BRILLIANT STUDENTS FORM 2 END TERM 3 SERIES 2 EXAMS *(ALL SUBJECTS TESTED)*



BRILLIANT STUDENTS FORM 2 END TERM 3 SERIES 2 EXAMS

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by Amobi Group of Examiners.

ORDER OF THE 11 SUBJECTS TESTED

(ALPHABETICALLY ARRANGED)

1. **AGRICULTURE**
2. **BIOLOGY**
3. **BUSINESS STUDIES**
4. **CHEMISTRY**
5. **C.R.E**
6. **ENGLISH**
7. **GEOGRAPHY**
8. **HISTORY**
9. **KISWAHILI**
10. **MATHS**
11. **PHYSCIS**

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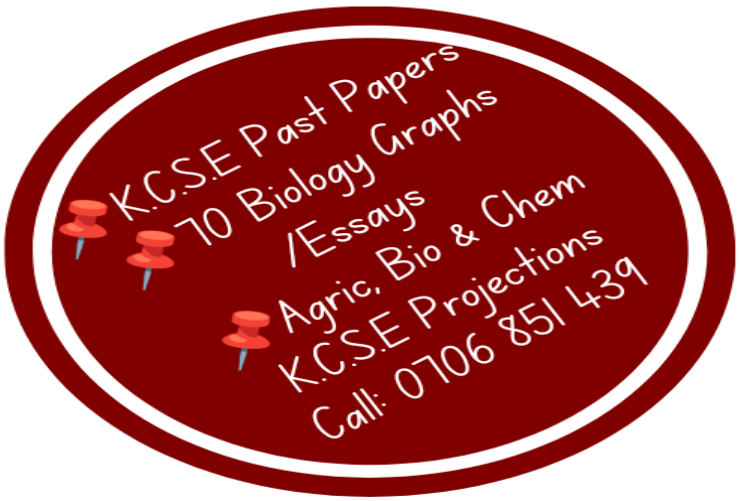
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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

NAME:……

SCHOOL: ……

ADM NO: …… **SIGN:** …… **DATE:** ……

AGRICULTURE

TIME: 2 HOURS

KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E.)

AGRICULTURE

TIME 2HOURS

INSTRUCTIONS TO CANDIDATES.

- *Write your name and admission number in the spaces provided.*
- *Answer all questions in the spaces provided.*
- *This question paper consists of three sections A, B and C.*
- *Answer all the questions in sections A.B and C.*
- *Answers should be written in the spaces provided.*

For Examiner's use only

Section	Question	Maximum score	Candidate,s score
A	1-16	30	
B	17-24	30	
	25	20	
	26	20	
	Total score	100	

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SECTION A(30MKS

1. List any four types of records a farmer should keep. **(2marks)**

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2. Give two conditions in agricultural production under which opportunity cost is zero **(1 mark)**

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3 Give **four** reasons-for keeping livestock health records on the farm. **(2 marks)**

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4. State 4 reasons for primary cultivation. **(2marks)**

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5. Distinguish between soil structure and soil texture **(1mark)**

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6. State one function for each of the following:

(a) shovel; **(1 mark)**

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(b) strip cup. **(1 mark)**

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7 Differentiate between olericulture and pomoculture **(2mks)**

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8 State four conditions under which shifting cultivation is practiced. **2mks**

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9 State 3 reasons why agriculture is important in Kenya's economy **(3mks)**

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10 Name the exotic cattle with

i) Highest butter fat content …… **(1marks)**

ii)Lowest butter fat content …… **(1mark)**

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11. State two characteristics of goats that make them adaptable to arid areas of Kenya. **(1mark)**

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12 Give four ways by which soil loses its fertility **(2marks)**

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13 State four characteristics that make a crop suitable for green manuring. **(2marks)**

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14 State four ways in which burning of vegetation may lead to loss of soil fertility. **(2 marks)**

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15. What is the function of each of the following ingredients in the preparation of compost manure?

(a) Wood ash **(1 mark)**

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(b) Top soil **(1 mark)**

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16 Give 4 reasons why water treatment is important. **(2marks)**

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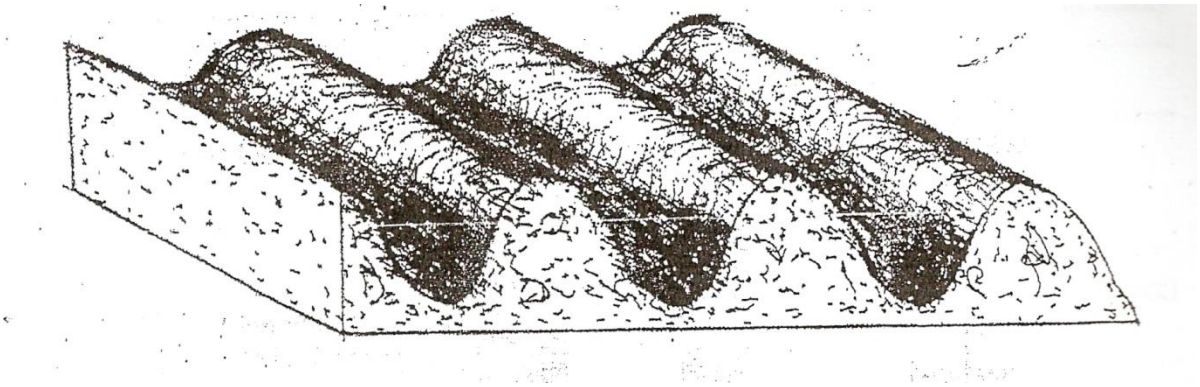
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SECTION B (30MARKS

17. The diagram below illustrates a final seedbed after a tertiary operation done during land preparation. Study it carefully and answer the questions that follow.



(a) Name the tertiary operation carried out on the seedbed **(1mark)**

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b) Give two advantages of planting crops on a final seedbed illustrated above **(2 marks)**

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18 a) List two aspects of light that influence crop growth. **(2marks)**

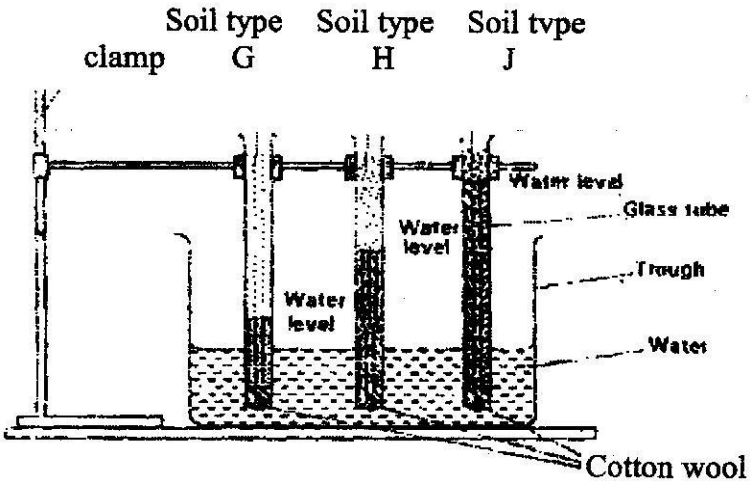
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b The diagram below shows an experiment set up using soil types G , H and J and observations made after 24 hours. Study the diagram and answer the questions that follow.



i) What is the experiment represented above designed to study? **(1mark)**

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ii) Name the soil types G and J **(1mark)**

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iii) What is the characteristic texture of soil types G and J? **(2marks)**

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iv) State how a farmer would improve the structure of soil type G. **(1mark)**

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19 Study the diagrams of workshop tools shown below





(i) Identify the tools labeled E and F **(1 mark)**

E _____

F _____

(ii) What functional advantage does tool E have over tool F? **(1 mark)**

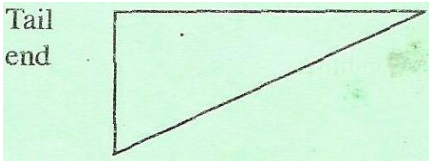
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20. The diagram below illustrates the general shape of a cattle breed. Study it carefully and answer the questions that follow.

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(a) Identify the type of breed illustrated by the above shape **(1mark)**

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(b) Give an example of a breed in (a) above. **(1 mark)**

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(c) State four physical characteristics of the type of breed identified in (a) above. **(2 marks)**

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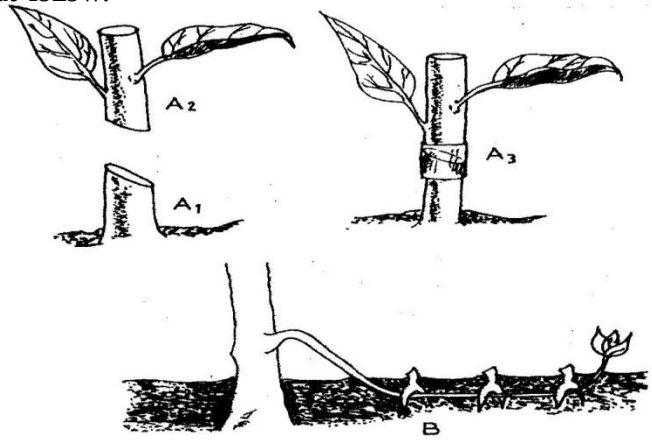
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21. The diagrams labeled A_1, A_2, A_3, and B below illustrate materials and methods of vegetative propagation. Study them and answer the questions that follow.



(a) Name the parts labeled A_1, and A_2 **(2 marks)**

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(b) Name the methods of propagation illustrated in diagrams A_3 and B **(2 marks)**

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22.The diagrams labeled D and E below are illustrations of coffee established using two different formative pruning systems. Study them and answer the questions that follow.





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(a) Name the system of pruning illustrated in diagram D above **(1 mark)**

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(b)State 2 disadavantages of the pruning system labelled E **(2 marks)**

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23 (a) The diagrams below represent two ways in which a crop was pruned. Study them carefully and answer the questions that follow.



(i) Which diagram represents the correct way of pruning? **(1 mark)**

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

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(b) State two ways in which pruning assists in controlling crop diseases. **(1 mark)**

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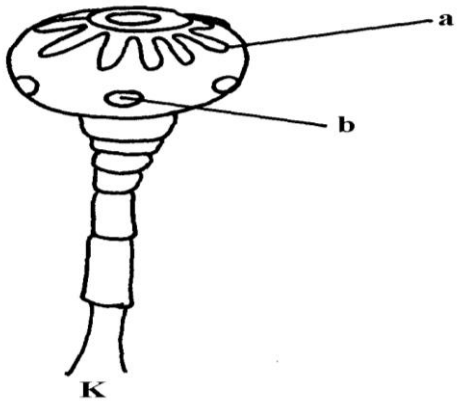
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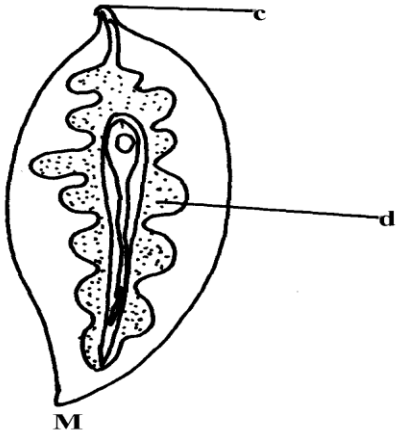
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24. Below are diagrams showing different types of internal parasites. Study them carefully and answer the questions that follow:-





a) Identify the parasites **K & M** **(1mark)**

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b) Name the organs where each parasites is found **(2marks)**

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c) Give the intermediate host of parasite **M** **(1mark)**

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SECTION C (40 MARKS

25. a) State and explain five factors which may influence the spacing of crops **(10 marks)**

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b) State and explain five advantages of crop rotation **(10marks)**

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26 (a) Describe **ten** signs of ill –health in livestock **(10 marks)**

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b). Explain measures used to control livestock diseases. (10 marks)

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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

