

F4 ENDTERM 1 EXAMS

ALL SUBJECTS

*Well organized standard set of ENDTERM 1 exams to our KCSE
Candidates in All High Schools.*

To Acquire/obtain Marking Schemes

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COURTESY OF MWALIMU PUBLISHERS.

END OF TERM 1 EXAMS

BIOLOGY

FORM FOUR

PAPER 1

TIME: 2 HOURS

NAME..... ADM NO:.....

SIGN..... INDEX NO:.....

DATE;.....

INSTRUCTIONS TO CANDIDATES:

- *Answer ALL the questions*
- *Answers should be written in the spaces provided*

1. State the functions of each of the following organelles: (2mks)

a) Plasma membrane.....

.....

b) Ribosome.....

.....

2. (a) State **two** ways by which leaves of plants are adapted to gaseous exchange. (2mks)

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.....

.....

b) State a function of aerenchyma tissue. (1mk)

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.....

3. How do identical and fraternal twins arise? (2mks)
i) Identical

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ii) Fraternal (1mk)

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4. State **three** functions of an exoskeleton. (3mks)

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5. What is meant by destarching a leaf? (1mk)

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6. State **two** ways in which sunlight increases the rate of transpiration. (2mks)

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7. List **two** features of flowers that attract insect pollinators. (2mks)

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8. (a) State **two** adaptations of pelvic girdle to its functions. (2mks)

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.....

b) Name the type of joint found between the femur and pelvic girdle. (1mk)

-
-
9. The table below shows some nutrients, their sources and disease caused by their deficiencies in man. Complete the table. (2mks)

Nutrient	Source	Deficiency disease
Iron		
		Night blindness

10. (a) Give **two** ways in which red blood cells are adapted to carry out their functions. (2mks)

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(b) Name chemical forms in which carbon IV oxide is transported in the human body. (2mks)

-
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-
11. Name any **two** divisions of the kingdom plantae. (2mks)

-
-
-
12. a) Name the hormone produced in human body when one takes in a large amount of water. (1mk)

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.....

.....

(b) What disease results from the inadequate production of the hormone in 12(a) above? (1mk)

13. A cow in a paddock was found to be infected with ticks. State the trophic level occupied by the (2mks)

a) i) Cow.....

ii) Tick.....

b) Give **one** disadvantage of using pesticide to eliminate the ticks. (1mk)

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14. What is the role of water in germinating seeds? (2mks)

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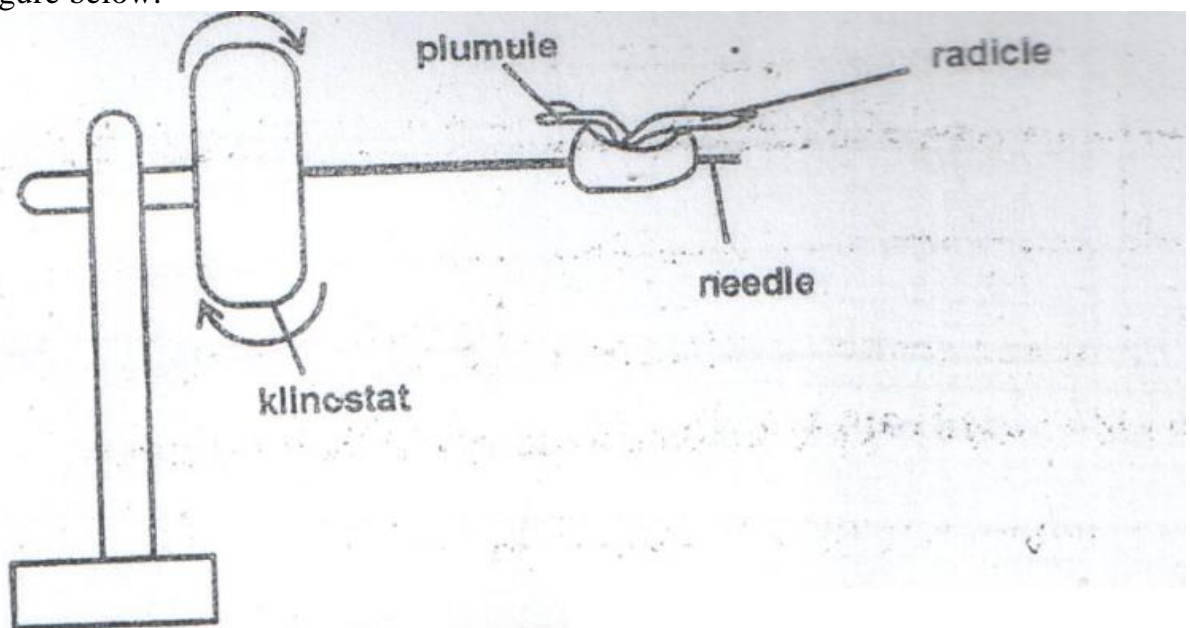
15. (a) State **two** limitations of fossil records as an evidence for organic evolution theory. (2mks)

