading to come below the drawing.**(2mks)**

(x)Set a hanging indent to the 2nd paragraph which starts with "To Kill a Mockingbird is unusual…" **(2mks)**

(xi)Replace all words written "racism" with "racial discrimination" **(2mks)**

(xii) Set the 1st paragraph which starts with "To Kill a Mockingbird is primarily a…" so as the text is aligned to the right. **(1mk)**

(e) Automatically paginate the document using the format **"page x of y"** **(1mk)**

(f) Apply a page border to the whole document with the following formats: **(3mks)**

- **Style**: Double line
- **Border color**: Blue
- **Border width**: 2¼pt

(g) (i) Create a table at the end of the document created in (b) above and enter the following data **(3mks)**

BOOK _NO	BOOK_TITTLE	AUTHOR	PRICE
B0-02	In Cold Blood	Truman capote	875.00
B0-09	Roman Holiday	Gregory Peck	955.00
B0-03	The catcher in the Rye	J. D. Salinger	650.00

(ii) Insert the title "RELATED BOOK NOVELS" as the first row of the table. Align the title to the center **(2mks)**

(iii) Apply borders to the whole table **(1mk)**

(iv) Using a formula, calculate the average cost of books in the table. **(2mks)**

(h) Print the documents; MOCKING_BIRD and MOCKING_BIRD 2 **(2mks)**

2. The tables below, **STUDENT, SUPERVISOR** and **SUPERVISIONS** are extracts of records kept in MOKASA UNIVERSIRY for project supervisions.

Student Number	Name	Gender	Project Fee Paid
C001	Ken	M	32000
C002	Joy	F	27800
C003	Lero	M	18900
C004	Moth	F	42700
C005	Ben	M	45000

Table 1 STUDENTS TABLE

Supervisor Number	Name	Department
L220	Alex	Mechanical
L230	Sakaja	ICT
L240	Roy	Electronics
L250	Mati	Education
L260	Joy	Human Resource

Table 2 SUPERVISOR S' TABLE

Supervision Number	Supervision Date	Student Number	Supervisor Number	Project Title
100	12/03/2015	C001	L220	Java
200	22/03/2015	C003	L230	Website
300	17/03/2015	C004	L240	Robotics
400	02/03/2015	C001	L220	Java
500	18/03/2015	C002	L240	Robotics
600	12/03/2015	C004	L230	Java
700	11/03/2015	C002	L250	Database
800	12/03/2015	C003	L220	Java
900	12/04/2015	C005	L250	Database
1100	12/04/2015	C002	L250	Database

Table 3 SUPERVISIONS TABLE

a) Using a database application software, create a database file named **PROJECT** **(1mk)**

b) Create three tables named **STUDENT, SUPERVISOR** and **SUPERVISIONS** as shown above. **(9mks)**

c) Set the primary key for each table. **(3mks)**

d) Create relationships among the tables. **(2mks)**

e) Enter the data in the table **STUDENT, SUPERVISOR** and **SUPERVISIONS** as shown above. **(9mks)**

f) Create a form for each table above. **(3mks)**

g) Create a query named **BALANCE** to display student name, Gender, project fee balance per student, given that the total project fee is **Ksh.50000**. **(4mks)**

h) Create a query named **BALANCE2** to display students' Names, project title whose fee balance is above **Ksh.20000.** . **(4mks)**

i) Create a bar chart based on question (h) to display students Name and balance. Save as **BALANCE CHART.** **(3mks)**

j) Create a report named SUPERVISION to display Students Names, Project Title, names of supervisor, and supervision Dates. The records in the report should be grouped by students' Name and the number of supervisions by each student should be displayed. **(5mks)**

k) Title the report as supervision per lecturer. **(2mks)**

l) Print the following:

- **Tables**: STUDENT, SUPERVISOR and SUPERVISIONS **(2mks)**
- **Queries**: BALANCE and BALANCE2 **(2mks)**
- **REPORT**: SUPERVISIONS **(1mk)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

HOME SCIENCE

441/1

PAPER 1 (THEORY)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSRUCTIONS 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 three sections **A, B** and **C***
*d) Answer all questions in section **A** and **B** and **TWO** questions only in section **C** in the spaces provided*
d) All questions must be answered in English

