KCSE JOINT MOCK

ALL SUBJECTS

SUBJECTS COMPILED;

Mathematics, English, Kiswahili, Biology, Chemistry, Physics, CRE, History, Geography, Business Studies, Agriculture, French, Homescience &Computer Studies.

Qualitative Joint KCSE Evaluation Mock Trial Examinations among Selected National Schools in Preparation for the Forthcoming Final Examinations.

SERIES 1

For Marking Schemes/Answers

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KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

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

231/1

BIOLOGY

PAPER 1

THEORY

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

- ***a)*** *Write your* ***name, Admission number and name of your school*** *in the spaces provided above*
- ***b)*** ***Sign*** *and write the* ***date*** *of examination in the spaces provided.*
- ***c)*** *Answer* ***all*** *the questions in the spaces provided.*
- ***d) Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing***

FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-29	80	

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

1. How does growth as a characteristic of living organisms differ in plants and animals ?

(2marks)

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2. a)State the role of active transport in animal nutrition **(1mark)**

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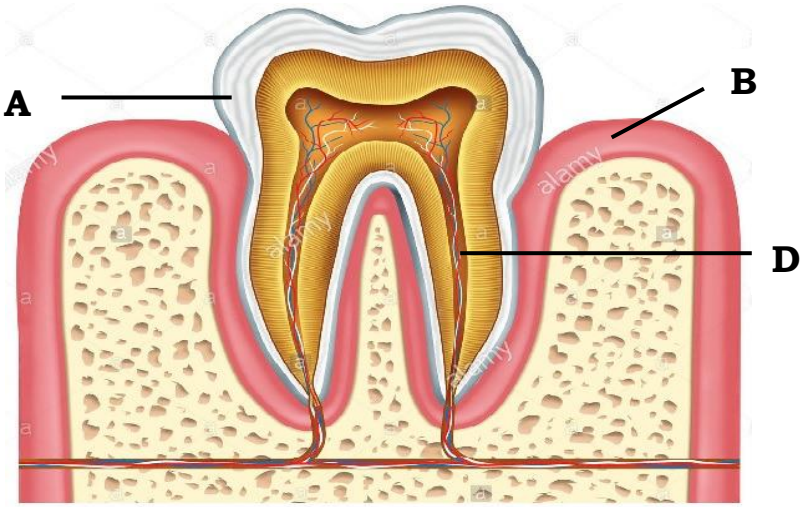
b) Cyanide lowers the rate of active transport. Explain? **(2marks)**

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3. The figure below is a diagram of a vertical section of a mammalian tooth.



(i) Name the part labelled **A** and **B**. **(2 marks)**

A

……

C

……

(ii) State ***two*** ways in which structure **D** is adapted to its functions. **(2 marks)**

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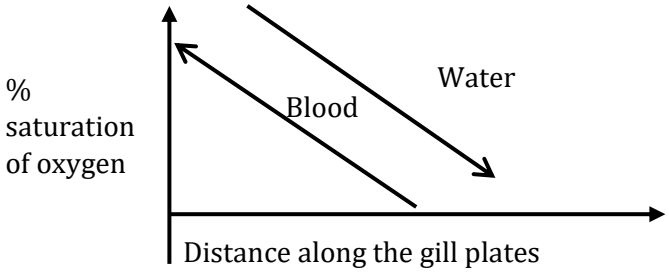
(iii) List ***two*** ways of preventing gingivitis. **(2 marks)**

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4. The figure below shows % saturation of oxygen in blood in fish as water passes along the gill plate.



(a) (i) Name the type of blood flow shown in the gill plate. **(1mark)**

……

(**ii)** Explain the advantage of the type of flow named in a (i) above **(2marks)**

……

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(b) State **<u>two</u>** organs in humans which display the type of flow named in a (i) above **(2marks)**

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(c) State **two** ways in which floating leaves of aquatic plants are adapted to gaseous exchange

(2marks)

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……

5. The equation below shows an oxidation reaction of food substances.

$C_{51}H_{98}O_6 + 145O2$ ------- X CO2 + 98 H2O + energy

a) What do you understand by the term respiratory quotient? **(1mark)**

……

……

b) Determine respiratory quotient of the oxidation of food substance. **(2marks)**

……

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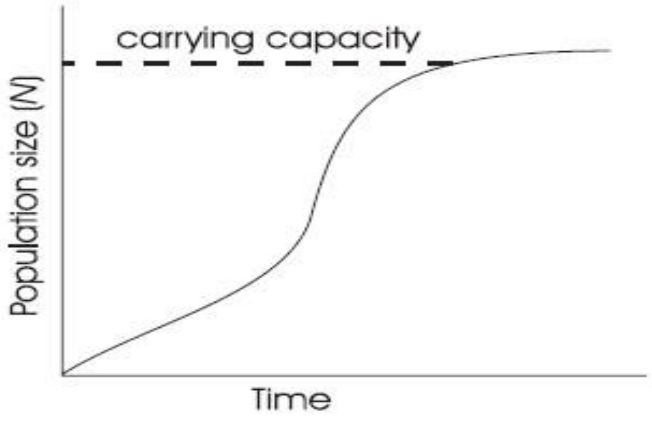
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c) Identify the food substances. **(1mark)**

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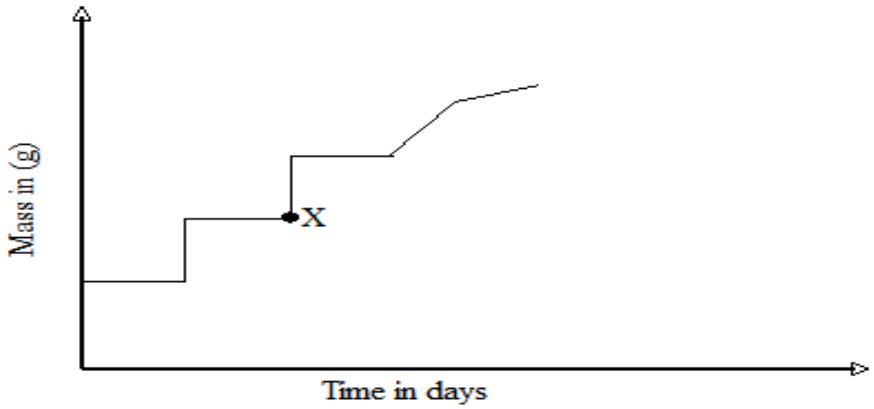
……

6. When any one of the growth parameters such as growth in size or weight, increase in number of cells are plotted in a graph against time like below, a clear curve is obtained



State its name……..... **(1mark)**

7. The graph below represents the growth in a certain phylum.



How does this differ from growth in humans? **(1mark)**

……

……

8. The embryo of a dry, fully developed seed usually passes through a period of rest after ripening period and it cannot germinate even when provided with all favorable conditions. State the significance of this. **(2marks)**

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9. a) Cowpeas seeds were place in a vacuum flask and left for five days. What is the expected change in composition of gases in the flask on the sixth day? **(1mark)**

……

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

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10. Biotechnologist works day a night to curb food insecurity using the knowledge of polyploidy in genetics. Explain the economic importance of such practice? **(2marks)**

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……

b) Define a backcross? **(1 mark)**

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……

11. The structure below was obtained from an animal cell



a) What is the name of the hair like processes and state its function? **(2marks)**

Name

……..

Function

……..

b) From which parts of the mammalian body are these structures found? **(1mark)**

……..

c) State the effect of cigarette smoking to the structure? **(1mark)**

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……

12. A student was found to have blood group B+

a) What type of antibody is present in his plasma? **(1mark)**

……

b) Which antigens are present in this blood group? **(1mark)**

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13. Plants relatively have less waste to excrete than animals. Give two reasons to explain this observation **(2marks)**

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14. State **two** methods by which plants get rid of their waste products **(2marks)**

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15. To estimate the population size of mosquitoes in Banji village that covers an area of $25km^2$, visiting researchers caught 400 mosquitoes which they marked and released. After 24 hours, 200 mosquitoes were caught out of which 120 had not been marked.

(a) Suggest the sampling method described above. **(1 mark)**

……

(b) What are the disadvantages of this method? **(2 marks)**

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16. The table below shows stomatal distribution on leaves A and B and their surface area.

Use the information to answer the questions.

	Leaf surface	A	B
Number of stomata	Upper leaf surface	20	5
	Lower leaf surface	0	15
Surface area		$25\ cm^2$	$18cm^2$

Identify with reasons the habitats of the plant from which the leaves were obtained.

Leaf A: **(2 marks)**

Habitat ……..……..……..……..

Reason ……..……..……..……..……

……..……

Leaf B: **(2 marks)**

Habitat ……

Reason ……

……

17. Name the causative agent of the following diseases **(2 marks)**

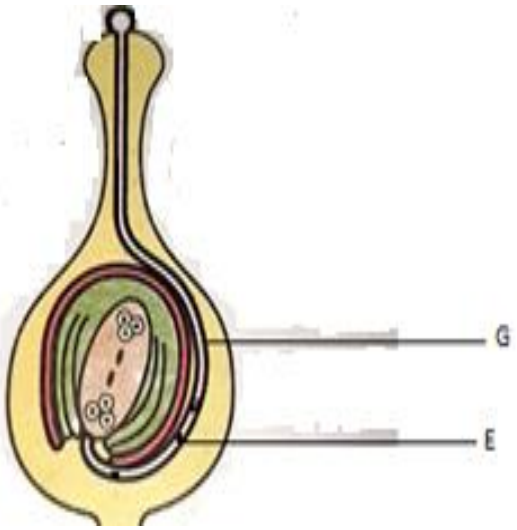
(i) Trichomoniasis.

……

(ii) Gonorrhea

……

18. The diagram below shows a pollen tube as it develops down the style. Use it to answer the questions that follows;



(i) Name the part labelled **G**. **(1 mark)**

……

(ii) State ***two*** functions of structure labelled **E**. **(2 marks)**

……

……

19. (a) Define parthenogenesis? **(1 mark)**

……

……

(b) Name the plant hormone that induces fruit ripening. **(1 mark)**

……

……

20. A group of Form Three students collected a certain specimen for study as shown below. Study it carefully and use it to answer the questions that follow.



(i) Name the type of metamorphosis in the above specimen. **(1 mark)**

……

(ii) Give any ***two*** advantages of the above metamorphosis. **(2 marks)**

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21. (i) Give ***two*** structural features in a leaf that adapts it to absorb Carbon (IV) Oxide. **(2 marks)**

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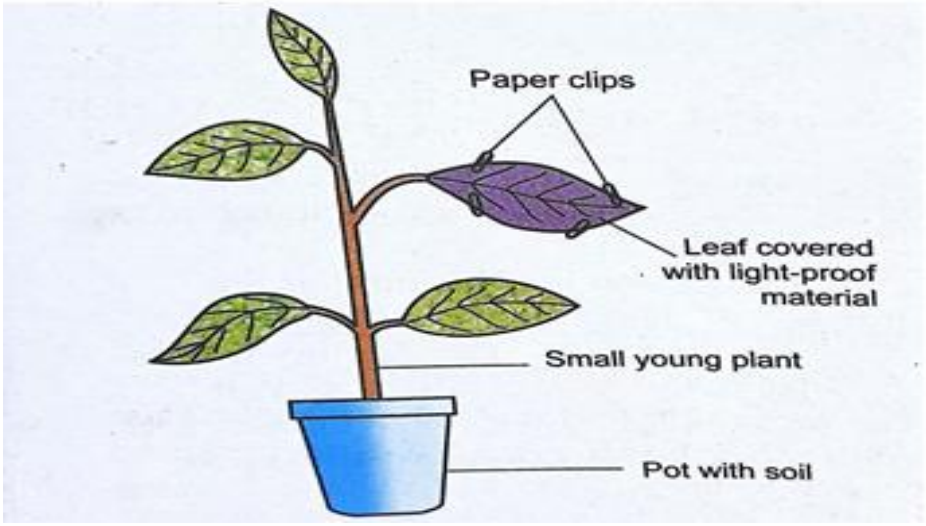
……

(ii) Name the cell organelle in which Carbon (IV) oxide combines with water to form a complex organic compound takes place **(1 mark)**

……

……

22. In an experiment to investigate a factor affecting photosynthesis; leaf of a potted plant, which had been kept in the dark overnight was covered with an aluminum foil as shown in the diagram below. The set up was kept in the sunlight for three hours after which a food test was carried out on the leaf.



(a) Which factor was being investigated in the experiment? **(1 mark)**

……

(b) Which food test was carried out? **(1 mark)**

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(c) State the results of the food test. **(1 mark)**

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23. Explain how the following plant adaptations minimizes rate of transpiration **(2marks)**

a) Sunken stomata

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b) Thick cuticle

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24. Explain how drooping of leaves on a hot sunny day is advantageous to a plant **(2marks)**

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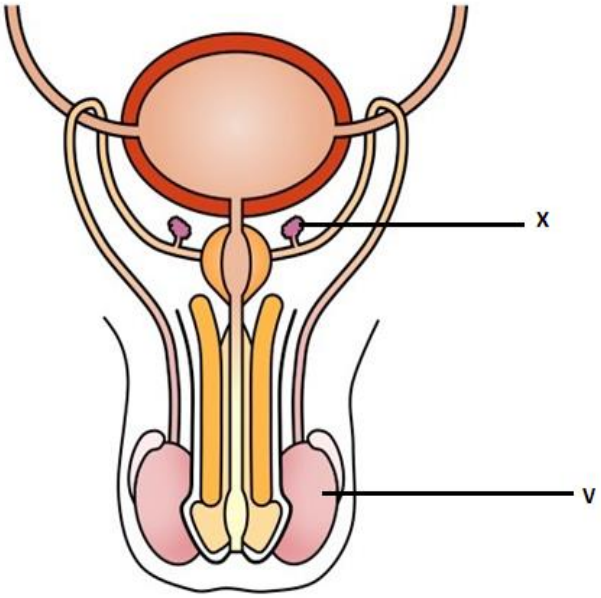
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25. Name **two** tissues in plants which are thickened with lignin **(2marks)**

……

……

26. The diagram below shows the front view of a male reproductive system.



a) Give the functions of the structures labelled **X** and **V** **(2marks)**

X

……

……

V

……

……

b) What is the role of Follicle Stimulating Hormone in male reproduction? **(1mark)**

……

……

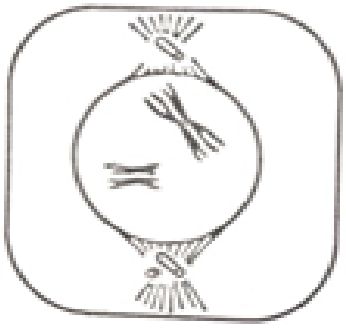
27. Explain why the concentration of insecticides in fish eating birds may be hundreds of times greater than its concentration in the water where the fish live **(3marks)**

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28. The diagram below shows a stage in meiosis



State the biological significance of the stage represented on the diagram above **(1mark)**

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29. How do the following factors hinder self-pollination in flowering plants? **(3marks)**

a) Self-sterility

……

……

b) Heterostyly

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……

c)Protogyny

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SERIES 001

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

231/2

BIOLOGY

PAPER 2

(THEORY)

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

a) *Write your **name, index number** and the **name** of your school in the spaces provided above.*
b) ***Sign** and **write** the **date** of examination in the spaces provided above.*
c) *Answer **all** questions in this question paper.*
d) *Answers to **all** questions **must** be written in the spaces provided in this booklet.*

FOR EXAMINER'S USE ONLY

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

SECTION A (40 MARKS)

Answer all questions in this section in the spaces provided.

1. (a) Name **two** disorders in human caused by gene mutation. **(2 marks)**

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(b) Describe the following chromosomal mutations:

(i) Inversion **(1 marks)**

……

……

(ii) Translocation **(1 marks)**

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(c) In mice the allele for **black fur** is **dominant** to the allele for **brown fur**. What Percentage of offspring would have brown fur from a cross between heterozygous black mice? Show working. Use letter **B** to represent the allele for **black colour**. **(4 marks)**

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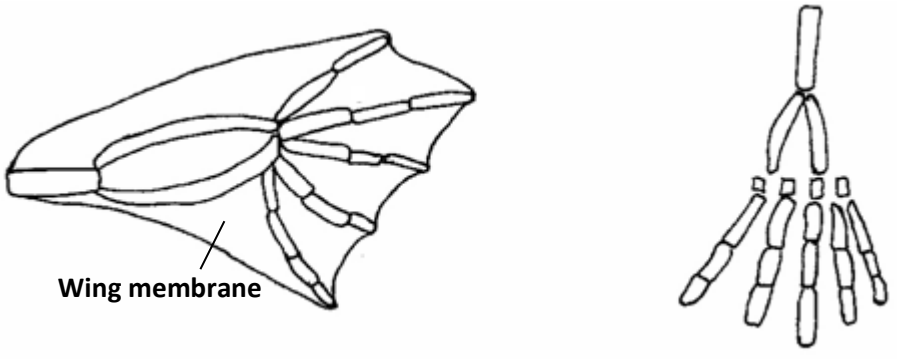
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2. The diagram **below** shows structures of the bat wing and human arm.



(a)These structures are thought to have same ancestral origin. State **one** structural similarity and **one** adaptational difference between the two.

(i) Structural similarity. **(1mk)**

……

……

(ii) Adaptation difference. **(2mks)**

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(b)Give **two** other examples of structures in nature that show the type of evolution as in (a) above. **(2mks)**

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(c)Distinguish between the terms 'chemical evolution' and 'organic evolution'. **(2mks)**

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(d) What is the study of fossils called? **(1mk)**

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3 a) Name the causative agents for the following respiratory diseases.

i) Whooping cough…… **(1 mark)**

ii) Pneumonia……. **(1 mark)**

b) Describe how carbon (IV) oxide in the tissues reaches the lungs **(4 marks)**

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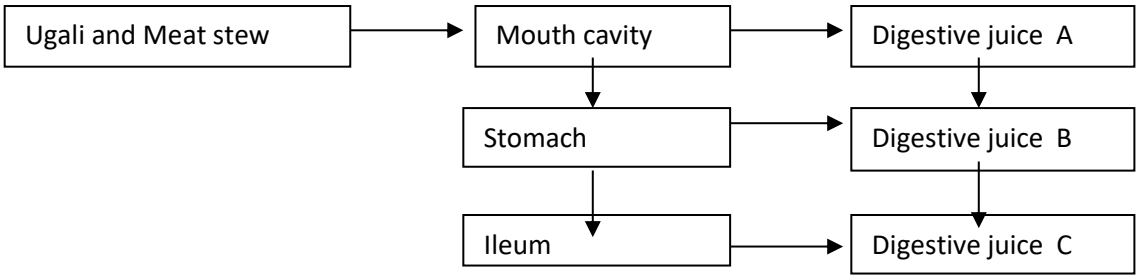
c) How are guard cells adapted to their functions? **2mks**

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4.The flow diagram below represents passage of a meal through the human digestive system. Study the diagram and answer the questions that follow.



(a) Name the physical process that will occur in mouth cavity **(1mark)**

……

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(b) Name the digestive juices **B** and **C** **(2 marks)**

B…….

C…….

(c) Explain **two** ways in which the digestive system is protected from corrosive effects of digestive juices. **(2 marks)**

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(d) Name the hormone that stimulate secretion of juice **B**. **(1mark)**

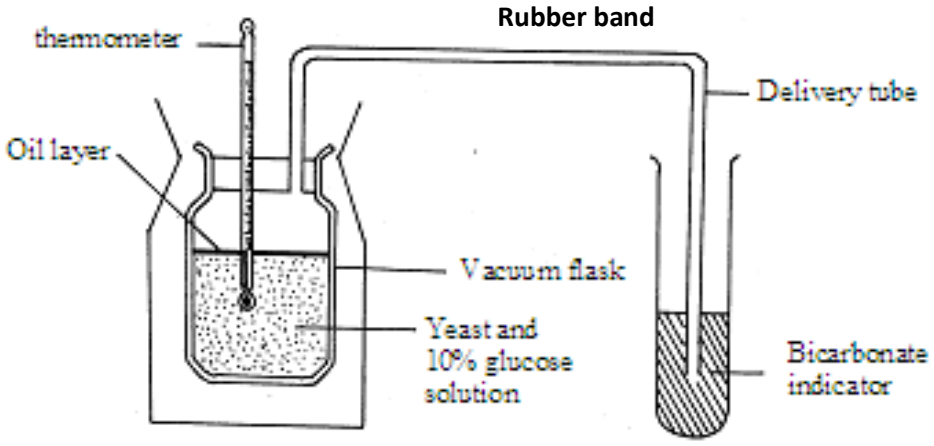
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(e) Identify **two** contents of digestive juice **A** **(2 marks)**

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……

5. The experiment below was set-up to investigate some physiological processes. The glucose solution was first boiled then cooled. The set-up was left for 24hrs.



(a) Suggest two aims of the experiment. **(2mks)**

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(b)(i) State the expected observations after 24 hours. **(2mks)**

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(ii) Explain your observations in a (i) above. **(2mk)**

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(iii) Why was glucose solution boiled then cooled? **(1mk)**

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(iii) Suggest a control for the above experiment **(1mk)**

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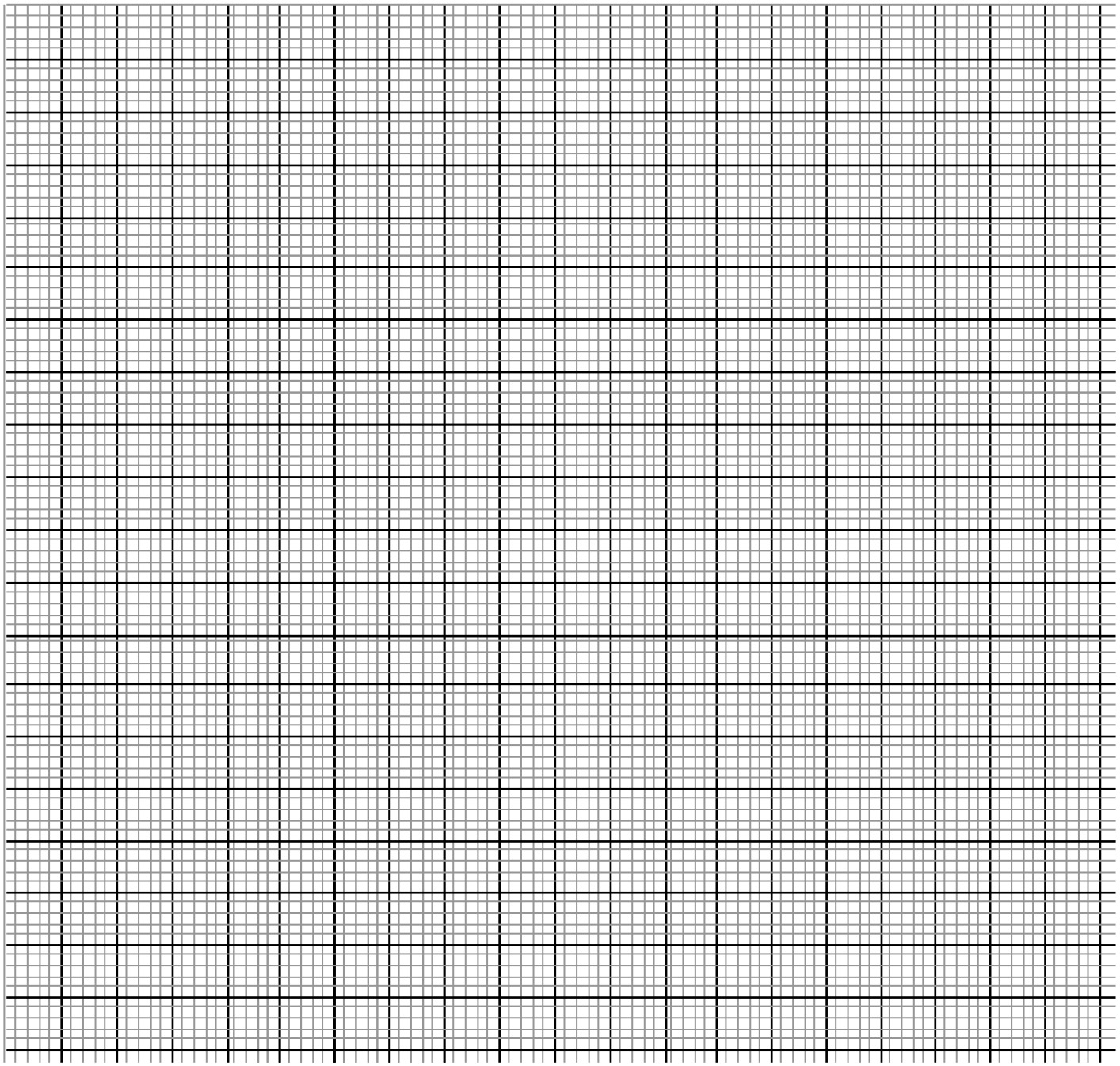
SECTION B (40 MARKS)

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

6. In an experiment, a man drank one litre of water and the volume of urine produced was measured and recorded at an interval of one hour after drinking the water. On the second day, the man repeated the experiment but this time he drank one litre of 1.2% sodium chloride solution. The results are as shown in the table below:

Time (hours)	Volume of urine produced (cm^3) on drinking	
	Water	1.2 % sodium chloride solution
0	80	30
1	50	30
2	350	40
3	540	35
4	30	60
5	100	40
6	50	80
7	70	100

(a) On the same axes, plot graphs of urine produced on drinking water and 1.2%sodium chloride solution against time. **(8 marks)**



(b) From the graph, determine the volume of urine produced by the man two and a half hours after drinking water. **(1 mark)**

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(c) Account for the production of urine produced by the man when he drank the litre of

(i) 1.2% sodium chloride solution. **(3 marks)**

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(ii) Water **(3marks)**

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(d) What is diabetes insipidus? **(2 marks)**

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(e) Explain why treatment of diabetes mellitus is via injection and not through taking insulin tablets orally. **(2 marks)**

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7. Explain how abiotic factors affect plants in their habitat. **(20 marks)**

8.Describe the structure and function of various parts of the heart **(20 marks)**

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KCSE JOINT MOCK

SERIES 001

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

231/3

BIOLOGY

PAPER 3

TIME: 2 HOURS

REQUIREMENTS FOR EACH CANDIDATE

a) *Solution P- starch*

b) *Solution Q- egg white*

c) *Solution Z- water*

d) *Solution R- Diastase*

e) *Benedict's solution*

f) *Iodine solution*

g) *Visking tubing - 8cm*

h) *Thread*

i) *100ml beaker*

j) *5 test tubes*

k) *5 labels*

l) *D1-Blackjack*

m) *D2-Sonchus*

n) *D3-Jacaranda*

o) *D4-Mango*

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231/3

BIOLOGY

PAPER 3

(PRACTICAL)

Time: 1 ¾ HOURS

INSTRUCTIONS TO CANDIDATES

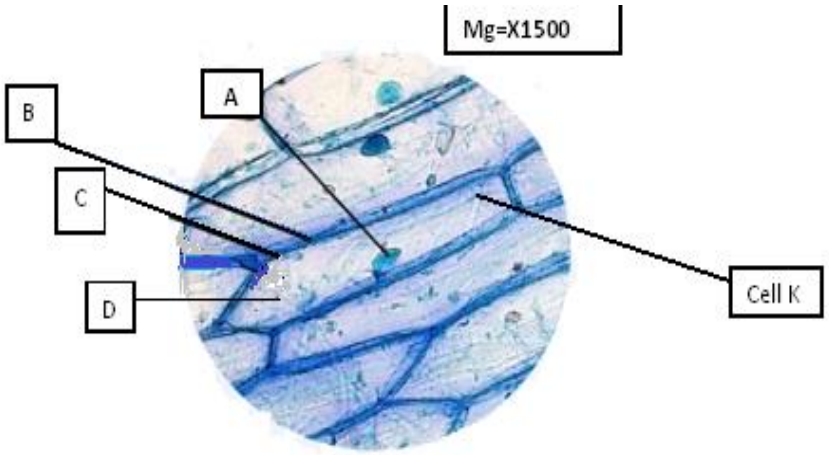
a) *Answer ALL the questions.*
b) *You are required to spend the first 15 minutes of 1 ¾ hours allowed for this paper reading the whole paper carefully before commencing your work.*
c) *Answers must be written in the spaces provided in the question paper.*
d) *Additional pages must not be inserted.*

FOR EXAMINERS USE ONLY

Question	Maximum score	Candidate's score
1	12	
2	14	
3	14	
Total Score	*40 Marks*	

1. You are provided with the photomicrograph of an onion outer epidermis as seen under light microscope

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a) On the photograph, name parts labelled A, C, and D **(3mark)**

A ……

C ……

D ……

a) Explain how the part **labelled B** is adapted to its function **(2marks)**

……

……

……

b) Calculate the actual size of the cell **marked K**, give your answer in micrometres **(2marks)**

c) The differences between the cells in the photograph and those obtained from an animal epithelial cells **(3marks)**

Onion epidermal cells	Animal epithelial cells

d) State the process that make the structures in the cell above appear more distinct **(1mark)**

……..

e) In microscopic procedure in 1 (d) above name what was used to achieve the process **(1mark)**

……

2. The photographs below represent specimen labeled A, B, C and D

SPECIMEN A	**SPECIMEN B**
	
SPECIMEN C	**SPECIMEN D**
	

i) Name the type of placentation shown in specimen A and B **(2 marks)**

A……...……

B……..……..…

ii) Identify the type of sections from which specimen **C** and D was obtained?

(2 marks)

C……...…

D……..……..…

iii) Classify the above specimen labeled D **(1mark)**

……

iv) You are provided with specimen labeled **D1, D2, D3** and **D4**. Examine them

Draw and label specimen labeled **D2** **(3marks)**

v) Giving a reason and state the agent of dispersal of the specimen **(6marks)**

Specimen	Agent of dispersal	Reason
D1		
D3		
D4		

3. You are provided with the following. Solution **P**, **Q** and **Z**.

(a) (i) Put 2 cm^3 of solution **P** into two test tubes labeled **A** and **B**. Add iodine solution drops into test tube **A**. Observe and record. **(1 mark)**

……

……

(ii) To test tube **B**, add an equal amount of Benedict's solution. Heat to boil. Record your observation. **(1 mark)**

……

……

(iii) From the results in (a) (i) and (ii), identify solution **P**. **(1 mark)**

……

……

(iv). Put 2cm^3 of solution **Z** into a clean test tube labelled **C**. Add equal volume of Benedict's solution. Heat to boil. **(1 mark)**

……

……

(v) Open the visking tubing provided, Pour solution **P** into the visking tubing and add 1cm^3 of the solution **R**. Tie the visking tubing and ensure there is no leakage. Pour solution **Z** into a clean beaker till it is half full. Immerse visking tube in the solution **Z** in the beaker. Allow it to stand for 30 minutes. After 30 minutes, take 2cm^3 of solution **Z** from the beaker into a clean test tube labelled **D**. Add equal amount of Benedict's solution. Heat to boil. Record your observation. **(1 mark)**

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……

(vi) Account for the observation made in (v) above. **(3 marks)**

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(b) i) Pour 2 cm^3 of solution **Q** into a clean test tube. Observe and record the color of solution **Q.**

(1 mark)

……

……

ii) Add 1 cm^3 of sodium hydroxide into test tube containing solution **Q**. Record your observation.

(1 mark)

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……

iii) Explain the results observed in (b)(ii) above. **(2 marks)**

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iv). what is the identity of solution **R?** **(1 mark)**

……

……

v) State **one** factor that can affect the process demonstrated in 3a **(v**) above **(1 mark)**

……

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233/1

CHEMISTRY

PAPER 1

(THEORY)
TIME 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. *Write your name and index number in the spaces provided above.*
2. *Answer all the questions in the spaces provided.*
3. *All working must be clearly shown.*
4. *Non-programmable silent electronic calculators and KNEC mathematical tables may be used.*

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
1 - 25	80	

ANSWER ALL QUESTIONS

1. The pH values of some solutions labeled **E** to I are given in the table **below**. Use the information to answer the questions that follow.

pH	14.0	1.0	9.0	6.5	5.0
Solution	E	F	G	H	I

(a) Identify the solution with the highest concentration of hydroxide ions. Explain **(1mk)**

……

……

(b). Which solution can be used as a remedy for acid indigestion in the stomach? Explain **(1mk)**

……

……

(c) Which solution would react explosively with Potassium metal? **(1mk)**

……

2. a) Distinguish between ionization energy and electron affinity **(2mks)**

……

……

……

b) The table below shows first ionization energies of metals represented by letters A, B, C and D. The metals are in the same group of the periodic table.

Metal	A	B	C	D
1st ionization energy (kJ/mole	402	496	520	419

Which of the metals has the largest atomic radius? Explain. **(2mks)**

……

……

……

3. An element: $^{23}_{11}M$

(a) To which chemical family does it belong? **(½mk)**

……

(b) Write the electron arrangement of the atom. **(½mk)**

……

(c) Draw the structure of its ion. **(1mk)**

4. (a) Define electrolysis. **(1mk)**

……

……

(b) During the electrolysis of molten aluminium oxide, write the equations at the;

Anode -

……. **(1mk)**

Cathode -

……. **(1mk)**

5. In an experiment to determine the percentage purity of Sodium carbonate produced in the Solvay process , 2.15g of the sample reacted with exactly 40.0cm^3 of 0.5M Sulphuric(VI)acid. Determine the percentage purity of sodium carbonate in the sample.

6. **Y** is a product of gaseous reaction which results in an equilibrium mixture being formed.

Reactants $\rightleftharpoons$ **Y**

The percentage of **Y** in equilibrium at various temperatures and pressure is shown in the following table.

Temperature (^{0}C)	1 atm	100 atm	200 atm
550	**0.77**	**6.70**	**11.9**
650	**0.032**	**3.02**	**5.71**
750	**0.016**	**1.54**	**2.99**
850	**0.09**	**0.87**	**1.68**

Use this data to deduce, giving a reason for each case;

a) Whether production of Y is exothermic or endothermic. **(2mks)**

……

……

……

b) Whether production of Y **involves** an increase or a decrease in number of moles of gas present. **(2mks)**

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7. State and explain what is observed when moist red flowers are dropped in a gas jar containing Sulphur (IV) oxide. **(3mks)**

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8. A sample of water collected from **River Nzoia** is suspected to contain chloride ions. Describe an experiment that can be carried out to determine the presence of the chloride ions. **(2mks)**

……

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9. During distillation in a laboratory the distillate can be collected either by a beaker or a conical flask.