NAME: ……

SCHOOL: ……

ADM NO: …… **SIGN:** …… **DATE:** ……

231/1

BIOLOGY

FORM 2 BIOLOGY

INSTRUCTIONS TO THE STUDENT

(a) Write your name and admission number in spaces provided

(b) Answer all the questions in the spaces provided

(c) This paper consists of 7 printed pages

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Question No	Maximum score	Candidates Score
1-15	100	

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1.Name the branches of biology that deal with study of

(a) Inheritance and variations **(1mk)**

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(b) Chemical changes inside living organisms **(1mk)**

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(c) The relationship between organisms and their environment **(1mk)**

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(d) Insects **(1mk)**

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2. (a) State two functions of cell membrane **(2mk)**

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(b) Name the cell organelles that would be abundant in

(i) Skeletal muscles **(1mk)**

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(ii) Palisade cells **(1mk)**

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(iii) Fat cells **(1mk)**

3. Explain the importance of each of the following during the process of digestion in human beings

(a) Teeth **(1mk)**

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(b) Saliva **(2mks)**

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4.State two ways in which active transports differs from diffusion **(2mks)**

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5. Name two important stages of photosynthesis and state where in the chloroplasts, each takes places. **(4mks)**

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(b) Explain how the following factors affect the rate of photosynthesis

(i) Concentration of carbon (1v) Oxide **(1mk)**

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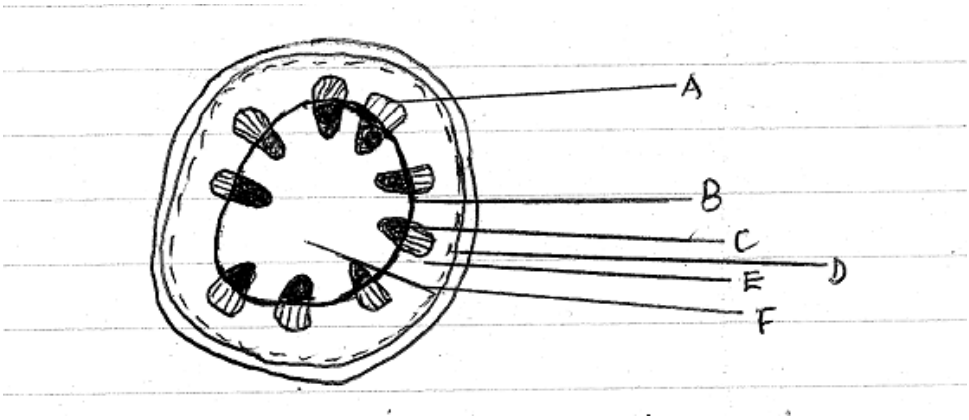
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(ii) Light intensity **(1mk)**

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6.The diagram below shows the transverse section of a young stem



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(a) What are the functions of the structures labeled A, B, C and D **(4MKS)**

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(b) What type of cell are found in the part labeled E and F **(1MK)**

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(c) If the shoot from which this section was obtained had been immersed in red coloured water for one hour, what part on the diagram would be stained **(1mk)**

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

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(d) Is this a monocot or a dicot stem? Give at least three reasons to support your answer **(4mks)**

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7 The table below shows the percentage composition by volume of inhaled and exhaled air.

Gas	Inhaled air (%)	Exhaled air(%)
Oxygen	21	16
Carbon(IV) oxide	0.04	4.0
Nitrogen	78	78

(a) By what percentage is

(i) Carbon dioxide concentration in exhaled air higher than inhaled air? **(1mk)**

(ii) Oxygen concentration in the exhaled air lower than the inhaled air. **(1mk)**

(b)Explain the difference in the composition of the gases between inhaled and exhaled air. **(3mks)**

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8 In an investigation, a student extracted three pieces of pawpaw cylinders using a cork borer. The cylinders were cut back top 50mm length and placed in a beaker containing a solution. The results after 40 minutes were as shown in the table below.

Feature	Result
Average length of cylinders(mm)	56mm
Stiffness of cylinders	Stiff

(a) Account for the results in the table above **(3mks)**

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(b) What would be a suitable control set up for the investigation? **(2mks)**

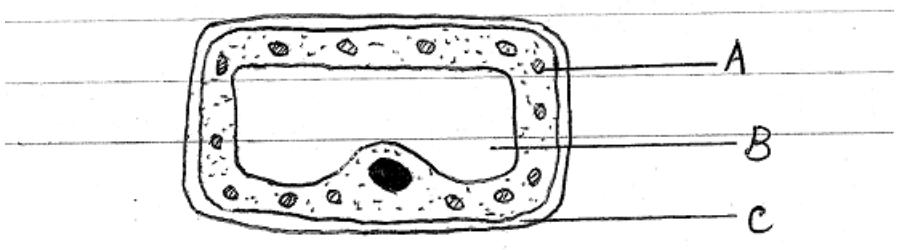
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9 The figure below is a diagram of a cell as seen under the light microscope.



(a) Name three structures that shows this is a plant cell and not an animal cell. **(3mks)**

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b) Name one chemical compound that is only found in the structure labeled A and state its function. **(2mks)**

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c) Name the fluid in the part labeled B and state its functions. **(3mks)**

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d) What is the main chemical compound found in the structure labeled C? **(1mk)**

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e) Suggest why the structures labeled A would more on one side than the other side. **(2mks)**

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

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b) State three important functions of lipids in living organisms. **(2mks)**

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c) Other than through enzymatic action, how else can a disaccharide be hydrolyzed to its constituent monosaccharides. **(1mk)**

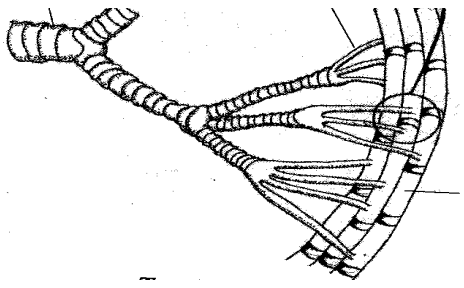
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11.The diagram below represents part of a geasous system in a grasshopper.

P Q



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a) Name the structures labeled P and Q

P…… **(1 mark)**

Q …… **(1 mark)**

b) State the function of the structure labeled P **(1 mark)**

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c) Describe the path taken by carbon (IV) oxide from the tissues of the insect the atmosphere **(3 marks)**

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d) How is the structure labeled Q adapted to its functions **(2 marks)**

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12. State five differences between aerobic and anaerobic respiration. **(5mks)**

AEROBIC RESPIRATION	ANAEROBIC RESPIRATION

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13.(a) State four characteristics of gaseous exchange or respiratory surfaces. **(4mks)**

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(b) Describe the mechanism of breathing in a mammal under the following subheadings. **(16mks)**

Inhalation

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Exhalation

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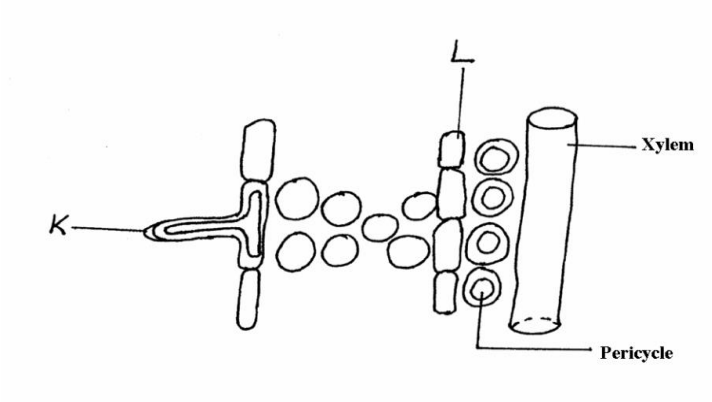
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14. The diagram below shows part of a longitudinal section of a root: -



(a) Identify cells K and L :- **(2 mks)**

K……

L……

(b) State two adaptations of Cell K to its functions :- **(2 mks)**

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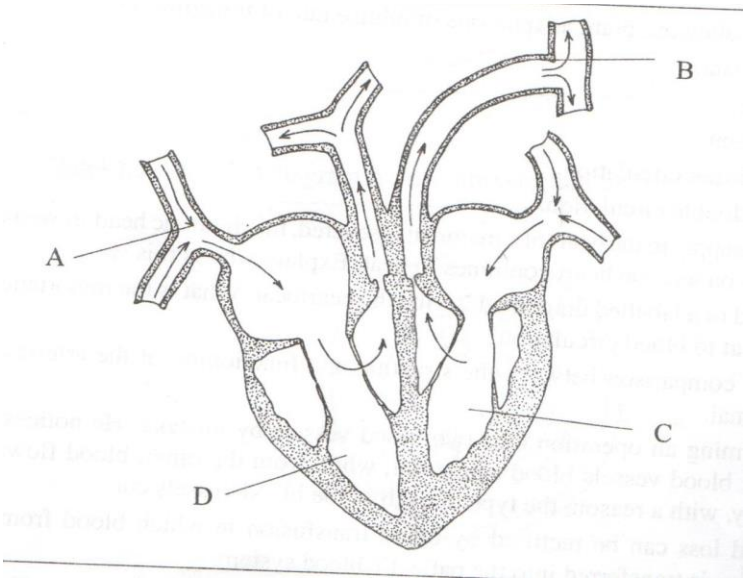
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15.The diagram below represents a section through a mammalian heart.



a.Label the parts marked A ,B and C**.** **(2 mks)**

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b. State the structural differences between blood vessels labeled A and B. **(3 mks)**

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c.Explain why chamber C has thicker walls than the chamber labeled D. **(2 mks)**

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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

NAME: ……

SCHOOL: ……

ADM NO: …… **SIGN:** …… **DATE:** ……

565

BUSINESS STUDIES

TIME: 2 HOURS

KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E.)

BUSINESS STUDIES

TIME 2HOURS

INSTRUCTIONS TO CANDIDATES.

- **Write your name and admission number in the spaces provided.**
- **Answer all questions in the spaces provided.**
- Answers must be written in English.

1.Identify four disciplines that make-up Business studies. **4MKS**

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2.State whether each of the following factors fall under external or internal business environment.

	External	**Internal**
Law's governing Business operations in Kenya		
Share holders decisions		
Changes in tax		
Changes in population		

3.Give four challenges faced in the satisfaction of human wants. **4mks**

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4.Outline four characteristics of free resources. **4mks**

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5.Highlight four reasons why the government involves itself in Business Activities. **4mks**

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6.In the table below, match the descriptions with appropriate type of a partner.4mks

Statement/description	**Type of partner**
Under 18 years of age	
Does not take part in the running of the business	
Allows his/her name to be used as if he/she is a partner.	
Has unlimited liabilities.	

7.State four differences between goods and services.4mks

Goods	**Services**

8.Outline four ways in which traders may exploit consumers. **(4mks)**

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9.Outline four reasons why a trader may construct their own warehouse. . **(4mks)**

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10. List four means of payment that a trader may use to effect payment. **(4mks)**

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11. Highlight four merits of an open plan office layout . **(4mks)**

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12. Outline any four features of Public Corporations. **(4mks)**

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13. The table below shows different characteristics of production. Indicate whether each relate to direct or indirect production. **4mks**

Characteristics of production	Type of production
Uses machines and modern technology	
Mainly produces as the needs arises	
Production is market oriented	
Level of output is generally low.	

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14. Identify any four gaps in the society that may give rise to a business opportunity. **(4mks)**

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15. State four ways in which the government may regulate business activities. **(4mks)**

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16. Highlight four roles of transport in promotion of trade. **(4mks)**

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17. Highlight four reasons why letters continue to be used as a means of communication. **(4mks)**

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18. Outline four roles played by Nairobi Stock Exchange market in Kenya's economy. **(4mks)**

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19. Identify the following types of warehouse having the following characteristics.

