

FORM 3 ENDTERM 2 EXAMS

(SMART-GRADE SERIES)

ALL SUBJECTS

*Smart-grade Collection of Standard set of End of Term 2 Assessment
Tests for the Current Class for all High Schools in the Republic of
Kenya.*

SUBJECTS TESTED;

*Mathematics, English, Kiswahili, Biology, Chemistry, Physics, CRE, Geography,
History, Business Studies, Home-Science, Agriculture, French, Computer Studies,
IRE, Art and Design.*

SMART-GRADE SERIES

For Marking Schemes / Answers

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MWALIMU CONSULTANCY

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

231/1

BIOLOGY

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- (a) Write your name, index number and school in the spaces provided above*
- (b) Sign and write the date of the examination in the spaces provided above*
- (c) Answer ALL the questions in the spaces provided on the question paper*
- (d) Candidates should answer the questions in English*

FOR EXAMINER'S USE ONLY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	GRAND TOTAL

Answer all the questions in the spaces provided.

1. Name the spore producing structures in

(3mks)

(a) Bryophyte

.....

(b) Pteridophyta

.....

(c) Fungi

.....

2. Name the carbohydrate stored in:

(2mks)

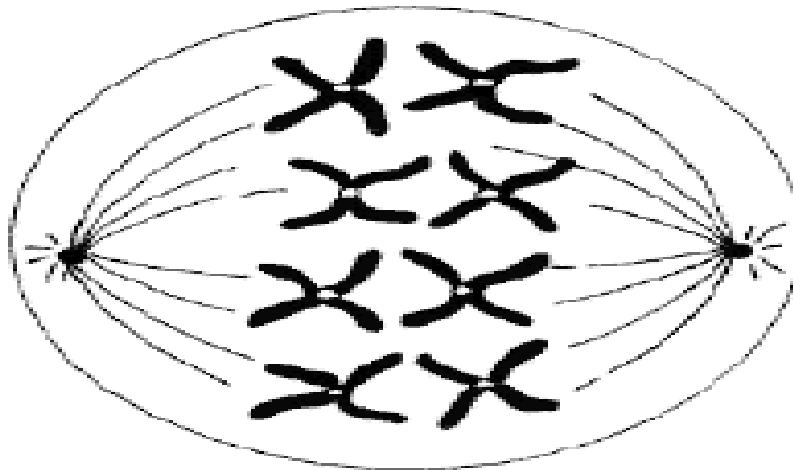
a) Cell wall

.....

b) Mammalian liver

.....

3. The diagram below represents a stage in the cell division.



a) i) Name the type of cell division.

(1mk)

.....

ii) Name the stage of cell division.

(1mk)

.....

4. Write **three** differences in the leaves of plants in the class Monocotyledonae and class

Dicotyledonae

(3mks)

Monocotyledonae	Dicotyledonae

5. Given the following organisms in a dam, construct a possible food chain for the dam. (2mks)

Small fish

Crocodiles

Mosquito larvae

Microscopic algae

Large fish

.....

6. Why are plants able to accumulate most of the waste products for long?

(2 mks)

.....

7. State the conditions in human beings that results to the following:-

(i) Production of large quantities of dilute urine.

(1 mk)

.....

(ii) Release of aldosterone hormone

(1 mk)

.....

(iii) Release of glucagon hormone.

(1 mk)

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8. State two characteristics of fungi.

(2 mks)

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9. State the changes that occur in arterioles in the human skin during thermoregulation. (2 mks)

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10. Study the diagram of the mammalian tooth below and answer the questions that follow.



a) Identify the tooth.

(1mk)

.....

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

(1mk)

.....

.....

c) State **one** adaptation of the tooth to its function.

(1mk)

.....

.....

11. Study the pictures of two organisms below and answer the questions that follow.



a) Why are the two organisms classified in the same phylum? (2mks)

.....
.....

b) State **two** features that are used to classify the organisms above into classes. (2mks)

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.....

12. Oil can be applied on stagnant water to control the spread of malaria.

a) How does this control the spread of malaria. (2mks)

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.....

b) Give a reason why this practice should be discouraged. (2mks)

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.....

13. A strip of raw potato whose length measured 5cm was immersed in a beaker of solution.

After 45minutes the strip measured 5.2 cm.

a) Explain the change in length. (2mks)

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.....
.....

c) State one other observation that was made on the raw potato strip at the end of the experiment (1mk)

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14. State the use of Colchicine (1 mk)

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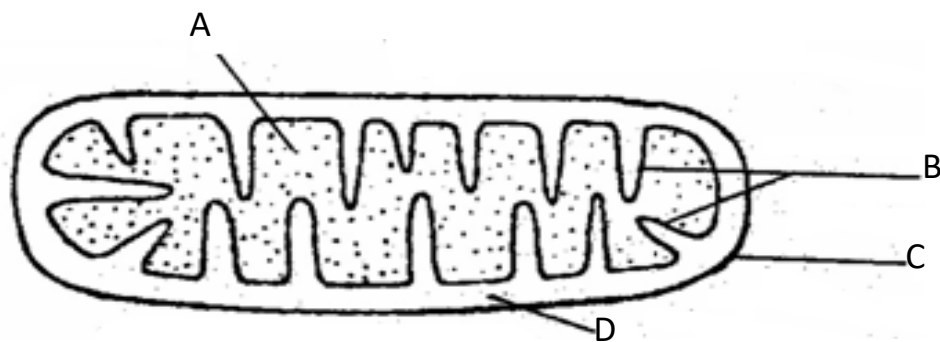
15. State **three** ways in which protein are important to plant. (3marks)

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.....

16. The diagram **below** represents a cell organelle.



(a) Identify the organelle. (1 mark)

.....

(b) Name the part labeled B. (1 mark)

.....

(c) State the function of part labeled A. (1 mark)

.....

.....

17. Name any **two** problems that animal species overcome by their dispersion. (2marks)

.....

.....

18. Explain why tropical forests do not have undergrowth **(2marks)**

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19. Explain how forward flow of blood is maintained in the veins? **(2marks)**

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20. Explain the function of enzyme catalase in ensuring that tissues are kept safe from poisoning. **(2marks)**

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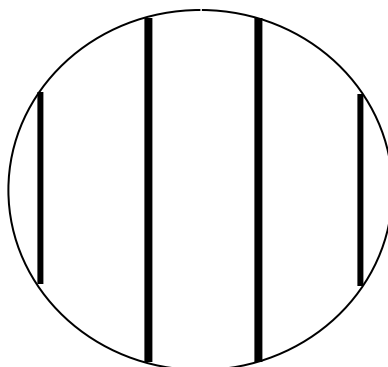
21. State the role of light energy in autotrophic nutrition. **(2 marks)**

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22. A form one student trying to estimate the size of onion cells observed the following on the microscope's field of view.



(a) Define the term resolving power. (1 mark)

.....

.....

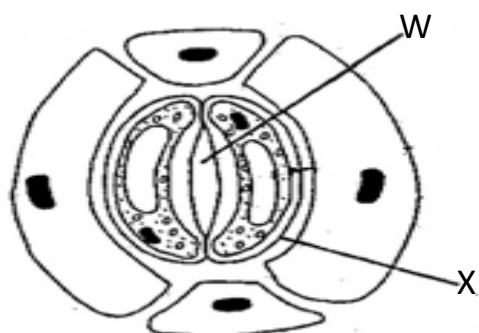
(b) If the student counted 20 cells across the field of view calculate the size of one cell in micrometers. (2 marks)

23. State the importance of peristalsis in nutrition of mammals. (1 mark)

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.....

24. The diagram below shows part of plant tissue.



(a) Name cell labeled X and part labeled W. (2 marks)

X

W

(b) State how cell X are suited to their functions. (2mks)

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.....

25. State the importance of cytoplasmic filaments in sieve tube elements. (1 mark)

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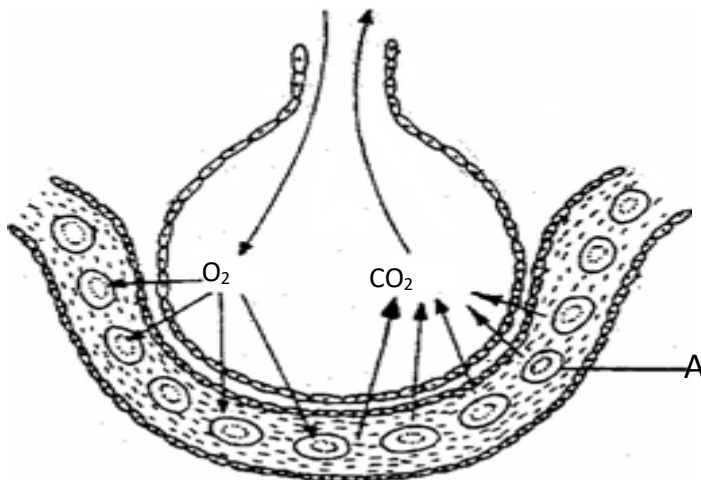
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26. State any two characteristics of populations.

(2marks)

.....
.....

27. The diagram **below** shows the exchange of gases in alveolus.



(a) State how the alveoli are adapted to their function.

(3 marks)

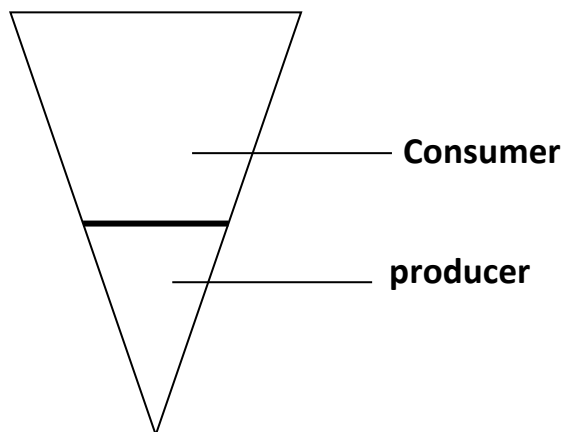
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(b) Name the cell labeled A.

(1 mark)

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28. The diagram below represents a pyramid of biomass derived from a certain ecosystem



(a) Suggest the role of sunlight in this ecosystem (1mk)

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.....

(b) State the significance of short food chains in an ecosystem (1mk)

.....

.....

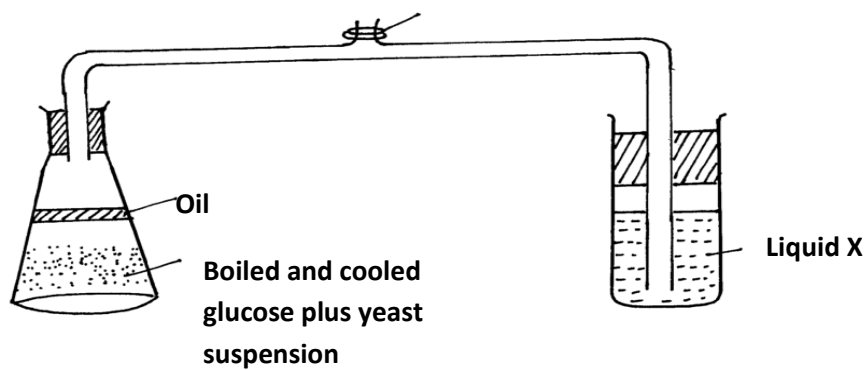
29. Suggest two reasons for the appearance of glucose in the urine of a man. (2 marks)

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.....

.....

30. The set up below shows apparatus to demonstrate a certain biological process



(a) What biological process was being investigated in the experiment (1mk)

.....

(b) Write down a word equation that represents the reaction above (1mk)

.....

.....

(c) In the above set up, why was it important to boil and cool glucose before adding yeast? (1mk)

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.....

31. State two factors which contribute to the formation of tissue fluid in the capillaries (2mks)

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.....

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32. a) Name structural units of **lipids** (1mk)

.....

.....

b) State two functions of lipids in living organisms (2mks)

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.....

.....

33. If the nerve supply to the heart of mammal is severed, the rhythmic heart movements will still go and heart continues to beat. Explain (2mks)

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.....

.....

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

231/2

BIOLOGY

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

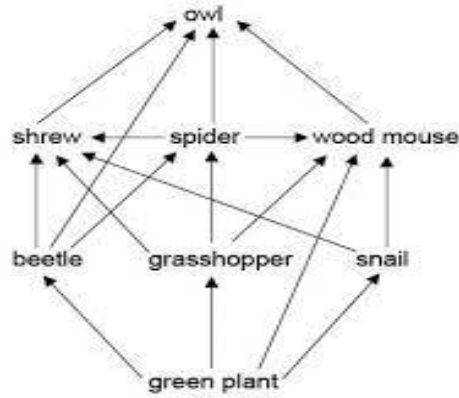
INSTRUCTIONS

- a) This paper has **TWO** sections: **A** and **B***
- b) All Questions in Section **A** are **Compulsory***
- c) Question 6 is Compulsory*
- d) Choose Either Question 7 or 8*
- e) Write your Answers in the Spaces Provided*
- f) Wrong Spelling of Technical Terms shall be **Penalized***

SECTION	QUESTION	MAX SCORE	STUDENT'S SCORE
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7 or 8	20	
TOTAL SCORE		80	

SECTION A (40 MARKS)

1. The following is an illustration of feeding relationship of organisms in a given ecosystem



a) From the above, write a food chain with:

(2mks)

i) Owl occupying third energy level

.....
.....

ii) Owl as quaternary consumer

.....
.....

b) Why should the green plant have the highest biomass?

(2mks)

.....
.....
.....

c) i) Which organism is lacking for the above to be a complete ecosystem?

(1mk)

.....
.....

ii) What is the role of the organism mentioned in ci) above?

(1mk)

.....
.....

- d)** A researcher randomly caught 400 grasshoppers, marked them with ink and released them back to the environment. 24 hours later, he caught 374 out of which 294 lacked the ink mark. Determine the population of grasshoppers in that habitat (2mks)

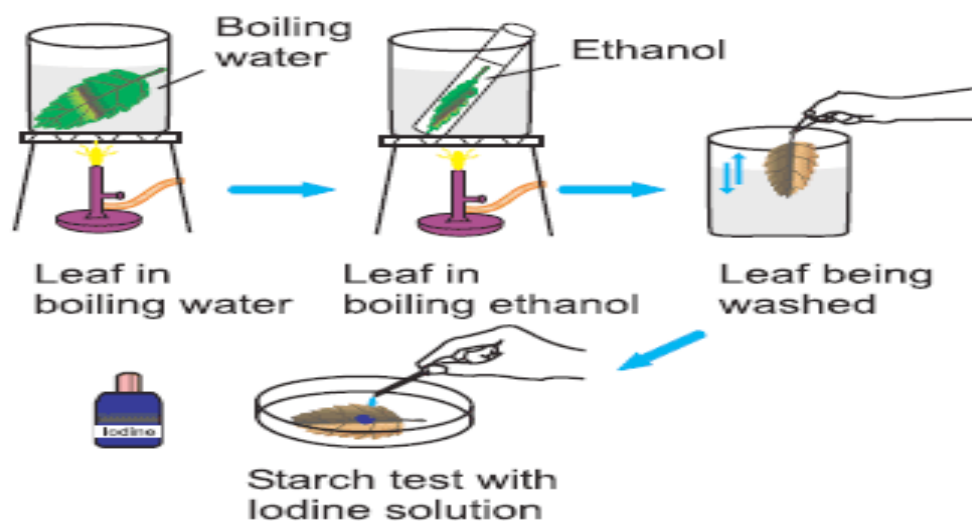
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2. The following are steps followed when testing for starch in a leaf



a) Why would it be necessary to do the following:

- i)** Place the leaf in sunlight for 5 hours before the experiment

(1mk

.....

.....

- ii)** Dip the leaf in boiling water for 5 minutes

(1mk

.....

.....

- iii)** Place the leaf in boiling ethanol

(1mk

.....

.....

b) State the conclusion to be made when the following colours are observed (2mks)

Observation	Conclusion
Brown	
Blue Black	

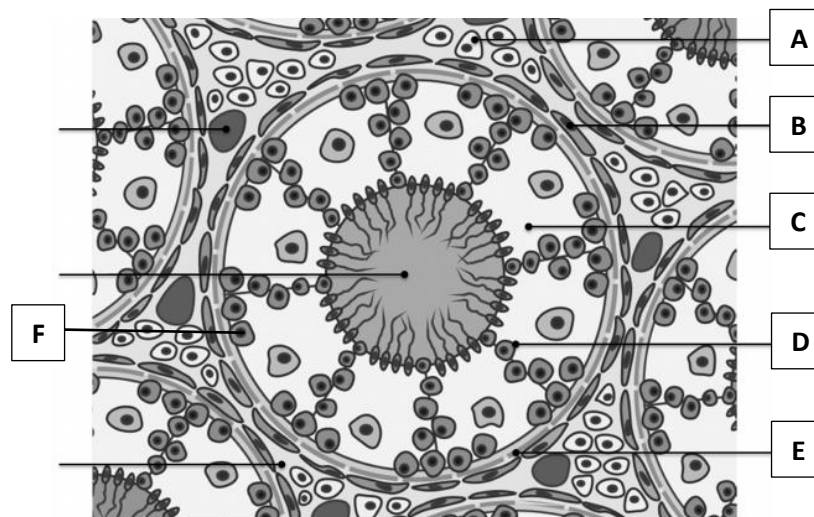
c) State **TWO** reasons why plants store carbohydrates as starch and not glucose (2mks)

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3. The following is an illustration of an internal section of the human testis



a) Name the type of cell division that results into the formation of:

i) Cell **F** from Cell **B** (1mk)

ii) Cell **D** from Cell **F** (1mk)

b) Give the name and function of the hormone released by the cells labelled **A** (2mks)

Name

Function

c) Give **TWO** ways cell **C** is important to the development of the spermatids (2mks)

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d) State the significance of the following:

i) The human testes are found hanging outside the male body

(1mk)

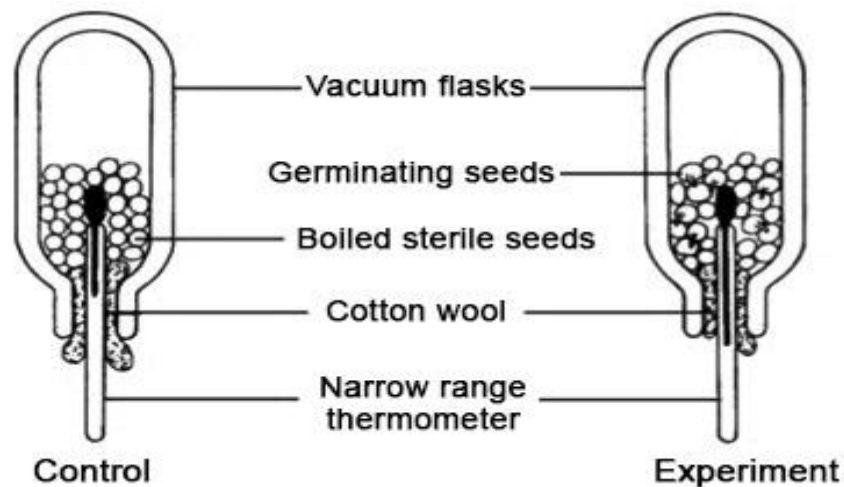
.....
.....

ii) One ejaculation during sexual intercourse releases millions of spermatozoa

(1mk)

.....
.....

4. The following set up was left standing for 3 days to study a physiological process



a) What was the aim of the experiment?

(1mk)

.....

b) State the importance of the following during the experiment

i) Using a vacuum flask

(1mk)

.....

ii) Inverting the vacuum flask

(1mk)

.....

iii) Sterilizing the boiled beans in the flask marked "Control"

(1mk)

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c) Account for the observation made in the vacuum flask marked:

i) “Experiment”

(2mks)

.....

.....

.....

ii) “Control”

(2mks)

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5. The following table shows variations in concentrations of forms in which Carbon (IV) Oxide is transported by blood at rest and during physical body exercise.

Form in which Carbon (IV) Oxide is Transported	At Rest (Mole/litre)	During Physical Body Exercise (Mole/litre)
Dissolved Carbon (IV) Oxide	0.52	0.97
Hydrogen Carbonate ions	12.34	13.68
Carbon (IV) Oxide bound to a protein	0.26	0.16
Total Carbon (IV) Oxide in Plasma	13.12	14.81
pH of Blood	7.42	7.09

a) Give an explanation on how involvement in physical body exercise affects pH of blood (2mks)

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.....

.....

b) i) Name the protein in the blood responsible for transport of Carbon (IV) Oxide

(1mk)

.....

ii) Write a word equation for the reaction between Carbon (IV) oxide and the molecule named in bi) above

(1mk)

.....

c) Explain why more Carbon (IV) Oxide is transported in form of Hydrogen Carbonate ions

(2mks)

.....

.....

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d) Why is it that a person sleeping in a poorly ventilated room with a lit charcoal burner is likely to die by suffocation?

(2mks)

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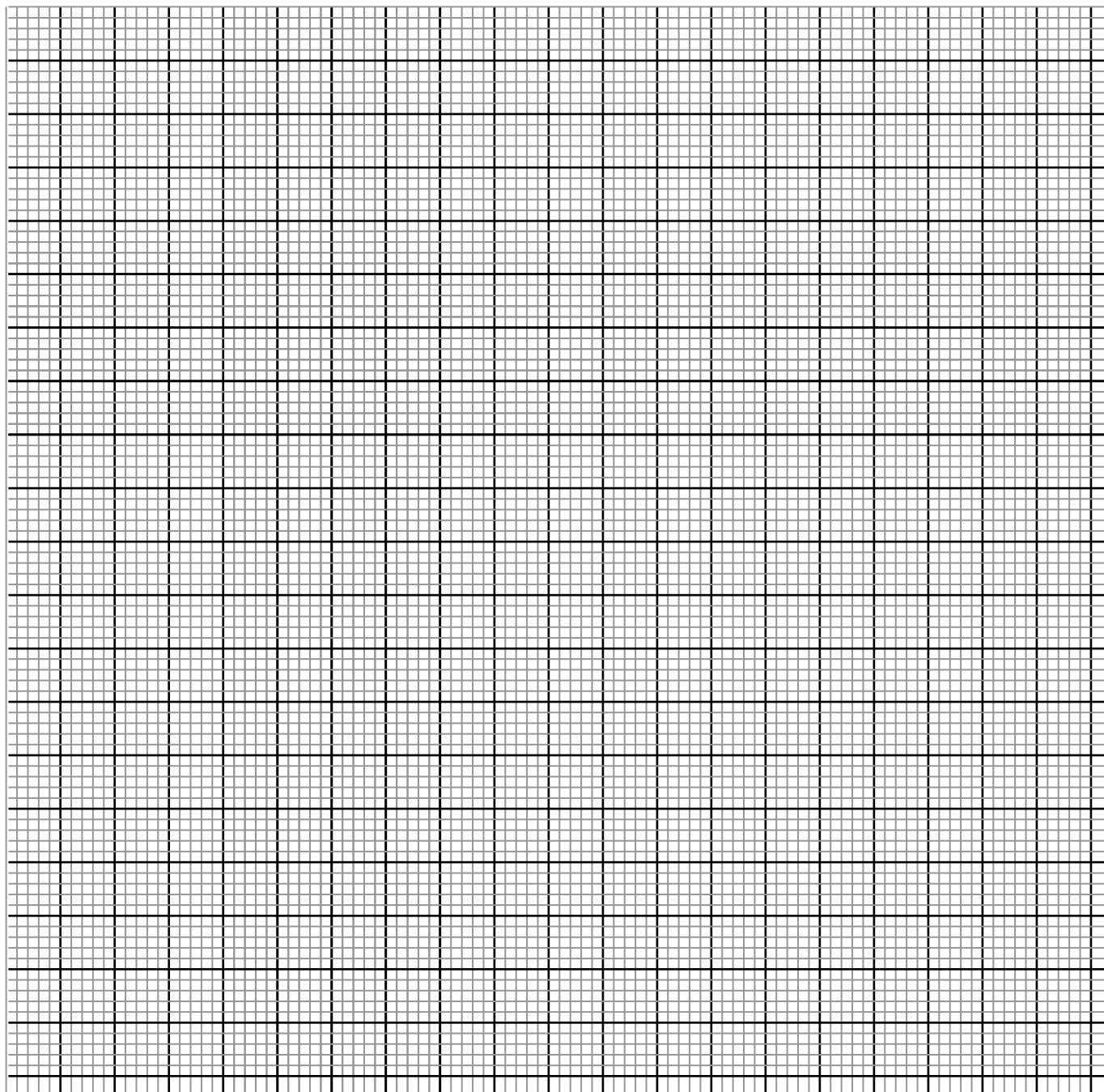
SECTION B (40 MARKS)

Qn 6 is Compulsory. Choose to do either Qn. 7 or Qn. 8

6. In a study, Peter and James each drunk a juice containing 5grams of glucose. At intervals of 15minutes, the concentration of glucose in their blood was measured and tabulated as shown below

Time in Minutes	PETER Blood Glucose Level (Mg/dL)	JAMES Blood Glucose Level (Mg/dL)
0	94	100
15	94	100
30	97	160
45	107	205
60	114	245
75	116	265
90	115	266
105	109	254
120	100	233

- a)** Using the same axes, plot a graph of Blood Glucose level against time for the two study participants
(8mks)



- b)** From the graph account for the shape of graph at:

- i)** 0-15minutes **(2mks)**

.....

.....

.....

ii) 30-75minutes

(2mks

.....

.....

.....

c) Determine the concentration of glucose in the blood of the two participants at 50th minute (2mks

i) Peter

ii) James

d) Describe the role played by Pancreas in the drop of blood glucose level observed between 90th and 120th minute (4mks

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.....

.....

.....

e) i) Name the likely disorder James is suffering from (1mk

.....

ii) State **ONE** way in which the disorder mentioned in e)i) above can be managed (1mk

.....

.....

7. a) Explain how various components of blood are adapted to their functions (16mks

b) Outline the differences between the features of insect pollinated flowers and wind pollinated flowers (4mks

8. a) Describe how the human body restore osmotic pressure of body fluids (8mks

b) Describe the opening and closing of stomata using the starch-sugar interconversion theory (12mks

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

231/3

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¼ HOURS

SIGN:

Kenya Certificate of Secondary Education.

Provide each learner with the following:

- a) 5ml of T1 (concentrated sodium hydrogen carbonate solution)*
- b) 5ml of T2 (1% Starch solution)*
- c) 1ml Olive oil*
- d) 1 piece of Irish potato*
- e) 2ml of Iodine solution*
- f) Test tubes (4)*
- g) Labels (4)*
- h) 1pc of Measuring cylinder (10ml)*
- i) 2 pcs of Droppers*
- j) Distilled water in a wash bottle*
- k) 1 pc of Pestle and Mortar*
- l) 1 pc of Scalpel blade*
- m) Ruler 15cm/30cm*

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

231/3

BIOLOGY

PAPER 3 (PRACTICAL)

TIME: 1¼ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

INSTRUCTIONS

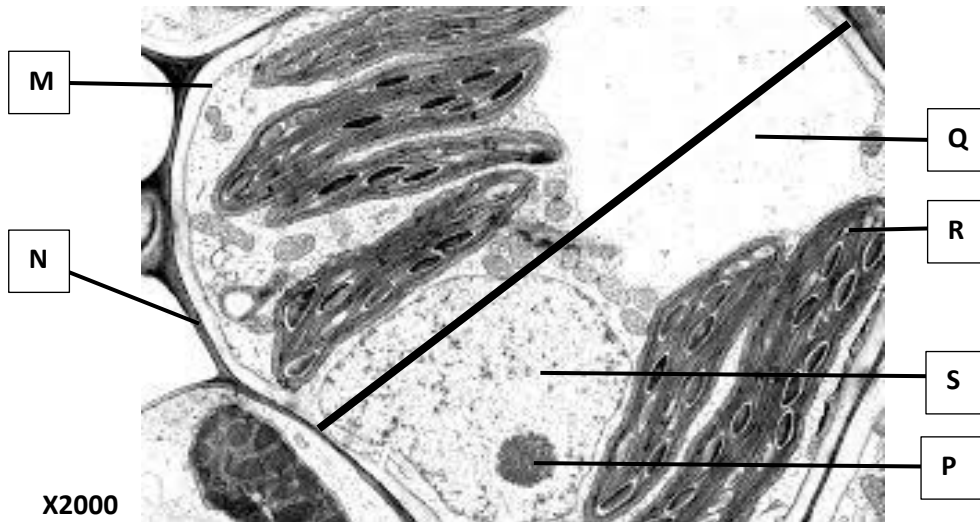
- a) This paper consists of **THREE** questions that must all be attempted*
- b) You are required to spend the first **15minutes** of the time allocated to read through the questions before beginning the practical examination.*
- c) Write your Answers in the Spaces Provided*
- d) Wrong Spelling of Technical Terms shall be **Penalized***

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	14	
2	15	
3	11	
Total score	40	

QUESTIONS

1. The following is an electro micrograph of a section of a cell. Use it to answer questions that follow



a) i) Is this an animal cell or a plant cell?

(1mk)

.....

ii) Give **TWO** reasons for your answer in ai) above

(2mks)

.....

.....

.....

b) State the name and functions of the following parts labelled:

(4mks)

Part	Name	Function
M		
P		
Q		
R		

c) State the expected differences between the following structures in terms of the features given

(3mks)

Feature	M	N
Flexibility		
Chemical Composition		
Permeability		

d) i) Measure the length from one end to the other of structure N represented by the straight dark line running across the cell

(1mk)

.....mm

ii) Determine the actual diameter (in micrometers) of the cell represented by the straight dark line running across the cell

(3mks)

.....

.....

.....

.....

2. Use the photographs shown below of common living organisms to answer questions that follow



Tapeworm



Snail



Beetle



Earthworm



Ant



Roundworm



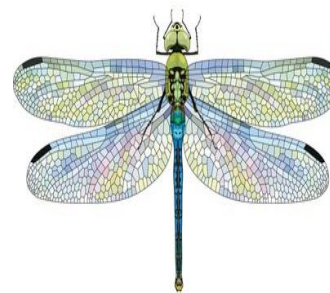
Spider



Scorpion



Housefly



Dragon fly

a) i) Name the class to which both **housefly** and **dragon fly** belong

(1mk

.....

ii) Give a reason for your answer in ai) above

(1mk

.....