(a) Define the term distillate. **(1mk)**

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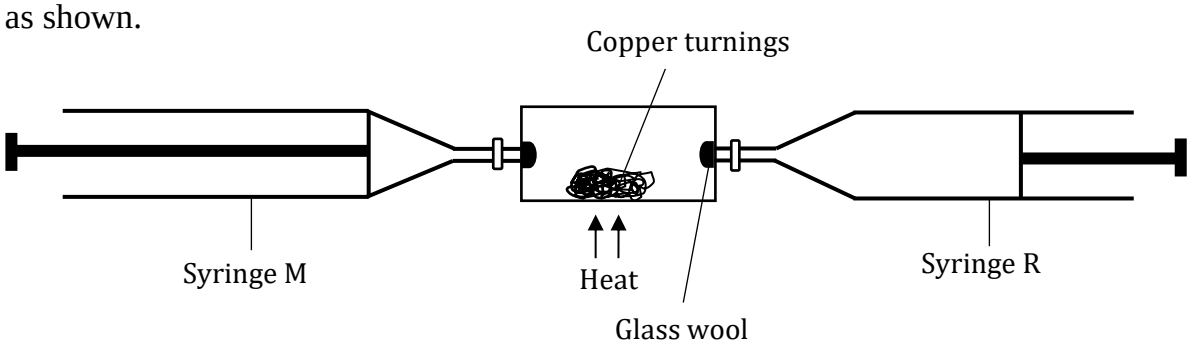
(b) Explain why a conical flask is the most preferred apparatus for the collection of the distillate. **(1mk)**

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……

(c) Draw the diagram of a graduated conical flask. **(1mk)**

10. In an experiment to determine the proportion of oxygen in air, copper turnings were packed in excess in a long combustion tube connected to two syringes of $110cm^3$ each in volume. At the beginning of the experiment, syringe R contained $110cm^3$ of air while syringe **M** was closed and empty as shown.



Air was passed over the heated copper slowly and repeatedly until there was no further change in volume. 97.5cm^3 of air remained in syringe M.

(a) State and explain the observation made in the combustion tube. **(2mks)**

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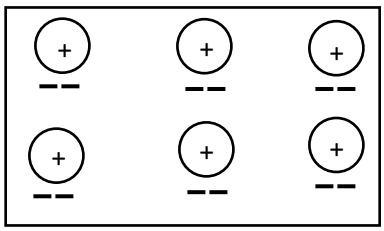
(b) If the volume of air in the **combustion tube** at the beginning of the experiment was 23.8cm^3 and at the end of the experiment reduced to 10cm^3, calculate the percentage of the active part of air. **(2mks)**

……

……

……

11. Below is a structure of an element X. Use it to answer the questions that follow.



(a) Name the chemical family to which element X belongs. Give a reason. **(2mks)**

……

……

……

(b) (i) Define covalent bond. **(1mk)**

……

……

(ii) Using dots(•) of cross (**x**) diagram, show bonding in Carbon (II) Oxide. **(1mk)**

12. **(a) (i)** State ***two*** allotropes of Carbon. **(1mk)**

……

……

(ii) Explain the differences in their densities. **(2mks)**

……

……

……

(b) **(i)** Name the process used for large scale production of Sodium Carbonate using brine as raw material. **(1mk)**

……

……

(ii) Write the overall chemical equation for the reaction in the carbonator. **(1mk)**

……

……

(c) Name two gases recycled in the above process **(1mk)**

……

……

13. Name the following compounds using the IUPAC system. **(3mks)**

(i) $CH_3\,CH_2\,CH_2\,CH_2\,\underset{\displaystyle Br}{\underset{|}{C}}\,=\,\underset{\displaystyle CH_3}{\underset{|}{CH}}$

……

(ii) $CH_3CH_2CH_2COOCH_2CH_2CH_3$

……

(iii) $CH_3\underset{\displaystyle Cl}{\underset{|}{CH}}\underset{\displaystyle CH_3}{\underset{|}{CH}}\underset{\displaystyle Cl}{\underset{|}{CH}}CH_3$

……

14. Describe how to prepare Ethane gas starting with soda lime **(3mks)**

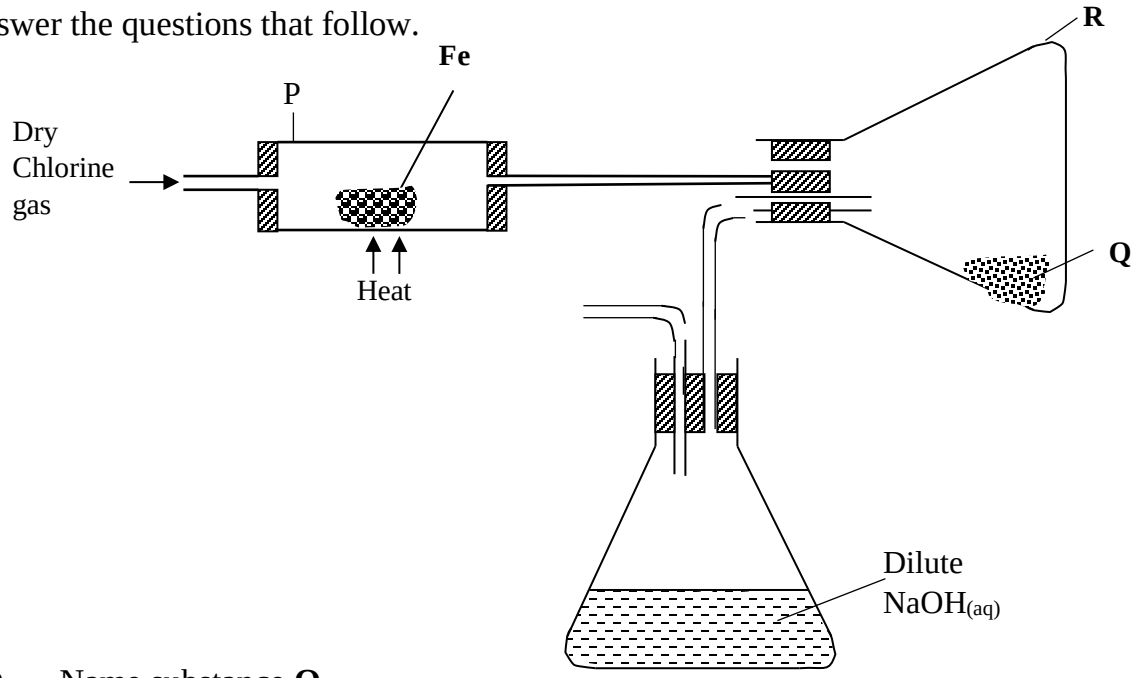
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15. The diagram below shows how chlorine reacts with metals in the laboratory. Study it and answer the questions that follow.



(a) Name substance **Q**. **(1mk)**

……

(b) Give a reason why substance Q is not collected in the combustion tube P. **(1mk)**

……

……

(c) Write chemical equation for the reaction that occurs in the conical flask containing Sodium hydroxide. **(1mk)**

……

16. (a) Water sample is found to contain Mg^{2+},Cl^{-}, SO_4^{2-} , and Ca^{2+}. Identify the type of water hardness **(1mk)**

……

……

(b) Which type of detergent is more suitable with the water sample above. Give a reason **(2mks)**

……

……

(c) Permanent water hardness cannot be removed by boiling. Explain **(1mk)**

……

……

17. Starting with lead metal, write procedure on preparation of lead(II) nitrate crystals **(3mks)**

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……

18. The following chemical equations show the effects of heat on nitrates.

$2B(NO_3)_{2(s)} \longrightarrow 2BO_{(s)} + 4NO_{2(g)} + O_{2(g)}$

$2ANO_{3\,(s)} \longrightarrow 2ANO_{2(s)} + O_{2(g)}$

$2CNO_{3(s)} \longrightarrow 2C_{(s)} + 2NO_{2(s)} + O_{2(g)}$

a. Arrange elements A, B and C from the most reactive to the least reactive. ($1\frac{1}{2}$mks)

……

……

……

Give one example of element A, B and C. **($1\frac{1}{2}$mks)**

……

……

……

19. Copper (II) sulphate crystals, a boiling tube, a test-tube, a beaker and other necessary requirements were used in an experiment to determine the type of change that occurred when the crystals were heated.

(a) Draw a labelled diagram to represent the set-up at the end of the first part of the experiment.

(3mks)

(b) After the second part of the experiment was done, state the conclusion that was made about the type of change undergone by copper (II) sulphate crystals when heated. **(1mk)**

……

……

20. (a). Distinguish between chromatography and a chromatogram. **(1mk)**

……

……

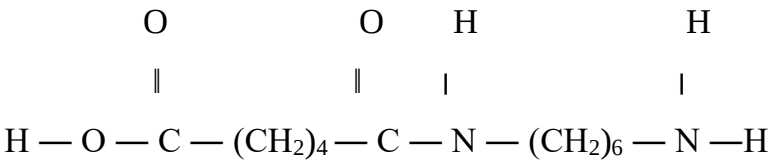
……

(b) State the role of chromatography in the administration of international athletics competitions. **(1mk)**

……

……

21. Study the polymer shown below.



a) Name the polymer. **(1mk)**

……

b) Identify two monomers that make up the polymer. **(2mks)**

……..

c) Give one use of the polymer **(1mark)**

……

……..

22. **(a)** State Charles law. **(1mk)**

……

……

……

(b) A gas occupies 450cm^3 at 27^{0}C. What volume would the gas occupy at 177^{0}C if its pressure remains constant? **(2mks)**

……

……

……

……

23. A colourless liquid was suspected to be water. State two ways to confirm.

(i) Purity of the water. **(1mk)**

……

……

(ii) That the liquid was water. **(2mks)**

……

……

……

24. Use the following information to answer the questions that follow

$\Delta H_{lattice}$ $MgCl_2$ = +2489 kJ/ mol

$\Delta H_{hydration}$ Mg^{2+} = - 1891 kJ/ mol

$\Delta H_{hydration}$ Cl^- = -384 kJ/ mol

a) Calculate the heat of solution of magnesium chloride. **(2mks)**

……

……

……

b) Draw an energy level diagram for the dissolving of magnesium chloride **(2mks)**

25. i) A solution of aqueous sodium hydroxide is added to a gas jar of nitrogen (IV) oxide and shaken. State and explain the observation made **(2mks)**

……

……

……

ii) Write the chemical equation for the reaction above **(1mk)**

……

……

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233/2

CHEMISRY

PAPER 2

THEORY

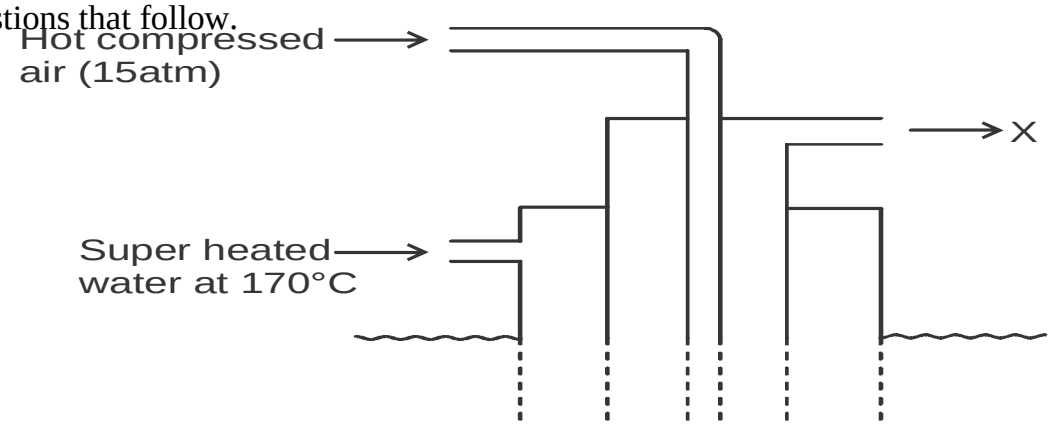
INSTRUCTIONS TO CANDIDATES

- ***a)*** *Write your name and index number in the spaces provided.*
- ***b)*** *Answer **ALL** the questions in the spaces provided.*
- ***c)*** *Electronic calculators and Mathematical tables **may** be used.*
- ***d)*** *All workings **must** be clearly shown where necessary.*

FOR EXAMINER'S USE ONLY

Questions	Maximum Score	Candidates Score
1	16	
2	13	
3	13	
4	11	
5	13	
6	14	
	80	

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



i) Identify **X**……..... **(1mark)**

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

……

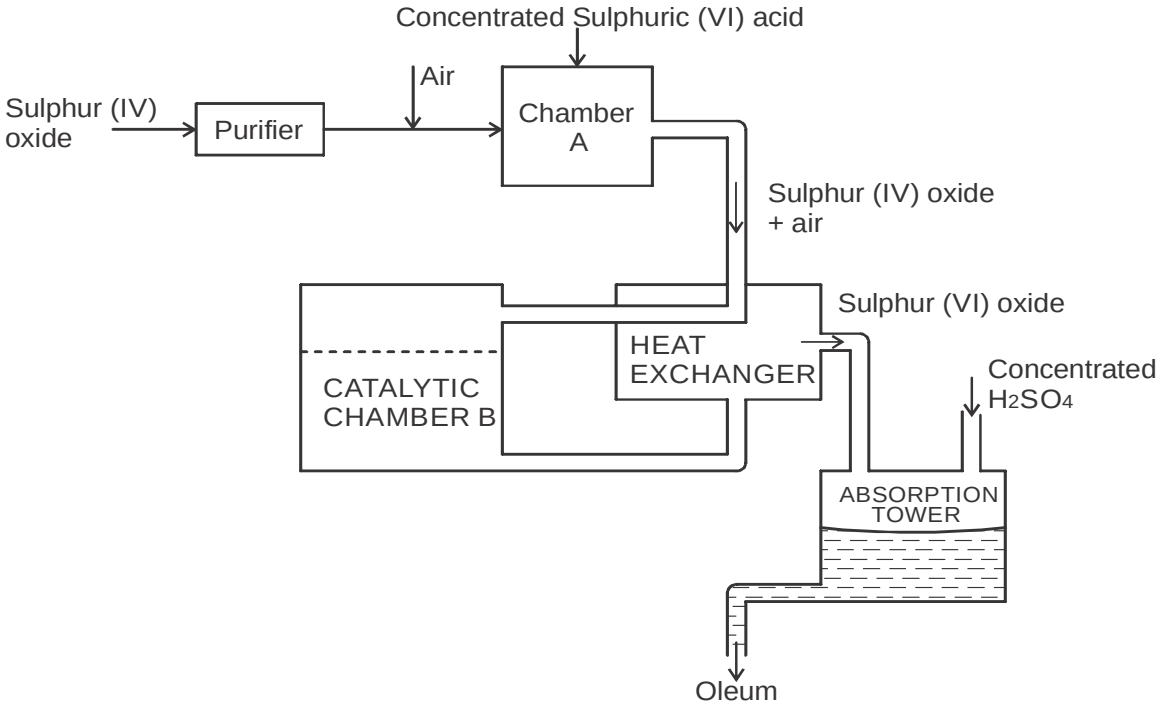
……

iii) State two physical properties of sulphur that makes it possible for it to be extracted by this method **(2marks)**

……

……

c) The diagram below shows part of the process in the manufacture of sulphuric (VI) acid. Study it and answer 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 **(1mark)**

……

……

iii) Name two catalysts that can be used in the catalytic chamber B **(2marks)**

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……

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

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v) Describe the test for a Sulphite anion SO_3^{2-} **(2 mark)**

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……

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

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2. Use the standard electrode potential for elements G,H,J, K and L given below to answer the questions that follow

Half reactions	Electrode potential (volts)
$G^{2+}_{(aq)} + 2e^- \rightarrow G_{(s)}$	-2.90
$H^{2+}_{(aq)} + 2e^- \rightarrow H_{(s)}$	-2.38
$J^{+}_{(aq)} + e^- \rightarrow \frac{1}{2}J_{2(g)}$	0.00
$K^{2+}_{(aq)} + 2e^- \rightarrow K_{(s)}$	+0.34
$\frac{1}{2}L_{2(g)} + e^- \rightarrow L^-_{(aq)}$	+2.87

i) Which element could be hydrogen. Explain **(1mark)**

……

……

ii) Which two half cell would produce the highest potential difference (e.m.f) when combined**(1mark)**

……

……

iii) In the space provided below construct a well labelled electrochemical cell obtained when G^{2+}/G and K^{2+}/K half cells are combined **(3marks)**

iv) Calculate the E^{Θ} value of the electrochemical cell constructed in (iii) above **(2marks)**

……

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……

v) It is advisable to store a nitrate solution of K in a container made f H. Explain. **(2marks)**

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……

……

b) During electrolysis of aqueous copper (II) sulphate using copper electrodes a current of 0.4 ampheres was passed through the cell for 5 hours

i) Write an ionic equation of the reaction that occurred at the cathode **(1mark)**

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ii) Determine the change in mass of the anode which occurred as a result of the electrolysis process (Cu= 63.5 1 Faraday= 96500 coulombs) **(3marks)**

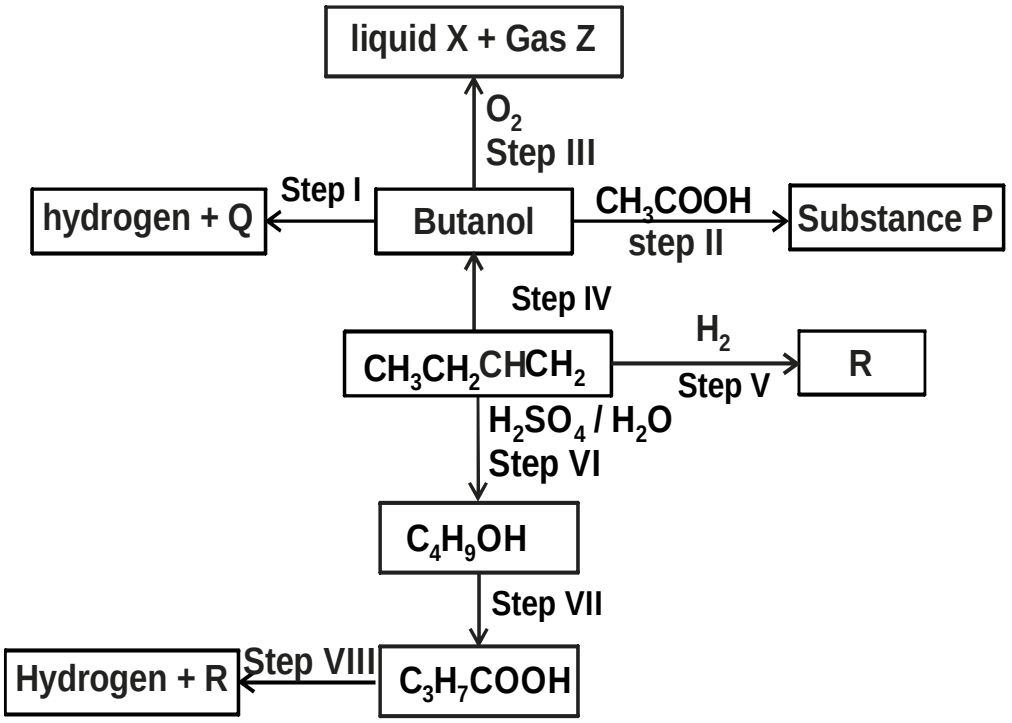
. ……

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3. Study the reactive scheme below and answer the questions that follow.



i) What is the distinguished physical property of substance P **(1mark)**

……

……

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

……

……

iii) Describe how C_3H_7COOH can be distinguished from C_4H_9OH **(2marks)**

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iv) Write an equation for the reaction that takes place in step III. **(1 mark)**

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……

v) Name the type of reaction that occurs in steps II and VII. **(2 marks)**

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vi) If 7.4g of butanol completely underwent step III, determine the volume of gas Z produced at STP (MGV = 22.4L , C= 12.0, H=1.0 O=16.0) **(3 marks)**

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

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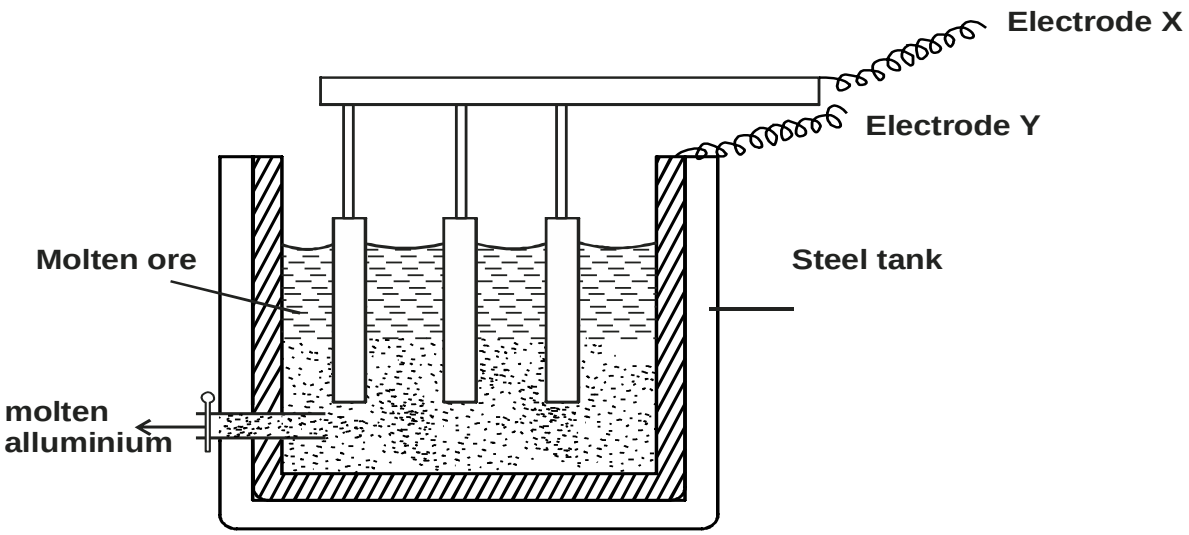
viii) Describe a chemical test for liquid X. **(2 marks)**

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4. Aluminium is extracted using the electrolytic cell represented by the diagram below



i) Why is aluminium extracted by electrolytic method? **(1 mark)**

……

……

ii) Name the electrodes labelled X and Y **(2marks)**

……

……

iii) The chief ore from which aluminium is extracted is bauxite.

a)Name **two** main impurities present in bauxite. **(2 marks)**

……

……

b) Aluminium oxide is the main component in bauxite with a melting point of 2015°C but electrolysis of molten aluminium oxide is carried out at 800°C. Explain how this is achieved. **(2mks)**

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……

i**v)** Write the equations for the reaction taking place at the anode. **(1 mark)**

……

……

v) One of the electrodes is replaced periodically. Which one and why? **(2 mark)**

……

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……

vi) Duralumin (an alloy of copper, aluminium and magnesium) is preferred to pure aluminium in the construction of aeroplane bodies. Give **one** property of duralumin that is considered. **(1 mark)**

……

……

5. The grid below represents part of the periodic table. Study it and answer the questions that follow. The letters do not represent the 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 of 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
M.P. °C	801	1356	-101	26	-39	113
B.P °C	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 in molten state and not in solid state. **(2marks)**

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……

ii) What is the most likely structure of substance N. Explain. **(2 marks)**

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iii) Identify, with reasons, a substance that exists as a liquid at room temperature **(2 marks)**

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6. A piece of marble chip (calcium carbonate) is put in a beaker containing excess of dilute hydrochloric acid which is placed on a reading balance. The mass of the beaker and its contents is recorded every two minutes as shown in the table.

Time (min)	0	2	4	6	8	10	12
Mass (g)	126.4	126.3	126.2	126.1	126.0	126.0	126.0

i) Why is there a continuous loss of mass of the reaction mixture. **(1 mark)**

……

……

ii) Write an equation for the reaction taking place. **(1 mark)**

……

iii) State two different ways by which the reaction could have been made more rapid. **(2 marks)**

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……

iv) Why does the mass remain constant after 8 minutes **(1 mark)**

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……

v) State the observations that would be made if a few drops of lead II nitrate solution was added to $1cm^3$ of the resulting solution followed by excess ammonia solution. **(2 marks)**

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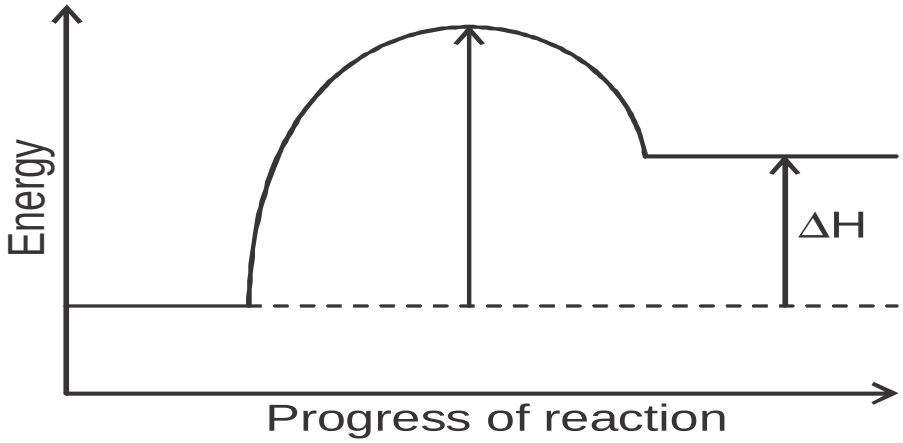
……

vi) State one environmental effect that excess carbon (IV) oxide in the air causes. **(1 mark)**

……

……

vii) The energy profile for the forward direction of a reversible reaction is shown.



Sketch on the diagram the path for a catalysed reaction. **(2 mark)**

viii) What do you observe when you introduce the following substances in this equation

$2CrO^{2-}_{4(aq)} + 2H^{+}_{(aq)} \rightleftharpoons Cr_2O^{2-}_{7(aq)} + H_2O_{(l)}$ $\Delta H = -477 Kj/Mol$

Yellow Orange

i) Dilute hydrochloric acid solution **(2 mark)**

……

……

……

ii) Increase heat **(2 mark)**

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233/3 CONFIDENTIAL

Apart from the usual laboratory fittings, each student should have the following;

1. *About 0.5g of Solid Q in a stoppered container*
2. *About 0.5g of Solid R in a stoppered container*
3. *100cm^3 of solution R*
4. *100cm^3 of solution Q*
5. *100cm^3 of solution P*
6. *Distilled water.*
7. *About a spatula end-full of solid Calcium hydroxide*
8. *Red litmus paper*
9. *Three 250ml conical flasks*
10. *One burette 0 – 50ml*
11. *One pipette 25ml*
12. *One 50ml measuring cylinder*
13. *One 10ml measuring cylinder*
14. *One 250cm^3 volumetric flask*
15. *Phenolphthalein indicator*
16. *Labels (2)*
17. *Stop watch*
18. *Two boiling tubes*
19. *One metallic spatula*
20. *Five test tubes on a test-tube rack*
21. *Wooden splint*
22. *Test tube holder*

The student should also get access to;

1. 10% Hydrogen peroxide (freshly prepared + dropper).
2. 2M Barium nitrate solution + dropper.
3. 0.5M Hydrochloric acid + dropper.
4. Source of heat.
5. Sodium hydrogen carbonate
6. Acidified Potassium manganate (VII)
7. Acidified Potassium dichromate (VI)

NOTES

Solid Q is Hydrated ferrous ammonium sulphate.

Solid R is Malleic acid

Solution R is prepared by weighing exactly 4.8g of sodium carbonate dissolve it to make $1dm^3$ of solution.

Solution Q is prepared by weighing exactly $172cm^3$ of hydrochloric acid (35-37% sp.gr 1.18) and dissolving to make $1dm^3$ of solution.

Solution P is prepared by weighing exactly 37.2g of sodium thiosulphate pentahydrate and dissolving to make $1dm^3$ of solution.

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233/3

CHEMISTRY

(PRACTICAL)

INSTRUCTIONS TO CANDIDATES

a. *Write your name, class, admission number, index number, signature and date in the spaces provided above.*

b. *Answer ALL the questions in the spaces provided in the question paper.*

c. *You are not allowed to start working with the apparatus for the first 15 minutes of the 2 ¼ hours allowed for this paper. This time is to enable you to read the question paper and make sure you have all the chemicals and apparatus that you may need.*

d. *All working MUST be clearly shown where necessary.*

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

For Examiner's Use Only

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	23	
2	10	
3	07	
Total Score	40	

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

QUESTIONS

1. You are provided with:-

- Solution **Q**, 2M Hydrochloric acid.
- Solution **P**, 0.15M Sodium thiosulphate
- Solution **R,** Sodium carbonate

PROCEDURE 1

Measure 20cm^3 of 0.15M Sodium thiosulphate (solution **P**) into a 250cm^3 a conical flask. Place the beaker on a white piece of paper with **ink mark** '**X**' on it. Measure 20cm^3 of 2M hydrochloric acid solution **Q** using a 50cm^3 measuring cylinder. Put the acid into the conical flask containing Sodium thiosulphate and immediately start off the stop watch. Determine the time taken for the **mark** '**X**' to become invisible /obscured when viewed from above. Repeat the procedure by measuring different volumes of the acid and adding the volumes of the distilled water to complete Table I below.

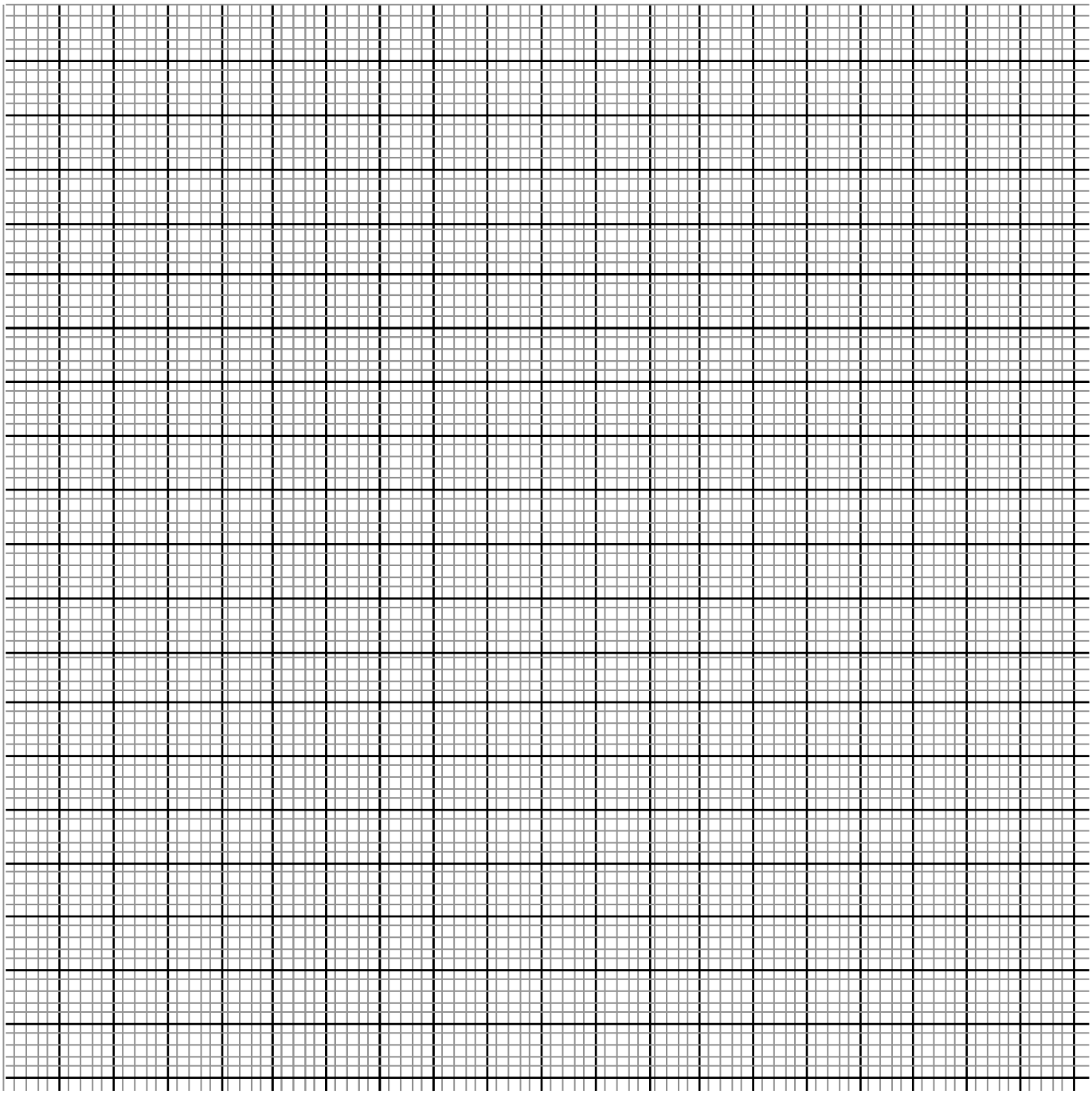
Table I

Volume of acid (cm^3)	**Volume of water (cm^3)**	**Volume of sodium thiosulphate (cm^3)**	**Time taken for mark 'X' to be invisible/obscured (seconds)**	**Reciprocal of time (sec^{-1}) $\frac{1}{t}$**
20	0	20		
18	2	20		
16	4	20		
14	6	20		
12	8	20		
10	10	20		

a) Complete the table above **(6 marks)**

b) Plot a graph of 1/t (rate) against volume of acid used **(3 marks)**

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c) Explain the shape of your graph **(1 mark)**

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……

……

d) From the graph determine

(i) Time taken for the cross to be obscured/invisible when the volume of the acid is:

I) $15cm^3$ **(1 mark)**

……

……

……

II) $8cm^3$ **(1 mark)**

……

……

……

(ii) The volume of the acid used if the time taken for the cross to be obscured/invisible is:

I) 40 seconds **(1 mark)**

……

……

II) 43 seconds **(1 mark)**

……

……

PROCEDURE 2

Using a 10 cm^3 measuring cylinder, place 10 cm^3 of solution Q into a 250 ml volumetric flask. Add about 200 cm^3 of distilled water. Shake well. Add more distilled water to top up to the mark. Label this solution T. Fill the burette with solution T. Using a pipette and pipette filler, pipette 25 cm^3 of solution R into a conical flask. Add 3 drops of Phenolphthalein indicator and titrate with solution T.

– Record your results in the table.

– Repeat the titration two more times and complete the table.

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TABLE 2

	I	II	III
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution T (cm^3) added			

(4 marks)

a) Determine the:-

(I) Average volume of solution T used. **(1 mark)**

……

(II) Moles of the acid in the average volume of solution T used. **(2 marks)**

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……

(IV) Concentration of solution R in moles per litre. **(2 marks)**

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……

……

2. (a) Put a spatula end-full of solid A into a boiling tube and add about 10cm^3 of distilled water. Shake the mixture well. Divide the resultant solution into 4 equal portions.