For examiner's use only

Section	Question (s)	Maximum score	Candidates score
A	1 – 27	40	
B	28	20	
C		20	
		20	
	Total score	**100**	

SECTION A (40 MARKS)

Answer all questions in the spaces provided

1. What is a dessert? Give one example **(1mk)**

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2. Identify **two** types of vacuum cleaners. **(1mk)**

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3. Mention **two** types of electronic money transfer used to pay for goods and services. **(1mk)**

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4. State **two** reasons why a person suffering from scurvy may develop anaemia. **(2mks)**

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5. List **four** types of fabrics that are drip dried during laundry. **(2mks)**

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6. Suggest **two** points to bear in mind when attaching buttons. **(2mks)**

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7. State **two** advantages of owning a home. **(2mks)**

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8. Mention **two** importance of melanin in the body. **(2mks)**

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9. Give **two** reasons why lampshades are popular. **(2mks)**

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10. What is the meaning of haberdashery **(1mk)**

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11. Outline **four** ways of preventing cholera outbreak **(2mks)**

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12. Identify **two** practices necessary for successful steaming **(2mks)**

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13. What is the role of a 'U/S' bend in concealed drainage system **(1mk)**

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14. Highlight **two** dangers of excess weight gain during pregnancy **(2mks)**

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15. Identify **four** fabrics that should not be wrung. **(2mks)**

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16. List **four** fastenings suitable for a toddlers garment. **(2mks)**

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17. Highlight **two** benefits of studying home science to the community. **(2mks)**

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18. State **two** reasons for blanching vegetables. **(2mks)**

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19. Give **two** example of builders added to detergents during manufacture**. (1mk)**

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20. State **four** advantages of regular cleaning of household items. **(2mks)**

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21. Distinguish between raglan and kimono sleeve. **(1mk)**

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22. State **two** characteristics of incomplete or second class proteins. **(1mk)**

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23. Identify **two** immunizable diseases caused by viruses. **(1mk)**

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24. Identify **two** situations when a lactating mother produces little or no milk at all. **(1mk)**

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25. Name **two** areas in the house where light fixtures can be found. **(1mk)**

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26. Define the following in relation to weaning. **(1mk)**

(a) Basic mix

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(b) Multi mix

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SECTION B (20MKS) (COMPULSORY)

27. You have been asked to help with household chores, describe how you would:

a) Launder a polyester shirt with a chewing gum stain. **(11mks)**

b) Clean a blocked kitchen sink. **(5mks)**

c) Clean a golden ring **(4mks)**

SECTION C 40MKS

*Answer **two** questions only in this section*

28. (a) Explain **three** forms of credit buying **(3mks)**

.(b) Using diagrams describe how to attach a knife pleated frill on the hem of an apron using an overlaid seam. **(10mks)**

(c) Explain **three** practices that would ensure a sewing machine remain in good working condition. **(3mks)**

(d) Highlight **four** practices to ensure good eyesight. **(4mks)**

29. **(a)** Classify laundry equipment giving an example in each case. **(4mks)**

(b) Describe the preparation and attachment of a round collar using a facing. **(10mks)**

(c) Explain **six** uses of sugar in flour mixtures **(3mks)**

(d) Explain **three** benefits of attending post-natal clinic to the mother. **(3mks)**

30. **(a)** Explain the acronym RICE as used in the management of sprains. **(4mks)**

(b) Describe the preparation of a set in sleeve with continuous slit opening in readiness for attachment. **(10mks)**

(c) Explain **three** reasons for covering a sauce pan when cooking **(3mks)**

(d) Explain **three** rights of passengers' in a public service vehicle. **(3mks)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

HOME SCIENCE

441/2

PAPER 2 (PRACTICAL)

TIME: 2½ HOURS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education.

