KCSE 2023 REFLECTOR

ALL SUBJECTS

First Series of Exclusive Set of Probable Questions Predicted in the Final Examinations for our KCSE Candidates Scheduled for November 2023.

A Reflection of what is expected in KCSE 2023 Examinations.

SUBJECTS COMPILED;

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

SERIES 1

For Marking Schemes

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

A REFLECTION OF KCSE

KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

BIOLOGY

231/1

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) *All Questions are Compulsory*

b) *Write your Answers in the Spaces Provided*

c) *Wrong Spelling of Technical Terms shall be Penalized*

FOR EXAMINERS' USE ONLY

MAX SCORE	STUDENT'S SCORE
80	

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Answer ALL questions in the spaces provided.

1. State **TWO** ways in which the study of Biology has helped the world in the accelerated fight against the recent Covid-19 pandemic. **(2mks**

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2. a) Give **ONE** function of centrioles **(1mk**

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b) Name a Kingdom in which all members lack centrioles in their cells **(1mk**

……

3. a) Name the skin pigment formed by cells in the mammalian skin **(1mk**

……

b) Which genetic disorder is associated with the absence of the pigment named in 2a)? **(1mk**

……

c) How does the skin pigment help protect human beings against skin cancer? **(1mk**

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4. Explain the following observations

a) More water hyacinth plants are found growing along the shore of Lake Victoria than in the deep waters **(1mk**

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b) Green plants grow faster in lower altitudes areas than in higher altitude areas **(2mks**

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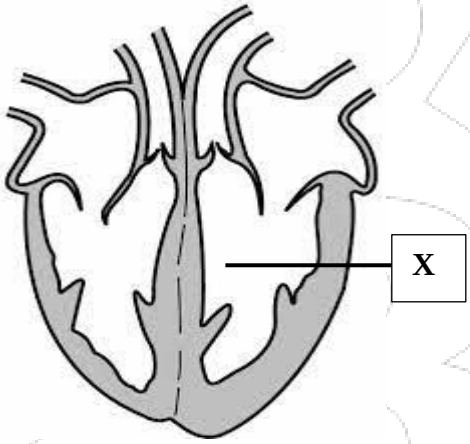
5. State **TWO** functions of a cover slip in light microscope work **(2mks**

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6. Use the diagram of the heart shown below to answer the questions that follow



a) From the diagram, give a reason to show that **X** is the left ventricle **(1mk**

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b) Name a class of organisms where all members have the heart structure above **(1mk**

……

c) Why are the muscles found in the heart above said to be myogenic? **(1mk**

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7. Account for the following

a) Red blood cells lack mitochondria **(1mk**

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b) The testes are found hanging outside the body in male human beings **(1mk**

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8. a) Why is pancreas said to be a dual gland? **(1mk**

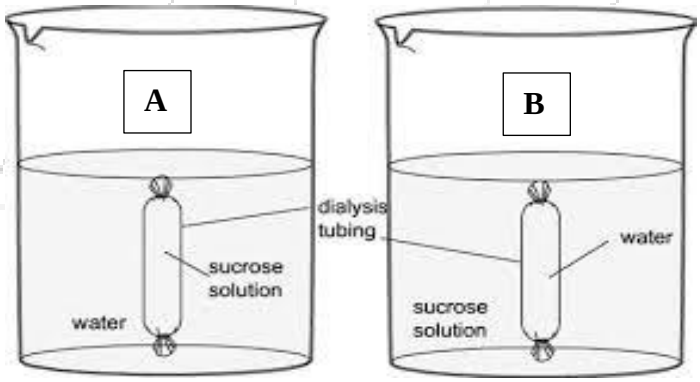
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b) Name the endocrine tissue in the pancreas **(1mk**

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9. A student made a set up shown below to study a physiological process



a) In which beaker did the dialysis tubing reduce in size? **(1mk**

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

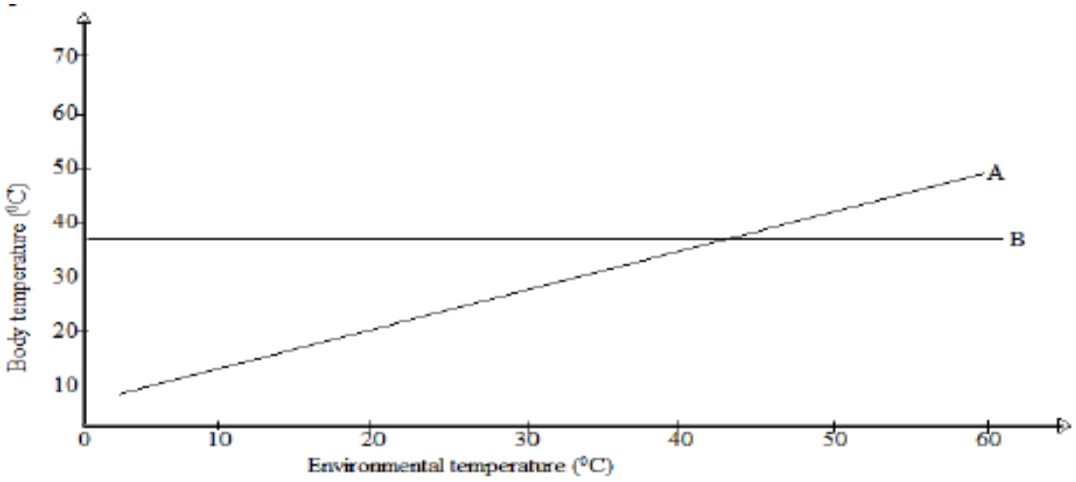
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10. The diagram below shows a graph of body temperature of two different organisms against changing environmental temperature



a) State the name used to refer to animal **A** in terms of thermoregulation **(1mk**

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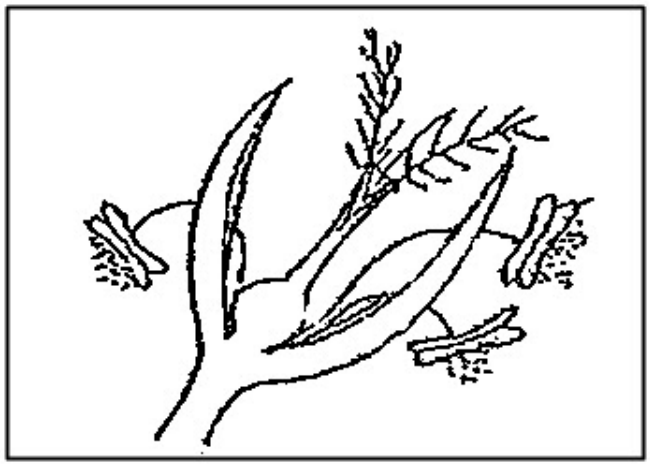
b) State **TWO** advantages animal **B** has over animal **A** **(2mks**

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11. The diagram shown below is of a flower



a) Name the agent of pollination for this flower **(1mk**

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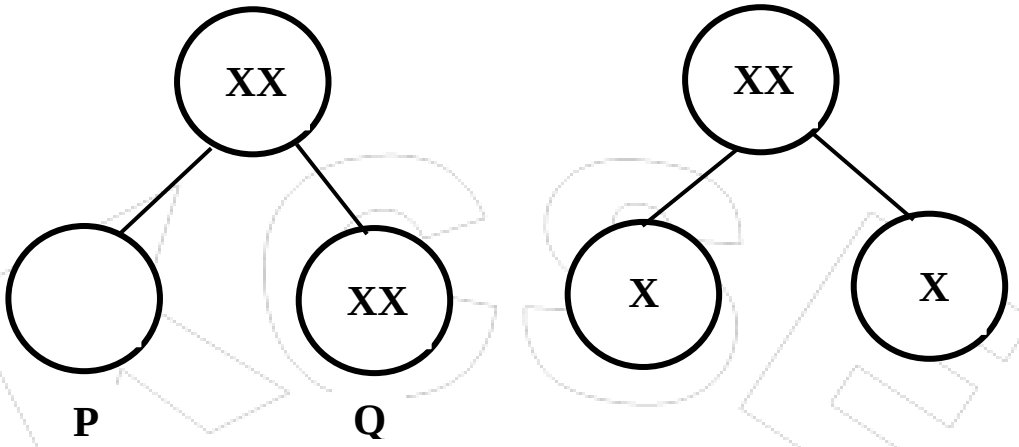
b) Give **TWO** adaptive features from the diagram to support your answer in a) above **(2mks**

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12. The process of gamete formation is represented below



a) State a reason why the process above represents gamete formation in female mammals**(1mk**

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b) Name the chromosomal mutation represented above **(1mk**

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c) Identify the genetic disorder that arise when the following gametes are fertilized

i) P ……. **(1mk**

ii) Q ……. **(1mk**

13. A sample of air was passed through pyrogallic acid and its volume reduced from 8 cm^3 to 7 cm^3. When it was later passed through lime water, the volume reduced to 6.8cm^3.

a) What was the role of pyrogallic acid in this experiment? **(1mk**

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b) Determine the percentage of Carbon (IV) oxide in the sample of air **(2mks**

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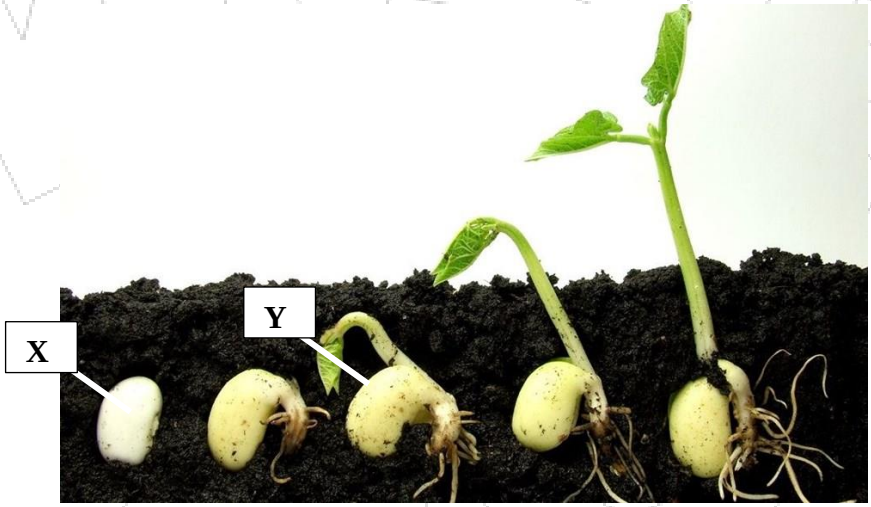
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c) Is this sample of air exhaled air or inhaled air? **(1mk**

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14. The stage-wise process of germination of a seed is shown below



a) Give a reason why the diagram above represents hypogeal germination **(1mk**

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b) Account for the change in dry weight of the cotyledon at stage **X** and **Y** **(2mks**

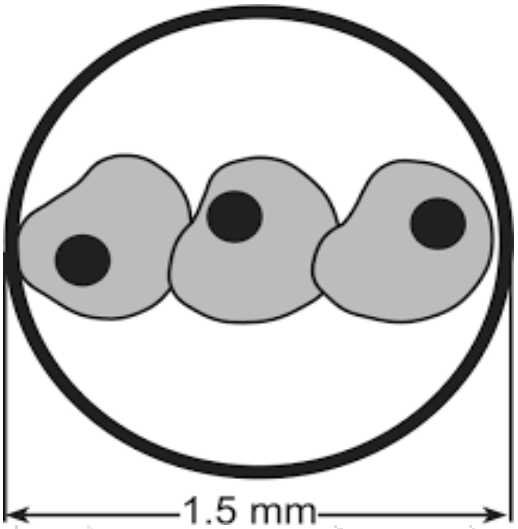
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15. Barbra observed animal cells in a field of view of a light microscope as shown below. If she used a total magnification of X1000 determine the actual diameter of one cell **(3 mks)**



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16. Explain the importance of the following features

a) Acrosome in the spermatozoa **(2mks**

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b) Hair-like structures in the fallopian tube **(1mk**

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17. a) What are vestigial structures? **(1mk**

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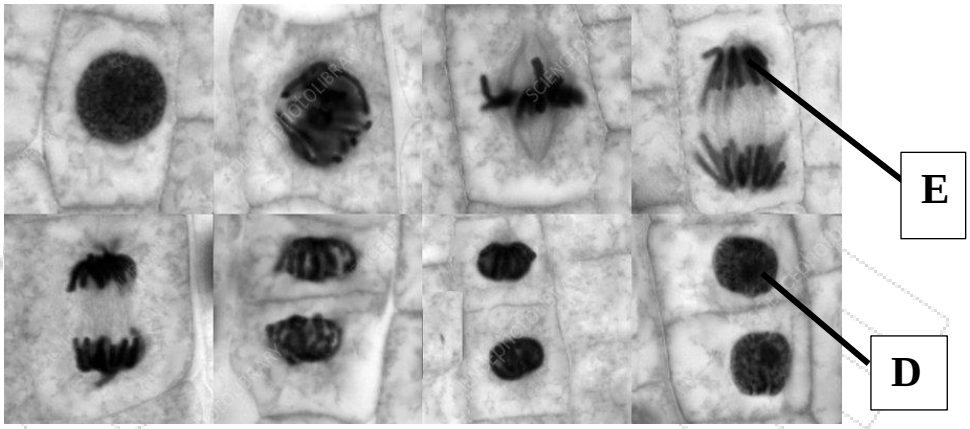
b) Explain why divergent evolution is advantageous to living organisms? **(2mks**

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18. The various stages of mitosis are represented below



a) Identify the stages represented by the letters:

i) D ……..…….. **(1mk**

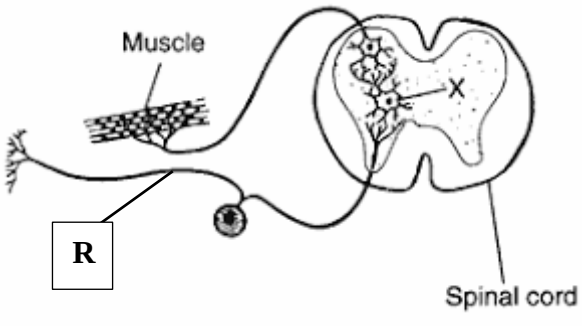
ii) E ……..…….. **(1mk**

b) What shows that the process represented above is taking place in a plant cell? **(1mk**

……

……

19. The diagram shown below represents the various nerve cells



a) Use arrows to show direction of impulse in a reflex arc in the diagram above **(1mk**

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b) Outline expected **TWO** structural differences between nerve cell **R** and **X** **(2mks**

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20. State the function of the following muscles in the body

i) Cardiac sphincter muscles **(1mk**

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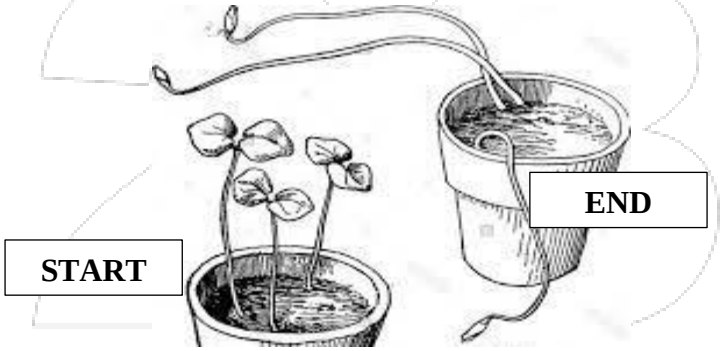
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ii) Erector pili muscles **(1mk**

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21. The diagrams below are of seedlings before and after an experiment.



a) Under which light condition was the experiment carried out **(1mk**

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b) Which term describes the appearance of the seedlings at the end of the experiment **(1mk**

……

c) What is the importance of the above experiment in crop production? **(1mk**

……

……

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22. State the function of the following cells in the body of organisms

a) Palisade **(1mk**

……

b) Schwann **(1mk**

……

c) Sertoli **(1mk**

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23. a) Mary suspects that she has diabetes mellitus. Using a sample of her urine describe a school laboratory procedure she can follow to confirm it is true **(3mks**

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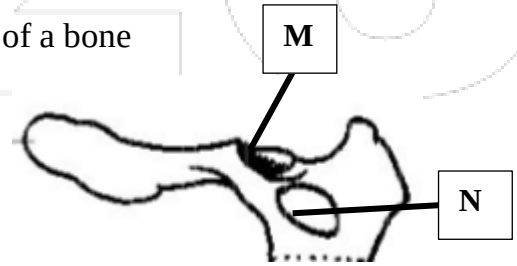
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b) Why is insulin not administered orally? **(1mk**

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24. The following is an illustration of a bone



a) Give the name of the bone **(1mk**

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b) State an advantage of the joint formed at the part labelled **M** **(1mk**

……

c) State the function of the part labelled **N** **(1mk**

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25. a) Distinguish between population and community as used in ecological studies **(2mks**

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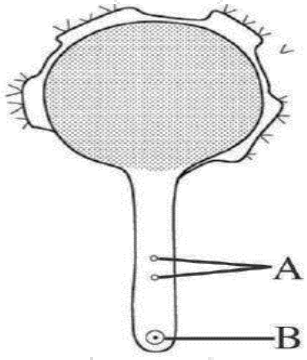
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b) State the formula for population estimation using capture recapture method **(1mk**

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26. The diagram below shows the structure of germinating pollen grain



a) Name the type of cell division that formed the parts labelled A **(1mk**

……

b) State the role of part labelled **B** **(1mk**

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27. The picture of a common animal is represented below



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a) Name the class to which the organism shown above belongs **(1mk**

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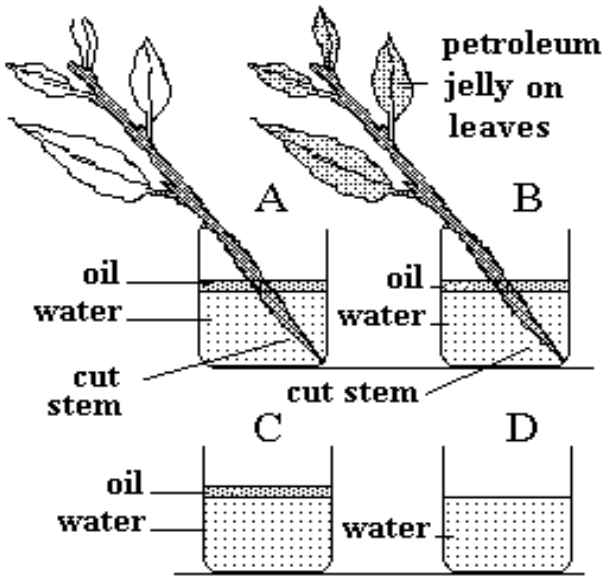
b) Give **TWO** reasons for your answer in a) above **(2mks**

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28. The following experimental set up was placed in sunshine to investigate a biological process



a) Account for the expected result in the level of water in the beaker labelled **B** **2mks**

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b) Why were the set up **C** and **D** included in the experiment? **(1mk**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

BIOLOGY

231/2

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

FOR EXAMINERS' USE ONLY

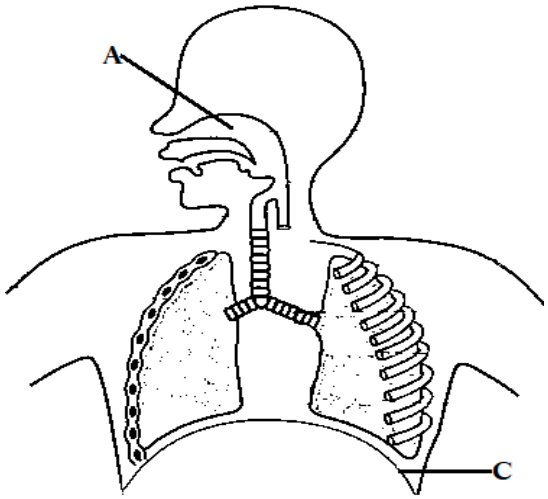
Question	1	2	3	4	5	6	7	8	TOTAL
Maximum Score	8	8	8	8	8	20	20	20	80
Candidate's Score									

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SECTION A (40MARKS)

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

1. The diagram below represents the human respiratory system.



a) How is structure labelled **A** adapted to its function? **(4 marks)**

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b) What would be the effect of contractions of the muscles of the structure labelled C during breathing in. **(3 marks)**

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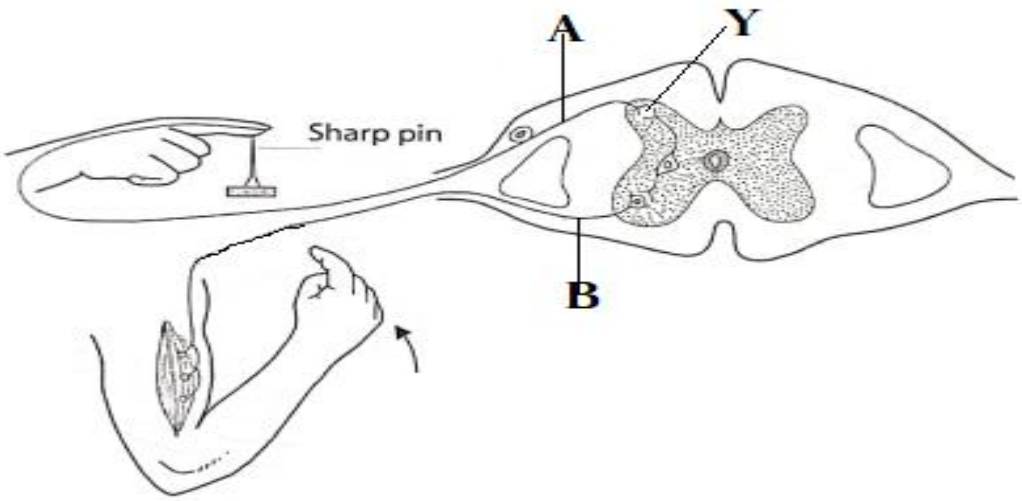
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c) Give the scientific name of the organism that causes whooping cough? **(1 marks)**

……

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2. The diagram below represents a section of the spinal cord.



a) State ***one*** structural and functional differences between **A** and **B**. **(2 marks)**

Structural

……

……

Functional

……

……

b) State ***three*** differences between a simple and a conditioned reflex? **(3 marks)**

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c) Explain how an impulse is transmitted across region **Y**? **(3 marks)**

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3. Form 3 students were assigned to study a particular ecosystem around the school.

a) Distinguish between an ecosystem and ecological niche. **(2 marks)**

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……

b) Name a suitable method they would have used to estimate the population of wild animals.

(1 marks)

……

c) State ***three*** methods which could be used to determine the diet of the wild animals. **(3 marks)**

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d) Name biotic factors that could have regulated the animal population? **(2 marks)**

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4. a) How is sex in humans determined. **(3 marks)**

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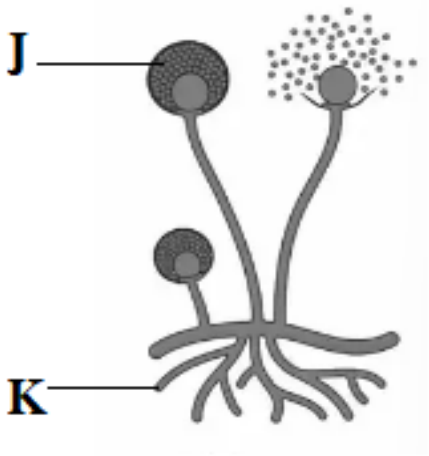
b) In human, hairy ears is controlled by a gene on the Y chromosome. Using letter Y^H to represent the chromosomes carrying the gene for hairy ears, work out a cross between a hairy eared man and his wife. **(4 marks)**

c) Girls will not display hairy ears, explain. **(1 mark)**

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5. The diagram below illustrates the structure of bread mould.



a) State the function of the structure labelled K. **(2 marks)**

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b) Describe the mode of reproduction. **(5 marks)**

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c) State any ***one*** economic importance of members of this kingdom **(1 mark)**

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SECTION B

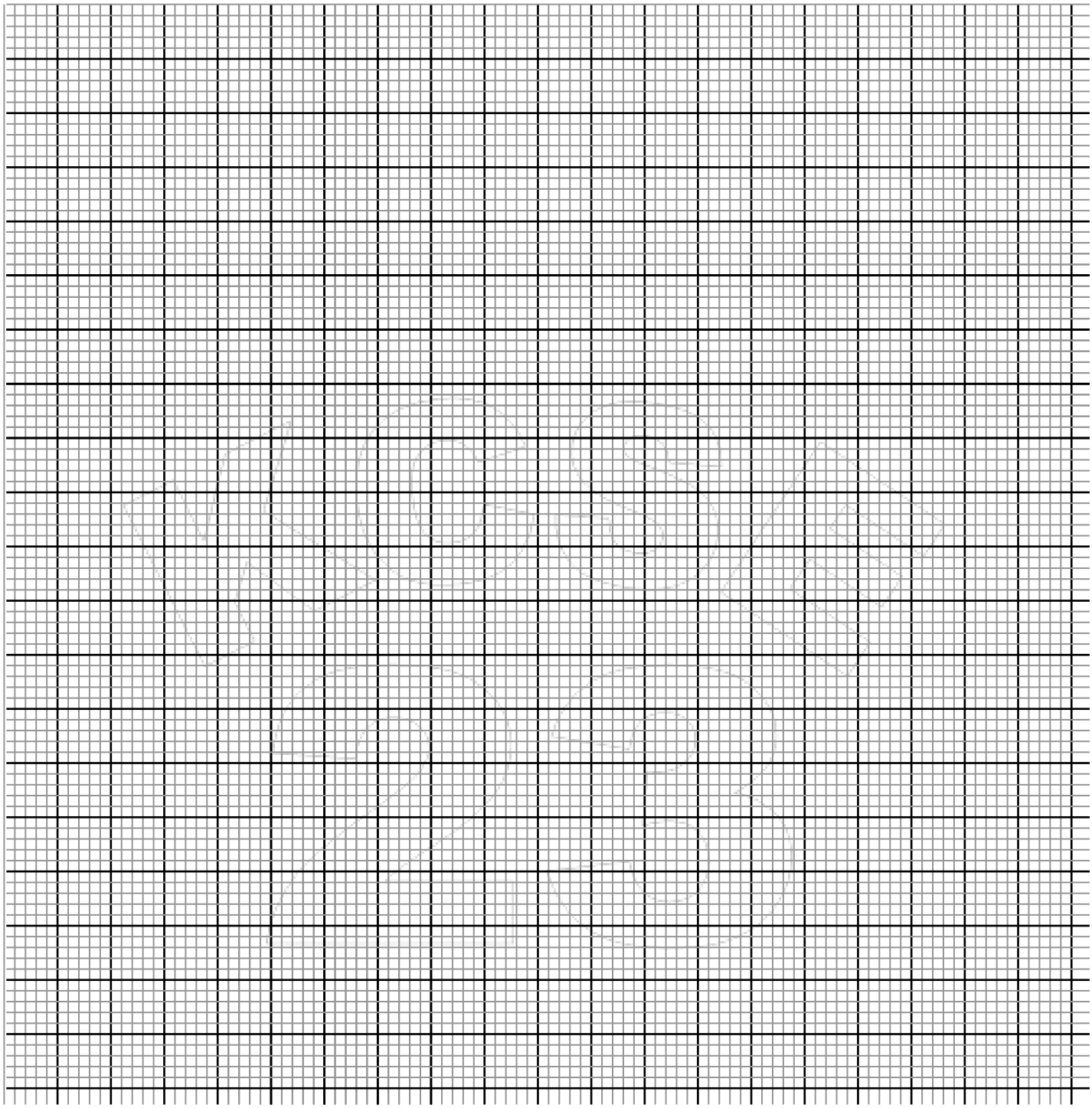
Answer question 6 (compulsory) and either question 7 or 8 in the space provided after question 8.

6. In an experiment carried out in a tropical country, carbon (IV) oxide concentration was measured around a plant in an open air at two hours in travels for a period of 24 hours. The results were as shown in the table below.

Time	**%of co2 concentration($x10^{-2}$)**
3am	3.40
5am	3.60
7am	3.90
9am	3.20
11am	2.95
1pm	2.90
3pm	2.90
5pm	2.92
7pm	3.02
9pm	3.10
11pm	3.20
1 am	3.30
3 am	3.40

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a) Plot a graph of % carbon (IV) oxide concentration against time on the grid provided. **(5 marks)**



b) Calculate the rate of change in CO_2 concentration between 4 a.m. and 7 a.m. **(2 marks)**

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c) Give a reason for the change in CO_2 concentration between:-

i) 7 a.m. to 11a.m (**2 marks)**

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ii) 12 noon to 4 p.m. **(2 marks)**

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iii) 5p.m. and 5 a.m. **(3 marks)**

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d) With reasons identify ***three*** environmental factors that are likely to affect the results. **(6 marks)**

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7. Describe how the male reproductive system is adapted to perform its functions. **(20 marks)**

8. Explain the role of the following hormones in growth and development:

(a)(i) Indole acetic acid. **(5 marks)**

(ii) Gibberellin. **(5 marks)**

(iii) Cytokinnin. **(5 marks)**

(b) Describe role of hormones in insect metamorphosis. **(5 marks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

BIOLOGY

231/3

PAPER 3 (PRACTICAL)

TIME: 1¾ HRS

SCHOOL…… SIGN……

BIOLOGY (CONFIDENTIAL REPORT)

Each candidate should have the following;

- ***a)*** *Transparent ruler*
- ***b)*** *20mls of* ***distilled water*** *in a boiling tube labelled* ***solution X****.*
- ***c)*** *20mls of* ***saturated NaCl solution*** *in a boiling tube labelled* ***solution Y****.*
- ***d)*** *DCPIP solution*
- ***e)*** *A large sized maize grain labelled* ***specimen X***
- ***f)*** *Scalpel*
- ***g)*** *NaOH solution (about 5ml)*
- ***h)*** *Bunsen burner*
- ***i)*** *Labels (2 pieces)*
- ***j)*** *Medium sized passion fruit labelled* ***Specimen Z****.*
- ***k)*** *Test tube holder*
- ***l)*** *Test tubes (3 pieces)*
- ***m)*** *Complete leaf (medium sized) of* ***Sukuma wiki*** *(kales) labelled* ***Specimen A****.*
- ***n)*** *Boiling tubes (2 pieces)*
- ***o)*** *Mortar and pestle*
- ***p)*** *Distilled water (about 15ml) in a small beaker*
- ***q)*** *Benedict's solution (about 5mls)*
- ***r)*** *$CuSO_4$ solution (about 2mls) with a dropper*
- ***s)*** *Measuring cylinder (50ml capacity)*
- ***t)*** *Test tube holder*
- ***u)*** *Bean pod (any type of bean) or Crotalaria pod labelled* ***Specimen Y****.*

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

BIOLOGY

231/3

PAPER 3 (PRACTICAL)

TIME: 1¾ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

- *.Write your **name, index number, admission number**, **school** and **stream** in the spaces provided.*
- ***Sign** and write the **date of examination** in the spaces provided above.*
- *You are required to spend the first 15 minutes of the $1^3/4$ hours allowed for this paper reading the whole paper carefully before commencing your work.*
- *Answer **ALL** the questions in this paper in the spaces provided.*
- *Candidates **should** answer the questions in English.*

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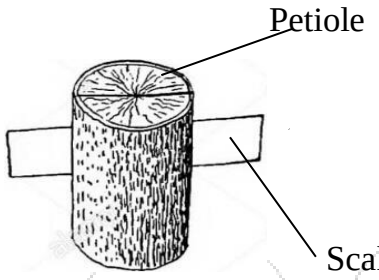
QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	16	
2	12	
3	12	
Total	40	

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*Answer **ALL** the questions in this paper.*

1. You are provided with **Specimen A, Solution X** and **Solution Y.**

(a) Cut out a cylindrical portion of the petiole from **Specimen A** measuring 5cm long (reserve the leaves for **part b** of the question). Make a longitudinal section through the petiole so as to divide it into two identical straight halves as shown below;



Place one straight half of the petiole into the boiling tube containing **solution X**, and label the tube as **Set up I.** Place the other straight half of the petiole into the boiling tube containing **solution Y**, and label the tube as **Set up II.** Leave the two set ups to stand for 30 minutes.

Remove the two halves of the petiole from the solutions and examine them.

(i) Account for the curvature of half of the petiole in **set up I.** **(5marks)**

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(ii) Based on your observation of the curvature of half of the petiole in **set up II**, state the nature of **solution Y** in relation to plant cells**.** **(1mark)**

……

(b) Cut the leaves of specimen A into small pieces and place them into a mortar. Add 10ml of distilled water, then grind them using a pestle so as to obtain an extract called **solution R**. Using the reagents provided, carry out various tests using the procedures in the table below to determine the food substances in the solution R. In each case, state the observation and conclusion made.

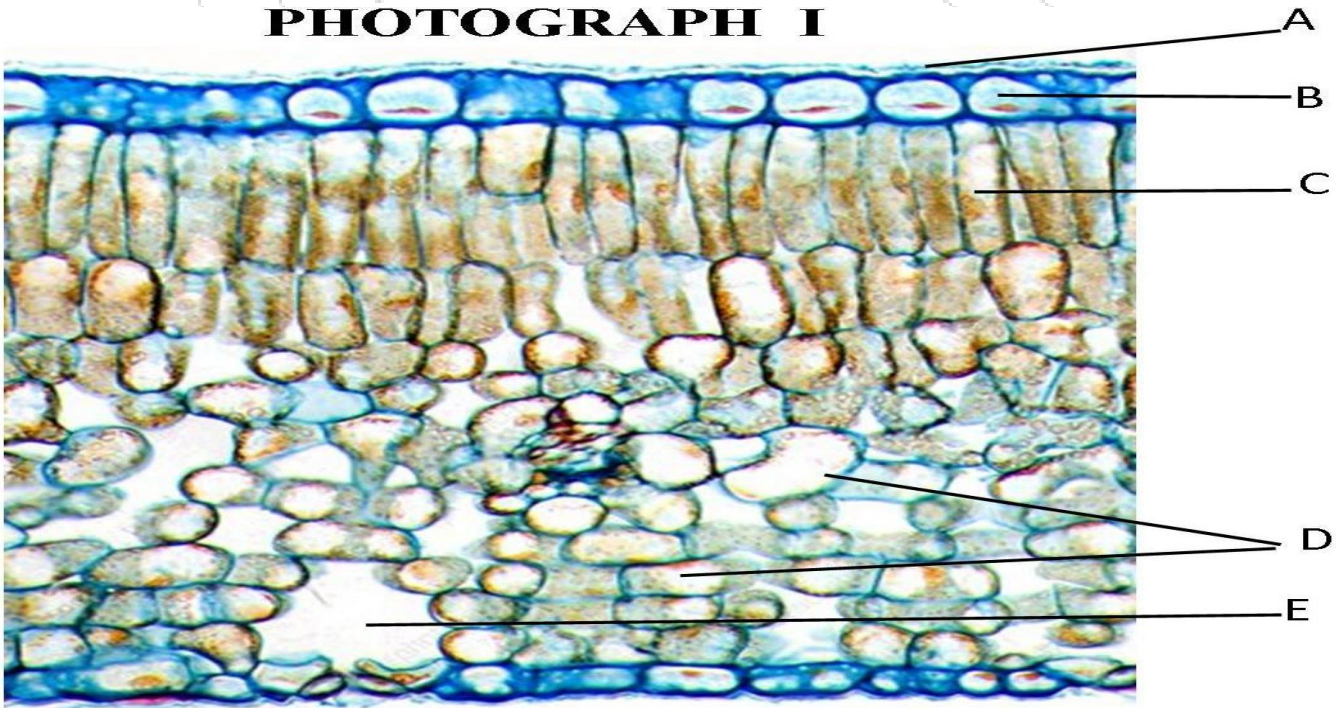
(6 marks)

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Food substance	Procedure	Observation	Conclusion
Proteins	-Place 2ml of solution R into a test tube. - Add equal amount of NaOH solution. -Add $CuSO_4$ solution dropwise and shake		
Reducing sugars	-Place 2ml of solution R into a test tube. -Add equal amount of Benedict's solution. -Boil the mixture.		
Vitamin C	-Place 2ml of DCPIP into a test tube. -Add solution R dropwise as you shake.		

(c) The **photograph I** below shows the internal structure of **Specimen A.** Study it carefully and answer the questions that follow.

PHOTOGRAPH I



(i) Identify the structures labelled A and B**.** **(2marks)**

A.....

B.....

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(ii) State **one** structural difference between cells C and D**.** **(1mark)**

……

……

(iii) What is the function of the part labelled E ? **(1mark)**

……

2. You are provided with **Specimens X, Y** and **Z.**

(a) State the type of dry, indehiscent fruit represented by **specimen X.** **(1mark)**

……

(b) With a reason, state the method of dispersal of **specimen Y**. **(2marks)**

(i) Method of dispersal**……**

(ii) Reason

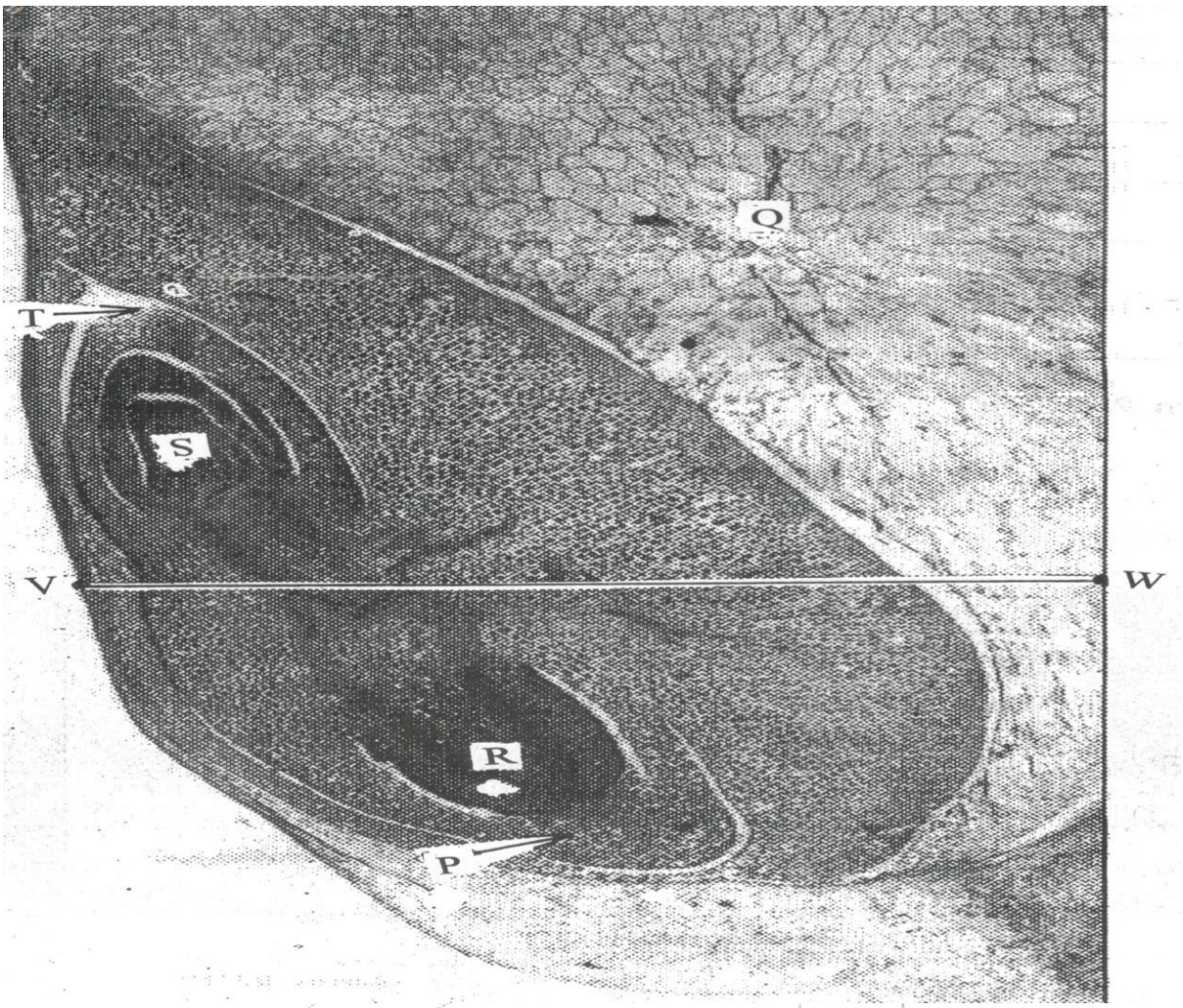
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(c) Cut **specimen Z** transversely so as to obtain two identical halves. Draw and label the cut surface of one half. **(3marks)**

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(d) Below is a photograph of the internal longitudinal section of **Specimen X**.



(i) Name the parts labelled P and S. **(2marks)**

P.....

S.....

(ii) State the function of the part labelled T. **(1mark)**

……

(iii) Identify the region that would stain blue black with iodine solution**.** **(1mark)**

……

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(e) The magnification of the internal longitudinal section in the above photomicrograph was X30,000. Measure the distance of the dark horizontal line between V and W in millimetres. Calculate the actual width of the section between V and W in micrometres. **(2marks)**

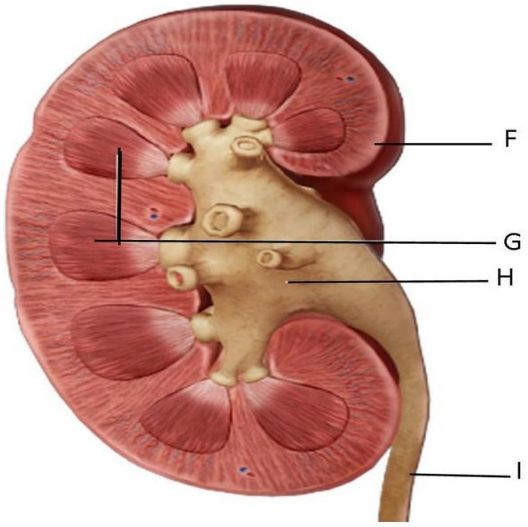
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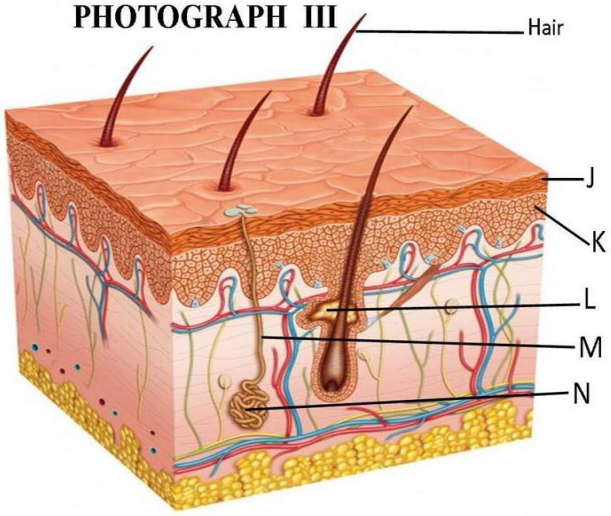
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3. Below are photographs II and III of the mammalian kidney and skin respectively.