Observations	**Inferences**
(½ mark)	(1 mark)

(b) (i) The solution is suspected to contain **ammonium ions**. Using **calcium hydroxide soli**d and **red litmus paper** provided, describe how you would confirm presence of the **ammonium ions**.

Description	Expected observations
(1 mark)	(½ mark)

(ii) Carry out the actual test as described in (b) (i) above.

Observations	Inferences
(1 mark)	(½ mark)

(c) To the second portion, add 4 drops of hydrogen peroxide solution. Test the gas produced using a glowing splint.

Observations	Inferences
(1 mark)	(1 mark)

(d) (i) The solution is also suspected to contain **sulphite ions**. Using **Barium nitrate solution** and **dilute hydrochloric acid** solution, describe how you would confirm presence of the **sulphite ions**.

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Description	Expected observations
(1 mark)	(1 mark)

(ii) Carry out the actual test as described in (d) (i) above.

Observations	Inferences
(1 mark)	(½ mark)

3. You are provided with solid B. Carry out the tests below and record your observations and inferences in the spaces provided.

(i) Place one third of solid B on a metallic spatula. Burn it in a non-luminous flame of the Bunsen burner.

Description	Expected observations
(1 mark)	(1 mark)

(ii) Place the remaining solid in a test-tube. Add about $6cm^3$ of distilled water and shake the mixture well. Retain the solution for the next procedure.

Description	Expected observations
(½ mark)	(½ mark)

(iii)

(I)To about $2cm^3$of the solution, add 2 drops of acidified potassium manganate (VII).

Description	Expected observations
(1 mark)	(1 mark)

(II)To about $1cm^3$ of the solution, add 3 drops of acidified potassium dichromate (VI) and warm.

(III) To about $2cm^3$ of the solution, add 1g of solid A; sodium hydrogen carbonate.

Description	Expected observations
(½ mark)	**(½ mark)**

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

232/2

PHYSICS

Paper 1

Time: 2 hours

Instructions to Candidates

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

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

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

(d) Answer ALL the questions in sections A and B in the spaces provided.

(e) ALL working MUST be shown clearly

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

FOR EXAMINER'S USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 12	25	
B	13	10	
	14	12	
	15	13	
	16	9	
	17	11	
TOTAL SCORE		**80**	

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

SECTION A (25 MARKS)

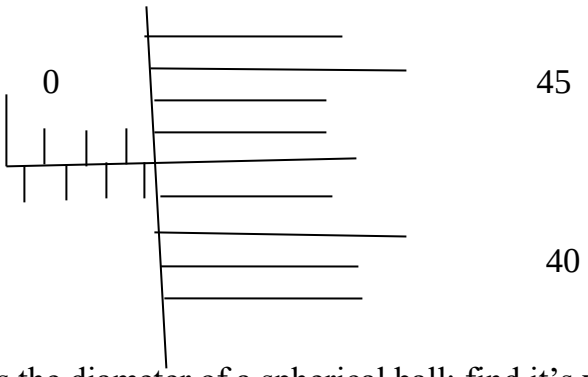
*Answer **ALL** the questions in this section in the spaces provided*

1.Thermodynamics is one of the branches of physics. What does it entail**?** **(1mk)**

……

……

2.(a) What is the reading in the following**;** **(1mk)**



(b) If the reading above was the diameter of a spherical ball; find it's volume**.** **(2mks)**

……

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3.State two factors which affect the spring constant. **(2mks)**

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……

4.State the relationship between mass and weight. **(1mk)**

……

……

5.(a) State how the pressure in a moving fluid varies with speed of the fluid. **(1 mk)**

……

……

(b)Water flows along a horizontal pipe of cross sectional area 60 cm^2 which has a constriction of cross sectional area 24 cm^2 at one place. If the speed of water at the constriction is 5 m/s, calculate the speed in the wider section. **(2 mks)**

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6.Explain why brakes fail in a hydraulic braking system when air gets into the system. **(2mks)**

……

……

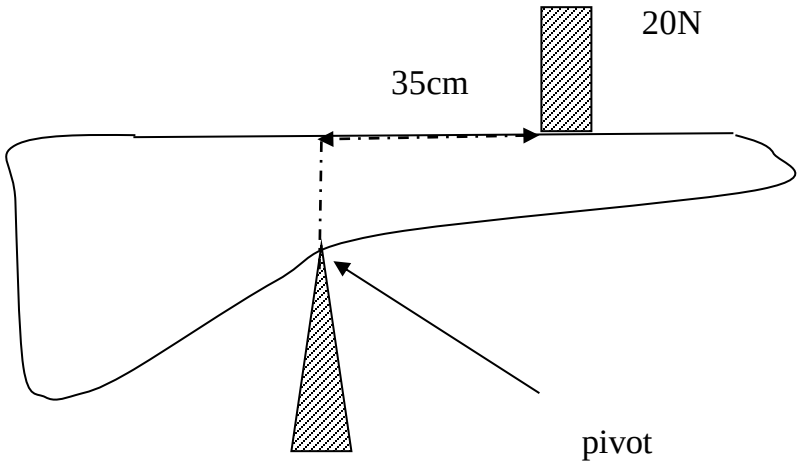
……

7.(i) State the principle of moments **(1mk)**

……

……

(ii) The figure below shows a non-uniform log of mass 1000g balanced on the pivot by a 20N weight as shown.



Determine the position of the centre of gravity from the pivot **(2mks).**

8.It is observed that a drop of milk carefully put into a cup of water turns the water white after sometime. Explain this **observation** **(1mk)**

……

……

9.A bullet hits a stationary block at the edge of a cliff 100m high and moves with a common velocity of 200 m/s. Determine the maximum horizontal distance covered. (take g=10 m/s^2) **(3 marks)**

10. The figure below shows a beam balance made out of concrete and reinforced with steel



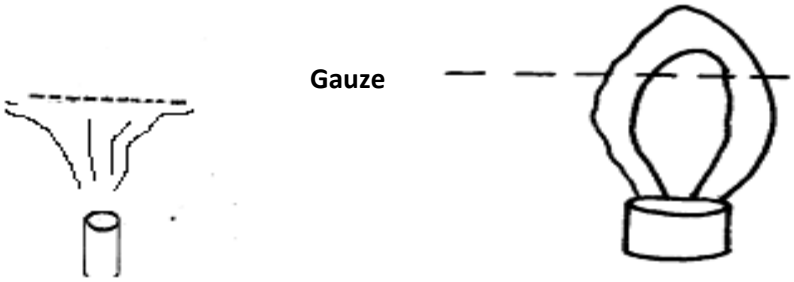
Use a diagram to explain the behaviour of the shape of the beam when heated up **(2mks)**

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……

……

11. When a Bunsen burner is lit below a wire gauze, it is observed that the flame initially burns below the gauze shown in figure (i). After sometime, the flame burns below as well as above the gauze as shown in figure (ii).



(i) **(ii)**

State the reason for this observation. **(1 mk)**

……

……

12. a) State Newton's 2nd Law of Motion **(1mk)**

……

……

b) A car of mass 1200kg moving at 90km/h is brought to rest over a distance of 20m. Calculate the braking force . **(3mks)**

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SECTION II(55mks)

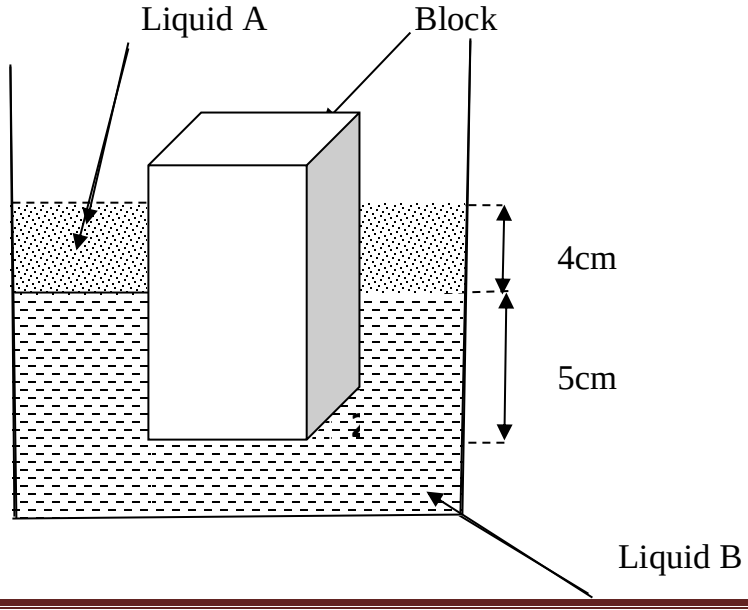
Attempt ALL the questions in this section in the spaces provided.

13. (a) State Archimedes Principle. **(1mk)**

……

……

(b) The figure below shows a rectangular block of height 10cm floating vertically in a beaker containing two immiscible liquids A and B. The densities of the liquids are 0.8g/cm^3 and 1.2g/cm^3 respectively. The block is of dimensions 2cm by 3cm 10cm.



Determine;

(i)the weight of liquid A displaced by the block**.** **(2mks)**

……

……

……

(ii)weight of liquid B displaced by the block**.** **(2mks)**

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……

……

(iii)mass of the block**.** **(2mks)**

……

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……

(c) A hydrometer is one of the applications of Archimedes Principle and relative density. State the functions of the following parts of a hydrometer;

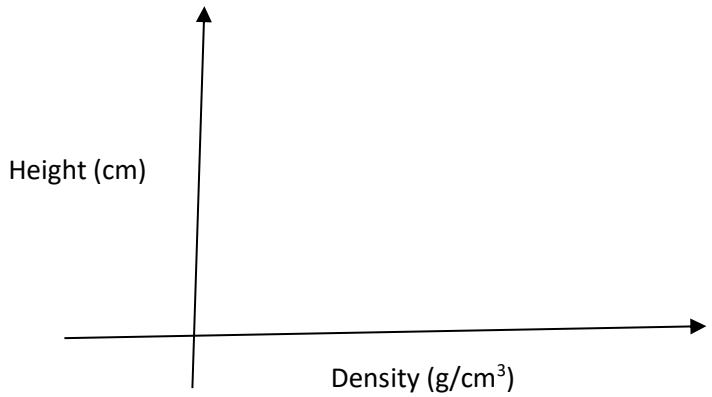
(i) wide **bulb** **(1mk)**

……

(ii) lead **shots** **(1mk)**

……

(d) Sketch a graph of depth of immersion of a hydrometer against the density of a fluid. (1mk)



14. (a) Explain what you understand by each of the following;

(i)Angular velocity **(1mk)**

……

……

(ii) Centripetal force. **(1mk)**

……

……

(b) A car is moving in an unbanked circular path. State what provides the centripetal force. **(1mk)**

……

……

(c) A bicycle wheel with radius 0.30m moves with a linear velocity of 9m/s. Determine;

(i) the angular velocity of the wheel. **(3mks)**

……

……

……

……

(ii) the centripetal acceleration at a point on the rim of the wheel. **(3mks)**

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(d) A marble of mass 50g attached to a light string of length 0.8m is rotated in a vertical plane.The string cannot bear a load more than 2.5 Determine the velocity at which the string would break. **(3mks)**

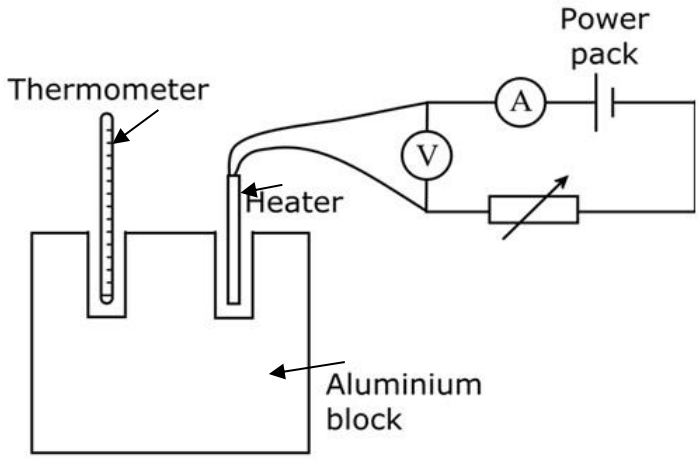
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15 (a)The Figure below shows a set up that can be used in an experiment to determine the specific heat capacity of a solid of mass **m** by electrical method.



(i) Why are the two holes for the heater and thermometer filled with light oil? **(1mk)**

.....

.....

(ii) State the measurements that should be taken from the above setup. **(2 mks)**

.....

.....

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(iii) If the change in temperature of the block was recorded as $\boldsymbol{\theta}$. Write an expression that can be used to determine the specific heat capacity of the solid. **(1 mk)**

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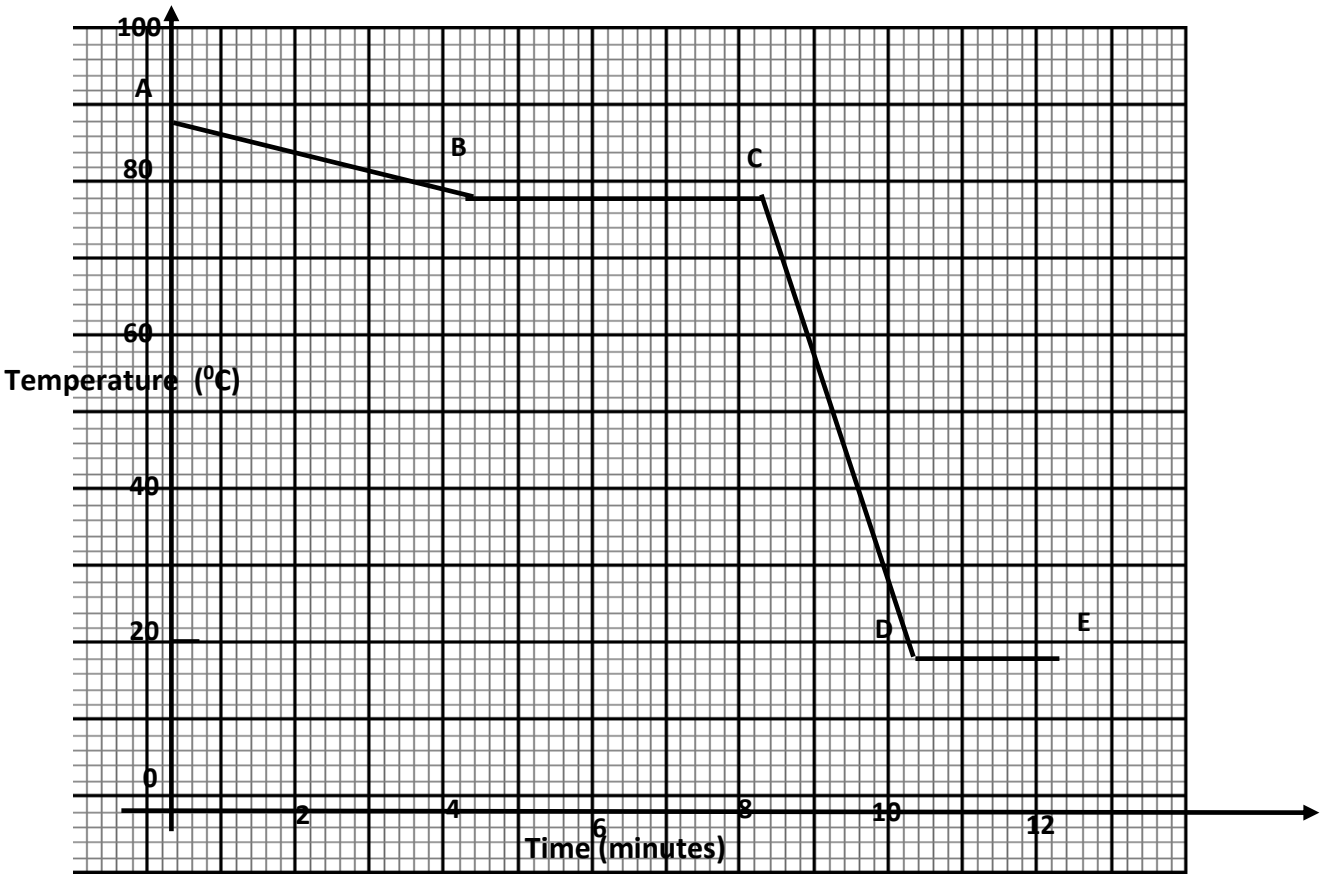
(iv) From the above expression, state the assumption made. **(1mk)**

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.....

(b) The graph below shows a cooling curve for 50g of Naphthalene which was heated until it melted into a liquid then allowed to cool.



Explain the shape of the graph between the points:

(i)AB. **(1mk)**

……

……

(ii)BC. **(1mk)**

……

……

(iii) Given that the specific latent heat of fusion for Naphthalene is 19097.3J/kg. Calculate the heat evolved between the region BC of the 50g of Naphthalene. **(3mks).**

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(iv) How much heat energy would be released by the 50g.of Naphthalene in region CD, if the specific heat capacity of Naphthalene is 1720J/kgK. **(2mks)**

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16.(a)A gas has a volume of $20cm^3$ at 27^0C and normal atmospheric pressure. Calculate the new volume of the gas if it is heated to 54^0C at the same pressure. **(3mks)**

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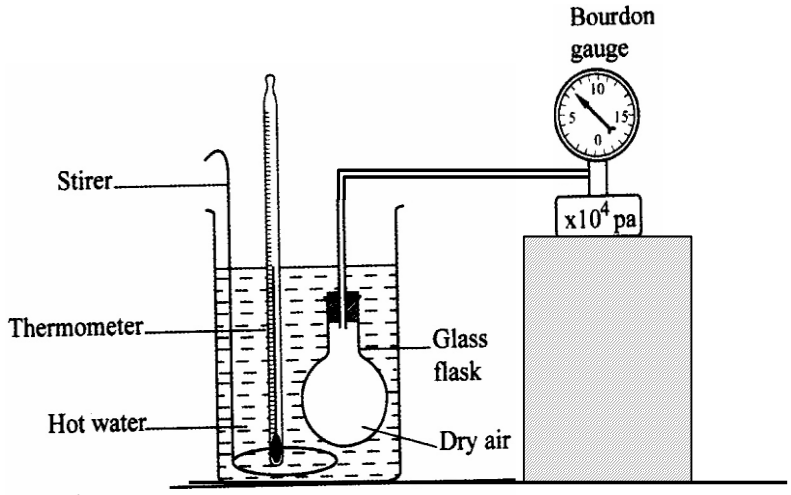
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(b) The figure below shows a set up that may be used to verify one of the gas laws.



(i) State the law being investigated **(1 mark)**

……

……

(ii) State the measurements that may be taken in the experiment. **(2 marks)**

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……

(iii) Explain how the measurement in (i) above may be used to verify the above law **(4 marks)**

……

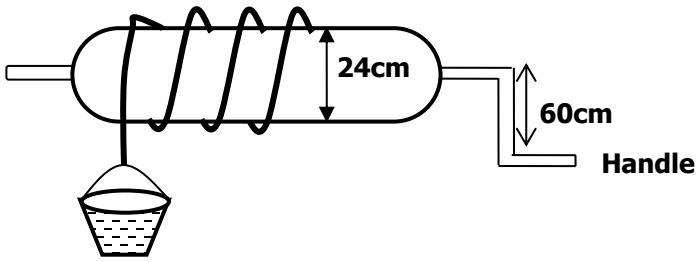
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17. The figure below shows a windlass. An effort is applied on the handle which is turned on a radius of **60 cm**. As the handle turns, a rope is wound around the drum of diameter **24 cm**, thus raising a bucket of water out of the well



a) If an effort of **20N** is needed to lift a bucket full of water of mass **8kg**, Calculate:

(i) The energy gained by the mass when the drum turns through one revolution **(3mks)**

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(ii) The work done by the effort during this revolution. **(3mks)**

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b) Suggest a reason why the two quantities in a(i) and (ii) are not equal **(1mk)**

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c) Calculate:

(i) The velocity ratio of the machine **(2mks)**

……

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(ii) The efficiency of the windlass **(2mks)**

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232/2

PHYSICS

Paper 2

(Theory)

TIME: 2 HRS

INSTRUCTIONS

1. *Write your name and your Index number in the spaces provided.*
2. *This paper consists of **two** sections, Section **A** and **B**.*
3. *Answer **ALL** the questions in both section in the spaces provided in this paper.*
4. ***ALL** working must be clearly shown.*
5. *Mathematical tables and electronic calculators **may be** used.*

Take: Planck's constant =$6.6x10^{-34}$ Js

FOR EXAMINER'S USE ONLY:

SECTION	QUESTION	MAXIMUM SCORE	STUDENTS SCORE
A	1-12	25	
B	13	11	
	14	09	
	15	15	
	16	10	
	17	10	
	TOTAL	**80**	

QUESTIONS

1.State any 2 ways of in increasing the size of an image formed by a fixed pinhole camera**.(2 mks)**

……

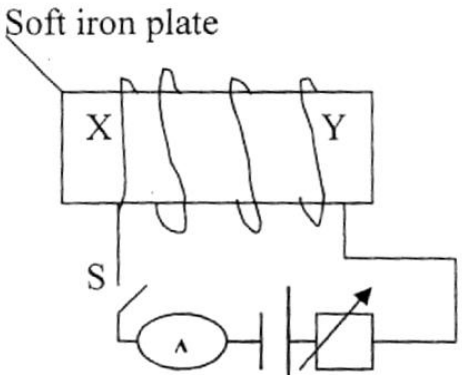
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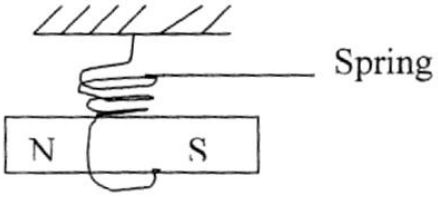
2.State 2 advantages of alkaline battery over a lead acid battery. **(2 mks)**

……

……

3. The diagrams below show a soft iron plate in a solenoid and a permanent magnet suspended by a spring.





State with reason the behaviour of the magnet when the switch S is closed. **(2 mks)**

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4. A man, standing between 2 parallel vertical walls, claps his hands. He hears the first echo 0.3 seconds later and the next echo after a further 0.2 seconds. If the velocity of sound in air is 300m/h. Calculate the distance between the walls. **(3 mks)**

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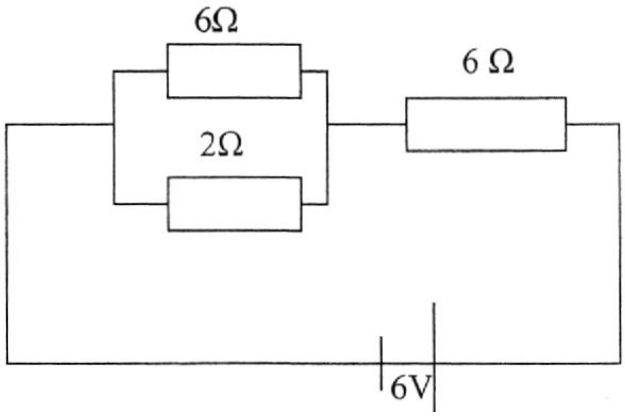
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5. The table below shows an electromagnetic spectrum. Complete the table in the order of increasing wavelength from A- B. **(2 marks)**

A			Visible Light			B

6.The figure below shows a 6V battery connected to an arrangement of resistors.



Determine the current flowing through 2 Ω resistor. **(4 marks)**

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7.State difference between semi conductors and metallic conductors. **(1 mark)**

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8. A radioactive sample has a mass of 16g and a half-life of 10 days. How much of the original sample remains after 40 days. **(2 marks)**

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9. Negatively charged rod is brought near the cap of a lightly charged electroscope. The leaf divergence first reduces but as the rod comes nearer, it diverges more.

i) State the charge of the electroscope. **(1 mark)**

……

……

(ii) Explain the behaviour of the leaf above. **(1 mark)**

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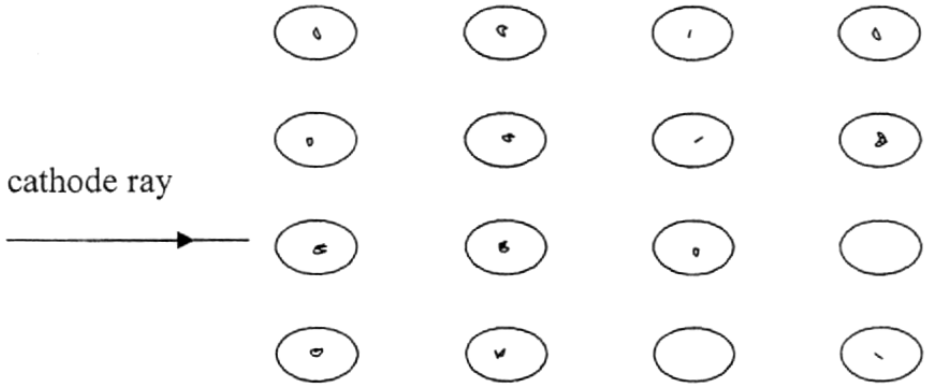
10. Water waves pass a point in a swimming pool at the rate of 30 crests per 60 seconds. One of the crests was observed to take 2 seconds to travel between 2 points, 6m apart. Determine the wavelength of the water waves. **(2 marks)**

……

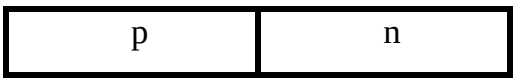
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b. The figure below shows a cathode ray beam entering a magnetic field, perpendicular to the plane of the paper complete the diagram to show the path of the beam in the field. **(1 mark)**



11. The diagram below shows a junction diode.



Complete the diagram to show how the diode can be connected in a reverse bias mode. **(1 mark)**

12. An Uranium 236 isotope has a symbol $^{2361}_{92}U$ when bombarded by a neutron, it splits to give Substances K and L and 2 neutrons. Calculate the values of a and b in the equation below. (1 mark)

$$^{236}_{92}U + {}^{1}_{1}n \longrightarrow {}^{95}_{56}K + {}^{a}_{b}L + {}^{2}_{0}n$$

SECTION B 55MKS

13a) Explain why a cathode ray tube is evacuated **(1 mark)**

……

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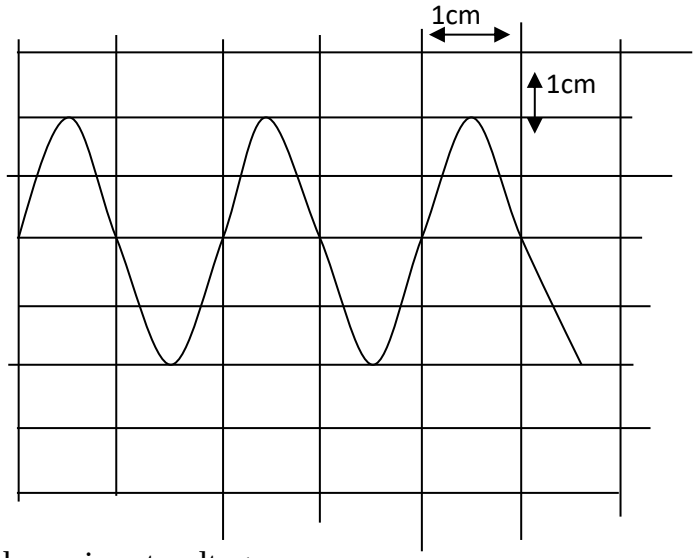
b) State four properties of cathode rays **(2 marks)**

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c) The figure shows the waveform displayed on the cathode ray oscilloscope screen when an alternating voltage is applied on the Y-input. The time- base is set at 1ms/cm and the Y-gain at 10v/cm



Calculate;

i. The amplitude of the ac input voltage **(2marks)**

……

……

……

ii. The frequency of the ac input voltage signal **(2 marks)**

……

……

……

d) The threshold frequency of sodium is 5.6×10^{14}Hz .Find

i. Work function of sodium **(2marks)**

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ii. The kinetic energy of the ejected electrons when sodium is shone with light of frequency 8.6×10^{14} Hz **(2 marks)**

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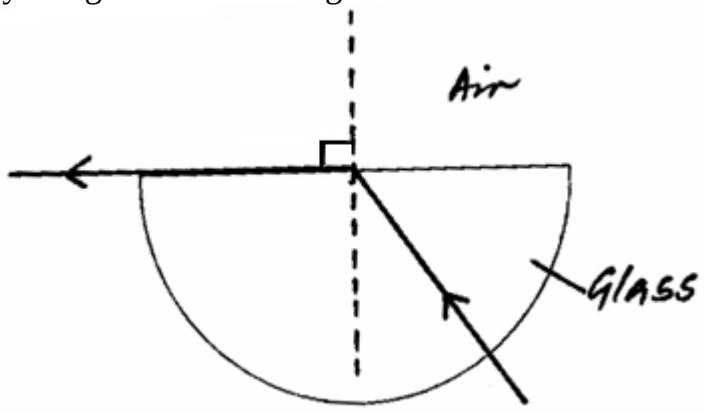
……

14. State the meaning of the term critical angle as applied in refraction of light. **(1 mark)**

……

……

ii)The figure shows a ray of light incident on a glass-air interface.



(i) Show on the diagram the critical angle, **c**. **(1 mark)**

ii) Given that the refractive index of the glass is ${}_a\eta_g$, and that the critical angle **c** = 42°, determine the value of is ${}_a\eta_g$. **(3 marks)**

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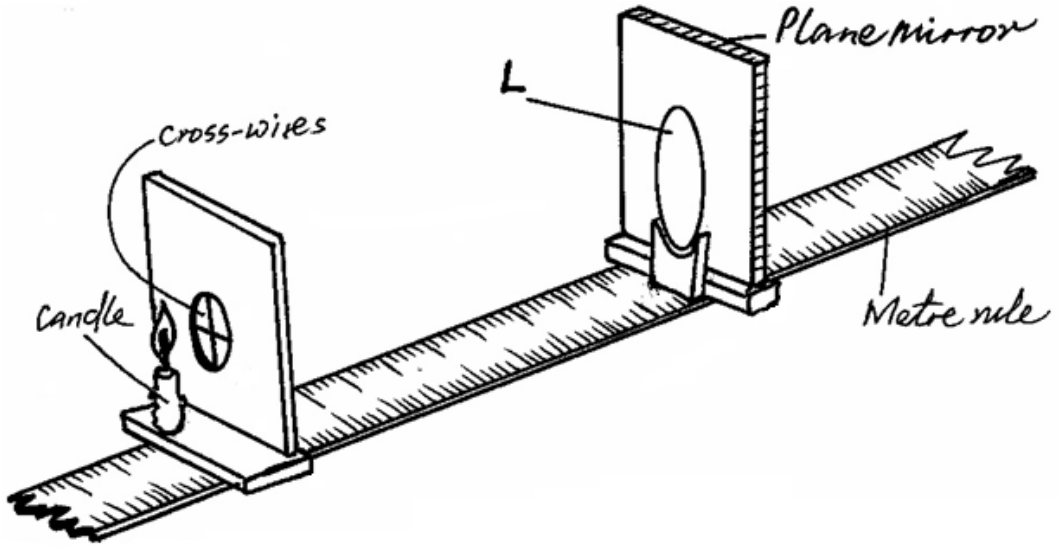
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(b) The figure shows an experimental set up consisting of a mounted convex lens **L**, cardboard screen with cross-wires at the centre, a plane mirror, a metre rule and a candle.



Describe how the set-up may be used to determine the focal length, f, of the lens. **(4 marks)**

……

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15.a) State one advantage of high voltage transmission. **(1mark)**

……

……

(b) A generator produces 150kw at a voltage of 5kv. The voltage is stepped up to 60kv and transmitted through cables of resistance 15Ω to a step down transformer in a substation. If both transformers are 80% efficient, calculate the:

(i) Current through the transmission cables. **(3marks)**

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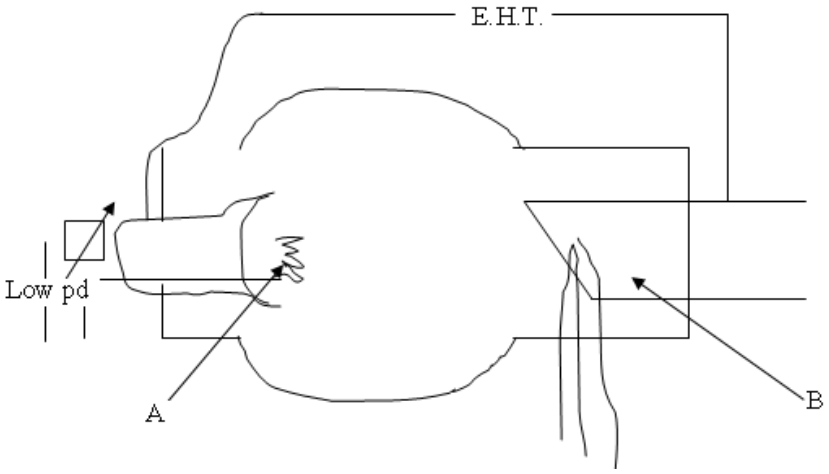
(ii) Power lost during transmission. **(3marks)**

……

……

……

(c) The figure below shows the features of an x ray tube



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

……

……

……

(ii) Explain how change in the potential across PQ change the intensity of the x-rays produced in the tube. **(1marks)**

……

……

(iii) During the operation of the tube, the target becomes very hot. Explain how the heat is caused. **(1mark)**

……

……

(iv) What property of lead makes it suitable for use as shielding material? **(1mark)**

……

……

(b) In a certain X ray tube, the electrons are accelerated by a p.d of 12000v. assuming that all the energy goes to produce x rays, determine the frequency of the x rays produced(take planks constant h=6.62×10^{-34}Js, and the charge of an electron e=1.6×10^{-19} **(3marks)**

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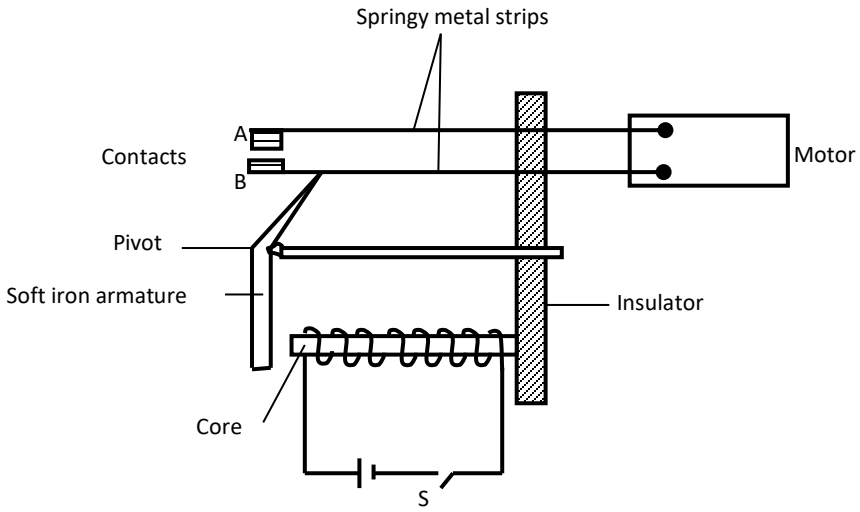
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16.Figure 8 shows an electromagnetic relay being used to switch an electric motor on and off. The electromagnet consists of a coil of wire wrapped around a core. The motor in figure is switched off.