.....

b) Give an observable feature that adapts the **tapeworm** to parasitism

(1mk

.....

c) Identify differences between **spider** and **beetle** in terms of the following features

(2mks

Feature	Spider	Beetle
Antennae		
Cephalothorax		

d) Fill in the following spaces to create a complete Dichotomus key for identification of the specimens provided above

(5mrks)

1. a) With limbs **Go to 2**

b) Without limbs _____

2. a) With four pairs of walking legs **Go to 5**
b) **Go to 6**
3. a) Shell encloses the body
b) Body not enclosed by a shell **Go to 4**
4. a) Worm with Segmented body **Go to 7**
b) **Roundworm**
5. a) Chelicerae longer than 2cm
b) Chelicerae less than 2cm **Spider**
6. a) Winged
b) **Ant**
7. a) With anterior suckers and hooks
b) Lack anterior suckers and hooks **Earthworm**
8. a) With a pair of wings **Housefly**
b) **Go to 9**
9. a) Membraneous forewing
b) Hard and thick forewing **Beetle**

e) Fill in the table below to show the steps and correct identity of each of the specimen (5mks)

Steps Followed	Identity
1b, 3a	
	Beetle
	Tapeworm
	Dragon fly
1a, 2b, 6b	

3. You are provided with:

- Solution **T1**
- Solution **T2**
- Olive oil
- Irish potato
- Iodine solution

a) Label two test tubes **X** and **Y**. Into each test tube, place 2ml of water and 8 drops of olive oil. To test tube labelled **X**, add 8 drops of liquid **T1**. Shake both test tubes and allow the contents to stand for 2 minutes.

i) Record your observations in the table below (2mks)

TEST TUBE	OBSERVATION
X	
Y	

ii) Name the process that has taken place in test tube **X** (1mk

.....

iii) **State** the significance of the process named in ai) above in digestion (1mk

.....

.....

iv) Name the digestive juice that has the same effect on oil as liquid **T1** (1mk

.....

v) Name the organ where the juice named in aiv) is manufactured (1mk

.....

b) Label two test tubes **E** and **F**. Place 2ml of liquid **T2** into each. Add a drop of iodine solution into each test tube

i) Record your observation (1mk

.....
.....

ii) Suggest the identity of solution **T2** (1mk

.....
.....

iii) Cut a cube whose sides measure 1cm from the irish potato provided. Crush the cube to obtain a paste and place the paste in test tube labelled **E**. leave the set up for at least 30minutes.

Record your observation in test tube **E** (1mk

.....
.....

iv) Account for the observation made in **b(iii)** above (2mks

.....
.....
.....

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

233/1

CHEMISTRY

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

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

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

*(d) Candidates **MUST** answer all questions in English.*

(e) KNEC mathematical tables and silent non-programmable electronic calculators may be used.

FOR EXAMINER'S USE ONLY.

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1 – 28	80	

QUESTIONS

1. A certain atom is represented as $^{32}_{16}\text{W}$.

a) How many neutrons are in the nucleus of atom **W**?

(1 mark)

.....

b) Write the electron configuration of the most stable ion of **W**.

(1 mark)

.....

c) Draw the structure of the ion of **W**

(2 marks)

2. Molten aluminium oxide was electrolysed using graphite electrodes.

a) Write the anode and cathode reactions to show the overall reaction of this electrolysis process.

(2 marks)

Anode _____

Cathode _____

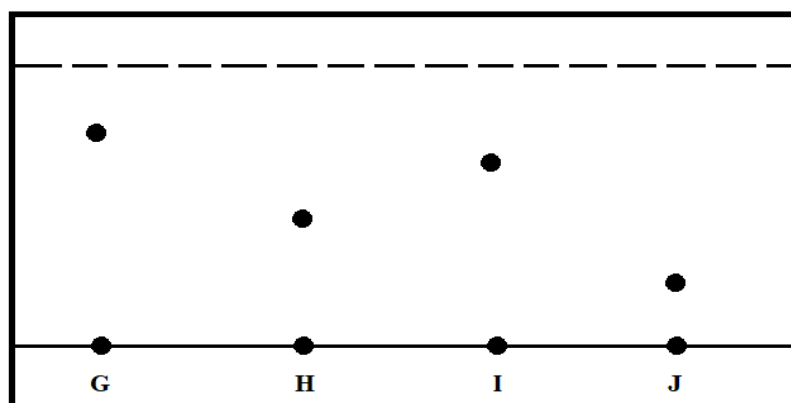
b) State the observation made at the anode

(1 mark)

.....

.....

3. The diagram below represents a paper chromatogram for pure substances **G**, **H**, **I**, and **J**. Study it and use it to answer the questions that follow.



a) Paper chromatography depends on **two** main properties of pigments to achieve separation. Name these **two** properties. (1 mark)

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.....

b) Explain the extent of travel of pigment J. (2 marks)

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.....
.....

4. When zinc burns in oxygen, the resultant compound can react with both dilute hydrochloric acid and with sodium hydroxide solution.

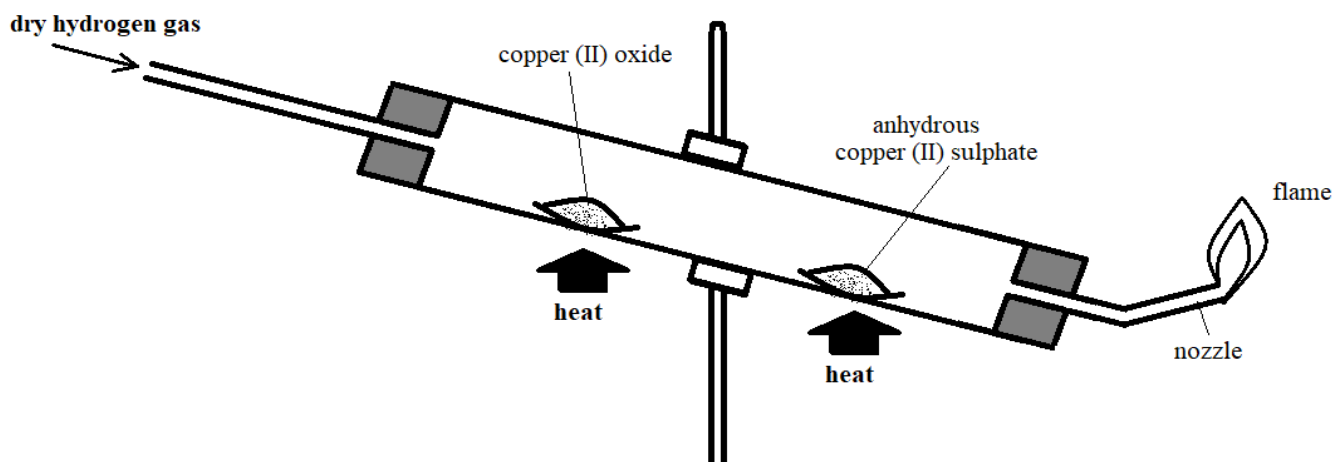
a) Write a chemical equation for the reaction between zinc and oxygen. (1 mark)

.....

b) What property of the compound formed makes it possible to react with both dilute hydrochloric acid and sodium hydroxide solution? (1 mark)

.....

5. Study the setup below and use it to answer the questions that follow.



a) What is the role of the flame at the nozzle? (1 mark)

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.....

b) The combustion tube is arranged in a slanting position and not horizontally. Explain **(1 mark)**

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.....

c) After the reaction, hydrogen is continuously passed through the combustion tube until the setup cools down. Explain. **(1 mark)**

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6. Using a suitable example, explain the term ‘unsaturated’ hydrocarbon. **(2 marks)**

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.....
.....

7. Under certain conditions, methane reacts with steam to form carbon (II) oxide and hydrogen as the only products.

a) Write a chemical equation for this reaction. **(1 mark)**

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b) Determine the total volume of gas formed when 50cm³ of steam reacts completely with methane. **(2 marks)**

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.....
.....
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8. 1.96g of zinc metal was added into a conical flask containing 100cm³ of 0.2M hydrochloric acid.

a) Determine the substance that was in excess. (Zn = 64, H = 1, Cl = 35.5) **(2 marks)**

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.....
.....
.....

b) Determine the quantity of the substance that was in excess. (2 marks)

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9. A luminous flame is bright yellow. Explain (2 marks)

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10. Study the table below and use it to answer the questions that follow. The letters X, Y, and Z are not symbols of actual elements.

Substance	Melting Point (°C)	Boiling Point (°C)	Electrical Conductivity
X	97	912	Conducts in solid and molten states
Y	-121	80	Does not conduct in any state
Z	745	1410	Only conducts in molten and aqueous states

a) Which is the most likely structure of substance Z? (1 mark)

.....

.....

b) Which substance is likely to be lithium? Explain (2 marks)

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.....

.....

11. The oxide of an element, **D**, contains 53.33% oxygen by mass. Determine the empirical formula of the oxide. (D = 7, O = 16) (2 marks)

.....

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.....

.....

12. John heated some white crystals and observed fumes of a brown gas, and an orange residue which changed to yellow on cooling. A glowing splint was rekindled during the experiment.

a) Name the cation and anion present in the white solid (1 mark)

Cation _____

Anion _____

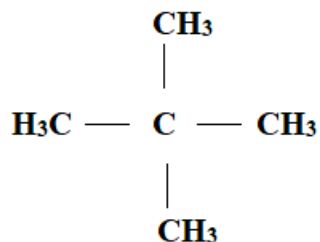
b) Name the **two** products formed when the brown fumes are bubbled through a beaker of distilled water. (2 marks)

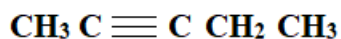
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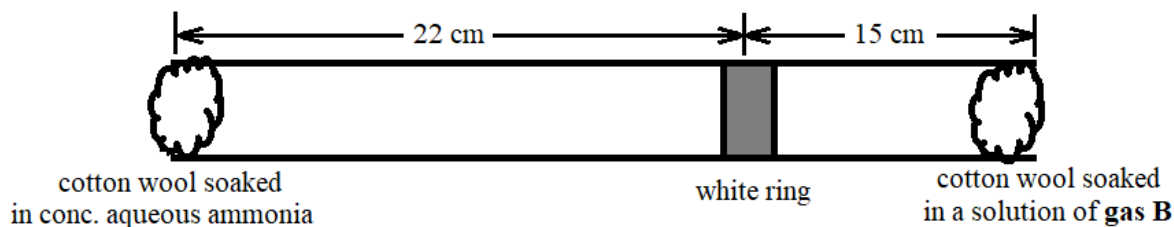
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13. Name the following compounds (2 marks)





14. The diffusion of molecules of ammonia and another unknown gas **B**, containing one atom of hydrogen and another element, through air was investigated. The distance covered by the two gases is as shown by the setup below. The white ring indicated appeared after four minutes.



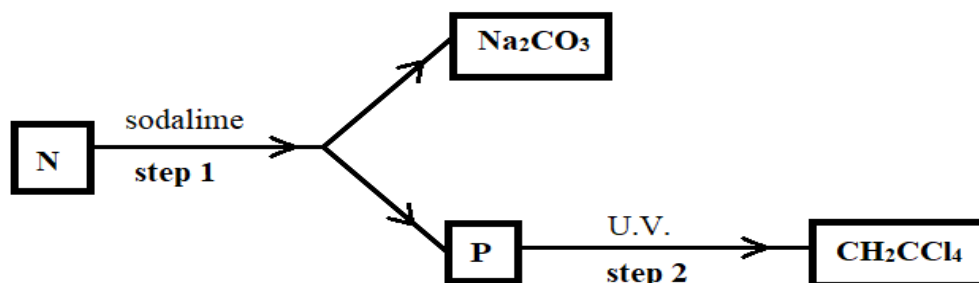
a) Calculate the molar mass of gas **B**. (H = 1, N = 14) (2 marks)

.....

b) In which group of the periodic table does the other atom of gas **B** belong? (1 mark)

.....

15. Study the flow diagram below and use it to answer the questions that follow.



a) Identify the following substances: (2 marks)

N _____

P _____

b) What name is given to the process shown in step 2? (1 mark)

16. Beryllium and carbon have atomic numbers 3 and 6 respectively. Compare their atomic radii. Explain. (2 marks)

.....

17. Ammonium chloride reacts with calcium hydroxide, in the Solvay Process, to generate ammonia gas. The by-product, calcium chloride, is among the products formed.

a) Write a chemical equation for the reaction

(1 mark)

.....

b) Calculate the volume of ammonia produced, at room temperature, when 2.14g of ammonium chloride reacts with calcium chloride. (N = 14, H = 1, Cl = 35.5, molar gas volume = 24L)

(2 marks)

.....

.....

.....

18. Using dots (•) and crosses (×) to represent electrons, draw structures to show the bonding in the compounds formed with the following elements combine: ($^{28}_{14}\text{Si}$, $^{23}_{11}\text{Na}$, $^{35.5}_{17}\text{Cl}$)

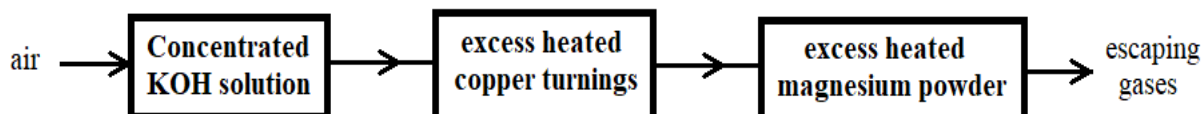
a) Sodium and chlorine

(2 marks)

b) Silicon and chlorine

(2 marks)

19. Air was passed through several reagents as shown in the flow diagram below



a) Write an equation for the reaction that takes place in the chamber with heated magnesium powder

(1 mark)

.....

.....

b) Potassium hydroxide solution, and not calcium hydroxide solution, is preferred for use in the first chamber. Explain (2 marks)

.....

.....

.....

20. Explain the following observations: (Si = 28, S = 32, C = 12, O = 16)

a) SiO₂ has a much higher boiling point than CO₂ (2 marks)

.....

.....

.....

b) SO₂ has a higher boiling point than CO₂ (2 marks)

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.....

.....

21.

a) State the kinetic theory of matter (1 mark)

.....

.....

b) Using the theory, explain what happens when steam progressively changes to ice (2 marks)

.....

.....

.....

22. 75cm³ of 3M H₂SO₄ solution was diluted to 0.2M. Calculate the volume of the dilute solution. (2 marks)

.....

.....

.....

23. When a 3g sample of magnesium powder reacted with oxygen, 4.6g of its oxide was obtained.

Calculate the percentage yield of the magnesium oxide (Mg = 24, O = 16) (2 marks)

.....

.....

.....

24. The table below shows the number of **valence electrons** of elements **P**, **T**, and **Y**. Study it and use it to answer the questions that follow.

Element	P	T	Y
No. of Valence electrons	3	5	1

a) **P** and **Y** cannot react to form a compound. Explain (1 mark)

.....

.....

b) Write a chemical equation to show the effect of heat on the carbonate of **Y**. (1 mark)

.....

c) Write the formula of the most stable ion of **T**. (1 mark)

.....

25. The following is a list of metals that may be available in the laboratory: Lead, Zinc, Copper, and Sodium.

a) Suggest the most suitable metal in the list that may be reacted with dilute hydrochloric acid in the laboratory to produce hydrogen gas. (1 mark)

.....

b) Give **one** reason for **each** of the other metals, as to why they may not be suitable for use in preparing hydrogen gas using the dilute hydrochloric acid sample. (3 marks)

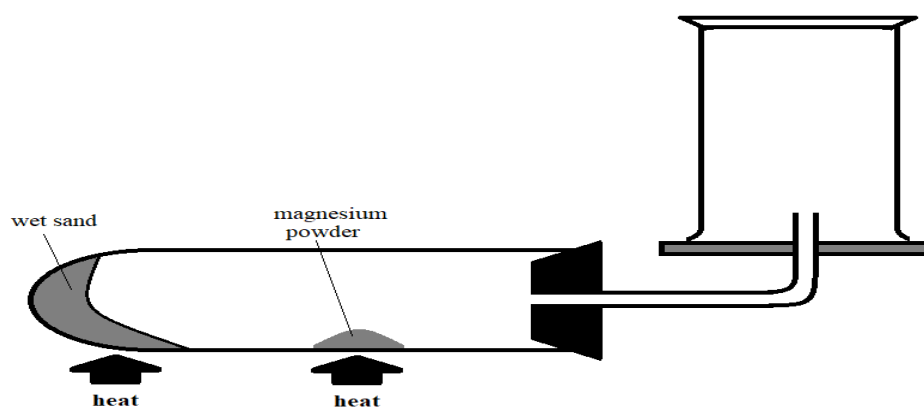
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26. Study the setup below and use it to answer the questions that follow.



a) Write an equation for the reaction that takes place in the boiling tube (1 mark)

.....

b) Identify the reducing agent in the reaction in a) above. Explain (2 marks)

.....

.....

.....

27. A certain mass of gas occupies 211cm^3 at 18°C and 740mmHg . What volume will it occupy at 20°C and 770mmHg ? (2 marks)

.....

.....

.....

28.

a) Distinguish between the terms deliquescent and efflorescent as used in Chemistry. (2 marks)

.....

.....

.....

b) Give **one** example of an efflorescent substance. (1 mark)

.....

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

233/2

CHEMISTRY

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

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

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

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

*(d) Candidates **MUST** answer all questions in English.*

(e) KNEC mathematical tables and silent non-programmable electronic calculators may be used.

FOR EXAMINER'S USE ONLY.

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	15	
2	13	
3	12	
4	11	
5	14	
6	15	
TOTAL SCORE	80	

1. The table below shows the properties of some elements. The letters do not represent actual symbols of elements. Study the table and use it to answer the questions that follow.

Element	A	D	E	G	J	L	M	Q	R	V
Atomic Number	7	8	19	15	2	9	6	16	12	11
Atomic Mass	14	16	39	31	4	19	12	32	24	23
Melting Point (°C)	-	-	637	44	-272	-223	Vary	113	669	98

- a) Select **two** elements that can have oxidation number of -2 (2 marks)

.....

- b) Which elements represent:

- i) The most reactive metal? (1 mark)

.....

- ii) The most reactive non-metal? (1 mark)

.....

- c) Which element could have the highest ionization energy? Explain (2 marks)

.....

.....

.....

- d) Select **two** elements, which when reacted:

- i) Form a compound that conducts electricity in their liquid and aqueous states only. (1 mark)

.....

- ii) Form a compound that dissolves in water to form an acidic solution. (1 mark)

.....

- e) Using a dot (•) and cross (×) diagram, show the bond between **A** and **R**. (2 marks)

f) The melting point of **V** is higher than that of **E**, Explain

(2 marks)

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.....

.....

g) Beaker containing the sulphate of **E** poured into another beaker containing lead (II) sulphate.

Describe how the two solids can be separated.

(3 marks)

.....

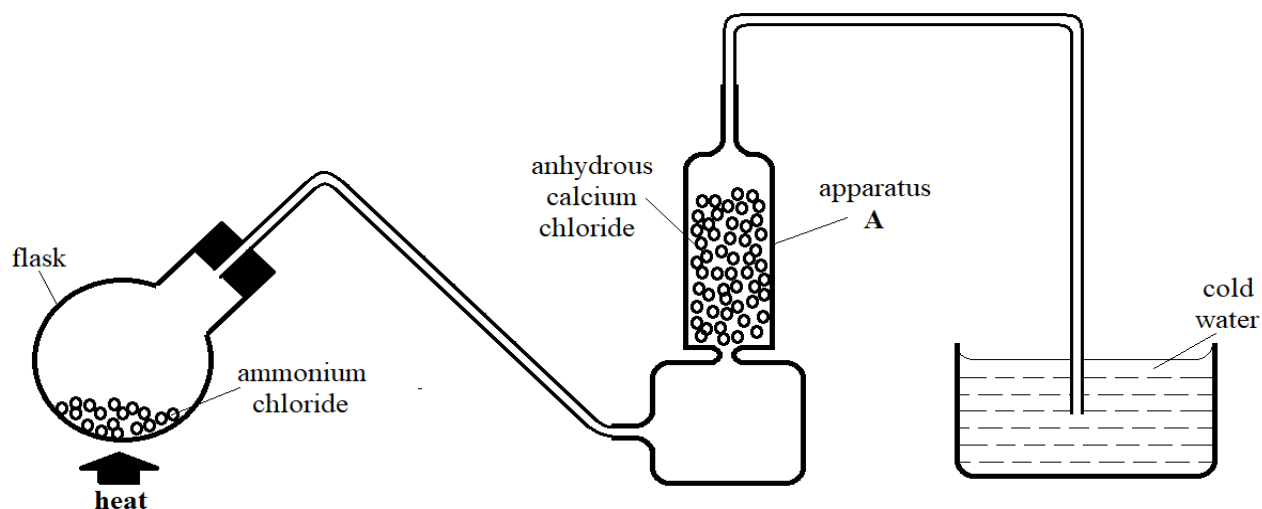
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2. A student wanted to prepare aqueous ammonia in the laboratory and set up the apparatus below.



a) State **three** mistakes made in arranging the setup

(3 marks)

.....

.....

.....

b) Name apparatus A

(1 mark)

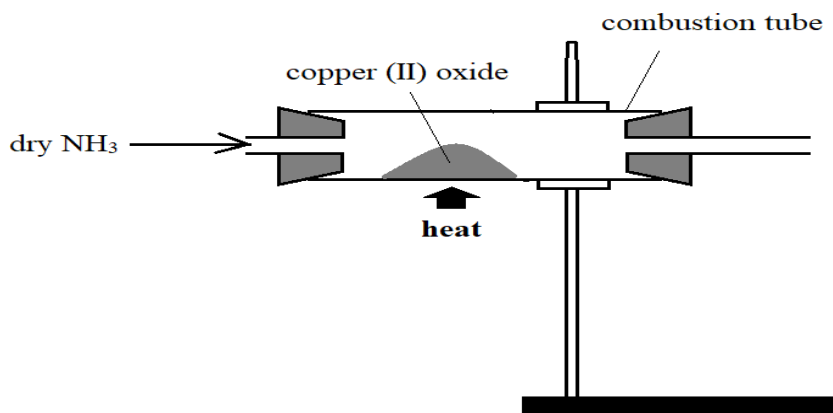
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c) Write the equation for the reaction that is expected to take place in the flask

(1 mark)

.....

d) Dry ammonia was passed over hot copper (II) oxide, as shown in the diagram below



i) State an observation that would be made in the combustion tube. **(1 mark)**

ii) Write an equation to show the reaction that occurred in the combustion tube. **(1 mark)**

e) Ammonia gas can be reacted with a certain reagent to produce ammonium sulphate, which is a fertilizer.

i) Write an equation to show how the fertilizer would be formed. **(1 mark)**

ii) Calculate the percentage by mass of nitrogen in the fertilizer. **(3 marks)**

(N =14, H = 1, O = 16, S = 32)

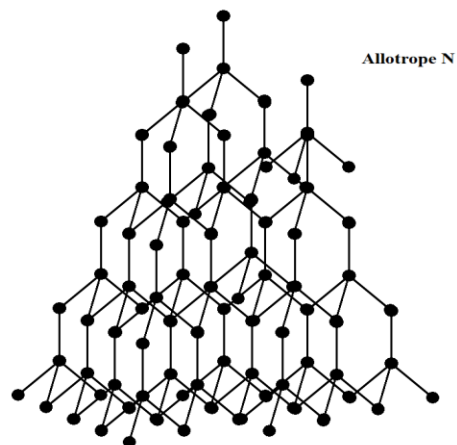
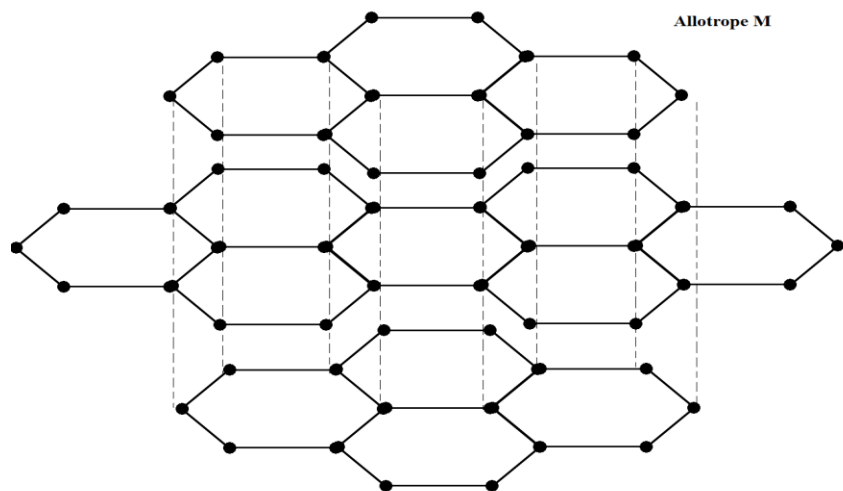
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f) State and explain the observation made when excess ammonia solution is added to copper ions.

(2 marks)

.....
.....
.....

3. The diagrams below show the structures of two allotropes of carbon. Study them and use them to answer the questions that follow.



a) Define the term ‘allotropy’.

(1 mark)

.....

.....

b) Name the allotropes illustrated above:

(2 marks)

M _____

N _____

c) Give **one** use of N

(1 mark)

.....

.....

d) Which letter represents the allotrope that conducts electricity? Explain

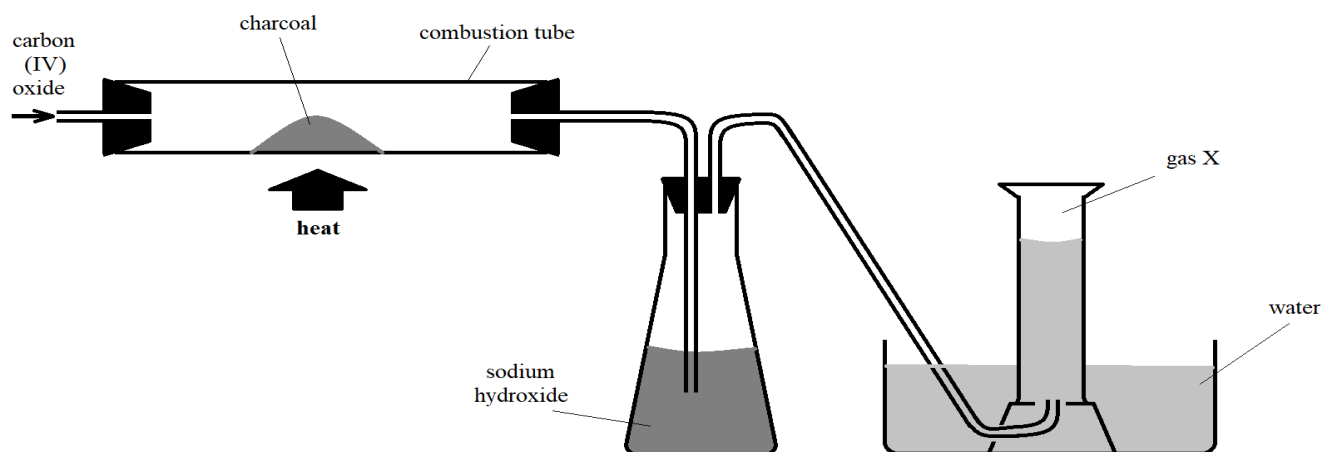
(2 marks)

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.....

.....

e) In an experiment, carbon (IV) oxide was passed over heated charcoal and the gas produced collected as shown in the diagram below.



i) Write an equation for the reaction taking place in the combustion tube. (1 mark)

.....
.....

ii) State the purpose of the sodium hydroxide solution. (1 mark)

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.....

iii) Name another substance that could be used in the place of the sodium hydroxide solution. (1 mark)

.....

iv) Describe a simple chemical test that can be used to distinguish between carbon (IV) oxide and gas X (2 marks)

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.....
.....

v) Give **one** use of gas X. (1 mark)

.....

4. During an experiment, sulphur (IV) oxide gas diffused through an orifice at a rate of 25.0cm^3 per minute. Under the same conditions, another **gas V** diffused through the same orifice at a rate of 26.26cm^3 per minute.

a) Determine the molecular mass of **gas V** (O =16, S = 32) (2 marks)

.....
.....
.....

b) Gas **V** consists of 87.2% by mass carbon and the rest is hydrogen. Determine the molecular formula of gas **V**. (H = 1, C = 12) (2 marks)

.....
.....
.....

c)
i) Name the homologous series to which gas **V** belongs. (1 mark)

.....

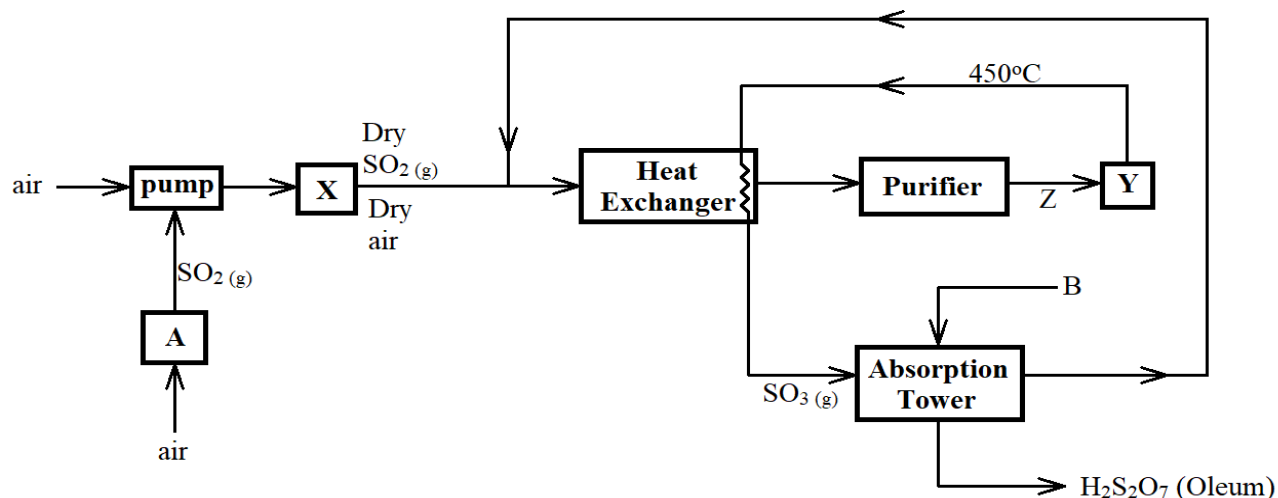
ii) Name and draw **two** possible isomers of gas **V**. (3 marks)

d) If one mole of gas **V** burned completely in air, write a chemical equation for the reaction that took place. (1 mark)

e) Calculate the volume of a 0.2M sodium hydroxide solution that would react completely with a solution containing 3.0g of CH_3COOH . (C =12, H = 1, O = 16) (2 marks)

.....
.....
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.....

5. The flow chart below shows how sulphuric (VI) acid is manufactured by the Contact Process. Study it and answer the questions that follow.



a) Name **two** raw materials in A

(2 marks)

.....

.....

b) Name:

i) The reagent used in X

(1 mark)

.....

ii) The impurities that are removed at the purifier.

(1 mark)

.....

c) State the importance of the purifier in the Contact Process

(1 mark)

.....

.....

d) Write chemical equations for the reactions taking place in:

i) Chamber Y

(1 mark)

.....

ii) Absorption Tower

(1 mark)

.....

iii) Describe the process that takes place in the heat exchanger.