PHOTOGRAPH II



PHOTOGRAPH III



(a) Identify the layers labelled F, J and K. **(3marks)**

F……

J……

K……

(b) State the function of each of the parts labelled L and M. **(2marks)**

L ……

M……

(c) Explain how the structure labelled N is adapted to its function. **(1mark)**

……

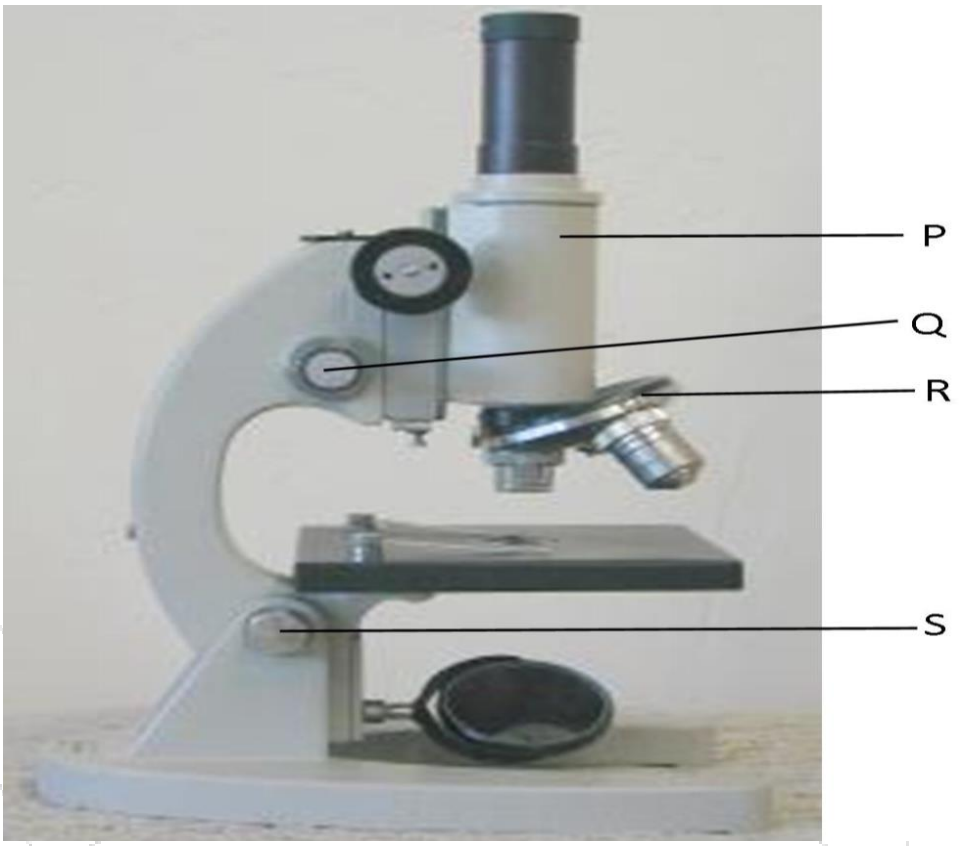
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(d) Identify part in photograph II that contains glomeruli. **(1mark)**

……

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(e) The cells in the layer labelled J can be examined using the light microscope shown below.



(i) Identify on the above photograph the structure that would be adjusted to improve on the clarity of blurred images of the cells in layer J. **(1mark)**

……

(ii) State the significance of using a sharp razor or scalpel to cut through layer J to obtain the cells for examination in the above microscope**.** **(1mark)**

……

……

(iii) Name the part labelled S in the above microscope**.** **(1mark)**

……

(iv) State **two** functions of the light microscope during examination of the cells in layer J. **(2marks)**

……

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

CHEMISTRY

233/1

PAPER 1 (THEORY)

TIME: 2 HRS

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 date of examination in the space provided.*

c) *All working must be clearly shown where necessary.*

d) *Mathematical tables and silent electronic calculations may be used*

e) *Answer all questions in English.*

For examiners use only

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-29	80	

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Answer all questions

1. A magnesium ribbon sample was heated in separate volumes of pure oxygen and air.

a) In which sample was the mass of the product higher? Explain. **(2 Marks)**

……

……

……

b) Write the equations for the reactions in the sample with air. **(2 Marks)**

……

……

2. Give the systematic name of the following compound and draw the structure of the polymer it forms:

CH_2CHCl

Name _____ **(1 Mark)**

Structure **(1 Mark)**

……

……

3. When aqueous sodium hydroxide solution was added to freshly prepared acidified iron (II) sulphate solution, a green precipitate was formed. When hydrogen peroxide was first added to iron (II) sulphate solution followed by sodium hydroxide solution, a brown precipitate was formed. Explain these observations. **(3 Marks)**

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……

4. Study the following nuclear reaction and complete it by giving the values of **m** and **n**

$$^{232}_{92}X \rightarrow ^{m}_{n}Y + 2\,^{0}_{-1}e^{-} + ^{4}_{2}He$$

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m _____ **(1 Mark)** **n** _____ **(1 Mark)**

5.

a) State Charles' Law **(1 Mark)**

……

……

b) A certain mass of carbon (IV) oxide gas occupied 200cm^3 as 25^{o}C and 750mmHg pressure. Calculate the volume occupied by the same mass of gas if pressure is lowered to 300mmHg and the temperature raised to 30^{o}C. **(2 Marks)**

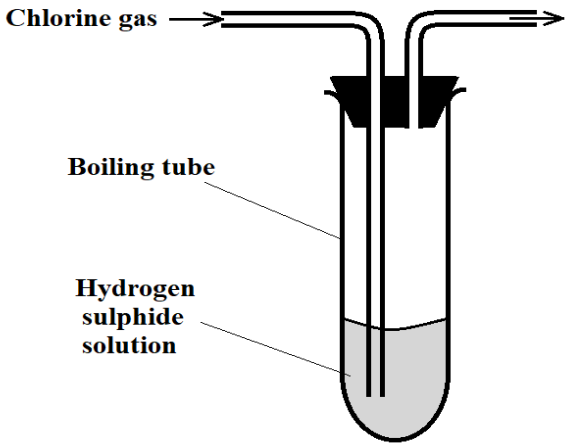
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6. Chlorine gas was bubbled into as solution of hydrogen sulphide as shown in the diagram below.



a) Explain the observation made in the boiling tube **(2 Marks)**

……

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……

b) What precaution should be taken in this experiment? **(1 Mark)**

……

……

c) Distinguish between the bleaching action of chlorine and that of sulphur (IV) oxide. **(1 Mark)**

……

……

7. Concentrated sulphuric (VI) acid was left exposed in air for a few days. It was found that the level of the acid had risen.

a) Why did the level of the acid in the container rise? **(1 Mark)**

……

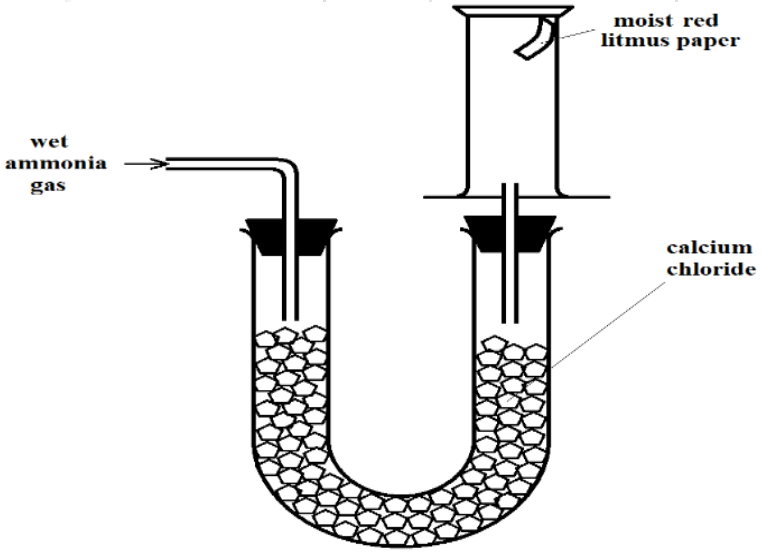
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b) How is this property useful in the laboratory? **(1 Mark)**

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8. The setup below can be used to dry and collect ammonia gas. Use it to answer the questions that follow.



a) The wet red litmus paper remained red. Explain. **(1 Mark)**

……

……

b) Name the method used when collecting ammonia gas. **(1 Mark)**

……

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9. 400cm^3 of **gas D** diffuses from a porous plug in 50 seconds while 600cm^3 of oxygen gas diffuses from the same apparatus in 30 seconds. Calculate the relative molecular mass of **gas D**. **(3 Marks)**

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10. Use the information in the table below on solubility to answer the questions that follow.

Salt	**Solubility at**	
	70^{o}C	**35^{o}C**
$CuSO_4$	38	28
$Pb(NO_3)_2$	78	79

A mixture containing 38g copper (II) sulphate and 78g of lead (II) nitrate in 100g of water at 70^{o}C is cooled to 35^{o}C.

a) Which of the two salts will crystallize? **(1 Mark)**

……

b) Calculate the mass of crystals formed. **(1 Mark)**

……

……

……

c) State the salt that will be unsaturated at 35^{o}C **(1 Mark)**

……

d) How much of the salt in **c)** above would be required to make a saturated solution at 35^{o}C? **(1 Mark)**

……

11. Methane burns in oxygen as shown by the equation below.

$$CH_4\ (g) + 2O_2\ (g) \rightarrow CO_2\ (g) + 2H_2O\ (g)$$

Given the following bond energies:

Bond	Bond Energy (kJ/mole)
C – H	413
O = O	497
C = O	740
O – H	463

a) Calculate the heat change for the reaction. **(2 Marks)**

……

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……

b) Define molar heat of combustion. **(1 Mark)**

……

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12. Given solid sodium carbonate, lead (II) nitrate crystals and water, explain how you can obtain a solid sample of lead (II) carbonate. **(3 Marks)**

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13. Calculate the volume of oxygen produced when 10g of silver nitrate was completely decomposed by heating at **s.t.p. (Ag = 108, N = 14, O = 16, MGV at s.t.p. = 22.4dm^3)** **(3 Marks)**

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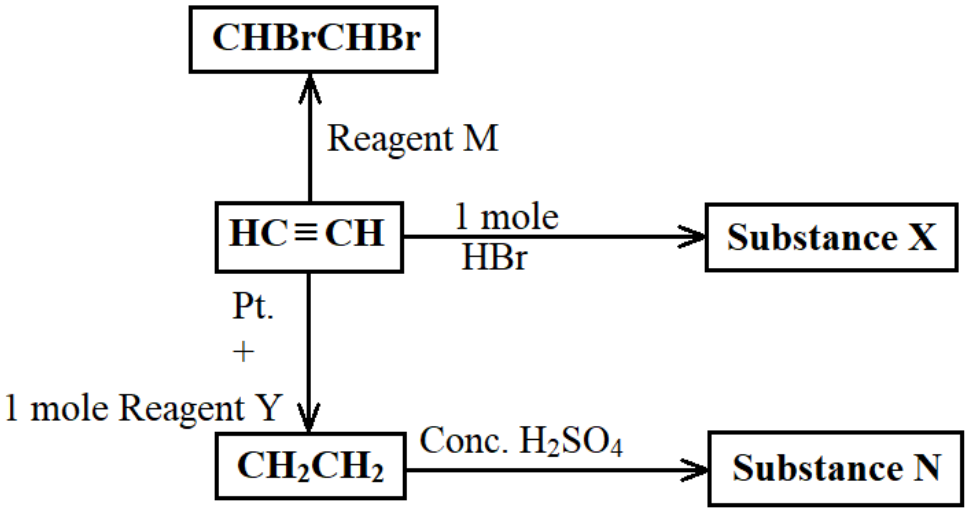
14. A solution of hydrogen chloride gas in water conducts an electrical current, while that of hydrogen chloride in methylbenzene does not conduct. Explain. **(2 Marks)**

……

……

……

15. The scheme below shows some reactions, starting with ethyne. Study it and answer the questions that follow.



a) Name substance

i)X _____ **(½ Mark)**

ii)N _____ **(½ Mark)**

iii)M _____ **(½ Mark)**

b) Ethene undergoes polymerization to form a polymer. Give an equation for the reaction and name the product. **(1½ Marks)**

……

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……

16. When 16g of ammonium nitrate was dissolved in $100cm^3$ of water at 25^oC, the temperature of the solution drops to 19^oC.

a) Calculate the molar enthalpy of solution of ammonium nitrate **(3 Marks)**

(N = 14, O = 16, H = 1, Specific Heat Capacity for Water = 4.2kJ/kg/k)

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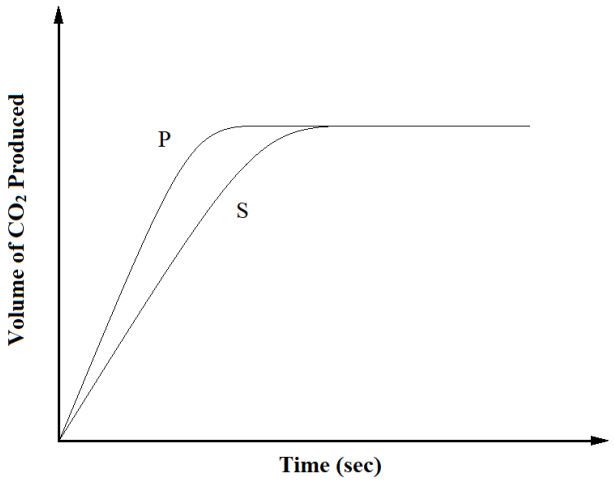
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b) Is the enthalpy change endothermic or exothermic? Give a reason **(1 Mark)**

……

……

17. The curves below represent the volume of carbon (IV) oxide gas evolved when 2M hydrochloric acid was reacted with 100g of powdered calcium carbonate and when 1M hydrochloric acid was reacted with the same quantity of calcium carbonate.



a) Which of the two curves represents the reaction of 2M concentrated hydrochloric acid? Explain. **(2 Marks)**

……

……

……

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b) Why do the two curves flatten at the same level of production of CO_2? **(1 Mark)**

……

……

18. The electron arrangement of ions X^{3+} and Y^{2-} are **2.8**, and **2.8.8** respectively.

a) In which groups do **X** and **Y** belong? **(1 Mark)**

X_____ **Y**_____

b) State the formula of the compound that would be formed between **X** and **Y** **(1 Mark)**

……

……

19.

a) State **two** ores from which sodium metal can be extracted. **(1 Mark)**

……

……

b) During the extraction, calcium chloride solid is added into the sodium chloride solid. Why is calcium chloride added to the sodium chloride? **(1 Mark)**

……

……

c) State **two** uses of sodium metal. **(2 Marks)**

……

……

20. Using and energy cycle diagram, calculate the enthalpy change of formation of carbon disulphide, given: **(3 Marks)**

$S(s) + O_2(g) \rightarrow SO_2(g)$ $\Delta H = -294kJ/mole$

$CS_2(g) + 3O_2(g) \rightarrow CO_2(g) + 2SO_2(g)$ $\Delta H = -1072kj/mole$

$C(s) + O_2(g) \rightarrow CO_2(g)$ $\Delta H = -393kJ/mole$

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21. The table below shows tests carried out in a sample of water and the results obtained.

Sample	Results	observations
A	Addition of sodium hydroxide dropwise until excess	Whit precipitate which dissolves in excess
B	Addition of excess ammonia solution	White precipitate
C	Addition of dilute nitric (V) acid followed by barium chloride	White precipitate

a) Identify the **anion** present in the water sample **(1 Mark)**

……

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

……

……

22. Use the following information to answer the questions that follow:

Sn^{2+} (aq) + $2e^-$ → Sn (s) **E^θ = -0.14V**

Cu^{2+} (aq) + $2e^-$ → Cu (s) **E^θ = +0.34V**

a) Write the cell representation for the cell made up of the two half cells **(1 Mark)**

……

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b) Identify the reducing species **(1 Mark)**

……

c) Calculate the E^{θ} value for the cell **(1 Mark)**

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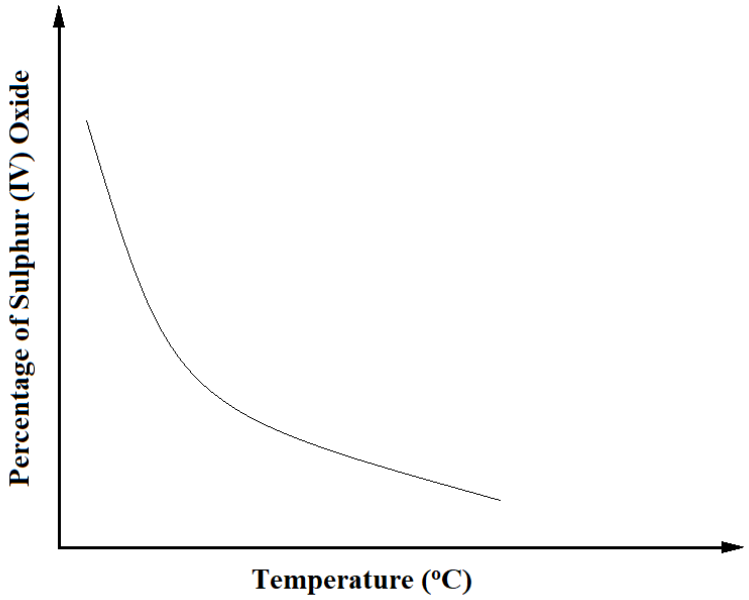
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23. The following is a reaction of an equilibrium mixture:

$$2SO_2\,(g) + O_2\,(g) \rightleftharpoons 2SO_3\,(g)$$

The percentage of sulphur (VI) oxide in the equilibrium mixture varies with temperature as illustrated in the sketch graph below



a) How does the percentage of sulphur (VI) oxide in the equilibrium mixture vary as the temperature increases? Explain. **(1½ Mark)**

……

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b) Is the forward reaction in the equilibrium exothermic or endothermic? Give a reason for your answer. **(1½ Mark)**

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24. Radioactive polonium (Po) with a mass number of 212 and atomic number of 84 was detected in a sample of water. The water had an activity of 1000 counts per second.

a) If the water is boiled, explain whether the activity would be affected or not. **(1 Mark)**

……

……

b) Given that polonium resulted from bitumen (B) following emission of a beta (β) particle, write a nuclear equation for the decay. **(1 Mark)**

……

c) State **one** medical application of radioactivity. **(1 Mark)**

……

25. Name and give the formula of:

a) The **chief ore** from which zinc is extracted **(1 Mark)**

……

……

b) The **main impurity** in the ore. **(1 Mark)**

……

……

c) The ore is concentrated by froth floatation. What is froth floatation? **(1 Mark)**

……

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26. The atomic number of sulphur is 16. Write the electron arrangement of sulphur in the following compounds

a) H_2S _____ **(1 Mark)**

b) SO_3^{2-} _____ **(1 Mark)**

27. For the reaction: **Cl_2 (g) + $2I^-$ (aq) → $2Cl^-$ (aq) + I_2 (s)**

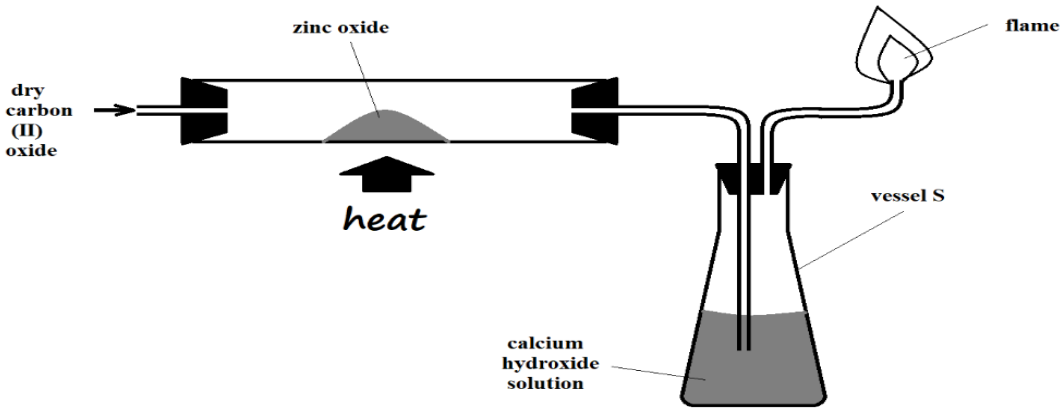
Using oxidation numbers, state and explain the reducing species. **(2 Marks)**

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28. The setup below was used to investigate the effect of carbon (II) oxide on zinc oxide.



a) State the observations made on the setup. **(2 Marks)**

……

……

b) Write equations for the reactions that took place. **(2 Marks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

CHEMISTRY

233/2

PAPER 2 (THEORY)

TIME: 2 HRS

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 date of examination in the space provided.*

c) *All working must be clearly shown where necessary.*

d) *Mathematical tables and silent electronic calculations may be used*

e) *Answer all questions in English.*

FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-7	80	

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Answer all questions

1.

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

C				**F**	**G**		**I**	
						H		**K**
D	**E**							
							J	

i)Identify the most reactive non-metal. Explain **(2 Marks)**

……

……

……

ii) What is the name given to the family of elements to which **I** and **J** belong? **(1 Mark)**

……

iii) Using dots (•) and crosses (×) to represent electrons, show bonding in the compound formed between **C** and **H**. **(2 Marks)**

iv) How does the atomic radius of **F** compare with that of **I**? Explain. **(2 Marks)**

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b) Study the table below and answer the questions that follow.

Substance	**M**	**N**	**O**	**P**	**Q**	**R**
Melting Point (ºC)	801	1356	-101	26	-39	113
Boiling Point (ºC)	1410	2850	-36	154	457	445
Electrical conductivity in solid state	Poor	Poor	Poor	Poor	Good	Poor
Electrical conductivity in molten state	Good	Poor	Poor	Poor	Good	Poor

i)Explain why **substance M** is a good conductor of electricity in the molten state but not in the solid state. **(2 Marks)**

……

……

……

ii) What is the most likely structure and bond in **substance N**? Explain. **(2 Marks)**

Structure _____ Bond _____

……

……

iii) Identify, with a reason, a substance that exists as a liquid at room temperature. **(2 Marks)**

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2.

a)

i)What name is given to different forms of an element which exist in the same physical state?

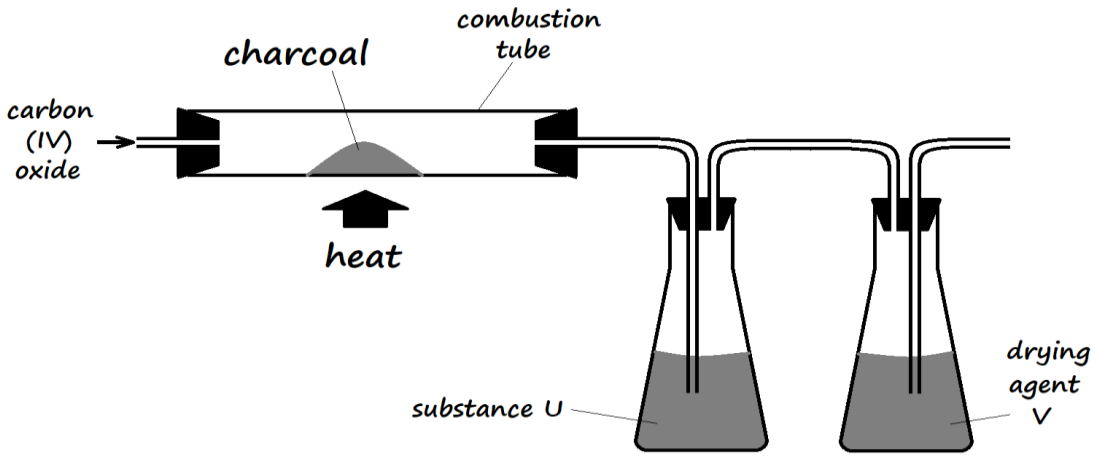
(1 Mark)

_____

ii) Name **two** crystalline forms of carbon **(1 Mark)**

_____ _____

b) The figure below is part of a setup used to prepare and collect dry carbon (II) oxide from carbon (IV) oxide.



i) Complete the diagram to show how dry carbon (II) oxide gas is collected. **(1 Mark)**

ii) Identify:

- Substance **U** and state its use

_____

_____

- Drying agent **Y**

_____

iii) Write a chemical equation for the reaction which takes place in the combustion tube **(1 Mark)**

.....

.....

iv) Carbon (II) oxide is a major environmental pollutant.

- Give **one** major source of carbon (II) oxide in the atmosphere **(1 Mark)**

.....

.....

- Explain how carbon (II) oxide causes poisoning **(1 Mark)**

.....

.....

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c) State **one** use of carbon (II) oxide **(1 Mark)**

……

d) Write an equation for the formation of water gas. **(1 Mark)**

……

e) Explain why sodium hydroxide solution is not used in testing for carbon (IV) oxide gas, while calcium hydroxide is preferably used. **(2 Marks)**

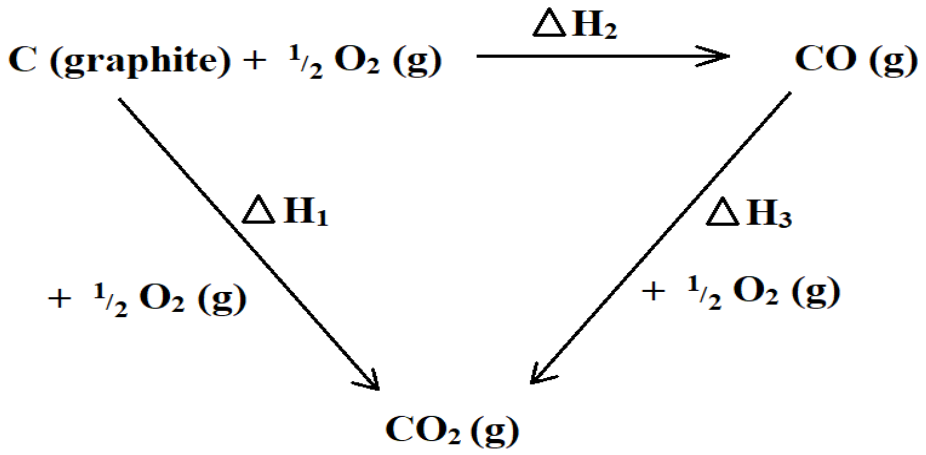
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3.

a) Study the following energy cycle diagram and then answer the questions that follow.



i) Name the enthalpy change represented by ΔH_2. **(1 Mark)**

……

ii) Use the following information to calculate the value of ΔH_1 for 144g of graphite. **(2 Marks)**

ΔH_2 = -110 kJ/mole ΔH_3 = -283kJ/mole

……

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b) The following are thermochemical equations for molar enthalpies of combustion for some substances. Study them and answer the questions that follow.

$C_4H_{10}(g) + \frac{13}{2}O_2(g) \rightarrow 4CO_2(g) + 5H_2O$ $\quad \Delta H^{\theta}_c = -2877kJ/mole$

$C(s) + O_2(g) \rightarrow CO_2(g)$ $\quad \Delta H^{\theta}_c = -399kJ/mole$

$H_2(g) + \frac{1}{2}O_2(g) \rightarrow H_2O(l)$ $\quad \Delta H^{\theta}_c = -286kJ/mole$

i) What is molar enthalpy of combustion of a substance? **(1 Mark)**

……

……

ii) Calculate the molar enthalpy of formation of butane (C_4H_{10}) using the information given above. **(3 Marks)**

……

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……

c) The following results were obtained in an experiment, to determine the heat of neutralization of 25cm^3 of 2M sodium hydroxide solution, using 25cm^3 of hydrochloric acid:

Initial temperature of acid = 25.0^{o}C
Initial temperature of alkali = 26.0^{o}C
Final temperature of mixture of acid + alkali = 38.5^{o}C
Density of solution =1g/cm^3
Specific heat capacity of solution =4.2 J/g/K

i) Define molar heat of neutralization **(1 Mark)**

……

……

ii) Write an **ionic equation** for the neutralization reaction involving hydrochloric acid and sodium hydroxide solution. **(1 Mark)**

……

……

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iii) Calculate:

- The enthalpy change during this experiment. **(2 Marks)**

……

……

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- The molar enthalpy of neutralization for this reaction **(2 Marks)**

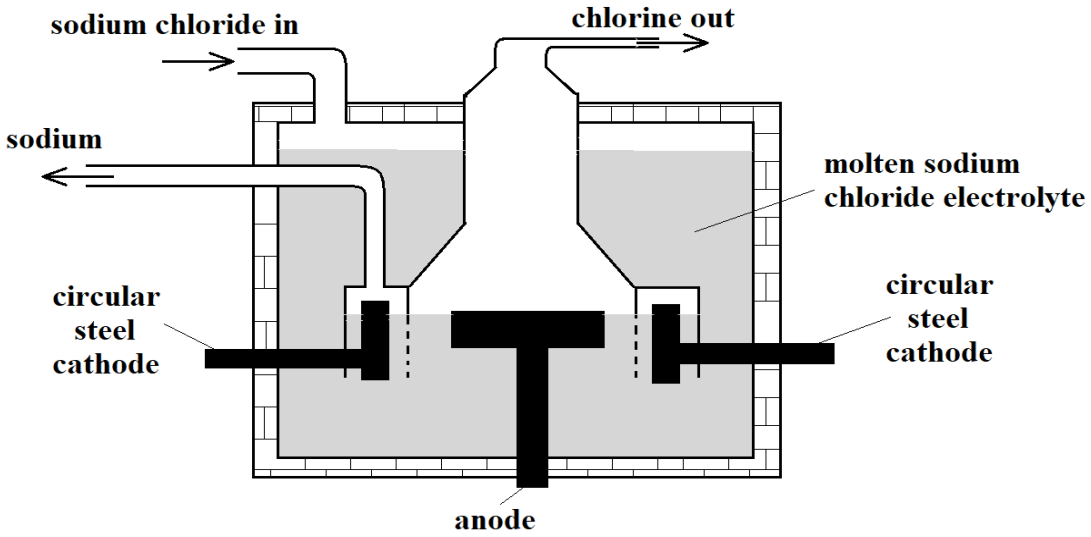
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4.

a) Below is a simplified diagram of the Down's Cell, used for the manufacture of sodium. Study it and answer the questions that follow.



i)What material is the anode made of? Give the reason why that material is used. **(2 Marks)**

……

……

……

ii) What precaution is taken to prevent chlorine and sodium from re-combining? **(1 Mark)**

……

……

iii) Write an ionic equation for the reaction in which chlorine gas is formed **(1 Mark)**

……

……

b) In the Downs process, (used for manufacture of sodium), a certain salt is added to lower the melting point of sodium chloride from about 800^{o}C to about 600^{o}C.

i) Name the salt that is added. **(1 Mark)**

……

ii) State why it is necessary to lower the temperature in **b)** above **(1 Mark)**

……

……

c) Explain why aqueous sodium chloride is not suitable as an electrolyte for the manufacture of sodium in the Down's Process. **(2 Marks)**

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……

d) Sodium metal reacts with air to form two oxides. Give the formulae of the two oxides **(1 Mark)**

_____ _____

e) State **two** uses of sodium **(2 Marks)**

……

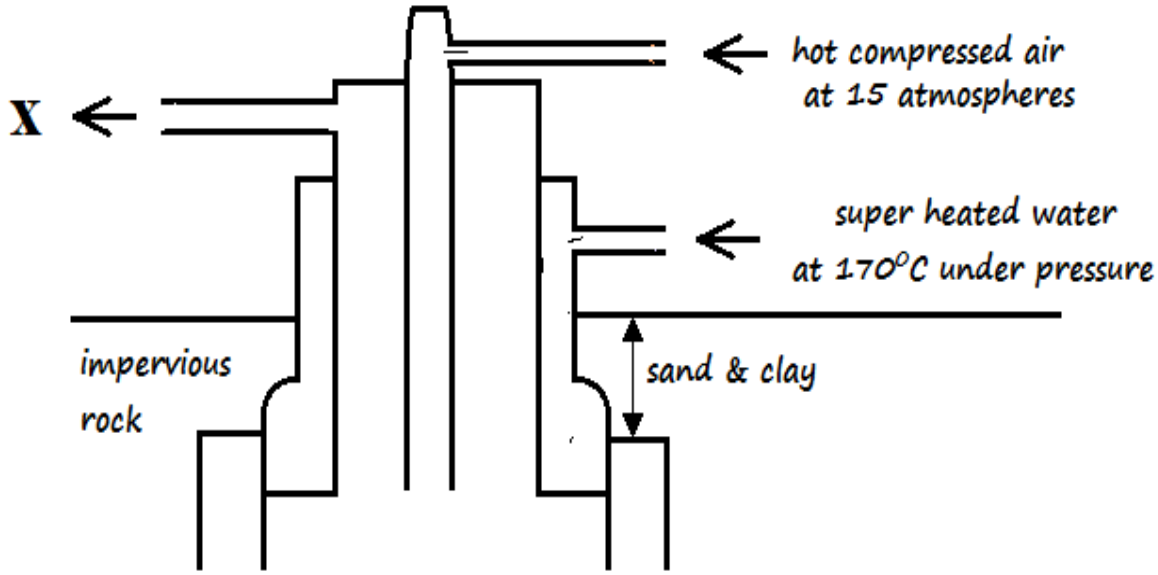
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5.

a) The diagram below shows part of the Frasch process, used for the extraction of sulphur. Use it to answer the questions that follow.



i)Identify **X** **(1 Mark)**

……

ii) Why is it necessary to use superheated water and hot compressed air in this process? **(2 Marks)**

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iii) State **two** physical properties of sulphur that makes it possible for it to be extracted by this method.

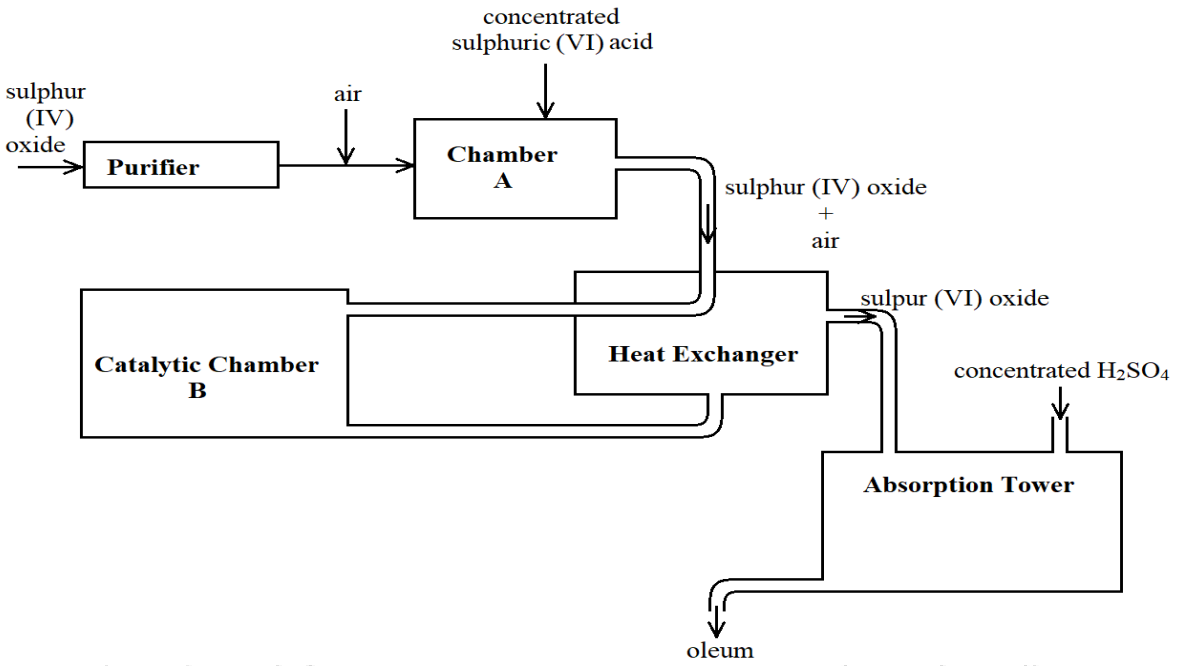
(2 Marks)

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b) The diagram below shows part of the process in the manufacture of sulphuric (VI) acid. Study it and use it to answer the questions that follow.



i)Give **two** reasons why air is referred to as a mixture **(2 Marks)**

……

……

……

ii) What is the role of concentrated sulphuric (VI) acid in **Chamber A**? **(1 Mark)**

……

……

iii) Name **two** catalysts that can be used in the Catalytic **Chamber B**. **(2 Marks)**

……

……

iv) State **two** roles of the heat exchanger **(2 Marks)**

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v) Describe the test for sulphite anion, SO_3^{2-} **(2 Marks)**

……

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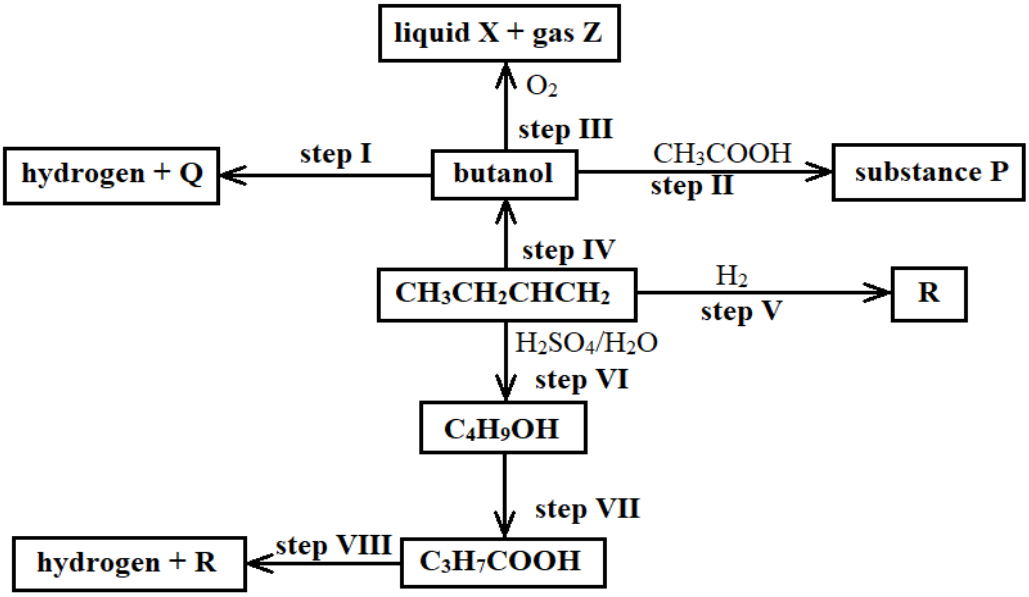
vi) Explain the observation made when a few drops of concentrated sulphuric (VI) acid are added to crystals of hydrated copper (II) sulphate. Explain your answer. **(2 Marks)**

……

……

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6. Study the reaction scheme below and answer the questions the follow:



i) What is the distinguishing physical property of **Substance P**? **(1 Mark)**

……

ii) Identify a suitable reagent that can be used in **Step I**. **(1 Mark)**

……

……

iii) Describe a chemical test on how C_3H_7COOH can be distinguished from C_4H_9OH. **(2 Marks)**

……

……

……

iv) Write an equation for the reaction that takes place in **Step III** **(1 Mark)**

_____

v) Name the types of reaction that occur in steps **II**, **III**, **V**, and **VII** **(2 Marks)**

II _____ **III** _____

V _____ **VII** _____

vi) If 7.4g of butanol completely underwent Step III, determine the volume of gas Z produced at s.t.p.

(MGV = 22.4 litres, C = 12, H = 1, O = 16) **(3 Marks)**

……

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……

vii) Write an equation for the reaction between **R** and one mole of fluorine gas **(1 Mark)**

……

viii) Describe a chemical test for **liquid X** **(2 Marks)**

……

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

CHEMISTRY

233/3

PAPER 3 (Practical)

TIME: 2¼ HRS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education.

CONFIDENTIAL REPORT

INSTRUCTIONS.

Apart from the normal fittings in the laboratory, each candidate will need the following chemicals and apparatus.

a) *500ml of distilled water supplied in a wash bottle*
b) *50ml burette*
c) *25ml*
d) *a pipette filler*
e) *2 conical flasks (250ml)*
f) *Source of heat (means of heating)*
g) *Stop watch/clock*
h) *A ruler*
i) *100ml measuring cylinder*
j) *50ml measuring cylinder*
k) *Complete retort stand*
l) *12cm long magnesium ribbon labelled C*
m) *100ml of solution A (sulphuric acid)*
n) *80ml of solution B (Sodium hydroxide soltn.)*
o) *100ml empty beaker*
p) *Funnel*
q) *Sand paper*
r) *3g of solid E*
s) *1g of solid F*

t) *Means of labeling*
u) *Six clean test tubes in a test tube rack*
v) *3 boiling tubes in a rack*
w) *Metallic spatula*
x) *About 0.2g of sodium hydrogen carbonate*
y) *Glass rod.*

Access

1. *2M Ammonia solution supplied with a dropper*
2. *2M Sodium hydroxide solution supplied with a dropper*
3. *2M Lead (II) Nitrate supplied with a dropper*
4. *0.2M Silver Nitrate solution supplied with a dropper*
5. *Acidified potassium dichromate (VI) supplied with a dropper*
6. *Acidified Potassium Manganate (VII) supplied with dropper*

N/B

1. *Solution A is prepared by accurately measuring 27.5cm^3 of concentrated Sulphuric acid, then adding it to 700ml of distilled water then topping it to one litre. Density of acid 1.84g/cm^3*
2. *Solution B is prepared by accurately measuring 20g of NaOH pellets and dissolving it in 800cm^3 of distilled water then topping to one litre with distilled water.*
3. *Solid E – sodium chloride*
4. *Solid F – maleic acid*

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

CHEMISTRY

233/3

PAPER 3 (Practical)

TIME: 2¼ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTION TO CANDIDATES:

a) *Write your name and class in the spaces provided on this page above*

b) *Sign and write the date of examination in the spaces on this page above.*

c) *Answer ALL the questions in the spaces provided after EACH question in the question-paper.*

d) *You are NOT allowed to start working with the apparatus for the first 15minutes of the 2¼ hours allowed for this paper. This time is to enable you read the question-paper and make sure you have ALL the chemicals and apparatus that you may need.*

e) *Mathematical tables and silent electronic calculator may be used.*

f)*ALL working MUST be clearly shown where necessary.*

Questions	Maximum Score	Candidate's Score
1	25	
2	15	
Total Score	40	

QUESTION 1.