Figure 8



(a) Suggest suitable material for the core. **(1mark)**

……

……

(b) What happens to the core when switch S is closed? **(2marks)**

……

……

……

c)Why do the contacts A and B close when the switch S is closed. **(2marks)**

……

……

……

(c) When the switch S is opened, what will happen to;

(i) The core **(1mark)**

……

……

(ii) Soft iron armature. **(1mark)**

……

……

(d) Give **one** other application of an electromagnet. **(1mark)**

……

……

(e) State **two** ways in which an electromagnet could be made more powerful. **(2marks)**

……

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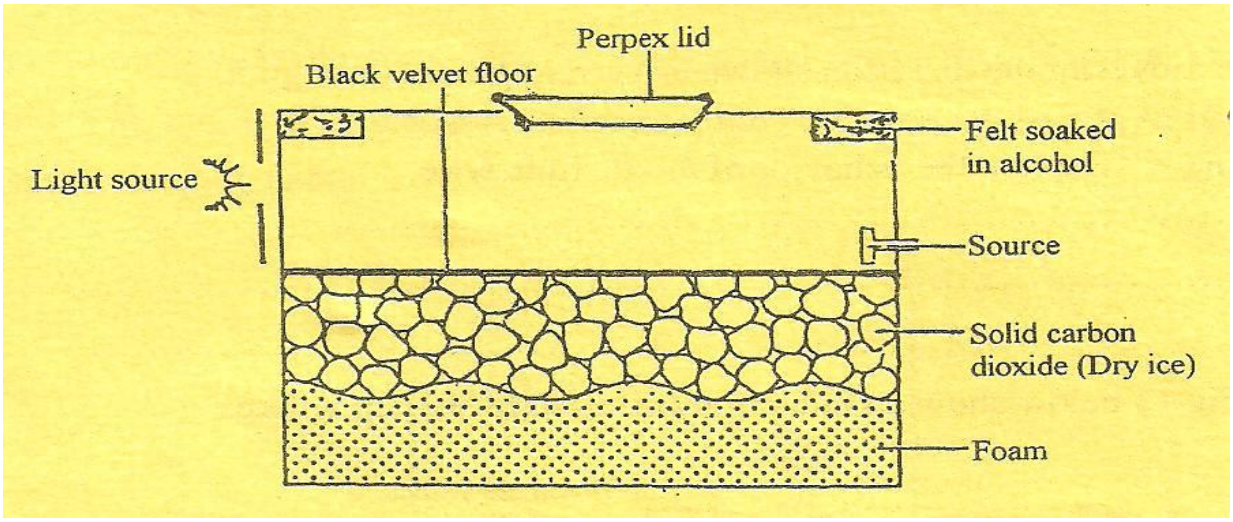
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17. Explain why carbon-14 ($^{14}_{6}C$) is radioactive while carbon $^{12}_{6}C$ is not. **(1 mark)**

……

……

(b) The figure below shows features of a diffusion cloud chamber used for detecting radiations from a radioactive source.



Explain how the chamber works when a radioactive particle is introduced at the source. **(2 marks)**

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……

(c) **(i)** What is the purpose of solid carbon (iv) oxide. **(1 mark)**

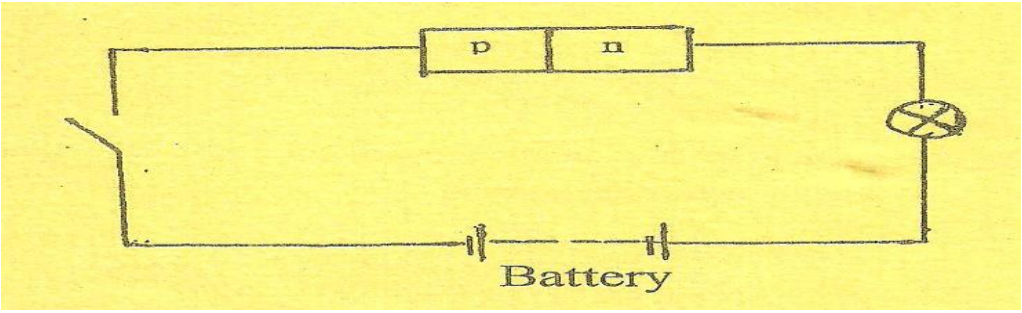
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(d) **(i)**Using a diagram explain how doping produces a p-type semi-conductor. **(3 marks)**

(ii) What is biasing? **(1 mk)**

(iii) The diagram below shows a circuit with a p-n junction and a very low power bulb.



State with reason the observations made on the bulb when the switch is closed. **(2 marks)**

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232/3

PHYSICS

PAPER 3 (PRACTICAL)

CONFIDENTIAL

Question 1

1. *Rectangular glass block.*
2. *Optical pins.*
3. *Soft board.*
4. *Protractor*
5. *30cm ruler.*
6. *Plain paper*
7. *Plane mirror*
8. *Some dry sand.*
9. *Water in a measuring cylinder labelled L.*
10. *Vernier calipers. (To be shared).*
11. *Half metre rule.*
12. *Tissue paper.*
13. *Weighing machine (to be shared).*
14. *A boiling tube*

Question 2

1. *250ml beakers.*
2. *Bunsen burner.*
3. *Thermometers.*
4. *Tripod stand and wire gauze.*
5. *Stopwatch*
6. *Measuring cylinder (100ml) and water.*

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

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

232/3

PHYSICS

PAPER 3

PRACTICAL

TIME: 2 ½HOURS

INSTRUCTIONS TO CANDIDATES

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

b) *Answer **ALL** the questions in the spaces provided in the question paper.*

c) *You are supposed to spend the first 15 minutes of the 2 $^{1}/_{2}$ hours allowed for this paper reading the whole paper carefully before commencing your work.*

d) *Marks are given for clear record of observations made, their suitability, accuracy and the use made of them.*

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

f) ***Non-programmable** silent electronic calculators and KNEC mathematical table may be used.*

FOR EXAMINERS USE ONLY

QUESTION	MAX. SCORE	CANDIDATES SCORE
1	20	
2	20	
TOTAL	40	

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

QUESTION 1 (PART A)

You are provided with the following apparatus:

- A rectangular glass block.
- Four optical pins.
- A soft board.
- A protractor.
- 30cm ruler.
- 2 white plain papers.
- A plane mirror.
- A vernier calipers (to be shared)

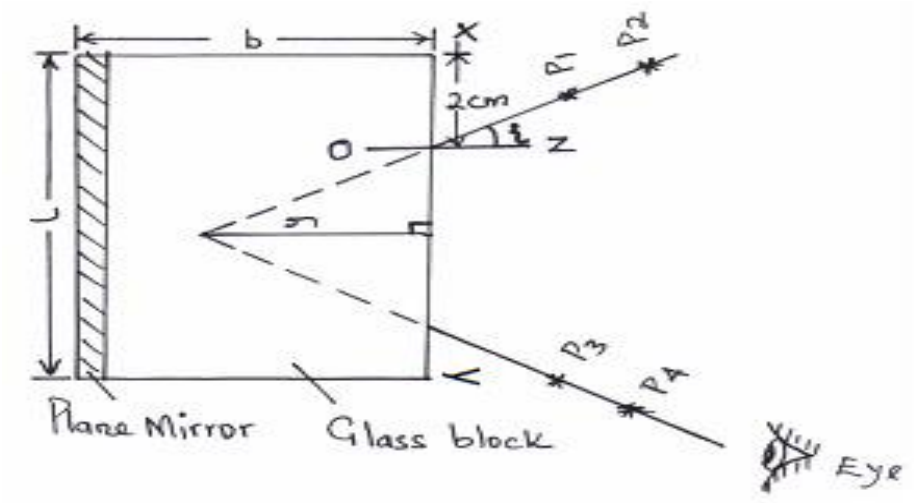
PROCEDURE

(a) Trace the outline of the glass block on the white paper.

(b) Draw a normal ON, 2cm from point X on side XY.

(c) Measure an angle (i) 10º from the normal.

(d) Place back the glass block on the outline and fix a plane mirror vertically along the length of the glass block on the opposite side of XY using a cello tape as shown in the figure below.



(e) Fix two pins P_1 and P_2 as shown in the figure.

(f) By observing image of P_1 and P_2, locate two pins P_3 and P_4 such that they appear to be in line with images of P_1 and P_2.

(g) Remove the pins and the block. Join P_3P_4 and produce the line to meet line P_1P_2 produced

(h) Measure the perpendicular distance y.

(i) Repeat the same for angles of 15º, 20º, 25º, 30º, 35º and 40º and record the results in table 2 below.

(NB: The paper work must be submitted together with the question paper).

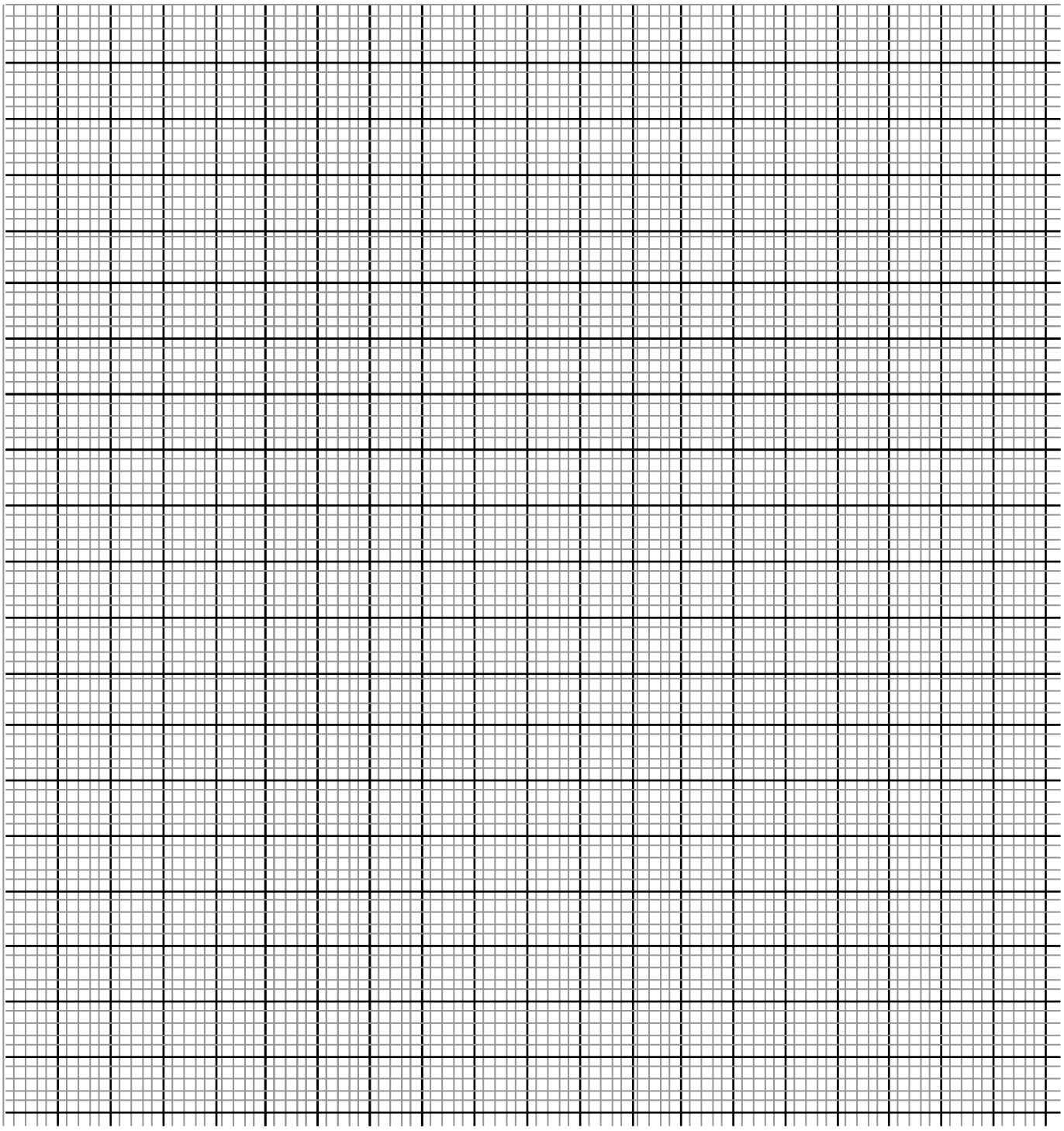
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Table 2

Angle i	10º	15º	20º	25º	30º	35º	40º
y(cm)							

(7marks)

(j) Plot a graph of y(cm) against angle i. **(5marks)**



i) Use the graph to determine y_o the value of y when i = 0º

y_o = …… cm **(1mark)**

ii) Measure and record the breadth (b) of the glass block

b = ……. Cm **(1mark)**

(ii) Determine the value of η given that

$$\eta = \frac{b}{y_O}$$ **(2marks)**

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PART B

You are provided with the following:-

- A boiling tube.
- Some dry sand.
- A liquid in a measuring cylinder labelled L.
- Half metre rule.
- A vernier calipers (to be shared).
- A weighing machine (to be shared).
- Tissue paper.
- A measuring cylinder.

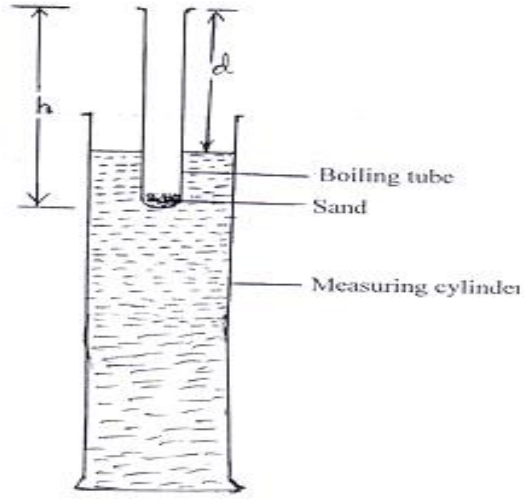
Proceed as follows:

a) Measure the length of the boiling tube.

h = ……. cm **(1mark)**

b) Put a little amount of sand in the boiling tube and place it in the measuring cylinder which is almost filled with liquid L. Add sand, little by little until the tube floats upright as shown in figure below.

Fig.1



Measure the length, d, of the boiling tube which is above the liquid using half metre rule

d = …… cm **(1mark)**

c).Determine the length, t, of the boiling tube which is immersed in the liquid using half metre rule

t = …….. cm **(1mark)**

d) Remove the boiling tube from the measuring cylinder, wipe it dry (on the outside) and measure its mass, m, including the sand inside.

m = …….. g **(1mark)**

e) Measure the external diameter, D, of the boiling tube.

D = …….. cm **(1mark)**

f)Determine the external radius, R.

R = …… cm **(1mark)**

g) Using the formula $m = 12\rho\pi R^2$, determine ρ for the liquid. **(2marks)**

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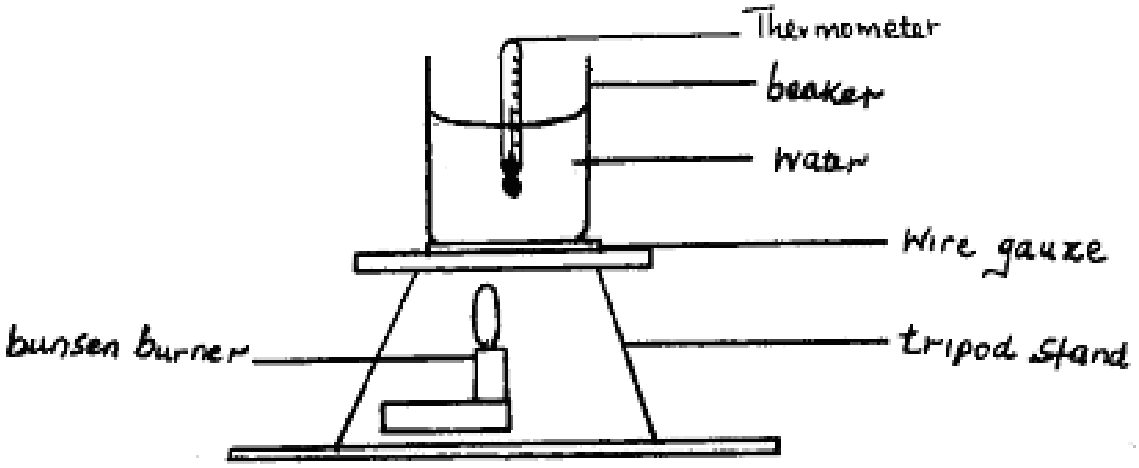
QUESTION 2

You are provided with the following:-

- A 250ml glass beaker.
- A Bunsen burner.
- A thermometer.
- A stopwatch.
- A Tripod stand and a wire qauze.
- A measuring cylinder 100ml.
- Water.

Procedure

Set the apparatus as shown in figure below.



(a) Measure 100cm³ of water and pour it into the beaker. Take the initial temperature of the water.

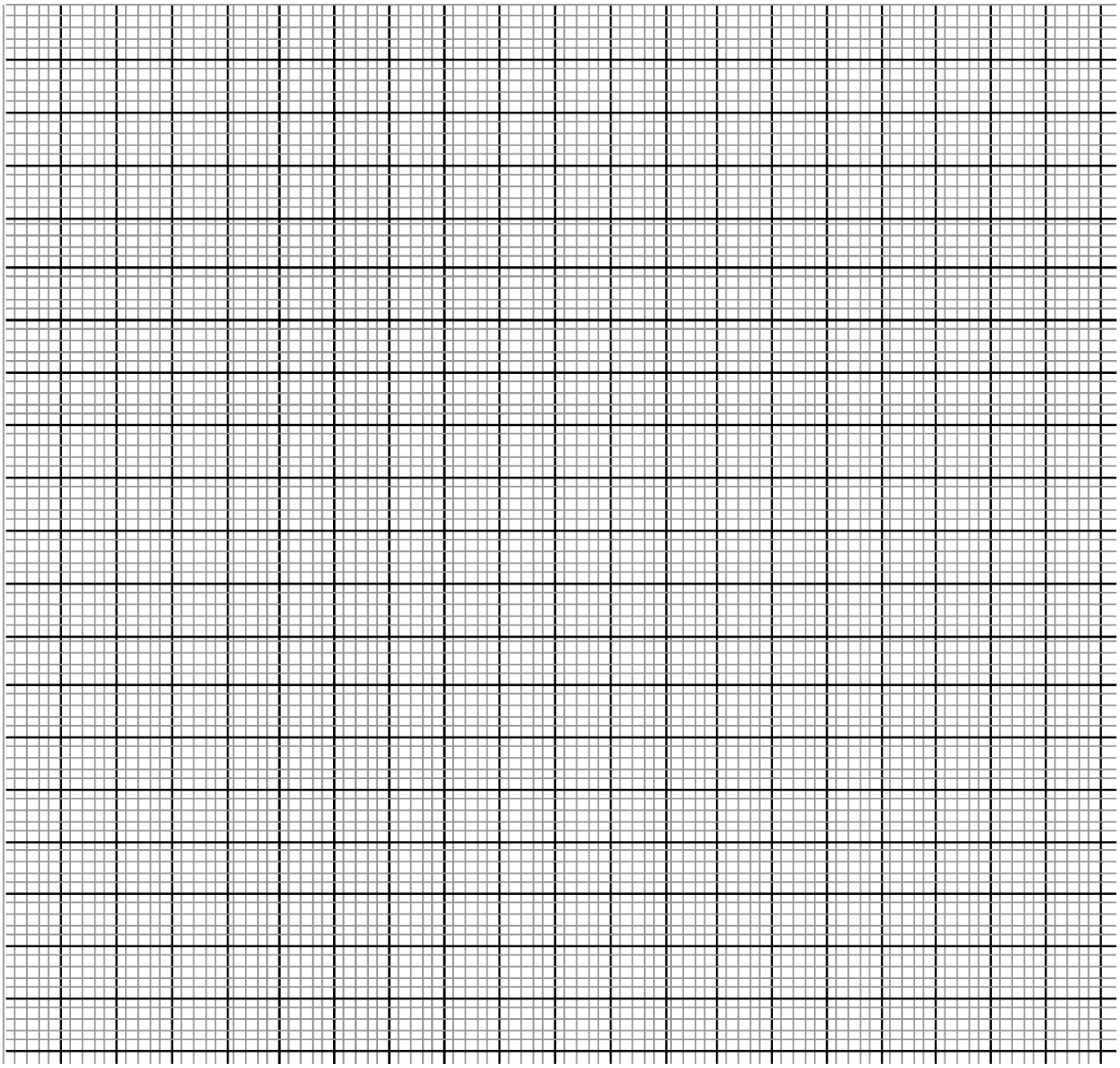
T_o =…… ºC. (1mark)

Now heat the water to a temperature of 75ºC. Switch off the gas tap and place a thermometer into the beaker and start the stopwatch when the temperature is 65ºC. Take the temperature TºC of water every two minutes. Record your results in the table 3 below. **(7marks)**

Table 3

Time, t(minutes)	2	4	6	8	10	12	14
Temperature, T(ºC)							
$(T - T_o)$ (ºC)							
Log $(T - T_o)$							

(b) Plot a graph of Log $(T - T_o)$ against Time (t). **(4marks)**



(c) From the graph find the value of Q given that $Q = \log (T - T_o)$ when $t = 0$. **(1mark)**

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(d) Determine P, where P is the antilog of Q. **(1mark)**

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(e) Calculate the temperature of the surrounding T_S using expression $P = 65 - T_S$. **(2marks)**

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KCSE JOINT MOCK

SERIES 001

NAME…….

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

443/1

AGRICULTURE

Paper 1

Time: 2 Hours

INSTRUCTIONS TO CANDIDATES:

a) *Write your* ***name*** *and* ***index number*** *in the space provided.*
b) ***Sign*** *and* ***write the date*** *of examination in the space provided*
c) *This paper consists of three section* ***A, B*** *and* ***C****.*
d) *Answer all questions in section* ***A*** *and* ***B****.*
e) *Answer any two questions in section C*
f) *All the questions should be answered in the spaces provided.*

FOR EXAMINERS USE ONLY

SECTION	QUESTINS	MAX SCORE	CANDIDATES SCORE
A	1-16	30	
B	17-20	20	
C	21	20	
	22	20	
	23	20	
TOTAL		90	

SECTION A (30MARKS)

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

1. Give four advantages of intensive farming. **(2mks)**

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2. State four benefits of agroforestry to a maize crop. **(2mks)**

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3. Name the plant part used for vegetative propagation of KJYTRVGH each of the following plants.

(i) Sisal **(½ mk)**

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(ii) Pyrethrum **(½ mk)**

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(iii) Sweet potatoes **(½ mk)**

……

(iv) Sugar cane **(½ mk)**

……

4. State four cultural ways of controlling couch grass **(2mks)**

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5. Name three sources of underground water **(1½mks)**

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6. State three causes of blossom end of rot in tomatoes **(1½mks)**

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7. Give three qualities of a good green manuring plant **(1½mks)**

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8. State four reasons for practicing minimum tillage. **(2mks)**

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9. Name four farm records that should be kept by a poultry farmer. **(2mks)**

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10. Give three ways in which pastures are classified **(1½mks)**

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11. State four ways in which land reforms can be implemented in Kenya. **(2mks)**

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12. State four factors that determine the stage at which a crop is harvested. **(2mks)**

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13. Give four beneficial effects of weeds to a farmer. **(2mks)**

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14. Give four advantages of practicing crop rotation. **(2mks)**

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15. Name four methods of controlling pests. **(2mks)**

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16. Distinguish between intensive hedgerow and border planting forms of agroforestry **(2mk)**

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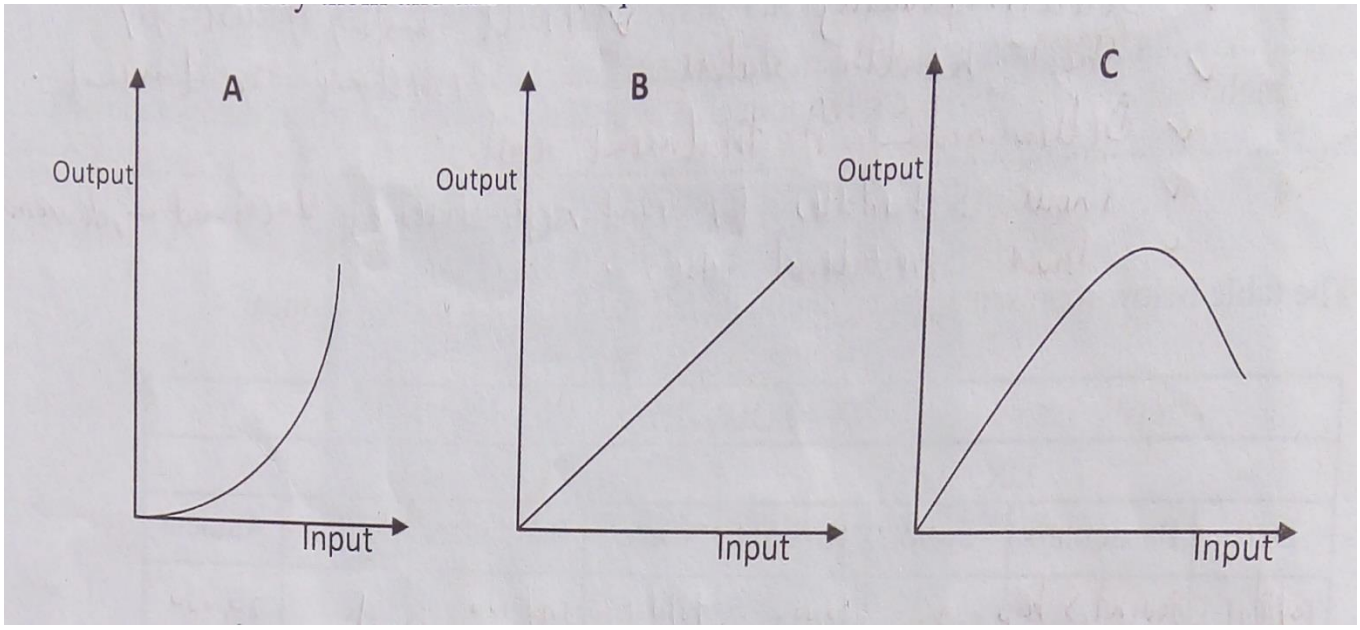
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SECTION B (20 MARKS)

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

17. The following illustrations show different production function curves in agricultural economics. Study them and answer the questions which follows;



(a) Identify the production function curves labeled A, B and C

A ……..…….. (1mk)

B …….…… (1mk)

C. ……. (1mk)

(b) What does the law derived from the production function labeled C state? **(1mk)**

……

(c)

(i) Which one of the three production functions curves is rare in Agriculture **(1mk)**

……..

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

……..

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

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

(a) Calculate the per capita income for each country show your working **(2mks)**

……

……

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

……..……..

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

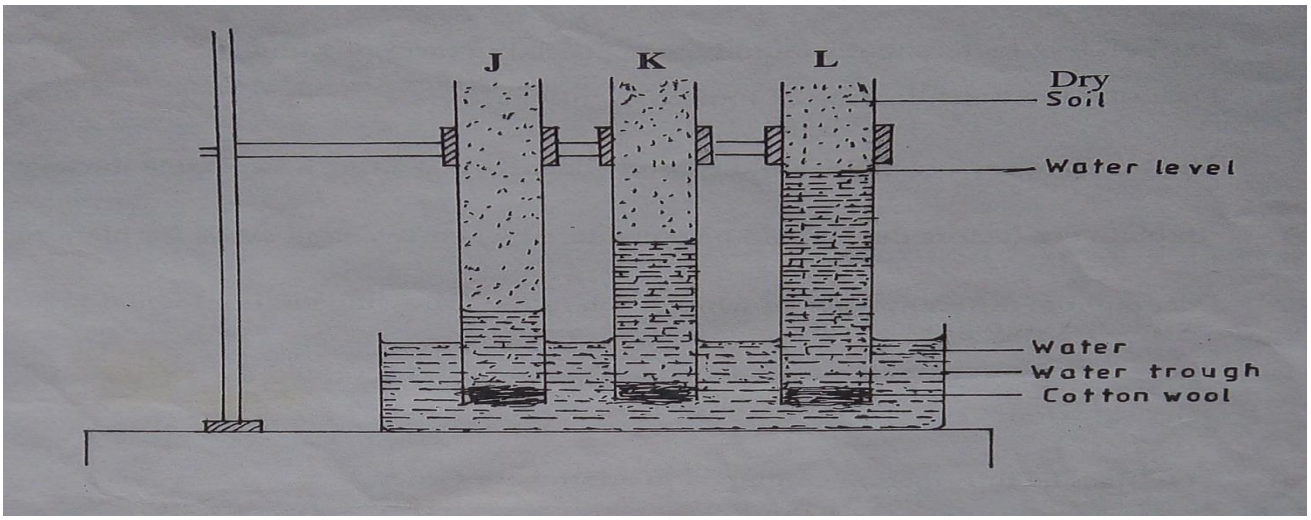
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(d) How can agriculture increase the gross domestic product of a country **(1mk)**

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……..…….

19. The diagram below illustrate investigation on a property of soil using soil samples labeled J, K and L.



(a) Name the property of soil being investigated **(1mk)**

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(b) What is the relationship between the soil property above and the size of soil particles? **(1mk)**

……

(c) Which soil sample would be suitable for growing paddy rice? **(1mk)**

……..……

(d) Give a reason for your answer in (c) above **(1mk)**

……..

20. The following is a list of nutrients: copper, calcium, nitrogen, molybodenum, zinc, phosphorus, carbon, sulphur, iron and magnesium. Which of the above nutrients are;

(a) Macro – nutrients **(1mk)**

……..

(b) Micro – nutrient **(1mk)**

……..

(c) Fertilizer elements **(1mk)**

……..

(d) Liming elements **(1mk)**

…….

(e) Primary macro nutrients **(1mk)**

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SECTION C

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

21.

(a) Explain five functions of a live fence in a farm. **(5mks)**

(b) Describe various risks and uncertainties in crop farming **(10mks)**

(c) State five functions of young farmers clubs in Kenya **(5mks)**

22.

(a) Explain five factors that should be considered in farm planning **(10mks)**

(b) Explain the different ways in which each of the following environmental factors influence crop production.

(i) Wind **(5mks)**

(ii) Temperature **(5mks)**

23.

(a) Outline the information contained in a purchase order. **(5mks)**

(b) Describe the harvesting of tea **(7mks)**

(c) Explain the cultural methods of controlling soil erosion **(8mks)**

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SERIES 001

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443/2

AGRICULTURE

PAPER 2

2 HOURS

INSTRUCTIONS TO CANDIDATES.

(i) *Write your **name** and **index number** in the spaces provided.*
(ii) *This paper consists of three sections **A, B** and **C.***
(iii) *Answer **ALL** the questions in section A and B and any two questions in section C.*
(iv) *All answers must be written in the spaces provided.*
(v) *Do not remove any pages from the question paper.*

FOR EXAMINER`S USE ONLY

Section	Questions	Maximum score	Candidates score
A	1-18	30	
B	19-22	20	
C		20	
		20	
	Total Score	90	

SECTION A (30 MARKS)

Answer all questions in this section in the spaces provided

1. Give two uses of the roof of cattle dip tank. **(1mk)**

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2. State two causes of soft shelled eggs. **(1mk)**

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3. Give four signs of farrowing in a sow. **(2mks)**

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4. Outline four causes of cannibalism in a flock of layers in the deep system**.** **(2mks)**

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5. State four maintenance practices carried out on a Jack plane. **(2mks)**

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6. State three uses of solar power on the farm. **(1½ mks)**

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7. Name four types of layer breeds of chicken. **(2mks)**

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8. Give the distinguishing characteristics of Essex and Wessex Saddle back breed of pigs.**(1mk)**

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9. Give four symptoms of brucellosis in cows**.** **(2mks)**

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10. State four reasons why inbreeding may be useful in livestock production. **(2mks)**

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11. Give two effects of Tsetse flies on livestock. **(1mk)**

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12. Name two types of rabbit houses. **(1mk)**

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13. List four types of vaccines used in livestock production. **(2mks)**

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14. Name four types of pests that affect bees. **(2mks)**

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15. Outline three reasons why farmers dehorn cattle**.** **(1^1/2mks)**

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16. (a. Differentiate between cropping and harvesting as used in fish production. **(1mk)**

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b. Name two species of fresh warm water fish**.** **(1mk)**

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17. Give four reasons for steaming up dairy cattle. **(2mks)**

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18. List four post milking practices. **(2mks)**

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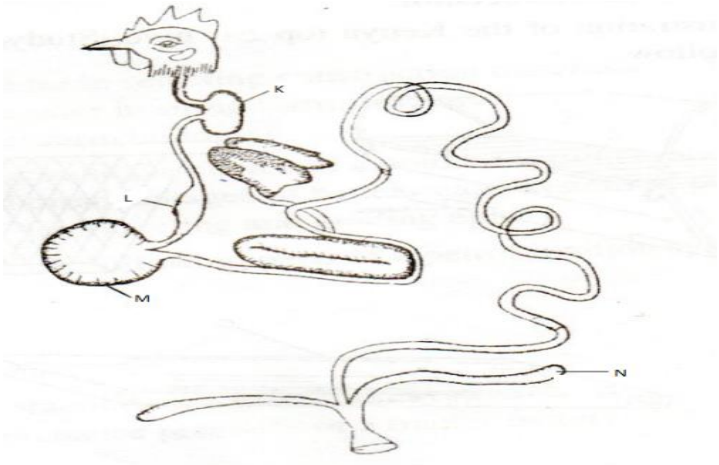
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SECTION B (20 Marks)

Answer all questions in this section in the spaces provided.

19. The diagram below shows the digestive system of a chicken. Study it and answer question that follow.



(a) . Identify the parts labeled **K.L,M** and **N** above. **(2mks)**

K……

L……

M……

N……

(b) . Give the function of the part labeled **M** that makes it efficient in digesting food. **(2mks)**

……

(C) . Give two characteristics of the part labeled M that make it efficient in digesting food.**(1mk)**

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20. Study the illustration below showing an animal suffering from a disease. Study it and answer question that follow.