(1 mark)

.....

.....

iv) Identify B.

(1 mark)

.....

e) Sulphur (VI) oxide gas is absorbed in substance B before dilution, rather than dissolving it directly in water. Explain.

(1 mark)

.....

.....

f) Name the most suitable catalyst for the Contact Process.

(1 mark)

.....

g) State and explain the observations made when concentrated sulphuric (VI) acid is added to:

i) Copper (II) sulphate crystals

(1½ marks)

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.....

.....

ii) Sucrose crystals

(1½ marks)

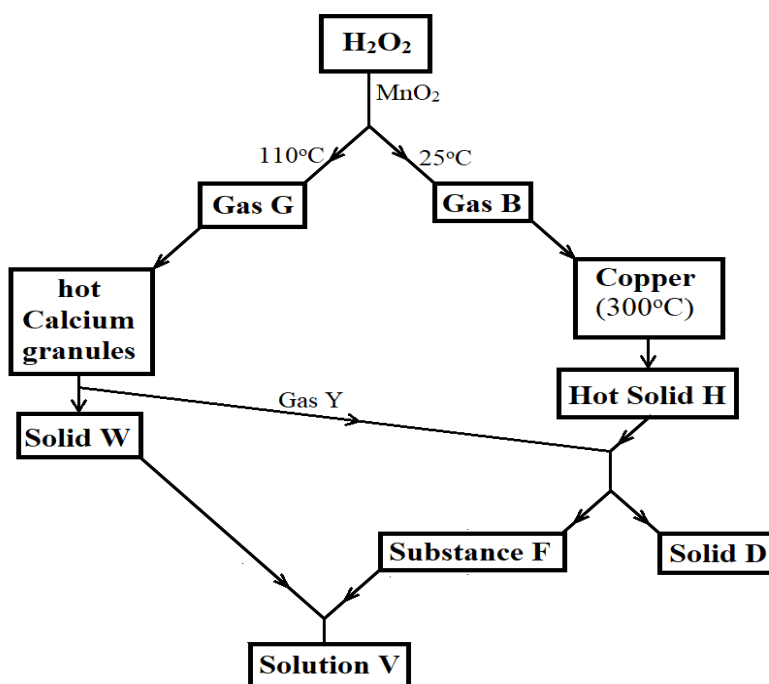
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6. Study the flow diagram below and answer the questions that follow



a) Name the following substances: (2 marks)

i) Gas B _____

ii) Gas G _____

iii) Gas Y _____

iv) Solid W _____

b) State:

i) The property displayed by the reaction of Gas Y and the hot Solid H? (1 mark)

.....

ii) The observation made during the reaction of Gas Y and the hot Solid H. (1 mark)

.....

c) Write chemical equations for the reactions between:

i) Gas G and hot calcium granules (1 mark)

.....

ii) Gas **B** and copper

(1 mark)

.....

iii) Solid **W** and substance **F**

(1 mark)

.....

d) Solid **D** was added into a conical flask containing 0.5M HCl solution. The flask was then warmed.

State and explain the observations made in the conical flask.

(2 marks)

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.....

.....

e) State **one** use of solution **V** in the laboratory

(1 mark)

.....

f) Describe a chemical test that can be used to identify substance **F**

(2 marks)

.....

.....

.....

g) Solid **H** was added to 0.5M nitric (V) acid and warmed

i) State the observation that was made at the end of the experiment

(1 mark)

.....

ii) What type of reaction is this? Explain.

(2 marks)

.....

.....

.....

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

233/3

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

CONFIDENTIAL

i) Each student should have the following

1. Burette
2. Pipette (25cm³)
3. Clamp and stand
4. Filter funnel
5. White tile
6. 2 conical flasks
7. 100cm³ measuring cylinder
8. 250cm³ volumetric flask
9. Metallic spatula
10. Two Labeling paper
11. Pipette filler
12. 500cm³ of distilled water in a wash bottle
13. About 80cm³ of solution P
14. About 100cm³ of solution Q
15. 6 test tubes and boiling tube in a test tube rack
16. 10ml measuring cylinder
17. 5ml liquid H

ii) In addition to the above, each student should have access to the following:

1. Means of heating
2. Phenolphthalein indicator
3. 2M Ammonia solution
4. 2M Sodium hydroxide
5. 2M $\text{Pb}(\text{NO}_3)_2$
6. 2M $\text{Ba}(\text{NO}_3)_2$

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

iii) SOLIDS AND SOLUTIONS

1. Solution P is 1M HCl
2. Solution Q contains 5.6g of sodium hydroxide in 1 litre of the solution
3. Liquid H – turpentine
4. Solid **R** 0.5g Zinc chloride

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

233/3

CHEMISTRY

PAPER 3 (PRACTICAL)

TIME: 2¼ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

INSTRUCTIONS

- a) Write your name and Number in the spaces provided above*
- b) Answer all the questions in the spaces provided above*
- c) Mathematical tables and silent electronic calculators may be used*

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORES	CANDIDATES SCORES
1	24	
2	10	
3	06	
	40	

QUESTION 1

You are provided with solution **P** and **Q**

Solution **P** is 1M hydrochloric acid

Solution **Q** contains 4.2 grams of the hydroxide of metal **X** (with formulae XOH) in 750cm^3 of the solution

You are required to carry out the experiment to determine the R.A.M of metal **X**

PROCEDURE

1. Measure 60cm^3 of solution **P** using a clean measuring cylinder and put into a 250cm^3 volumetric flask. Add distilled water up to the 250cm^3 mark and then label the resulting solution **F**.
2. Fill a clean burette with solution **F**.
3. Pipette 25cm^3 of solution **Q** into a clean conical flask and add 2 drops of phenolphthalein indicator.
4. Titrate solution **F** against solution **Q** and record the results in the table below.
5. Repeat step 3 and step 4 above two more times as you complete the table below.

	I	II	III
Final burette reading			
Initial burette reading			
Volume of solution F used			

(5mks)

a) Calculate the:

i) Average volume of solution F used (1mk)

.....
.....
.....

ii) Concentration of solution F in moles per litre (2mks)

.....
.....
.....
.....

iii) Concentration of solution F in grams per litre (H = 1, Cl = 35.5) **(2mks)**

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.....

.....

iv) Number of moles of solution F that reacted with each 25cm³ portion of solution Q **(3mks)**

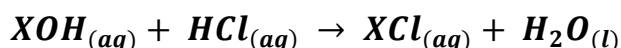
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b) Given the equation of the reaction between the solution Q (XOH) and the solution F (HCl) as:



Calculate the:

i) Number of moles of solution Q that reacted with each portion of solution F **(3mks)**

.....

.....

.....

.....

ii) Concentration of solution Q **(2mks)**

.....

.....

.....

iii) Number of moles of the metal hydroxide (XOH) in 750cm³ of solution Q **(2mks)**

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iv) R.F.M of the metal hydroxide (XOH) (2mks)

.....

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.....

v) R.A.M of metal X (O = 16, H = 1) (2mks)

.....

.....

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.....

2.You are provided with solid **R**. Carryout the test and record your observation and inference in the space provided.

(i)Place the entire solid in the boiling tube. Add 10cm³ distilled water and shake (2mks)

Observation	Inference

Divide the solution into **four** portions

(ii)To the first portion, add aqueous sodium hydroxide solution dropwise till excess (2mks)

Observation	Inference

(iii) To the 2nd portion add ammonia dropwise till excess

(2mks)

Observation	Inference

(iv) To the 3rd portion add three drops of barium nitrate

(2mks)

Observation	Inference

(v) To the forth portion add 2cm³ of lead [II] nitrate and warm

Observation	Inference

(2mks)

3. You are provided with liquid H. Carry out the test and write your observation and inferences below.

(a) Place about third of liquid H on a metallic spatula and ignite it using Bunsen burner flame

Observation	Inferences

(2mks)

(b) Place remaining of H in a test tube, add 5cm³ of distilled water and shake the mixture well retain the mixture for the next test

Observation	Inference

(2mks)

(c) To about 2cm³ of the mixture, add 2 to 3 drops of acidified potassium manganate (VII) solution

Observation	Inference

(2mks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

232/1

PHYSICS

PAPER 1 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

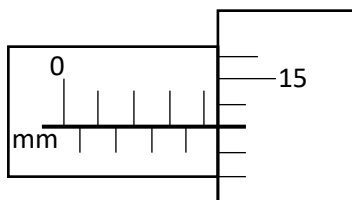
- This paper consists of two sections **A** and **B**.
- Answer **all** the questions in the two sections in the spaces provided after each question
- All working **must** be clearly shown.
- Electronic calculators, mathematical tables may be used.
- All numerical answers **should be expressed** in the **decimal** notations.
- You may use 'g' as 10m/s^2

FOR EXAMINER USE ONLY

SECTION	QUESTION	MAX MARKS	CANDIDATE'S SCORE
A	1 – 13	25	
B	14	13	
	15	14	
	16	12	
	17	10	
	18	06	
	TOTAL	80	

SECTION A (25 MARKS)

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



2. Give a reason why a thick glass bottle cracks when boiling hot water is suddenly poured inside it

(1 mark)

.....

.....

3. Give a reason why water is not a suitable liquid for use in a barometer

(1 mark)

.....

.....

4. State and explain any one factor that would affect surface tension of pure water in a beaker of water.

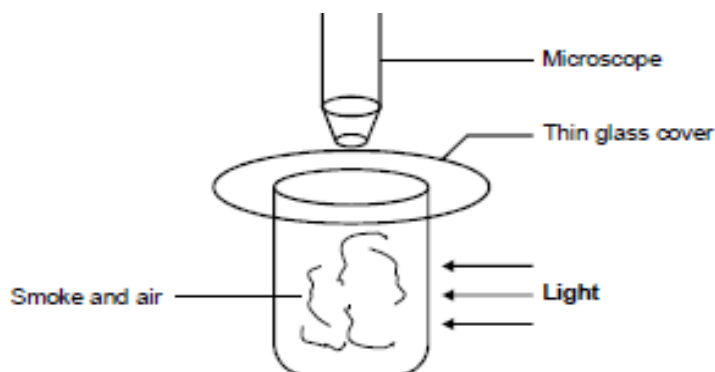
(2 marks)

.....

.....

.....

5. The diagram below shows apparatus used to observe the behavior of smoke particle in air.



i. Why are smoke particles suitable for use in this experiment? (1 mark)

.....

.....

ii. State and explain the behavior of the smoke particles (2 marks)

.....

.....

.....

6. Define the term Centre of gravity of a body. (1 mark)

.....

.....

7. A machine of velocity ratio of 50N overcomes a load of 4.5×10^3 N when the effort of 120N is applied. Find the efficiency of the machine. (3 marks)

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8. Figure below shows a fluid flowing in a tube of varying cross-sectional area.

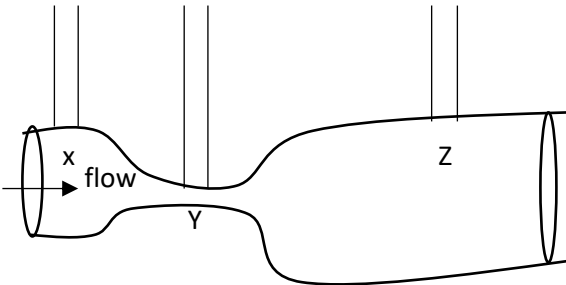


Figure 1

Show on the diagram the relative position of the levels of the liquid in section marked X, Y Z (1 mark)

9. A uniform metre rule is pivoted at the 15cm mark and it balances when a mass of 40g is hung from the 2cm mark. Calculate the mass of the rule. **(3 marks)**

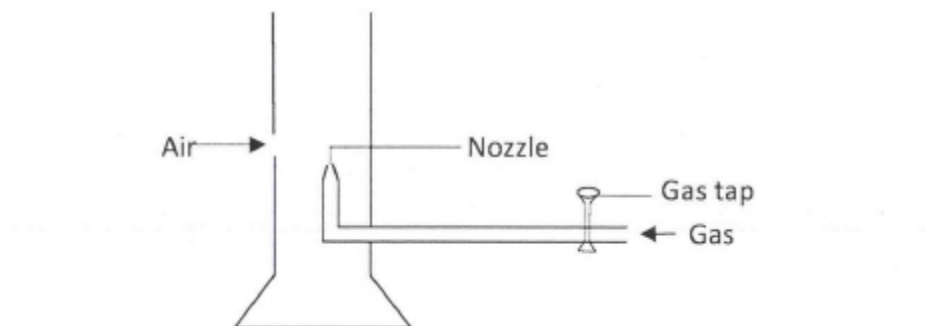
10. Figure 4 shows a solid cylinder standing on a horizontal surface. The cylinder is in stable equilibrium. In the horizontal space provided, sketch the cylinders in neutral equilibrium

(1 mark)



11. An object dropped from a height, h attains a velocity of 6m/s just before hitting the ground, find the value of h . **(2 marks)**

12. Figure 5 shows a Bunsen burner.



Explain how air is drawn into the burner when the gas tap is open.

(3 marks)

.....

.....

.....

.....

13. State **two** measurements you would take in an experiment to determine the upthrust of an object which is immersed in a fluid.

(2 marks)

.....

.....

.....

SECTION B (55 MARKS)

14.

a) Distinguish between streamline and turbulent flow.

(1 mark)

.....

.....

b) The figure below shows two light sheets of paper arranged as shown.

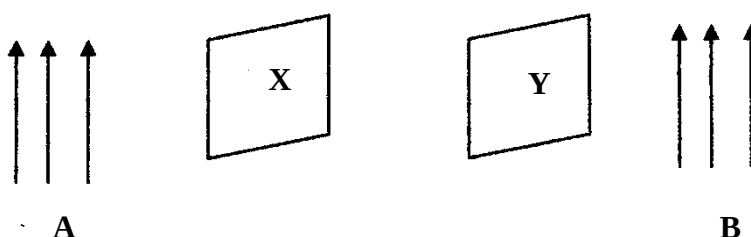


Figure 2

Explain the observation made when air is blown at the same speed and time at points A and B.

(2 marks)

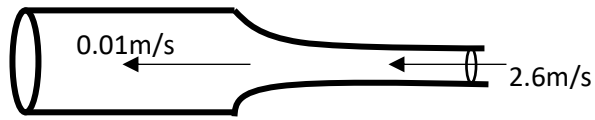
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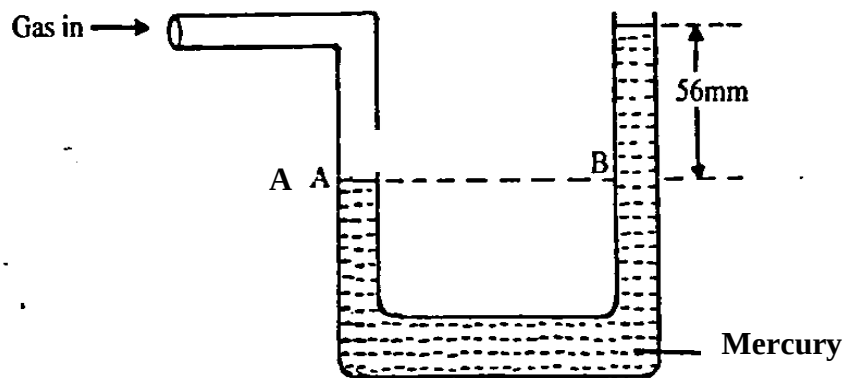
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- c) The figure below shows an incompressible fluid moving through a tube of varied cross-sectional area. If the area of the small tube is 0.05m^2 , calculate the diameter of the large tube in cm.

(3 marks)



- d) Use the figure below to answer the questions that follow.



- i. Which pressure is acting on point A?

(1 mark)

.....

- ii. If the atmospheric pressure is 760mm of mercury, what is the value of gas pressure? (3 marks)

.....

.....

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.....

- e) A small nail may pierce an inflated car tyre and remain there without pressure reduction in the tyre.

Explain this observation

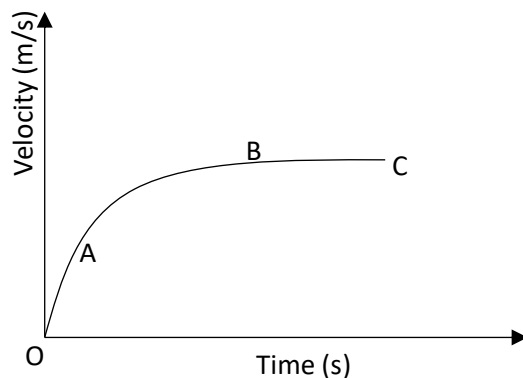
(2 marks)

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15. The figure below shows a velocity – time graph for the motion of a certain body.



a) Describe the motion of the body in the region:

i) OA: (1 mark)

.....

ii) AB: (1 mark)

.....

iii) BC: (1 mark)

.....

b) A car moving initially at 10m/s decelerates uniformly at 2.5m/s^2

Determine:

i. Its velocity after 1.5seconds. (2 marks)

ii. Distance travelled in 1.5 seconds. (3 marks)

iii. The time taken for the car to stop.

(3 marks)

iv. Sketch the velocity – time graph for the motion of the car up to the time the car stopped.

(1 mark)

v. From the graph determine the distance the car travelled before stopping.

(2 marks)

16. In an experiment to determine the density of a soil using a density bottle, the following measurements were recorded.

Mass of empty density bottle = 42.9g

Mass of density bottle full of water = 66.1g

Mass of density bottle with some soil = 67.2g

Mass of density bottle with soil filled up with water = 82.0g

Use the above data to determine the:

a) Mass of water that completely filled the bottle

(2 marks)

b) Volume of water that completely filled the bottle

(1 mark)

c) Volume of the density bottle **(2 marks)**

d) Mass of soil **(1 mark)**

e) Mass of water that filled the space above soil **(2 marks)**

f) Volume of soil **(2 marks)**

g) The density of the soils **(2 marks)**

17.

a) Define the following terms as used in machines:

i. Load **(1 mark)**

ii.Effort (1 mark)

iii.Mechanical advantage (1 mark)

iv.Velocity ratio (1 mark)

b) An electric crane uses $8.0 \times 10^4\text{J}$ of energy to lift a load of $2.0 \times 10^4\text{N}$ in 4 seconds. Determine:

i.The power developed by the crane (2 marks)

ii.Height to which the load is lifted (2 marks)

c) State two forms of energy transformations that lead to the crane’s inefficiency (2 marks)

.....
.....

18.

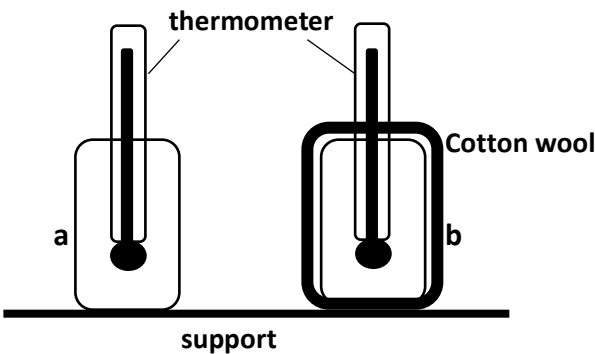
a) Distinguish between heat and temperature (1 mark)

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.....

b) Two identical copper cans are filled with boiling water. The can in b is covered in cotton wool as shown.



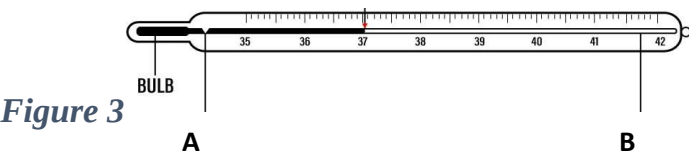
Which can would record lower temperature after 30 minutes. Explain (2 marks)

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c) Figure 11 is a clinical thermometer. Identify the parts labelled A and B. (2 marks)



A..... B.....

d) State the function of the part labelled A (1 mark)

.....

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FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

232/2

PHYSICS

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

Instructions to candidates

- This paper consists of two sections **A** and **B**.
- Answer **all** the questions in the two sections in the spaces provided after each question
- All working **must** be clearly shown.
- Electronic calculators, mathematical tables may be used.
- All numerical answers **should be expressed** in the **decimal** notations.
- You may use 'g' as 10m/s^2

FOR EXAMINER USE ONLY

SECTION	QUESTION	MAX MARKS	SCORE
A	1 – 11	25	
B	12	12	
	13	13	
	14	11	
	15	11	
	16	08	
	TOTAL	80	

SECTION A (25 MARKS)

1. State the laws of reflection of light. (2 marks)

.....
.....

2. State the two advantages of optical fiber over the ordinary cable. (2 marks)

.....
.....

3. A driver looked into his side mirror and saw a diminished image of a car behind him.

(a) State the type of mirror the side mirror is made of. (1 mark)

.....

(b) State two reasons why (a) above is preferred as side mirror. (2 marks)

.....
.....

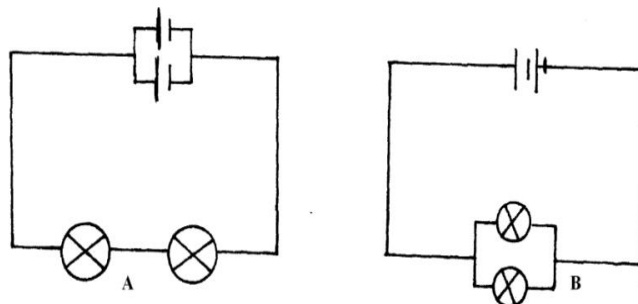
4. State the basic law of electrostatics. (1 mark)

.....
.....

5. a) Define electric current. (1 mark)

.....
.....

b) A student was investigating the brightness of bulbs when set up in circuits. He used identical bulbs and cells. He set up circuit A and B consisting of two bulbs and two cells as shown in figure 1 below.



State and explain which set – up had the bulbs brighter (2 mks)

.....

.....

.....

6. State two factors that affects the resistivity of an electrical conductor. (2 marks)

.....

.....

7. The figure 2 below shows light travelling from less dense to more dense medium.

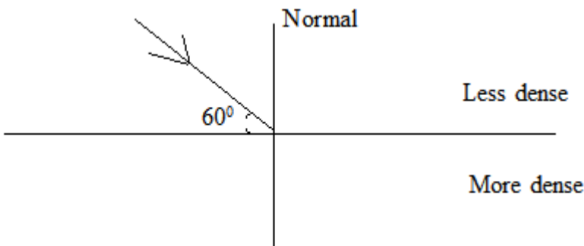


Figure 4

If the refractive index of the more dense medium is 1.4, calculate the angle of refraction. (3 mks)

.....

.....

.....

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8. The wavelength of a radio wave is 1km. Determine its frequency if the speed is $3 \times 10^8 \text{ m/s}$ (2 marks)

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.....

9. State two uses of gold leaf electroscope. (2 marks)

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.....

.....

10. Why is repulsion the surest way of identifying a magnet?

(2 marks)

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.....

11. A boy strikes a railway line with a hammer. A railway worker 60m away hears two sounds, one from the railway line and the other from air. If the time interval between the sounds is 0.16 seconds, and the average speed of the sound in air is 320 m/s. Determine the speed of sound in the rail.

(3 marks)

.....

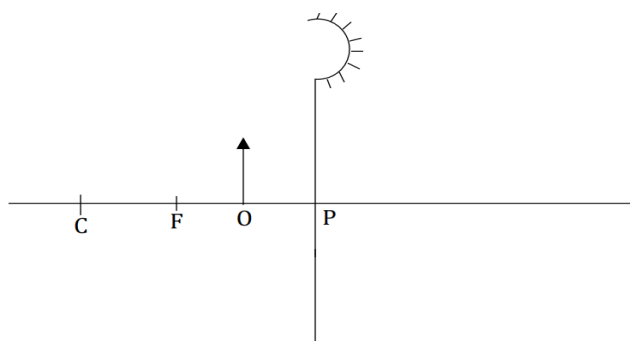
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SECTION B (55 MARKS)

12. The figure 3 below shows an object O placed in front of a concave mirror as shown.



(i) Complete the diagram to show the image formed.

(3 marks)

(ii) State two characteristics of the image formed.

(2 marks)

.....

.....

(iii) Give one application of the set up above

(1 mark)

.....

.....

(iv) A pinhole camera of length 15 cm forms an image 3cm high of a man standing 9m in front of the camera what is the height of the man? **(3 marks)**

.....

.....

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.....

(v) State the changes that would occur in the size and brightness of the image formed by a pinhole camera if;

a) The object distance is made large **(1 mark)**

.....

.....

b) The length of the camera is made longer **(1 mark)**

.....

.....

c) The single hole is replaced by four pinholes close together. **(1 mark)**

.....

.....

13. (a) State Ohms law. **(1 mark)**

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.....

(b) A device allows current of 10A to pass through a point in a circuit for 25 seconds. Calculate the total charge passing through the point within the period. **(2 marks)**

.....

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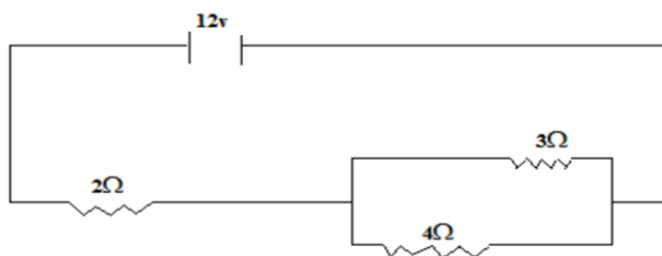
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(c) State two maintenance precautions for lead-acid **cells**

(2 marks)

.....
.....

(d) The figure 4 below shows three resistors connected to 12v supply.



Calculate.

i) the effective resistance.

(3 marks)

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.....
.....
.....

ii) the total current in the circuit.

(2 marks)

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.....
.....

iii) the current through the 4Ω resistance.

(3 marks)

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14. a) Describe two ways how a magnet can be destroyed

(2 marks)

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.....

b) (i) Distinguish between soft and hard magnetic materials.

(2 marks)

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.....
.....

(ii) Which of the two types of materials is suitable for use as:

- Compass needle?

(1 mark)

.....

- Core of an electromagnet?

(1 mark)

.....

c) State two ways by which the strength of an electromagnet can be increased.

(2 marks)

.....
.....

d) The figure 5 illustrates a complete circuit diagram of an electric bell

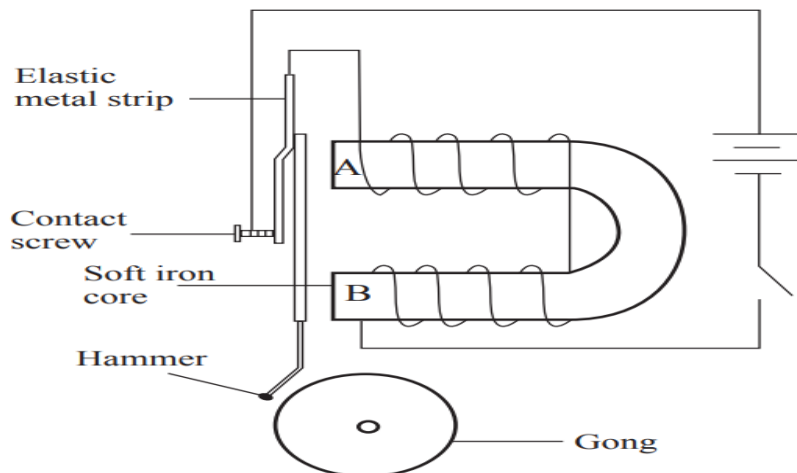


Figure 5

Explain how the bell works.

(3 marks)

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.....

15. a) A spoon partly submerged in a glass of water appears bent. Explain. **(1 mark)**

.....

.....

b) Define refractive index in terms of real and apparent depth. **(1 mark)**

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.....

c) What do you understand by the terms;

(i) total internal reflection **(1 mark)**

.....

.....

(ii) critical angle? **(1 mark)**

.....

.....

d) Diamond has refractive index of 2.4. Calculate critical angle. **(2 marks)**

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e) Describe an experiment to illustrate dispersion of white light. **(3 marks)**

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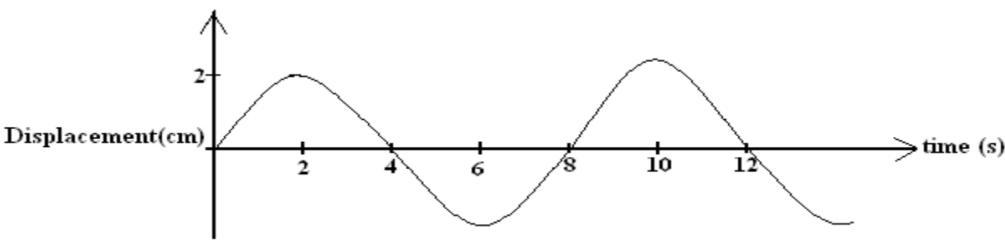
f) Explain why dispersion occurs. **(2 marks)**

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16. The figure 6 below shows a wave in progress



Determine the;

a) Amplitude (1 mark)

.....

.....

b) Frequency (2 marks)

.....

.....

.....

c) What is an echo? (1 mark)

.....

.....

d) State and explain the effect of temperature and pressure on the speed of sound (2 marks)

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e) A person standing 110 m from the foot of a cliff claps his hands and hears a sound 0.75 seconds later. Find the speed of sound in air. (2 marks)

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FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

232/3

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

CONFIDENTIAL

INSTRUCTION TO THE PHYSICS TEACHER:

The physics teacher should plan with school management to ensure availability of the following apparatus for the learner to carry-out this practical examination.

QUESTION ONE

- *a rectangular glass block (10.5cm by 6.5cm by 1.8cm)*
- *4 optical pins*
- *a soft board*
- *a plain paper*
- *Two tuck pins*
- *Protractor (to be provided by the candidate)*

QUESTION TWO

- *Two complete retort-stand (clamp, boss and stand)*
- *Copper wire (30 cm long and approximately 0.10 cm thick)*
- *A stop watch*
- *A meter rule*
- *Corked optical pin*
- *A protractor (to be provided by the candidate)*
- *One bar magnet (Approximately 7.5cm by 0.9cm by 0.5cm)*
- *A piece of thread (about 40 cm long)*
- *Electric balance*

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

232/3

PHYSICS

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- a) Answer all questions in the spaces provided in the question paper.*
- b) You are supposed to spend the first 15 minutes reading the whole paper carefully before commencing your work.*
- c) Candidates are advised to record their observations as soon as they are made.*
- d) Marks are given for observation actually made, their suitability, accuracy and the use made of them.*

FOR EXAMINER'S USE ONLY

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

QUESTION ONE

You are provided with the following;

- a rectangular glass block
- 4 optical pins
- a soft board
- a plain paper
- Two tuck pins
- Protractor (to be provided by the candidate)

Proceed as follows:

a) Place the glass block on the plain paper with one of the largest face upper most. Trace round the glass block using a pencil as shown below.