You are provided with:

- Sulphuric acid solution A
- 0.5M sodium hydroxide solution B
- Magnesium ribbon labelled C

You are required to:-

- Investigate the rate of reaction between solution A and metal C
- Determine the concentration of sulphuric acid in moles per litre

Procedure I

(i) Using a ruler, make 6 marks at 2cm length interval on the Magnesium ribbon provided. Cut the magnesium ribbon into 2 cm long pieces.

(ii) Transfer 50cm^3 of acid solution using a measuring cylinder into a clean dry 100ml beaker. Place 2cm length piece of magnesium ribbon into the beaker with the acid and immediately start the stop watch/clock. Shake gently and note the time taken for the piece of magnesium ribbon to react completely.

(iii) Record in table I below. Place another piece of magnesium ribbon (2cm) to the same solution and again note the time taken.

(iv) Repeat the procedure until all six pieces of magnesium ribbon have reacted with the same solution initially placed in the beaker

(v) Complete the table I below:

Note: Keep the solution obtained in this experiment for use in procedure II

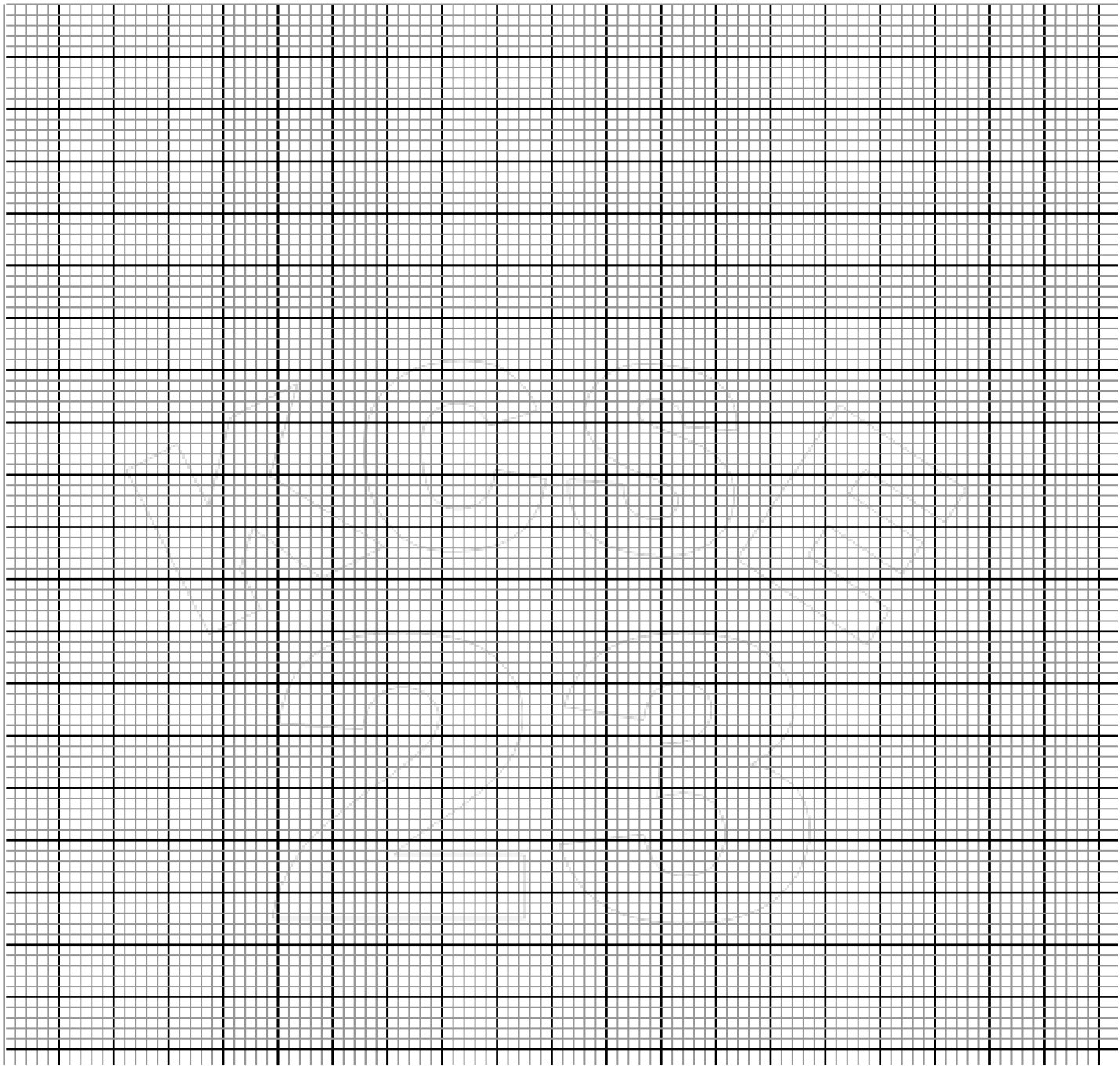
(a) Table I

Piece of magnesium added	1	2	3	4	5	6
Length of magnesium added (cm)	2	4	6	8	10	12
Time taken t(second)						
Reciprocal of time $^1/_{t^{(s-1)}}$						

(4 marks)

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(b) (i) On the grid provided, plot a graph of total length of magnesium ribbon added against reciprocal of time ($^{1}/_{t}$) for the reaction to go to completion. **(3 marks)**



(ii) From your graph, determine the time taken when 4.5cm length of magnesium ribbon to react completely. **(1 mark)**

……

……

……

(iii) Write a chemical equation for the reaction between magnesium and sulphuric acid. **(1 mark)**

……

……

(iv) Given that the mass of solid V, which reacted was 0.12g and that atomic mass of magnesium is 24.0g, determine the number of moles of sulphuric (VI) acid that were used up during the reaction. **(1 mark)**

……

……

……

(v) From your graph, state and explain the relationship between the length of magnesium ribbon and the reciprocal of time ($^1/_t$) **(1 mark)**

……

……

……

Procedure II

Place all the solution obtained in procedure I in a clean 100ml measuring cylinder. Add distilled water to make 100cm^3 of solution. Transfer all the solution into a beaker and shake well. Label it solution D. Fill the burette with solution B. Pipette 25.0cm^3 of solution D into a conical flask. Add 2-3drops of phenolphthalein indicator and titrate with solution. Record your results in the table II below. Repeat the titration two more times

Table II

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

(4 marks)

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(c) (i) Determine the average volume of solution B used . **(1 mark)**

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(ii) Calculate the number of moles of sodium hydroxide solution B used. **(1 mark)**

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……

(d) Calculate:

(i) The number of moles of sulphuric acid in 25.0cm^3 of solution D**.** **(1 mark)**

……

……

……

(ii) The number of moles of sulphuric acid in 100cm^3 of solution D. **(1 mark)**

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……

……

(e) Determine the total number of moles of sulphuric acid in 50cm^3 of solution A**.** **(1 mark)**

……

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(f) Calculate the concentration of the original sulphuric acid solution A in moles per litre.**(1 mrk)**

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QUESTION 2.

You are provided with solid E. Carry out the following tests and write your observations and inferences in the table below:

(a) Place all the solid E in a boiling tube. Add about $15cm^3$ of distilled water and shake vigorously for about 2 minutes.

Observations	Inferences
½ mark	**1 mark**

b) Divide the solution into five equal portions in five different clean test tubes.

(i) To the first portion, add 2M ammonia solution drop wise until in excess.

Observations	Inferences
1 mark	**½ mark**

ii) To the second portion add 2M Sodium hydroxide solution drop wise until in excess.

Observations	Inferences
1 mark	**1 mark**

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iii) To the third portion add 4 drops of 2M Lead (II) nitrate solution.

Observations	Inferences
1 mark	**1 mark**

iv) To the fourth portion, add 4 drops of 0.2M silver nitrate solution.

Observations	Inferences
1 mark	**1 mark**

(v) Clean one end of the glass rod provided. Dip the clean end of the glass rod in the fifth portion. Remove the end and heat it in the non-luminous part of a Bunsen burner flame. Note the colour of the flame and record below.

Observations	Inferences
1 mark	**1 mark**

QUESTION 3.

You are provided with solid F. Carry out the tests below. Write your observations and inferences in the spaces provided

(a) Place about a half of solid F on a metallic spatula and burn it using a Bunsen burner flame.

Observations	Inferences
½ mark	**½ mark**

(b) Place the remaining of solid F in a boiling tube. Add about 10cm3of distilled water and shake the mixture well.

Observations	Inferences
1 mark	**1 mark**

(c) Divide the mixture obtained into three portions.

(i) To the first portion, add a small amount of solid sodium hydrogen carbonate.

Observations	Inferences
1 mark	**1 mark**

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(ii) To the second portion, add about 1cm^3 of acidified potassium dichromate (VI) and warm.

Observations	Inferences
1 mark	**1 mark**

(iii) To the third portion, add two drops of acidified potassium magnate (VII)

Observations	Inferences
1 mark	**1 mark**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

PHYSICS

232/1

PAPER 1 (Theory)

TIME: 2 HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTION TO CANDIDATES

- This paper consists of two sections: **A** and **B**
- Answer all questions in section **A** and **B** in the spaces provided
- All workings **must** be clearly shown, and Use the **CONSTANTS** given.

✓ **Gravitational acceleration, 'g' = 10m/s^2** **Atmospheric pressure = 76mmHg**

✓ **density of water = 1000kg/m^3** **density of mercury = 13600kg/m^3**

- Silent, non-programmable calculator may be used

FOR EXAMINER'S USE ONLY:

QUESTION	MARKS	CANDIDATES' SCORE
1-12	25	
13	13	
14	14	
15	15	
16	13	
TOTAL	80	

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SECTION A (25 MARKS)

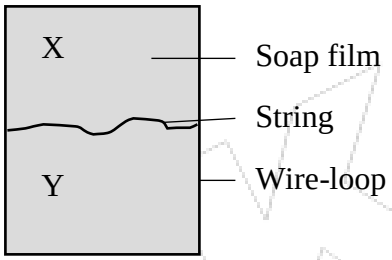
1. Distinguish between density and relative density of a substance **(1 mark)**

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2. Figure 1, below shows a wire loop with a string that has been dipped into soap solution.



(i) On the space alongside figure 1, Sketch a similar diagram to show the observed effect if the soap film is punctured at X **(1 mark)**

(ii) Explain the observations made in **(i)** above **(2 marks)**

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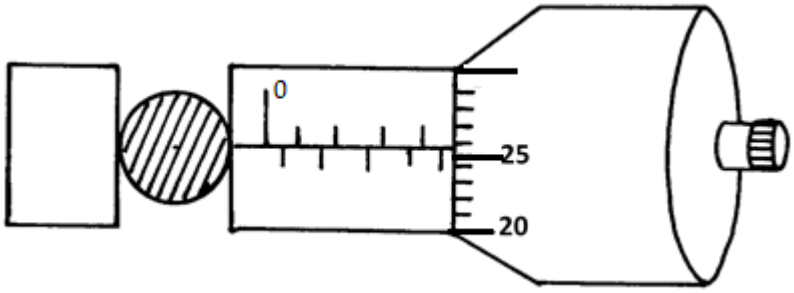
3. State **two** reasons why gas particles diffuse faster than liquid particles **(2 marks)**

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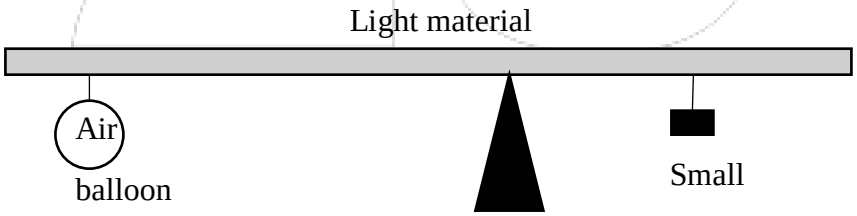
4. A ball-bearing of mass 0.250 kg is held between the anvil and spindle of a micrometer screw gauge as shown in figure 2. The reading on the gauge when the jaws are closed without anything in between is 0.011cm. Use this information to answer the questions **(a)** and **(b)** below:



(a) What is the diameter of the ball bearing? **(2 marks)**

(b) Determine the density of the ball bearing **(3 marks)**

5. The diagram in figure 3, shows a system in equilibrium and at room temperature.



State and explain what is observed when the temperature of the room is raised by 25^0c. **(2 marks)**

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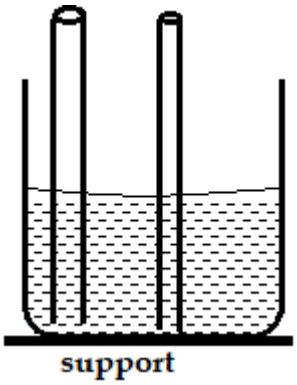
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6. ***Figure 4,*** shows two glass tubes of different diameters, dipped in a glass beaker half full of water

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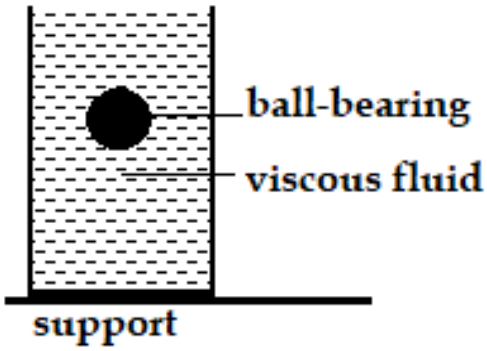
Complete the diagram to show how water will rise up in the two glass tubes **(1 mark)**

7. State the conditions necessary for the law of conservation of linear momentum to hold **(1 mark)**

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8. The diagram in ***figure 5,*** below shows a steel ball bearing gently falling down through a viscous liquid contained in a tall cylinder



Label on the diagram (giving direction), the forces acting on the ball bearing as it moves down the cylinder **(3 marks)**

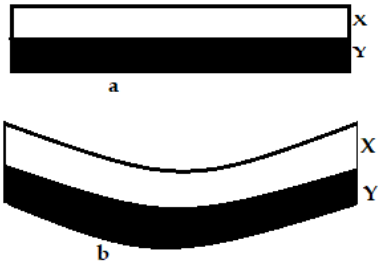
9. A string vest keeps a person warm though it is a collection of holes bounded by strings. Explain **(2marks)**

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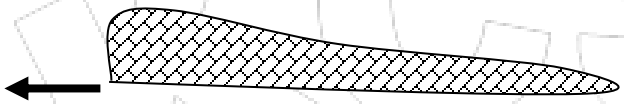
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10. The figure 6, below represents a bimetallic strip of metals **X** and **Y** at room temperature (a) and when dipped into crushed ice (b) respectively. Sketch a diagram in the space alongside, to show the shape when the strip is heated to a temperature above the room temperature **(1 mark)**

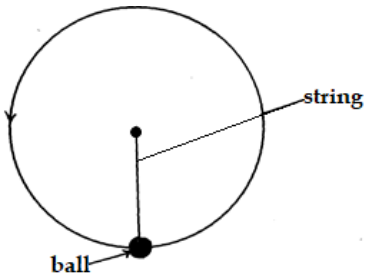


11. Figure 7, below shows the cross-section of an aero-foil, with the aero-plane moving in the direction shown by the arrow.



Using a sketch of the streamlines showing how air flows past the wing as the aero-plane moves, explain how the aero-plane achieves the dynamic lift **(3 marks)**

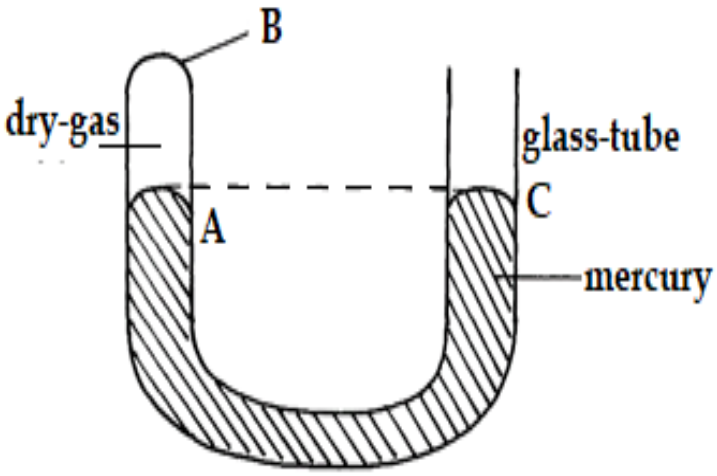
12. The diagram in figure 8, below shows a ball being whirled in a vertical plane at a uniform speed of 20m/s. If the maximum tension on the string is exceeded, suggest, by drawing on the diagram, the path which is likely to be taken by the ball. **(1 mark)**



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SECTION B (55 MARKS)

13. The diagram below represents a u-shaped glass tube sealed at one end and containing mercury.



(a) Determine the pressure (in N/m^2) of the dry gas as shown in the diagram above **(2 marks)**

(b) Explain why the gas should be dry if it is to be used to verify a gas law **(1 mark)**

(c) Describe how the arrangement can be used to verify Boyle's law. **(4 marks)**

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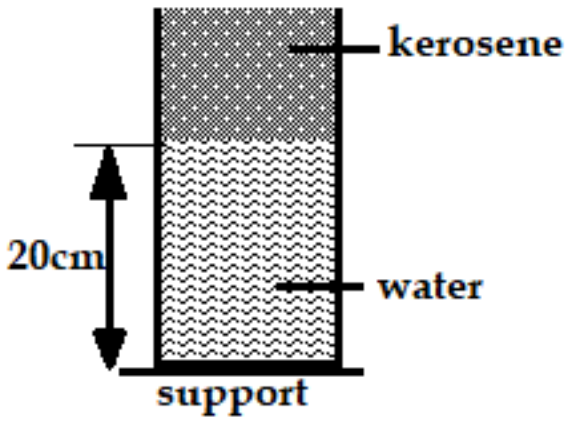
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(d) Using the kinetic theory of gases, explain why the pressure of a gas increases with temperature increase **(3 marks)**

(e) Figure 10 below shows a measuring cylinder of height 30cm filled to a height of 20cm with water and the rest occupied by kerosene.



Given that density of water = 1000Kgm^{-3}, density of kerosene = 800Kgm^{-3} and atmospheric pressure = 1.03x10^{5} Pascal, determine the total pressure acting on the base of the container**(3 marks)**

14.

(a) Distinguish between uniform velocity and instantaneous velocity **(1 mark)**

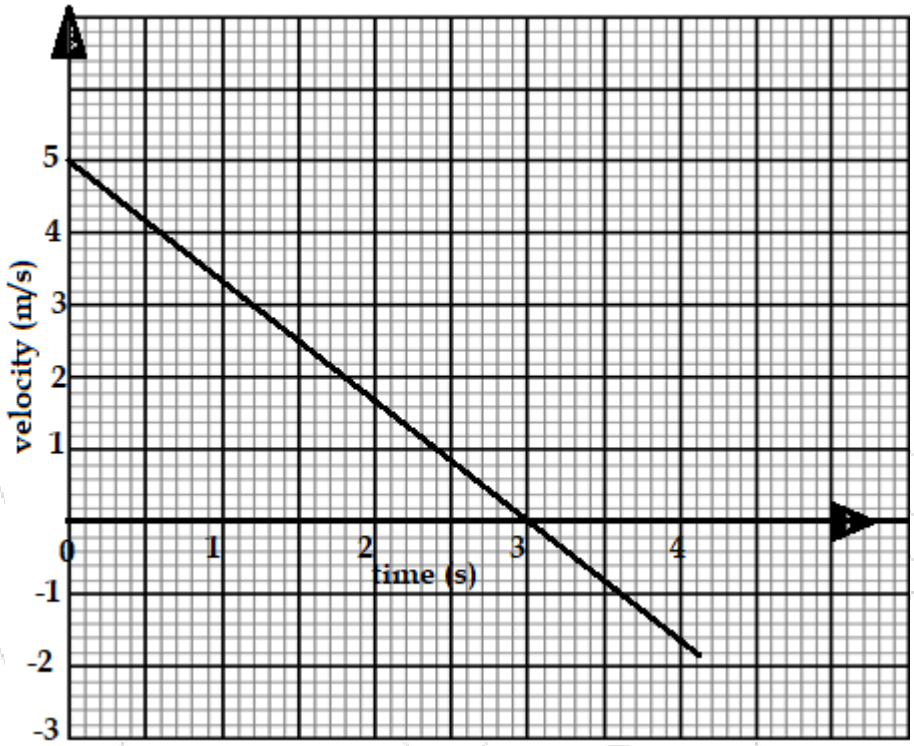
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(b) The velocity-time graph in the figure 11, below illustrates the motion of a ball which has been projected vertically upwards from the surface of the moon. The weight of the object on earth's surface is 20N.



i. State why the velocity becomes negative after 3seconds. **(1 mark)**

ii. Determine the acceleration of gravity on the moon showing clearly your work **(3 marks)**

iii. Determine the total distance travelled by the ball in 4.0seconds **(3 marks)**

iv. Find the weight of the ball on the moon **(2 marks)**

(c) A body starts from rest and attains a velocity of 10m/s after 4 seconds. Use the axes provided below to represent this motion **(2 marks)**

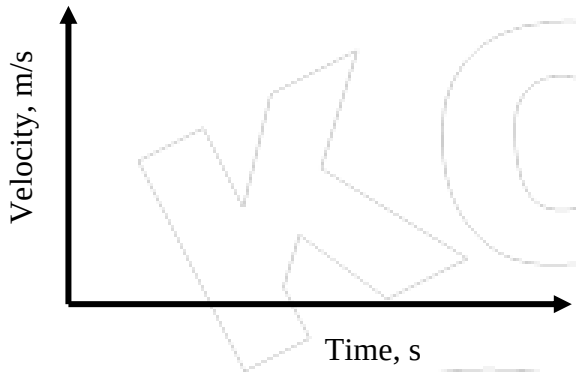


Figure 1

(d) Define angular velocity and state its SI unit **(2 marks)**

15.

(a) Define the term "velocity ratio" as used in the working of machines **(1 mark)**

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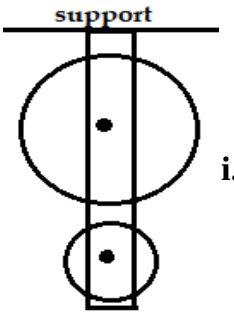
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KCSE 23

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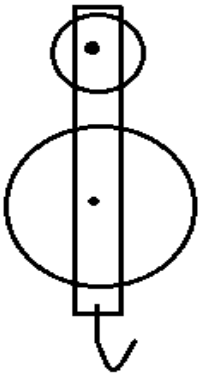
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(b) A civil engineer wanted to raise sand from the ground to the third floor of a house he was working on. He began by assembling the following pulley system in figure 13.



i. Complete the diagram in figure 13, by threading the pulley so that it can be used to raise the load **L** by applying an effort **E** from the third floor.

(2 marks)



i. The pulley system has a mechanical advantage of 3. Calculate the total work done when a load of 600N is raised through a height of 9m **(3 marks)**

(c) On the axes provided, sketch a graph of mechanical advantage against load for the pulley system

(2 mark)



(d) The graph below shows the potential energy against displacements for a body of mass 80g.

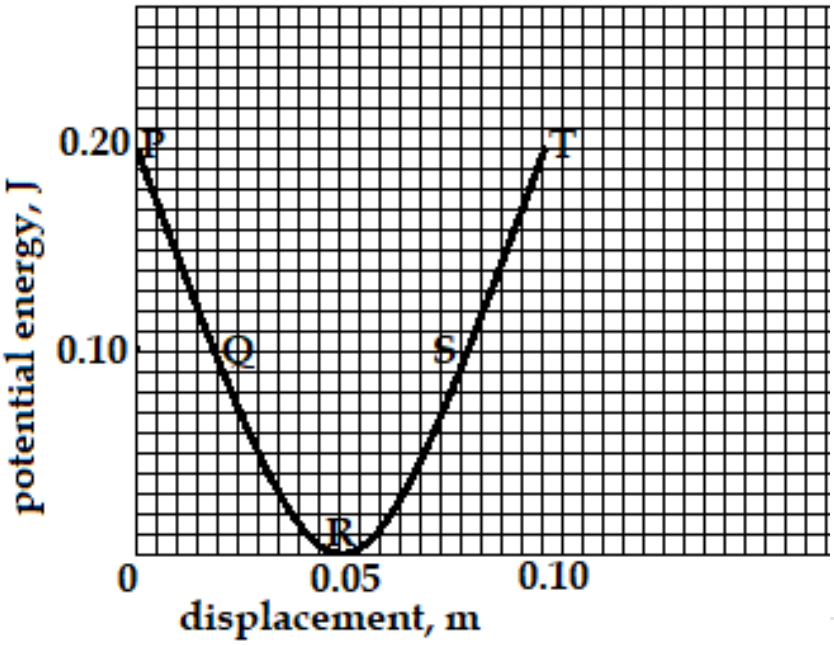


Figure 3

The body oscillates about point **R**. Calculate the velocity of the body at:

i.P and **T** **(3 marks)**

ii.Q and **S** **(2 marks)**

iii.at **R** **(2 marks)**

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16.

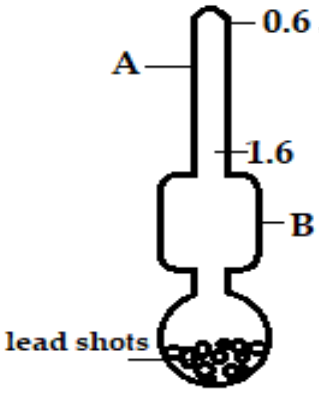
(a) State Archimedes' principle **(1 mark)**

(b) A rectangular brick of mass 10kg is suspended from the lower end of a spring balance and gradually lowered into water until its upper end is some distance below the surface.

i. State and explain the changes observed in the reading of the spring balance during the process **(2 marks)**

ii. If the spring reads 80N when the brick is totally immersed, determine the volume of the brick. **(3 marks)**

(c) The figure below shows a hydrometer.



i. Identify the parts labelled A and B **(2 marks)**

A ……

B ……

ii. Explain why the bulb should be made wide **(2 marks)**

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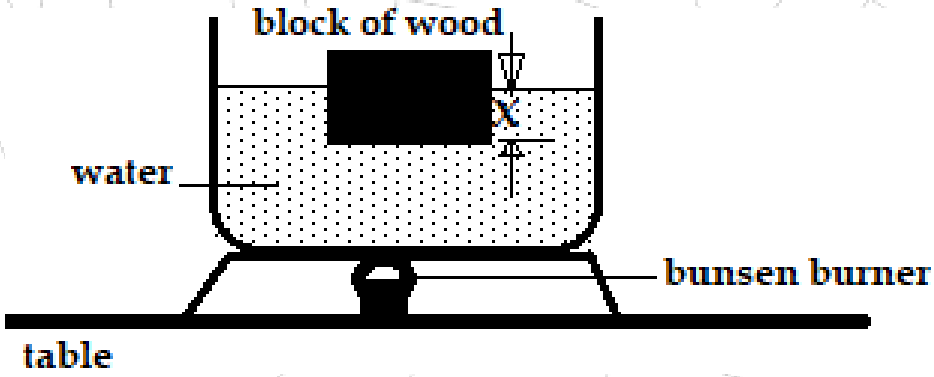
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iii. State the function of the lead-shots **(1 mark)**

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……

(d) The diagram, ***figure 16,*** shows a block of wood floating on water in a beaker. The set-up is at room temperature before the Bunsen burner is lit. State and explain the changes that are likely to occur in depth **X** when the Bunsen burner is lit. **(2 marks)**



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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

PHYSICS

232/2

PAPER 2 (Theory)

TIME: 2 HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

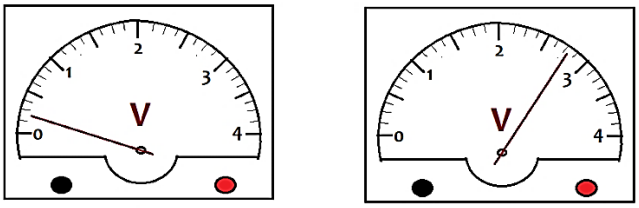
(a) Write your name, index number in the spaces provided above.
(b) Sign and write the date of the examination in the spaces provided
*(c) This paper consists of **TWO** Sections: **A** and **B**.*
*(d) Answer **ALL** the questions in section **A** and **B** in the spaces provided.*
***(e)** All working **MUST** be clearly shown.*
(f) KNEC mathematical tables and silent non-programmable electronic calculators may be used.

FOR EXAMINERS USE ONLY

Section	Question	Maximum score	Candidates score
A	1-15	25	
B	16	11	
	17	11	
	18	10	
	19	11	
	20	12	
TOTAL SCORE		80	

SECTION A (25 MARKS)

1. The fig. 1 below shows a voltmeter before and after use to take the emf of a cell.



Record the value of emf of the cell. **(2 marks)**

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2. The chart below shows an arrangement of different parts of the electromagnetic spectrum.

Radio wave	**A**	**B**	Visible light	**C**	**D**	Gamma Rays

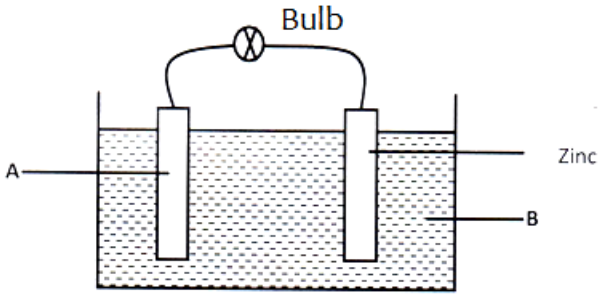
(i) Name the radiation represented by **C**. **(1 mark)**

……

(ii) Name a device that can be used to detect radiation **A**. **(1 mark)**

……

3. Figure 2 below shows a set-up of a simple cell.



(a) Name the material used in part A **(1 marks)**

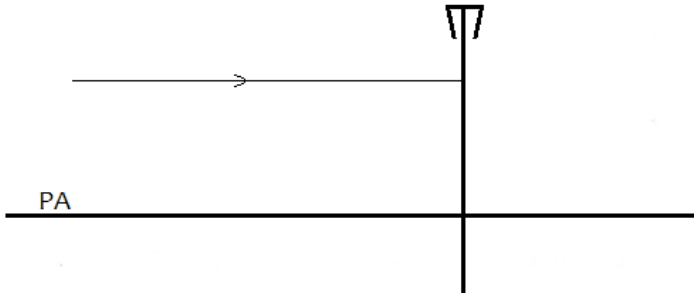
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(b) Name the electrolyte B. **(1 mark)**

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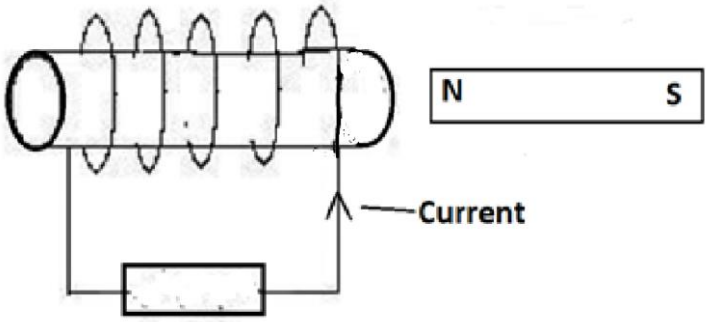
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4. The fig. 3 below shows a ray incident to a concave lens.



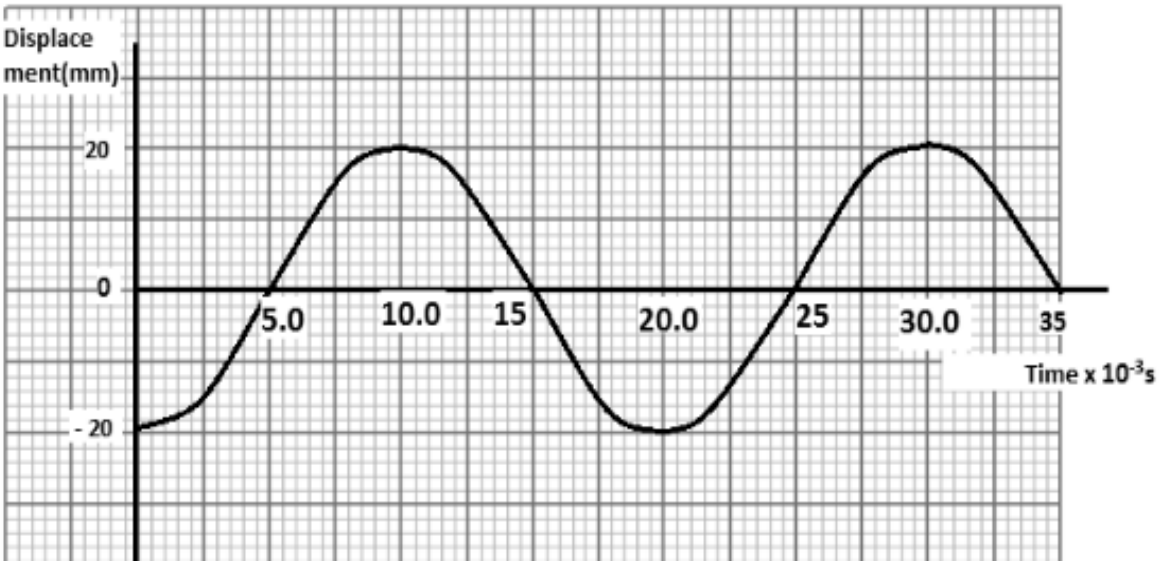
Draw on the diagram to show the resulting ray. **(1mark)**

5. The figure 4 below shows a magnet and a solenoid in relative motion.



If the current shown was induced current indicate the motion of the magnet. **(1mark)**

6. Figure 5 represents a displacement – time graph for a wave.



Determined the frequency of the wave. **(2marks)**

……

……

……

7. State the reasons for the following in the filament bulb:

a) Inside is filled with inert gas at low pressure. **(1 mark)**

……

……

b) The filament is coiled. **(1 mark)**

……

……

8. A girl standing at a distance claps her hands and hears an echo from a tall building 2 seconds later. If the speed of sound in air is 340m/s, determine how far the building is. **(3marks)**

……

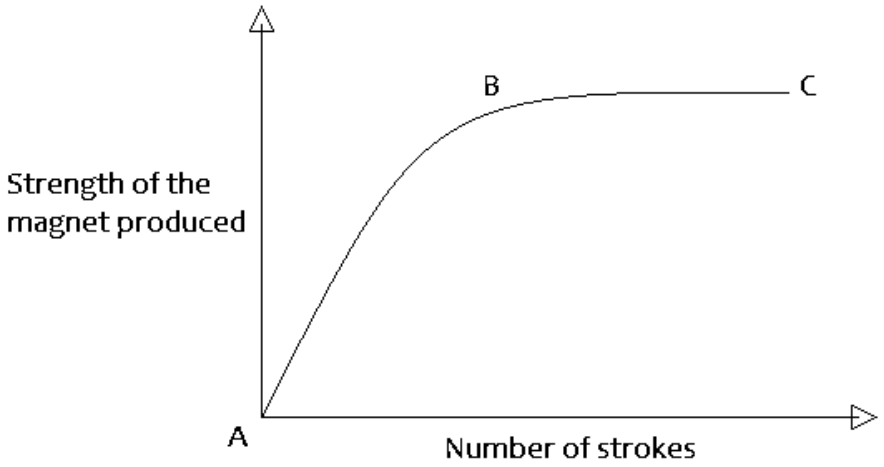
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9. In an experiment to magnetize an iron bar by single stroke method, the graph below was plotted.



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Explain what is happening between points AB and BC. **(2marks)**

AB

……

……

BC

……

……

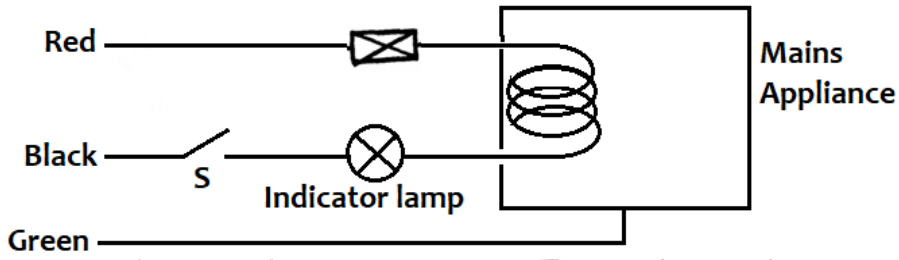
10. State two ways of confirming that an accumulator is fully charged. **(2marks)**

……

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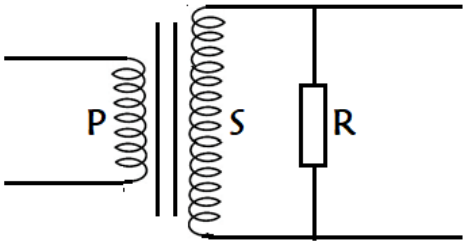
11. The fig. 6 below shows an electrical appliance with leads labelled Red, Black and Green.



Identify one mistake in the connection. **(1 mark)**

……

12. Figure 7 below shows a perfectly efficient transformer. The number of turns in the secondary coil S is six times that of the primary coil P.



If a supply voltage of 4V d.c is connected across P, state with reason what happens to the voltage across R **(2 marks).**

……

……

……

13. Explain what is meant by radioactive decay. **(1 mark)**

……

……

14. A part from the field, state two ways of increasing the magnitude of current generated. **(2 marks)**

……

……

……

15. State one structural difference between a.c and d.c generators. **(1 mark)**

……

……

SECTION B (55 MARKS)

16. a. State one application of each of the following. **(2marks)**

i. Convex mirror

……

……

ii. Parabolic mirror

……

……

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b. Fig. 9, which is drawn to a scale of 1:5, represents an object O and its image 'I' formed by a concave mirror.

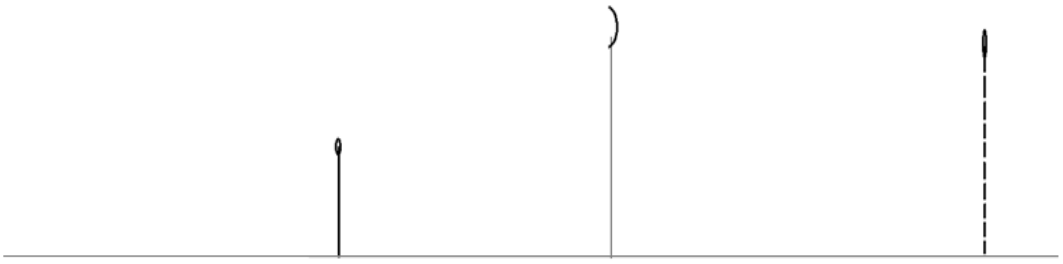


Fig. 1

By drawing suitable rays, locate and mark on the figure the position of the principal focus 'F' of the mirror. Determine the focal length f. **(3 marks)**

……

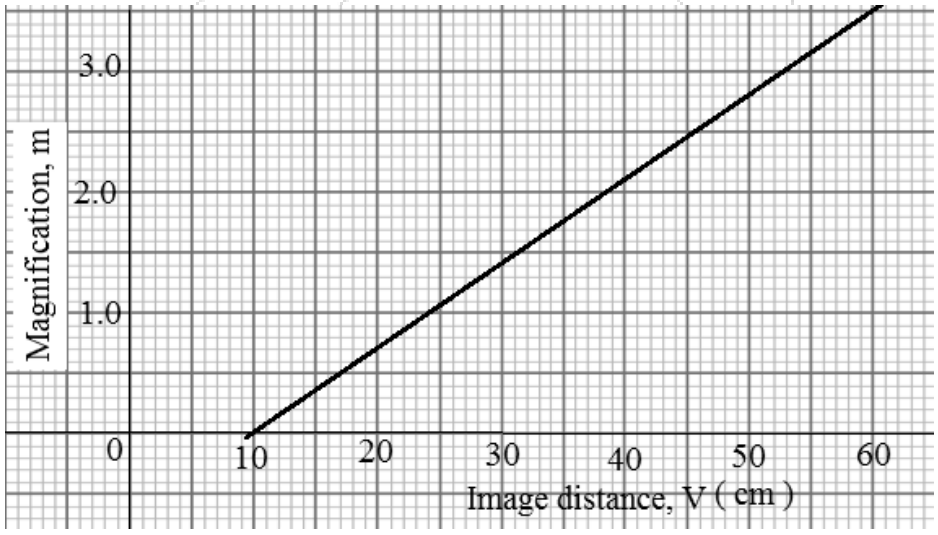
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c. The graph in Fig. 10 shows the variation of magnification, M with image distance, V for a concave mirror.



Determine:

I. The object position when the image position is 45cm. **(3marks)**

……

……

……

……

II. The focal length of the mirror. **(1mark)**

……

……

d) state two reasons why a concave mirror is used as a doctor's dental mirror. **(2 marks)**

……

……

……

17. (a) State **two** factors that determine the capacitance of a parallel place capacitor. **(2marks)**

……

……

……

(c) A 5μF capacitor is charged to a potential difference of 200V and isolated. It is then connected to a 10μf capacitor.

Find ;

(i) The resultant potential difference across the combination **(3marks)**

……

……

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(ii) Energy stored before connection **(3marks)**

……

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(iii) Total energy in the capacitors after connection. **(2marks)**

……

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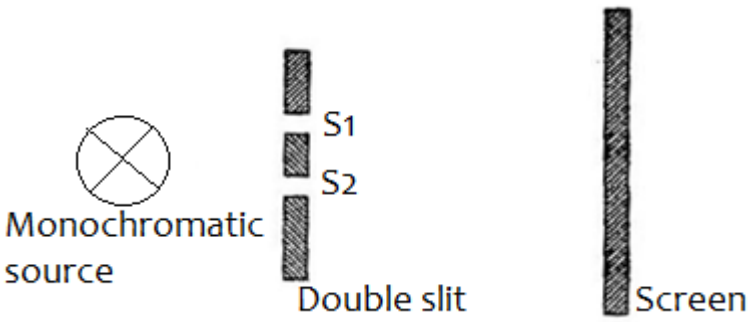
(c) Give two applications of capacitors **(2 marks)**

……

……

……

18. a) In an experiment to observe interference of light waves a double slit is placed close to the source. See figure 12



(i) What is a monochromatic source of light. **(1 mark)**

……

……

……

(ii) State the function of the double slit **(1 mark)**

……

(iii) Describe what is observed on the screen **(1marks)**

……

……

(iii) State what is observed on the screen when

I. The slit separation S_1S_2 is reduced **(1 mark)**

……

……

II. White light source is used in place of monochromatic source **(1 mark)**

……

……

b) During physics lesson, the teacher noticed that Joe had to sit behind in order to see the writings on the board clearly.