.....
.....

(b) State an ideal that led to the formulation of larmacks theory of evolution. (1mk)

.....
.....

16. Study the figure below.



A seedling with straight radical and plumule was attached to rotating Klinostat as shown above.

a) Draw the appearance of the seedling after three days. (1mk)

b) Explain your observations (a) above. (2mks)

.....

.....

.....

17.(a) Write the base sequence of MRNA that would be coded from the DNA strand shown below. (2mks)

----- ----- ----- ----- ----- ----- -----							DNA strand
C	A	T	G	A	G	T	

----- ----- ----- ----- ----- ----- -----							RNA strand
---	--	--	--	--	--	--	------------

(b) How many nitrogenous bases code for a single amino acid? (1mk)

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18. Why are animal cells put in isotonic solution when performing an experiment? (2mks)

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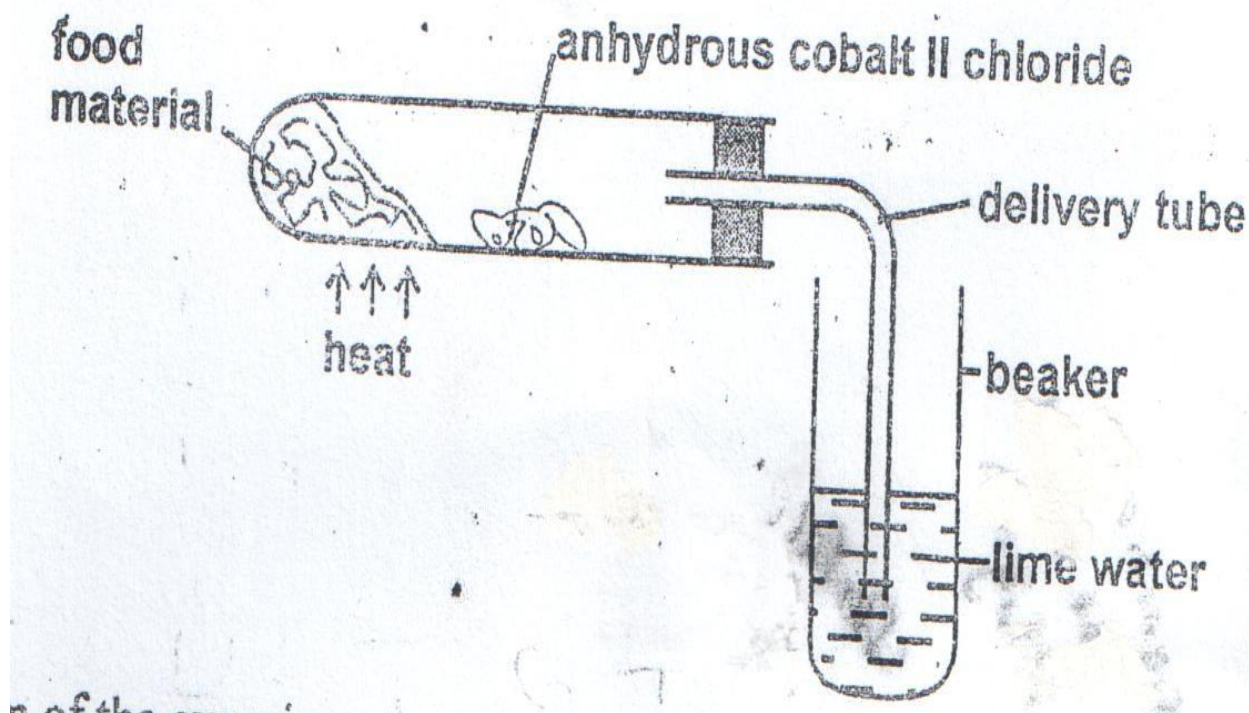
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19. Study the diagram below

a) Suggest the aim of the experiment.