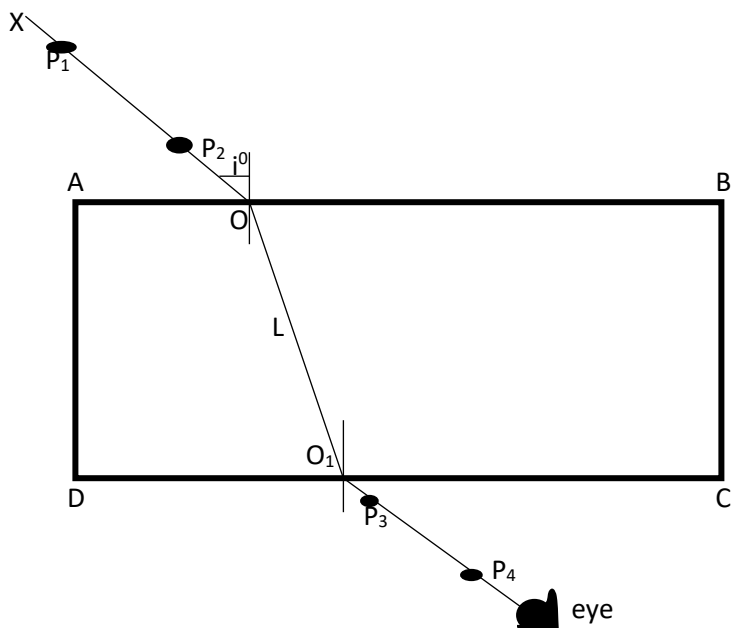


Figure 6

b) Remove the glass block and construct a normal at O (about mid-point of side AB). Construct an incident ray XO of angle of incidence, $i = 20^\circ$

- c) Fix two pins, P_1 and P_2 along the line XO which will act as the path of the ray light at the given angle of incidence.
- d) Replace the glass block on its outline and while viewing through the glass block from side CD (as shown above), fix two pins, P_3 and P_4 such that they appear to be in line with the pins P_1 and P_2 .
- e) Remove the glass block and the pins. Join point P_3 and P_4 with as a straight line and extend the line to meet the outline of the glass block at O_1 , as shown above.
- f) Measure the length, OO_1 and record it as L.

L = ... cm

(1 mark)

- g) Repeat the above procedure for the angles shown in the table,1 and complete the table 1 accordingly.

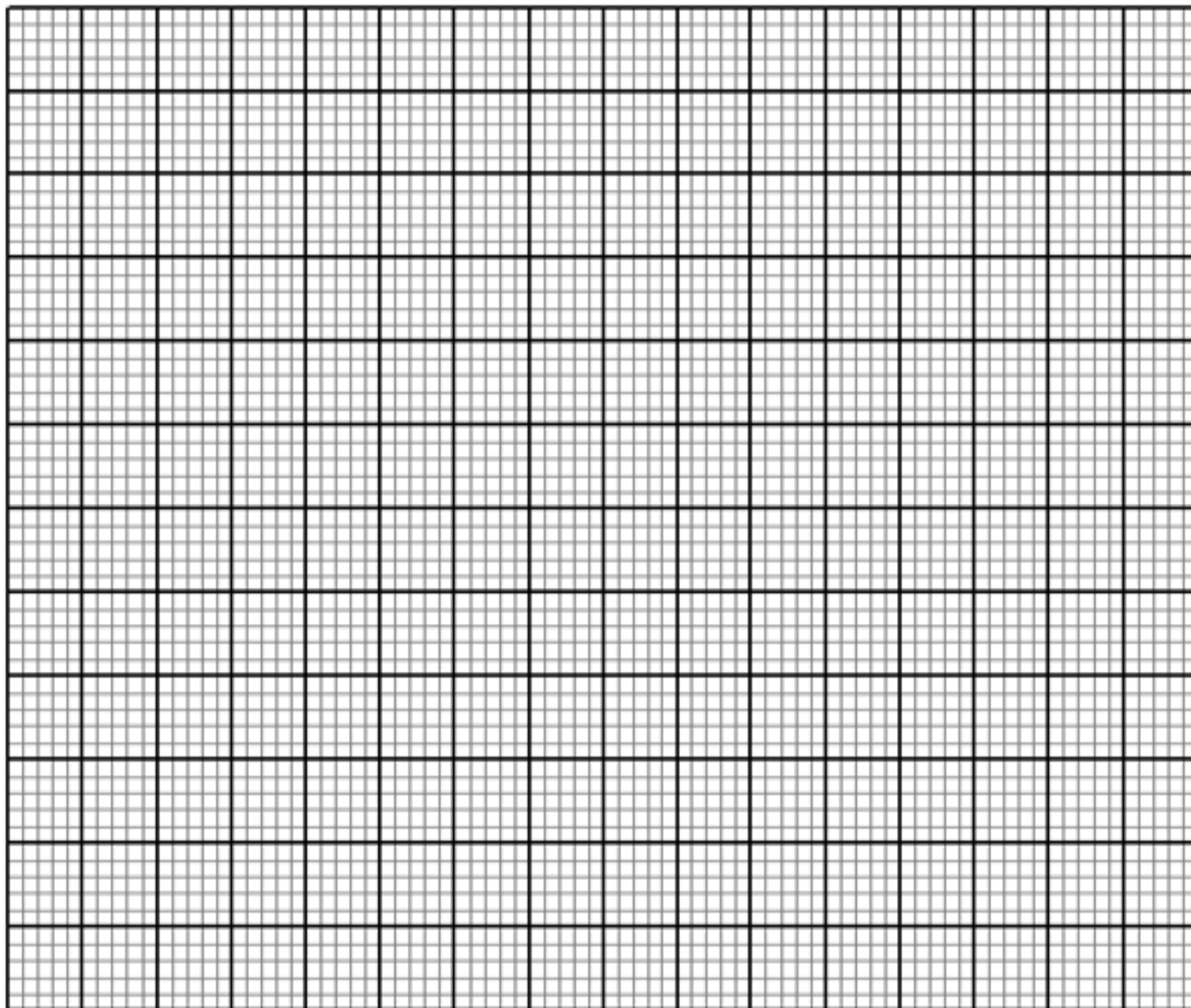
(6 marks)

Table 1

Angle i°	L (cm)	L^2 (cm ²)	$\frac{1}{L^2}$ (cm ⁻²)	$\sin^2 i$
20				0.1170
30				0.2500
40				0.4132
50				0.5868
60				0.7500

- h) Plot a graph of $\frac{1}{L^2}$ (y-axis) against $\sin^2 i$.

(5 marks)



i) Calculate the gradient, S.

(3 marks)

j) Given that the equation of that graph is: $\frac{1}{L^2} = -\frac{1}{b} \sin^2 i + c$, determine the values of b and c

i. $b = \dots\dots\dots$

(1 mark)

ii. $c = \dots\dots\dots$

(1 mark)

k) Calculate the value of Q given by;

(2 marks)

$$Q = -\left(\frac{c}{s}\right) + b$$

l) Hand in your constructions on the plain paper together with the answer script.

(1 mark)

QUESTION TWO

You are provided with the following apparatus

- A complete stand
- Copper wire
- A stop watch
- A piece of thread
- Electric balance
- A meter rule
- Corked optical pin
- A protractor (to be provided by the candidate)
- One bar magnet

PART A

Procedure

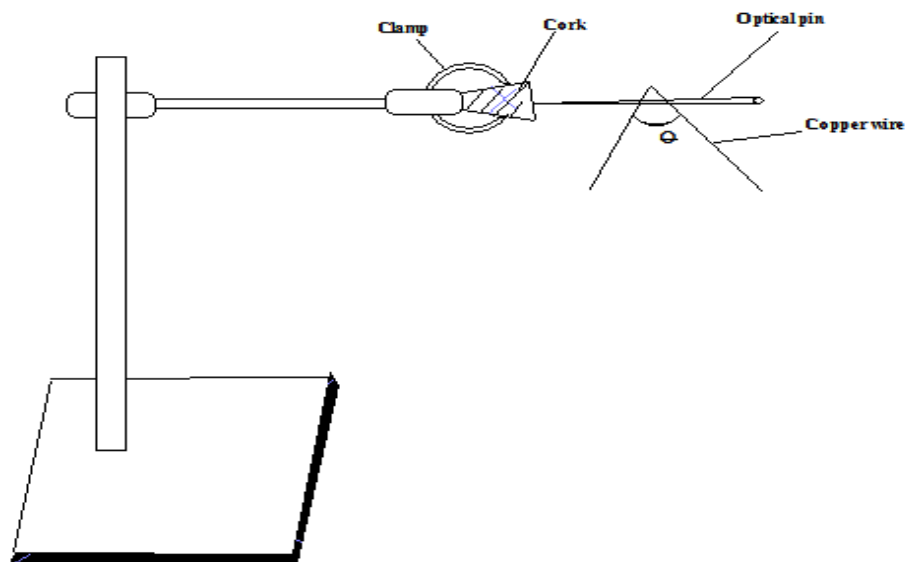
a) Measure the length L of the copper wire.

L = ... cm

L = ... m

(2 marks)

- b)** Bend the wire to form an angle $\theta = 60^\circ$, suspend it from the corked optical pin as shown in the diagram below.



- c)** Give it a small displacement so that it oscillates about a point on the pin. Measure the time, t for 10 oscillations of the wire.

$t = \dots\dots\dots$ (s) (1 mark)

- d)** Repeat the procedure (c) above for the values of $\theta = 70^\circ, 80^\circ, 90^\circ, 100^\circ, 110^\circ$ and record your results in the table 2 below. (8 marks)

θ°	60	70	80	90	100	110
$\cos \frac{1}{2} \theta$						
time, t for 10 oscillations (s)						
Periodic time T (s)						
T^2 (s^2)						
$\frac{1}{T^2}$ (s^{-2})						

PART B

Proceed as follows:

- e) Using the meter rule, measure the length L and breadth b for the magnet. (2 marks)

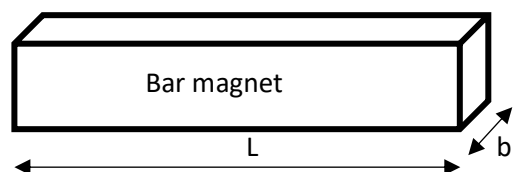


Figure 7

$L = \dots\dots\dots$ m

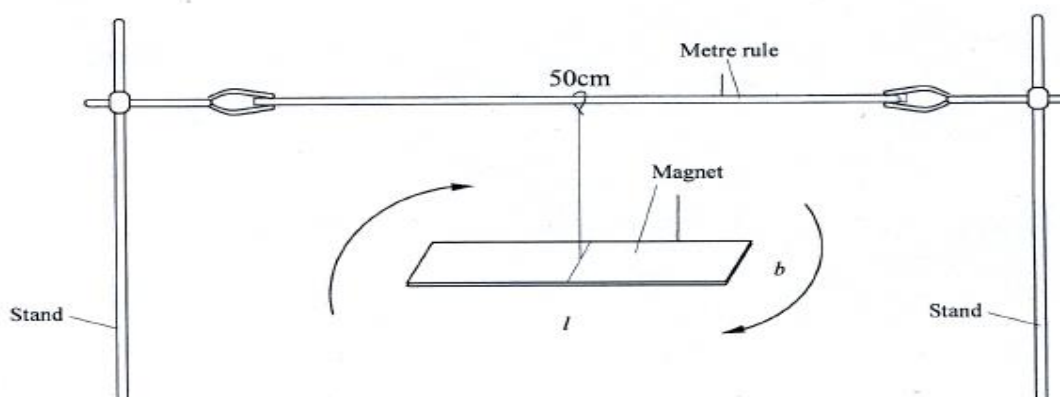
$b = \dots\dots\dots$ m

- f) Use the balance to measure the mass M of the magnet.

$M = \dots\dots\dots$ kg. (1 mark)

- g) Determine P given that: $P = \frac{M}{3}(L + b)^2$ (2 marks)

- h) Clamp the meter rule between the two retort stands. Using a piece of thread suspend the magnet at the 50 cm mark and in a horizontal plane such that the plane of the magnet is 20 cm from the metre-rule (as shown in figure 4).



i) Keep away all unnecessary magnetic materials including voltmeter from this bar magnet.

j) Displace one end of the bar magnet through a small angle and let it oscillate 10 oscillations about vertical axis through its centre as shown by the arrows. Measure the time t for 10 oscillations:

i. $t = \dots\dots\dots$ s **(1 mark)**

ii. period, $T = \dots\dots\dots$ s **(1 mark)**

k) Determine r , given that : $2r = \frac{P}{\sqrt{T}}$ **(2 marks)**

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FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

443/1

AGRICULTURE

PAPER 1

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

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

FOR EXAMINERS USE ONLY

SECTION	QUESTINS	MAX SCORE	CANDIDATES SCORE
A	1-19	30	
B	20-23	20	
C	24	20	
	25	20	
	26	20	
TOTAL		80	

SECTION A (30MARKS)

Answer ALL the questions in the spaces provided

1. Give **four** biotic factors which influence Agriculture positively. (2 marks)

.....

.....

.....

.....

2. State **two** farming practices which enhance organic farming. (1 mark)

.....

.....

3. Which chemical are used during water treatment to; (1½ marks)

i) Coagulate solid particles

ii) Soften the water

iii) Kill pathogens

4. Give **two** reasons that makes phosphatic fertilizers good for use during planting time.(1 mark)

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.....

5. List down **four** qualities of a good farm record. (2 marks)

.....

.....

.....

.....

6. What do you understand by the following terms?

(1½ marks)

i) Seed dressing

ii) Seed inoculation

iii) Chitting

7. State three problems associated with land fragmentation in Kenya?

(1½ marks)

8. Outline **four** land Reforms Programmes which have been carried out in Kenya since independence.

(2 marks)

9. List down **four** common methods of harvesting water.

(2 marks)

10. Give three methods of breaking seed dormancy. **(1½ marks)**

.....

.....

.....

11. What do you understand by the following terms as used in pests classification according to mode of action. **(2 marks)**

i) Stomach poisons

ii) Systemic poisons

iii) Contact poisons

iv) Suffocants

12. Give **two** reasons why farmers are encouraged to practice organic farming. **(1 mark)**

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.....

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13. State **three** advantages of shifting cultivation. **(1½ marks)**

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.....

.....

14.List **four** methods of farming. (2 marks)

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15.Outline **three** effects of soil organisms which benefit crop growth. (1½ marks)

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16.State **two** harmful effects of strong wind on crop production. (1 mark)

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17.State **three** advantages of adding organic matter to sandy soil. (1½ marks)

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18. State **three** ways by which biological agents can enhance the process of soil formation. (1½ marks)

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19.Outline **four** main reasons for secondary tillage. (2 marks)

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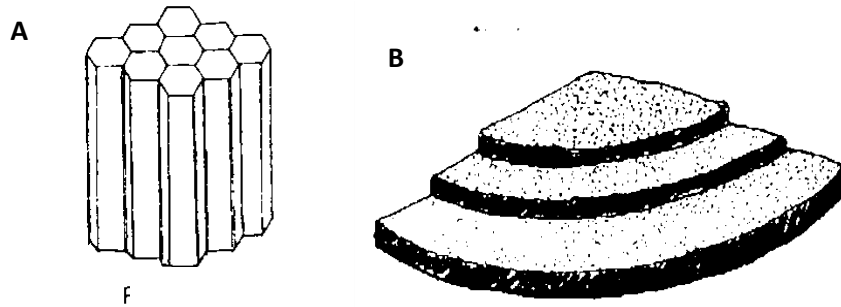
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SECTION B (20 MARKS)

Answer ALL the questions in the spaces provides

20. Below are two types of soil structures A and B.



a) Identify the two- types of soil structures. (2 marks)

A _____

B _____

b) State where the above soil structures are likely to be found. (1 mark)

.....

c) Outline ways which soil structure influences crop production. (3 marks)

.....

.....

.....

21 a) Study the diagram below and answer the questions that follow.

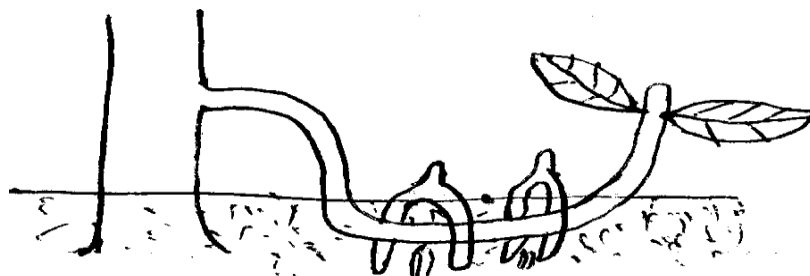
i) What is layering? (1 mark)

.....

.....

.....

ii) Identify the type of layering shown below. (1 mark)



b) Give **two** advantages of tissue culture in crop production.

(2 marks)

.....
.....

22a) Maize requires 120kg/ha of phosphorus pentoxide (P_2O_5). How much of the compound fertilizer 20:20:10 would be applied to 0.4 hectare of land to achieve this rate.

(show your working).

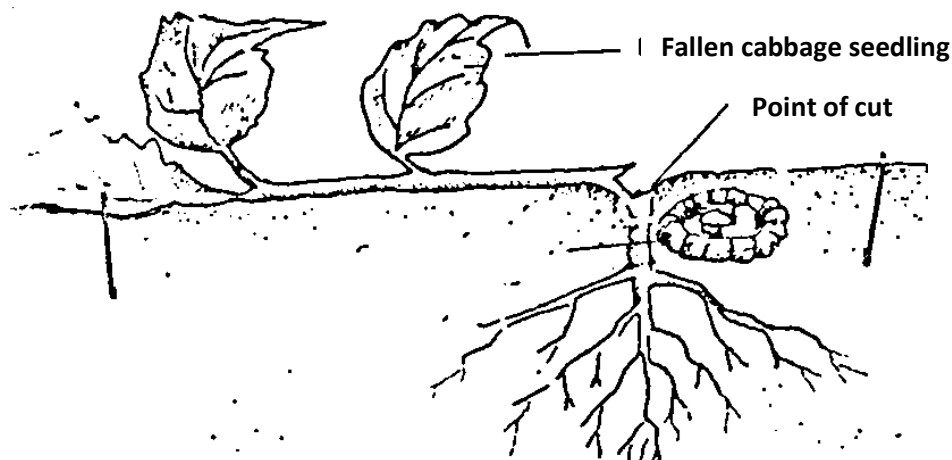
(3 marks)

b) Distinguish between straight fertilizers and compound fertilizers.

(2 marks)

.....
.....
.....
.....

23. The diagram below shows a cabbage seedling which has been attacked by a certain pest.



a) Identify the pest

(1 mark)

.....
.....

b) State **three** methods of controlling the above pest (3 marks)

.....

.....

.....

SECTION C (40MARKS)

Answer any TWO questions in this section in the spaces provided after question 25

24.a) Outline the factors affecting rooting of cuttings. (5 marks)

b) State and explain human factors that influence Agricultural production. (10 marks)

c) Highlight the management practices carried out in a nursery. (5 marks)

25.a) State and explain **five** ways through which soil loses its fertility. (10 marks)

b) Describe **five** characteristics of Nitrogenous fertilizers. (5 marks)

c) Outline **five** methods used in application of inorganic fertilizers. (5 marks)

26.a) Explain **seven** cultural methods of controlling crop diseases. (7 marks)

b) Describe precautions taken during the harvesting of coffee. (4 marks)

c) Given that a crop of cabbage is planted at a spacing of 60cm × 60cm, calculate the plant population in a plot of land measuring 4m × 3m. (show your working). (4 marks)

d) Give **five** factors that determine spacing of cabbages in the field. (5 marks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

443/2

AGRICULTURE

PAPER 2

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

SIGN:

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

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

FOR EXAMINERS USE ONLY

SECTION	QUESTINS	MAX SCORE	CANDIDATES SCORE
A	1-16	30	
B	17-22	20	
C	23	20	
	24	20	
	25	20	
TOTAL		80	

SECTION A 30 MARKS

1. Give four control measures of a liver fluke in livestock. (2mks)

.....

.....

.....

.....

2. State two signs that shows that a cow is about to parturate. (2mks)

.....

.....

3. State four signs of infestation by external parasites in livestock. (2mks)

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4. Name two notifiable diseases in Kenya. (1mks)

.....

.....

5. State four reasons for feeding colostrums to calves immediately after parturition. (4mks)

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6. Distinguish between mathering ability and prolificacy as used in livestock breeding. (2mks)

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7. Name the vegetative part of each of the following crops which is propagated. (2mks)

- i) Sweet potatoes.....
- ii) Cassava.....
- iii) Bananas.....
- iv) Oranges.....

8. Name two methods of weed control in pasture. (1mk)

.....
.....

9. Name four methods used in identifying farm animals. (2mks)

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.....

10. State two reasons why it is necessary to have individual calf pens instead of communal calf pen. (1mk)

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.....

11. State two effects of HIV/AIDS on agricultural production. (1mk)

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.....

12. State four reasons for maintaining farm tools and equipment in proper condition. (2mks)

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13. Give four factors which characterize small scale farming. (2mks)

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14. Give four benefits of conservation of farage. (2mks)

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15. Name four suitable sites for agroforestry. (2mks)

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16. Give objectives of land settlement and resettlement in Kenya. (2mks)

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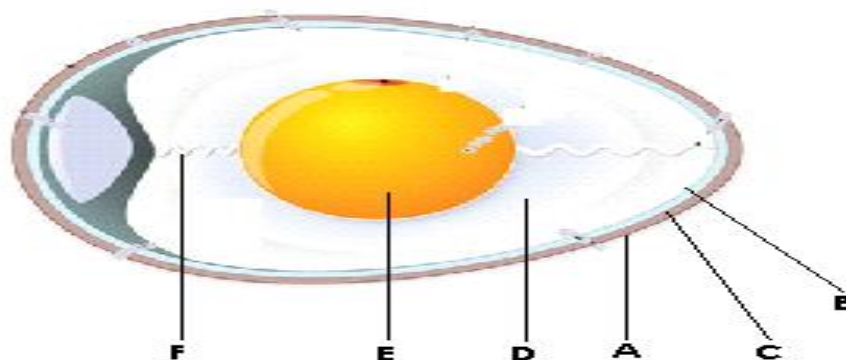
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SECTION B 20MKS

17. The diagram below is an illustration of an egg. Study it carefully and answer the questions that follow.



i) Name the parts labeled (3mks)

A.....

B.....

C.....

D.....

E.....

F.....

ii) State the qualities of the part labeled A that should be considered when selecting eggs for incubation. (2mks)

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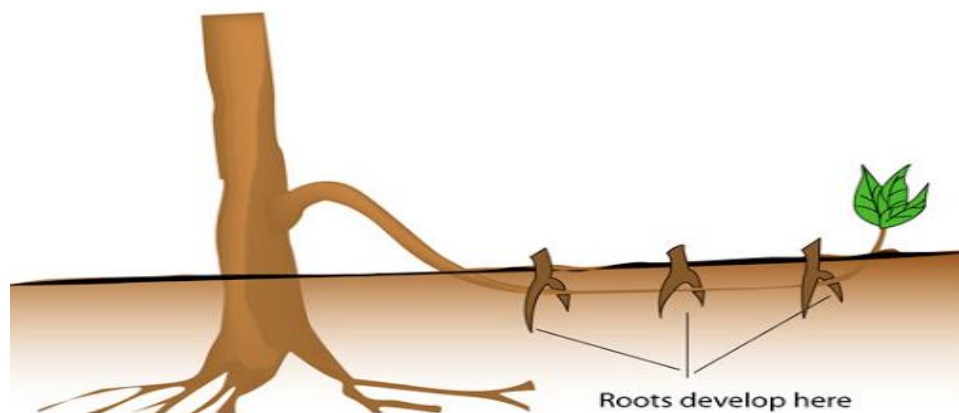
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iii) What is the function of the part labeled E in a fertilized egg. (1mks)

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18. Study the diagram below and answer the question that follow.



i) What is layering?

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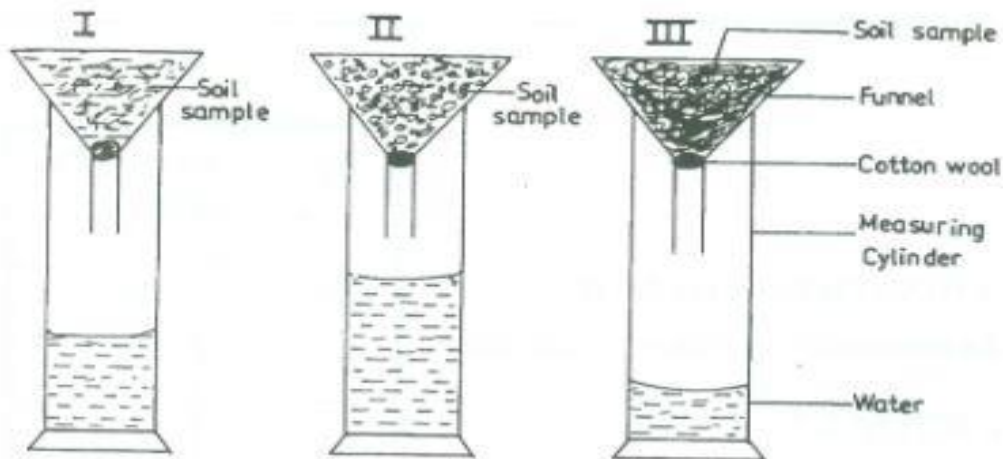
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ii) Identify the type of layering shown above

iii) Give two advantages of tissue culture in crop production

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.....

19. The diagram below illustrates an experiment on soil. Study it carefully and answer the question that follow.



a. State the aim of the experiment.

(1mk)

.....
.....

b. If the volume of water illustrated in the measuring cylinder was observed after one hour, identify the soil sample labeled **I** and **II** and give reasons.

Soil sample

I.....

Reasons

II.....

Reason.

c. State two ways in which the soil structure of the soil sample labeled **III** above can be improved.

(2mks)

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20.State four reasons why docking/tailing is done in wool.

(2mks)

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21.State two management practices that should be carried on a knapsack sprayer. (1mk)

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22.State two reasons why bees swarm.

(2mks)

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State two methods of tick **control**.

(1mk)

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SECTION C (40MARKS)

Answer any TWO questions in this section in the spaces provided after question 25

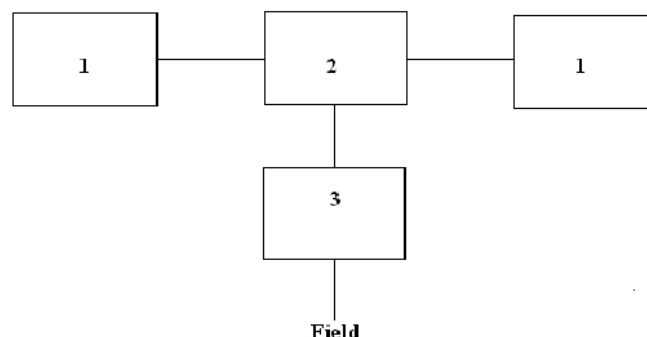
23.i)State five difference between ruminants and non-ruminants.

(5mks)

ii) Discuss calf rearing from birth to first calving.

iii) State five problems that farmers are likely to face when marketing their produce.

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



- a.** Identify the methods. (1mk)
- b.** Using arrows in the diagram show how the turning is done before the manure can be taken to the field. (2mks)
- c.** i) which other methods can be used to prepare the manure. (1mk)
- ii) After how long should the compost be ready for use? (1mk)
- B i)** state four reasons for maintaining farm tools and equipment in proper condition. (2mks)
- ii) list three factors that makes embryo transplant unpopular with many livestock farmers. (3mks)
- iii) An agriculture student was adviced to apply a complete faerizer 40:30:10 in a 20m by 10m plot at a rate of 400g per hectare.
- a.** Calculate the percentage of p_{2o5} in the cmlete fertizer. (3mks0)
- b.** Calculate the amount o fertilizer the student would require for the plot. (3mks)
- c.** Calculate the amount of k_2o that wwould be contained in 600kg of a compound fertilizer. 30:20:10 ($NP_2O_2:K_2O$) respectively.

25. Describe the production of tomatoes under the following sub-heading:

- a.** Nursery production (12mks)
- b.** Transplanting
- c.** Field management practices. (3mks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

565/1

BUSINESS STUDIES

PAPER 1

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- (a) Write your name and index number in the spaces provided above.
- (b) Sign and write the date of the examination in the spaces provided above.
- (c) This paper consists of 25 questions.
- (d) Answer ALL questions in the spaces provided

FOR EXAMINER'S USE ONLY

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

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

TOTAL MARKS

--

Answer ALL questions in the spaces provided

1. **State** four factors that determine the period which documents should be stored **(4mks)**

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.....

2. In the table below identify the type of utility for each circumstance **(4mks)**

CIRCUMSTANCE	UTILITY
Processing and packing of sugarcane in a sugarcane in a sugarcane factory	
Selling shoes in a market	
Transporting milk from Kiambu to Thika	
Storing goods in a warehouse	

3. Highlight four limitations of using consumer initiated methods in consumer protection **(4mks)**

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4. Highlight five ways in which consumer benefits from warehousing **(5)mks)**

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5. Identify four situations when differed payments would be used **(4mks)**

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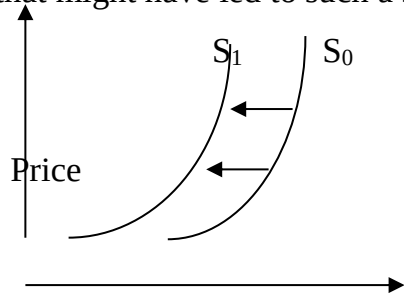
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6.The figure below shows a shift in supply.

State four possible causes that might have led to such a situation (4mks)



Quantity

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7. Identify four factors that affect the circular flow of **income** (4mks)

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8. A resource is something used by the business to achieve an objective. Identify four resources found in a business (4mks)

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9. Outline four features of monopoly structure of market (4mks)

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10. Outline four features of an insurable risk (4mks)

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11. Outline four measures that an employer can take to improve his/ her human resource (4mks)

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12. Highlight four benefits experienced by a holder of a credit card (4mks)

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13. Identify four reasons why one would prefer to use air transport to transport goods from one place to another (4mks)

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14. Outline four features that constitutes a market (4mks)

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15. Give four reasons why one would prefer to buy food first before buying a television (4mks)

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16. State four contents of a cover note (4mks)

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17. Identify the type of advertisement described below (4mks)

Any mention of a person/ firm or media	
Any paid form of impersonal presentation of a product made through mass communication media.	
Presentation of a commodity to prospective buyers, face to face by a sales person with an aim of making sales	
Process of information with a view of creating, promoting or maintaining good and favorable image of a firm	

18. Identify four gaps in a market that may bring a business opportunity in a market (4mks)

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19. Identify four factors that may determine location of an office (4mks)

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20. State five reasons why a firm may decide to remain small in an economy dominated by large firms (4mks)

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21. Outline four measures an office may take to safeguard the organizations **property** (4mks)

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22. Outline four circumstances under which per capital income statistics would be a good indicator of the welfare of the citizen of a **country** (4mks)

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23. Outline four factors that may constitute an efficient transport system (4mks)

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24. Outline four factors that may account for predominant direct production in a country (4mks)

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25. In the space provided, indicate with a tick whether the information relates to preference shares or ordinary shares (3mks)

Statement	Preference	Ordinary
Represent real owners of company		
Rate of dividend is fixed		
Has voting right		
Redeemable		
May be cumulative		
Considered last in liquidation		

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

565/2

BUSINESS STUDIES

PAPER 2

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO THE CANDIDATES

- Answer *any five* questions.
- Write your answer in the answer booklet provided.
- All questions carry equal marks.