I. Name the eye defect experienced by Joe. **(1 mark)**

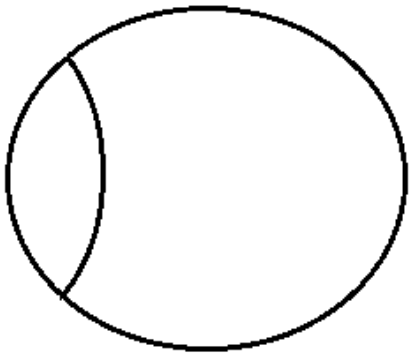
……

II. State one possible cause of the defect. **(1 mark)**

……

III. On the diagram in fig 11 below, draw to show how the defect can be corrected by use of a lens.

(3 marks)



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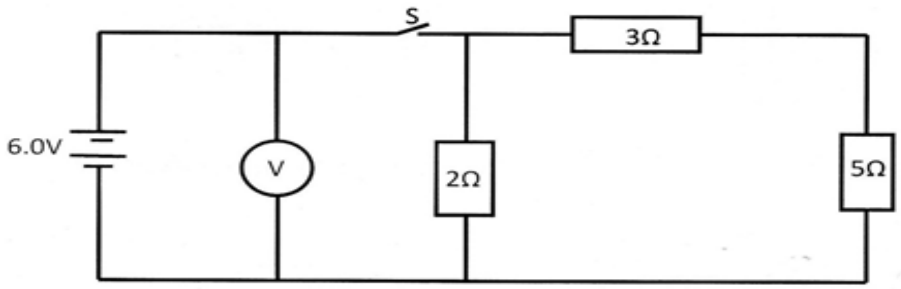
19. (a) Distinguish between an ohmic and non-ohmic conductors. **(1 mark)**

……

……

……

(**b)** Figure 16 shows a circuit with resistors and voltmeter connected to a battery



i). If each cell has an internal resistance of 0.7Ω, determine the total resistance in the circuit.

(3 marks)

……

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……

……

……

ii). Calculate the value of current flowing through the 3Ω resistor when the switch is closed?

(2 marks)

……

……

……

iii). What is the reading of the voltmeter when the switch S is

I.Open **(1 mark)**

……

……

II. Closed **(3 mark)**

……

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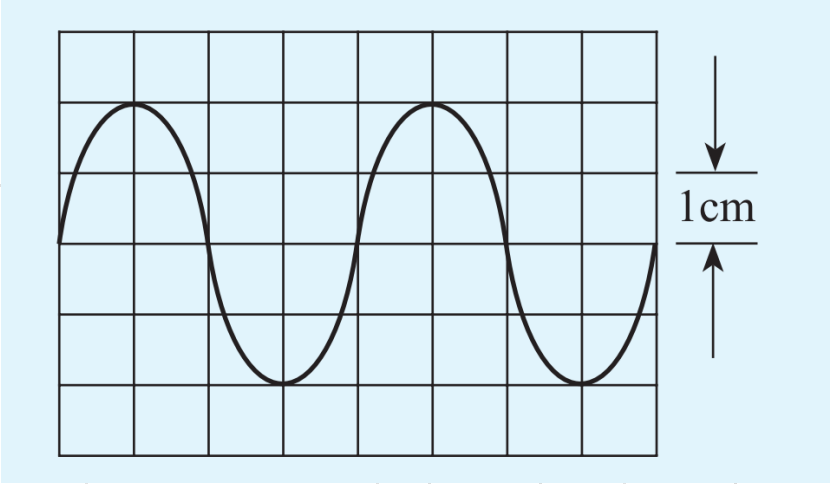
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iv). Account for the difference between the answers in (I) and (II) above **(1 mark)**

……

……

20. (a) The figure below shows a waveform on a CRO screen: Given that the Y-gain control is set at 20 V/cm and the time-base set to 10 ms/ cm,



Calculate the:

(i) Periodic time of the wave**.** **(2 marks)**

……

……

……

(ii) Frequency of the wave**.** **(2 marks)**

……

……

……

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(iii) Peak voltage **(2 marks)**

……

……

……

(b) Calculate the frequency of X-rays produced by an X-ray tube operating at 20 kV, assuming that no energy is dissipated as heat. (Planck's constant h = 6.63 $x10^{-34}$ Js, and the electronic charge is 1.6 $x10^{-19}$ C**)** **(3 marks)**

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(c) Calculate the energy of photons associated with radiation of frequency 4.8×10^{14} Hz, stating your answer in **eV** **(3 marks)**

……

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

PHYSICS

232/3

PAPER 3 (Practical

TIME: 2½ HRS

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education.

CONFIDENTIAL REPORT

Every candidate is expected to be provided with the following apparatus:

QUESTION ONE

You are provided with the following:

- *Copper wire (approximately 35 cm long and 1 mm thick)*
- *A retort-stand, boss and clamp*
- *An optical pin mounted on a cork*
- *A stop watch*
- *Wire cutters (to be shared)*
- *A metre-rule or half-metre rule*
- *A cylindrical container (approximate height of 20 cm)*
- *Some water*
- *A stop watch*
- *A metre ruler or half metre rule*
- *A boiling tube (approximate: diameter of 2.5 cm and height 15 cm)*
- *Some sand*
- *A rubber band*

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QUESTION TWO

- *Constantan wire (of approximate 0.33mm thick) mounted on a mm scale*
- *Ammeter (0 – 1) A*
- *Voltmeter (0 –2.5) V*
- *A jockey*
- *6 connecting wires with crocodile clips*
- *A switch*
- *A new dry cell and a cell holder*
- *Micrometer screw gauge (to be shared)*
- *Rectangular glass block (approximately 10cm by 6 cm by 2 cm)*
- *3 optical pins*
- *A soft board.*
- *A plane paper*
- *4 paper pins.*
- *Four tuck pins*
- *30 cm ruler* (to be provided by the candidates)

KCSE 23

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

PHYSICS

232/3

PAPER 3 (Practical

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) Answer all questions in the spaces provided in the question paper.

b) You are supposed to spend the first 15 minutes reading the whole paper carefully before commencing your work.

c) Candidates are advised to record their observations as soon as they are made.

d) Marks are given for observation actually made, their suitability, accuracy and the use made of them.

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	20	
TOTAL	40	

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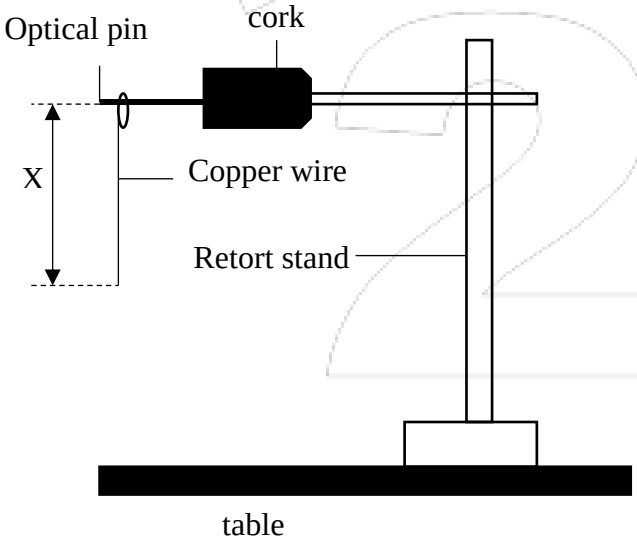
QUESTION ONE

PART A

You are provided with the following:

- Copper wire
- A retort-stand, boss and clamp
- An optical pin mounted on a cork
- A stop watch
- Wire cutters (to be shared)
- A metre-rule or half-metre rule

(a) Clamp the cork so that the optical pin is horizontal. Hang the copper wire from the pin by the loop as shown in figure 1. Ensure the wire is straight and the length X between the lower tip and the optical pin is 32 cm. If the length exceeds 32 cm reduce by cutting at the lower tip using the wire cutters provided.



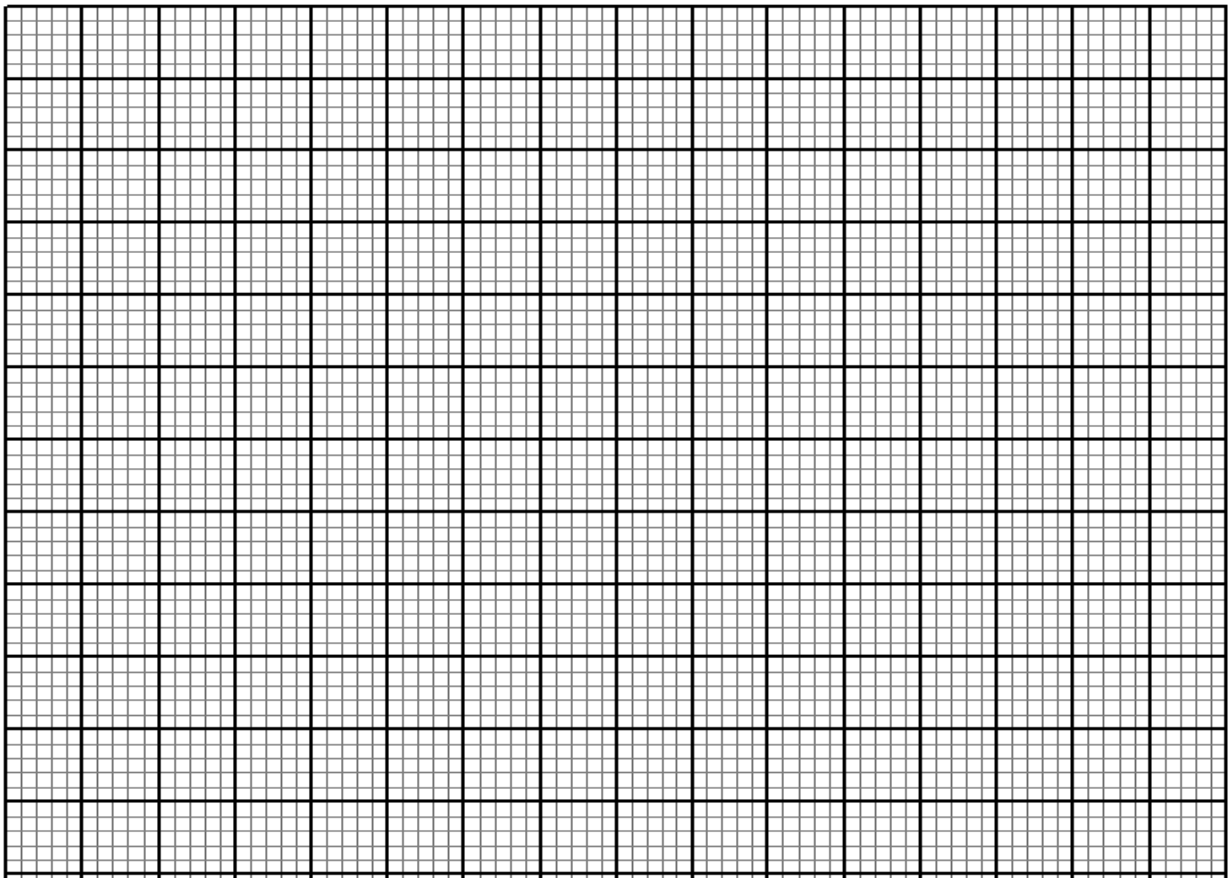
(b) Displace the lower tip of the wire slightly in a plane perpendicular to the optical pin and then release it. Measure the time t for 20 oscillations of the wire and record the value in table.

(c) Repeat the procedure in (b) above for other values of X shown in the table. (Note that each length X is obtained by cutting off an appropriate length from the lower tip of the wire. For example, to get X= 28cm cut off 4 cm from the lower end). Complete the table. **(6 marks)**

Table 1

Length X (cm)	32	28	24	20	16	12
Time t for 20 oscillations (S)						
Period (T = $\frac{t}{20}$ (S)						
T^2 (S^2)						

(d) Plot a graph of T^2 (y- axis) against X **(5 marks)**



(e) (i) Determine the slope, S, of the graph **(3 marks)**

(ii) Obtain the value of k in the equation: $S = \frac{8\pi}{3K}$ **(2 marks)**

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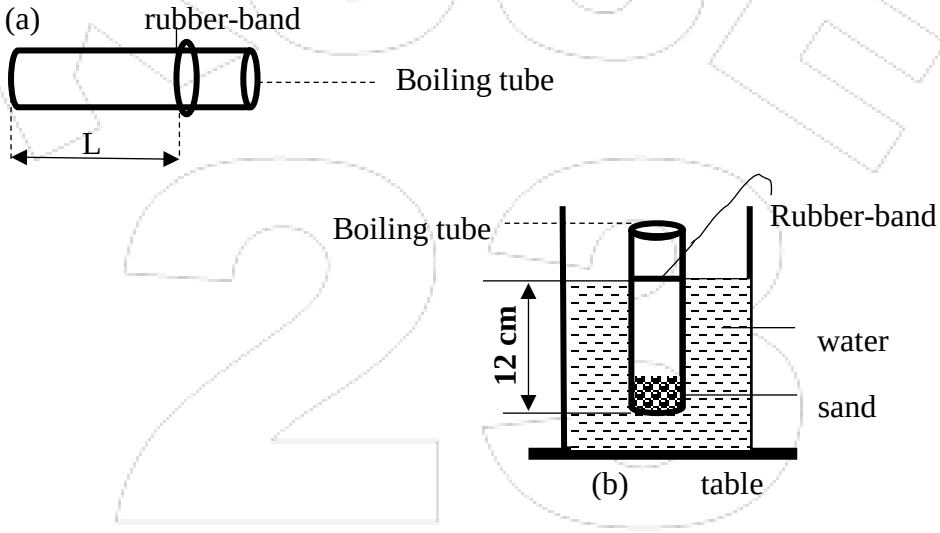
PART B

You are provided with the following:

- A cylindrical container
- Some water
- A stop watch
- A metre ruler or half metre rule
- A boiling tube
- Some sand
- A rubber band

Proceed as follows:

(f) Tie the rubber band round the boiling tube so that it is at a distance L= 12 cm from the bottom of the tube (see fig 2. a). Pour water into cylindrical container until the level is about 2.0 cm from the top of the beaker. Float the boiling tube in the water in the container. Add sand gradually into the boiling tube until the tube sinks to the 12 cm mark. See figure 2 (b).



(g) Depress the boiling tube slightly and release so that is oscillates vertically without touching the sides of the container. Measure and record in table 2 the time t_1, for five oscillations of the boiling tube, Repeat the procedure two more times to obtain t_2, and t_3 and record the values in table 2. Complete the table. **(3 marks)**

t_1 (S)	t_2 (S)	t_3 (S)	Average, t (S) $t = \frac{t_1+t_2+t_3}{3}$	$T = \frac{t}{5}\ (s)$

(h) Evaluate PT = 40L given that L is the length of the tube up to the rubber band in (f) and T is the value obtained in (g) above. **(1 mark)**

P = _____

QUESTION TWO

You are provided with the following apparatus:

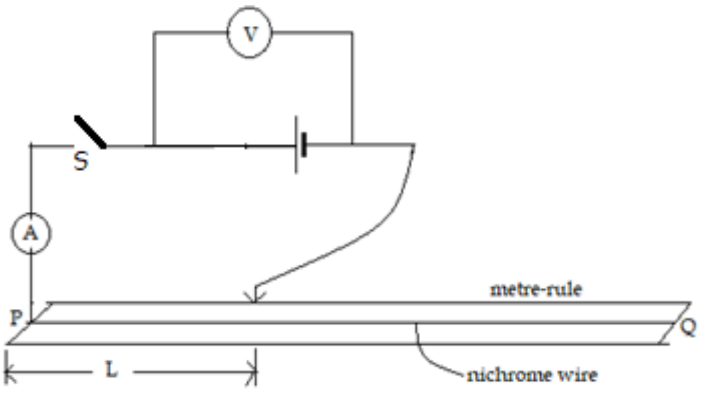
PART A

- Constantan wire SWG 28 mounted on a mm scale
- Ammeter (0 – 1) A
- Voltmeter (0 –2.5) V
- A jockey
- 6 connecting wires with crocodile clips
- A switch
- A new dry cell and a cell holder
- Micrometer screw gauge to be shared

Proceed as follows:

(a) Connect the apparatus provided as shown in the circuit below. Measure the voltmeter reading, E when the switch is open.

E = …… **(1 mark)**



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(b) With the crocodile clip at L = 10 cm, close the switch S and record the ammeter and voltmeter reading.

A = ……. **(1 mark)**

V = ……. **(1 mark)**

(c) Repeat the procedure in (b) for other values of l = 15cm, 20cm, 25cm, 30cm, 35cm and record the readings in the table below. **(5 marks)**

Table 2

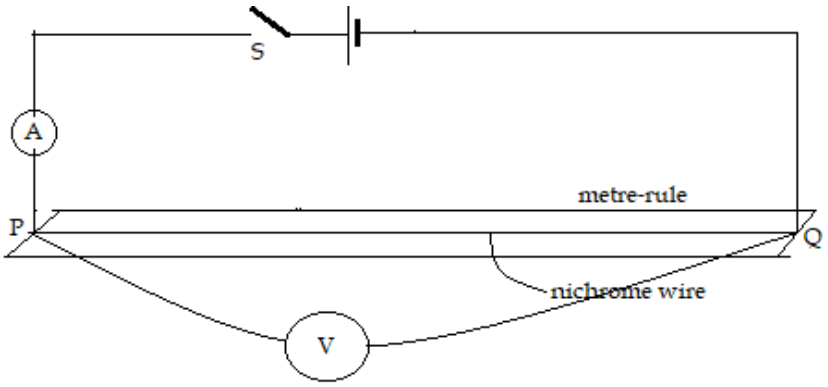
Length. L. (cm)	10	15	20	25	30	35
Voltmeter reading, V (volts)						
Ammeter reading, I(A)						

(d) Given that V = X – 0.3.I, determine the value of X when L is 20cm **(2 marks)**

(e) Measure the diameter d of the wire x using the micrometer screw gauge.

d = _____ m **(1mark)**

(f) Dismantle the apparatus and set up the circuit as shown below



(i) Close the switch S and record the ammeter and the voltmeter readings

I = _____ A **(1 mark)**

V = _____ V **(1mark)**

Hence find R, the resistance of the wire.

R = _____ **(1mark)**

(ii) Given that: **R =** $\frac{4\rho}{\pi d^2}$, **determine ρ** **(2 marks)**

PART B

You are provided with the following apparatus.

– Rectangular glass block
– 3 optical pins
– A soft board.
– A plane paper
– 4 paper pins.
– Four tuck pins

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Proceed as follows:

(g) Using the tuck pins, fix the plane paper on the soft board.

Place the rectangular glass block in the middle of the plane paper and trace its outline (as shown in figure 5). Using a pencil. Remove the block.

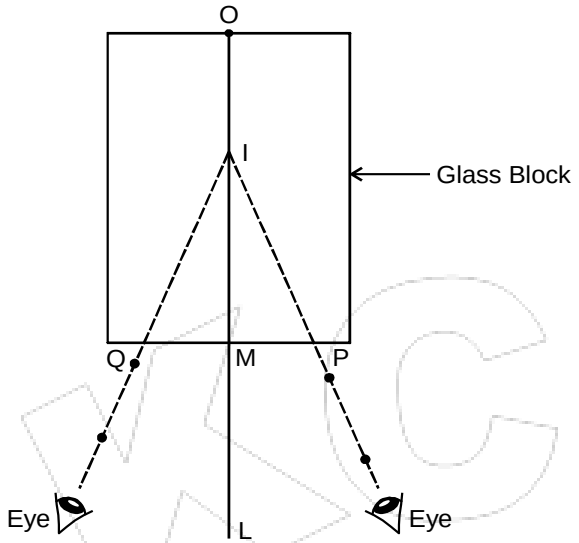


Figure 4

(h) Construct a perpendicular line LMO bisecting the shorter sides of M and O.

Mark points P and Q such that PM = MQ = 2cm.

Measure OM..... **($\frac{1}{2}$ mark)**

(i) Place the plane paper on the soft board and carefully replace the glass block so that it fit the outline. Press the object pin on O such that it is upright and touching glass block and the second pin on P also upright and touching the block.

(j) Press the third pin P_1 a short distance from the block such that P_1, P and I lie on a straight line when viewed through the block with one eye. I is the image of the object pin O.

(k) Repeat the experiment with now on Q. Press the third pin P_2 a short distance from the block such that when viewed P_2, Q and I lie in a straight line.

(l) Remove the pins and glass block; draw the lines P_1PI (PI dotted) and P_2 QI (QI) doted meeting OM at I.

IM = ...cm **($\frac{1}{2}$ mark)**

(m) Using the above information, determine, k, given that: $A = \frac{l}{k}$, where $l\ is\ the\ length\ OM$ and A is the length IM **(1 mark)**

(n) State the significance of k **(1 mark)**

NB - Hand in your work on the plane paper as proof of having done the experiment. **(1 mark)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

AGRICULTURE

443/1

PAPER 1 (Theory)

TIME: 2 HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

Instructions to students

a) *Write your name and Admission number in the spaces provided at the top of this page .*
b) *This paper consists of three sections: A , B and C.*
c) *Answer all questions in sections A and B.*
d) *Answer any two questions in section C.*
e) *All answers should be written in the spaces provided.*

For Examiner's Use Only

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-19	30	
B	20-22	20	
C	23	20	
	24	20	
	25	20	
	TOTAL SCORE	90	

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SECTION A (30 MARKS)

Answer all the questions in this section.

1. Name two field practices that are carried out to obtain optimum plant population in a crop field.

(1 Mark)

……

……

2. List four post-harvest practices that are carried out in maize production. **(2 Marks)**

……

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3. State two effects of high rainfall intensity to farming. **(1 Mark)**

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4. State four ways in which a farmer can improve the structure of water logged clay soil. **(2 Marks)**

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5. List four factors that determine the type of irrigation used in crop production. **(2 Marks)**

……

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6. State four symptoms of potassium deficiency in crops**.** **(2 Marks)**

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7. State any four disadvantages of using non capped multiple stem pruning in coffee. **(2 Marks)**

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8. State two practices which are carried out during hardening off in seedlings. **(1 Mark)**

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9. Give two conditions in economics when opportunity cost is zero. **(1 Mark)**

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10. State four advantages of organic farming**.** **(2 Marks)**

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11. State four disadvantages of organic mulch in crop production**.** **(2 Marks)**

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12. State four problems that may be brought up by hardpan in crop land**.** **(2 Marks)**

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13. State four pieces of information contained in land title deed. **(2 Marks)**

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14. Differentiate between seedbed and a seedling bed. **(2 Marks)**

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15. Give four reasons why it is difficult to control Sodom apple weed in crop fields. **(2 Marks)**

……

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16. Give two reasons for imposing quarantine on imported planting materials. **(1 Marks)**

……

……

17. Give four benefits of top dressing in management of grass pasture**.** **(1 Marks)**

……

……

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……

18. Define the following terms as used in crop production. **(1 Mark)**

(a) trellishing

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(b) stooking.

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19. Outline two ways of controlling damping off diseases on vegetable seedlings in nursery.

(1 Mark)

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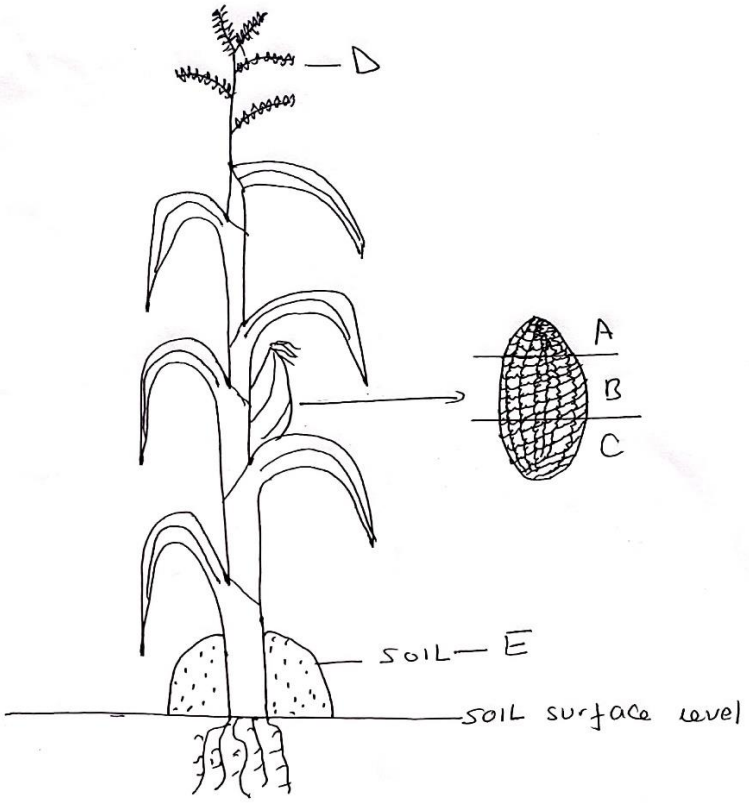
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SECTION B (20 MARKS)

Answer all questions in the spaces provided.

20. The diagram below illustrates a maize crop plant and its produce. Study the diagram and answer the questions that follow.



(a) Name one disease that attacks the part of the plant labelled D. **(1 Mark)**

……

(b) From which section of the produce labeled A, B and C should seeds for planting be obtained?

($\frac{1}{2}$ Mark)

……

(c) Give one reason for the answer given in (b) above**.** **(1 Mark)**

……

(d) Which practice is done on part E**?** **($\frac{1}{2}$ Mark)**

……

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(e) State the importance of the practice in the following crops.

(i) Maize **($\frac{1}{2}$ Mark)**

……

(ii) Irish potato **($\frac{1}{2}$ Mark)**

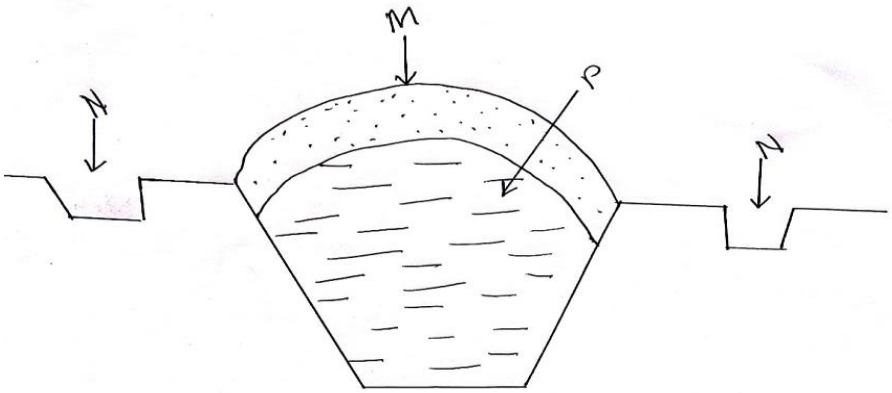
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(iii) At what stage of growth should the above practice be carried out on maize? **($\frac{1}{2}$ Mark)**

……

(f) A plot measuring 4 M by 3 M was prepared for planting maize at a spacing of 30 cm by 90 cm. Calculate the plant population in the plot. (Show your working). **($1\frac{1}{2}$ Mark)**

21. The diagram below shows a silo. Study it carefully and answer the questions that follow.



(a) Identify the type of silo shown. **(1 Mark)**

……

(b) Identify the part labeled P**.** **($\frac{1}{2}$ Mark)**

……

(c) State the use of the part **labeled** **(1 Mark)**

M-……...

N-……

(d) Give two ways of ensuring that anaerobic conditions are achieved during silage making process. **(2 Mark)**

……

……

……

(e) Name three other types of silage that are used in the farm**.** **(1 $\frac{1}{2}$ Mark)**

……

……

……

(f) Outline three ways in which silage losses occur during ensiling. **(1 $\frac{1}{2}$ Mark)**

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22. Use the information on the table below to answer the questions that follow.

Fertilizer input Units	Maize yield Bags	Maize product Bags
0	50	_
1	62	12
2	66	4
3	68	2
4	69	1
5	69	0

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The cost unit of fertilizer is sh 1500 per unit and price of maize is sh 1200 per bag.

(i) At what unit of fertilizer input should the farmer be advised to stop applying more fertilizer to the maize**.** **(1 Mark)**

……

……

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

……

……

(iii) Calculate the marginal return at the point of optimum production. **(1 Mark)**

(iv) State the law of diminishing returns in a crop production function process. **(1 Mark)**

……

……

(v) Name and explain three ways of combining inputs in production. **(1 Mark)**

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……

SECTION C (40 MARKS)

Answer only two questions. Each question carries 20 Marks.

23. (a) Describe effects of land fragmentation and sub-division. **(6 Marks)**

b)What advantages does a farmer holding a title deed have over one who does not have a title deed. **(4 Marks)**

c) Describe the cultural methods a farmer would employ to control crop diseases. **(10 Marks)**

24. (a) State the importance of the following during chemical water treatment.

(i) Filtration at water intake. **(1 Mark)**

(ii) Softening. **(1 Mark)**

(iii) Chlorination **(1 Mark)**

(iv) Coagulation and sedimentation. **(2 Mark)**

(b) State seven roles of a farm manager. **(7 Marks)**

(c) Explain four ways a farmer can adjust to uncertainty and risks. **(8 Marks)**

25. (a) Discuss the classification of pesticides according to their mode of action. **(10 Marks)**

(b) Outline any seven general post-harvesting practices carried out on crops. **(7 Marks)**

(c) Give three pieces of information a dairy farm manager should collect for planning purposes. **(3 Mark)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

AGRICULTURE

443/2

PAPER 2 (Theory)

TIME: 2 HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

- *Write your **name** and **index number** in the spaces provided.*
- *Sign and write the date in the spaces provided above*
- *This paper consists of three section **A, B** and **C***
- *Answer **all** the questions in section **A** and **B***
- *Answer any **two** questions in section **C.***
- *Answers should be written in the spaces provided in this booklet.*

FOR EXAMINER'S USE ONLY:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A		30	
B		20	
C		20	
		20	
	TOTAL	**90**	

SECTION A. (30 MARKS)

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

1. State **four** maintenance practices of a forked jembe. **(2mks)**

……

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……

……

2. Fill in the origin for the breeds of livestock shown in the table below. **(2mks)**

Livestock breed	Origin
Friesian cattle	
Aberdeen Angus cattle	
Large white pig	
Boer goat	

3. State the importance of keeping livestock healthy. **(2mks)**

……

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……

4. Give the functional difference between a pruning knife and a pruning saw. **(1mk)**

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5. Name any **two** dual purpose breeds of sheep. **(1mk)**

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6. List any **four** pre-disposing factors of livestock diseases. **(2mks)**

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7. Differentiate between the terms breed and type of animal. **(1mk)**

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8. Give the factors that determine the amount of water taken by an animal. **(3mks)**

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9. List any **four** causes of livestock diseases. **(2mks)**

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10. Give the reasons for breeding in livestock. **(2mks)**

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11. List the materials used in making walls of farm buildings. **(2mks)**

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12. What is the meaning of the term immunity as used in livestock health. **(1mk)**

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13. State the measures that prevent egg eating in poultry. **(2mks)**

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14. State the signs of heat in pigs. **(3mks)**

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15. Give **one** use of a screen in a fish pond. **(1mk)**

……

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16. State **two** methods of service in livestock. **(1mk)**

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17. Give the advantages of wall fence. **(1mk)**

……

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18. List the factors considered in sorting and grading eggs for market. **(1mk)**

……

……

SECTION B. (20 MARKS)

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

19. The diagram X and Y below show the hooves of sheep.



X



Y

a) Which one of the two hooves would be more susceptible to foot-rot disease. **(1mk)**

……

b) What routine management practice is required on the hoof to control foot rot? **(1mk)**

……

c) State four symptoms of hoof rot. **(2mks)**

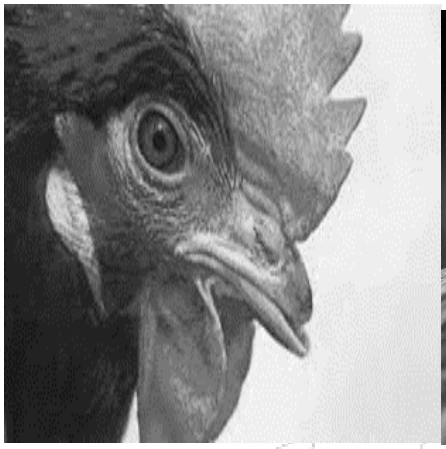
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20. a) The illustrations below labeled V, W, and X show three different ways some hens were debeaked.





I **II** **III**

i) Which hen was correctly debeaked? **(1mk)**

……

ii) State two reasons for your choice in (i) above. **(1mk)**

……

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b) Name any two tools which would be used for debeaking. **(2mks)**

……

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21. Below are diagrams illustrating the behaviour of chicks in various brooders. Study the diagrams and answer the questions that follow:



A



HEAT SOURCE

B



C

a) State the environmental problem in each brooder as illustrated by the behaviour of the chicks.

(3mks)

A …….

B…….

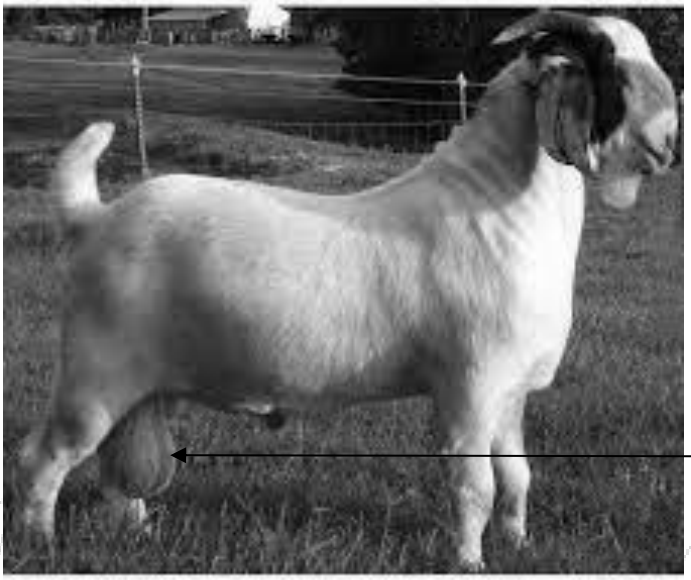
C …….

b) State one way of solving the problem in B. **(1mk)**

……

……

22. Below is a diagram of a male goat.



a) What operation is carried out on the part labeled F. **(1mk)**

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b) Why is it necessary to carry out the operation. **(2mks)**

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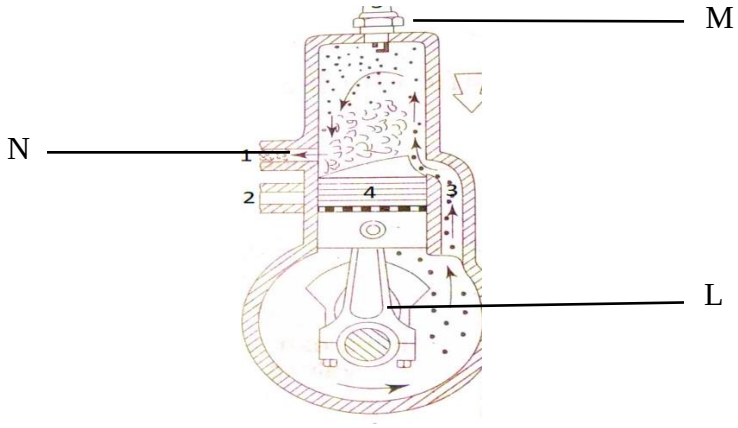
c) Give any two suitable methods of carrying out the operation in (a) above. **(1mk)**

……

……

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23. Below is a diagram of a two-stroke engine cylinder.



a) Name any one farm machine where the above engine is used. **(1mk)**

……

b) Identify the parts labeled M, L, and N. **(3mks)**

L…….

M…….

N …….

SECTION C (40 MARKS)

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

24. a) Describe the feeding management of broiler chicks from one day old to slaughtering. (10mks)

b) Describe the routine management practices in dairy calves. **(6mks)**

c) Describe the factors that affect milk composition. **(4mks)**

25. a) Describe a blue tick (*Boophilus decolaratus*) under the following sub-headings.

i) Diseases transmitted. **(2mks)**

ii) Preferred site of attachment. **(3mks)**

iii) Non-chemical control measures. **(5mks)**

b) Discuss mastitis disease under the following sub-headings:

i) Predisposing factors. **(5mks)**

ii) Control and treatment. **(5mks)**

26. a) Describe the functions of each of the following parts of a plunge dip. **(7mks)**

i) Foot bath

ii) Entrance race

iii) Roof

iv) Drainage race

v) Jump

vi) Dip tank

vii) Exit steps.

b) i) Describe the disadvantages of animal power. **(5mks)**

ii) State the advantages of four-strokes engine over two stroke engines. **(3mks)**

c) Describe the factors that influence the amount of concentrate a lactating animal would be given. **(5mks)**

KCSE 23

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

BUSINESS STUDIES

565/1

PAPER 1

TIME: 2 HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

- *Write your Name, School and Admission number in the spaces provided*
- *Answer **all** the questions in the spaces provided.*
- *Check that the question paper has all pages printed and that no questions are missing.*

FOR EXAMINERS USE ONLY

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

QUESTIONS	16	17	18	19	20	21	22	23	24	25
MARKS										

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

1. List four reasons why a business exists. **(4 Marks)**

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2. State four elements that constitute the internal business environment. **(4 Marks)**

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3. Most firms are adopting electronic filing systems. Mention 4 demerits of using such a system **(4 Marks)**

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4. Identify the type large scale retailers described by each of the following statements **(4Marks)**

i) Huge shopping complexes with many shops under one roof each under a different management

……..

ii) Many shops under one roof and one management each selling a particular line of products……..

iii) Businesses where customers make their orders through the post

……

iv) Shops operated by one company and located in different areas where they sell specialized products ……..

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5. Highlight four circumstances under which a co-operative may be dissolved **(4 Marks)**

……

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……

……

6. Highlight four barriers to effective **communication** **(4Marks)**

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7. Identify four ways in which the efficiency of a warehouse can be guaranteed **(4 Marks)**

……

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8. State four circumstances under which an insurance policy may be terminated **(4 Marks)**

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9. Highlight four factors that may cause the supply curve to shift to the right **(4 Marks)**

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10. State four measures that Kenya government may take to attract firms to an area. **(4 marks)**

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11. The following is a representative basket of an average family.

Year	Prices
2019	6,000
2020	7,200

Determine the increase in C.P.I using 2019 as a base year. **(4 Marks)**

12. Highlight four factors which may contribute to business failure **(4 Marks)**

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13. Highlight four problems associated with the income approach of measuring the national income **(4 Marks)**

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14. Highlight four features associated with a monopoly market structure**.** **(4 Marks)**

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15. Outline four roles of transport in the facilitation of **trade** **(4 Marks)**

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16. The following balances were extracted from the books of Maua Traders on 31st December, 2020.

	Shs
Fixed assets	300,000
Current assets	123,700
Creditors	84,500
5 year loan	125,000

Determine the net worth of the business as at 31st December 2020 **(4 Marks)**

17. Highlight three ways in which the introduction of money helped eliminate problems faced in barter trade **(3 marks)**

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18. Highlight four forms of economic integration **(4 marks)**

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19. State four measures that the government can use to encourage increase in the country's volume of exports. **(4 Marks)**

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20. Unemployment solving has been an agenda to Kenya. Identify the type of unemployment being solved below. **(4 marks)**

(i) Government initiating irrigation projects to ensure continuous production of food

……

(ii) Retraining teachers to embrace use of technology in teaching and learning

……

(iii) Government and private sectors inventing job advertisement sites for easy access by job seekers

……

(iv) Parliament passing legislation that accommodate the disabled people to acquire jobs……

21. The following information relates to Makini Traders for the year ending 31st December 2022.

Margin	15%
Sales	640,000
Purchases	480,000
Stock on 1/1/2015	130,000
Closing stock	?

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Required Trading Account of Makini Traders for the year ending 31st December 2022. **(5Marks)**

22. State any four types of advertising that a trader may **adopt** **(4 Marks)**

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23. State any four types of indirect taxes in **Kenya** **(4 Marks)**

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24. State four problems encountered at the plan implementation stage in economic planning and development **(4 Marks)**

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25. Wanja enterprises had the following assets and liabilities on 5th October 2021.

Item	Kshs
Equipment	800,000
Capital	1,200,000
Creditors	100,000
Debtors	200,000
Stock	250,000
Cash at bank	50,000

The following transactions took place on 7th October 2021.

i) Bought goods for resale Ksh. 150,000 on credit

ii) A debtor paid Ksh. 50,000 by cheque

iii) Sold the equipment for Ksh. 700,000 cash

Required : Prepare Wanja enterprises balance sheet after the above transactions **(4 Marks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

BUSINESS STUDIES

565/2

PAPER 2

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) *Write your name and index number on the answer booklet provided above.*
b) *Sign and write the date of the examination in the spaces provided above*
c) *This paper consists of six questions.*
d) *Answer any* ***five*** *questions in the spaces provided after question 6.*
e) *All questions carry equal marks.*

FOR EXAMINER'S USE ONLY

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

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*Answer any **five** questions*

1. a)Labour is an important factor of production. Explain five barriers that may hinder its mobility as a factor of production**.** **(10 marks)**

b) Explain five circumstances under which a high population growth may be desirable to a country. **(10 marks)**

2. a) Explain five factors that influence the amount of money held by an individual for transactionary motive**.** **(10 marks)**

b) Manufacturers distribute their products to the final consumers through various channels. Explain five factors considered when choosing a particular channel of distribution. **(10 marks)**

3. a) On 1st June 2008 Happy Traders had cash in hand shs.5000 and cash at Bank shs7500. The following transactions took place during the month.

June 2: Bought goods in cash sh750
June 4: Paid salaries by cash shs. 3750
June 5 Received cheques from the following debtors after allowing 2% discount in each case, Kamau sh. 490, Jane sh. 980.
June 8: Paid the following accounts by cheque in each case deducting a 5% discount Otieno sh.1,500, Wanjiku sh.600.
June 12: Bought office machinery by cheque shs.2,500
June 20: Withdrew cash sh.500 for private use.
June 25: Cash sales sh.1000
June 26: Banked cash amounting to sh.500
June 29: Received shs.1,500 cash from Wanjohi a debtor.