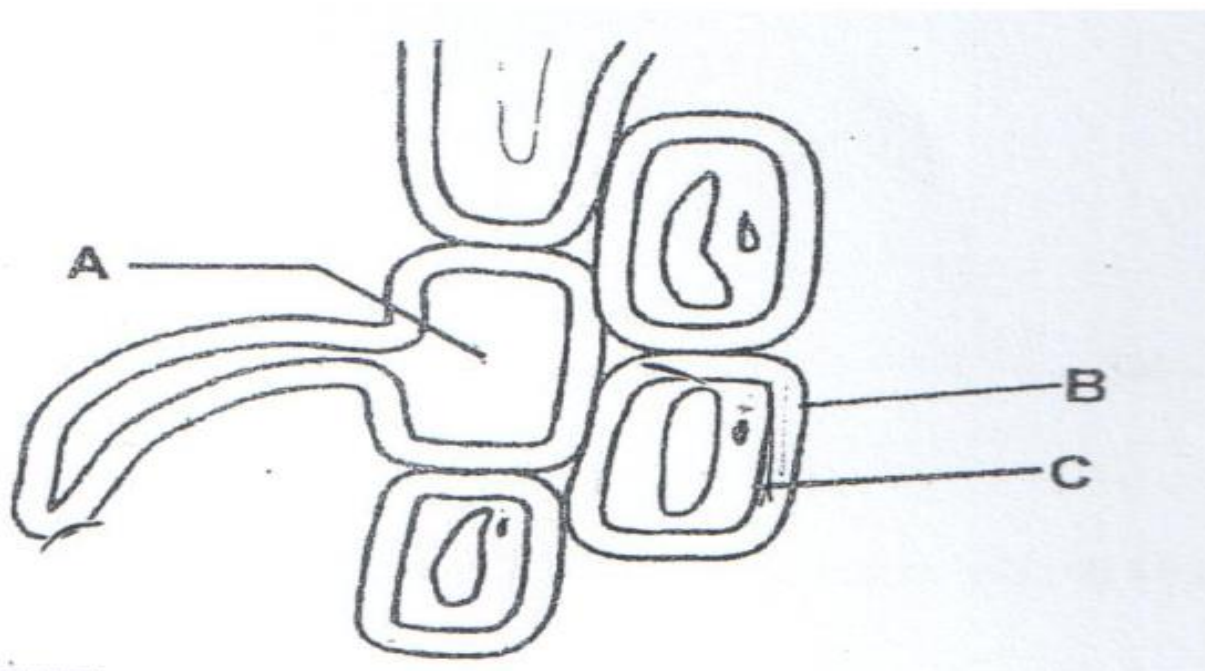
(1mk)



b) Account for the results observed at the end of the experiment.

(2mks)

20.



(a) Name the parts labeled A, B and C. (3mks)

A –

B -

C -

(b) Name the process by which water passes from the soil to the part labeled A. (1mk)

.....
.....

21.State role of the following bacteria in the nitrogen cycle. (3mks)

a) Nitrosomonas.....

b) Nitrobacter.....

c) Azotobacter.....

22.Explain the importance of each of the following during digestion in man.

a) Teeth..... (1mk)

b) Saliva(1mk)

23.(a) Distinguish between prokaryotic and eukaryotic cells. (2mks)

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

b) Name one kingdom with:

i) Prokaryotic cells(1mk)

ii) Eukaryotic cells.....(1mk)

24.What would blood gain on passing through each of the following organs:

i) The lungs.....(1mk)

ii) Active muscles.....(1mk)

25.State **two** main characteristics of organisms in kingdom fungi. (2mks)

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26. State **two** adaptations of fruits dispersed by wind. (2mks)

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27. (a) Describe how white blood cells fight against infection. (2mks)

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(b) A drop of a person's blood shows clumping with the anti-B serum but not with anti-A serum. State the person blood group. (1mk)

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.....