CONFIDENTIAL

The school to provide the following for the students:-

1. Light weight cotton fabric 65 × 90cm

2. Sewing thread to match the fabric.

3. Both large and small sewing equipment.

4. A4 size envelope.

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KCSE 2024 PREDICTION EXAM

SERIES 3

HOME SCIENCE

441/2

PAPER 2 (PRACTICAL)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

(CLOTHING CONSTRUCTION)

A pattern of girls dress is provided. You are advised to study the sketches, the instructions and the layout before the test.

Material provided:

1. Pattern pieces

ADress Front

BDress Back

C Front Yoke

D Pocket

EBack neck facing

2. Plain light weight cotton fabric 65 cm by 90 cm.

3. Sewing cotton thread to match the fabric.

4. 1 large envelope

THE TEST

Using the materials provided, cut out and make up the right half of the girls dress to show the following process:-

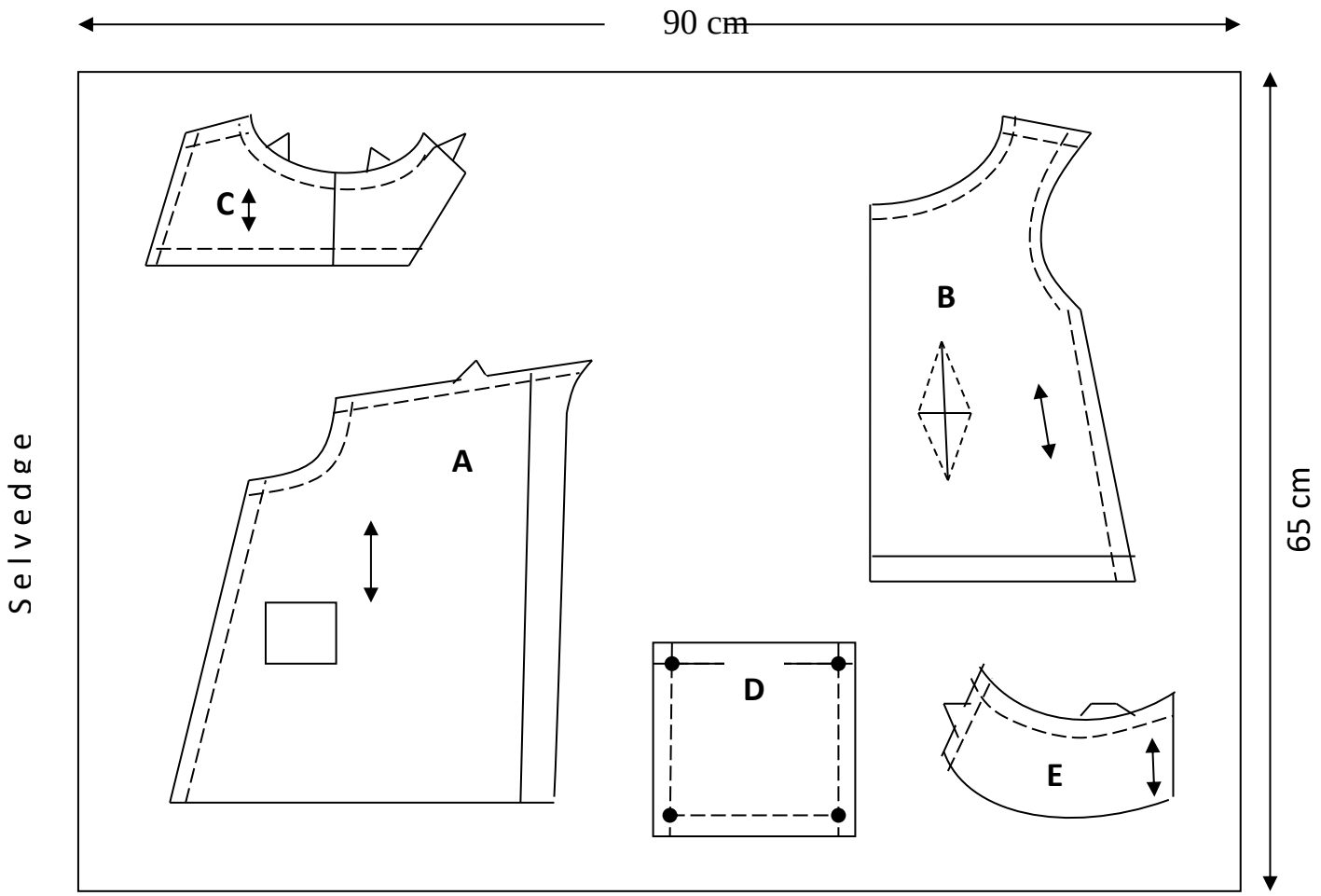
1. The making of the double pointed dart on the dress back.
2. The preparation of inverted pleat on the pocket.
3. Preparation and attachment of the pocket.
4. Preparation/making of gathers on the dress front.
5. Attachment of front yoke to dress front using an overlaid seam. ***(Do not trim, do not neaten).***
6. The making of shoulder seam using double stitched seam.
7. Making the side seam using plain seam.
8. Joining of the front facing and back neck facing and neatening the free edge.
9. Use the joined facing to neaten the neck line.
10. The working of the button hole.
11. Neatening of the lower edge of the dress using solid hem with the use of slip hemming stitches.