Required: Prepare a three column cash book duly balanced. **(12 marks)**

b) Explain four reasons why the Government imposes tax on its Citizens. **(8 mks)**

4. (a) Outline five differences between a parastatal and a co-operative society **(10mks)**

(b) The table below shows the age distribution of a country.

Age (year)	%
0-15	45
16-55	31
56 and above	24

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Explain five negative economic implications of this age distribution to a country **(10mks)**

5. (a) Describe the procedure that should be followed when taking an insurance policy **(10mks)**

(b) Zeraki Investment operates a wholesale business and the following information relates to various transactions during the month of May, 2019.

May 3 sold goods on credit to Anyimba sh 60,000
8 purchased goods on credit from Mjuaji stores sh 120,000
12 returned goods bought on credit from Mjuaji stores sh 6,000
16 purchased goods on credit from Mjuaji stores sh 160, 000
22 sold goods on credit to Mafala retailers sh 150,000
23 bought a new motor vehicle from Mashariki motors worth sh 3,200,000 on credit
24 Anyimba returned goods worth sh 10,000 to the business
29 sold equipment worth sh 840,000 on credit to Chap Chap limited.

Record these transactions into Zeraki investment books of original entry. **(10mks)**

6. a) Motorcycles have become a common feature in transport in Kenya. Outline **five** reasons that explain the rapid growth of motorcycle transport in Kenya **(10 mks)**

b) Explain FIVE reasons for the existence of small firms despite competition from large scale firms **(10mks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

ENGLISH

101/1

PAPER 1 *(Functional Skills)*

TIME: 2 HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

(a) Write your name, admission number, stream and signature in the spaces provided above.

*(b) This paper has **three** sections: **1, 2** and **3.***

*(c) Answer **ALL** questions in this paper.*

For Examiner's Use Only

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

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1. FUNCTIONAL WRITING (20 MARKS)

You are a member of the Integrity Club in your school. You have been asked to take minutes of a meeting attended by the Patron and Head of Department in charge of clubs and societies since the secretary is away. Five other members are present, the treasurer and two members have sent their apologies while the whereabouts of one other member are unknown. A visit to a nearby law court, termly contributions and verification of registration are discussed. The meeting also revisited the late attendance to meetings.

Write the **minutes** of the meeting. **(20 marks)**

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

Fill in the blank spaces with the most appropriate word.

Developing countries **(1) ……** formidable challenges when they attempt (2) **……** establish efficient tax systems. First, most workers in these (3) **……** are typically employed in Agriculture or in small, informal enterprises. As they are seldom paid a regular, fixed wage**, (4) ……** earnings fluctuate, and many are paid in cash, "off the books." The base for an income tax is therefore hard to calculate nor do workers in these countries typically spend their earnings in large stores that keep accurate **(5) ……** of sales and inventories. **(6) ……** a result, modern means of raising revenue, such as income **(7) ……** and consumer taxes, play a diminished **(8) ……** in these economies, and the **(9) ……** that government will achieve high tax levels **(10) ……** excluded.

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

a) Read the oral narrative below and respond to the questions based on it.

THE LAZY GIRL

A long time ago, there lived a woman. The woman gave birth to a baby girl. The woman did not train her child to do work as she grew. People would tell her to teach her child to do work but she objected saying her child was too beautiful to do work. Every morning she went out to dig alone leaving behind her girl sleeping. The girl grew up into a mature person without knowing how to do any kind of work. Time came and her mother died. One young man married her. But later the young man discovered that his wife did not know how to do anything. Whenever she went to the garden to dig, she could just cry.

One day as she was crying, the ghost of her mother appeared. It began to dig for her while singing:

Njabala, Njabala, Njabala

your friends dig like this.

Within a very short time, the ghost had dug a very large portion and the girl went back home. Later on, when the husband went to the garden and saw the portion which had been dug, he was surprised. The following morning, he went and hid himself in the nearby bushes to confirm whether it was really his wife who was digging the garden.

As he watched, the ghost of his dead mother - in – law appeared and began to dig. The man then left his hide out and went back home. After the ghost had finished digging, the wife also left garden and went home. Unfortunately, when she reached, the husband told her to pack up her belongings and return to her father's home. The girl tried to ask what the problem was but the man could not say

anything. The girl cried but the man could not change his mind. Eventually, the girl packed up her belongings and left.

i. What **three** non-voice aspects would the narrator work on to make the narration a memorable one? **(3 marks)**

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ii. 'Eventually, the girl packed up her belongings and left.' **(2 marks)**

How would the narrator perform this sentence?

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b) For each of the following provide another word pronounced as the one given. **(4 marks)**

a) Chews ……

b) Click ……..

c) Cache …….

d) Cereal…….

c) Explain the meaning one would derive by stressing the underlined word. **(2 marks)**

i) Mondi was <u>really</u> tired.

……

……

……

ii) <u>She</u> cooked dinner for us.

……

……

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d) You are part of a group in Form Four discussing the plot of *A Doll's House* by Henrik Ibsen. Under what circumstances would you politely interrupt the speaker? **(4 marks)**

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e) Imagine that you attended a public lecture on how to pass exams. How would you ensure that you pay attention despite the high temperatures and congestion**?** **(3 marks)**

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f) Imagine that you have been invited to attend an interview for a job placement as an enumerator by the Kenya Bureau of Statistics. State **four** things you would do to ensure your grooming is right. **(4 marks)**

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g) The form four class would want the school to allow them end their prep at midnight. They send a delegation to the principal's office and they fail to have their request granted. What could have led to this outcome? **(4 marks)**

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h) The following is a conversation between a teacher and a student. Fill in the blanks with appropriate exchanges. **(4 marks)**

Student:……...

Teacher: Yes, come in.

Student: ……

Teacher: How do you do?

Student: ……...

Teacher: I am sorry, I left my copy at home, but I can request my colleague to assist you with one.

Student: ……

Teacher: You are welcome.

THIS IS THE LAST PRINTED PAGE

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

ENGLISH

101/2

PAPER 2

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- The exam has ***FOUR sections***.
- All the sections are ***compulsory.***
- Write your answers in space provided.
- The exam carries ***80 marks.***

FOR EXAMINER'S USE ONLY

S/NO	SECTION	MAXIMUM MARKS	STUDENTS SCORE
1	COMPREHENSION PASSAGE	20	
2	EXCERPT	25	
3	ORAL NARRATIVE	20	
4	GRAMMAR	15	
Grand Total		**80 marks**	

1. COMPREHENSION **20 marks**

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

The insect is not a blind **automation**. There is a ray of conscious thought running through its whole life. This view will meet opposition: to some people, the insect is a machine without emotion; to others, it is just a shade over the mechanical, process of something called `discernment,' but without the slightest gleam of reason.

Ants, however, show great intelligence as excavators. The ordinary plan of excavation is for ants to carry out earth and throw it outside the nest. There is nothing particular to note about it; all the ants engaged at the task behave in the same way. But one day I noticed a deviation. Some ants had made a nest on the side of a bank. The ejected earth ran down from it in a shoot, like a landslide on the face of a hill. The shoot was very steep and crumbling, and as each ant carried out its load it slipped on the loose material and tumbled down to the bottom of the slope. The ants, however, refused to be defeated. After some days of slipping and falling they managed to devise an ingenious plan for **surmounting** the serious difficulty. They assigned to one particular ant the duty of consolidating and hardening the ground. This ant set about collecting pebbles which it found near the base of the shoot. These pebbles it carried up the shoot and then spread them out in the form of a platform at the very top; just outside the mouth of the nest.

This was tremendous labour for one ant. The carrying of the pebbles up the slippery slope was a task that lasted several days. It required the entire labourer's strength, and caused it innumerable falls. It was interesting to see selection at work. The ant never took the first pebble that offered. Several were examined, picked up and tested, until one was found that fitted the job. Moreover, it did not place its pebbles in a haphazard way: it carefully found a suitable spot for fitting of each load. The final result was a platform of pebbles on which the excavators walked easily, and no more of them fell down the slope.

Can we deny intelligence to this? Is this the action of automation, a thing that works blindly like a machine? No. intelligence runs all through the act. There is divergence from the accustomed habits; there is choice in the selection of pebbles; there is design in the making of the platform; there is the end in view, and one very much to the advantage of the ants. It was not instinct but reason at work.

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I can no more deny intelligence to this ant than I can to a man who builds a **parapet** to prevent people from tumbling down a hill.

QUESTIONS

(a) Why does the writer believe that the insect is not a blind automation? **(2marks)**

_____

_____

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_____

(b) Identify and illustrate the figure of speech used in the second paragraph. **(2marks)**

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(c) How did the ants overcome the problem of tumbling down the slope? **(2marks)**

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(d) State how this problem was solved. **(3marks)**

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(e) Make **notes** on the procedure followed by the particular ant in making the platform**. (6marks)**

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(f) Why was there a divergence from accustomed actions of the ant**?** **(2marks)**

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

(i) Automation

_____

(ii) Surmounting

_____

(iii) Parapet

_____

2. EXCERPT **25 MARKS**

Read the excerpt below then answer the questions that follow.

Krogstad: (*controlling himself*) Listen to me, Mrs. Helmer. If necessary, I am prepared to fight for my small post in the Bank as if I were fighting for my life.

Nora: So it seems.

Krogstad: It is not only for the sake of money; indeed, that weighs least with me in the matter. There is another reason- well, I may as well tell you. My position is this. I dare say you know, like everybody else, that once, many years ago, I was guilty of discretion.

Nora: I think I have heard something of the kind.

Krogstad: The matter never came into courts; but every way seemed to be closed to me after that. So I took to the business that you know of. I had to do something; and, honestly, I don't think I've been one of the worst. But now I must cut myself free from all that. My sons are growing up; for their

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sake I must try and win back as much respect as I can in the town. This post in the bank was like the first step for me – and now your husband is going to kick me downstairs again into the mud.

Nora: but you must believe me, Mr. Krogstad; it is not in my power to help you at all.

Krogstad: Then it is because you haven't the will; but I will have the means to compel you.

Nora: You don't mean that you will tell my husband that I owe you money?

Krogstad: Hm! - suppose I were to tell him?

Nora: it would be perfectly infamous of you. (Sobbing) To think of his learning my secret, which has been my joy and pride, in such an ugly, clumsy way- that he should learn it from you! And it would put me in a horribly disagreeable position-

Krogstad: Only disagreeable?

Nora: *(impetuously*) Well, do it, then! – and it will be the worst for you. My husband will see for himself what a blackguard you are, and you certainly won't keep your post then.

Krogstad: I asked you if it was only a disagreeable scene at home that you were afraid of?

Nora: If my husband does not get to know of it, of course he will at once pay you what is still owing, and we shall have nothing more to do with you.

Krogstad: (*coming a step nearer*) Listen to me, Mrs Helmer. Either you have a very bad memory or you know very little of business. I shall be obliged to remind you of a few details.

a. What happens just before this excerpt? **(3marks)**

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b. Discuss any two themes evident in this excerpt. **(4 marks)**

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c. Why is Krogstad prepared to fight for the post in the bank? **(4 marks)**

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……

d. Discuss the character traits of; **(4marks)**

i. Krogstad

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ii. Nora

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e. What stylistic devices are used in the excerpt above? **4 marks**

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f. Explain the meaning of the following words as used in the excerpt. **2marks**

i. Compel

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ii. Blackguard

……

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g. "I shall be obliged to remind you of a few details." Which details are referred to here? **(4 marks)**

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3. ORAL NARRATIVE **20marks**

Read the narrative below and answer the questions that follow.

One day on a farm, cat took out her walking stick and started to walk laboriously along the road, leaning heavily on her stick. Hen, who was pecking at the ground nearby, looked up and said, "Aunty Aunty, where are you going?"

The cat said, "I am off to the holy city to give my annual offering". Hen said, "May I come with you? I will accompany you on your long journey and at the same time perform my pilgrimage as well". Cat replied "If you must, there is no stopping you". So both of them started moving further on the road. Then they met Duck. Duck said, "Aunty, where are you going?"

Cat replied, "Come if you must," Duck joined them.

A little ahead they met Mouse. Mouse asked, "Aunty where are you going?" Cat replied, "I am going to the holy city," Mouse asked, "May I come along with you?"Cat said, "If you want to dear." They walked along the road for some time then cat said, "Oh my old bones, now they ache ohoo." The three stopped and offered to rest along with her. Cat said, "Hen may wait with me if she likes, the two of you go on ahead. We will catch up with you." The cat pounced on the Hen and ate her up.

After a few hours, Cat caught up with Duck and Mouse. When they enquired about Hen, Cat said, "Oh, she had forgotten her offering at home and has gone back for it," And they walked on.

The next day Cat began to groan again, and this time asked Duck to stay with her. Mouse went on ahead. When Cat caught up with Mouse she said Duck has forgotten her offering as well.

At this Mouse got suspicious for if Duck forgotten her offering as well she would have turned back with Hen. Meanwhile, Cat thought: "Now it is the turn of Mouse, what a delicacy! The taste will linger for a long time in my mouth."

Then she said to the Mouse, "Mouse let us stop for a rest." After a while she said, "It is long since I played catch and catch with anyone. Why don't I fulfill this desire for who knows how long I have to live?"

Mouse began to play; he ran here and there; soon he realized that Cat was out to get him so he quickly darted into a hole in the ground. Now cat know she could not get Mouse so she said, "Mouse, Mouse, come out. I want to tell you a story," Craftily Mouse replied, "You tell the story and I will listen to it in here."

So, you see whenever Mouse sees Cat, he runs quickly to hide for he knows that Cat is after him. He has not forgotten the uncompleted journey to the holy city.

(a) Giving a reason, classify this narrative. **(2 marks)**

……

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(b) What features of oral narratives are evident in this story? Explain any 4. **(4 marks)**

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(c) Briefly explain any two character traits of the Cat in this story. **(4 marks)**

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(d) What two lessons do we learn from the story? **(4 marks)**

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(e) Why do you think the Duck did not complete the journey? **(2 marks)**

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(f) What does the story reveal about the community from which the story was taken? **(2 marks)**

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(g) Explain the two problems you could encounter when collecting this type of oral genre.**(2 mrks)**

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……

4. GRAMMAR **15 marks**

1. Rewrite the following sentences according to the instructions given. (3marks)

i. John never reported late to work last year. (Beginning with "Not once")

……

ii. If I had not missed the train last night, I _____ (give) my first lecture now.
(use the correct tense of the verb in brackets)

iii. As soon ass the man left, they started talking. (rewrite using No sooner…)

……

2. Fill in the blank with the suitable prepositions. **(2marks)**

i. The thief who snatched my bag walked _____ a limp.

ii. Liverpool won because the spectators cheered them _____

3. Rewrite the following sentences inserting appropriate question tags. 2 marks

a. It is cold.

_____

b. They haven't come.

_____

4. Rewrite the underlined phrasal verbs with appropriate verbs in each sentence. (2 marks)

a. The students' performance did not measure up to the expected standards.

_____

b. After the disagreement, he walked out on her family.

_____

5. Fill in each blank space with the correct form of the word in brackets. (3marks)

i. It is easy to spell a word from his _____ (pronounce)

ii. Do not wait for the train, it comes to this town very_____ (regular)

iii. The hunt for the criminals has been _____ (intense)

6. Rewrite the following sentences punctuating them appropriately. (3marks)

a. Definitely said Liam I will finish the novel next month.

_____

b. Do you take meals daily asked mutual.

_____

c. if you need anything the lady said call my number.

_____

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

ENGLISH

101/3

PAPER 3

(Creative Composition and Essays Based on Set Texts)

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO STUDENTS

- *Write your **name, admission number** and **class** in the spaces provided.*
- *Sign and write the date of the examination in the spaces provided.*
- *Answer **all** questions in the spaces provided. Use **blue** ink only.*
- *All your answers must be written in the spaces provided in this question paper.*

Question	Maximum Score	Student's Score	Examiner's Initials
1	20		
2	20		
3	20		
TOTAL	60		

*Answer **three** questions only*

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

Either

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

Or

b) Write a composition on the following statement:

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

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

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

3. Optional Text: A Silent Song and other short stories – *Godwin Siundu*

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

a) An Artist of the Floating World

The author has been able to effectively employ imagery to bring out the message of the text. Illustrate the effectiveness of this style in the text **An Artist of The floating world by Kazuo Ishiguro**

OR

b) Drama: *David Mulwa, Inheritance*

'It is possible to achieve positive change without violence'. Using David Mulwa's Inheritance, justify this statement.

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UTABIRI WA KCSE 2023

(MFUATANO WA KIAKISI 1)

102/1

KISWAHILI

KARATASI YA 1 (INSHA)

MUDA: SAA 1¾

JINA……

SHULE…… **SAHIHI**……

NAMBARI YA USAJILI…… **MKONDO**……

Cheti cha Kuhitimu Masomo ya Sekondari (KCSE)

MAAGIZO KWA MTAHINIWA:

1. *Andika insha **mbili**. Insha ya kwanza ni ya **lazima**.*
2. *Kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.*
3. *Kila insha isipungue maneno **400.***
4. *Kila insha ina alama 20.*
5. *Kila insha **lazima** iandikwe kwa lugha ya **Kiswahili.***
6. *Insha zote **sharti** ziandikwe katika nafasi ulizoachiwa kwenye kijitabu hiki cha maswali.*

Kwa matumizi ya mtahini pekee.

Swali	Upeo	Alama
1	20	
2	20	
3	20	
4	20	
Jumla	40	

MASWALI

1. Wewe ni mhariri mkuu wa Gazeti la Mwangaza, andika tahariri kuhusu namna tatizo la ukosefu wa nafasi za ajira miongoni mwa vijana linavyoweza kukabiliwa.

2. Serikali za ugatuzi zina faida nyingi kuliko hasara . Jadili

3. Andika insha inayooana na methali **kutangulia si kufika**

4. Andika insha itakayoanza kwa maneno haya:

Milipuko mikubwa ilisikika pu! Pu! Puu! Kisha niliwaona watu wakikimbia kuelekea pande zote**…**

KCSE 23

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UTABIRI WA KCSE 2023

(MFUATANO WA KIAKISI 1)

102/2

KISWAHILI

KARATASI YA 2 (LUGHA)

MUDA: SAA 2½

JINA……

SHULE…… **SAHIHI**……

NAMBARI YA USAJILI…… **MKONDO**……

Cheti cha Kuhitimu Masomo ya Sekondari (KCSE)

Maagizo

(a)Andika jina na nambari yako ya mtihani katika nafasi ulizoachiwa hapo juu.

(b)Tia sahihi yako kisha uandike tarehe ya mtihani

(c) Jibu maswali yote.

Kwa matumizi ya mtahini pekee

Swali	Upeo	Alama
1	15	
2	15	
4	40	
4	10	

1 UFAHAMU (alama 15)

Soma kifungu kifuatacho kisha ujibu maswali

Suala la mahusiano ya wanadamu katika jamii, uainishaji wake na udhihirikaji wake limewashughulisha wataalamu wa elimu jamii kwa dahari ya miaka. Suala hili huwatafakarisha wataalamu hao kutokana na umuhimu wake katika maisha ya binadamu. Msingi mkuu wa uainishanji wa mahusiano hayo ni kukichuza kipindi cha mahusiano yenyewe. Yapo mahusiano bainaya waja ambayo yanachukua muda mfupi, kwa mfano saa au dakika chache na mengine ambayo huenda yakachukua miaka ayami.

Mahusiano ya muda mrefu kabisa ni yale yanayojulikana kama mahusiano ya kudumu. Inamkinika kudai kuwa miundo ya kijamii, kisiasa na kiuchumi huweza kuyadhibiti mahusiano hayo kwa kiasi kikubwa. Watu wengi huitakidi kuwa uhusiano uliopo baina ya mtu na jamaa yake utachukua muda mrefu, na kwa hiyo ni uhusiano wa kudumu. Hali hii hutokana na uhalisi kuwa tunahusiana na jamaa zetu kwa kipindi kirefu labda tangu ukembe hadi utu uzima wetu. Uhusiano huuhautarajiwi kuvunjwa na umbali wa masafa baina yetu;tunaendelea kuwasiliana kwa barua au, katika enzi hii ya utandawazi,kwa kutumia nyenzo za teknohama kama mtandao na simu za mkononi na kudumisha uhusiano wetuwa kijamaa. Hata hivyo, inawezekana baadhi ya mahusiano ya kijamaa yasiwe ya kudumu. Mathalan, uhusiano uliopo baina ya mke na mume, na ambao unatarajiwa kuwa wa kudumu au wa kipindi kirefu,unaweza kuvunjwa kwa kutokea kwa talaka. Talaka hiyo inavunja ule uwezekano wa uhusiano wa kudumu unaofumbatwa na sitiari ya pingu za maisha.

Katika ngazi ya pili,mahusiano ya kipindi cha wastani,kuna mahusiano yanayohusisha marafiki zetu maishani, shuleni au kwenye taasisi zozote zile, majirani zetu, wenzetu katika mahali mwa kazi,washiriki kwenye sehemu za ibada au za burudani na wenzetu kwenye vyama tofauti na makundi ya kujitolea. Inawezekanakudahili kuwa baadhi ya mahusiano haya,hususan baina ya marafiki na majirani huweza kuwa ya miongo na daima. Hali hii huweza kutegemea muundo na mfumo wa jamii. Kwa mfano, kwa wanajamii waoishi kwenye janibu fulani mahsusi, na kwa miaka tawili bila ya kuhajiri,uhusiano wao na majirani huweza kuwa wa kudumu. Hali hii **inasigana** na hali iliyoko kwenye maisha ya mijini. Maisha ya mijini yana sifa ya kubadilikabadilika. Isitoshe,kutokana na mfumo wa maisha ya kibepari **yameghoshi** ubinafsi mwingi. Mawimbi ya mabadiliko na ubinafsi huweza kuumomonyoaukuta wauhusiano wa kudumu.

Mwelekeo wa maisha ya siku hizi ya uhamaji kutoka maeneo au viambo walikoishi watu unasababisha kupombojea kwa mahusiano ya kudumu baina yao na majirani zao. Uhusiano katiya wenza katika mazingira ya kazi unahusiana kwa kiasi fulani na ule wamajirani. Vimbunga vya ufutwaji kazi, ubadilishaji wa kazi, hali zisizotegemewa na mifumo ya kimataifa pamoja na hata mifumo ya kisiasahuweza kuathiri mshikamano wa wanaohusika kazini.

Kiwango cha mwisho cha mahusiano ni uhusiano wa mpito au wa muda mfupi. Mahusiano ya aina hii hujirikatika muktadha ambapo pana huduma fulani. Huduma hizi zinaweza kuwa za dukani, kwenye sehemu za ibada,kwenye kituo cha mafuta,kwa kinyozi, kwa msusi na kadhalika. Kuna sababu kadha zinazotufanya kuyazungumzia mahusiano ya aina hii kama ya mpito. Kwanza,

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uwezekanowa mabadiliko ya anayeitoa huduma hiyo ni mkubwa. Si ajabu kuwa unaporudi kwa kinyozi au msusi unatambua aliyekushughulikia hayupo. Hata hivyo, kuna **vighairi** hususa pale ambapo mtoa huduma anayehusika ni yule yule mmoja.

Mahusiano ya mpito yanatawaliwa na‘uhusiano wa chembe chembe.’ Uhusiano wa chembe chembe, bidhaa ya mfumo wa kibepari, unamaanisha kuwa kinachoshughulisha mtu ni chembe ndogo tu ya mwenzake. Chembe hiyo inaweza kuwa huduma, kwa mfano, gazeti analokuuzia mtu, viatu anavyokushonea,nguo anazokufulia,ususi anokufanyia na kadhalika. Mahussiano ya aina hii yametovukwa na hisia za utu na ni zao la mifumo ya kisasa ya kiuchumi na kijamii. Mtu anayehusiana na mwenzakekwa misingi ya chembe ndogo tu, huenda asijali kama mwenzake amekosa chakula,amefutwa kazi,amefiliwa,ameibiwa na kadhalika.

Suala kuu tunalopaswa kujiuliza ni: je, tunahusianavipi na jamaa zetu, marafiki zetuna majirani zetu? Je, uhusianowetu na raia wenzetu ni wa aina gani? Je, uhusiano wetu na nchi yetu ni wa mpito au ni wa kudumu?

(a) Taja kigezo cha kuzungumzia mahusiano. **(alama 1)**

……

(b) Eleza imani ya watu kuhusu mahusiano ya watu. **(alama 1)**

……

……

(c) Fafanua athari ya teknolojia kwenye mahusiano ya watu. **(alama 2)**

……

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……

(d) Eleza sababu nne kuu za kuharibika kwa mahusiano katika maisha ya leo**.** **(alama 2)**

……

……

……

(e) Taja sifa kuu za mahusiano ya muda mfupi. **(alama2)**

……

……

(f) Je, kifungu hiki kina ujumbe gani mkuu? **(alama2)**

……

……

……

(g) Eleza maana ya maneno yafuatayo kama yalivyotumiwa katika kifungu. **(alama 3)**

(i) inasigana**……**

(ii)yameghoshi**……**

(iii)vighairi**……**

……

2 UFUPISHO (alama 15)

Jamii ya leo inatawaliwa na kuendeshwa na kanuni ya maarifa. Inawezekana kusema kuwauchumi wa jamii za leo na zijazo utategemea maarifa zaidi kuliko utakavyotegemea uwezo wowote mwingine. Utambuzi wa uwezo mkubwa wa maarifa katika maisha ya binadamu ndio msingi wa watu kusema 'maarifa ni nguvu.'

Maarifa huelezwa kwa tamathali hii kutokana na uwezo wa: kuyadhibiti,kuyaendesha, kuyatawalana kuyaongoza maisha ya binadamu popote pale walipo. Mtu ameyakosa maarifa fulani huwa ameikosa nguvu hiyo muhimu na maisha yake huathirika pakubwa. Kwa msingi huu, maarifa yanawezakuangaliwa kama utajiri mkubwa ambao binadamu anaweza kuutumia kwa faida yake au kwa faida ya wanajamii wenzake. Ukweli huu ndio unaoelezwa na methali ya Kiswahili: 'Elimu ni mali.' Elimu ni chimbuko la maarifa muhimu maishani.

Msingi wa utajiri na maendeleo ya binadamu popote alipo basi ni maarifa. Je, maarifa kwa upande wake yana sifa gani? Maarifa yenyewe hayana upinzani. Maarifa uliyo nayo huweza kuwa na watu wengine pasiwe na upinzani baina yenu kwa kuwa kila mmoja ana maarifa sawa. Kila mmoja ana uhuru wa kuyatumia maarifa hayo kama chanzo cha kuyazalisha mengine. Utumiaji wa maarifa yenyewe hauyamalizi maarifa hayo. Maarifa hayawezi kugusika ingawa mtu anaweza kuyanyumbua maarifa yenyewe kwa kuyatumia kwa namna tofauti.

Maarifa huingiliana na maarifa mengine. Maarifa aliyo nayo mtu huweza kuhusishwa na maarifa aliyo nayo mtu mwingine ili kuvyaza au kuzuka na maarifa tofauti. Maarifa yanaweza kuchukuliwa kutoka sehemu moja hadi nyingine kwa namna ambavyo mtu huweza kufanya bidhaa nyingine ile. Kwa mfano, ni muhali mtu kulalamika kuwa hawezi kutembea kutoka sehemu moja hadi nyingine kwa sababu ana mzigo wa maarifa kichwani.

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Sifa nyingine muhimu ya maarifa ni kuwa yanaweza kuwasilishwa kwa njia au mitindo mingine ya kidhahania. Ikiwa unataka kukihamisha chombo fulani kutoka sehemu moja hadi nyingine, lazima uwazie ukubwa wake, uzito wake na labda hata umbali wa panapohusika. Maarifa huweza kubadilishwa au kugeuzwa na kuwa ishara ambazo huyafanya kuwasilishswa kwa njia nyepesi kuliko kwa mfano ikiwa mtu atayawasilisha katika muundo wa, kwa mfano,kitabu.

Maarifa yana sifa ya uhusianaji. Kipengele fulani cha maarifa huwa na maana kinapowekwa sambabmba au kugotanishwa na kipengele kingine cha maarifa. Huo huwa muktadha mzuri wa kueleweka au kuwa na maana kwa mfano, neno 'mwerevu' huweza kuwa na maana kwa kuwekwa katika muktadha wa 'mjinga', ' mjanja', 'hodari' na kadhalika.

Maarifa huweza kunifadhiwa katika nafasi ndogo sana. Suala hili linaeleweka kwa njia nyepesi tunapoangalia maarifa katika muktadha wa teknolojia. Data zinazowahusu mamilioni ya watu,ambazo zingehitaji maelfu ya maktaba na lukuki ya vitabu, huweza kuhifadhiwa kwenye kifaa kidogo kinachoweza kutiwa mfukoni.

Maarifa hayawezi kuthibitiwa au kuzuiliwa mahali fulani yasisambae. Maarifa huenea haraka sana. Maarifa ni kitu kinachoepuka pingu za watu wanaopenda kuwadhibiti binadamu wenzao. Hata pale ambapomfumo wa kijamii au wa kisiasa unafanya juu chini kuwadhibiti raia au watu wenyewe,ni muhali kuyadhibiti maarifa yenyewe. Inawezekana kuzidhibiti njia fulani za uenezaji wa maarifa lakini maarifa hayo yatapata upenyu wa kusambaa. Ni kweli kuwa maarifa ni nguvu inayozishinda nguvu zote.

(a) Fupisha aya ya pilina tatu (maneno 55-60)(alama 5, 1 ya utiririko)

Matayarisho

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Nakala safi

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(b) Eleza sifa kuu za maarifa kama zinavyojitokeza kuanzia aya ya nne hadi aya ya nane.

(maneno 100-110) (alama 10, 2 za utiririko)

Matayarisho

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Nakala safi

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3 MATUMIZI YA LUGHA (alama 40)

(a) Taja sauti mbili zinazotamkwa mdomoni. **(alama 2)**

……

……

(b) Andika visawe vya maneno yafuatayo; **(alama 2)**

i)doa……

ii)omba……

(c) Bainisha shamirisho na chagizo katika sentensi **(alama 2)**

Vibarua wamefanya kazi haraka ipasavyo .

……

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(d) Eleza maana mbili za sentensi ifuatayo;

Hawa ni watoto wa marehemu Bwana Ndovu na Bi.Makombo **(alama 2)**

……

……

……

(e) Eleza matumizi ya alama ya ritifaa kwa neno lifuatalo;

N'shamchukua **(alama 2)**

……

……

(f) Eleza mofimu katika neno lifuatalo **(alama 3)**

Walichokilalia

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(g) Bainisha vitenzi vilivyo katika sentensi ifuatayo: **(alama 2)**

Kalamu aliyokuwa nayo mwalimu ni ya mwanafunzi.

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(h) Changanua sentensi ifuatayo ukitumia mistari au mishale **(alama 4)**

Chakula kitamu kimeandaliwa.

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(i) Huku ukitoa mifano mwafaka onyesha matumizi matatu ya kinyota katika sentensi. **(alama 3)**

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(j)Tunga sentensi moja ukitumia kielezi cha wakati na kielezi cha mahali**.** **(alama2)**

……

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……

(k) Toa mfano wa neno lenye muundo ufuatao wa silabi. **(alama 1)**

IK+KI+KI+KI

……

……

(l) Onyesha matumizi ya viakifishi vifuatavyo. **(alama 2)**

(i) kibainishi

……

……

(ii)parandesi

……

……

(m) Tumia neno –baya kama**:** **(alama 2)**

(i) kiwakilishi

……

(ii)kielezi

……

(n) Tunga sentensi sahili ukitumia kitenzi ‘la’ katika kauli ya tendewa. **(alama 2)**

……

……

(o) Unganisha sentensi zifuatazo ukitumia neno japo;

i)Selina alijitahidi sana.

ii)Selina hakushinda mbio hizo.

……

……

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(p) Kwa kuzingatia maagizo andika upya sentensi ifuatayo: (**alama2)**

Tinga amewafanya ng'ombe wake wanywe maji.

(Anza kwa : Mifugo wangu ……..usitumie 'amewafanya')

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(q)Tunga sentensi moja yenye nomino dhahania na kivumishi kimilikishi. **(alama 2)**

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(r) Bainisha maana mbili zinazojitokeza kutokana na sentensi hii. **(alama 2)**

Umu alimwandikisha mkewe.

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(s)Onyesha dhamira ya sentensi hii; **(alama 1)**

Huenda mvua ikanyesha leo

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4.ISIMU JAMII **(Alama 10)**

Kumekuwa na mijadala mingi kuhusu athari ya chanjo dhidi ya ugonjwa unaosababishwa na virusi vya Kovid-19.Wewe ni Afisa wa afya katika eneo lenu umealikwa kutoa hotuba kuhusu usalama wa chanjo hii .Eleza sifa kumi za lugha utakayotumia.

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UTABIRI WA KCSE 2023

(MFUATANO WA KIAKISI 1)

102/3

KISWAHILI

KARATASI YA 3 (FASIHI)

MUDA: SAA 2½

JINA……

SHULE…… SAHIHI……

NAMBARI YA USAJILI…… MKONDO……

Cheti cha Kuhitimu Masomo ya 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 **manne** pekee.*
*d) Swali la **kwanza** ni la **lazima.***
e) Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki; yaani; Riwaya, Tamthilia, Ushairi na Hadithi Fupi.
*f) Usijibu maswali **mawili** kutoka **sehemu moja**.*

KWA MATUMIZI YA MTAHINI PEKEE.

Swali	Upeo	Alama
1	20	
	20	
	20	
	20	
Jumla	80	

1. Lazima

Soma shairi lifuatalo kisha ujibu maswali.

Fahali la dunia ndani ya zizi lake, linatesa
Linaminya
Linanyonya
Kwa kinyama laoneya

Fahali la dunia latumia mabavu, linaoneya
Laandama na kusakama kina mama
Linatesa

Fahali la dunia
Liso na huruma linatesa
Linapiga vindana na wengine wanyama
Tena bila huruma
Laoneya

Fahali hili limeota pembe ziso butu
Limehama zizi, laranda kotekote duniani
Mashariki na kusini, linatesa

Kwa kiburi fahali la dunia linaminya
Linatamba, lajigamba
Lajiona mwamba kwa maguvu
Fahali la dunia lasumbua kwa maonevu
Fahali la dunia lakera wengi insi

Fahali la dunia lidhibitiwe lisitese
Langu malenga sikieni
Dunia unganeni
Pamoja shikaneni, unyonge kataeni
Semeni basi!

Maswali

(a) Thibitisha shairi hili ni la wanamapinduzi. (alama 3)

(b) Eleza dhamira ya mtunzi wa shairi hili. (alama 2)

(c) Utungo huu unakatisha tamaa. Thibitisha kwa mifano mitano. (alama 5)

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(d) Huku ukitoa miofano, onyesha jinsi idhini zifuatazo zilivyotumiwa. (alama 3)
   i) Inkisari
   ii) Mazida
   iii) Kuboronga sarufi
(e) Bainisha toni inayotawala kwenye utungo huu. (alama 2)
(f) Nafsi neni katika shairi ni mzindushi. Tetea kauli hii kwa hoja tatu. (alama 3)
(g) Taja tamathali inayojitokeza kwenya kauli 'Semeni basi!' na ueleze umuhimu wake. (alama 2)

CHOZI LA HERI: JIBU SWALI LA 2 AU 3

2. Sidhani kama moyo wa mja huyu uliwahi kutaka kujua lolote kuhusu ukuaji wangu. Sikumbuki hata siku moja akiniuliza kuhusu neema na mashaka yangu ...
(a) Weka dondoo hili katika muktadha wake. (alama 4)
(b) Eleza umuhimu wa msemaji. (alama 4)

(c) Eleza namna mrejelewa na wengine wenye majukumu kama yake wanavyofaulu au kutofaulu katika utekelezaji wa majukumu yao. (alama 12)

3. Kila alipokuja jijini Jumapili alikuwa kaandamana na wazazi wake kwa ibada.
(a) Eleza nafasi ya mrejelewa katika kuwajenga wahusika wengine riwayani. (alama 8)
b) (i) Bainisha mbinu ya kimtindo katika dondoo. (alama 2)
(ii) Fafanua jinsi mbinu uliyotajwa katika b(i) ilivyotumika kuendeleza maudhui riwayani. (alama 10)

BEMBEA YA MAISHA: JIBU SWALI LA 4 AU 5

4. Si neno mama!...Hakuna kizuri kijacho kwa urahisi. Mazuri hutoka mbali na wakati mwingine yana hadithi za kutisha. Maisha yetu ni mfano wa mbegu iliyopandwa. **Mbegu hiyo haina budi kuoza kwanza ndipo ioteshe mche upendezao.**

a) Eleza muktadha wa dondoo hili. (Alama 4)
b) Tambua vipengele viwili vya fani. (Alama 2)
c) Kwa hoja nne, fafanua wasifu wa msemewa. (Alama 4)
d) Ni vipi kauli iliyokolezwa wino inadhihirika katika tamthilia ya Bembea ya Maisha? (Alama 10)

5. (a) " Japo nilipungukiwa na mengi niliyotamani, nilitaka nyinyi muote mbawa mpae juu na kuitazama dunia kutoka kule juu kwa niaba yangu. Stahamala yangu haikuniletea hasara..."
(i) Tambua mandhari ya dondoo hili. (alama 1)
(ii) Bainisha toni inayojitokeza kwenye dondoo. (alama 2)
(iii) Eleza umuhimu wa mandhari ya dondoo hili. (alama 8)
(b) Onyesha jinsi mhusika Sara alivyotumiwa na mwandishi kuendeleza msuko wa tamthilia hii. (alama 10)

MAPAMBAZUKO YA MACHWEO NA HADITHI NYINGINE: JIBU SWALI LA 6 AU 7

6. Jadili namna ukiukaji wa haki umeendelezwa katika hadithi zifuatazo. (Alama 20)
a) Sabina
b) Kifo cha Suluhu
c) Nipe Nafasi.

Pupa: F.M. Kagwa

7. a) "Pupa imenitumbukiza kwenye kisima nilichochimba, sasa naingia mwenyewe ..."

i) Bainisha mbinu za kimtindo katika dondoo hili. (alama 2)

ii) Huku ukitolea mifano mwafaka, onyesha ukweli wa kauli hii. (alama 8)

Kila Mchezea Wembe: Pauline Kea Kyovi

b) "Dunia hii nayo kubwa, anasa zake nyingi huwezi kuzimaliza"

i) Eleza muktadha wa dondoo hili. (alama 4)

ii) Fafanua toni katika dondoo hili. (alama 2)

iii) Jadili namna ambavyo anasa imejitokeza katika hadithi hii. (alama 4)

8. FASIHI SIMULIZI

Soma kifungu kifuatacho kisha ujibu maswali yanayofuata

Tumbo: Leo nitakuwa baba na wewe mama. Mimi sipendi mwajificho.

Chausiku: Sawa basi. (Anaimba huku akishika masikio yake) Maskini punda, alinyimwa pembe, akapewa masikio hiyo ndiyo pembe. Pembee pembe, akapewa masikio hiyo ndiyo pembe.

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Tumbo: Mamake Chausiku, nahisi njaa. Napeza kula samaki.

Chausiku: Ala! Umejuaje kuwa ninapika samaki? Baba Chausiku, samaki kutoka Soko Mjinga ni tamu kama asali. Chakula ki tayari. (Anampa kitawi chenye vipande vya vijiti). Ndio hii samaki.

Tumbo: (Akiimba) Nimeshiba sana. Asante. Nataka kwenda katika shamba la mahindi kukaza seng'enge. (Anachukua kipande cha mti) Nimechukua nyundo yangu kwenda kujenga ua. (Anatumia kijiti hicho kupigia vijiti vingine ardhini huku akisema kuwa anajenga ua).

Chausiku: Nimechoka sasa. Tuimbe kidogo.

Wote: (Wanaimba huku wakirukaruka)
Watoto wangu ee
Ee
Mimi mama yenu
Ee
Sina nguvu tena
Ee...