28. Calculate the diameter of the cells in micro-metre given that the diameter of the field of view is 3mm and that they are 10 cells across the field of view, the total magnification was 100x. ((2mks)

29. (a) Apart from AIDs, name **one** diseases of the reproductive system in man that is caused by viruses. (1mk)

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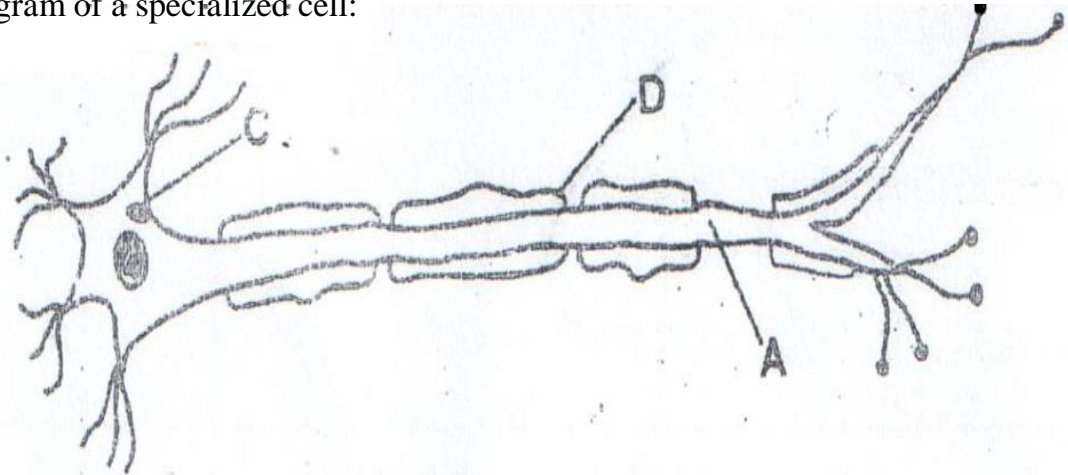
.....

(b) State **one** way by which HIV/AIDs is transmitted from mother to child. (1mk)

.....

.....

30. Below is a diagram of a specialized cell:



i) Name parts (2mks)

A

C

ii) What is the role of part D? (1mk)

.....
.....

31. State two roles of progesterone. (2mks)

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32. What is parthenocarpy? (1mk)

.....
.....

End

END OF TERM 1 EXAMS

BIOLOGY

FORM FOUR

PAPER 2

TIME: 2 HOURS

NAME..... ADM NO:.....

SIGN..... INDEX NO:.....

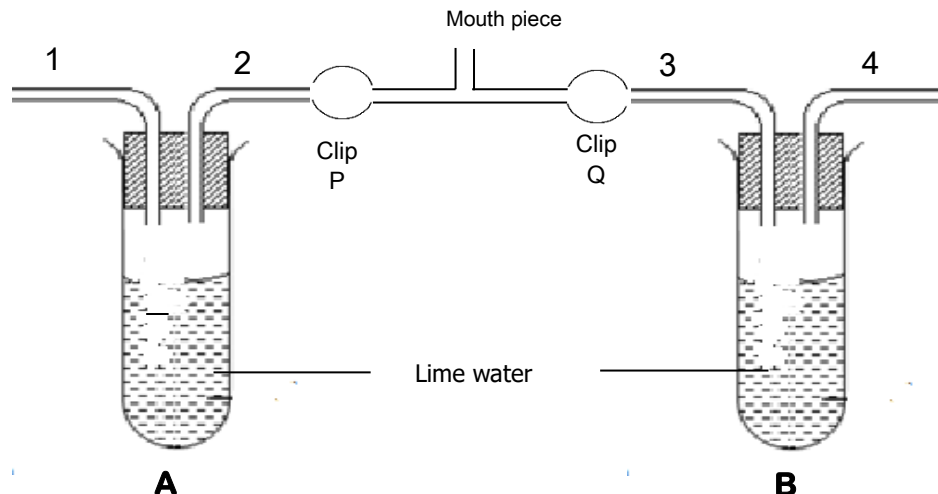
DATE;.....