Characteristics	**Type of warehouse**
Holds tax free goods produced locally or imported	
Used to hold dutiable goods from within or outside the country.	
Goods can stay in store without the owner worrying about high storage charges or loss of goods.	
These warehouses are located at entry points, terminals and urban areas for hire by local traders.	

20. Give four reasons why office documents should be filed**.** **(4mks)**

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21. Outline four features of a supermarket . **(4mks)**

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22. List four functions of an entrepreneur as a factor of production. **(4mks)**

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23. State four barriers to effective communication. **4mks**

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24. Outline four circumstances under which non-verbal signs may be used. **(4mks)**

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25. Identify four circumstances under which air transport would be suitable for a business.

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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

NAME: ……

SCHOOL: ……

ADM NO: …… **SIGN:** …… **DATE:** ……

CHEMISTRY

PAPER – 233

TIME: 2 HRS

INSTRUCTIONS TO CANDIDATES

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

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

c) ANSWER ALL QUESTIONS IN THE SPACES PROVIDED.

d) All working must be clearly shown where necessary.

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1 - 28	100	

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

a) Write the electron arrangement of elements X and Y.

X - …… **(1 mk)**

Y -…… **(1 mk)**

b) Write the formula of the compound that would be formed between element X and Y. **(1 mk)**

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2.Study the equation below;

$$Mg_{(s)} + ZnO_{(s)} \longrightarrow MgO_{(s)} + Zn_{(s)}$$

a.By use of arrows, indicate oxidation and reduction reactions in the equation. **(2 mks)**

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b. Name the reducing agent in the above reaction. **(1 mk)**

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3.Distinguish between the terms deliquescent and efflorescent salts. **(2 mks)**

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4.The table below shows PH value of different solutions.

Solution	A	B	C	D
PH	14	7	2	11

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a.Which solution is likely to be sugar solution? **(1 mk)**

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b. Two of the solutions were found to react with both aluminium oxide and zinc oxide. Identify the two giving reasons. **(2 mks)**

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5.Identify the methods that are most appropriate to obtain. **(3 mks)**

(i) Oil from coconut

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(ii) Diesel from crude oil

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(iii) Sugar crystals from sugar solution

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6.An element Q has an electron arrangement of 2.8.5 (a) Identify the group and period to which it belongs.

Group - …… **(1 mk)**

Period - …….. **(1 mk)**

(b) is element Q a metal or a non-metal? **(1 mk)**

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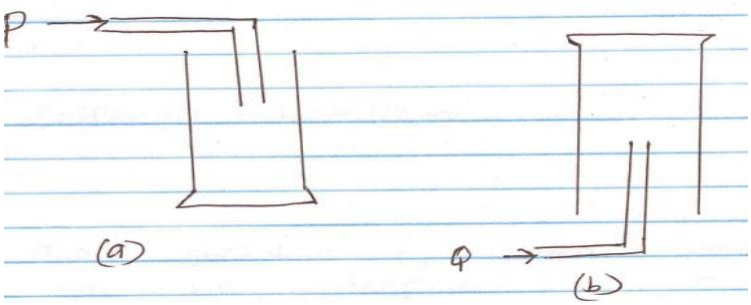
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7.Carbon has two isotopes namely $^{14}_{6}C$ *and* $^{12}_{6}C$. Calculate the relative abundance of these two isotopes if the relative atomic mass of carbon is 12.4. **(3 mks)**

8.The diagram below shows how two gases, P and Q were collected.



(i) Name the two methods shown above.

a -……. **(1 mk)**

b - ……. **(1 mk)**

(ii) State the property of Q that enables it to be collected as shown above. **(1 mk)**

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(iii) Give an example of a gas that is collected using the method shown in (b) above. **(1 mk)**

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9. State and explain the changes in mass that occur when the following substances are separately heated in open crucibles.

(i) Copper metal **(1 ½ mk)**

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(ii) Copper (ii) Nitrate **(1 ½ mks)**

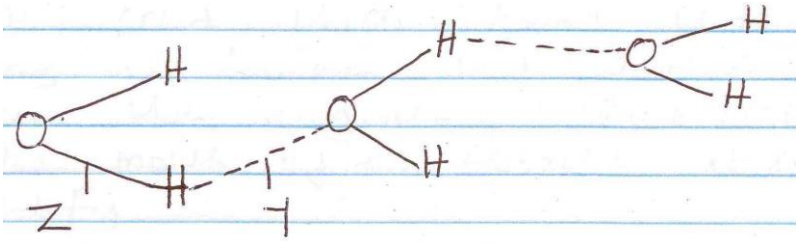
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10. The structure of water molecule can be represented as shown below.



(a) Name the type of bonds represented by letters Y and Z.

Y – …….. **(1 mk)**

Z - …… **(1 mk)**

11. Element R has a valency of 2, element Q has a valency of 1 while element B has a valency of 3. Write the chemical formulae of their sulphates, phosphates and nitrates. **(4½ mks)**

Element	Sulphates	Phosphates	Nitrates
R			
B			
Q			

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12. When a white solid X is heated, a yellow solid which turns white on cooling is formed and a brown gas is seen. When a glowing splint is placed at the mouth of the test-tube it relights.

a) Identify;

(i) Solid X - **(1 mk)**

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(ii) The brown gas - **(1 mk)**

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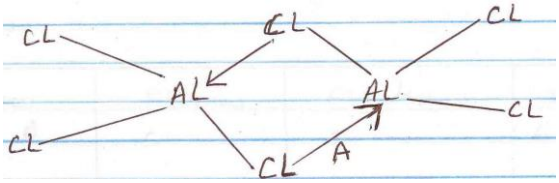
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b) Write an equation for the decomposition of solid X. **(1 mk)**

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13. Below is a structure of aluminium chloride.



a.Identify bond A. **(1 mk)**

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b. State the observations made when aluminium chloride solution is tested with blue and red litmus paper. Explain. **(2 mks)**

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14. Which particles conduct electricity in;

(i) Molten lead (ii) bromide **(1 mk)**

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(ii) Aqueous sodium chloride **(1 mk)**

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(iii) Graphite **(1 mk)**

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15. The following table gives the structures of the different atoms. Study it and answer the questions that follow. (A, B, C, D and E do not represent the actual symbols of the elements).

Atom	Protons	Electrons	Neutrons
A	5	5	6
B	9	9	10
C	10	10	11
D	15	15	16
E	10	10	12

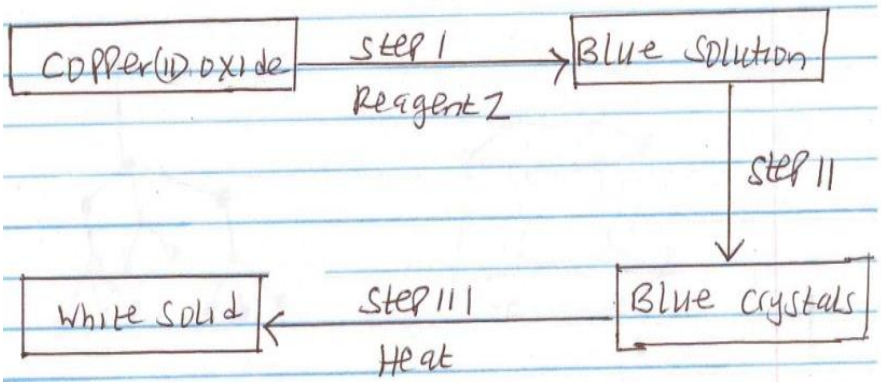
a. What is the mass number of atom B? **(1 mk)**

b. Which of the atoms has a mass number of 11? **(1 mk)**

c. Which of the atoms represent isotopes of the same element. **(1 mk)**

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16. Study the following flow chart and answer the questions that follow.



(a) (i) Identify reagent Z. **(1 mk)**

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(ii) Identify the white solid. **(1 mk)**

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(b) Write a chemical equation for the formation of the blue solution. **(1 mk)**

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17. State two properties that makes aluminium to be used in making of overhead electric cables. **(2 mks)**

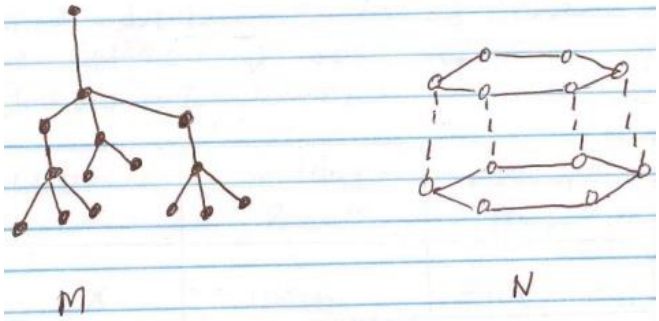
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18. The structures below represent two allotropes of carbon. Study them and answer the questions that follow



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a) Identify the allotropes labeled

M - …….. **(1/2 mks)**

N -……. **(1/2 mks)**

b) Explain in terms of structure and Bonding which of the two allotropes;

(i) Conducts electricity. **(1 mk)**

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(ii) Is used in making drilling equipments. **(1 mk)**

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19. (a) Name two conditions which accelerate rusting. **(2 mks)**

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(b) State ONE method used for preventing rusting. **(1 mk)**

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20. The information below gives melting points of some substances. The letters do not represent the actual symbols of elements.

Substance	Melting point ^{0}C	Boiling point ^{0}C
X	1536	3100
Y	65	1115
Z	-40	361
P	-218	-190
Q	99	890
R	116	445

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(i) Identify any two substances that are solids at room temperature (25^0C). **(2 mks)**

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(ii) Identify a substance that is a liquid at room temperature. **(1 mk)**

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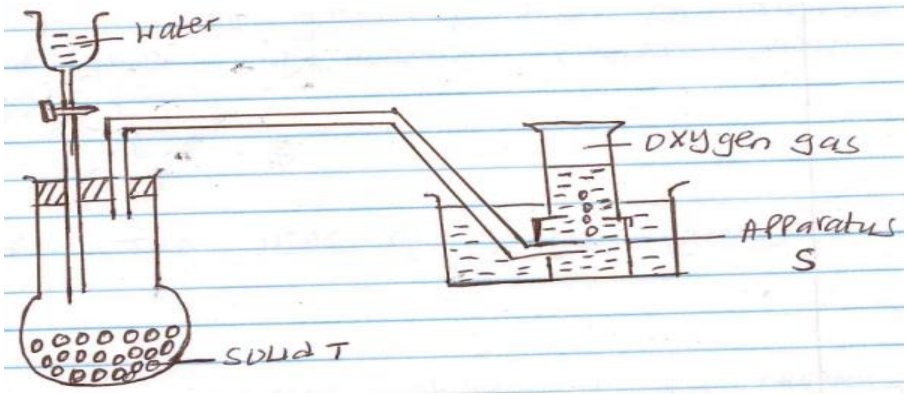
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(iii) Identify a substance that remains as a liquid over the widest range of temperature. **(1 mk)**

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21. (a) The following diagram shows how oxygen can be prepared and collected in the laboratory.



(i) Name;

I apparatus S - **(1 mk)**

……

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II solid T - **(1 mk)**

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(ii) Why is it possible to collect oxygen as shown in the diagram? **(1 mk)**

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(iii) Explain why it is important NOT to collect any gas for the first few seconds of the experiment? **(1 mk)**

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(iv) Write an equation for the reaction that takes place. **(1 mk)**

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(b) What name is given to the compounds formed when an element reacts with oxygen? **(1 mk)**

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(c) State TWO uses of oxygen. **(2 mks)**

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22. Name the salts obtained by reacting;

(i) Zinc oxide with dilute sulphuric (vi) acid. **(1 mk)**

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(ii) Sodium carbonate with nitric acid. **(1 mk)**

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(iii) Potassium carbonate and dilute hydrochloric acid. **(1 mk)**

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23. (a) The table below shows properties of some substances.