Maswali

(a) Bainisha utanzu ambapo utungo wa aina hii unapatikana. (alama 1)

(b) Wewe ni mmoja wa wawasilishaji wa utanzu huu wa fasihi simulizi. Eleza sifa unazofaa kuwa nazo. (alama 5)

(c) Eleza sifa zozote **nne** za kipera hiki. (alama 4)

(d) Eleza shughuli **mbili** za kiuchumi zinazodhihirika katika utungo huu. (alama 2)

(e) Unanuia kufanya utafiti kuhusu kipera hiki. Eleza changamoto zinazoweza kukukabili unapotekeleza shughuli hiyo. (alama 6)

(f) Eleza udhaifu wa maandishi kama kifaa cha kuhifadhi data. (alama 2)

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

CHRISTIAN RELIGIOUS EDUCATION

313/1

PAPER 1

TIME: 2½ HRS

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 on the foolscaps provided.*

d) *Each question carries 20 marks.*

FOR EXAMINER'S USE ONLY

Questions	1	2	3	4	5	6	TOTAL
Score							

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Answer any five questions

1 a)Explain why the Bible is referred to as the word of God. **(6mks)**

b)State seven reasons for translating the Bible into local languages **(7mks)**

c)Show how the study of CRE has promotes morality in the society **(8mks)**

2. a) Describe the call of Moses in Exodus 3:1-22 **(8mks)**

b) What precaution were made by the Israelites to celebrate the passover feast ? Exodus 12 :1-3 **(7mks)**

c) In what ways does God show mercy to Christians today **(5mks)**

3 a) Give reasons why Elijah was forced to escape from Israel. **(7mks)**

b) Explain the main features of Canaanite Religion **(7mks)**

c)What can Christians learn from the happenings at the Mt. Carmel contest about the, nature of God. **(6mks)**

4 a) Give reasons why God called prophets in Israel **(5mks)**

b) Describe the Day of the Lord as it was taught by prophet Amos **(Amos 8:7-13)** **(8mks)**

c) Identify the roles played by prophets in traditional African Society. **(7mks)**

5 a) Give reasons why Jeremiah wrote the letter to the Exiles in Babylon. **(7mks)**

b) State the teachings of Jeremiah on judgement and punishment. **(7 mks)**

c) What is the relevance of the suffering and lamentation of Jeremiah to Christians? **(8mks)**

6 a) How was the problem of sickness solved in traditional African society. **(7mks)**

b)Give six moral values expected of initiates in African traditional society **(6mks)**

c) Outline the changing attitude to birth and naming in society today. **(6mks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

CHRISTIAN RELIGIOUS EDUCATION

313/2

PAPER 2

TIME: 2½ HRS

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 on the foolscaps provided.*
- ***d)*** *Each question carries 20 marks.*

FOR EXAMINER'S USE ONLY

Questions	1	2	3	4	5	6	TOTAL
Score							

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For Marking Schemes - Contact 0746 222 000 / 0742 999 000

Answer any five questions

1 a) With reference to the incident when Jesus was dedicated to God , outline seven revelation of Simeon and Annah about His life. **(7mks)**

b) List seven Jewish ceremonies in which Jesus was involved. **(7mks)**

c) State the rituals performed during the birth of a baby in African society. **(6mks)**

2 a) Describe the incident when Jesus was rejected at Nazareth. Lk. 4: 16-30 **(7mks)**

b) State the teaching of Jesus on the healing of Gerasene Demoniac **(6mks)**

c) Identify six characteristics of a true follower of Jesus **(6mks)**

3 a) Explain four areas of conflict between Jesus and the Jewish religious leaders in His Jerusalem ministry **(8mks)**

b) State how Judas Iscariot betrayed Jesus. **(6mks)**

c) Identify six ways in which the church continues with the healing ministry of Jesus **(6mk)**

4 a) Explain what the teachings of Jesus about the Vine and the branches reveal about the unity of believers (John 15: 1-10) **(8mks)**

b)Mention six leadership qualities demonstrated by Peter on the day of Pentecost **(6mks)**

c) What role do women play in the church today . **(6mks)**

5 a) Identify six roles of parents in a Christian family **(6mks)**

b) Explain biblical teachings on celibacy as an alternative to marriage. **(7mks)**

c) Why are Christians opposed to child labour. **(7mks)**

6 a) Explain how unfair distribution of wealth can lead to social disorder in Kenya today. **(7mks)**

b) Give possible remedies to the problem of ethnicity in Kenya. **(7mks)**

c) State six ways in which Christens can put their wealth in good use **(6mks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

HISTORY AND GOVERNMENT

311/1

PAPER 1

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

b) *Answer all questions in section A, Three questions in section B, and Two questions in Section C.*

c) *Answers to all questions must be written in the answer booklet provided.*

d) *Candidates should answer the questions in English.*

FOR EXAMINER'S USE ONLY

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

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SECTION A (25MKS)

Answer All The Questions In This Section

1. Give **TWO** examples of early inhabitants of Kenya**.** **(2 marks)**

2. Identify TWO cultural practices introduced by the Cushites in Kenya. **(2 marks)**

3. Identify the TITLE given to the war leader among the Luo community. **(1 mark)**

4. What was the MAIN negative effect of plantation agriculture on the people of Kenyan coast? **(1 mark)**

5. Give TWO diplomatic methods used by the British to establish colonial rule in Kenya **(2marks)**

6. Give the **MAIN** importance of the Devonshire white paper of 1923**.** **(1 mark)**

7. State TWO economic benefits of the Kenya Uganda railway during the colonial period.**(2 marks)**

8. Give TWO advantages of Representative democracy **(2 marks)**

9. Give ONE reason why Africans were denied equal educational opportunities with other races during the colonial period**.** **(1 mark)**

10. Identify TWO features of African socialism as spelt out in the sessional paper no. 10 of 1965. **(2 marks)**

11. Identify TWO ways of becoming a Kenyan **citizen.** **(2 marks)**

12. Given ONE reason why the government of Kenya may limit a person's freedom of speech. **(1 mark)**

13. Give TWO ways through which parliamentary supremacy in Kenya can be limite**d.** **(1 mark)**

14. Give ONE house committee of parliament which deals with government financial matters. **(1 mark)**

15. What was the **MAIN** contribution of professor Wangari Maathai. **(1 mark)**

16. Give the MAIN constitutional change in Kenya in **2008** **(1 mark)**

17. State ONE type of public **expenditure** **(1 mark)**

SECTION B (45 MARKS)

Answer Any Three Questions

18a) State three ways through which the Bantus interacted with the Cushites during the pre-colonial period**.** **(3 Marks)**

b) Describe the social organization of the Abagusii during the pre-colonial period. **(12 Marks)**

19. (a) Give three reasons why the early visitors came to Kenyan coast before 1500 A.D.**(3 marks)**

(b) Explain six factors that contributed to the development of trade between Kenyan coast and outside world by 1**900** **(12 marks)**

20. (a) Give three grievances of the Kikuyu Central Association which were Presented by Jomo Kenyatta to the colonial secretary in **1929.** **(3 marks)**

b) Explain six roles played by trade unions to improve the lives of the people of Kenya during the colonial period **(12 marks)**

21.(a) Identify three education commissions established in the post-colonial Kenya. **(3 marks)**

(b) Explain six challenges facing the health sector in Kenya today. **(12marks)**

SECTION C (30 MARKS)

Answer Any Two Questions

22. a) State three reasons why national integration is important in Kenya**.** **(3 Marks)**

b) Explain six methods of conflict resolution. **(12 marks)**

23(a) State three functions of cabinet secretaries **(3 Marks)**

(b) Explain six functions of the Independent Electoral and Boundaries Commission**.(12 marks)**

24. (a) State three functions of a governor in Kenya **(3 Marks)**

(b). Explain six possible solutions to challenges facing County Government in Kenya **(12marks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

HISTORY AND GOVERNMENT

311/2

PAPER 2

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

b) *Answer all questions in section A, Three questions in section B, and Two questions in Section C.*

c) *Answers to all questions must be written in the answer booklet provided.*

d) *Candidates should answer the questions in English.*

FOR EXAMINER'S USE ONLY

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

For Marking Schemes - Contact 0746 222 000 / 0742 999 000

SECTION A (25MKS)

Answer All The Questions In This Section

1. Give two ways in which archaeologists obtain historical information **(2mks)**

2. Name the period in history that is associated with microlithic tools **(1mk)**

3. Identify tools invented by the Sumerians that facilitated the production of food **(2mks)**

4. State two characteristics of regional trade **2mks)**

5. Identify one earliest traditional means of water transport **(1mk)**

6. State two disadvantages of wood as a source of energy **(2mks)**

7. Give the contribution of Loius Pasteur in the field of medicine **(1mk)**

8. Identify the main factor that led to the growth of the ancient town of Meroe **(1mk)**

9. State one significance of the of the royal fire by the for Mwene Mutapa kingdom **(1mk)**

10. Name the Chartered Company used by the British government to administer her colonies in West Africa **(1mk)**

11. What was the main contribution of religion in the MajiMaji uprising of 1905-1907? **(1mk)**

12. State two roles of African chiefs in the French system of assimilation in Senegal **(2mks)**

13. Apart from African National Congress (ANC) name one other political party that fought for independence in South Africa **(1mk)**

14. Give two camps of fighting powers during the Second World War **(2mks)**

15. Name any two permanent members of the United Nations **(2mks)**

16. State the main political challenge that has faced Democratic Republic of Congo **(1mk)**

17. Identify two houses of Congress in United States of America **(2mks)**

SECTION B 45 MARKS

(Answer any three questions in this section)

18 a) Identify five ways in which the development of the upright posture improved early man's way of life **(5mks)**

b) Describe the way of life of early human beings during the Middle Stone Age **(10mks)**

19 a) State three contributions of oversee colonies to the expansion European industries in Europe **(3mks)**

b) Discuss six problems which the European society faced as a result of industrialization **(12mks)**

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20 a) Identify three ways in which African collaboration with Europeans hastened colonization of **Africa** **(3mks)**

b) Explain six effects of the partition of Africa on African communities **(12mks)**

21 a) Give three political developments in South Africa between 1990 and 1991 which led to peaceful introduction of majority rule **(3mks)**

b) Explain six challenges faced by African Nationalists in their struggle for majority rule in South Africa **(12mks)**

SECTION C 30MARKS

(Answer any two questions in this section)

22 a) State three functions of Lukiko of Buganda kingdom during pre-colonial period **(3mks)**

b) Describe the political organization of the Shona during the pre-colonial period **(12mks)**

23 a) Name three co-founders of Pan-African Movement **(3mks)**

b) Explain six achievements of Pan-Africanism between 1945 and 1963 **(12mks)**

24 a) Give three requirements one has to fulfill in order to contest as a president in India **(3mks)**

b) Describe six functions of the Prime Minister of Britain **(12mks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

GEOGRAPHY

312/1

PAPER 1

TIME: 2¾ HRS

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

(c) *Answer **all** the questions in section **A***

(d) *Answer **question 6** and any other **two** questions from section **B***

For Examiner's Use Only

Section	Questions	Maximum Score	Candidate's Score
A	1 – 5	25	
B	6	25	
		25	
		25	
	Total Score	100	

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SECTION A

*Answer **all** questions in this section*

1. (a) Define the term equinox. **(2 marks)**

(b) If the local time at 75^0W is 8.00 a.m., what is the local at the longitude 35^0E? **(3 marks)**

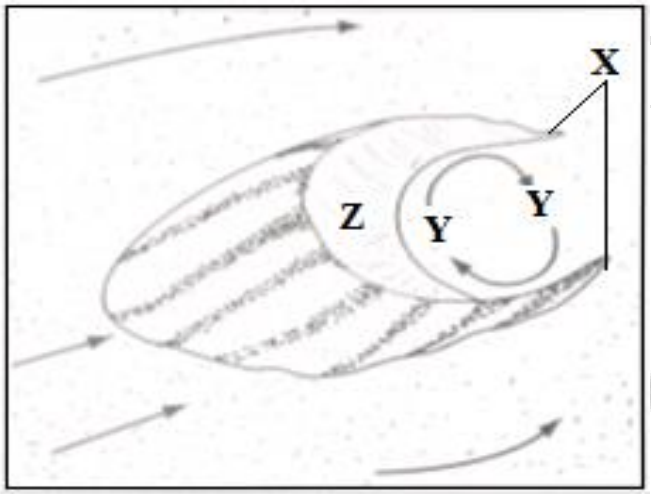
2. (a) Give **two** examples of non-metallic minerals. **(2 marks)**

(b) State **three** ways through which sedimentary rocks are formed. **(3 marks)**

3. (a) What is natural vegetation? **(2 marks)**

(b) State **three** characteristics of Mediterranean type of vegetation. **(3 marks)**

4. The diagram below shows a barchan. Use it to answer question (a).



(a) Name (i) the feature marked **X**. **(1 mark)**

(ii) the air current marked **Y**. **(1 mark)**

(iii) the slope marked **Z**. **(1 mark)**

(b) Give **two** ways in which wind transport its load in deserts. **(2 marks)**

5. (a) Differentiate between a catchment area and a watershed. **(2 marks)**

(b) Give **three** features that result from river rejuvenation. **(3 marks)**

SECTION B

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

6. Use the map **PROVIDED KISUMU EAST I:50,000 (SHEET 116/2)** and answer the following questions .

a.) **i)** What is the sheet title of the map **(1mk)**

ii). What is the magnetic declination of the map extract **(1mk)**

b. i) Convert the ratio scale of the map extract into statement scale. **(2mks)**

c.) What is the bearing of trigonometrical station at grid reference 081980 from the Air photo Principals point at grit square 0997. **(2mks)**

d) Give three types of natural Vegetation found in the area covered by map. **(3mks)**

e) Describe the drainage of the area covered by the map**.** **(5mks)**

f) Draw a rectangle 12cm by 10cm to represent the area enclosed by Easting 03 and 09 and Northing 80 and 85. On the rectangle, mark and name the following features**.** **(5mks)**

i) Trigonometrical station 1154.

ii) All weather road B 25/3

iii) Seasonal swamp.

iv) Ombeyi river.

g. Citing evidence from the map ,explain three social factions of Kisumu town . **(6mks)**

7. (a) (i) What is plate tectonics? **(2 marks)**

(ii) Explain **three** evidences supporting the continental drift theory. **(6 marks)**

(b) (i) Apart from fold mountains, give **three** other features resulting from folding**.** **(3 marks)**

(ii) With the aid of well labeled diagrams, describe how movement of tectonic plates may lead to formation of fold mountains. **(8 marks)**

(c) Explain **three** positive significance of fold mountains to human activities. **(6 marks)**

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8. (a) (i) Define the term climate. **(2 marks)**

(ii) Explain how the following factors influence the climate of an area.

- latitude **(2 marks)**
- distance from the sea **(2 marks)**

(b) The table below shows temperature readings at a weather station.

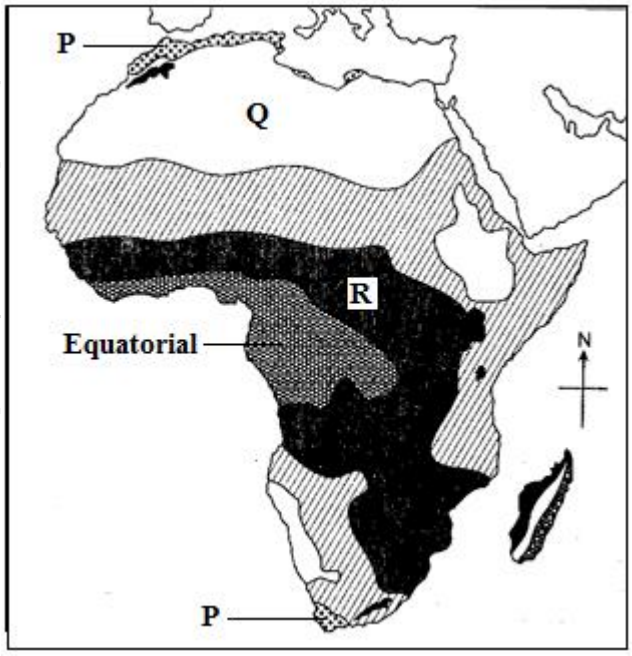
Day	MON.	TUE.	WED.	THUR.	FRI.	SAT.	SUN
Max (^oC)	26	25	26	24	27	27	24
Min. (^oC)	15	17	17	13	19	18	17

Calculate;

(i) the diurnal temperature range for Monday. **(2 marks)**

(ii) the mean daily temperature for Friday. **(2 marks)**

(c) Study the climate map of Africa below and answer the questions that follow.



(i) Name the climatic regions marked **P**, **Q** and **R**. **(3 marks)**

(ii) Describe the characteristics of equatorial climate. **(6 marks)**

(d) Explain **three** ways in which vegetation has adopted to the climatic conditions in the region **Q**.

(6 marks)

9. (a) (i) What is an artesian basin? **(2 marks)**

(ii) Explain **three** factors which influence the formation of features in limestone areas. **(6 marks)**

(b) (i) A part from stalagmites, name **two** other underground features in limestone areas. **(2 marks)**

(ii) With the aid of a diagram, describe how a stalagmite is formed. **(8 marks)**

(c) Your supposed to carry out a field study on limestone region.

(i) Give **two** reasons why you would need a map of the area of study. **(2 marks)**

(ii) State **two** ways you would prepare for the study. **(2 marks)**

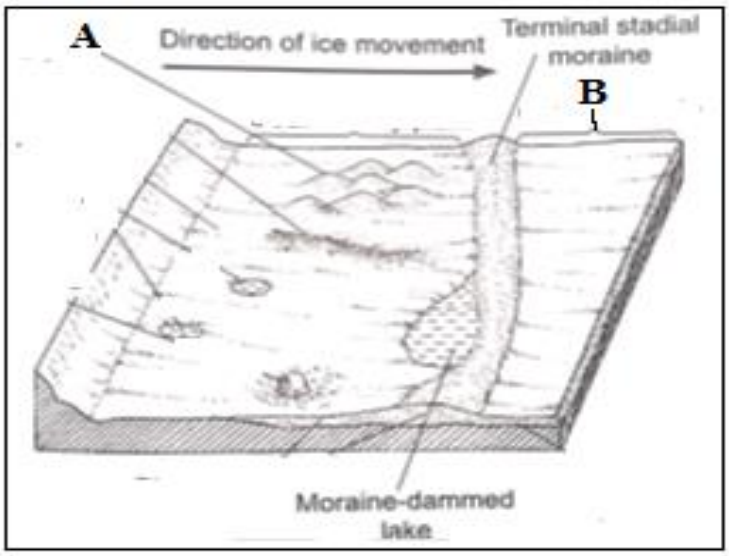
(iii) Give **three** reasons why you are likely to find few settlements in the study area. **(3 marks)**

10. (a) (i) Define the term glacier. **(2 marks)**

(ii) Give **two** processes of glacial erosion. **(2 marks)**

(b) Explain **three** conditions that lead to glacial deposition. **(6 marks)**

(c) The diagram below shows features resulting from glacial deposition in lowlands.



(i) Identify the features labeled **A** and **B**. **(2 marks)**

(ii) Describe how a terminal moraine is formed. **(3 marks)**

(d) Explain **five** positive significance of glaciation in lowland areas. **(10 marks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

GEOGRAPHY

312/2

PAPER 2

TIME: 2¾ HRS

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

(c) *Answer **all** the questions in section **A***

(d) *Answer **question 6** and any other **two** questions from section **B***

For Examiner's Use Only

Section	Questions	Maximum Score	Candidate's Score
A	1 – 5	25	
B	6	25	
		25	
		25	
	Total Score	100	

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SECTION A

*Answer **all** questions in this section*

1. (a) Name **two** types of fish caught from Lake Victoria **(2mks)**

(b) State **three** reasons why fish farming should be encouraged in Kenya **(3mks)**

2 (a) State **three** physical conditions that favour wheat cultivation in Kenya **(3mks)**

(b) Name two provinces where wheat is grown on large scale in Canada **(2mks)**

3 (a) What is urbanization **(1mk)**

(b) State **four** factors which have led to the development of Mombasa as a mojor sea port in the region **(4mks)**

4 Differentiate between land reclamation and land rehabilitation **(2mks)**

(b) State **three** factors that influenced the establishment of perkerra irrigation scheme **(3mks)**

5 (a) List **two** forms of telecommunication services in Kenya **(2mks)**

(b) State **three** ways in which Kenya would benefit from construction of standard gauge railway **(3mks)**

SECTION B: ANSWER QUESTION 6 AND ANY OTHER TWO.

6. Use the data below to answer questions that follow:

Kenya's Export crop (1986-1989) in tonnes

Year/crop	**1986**	**1987**	**1988**	**1989**
Coffee	12.6	10.0	9.1	9.8
Tea	11.6	13.5	13.8	16.3
Sisal	3.2	2.8	3.1	3.3

(a)(i) Calculate the tones of crop export from Kenya between 1986-1989 **(2mks)**

(ii) Draw a compound bar graph to represent Kenya Export (1986-1989) **(8mks)**

(Scale 1 cm ref 5 tonnes)

(iii) Give **two** advantages of using compound bar graphs to represent data **(2mks)**

b) Describe the stages involved in coffee production from picking to marketing. **(8mks)**

c) i) A part from being a beverage, state **any** other use of coffee. **(1mk)**

ii) Explain two significance of coffee industry to the Kenyan economy. **(4mks)**

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7. (a) (i) Name **three** types of minerals. **(3mks)**

(ii) State **three** ways in which minerals occur. **(3mks)**

(b) (i) Describe shaft mining method. **(5mks)**

(ii) Outline **three** challenges faced by shaft miners. **(3mks)**

(c) Explain **four** problems facing the mining industry in Kenya. **(8mks)**

(d) Highlight **three** ways in which mining derelicts can be reclaimed. (**3mks)**

8. (a) (i)Apart from water and air pollution name **two** other types of pollution. **(2mks)**

(ii)Identify **three** ways through which water is polluted. **(3mks)**

(iii)Explain **three** effects of air pollution on the environment. (**6mks)**

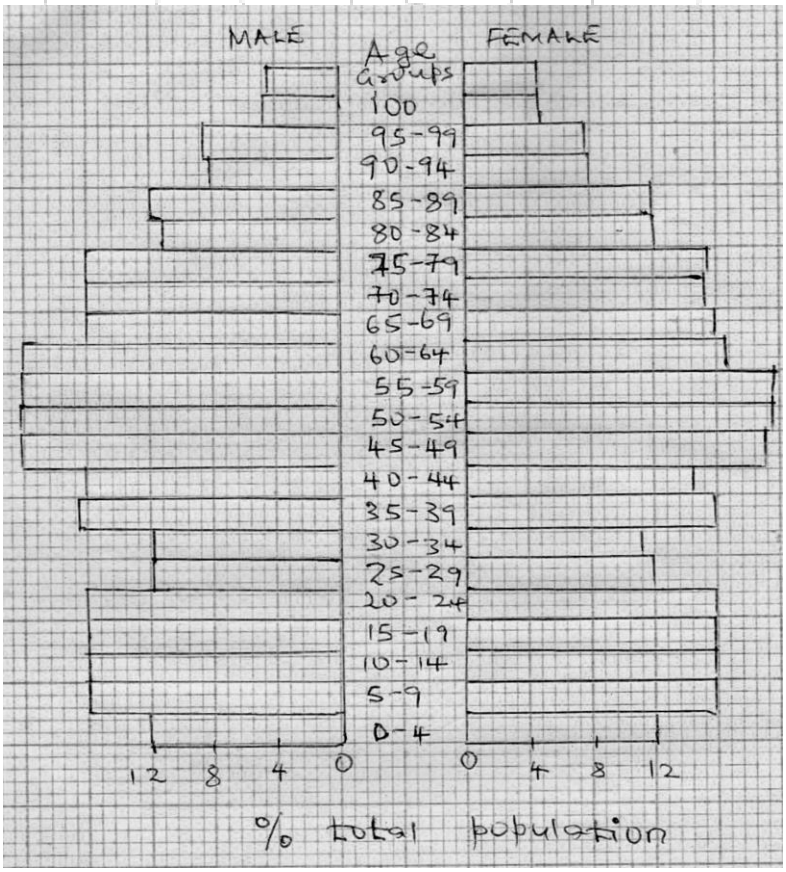
(b)(i) Explain **three** factors that lead to frequent flooding in the lake region of Kenya.**(6mks)**

(ii)Explain **two** ways through which floods are controlled in the lake region of Kenya.**(4mks)**

(c)State **four** effects of wind as an environmental hazard in Kenya. **(4mks)**

9. The pyramid below represents the population structure of country A.

Use it to answer the questions that follow.



a. Describe the characteristics of the population represented by the pyramid. **(8mks)**

b. Apart from migration, explain **four** factors that influence population growth and structure. **(8mks)**

c. State **two** positive effects of high population growth. **(2mks)**

d. i. Give **five** problems that could arise from overpopulation. **(5mks)**

ii. Name **two** sources of population data. **(2mks)**

10.(a) (i) What is energy? **(1mk)**

(ii) Name **three** renewable sources of energy. **(3mks)**

(b) (i) State **four** factor that led to the implementation of the seven forks dam project in Kenya**.** **(4mks)**

(ii) Explain **three** benefits of seven forks Dam to the economy of Kenya. **(6mks)**

(c) (i) Name **two** countries in Eastern Africa where crude oil has been discovered. **(2mks)**

(ii) Describe the mode of formation of crude oil. **(4mks)**

(d) State **five** reasons why Kenya is investing in the development of renewable sources of energy. **(5mks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

MATHEMATICS

121/1

PAPER 1

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS:

1. *Write your name, Index number in the space provided at the top of the page.*
2. *Sign and write the date of examination in the spaces provided above.*
3. *This paper consists of **Two** sections 1 and II.*
4. *Answer all the questions in section **1** and only **five** questions from section II*
5. *All answers and working must be written on the question paper in the spaces provided below each question.*
6. *Show all the steps in your calculation, giving your answers at each stage in the space provided.*
7. *Marks may be given for correct working even if the answer is wrong.*
8. *Non programmable silent electronic calculator and KNEC Mathematical table may be used, except when stated otherwise.*

FOR EXAMINER'S USE ONLY

SECTION 1

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

SECTION 2

17	18	19	20	21	22	23	24	Total

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SECTION 1 (50 MARKS) COMPULSORY

1. Without using calculators evaluate: **(3 marks)**

$$\frac{\frac{1}{2}+2\frac{4}{5}\ of\ 8\div 6(2\times 4\frac{2}{5})}{\frac{1}{2}\ of\ 6\left(8\div 7\frac{1}{3}\right)}$$

2. Simplify the expression **(3 marks)**

$$\frac{y^4 - x^4}{y^3 - yx^2}$$

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3. Solve for x in the equation **(3 marks)**

$$2^{(2x-1)} \times \frac{1}{8}^{(1+x)} = 4^{(3x+1)}$$

4. The marked price of a modern camera is Ksh. 24,000. A trader sold it to a customer at a 10% discount. If the trader still made a profit of 20% on the cost price, what was its cost price. **(3 mks)**

5. A two – digit number is such that the sum of the digit is 12. If the digits are interchanged the value of the new number formed is fifteen more than twice the value of the original number. Find the original number? **(4 marks)**

6. Using reciprocal and square – root tables only. Evaluate. **(3 marks)**

$$9.452^2 + \frac{1}{63.37}$$

7. Two similar container hold 2000cm^3 and 6.75 litres respectively. If the smaller container has a diameter of 15.50cm. What is the radius of the larger container correct to 1 decimal place?**(3 mks)**

8. Given that **OA** = i + 3j - 4k and **OB** = 3i - j - k. **(3 marks)**

Find /AB/

KCSE 23

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9. Three schools A, B, and C are such that B is 12km due south of A and C is 15km from A. C is on a bearing of $N30^0W$ from B. Calculate the bearing of C from A. **(3 marks)**

10. Solve the inequality

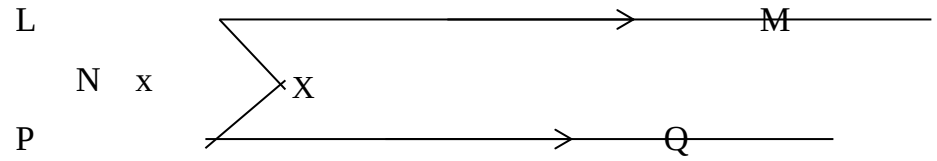
$$3 - 2x < x \leq \frac{2x + 5}{3}$$

State the integral values which satisfy these inequalities **(3 marks)**

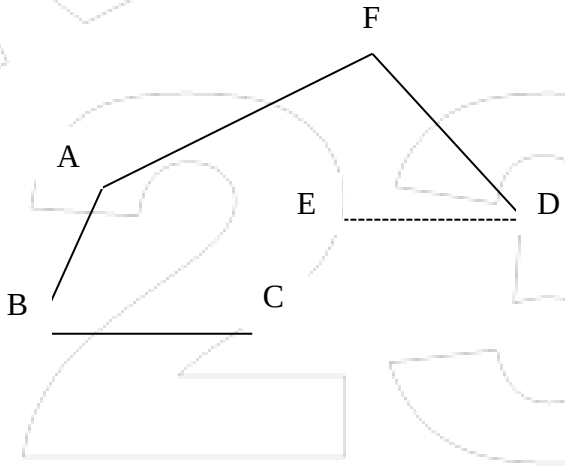
11. The gradient of a line L through A (2x, 4) and B (-1, x) is $^1/_7$. Find the equation of line perpendicular to L through B. **(3 marks)**

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12. On the figure below LM is parallel to PQ. Angle MLN = 30^0 and Angle NPQ = 70^0. Find the value of X^0 **(3 marks)**



13. Complete the sketch below for the prism, ABCDEF **(3 marks)**



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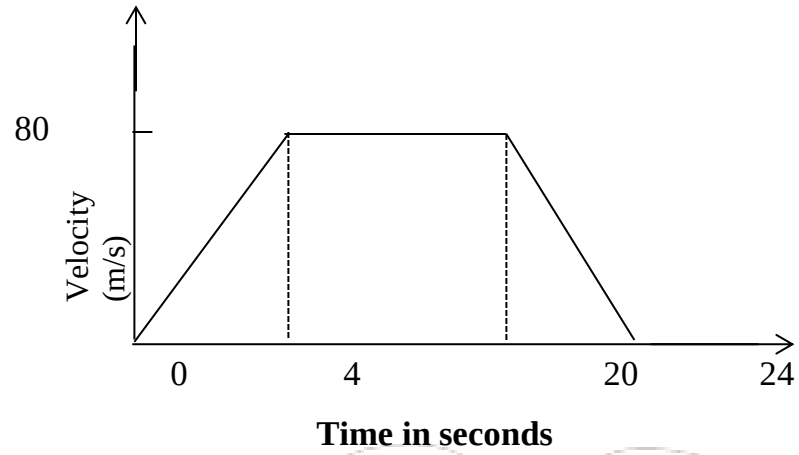
14. A Jua Kali artisan has 63000g of metal of density 7g/cm^3. He intends to use it to make a rectangular pipe with external dimensions 120mm by 150mm and internal dimensions of 100mm by 120mm. Calculate the length of the pipe in metres. **(3 marks)**

15. Jane and Mary started a business whereby contributed Ksh. 25000 and 20000 respectively. At the end of the year a profit of Ksh. 8100 was realized. From the profit funds for development, dividends and reserves were set aside in the ration 4:5:6 respectively. If the dividends were shared in the ration of their contribution, determine:

(a) The amount set aside for development **(2 marks)**

(b) The dividends Mary received **(2 marks)**

16. The figure below is a velocity time - graph for car



(a) Find total distance traveled by the car **(2 marks)**

(b) Calculate the deceleration of the car. **(1 mark)**

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SECTION II (50 MARKS)

Answer any five questions in this section

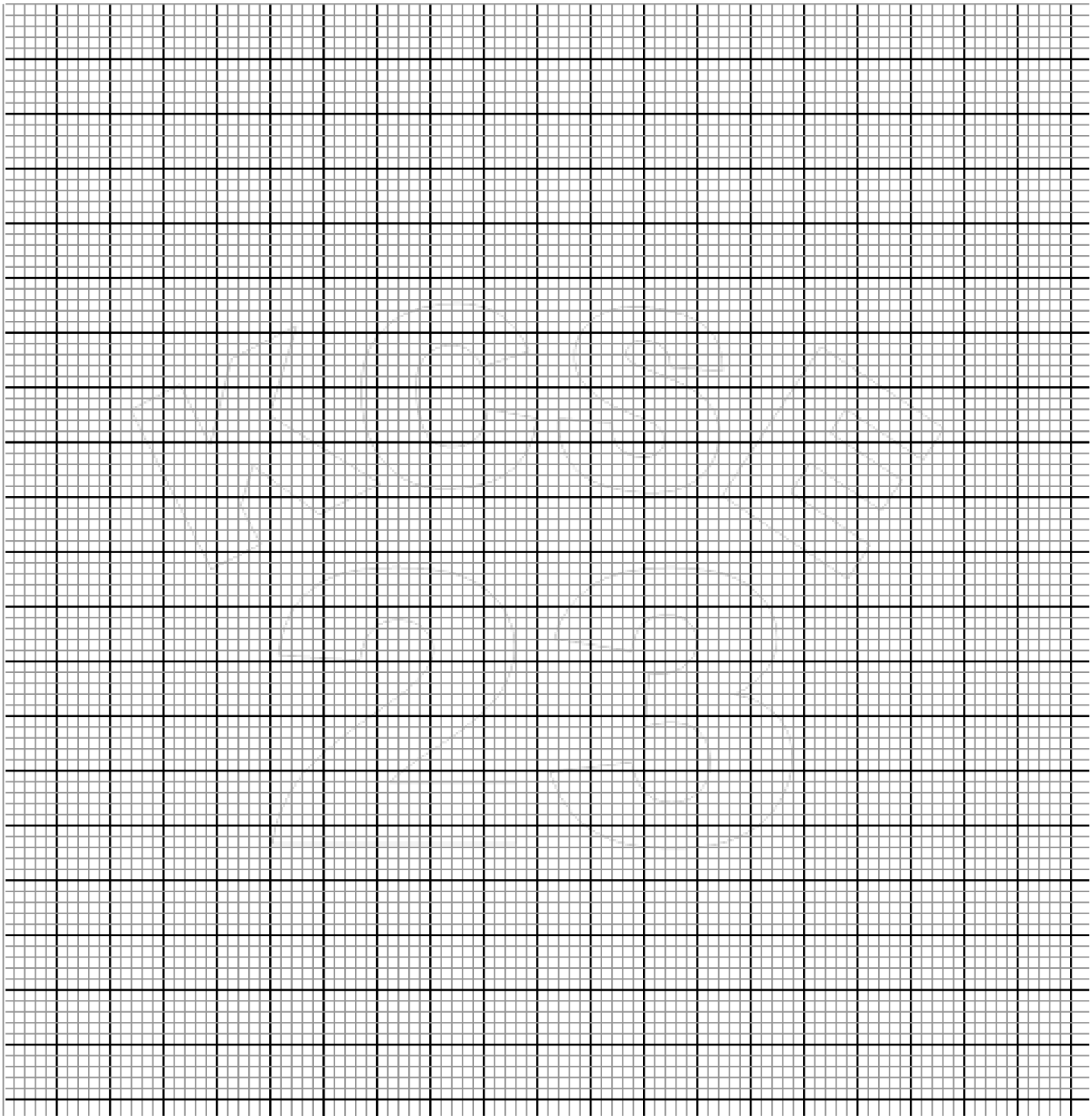
17. Five members of a self-supporting enterprise Peter, John, Esther, Brian and Caro were given a certain amount of money to share amongst themselves. Peter got 3/8 of the total amount while John got 2/5 of the remainder. The remaining amount was shared equally among Esther, Brian and Caro each of which received Ksh. 6,000;

(a) How much was shared among the five business women? **(3 marks)**

(b) How much did John get? **(2 marks)**

(c) Peter, John and Caro invested their money and earned a profit of Ksh. 12,000. A third of the profit was left to maintain the business and the rest was shared according to their investments. Find how much each got. **(5 marks)**

18. (a) On the grid provided draw the square whose vertices are A(6, -2), B(7, -2), C(7, -1) and D(6, -1) **(1 mark)**



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(b) On the same grid draw

(i) $A^1B^1C^1D^1$ the image of ABCD, under an enlargement scale factor 3, Centre (9, -4) **(3 marks)**

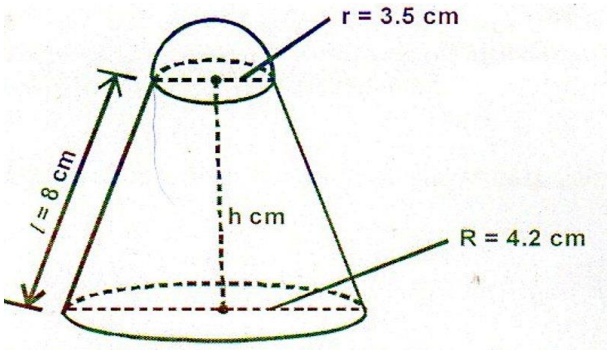
(ii) $A^{11}B^{11}C^{11}D^{11}$, the image $A^1B^1C^1D^1$ under a reflection in the line x = 0 **(2 marks)**

(iii) $A^{111}B^{111}C^{111}D^{111}$, the image of $A^{11}B^{11}C^{11}D^{11}$ under a rotation of $+90^0$ about the origin. **(2 marks)**

(c) Describe a single transformation that maps $A^1B^1C^1D^1$ onto $A^{111}B^{111}C^{111}D^{111}$. **(2 marks)**

KCSE 23

19. The figure below shows a solid made up of a conical frustum and a hemispherical top. The dimensions are as indicated.



The top radius r = 3.5cm, bottom radius R = 4.2cm, slant height l = 8cm and the height of the frustum part is h cm.

(a) Find the surface area of the solid (Take $\pi = {}^{22}/_{7}$) **(5 marks)**

(b) If a similar solid has a total surface area of 81.51cm^2, determine the radius of its base, to the nearest whole number **(1 mark)**

(c) (i) Find the height h of the frustum. **(1 mark)**

(ii) Hence determine the volume of the solid **(3 marks)**

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20. Two towns A and B are 80km apart. Juma started cycling from town A to town B at 10.00am at an average speed of 40km/h. Mutuku started his journey from town B to town A at 10.30am and traveled by car at an average speed of 60km/h

Calculate:

(i) The distance from town A when Juma and Mutuku met **(5 marks)**

KCSE 23

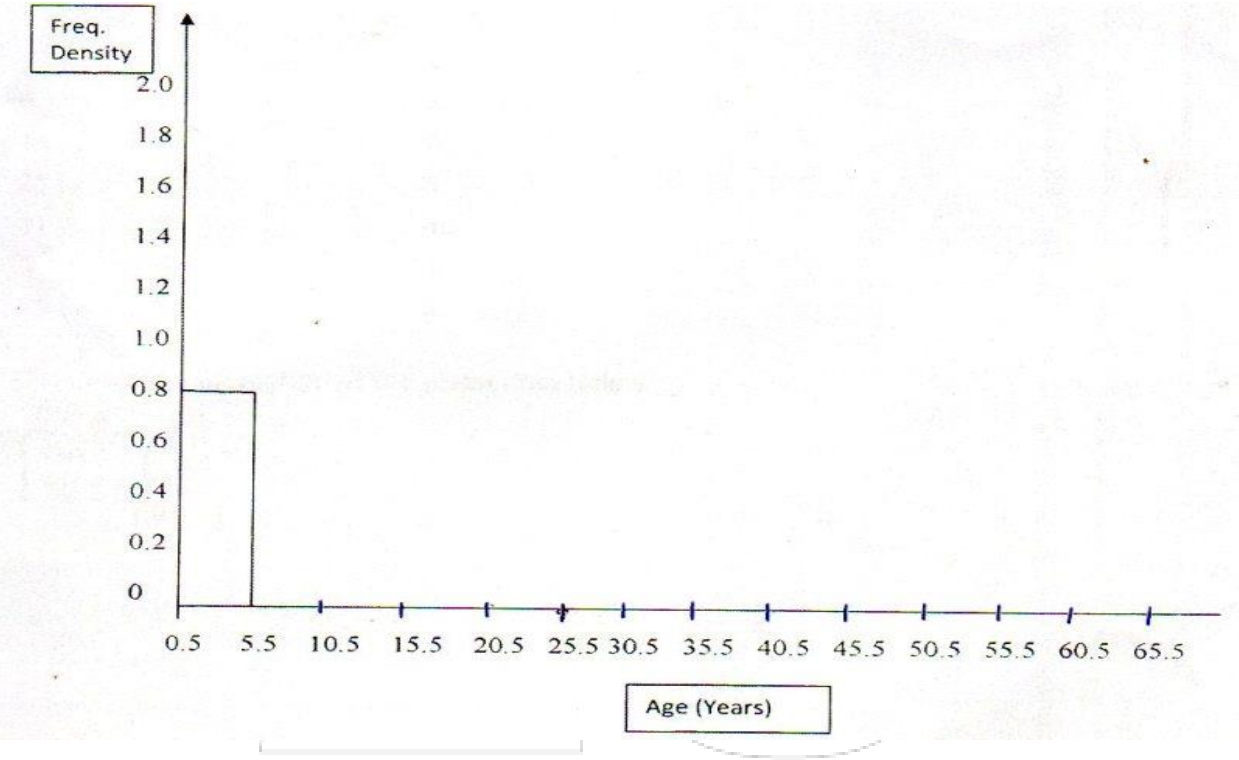
(ii) The time of the day when the two met **(2 marks)**

(b) Kamau started cycling from town A to town B at 10.20am. He met Mutuku at the same time as Juma did. Determine Kamau's average speed. **(3 marks)**

21. The following data shows the sample of age distribution of the people who reside in a certain village in years, in Nandi County

Age group	Frequency
1 …….5	4
6 ……10	8
11 …… .20	8
21 …….30	6
31 …….50	40
51 …….55	3
56 …….65	3

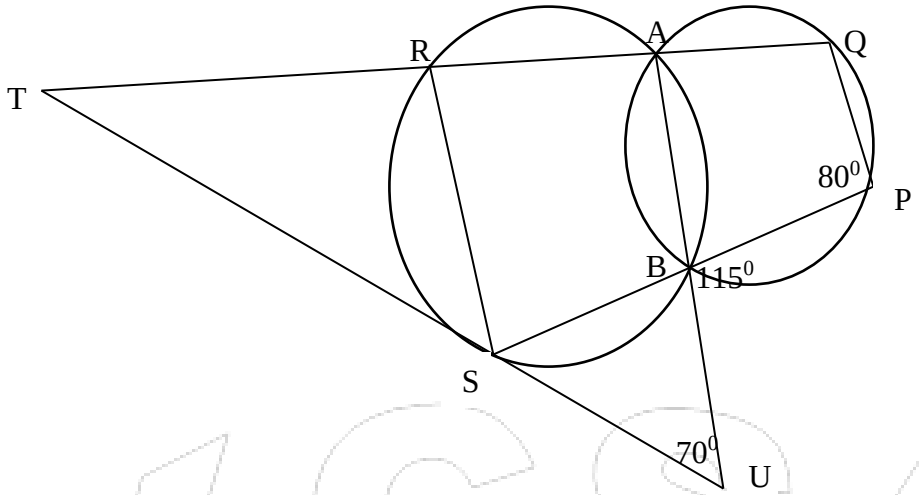
(a) Complete the histogram of the given data below **(6 marks)**



(b) Calculate the mean age of the given sample in the village **(4 marks)**

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22. The figure below shows two circles ABPQ and ABSR intersecting at A and B. PBS, QART and ABU are straight lines. The line UST is a tangent to the circle ABSR at S. Angle BPQ = 80^0, angle PBU = 115^0 and angle BUS = 70^0



Find the values of the following angles, stating your reasons in each case.