INSTRUCTIONS TO CANDIDATES:

- Answer *ALL* the questions
- Answers should be written in the spaces provided

SECTION A: (40 MARKS)

1. The following set up was set for the form two class to study a certain concept.



a) Point out **one** mistake in the set-up and correct the mistake on diagram.

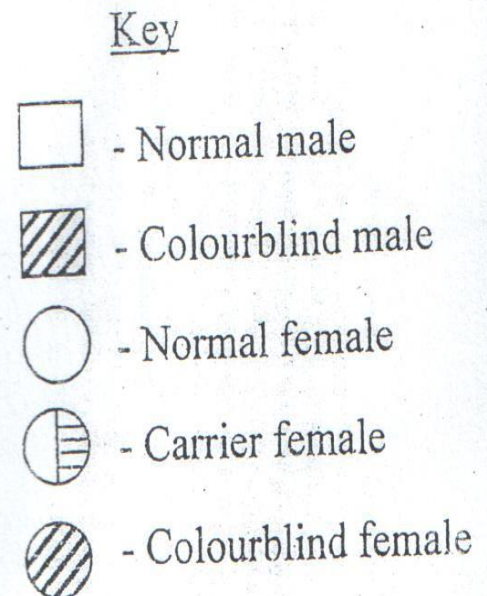
(2mks)

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(1mk)

(5mks)

- THE GENE FOR COLORECTAL CANCER



a) Define the term sex linkage. (1mk)

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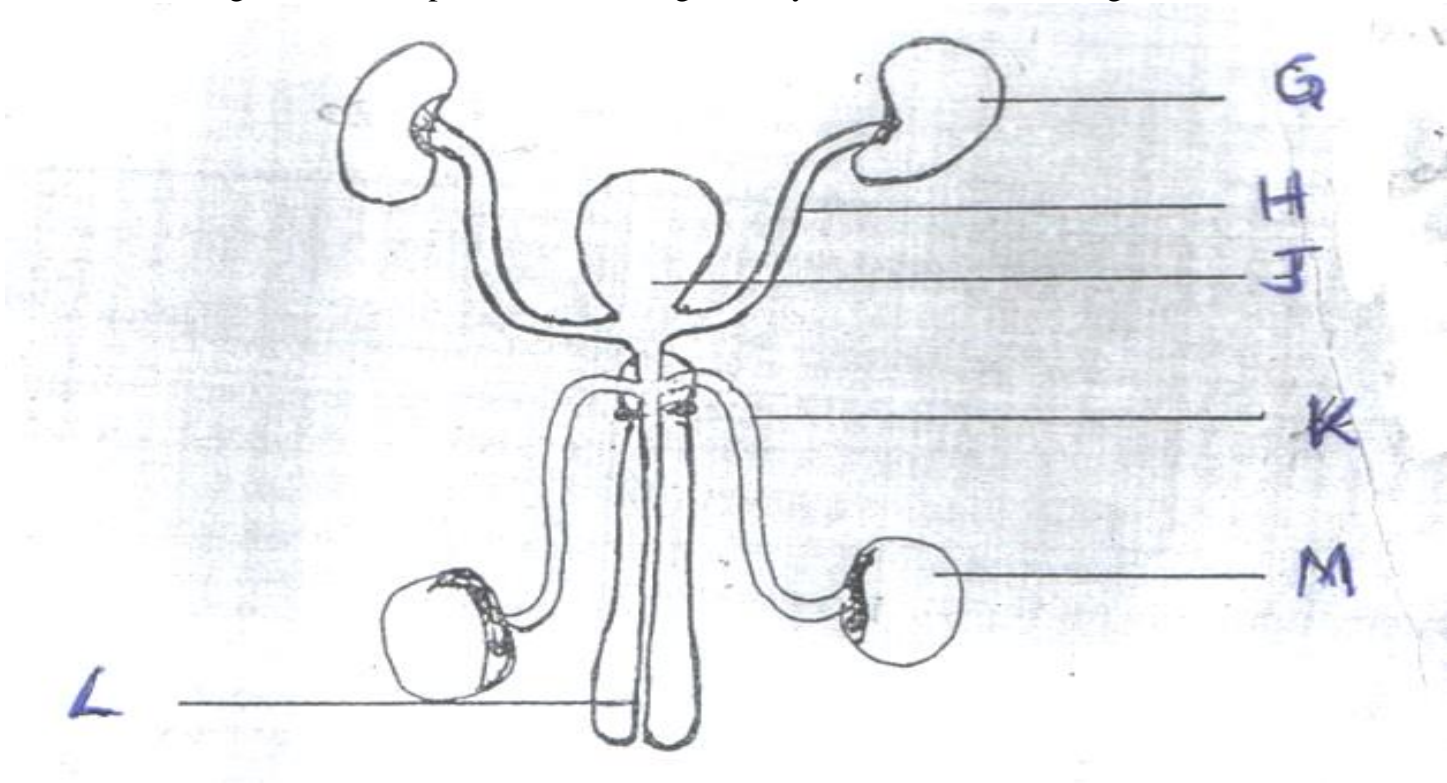
b) Write down the genotype of the parents A and B. (2mk)