NB:

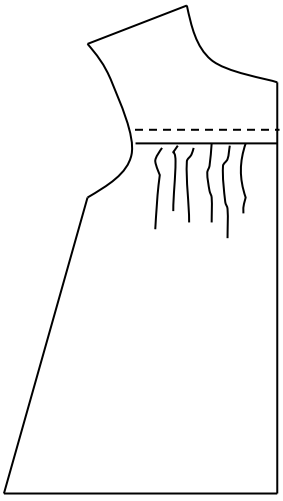
At the end of the examination, firmly sew on your work, on single fabric – a label having your name and index number. Remove the needles and pins from your work, then fold your work neatly and place it in the envelope provided.

DO NOT PUT SCRAPS OF FABRIC IN THE ENVELOPE AND DO NOT SEAL THE ENVELOPE.

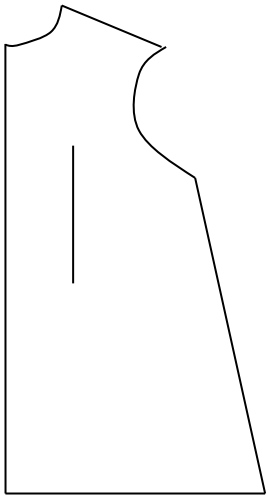
LAYOUT – NOT DRAWN TO SCALE



FRONT VIEW



BACK VIEW



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KCSE 2024 PREDICTION EXAM

SERIES 3

HOME SCIENCE

441/3

PAPER 3 (PRACTICAL)

TIME: 1¾ HOURS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

(Food and Nutrition)

PLANNING SESSION: 30 minutes

PRACTICAL TEST SESSION: 1 ¼ Hours

Instructions to Candidates

a) Read the test carefully.
*b) **No extra stationery is provided**.*
c) You are expected to use pages of the question paper as stationery for your work
d) Tear the pages along the dotted lines as shown.
e) Text books and recipes may be used during the planning session as reference materials
f) You will be expected to keep to your order of work during the practical session.
g) You are only allowed to take away your reference materials at the end of the planning session.
h) You are not allowed to bring additional notes to the practical session.

THE TEST

You have invited two of your friends for a lunch picnic. Using the ingredients listed below, prepare cook and pack a suitable one course meal for the three of you. Include a refreshing drink.

Ingredients.

Plain wheat flour/irish potatoes
Onions
Tomatoes
Carrots
Cabbage
Fish/chicken
Salt
Capsicum
Sugar
Fruits in season
Oil/cooking fat
Spices

PLANNING SESSION – 30 MINUTES

For each task listed below use separate sheets of paper and carbon paper to make duplicate copies then proceed as follows:

1. Identify the dishes and write their recipes
2. Write your order of work.
3. Make a list of the foodstuff and equipment you will require.