Substance	Melting point (^{0}	Boiling point (^{0}	Electrical conduc	
			Solid	Liquid
A	-112	-107	Poor	Poor
B	801	1413	Poor	Good
C	97.5	880	Good	Good
D	44	280	Poor	Poor
E	1700	2200	Poor	Poor
F	-110	46.3	Poor	Poor

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Select a substance which;

(i) Has a giant ionic structure. **(1 mk)**

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(ii) Is a metal **(1 mk)**

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(iii) Has a giant atomic structure. **(1 mk)**

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(b) Using dots(.) and crosses (x) illustrate bonding in ammonia molecule (NH_3). (N=7, H=1) **(2 mks)**

24. When a student was stung by a nettle plant, a teacher applied an aqueous solution of ammonia to the affected area of the skin and the student was relieved of the pain. Explain. **(1 mk)**

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25. (a) The information below is on four elements represented by letters P, Q, R and S. study it and answer the questions that follow. Q reacts with dilute acids but not with acids. S displaces P from its oxide and P reacts with cold water. Arrange the elements inorder of increasing reactivity. **(1½ mks)**

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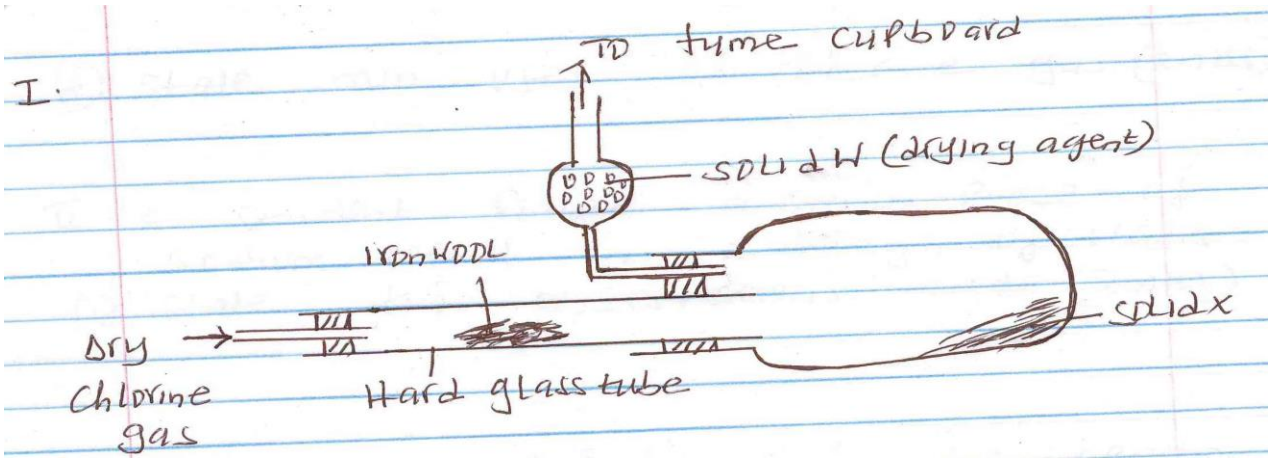
(b) State ONE reason why Helium is preffered to hydrogen in weather balloons. **(1 mk)**

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26. The set up below shows the reaction between dry chlorine gas and iron wool.



a) Give one essential condition that is missing in the set up. **(1 mk)**

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b) Why is it not advisable to release excess chlorine gas in the atmosphere? **(1 mk)**

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c) Write a chemical equation for the formation of solid X. **(1 mk)**

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d) Name solid W and state why it is necessary. **(2 mks)**

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e) Give the formula of the product formed if iodine vapour is reacted with heated iron wool. **(1 mk)**

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f) State two uses of chlorine gas. **(2 mks)**

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(ii) A student placed a small piece of sodium metal in a trough of water.

(i) State two observations made? **(2 mks)**

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(ii) Write a chemical equation for the reaction that took place. **(1 mk)**

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27. The products formed by action of heat on nitrates of elements A, B and C are shown below.

Nitrates	Products formed
A	Metal oxide + Nitrogen(iv)oxide + Oxygen
B	Metal + Oxygen + Nitrogen(iv)oxide
C	Metal nitrite + Oxygen

I. (a) Arrange the metals inorder of increasing reactivity. **(1 mk)**

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(b) Which element forms a soluble carbonate? **(1 mk)**

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(c) Give an example of element B. **(1 mk)**

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II. (i) Write an equation to show the effect of heat on each of the following;

a.Sodium hydrogen carbonate. **(1 mk)**

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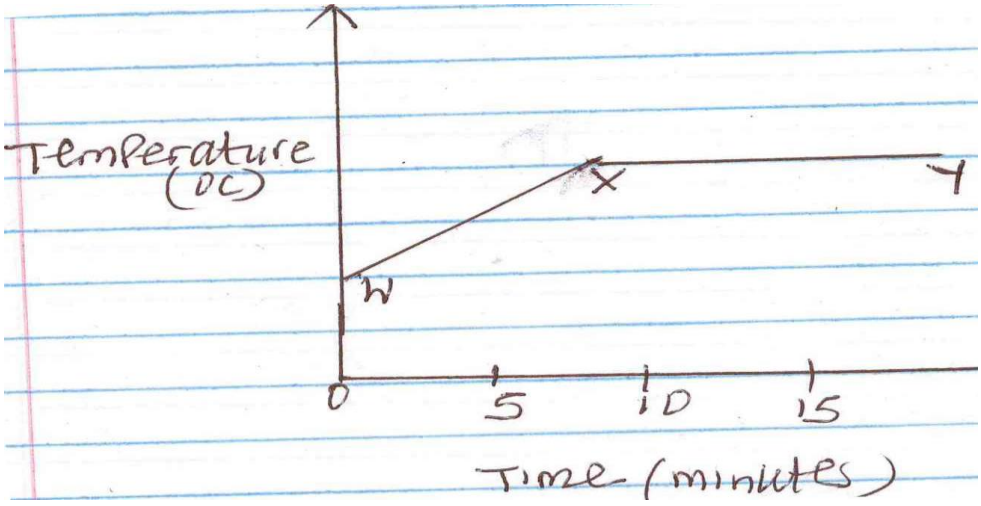
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b. Copper(ii)carbonate **(1 mk)**

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28. The graph below shows the curve obtained when water at 20^0C was heated for 15 minutes.



a.What happens to water molecules between point W and X? **(1 mk)**

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b. In which part of the curve does change of state occur? **(1 mk)**

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c. Explain why the temperature does not rise between point X and Y. **(1 mk)**

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d. Which test would be used to check if water is pure? **(1 mk)**

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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...

ADM NO: …… **SIGN:** …… **DATE:** ……...

C.R.E FORM 2

END TERM III

TIME: $2^1/_2$ HRS

INSTRUCTIONS:

Attempt all the questions.

1.a) State the major divisions of the New Testament **(5mks)**

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b) Describe the first account of creation as recorded in Gen1:1-24 **(8mks)**

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c) From the creation stories what do we learn about the nature of man? **(7mks)**

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2.a) Describe the call of Moses **(8mks)**

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b) What do we learn about God from the call of Moses? **(6mks)**

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c) Give three reasons why the Israelites left Egypt **(6mks)**

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3.a) Outline Jeremiah's prophecy about the Messiah **(6mks)**

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b) Describe the events that took place on the Night Jesus was born **(7mks)**

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c) Identify seven virtues Christians acquire when celebrating the birth of Jesus **(7mks)**

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4.a) Outline the temptations of Jesus as recorded in Lk.4:1-13 **(8mks)**

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b) Identify six lessons Christians learn from the healing of the boy possessed by Demons **(6mks)**

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c) State six qualities of Jesus from the miracles of raising the dead **(6mks)**

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5. (a) State the traditional African understanding of God. **(8mks)**

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(b) What is the responsibility of the living towards the Ancestors in Traditional African Communities. **(6mks)**

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(c) Outline six causes of death in Traditional African Communities. **(6mks)**

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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

NAME: ……

SCHOOL: ……

ADM NO: …… SIGN: …… DATE: ……

ENGLISH 101

INSTRUCTION TO CANDIDATES:

Write your name and your admission number in the spaces provided above.

Answer all questions in the spaces provided

Correct spellings and grammatically correct sentences must be used

Ungrammatical constructions will be penalized.

Your work must be neat

This paper consists of five sections:

A FUNCTIONAL SKILLS (20MKS)

B:CLOZE TEST (10MRKS)

C:COMPREHENSION (20MKS)

D:ORAL SKILLS (30MKS)

E:GRAMMAR (20MRKS)

TOTAL (100MRKS)

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A) FUNCTIONAL WRITING (20MKS)

Imagine you are one of the passengers in Easy Coach Bus going to Kisumu. You alight in Nakuru and later realize that you picked another passenger's luggage by mistake. Write a letter of apology to the manager, Easy coach company Kisumu office. Direct him to pick the luggage at the Nakuru office and request him to drop yours at the same office. Remember to thank him for being kind.

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B) CLOZE TEST (10MKS)

FILL IN THE BLANKS WITH THE MOST APPROPRIATE WORD

I 1_____I was treated less kindly when I arrived. The host did not look directly 2 _____ me. Yet I had thought that my visit would be 3 _____ appreciated. There were six people in that small room and all continued to direct their **4** _____ towards the television set. It was news time. I was 5 _____ on time for a great disappointment 6 _____ I encouraged myself, "not again, not ever."

When I asked why I was given such a hostile 7 _____ **,** I got evasive answer. Anyway, I was supposed to be a goodwill messenger from the local Government Revenue Department 8 _____ six gentlemen sitting 9 _____ the tiny table were meant to be waiting with bated breath and appreciation for my news. Well, I decided they could wait a 10 _____ longer.

C. **COMPREHENSION**

1.***Read the passage below and answer the questions that follow:***

BAKING soda or bicarbonate or edible soda (ENO), as it is also called, is sodium bicarbonate in chemistry books. It is different from washing soda or soda ash, which is sodium carbonate. Soda bicarbonate was called 'saleratus' in earlier days.

In the human body, it is the main mildly alkaline substance. The human body makes it out of carbon dioxide breathed in sodium obtained from the salt in the diet. it helps to maintain the delicate balance between acidity and alkalinity that is necessary for the normal chemical activity in the body. It helps transport carbon dioxide to the lungs, neutralizes stomach acids as a component of saliva, helps cut down on tooth decay. The blood of a healthy human being is slightly alkaline. When the amount of sodium bicarbonate in the blood is insufficient, we suffer from acidosis. The digestive juices from the liver and pancreas are alkaline. The gastric juice in the stomach is decidedly acidic and it contains hydrochloric acid.

To most people, baking or edible soda in tablet form or a powder is a comforting medicine to sooth acidity. A teaspoon dissolved in a glass of water is a popular and effective remedy for indigestion. A cupful dissolved in bathwater along with two cupfuls of starch helps relieve the itching of allergic reactions.

When mixed with water to form paste, it helps alleviate the pain of minor burns and a paste of soda bicarbonate and water or cold cream, relieves the discomfort of insects bites. For fungus on your feet, especially between your toes, apply a soda bicarbonate paste. For foot odour soak your feet in a solution of soda bicarbonate in water. Take soda

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bicarbonate and mix it with a little bit of water, and apply it with your fingers along the gum-line in your teeth. Brush your teeth after this. It will help you stop all sorts of gum diseases. Mixed with a little common salt, soda bicarbonate makes an excellent tooth powder. Most toothpaste contains a little soda bicarbonate.

As a formidable plaque deterrent soda bicarbonate was recognized as an efficient dental cleaner in 1931 only. Soda bicarbonate is now a major component of best selling toothpastes. There is exclusive soda bicarbonate toothpaste. From the home medical cabinet, soda bicarbonate has now moved to the industry. Today, it is used to curb acid emissions from chimneys and to help prevent acid rain, to keep toxic materials like lead and copper out of drinking water, to help in biodegradation of sewage and to remove contamination from soil. It may turn out to be world's 'greenest' natural chemical. It has more than 300j applications in industry and more and more uses are still being discovered. Soda bicarbonate is also added to cattle feed. Cattle raised for meat industry are fed a high energy, low-fibre diet to maximize weight gain, are given supplementary soda bicarbonate to speed up their digestion process. Dairy cows which are given a similar diet, also have soda (bicarbonate mixed with their feed).it (increases their milk production). Use of soda bicarbonate in baking was an instant success as a time-saver.