FOR EXAMINER'S USE ONLY:-

Question	1	2	3	4	5	6	TOTAL
Marks							

Answer any FIVE questions.

1. a) Explain **five** benefits that would accrue to a businessman who uses a Liner rather than Tramps Steamers. (10mks)
- b) Using a diagram, describe the effects of outward shift in supply curve on equilibrium price and quantity. (10mks)
2. a) Explain **four** measures that may be taken by the government to promote her export. (8mks)
- b) The following Trial Balance was extracted from the books of Kisumu Auto spares as at

31stOct 2022

Kisumu Auto Spares

Trial Balance

As at 31st Oct 2022

	DR	CR
Capital		653,560
Motor vehicle	603,000	
Equipment	200,600	
Furniture	94,400	
Debtors	75,900	
Creditors		74,300
Carriage on sales	14,400	
Discount Received		26,400
Salaries	12,400	
Rent Income		12,600
Sales		319,400
Purchases	300,000	
Advertising	22,200	
Rates	9,400	
Stock 1-11-2021	61,500	
Bank		412,600
Cash	105,060	
TOTAL	<u>1,498,860</u>	<u>1,498,860</u>

Stock on 31stOctober 2022 was sh. 80,200

Required,

- (i) Prepare Trading ,Profit and Loss account for the year ended 31stOct 2022
- (ii) Prepare Balance sheet as at 31stOctober 2022 (12mks)

3. a) Explain **Five** circumstances under which a manufacturer would find it advisable to distribute his goods through wholesalers. (10mks)

b) Explain **five** functions of the central bank of Kenya in the Economy. (10mks)

4. a) Distinguish between shares and debenture as a source of finance. (10mks)

b) Outline five circumstances under which a firm will be located near the market for its products. (10mks)

5. a) The following information relates to Bizna Distributor Company for the year ended 31stDec 2009

	shs
Gross profit	600,000
Opening stock	285,000
Sales	2,400,000
Purchases	1,830,000
Expenses	360,000
Closing stock	315,000
Fixed assets	400,000
Debtors	900,000
Bank	35,000
Current liabilities	438,000

Required calculate

i) Margin (2 ½ mks)

ii) Rate of stock turnover (2 ½ mks)

iii) Return on capital employed (2 ½ mks)

iv) Current ratio (2 ½ mks)

b) Explain **five** ways in which the Entrepreneur contributes to the production of goods.(10mks)

6. a) Describe **five** means of payment that a trader may use to settle business debts. (10mks)

b) Explain **five** indicators of under development in Kenya. (10mks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

313/1

CHRISTIAN RELIGIOUS EDUCATION

PAPER 1

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- a) Write your name; admission number; Index number; class and date in the spaces provided above.*
- b) This paper consists of six questions.*
- c) Answer any **FIVE** questions in the answer sheet provided*
- d) Each Question carries 20 marks*

FOR EXAMINER'S USE ONLY

Questions No.	1	2	3	4	5	6	GRAND TOTAL
Marks							

QUESTIONS

1. (a) Explain the difference between the first and the second account of creation. (8 marks)
(b) Outline **six** consequences of sin after the fall of man in the Genesis stories of creation. (6 marks)
(c) Show **six** causes of evil in African traditional societies. (6 marks)

2. (a) State **five** reasons why Moses was reluctant to go back to Egypt. (5 marks)
(b) Describe how God showed love and concern to the people of Israel during the exodus. (8 mark)
(c) Give lessons Christians learn from the incident when the Israelites worshipped the golden calf. (6 marks)

3. (a) State **six** promises of God to king David. (6 marks)
(b) Explain how King Solomon turned away from the covenant way of life. (7 marks)
(c) Show importance of the temple of Jerusalem to the Israelites. (7 marks)

4. (a) Mention different forms of injustice that prophet Amos condemned. (8 marks)
(b) Explain reasons why prophets condemned Israelites way of life. (6 marks)
(c) State evils that prophet Amos would condemn in Kenya today. (6 marks)

- 5.(a) Explain the role of prophets in the old Testament. (7marks)
(b) State seven teachings of prophet Amos on the day of the Lord (7mks)
(c) What can Christians do to avoid God’s punishment (6marks)

6. (a) Name **five** specialists in traditional African communities. (5 marks)
(b) Describe why cleansing rituals were performed in traditional African communities. (8 marks)
(c) Identify **seven** factors that are undermining the role of elders in Kenya today? (7 marks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

313/2

CHRISTIAN RELIGIOUS EDUCATION

PAPER 2

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- a) Write your name; admission number; Index number; class and date in the spaces provided above.*
- b) This paper consists of six questions.*
- c) Answer any **FIVE** questions in the answer sheet provided*
- d) Each Question carries 20 marks*

FOR EXAMINER'S USE ONLY

Questions No.	1	2	3	4	5	6	GRAND TOTAL
Marks							

Answer any **FIVE** questions

1. a) In what ways did Jesus the Messianic prophecies of Isaiah about the suffering servant? **(8mks)**
b) Outline seven events that took place on the night that Jesus was **born**. **(7mks)**
c) **Give five** factors that hinder people from accepting the call of Christ to salvation. **(5mks)**
2. a) Describe the healing of the centurion servant, **Luke 7: 1 – 10**. **(8mks)**
b) **State ways** which recited to the miracles of **Jesus**. **(6mks)**
c) **Identify** ways through which the church continue with healing ministry of **Jesus**. **(6mks)**
3. a) Describe the parable of the tenants, **Luke 20:9 – 18**. **(8mks)**
b) State Jesus teaching on **wealth**. **(6mks)**
c) In what ways do people misuse their wealth **today**? **(6mks)**
4. a) **Highlight** Peters message on the day of **Pentecost**. **(7mks)**
b) **Identify** four teachings of st. Paul on the similarities between the Church and husband wife relationship. **(7mks)**
c) **Give five** ways in which Christians fight injustices in the society **today**. **(5mks)**
5. a) **Narrate** the incident in which Jesus praised the widow who offered two copper coins in the temple in **(Luke 21:1-4)** **(5mks)**
b) Give reasons why Christians take part in the lord supper **today**? **(8mks)**
c) How can Christian prepare themselves for the second coming of **Christ**. **(7mks)**
6. a) Describe the effort made by the Jewish religious leaders to have Jesus arrested and put to **death**. **(7mks)**
b) **Outline seven** reasons why Judas betrayed Jesus. **(7mks)**
c) State six reasons why the resurrection of Jesus is important to Christian **today**? **(6mks)**

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

312/1

GEOGRAPHY

PAPER 1

TIME: 2¾ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- (a) Write your Name and Index Number in the spaces provided above,
- (b) This paper consists of two Sections; A and B.
- (c) Answer all the questions in Section A.
- (d) Answer question 6 and any other two questions from Section B.

FOR EXAMINER'S USE ONLY

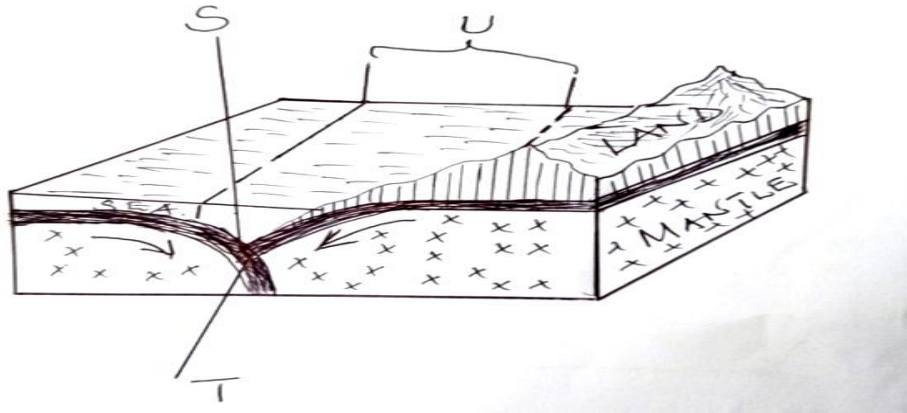
Section	Question	Maximum score	Candidate's score
A	1-5	25	
B	6	25	
		25	
		25	
TOTAL SCORE			

SECTION A:

Answer all the questions in this section.

1. (a) Name two types of earth movements. (2 mks)

(b) The diagram below represents tectonic plate boundary. Name the areas marked S, T and U. (3 mks)



2. (a) Differentiate between seismic focus and epicenter. (2 mks)

(b) State two ways through which a river transports its load. (2 mks)

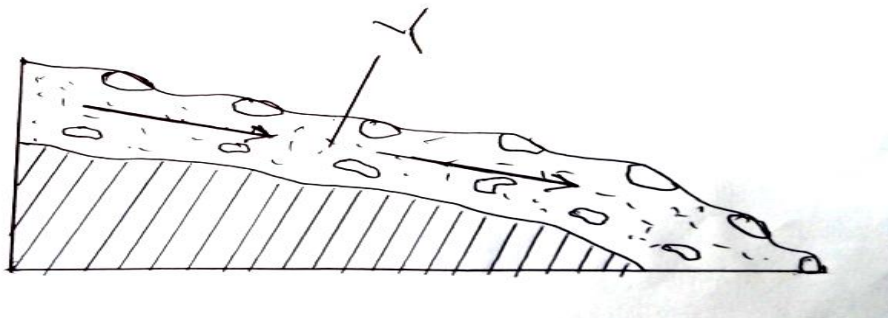
3. (a) Apart from exfoliation, name two other physical weathering processes influenced by temperature changes. (2 mks)

(b) Describe exfoliation process. (4 mks)

4. (a) State two ways through which a river transports its load. (2 mks)

(b) State three conditions necessary for the formation of a delta. (3 mks)

5. (a) The diagram below shows a process of slow mass wasting.

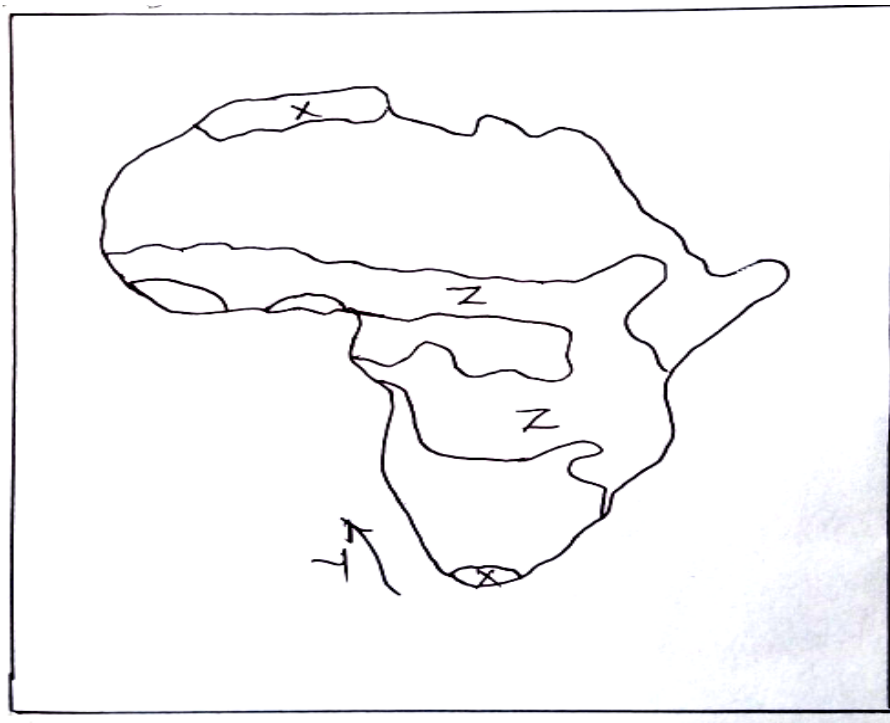


(i) Identify the process. (1 mk)

(ii) Name the feature marked Y. (1 mk)

(b) State three conditions which may influence occurrence of landslides. (3 mks)

6. Study the map of **Nyeri (1:50,000) sheet 120/4** provided and answer the questions that follows
- i) Give the latitudinal and the longitudinal position of the south west corner of the map extract (2mks)
 - ii.) Calculate the magnetic declination of the map extract (2mks)
 - i) Which adjoining sheet is to the S.E of the area covered by the map? (1mk)
 - ii.) What is the general flow of river Chanya (2mks)
 - iii.) Give three social function of Nyeri town (3mks)
 - c.) Calculate the area of Nyeri Forest to the East of Easting 69 and North of Northing 56. (Give your answer in Kilometre squared(Km²) (2mks)
 - d.) Citing evidence from the map. Give
 - i.)Two reasons why the area is covered by the map is suitable for coffee growing (4mks)
 - ii.) Two factor that favor saw milling in the area covered by the map (4mks)
 - e.) Describe drainage of the area covered by the map (5mks)
7. (a) (i) What is fog? (2 mks)
- (ii) State two conditions necessary for the formation of fog. (2 mks)
- (b) With the aid of a labeled diagram, describe how relief rainfall is formed. (7 mks)
- (c) Use the map of Africa below to answer the questions that follow.



(i) Name, the type of climate experienced in the region marked X. (1 mk)

The ocean current marked Y. (1 mk)

(ii) Describe the characteristics of the type of climate found in the area marked Z. (6 mks)

(d) Suppose your class carried out a field study on weather around the school environment;

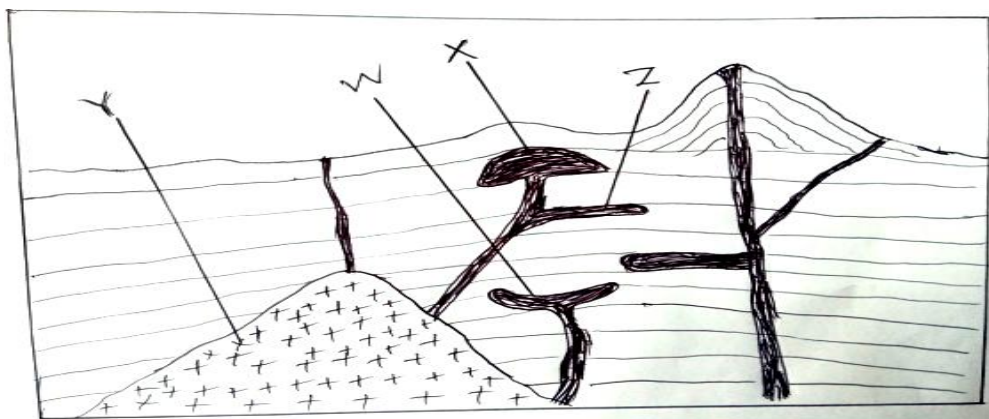
(i) Explain two effects of wind on climate that they are likely to have identified. (2 mks)

(ii) Give two methods the class used to collect data in the field. (2 mks)

(iii) Give two follow-up activities the class was involved in after the field study. (2 mks)

8. (a) Distinguish between magma and Lava. (2 mks)

(b) The diagram below shows intrusive volcanic landforms. Use it to answer the questions that follow.



(i) Name the features marked W, X and Y. (3 mks)

(ii) Describe how feature Z is formed (4 mks)

(c) (i) Name two features that result from fissure eruption. (2 mks)

(ii) List two types of lava. (2 mks)

(d) (i) Describe how a composite volcano is formed. (6 mks)

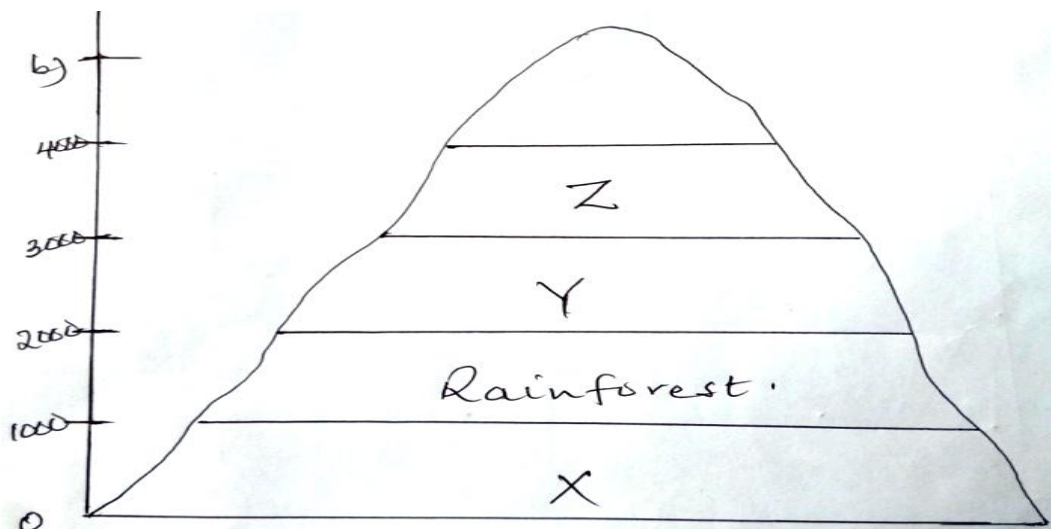
(ii) Explain the significance of volcanic features to human activities. (6 mks)

9. (a) (i) Define Secondary Vegetation. (2 mks)

(ii) State three climatic factors which influence the distribution and type of vegetation. (3 mks)

(iii) Give three uses of mangrove trees. (3 mks)

(b) The diagram below represents zones of natural vegetation on a mountain slope. Use it to answer the questions that follow.



(i) Name the vegetation zones marked X, Y and Z. (3 mks)

(ii) Describe the characteristics of the rainforest vegetation. (6 mks)

(c) You are required to carry out a field study on natural vegetation within your local environment.

(i) Give three types of information for your study. (3 mks)

(ii) State three ways you would do to identify the different types of plants. (3 mks)

(iii) State two ways in which the information collected during the study would be useful to the local community. (2 mks)

10. (a) (i) Define the term Ocean. (2 mks)

(ii) State three sources of salt in ocean water. (3 mks)

(iii) State three factors which determine the temperature of the ocean water. (3 mks)

(b) (i) Describe three processes of wave erosion. (6 mks)

(ii) Name five features resulting from wave erosion. (5 mks)

(c) Your class is required to carry out a field study on wave erosion along the Kenyan coastline.

(i) Why would you need to carry the following?

A mosquito net. (1 mk)

Light clothes (1 mk)

(ii) Explain reasons why you think your study will be important to the government of Kenya. (3 mks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

312/2

GEOGRAPHY

PAPER 2

TIME: 2¾ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- (a) Write your Name and Index Number in the spaces provided above,
- (b) This paper consists of two Sections; A and B.
- (c) Answer all the questions in Section A.
- (d) Answer question 6 and any other two questions from Section B.

FOR EXAMINER'S USE ONLY

Section	Question	Maximum score	Candidate's score
A	1-5	25	
B	6	25	
		25	
		25	
TOTAL SCORE			

SECTION A:

Answer All The Questions In This Section:

1. a. Define the term Geography? (2 mks)
b. Outline 4 importances of Geography in the learning process. (4 mks)
2. a. State 4 layers of the earth. (4 mks)
b. Name the boundary that separate:- (2 mks)
 - i. The crust and Mantle.
 - ii. The mantle and the core.
3. a. State 2 effects of earths rotation. (2 mks)
b. Outline 3 causes of earth movements. (3 mks)
4. a. Give three examples of rapid mass movements. (3 mks)
b. Name 3 fold mountains of Alphine Orogeny. (3 mks)
5. a. What is agro-forestry. (3 mks)

SECTION B:

INSTRUCTIONS:

Question 6 Is Compulsory And Any Other Two:

6. The table below shows temperature and rainfall date of station X.

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp. °C	12	13	14	17	19	22	24	26	24	20	16	13
Rainfall in (mm)	112	84	74	41	46	15	10	5	41	79	130	137

- a. Use the data to calculate
 - i. The mean monthly temperature. (3 mks)
 - ii. The mean monthly Rainfall. (3 mks)
 - iii. The median rainfall. (2 mks)
 - iv. The temperature and rainfall range. (4 mks)
- b. Use the rainfall data to draw a simple line graph. (7 mks)
- c. State 3 advantages of using a simple line graph. (3 mks)
- d. Outline clearly 3 disadvantages of using this technique. (3 mks)

7. a. Define the term vegetation. (2 mks)

b. i. State and explain 4 factors which influences the distribution of vegetation. (8 mks)

ii. Explain clearly 4 uses of vegetation. (8 mks)

c. i. Give 3 characteristics of Savanna Grasslands. (3 mks)

ii. Fill in the blank spaces. (4 mks)

Temperature grassland	Where its found
-----------------------	-----------------

Prairies	-
----------	---

Steppes	-
---------	---

Pampas	-
--------	---

Veldt	-
-------	---

8. a. i. Define the term forest. (2 mks)

ii. Explain five uses of forests and forest products in Kenya. (10 mks)

b. i. Outline any 4 problems facing forestry in Kenya. (4 mks)

ii. Highlight five forest conservation measures commonly used in Kenya. (5 mks)

c. Compare and contrast softwood forestry in Canada and Kenya. (4 mks)

9. a. i. Define the term mining. (2 mks)

ii. State three ways in which minerals occur. (3 mks)

b. i. State and explain 4 factors that influence the occurrence and exploitation of minerals. (8 mks)

ii. Explain any two methods employed in underground mining. (4 mks)

c. i. State 4 effects of mining in the environment. (4 mks)

ii. Highlight 4 problems facing mining in Kenya. (4 mks)

10. a. Name the minerals found in the following places in East Africa. (3 mks)

i. Ruhuhu valley

ii. Kariandusi

iii. Tororo

b. Describe the stripping method of open cast mining. (3 mks)

c. Study the data below and answer questions that follow:-

Percentage of mineral production.

COUNTRY A

Lime stone - 10%

Coal - 20%

Iron ore - 50%

Trona - 20%

COUNTRY B

Iron ore - 50%

Bauxite - 10%

Tin - 10%

Others - 30%

i. Draw a dividend rectangle 10cm long to show the percentage of minerals mined in country A.

(5 mks)

ii. State three advantages of using dividend rectangles to represent geographical data.**(3 mks)**

d. i. Name two areas where diamond is mined in South Africa. **(2 mks)**

ii. Describe the stages involved in the processing of diamonds. **(4 mks)**

iii. State 5 economic contributions of diamonds to the economy of South Africa.**(5 mks)**

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

311/1

HISTORY AND GOVERNMENT

PAPER 1

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

- a) This paper consists of three sections A, B and C.
- b) Answer all the questions in section A, three questions from section B and two questions in section C.
- c) Answers to all questions must be written in the answer booklet provided.
- d) Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.
- e) Answer all questions in English.

FOR EXAMINER'S USE ONLY

SECTION A	SECTION B			SECTION C		TOTAL
1-17						

SECTION A (25 MARKS)

Attempt all the questions from this section.

1. Give **one** example of audio – visual source of information on Kenyan History. (1 mark)
2. State **two** practices introduced by Cushitic speakers among other Kenyan communities.(2 marks)
3. What name did the Nandi give to their Supreme Being? (1 mark)
4. List down **two** reasons why Omani Arabs were unable to control the coast immediately.(2 mks)
5. What was the **main** pronouncement of the Devonshire White Paper of 1923? (1 mark)
6. Give **two** features of missionary education. (2 marks)
7. Name **one** Kenyan leader who signed the National Accord and Reconciliation Act on February 2008. (1 mark)
8. State **one** aspect of Kenyan democracy. (1 mark)
9. Give **one** strategic reason for the scramble and partition of East Africa. (1 mark)
10. Name **two** Kenyan communities that showed mixed reactions. (2 marks)
11. State **two** roles of Mekatilili in the Agiriyama resistance. (2 marks)
12. State **one** objective of the Local Native Councils (LNC) in Kenya. (1 mark)
13. List down **two** roles of chiefs and headmen during the colonial period. (2 marks)
14. Give **two** grievances of the early political organizations in Kenya. (2 marks)
15. State **two** reasons why the colonial government encouraged white settlers to come to Kenya. (2 marks)
16. Define the concept ‘Dual Citizenship’. (1 mark)
17. Give **one** cause of international conflicts. (1 mark)

SECTION B (45 MARKS)

Attempt any three questions from this section.

- 18 a) State **five** economic activities of the Somali. (5 marks)
b) Explain **five** results of the migration and settlement of the people of Kenya. (10 marks)
- 19 a) Give **three** factors that promoted trade between the East African Coast and the outside world. (3 marks)
b) Explain **six** consequences of the long distance trade. (12 marks)

- 20 a)** State **five** causes of the Nandi resistance (1895-1906) (5 marks)
- b) Explain **five** effects of the Wanga collaboration. (10 marks)
- 21 a)** List down **five** problems faced by the Uganda railway builders. (5 marks)
- b) Explain **five** impact of urbanization in Kenya during the colonial rule. (10 marks)

SECTION C (30 MARKS)

Attempt any two questions from this section.

- 22 a)** State **five** importance of National Integration. (5 marks)
- b) Explain **five** ways in which the bill of rights protects the rights of an individual. (10 marks)
- 23 a)** List down **three** advantages of written constitution. (3 marks)
- b) Explain **six** features of the independence constitution. (12 marks)
- 24 a)** Give **five** disadvantages of democracy. (5 marks)
- b) Explain **five** functions of the Kenya National Human Rights and Equality Commission. (10 marks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

311/2

HISTORY AND GOVERNMENT

PAPER 2

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

- a) This paper consists of three sections A, B and C.*
- b) Answer all the questions in section A, three questions from section B and two questions in section C.*
- c) Answers to all questions must be written in the answer booklet provided.*
- d) Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.*
- e) Answer all questions in English.*

FOR EXAMINER'S USE ONLY

SECTION A	SECTION B			SECTION C		TOTAL
1-17						

SECTION A (25 MARKS)

Attempt all the questions from this section.

1. Give **two** factors that influenced the Neolithic Revolution. (2 marks)
2. State **two** results of the Buganda collaboration. (2 marks)
3. Mention the **main** source of energy in early industrial revolution. (1 mark)
4. List down **two** duties of the indigenous rulers in Northern Nigeria. (2 marks)
5. Highlight **two** disadvantages of land enclosure system. (2 marks)
6. Name **one** community that participated in the Chimurenga war. (1896-1897) (1 mark)
7. State **two** ways in which a cell phone is used in communication. (2 marks)
8. State **one** commune in Senegal where Assimilation was fully applied. (1 mark)
9. Give **one** factor that led to the decline of Meroe as an early urban center. (1 mark)
10. State **two** terms of the Berlin Conference. (2 marks)
11. Give **two** negative impacts of scientific inventions on industry. (2 marks)
12. List down **two** types of trade. (2 marks)
13. Give **one** method used by Europeans to acquire colonies in Africa. (1 mark)
14. State **two** duties of the Katikiro. (2 marks)
15. Name the King of the Lozi who collaborated with the British. (1 mark)
16. Define the term 'Hansard' as used by British unwritten constitution. (1 mark)
17. State **one** characteristic of human rights. (1 mark)

SECTION B (45 MARKS)

Attempt any three questions from this section.

18. a) State **five** features of early Agriculture in Britain before Agrarian Revolution. (5 marks)
b) Explain **five** steps that Kenya has taken to solve food shortages. (10 marks)
19. a) Give **three** factors that facilitated the scientific revolution. (3 marks)
b) Explain **six** obstacles to Industrialization in India. (12 marks)
20. a) State **five** factors that led to the growth of Trans – Atlantic trade. (5 marks)
b) Describe the organization of Trans – Saharan trade. (10 marks)

21. a) List down three positive results of African rebellion in Tanganyika. (3 marks)
- b) Explain **six** factors that enabled Samori Toure to resist the French for so long. (12 marks)

SECTION C (30 MARKS)

Attempt any two questions from this section.

22. a) Give **five** political aspects of the Shona. (5 marks)
- b) Describe the economic organization of the Buganda. (10 marks)
23. a) State **five** characteristics of a good constitution. (5 marks)
- b) Other than Hansard, explain **five** sources of British unwritten constitution. (10 marks)
24. a) List down **five** consequences of the Land Apportionment Act for the **Africans**. (5 marks)
- b) Explain **five** reasons for the use of indirect rule in Northern Nigeria. (10 marks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

101/1

ENGLISH

PAPER 1 (*Functional Skills*)

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

1. Write your name and admission number in the spaces provided above
2. Answer **ALL** the questions that are asked in this paper in the spaces provided
3. Candidates should check to ascertain that all pages are printed as indicated and no questions are missing
4. Candidates must answer their questions in English.

FOR EXAMINER'S USE ONLY

SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	20	
B	10	
C	30	
TOTAL SCORE	60	

1. SECTION A (FUNCTIONAL WRITING)

20 marks

You are throwing a party at home during one of the weekends. You have planned to invite your friends through a card. If there are five special guests and master of ceremonies invited, design that card.

2. SECTION B CLOZE TEXT (10MRKS)

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

A student in Mandera County (1).....history after scoring an A in the 2019 form four examination. Ibrahim Abdi Ali, a former student at Sheikh Ali Secondary School (2).....the troubled Rhamu Sub County,(3).....81 points. No Mandera student had (4).....scored an A. Speaking at Tawfiaq Secondary School where (5).....has been a Volunteer teacher, Ibrahim said it was by God's (6).....that he broke the record in the hardship(7)..... "I challenge students to keep the fire (8).....since it has taken me much perseverance to achieve this," he said. Ibrahim said he (9).....out of school in form two due to lack of fees,(10).....the Principal of Sheikh Ali came to his rescue.

3. SECTION C ORAL SKILLS (30MRKS)

READ THE POEM BELOW AND ANSWER THE QUESTIONS THAT FOLLOW.

SUNSET

The sun spun like
A tossed coin
It whirled on the azure sky
It clattered into the horizon
It clicked in the slot
And neon lights popped
And blinked "time expired,"
As on parking meter.

(Oswald Mbusiyeni)

QUESTIONS

(i) Describe the rhyme scheme of the poem.

(2mks)

.....

.....

.....

.....

(ii) How would you say the last line of this poem. **(2mks)**

.....

.....

.....

(iii) Identify and illustrate any other sound patterns used in the poem. **(4mks)**

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(iv) State and illustrate two non-verbal cues that you would use to make the recitation of the above poem interesting. **(2mks)**

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.....