For Marking Schemes Contact 0746 222 000 / 0742 999 000

KCSE 2024 PREDICTION EXAM

SERIES 3

ISLAMIC RELIGIOUS EDUCATION

314/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

Instructions to candidates

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

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

c) *This paper consists of* ***SIX*** *questions*

d) *Answer any* ***FIVE*** *questions in the spaces provided at the end of question six*

e) *Candidates should check the question paper to ascertain that all the questions are available*

f) *Candidates should answer the questions in English*

FOR EXAMINER'S USE ONLY

QUESTION	1	2	3	4	5	6	TOTAL SCORE
CANDIDATE'S SCORE							

1. (a) State the teachings a Muslim can learn from surah Nasir (Q:110) **(5 mks)**

(b) Explain the circumstances that led to the revelation of Surah An Nur (Q.24). **(5 mks)**

(c) Give reasons why the nature of the Quran changed from short to long verses when it was revealed in Madina **(10 mks)**

2. (a) State the teachings of Ayatul Qursi on the attributes of Allah. **(5 mks)**

(b) Explain five problems in translating the Quran into other languages. **(5 mks)**

(c) Describe the language of Quran. **(10 mk**

3. (a) Name the main shia collections of Hadith. **(4 mks)**

(b) Explain the methods used by Imam Bukhari in collecting and compiling Hadith. **(6 mks)**

(c) Discuss the effect of anger. **(10 mks)**

4. (a) Outline four differences between Sharia and fiqh. **(4 mks)**

(b) Discuss the contribution made by Imam Abu Hanifah to Islam. **(8 mks)**

(c) Describe the benefit of Tawba. **(8 mks)**

5. (a) Describe the undesirable act s in prayers. **(5 mks)**

(b) State the difference between Zakatul Mal and Zakatul fitr. **(5 mks)**

(c) Discuss how Hajj helps a Muslim to advance spiritually. **(10 mks**

6. (a) Outline the qualities of an Imam according to the shia belief. **(5 mks)**

(b) Discuss the significance of believing in Qadar (predestination). **(7 mks)**

(c) State the characteristics of the revealed scriptures. **(8 mks)**

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KCSE 2024 PREDICTION EXAM

SERIES 3

ISLAMIC RELIGIOUS EDUCATION

314/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

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

c) *This paper consists of **SIX** questions*

d) *Answer any **FIVE** questions in the spaces provided at the end of question six*

e) *Candidates should check the question paper to ascertain that all the questions are available*

f) *Candidates should answer the questions in English*

FOR EXAMINER'S USE ONLY

QUESTION	1	2	3	4	5	6	TOTAL SCORE
CANDIDATE'S SCORE							

1. (a) Identify any five activities that would lead to Muunkarat. **(5 mks)**

(b) Explain the basic beliefs on which Islamic morality is based. **(8 mks)**

(c) State seven main objectives of practicing Husunul khulug. **(7 mks)**

2. (a) State five types of sexual perversion according to Islam. **(5 mks)**

(b) Identify the identities a muslim should retain in a changing society. **(5 mks)**

(c) Discuss the measures put forward by Islam to curb the spread of HIV/AIDs. **(10 mks)**

3. (a) Discuss reasons why the family is considered the bedrock of Islamic society. **(8 mks)**

(b) Outline six duties of a husband in a Muslim family. **(6 mks)**

(c) Highlight the position of a woman in Islam. **(6 mks)**

4. (a) Give eight factors that may invalidate an Islamic contract. **(8 mks)**

(b) Discuss ways of eliminating corruption in the society. **(12 mks)**

5. (a) State the significance of the two covenants of Al-Agaba entered between the prophet (P.B.U.H) and Madinans. **(5 mks)**

(b) Explain any five events that led to the formation of the khawarij movement. **(10 mks)**

(c) Describe the factors that influenced the spread of Islam in North Eastern Kenya. **(5 mks)**

6. (a) Discuss the contribution of Sheikh Abdallah Al-Farsy to education in East Africa. **(10 mks)**

(b) Discuss the views of Ibn Khaldun on eduction. **(10 mks)**

TO ALL CANDIDATES;

Incase a Significant Number of these Questions Appear in KCSE Exam, Don't panic!

TAKE IT EASY

FOR MARKING SCHEMES

CONTACT

0746 222 000 / 0742 99 000

kcsepredictions@gmail.com

SUCCESS

TO ALL

KCSE CANDIDATES