Yeast breads needing a rising time of two to three hours where quickly joined by quick-rising baking soda batters, breads and biscuits.

When soda bicarbonate is combined with an acid like vinegar (acetic acid), butter-milk containing lactic acid, carbon dioxide is released to create an instant cleaning agent.cour tarnished brass and copper pots with a paste of soda bicarbonate and lemon juice. They will shine once again. Flush one cup of soda bicarbonate down the toilet every week. It helps clean clogged septic tanks. For food stuck or burnt into pots and pans, cover the burned food generously with soda bicarbonate. Add enough hot water and let it soak for a few minutes. Wash thoroughly.

1. a) How does the human body absorb soda bicarbonate? **(2mks)**

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b) In note form, what is the importance of soda bicarbonate in the human body? **(4mks**

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c) The digestive juices from liver and pancrease are alkaline.(Begin: Both ….) **(1mk**

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d) In a paragraph of not more than 40 words, summarize the uses of edible soda at home(8mks

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e) Soda bicarbonate is used to curb acid emission from chimneys and to help prevent acid rain.

(Begin: Not only …..) **(2mks**

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……

f) Give the meanings of the following words and phrases as used in the passage (1mk

i) Comforting medicine to soothe acidity **(1mk**

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ii) Remedy **(1mk**

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iii) Greenest natural chemical **(1mk**

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iv) Deterrent **(1mk**

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(f) ***Rewrite the following sentence in reported speech:***

"There are many people who can help you if you are really serious about financial success'', he said, "so seek them out and ask for help". **(1mk)**

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(g) What does the writer say is the truth about loans? **(2mks)**

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

(i) Back to the drawing board **……**

(ii) To gauge our financial health **……**

(iii) Seek **……**

(iv) Premiums**……**

C) ORAL SKILLS (30MKS)

a) Oral Poem

Read the following oral poem and answer questions that follow (8 marks)

One hand cannot manage work
A threshing stick cannot thresh millet with
One hand
Some hands breed hatred at eating time
Nobody hates being assisted

Let millet be threshed
Let it be threshed, let it be threshed

Cut a threshing stick for me
A lazy wife
Is taken back to her parents
When the rain fails
It blames the wind
And a lazy woman
Blames the threshing stick
Cut a threshing stick for me-ii
My co-wife, cut me a threshing stick
You woman, owner of this occasion
Remember that work is the stomach

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Take care not to starve us
The threshing sticks are sounding
Let the millet leave the threshing ground

(Adapted from Oral Literature of the Embu and Mbeere by CiarunjiChesaina)

Questions

1.Identify and illustrate two mnemonic effects (sound devices) in the poem. **(2 marks)**

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2.You've been asked to perform the above poem. Explain how you will prepare for it. **(2 marks)**

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3.What non-verbal aspects would you use in the performance of the poem and where? **(2 marks)**

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4.While performing the above poem you notice that members of the audience are murmuring what could the problem be? **(2 marks)**

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b) Give another word with the same pronunciation as the word given **(3 marks)**

(i) Born .....

(ii) Heard .....

(iii) Gamble .....

(iv) Core .....

(v) Some .....

(vi) Aisle .....

c) Identify the silent letter in the following words **(3 marks)**

(i) psychology

(ii) Debut

(iii) know

(iv) Tomb

(v) Lesson

(vi) Subtle

d) You attend a prize-giving ceremony in your school. Mention four things that will indicate that the students are attentive as the chief guest speeches. **(4 marks)**

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e) The underlined indicates the stressed word in the sentence below. Briefly explain what each sentence means **(3 marks)**

(i) <u>Tom</u> visited Mary yesterday

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(ii) Tom <u>visited</u> Mary yesterday

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(iii) Tom visited Mary yesterday

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f) TELEPHONE CONVERSATION

Imagine that your uncle, John calls you and wants to send you to your grandmother tomorrow. Fill in the blank spaces so as to complete the conversation that took place

Uncle John: hello Jack. This is Uncle John. How are you?

You: _____ **(1mk**

Uncle John: I am happy that you are fine. Please, do me a favour. I brought some items for your grandma and she needs them urgently._____ **(1mk**

You: tomorrow? _____ **(1mk**

Uncle John: What plans?

You: _____ **(1mk**

Uncle John: could you reschedule the visit? Joseph will you understand

You: _____ **(2mks**

Uncle John: I see your point. You cannot cancel the visit for a second time?

You: _____ **(2mks**

Uncle John: sure! I'll try Patrick _____ **(1mk)-**

You: I assure you he will be of help _____ **(1mk**

Uncle John: oh! I didn't know he enjoys travelling. Thank you for that suggestion.

You: thank you for being understanding.bye.

SECTION E: GRAMMAR (20 MARKS)

1. Fill in the blanks with simple present form of the verbs in brackets.(5 Marks)

i. Nairobi _____ the capital of Kenya. **(be)**

ii. The posts _____ very heavy. **(be)**

iii. She and her sister _____ very hard.**(work**)

iv. They _____ to work by bus. **(come)**

v. Raising children _____ a fortune. **(cost**)

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A. ***<u>Arrange the adjectives given in brackets in the correct order in the space provided. (supply a, or an where necessary). (5mks)</u>***

1.She was wearing a _____ dress. (Japanese, silk, green)

2.I have just read (a/an) _____ novel. (new, exciting, Caribbean)

3.The meeting took place in a _____ hall. (conference, dilapidated)

4.The company is proud to launch a_____ drink. (refreshing, sparkling, new)

5.His car was a_____ model. (French, reliable, twenty-year old)

(a) <u>Complete each of the following sentences with one of the words in brackets.</u> **(3mks)**

(i) They saw _____ animals in the park than they expected. (less, fewer)

(ii) After walking for three kilometers, they were lucky to get _____ water from the stream. (little, a little).

(iii) We cannot accommodate another person, there is _____space left. (little, a little)

(b) <u>Use the right form of the words in brackets.</u> **(3mks)**

(i) The modern world today has many _____ forms of communication. (sophistication).

(ii) There are several factors which contribute to a healthy _____ (exist).

(iii)Victims of drug abuse become social _____ (fit).

C)supply questions tags to the following statements(4mrks)

1.He didn't come to school,**……..?**

2.I have not seen her,**……..?**

3.Jane rarely sleeps in class,**……..?**

4.She is a smart lady,**…….?**

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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

NAME: ……..……..

SCHOOL: ……..……..……..……..……..……..……...

ADM NO: …… **SIGN:** …… **DATE:** ……...

GEOGRAPHY TERM III

TIME : 2 HOURS

INSTRUCTIONS TO CANDIDATES

(a) Write your Name, Admission Number and Class in the space provided above.

(b) Answer all the questions in the spaces provided.

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

(d) Candidates should answer questions in English

ANSWER ALL QUESTIONS ON SPACE PROVIDED

1.(a) State four reasons why its important to study geography **(4mks)**

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(b) Mention branches of geography **(2mks)**

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2. (a) Describe the solar system **(2mks)**

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(b) State the characteristics of the sun **(3mks)**

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(c) The local time at station x 60^0w is 11.30a.m what is the time at station Y 37^0E **(2mks)**

(d) With aid of well labeled diagram describe the occurrence of solar eclipse **(6mks)**

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3.(a) Name the layers of the atmosphere **(4mks)**

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(b) State the characteristics of the troposphere **(3mks)**

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4. (a) Name three forms of precipitation that commonly occur in Kenya **(3mks)**

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(b) What's Stevenson's Screen **(2mks)**

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(c) Mention instruments found in the stevenson's screen **(2mks)**

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5. (a) Apart from water vapour, name other three substances that are suspended in the atmosphere **(3mks)**

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(b) Give two factors that are considered when classifying clouds **(2mks)**

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(c) State four proofs that the earth is Spherical **(4mks)**

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6. (a) Define statistics **(2mks)**

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(b) State four methods used to collect statistical data **(4mks)**

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7. (a) Name types of field work **(2mks)**

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(b) Why is it necessary to carry a pre-visit in field work **(4mks)**

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8. (a) Define earth movement **(2mks)**

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(b) Identify two causes of earth movement **(2mks)**

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(c) Name fold mountains found in the following countries **(3mks)**

Asici

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North America

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South America

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(d) Other than Fold Mountains name other result and features of folding **(2mks)**

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(e) Through aid of diagrams explain how the rift valley was formed through tensional forces **(5mks)**

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9. (a) Define climate **(2mks)**

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(b) State factors influencing climate of a place **(4mks)**

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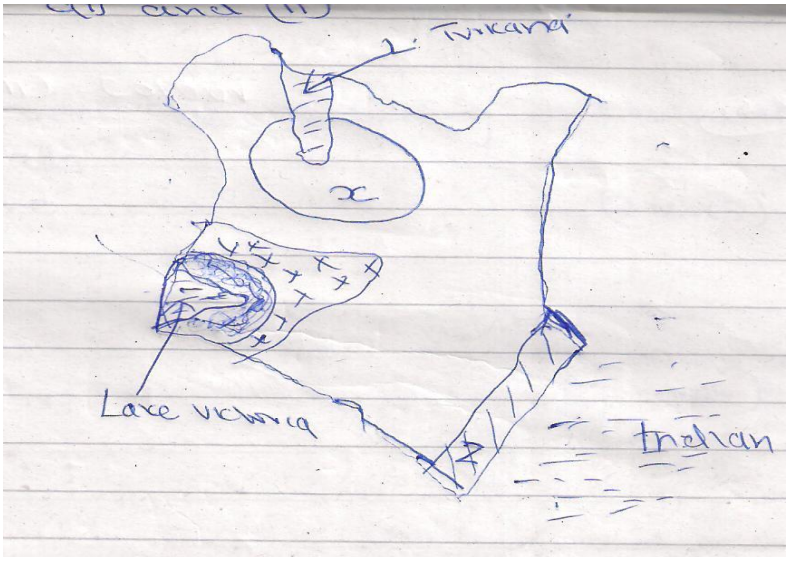
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(c) The Map below shows climate regions of Kenya . use it to answer questions below c(i) and (ii)



(c) (i) Name the climatic regions marked x and y **(2mks)**

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(ii) State four characteristics of the climatic region marked 2 **(4mks)**

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10. (a) What is a mineral **(2mks)**

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(b) Describe the following characteristics of minerals

(i) Lustre **(2mks)**

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(ii) Colour **(2mks)**

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(c) Name two examples of extrusive igneous **(2mks)**

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11. (a) Differentiate between Magma and Lava **(2mks)**

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(b) Name intrusive features of volcanicity **(3mks)**

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(c) Explain three ways in which volcanic features influence human activities **(6mks)**

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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

NAME: ……

SCHOOL: ……

ADM NO: …… **SIGN:** …… **DATE:** ……

HISTORY

FORM 2

TERM III

Instructions to candidates

1.Answer all the questions.

2.Answers to all the questions must be written in the spaces provided.

Attempt All the Questions in the spaces provided.