(a) Write a word pronounced exactly the same way as: **(5marks)**

- i) Break
- ii) Fold
- iii) Gate
- iv) Hew
- v) Metal

(b) Underline the silent letter(s) in: **(3marks)**

- i) Chorus
- ii) Months
- iii) Crochet

(c) Indicate whether the following have a rising or falling intonation (3mks)

(i) What a wonderful watch you have.

.....

(ii) Hand in your answer sheets now.

.....

(i) Can I assist you?

.....

(d) You are expected to address an assembly of noisy students. How would you ensure that they listen to you? (4mks)

.....

.....

.....

.....

.....

(f) Below is an extract from a discussion. Read it carefully and answer the questions

CHAIRPERSON: Manzee, the teacher of English left us this question. Let's hurry over it and go on with other things. The question is "What role does Mrs Linde play in the A Doll's House? Evans, what do you think?

TEDDY: Excuse me. We have not chosen a secretary. How can we go on without one? Everybody chill. Let everybody take down their notes. So, we do not need a secretary.

EVANS: What about the report we have to make. A secretary is necessary for a discussion of this nature.

CHAIRPERSON: (*Furiously*) you can't over-rule us here, Evans. You'd better shut up. Wandia is Aoro's wife who offers assistance in raising their family.

FLORA: (Loudly) Noo! But Mrs Linde abandons her relationship with Krogstad and goes for further studies

A rich old man. She is.....

DAVE: We are not talking about....

CHAIRPERSON: Eeh! Stop it! Mrs Linde develops the plot in the story. She agrees to marry a rich old man so as to fend for her family. Let's stop there, discussion over.

ELIZA: (*Amid pandemonium*) But we haven't finished the assign.....

CHAIRPERSON: I said over. Next time.

QUESTIONS

1. Based on your knowledge of group discussions, identify 3 weaknesses in the discussion.(5mks)

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FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

101/2

ENGLISH

PAPER 2

{Comprehension, Literary Appreciation & Grammar}

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

Instructions to candidates

- Write your **Name**, **Index number** and the **Date** in the spaces provided above.
- Answer **all** the questions in this paper.
- All your answers **must** be written in the spaces provided in this question paper.
- All working **must** be clearly shown where necessary

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	25	
3	20	
4	15	
Total score	80	

A. COMPREHENSION (20MARKS)

Read the passage below and answer the questions that follow.

Napoleon Bonaparte, leader of France in the early 19th century, once said that 'impossible' is only found in the dictionary of fools. For long, the plight of needy pupils who did not benefit from the host of scholarships in the country has been brought to our attention. Through their resilience, they have given credence to Napoleon's word.

These children have gone out of their way to awaken us to the fact that education is a basic human right. Children from across the country have trekked to various secondary schools to plead with the respective principals to admit them despite their lack of school fees. Theirs have been bravery and courageous acts tinged with desperation.

Unfortunately, this is happening at a time the nation is gripped with the Building Bridges juggernaut on which colossal sums of money been allocated.

Had that money been channeled to where it matters most, it would have given relief to many families. To our politicians though the quest for power overrides any other pressing national issues. To them, our problems require political answers to be found in creating more leadership positions.

Education is a **basic** human right. **Basic education** runs **from** early childhood **to secondary** level. It is thus the duty of the government to **ensure children** are not denied this right.

Our constitution is explicit on this. Moreover, myriad international legal instruments bind the government to facilitate the enjoyment of the right by citizens unfettered.

At least the current effort at 100 per cent transition to secondary school level is laudable. However, infrastructure and personnel in schools yearn for urgent attention. The schools are bursting at the seams. If this challenge is not addressed urgently, most institutions will gradually decline.

That aside, we should revisit our approach to issuance of scholarships to needy members of society. We not only need to cater for the fees and other school requirement for the child, we should go further and look at the homes of the cases.

The parents and guardians need to be empowered to break the cycle of poverty. Learning will be best where both the home and school environment are conducive to learning. From what we have been shown by the media. It is clear that attempts at provision of scholarships have not successfully benefitted all the needy cases.

If it did, how come these cases escaped media attention? At least the private sector, and to some extent the scholarships scheme spearheaded by the Ministry of Education have, to an extent, been successful.

But I doubt whether a thumbs-up can be given to those run by our politicians. There are numerous cases where friends, relatives and a caboodle of undeserving cases have benefited while the needy cases are ignored.

This calls for a paradigm shift in our approach to scholarships for post-primary learners. Most Kenyans are poor. Nonetheless the government, corporations and individuals, can bring a smile to the faces of the many needy cases in our midst.

Donations are good. At least they give a temporary reprieve to the children. However, there is needed to come up with a more airtight approach to the problem. My prayer is that when this is done, we get people of high integrity to oversee the process. The canker of corruption as we all know is our greatest undoing as a nation.

The point to start is by the government getting data on the needy cases from field officers before the exams. Second, the government should ensure all schemes dealing with public funds are managed by the Ministry of Education.

It is vital to divorce the scholarships from performance. We should remember that most deserving cases come from poor families where shortage of essentials of life may hamper good performance.

Harmonization of the schemes from the public coffers does not mean we do away with those managed by corporate bodies and other foundations. It is vital for the government to enter into partnership with all players in this domain.

Spreading the scope of the beneficiaries should force us to come up with other innovative measures to address the problem. There is need to encourage more bodies to include provision of scholarship to needy cases in their corporate responsibility.

Secondary schools through their boards of managements and parents associations should also chip in. Alumni associations can also be invigorated to lend a hand. The principals should also try not to expose the plight of the cases to other learners.

This might have a negative effect on the children's psychological growth. Ultimately, the government should go out of its way to provide quality basic education to its population

Adapted from the Daily Nation.

QUESTIONS.

a) What makes Napoleon Bonaparte's words credible? (2mks)

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.....
.....

b) What according to the author has motivated needy children to go out and seek admission to schools even without fees? (2mks)

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.....
.....

c) Explain the irony in the lack of school fees for needy children. (2mks)

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.....

.....

d) Define basic education. (1mk)

.....

.....

e) A part from scholarships, which other measures can be taken to help the many needy cases. (3mks)

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.....

6. Why is it wrong to expose a student's neediness? (1mk)

.....

.....

7. Describe the tone the author uses in talking about politicians. (3mks)

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8. What two measures should the government take to ensure that all needy cases receive the help they deserve? (2mks)

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.....

.....

9. Explain what the following words and expressions means.

Myriad

(3 mks)

.....
.....

Laudable

.....
.....

Divorce.

.....
.....

10. Change the sentence below to superlative

(1mk)

- Donations are good.

.....

B. LITERARY TEXT FATHERS OF NATIONS.

(25MARKS)

Read the Possible excerpt below and answer the questions that follow.

The visitor reached for his coffee and took a sip. "More like it!" he said. "Nice and hot," he added.

Then he turned to Comrade Melusi. "Your new business, how did it do?"

"I can't say it did well. Inflation was eroding incomes faster than they could grow. But I survived.

I didn't live and work in as clean a suburb as I did before. I just could not afford to live there

anymore. No, I had relocated to a slum in a poor part of Harare. But, hey, I was alive" He laughed,

falsely. Sorrow was in his eyes. "Then there came Murambatsvina." "Then there came what?"

asked the visitor.

"Murambatsvina. It is Shona, meaning expelling the trash." "Please go on."

"Bulldozers went from slum-to-slum evicting residents by tearing their homes to the ground.

Murambatsvina expelled us, the trash, all right. We got no advance warning before or alternative

accommodation after. Nobody cared whether we lived or died. We had to go. It did not matter

where. Just go!"

"Did anyone explain why you had to leave?"

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

"Was that its aim?"

Comrade Melusi belched. "Disease and crime increased instead. No, Murambatsvina had nothing

to do with curbing of disease or crime. Its true aim was to punish us, the urban poor, for supporting

opposition parties."

QUESTIONS

a) What happened immediately before this excerpt?

(2 Marks)

.....

.....

.....

b) Discuss two thematic concerns evident in the excerpt.

(6 marks)

.....

.....

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.....

c) Explain one instance of irony in the excerpt.

(2 marks)

.....

.....

.....

d) Apart from irony, identify and illustrate three styles used in this excerpt.

(6 marks)

.....

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e) Describe the mood in the excerpt.

(3 marks)

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.....

f) Who is comrade Melusi?

(2 marks)

.....

.....

.....

g) What happens immediately after this excerpt?

(2 marks)

.....

.....

.....

h) Give the meaning of the following words as used in the excerpt.

(2 marks)

(i) Inflation

(ii) Curb :

c. ORAL NARRATIVE

20 MARKS

Read the narrative below and answer the questions that follow.

THE BLACK AND THE RED GOD.

Once there were two gods, the black god and the red god. The black god was very humble, kind and loving, while the red god was malevolent and did not care about the people at all. These gods lived together away up in heaven but the black god lived below the red god, therefore closer to the people on the earth.

One day, famine spread all over the world. Cattle could find neither grass to eat nor water to drink and they were almost dying of starvation. Then the black god spoke to the red god and said, "Let us give people water for they are about to starve to death." The red god was reluctant to let the people have water, for he had no liking for them, but after much pleading from the black god, he relented. It was then agreed that water was to be released from heaven to earth. When this was done, it rained very hard for many days.

After sometimes, the red god said to the black god, "You can now hold back the water, for the people have had enough." The black god answered; "let us leave it for a few more days for the earth has been parched dry". This was done, and when the red god again told the black god to hold back the water, he did so and the rain stopped falling.

A few more days elapsed and the black god now asked the red god to release some more water for the people. The red god refused; and there ensued an argument between them, with the red god threatening to wipe out all the people, whom he described as having been spoilt, and the black god struggling to prevent him from doing so. And so, up to this day, when one hears loud thunder, it is the red god trying to get past the black god to wipe out the people of the earth. But when the sound of thunder is not very loud, it is the black god who is trying to prevent the red god from killing the people.

QUESTIONS

a) Classify this narrative. (2mks)

.....

.....

.....

b) Describe one character trait of each god. (4mks)

(i) The red god

.....

.....

.....

(ii) The black god

.....

.....

.....

c) Discuss the effectiveness of any two literary devices. (4mks)

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.....

d) Identify and illustrate any **three features of oral narratives evident in this story (3mks)**

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.....

e) What economic activity is practiced by the people described in this story? (2mks)

.....

.....

f) What moral lesson can be learnt from this story? (2mks)

.....

.....

g) What do you infer from the fact that the black god lived below the red god? (3mks)

.....

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.....

.....

D. GRAMMAR (15 MARKS)

a. Rewrite according to instructions in brackets. (4 marks)

i. I met my friend while walking from home to school. (Begin with: Walking)

.....

ii. Who taught you Physics? (Rewrite in the passive)

.....

iii. Having persevered, he bore fruits. (Rewrite using “**perseverance**”)

.....

iv. The little rascals ran round the ragged slope. (End: ...rascals)

.....

b. Rewrite the sentences below replacing the word in bold with a phrasal verb formed from the word given in bracket. (3marks)

i.He **terminated** the engagement. (break)

.....

ii.Parents are advised to **rear** their children well. (bring)

.....

iii.After breaking into the mall, the criminals **stole** the loot. (made)

.....

c. Fill in the blank space with a suitable article. (2marks)

i.He planted eucalyptus tree behind grandmother's house.

ii......umbrella can protect us from sun rays.

d. Rewrite the following sentences, correcting the error in each. (3 marks)

(i) Most youths prefer playing football than hockey.

.....

(ii) Kimeli is the most highest paid employee in my company.

.....

(iii) I demand to know what is this.

.....

e. Fill in the blank spaces with an appropriate pronoun. (3 marks)

(i) The children and ought to leave immediately if we want to arrive there before dark.

(ii) The organizers have invited Manzizi and but I don't intend to go.

(iii) Since he obtained the highest grade, the school should give the award to no one else but.....

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

101/3

ENGLISH

PAPER 3

(Imaginative Composition and Essays Based On the Set Texts)

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- (a) Write your name and index number in the spaces provided above.*
- (b) Sign and write the date of the examination in the spaces provided above.*
- (c) Answer **three** questions in this question paper.*

FOR EXAMINER'S USE ONLY

Questions	Maximum Score	Candidate's Score
1	20	
2	20	
3	20	
	TOTAL	

QUESTIONS

1. IMAGINATIVE COMPOSITION(COMPULSORY)

Either

- (a)** Write a story beginning with: **(20 marks)**

“As he walked in through the door, I noticed he was not one of the usual customers...”

OR

- (b)** Write a composition explaining why students cheat in National Exams. **(20marks)**

2. THE COMPULSORY SET TEXT (20marks)

Either

The novel:

The Samaritan – By John Lara

Corruption molds suspicious leaders who will always work towards escaping punishment rather than working towards the progress of their nations. Using illustrations from *The Samaritan* by *John Lara*, write a composition. **(20 marks)**

3. THE COMPULSORY NOVEL

Fathers of Nations By Paul B. Vitta

"Alienation is not only painful but also stigmatizing." Using **Fathers of Nations** by **Paul B.**

Vitta for your illustrations, write an essay to show the truth of this assertion. **(20 marks)**

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

102/1

KISWAHILI

PAPER 1

TIME: 1¼ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Hati ya Kuhitimu Kisomo cha Sekondari (K.C.S.E)

MAAGIZO KWA MTAHINIWA:

- a) Andika jina lako, nambari ya mtihani na tarehe katika karatasi ya majibu.*
- b) Karatasi hii ina maswali manne.*
- c) Jibu maswali mawili pekee. Kila swali lina alama 20.*
- d) Swali la kwanza ni la lazima. kisha chagua swali la pili kutoka miongoni mwa matatu yaliyosalia.*
- e) Majibu yote yaandikwe katika lugha ya Kiswahili.*

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

MASWALI

1. Wewe ni afisa wa Tume ya kukabiliana na ufiisadi nchini. Umealikwa kuwahutubia wana funzi kuhusu athari za wizi wa mitihani kwa kizazi kijacho. Andika hotuba yako.
2. Fafanua hatua ambazo zinaweza kuchukuliwa nchini kukabiliana na umaskini .
3. Andika kisa kitachodhihirisha maana ya methali.
Ulimi huuma kuliko meno
4. Kamilisha tukio kwa maneno yafuatayo:

“....waliwasili saa tatu baadaye. Uharibifu wa mali na maisha ulikuwa umeshatendeka wala kufika kwao hakukusaidia kwa lolote.”

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

102/2

KISWAHILI

PAPER 2

(LUGHA)

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

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

Kwa matumizi ya mtahini pekee.

	Swali	Upeo	Tuzo
A	Ufahamu	15	
B	Ufupisho	15	
C	Matumizi ya lugha	40	
D	Isimu jamii	10	
	JUMLA	80	

UFAHAMU (alama 15)

Soma kifungu kifuatacho kisha ujibu maswali

Haikuwahi kunija akilini kuwa jambo kama hilo lingeweza kunikumba. Lilinipata kwa kasi sana. Nilididimia katika luja. Maisha yangu ya baadaye yalielekea kuingia giza kuu na kuniauni hakuwepo.

Nilikulua katika Kijiji cha Mwanda na wazazi wangu na mnuna wangu. Hatukuwa matajiri lakini hatukukosa mahitaji ya kimsingi. Wazazi wangu walinikumbusha kila mara nitie chudi masomoni ili angaa Maisha yangu ya mbeleni yawe mazuri kuliko yale niliyokulia.

Nilipojiunga na Shule ya Upili ya Kazana sikuwa na marafiki wengi. Nilianza vyema lakini nilipoingia kidato cha pili Maisha yangu yalichukua mkondo mwingine. Sikushiriki katika michezo yoyote au chama chochote cha wanafunzi. Nikuwepo tu! Hali hii iliniletea upweke mkuu nami nikatafuta jinsi ya kujaza ombwe hilo.

Nakumbuka likizo ya muhula wa pili vyema. Nilialikwa karamu na Rafiki yangu mmoja aliyeishi karibu na kwetu. Karamu yenyewe ilikuwa ya kusherehekea siku yake ya kuzaliwa. Karamuni, wengi walionekana kufahamiana na walipiga gumzo kwa uchangamfu. Vicheko vilihizika katika gumzo yao. Mimi nilbaki na upweke wangu.

Baadha ya vyakula na vinywaji kwisha, muziki uliwekwa na vijana wakaanza kusakata densi. Mabanati wengi walinengua viuno nusura wakatike nyonga. Mvulana alinijia kujitambulisha kwa jina Todi. Alikuwa na maneno mengi kama chiriku. Alikuwa natafuna mairungi na mara kwa mara alikuwa akitia vidonge fulani na kuvitafuna. Anieleza kuwa vidonge hivyo vilikuwa vinampa uchangamfu wa ajabu.

“Je, ungetaka kuvijaribu” Aliniuliza.

Kwanza nilidinda lakini akanishi na nikakubali. Alinipa vidonge viwili na chingamu. Niliifungua chingamu na nikaanza kuitafuna. Nikaweka kidonge cha kwanza mdomoni na nikatafuna vile vile. Hakikuwa na ladha chungu kama nilivyotarajia. Nikatia kidonge cha pili mdomoni nacho pia nikakitafuna.

Muda wa nusu saa uliisha nami nikaanza kuhoji ikiwa vidonge vilikuwa na athari yoyote. Fikira zile ni kama zilichochea vidonge hivyo kuanza kazi. Nilihisi kichwa change kikiwa chepesi. Mwanga wa taa uakaongezeka na utamu wa muziki ukakolea. Nilipenda jinsi nilivyohisi. Nilitamani kujihisi hivyo milele!

Uraibu wa kutumia dawa za kulevya ulianza hapo. Nilivuta bangi, nikatumia kokeni na ketamine. Sikufikira nilikuwa katika hatari yoyote. Masomoni nilianza kushika mkia na kuchekwa na wnafunzi wengine. Nilijitafutia nafuu ya muda katika dawa za kulevya.

Jumapili moja nilialikwa na rafiki yule yule kwao. Wazazi wake walikuwa wamesafiri

Naye akaachwa nyuma ili alinde nyumba yao. Ilikuwa asubuhi na tulikuwa na siku nzima ya kujitawala kwani wazazi wake wangerudi jioni. Waama paka akiondoka panya hutawala. Tulikuwa na mihadarati ya aina aina; si heroini, si kokeni. Si bangi, si pombe; tulitaka kujaribu yote. Tulichanganya yote.

Sikumbuki yote yaliotokea. Nakumbuka tu nilitapika na baadaye nikapoteza fahamu. Nilisimuliwa baadaye kuwa wenye nyumba walirudi na kutupata tu hali mahututi; si wa maji si wa chakula. Waliita ambulensi na kutukimbiza hospitalini. Nilipopata fahamu nilijipata kitandani ndani ya

chumba chenye kuta nyeupe .Wazazi wangu na mdogo wangu walikuwa wamesimama kando ya hicho na nyuso zao zilionyesha fazaa kuu. Ilikuwa wazi kuwa nilikuwa nimewasaliti upeo wa kusaliti. Machozi anilengalenga . Nilitamani ardhi ipasuke inimeze mzimamzima niondoke na aibu iliyonikabili.

Muuguzi aliingia na kuvunja kimya kilichotawala chumba kile.”Huyu na rafikiye waliponea chupuchupu ,”aliwaambia jamaa zangu. Aliongezea kuwa ikiwa nilithamini Maisha yangu sikuwa na budi kuepukana na matumizi ya dawa za kulevyu.

MASWALI

a)Kwa nini msimulizi alkiumbwa na upweke alipojiunga na shule ya upili? (alama 3)

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b)Eleza sifa moja ya msimulizi iliyomfanya ashawashike kuingilis mihadarati. (alama 1)

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c)Eleza madhara yaliomkumba msimulizi katika matumizi ya dawa za kulevyu. (alama 2)

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d)Eleza sifa mbili za Todi. (alama 2)

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e)Toa mifano miwili miwili ya mbinu zifuatazo kutoka kwenye ufahamu (alama 4)

i) Utohozi

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ii)tabaini

f)Eleza maana ya maneno na mafungu yafuatayo kama yalivyotumika katika ufahamu .(alama 3)

i)nitie chudi

ii)tuja

iii)fazaa kuu

SEHEMU YA B-MUHTASARI(ALAMA 15)

Soma taarifa ifuatayo kisha ujibu maswali;

Ni dhahiri kwamba uharamia umechipuka kama desturi na mfumo wa maisha katika siku za hivi karibuni.Janga hili limeshamiri hususan pembeni mwa bara la Afrika na kanda za Affrika Mashariki .Taarifa za uharamia zimetawala vyombo vya habari , kiasi kwamba haipiti siku bila kuripotiwa visa vipya vya matendo haya mabovu ambayo yanaweza tu kumithilishwa na uhayawani.Matukio haya yamewalimbikizia mabaharia wa nchi husika , simanzi na masaibu yasioweza kutiwa mizani.

Yamkini tatizo hili halitokei pasi na kumotishwa na kitita kikubwa cha fidia kinachodaiwa na maharamia hawa.Aghalabu , suala hili lahusishwa pakubwa na azma na ari ya kuendeleza ujambazi wa kimataifa sawia na ulipuaji wa bomu mjini Nairobi na Dar-es-saalm mnamo Agosti 7,1998 na tukio la Septemba 11. Mwaka wa 2001 kule Marekani.Maafa na uharibifu wa mali si hoja , la mno kwa maharamia ni kutosheleza matakwa yao. Kwa upande mwingine, ukosefu wa tawala-wajibika katika maeneo kunatokea unyama huu ni thibitisho tosha la mazingira yanayowezeha na kuruhusu kuchipuka wa janga hili.

Mchipuko wa baa la uharamia umelengewa jamii ya kimataifa ambayo ni mhdumu mkuu wa harakati za kusitisha majanga makubwa kama vile njaa, umaskini na magonjwa yaliosheheni pakubwa barani.Bila shaka , hili suala linalosawisishwa na ‘kinyume mbele’.Maharamia wanatishia utangamano wa kimataifa wanapotibua usafiri wa abiria na shehena zinazoelekezwa sehemu tofauti ulmwenguni.

Matumizi ya kidiplomasia na mashauriano hayaelekei kuzalisha matunda katika juhudi za kudhibiti uharamia. Zaidi ya hayo , matumizi a nguvu yahusishayo mashambulizi pamoja na maharamia kufunguliwa mashtaka nchini Kenya na Ufaransa kunaeelekea kuzipiga jeki juhudi za uharamia ulimwenguni. Aidha, utawala wan chi kunapochipuka uharamia haujajizatiti kuharamia doa hili linalotisha ustawi wa kimataifa.

Mathalan, ni jambo lisilopingika inapobainika kuwa uharamia umedumaza biashara ya kimataifa hali inayochangia upungufu na ucheleweshaji wa bidhaa muhimu zinazoendeleza ustawi wa uchumi. Dosari hii inaelekea kukwamiza mojawapo wa maendeleo ya milenia yanayosisitiza uimarishaji na ushirikiano wa maendeleo na upanuzi wa masoko ulimwnguni. Harakati za kikatili katika kanda mashariki ya bara Afrika zimejuhumiwa. Ni muhali kuwa utalii kustawi kwenye maeneo yalio na tishio la usalama. Itakumbukwa bayana kwamba watalii hawasafiri tu kwa ndege bali hata kwa meli.

Jitihada za kuweka laini za mawasiliano chini ya bahari ili kurahisha na kupunguza gharama za mtandao ulimwenguni ni ndoto ambayo haijatimia hadi hivi sasa, kufuata juhudi za maharamia katika Bahari Hindi. Kwa mujibu wa hali hii, mawasiliano mepesi na nafuu yasitarajiwe hivi karibuni. Licha ya hayo, shughuli za uvuvi na biashara nyinginezo kwenye kanda ya mwambao zimetiliwa shaka si haba.

Itabidi mikakati kabambe na suluhisho la kudumu liweze kupatikana ili vitendo vya uharamia viweze kusitishwa.

a) Fupisha aya mbili za kwanza kwa maneno 50.

(alama 6)

Matayarisho

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Nakala safi

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b)Onyesha jinsi ambavyo Kenya imeathiriwa na uharamia na namna hali hii iantia hofu kwa maneno 50.(alama 5)

Matayarisho

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Nakala safi

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c)Fupisha aya mbili za mwisho kwa maneno 40. (alama 4)

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SEHEMU YA C;SARUFI NA MATUMIZI YA LUGHA(ALAMA 40)

a)Andika maneno yoyote yanayoanza na kwa sauti zifuatazo; (alama 2)

- i)Kitambaza na irabu ya chini-----
- ii)Kizuiwa ghuna cha masine na kiwamizo hafifu cha koromeo-----
- iii)Kiyeyusho cha mdomo na irabu ya nyuma wastani.....

iv)Kimadende na irabu ya mbele juu.....

b)Tambua kiimbo;Tafadhli niazime kalamu yako kwa muda. (alama 2)

c)Andika maneno yalio na miundo ifuatayo; (alama 2)

i)Kiambishi cha umoja , mzizi, kiishio -o

ii)kirejeshi cha umoja , kiambishi cha mahali

d)Uganisha sentensi zifutazo ili uweze kuunda sentensi ya masharti; (alama 2)

Wanasayansi watatabiri mapema.

Wanasayansi watafaulu kuondoa majanga

e)Tunga sentensi kwa kutumia nomino kama kivumishi. (alama 2)

f)Andika sentensi inayoanza kwa kiima na kumalizika kwa kijalizo. (alama 2)

g)Badilisha shamirisho kitondo kuwa shamirisha kipozi katika sentensi uliopewa. (alama2)

Mtoto wa Juma amefundishwa virai kwa kutungiwa sentensi za virai.

h)Tunga sentensi yenye kirai nomino, kirai kitenzi na kirai kielezi (alama3)

i)Andika katika hali ya ukubwa;Mtoto huyu amevaa kiatu kikubwa. (alama 3)

j)Kanusha;Mama hucheka sana akifurahi. (alama 1)

k) Akifisha; jichunge akasema musa msimamo wako huenda ukakuathiri sana. (alama 2)

l) Changanua kwa njia ya mshale; (alama 4)
Juma alichoka sana alipokuwa akifanya mazoezi jana jioni.

m) Tunga sentensi mbili kudhihirisha maana mbili za neno katia. (alama 4)

n) Andika vinyume vya maneno yaliopigiwa mstari;
Mwanafunzi jasiri hujitahidi katika masomo yake. (alama 2)

o) Ainisha vishazi katika sentensi ifuatayo; (alama 2)
Kila darasa likipunguza kiwango cha kelele idadi ya wanafunzi wanaofaulu wataongezeka.

p) Kwa kutolea mfano katika sentensi elezea matumizi mawili ya kiambishi -ki. (alama 2)

q) Onyesha uamilifu wa viambishi katika neno lifuatalo; Walilana (alama 2)

r) Tofautisha aina mbili za mofimu. (alama 2)

SEHEMU YA D-ISIMU JAMII(ALAMA 10)

Eleza sifa kumi za lugha utakayotumia ukipata nafasi ya kutangaza mchaezo wa kandanda. (alama 10)

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FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

102/3

KISWAHILI

PAPER 3

FASIHI

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

MAAGIZO

a) Jibu maswali manne **pekee**.

b) Swali la kwanza ni la lazima

c) Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki yaani; Hadithi fupi, Tamthilia na Ushairi.

d) Usijibu maswali **mawili** kutoka **sehemu moja**.

e) Majibu yote yaandikwe kwa lugha ya Kiswahili

KWA MATUMIZI YA MTAHINI PEKEE

Swali	Upeo	Alama
1	20	
	20	
	20	
	20	
	Jumla	

SEHEMU YA A.(alama 20)

Swali la lazima;

Soma shairi lifuatalo kisha ujibu maswali

Sidanganyiki kwa hotuba , na mahubiri matupu
Hasa wanaokula riba , wanaojaza vikapu
Nimeamka.

Nawambia wahubiri, wanaowadanganya watu
Moyo umejaa ari, sizunguki tena katu
Nimeamka.

Ni macho nimeamka, jicho linaona mbali
Kwa kila linalozuka , linalo yake asili
Nimeamka.

Linapenya langu jicho, liangazapo dosari
Huyaibua maficho, ya wale wenye viburi
Nimeamka.

Hupima yao maneno , na vitendo vya kadiri
Wale walao mavuno, hunikoroga suduri
Nimeamka.

MASWALI;

a)Eleza tasnia ya shairi hili. (alama 2)

b)Tambua bahari ya shairi hili kwa kuzingatia;

i)vina

ii)mishororo

iii)mizani (alama 6)

c)Ujumbe upi unaojitokeza katika shairi hili. (alama 6)

d)Tambua aina za urudiaji na dhima yake katika shairi. (alama 2)

e)Andika ubeti wa kwanza kwa lugha ya tutumbi. (alama 3)

f)Shairi hili ni la mkondo upi? (alama1)

SEHEMU YA B; TAMTHILIA YA BEMBEA YA MAISHA

Jibu swali la 4 au la 5

4.Tambua mandhari yoyote manne na umuhimu wake katika Tamthilia hii.(alama 20)

AU

5.”Eti la alama! My foot! Eti ameshuka nafasi darasani lakini anapandisha alama...”

a) Weka dondoo hili katika muktadha wake. (alama 4)

b)Eleza maudhui yanayojitokeza katika dondoo hili.(alama2)

c)Jadili sifa sita za mnenaji.(alama 6)

d)Tathmini umuhimu wa mneneji katika Tamthilia.(alama 8)

SEHEMU YA C;HADITHI FUPI-MAPAMBAZUKO YA MACHWEO.

Jibu la 6 au 7.

6.Fafanua ufaafu wa anwahi Fadhila za Punda.

(alama 20)

AU

7.Mwandishi katika hadithi *Mwiba wa kujitakia* alifaulu kutumia mbinu ya uwili.Thibitisha ukweli wa kauli hii.

(alama 20)

SEHEMU YA D-FASIHI SIMULIZI-

(ALAMA 20)

8.a)Wewe ni mwigizaji wa michezo ya jukwaani. Eleza mambo sita utazingatia ili kufanikisha uigizaji wako.(alama 6)

b)Mbinu ya uigizaji sauti ina umuhimu gani? (alama 4)

c)Soma kifungu hiki kisha ujibu maswali

Hamkuona jinsi tulivyowapiga magoli

Hamkuona vile tuliwala chenga kila mara

Itakuaje timu mbovu kama hii

Kuchezea miamba kama sisi

Niliwafunga baada ya sekunde wakati ule nitashindwaje leo?

i)Tambua aina ya lipera hiki na utoe ithibati.