(a) . Identify the disease the animal is suffering from. **(1mk)**

……

(b. What causes the disease shown above? **(1mk)**

……

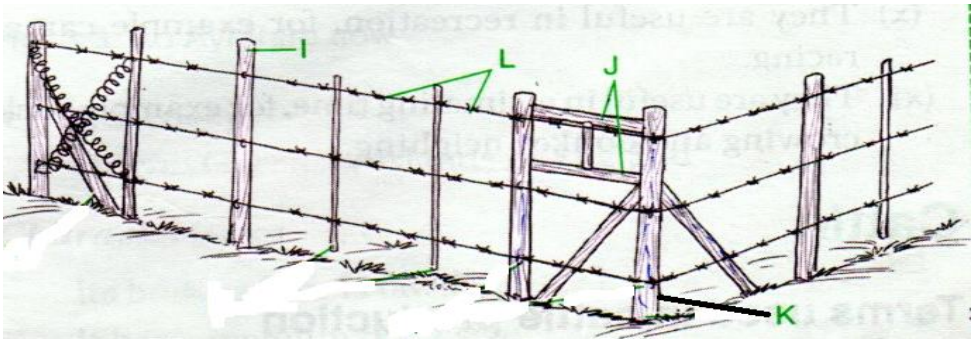
(c. Give three symptoms shown by a cow suffering from the disease above. **(3mks**

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21. Study the farm structure shown below and answer questions that follow.



(a) . Identify the structure shown above. **(1mk)**

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(b) . Name the parts labeled **I,J,K** and **L**. above. **(2mks)**

I.....

J.....

K.....

L.....

(c) . Give two disadvantages of using the structure above in pasture fields. **(1mk)**

.....

22. The diagram below shows a stir up pump. Study it and answer questions that follow.



(a. Name the parts labeled **A,B,C** and **D.** **(2mks)**

A.....

B.....

C.....

D.....

(b. State two maintenance practices that should be carried out on the equipment illustrate above **(2mks)**

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(c. State one disadvantage of using the equipment above in controlling ticks**.** **(1mk)**

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SECTION C (20 Marks

Answer any TWO questions in this section in the spaces provided.

23. (a) .Describe Newcastle disease under the following sub headings

(i) Causal organism **(1mark)**

(ii) Symptoms **(6marks)**

(iii) Control measures **(3marks)**

(b) State and explain the requirements of a deep litter home in poultry **(10marks)**

24. (a) . Describe the procedure of training a calf to take milk from a bucket in artificial calf Rearing**.** **(5marks)**

(b). Outline seven factors considered when selecting eggs for incubation. **(7marks)**

(c) Describe management practices that would ensure clean milk production in a dairy farm. **(8marks)**

25. (a). Describe the symptoms of livestock infection in livestock **(6marks)**

(b) Explain the rearing of chicks from 1 day old to 8 weeks old. **(14 marks)**

KCSE JOINT MOCK

SERIES 001

NAME…….

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565/1

BUSINESS STUDIES

PAPER 1

TIME: 2 HRS

INSTRUCTIONS

1. *Write your name, index number, school and signature in the spaces given above.*
2. *Sign and write the data of the examination in the spaces provided above*
3. *Answer all the questions.(25 questions)*
4. *All answers should be written in the space provided below each question.*
5. *Candidates should check the question paper to ascertain that all the questions are printed.*
6. *All questions should be answered in English.*

FOR OFFICIAL USE ONLY.

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

Question	16	17	18	19	20	21	22	23	24	25
Marks										

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QUESTIONS

1.Situma insured his house worth sh. 800,000 for sh. 700,000 and unfortunately the house was destroyed by an inferno and he sustained losses worth sh. 600,000. Calculate the amount of money that Situma should claim from the insurance company as compensation and comment. **(4 marks)**

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2.Outline **four** importance of a Bonded warehouse to the government. **(4 marks)**

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3.Outline **fou**r reasons why Business Studies should be offered as a discipline in secondary schools. **(4 marks)**

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4. State ***four*** sources of monopoly power. **(4 marks)**

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5.The following information relates of Jabez Enterprises for the year ended 31.12.2014.

	Shs.
Capital 31/12/2014	248,000
Net loss for the year	61,000
Capital as at 1/1/2014	89,000
Drawings for the year	57,000

Required:

Calculate the additional capital during the year. **(4 marks)**

6.Indicate the effects of the following transactions below on the value of the business assets, liabilities and capital. Use (+) for increase, (–) for decrease and (NC) for no effect. **(4 marks)**

	Transaction	**Effect of transaction**		
		Assets	**Liabilities**	**Capital**
(a)	Opened a Bank A/C and deposited cash			
(b)	Proprietor invested cash into the business			
(c)	Owner received a cheque from a debtor			
(d)	Took a Bank loan to pay creditors			

7.Okhiama a metal supplier carries out a Business in Mombasa County. Outline **four** methods that they can adopt to fix the prices of all their products. **(4 marks)**

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8.Explain the following documents used in international trade. **(4 marks)**

(a) Foreign Exchange Allocation License (F.E.A.L)

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(b) Letter of credit

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(c) Certificate of origin

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(d) Bill of lading

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9. State four benefits associated with the construction of the Standard Gauge Railway (SGR) to the Kenyan economy **(4 marks)**

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10. By use of a well labeled diagram, illustrate the kinked demand curve in an Oligopolistic market situation **(4 marks)**

11. Navakholo enterprises had the following ledger account balances as at 31st December, 2020.

	shs.	
Purchases	3,880	
Sales		3,350
Purchases returns		150
Sales returns	160	
Debtors	2,550	
Bank overdraft		3,100
Wages	800	
Cash	960	
Capital		1,750

Required: Prepare Navakholo enterprises' Trial Balance as at 31st December, 2020.. **(4 marks)**

12. Given the following books of original entry, identify the source documents used for each.

(4 marks)

Book of original entry	Source document
(a) Purchases journal	
(b) Cash book	
(c) Sales return book	
(d) Sales journal	

13. Give four non - tax sources of revenue to the government. **(4 marks)**

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14. State four characteristics of good money. **(4 marks)**

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15. State four characteristics of labour as a factor of production **(4 marks)**

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16. Define the following terms **(4 marks)**

a. Scarcity

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b. Choice

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c. Scale of preference

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d. Opportunity cost

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17. Highlight four circumstances under which personal selling is appropriate **(4 marks)**

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18. Outline **four** personal attributes of an office staff. **(4 marks)**

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19. Highlight **four** benefits of using mobile money transfer services as a means of payment. **(4mks)**

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20. State **four** barriers to effective communication in an organizational meeting. **(4 marks)**

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21. Outline four measures that consumers may adopt to protect themselves from unscrupulous business practices. **(4 marks)**

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22. State **four** ways in which businesses may maintain a healthy business environment. **(4 marks)**

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23.State four channels that M-Zuri a flower firm in Nakuru may use to sell her products to customers in the U. S.A. **(4 marks)**

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24. The following information was extracted from the books of Kaptagat traders for the year ended 31/12/2020

Shs

Sales	4,800,000
Opening stock	800,000
Closing stock	1,200,000

Gross profit margin is calculated at 25%

Required: Prepare a trading account for the period end 31/12/2020. **(4 marks)**

25.The table below shows the price of petrol per litre for various years.

Year	Pump price
2017	98
2018	102
2019	112
2020	120
2021	127

Calculate the consumer price index using year 2017 as the base year. **(4 marks)**

Year	Price	CPI
2017	86	*100*
2018	92	*106.97*
2019	108	*125.58*
2020	120	*139.53*
2021	127	*147.67*

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

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

565/2

BUSINESS STUDIES

PAPER 2

2 HOURS 30 MINUTES.

INSTRUCTIONS TO CANDIDATES

*a) This paper consists of **six** questions*

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

c) Write your answers in the answer booklet

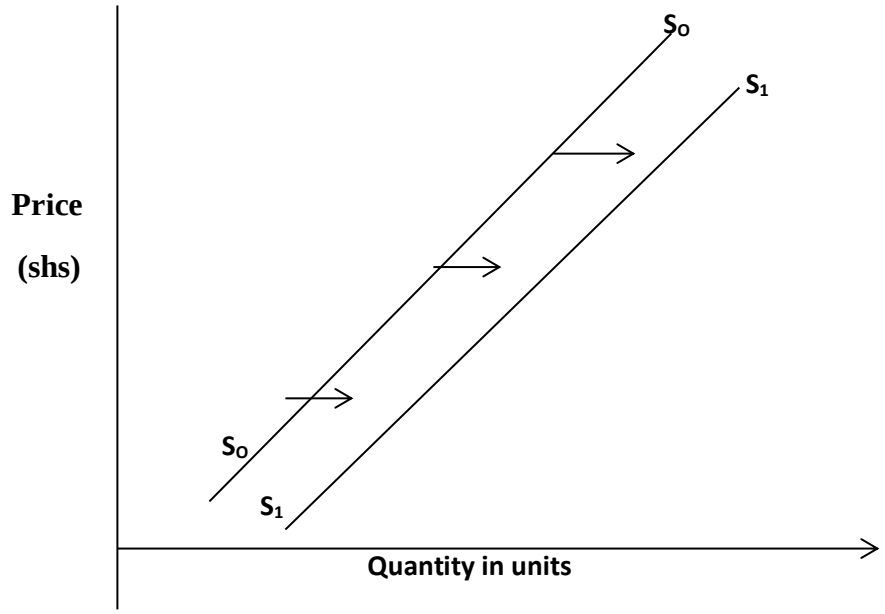
d) All questions carry equal marks

QUESTION	1	2	3	4	5	6	**TOTAL**
MARKS SCORE							

QUESTIONS

1. (a). Outline **five** factors that may lead to growth of entrepreneurship in Kenya**.** **(10mks)**

(b) . The diagram below illustrates a shift of the supply curve.



Explain **five** factors that may bring about the above shift in supply from S_oS_o to S_1S_1. **(10mks)**

2. (a). Outline **five** differences between partnership and co – operative forms of business units.

(10mks)

(b). Explain **five** benefits that Kenya may enjoy as a member of East African community. **(10mks)**

3. (a). Explain **five** benefits of pooling of risks to an insurer. **(10mks)**

(b). The information below relates to Navakholo Traders. Prepare a duly balanced three column cash book . **(10mks)**

2020

February 1: balance b/d cash sh 40,000 and a bank overdraft of sh. 270,000

February 3: settled Beta creditors account of 80,000 by cheque, having deducted 6% cash discount.

February 7: received sh. 60,000 cash from Zoom traders.

February 15: deposited sh. 45,000 to the bank

February 20: withdraw sh. 92,000 from the bank for private use.

February 24: received sh. 199,500 from Delta by cheque after allowing 5% cash discount.

February 28: banked all the cash leaving only 15,000 in the office.

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4. (a) Explain **five** measures that may be taken by the Government to solve unemployment problems. **(10mks)**

(b). Explain **five** factors that hinder economic development of Kenya despite the government's spending on the planning exercise. **(10mks)**

5. (a). Explain **five** uses of national income statistics **(10mks)**

(b) . Explain **five** roles that the central bank of Kenya plays as a government's bank. **(10mks)**

6. (a) Outline **five** features of hypermarkets. **(10mks)**

(b) The following information relates to HZ enterprises for the year ended 31/12/2021

Hz enterprises
Trial balance
As at 31/12/2021

Items	Dr(sh)	Cr(sh)
Premises	4,000,000	
Furniture	1,500,000	
Capital		4,900,000
Net profit		50,000
Stock	100,000	
Debtors	200,000	
Drawings	60,000	
Bank loan		1,900,000
Bank	970,000	
Cash	360,000	
Creditors		340,000
	7,190,000	**7,190,000**

Required: a). Hz enterprises balance sheet as at 31/12/2021 **(4mks)**

b).Calculate i). Capital invested **(1mk)**

ii). Borrowed capital **(1mk)**

iii). Capital employed **(2mks)**

iv). Working capital **(2mks)**

KCSE JOINT MOCK

SERIES 001

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

101/1

ENGLISH

Paper 1

(Functional writing, cloze test and oral skills)

TIME: 2 Hours.

INSTRUCTIONS TO CANDIDATES.

*1. Write your **name, class, Admission number, signature and date** in the spaces provided above.*

*2. Answer **ALL** questions in this question paper.*

*3. Write **ALL** your answers in the spaces provided.*

*4. Write legibly and neatly preferably in **blue ink.***

For Examiner's use only.

Question	Maximum Score	Student's Score	Examiner's Initials
1.	**20**		
2.	**10**		
3.	**30**		
Total	**60**		

1. FUNCTIONAL WRITING.

You are the chairperson of your school's Drama Club. There is a performance of the Literature set books by **Mwalimu Agency Theatre Group** in your school scheduled to be held in two weeks' time. Write a letter to a neighbouring school inviting their candidate class to attend the performance. In your letter briefly, describe the directions to your school. **(20 marks)**

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CLOSE TEST. **(10 MARKS)**

Fill in the blank spaces in the passage below with the most appropriate word.

Coronavirus disease (COVID-19) is an (i)…… disease caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will (ii)…… mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with (iii)…… medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop (iv)……illness.

The best way to prevent and slow down (v)……is to be well informed about the COVID-19 virus, the disease it causes and how it spreads. (vi)…… yourself and others from infection by washing your hands or using an (vii)…… based rub frequently and not touching your face. The COVID-19 virus spreads primarily (viii)…… droplets of saliva or discharge from the nose when an infected (ix)…… coughs or sneezes, so it's important that you also (x)…… respiratory etiquette (for example, by coughing into a flexed elbow)

3. Oral Skills. **(30 marks)**

a) Read the oral narrative below and answer the questions that follow.

The Foolish Hyena.

A long time ago, the Hare and the Hyena lived together as friends. The Hare was craftier than the Hyena. On several occasions, the Hare tricked the Hyena and put him in problems. One day, they planned to go on a journey and because the journey was long, they needed food. The Hare and the Hyena each had his own food. They began the journey very early in the morning. They travelled until they came to a river. As the Hyena was looking the other side, the Hare hurriedly hid his food and picked a stone. He then threw that stone in the river and deceived the Hyena that he had thrown his food into the river. He told the hyena to do the same. The Hyena foolishly got his food and threw it into the river. They continued with their journey until they felt hungry. Therefore, when they came to the next river, the Hare went into the river and washed his hands. When the hyena saw the Hare wash his hands, he also went in and washed his. Then the Hare asked him, "you are washing hands, what do you want to eat? Then the Hyena also asked the Hare, "you have also washed the hands, what do you want to eat? Then the Hare replied, "I want to eat my food." Then he got his food and began to eat. When the Hyena asked him for something to eat, the Hare refused saying, "you threw your food into the river."

The Hyena said, "So you hid your food and deceived me that you had thrown it into the river." The Hyena had to stay hungry until they reached where they were going.

i. What would you do in order to capture the audience's attention before you begin to tell this story? **(2marks)**

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ii. Explain three ways in which you would know that your audience in this story is fully participating in the performance of this narrative. **(3 marks)**

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How would you perform this line, "...what do you want to eat?" **(2 marks)**

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b) Identify the silent letters in the words provided below. **(4 marks)**

i. Phlegm. .....
ii. Sandwich. .....
iii. Debris. .....
iv. Sovereign. .....
v. Sovereign. .....

c) You are listening to a speech on drug and substance abuse by your guidance and counselling teacher. After the speech, the teacher calls you on stage to summarise what she has been talking about. How would you ensure that your presentation is effective? **(6 marks)**

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d) For each of the following sentences, indicate whether you would with a rising or a falling intonation. **(4 marks)**

i. Why are you sleeping in class? .....

ii. Take off your sweater. .....

iii. What a shame to sleep during the lesson! .....

iv. Can I go take some water please? .....

e) The underlined part indicates the stressed word in the sentences below. Explain the meaning of each sentence. **(3marks)**

i. <u>You</u> are being called by the teacher.

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.....

ii. You are being <u>called</u> by the teacher.

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iii. You are being called by the <u>teacher</u>.

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<u>f) The following is a conversation between a father and his son. Read the conversation and answer the questions that follow.</u>

Son: *(bangs the door)* Dad, I want some money right now.

Father: *(stretching his hand to greet the son)* Good afternoon my son, how was your ...

Son: Dad, did you hear me! I said I want some money.

Father: *(looking surprised)* I heard you, but is that how you talk to your elders?

i. Identify the shortcomings in the son's conversational skills. **(3 marks)**

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ii. What should the son do to improve his conversational skills? **(3 marks)**

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KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

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

ENGLISH

101/2

(Comprehension, Literary Appreciation and Grammar)

2 ½ hours

INSTRUCTIONS TO CANDIDATES

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

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

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

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

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's Score
1	20	
2	25	
3	20	
4	15	
Total Score		

Q1. COMPREHENSION PASSAGE (20MKS)

Read the following passage and answer the questions that follow.

You may think that expecting food to change your life is too much to ask. But have you considered that eating the right food at the right time will increase your energy, help you manage weight and ward off major illnesses?

Researchers have found that eating a meal with plenty of protein leaves you feeling more satisfied for longer when compared to a meal loaded with low - quality carbohydrates. Your body takes longer to digest protein, leading to a gradual increase in blood sugar. The high protein breakfast will therefore carry you through the morning and, more importantly, through your tea break. Many high - carbohydrate meals are absorbed quickly and send blood sugar on a roller coaster ride, taking your appetite with it and depleting your energy.

Many foods contain antioxidants, but fruits and vegetables may be the richest source. Behaving like chemical warriors, antioxidants neutralize molecules known as free radicals before they damage arteries and body cells. This protects you from heart diseases, high blood pressure, cancer and diabetes; you can now see why antioxidant foods should be consumed in generous portions. Actually, forget pills - antioxidants work best when consumed in foods. In fact, nutritionists recommend that we eat five portions of fruit and vegetables a day. It's less daunting than it sounds: a portion equals a piece of fruit, three tablespoons of cooked vegetables or a glass of flesh juice.

And do you desire to relieve yourself of some baggage? Calcium is the latest weight - loss star to appear on the scene. Scientist stumbled on its magic by accident. From a study that measured the blood pressure of obese people, it was discovered that those who took one large tub of yoghurt a day in their diet lost an average of eleven pounds of body fat in one year, even though they did not eat less.

A follow - up study found that people on a high - calcium diet lost more weight and fat than did people on a low calcium diet -and again, both consumed the same number of Calories. Researcher* believe calcium encourages fat cells to stop "getting fatter". Instead, the cells burn extra fat without you having to go anywhere near a gymnasium.

It probably sounds strange to say that you can eat more in order to lose weight. Obviously, the question you should ask immediately is, "Eat more of what?" We are talking about foods rich in fibre. They have what is referred to as low energy density; that translates to few calories relative to weight. This means that you can down a mountain without fear of calorie overload.

Fibre also aids weight loss because it's filling. Most high fibre foods take a lot of chewing, triggering your body's fullness sensors. Moreover, you absorb the food more slowly so you feel full longer. Will the wonders of food ever cease? Not if researchers in nutrition keep up their pace. Let them keep the good news flowing - such as the fact that we don't have to starve ourselves to lose weight and keep disease at bay.

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

Questions

(a) From the information given in the first paragraph, how can you improve your life**?(2mark)**

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……

……

(b) In not more than 35 words, summarize the effects of eating carbohydrates. **(4 marks)**

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(c) Explain how free radicals contribute to the occurrence of high blood pressure and cancer. **2 mks)**

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a) In what two forms can antioxidants-'be consumed? **(2mks)**

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e) "In fact nutritionists recommend that we eat five portions of fruits and vegetable a day." Rewrite the sentence above as a question without changing the meaning, beginning: Don't…… **(1 mark)**

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(f) What is the attitude of the author towards calcium as a weight-cutting measure? **(2mks)**

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(g) According to the passage, how can you use up excess fat? **(2mks)**

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(h) Identify an instance of irony in the passage. **(2mks)**

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

a) Daunting –

b) Baggage –

c) Down to earth –

2. H.R. Ole Kulet, *Blossoms of the Savannah*

Read the excerpt below and then answer the questions that follow. **(25 marks)**

"What do you mean?" he asked, suddenly sitting up. "I hope you don't imply that our culture comes second. Do you?"

"Not really, my husband," she said ruefully, beating a hasty retreat. "Our culture is everything and it rules our lives."

"Good," he said authoritatively. "Now listen, you must immediately start counselling the girls to understand their roles as potential wives of the men of Nasila. Prepare them to appreciate and and accept their future responsibilities as mothers and home builders."

"I'll do that my husband," she said quietly.

"One other thing," he said evenly. "I'll ask Simiren to request that young teacher called Parmuat, who is of our clan and therefore a brother to the girls to find time to teach them a few home truths. After that we shall call *enkamuratani* to play her part before we give them away."

Those were the words, whose utterance she dreaded. And once uttered, she knew, the words instantly became an inviolable edit. Now that he had spoken, the pain was already harrowing and torment in her unbearable. She was torn between her love for her daughters and her dutiful role of a faithful and obedient wife of Ole Kaelo. But in her culture there was no room for dissent, especially if the subject was in conformity with the culture. Who would side with her if she were to oppose the cultural rituals?

Her only ally would be the woman the elders of Nasila contemptuously called *entangoroi* or the wasp. Those who honoured her called *Emakererei* , for she was said to have attended Makerere university in Uganda., where she attained her degree in Veterinary Science. Mama Milanoi knew her well. Her actual names were Minik ene Nkoitoi. Outside Nasila, she was respected and honoured. At thirty, she was already managing an expansive government sheep ranch reputed to hold hundreds of thousands of sheep, about one hundred kilometres away from Nasila. Under her were hundreds of employees who worked at the ranch in Nasila, however, she was regarded as the devil incarnate. She was hated and reviled for criticising and campaigning vigorously against traditions that she said abused the rights of the girl child namely girls' circumcision and early marriages. And that had put her in direct collision with the people of Nasila. If she aligned herself with a person who Nasila regarded as having such an obnoxious reputation, where would her marriage stand?

a) Place the excerpt in its immediate context. **(4 marks)**

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b) Why was Minik ene Nkoitoi regarded as a devil incarnate in Nasila? **(2 marks)**

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c) From the excerpt, what do we learn about Mama Milanoi? **(4 marks)**

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d) Explain two themes that are highlighted in the excerpt. **(4 marks)**

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e) "What do you mean?" {Rewrite in reported speech} **(1 mark)**

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f)Discuss the effectiveness of two aspects of style employed in this excerpt. **(4 marks)**

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g) Describe the mood at the end of the excerpt. **(2 marks)**

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h) Explain the meaning of the following expressions as used in the excerpt:

(4 marks)

i. Ruefully

……

ii. Contemptuously

……

iii. Devil incarnate

……

iv. Obnoxious

……

3. ***Read the poem bellow and then answer the questions that follow.***

My grandmother

She kept an antique shop – or it kept her.
Among Apostle spoons and Bristol glasses,
The faded silks, the heavy furniture,
She watched her own reflection in the brass
Salvers and silver bowls, as if to prove
Polish was all, there was no need for love.

And I remember how I once refused
To go out with her, since I was afraid.
It was perhaps a wish not to be used
Like antique objects. Though she never said
That she was hurt, I still could feel the guilt
Of that refusal, guessing how she felt.

Later, too frail to keep a shop, she put
All her best things in one long, narrow room.
The place smelt old, of things too long kept shut,
The smell of absences where shadows come
That can't be polished. There was nothing then
To give her own reflection back again.

And when she died I felt no grief at all,
Only the guilt of what I once refused.
I walked into her room among the tall
Sideboards and cupboards – things she never used
But needed: and no finger-marks were there,
Only the new dust falling through the air.

- Elizabeth Jennings

a) Identify the persona in the above poem. **(2 marks)**

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……..……

b) In note form, summarize what each stanza is talking about. **(4 marks)**

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c) Identify and briefly explain the use of any two images in the poem. **(4 marks)**

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d) What does the persona feel towards the subject matter? **(2 marks)**

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e) What do the following lines mean in the poem? **(2 marks)**

"too frail to keep a shop"

……

……

"Only the new dust falling through the air"

……

……

f)Describe the tone the persona uses in the poem above. **(2 marks)**

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g) Explain the paradox in the line**:** **(2 marks)**

-things she never used

But needed:

……

……

……

h) Explain the persona's sense of guilt. **(2 marks)**

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4 GRAMMAR

a) ***Fill in the blanks with the correct alternative from the choices given.*** ***(2 marks)***

i) Since the introduction of community policing in our estates_____ of theft have reduced. (Incidence / incident / incidents)

ii) An elephant looks after _____ calf. (it's / its)

b) ***Rewrite the following sentences as instructed.***

i) Someone is following us. (Rewrite in the passive voice)

……

ii) The victim and the neighbours did not speak to the reporters. (Begin; Neither .....)

……

iii) We light fire in the kitchen (Rewrite in past tense).

……

iv) Okoyo will not win the elections if he does not clear himself of the corruption charges. (Begin: unless .....)

……

c) ***Use the correct form of the word in brackets to complete each of the foI1owing sentences.*** **(3 marks)**

i) Owino did not know that a tree had _____ (strike) his house.

ii) Nobody expected the company to make _____ (lose)

iii) The three _____ (passer-by) were arrested.

d) ***For each of the following sentences replace the underlined phrasal verb with a word that has the same meaning*** (2 marks)

i) I wished to meet him after classes yesterday but he didn't <u>show up</u>.

……

ii) After a hard day's work, I sat on an easy chair and <u>dozed off</u>.

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(e) Provide the most suitable prepositions for the sentences below.

i) The soldier was punished_____ neglect of duty.

ii) The thief was disguised _____ an official from the Ministry of Education.

iii) They descended _____ a noble family.

iv) The doctor died _____Corona virus.

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

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

101/3

ENGLISH

Paper 3

(Creative Composition and Essays Based on Set Texts)

Time: 2 ½ hours

INSTRUCTIONS TO CANDIDATES

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

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

c) *Answer **three** questions only.*

d) *Questions **one** and **two** are **compulsory.***

e) *In question **three** choose only **one** of the optional texts you have prepared on.*

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

g) *Each of your essays must **not** exceed **450** words.*

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's Score
1	20	
2	20	
3	20	
Total Score		

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

1. .Imaginative composition (compulsory) **(20mrk)**

Either

a) Write a composition ending with……..”If I was given another chance, I would do things differently.”

or

b) Write an essay on the role of the youth in curbing the **covid-19** rising cases.

2. The Compulsory Set Text **(20 marks)**

Henrik Ibsen, *A Doll’s House*

“Desperate situations call for desperate measures.” Referring closely to *A Doll’s House,* write an essay in support of this statement.

3. Optional Set Texts

Either

(a) Short Story

Moran (Ed) Memories we Lost and Other Stories

Using illustrations from Benjamin Branoff’s, The Window Seat, write an essay on the chaos of urban life. **(20mks)**

Or

b) **Drama**

David Mulwa, *Inheritance*

“The citizens of Kutula have been betrayed by their leaders and have become disillusioned.” Basing your essay on David Mulwa’s play *The Inheritance,* write an essay to justify this statement.

Or

c) The Novel: **The Pearl by John Steinbeck**.

“Greed brings out the worst in us.” Show the truth of this statement with reference to John Steinbeck’s ‘The Pearl’

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KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

102/1

KISWAHILI

INSHA

Karatasi ya 1

MAAGIZO

a) *Andika jina lako na nambari ya usajili kwenye nafasi ulizoachiwa hapo juu.*

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

c) *Andika insha **mbili**. Insha ya kwanza ni ya **lazima.***

d) *Kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.*

e) *Kila insha isipungue maneno **400**..*

Kwa matumizi ya mtahini pekee

SWALI	UPEO	ALAMA
1.	20	
2.	20	
3.	20	
4.	20	
JUMLA	40	

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MASWALI

1. Suala la Afya ya akili ni suala nyeti na telezi na ambalo halijapewa umakini ufaao na wanajamii kutokana na unyanyapaa unaohusishwa nalo. Ukiwa Mhariri Mkuu wa Gazeti la Mzalendo, andika tahariri kuangazia vyanzo vya changamoto hii na kupendekeza suluhu mwafaka.

2. "Vijana ndio nguzo kuu katika kuimarisha mshikamano wa kitaifa". Thibitisha.

3. Tunga kisa kitakachodhihirisha matumizi ya methali ifuatayo:
Jifya moja haliinjiki chungu

4. Tunga kisa kitakachokamilika kwa maneno yafuatayo:
Kweli nimetambua kuwa, familia ni nguzo muhimu katika ujenzi wa jamii.

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

Hati Ya Kuhitimu Kisomo Cha Sekondari

102/2

KISWAHILI

Karatasi ya 2

LUGHA

Muda: Saa $2^1/_2$

Maagizo:

i) *Andika jina lako, nambari yako ya usajili na darasa katika nafasi ulizoachiwa hapo juu.*

ii) *Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.*

iii) *Jibu maswali yote.*

iv) *Majibu yote yaandikwe katika nafasi ulizoachiwa katika kijitabu hiki cha maswali.*

v) *Majibu yote lazima yaandikwe kwa lugha ya Kiswahili.*

vi) *Hakikisha kuwa kurasa zote zimepigwa chapa.*

Kwa Matumizi Ya Mtahini Pekee

Swali	Upeo	Tuzo
1. Ufahamu	15	
2. Ufupisho	15	
3. Matumizi ya Lugha	40	
4. Isimujamii	10	
Jumla	80	

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

1. UFAHAMU (ALAMA 15)

Soma kifungu kifuatacho kisha ujibu maswali.

ULEVI

Ilikuwa Jumamosi ya mwisho wa mwezi, wakati wa magharibi, nikiwa kwenye tembeatembea zangu za kupunga hewa. ZCVNikaona kilee, kijitu si kijitu, mtu si mtu. Kinakuja kwa kuyumba huku na huku kama kwamba kikiendeshwa na upepo.

Kukaribiana nacho, nikaweza kukiona vizuri zaidi. Kilikuwa kirefu, lakini kilichokonda na kukondeana mithili ya kiuno cha nyigu. Shati kiliyovaa ilionekana kama kwamba imetundikwa tu kijitini. Kukikazia macho, nilitambua. Maskini! Mwili wake ulidhoofika na kuwa kitu kama vile mfuko tu wa mifupa.Kufumba na kufumbua, kilianguka bwup! Chini. Nikajikuta nakitikisa kichwa.

“Vipi Mlachake bwana we?” Nikamtupia, huku nikijaribu kumsaidia ainuke.

”Vi-vi-vipi ni-nini?” Akanirudia.

“Umerudia he?”

“ La-lakini kwa pe-pesa zangu, si-si-siyo kwa-kwa-kwa kudoea.”

“Daktari alikushauri vipi?

“A-ach-ch-chana naye yeye hu-huyo. Ati nina-naji-jipunguzia maisha.Kwa ni-ni-nani ha-hata-ta-kufa?”

Kuzidi kumyanyua ili nimwinue kutoka chini, akatitazama kwa macho yake malegevu na kuniuliza, “Ha-hata wewe pia una-na-nataka kuniibia?”

“Nani amekuibia?” Nikamwuliza kwa mshangao. Kimya. Aliweza kuinuka na kubaki akiyumbayumba mfano wa mcheza rumba. Kisha yakamtoka matusi mfululizo.

“Mlachake!” Ikanitoka sauti ya mshangao baada ya kushuhudia yale niliyoyatia machoni.

“Ni aibu gani hii ya kujitapikia ovyo?”

“Ni me-jiji-jitapikia ni-ndiyo. Sikumta-tapikia mtu.”

“Sikiza Mlachake bwana.”

“Ndi-ndiyo bwana m-mkubwa,” akasema na kunipigia saluti. Kisha, kwa mara nyingine tena, huyoo akasalimu amri.

“Mlachake! Pesa, ulizifanyia, kazi mwezi mzima ili zije kukutesa namna hii he?”

“Ndi-ndiyo. Cha m-m-mgema hu-uliwa na mle-levi si-si ndiyo?”

Kwa mara nyingine tena, nilijikuta natikisa kichwa. Papo hapo, akili ikanipa kuwa nimsaidie kwa kumfikisha nyumbani kwake.

Kufika mlangoni tu, alipaaza sauti akisema, “Fungua!” Ilhali mlango ulikuwa umekomewa kutoka nje. Kisha dwa!Akaupiga teke, halafu “Huuwi!” akapiga nduru huku akishika mguu na kutandwa na wingu jeusi usoni. “Nita-ta-charaza mtu le-le leo mimi,” akatisha. Akichutama na kubwagizika chini mfano wa gunia tupu. Nikatikisa kichwa na kujiendea zangu.

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

MASWALI

a) Taja sababu mbili za Mlachake kuonekana akiyumbayumba. **(Al 2)**

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b) Mbali na kumletea mtu aibu kama vile ya kujitapikia ovyo, taja athari au hasara nyingine tatu za ulevi kwa mlevi **(Al 3)**

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c) Mwandishi anasema, "Kwa mara nyingine tena huyoo, akasalimu amri." Anamaanisha nini hasa kwa kusema "akasalimu amri?" **(Al 1)**

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d) Ni aina gani mbili za ushihidi zinazotudokezea kuwa Mlachake hakuishi pekee nyumbani kwake? **(Al 2)**

.....

.....

e) i) Ni methali gani iliyomjia Mlachake kichwani wakati alipozungumza na msimulizi wa makala hii? **(Al 1)**

.....

ii) Eleza jinsi methali hiyo inavyoingiliana na maudhui ya makala hii. **(Al 2)**

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.....

f) Eleza matumizi yafuatayo ya lugha kama yanavyojitokeza katika makala uliyosoma**.** **(Al 4)**

i) Wakati wa magharibi

.....

ii) Kukutesa

.....

iii) Kudoea

.....

iv) Akili ikanipa

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2. UFUPISHO (ALAMA 15)

Soma kifungu kifuatacho kisha ujibu maswali.

Tangu kuripotiwa kwa maambukizi na vifo kutokana na Tandavu la Korona nchini Kenya, Wakenya wengi wamekuwa wakiishi kwa hofu. Vifo vinavyohusishwa na ugonjwa huu hatari vimekuwa vikiongezeka kila kukicha. Ugonjwa huu sugu unawafisha watu kwa muda mfupi baada ya kuambukizwa. Kutokuwepo kwa dawa za kutibu ugonjwa wenyewe kunaongeza wasiwasi miongoni mwa wanajamii. Nchi ya Kenya kama ilivyo mataifa mengine ulimwenguni imehimiza raia wake kupata chanjo dhidi ya tandavu hili. Hata hivyo, hatua ya serikali kutumia vitisho ili kuwashinikiza watumishi wa umma kupata chanjo ya korona haifai kwani huenda ikatatiza mpango wa kuchanja watu milioni kumi mwaka huu. Licha ya serikali kujaribu kuwalazimisha watumishi wa umma bado chanjo haijakubalika na wengi nchini. Kutokubaliwa kwa chanjo hii kumesababishwa na ukosefu wa elimu ya kutosha kuihusu. Watu wengi wanahofia kuwa huenda waliochanjwa wakapata madhara baadaye.