A

B

c) Write down the phenotypic ratios of the 2nd generation from parents A and B. Show how you arrived at your answer. (5mks)

3. The diagram below represents the urinogenital system of a human being.



- a) Name the parts labeled H and K. (2mks)

H

K
- b) State the functions of the parts labeled G and L. (2mks)

G.....

L
- c) (i) Give the letter of the structure in which meiosis occurs.(1mk)

(ii) State how the structure identified in (c) (i) is modified to enhance the survival of products of meiosis. (1mk)

.....

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d) (i) Name the hormone secreted by the part labeled M.....(1mk)
- FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

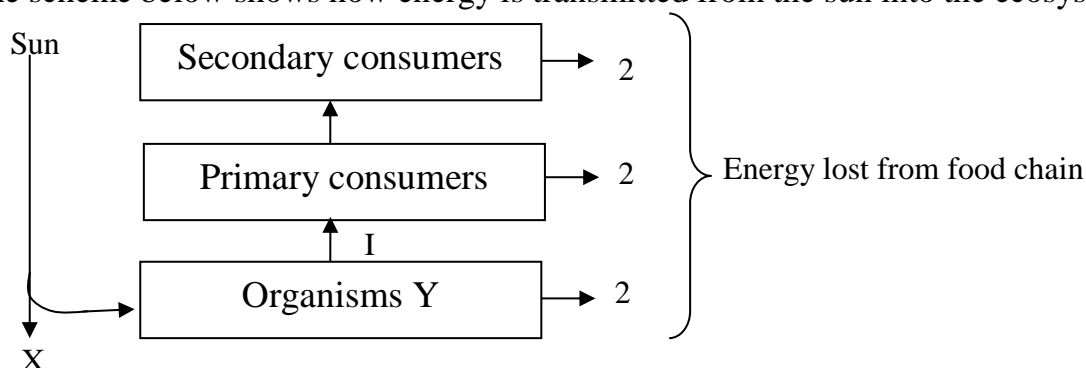
(ii) What is the function of the hormone named in (d) (i) above. (1mk)

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4. The scheme below shows how energy is transmitted from the sun into the ecosystem.



a) Name; (2mks)

i) Organisms Y

ii) Process I

b) Suggest two ways through which energy is lost from one trophic level to the next. (2mks)

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c) What is the importance of decomposers in an ecosystem? (1mk)

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d) Define the term Eutrophication. (1mk)

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e) Which trophic level has the least number of organisms? Explain why. (2mks)

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5. An animal had the following teeth; on the upper jaw, no incisors, no canines, six premolars and six molars. On the lower jaw, 6 incisors, no canines, six premolars and six molars.

a) Write down it's dental formula. (1mk)

b) (i) Suggest the mode of nutrition of this animal.....
(1mk)

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

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c) State **two** adaptations of the animal whose dental formula you have written in (a) above. (2mks)

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d) Name one dental disease in humans. (1mk)

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.....

e) What is the role of teeth in digestion? (2mks)

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SECTION B: (40 MARKS)

This section consist of three questions 6, 7 and 8. Answer question 6 (COMPULSORY) and either question 7 or 8 in the spaces provided.

6. The relationship between oxygen concentration, potassium gain and sugar loss in isolated barley root was determined. The results obtained are given in the table below. (The sugar loss and potassium gain are expressed in arbitrary units).