(alama 2)

ii)Fafanua umuhimu wa kipera cha Fashi ulichotambua katika sehemu ya (a). (alama 8)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

121/1

MATHEMATICS

PAPER 1

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES

- a) Write your **name** and **index number** in the spaces provided above.
- b) Sign and write the **date** of examination in the spaces provided above.
- c) This paper consists of **two** sections, section **I** and section **II**.
- d) Answer **all** the questions in **section I** and only **five** questions from **section II**.
- e) **All** answers and working **must** be written on the question paper in the spaces provided below each question.
- f) Show all the steps in your calculations, giving your answers at each stage
- g) Marks may be given for correct working even if the answer is wrong.
- h) Non- programmable silent calculators and KNEC mathematical tables may be used except where stated otherwise.

SECTION 1

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

SECTION 2

17	18	19	20	21	22	23	24		GRAND TOTAL

SECTION I (50 MARKS)

1. Without using tables, evaluate $\frac{0.51 \times 5700}{6.8 \times 0.0095}$ giving the answer in standard form. **(3 marks)**

2. Find the value of t in the following equation $81^{-1} \times \left(\frac{1}{27}\right)^t = \frac{1}{243^{-1}}$ **(3 marks)**

3. Simplify the expression **(3 marks)**

$$\frac{x^2 - 9y^2}{2x^2 - 7xy + 3y^2}$$

4. Evaluate using tables of reciprocals and cubes only expressing your answer to 4 significant figures

$$\frac{4}{0.2356} + (0.9873)^3 \quad (3 \text{ marks})$$

5. Simplify; $\frac{2}{3} \text{ of } 5\frac{2}{5} - 2\frac{3}{10}$ (3 marks)

$$\frac{3}{5} \div 4\frac{1}{2} + 1\frac{3}{5}$$

6. Find the equation of a line which passes through the point (2, 3) and is perpendicular to $y = 3x - 1$, giving your answer in the double intercepts form. (3 marks)

7. George received 10,000 Euros from his brother who stays in France. He sent to his sister who stays in Japan 10,000 Yen. In addition George bought a car worth sh.200,000. Exchange rates :

Buying	Selling	
1 Euro	73.4226	73.52953
100 Japanese yen	62.8011	62.8822

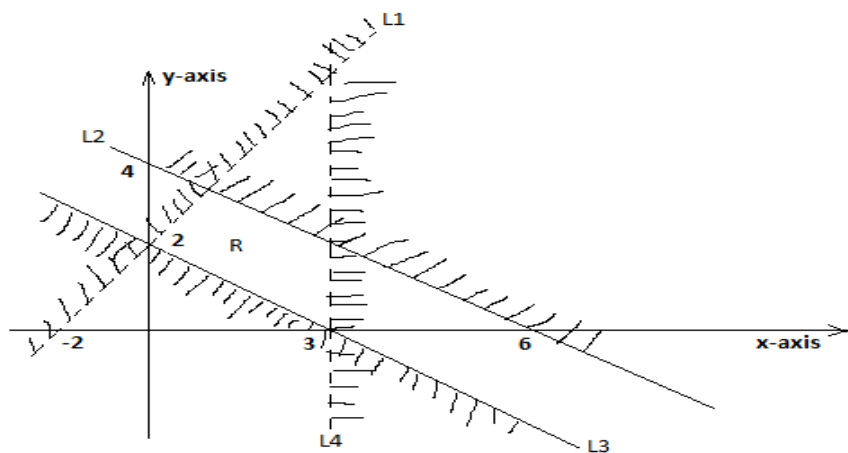
How much was left.

(3 marks).

8. Write down four inequalities which fully describe the unshaded region R in the figure S

Below.

(4 marks)



9. A line $PQ = 12.5\text{cm}$. By using another line, divide PQ into nine equal parts. **(3 marks)**

10. A boy walk directly from point Q towards the foot of a vertical flag post 200m away. After conveying a distance of 140m , he observes the angle of elevation of the top of the flag post is 75° . Calculate the angle of depression of point Q from the top of the flag post. **(3 marks)**

11. Two similar blocks have masses of 729g and 216g respectively. If the surface area of the smaller block is 300cm^2 , calculate the surface area of the larger block. **(3 marks)**

12. Solve for y given that y is acute and $\sin (3y - 50^\circ) - \cos (2y + 10^\circ) = 0$ **(3 marks)**

13. Kassim has a money box containing 100 mixed shs 5 and shs 10 coins with a total value of shs 600. How many of each type of coin does the box contain. **(3 marks)**

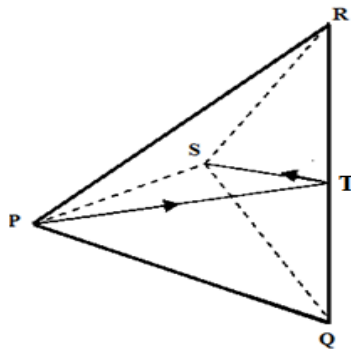
14. Without using a calculator evaluate:

$$\frac{-2(5 + 3) - 9 \div 3 + 5}{-3 + -16 \div -8 \times 4}$$

(3 marks)

15. A solid block in the shape of a cylinder has a height of 14cm and weighs 22kg. If it is made of material of density 5g/cm^3 , find the radius of the cylinder. Take $\pi = \frac{22}{7}$ (3 marks)

16. The figure below shows a regular tetrahedron PQRS of edges 4cm. Draw its net and measure the length of the straight path of PS through the midpoint T over the edge QR. (3 marks)



SECTION II (50 MARKS)

(Answer ANY FIVE questions in the spaces provided)

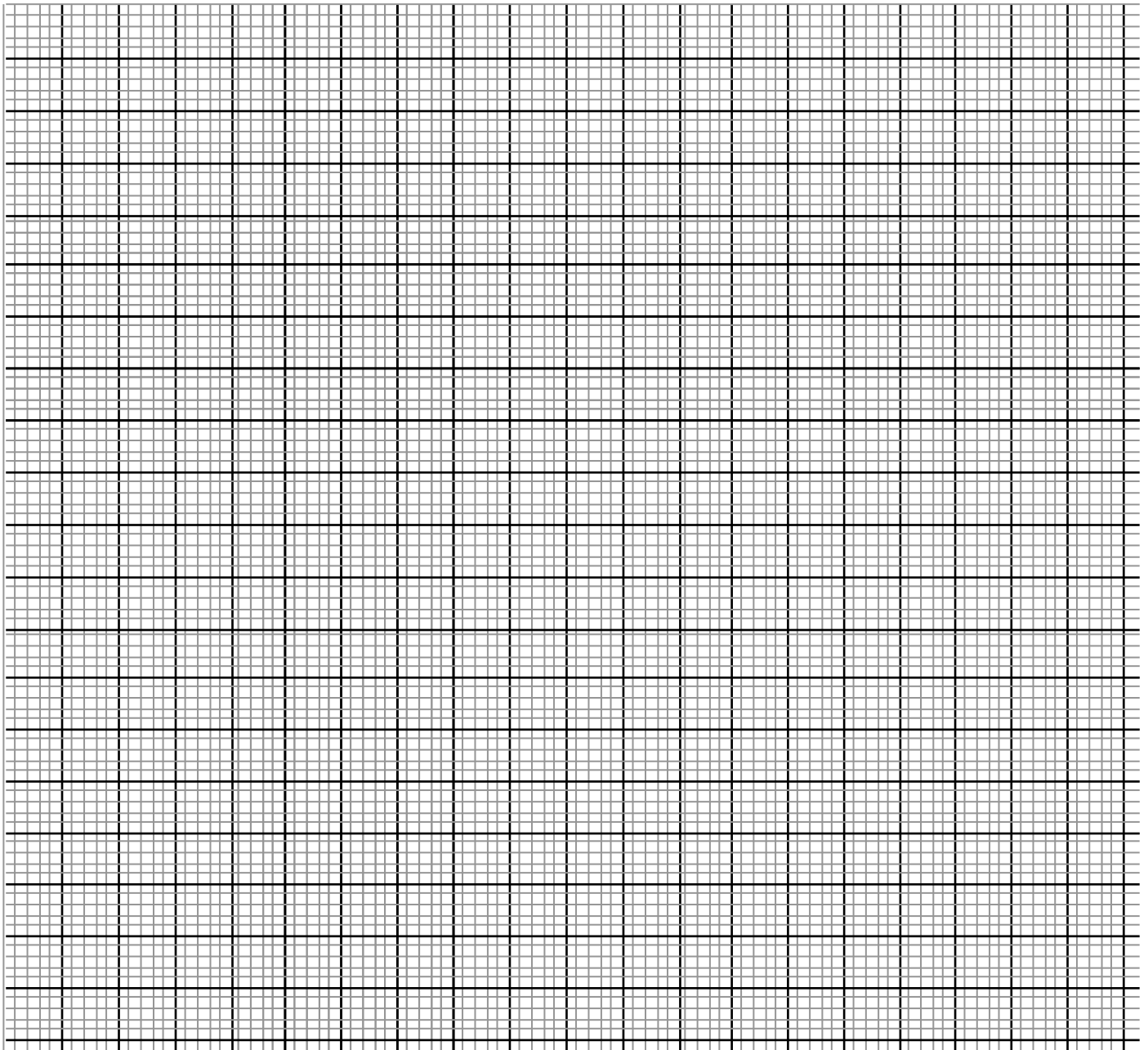
17. Complete the table below for the equation $y=2x^2+2x-8$ by filling the blank space. **(2 mks)**

x	-5	-4	-3	-2	-1	0	1	2	3	4
y	32			-4		-8			16	

a). On the graph provided below, plot the graph of $y=2x^2+2x-8$.

(4 marks)

(use the scale: y-axis=1unit, x-axis=1unit)



b) Use your graph to solve:

i) $2x^2 + 2x - 8 = 0$

(1 mark)

ii) $2x^2 + x + 2 = 0$

(3 marks)

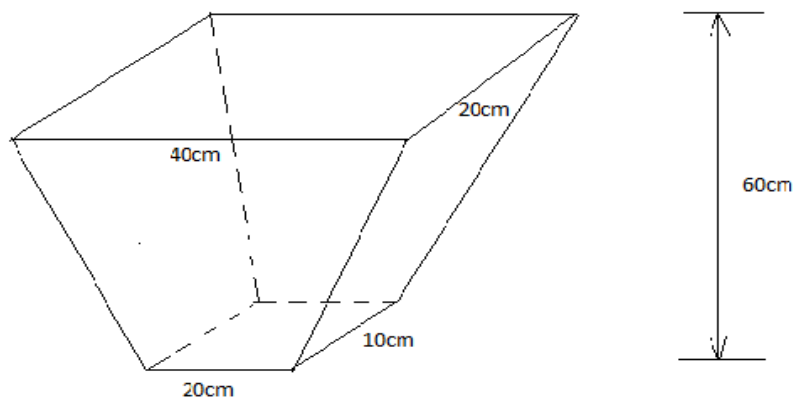
18. A bus left Kisumu at 9.30 am towards Nairobi at an average speed of 81km/hr. A matatu left Nairobi for Kisumu at 10.10 a.m at an average speed of 72km/hr. The distance between Kisumu and Nairobi is 360km. Determine:

(i) The time taken before the two vehicles met. **(4 marks)**

(ii) The distance between two vehicles 40 minutes after meeting. **(3 marks)**

(iii) A car left Kisumu towards Nairobi at 9.50am at an average speed of 90km/hr. Determine the time the car caught up with the bus. **(3 marks)**

19. The Figure shows a frustum of a right pyramid open container for storing water.



Calculate:

a) The height of the pyramid from which the frustum was cut from. **(2 marks)**

b) The surface area of the frustum **(4 marks)**

c) The capacity of the frustum in **litres** **(4 marks)**

20. The table below represent marks in percentage scored by 50 students in a class

Marks	Frequency
40-44	6
45-49	4
50-54	7
55-59	6
60-64	12
65-69	4
70-74	5
75-79	3
80-84	3

a) State the modal class

(1 mark)

b) Estimate:

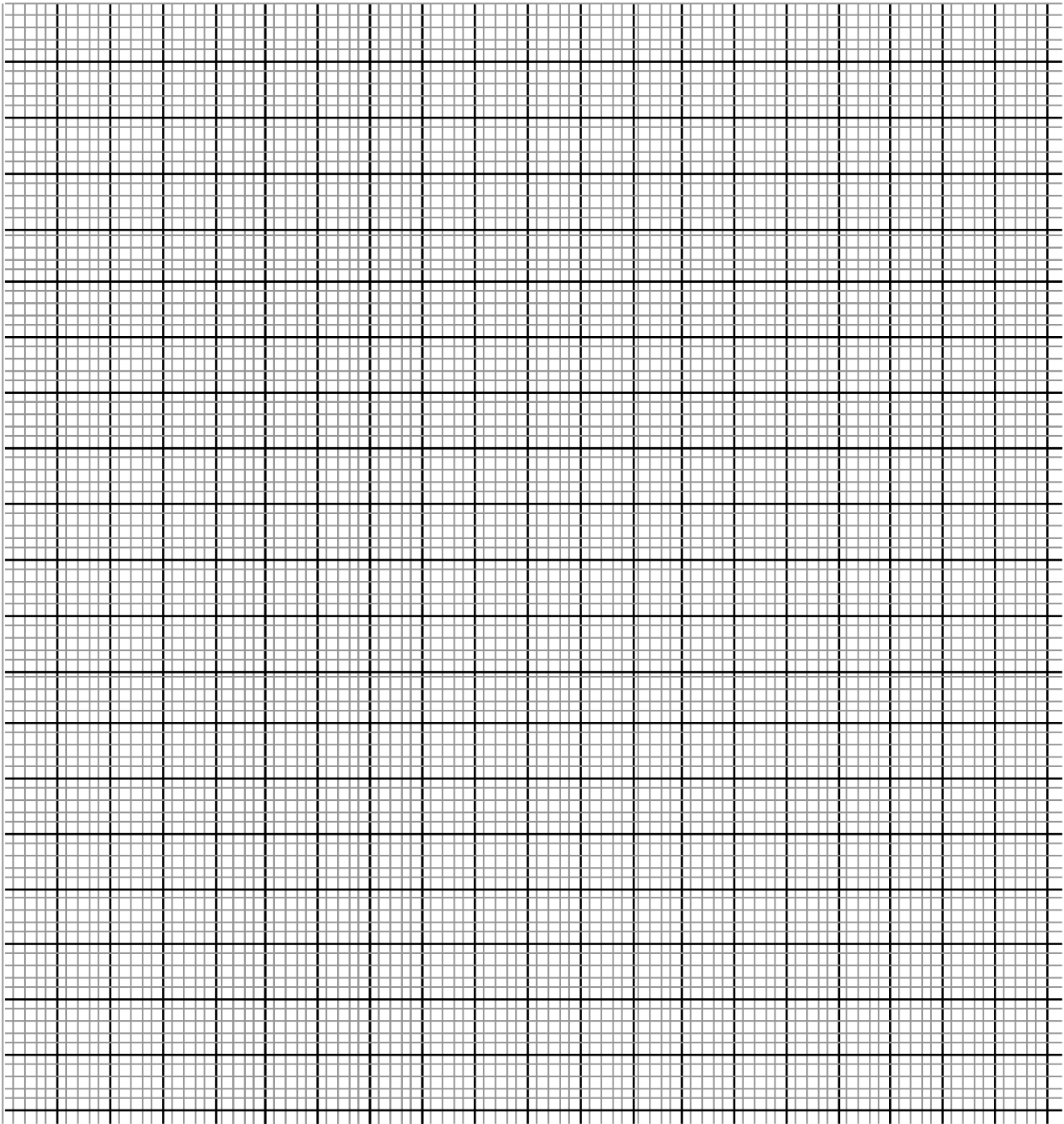
i. The mean mark

(2 marks)

ii. The median

(3 marks)

c) On the grid provided draw a frequency polygon to represent the above information. **(4mks)**



21. Given that the column vectors

$$p = \begin{pmatrix} -3 \\ 4 \end{pmatrix}, q = \begin{pmatrix} 16 \\ -4 \end{pmatrix}, r = \begin{pmatrix} 9 \\ 6 \end{pmatrix} \text{ and that } s = 2p - \frac{3}{4}q + \frac{2}{3}r$$

Express s as a column vector and hence calculate its magnitude

(4 marks)

b) Given that the midpoint of PQ is (-3,1) and Q (7,5), obtain the co-ordinates of P. **(3marks)**

c) A translation $T \begin{pmatrix} 2 \\ 1 \end{pmatrix}$ maps triangle ABC onto triangle $A^1B^1C^1$. Given the co-ordinates A(2,3), B(2,5) and C(4,4). Find the co-ordinates of A^1B^1 and C^1 . **(3 marks)**

22. The coordinates of triangle ABC are A(1, 1), B(3, 1) and C(1, 3).

(a) Plot the triangle ABC. (1 mark)

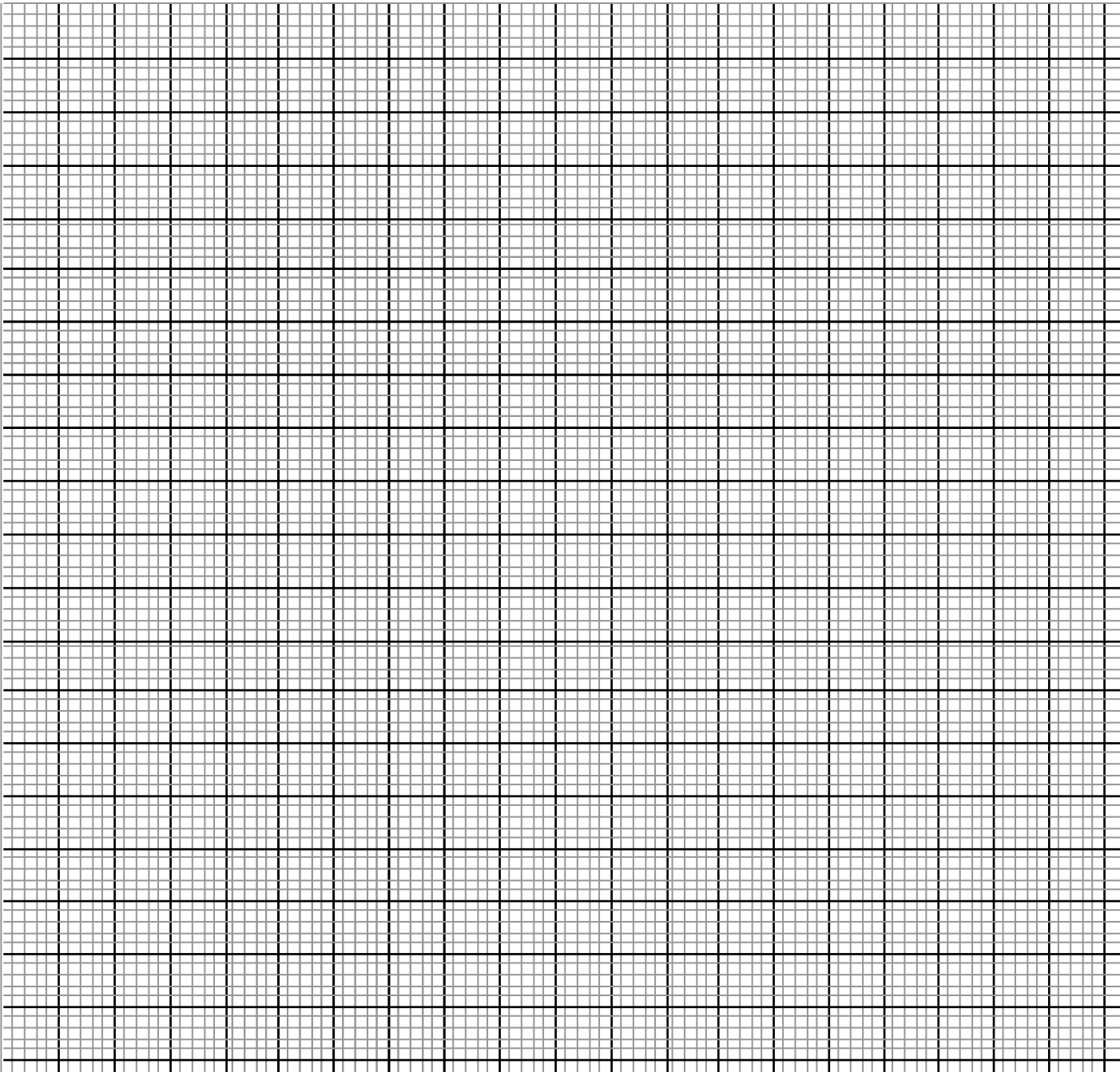
(b) Triangle ABC undergoes a translation vector $\begin{pmatrix} 2 \\ 2 \end{pmatrix}$. Obtain the image of A'B'C' under the transformation, write the coordinates of A'B'C'. (2 marks)

(c) A'B'C' undergoes a reflection along the line $X=0$, obtain the coordinates and plot on the graph points A''B''C'' under the transformation. (2 marks)

(d) The triangle A''B''C'' undergoes an enlargement scale factor -1, centre origin. Obtain the coordinates of the image A'''B'''C'''. (2 marks)

(e) The triangle A'''B'''C''' undergoes a rotation centre (1, -2) angle 120° . Obtain the coordinates of the image A''B''C''. (2 marks)

(f) Which triangles are directly congruent? (1 mark)



23. A pilot intends to fly from A to D through B and C, B is 750km from A and on a bearing of $N50^{\circ}E$. C is on a bearing of $N 40^{\circ} W$ from B and their distance apart is 600km. D is on a bearing of $S 85^{\circ} W$ from C and at a distance of 1050km.

a) Using the scale of 1cm for 100km, show the flight route. **(4mks)**

b) If the pilot on its way back decides to fly directly from D to A;

i) By use of compass bearing find the direction of A from D. **(1 mark)**

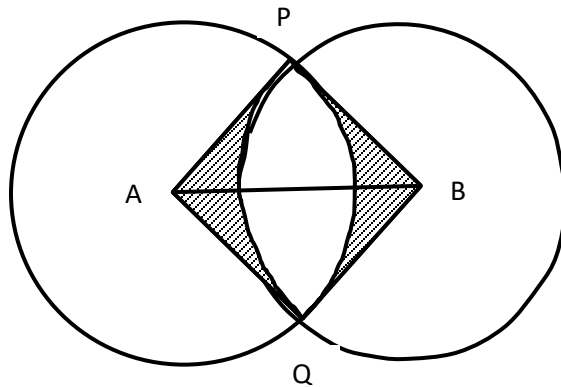
ii) Find the distance from D to A in kilometers. **(1 mark)**

c) The plane flies at 500km/h. If it leaves D at 9.00a.m at what time did it arrive at A. **(2 marks)**

d) i) Using your diagram in (a) above, (i) find the distance between A and C **(1 mark)**

ii) Find the compass bearing of A from point C **(1 mark)**

24. In the figure below A and B are centres of the circle intersecting at point P and Q. Angle PBQ = 97.2° while $\angle PAQ = 52^\circ$. $PB = 4\text{cm}$ while $AP = 10\text{ cm}$.



Determine;

a) The length of AB **(3 marks)**

b) The area of the sector APQ **(2 marks)**

c) The area of the quadrilateral APBQ **(3 marks)**

d) Area of the shaded region **(2marks)**

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

121/2

MATHEMATICS

PAPER 2

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS

- a) Write your *Name*, *Admission Number* and *Class* in the spaces provided.
- b) This paper contains *Section I* and *II*.
- c) Attempt ALL questions in *Section I* and any *FIVE* in *Section II*.
- d) Show all your workings in the spaces provided below each question.
- e) Marks may be given for correct working even if the answer is wrong.
- f) Use *Electronic Calculator* and *Mathematical Tables* where possible.
- g) Candidates must check the question paper to ascertain that no pages are missing.

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

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SECTION I

Answer all questions

1. Make x the subject in $y = \left(\frac{ax^2+b}{bx^2-9} \right)^{1/3}$. **(3 marks)**

2. Using logarithms evaluate. $\left(\frac{0.07292 \times 492.9}{82.9} \right)^{1/3}$ **(4 marks)**

3. Solve the following linear inequalities and list the integral values of x . **(3 marks)**

$$\frac{1}{3}x + 7 \geq -2x$$

$$0.5x + 4 > 1.5x$$

4. Simplify $\frac{3}{\sqrt{7}-2} - \frac{5}{\sqrt{7}+2}$.

(3 marks)

5. Find the value of k if $4x^2 + 9x + 2 + k$ is a perfect square.

(3 marks)

6. The cash price of a music system is kshs. 30,000. It can be bought under hire purchase terms by paying a deposit of kshs. 10,000 and twelve monthly installments of Kshs. 3,200 per month. Determine the percentage rate of interest per month.

(3 marks)

7. Expand and simplify $(2 - x)^6$ hence using the first 4 terms, evaluate $(1.98)^6$. **(4 marks)**

8. Solve for x in $\log(2x + 4) - \log(x - 1) = 3\log 2$ **(3 marks)**

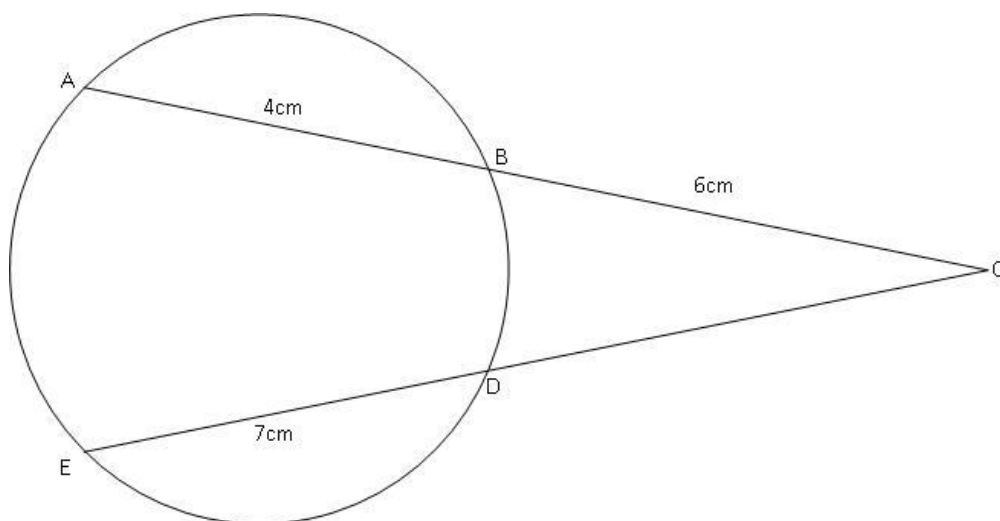
9. $A = \begin{pmatrix} 3 & 4 \\ 1 & 2 \end{pmatrix}$ $B = \begin{pmatrix} 2 & 4 \\ 6 & 8 \end{pmatrix}$ Find C if $C = A^{-1}B$. **(4 marks)**

10. Find the percentage error in estimating the volume of a cuboid whose dimensions are 8.2cm by 6.4cm by 5.3cm. **(3 marks)**

11. A varies partly as the square of R and partly as a constant.
When A= 23, R=3. When A is 55, R=5. Find A when R = 7. **(3 marks)**

12. $OA = 2i + 3j + 4k$ $OB = 4i - 3j - 2k$
P divides AB internally in the ratio 2: 1. Find the coordinates of R. **(3 marks)**

13. In the figure below $AB = 4\text{cm}$, $BC = 6\text{cm}$, $ED = 7\text{cm}$. Find the length DC . **(3 marks)**



14. The average of the first and fourth terms of a GP is 185. Given that the first term is 27, find the common ratio. **(3 marks)**

15. The equation $3x^2 - 8px + 12 = 0$ has real roots. Find the value of P. **(3 marks)**

16. Solve for x in the equation. $2\cos(3x + 60^\circ) = \sqrt{3}$ for $0 \leq x \leq 180^\circ$. **(4 marks)**

SECTION II

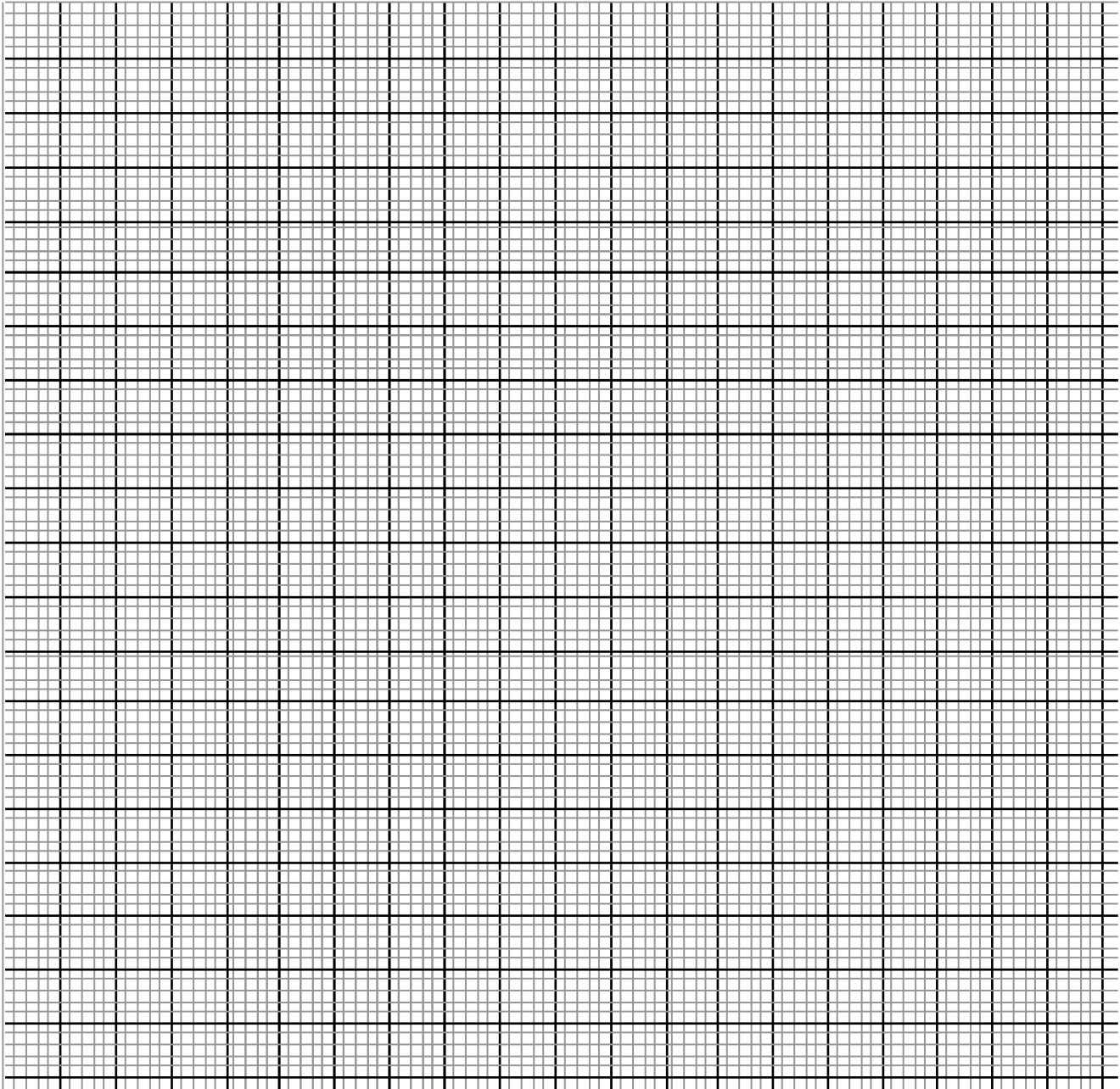
Answer any five questions in this Section

17. Complete the table below for the equation $y=2x^2+2x-8$ by filling the blank space. (2 marks)

X	-5	-4	-3	-2	-1	0	1	2	3	4
Y	32			-4		-8			16	

a). On the graph provided below, plot the graph of $y=2x^2+2x-8$. (4 marks)

(use the scale: y-axis=1unit, x-axis=1unit)



b) Use your graph to solve:

i) $2x^2 + 2x - 8 = 0$

(1mk)

ii) $2x^2 + x + 2 = 0$

(3mks)

18.a) Find A^{-1} , the inverse of matrix $A = \begin{pmatrix} 6 & 5 \\ 4 & 7 \end{pmatrix}$

(2 marks)

b) Ibanda sells white and brown loaves of bread in his kiosk. On a certain day he sold 6 white loaves of bread and 5 brown ones for a total of Kshs. 520. The next day he sold 4 white loaves and 7 brown ones for a total of Kshs. 530.

i. Form a matrix equation to represent the above information.