Mamilioni ya watu wameathiriwa kwa njia moja au nyingine na ugonjwa huu. Kenya imeshuhudia hoteli nyingi za kifahari kufungwa. Hii imetokana na usafiri wa ndege kusitishwa kote duniani. Kutokana na hali hiyo, hoteli zilizotegemea wateja watalii zilisimamisha shughuli zake kwa muda. Kwa mfano, ya *Intercontinental* ilifunga milango yake kabisa mwaka wa 2020. Jambo hili liliwafanya watu wengi kupoteza ajira.

Usafiri wa umma umekumbwa na changamoto si haba kutokana na tandavu la korona. Serikali ilipunguza wasafiri katika magari ya abiria kwa thuluthi moja. Wasafiri hao walilazimika kulipa nauli maradufu kwa safari ile ile. Watu wengi walilazimika kufutilia mbali mipango yao ya usafiri. Kafyu vile vile iliathiri usafiri huu wa umma. Magari mengi yalilazimika kusitisha safari njiani kwa kupatikana na kafyu. Wafanyabiashara katika sekta ya matatu wanahesabu hasara kubwa kwa kukosa abiria. Wengine wamelazimika kuuza magari yao kwa kutamaushwa na changamoto iliyowakumba ghafla.

Aidha, shule zililazimika kufungwa mnamo Machi 2020. Wanafunzi walikaa nyumbani hadi Januari 2021. Hii iliharibu kalenda ya masomo nchini. Serikali ilijaribu kuwasihi walimu kufunza mtandaoni lakini hii haikufaulu hata. Wanafunzi wa kike kadhaa waliishia kupata ujauzito hivyo basi kukatiza masomo yao. Ibada zote pia zilisitishwa. Nao waumini hawakusazwa. Baada ya serikali kufunga makanisa, misikiti na vyumba vingine vya ibada, waumini wengi walilazimika kufuatilia ibada zao katika runinga au mtandaoni. Waliokosa mitandao waliomba na jamaa zao na wengine kupuuza ibada hizo kwa muda.

Shida zilizindikana ugonjwa wenyewe ulipozidi kuenea. Hospitali za umma zililemewa na idadi ya wagonjwa waliokuwa wakienda kule kutafuta matibabu. Vitanda vilijaa na hata wengine wakalala chini katika wadi mbalimbali. Huduma za afya zikazidi kudidimia kutokana na ukosefu wa wahudumu wa afya na vifaa vya kutumiwa na wagonjwa. Vifo vingi vikaripotiwa katika hospitali hizi za umma. Kila sehemu nchini ikaathirika. Majonzi yakajaa kila mahali.

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Licha ya haya mabaya yote yaliyokuja na ugonjwa huu wa corona, kuna wale waliochuma riziki kwa kuzuka kwa ugonjwa huu. Mambo mapya yalijitokeza katika ulimwengu wetu. Msamiati wa lugha ukaongezeka. Hii ilitokana na haja ya kuwepo kwa istilahi au misamiati ya kufafanua hali mpya iliyoibuliwa na tandavu hili. Vilevile Kutokana na watu kulazimika kufanya kazi nyumbani, ujuzi wa matumizi ya mtandao umeimarika. Kwa mfano, ufundishaji mtandaoni umefaidi vyuo vingi vinavyofundisha masomo ya mbali.

Wanabiashara wengine wakaanza kuuza barakoa. Barakoa ilikuwa kitu kigeni huku kwetu na duniani kwa jumla. Wengi walipata faida kubwa sana kwa kuwa soko la barakoa lilikuwa pana. Hata hivyo, barakoa zinazotumika na wananchi wengi hazijathibitishwa kuwa bora kuzuia korona. Hali hiyo inawafanya watumiaji wake kuwa na usalama wa bandia kwani wanaweza kuambukizwa ugonjwa wa korona kwa urahisi licha ya kuwa wamevalia barakoa hizo.

Kadhalika, viyeyushi vikaanza kutumika kwa wingi humu nchini na duniani kote. Wachuuzi wengi waliingia biashara hii na kufaidika kiasi. Wengi hawakujua viyeyushi ni nini kabla ya wakati huo. Hivi sasa hata watoto wadogo wanajua viyeyushi na kutumia kwa njia mwafaka.

Kundi lingine lililonawiri kwa korona ni hospitali za kibinafsi. Wengi wa matajiri walioambukizwa ugonjwa huu walijipeleka hospitali hizi kwa matibabu. Wenye hospitali hizo nao wakapandisha bei ya matibabu kwao. Ikawa ni biashara inayonoga kabisa. Hawakujali kuhusu wale wasio na pesa.

Korona imefanikisha juhudi za maafisa wa afya kuhimiza usafi kila mara. Hii ni kwa sababu watu wanalazimika kunawa mikono yao kila mara. Usafi huu wa mikono unapunguza visa vya magonjwa kama vile kipindupindu katika jamii. Aidha, gharama za sherehe zimepungua mno kutokana na sheria za kudhibiti idadi ya watu wanaohudhuria sherehe za mazishi au matanga. Hali hii ni nafuu kwa wale wachochole ambao wakati mwingine hulazimika kuuza kidogo walicho nacho ili kugharamia sherehe za matanga au arusi.

MASWALI

a) Kwa kuzingatia aya tano za kwanza, eleza shida zilizoletwa na korona. (Maneno 100) **(Al 9)**

Matayarisho

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b) Fupisha aya nne za mwisho kwa maneno 60. **(Al 6)**

Matayarisho

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Jibu

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3. MATUMIZI YA LUGHA (ALAMA 40)

a) Andika neno lenye muundo ufuatao wa sauti: **(Al 2)**

Kipua cha kaakaa laini, irabu ya kati tandazwa, kipasuo sighuna cha ufizi, irabu ya chini tandazwa

.....

b) Eleza maana ya silabi. **(Al 1)**

.....

c) Tambua muundo wa silabi katika neno MAKTABA**.** **(Al 1)**

.....

d) Ainisha vipengele vilivyopigiwa mstari: (**Al 2)**

i) Genge <u>la</u> wezi limetiwa mbaroni.....

ii) Genge <u>la wezi</u> limetiwa mbaroni.....

e) Tunga sentensi moja ukitumia neno hili ili litumike ulivyoelekezwa mabanoni. **(Al 2)**

Enzi (nomino na kitenzi)

.....

f) Eleza maana mbili ya sentensi hii**:** **(Al 2)**

Watu wa pwani hawaogopi bahari kama watu wa bara.

.....

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g) Taja matumizi matatu ya kiambishi ‘i’ na utolee mifano: **(Al 3)**

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h) Ainisha mofimu za neno: Kitandani **(Al 3)**

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i) Tunga sentensi moja ukitumia wakati ujao hali ya kuendelea. **(Al 2)**

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j) Katika sentensi moja, tumia **papa** na **bapa** ili kudhihirisha maana ya kila neno. **(Al 2)**

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k) Changanua kwa vishale: Wale wageni wetu watakuwa wamewasili leo jioni. **(Al 4)**

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l) Amrisha katika nafsi ya pili wingi: **La.....** **(Al 2)**

m) Yakinisha katika umoja: Msingalisoma nyakati zile msingalipata zawadi kemkem. **(Al 1)**

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n) Tambua kauli iliyotumika: Ametwikwa jukumu la kuwalea yatima wale. **(Al 1)**

.....

o) Bainisha yambwa na chagizo katika sentensi inayofuata**.** **(Al 2)**

Vibarua wamefanya kazi hiyo haraka ipasavyo.

.....

p) Akifisha: **(Al 2)**

i) Hako katoto kalipoletwa kila mtu alikahurumia

.....

ii) Jama ni kweli umemkosea mzazi wako heshima?

.....

q) Andika katika usemi wa taarifa. **(Al 3)**

“Ninataka kuanza kupendekeza majina ya watakaosafiri sasa”, Afisa alisema.

.....

.....

r) Vishazi tegemezi vina uamilifu gani? Taja kwa hoja mbili na utungie sentensi. **(Al 2)**

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s) Andika kisawe cha: enda arijojo **(Al 1)**

.....

t) Andika kinyume: Ajitahidiye husifiwa kwa bidii yake na hupandishwa madaraka. **(Al 2)**

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4. ISIMUJAMII (ALAMA 10)

a) Eleza majukumu matano ya Kiswahili kama lugha ya kitaifa **(Al 5)**

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b) Eleza changamoto tano zinazokabili lugha ya Kiswahili kama somo katika shule za upili nchini Kenya **(Al 5)**

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KISWAHILI

Karatasi ya 3

FASIHI

Muda: Saa 2 1/2

Maagizo:

*i) Andika jina lako na nambari yako ya mtihani katika nafasi ulizoachiwa hapo juu. ii) Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu. iii) Jibu maswali **manne** pekee. iv) Swali la kwanza ni la **lazima**. v) Maswali hayo mengine **matatu** yachaguliwe kutoka sehemu **nne** zilizobaki; yaani: Riwaya, Hadithi fupi, Tamthilia na Fasihi Simulizi. vi) Usijibu **maswali mawili** kutoka **sehemu moja**. vii) Majibu yote **sharti** yaandikwe katika lugha ya Kiswahili. v*

Kwa matumizi ya mtahini pekee

Swali	**Upeo**	**Alama**
1	20	
	20	
	20	
	20	
Jumla		

SEHEMU A: USHAIRI 1. Lazima

Soma shairi lifuatalo kisha ujibu maswali.

KAMA SODOMA!

Miji yetu kwa yakini, kidogo kama Sodoma!
Haihitaji makini, kwa mwenye macho mazima
Utaona walakini, mradi ukitizama Wanazini
hadharani, wana kwa watu wazima Yafanana
na Sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Wanazini hadharani, wana kwa watu wazima
Wanatafuna maini, vijana na kina mama
Hawana haya nyusoni, wameharamisha wema Yafanana
na Sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Hawana haya nyusoni, wameharamisha wema
Baba na binti ndani, wanacheza lelemama
Marijali wa mbioni, kujipagaza umama
Yafanana na Sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma! Marijali
wa mbioni, kujipagaza umama
Wameikataa dini, toka tumboni mwa mama
Wadai Wataliani, watajirisha mapema Yafanana
na sodoma, mji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Wadai ufirauni, watajirisha mapema
Hivyo mambo ya kigeni, yametunukiwa dhima
Uwaonapo fuoni, nusu uchi wa mnyama
Yafanana na Sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Uwaonapo fuoni, nusu uchi wa mnyama
Watu hawana imani, umezidi uhasama
Na viongozi wa dini, kuabudu darahima Yafanana
na Sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama sodoma!
Na viongozi wa dini, kuabudu darahima

Wamekeuka yamini, kati yao na Rahima
Wamemuasi Manani, na kusahau kiyama Yafanana
na sodoma, miji yetu kwa yakini.

Miji yetu kwa yakini, kidogo kama Sodoma!
Wamemuasi manani, na kusahau kiyama
Ya Illahi tuauni, tuwe watu maamuma Tukue
katika dini, siku zetu za uzima
Yafanana na Sodoma, miji yetu kwa yakini.

MASWALI

(a) Bainisha bahari ya shairi hili ukijikita katika ruwaza zifuatazo **(alama3)**
i) Mishororo ii) Maneno iii) Vina

(b) Eleza muundo wa shairi hili **(alama4)**

(c) Bainisha mbinu zifuatazo za kimtindo katika shairi hili **(alama3)**
i) Tashbihi ii) Taswira iii) Tasfida

(d) Eleza toni ya shairi hili **(alama1)**

(e) Bainisha nafsi nenewa katika shairi hili **(alama1)**

(f) Fafanua dhamira ya mtunzi wa shairi hili **(alama2)**

(g) Andika ubeti watatu kwa lugha tutumbi **(alama4)**

(h) Fafanua maana ya maneno haya kama yalivyotumiwa na mshairi **(alama2)**
i) Manani
ii) Marijali

SEHEMU B: RIWAYA

A.Matei: *Chozi la Heri*
Jibu swali la 2 au la 3

2. "Nakumbuka asubuhi ya pili baada ya mtafaruku kuanza.Nilikuwa sebuleni na mwanangu tukitazama runinga".

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

Eleza nafasi ya msemaji katika kuwakuza wahusika wengine riwayani **(alama 5)**

(b). Tambua mbinu kuu ya kimtindo uliotumika katika dondoo**.** **(alama 1)**

(c). Eleza jinsi mbinu uliyotaja hapo juu (iii) (a) ilivyotumika kukuza maudhui riwayani **(alama 10)**

3. Madhila anuwai yanayowazonga wahusika wengi katika riwaya ya Chozi La Heri yanafungamanishwa na hiari ya maamuzi yao. Jadili. **(alama 20)**

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SEHEMU C: TAMTHILIA

P.Keya: *Kigogo*

Jibu swali la 4 au la 5

4. "Ama kweli dunia gunia . Ilikumeza hindi bichi ikakuguguna, sasa inakutema guguta."

(a). Weka dondoo hili katika muktadha wake. **(alama4)**

(b). Eleza mbinu mbili za kimtindo katika dondoo. **(alama2)**

(c). Masaibu yanayowakumba wahusika katika Kigogo ni zao la matendo yao ya awali. Fafanua kauli hii kwa kutolea mifano mwafaka tamthiliani. **(alama 14)**

5. Ubinafsi una athari kubwa katika jamii. Tetea kauli hii kwa kutolea hoja ishirini kamilifu katika tamthlia ya Kigogo. **(alama 20)**

SEHEMU D: HADITHI FUPI

A.Chokocho Na D.Kayanda: *Tumbo Lisiloshiba na Hadithi Nyingine*

*K. Wasike***: "**Mapenzi ya Kifaurongo"

6. Looh! Kwani swali langu liko vipi? Kwa nini wanafunzi wanacheka? Dkt. Mabonga hacheki safari hii kwa nguvu. Haikosi nimemuudhi. "Hilo si swali," anasema. "Iwapo ulinuia kuchekesha ungenyamaza tu. Hatukuja hapa kuchekeshwa. Tena pale ulipo hujui kuchekesha."

(a). Bainisha mbinu za kimtindo zilizotumiwa kwenye dondo**. (alama6)**

(b). "Hadi sasa mimi ni kama rubani aliyeharibikiwa na ndege angani." Eleza maana ya kitamathali inayojitokeza kwenye kwenye dondoo hili. **(alama14)**

S. A. Mohamed: **"Tumbo Lisiloshiba"**

7. (a)"Fujo hazitatuhamisha hapa panapo ardhi yetu."

Kwa kurejelea kauli hii jadili namna ambavyo wanyonge katika hadithi ya Tumbo Lisiloshiba walivyojiopoa kutoka kwadhulma za uongozi mbaya**. (alama8)**

(b) Kwa kurejelea hadithi zifuatazo, jadili nafasi ya Elimu katika Jamii. **(alama12)**

i) Mapenzi Kifaurongo ii) Shogake dada ana ndevu iii) Mame Bakari

SEHEMU E: FASIHI SIMULIZI

(a). Eleza maana ya semi katika Fasihi Simulizi. **(alama2)**

(b). Fafanua sifa sita za semi. **(alama6)**

(c). Wewe ni mwigizaji wa michezo ya jukwaani. Eleza mambo sita ambayo utazingatia ili kufanikisha uigizaji wako. **(alama6)**

(d). Onyesha jinsi methali ni utanzu tegemezi kwa kueleza miktadha ambapo hutumiwa. **(alama 6)**

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CHRISTIAN RELIGIOUS EDUCATON

PAPER 1

TIME: 2½ HRS.

INSTRUCTIONS TO CANDIDATES

a) *This paper consist of **six** questions*

b) *Answer any **FIVE** questions in the answers sheet provided..*

c) *Question must be answered neatly in a good hand writing.*

QN	1	2	3	4	5	TOTAL SCORE
SCORE						

QUESTIONS

1. a)Why is man considered as the paramount of God's creation? ***(8 marks)***

b) Explain God's plan of salvation according to Genesis **3** to **12.** **(6 marks)**

C) State **six** ways in which the teaching of C.R.E. promotes international consciousness. ***(6 marks)***

2. a) What are the challenges that Abraham faced after leaving ur of the Chaldeans?. ***(7 marks)***

b) Describe the making of the Sinai covenant. ***(8 marks)***

c) Give **five** importance of the Ten Commandments Today. ***(5 marks)***

3. a) What led to the spread of idolatry in Israel? ***(8 marks)***

(b) Give **seven** reasons why Elijah faced hostility and danger as a prophet of God. ***(7 marks)***

(c) Outline the practices of idolatry in the society today. ***(5 marks)***

4. a). Mention **six** titles given to the prophets in the old testament **(6mks)**

b**). Give eight** ways in which the Israelites practiced hypocrisy in religion during the time of prophet Amos **(8mks)**

c). How do Christians fight hypocrisy in the church today. **(6mks)**

5. a) Give **six** reasons why Nehemiah was against mixed marriages in Israel. **(6mks)**

b) Identify the conditions the Israelites set during the renewal of the covenant in Nehemiah Chapter 10 **(7mks)**

c) State **seven** ways in which Christians observe the day of worship. **(7mks)**

6.a) Mention **Seven** practices that undermines the dignity of women in Traditional African Societies. ***(7 marks)***

b) What was the importance of seclusion period after child birth in Traditional African Societies? ***(6 marks)***

c) State **seven** factors which have affected the Traditional African Responsibilities towards God, Spirits and Ancestors. ***(7 marks)***

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CHRISTIAN RELIGIOUS EDUCATION

PAPER 2

TIME:2½ HOURS

INSTRUCTIONS TO CANDIDATES

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

b) *This paper consists of six questions.*

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

d) *Each question carries 20 marks.*

QUESTION	1	2	3	4	5	6	TOTAL
SCORE							

1. (a) Identify **five** roles of te messiah according to **Isaiah 61:1-2** found in **Luke 4 :18- 19.** **(5 marks)**

(b) State **seven** activities that took place during the presentation of Jesus in the temple **Luke 2:22-40.** **(7 marks)**

(c) Give **eight** reasons why children should be introduced to the worship God in church at an early age. **(8 marks)**

2. (a) Describe the incident when Jesus healed a man with leprosy **Luke 5:12- 16.** **(8 marks)**

(b) Outline reasons why Jesus used parables in his teachings. **(7 marks)**

(c) State **five** teachings about Jesus that Christians learn from the miracles He performed. **(5 marks)**

3. (a) Identify the causes of conflict between Jesus and the Jewish religious leaders in Jerusalem. **(7 marks)**

(b) Outline the incident in which Jesus revealed himself to the two men on their way to Emmaus. **Luke 24:13-31.** **(7 marks)**

(c) State **six** ways in which the church leadership solve conflicts today. **(6 marks)**

4. (a)Outline **seven** teachings of Jesus on the role of the Holy Spirit. **(7 marks)**

(b) Explain the unity of believers as expressed in the image of the People of God 1 peter 2:9-10 **(7 marks)**

(c) Identify **six** ways in which Christians are able to identify those who possess the Gifts of the Holy Spirit. **(6 marks)**

5. (a)Identify **seven** factors that have led to an increased rate of child labour in Kenya today. **(7 marks)**

(b)Outline the causes of conflict between an employer and employees in Kenya. **(7 marks)**

(c)Give **six** roles a Christian should play during a strike. **(6 marks)**

6. (a)Explain similarities between the Christian and traditional African view on marriage. **(6 marks)**

(b)Give **seven** reasons why Christians in Kenya condemn homosexuality. **7 marks)**

(c)Identify **seven** ways in which the church is helping solve the problem of domestic violence in Kenya today. **(7 marks)**

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HISTORY AND GOVERNMENT

PAPER 1

TIME: 2½ hours

INSTRUCTIONS TO CANDIDATES

*(a) This paper consists of **three** sections **A, B** and **C.***

*(b) Answer **all** questions in section **A, three** from Section **B** and **two** from Section **C.***

(c) Answers to all the questions must be written legibly in the answer booklet provided.

(d) Candidates should answer the questions in English

SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	25	
B	45	
C	30	
	TOTAL SCORE	

SECTION A (25 MARKS)

Answer all questions in this section

1. Give **one** way in which the study of history helps learners to develop critical thinking. **(1 mark)**

2. Identify the historic site where the remains of Kenyapithecus have been discovered in Kenya. **(1 mark)**

3. Give ***t*wo** communities that belong to the Coastal Bantu. **(2 marks)**

4. Name the title of the leader of warriors among the Luo **(1 mark)**

5. State **one** way in which Seyyid Said promoted missionary work in Kenya. **(2 marks)**

6. Give **two** symbols of National Unity in Kenya. **(2 marks)**

7. Give **one** political party that was represented in the Second Lancaster House Conference of 1962. **(1 mark)**

8. State **two** advantages of representative democracy. **(2 marks)**

9. Name **one** independent office created by the new constitution of Kenya 2010.**(1 mark)**

10. Give **two** economic reasons why Africans in Kenya resisted the British invasion **(2 mark)**

11. Give **two** cash crops that were cultivated by European settlers in Kenya during the colonial period. **(2 marks)**

12. Give the **main** result of Limuru conference of 1966. **(1 mark**

13. State **one** role of Ronald Ngala in Kenya African Democratic Union (KADU). **(1 mark)**

14. Give **one** type of Bills in Kenya. **(1 mark)**

15. State **two** functions of High Court of Kenya. **(2 marks)**

16. Outline **one** challenge facing Harambee philosophy in Kenya**.** **(1 marks)**

17. Give **two** categories of members of County Assembly**.** **(2 marks)**

SECTION B (45 MARKS)

Answer any three questions from this section

18. (a) Give **five** features of the early Coastal City States in the East African Coast. **(5 marks)**

(b) Explain **five** effects of plantation agriculture in the East African Coast. (**10 marks)**

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19. (a) Give **five** terms of the Devonshire White Paper of 1923. **(5 marks)**

(b) Explain **five** reasons for the construction of the Kenya-Uganda railway.

(10 marks)

20. (a) Identify **five** demands of the East African Association (EAA). **(5 marks)**

(b) Explain **five** roles of women in the struggle for independence in Kenya.

(10 marks)

21. (a) State **five** categories of land classified as Public Land in Kenya. **(5 marks)**

(b) Explain **five** functions of National Land Commission in Kenya. **(10 marks)**

SECTION C (30 MARKS)

Answer any two questions from this section

22. **(a)** Give **three** development rights of a child in Kenya. **(3 marks)**

(b) Explain **six** features of the 1962 Independence Constitution of Kenya.

(12 marks)

23. **(a)** State **three** qualifications for a member of parliament in Kenya. **(3marks)**

(b) Explain **six** functions of the Speaker of National Assembly in Kenya.

(12 marks)

24. **(a)** State **three** principles of Devolution in Kenya**.** **(3 marks)**

(b) Explain **six** roles of Commission on Revenue Allocation. **(12 marks)**

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

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

311/2

HISTORY AND GOVERNMENT

PAPER 2

TIME: 2½ hours

INSTRUCTIONS TO CANDIDATES

*(a) This paper consists of **three** sections **A, B** and **C.***

*(b) Answer **all** questions in section **A, three** from Section **B** and **two** from Section **C.***

(c) Answers to all the questions must be written legibly in the answer booklet provided.

(c)

SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	25	
B	45	
C	30	
	TOTAL SCORE	

SECTION A (25 MARKS)

Answer all questions in this section

1. Define the term government. **(1 mark)**

2. Give **two** methods used by archaeologists to locate archaeological sites. **(2 marks)**

3. Identify **two** species of Homo Sapiens. **(2 marks)**

4. Name the method used by early man in the Middle Stone Age to improve his tools. **(1 mark)**

5. Mention **two** urban centres that emerged as a result of early agriculture in Mesopotamia **(2 marks)**

6. Give **one** reason why early man developed trade. **(1 mark)**

7. Give the **main** item of trade from North Africa during the Trans-Saharan trade. **(1 mark)**

8. Identify **two** advantages of road transport. **(2 marks)**

9. Give **two** examples of print media as a modern means of communication. **(2 marks)**

10. Identify **two** reasons why metals were preferred over stone tools**.** **(2 marks)**

11. Name the country that pioneered industrial revolution in Europe**.** **(1 mark)**

12. Identify the **main** reason for the growth of London as an early urban centre in Europe **(1 mark)**

13. Give **two** duties of ***Lukiiko*** in the Buganda kingdom. **(2 marks)**

14. Mention **one** type of spirit in the Shona kingdom in the 19th century. **(1 mark)**

15. Give **two** strategic factors for the European scramble and partition of Africa. **2 marks)**

16. Apart from Assimilation, name another administrative policy used by the French to administer her colonies in Africa. **(1 mark)**

17. Identify the European power which colonized Mozambique up to 1975. **(1 mark)**

Section B (45 marks)

Answer any three questions from this section

18. (a) Give **five** disadvantages of open field system of farming in Britain before Agrarian Revolution **(5 marks)**

(b) Explain **five** effects of Agrarian Revolution in the United States of America (USA). **(10 marks)**

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19. (a) Give **five** methods used to acquire slaves from West Africa during the Trans-Atlantic trade. **(5 marks)**

(b) Explain **five** social effects of the Trans-Atlantic slave trade. **(10 marks)**

20. (a) Identify **five** factors for the growth of early urban centres in Africa. **(5 marks)**

(b) Explain **five** solutions to the challenges facing Johannesburg as a modern urban centre. **(10 marks)**

21. (a) State **five** reasons for Kabaka Mutesa I collaboration with the British. **(5 marks)**

(b) Explain **five** reasons why the Shona and Ndebele were defeated during the Chimurenga war (1896-1897). **(10 marks)**

SECTION C (30 MARKS)

Answer any two questions from this section

22. (a) Give **three** factors that led to the rise of the Shona Kingdom. **(3 marks)**

(b) Describe the political organization of the Asante kingdom in the 19th century. **(12 marks)**

23. (a) Identify **three** roles of the Emirs in Northern Nigeria during the colonial period. **(3 marks)**

(b) Explain **six** reasons why the British used direct rule in Zimbabwe. **(12 marks)**

24. (a) Give **three** methods used by nationalists in Ghana during the struggle for independence. **(3 marks)**

(b) Explain **six** challenges faced by nationalists in South Africa in the struggle for independence. **(12 marks)**

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

KCSE JOINT MOCK

SERIES 001

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

312/1

GEOGRAPHY

Paper 1

2 ¾ HOURS

INSTRUCTIONS TO CANDIDATES

*(a) Write your **name, index number** and the **name** of your school in the spaces provided above.*
*(b) **Sign** and **write** the **date** of examination in the spaces provided above.*
*(c) This paper has **two** sections **A** and **B***
*(d) Answer all the questions in section **A***
*(e) Answer **question 6** and any other **two** questions in section **B***
(f) All answers must be written in the answer booklet provided.

FOR EXAMINERS USE ONLY

SECTION A

QUESTION NUMBER	1	2	3	4	5	SUB TOTAL
MARKS						

SECTION B

QUESTION NUMBER	6	7	8	9	10	SUB TOTAL
MARKS						

TOTAL

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

SEC. A. 25 MARKS

1. **(a)** What is Weather? **(2mks)**

(b) Give three main methods of forecasting weather. **(3mks)**

2. **a)** Differentiate between Latitude and Longitude. **(2mks)**

b) The Local time at town x which is on longitude 30^{o}E is 10.30 A.M. What will be the Local time at town Y which is on Longitude 15^{o}W **(3mks)**

3. **(a)** What is natural vegetation? **(2mks)**

(b) Give three characteristics of Mediterranean vegetation **(3mks)**

4. **(a)** Define the term soil. **(2mks)**

(b) Give **three** factors that determine soil leaching. **(3mks)**

5. Give **five** conditions that favour the growth of coral. **(5mks)**

SECTION B

Answer question six and any other two questions in this section

6. Study the map of **Taita Hills 1:50,000 (Sheet 189/4**) provided and answer the following questions.

a) **(i)** What is the name given to this type of a map. **(1mk)**

(ii) Give the title of this map. **(1mk)**

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

ii) Calculate the area covered by the Ronge Forest. **(2mks)**

c) **(i)** Give **3** physical features found at grid square **2318**. **(3mks)**

(ii) What is the bearing of point **230300** from the air photo principal point at grid square **2226**. **(2mks)**

(**iii)** Describe the distribution of settlements in the area covered by the map. **(5mks)**

d) **(i)** Using a vertical scale of 1cm represent 100 metres draw a cross-section along the line connecting point 280140 and point 370140. **(4mks)**

(ii) On the cross-section mark and label the following.

- Hill **(1mk)**
- River **(1mk)**
- All weather road:- bound surface. **(1mk)**

(iii) Calculate the vertical Exaggeration of the cross-section. **(2mks)**

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7. **a)** **(i)** What is Solar system **(2mks)**

(ii) Give **three** components of the Solar system. **(3mks)**

b) State **Five** characteristics of the sun **(5mks)**

c **(i)** What is the name used to describe the shape of the earth. **(1mk)**

(ii) Give the **three** forces that contribute to the shape mentioned above. **(3mks)**

(iii) State **Four** effects of the rotation of the earth. **(4mks)**

d) Describe the structure of the earth crust. **(7mks)**

8. ***(a)*** ***(i)*** What is desertification? **(2mks)**

(ii) Name **three** types of desert surfaces **(3mks)**

(b) Describe the **three** processes through which wind transports its load. **(6mks)**

c) Using a well labeled diagram, describe how a mushroom block is formed. **(6mks)**

d) Explain **four** ways through which desert features influence human activities. **(8mks)**

9. **(a)** (i) What is magma? **(2mks)**

(ii) Name **Four** types of magma. **(4mks)**

(b) Briefly describe how the following features are formed.

(i) Geyser **(5mks)**

(ii) Lava Plateau. **(5mks)**

c) Explain two ways in which Volcanic Mountains positively influence human activities. **(4mks)**

d) Students carried a field study on volcanic rocks.

(i) Give **two** methods they would have used to collect data. **(2mks)**

(ii) State **three** problems that they are likely to have experienced during the field study. **(2mks)**

10. **a)** i) Differentiate between an ice berg and an ice sheet. **(2mks)**

(ii) Identify **Four** ways through which ice moves **(4mks)**

b) Describe the following processes of glacial erosion**.**

i) Plucking **(4mks)**

ii) Abrasion **(3mks)**

c) Describe how a glacial trough is formed**.** **(5mks)**

d. Students of Gatunguru secondary school carried out a field study on glaciation on Mt. Kenya.

(i) Give **three** reasons why they conducted a reconnaissance **(3mks)**

ii) Give **three** activities they may have been involved in during the study. **(3mks)**

iii) Formulate **one** hypothesis that would have been relevant for study. **(1mk)**

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

KCSE JOINT MOCK

SERIES 001

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

312/2

GEOGRAPHY

PAPER 2

Time: 2¾ hours

INSTRUCTIONS TO CANDIDATES

This paper has two sections: A & B.

- *Answer **all** questions in **section A.***
- *In **section B** ,answer **question 6** and any other **two** questions.*
- *All answers to be written in foolscaps provided.*

FOR OFFICIAL USE ONLY

SECTION A	1	2	3	4	5		

SECTION B	6	7	8	9	10		

SECTION A

Answer all the questions in this section.

1. a) What is Agroforestry? **(2 marks)**

b) Outline **three** exotic softwood tree species grown in Kenya. **(3 marks)**

2. a) Distinguish between Land reclamation and Land rehabilitation. **(2 marks)**

b) Identify **three** methods of Land reclamation used in Kenya. **(3 marks)**

3. a) What is Eco-tourism. **(2 marks)**

b) State **three** benefits of Domestic tourism in Kenya. **(3 marks)**

4. a) Define the term Trade. **(2 marks)**

b) Name **three** major imports of Kenya from the Middle East. **(3 marks)**

5. a) Apart from road transport, give **two** other forms of Land transport. **(2 marks)**

b) State **three** advantages of road transport. **(3 marks)**

SECTION B

6. (a) The photograph below shows some mining activities. Study and use it to answer the questions that follow.



(i) Identify the type of photograph. **(1 mark)**

(ii) Give reasons for your answer in (i) above. **(3marks)**

(iii) Draw a rectangle measuring **10cm** by **12cm** to represent the photograph. **(1 mark)**

(iv) On it, mark and label **four** main features. **(4marks)**

(v) State **three** negative effects of the mining method shown in the photograph to the physical environment. **(3marks)**

(b) (i) Name **two** gold mining areas in South Africa. **(2marks)**

(i) Describe the process of gold processing. **(5marks)**

(ii) Explain **three** economic benefits of petroleum to the oil producing countries in the Middle East region. **(6 marks)**

7. (a) (i) Define pastoral farming. **(2 marks)**

(ii) Name **three** pastoral communities in Kenya. **(3 marks)**

(b) (i) Identify **two** exotic beef cattle breeds kept in Kenya. **(2 marks)**

(ii) Outline **three** characteristics of nomadic pastoralism. **(3 marks)**

(c) (i) Explain **three** factors favouring beef farming in Kenya. **(6 marks)**

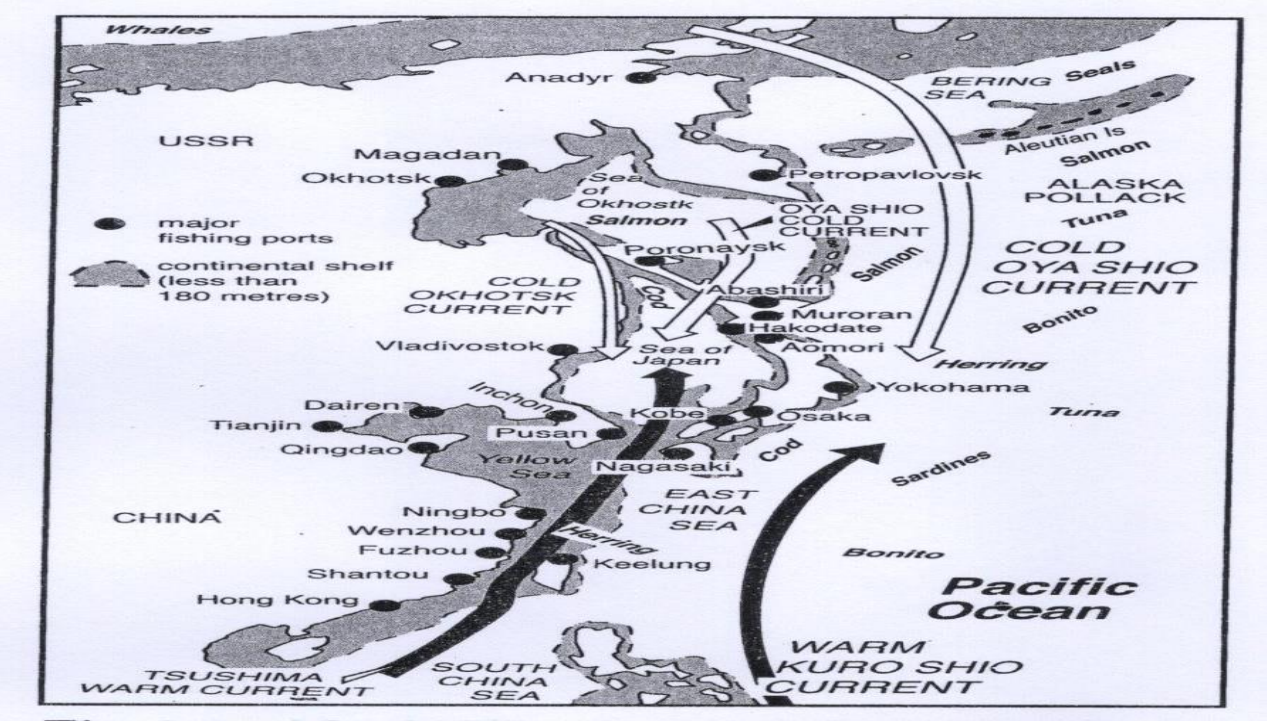
(ii) State **four** similarities between beef farming in Kenya and Argentina. **(4 marks)**

(d) Your class carried a field study on tea processing.