Percentage oxygen concentration	0	5	10	15	20	100
Sugar loss	15	20	42	45	45	48
Potassium gain	5	55	70	73	75	70

- a) Plot on the same axes graphs of sugar loss and potassium gain against oxygen concentrations. (8mks)

GRAPH PROVIDED BY TEACHER

- b) (i) Suggest the process by which potassium is taken in by the roots. (1mk)

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- (ii) Give reasons for your answer. (2mks)

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- c) Account for the sugar loss and potassium gain at;

- i) 0% oxygen concentration. (2mks)

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- ii) Between 5% and 20% oxygen concentration. (2mks)

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- d) Apart from oxygen concentration, suggest two other factors that affect the above process. (2mks)

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This image shows a full page of primary-ruled paper. It features multiple horizontal rows of small black dots, which are commonly used as guides for handwriting practice in elementary school. The dots are evenly spaced and extend across the entire width of the page. There are no margins, text, or other markings present.

This image shows a full page of primary-ruled paper. It features multiple horizontal rows of small black dots, which are commonly used as guides for handwriting practice in elementary school. The dots are evenly spaced both vertically and horizontally across the entire page. There are no margins, text, or other markings present.

END OF TERM 1 EXAMS

BUSINESS STUDIES

FORM FOUR

PAPER 1

TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN.....INDEX NO:.....

1.State four reasons why individuals engage in business activities **(4mks)**

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2.List any five characteristics of services **(5mks)**

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3.State any three circumstances under which human resources help in exploiting natural resources
(3mks)

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4.Highlight any four means of payment available to tradersin your home town (4mks)

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5.Mention any three documents used in home trade which do not contain the prices of goods
dispatched (3mks)

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6.State any five business considerations in evaluating a business opportunity (5mks)

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7.Use the table below to show four differences between partnerships and private companies (4mks)

Partnerships	Private companies

8.Give four reasons as to why a warehouse may be ineffective **(4mks)**

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9.Despite the development of widespread & modern means of transportation, human portorage is still popular. Enumerate any four factors that may have contributed to its usage in modernized economies **(4mks)**

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10.Identify any five items of information in an insurance policy **(5mks)**

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11.State any three unethical practices employed during the promotion of products **(3mks)**

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12.Highlight four main circumstances that makes it mandatory for business to use written communication **(4mks)**

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13.Identify any four factors that affects both demand and supply of a commodity **(4 mks)**

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14. Outline five ways in which “Land” may influence the location of a firm **(5mks)**

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15.State any four expenses incurred by intermediaries in the distribution of goods **(4mks)**

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16.Using the book keeping equation fill in the missing figures for business A,B,C and D (4mks)

Business	Assets	Capital	Liabilities
A	36000		12000
B		37000	23000

C	70000		53000
D	18000	6000	

17.Highlight four items that are considered when measuring the national income using the expenditure approach **(4mks)**

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18. Use a (√) to classify the following accounts as either personal, impersonal or private.(4mks)

Account	Personal	Private	Impersonal
Capital			
Owino (debtor)			
Pent income			
Drawings			

19.Complete the following table by indicating the account to be debited and the one to be credited (4mks)

Started a business with Sh 50,000 cash		
Received a cheque from a debtor Kamunya		
Bought office equipment by cheque		
Paid creditor Wambui in cash		

20.Outline five benefits that a community derives from international trade **(5mks)**

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21.A part from taxes, state any other four sources of public finance internally **(4mks)**

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22.The following information relates to Mwangi traders for the month of August

Opening stock Sh.40,000

Purchases Sh.46,000

Carriage in Sh.2100

Closing stock Sh. 22,500

Goods are usually sold at a mark-up of 20%. Prepare a trading account (5mks)

23.State any four importance's of preparing a balance sheet to the business **(4mks)**

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24.Mogere traders had the following information from his books of account as at 31st December 2009

(4mks)

Capital 1/1/09 sh. 6,800,000

Additional capital sh. 1,221,560

Drawing for the year sh. 50,440

Capital 31/12/09 sh. 9,800,000

Determine the profit for the year.

25.Outline the meaning of the term “Crowding out effect”

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Have A Nice Holiday
Stay Safe

END OF TERM 1 EXAMS

BUSINESS STUDIES

FORM FOUR

PAPER 2

TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN.....