(1 mark)

ii. Use matrix method to find the price of a white loaf of bread and that of a brown loaf of bread.

(3 marks)

c) A school canteen bought 240 white loaves of bread and 100 brown loaves of bread. A discount of 10% was allowed on each white loaf whereas a discount of 13% was allowed on each brown loaf of bread. Calculate the percentage discount on the cost of all the loaves of bread bought.

(4 marks)

19. Income tax for all income earned by Joyce were taxed as follows.

<u>Income per month in Kshs.</u>			<u>Rate in Kshs. per</u>
			<u>K£</u>
1	-	8,100	2
8,101	-	16,200	3
16,201	-	24,300	4
24,301	-	32,400	5
32,401	-	40,500	6
40,501		and above	7

Joyce earns a basic salary of Kshs.38,400 per month. She gets monthly house allowance of Kshs.12,600, and medical allowance of shs.2,400. She is entitled to a personal relief of Kshs.1,160 pm. Her deductions per month includes NHIF shs.840, NSSF Kshs.1,720 and cooperative loan of shs.4,780. Determine:-

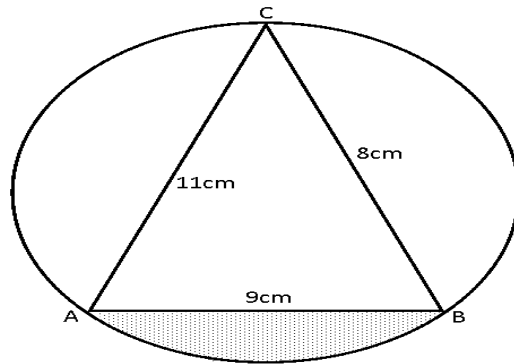
(a) The taxable income per month in Kenya Shillings. (2 marks)

(b) The net tax p.m. in Kenya Shillings. (5 marks)

(c) The net earnings per month in Kenya Shillings. (3 marks)

20. The figure below shows a triangle ABC which is circumscribed.

$AB = 9\text{cm}$, $BC = 8\text{cm}$, and $AC = 11\text{cm}$.



By leaving your answer to 1 decimal place, determine,

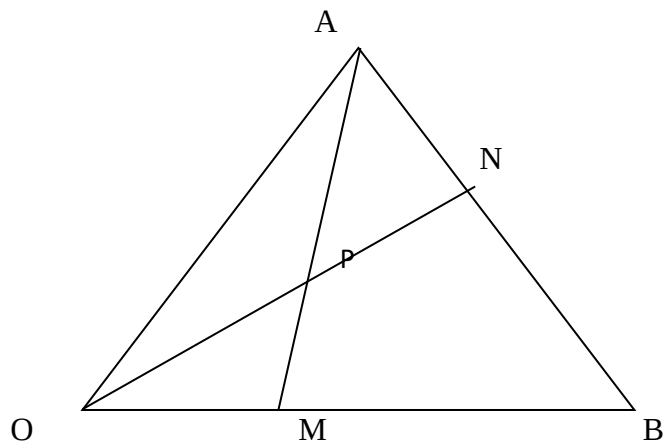
(a) The area of triangle ABC. **(3 marks)**

(b) The size of angle ACB. **(2 marks)**

(c) The radius of the circle. **(2 marks)**

(d) The area of mirror segment AB. **(3 marks)**

21. The figure below shows triangle OAB in which $\mathbf{OA} = \mathbf{a}$ and $\mathbf{OB} = \mathbf{b}$. M and N are points on OB and AB respectively such that $\mathbf{OM} = \frac{1}{3}\mathbf{OB}$ and $5\mathbf{AN} = 2\mathbf{AB}$. Lines AM and ON meet at P such that $\mathbf{OP} = \frac{5}{9}\mathbf{ON}$.



(a) Express the following vectors in terms of $\mathbf{a}$ and $\mathbf{b}$

(i) $\overrightarrow{AB}$ (1 mark)

(ii) $\overrightarrow{ON}$ (2 marks)

(iii) $\overrightarrow{AM}$ (1 mark)

(b) Express $\overline{AP}$ and $\overline{PM}$ in terms of $\mathbf{a}$ and $\mathbf{b}$ and hence show the points A, P and M are collinear
(5 marks)

(c) State the ratio AP: PM **(1 mark)**

22. (a) the 18th term of an arithmetic progression is 59. The sum of the 7th and 11th term of the arithmetic progression is 58. Find:-

(i) The first term and common difference. **(3 marks)**

(ii) The sum of the first 50 terms of the arithmetic progression. **(2 marks)**

(a) The Basic Salary per month of John during first month of employment is kshs.32,400. His salary is increased by 4% at the end of each year. If he was employed on 1st Jan, 2002.

Find:-

(a) His monthly earnings during the month of August 2014 if his incremental date is the month of January each year.

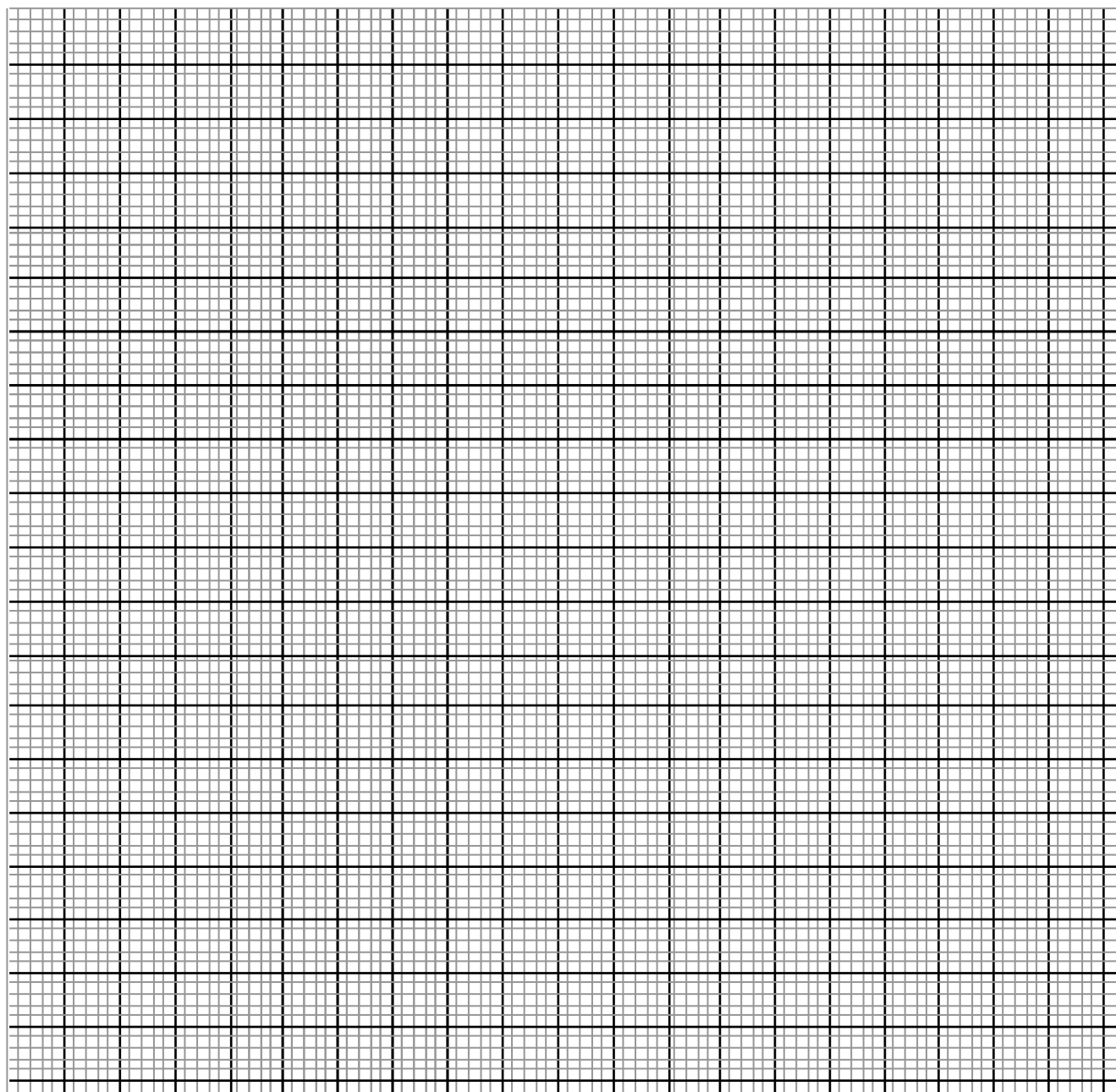
(2 marks)

(b) His total earnings by 31st December, 2014. **(3 marks)**

23. (a) Complete the table below for $y = 2 \sin 2x$ and $y = 3 \cos x$. (2 marks)

x	0	30	60	90	120	150	180	210	240	270	300	330	360
$2 \sin 2x$		1.73	1.73					-1.73	-1.73	0			
$3 \cos x$	3			0			-3					2.60	3

- (b) Draw the graph $y = 2 \sin 2x$ and $3 \cos x$ on the same grid. (6 marks)



- (c) Using your graph solve $2 \sin 2x - 3 \cos x = 0$ (2 marks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

451/1

COMPUTER STUDIES

PAPER 1

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTION TO CANDIDATES

- Write your name and index number in the spaces provided above
- This paper consists of **Two** sections **A** and **B**
- Answer **ALL** questions in section **A**
- Answer question 16 and any other **THREE** questions from section **B**

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	CANDIDATE'S SCORE
A	1 -15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

SECTION A (40 MARKS)

Answer ALL the questions in SECTION

1. State two difference between compilers and interpreters (2marks)

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2. Give three reasons why Magnetic Ink Character Recognition are too popular in banking industry for cheque processing (3marks)

.....

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3. Change $\frac{14}{64}$ base 10 to binary (3marks)

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.....

4. Describe the following numbering system (4marks)

(i) Hexadecimal

.....

.....

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(ii) Octal

.....

.....

.....

5. State functions a primary key in a database

(2marks)

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6. Mention three hardware related factors that one need to consider before installing an operating system in a computer

(3marks)

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7. Typing in Ms-Word is easier and efficient. Give three features that make this possible (3marks)

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.....

8. Describe three reasons why primary storage is not used for secondary storage (3marks)

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.....

9. A coding scheme represent a word as $101101010010100100010101_2$. Get the number of (2marks)

(i) Nibbles in the word

(ii) Bytes in the word

10. Kenya Power Lighting Company sends out staff to read power meters at the end of every month. The data collected by the staff is fed into the computer then process at the same time to generate bills

(i) Name this type of data processing **(1mark)**

(ii) State two advantages of this approach **(2marks)**

11. Explain how data in a computer can be secured using **(2marks)**

(i) Password

(ii) Firewall

12. Represent -23_{10} in three ways in 8 bit binary **(3marks)**

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13. Name three change case options supported by Ms-publisher (3marks)

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14. What is a database (1mark)

.....

.....

15. Use illustrations to explain how While.... Do and Repeat..... Until can be implemented (3marks)

SECTION B (60 MARKS)

16.

(a) Define the following terms with regard to programming (3marks)

(i) Machine dependent

(ii) Bug

(iii) Syntax

(b) Distinguish between pseudo code and program flowchart as used in programming **(2marks)**

(c) List three methods used by programmers to detect errors in a computer program **(3marks)**

(d) Jane deposited 10000 shillings in Mwalimu Sacco at an interest rate of 10% per annum .At the end of each year, the interest earned is added to the deposit and the new amount becomes the deposit of that year. Design a flowchart for a program that would track the growth **(7marks)**

17.

(a) Give three reasons to justify why most electronic devices prefer using binary number system

(3marks)

(b) Convert

(i) 1001011.001010_2 to decimal number **(3marks)**

(ii) 621_{10} to Hexadecimal number **(3marks)**

(c) Using twos complement subtract 9_{10} from 3_{10} , leave your answer in binary notation **(3marks)**

(d) Arrange the following numbers in order from smallest to largest **(3marks)**

1001011_2 , ABH, 67_8 and 45_{10}

18.

(a) Describe the following database features

(i) Macro **(2mark)**

(ii) Module **(2mark)**

(iii) Table **(2mark)**

(b) Study Table A and B then use it to answer questions that follows

Table: A

Field Name
ID Number
Last Name
First Name
Address
Town

Table: B

Field Name
ID Number
Product ID
Product Name
Unit cost
Quantity
Date of Birth
Total

(i) Identify the most appropriate data type for ID Number, Product Name and Quantity **(3marks)**

(ii) Given that the data type for Total is calculated write an expression to be entered in the expression builder **(2marks)**

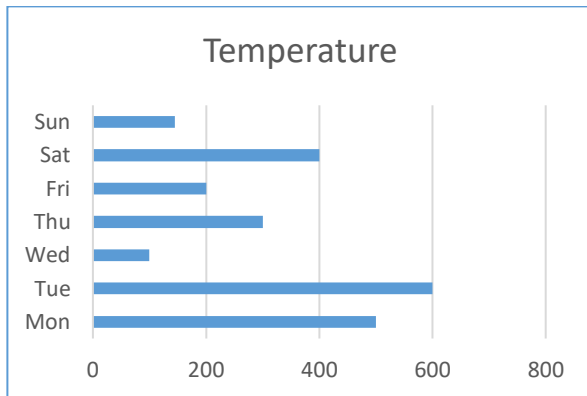
(iii) Suggest how date birth can be validated to restrict entries of future dates **(2marks)**

(iv) Explain how a relation can be created between Table A and B **(2marks)**

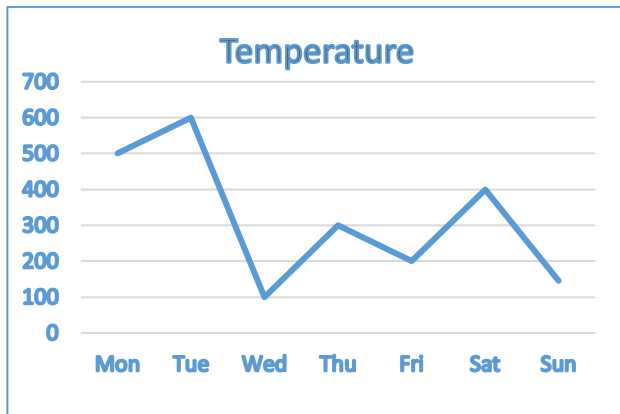
19.

(a) Identify the type of graph represented in (i), (ii) and (iii) below (3marks)

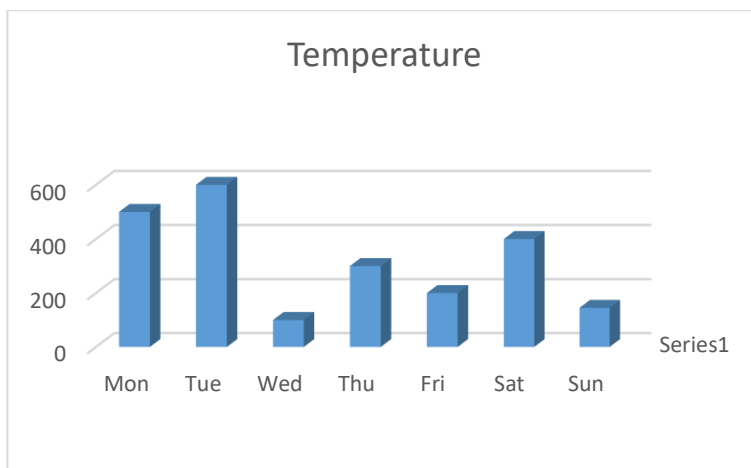
(i)



(ii)



(iii)



(b) Explain why spreadsheet suitable for the following applications(2marks)

(i) Statistical

(ii) Accounting

(c) A form student was feeding data in a Ms-excel table. He keyed in half in cell and then the cell displayed 02-Jan after pressing the enter key. State the cause of this anomaly and how it can corrected (2marks)

(d) The formula =\$C1+\$D\$2 was typed in Cell G3. State how the formula will appear if it copied to cell H4 (2marks)

(e) Enumerate three emerging issues affecting use of internet (3marks)

(f) Briefly describe the functions of the following Navigation toolbar in an Internet Browser (3marks)

(i) History button

(ii) Refresh button

(iii) Download button

20.

(a) What is intellectual property right (2marks)

(b) Give four ways of controlling unauthorized access to a computer room (4marks)

(c) State four signs associated with a computer infected with a virus (4marks)

(d) Most organizations are now backing up their data online. State three reasons for backing data online (3marks)

(e) Apart from cost and speed state any other two difference between SRAM and DRAM (2marks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

441/1

HOME SCIENCE

PAPER 1

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

Instructions to students

- a) Write your name, admission number and class in the spaces provided*
- b) Sign and write the date of the examination in the spaces provided*
- c) This paper consists of **three** sections: **A**, **B** and **C***
- d) Answer **all** the questions in sections **A** and **B** and any **two** questions in section **C***
- e) Answers to all the questions must be written in the spaces provided in the paper*

For examiner's use only

Section	Question	Maximum Score	Student's Score
A	1- 20	40	
B	21	20	
C		20	
		20	
TOTAL SCORE		100	

SECTION A: (40 marks)

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

1. State any **two** causes of anaemia other than nutritional deficiency. **(1mark)**

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2. Suggest **two** factors that may interfere with formation of lather during laundry. **(2marks)**

.....

.....

3. State **two** factors that determine the choice of repair method. **(2marks)**

.....

.....

4. Suggest **two** ways of keeping off pests in the kitchen. **(2marks)**

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.....

5. Highlight **two** factors that may affect the price of goods. **(2marks)**

.....

.....

6. Give **four** methods that can be used to manage a large amount of fullness in garments. **(2marks)**

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7. Suggest **six** items to include in a baby layette. **(3marks)**

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8. Mention **two** ways of conserving energy when using charcoal. (1mark)

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9. Suggest **two** ways of ensuring efficiency when working in the kitchen. (2marks)

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.....

10. Mention **two** positive signs of pregnancy. (2marks)

.....

.....

11. Give **two** reasons why synthetic detergents are more popular than soap in laundry work. (2marks)

.....

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12. Suggest **two** reasons why steaming is a good method of cooking food for invalids.(2marks)

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13. Suggest **two** ways of conserving nutrients when preparing and cooking potatoes. (2marks)

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14. Give **two** reasons why a wooden chopping board should not be cleaned with hot water.

(2marks)

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15. List **four** openings used when making a shirt.

(2marks)

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16. Suggest **two** ways modern lifestyle contributes to obesity.

(2marks)

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17. Highlight **three** advantages of buffet service when serving a large number of people. (3marks)

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18. Mention **two** qualities of toys for a 3 month old baby.

(2marks)

.....

.....

19. Highlight **two** limitations of nylon for baby’s clothes.

(2marks)

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20. Suggest **four** causes of skipped stitches when machine stitching. (2marks)

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SECTION B: (20 marks)COMPULSORY

Answer question 21 in the spaces provided after the question

21. Your brother is going for national music festivals over the holiday.

a) Describe the procedure you will follow to launder his acrylic sweater with a hole and make it ready for the journey. (12marks)

b) Outline the procedure for cleaning the leather bag he will use to pack his clothes. (8marks)

SECTION C: (40 marks)

*Answer any **two** questions from this section in the spaces provided at the end of the section.*

22.

a) Discuss **three** ways of minimizing diarrhoea in children. (6marks)

b) Outline **five** possible reasons for banning of polythene bags in Kenya. (5marks)

c) Highlight **five** information you expect on a packet of maize meal and the importance of each. (5marks)

d) Give **four** reasons for using a plan when cooking in the Home Science exam. (4marks)

23.

a) Highlight **five** qualities of a good cooking pot. (5marks)

b) Explain **five** disadvantages of using infant formula to feed a baby. (5marks)

c) Discuss **three** points to bear in mind when planning a meal for an individual. (6marks)

d) Outline **four** ways of encouraging a child to play. (4marks)

24.

a) Discuss **three** reasons why meals may be packed. (6marks)

b) Mention **four** preparations made on fabric before cutting. (4marks)

c) Outline **four** qualities of a good bath shelter. (4marks)

d) Discuss **three** advantages of building a family home. (6marks)

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

441/2

HOME SCIENCE

PAPER 2

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS

Answer all the questions in the spaces provided.

A pattern of a girls skirt is provided. You are advised to study the sketches, instructions and layout carefully before you begin the test.

Material provided.

1. Pattern pieces.
A – Skirt back
B - Skirt front
C – Pocket
D – Waist band
2. Plain light weight cotton fabric 55cm x 90cm wide.
3. Sewing thread to match the fabric.
4. One large envelop.

THE TEST

Using the materials provided cut out and make the **RIGHT HALF** of the skirt to show the following processes:

- a.** Making of the back dart.
- b.** Preparation of plants on the skirt front.
- c.** Attachment of front pocket to the skirt and back pocket to the skirt back. Do not trim or neaten the seam.
- d.** Making the side seam using an open seam. Neaten below the pocket only.
- e.** Joining of the pocket seam. Do not neaten.
- f.** Preparation of an interfaced waistband.
- g.** Attachment of the waistband, slip-hem the back piece only.
- h.** Making of the worked loop on the back waistband for a 1cm wide button.

At the end of the examination, family sew onto your work on a single fabric, a label bearing your name and admission number. Remove needles and place it in the envelope provided. Do not put scraps of fabric in the envelope.

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

441/3

HOME SCIENCE

PAPER 3

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

HOMESCIENCE (FOOD AND NUTRITION)

PAPER 3 (441/3)

FORM THREE (3)

PLANNING: 30 MINUTES

PRACTICAL TEST SESSION: 1 ¼ HOURS

TIME: 1 ¾ HOURS

INSTRUCTION TO CANDIDATES

1. Read the test carefully
2. Write your name and admission number on every sheet of paper used
3. Textbooks and recipes may be used during the planning session as reference materials
4. You will be expected to keep to your order of work during the practical session
5. You are allowed to take away ONLY your reference materials at the end of the planning session
6. You are not allowed to bring additional notes to the practical session.

THE TEST

Your friend has slept over at your place. Using the ingredients listed below, prepare, cook and present a simple breakfast for the two of you.

INGREDIENTS

Bread

Milk

Eggs

Carrots

Tomatoes

Margarine

Lettuce

Fruit in season

Tea leaves/cocoa

Oil/Cooking fat

Sugar

Salt

PLANNING SESSION- 30 MINUTES

Use separate sheets of paper for each tasks 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 foodstuff, materials and equipment you will require.

FORM 3 ENDTERM 2 EXAMS

SMART-GRADE SERIES

FRENCH

PAPER 1

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

Kenya Certificate of Secondary Education.

INSTRUCTIONS TO CANDIDATES:

Attempt all the questions in this paper

I. COMPOSITION: In 150-180 words, write in French, a composition on,

Either:

a) En cours de votre voyage pendant les vacances passées vous avez été victime d 'un accident de route. Racontez ce qui s ' est passé. (15 points)

Or :

b) Ce soir –là, à ma grande surprise, quand je suis arrivé(e) chez moi, la porte était fermée.....(15 pts)

II . READING

COMPREHENSION PASSAGES -15 points

Passage I.

Il y avait dans un pays , un jeune homme dont les parents, à sa naissance ,avaient consulté Ifa, et Ifa avait dit, <Cet enfant ne doit pas se marier.>.

Il grandissait quand un jour ,au marché, passant près de l' étalagé d'une jeune femme, il a entendu quelqu'un qui lui adressait la parole ainsi ,<Jeune homme, je veux devenir ta femme.>Il concassait l'ordre d 'Ifa et s'est contenté de répondre, <Je ne peux pas me marier.> La jeune femme a écouté, mais résolu à devenir sa femme, elle a passé outre .Apprenant un jour que le jeune homme ne demeurait pas loin de là, la jeune femme est allée le trouver, lui a parlé et a fait tant si bien qu'il a accepté la prendre pour épouse.

Questions.

a) Quel était l'ordre d'Ifa ?

.....
.....

b) Où travaillait la jeune fille?

.....
.....

c) Pourquoi la jeune homme n'a pas accepté l'ordre d'Ifa ?

.....
.....

d) Trouvez dans le texte les synonymes de :

i)habitait.....

ii)femme.....

Passage II

Un certain monsieur a un domestique très paresseux. Un jour il appelle son domestique et demande ses souliers. Il pleut à torrents, mais il désire voir un ami malade.

Le domestique apporte les souliers ; ils ne sont pas propres. Le monsieur est très vexé.< Regardez mes souliers, Joseph ! >dit il.<Votre paresse est inexcusable ! >< Eh bien, monsieur,<répond Joseph .<Inutile de polir vos souliers. Dans deux heures, ils vont être sales.> <Très bien,>répond froidement le maître. Il met les souliers sales et quitte la maison.

A sept heures du soir, Joseph frappe à la porte du salon. Il désire la clé de la cuisine. <Pourquoi faire ?><Pour faire mon souper monsieur .> < Ah non, pas de souper pour vous, ce soir, mon homme !> < Mais monsieur, j' ai faim...!>< Peut- être bien,> dit le maître. <Inutile de manger, Joseph .D ans deux heures, vous allez recommencer à avoir faim. !

Questions

a) Pourquoi le monsieur sort-il ?

.....
.....

b) Pour quelle raison le monsieur n'est-il pas content de Joseph ?

.....
.....

c) Comment est-ce que le maître a puni Joseph ?

.....
.....

d) Donnez deux traits du maître.

i).....

.....

ii).....

.....

Passage III

Tu n'as pas beaucoup fait à l'école ce trimestre ; tes notes et les remarques des professeurs sont décourageantes ! Si c'est à cause de tes copains ou cette télévision-là, dès ce moment, tu ne vas plus sortir, et tu n'inviteras personne dans cette maison ! Tu ne regarderas jamais la télévision. Tu vas travailler. Il n'y a pas de difficulté dans ce qu'on vous enseigne... ta mère et moi, nous n'écouterons aucune excuse ! Je crois que c'est entendu !

a) Pour quelles raisons est-ce que cette personne n'as pas bien fait à l'école ce trimestre ? **2 pts**

.....
.....
.....

b) Trouvez dans le texte le contraire de :1.5 pts

i) Quelqu'un.....

ii) Toujours.....

iii) Ennemi.....

c)Selon vous, qui parle à cette personne? Justifiez votre réponse. 1.5pts

.....

.....

.....

.....

.....

III. GRAMMAR

COMPLETE THE TEXT BY FILLING THE BLANK WITH ONE APPROPRIATE WORD.

5 Pts

Demain, je(a) lèverai (b).....bonne heure puis je prendrai.(c).....douche et je m’habillerai très bien. Je me brosserai(d) dents. Ensuite, j’irai.(e).....Nairobi pour un concours.(f).....natation. Si j’.(g).....de l’argent, je ferai(h).....achats pour(i).....ma famille. Mes enfants .(j).....si contents !

A. Answer the following in the negative form. Avoid unnecessary repetition.

i) Tu travailles toujours a Kisumu ?

-Non,

je.....

.....

ii) Maman dit quelque chose ?

-Non,

elle.....

.....

iii) Avez –vous déjà fini vos devoirs?

-

Non,.....

.....

iv) Juliette mange encore ses gâteaux?

-Non,

elle.....
.....

v) Jacques, vous parlez à quelqu'un ?

-

Non,.....
.....

B.REWRITE THE FOLLOWING SENTENCES IN PASSÉ COMPOSÉ

i)Je me lève très tôt le matin.

ii)Jacqueline vend sa vieille voiture.

iii) Mon ami choisit une très belle robe pour son anniversaire.

iv) Les enfants se couchent sous l'arbre.

v) Les filles de Mme Laroche se dirigent vers le marché.

C.STARTING WITH THE WORDS GIVEN, COMPLETE THE SENTENCES BELOW AVOID UNNECESSARY REPETITION.

i) Les enfants mangent les fruits.

-Les fruits

sont.....
.....

ii) La bonne lave la maison.

-L a maison.....
.....

iii) Vous avez mal à l'épaule?

-Oui, l'épaule.....
.....

iv) Le bébé a mal au genou?

-Non, le genou.....
.....

v) Cette dame n'a pas fini son repas?

-Si, elle.....
.....

vi) Mwende, tu lis un roman et tu manges?

-Oui, en.....

vii) Si tu arrives tôt, tu vas voir le directeur.

-C'est vrai?

-Oui, en.....
.....

viii) Vous allez à Nairobi mes amis?

-Oui, nous.....
.....

ix) Tu viens du marché, maman ?

-Oui chéri, je.....
.....

x) Vous avez parlé à vos parents?

-Non, nous.....
.....

xi) Toi Marie, tu invites tes amis à ta fête ?

-Bien sûr,
je.....
.....

xii) Maman donne les gâteaux aux enfants de sa voisin?

-Non, elle

.....
.....

D. For each of the questions in column A, select one matching response from column B -3 points

COLUMN A	COLUMN B
i) Qu'avez- vous dans dans la poche?	a) Il y a deux jours.
ii) Que fait –elle?	b) Mes copains.
iii) Quand ton frère part-il?	c) Mal.
Iv) Qui invitez –vous?	d) Rien
v) Comment va leur fils?	e) À midi.
vi) Quand êtes –vous venu?	f) Il y a des cadeaux.

[illegible]

THE END

For Marking Schemes,

Contact Mr Isaboke

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Mwalimu Consultancy Ltd

FOR THE FOLLOWING;

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- ✓ **KCSE MOCKS**
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