(i) Outline **3 stages** of tea processing that the class may have observed. **(3 marks)**

(ii) State **two** methods that the class may have used to present data. **(2 marks)**

8. (a) The diagram below shows a fishing ground in the pacific ocean.



(i) Identify the fishing ground shown above. **(2 marks)**

(ii) Name **two** types of fish species found in the fishing ground above. **(2 marks)**

(b) (i) Differentiate between fishing and fisheries. **(2 marks)**

(ii) Name **two** inland types of fisheries in Kenya. **(2 marks)**

(c) (i) Describe the long lining fishing method. **(4 marks)**

(ii) Explain **three** physical factors that have influenced the development of fishing in Japan. **(6 marks)**

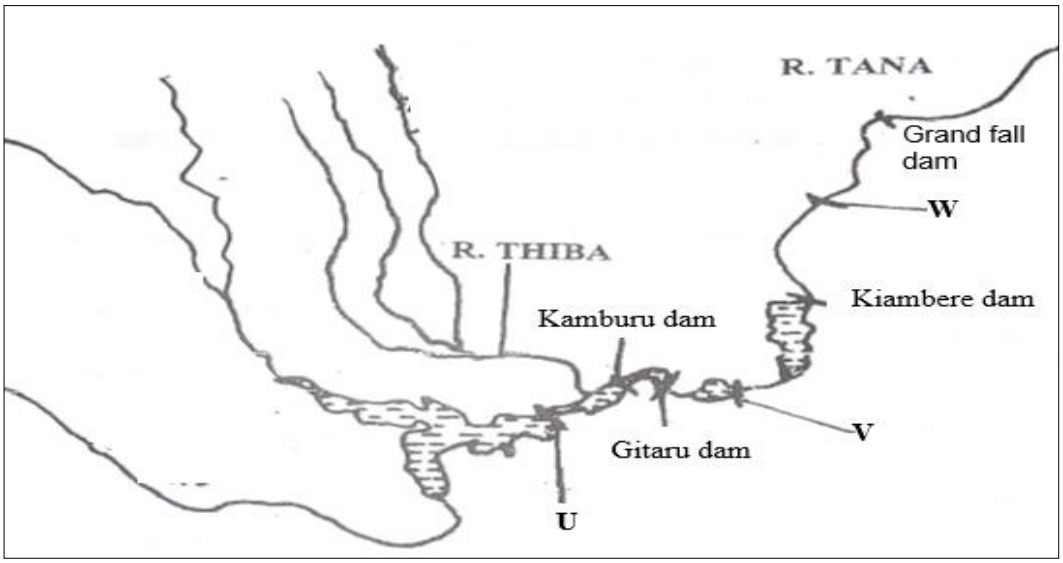
(d) (i) State **four** problems that face Marine fishing in Kenya. **(4 marks)**

(ii) Give **three** ways of conserving fresh water fisheries in Kenya. **(3 marks)**

9. (a) (i) Define the term energy. **(2 marks)**

(ii) Name **two** types of renewable energy. **(2 marks)**

(b) Study the diagram of the seven forks dam power project provided below and use it to answer the questions that follow.



(i) Identify the dams labeled U and V. **(2 marks)**

(ii) Explain **three** physical factors that favored the establishment of the seven forks power project. **(6 marks)**

(iii) State **three** benefits of the seven forks power scheme. **(3 marks)**

(c) (i) What is energy crisis? **(2 marks)**

(ii) Explain **four** effects of the energy crisis to the economies. **(8 marks)**

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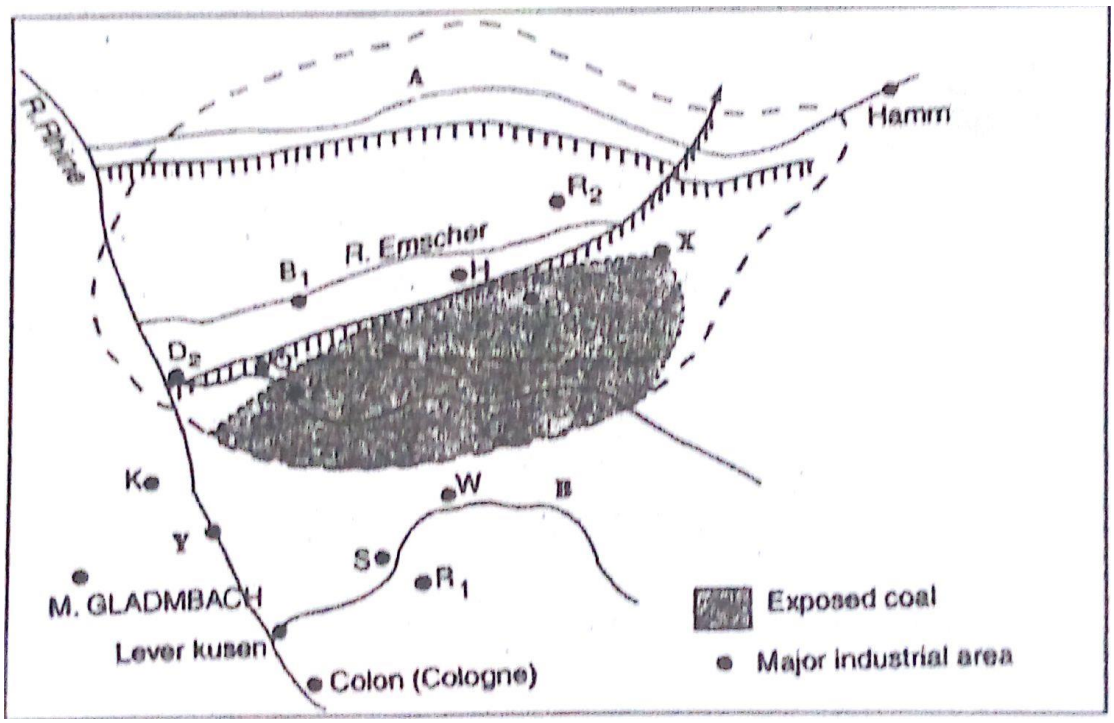
10. (a) (i) Define industrial decentralization. **(2 marks)**

(ii) State **three** causes of industrial inertia. **(3 marks)**

(b) Name **three** non-agricultural industries in Kenya. **(3 marks)**

(c) Explain **four** measures the government of Kenya is undertaking to promote Jua kali industry in Kenya. **(8 marks)**

(d) Study the map of Ruhr region below and use it to answer question **(a)**.



(i) Identify

- the river marked A. **(1 mark)**
- the canal marked H. **(1 mark)**
- the town marked Y. **(1 mark)**

(ii) Explain **three** human factors that led to the growth of Ruhr industrial region.

(6 marks)

KCSE JOINT MOCK

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

121/1

MATHEMATICS

PAPER 1

2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

1. *Write your name, index number and class in the spaces provided.*
2. *Sign and write date of the of the examination in the spaces provided.*
3. *The paper contains two sections: Section I and II*
4. *Answer ALL questions in section I and **STRICTLY FIVE** questions from section II.*
5. *All working and answers must be written on the question paper in the spaces provided below each question.*
6. *Show all the steps in your calculations, giving you're your answers at each stage in the spaces below each question.*
7. *Marks may be awarded for correct working even if the answer is wrong.*
8. *Non-programmable silent electronic calculators and KNEC mathematical tables may be used except where 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 II

17	18	19	20	21	22	23	24	25	TOTAL

SECTION I:(50 Marks). Attempt ALL questions in this section

1. Without using a calculator evaluate **(3 Marks)**

$$\frac{\left(3\frac{1}{3}+1\frac{1}{9}\right)\div 1\frac{1}{3}}{\left(4\frac{2}{9}-2\frac{5}{9}\right)x\ \frac{2}{3}}$$

2. A basket ball team play 10 matches in a tournament. The following are scores in each match.

9, 15, 17, 16, 7, 20, 21, 15, 10, 12

Determine:

(a) the mode. **(1 mark)**

(b) the median. **(2 marks)**

3. The gradient of curve at any point is given by 2x – 1. Given that the curve passes through point (1, 5), find the equation of the curve. **(3 Marks)**

4. Simplify: $\frac{9x^2-1}{3x^2+2x-1}$ **(3 Marks)**

5. Find the value of $\sqrt{\left(\frac{2x^2+2(p+r)}{p-r} \div \frac{1}{2}\right)+r}$; if $p = r + 2, x = p + 1$ and $r = 2$. **(3 Marks)**

6. A car uses 1 litre of petrol for every 8 kilometres. The car was to travel 480 kilometres and had 15 litre of petrol at the beginning of the journey. Each litre of petrol cost sh. 112.00. How much did it cost for the extra petrol added? **(3mks)**

7. Two pipes **A** and **B** can fill an empty tank in 3hrs and 5hrs respectively. Pipe **C** can empty the full tank in 6 hours. If the three pipes **A**, **B**, and **C** are opened at the same time, find how long it will take for the tank to be full. **(3marks)**

8. Without using tables or calculators, find the value of **t** in

$log_3(t+5) - log_3(t-3) = -2$ **(3 marks)**

9. The position vectors of A and B are given as **a** = 2**i** – 3**j** + 4**k** and **b** = -2**i** – **j** + 2**k** respectively.

Find to 2 decimal places, the length of vector **AB**. **(3 Marks)**

10. A regular polygon has internal angle of 150^0 and side of length 10cm.

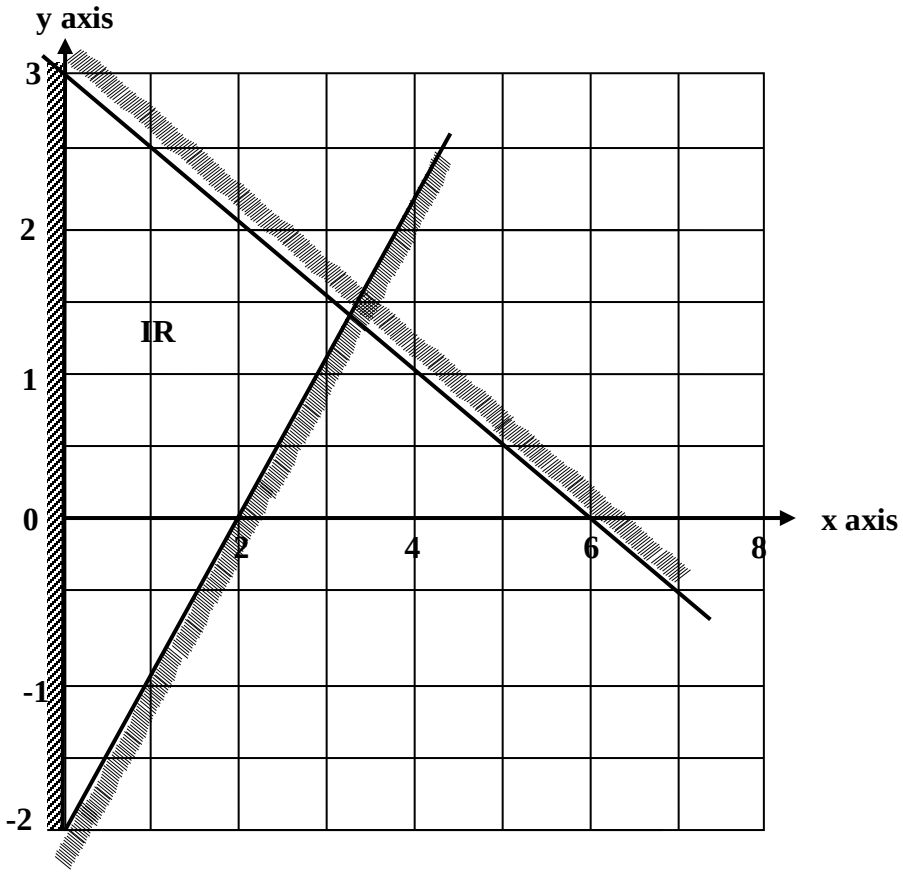
(a) Find the number of sides of the polygon. **(2 Marks)**

(b) Find the perimeter of the polygon. **(2 Marks)**

11. Solve for x in the equation. **(3 Marks)**

$9^{(2x-1)} \times 3^{(2x+1)} = 243$

12. The region R in the figure below is defined by the inequalities L1, L2 and L3.



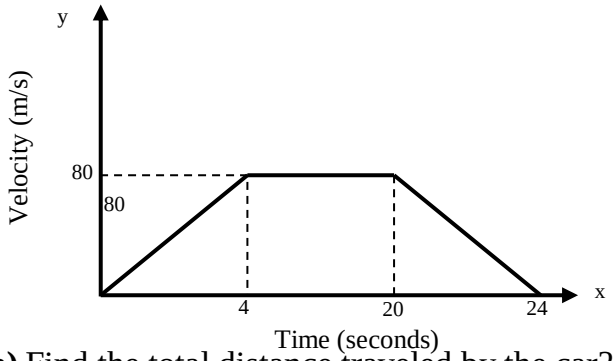
Find the three inequalities **(3 Marks)**

13. Two boys and a girl shared some money. The elder boy got $\frac{4}{9}$ of it, the younger boy got $\frac{2}{5}$ of the remainder and the girl got the rest. Find the percentage share of the younger boy to the girl's share. **(3Marks)**

14. Use tables of reciprocals only to find the value of

$\frac{5}{0.0829} - \frac{14}{0.581}$ **(3 marks)**

15. The figure below is a velocity – time graph for a car. (not drawn to scale).



(a) Find the total distance traveled by the car? **(2 Metres)**

(b) Calculate the deceleration of the car. **(2 Marks)**

16. A point C is on a line PQ where PQ = 9cm. C divides PQ such that $PC = \frac{4}{7}PQ$.

By construction locate C. **(3 marks)**

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SECTION II (50 MARKS): Answer any five questions in this section.

17. Arc of a circle of radius 40cm subtends an angle of 126° at the centre of the circle. Using $\pi = \frac{22}{7}$;

(a) Calculate:

(i) the length of the arc. **(2 marks)**

(ii) the area of the sector. **(2 marks)**

(b) The sector is folded to form a cone.

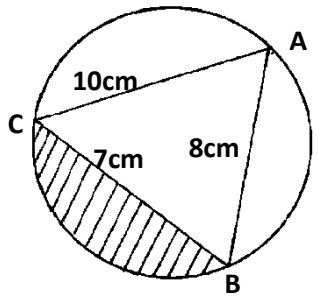
Calculate:

(i) the radius of the base of the cone. **(2 marks)**

(ii) the height of the cone.correcr to 2 decimal places **(2 marks)**

(iii) the capacity of the cone in litres correct to 2 decimal places. **(2 marks)**

18. The figure below shows a triangle **ABC** inscribed in a circle. **AC** = 10cm, **BC** = 7cm and **AB** = 10cm.



(a) Find the size of angle **BAC**. **(3mks)**

(b) Find the radius of the circle. **(2mks)**

(c) Hence calculate the area of the shaded region. **(5mks)**

19. A straight line passes through the points (8, -2) and (4,-4).

(a) Write its equation in the form ax + by +c = 0, where a, b and c are integers. **(3 Marks)**

(b) If the line in (a) above cuts the x-axis at point P, determine the coordinates of P.**(2 Marks)**

(c) Another line, which is a perpendicular bisector to the line in (a) above cuts the y axis at the point Q. Determine the coordinates of point Q. **(3 Marks)**

(d) Find the length of QP **(2 Marks)**

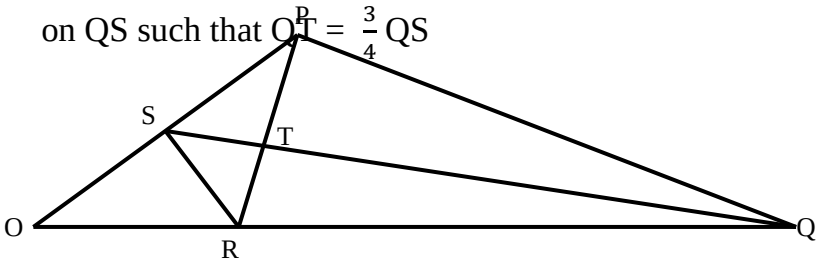
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20. (a) A bus travelling at 99km/hr passes a check-point at 10.00a.m. and a matatu travelling at 132km/h in the same direction passes through the check point at 10.15a.m. If the bus and the matatu continue at their uniform speeds, find the time the matatu will overtake the bus. **(6mks)**

(b) Two passenger trains A and B which are 240m apart and travelling in opposite directions at 164km/h and 88km/h respectively approach one another on a straight railway line. Train A is 150 metres long and train B is 100 metres long. Determine time in seconds that elapses before the two trains completely pass each other. **(4mks)**

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21. The figure below shows triangle OPQ in which OS = $\frac{1}{3}$ OP and OR = $\frac{1}{3}$ OQ. T is a point on QS such that QT = $\frac{3}{4}$ QS



(a) Given that OP = p and OQ = q, express the following vectors in terms of p and q.

(i) $\underset{\sim}{SR}$ **(1 Mark)**

(ii) $\underset{\sim}{QS}$ **(2 Marks)**

(iii) $\underset{\sim}{PT}$ **(2 Marks)**

(iv) $\underset{\sim}{TR}$ **(2 Marks)**

(b) Hence or otherwise show that the points P, T and R are collinear. **(3 Marks)**

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22. A saleswoman is paid a commission of 2% on goods sold worth over ksh. 100,000. She also paid a monthly salary of ksh. 12,000. In a certain month, she sold 360 handbags at ksh. 500 each.

a) Calculate the saleswoman's earnings that month. **(3 mks)**

b) The following month the sales woman's monthly salary was increased by 10%. Her total earnings that month were ksh. 17600. Calculate:

(i) The total amount of money received from the sales of hand bags that month. **(5 mks)**

ii) The number of handbags sold that month. **(2 mks)**

23.(a) Fill the table below for the function $y = 2x^2 + 6x - 5$, for $-4 \leq x \leq 3$ **(2 Marks)**

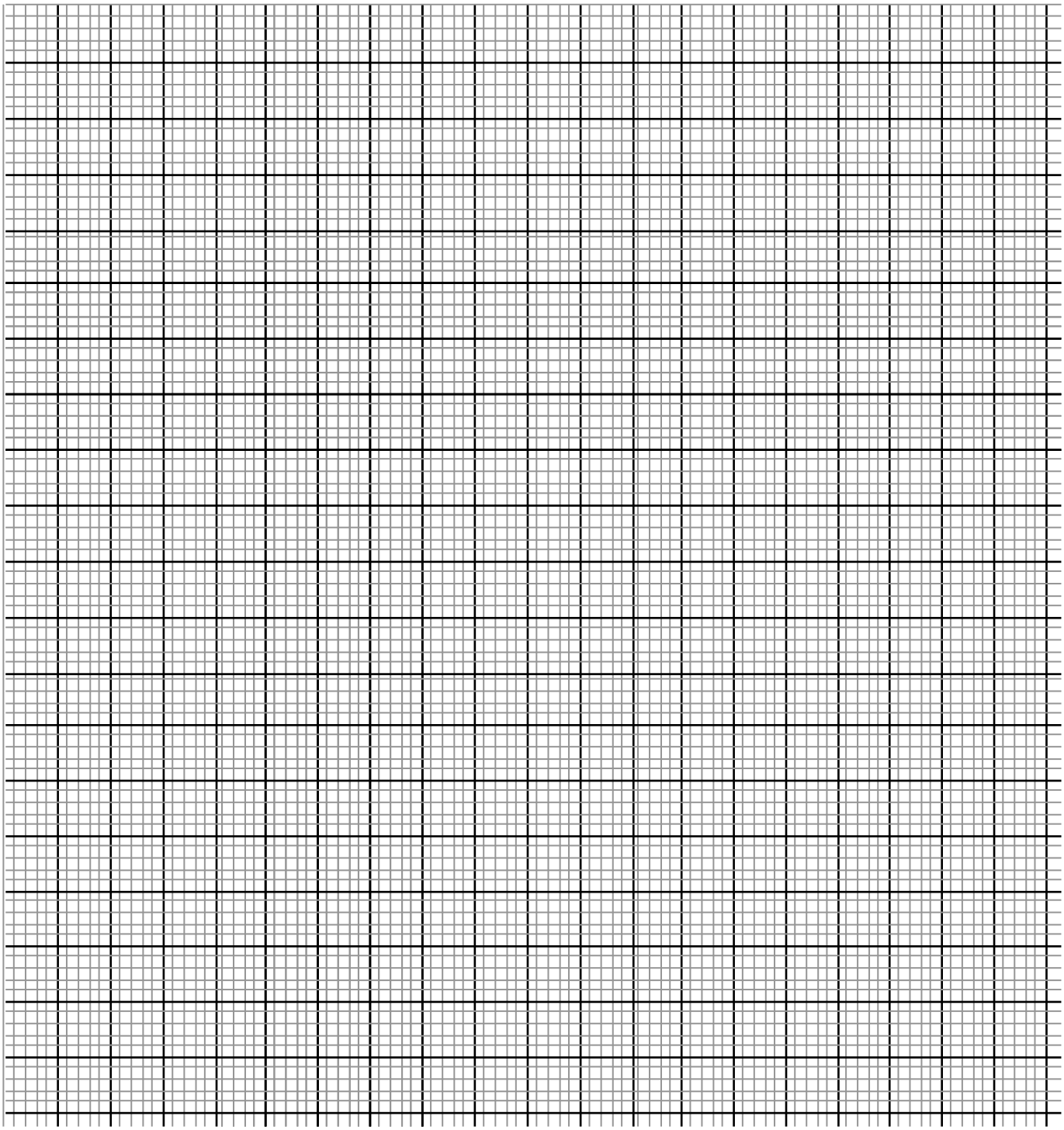
X	-4	-3	-2	-1	0	1	2	3
Y								

(b) (i) Draw the curve for $y = 2x^2 + 6x - 5$, for $-4 \leq x \leq 3$ on grid given **(3 Marks)**

(ii) On the same axes, draw line $y = 7x + 1$ **(1Mark)**

(c) Determine the values of x at the points of intersection of the curve $y = 2x^2 + 6x - 5$ and line $y = 7x + 1$ **(2 Marks)**

(d) Use your graph to estimate the value of $2x^2 + 6x = 5$ **(2 Marks)**



24. The displacement S metres of a moving particle after t seconds is given by

$S = 2t^3 - 5t^2 + 4t + 2$

Determine

(a) the velocity of the particle when t = 2. **(3 marks)**

(b) the value(s) of t when the particle is momentarily at rest. **(3 marks)**

(c) the displacement when the particle is momentarily at rest. **(2 marks)**

(d) the acceleration of the particle when t = 5. **(2 marks)**

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

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MATHEMATICS

PAPER 2

TIME: 2 ½ HOURS

INSTRUCTIONS TO CANDIDATES:

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

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

(c) This paper consists of ***TWO*** sections: ***Section I*** and ***Section II.***

(d) Answer ***ALL*** the questions in ***section I*** and only five 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 calculations, giving your answers at each stage in the spaces below each question.***

(g) Marks may be given for correct working even if the answer is wrong.

(h) ***Non-programmable*** silent electronic calculators and KNEC Mathematical tables may be used except where stated otherwise.

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Section I

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

Section II

17	18	19	20	21	22	23	24	Total

Grand Total

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

SECTION I (50 MARKS)

1. Evaluate without using Mathematical tables or a calculator. **(3mks)**

$$2\log 5 - \frac{1}{2}\log 16 + 2\log 40$$

2. Solve for x given that the following is a singular matrix $\begin{pmatrix} 1 & 2 \\ x & x-3 \end{pmatrix}$ **(2mks)**

3. Make b the subject of the formula a = $\frac{bd}{\sqrt{b^2 - d}}$ **(3 mks)**

4. Without using mathematical tables or calculators express in surd form and simplify

$$\frac{1 + Cos\,30^o}{1 - Sin\,60^o}$$

(3 mks)

5. Agotho has a rectangular plot that was measured to the nearest meter and found to be 80m in length and 60m in width. Determine the percentage error in its perimeter. **(3 marks)**

6. Peter operates a printing firm and the cost of printing a book is partly constant and partly varies as the number as pages. If a book has 200 pages, the cost in sh 400 and if it has 100 pages, the cost is sh 240. Find the cost of printing a book with 400 pages. **(4 mks)**

7. A body starts from rest and after t seconds its velocity in ms^{-1} was recorded as shown below;

T in (sec)	0	1	2	3	4	5	6
Velocity	0	0.29	5.4	7.7	9.7	11.4	12.7

Use the trapezoidal rule to estimate the distance covered by the body between 1 and 6 seconds

(2 mks)

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

8. 14 people can build 10 huts in 30 days. Find the number of people working at the same rate that will build 18 similar huts in 27 days. **(3mks)**

9. A point M (60 °N, 18 °E) is on the surface of the earth. Another point N is situated at a distance of 630 nautical miles east of M.

Find:

(a) the longitude difference between M and N**;** **(2 mks)**

(b) The position of N**.** **(1 mk)**

10. (a) Expand $(x-0.2)^5$ in ascending powers of x. **(2mks)**

(b) Use your expansion up to the fourth term to evaluate 9.8^5. **(2mks)**

11. The equation of a circle center (a, b) is $x^2 - y^2 - 6x - 10y + 30 = 0$.

Find the values of a and b. **(3 mks)**

12. Solve for x in the equation $\sqrt{3} \tan (x - 20)^0 = -1$, for $0^0 \leq x \leq 360^0$ **(3mks)**

13. Find the equation of the tangent to the curve $2x^2 - 8y = 0$ at the point $(12,18)$. **(3mks)**

14. Transformations M and N are represented by the matrices; $\begin{pmatrix} 2 & 0 \\ 0 & 2 \end{pmatrix}$ and $\begin{pmatrix} 3 & 0 \\ 1 & 3 \end{pmatrix}$

respectively. Point R has co-ordinates (3, -2), find the co-ordinates of R^1 the image of R under transformation represented by N followed by M. **(3 mks)**

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

15. A coffee dealer mixes two brands of coffee, x and y to obtain 40kg of the mixture worth Ksh. 2,600. If brand x is valued at Ksh. 70 per kg and brand y is valued at Ksh. 55 per kg. Calculate the ratio in its simplest form in which brands x and y are mixed. **(4mks)**

16. Given that y = 3 Sin $(\frac{2}{5}x + 30)^0$ for $0^0 \leq x \leq 360$. Determine:

a) Amplitude of the curve. **(1 mk)**

b) Phase angle of the curve **(1 mk)**

c) Period of the curve. **(2 mks)**

SECTION II (50 MARKS)

Answer only five questions in this section

17. (a Hellen's earnings are as follows:
Basic salary sh. 38000 per month
House allowance sh. 14000 per months
Travelling allowance sh.8500 per month and
Medical allowance Ksh.3300 per month.
She is given a personal relief of Ksh. 12672 per annum

The table for payable tax is shown below

Income in K£ p.a	Payable tax rate in Kshs per K£
0-6000	2
6001-12000	3
12001-18000	4
18001 -24000	5
24001-30000	6
30001-36000	7
36001-42000	8
42001-48000	9
Over 48000	10

Calculate

(i) Hellen's taxable income in K£ p.a **(2mks)**

(ii) Her P.A.Y.E **(5mks)**

Hellen is deducted the following items per month

NHIF	Ksh.320
Cooperative shares	Ksh.2000
Loan repayment	Ksh5000

Determine her net salary per month **(3mks)**

18. The data below represent the heights taken to the nearest centimeters of 40 lemon trees in a garden. (NB: A = Assumed mean)

Height (cm)	F	x	d = x - A	fd	d^2	fd^2
131 – 140	3					
141 – 150	4					
151 – 160	7					
161 – 170	11					
171 – 180						
181 – 190	5					
191 – 200	1					

a) Complete the table. **(6 mks)**

b) Using 165.5 as the assumed mean, calculate the mean height. **(2 mks)**

c) Calculate the standard deviation of the distribution. **(2 mks)**

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

19. An arithmetic progression (AP) has the first term a and the common difference d.

(a) Write down the third, ninth and twenty fifth terms of the AP in terms of a and d. **(1mk)**

(b) The AP above is increasing and the third, ninth and twenty fifth terms form the first three consecutive terms of a Geometric Progression (G.P) The sum of the seventh and twice the sixth terms of the AP is 78. Calculate:-

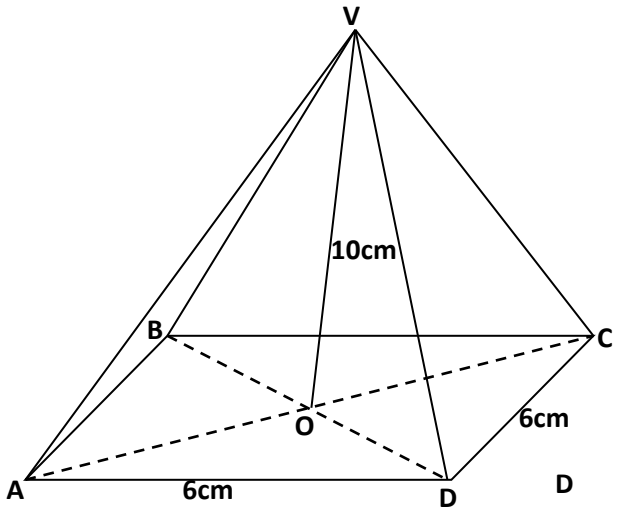
(i) the first term and common difference of the AP. **(5mks)**

(ii) the sum of the first nine terms of the AP. **(2mks)**

(iii) The difference between the fourth and the seventh terms of an increasing AP. **(2mks)**

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

20. The figure below is a square based pyramid ABCDV with AD = DC = 6cm, and height VO = 10 cm.



(a) State the projection of VA on the base ABCD. **(1 mk)**

(b) Find

(i) The length of VA **(3 mks)**

(ii) The angle between VA and ABCD **(2 mks)**

(iii) The angle between the planes VDC and ABCD **(2 mks)**

(iv) Volume of the pyramid **(2 mks)**

21. **(a)** Complete the table below for the function $y = x^2 + 3$ **(2mks)**

x	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
y	4		7			15.25	19		27		39

(b) Use the mid-ordinate rule with five strips to estimate the area bounded by the curve, the line $x = 1$ and the line $x = 6$. **(2mks)**

(c) Use integration to find the exact area in (b) above. **(3mks)**

(d) Calculate the percentage error arising from the use of mid-ordinate rule. **(3mks)**

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

22. A contractor applied for contracts

A - Building a classroom block

B - Constructing school dining hall

C - Putting up a dormitory block

The probability of getting A is 0.7. The probability of getting B is 0.6 If A is obtained and only 0.3 if A is not obtained. The probability of getting C is 0.8 if B is obtained and only 0.4 if B is not obtained.

a) Draw a tree diagram to represent the above information. **(2 marks)**

b) Find the probability of getting

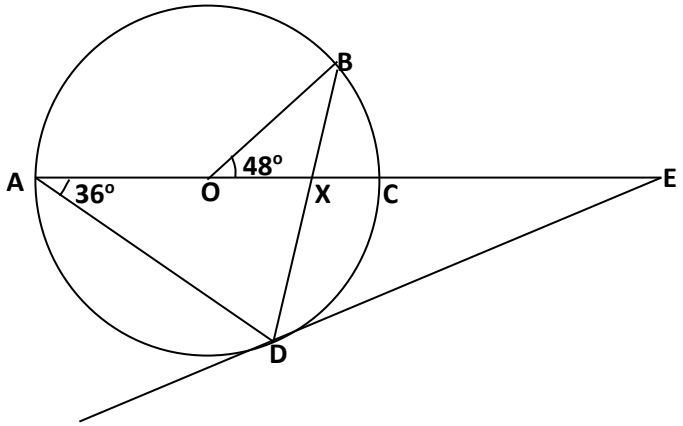
i) The three contracts **(2 marks)**

ii) Only one contract **(2 marks)**

iii) At least one contract **(2 marks)**

iv) None of the contract **(2 marks)**

23. In the figure below, O is the centre of the circle. A, B, C and D are points on the circumference of the circle. A, O, X and C are points on a straight line. DE is a tangent to the circle at D. Angle BOC= 48^0 and angle CAD = 36^0.



(a) Giving reasons or otherwise, find the value of the following angles:-

(i) Angle CBA **(1 mk)**

(ii) Angle BDE **(2 mks)**

(iii) Angle CED **(3 mks)**

(b) It is also given that AX = 12 cm, XC = 4 cm, DB = 14 cm and DE = 20 cm.

Calculate:

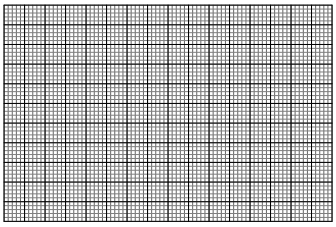
(i) DX **(2 mks)**

(ii) AE **(2 mks)**

24. A tailoring business makes two types of garments A and B. Garment A requires 3 metres of material while garment B requires 2 ½ metres of material. The business uses not more than 600 metres of material daily in making both garments. It must make not more than 100 garments of type A and nor less than 80 of type B each day.