1.Identify the two areas of study in history. **(2 mks)**

2.Give three reasons why the study of government is important. **(3 mks)**

3.State four reasons why Africa is considered as the cradle of mankind. **(4 mks)**

4.Describe the way of life of the early man in the middle Stone Age Period. **(5 mks)**

5.State and explain two theories which try to explain the origin of agriculture. **(4 mks)**

6.Give the role of the council of elders among the Mijikenda community. **(5 mks)**

7.Identify five factors which enabled the early visitors to come to the Kenyan Coast before 1500 A.D. **(5 mks)**

8.Give the various factors that enabled Christian missionaries to spread Christianity in Kenya. **(6 mks)**

9.Which are the limitations of the right to life? **(4 mks)**

10. Identify three symbols of national unity in Kenya. **(3 mks)**

11. Explain the problems which were encountered by traders during the Tran-Saharan trade. **(6 mks)**

12. Give reasons why African slaves were preferred during the Trans Atlantic trade. **(4 mks)**

13. Name three ports in Africa that developed as a result of the Trans Atlantic trade. **(3 mks)**

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14. What are the disadvantages of railway transport? **(5 mks)**

15. Give any four problems associated with the use of modern telecommunication facilities. **(4 mks)**

16. Explain six effects of iron working on African communities. **(6 mks)**

17. Identify the disadvantages of using coal as a source of industrial energy during the 19^{th} century. **(4 mks)**

18. Give four inventions that improved textile manufacturing industry in Britain in the 18^{th} century. **(4 mks)**

19. Explain five positive impact of the scientific inventions on medicine. **(4 mks)**

20. Identify six similar factors which have led to the USA, Germany and Japan to emerge as world industrial powers. **(6 mks)**

21. Identify six challenges which have contributed to the slow pace of industrialization in the third world countries. **(6 mks)**

22. Explain five factors which led to the growth of early urban centres in Africa. **(5 mks)**

23. Give two ways in which water was used as a source of energy during the industrial revolution. **(2 mks)**

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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

JINA: ……

SHULE: ……

NAMBARI YA USAJILI: …… SAHIHI: …… TAREHE: ……

MTIHANI WA MWISHO WA MUHULA WA TATU

KIDATO CHA PILI

MAAGIZO

(a) Andika jina lako na nambari yako ya mtihani katika nafasi ulizoachiwa hapo juu.

(b) Jibu maswali yote.

(c) Majibu yote yaandikwe katika nafasi ulizoachiwa katika kijitabu hiki cha maswali.

(d) Majibu yote lazima yaandikwe kwa lugha ya Kiswahili.

(e) Watahiniwa lazima wahakikishe kwamba kurasa zote za karasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo.

Kwa matumizi ya mtahini pekee.

Swali	Upeo	Alama
A	20	
B	20	
C	10	
D	10	
E	40	
JUMLA	100	

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A. (INSHA)

ALAMA 20

Umekutana na binamu yako aliyekuwa masomoni ng'ambo kwa muda wa miaka miwili. Andika mazungumzo kati yenu kuhusu mabadiliko yaliyotokea nchini tangu aende. **(alama 20)**

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B. USHAIRI (ALAMA 20)

SOMA USHAIRI UNAOFUATA KISHA UJIBU MASWALI.

Tumeingia uwanjani, kukutana na vijana
Tahiyatuni kaeni, kusikia yenye mana,
Akili zifungueni, mpate kutulizana,
Sigara si ya kuigwa, vijana fikirieni.

Si sinema msidhani, mtaanza kuugua,
Maradhi ya vifuani, mapafu yataungua,
Sijitie ubabeni, kujitia mnajua,
Sigara si ya kuigwa, vijana fikirieni.

Mkingia shughulini, midomo itaungua,
Mtanuka midomoni, thamani kuwapungua,
Mkizitupa makaoni, hasara mtazizua,
Sigara si ya kuigwa, vijana fikirieni,

Ulevi nao acheni, twataka kuwazindua,
Mtangia hatiani, hivyo mnajizuzua,
Wengi hawawathamini, walevi wanapujua,
Ulevi msitamani, vijana fikirieni.

Usingie madawani,kalewa bila kujua,
Si bangi si heroini, siwaze kuzichukua,
Mtangia mashimoni, tubaki tukitundua,
Madawani jitengeni, vijana fikirieni.

Mkijitia uhuni, mjue mtajichubua,
Mpiga ngumi kutani, mazuri hatavumbua,
Ukimwi u mitaani, upesi utawanyakua,
Acheni kuyatamani, vijana fikirieni.

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Uvivu nao acheni, utakuja wasumbua,
Vitabu kavishikeni, mazuri mtayavua,
Heshima muithamini, si watu kuwatibua,
Haki zenu zijuchi, vijana fikirieni.

Maswali:

(a) Lipe shairi hili kichwa mwafaka. **(alama 2)**

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(b) Eleza umbo la shairi hili ukizingatia yafuatayo. **(alama 10)**

(i) Mishororo

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(ii) Vina

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(iii) Beti

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(iv) Mizani

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(v) Aina ya ushairi

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(c) Bainisha matumizi ya uhuru wa mwandishi ukizingatia: . **(alama 4)**

(i) Inkisari

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(ii) Mazda

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(iii) Tafsida

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(iv) Kufinyanga sarufi/kuboronga

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(d) Taja maudhui mawili kutoka shairi hili. **(alama 2)**

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(e) Taja tamathali moja ya lugha na mbinu ya kisanaa **(alama 2)**

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C. ISIMU JAMII (ALAMA 10)

Taja na ueleze kaida zozote tano za matumizi ya lugha katika jamii.

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D. **FASIHI SIMULIZI** (ALAMA 10)

Huku ukieleza andika sifa zozote tano za fanani/ mtambaji bora.

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E. **SARUFI** **(ALAMA 40)**

(a) Taja sifa mbili za kila mojawapo ya sauti hizi /s/ /z/ **(alama 2)**

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(b) Weka shadda kwenye maneno haya **(alama 2)**

(i) Stima

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……

(ii) Rukwama

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(c) Bainisha viambishi katika maneno haya **(alama 2)**

(i) Walioandikiana

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(ii) Vilivyovunjwa

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(d) Tumia kihusishi cha mahali kutunga sentensi **(alama 2)**

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(e) Eleza matumizi ya msemo huu **(alama 2)**

Pua na mdomo'

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(f) Eleza dhana ya 'ni' katika sentensi hizi. **(alama 2)**

(i) Simameni tuombe

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(ii) Ninataka tuelewane

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(g) Tumia kimilikishi cha nafsi ya tatu umoja kutunga sentensi **(alama 2)**

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(h) Andika maana mbili za sentensi hii: **(alama 2)**

Mtoto alimlilia mama.

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(i) Tumia alama hizi kutungia sentensi. (alama 2)

(i) Mshazari

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(ii) Kistari kifupi

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(j) Andika sentensi hii bila kutumia ‘amba’ **(alama 2)**

Gari ambalo lilinunuliwa jana limeibiwa.

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(k) Nyambua vitenzi hivi katika hali ya kutendesha. **(alama 2)**

(i) Oa

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……

(ii) Kimbia

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(l) Kamilisha makundi haya. **(alama 2)**

Chane ya_____

Shungi la _____

(m) Onyesha matumizi mawili ya kiambishi ‘po’katika sentensi moja . **(alama 2)**

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(n) Weka maneno haya katika ngeli mwafaka. **(alama 2)**

(i) Tikiti ……..

(ii) Dole …….

(o) Andika sentensi mbili sahihi kwa kurekebisha sentensi hii. **(alama 2)**

Huku mlimo, panawafaa watu kama nyinyi.

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(p) Tumia – zuri kama kielezi, kiwakilishi na kivumishi katika sentensi. **(alama 3)**

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(q) Kamilisha methali hii

Aso hadhari _____

(r) Bainisha aina za maneno **(alama 2)**

Angelina ni mtoto mtukutu

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(s) Ainisha vitenzi kwenye sentensi hii **(alama 2)**

Yeye alishindwa kuruka kiunzi kile

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(t) Yakinisha sentensi ifuatayo. **(alama 2)**

Nisingemuona nisingetimiza ahadi yako

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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

NAME: ……..……

SCHOOL: ……..……

ADM NO: …… **SIGN:** …… **DATE:** ……...

END OF TERM 3

FORM 2 MATHEMATICS EXAM

TIME: 2½ HRS.

INSTRUCTION TO STUDENTS:

1.*Write your* ***name****,* ***admission number*** *and* ***date*** *in the spaces provided above.*

2.*This paper consists of* ***two*** *Sections; Section* ***I*** *and Section* ***II****.*

3.*Answer* ***ALL*** *the questions in Section* ***I*** *and only* ***five*** *questions from Section* ***II****.*

4.*All answers and working must be written on the question paper in the spaces provided below each question.*

5.*Show all the steps in your calculation, giving your answer at each stage in the spaces provided* ***below*** *each question.*

6.*Marks may be given for correct working even if the answer is wrong.*

7.*KNEC Mathematical tables* ***may be*** *used, except where stated otherwise.*

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

FOR EXAMINER'S USE ONLY:

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	TOTAL

GRAND TOTAL

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SECTION A (Answer all questions in the spaces provided)

1.Arrange the following sets of numbers in descending order. **[2 Marks]**

404,044 440,440 440,404 404,444 444,044

2.Prove that 581,526 is divisible by both 9 and 11. **[2 Marks]**

3.When a number u is divided by either 36, 24 or 45, the remainder is always 5. Find the least value of u. **[3 Marks]**

4.Using mathematical tables, find the cubes of each of the following numbers. Leave your answer in standard form.

a.2341 **[2 Marks]**

b. 0.00472 **(2mks)**

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5.Use logarithms tables to evaluate; $\frac{743.1 \times 34.8}{15.6 \times 102.7}$ **[4 Marks]**

6.Find the equation of a line that passes through (3, -5) and is perpendicular to a line whose equation is $4x - 5y - 6 = 0$ **[3 Marks]**

7.Two similar vases have their heights in the ratio 3:2. What is the ratio of

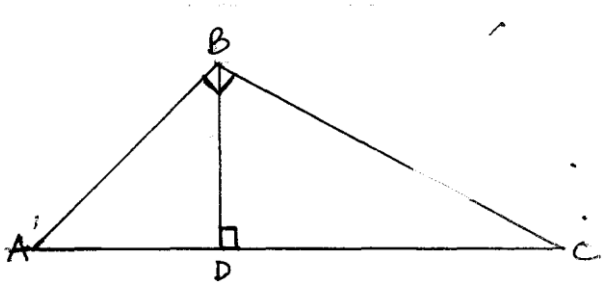
i. Their surface areas **[1 Mark]**

ii. Their volumes **[1 Mark]**

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8. A rectangular container measuring 1.2m long, 70 cm wide and 55 cm high is half full of water. All this water is poured into an empty cylindrical tank of diameter 1.4 metres. Find the height to which the water rises. **(4 mks)**

9. In the triangle below, AB=12cm AC=13cm and ABC=BDC=90^0.



Calculate;

i. The length of BC **[2 Marks]**

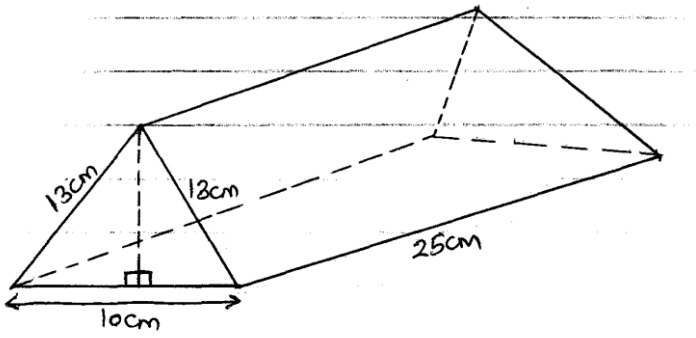
ii. The length of BD **[2 Marks]**

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10. Express as a single fraction in the simplest form; $\frac{x-3}{5}+\frac{2x-5}{4}$ **[3 Marks]**

11. The ratio of boys to girls is 3:2. When $\frac{1}{3}$ of the boys and 6 girls are absent, the ratio remains the same. Find the number of students in the class. **[4 Marks]**

12. The diagram below shows a triangular prism. Determine its total surface area. **[3 Marks]**



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13. The size of the interior angle of a regular polygon is $x°$ and the exterior angle is $(\frac{x-36}{3})^0$

a.Calculate the value of x **[2 Marks]**

b. How many sides does the polygon have? **[2 Marks]**

14. Solve for the value of θif **[2 Marks]**

$$\sin(2\theta + 30) = \cos(2\theta + 20)$$

15. A triangle measures 16cm by 20cm by 24cm. calculate its area using the Hero's formula. [**3 Marks]**

16. If $a = 8\ and\ b = 36$, calculate the value of; **[3 Marks]**

$$(a^{-\frac{2}{3}} + b^{\frac{1}{2}})^{\frac{1}{2}}$$

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SECTION B (Answer any 5 questions)

17. The table below is a bus timetable for journeys between towns E and J via towns FGH and I. Use it to answer the questions that follow.