(a) <BAR **(2 marks)**

(b) <STR **(2 marks)**

(c) <BSU **(2 marks)**

(d) <BRS **(2 marks)**

(e) <SBU **(2 marks)**

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23. Using a pair of compasses and ruler only,

(a) Construct triangle XYZ such that XY = 8cm, YZ = 6cm and angle XYZ = 30^0 **(3 marks)**

(b) Measure the length of XZ **(1 mark)**

(c) Draw a circle that touches the vertices X, Y and Z. **(2 marks)**

(d) Measure the radius of the circle **(1 mark)**

(e) Calculate the area of the circle outside the trangle to 2 d.p. **(3 marks)**

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24. The function $y = x^3 + x^2 – 3x + 2$ represents a curve.

a) Find the gradient function of the curve **(1 mark)**

b) Find the turning points of the curve and distinguish between them. **(6 marks)**

KCSE 23

c) Hence sketch the curve $y = x^3 + x^2 – 3x + 2$ **(3 marks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

MATHEMATICS

121/2

PAPER 2

TIME: 2½ HRS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS:

a) *Write your name, Index number in the space provided at the top of the page.*

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

c) *This paper consists of* ***Two*** *sections 1 and II.*

d) *Answer all the questions in section* ***1*** *and only* ***five*** *questions from section II*

e) *All answers and working must be written on the question paper in the spaces provided below each question.*

f) *Show all the steps in your calculation, giving your answers at each stage in the space provided.*

g) *Marks may be given for correct working even if the answer is wrong.*

h) *Non programmable silent electronic calculator and KNEC Mathematical table may be used, except when stated otherwise.*

FOR EXAMINER'S USE ONLY

SECTION 1

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

SECTION 2

17	18	19	20	21	22	23	24	Total

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SECTION 1 (50 MARKS) COMPULSORY

SECTION I (50 Marks)

1. A quadratic equation has roots as $x = -4$ and $x = \frac{2}{3}$. Write the equation in the form $ax^2 + bx + c = 0$, where a, b and c are integers. **(3 marks)**

2. Given that $2 \leq p \leq 8$ and $3 \leq q \leq 10$, find the maximum value of: **(2 marks)**

$$\frac{p-q}{q+p}$$

3. Without using a mathematical table or a calculator, write the expression below in the form $a\sqrt{3} + c$, where a and c are constants **(3 marks)**

$$\frac{2}{\sin 90^0 + \tan 60^0}$$

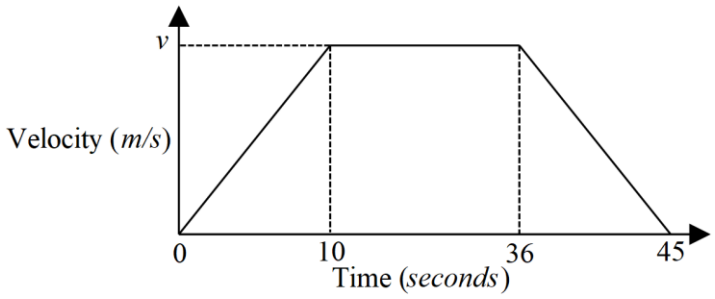
4. Solve for x in the equation $\log_2(x-3)+2=\log_2(8-x)$ **(3 marks)**

5. A truck is bought at Kshs. 1,800,000. It depreciates by 10% per annum in the first 2 years, thereafter its annual depreciation rate is 15%. Find the value of the truck after 5 years. **(4 marks)**

6. The position vectors of points A and B are $4\boldsymbol{i}-5\boldsymbol{j}+6\boldsymbol{k}$ and $-2\boldsymbol{i}+3\boldsymbol{j}+8\boldsymbol{k}$ respectively. Calculate the magnitude of $\boldsymbol{AB}$ correct to 3 decimal places. **(3 marks)**

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7. The figure below shows the velocity-time graph of a particle that moves for 60 seconds and covered a distance of 852 metres.



Calculate the value of v **(2 marks)**

8. Make x the subject of the formula: **(3 marks)**

$$px = \sqrt{x^2 + \frac{m}{Q}}$$

9. The equation of a circle is $x^2 + y^2 + 6x - 10y - 2 = 0$. Determine the co-ordinates of the centre and the area of the circle in terms of π **(3 marks)**

10. (a) Expand $(1 + 3x)^6$ in ascending powers of x up to the term in x^3 **(1 mark)**

(b) Use your expansion to evaluate $(0.997)^6$ correct to 5 decimal places. **(2 marks)**

11. (a) Complete the table below for the function $y = x^2 - 4x + 5$ for $1 \leq x \leq 5$ **(1 mark)**

y	1	1.5	2	2.5	3	3.5	4	4.5	5
x	2				2		5		

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(b) Use the mid-ordinate rule with 4 strips to find the area bound by the function, the x-axis and the lines $x = 1$ and $x = 5$. **(2 marks)**

12. A town T lies on latitude 37^0N and longitude 50^0E. An airport is located on another town R whose longitude is 10^0W on the same latitude as T. An aeroplane leaves town T and flies westwards to R. Calculate the distance covered by the plane in km. (Take R = 6370km and $\pi = \frac{22}{7}$)

(3 marks)

KCSE 23

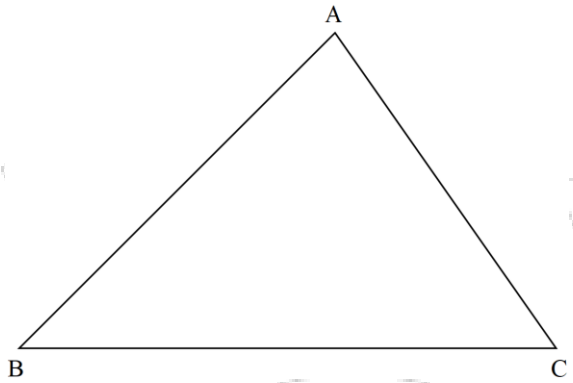
13. The diagram below shows a plot of land. Shade the region R enclosed under the following conditions:

(i) $CR \geq 1.5$ cm

(ii) R is more than 2 cm from line AB

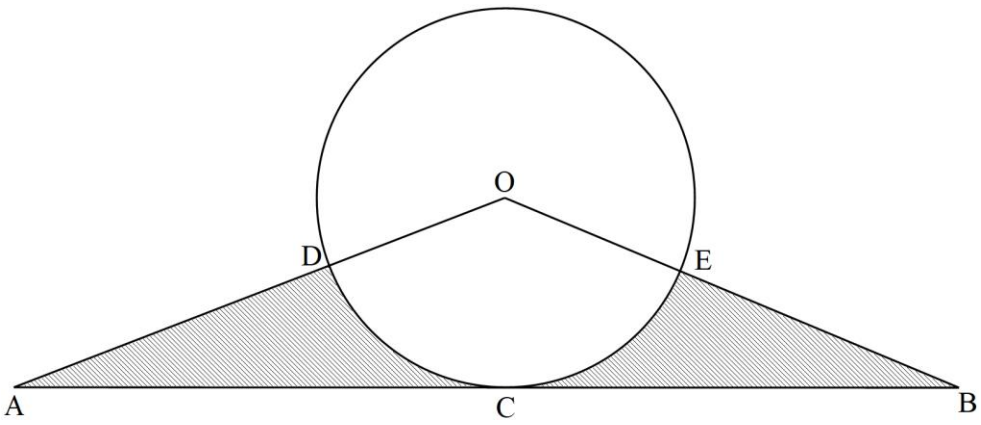
(iii) $\angle CRA \geq \angle CRB$

(iv) R is nearer to CB than CA



By construction and using a scale of 1 cm to represent 10 metres, shade the region where the borehole lies. **(5 marks)**

14. In the figure below, O is the centre of the circle. AB is a tangent to the circle at C. AD=17cm and AO=24cm



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Calculate the shaded area correct to 4 significant figures. **(4 marks)**

15. A trader makes two types of chairs; ordinary and special. The cost of each ordinary chair is Kshs. 300 while the cost of a special chair is Kshs. 700. He is prepared to spend not more than Kshs. 21, 000. It is not viable for him to make less than 20 chairs. Ordinary chairs must be less than twice the special chairs but more than 15. By taking the number of ordinary chairs as x and the special chairs as y; Write down all the inequalities representing the above information. **(4 marks)**

16. A construction firm has two tractors; P and Q. tractor P completes a job in 4 days while tractor Q completes the work in 6 days. The two tractors start working together and after 2 days, tractor P breaks down. How long does it take Q to complete the remaining work? **(3 marks)**

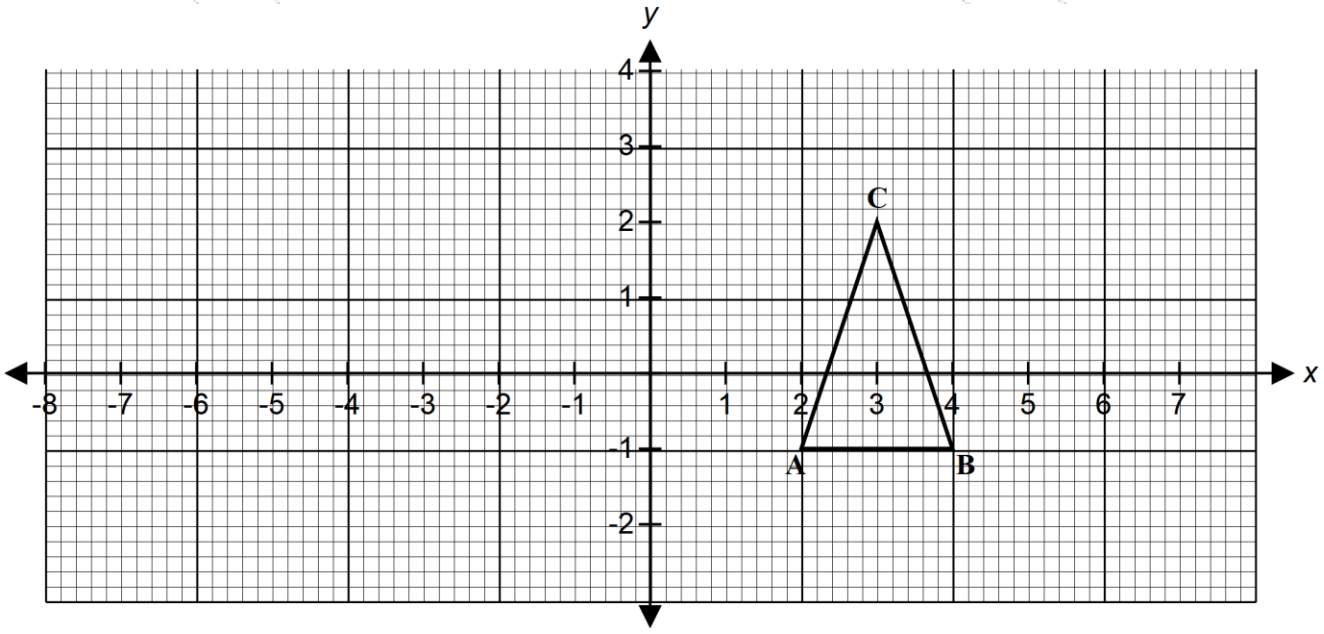
SECTION II (50 marks)

Answer any ***five*** questions in this section

17. The graph below shows a triangle ABC with vertices $A(2,-1), B(4,-1)$ and $C(3,2)$

(a) $\Delta A'B'C'$ is the image of ΔABC under a transformation given by the matrix $\begin{pmatrix}1 & 2\\ 0 & 1\end{pmatrix}$. Determine the coordinates of A', B' and C' **(2 marks)**

(b) On the grid provided draw $\Delta A'B'C'$ and describe the transformation fully **(3 marks)**



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(c) $\Delta A''B''C''$ is the image of $\Delta A'B'C'$ under a reflection along the line $y = 0$. Draw $\Delta A''B''C''$ on the same pair of axes and state its coordinates **(2 marks)**

(d) Determine the matrix representing a single transformation that maps ΔABC onto $\Delta\ A''B''C''$ **(3 marks)**

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18. (a) Write down the first three terms of the sequence whose n[th] term is given by $T_n = 5n - 2$

(1 mark)

(b) The third and the sixth terms of a geometric sequence are 18 and 486 respectively. Find the first term and the common ratio of the sequence. **(3 marks)**

(c) The first and the last terms of an arithmetic progression are 8 and -190 respectively. If the sum of the first n terms of this arithmetic progression is -3094, find the number of terms in the progression **(2 marks)**

(d) The second, fourth and seventh terms of an arithmetic progression are the first three terms of a geometric progression. Find the common ratio of the geometric progression if the first term of the arithmetic progression is 2 **(4 marks)**

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19. (a) Three variables P, Q and R are such that P varies partly as the square of Q and partly inversely as the square root of R. Determine:

(i) The relationship between P, Q and R given that when $P = 11\frac{1}{3}, Q = 2$ and $R = 9$ and also when $P = 14.75$, $Q = 5$ and $R = 64$ **(4 marks)**

(ii) Q when $P = 145\frac{11}{18}$ and $R = 1.44$ **(2 marks)**

(b) Four quantities A, B, C and D are such that A varies jointly with B, the square root of C and inversely as the square of D. Find the percentage change in A if B increases by 21%, C decreases by 36% and D increases by 10% **(4 marks)**

20. A particle moves along a straight line such that its displacement S metres from a given point $S = t^3 - 5t^2 + 4$ where t is time in seconds. Calculate:

(a) The displacement of the particle at $t = 5$ **(2 marks)**

(b) The velocity of the particle when $t = 5$ **(3 marks)**

(c) The values of t when the particle is momentarily at rest **(3 marks)**

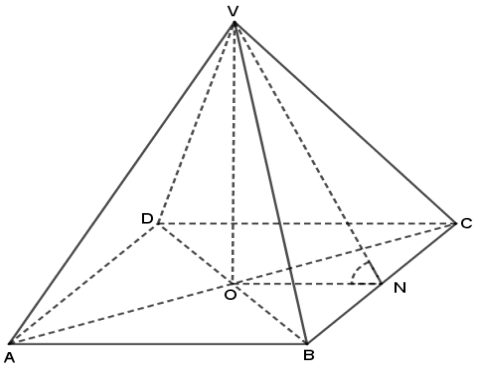
(d) The acceleration of the particle $t = 2$ **(2 marks)**

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21. The figure below shows a right pyramid standing on a rectangular base ABCD. AB=8 cm, BC=15 cm and each slant edge is 12 cm long. N is the midpoint of BC



Calculate to two decimal places

(a) The vertical height of the pyramid **(3 marks)**

(b) The volume of the pyramid. **(1 mark)**

(c) The obtuse angle between the planes VBC and VAD of the pyramid **(4 marks)**

(d) The angle between line VD and the base **(2 marks)**

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22. (a) Complete the table below giving the values correct to 2 decimal places. **(2 marks)**

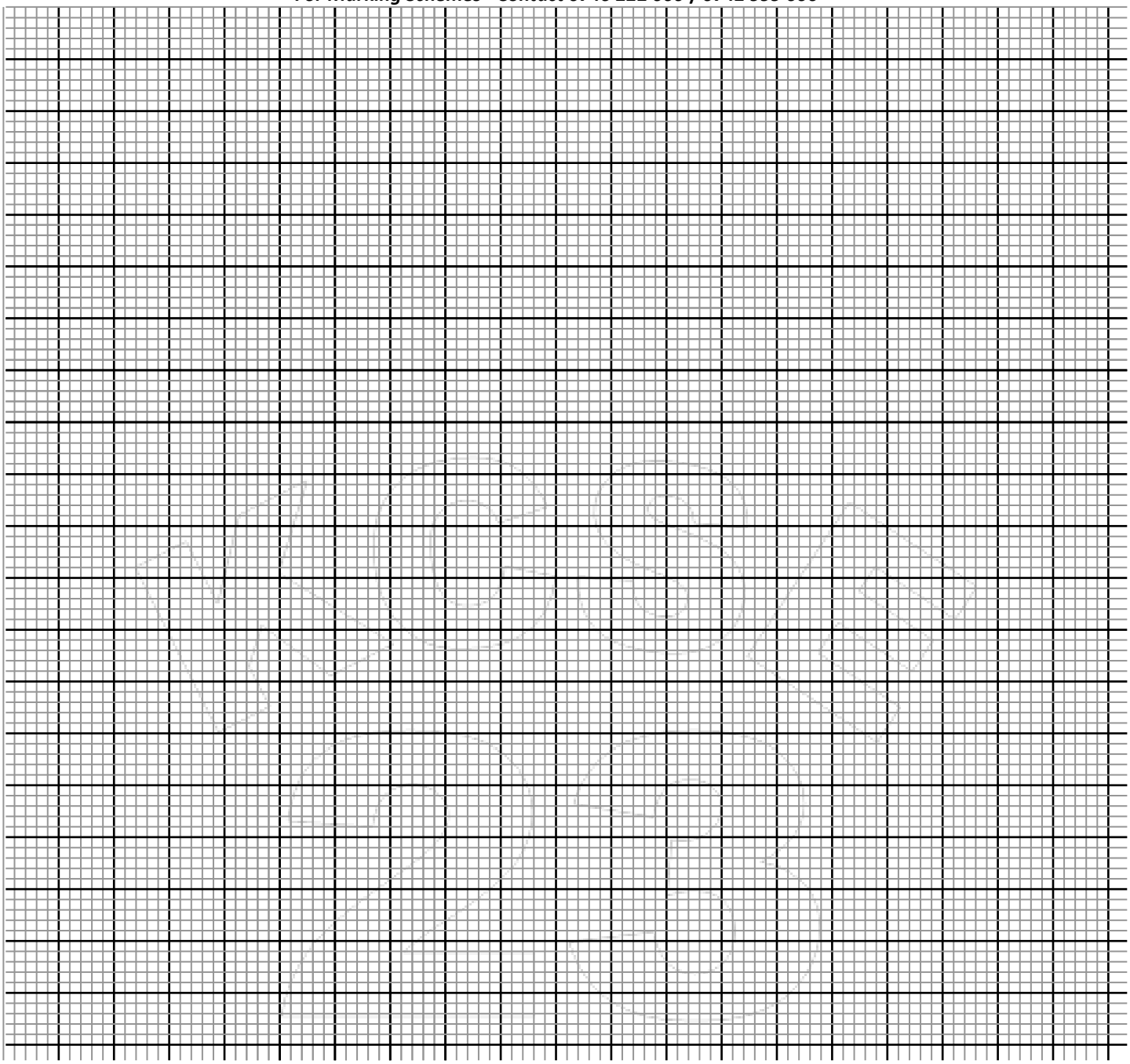
x	0^0	30	60	90	120^0	150	180^0	210^0	240	270	300^0	330	360
$y = \sin(x + 30^0)$	0.50			0.87		0.00		-0.87			-0.50		0.50
$y = 2\cos(x + 30^0)$	1.73		0.00		-1.73		-1.73		0.00			2.00	1.73

(b) On the same set of axes, draw the graphs of $y = \sin(x + 30^0)$ and $y = 2\cos(x + 30^0)$ for $0^0 \leq x \leq 360^0$.

Use the scales *x*-axis; 1 cm to represent 30^0 and *y*-axis; 2 cm to represent 1 unit. **(5 marks)**

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(a) Use you graphs to solve the equation $2\cos(x + 30^0) - \sin(x + 30^0) = 0$ **(2 marks)**

(b) State the amplitude of $y = 2\cos(x + 30^0)$ **(1 mark)**

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23. A triangle OPQ, R and S are points on $\boldsymbol{OP}$ and $\boldsymbol{OQ}$ respectively, such that $\boldsymbol{OR}: \boldsymbol{RP} = 2:3$ and $\boldsymbol{OS}: \boldsymbol{SQ} = 2:1$. $\boldsymbol{PS}$ and $\boldsymbol{QR}$ intersect at T. Given that $\boldsymbol{OP} = \boldsymbol{p}$ and $\boldsymbol{OQ} = \boldsymbol{q}$.

(a) Express in terms $\boldsymbol{p}$ and $\boldsymbol{q}$

(i) $\boldsymbol{QR}$ **(1 mark)**

(ii) $\boldsymbol{PS}$ **(1 mark)**

(b) Given that $\boldsymbol{QT} = h\boldsymbol{QR}$ and $\boldsymbol{PT} = k\boldsymbol{PS}$, express $\boldsymbol{OT}$ in terms of

(i) $h, \boldsymbol{p}$ and $\boldsymbol{q}$ **(2 marks)**

(ii) $k, \boldsymbol{p}$ and $\boldsymbol{q}$ **(2 marks)**

(c) Find the values of h and k **(4 marks)**

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24. The test scores obtained by 40 students were recorded as shown in the table below

Marks	No. of Students
61 – 65	4
66 – 70	5
71 – 75	9
76 – 80	8
81 – 85	8
86 – 90	6

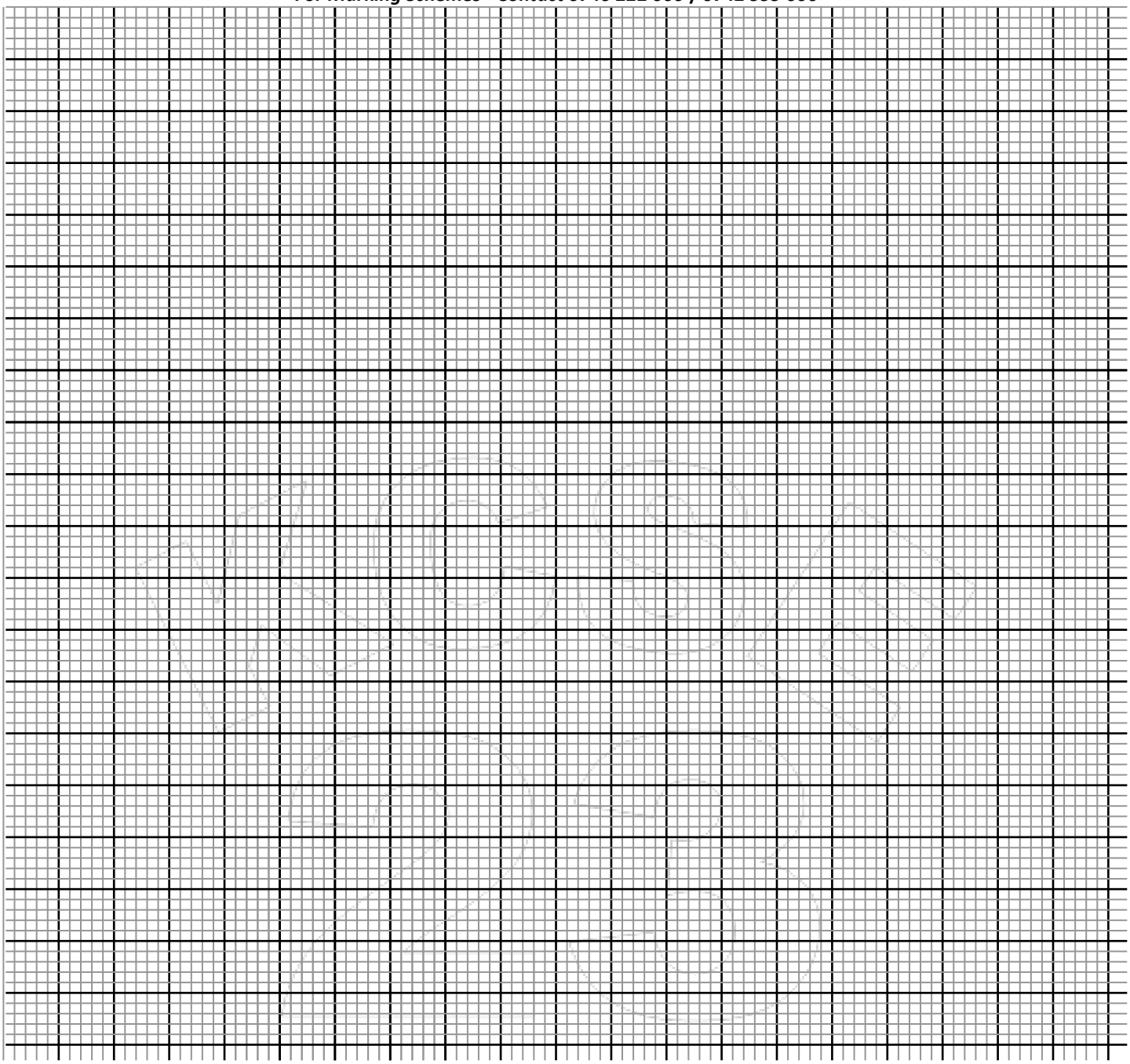
(a) Using a working mean of 73, calculate

(i) the mean mark **(4 marks)**

KCSE 23

(ii) the standard deviation **(3 marks)**

(b) (i) On the grid provided, draw an ogive to represent the information in the table **(3 marks)**



(ii) Us the ogive to estimate the marks scored by the 25^{th} student. **(1 mark)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

COMPUTER STUDIES

451/1

PAPER 1 (THEORY)

TIME: 2½ HRS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTION TO CANDIDATES

- *Write your name and index number in the spaces provided above*
- *This paper consists of **Two** sections **A** and **B***
- *Answer **ALL** questions in section **A***
- *Answer question16 and any other **THREE** questions from section **B***
- *All answers should be written in the spaces provided on the question paper*

FOR EXAMINER'S USE ONLY

SECTION	QUSTIONS	CANDIDATE'S SCORE
A	1 -15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

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SECTION A (40 MARKS)

Answer ALL the questions in SECTION

1. State three functions of the control panel **(3marks)**

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……

……

2. Use the passage below to answer the questions that follows

❩ **ral literature** is a broad term that includes: epics, folklore, proverbs, folksongs, oral poetry, jokes, myths, ritual chants, spells, legends, riddles, tongue-twisters, word games, recitations and word games. *Broadly it refers to any form of verbal art that is transmitted through word of* mouth.

Jane Nandwa and Austin Bukenya (1993) describe oral literature as:

"Those utterances whether spoken, recited or sung whose composition and ~~performance exhibit to an appreciable~~ degree the artistic character of accurate observation, vivid imagination and ingenious expression."

When used in a piece of writing, oral literature in its various genres creates the effect of livening up the story and giving it an identity besides other functions such as capturing the audience's attention and stressing important points. These effects of orature are portrayed vividly in Okot P' Bitek's novel "**White Teeth**."

(a) Mention three paragraph formatting features used in the passage above **(3marks)**

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(b) With an aid of examples describe three text formatting features applied in the above passage **(3marks)**

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3. As regards to communication within computer network, what do you understand by the following terms **(2marks)**

(i) Point –to-Point

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(ii) Broadcast

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……

4. Describe three components of video conferencing **(3marks)**

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5. With reference to Desktop publishing describe the following terms **(2marks)**

(i) Gutter

_____

_____

_____

(ii) Stroke

_____

_____

_____

6. Lindah does not understand why computers are said to be **Automatic** at the same time they have No Intelligent Quotient (**IQ**) **(2marks)**

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……

7. State the difference between private university and public university **(2marks)**

……

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8. Ronaldo a student from Lenana School lives in a house with full internet access. She spends most of her time on phone and Desktop computer. State any three social issues associated with doing this **(3mks)**

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9. Mention three factors to consider when choosing a file organization method **(3marks)**

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10. Give two reasons to justify why many computer users today prefer saving their documents in the google drive **(2marks)**

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11. Computerization and automation are the great innovations of the 21st century. Describe how introduction of computers in the work place affected the job market **(3marks)**

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12. Mention three characteristics of human beings that can be used to enable computerized law enforcement systems **(3marks)**

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13. Use illustrations to explain two ways of implementing FOR loop **(2mks)**

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14. Explain the function of the following as used in data security and control **(2marks)**

(i) Patches

……

……

(ii) Firewall

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……

15. The office has a fast internet connection for transferring information. However sometimes the internet run slowly. Give two reasons why this could be the case. **(2mks)**

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……

SECTION B (60 MARKS)

Answer Question 16 (Compulsory) and Any other THREE in this Section

16.

(a) Describe the following qualities of an algorithm **(2marks)**

(i) Definiteness

(ii) Finiteness

(b) State three differences between Assembly language and Machine language **(3mark)**

(c) Study the Pseudo code below and use it to answer the question that follows

```
Start
  Input Initial Deposit
  Input Interest Rate
  Set Deposit to Initial Deposit
  Set Year to Zero
  While Year <=4 Do
  Interest =Deposit * Interest rate
  Total = Deposit +Interest
  Deposit =Total
  Year=Year+1
  Endwhile
        Display Total
 Stop
```

(i) Given that the Initial Deposit is 2000 and the Interest rate is 10% get the final total **(4marks)**

(ii) Draw a flowchart for the above algorithm using a Repeat.... Until **(6marks)**

17.

(a) Study the table below and answer the questions that follow

	A	B	C	D	E	F	G
1	**Student Name**	**Math**	**English**	**Computer**	**Total**	**Average**	**Grade**
2	James Pesa	24	22	52			
3	Maureen Kamau	60	17	71			
4	James Jared	24	41	10			
5	Mary Anna	52	63	81			
6							

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(i) Write down the formula that

(a) Calculate the total marks for Maureen Kamau **(2marks)**

(b) Calculate the total marks for students with more than 50 and above in Maths **(2marks)**

(c) Get the mean score for Computer **(2mark)**

(ii) The grading system is a shown in the table below .Write a function that will assign grades as reflected in the table below **(3marks)**

Average	Grade
80 - 90	A
70 - 80	B
60 -70	C
50 - 60	D
0 - 49	E

(iii) Write a formula using named reference that counts the total number of students who have scored more than 50 in computer **(2marks)**

(b) Describe three features that make spreadsheet application suitable for mathematical applications **(3marks)**

(c) A formula = B$2+$C2 was typed in cell C2 the copied to cell C3 and the finally to D3. State how the formula will appear in D3 **(1mark)**

18.

(a) What is the binary equivalent of $24\frac{12}{32}$ base 10 **(3marks)**

(b) Convert 5BA2H to Binary **(3marks)**

(c) Using 8-bits twos complement subtract 19_{10} from 14_{10} **(3marks)**

(d) Given that the left most digit is a sign bit work out the decimal equivalent of the following binary numbers

(i) 00111010110_2 **(2marks)**

(ii) 10100111010_2 **(2marks)**

(e) Describe two coding schemes used by computers to represent data in a computer **(2marks)**

19.

(i) Study the tables shown below and use them to answer the questions that follow

Table 1

Admission No	Name	Guardian ID	Date of Birth	Class	Hall	County
0978	Peter Kilulu	P0023	12-12-1999	Form Three	Moi	Kiambu
4678	John James	P0045	07-08-1999	Form Two	Kenyatta	Muranga
6754	Luke Kenya	P0023	06-01-2000	Form One	Uhuru	Migori

Table 2

Guardian ID	Name	Address	Telephone	County
P0023	John Mayi	P.O Box 123 Kisumu	0723567453	Kisumu
P0045	Jerry Watu	P.O. Box 2341 Nairobi	0745897654	Nairobi

(a) Choose the most appropriate key field for Table 1 and 2 **(2marks)**

(b) Identify the most suitable data types Admission No and Date of Birth **(2marks)**

(c) Describe how a relationship can established between Table 1 and 2 **(3marks)**

(d) Write an expression to validate Date of Birth to allow dates that following in the year 1999 only **(2marks)**

(ii) Peter Kipasi is the system analyst for Finaly group of companies. The Company Management automated their operations to have a competitive advantage over other companied in the same field. Peter received a memo from the CEO requesting him to consider changing the current information system. State what might have necessitated this **(3mark)**

(iii) State three qualities of a good system analyst **(3marks)**

20.

(i) Mention four limitations of computer networking **(4marks)**

(ii) Explain how fibre optic transmit data signal and yet the core can only allow light signals to pass through **(3marks)**

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(iii) State the function of the following Communication devices

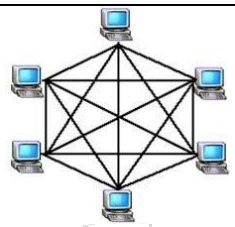
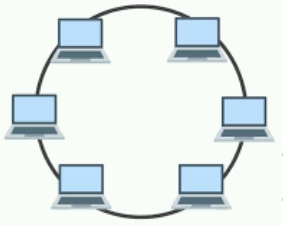
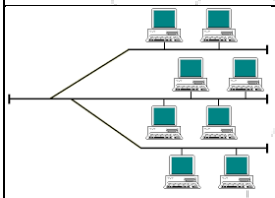
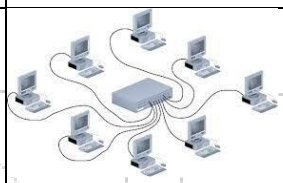
(a) Router **(1mark)**

(b) Switch **(1mark)**

(c) Bridge **(1mark)**

(d) NIC **(1mark)**

(iv) Identity the Network topologies represented in the table **(4marks)**

Name:	**Name:**
	
Name:	**Name:**
	

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

COMPUTER STUDIES

451/2

PAPER 2 (PRACTICAL)

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

a) *Indicate your **name** and **Index number** at the top right hand corner of each print out*

b) *Write your **Name**, and **Index Number** on the CD / Removable storage medium provided*

c) *Write the **name** and the **version** of each S/W used for each question attempted in the answer sheet provided.*

d) *Answer **all** the questions*

e) *All questions carry equal marks*

f) *Passwords **should not be used** while saving in the CD/Removable storage medium*

g) *All answers **must** be saved in the CD / Removable storage medium*

h) *Make a printout of answers on the answer sheet provided.*

i) *Arrange your printouts and tie/staple them together.*

j) *hand in all the **printout** and the CD/removable storage medium used*

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1. Jumia sales and marketing company sells products J, K, L. The table below shows an extract of a spreadsheet for the company`s salespersons and their respective sales in shillings for each product.

	A	B	C	D	E	F	G	H
1	**SALES PERSON**	**PRODUCT J**	**PRODUCT K**	**PRODUCT L**	**TOTAL SALES**	**POINTS**	**CATEGORY**	**TOTAL PAY**
2	Thomas	4,000.00	6,230.00	7,500.00				
3	Mary	4,500.00	6700.00	8,000.00				
4	Cantona	5,678.00	10,000.00	7,800.00				
5	Janeth	3,200.00	4,000.00	9,600.00				
6	Maxwell	8,000.00	7,005.00	8,900.00				
7	Nambwa	9,800.00	9,670.00	10,000.00				
8	Kedeki	2,700.00	3,400.00	2,300.00				
9	**TOTAL**							

(a) i) Using a spreadsheet package enter the above information and save it as **SALES_TABLE.** **(13 marks)**

(b) (i) Type a formula:

I at cell B9 to compute the total sales for product J; **(1 mark)**

II at cell E2 to compute the total sales for Thomas . **(1 mark)**

(ii) Apply the formulae to the appropriate cells. **(2 mark)**

(c) A Salesperson earns points for the sales of each product based on the following criteria;

- 1 point for every shs. 50 for product J,
- 2 points for every shs.65 for product K
- 3 points for every shs.40 for product L

(i) Type a formula in cell F2 to compute the total points earned by Thomas; **(3marks)**

(ii) Apply the formula in (c) (i) to the rest of the salespersons. **(1 mark)**

(d) A salesperson is categorized based on points earned as follows.

POINTS RANGE	**CATEGORY**
Over 1300	Gold
1101-1300	Silver
Up to 1100	Bronze

Those salespersons attaining a Gold category earn a promotion.

(i) Type a formula in G4 to determine Cantona's category. **(4 marks)**

(ii) Apply the formula in (d) (i) to other appropriate cells. **(2 marks)**

(iii) Type a formula at G10 to determine the number of Sales who will earn a promotion **(4 marks)**

(e) Each salesperson earns a total pay of Shs 20,000 plus 2% commission of their total sales. Using absolute referencing, determine the total pay for each salesperson if the value 2 is entered in cell B12. **(5 marks)**

(f) Create a bar chart showing product J and L sales person. Insert appropriate labels on the chart. **(9 marks)**

(g) Rename the worksheet containing the data as **SalesData** and the chart sheet as **SalesChart**. **(2 marks)**

(h) Print the following: **(3 marks)**

(i) **SalesData**;

(ii) **SalesData** showing the formulae;

(iii) **SalesChart**.

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Question 2

Witu Company is an organization that has employed several workers .In order for it to monitor the performance of its workers and the different duties assigned to its workers, the company needs a database to organize the information required.

(a) Create a database file and name it records 2016 **(2mks)**

(b) (i)Using the table below create the appropriate fields and split the data into two tables ,one for storing employees records and the other for storing employment records and give them appropriate names **(8mks)**

EMPLOYEE NO.	NAME	DEPARTMENT	MARITAL STATUS	SALARY	AGE	DEP CODE
2213	JOHN CLAY	TRANSPORT	MARRIED	8,000.00	35	D001
2214	ROSE JOHNS	CUSTOMER CARE	MARRIED	10,000.00	40	D002
2215	PETER ROGERS	HEALTH	MARRIED	50,000.00	45	D003
2216	JED OTIENO	FINANCE	SINGLE	20,000.00	25	D004
2217	VINCENT JED	TRANSPORT	SINGLE	8,000.00	20	D001
2218	ALLAN LIMO	HEALTH	SINGLE	4,000.00	22	D003
2219	PETER OLOO	HEALTH	MARRIED	80,000.00	35	D003
2220	HUSSEIN KIMAN	FINANCE	SINGLE	15,000.00	26	D004
2221	ROBERT KIBANI	FINANCE	SINGLE	5,000.00	28	D004
2222	JANE LESSOS	TRANSPORT	MARRIED	6,000.00	31	D001
2223	LUCY OJWANG	CUSTOMER CARE	MARRIED	8,000.00	30	D002

(ii) Create screens for each table for inputting the data in the table above **(12mk)**

(iii) For each of the tables, choose the most appropriate primary key **(2mks)**

(iv) Create a relationship between the two tables **(2mks)**

(c.) Create a query to display the files Name, Department and Salary for those employees who earn more than 10,000.00.Save as experts **(5mks)**

(d)

(i) Generate a tabular report with landscape orientation from the table to display the fields in the following order **(5mks)**

EMPLOYEE NO., NAME, SALARY, DEPARTMENT, AGE

(ii) Sort records in the report in alphabetical of the name field **(2mks)**

(ii) Compute the total of salary for all the employees and place it below the salary column. Save as **Expenses** **(5mks)**

(iv) Create a query to display Name, Marital Status, Age and the workers years of birth and save it as YOB **(5mks)**

(e)Print the two **tables, experts, expenses** and **YOB** **(2mks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

HOME SCIENCE

441/1

PAPER 1 (THEORY)

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO STUDENTS

a) *Write your name, admission number and class in the spaces provided*
b) *Sign and write the date of the examination in the spaces provided*
c) *This paper consists of* ***three*** *sections:* ***A****,* ***B*** *and* ***C***
d) *Answer* ***all*** *the questions in sections* ***A*** *and* ***B*** *and any* ***two*** *questions from section* ***C***
e) *Answers to all the questions must be written in the spaces provided in the paper*

For examiner's use only

Section	Question	Maximum Score	Student's Score
A	1- 20	40	
B	21	20	
C		20	
		20	
TOTAL SCORE		100	

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SECTION A: (40 marks)

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

1. Name **two** examples of absorbers used in stain removal. **(1 mk)**

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……

2. List down **two** stains that are removed by sunlight. **(1 mk)**

……

……

3. Give another name for the following nutrients. **(2 mks)**

a. Vitamin A _____

b. Tocopherol _____

c. Vitamin C _____

d. Phylloquinone_____

4. State **two** qualities to look for when buying a kitchen knife. **(2 mks)**

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5. Give **four** disadvantages of decayed teeth. **(2 mks)**

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6. Mention **four** uses of milk in food preparation. **(2 mks)**

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7. Give **two** signs and symptoms a person suffering from goitre would exhibit. **(2 mks)**

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8. Dried fruits are used to in cake making. Give **two** reasons for this. **(2 mks)**

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9. Give **two** advantages of using an ironing board instead of a table when ironing clothes**.(2 mks)**

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10. Mention **four** reasons why excessive gain during pregnancy is dangerous. **(2 mks)**

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11. State **two** precautions taken when laundering viscose rayon. **(2 mks)**

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12. State **three** benefits of breast-feeding to a mother. **(3 mks)**

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13. Give **two** uses of facings in clothing construction. **(2 mks)**

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14. What is the difference between decorating and garnishing food. **(2 mks)**

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15. List down **four** faults that may occur in cooking of mandazi. **(2 mks)**

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16. Outline **two** reasons for blending fibres. **(2 mks)**

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17. State **two** advantages of electricity as a form of lighting. **(2 mks)**

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18. Highlight **two** disadvantages of réchauffé dishes. **(2 mks)**

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19. Give **three** considerations to make when choosing cleaning agents. **(3 mks)**

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20. State **four** uses of trimmings in garment construction. **(2 mks)**

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SECTION B (20 marks)

COMPULSORY

Answer question 21 in the spaces provided.

21. You have been requested to assist with some chores in the home.

a. Outline **six** rules to observe when removing stains from clothes and household articles before doing the family wash. **(6 mks)**

b. Outline the procedure you would follow when laundering a woolen blanket for a baby cot. **(14 mks)**

SECTION C (40 MARKS)

*Answer any **TWO** questions from this section in the spaces provided at the end of this section.*

22. (a) Outline **four** practices undertaken to prevent loss of colour when laundering clothes.**(4 mks)**

(b) Explain **four** factors to consider when buying green leafy vegetables. **(8 mks)**

(c) Mention **four** points to consider when taking body measurements. **(4 mks)**

(d) Suggest **four** factors that can cause food prices to rise. **(4 mks)**

.

23. (a) State **four** ways of minimizing fatigue while working in the kitchen. **(4 mks)**

(b) Give **four** qualities of a well-made patch on a bed sheet. **(4 mks)**

(c) Identify and explain **three** activities carried out in preparation for a family wash. **(6 mks)**

(d) Give two reasons for using each of the following ingredients in flour mixtures. **(6 mks)**

i) Eggs

ii) Sugar

iii) Salt

24. (a) Outline **two** remedies for each of the following sewing machine faults. **(4 mks)**

i. Needle breaking

ii. Missing stitches

(b) Describe **three** principles of food preservation. **(6 mks)**

(c) Explain **four** benefits of living in a well-ventilated house. **(4 mks)**

(d) Explain **three** factors to consider when selecting a baby's clothes. **(6 mks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

HOME SCIENCE

441/2

PAPER 2 (PRACTICAL)

CLOTHING CONSTRUCTION

SCHOOL…… SIGN……

Kenya Certificate of Secondary Education.

CONFIDENTIAL

1. *Plain light weight cotton fabric 70 by 90cm..*

2. *Sewing thread to match the fabric.*

3. *Elastic 18cm long by ½ cm wide*

4. *Bodkin/ safety pin*

5. *1 large envelope.*

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

HOME SCIENCE

441/2

PAPER 2 (PRACTICAL)

TIME: 2½ HRS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

441/2

HOME SCIENCE

CLOTHING CONSTRUCTION

Paper 2

Time: 2 ½ hours

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A pattern of a blouse is provided. You are advised to study the sketches, instructions and the layout carefully before you begin the test.

MATERIALS PROVIDED

1. Pattern pieces
   - A - FRONT BODICE
   - B- BACK BODICE
   - C- SLEEVE
   - D - FRONT YOKE
   - E- COLLAR
   - F- FRONT FACING
   - G - BACK NECK FACING
2. Plain light weight cotton fabric 70 by 90 cm.
3. Sewing thread to match the fabric.
4. Elastic cord 18 cm long by $^1/_2$cm wide
5. Safety pin/bodkin
6. 1 large envelope.

THE TEST

Using the materials provided, cut out and make up the **LEFT HALF** of the blouse to show the following.