(a) Write down three inequalities from this information other than and $x \geq y$, where x is the number of garments of type A and y the number of garments of type B. **(3mks)**

(b) Graph these inequalities. **(3mks)**



(c) If the business makes a profit of sh 80 on garment A and a profit of sh. 60 on garment B, how many garments of each type must it make in order to maximize the profit and what is the total profit? **(4mks)**

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

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

451/1

COMPUTER STUDIES

Paper 1

(THEORY)

2½hrs

Instruction to candidates

- ***a)*** *Write your name and index number in the space provided above.*
- ***b)*** *Sign and write the date of examination in the spaces provided above.*
- ***c)*** *This paper consists of **two** sections **A** and **B**.*
- ***d)*** *Answer **all** the questions in section **A.***
- ***e)*** *Answer question **16** and any other **three** questions from section **B.***
- ***f)*** *All answers should be written in the space provided in the question paper.*

For Examiner's Use Only

Section	Question Number	Candidate's Score
A	1-15	
B	16	
	17	
	18	
	19	
	20	
	Total Score	

SECTION A (40 Marks)

Answer all questions in this section

1. Today, many companies are re-engineering their products to implement the USB connection to the computer. State any two reasons for the drift. **(2 Marks)**

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2. Bochongo high school managed to construct a computer laboratory but did not have funds for equipping it with computers. A British company offered to donate some computers to the school

a. After an assessment, it was identified that the supplied computers were the third generation of computers, state any two characteristics of third-generation computers. **(1 Mark)**

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……

3. (a)It was noted that after every lesson, the students complained of itchy eyes and mild headache. State any two reasons for this problem. **(2 Marks)**

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(b) State any one solution of the problem mentioned in (2b) above. **(1 Mark)**

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4. State any two methods of input available for the operation of a smartphone. **(2 Marks)**

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5. Define the term relationship as used in database management systems. **(1 Mark)**

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6. State any two importance of referential integrity with reference to database tables. **(2 Mks)**

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7. State the function of an append query. **(1 Mark)**

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8. Computers are known to create employment for many people in different computing fields. List any two duties of the IT professionals listed below. **(4 Marks)**

a. System analyst.

……

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b. Network engineer.

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9. Interfaces enable computer users to interact with the operating system.

a. State four advantages for using a graphical user interface in loading programs and files.

(4 Marks)

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b. A vehicle assembly company has introduced robots to replace the human workforce. State two effects this would have on the work force. **(2 Marks)**

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10. A system analyst is employing a programmer to write a software for a new computer-based system. State the benefits of this method of obtaining appropriate software. **(3 Marks)**

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11. Give any two advantages of OLED monitors over the LED monitors. **(2 Marks)**

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12. Distinguish between margins and borders as used in word processing. **(2 Marks)**

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13. In recent times, computer scientists and engineers have managed to come up with smarter computers, which can almost simulate human thinking and learning often referred to as artificial intelligence (AI), instead of relying on conventional program instructions. List any **two** application areas of artificial intelligence. **(2 Marks)**

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FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

14. DTP is known to be sophisticated software well suited for desktop publishing.

(a) Explain the following terms as used in desktop publishing. **(2 Marks)**

- Pasteboard

……

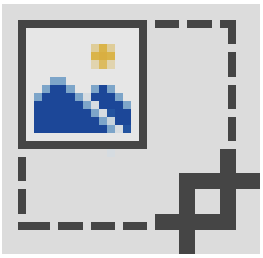
……

- Text overflow

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……

(b) The figure below shows a formatting tool used in DTP. Identify its name. **(1 Mark)**



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15. Spreadsheet is the dream software for accountants due to their ability to handle numeric oriented data

(a) Identify the type of cell referencing used in the expressions below: **(2 Marks)**

=RANK($C$3:$A$10, 0)

……

……

=SUM(A$3:A12)

……

……

(b) State the importance of forms in a spreadsheet during data entry. **(1 Mark)**

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(c) Differentiate between sorting and filtering as used in worksheet data management. **(2 Mks)**

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SECTION B (60 Marks)

*Answer question **16** and any other **three** questions*

16. When writing a computer program using a high-level programming language, it needs to be translated into object code for it to be understood and executed by the computer.

a. State any two advantages of an interpreter. **(2 Marks)**

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b. State any three characteristics of the third-generation programming languages. **(3 Mks)**

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The psedocode below was written by a learner. Use it to answer the questions that follows

```
Start
Sum=0
For count=0 - 4 do
Print “enter a number (N)”
Input N
If P>10 then
Number out of range
Else
Sum=sum + N
Print sum
End if
End for
Stop
```

c. Identify the errors in the above pseudocode and re-write it correctly. **(3 Marks)**

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d. State the function of the above pseudocode **(1 Mark)**

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e. Draw a flow chart for the corrected pseudocode **(6 Marks)**

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17. a) State one application of computing where real-time processing is more appropriate than batch processing and give a reason why **(2 Marks)**

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(b) i) State three reasons why hospitals have changed from a manual system to a computer-based system for storing patient records **(3 Marks)**

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ii) State any three data access methods that can be used to retrieve a patients record in a computerized system. **(3 Marks)**

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iii) Other than storing patient records, state any other three ways the computers can be used in a hospital. **(3 Marks)**

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c) Data protection rules give legal rights to individuals and state that personal data stored on computer systems must be kept secure.

i) Give one legal right for personal data. **(1 Mark)**

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ii) Give three software methods of protecting data. **(3 Marks)**

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18. Information systems are known to be the driving force for any organization. The success of an organization depends on the design and implementation of its information system.

a. Define any four components of an information system. **(4 Marks)**

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b. State the stage in systems development when the activities listed below are performed. **(2 Marks)**

i. The system analyst presents a report recommending for a change in the system.

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ii. The system analyst creates a logical design of the system.

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iii. The project stakeholders invite users to have a feel of the system before implementation.

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iv. The system analyst monitors and evaluates the system performance.

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c. Distinguish between the direct and phased changeover strategies. **(2 Marks)**

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d. Describe the system characteristics listed below. **(4 Marks)**

i. Systems have a life cycle.

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ii. The interdependency between subsystems.

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e. State any three reasons that may lead to information system change in an organization. **(3 Marks)**

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19. After data is processed, it is important to keep it somewhere either permanently or semi - permanently for future use.

a. Briefly describe how data is stored/ represented on a solid-state storage device.**(2 Mks)**

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b. State any two advantages of solid-state storage devices. **(2 marks)**

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c. Distinguish between BCD and EBCDIC coding schemes. **(2 Marks)**

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d. Using 8 bits and twos complement subtract 43_{10} from 30_{10}, giving your answer in decimal notation **(5 Marks)**

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e. Convert 11011011111.1111_2 to its equivalent Hexadecimal number **(1 Mark)**

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f. Determine the value of x in the equation; $1001101_2 - X_{10} = 11010_2$ **(3 Marks)**

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20. Networking is said to be important in facilitation of data transfer.

(a) Dr. Jabari, a networking expert trained his students on various data communication aspects. After a lesson, he asked them to state and explain **three** modes of data transmission. As a student, what answers would you provide? **(3 Marks)**

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(b) Differentiate between LAN and WAN as used in computer networks. **(2 Marks)**

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(c) State **two** advantages of fiber-optic transmission media. **(2 Marks)**

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(d) In a computer network, a server computer must be installed with a network operating system in order to operationalize a number of network functions. State **three** functions performed by a network operating system (NOS). **(3 Marks)**

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(e) (i) Define the following terms as used in the internet.

- Browser **(1 Mark)**

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- Spam **(1 Mark)**

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(ii) Many organizations own and manage websites for various uses. One use of website by a business is conducting their business activities through e-commerce. Mention **three** advantages of e-commerce. **(3 Marks)**

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This is the last page

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

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

451/2

COMPUTER STUDIES

Paper 2

(PRACTICAL)

TIME: 2 HRS

INSTRUCTIONS TO CANDIDATES

1. *Type your name and admission number at the top right hand corner of each printout*
2. *Sign and write the date of the examination below the name and index number on each printout*
3. *Write your name and index number on the compact disks*
4. *Write the name and version of the software used for each question attempted in the answer sheet*
5. *Passwords should not be used while saving in the compact disks*
6. *Answer all the questions*
7. *All questions carry equal marks*
8. *All answers must be saved in your compact disks*
9. *Make a printout of the answers on the answer sheets provided*
10. *Hand in all the printouts and the compact disks.*

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

1. KASSU School intends to carry out mathematics contest in their school for the year 2021. The following is a standard letter inviting other schools to the event.

(a) (i) Create a folder; name it as your name and admission number. **(2 marks)**

(ii) Using word processor, create the document as it appears. Give the filename **CONTEST** in the folder created (a)(i) above. **(19 marks)**

KASSU SCHOOL

THE PRINCIPAL **September 4TH 2021**

……

Dear Sir/Madam,

RE: KASSU SCHOOL ANNUAL NATIONAL MATHEMATICS CONTEST

We have the pleasure to invite your school for the National Mathematics Contest sponsored by the Worldwide Tech Ltd and Brooklyn University to be held at KASSU School on **Saturday 2nd October 2021 starting at 8.00am.**

The objective of the contest is to demystify the perception and fear that students have towards mathematics as being difficult in order to improve the performance of the subject in the country. All participating students will receive Certificates of Participation and those who excel will receive trophies and certificates of merit. Top students i.e. position 1 & 2 per form and in each category (Junior and Senior); boys, girls and mixed, will receive trophies. **Brooklyn University shall award a one-year full scholarship fees** to the **Best Form Three Boy** and **Best Form Three Girl**.

The mathematics department that produces the top boy and girl at the grand finale will win a cash prize of **Ksh 150,000 for the department.**

Please confirm your participation by calling the school through **Mr. Olunga on 0726927450** before 27th September 2021 to facilitate for logistical prparataions.

Yours faithfully

(b) Set the page settings as follows: **(4 marks)**

- Paper Size: A4
- Top margins: 0.4" (1.016) cm
- Bottom margins: 0.4" (1.016) cm
- Gutter: 0.22" (0.548) cm

(c) Format the subject heading which starts with **"RE: KASSU SCHOOL…."** as follows: **(3 marks)**

- Alignment: Centre
- Font size: 18
- Font type: Britannic Bold

(d) Insert header "Your name and admission number" and include a line object under.**(1 mark)**

(e) Apply the following to the paragraph starting with *"The objective of the contest ……."*

- Hanging indent By 0.6" **(1 mark)**
- Line spacing to 1.3 **(1 mark)**

(f) Format the text containing "**Value Proposition**" as follows: **(2 marks)**

- White font color
- Dark red background

(g) Create a copy of the document save As **CONTEST_2** and proofread your work.**(2 marks)**

(h) Insert page numbering at the bottom right of each page. **(1 mark)**

(i) Group all objects in the school logo. **(1mark)**

(j) Apply the following character spacing formats to the second paragraph. **(2 marks)**

- Condensed by 0.9pts
- Kerning for fonts at 8 points & above.

(k) Convert all the last paragraphs into three columns of the same width and height. A line between should separate the columns. **(3 marks)**

(l) (i) Convert the names and designations at the bottom of the letter to one column and five rows. **(3 marks)**

(ii) Merge the empty rows inside the table to one cell. **(1 marks)**

(iii) Put a strikethrough to the names of the designations. **(1 mark)**

(m) Insert a watermark with any picture from your computer gallery to authenticate your document. **(1 mark)**

(n) Print the two documents. **(2 marks)**

2. XYZ is a training college that offers three courses to students. A student sits for three types of examinations every semester. Each examination is marked out of 100%. The following table shows sample data collected from the database:

RECORD NO.	STUDENT ID	STUDENT NAME	EXAM CODE	GENDER	COURSE CODE	DATE ENROLLED	COURSE DESCRIPTION	TUITION FEE	SEMESTER	SCORE
1.	ENG-001	MIKE	01	M	D-ENG	01/11/2017	Diploma in Engineering	Sh. 25,000	2	75
2.	CSC-002	KIOKO	02	F	D-CSC	02/11/2017	Diploma in Computer Science	Sh. 35,000	2	80
3.	NUR-003	ABIUD	03	M	D-NUR	03/11/2017	Diploma in Nursing	Sh. 15,000	2	65
4.	ENG-004	JANE	02	F	D-ENG	01/11/2017	Diploma in Engineering	Sh. 25,000	2	60
5.	CSC-002	KIOKO	03	F	D-CSC	02/11/2017	Diploma in Computer Science	Sh. 35,000	2	78
6.	NUR-003	ABIUD	01	M	D-NUR	03/11/2017	Diploma in Nursing	Sh. 15,000	2	72

a). Using a database management application split the information in the above table into three tables namely; (15 marks)

i. Student enrolment

ii. Exam performance

iii. Courses offered

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

b). Create a relationship between the three tables **(3 marks)**

c). Create appropriate forms to be used for entering the records **(6 marks)**

d) Create a query to:

i. Show all students whose score is greater than 70% save it as ***HighScore*** **(3 marks)**

ii. Show students whose name end with the letter 'E' save it as ***Engineers*** **(3 marks)**

iii. Show all students taking Diploma in Computer Science save it as ***Comps*** **(3 marks)**

e). Create a report called ***Tuition Summary*** displaying the following details: **(7 marks)**

- Student ID
- Student Name
- Course Description
- Tuition fees
- Total fees collected

f). Using a report called ***ANALYSIS***, create a column chart showing students performance in the exam. **(5 marks)**

g). Print the tables student enrolment, exam performance, courses offered, the Tuition summary and Analysis reports. **(5 marks)**

FOR KCSE RESOURCES &MARKING SCHEMES CONTACT 0746 222 000

KCSE JOINT MOCK

SERIES 001

NAME…….

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

501/1

FRENCH

PAPER 1

(Listening Comprehension, Dictation & Composition)

TIME: 2 Hrs

INSTRUCTIONS TO THE CANDIDATES:

a. This paper consists of three sections.
b. Ensure that all the three sections are clearly indicated.
c. This paper consists of **8** printed pages.
d. All your answers **must** be in French.
e. Answer all the questions in sections I and II.
f. In section III indicate the question that you will have selected e.g question **8a** or question **8b.**

For Examiner's Use Only

SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
I	15	
II	05	
III	15	
TOTAL SCORE	**35**	

SECTION 1 (15mks)

LISTENING COMPREHENSION

Write answers to Questions 1-6 in the spaces provided.

1. (a) Il s'agit d'une émission de télévision pour des

……(½)

(b) On parle de combien d'émissions ?

……(½)

(c) A quelle heure peut-on suivre l'émission de la condition féminine ?

……(½)

(d) Michel Kamara est connu pour ses

…….(½)

2. (a) Dans cette annonce on parle de la compétition de …… qui est ouverte (½)

(b) Qu'est-ce qu'on doit donner avant le 30 novembre ?

……. (½)

(c) Pour avoir plus d'informations, il faut aller à

……..(½)

3. (a) Où est-ce qu'on fait cette annonce ?

…… (½) (b) Elle s'adresse aux …… (½)

(c) Selon l'annonce, on recevra …….(½) pour avoir dépensé

……... ……. euros. (½)

4. (a) Qu'est-ce que Mathilde fête ?

……. (½)

(b) Combien de personnes y aura-t-il pour sa fête ?

……. (½)

(c) Que faisait Nathalie quand Mathilde a appelé ?

……. ……(½)

(d) Nathalie n'a pas pu rejoindre Mathilde au téléphone parce que la ligne

……... (½)

(e) Donnez 2 détails sur le cousin de Nathalie

(i) …… (½)

(ii) …… ..(½)

5. (a) Où se trouve Francine ?

…… (½)

(b) (i) Quel moyen de transport utilisera-t-elle ?

……(½)

(ii) Avec qui ? ……(½)

(c) A quelle heure arrive-t-elle ?

…… (½)

6. (a) Où se passe la visite ?

……(½)

(b) Le /La guide s'appelle

……(½)

(c) Il y a …….. étages dans la nouvelle section. (½)

(d) (i) Le café se trouve au …… étage. (½)

(ii) On peut y acheter …….. (½)

(e) (i) On peut acheter …… au magasin du musée. (½)

(ii) Ce magasin est …… la sortie. (½)

SECTION II (DICTATION) (5mks)

7. Listen to the instructions before you start writing.

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SECTON III (COMPOSITION) (15mks)

Imaginative writing

In this section choose ONLY one question.

In 150 -180 words, write a composition in French beginning with:

EITHER

Beginning as follows :

8. **(a) Il faisait froid ce soir-là …**

OR

Ending as follows :

(b) . …….Je n'oublierai jamais ce soir-là.

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

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

501/2

FRENCH

PAPER 2

(Reading Comprehension, Grammar and Functional Writing)

2 hours 15 minutes

Instructions to candidates.

a. Write your name, school, class and admission number in the spaces provided above.

b. This paper has **three** sections: **I, II, and III.**

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

d. Candidates should answer the questions in French.

For Examiner's Use Only

SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
I	15	
II	15	
III	10	
TOTAL SCORE	**40**	

SECTION I

(Reading Comprehension 15 marks)

Read the passages below and answer the questions that follow each passage.

1. **PASSAGE 1**

L'école publique est gratuite.

Elle est obligatoire de 6 à 16 ans.

Le système français est très centralisé avec des examens sous contrôle du ministère de l'Éducation nationale.

Le but de l'école est de donner une bonne culture générale.

Les lycéens peuvent apprendre jusqu'à trois langues étrangères, mais la plupart d'entre eux n'en étudient que deux.

Le baccalauréat est un examen passe par la majorité des jeunes.

Cet examen permet d'entrer à l'université.

QUESTIONS

1. Combien est-ce qu'on paie à l'école publique ?.....1pt
2. Quel examen vous donne la permission d'entrer à l'université ? ……1pt
3. Du texte, donnez un autre nom qui signifie « élèves »……..1pt

2. **PASSAGE 2**

JOURNÉE NOIRE

Aujourd'hui ce n'était pas mon jour !..En sortant de chez moi, je suis tombée sur la voisine du dessous qui m'a agressée à cause du bruit de la fête d'hier soir.

Dans la rue, à un passage piétons, un chien m'a mordue et son maitre m'a insultée, tout ça parce que j'avais marché sur la patte de l'animal !mais ce n'est pas fini…En allant au travail, dans le métro, un jeune m'a bousculée et en a profité pour me voler mon portable. Je suis allée au commissariat le plus proche pour faire une déclaration de vol, et là on m'a ignorée pendant une demi-heure avant de me rediriger vers une autre poste de police.

QUESTIONS

1. Pourquoi était-elle agressée par sa voisine ?.....1pt
2. Par quel moyen est-elle allée au travail ?.....1pt
3. Est-ce qu'elle avait été aidée au commissariat ?.....1pt

3. PASSAGE 3

249 Euros Hôtel Paradis 4 étoiles ,1 semaine Départs de toute la France du 26 septembre au 14 octobre Hôtel de luxe situé au cœur de la palmeraie, à 15 minutes du centre-ville Courts de tennis, terrain de golf, piscine, spa avec salle de fitness, soirées dansantes et folkloriques. Visites guidées, circuits dans le désert.

QUESTIONS

1. Quand passera le départ ?.....1pt
2. D'après ce texte, auquel sport pouvez-vous participer dans l'eau ?.....1pt
3. Combien coûte cette réservation ?.....1pt

4. PASSAGE 4

Un réveil pour se lever
Une serviette pour se laver
Une chemise pour s'habiller
Un bol pour déjeuner
Des chaussures pour se promener
Un manteau pour se chauffer
Un bonnet pour se cacher
Mon cartable est prêt
Mes devoirs sont faits
Où est-ce que je vais ?
A l'école, pour enseigner

Questions

1. Qui parle ?.....1pt
2. Mentionnez deux habits dans le poème……..1pt
3. Où va cette personne ?.....1pt

5. PASSAGE 5

Je vais souvent à l'opéra, j'aime beaucoup les spectacles de danse contemporaine et bien sur les opéras .Comme je prends toujours une place à Galleria c'est assez loin, bien sur je ne vois pas très bien la scène, les expressions des artistes sont invisibles, mais je me laisse charmer par la musique et l'ambiance du lieu. Je ne regrette jamais mon choix.

Questions

1. Où se trouve l'opéra ?……1pt
2. Pourquoi je ne vois pas bien ?.....1pt
3. Est -ce que j'ai des regrets ?.....1pt

SECTION II

Grammar (15 marks)

6. Rewrite the sentences below as guided, making appropriate changes. Avoid unnecessary repetitions.

1. As-tu regardé ces films fantastiques ?
   Oui, je…….. 1pt

2. Les ivoiriens parlent le français.
   Le français ……..1pt

3. Hier quand je suis sorti de la banque, j'ai vu un fou.
   C'est en……1pt

4. 'Nous sommes les invités de l'ambassade' Les touristes ont dit.
   Ils ont dit…… 1pt

5. Pierre prend des médicaments ?
   Oui, il…….1pt

6. Les élèves font du bruit dans la salle à manger ?
   Non,……..1pt

7. Les voleurs, ont-ils volé quelque chose ?
   Non,……1pt

8. Enfant : Je voudrais rendre visite à ma tantine Mathilde.
   Papa : Bien sûr, il faut……1pt

7. Complete the text below by filling each blank space with ONE appropriate word. (4 marks)

Je viens (i)……..prendre un boulot et je ne suis pas (ii)……diplômé. Vous savez, (iii)……France, la situation économique est (iv)……favorable que personne n'est au chômage De temps en (v)……..on voit dans les journaux, les appels (vi)…….poser des candidatures aux postes variés.
Tant (vii)…….pour moi, j'aurai mon diplôme (vii)……six mois.

8. Match the sentences in column A with those in Column B (3 points)

Il vend des fleures	Coiffeur
Il s'occupe des cheveux	Maître
On va chez lui quand on est malade	Femme d'affaire
Elle a beaucoup de magasins	Avocats
Ils représentent les criminels	Médecin
Il enseigne à l'école	Fleuriste
	Epicier

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

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

441/1

HOME SCIENCE

Paper 1

(THEORY)

2½ HOURS

Instructions to candidates

a) Write your name and admission no in the spaces provided.

b) Answer all the questions in section A and B and any two from section C.

c) Answers to all questions must be written in the spaces provided.

FOR EXAMINERS USE ONLY.

Section	*Question*	*Maximum score*	*Candidates score*
A	***1-40***	***40***	
B	***41***	***20***	
C	***42-44***	***40***	

SECTION A (40 MARKS)

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

1. State two uses of forks in the kitchen during preparation and cooking of food**.(1mark)**

……

……

……

2. Mention two disadvantages of steaming food (**1mark)**

……

……

……

3. State two reasons for cooking food **(1mk)**

……

……

……

4. State two conditions essential in making steam effective as a raising agent **(1mark)**

……

……

……

5. Outline two uses of fat in bread making **(1mark)**

……

……

……

6. Define the term environmental hygiene **(1mark)**

……

……

7. State two ways one can care for open drains **(1mark)**

……

……

……

8. Mention two points on prevention and control of round worms **(1mark)**

……

……

……

9. Identify two ways of meeting the social needs of patient recuperating at home **(1mark)**

……

……

……

10. List two ways of achieving good grooming **(1mark)**

……

……

……

11. Mention two vegetable fibers used to make brooms and brushes **(1mark)**

……

……

……

12. State two advantages of bungalows(**1mark)**

……

……

13. Differentiate between polished wood and a laminated wood **(1mark)**

……

……

……

14. Define the term consumer Education **(1mark)**

……

……

15. Identify two principles of wise buying **(1mark)**

……

……

……

16. State two factors that affect a budget **(1mark)**

……

……

……

17. State two advantages of breast milk**(1mark)**

……

……

……

……

18. A disease portrays the following features,

i. Its highly contagious

ii. Its viral

iii. It affects the liver causing liver cirrhosis

iv. The vaccine of the diseases is given in three doses

Which disease is this**?**.....

19. Mention the main importance of postnatal care**(1mark)**

……

……

……

20. State two points on achieving safe parenthood **(1mark)**

……

……

……

21. Mention two points to observe when using disinfectants during laundry **(1mark)**

……

……

……

22. Give two grease absorbents used in laundry **(1mark)**

……

……

……

23. List two types of vacuum cleaners**(1mark)**

……

……

……

24. List two uses of candles as a source of lighting **(1mark)**

……

……

25. Mention two advantages of biogas fuel **(1mark)**

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26. List down two types of windows can be used for ventilation **(1mark)**

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……

27. Mention two common injuries which may accidentally occur at home**. (1mark)**

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28. Identify two ways starch can be prepared at home**(1mark)**

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……

29. State two ways of improvising clothes storage facilities **(1mark)**

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……

30. Mention two dangers of poor ventilation **(1mark)**

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……

……

31. Differentiate between a tear and a wear **(1mark)**

……

……

……

32. Define the term pressing as used in laundry **(1mark)**

……

……

33. Mention two methods of neatening seams(**1mark)**

……

……

34. Fasteners are mainly functional on garments. Give two examples **(1mark)**

……

……

35. State two properties of silk that makes it suitable for making furnishings**(1mark)**

……

……

36. List two balance marks in pattern markings **(1mark)**

……

……

37. Aprons are available in many styles. Give two factors that may determine the choice of an apron style . **(1mark)**

……

……

38. State two qualities of a well-made seam (**1mark)**

……

……

39. Mention two layers that makes a pleat **(1mark)**

……

……

40. List down two functions of pockets on garments**(1mark)**

……

……

……

SECTION B: (20 MARKS)

COMPULSORY

Answer question 41 in the spaces provided.

41. You are at home over the weekend and asked to assist in household chores. Explain how to thorough clean the following items;

a) Launder a polyester dress with a gum stain (8marks)

b) Cleaning a kitchen counter made of plain wood (7marks)

c) Cleaning a baby's feeding bottle (5marks)

SECTION C (40 MARKS)

***Answer two questions from this section in the space provided*.**

42.

a) Name any three government bodies provides information to consumers. (3marks)

b) Describe with the use of two diagrams the procedure of making a French seam (6marks)

c) Briefly describe the cleaning of calabashes (4marks)

d) Mention four groups of people who may need packed meals (4marks)

e) Yellow fever is an acute viral disease, state the symptoms of the disease (3marks)

43.

a) Discuss five reasons for sufficient ventilation in a room (5marks)

b) Explain where the following body measurements are taken (3marks)

- Bust
- Waist
- Back length

c) Briefly explain five points to consider when planning and serving meals for children(5marks)

d) State three disadvantages of cash buying (3marks)

e) State four ways of fulfilling the physical needs of an expectant mother (4marks)

44.

a) Briefly explain how to darn a hole in a knitted fabric(5marks)

b) Discuss five possible causes of needle breaking when sewing (5marks)

c) Mention three signs and symptoms of anorexia nervosa (3 marks)

d) Outline and explain the three forms of advertisements (3 marks)

e) State four points on the importance of immunization (4marks)

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

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

441/2

HOME SCIENCE

CLOTHING CONSTUCTION PRACTICAL

PAPER 2

INSTRUCTIONS TO SCHOOLS

The following materials will be provided by the school

1. Plain light weight cotton 55 cm long by 90cm wide
2. Cotton sewing thread to match the fabric
3. A4 envelope

FABRIC IN EXCESS OF THE AMOUNT SPECIFIED MUST NOT BE SUPPLIED TO THE CANDIDATES.

These instructions consist of 1 printed page

KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

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

441/2

HOME SCIENCE

(CLOTHING CONSTRUCTION)

PAPER 2

PRACTICAL

Time: 2 ½ hours

Instructions to candidates

- *This paper consists of **3** printed pages.*
- *Candidates should check the question paper to ascertain that all pages are printed and no questions are missing.*

A pattern of a girl's skirt is provided. You are advised to study sketches, instructions and layout carefully before you begin the test.

1. Materials provided.
   - A Skirt Back
   - B Skirt Front
   - C Front Yoke
   - D Front frill
   - E Back Frill
   - F Waist band
   - G Pocket
2. Plain light weight fabric 55cm long by 90cm wide.
3. Sewing thread to match the fabric
4. One large A4 envelope.

The test

Using the materials provided, lay, cut and make the **LEFT HALF** to show the following processes;

(a) Cutting out **(18marks)**

(b) Making the dart at the back skirt**. (5marks)**

(c) Joining the front yoke to the front skirt using overlaid seam**. (10$^{1}/_{2}$marks)**.

(d) Attaching the in-seam pocket. **(7marks)**

(e) Making the side seam using open seam. Neaten the lower part of the seam only. **(6$^{1}/_{2}$marks)**

(f) Joining the front frill to the back frill using double stitched seam**. (7marks)**.

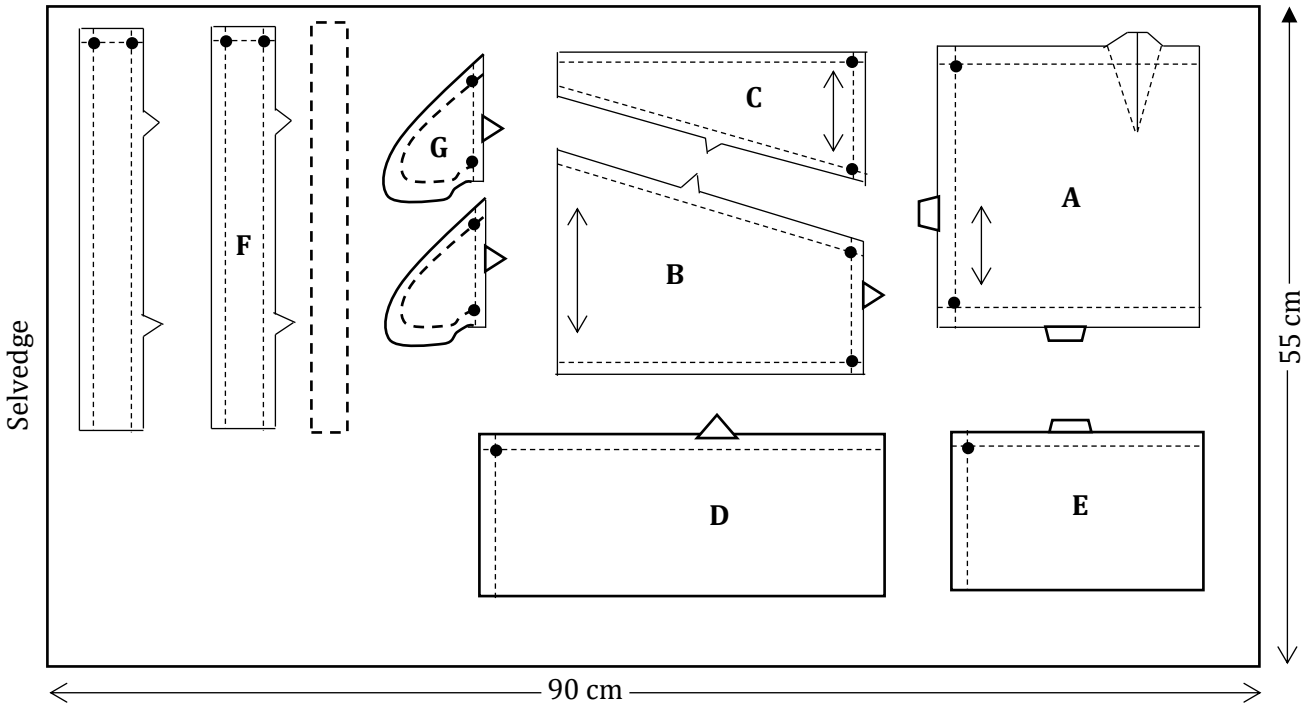
(g) Attach the lower part of the skirt to the joined frills using plain seam. Neaten the back part only. **(7marks)**

(h) Preparing and attaching an **INTERFACED** waist band. Neaten using hemming stitches. **(13marks)**

(i) Making the button hole. **(10marks)**

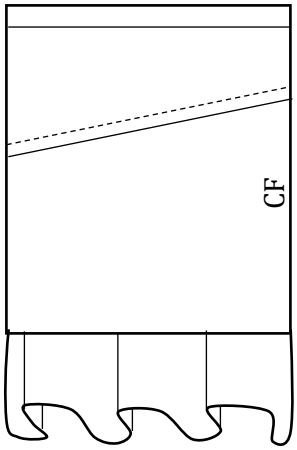
(j) Presentation. **(6marks)**

LAYOUT (NOT DRAWN TO SCALE)

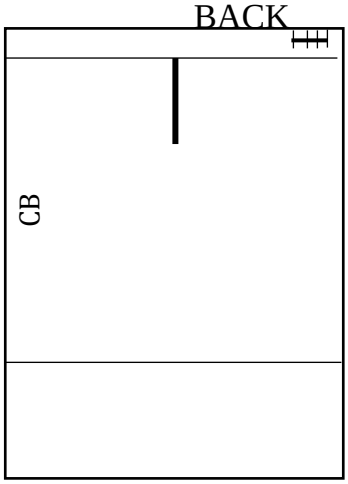


VIEWS

FRONT



BACK



KCSE JOINT MOCK

SERIES 001

NAME…….

SCHOOL…….. INDEX NO…….

SIGN……...

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

441/3

HOME SCIENCE

(Food and Nutrition)

Paper 3

Practical

Time: $1\frac{3}{4}$ Hours

Planning session - 30 minutes

Practical test session – $1\frac{1}{4}$ hours

INSTRUCTIONS TO CANDIDATES

1. Read the test carefully.
2. Write your name on every sheet of paper.
3. Textbooks and recipes may be used during the planning session as reference.
4. You will be expected to keep to your order of work during the practical session.
5. You are only allowed to take away your reference materials at the end of the planning session.
6. You are not allowed to bring additional notes to the practical.

THE TEST

You are home for half term with a visiting cousin who will be travelling early in the morning. Using **ALL** the ingredients listed below, prepare, cook and serve/ pack:

1) A one course dinner for you and your cousin. Include a nutritious drink.
2) A packed item and a drink

INGREDIENTS

- *Maize flour*
- *Wheat flour*
- *Beef/chicken*
- *Green leafy vegetables*
- *Oranges / pineapple*
- *Eggs*
- *Baking powder*
- *Sugar*
- *Cooking fat and oil*
- *Salt*
- *Green pepper*
- *Carrots*
- *Onions*
- *Tomatoes*
- *Cinnamon sticks*

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 food items and write down their recipes.
2. Write down your order of work
3. Make a list of food stuffs, materials and equipment you will require.

THE END

POLITE NOTE:

TO ALL KCSE 2022 CANDIDATES;

Incase a Significant Number of these Questions

Appear in KCSE Exam, Don't panic!

TAKE IT EASY

FOR MARKING SCHEMES

CONTACT

0746 222 000

mwalimuagency@gmail.com

Mr Isaboke-Mwalimu Agency.

TO ALL

KCSE CANDIDATES

SUCCESS