Town	Arrival	Departure
E		0500
F	0630	0645
G	0710	0720
H	0820	0830
I	1145	1230
J	1345	

a. At what time does the bus leave town G in 12hr system. **[1 Mark]**

b. How long does it take between town E and G. **[1 Mark]**

c. In which town does the bus stop the longest and for how long? **[2 Marks]**

d. If the bus does not stop anywhere;

i. How long would it take to travel from town E to town J. **[2 Marks]**

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ii. At what time would it arrive at town J. **[1 Mark]**

e. If the distance between town G and J is 400km, calculate the average speed between G and J. **[3 Marks]**

18. In a certain day secondary school in Vihiga County. There were 500 students. The ratio of boys to girls is 3:2.

a. How many more boys than girls are there in the school? **[2 Marks]**

b. i. One day 10% of the girls and two fifth of the boys went for music and drama festivals. How many students were left in the school? **[3 Marks]**

ii. During the Festivals each student was given 100/= and the two accompanying teachers were given 1000/= each for lunch. What was the total expenditure? **[2 Marks]**

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c. On a certain morning, ½ of the boys and 0.75 of the girls were sent home for fees. Given that each student brought 2500/= the following day, calculate the total amount of money that was collected. **[3 Marks]**

19. A line L_1 passes through (3, -2) and (5,4).

a. Determine the gradient of line L_1 **[1 Mark]**

b. The equation of line L_1 **[2 Marks]**

c. Line L_1 cuts $x - axis$ at point P and the $y - axis$ at point Q. determine the co-ordinates of P and Q. **[4 Marks]**

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d. Another line L_2 passes through (-3,7) and is perpendicular to L_1. Determine its equation. **[3 Marks]**

20. a. Given that the ratio of the areas of two similar solids is 9:25

i. What is the linear scale factor between the two solids? **[2 Marks]**

ii. If the length of the smaller solid is 1.2m, what is the length of the bigger solid? **[2 Marks]**

b. The linear dimensions of a model car are $\frac{1}{16}$ of the dimensions of the actual car.

i. What is the area of the windscreen of the actual car if the windscreen of the model car is $3cm^2$? **[2 Marks]**

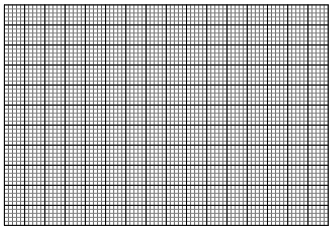
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ii. If the capacity of the boot of the model car is $15cm^3$, find the capacity of the boot of the model car. **[2 Marks]**

c. The volume of two similar jugs are in the ratio 8:125. What is the ratio of their surface areas? **[2 Marks]**

21. A triangle PQR has co-ordinates P(1,1) Q (1,3) R (3,1)

a.Plot the triangle in the graph paper provided. **[1 Mark]**



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b.P'Q'R' is the image of PQR under an enlargement scale factor 2 about origin.

i. Plot P'Q'R' in the graph provided. **[3 Marks]**

ii. State the co-ordinates of P'Q'R'. **[1 Mark]**

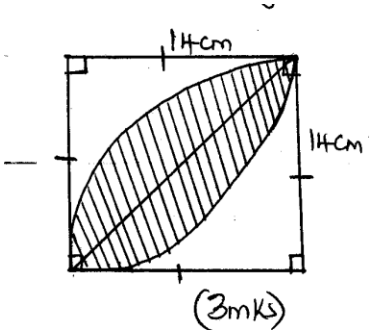
c. P''Q''R'' is the image of P'Q'R' under reflection in the $y-axis$. Plot P''Q''R'' in the graph paper and state its co-ordinates. **[4 Marks]**

d. Calculate the area of triangle P''Q''R'' **[1 Mark]**

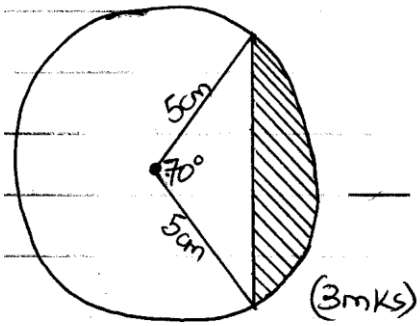
22. In each of the following figures, calculate the area of the shaded regions.

a.

b.

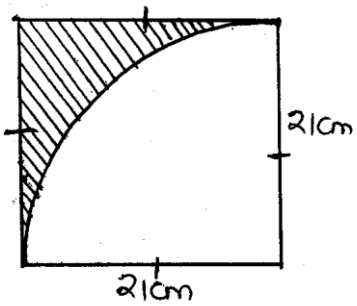


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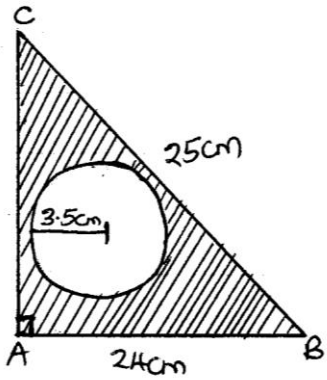
(3mks)

c.



(2mks)

d.



(2mks)

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23. Amina bought 3 pens and 2 pencils for shs. 13. Njoki bought 2 similar pens and 1 pencil and spent shs. 5 less than Amina.

a. Form 2 simultaneous equations to represent the above information **[2 Marks]**

b. Using substitution method, determine the price of each item. **[3 Marks]**

c. Migwi bought 100 pencils and 150 pens from the same shop.

i. What was the total cost? **[2 Marks]**

ii. He later sold all the pencils at a profit of 30% and all the pens at a profit of 50%. Determine the total profit. **[3 Marks]**

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24. A bus has a carrying capacity of 52 passengers and a Nissan 14 passengers. Both vehicles were used to ferry people from a village to a church for a wedding function. The distance from the village to church is 80km and the fuel consumption of the bus is 1 litrefor every 8km and the Nissan is 1 Litre for every 15 km. Fuel costs shs. 15 per litre. The bus made 5 complete round trips and the Nissan made 8 complete round trips with full capacity. If each passenger was paying shs. 100 to be ferried to the function; Find

i. The total collection made by each vehicle. **[3 Marks]**

ii. The total cost of fuel used by each vehicle. **[2 Marks]**

iii. The net profit made by each vehicle. **[3 Marks]**

iv. The total number of people who were ferried to the function. **[2 Marks]**

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BRILLIANT STUDENTS

FORM 2 END TERM 3 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...

ADM NO: …… **SIGN:** …… **DATE:** ……...

TERM III

232/1

PHYSICS

TIME: 2 HRS

INSTRUCTION TO CANDIDATES:

1.Write your name and Admission number in the spaces provided.

2.Answer all the questions in the spaces provided.

3.Mathematical tables may be used.

4.All workings must be clearly shown where necessary.

5.This paper consists of **8** printed pages

FOR EXAMINERS USE ONLY:

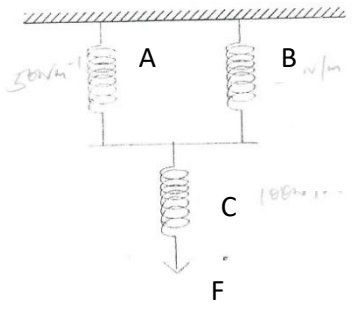
SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1 – 11	25	
B	12	10	
	13	9	
	14	11	
	15	15	
	16	10	
TOTAL	**80**		

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SECTION A (25 MARKS)

1.Study the arrangement and answer the questions that follow.

A and B are identical rubber strips and each has an elastic constant of $50Nm^{-1}$. C has an elastic constant of $100Nm^{-1}$.



a) If C extends by 4 cm, by how much would A extend? **(2 mks)**

b) Determine the force F, which would cause these extensions. **(2 mks)**

2.State two factors that affect the turning effect of a force. **(2 mks)**

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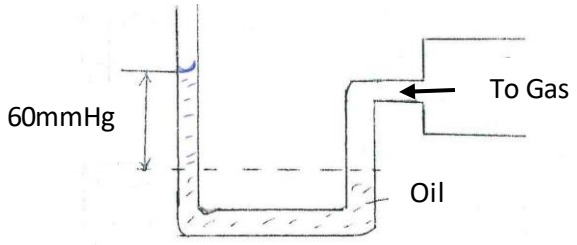
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3.The figure below shows a u-tube manometer containing oil of density $0.9g/cm^3$. One end is connected to a gas tap.



If atmospheric pressure is 1.0×10^5 pa, find the pressure of the gas. **(3 mks)**

4.State two advantages of an alkaline cell over a lead-acid cell. **(2 mks)**

5.Three forces 12N due East, 4N due South and 15N due West acted on a body. If the body was in equilibrium, find the resultant force. **(2 mks)**

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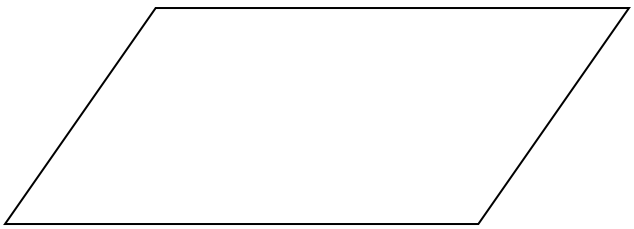
6.Explain the following observation. A balloon, when rubbed on a blazer, it sticks to the ceiling board. **(1 mk)**

7.A block measuring 20cm by 10cm by 4cm rests on a flat surface. The block has a weight of 6N. determine;

(i) The minimum pressure it exerts on the surface. **(2 mks)**

(ii) The density of the block in kg/m^3. **(3 mks)**

8.The figure below shows a uniform cardboard in the shape of a parallelogram.



Locate the centre of gravity of the cardboard. **(1 mk)**

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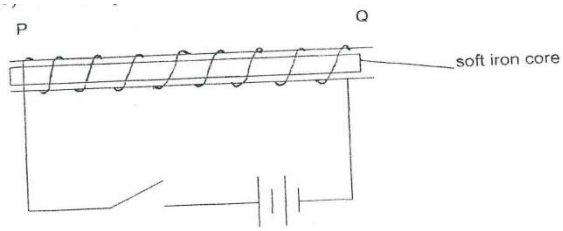
9. (a) What is an electromagnet? **(1 mk)**

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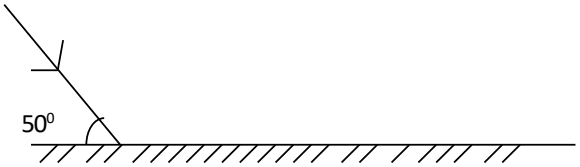
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(b) Name the polarity of ends P and R on the diagram below, when the current is switched on



P …… and Q …… (1 mk)

10. The figure 4 below shows a ray of light incident on the surface of a plane mirror.



The mirror is now rotated clockwise through an angle of 10^0. Find the angle between the incident and the reflected rays. **(1 mk)**

11. The force on a current carrying conductor in a magnetic field can be varied by changing among other, the magnetic field strength and magnitude of the current. Name two other factors that cause the force to vary.**(2 mks)**

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SECTION B: (55 MARKS)

12. (a) Sketch a diagram of micrometer screw gauge with the reading of 12.25 mm. **(2 mks)**

(b) The oil level in a burette is $10.0cm^3$. 5000 drops of the oil are run off the burette. If the radius of 1 drop is 0.7 mm.