1. Cutting out. **(18mks)**
2. Working a double pointed dart at the back bodice **(7mks)**
3. Working of the inverted pleat on the front yoke **(3mks)**
4. Joining the front bodice to the front yoke using an overlaid seam **($8^1/_2$mks)**
5. Joining the joint front bodice to back bodice at the shoulder using double stitched seam. (**6mks)**
6. Joining the joint front bodice to back bodice at the side using an open seam**. (4mks)**
7. Joiningthe front facing to the back neck facing and neatening the free edge of the joined facing **($6^1/_2$mks)**

8. Preparation of the interfaced collar **(3½mks)**

9. Usethe joined facing to neaten the front opening and attach the collar by sandwiching method. **(7½mks)**

10. Working of the sleeve to include.

a) Management of fullness at the crown. **(2½mks)**

b) Making of the underarm seam using French seam. **(7½m**

c) Joining of the sleeve to the garment at the armhole**.** ***(Do not trim, do not neaten)*** **(6mks)**

d) Working of the elastic casing at the lower edge of the sleeveand insertingthe elastic cord. **Do not seal the opening used to insert the cord** **(4½mks)**

11. Presentation. **(5½mks)**

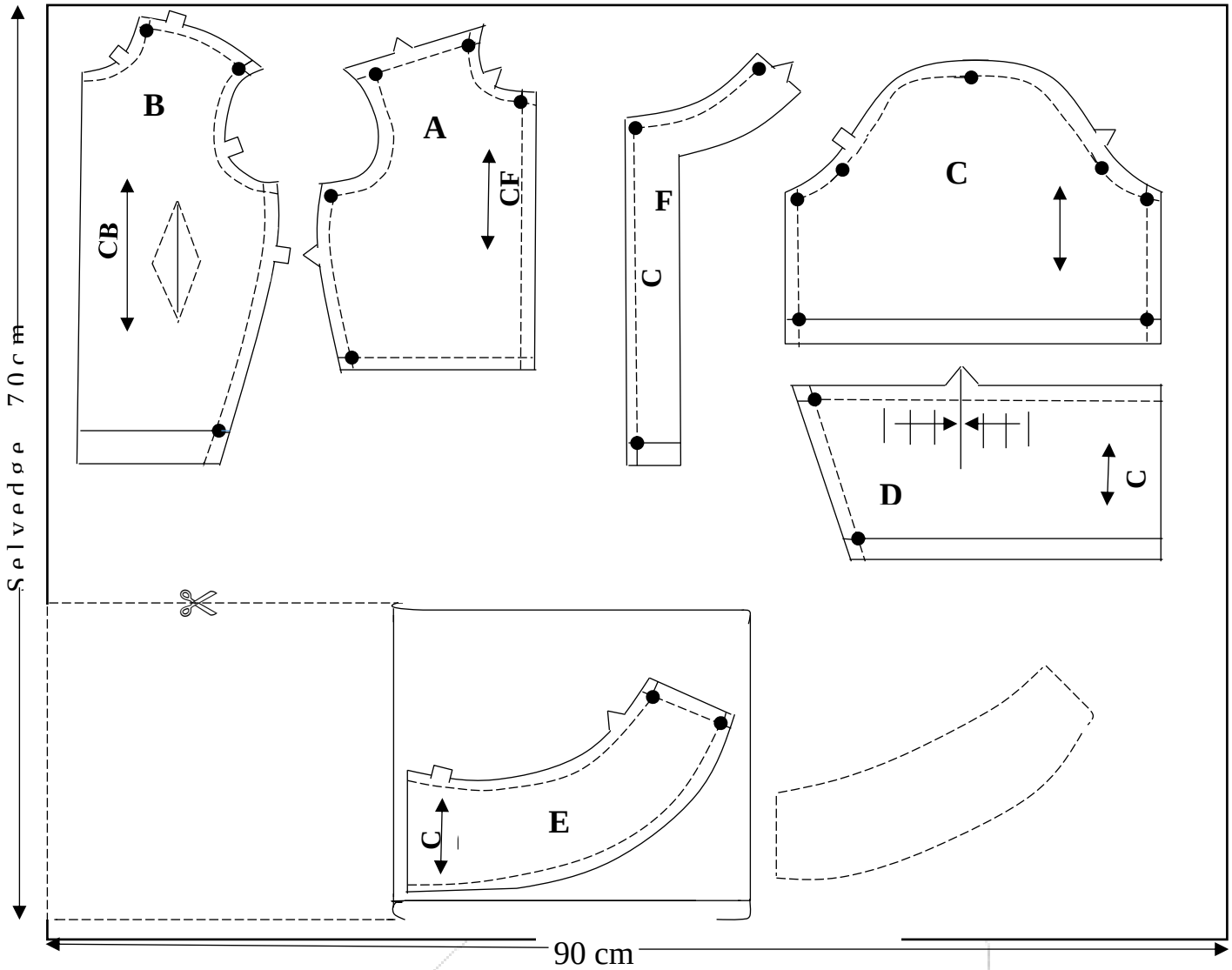
NOTE:

At the end of the test, firmly sew on to your work on a single fabric a label bearing your name and admission number. Remove needles and pins from work. Then fold your work carefully and place it in the envelope. **DO NOT PUT SCRAPS OF MATERIALS IN THE ENVELOPE AND DO NOT SEAL THE ENVELOPE.**

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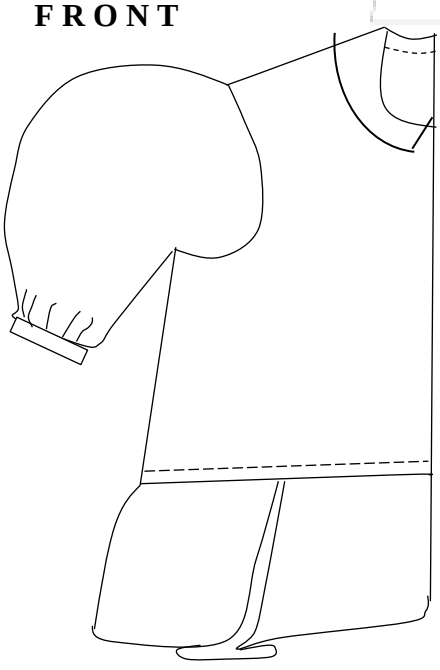
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LAYOUT – NOT DRAWN TO SCALE

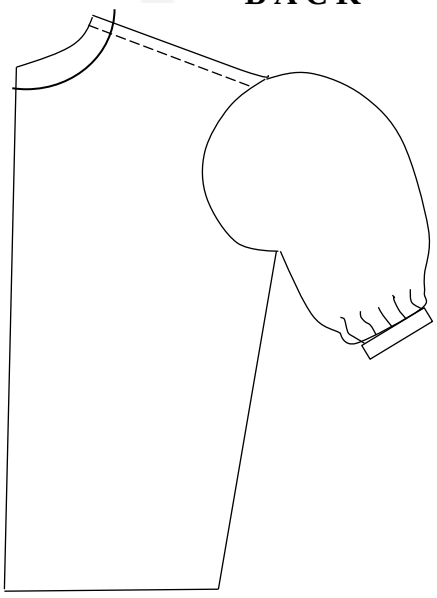


VIEWS

FRONT



BACK



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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

HOME SCIENCE

441/3

PAPER 3 (PRACTICAL)

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

HOME SCIENCE (FOODS AND NUTRITION)

Instructions to candidates

PLANNING SESSION 30 minutes

PRACTICAL SESSION 1 hour

Read the test carefully.

Text books and recipes may be used during the planning session as reference materials.

You will be expected to keep to your order of work during the practical session.

At the end of planning session you will only carry out your reference materials.

You are not allowed to bring additional notes to the practical session

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THE TEST

You are making a quick lunch for yourself and your aunt. Using **all** the ingredients listed below, prepare, cook and present a one dish meal and a refreshing drink for the two of you.

Ingredients

- ***a)*** *Fruit in season*
- ***b)*** *Beef/Beans*
- ***c)*** *Salt*
- ***d)*** *Tomatoes*
- ***e)*** *Rice/Green bananas/Potatoes*
- ***f)*** *Fat/Oil*
- ***g)*** *Carrots*
- ***h)*** *Sugar*
- ***i)*** *Onions*

PLANNING SESSION- 30 minutes

Use separate sheets of paper for each task listed below and a carbon paper to make duplicate copies. Then proceed as follows:

1. Identify the dishes and write down the recipes;

2. Write down your order of work;

3. Make a list of foodstuff, materials and equipment you will require.

THIS IS THE LAST PRINTED PAGE

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

ISLAMIC RELIGIOUS EDUCATION

314/1

PAPER 1

TIME: 2½ HRS

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 on the foolscaps provided.*
- ***d)*** *Each question carries 20 marks.*

FOR EXAMINER'S USE ONLY

Questions	1	2	3	4	5	6	TOTAL
Score							

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Answer any five questions

1. a) State etiquettes to be observed during Qur'an recitation. **(7mks)**

b) State six characteristics of the language of the Qur'an. **(5mks)**

c) Discuss the reasons why mankind needed revelation of the Qur'an. **(8mks)**

2. a) Give factors that facilitated the compilation of the Qur'an. **(5mks)**

b) Why is the Qur'an considered as a miracle by Muslim? **(7mks)**

c) Explain five benefits of translating the Qur'an into other languages. **(8mks)**

3. a) Discuss the importance of Hadith. **(8mks)**

b) Explain the five themes of the forty Hadith of Iman Nawawi. **(5mks)**

c) "One who takes care of an orphan and I will be in paradise" he raise his force figure and middle figure by way of illustration in relation to this hadith. Identify five Islamic teachings in treatment of orphans. **(7mks)**

4. a) Discuss briefly the ulul Azm prophets and their trials. **(10mks)**

b) Explain the significance of the belief in Qadar to a Muslim. **(10mks)**

5. a) State the significances of shahadah. **(10mks)**

b) What are the functions of a Kadhi in Kenya. **(10mks)**

6. a) Explain the reasons why it becomes compulsory for a pilgrim to slaughter animals. **(7mks)**

b) What are the contribution of Imam Abu Hanifah to development of Figh. **(5mks)**

c) What are the major offenses of Hudud and punishment of each. **(8mks)**

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

ISLAMIC RELIGIOUS EDUCATION

314/2

PAPER 2

TIME: 2½ HRS

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 on the foolscaps provided.*
- ***d)*** *Each question carries 20 marks.*

FOR EXAMINER'S USE ONLY

Questions	1	2	3	4	5	6	TOTAL
Score							

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Answer any five questions

1. (a). State the benefits of having the virtue of *Sidq (*Truthfulness*)* **(5marks)**

(b) Identify five importance of preserving the physical environment. **(5marks)**

(c) Discuss five ways Muslims can help in the fight against drug and substance abuse.

(10marks)

2. (a) State five significance of marriage in Islam. **(5 marks)**

(b) What are the rights that a Muslim husband is entitled to **(7 marks)**

(c) Explain four Islamic teachings on how eddat should be observed **(8 marks)**

3. (a) Under what circumstances can a business agreement be considered null and void in Islam

(8marks)

(b) Identify seven forms of child abuse which are common in the society. **(7marks)**

(c) Mention five reasons that can lead to revocation of a Wasiya. **(5 marks)**

4. (a) Name six wives of the prophet (p.b.u.h). **(6 marks)**

(b) Identify the contributions of Abubakar (R.A) to the prophet's (p.b.u.h) mission**. (7marks)**

(c) Explain the factors that led to the decline of the Fatimid dynasty. **(7marks)**

5. (a) Explain the roles that city states played in the spread of Islam along the coast of East Africa

(10 marks)

(b) Identify the social contributions of Muslims in Kenya **(5marks)**

(c) Outline **five** achievements of *Harun Ar-Rashid* of the *Abbasids* **(5 marks)**

6. (a) State six contributions of *SeyyidQutb* in Islam **(6 marks)**

(b) Explain seven of the ten rules of conduct formulated by *Imam Al Ghazali.* **(14marks)**

KCSE 23

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

FRENCH

501/1

PAPER 1

TIME: 2 HRS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

INSTRUCTIONS:

- *This paper consists of **three** sections*
- *Section **I** is listening comprehension*
- *Section **II** Dictation*
- *Section **III** is creative a composition: Choose one composition from Question 1.*
- *Answer **all** questions in the spaces provided.*

FOR EXAMINER'S USE ONLY

Section	Maximum	Candidate's score
I	15	
II	05	
III	15	
Total score	35	

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Listening Comprehension.

Write answers to Questions 1 – 7 in the spaces provided.

Passage 1

1. a) D'après l'annonce, quelle est la première émission du soir que vous pouvez voir?…….(½ pt)

b) On parle de le France à cause du …… (½ pt)

c) La dernière transmission sera (1pt)

i) Un …….

ii) à……

Passage II

2 a) De quoi est-ce qu'on parle dans l'annonce? (½pt)

……

b) On ne peut pas rouler sur la Route National 10 parce que (1pt)

…….

……

Passage III

3. a) Quand arrive-t-on? ……. (½ pt)

b) Qu'est-ce qu'on demande aux voyageurs de faire? (1pt)

…….

Annonce B

c) Donnez deux détails sur le petit garçon (1pt)

i) ……..

ii) ……..

d) Qui doit se présenter et où?

i) ……. (½ pt)

ii) ……. (½ pt)

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Annonce C

e) D'après l'annonce, il y aura un concours le _____(i) au _____ (ii) municipal. Seulement les _____(iii) peuvent participer. Un prix sera offert au _____ (iv) (2pts)

Passage IV

4 a) D'après la conversation, qu'est-ce qu'on peut chercher au Magasin Jourdin?

…… (½pt)

b) A quelle heure ouvre le magasin, l'après-midi?

…… (½pt)

c) Combien est-ce qu'il faut payer?..... (½pt)

Passage V

5. a) Quel est le sport préféré de l'auditeur?

…… (½pt)

b) Quel est son problème de santé? …… (½ pt)

c) Selon le docteur, quelle sera le meilleur sport pour lui?

…… (½pt)

Passage VI

6. a) Selon le texte, où est-ce qu'on peut passer l'hiver?

…… (½pt)

b) Donnez deux activités qu'on peut y faire?

i) …… (½pt)

ii) …… (½pt)

Passage VII

7 a) Dans quelles parties du pays pleuvra-t-il

i) ……

ii) …… (1pt)

b) Quand est-ce-qu'il fera chaud?..... (½ pt)

SECTION II: Dictation

Write the passage in the spaces provided. **(5pts)**

……

……

……

……

……

……

……

……

……

……

……

SECTION III: Composition

Write your composition in the spaces provided **(15pts)**

In about **150-180** words write in French a composition on:

Either

a) Vous avez été témoin d'un accident routier. Racontez I 'histoire.

Or

b) Ecrivez une petite histoire en commençant par;

"Ce jour-là, j'étais très fatigué (e)…….

……

……

……

……

……

……

……

……

……

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KCSE 2023

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

FRENCH

501/2

PAPER 2

(Reading Comprehension, Grammar and Functional Writing)

TIME: 2½ HRS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

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

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

FOR EXAMINER USE ONLY

Section	Total marks	Candidate's score
Comprehension	**15**	
Grammar	**15**	
Writing	**10**	
Total	**40**	

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SECTION I:15 MARKS

READING COMPREHENSION

Passage 1

Questions

Un événement extraordinaire s'est passé hier soir dans la ville de Sakima. Un pêcheur a eu un choc et maintenant hospitalisé après avoir trouvé un grand serpent et ses petits dans un sac. Monsieur Oumar , pécheur et père de trois enfants était allé au Lac Victoria où il avait rempli son sac de poissons .Puis il avait pris un matatu pour rentrer à Kondole, son village natal . Il est arrivé à la maison et devant sa femme, il a ouvert le sac. Mais hélas ! Au lieu des poissons ,il a trouvé le reptile et sa famille encore vivants. Il est immédiatement tombé par terre et sa femme a dû appeler l'ambulance pour le transporter à l' hôpital. La police a finalement établi que Monsieur Oumar avait pris le sac d' une sorcière sans le savoir.

Questions

1.Oumar a été choqué parce qu'il…….(1pt)

2.Remplissez le tableau comme dans l 'exemple (2 pts)

Verbe	infinitif
Exemple :avait	avoir
pris	…….
dû	…….
rempli	……
ouvert	……

3.M. Oumar est célibataire.(1/2 pt)

☐ Vrai ☐ faux. Cochez la bonne réponse.

-Justifiez votre réponse.(1/2 pt)

Passage II

J'avais déjà ma clientèle à la plage de Carnac ; les gens guettaient mon passage, ils m'avaient un peu adopté. De mon côté, j'avais noté les villas ou j'étais bien accueilli, celles dont les habitants m'achetaient mon poisson sans marchander. J'avais acquis une certaine expérience en vendant des palourdes avant d'embarquer.

D'ailleurs, je ne manquais jamais de passer tous les jours à la villa « Les Goélands », car on m'offrait un bol de chocolat chaud. Ses propriétaires devaient avoir pitié de moi, en me voyant si petit, chargé d'un panier et souvent mouillé après une nuit humide. En tout cas, j'appréciais beaucoup leur geste.

1. Qui est le narrateur ? (1 point)

2. Qu'est-ce qu'il fait comme travail ? (1 point)

3. Pourquoi est-ce que les propriétaires avaient pitié du narrateur ? (1 point)

4. Le narrateur est travailleur. Vrai ou faux ? (1 point)

Passage III

Lorsqu'il y avait des betteraves rouges en entrée, Pascal faisait la grimace, mais il en acceptait une cuillerée sans grogner. Il les mangeait en fermant les yeux, imaginant que c'était du nougat ou de la crème glacée au cassis. Et généralement, les betteraves rouges passaient bien.

Mais pour les poireaux, il avait tout essayé ! Il faut manger des poireaux pour grandir, disait maman.

Pascal ne comprenait pas pourquoi il ne se grandissait pas plus vite. Et comme il n'avait que neuf ans, il se doutait qu'il faudrait encore manger beaucoup de poireaux avant d'atteindre la taille de son père.

1. Pascal aimait les betteraves rouges. Vrai ou faux ? (1/2 point)

2. Pourquoi mange-t-on les poireaux ? (1 point)

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3. Quel âge a-t-il Pascal ? (I /2 point)

4. Décrivez le caractère de Pascal. (2 points)

Passage 1V

« Nous sommes trois amies de Bretagne, nous nous révoltons contre les bateaux pétroliers et chimiques qui déversent des saloperies dans la mer. Y' en a ras-le-bol ! D'abord du pétrole, ensuite des produits toxiques… et après ce sera quoi ? Y'en a marre de nettoyer la merde des autres ! C'est honteux de voir que le gouvernement prend si peu de moyens afin d'empêcher ces catastrophes car ce ne sont pas les responsables qui vont aller sur les plages tout nettoyer, c'est nous ! En espérant qu'une nouvelle loi soit instaurée, interdisant les bateaux susceptibles de produire un danger, lors des tempêtes. Ce n'est pas dur de regarder la météo ! »

Questions

1. Les filles luttent contre les bateaux _____ et _____ (1 point)

2. « Y'en a marre ! » Cherchez une autre expression de même sens dans le texte. (1 point)

3. La narratrice et ses amies sont contentes. Vrai ou faux ? (½ point)

-Justifiez votre réponse. (1/2 point)

SECTION II

Grammar (15 points)

5. Beginning as indicated ,complete the following sentences making all appropriate changes.

a)Les étudiants finiront leurs examens puis ils iront en vacances.

-

Avant……
……

b)Tu as vendu ta maison la semaine dernière?

Oui,……

……

c)Dites-moi, est-ce que vous pouvez acheter un journal ce soir?

-Non,

je……

……

d) Quand les étudiants voient le professeur, ils s'échappent.

-C' est vrai ?

-

Oui,en……

……

e)Tous les élèves étudient l'anglais.

L'anglais……

……

f)J' ai besoin d' un stylo pour écrire une rédaction.

-

Demain……

……

g)<<Ne dormez pas tard ! >> dit la maman aux enfants.

-Comment ? Qu'est –ce qu'elle leur a dit ?

-Elle leur a dit

……

……

h)Le bébé a le sommeil lourd, mais il a entendu le bruit.

Malgré……

……

i)Y a-t-il quel qu'un au bureau?

Non,……

……

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j.)Tu ne vas pas t'amuser au parc?

-

Si,……

……

k)Votre père vous a rendu votre voiture?

-Bien sûr, il

……

……

Match the questions in column A with the answers in column B (3pts)

Column A	**Column B**
a)Qu ' est –ce que vous buvez?	i)Il est allemand.
b)Que fêtent – ils ?	ii)Il n'appelle personne.
c)Comment s' appelle votre chef?	iii)Très bien.
d) Quel est le prix de ce livre?	iv)L' anniversaire de Michel
e)Comment va ton cousin ?	v)Oui, c' est Céline.
f)Vous connaissez la fille en rose?	vi)Jean Luc Dubois.
g)C' est quoi sa nationalité?	Vii)Un coca s' il vous plait.
	viii) Ça coute dix euros.

a	b	c	d	e	f	g

SECTION III-FUNCTIONAL WRITING-10 PTS

Write a letter in French of about 120-150 words on :

Either :

i)Imaginez que vous êtes à la gare et vous vous perdez.

Écrivez une lettre au commissaire de police pour l'aide.

OR

ii)Écrivez une lettre à la directrice/ au directeur de votre école exprimant les problèmes communs que vous avez à l' école.

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

FRENCH

501/3

(Oral Examination)

PAPER 3

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Kenya Certificate of Secondary Education.

SECTION I

(Reading Aloud)

15 Minutes

PASSAGE A

Les établissements scolaires sont très importants pour apprendre non seulement les matières mais aussi certains métiers. Les activités que les élèves font quand ils sont libres mènent aux carrières. Il y a ceux qui participent au festival de théâtre et de musique et grâce à leurs compétences, ils deviennent chanteurs et actrices après les études. Ainsi, ils gagnent la vie et parfois cela se passe des qu'ils terminent les examens de K.C.S.E. grâce à leurs intérêts naturels, ils trouvent du boulot sans problème. Parmi eux, il y en a qui découvrent leurs talents et deviennent présentateurs de radio et de télévision. Voilà pourquoi les propriétaires des chaines FM recrutent les présentateurs jeunes.

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PASSAGE B

Les activités de loisirs peuvent aussi devenir les moyens de gagner la vie: le théâtre, les concerts des chansons et la musique, les débats, la poésie... Les sports sont parmi les activités d'où l'on gagne beaucoup d'argent, par exemple le golf, le foot et le basket. Selon K.A.A.A., les sportifs avouent que pour eux, courir c'est leur façon de vivre. Apres être invités aux sports, ceux-ci se développent pour devenir enfin des champions. Récemment, une jeune athlète a gagné la médaille d'or pendant les jeux olympiques. Deux semaines après, elle a été déclarée la championne nationale et on lui a remis un million de dollars.

SECTION II (Exposé)

Instructions to candidates.

a) You will talk on the topic given overleaf.

b) You will have ten minutes to prepare for the task.

c) You will have two minutes to talk about the topic.

d) DO NOT write anything on this card.

CARD A

Les sports sont aussi importants que les autres carrières. Que pensez-vous ?

CARD B

La vie scolaire influence toujours la vie familiale. Discutez.

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CARD C

Comment peut-on lutter le chômage en utilisant la nouvelle technologie?

CARD D

Conserver l'environnement c'est protéger la santé. Qu'en pensez- vous ?

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

DRAWING AND DESIGN

449/1

PAPER 1

TIME: 2½ HRS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

FOR EXAMINERS USE ONLY

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

INSTRUCTIONS TO CANDIDATES.

You should have the following for this examination:

- *Drawing instruments*
- *3 sheet of drawing paper size A3*
- *Scale rule*

This paper consists of THREE sections A, B and C.
Answer ALL the questions in section A and B and any TWO questions from section C.
Questions in section A must be answered on the answer sheets provided.
Questions in section B and C should be answered on the A3 drawing papers provided.
All dimensions are in millimeters unless otherwise stated.
Candidates may be penalized for not following the instructions given in this paper.

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SECTION A (50 marks)

Answer ALL the questions in this section.

1.(a) Distinguish between the roles of an architect and a draughtsman. **(2 marks)**

……

……

……

……

(b) State two precautions to be observed when storing a T-square, **(2 marks)**

……

……

……

2 (a) Give two reasons why e dimensioning symbols used? **(2 mark)**

……

……

……

(b) Define the following as used in engineering

(i) Orthographic projections.

(ii) Detailed drawings

c) Demonstrate using sketches how to dimension blind hole.

3. (a) With reference to engineering design, define the following terms**:** **((2 marks)**

i. restriction**……**

……

ii. prototype.

……

……

(b) Figure 2 shows a longitudinal section of an ISO metric thread. Show the following:

(i) pitch

(ii) crest

(iii) root

(iv) major diameter. **(2 marks)**

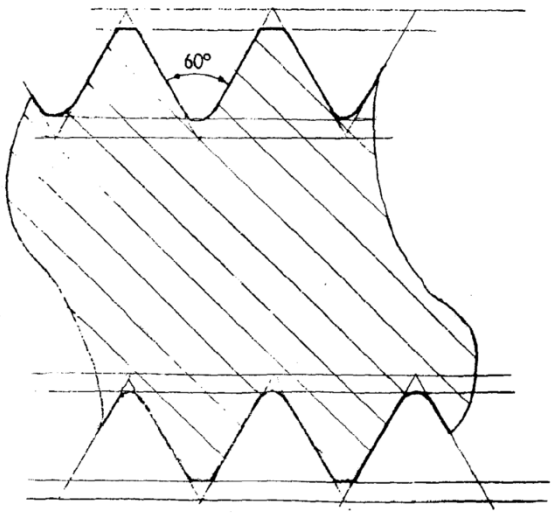


Figure 2

4. Figure 3 shows the elevation of a cam profile

Construct the profile **(3marks)**

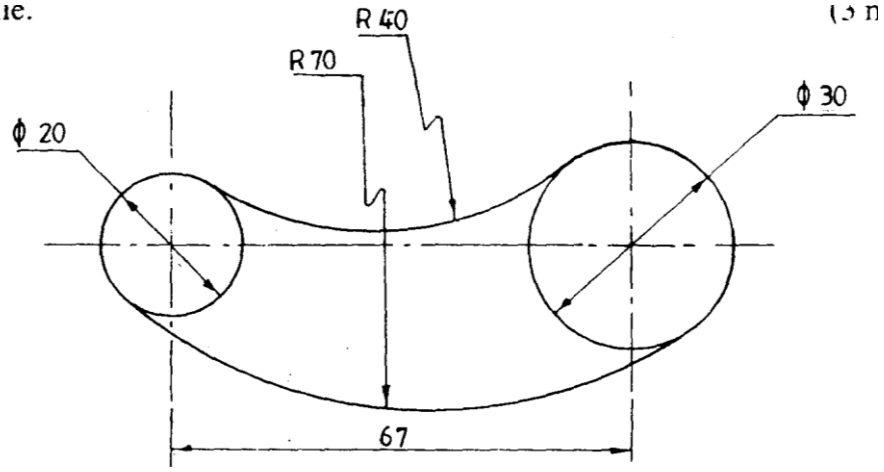


Figure 3

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5 (a) Give two major elements in each of the following materials: (3 marks)

(i) bronze……...

(ii) soft solder…….

(iii) brass……..

(b) Figure 4 shows two views of a block. Sketch the oblique views of the block with A-A being the lowest point. (3 marks)

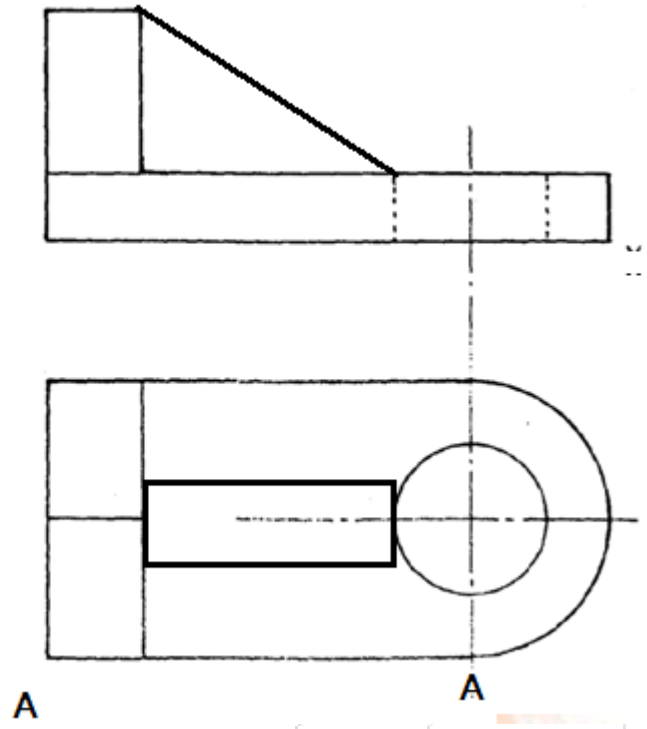


Figure 4

6. Sketch free hand exploded pictorial views for each of the following wood joints (4 marks)

a) double mortise and tenon joint

b) stopped housing joint.

7. Construct a plain scale of 1:5 to measure to an accuracy of 10mm and to a maximum length of 600mm. Show a reading oi'380rnm. **(3 marks)**

8 (a) Figure 5 shows a plan of a machine part drawn to a scale twice full size. Measure and dimension correctly the arc, tapped hole and bevel. **(3 marks)**

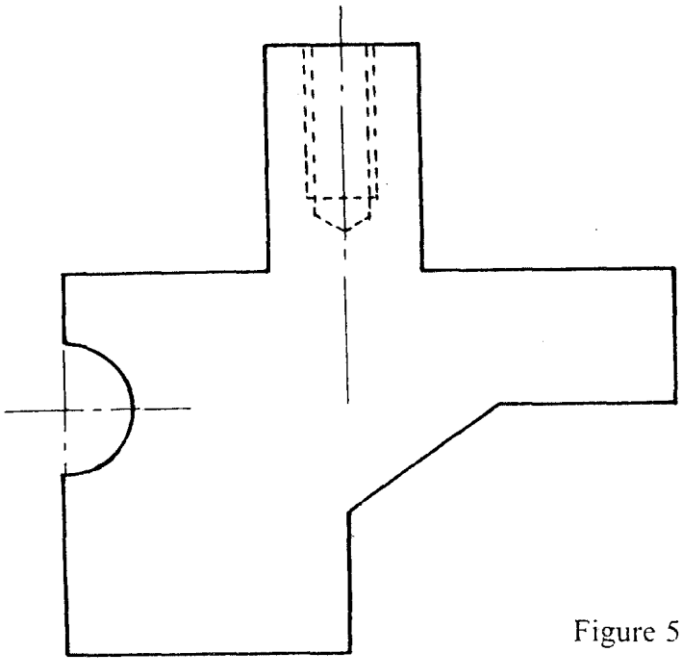


Figure 5

(b) Draw an oblique square based pyramid whose vertical height is equal to the base Length 40mm . Retain the construction lines. **(2 marks)**

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9. Figure 6 shows a cube drawn in perspective. Name the labelled areas A, B, C and D. **(2 marks)**

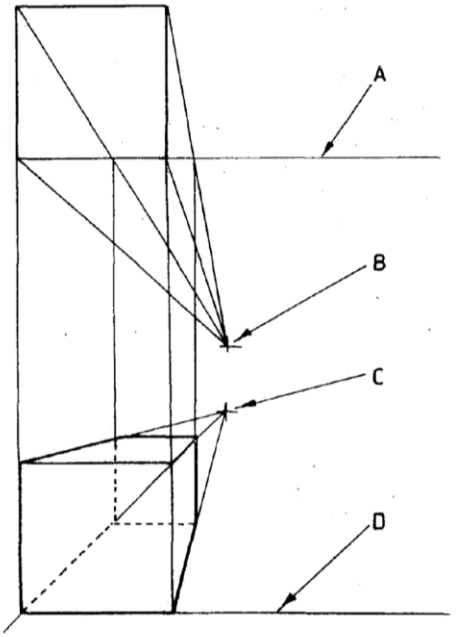


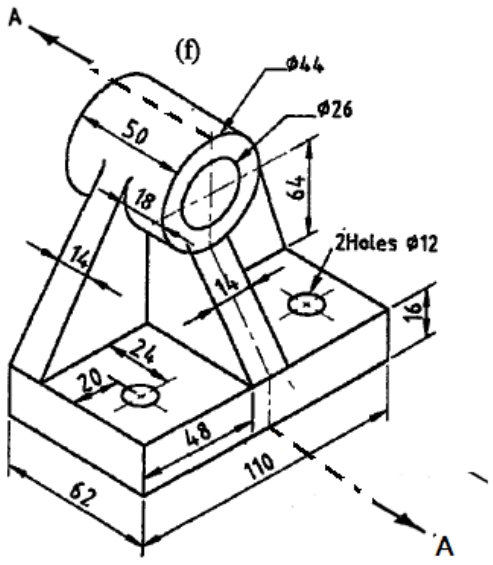
Figure 6

10. Figure 7 shows an isometric drawing of a block. Draw:

(a) Sectional front elevation along plane A — A.

b) End elevation.

c) Plan. **(6marks)**



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SECTION B (20 marks)

*This question is **compulsory**. Candidates are advised to spend not more than one hour on this question.*

11 Figure 7 shows parts of a retort stand clamp drawn in first angle projection. Assemble the parts and draw FULL SIZE, the following views of the vice in third angle projection:

(a) A sectional front elevation along the cutting plane P–P

(b) End elevation in the direction of arrow X

(c) Plan.

Insert **three** leading dimensions and do not show hidden details.

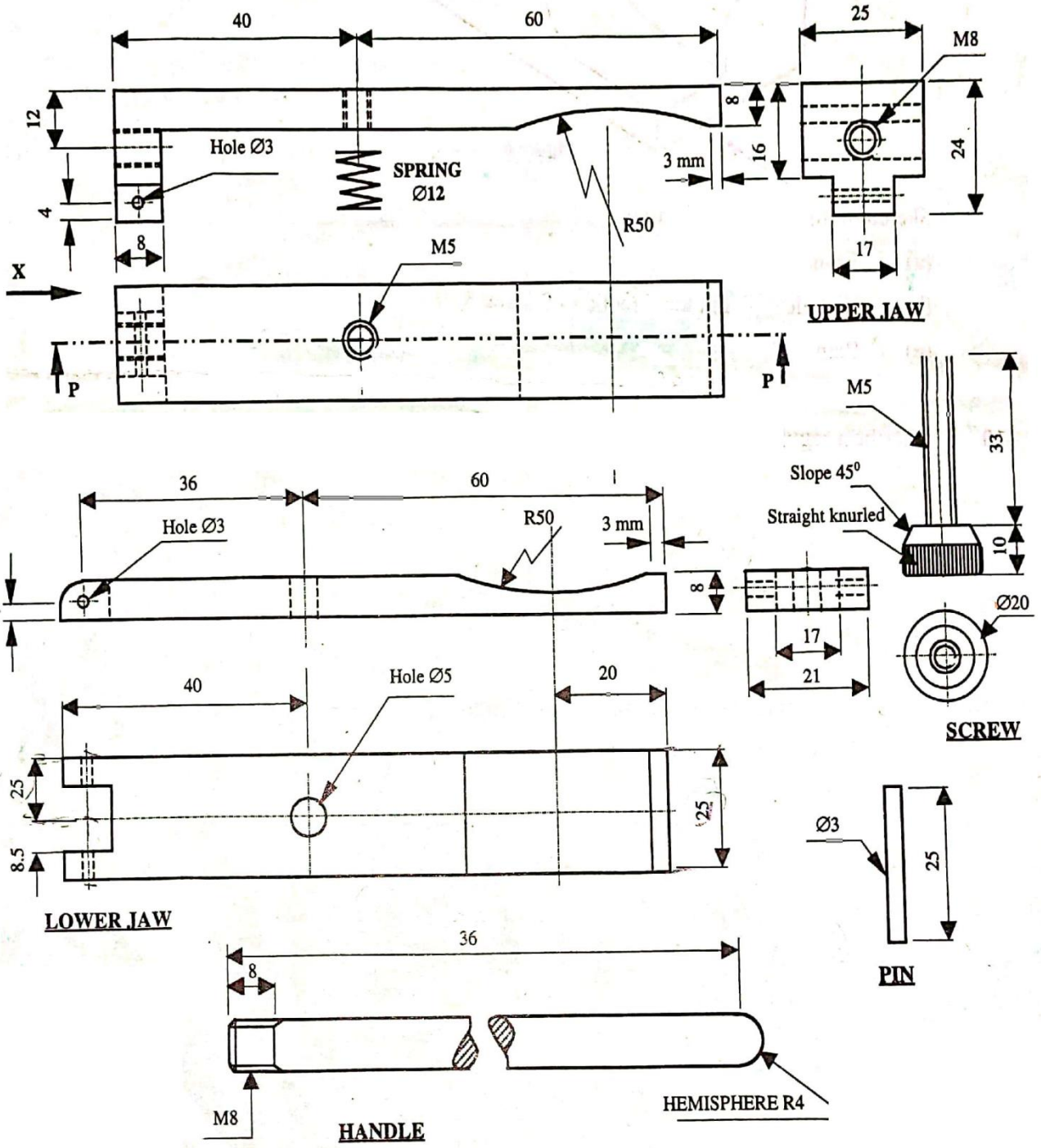


Figure 7

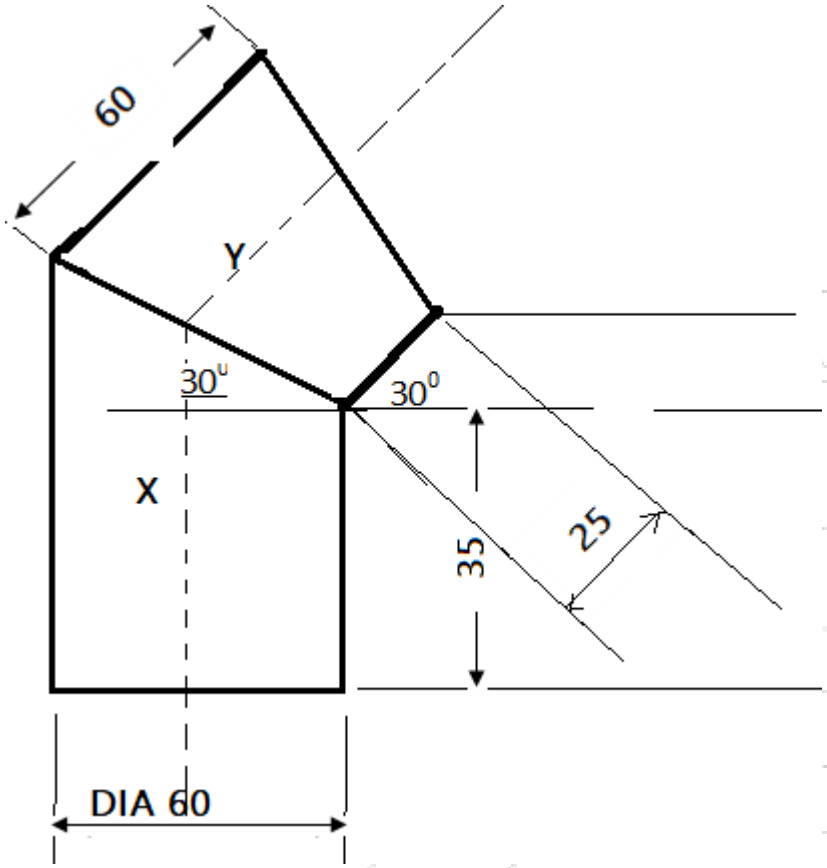
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SECTION C (30 MARKS)

Answer any two questions in this section.

12. The figure below shows two-piece elbow pipes intersecting.

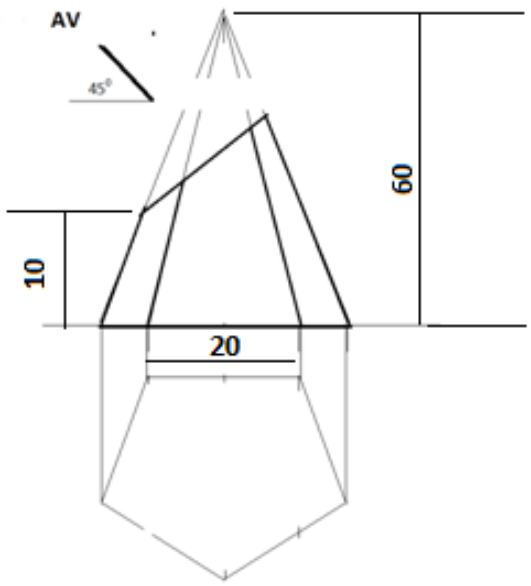
Draw the surface developments of pipes X and Y. (15 marks)



13. Figure below shows a pentagonal pyramid truncated by a cutting plane tilted at 30^0 copy the view and draw the following:

a) Complete plan

b) True shape and auxiliary view at 45^0



14 A cylinder, whose internal diameter is 50mm, has a 5mm thick wall and 130mm length. Two points, one outside and the other inside the cylinder, start moving along and round the cylinder at a constant velocity.

Draw the loci of the two points as they move from the base to the top of the cylinder by completing two revolutions. Name the curve traced by one of the points.

(15 MARKS)

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KCSE 2023 REFLECTOR EXAMS

(PREDICTION SERIES 1)

DRAWING AND DESIGN

449/2

PAPER 2

TIME: 2½ HRS

NAME……

SCHOOL…… **SIGN**……

INDEX NO…… **ADM NO**……

Kenya Certificate of Secondary Education.

FOR EXAMINERS USE ONLY

A	b	C	d	E	TOTAL

Instructions to Candidates

You should have the following materials for this examination:

4 sheets of drawing paper size A3
Drawing instruments.

*This paper has **ONE COMPULSORY** question.*
*This paper is to be issued to the candidates **30 minutes** before the examination starts.*
*The candidates are advised to spend this time **understanding the design problem** and **planing the work** on one of the drawing papers provided.*

Due to increased enrolment in schools and colleges, use of desks and lockers has created congestions in classroom. Therefore there is need to use dining halls and lecture halls.

Design a portable lecture chair for students considering that;

1. It should have a comfortable seat with backrest.
2. It should have a suitable flap for taking notes when seated.
3. It should have a shelve for placing books and other items.
4. It should have means of adjusting the height to suit student with different heights
5. It should be moved around with ease without making noise.

Requirements

a) Make two rough sketches for the design. (4 marks)

b) Produce a refined well-labelled sketch of the chair. **(14 marks)**

c) Make exploded sketches of mechanisms to allow for considerations 2, 3, 4, and 5 above. **(16 marks)**

d) List two materials used in the design and each case state the reason for the material choice. **(4 marks)**

e) List two methods of joining used in your design. **(2 marks)**

KCSE 23

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KCSE 2023

THE END

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