(i) Calculate the volume of one drop. **(2 mks)**

(ii) What is the final reading of the burette. **(1 mk)**

(c) The oil was made to spread on a surface of water forming a circular patch of diameter 21.0 m.

(i) Calculate the area of the oil patch. **(2 mks)**

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(ii) Calculate the thickness of the oil molecule. **(2 mks)**

(d) State one assumption made in c(ii) above. **(1 mk)**

13. (a) State the Flemings left hand rule. **(1 mk)**

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(b) Sketch the resultant field pattern around the following current carrying conductor and show the direction of the forces acting on the conductors.

(i) Current flowing into the paper. **(1 mk)**

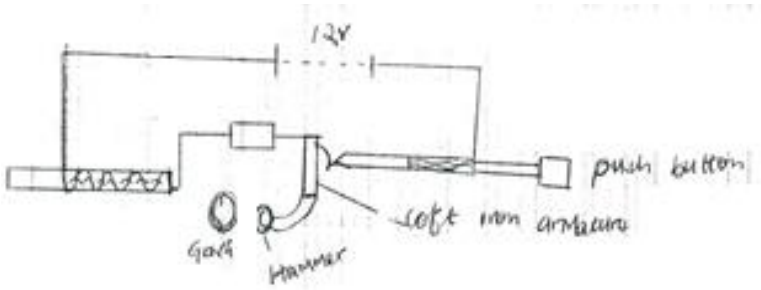


(ii) Current flowing out of the paper. **(1 mk)**



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(c) The diagram below shows an electric bell.



(i) Describe how the electric bell works. **(4 mks)**

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(ii) Explain what would happen if the armature is made of steel. **(1 mks)**

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(iii) What adjustment should be done to the system to make it operate effectively with a lower voltage battery. **(1 mk)**

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14. (a) Differentiate between a real image and a virtual image. **(1 mk)**

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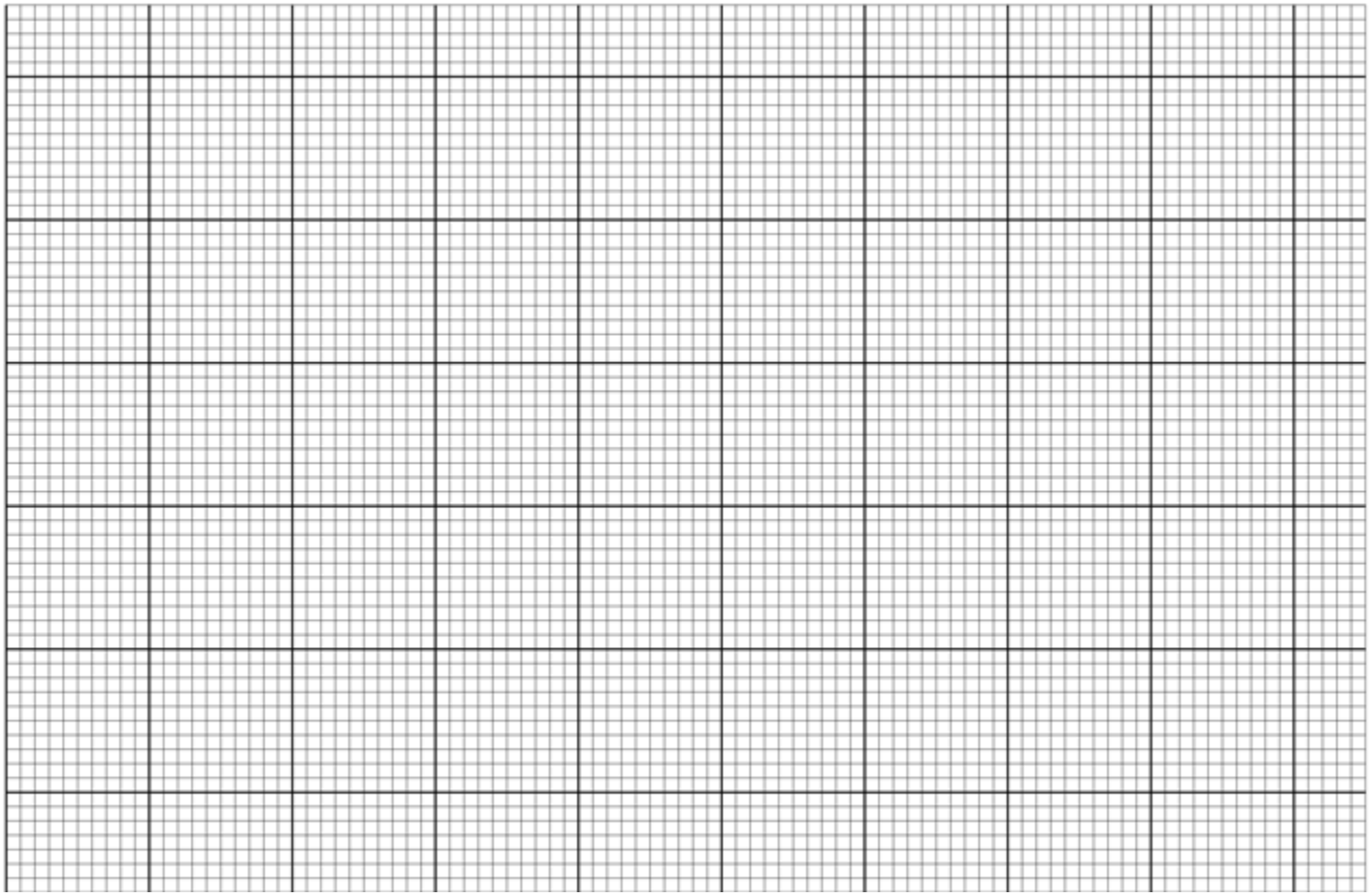
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(b) An object of height 10cm is placed 5cm infront of a concave mirror of local length 10cm.

(i) By use of ray diagram shows the location of the image on the grid provided **(4 mks)**



Use the ray diagram in (i) above to determine the

(ii) Image distance **(2 mks)**

(iii) Magnification **(3 mks)**

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(c) State the reason why convex mirror is used as a driving mirror instead of plane mirror. **(1 mks)**

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15. (a) State Hooke's law. **(1 mk)**

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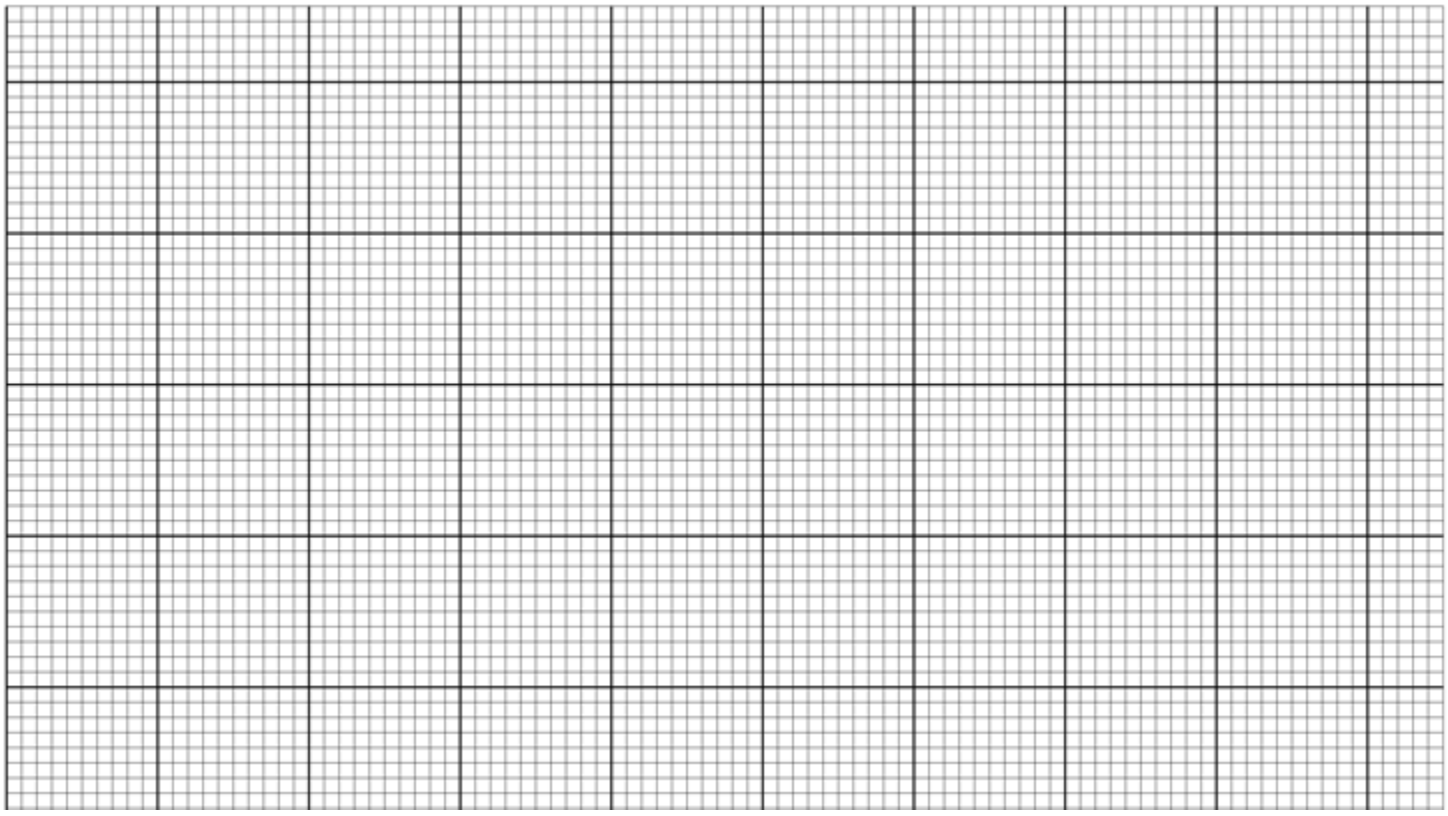
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(b) A spring with the upper end fixed, hang vertically and several masses are suspended from its lower end one at a time. The readings were recorded as shown.

Mass in kg	0	0.02	0.04	0.06	0.08	0.10
Extension mm	0	11	9	29	41	51
Force N						
Extension in m						

(i) Fill in the table. **(2 mks)**

(ii) Plot a graph of extension in (m)(y-axis) against force in N. **(5 mks)**



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(c) (i) From the graph determine the extension of a mass 0.045kg. Give your answer in mm. **(2 mks)**

(ii) Determine the spring constant of the spring. **(3 mks)**

(d) If two such springs were connected in series, what extension would they show when a mass of 1.5kg hangs from one end. **(2 mks)**

16. (a) State two advantages of a lead acid accumulator over dry cells. (**2 mks)**

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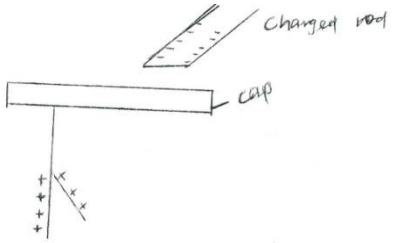
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(b) The figure below shows a highly negatively charged rod being brought slowly near the cap of a positively charged gold leaf electroscope.



State and explain what will be observed on the leaf of the electroscope. **(2 mks)**

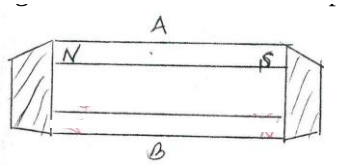
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(c) The figure below shows how keepers are used to store magnets. **(2 mks)**



(i) Mark on the diagram the polarity of the magnet B. **(2 mks)**

(ii) Briefly explain how keepers assist in storing magnets. **(2 mks)**

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