INDEX NO:.....

Instructions to the candidates.

Choose any five questions. All questions carry equal marks.

1. (a) Highlight five characteristics of an efficient tax system. (10mks)

(b) Differentiate between a public limited company and a public corporation. (10mks)
2. (a) Explain clearly the malpractices by traders against which consumers may need protection by the government. (10mks)

(b) Explain clearly with the aid of a diagram the change in equilibrium as a result of a change in demand of a commodity. (10mks)
3. (a) Discuss five benefits that a customer may get by using Automated Teller Machine (ATM) for financial transactions. (8 mks)

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(b) The following trial balance related to Kimani's business as at 31st December 2012

	DR(SHS)	CR(SHS)
Stock on 1 st January 2003	60,000	
Purchases and sales	400,000	580,000
Returns	20,000	50,000
Debtors and Creditors	65,000	40,000
Premises	540,000	
Machinery	200,000	
Fixtures and fittings	100,000	
Carriage outwards	8,000	
Wages and salaries	30,000	
Discounts	25,000	32,000
Commissions	16,000	14,000
Cash in hand	70,000	
Capital	<u> </u>	<u>818,000</u>
	<u>1,534,000</u>	<u>1,534,000</u>

REQUIRED:

(a) Prepare a trading profit and loss account for the period ended 31st December 2012 and a balance sheet as at that date if the closing stock was worth shs 70,000 (12 mks)

4. (a) Explain clearly the problems associated with expenditure approach method in measurement of national incomes. (10mks)

(b) Outline five reasons why ethical practices is necessary in product promotion. (10mks)

5. (a) Jane, a petty cashier was given Sh ,2000 on 1st June 2005. During the month, she made the following payments:

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2005

June 2 Stationery Sh 100, staff tea Sh 80.

5 Telephone bill Sh 50, postage stamps Sh 100.

8 Travelling Sh 200, telephone Sh 100.

10 Stationery Sh 50, staff tea Sh 100.

15 Postage stamps Sh 50, travelling Sh 100.

20 Sundry expenses Sh 100.

23 Stationery Sh 80, telephone Sh 40.

25 Travelling Sh 50, sundry expenses Sh 100.

28 Envelopes Sh 20, staff tea Sh 50.

30 Adhiambo, a creditor, was paid Sh 100.

Use the following analysis columns to prepare a petty cash book:

Stationery, Staff tea, Travelling. Telephone, Sundry expenses. Ledger accounts. (12 mks)

(b) Explain five demerits that a country may suffer when the government becomes a major investor in business. (8 mks)

6. (a) Explain the role played by insurance industry in promoting the development of Kenyan economy. (10mks)

(b) Explain clearly the tools of monetary policy used by the central bank to control inflation. (10mks)

END OF TERM 1 EXAMS

AGRICULTURE

FORM FOUR

PAPER 1

TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN.....INDEX NO:.....

INSTRUCTIONS TO CANDIDATES:

- Answer **ALL** the questions
- Answers should be written in the spaces provided

SECTION A (30 MARKS)

Answer ALL Questions in the Spaces Provided

1. State **two** ways by which wind affects the growth of crops. (1mk)

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.....

2. Name **three** types of capital used in Agriculture. (1½mks)

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.....

3. List **four** reasons for primary cultivation.

(2mks)

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4. Give **four** properties of soil that are influenced by its texture.

(2mks)

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5. State **two** reasons for drying grains before storage.

(1mk)

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6. List **four** methods of treating water for domestic use.

(2mks)

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7. State **four** ways by which plant nutrient may be lost from the soil.

(2mks)

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8. State **four** functions of nitrogen in crops. (2mks)

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9. State **three** ways in which organic mulch helps to conserve water in the soil. (1½mks)

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10. Give **four** advantages of proper stocking rate in pasture management. (2mks)

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11. Differentiate between thinning and pricking out as used in crop management (1mk)

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12. List **three** books of account used in the farm (1 ½ mks)

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13. State **three** cultural measures taken by farmers to control weeds in the field (1 ½ mks)

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14. State **three precautions taken when harvesting pyrethrum**

(1 ½ mks)

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.....
.....
15. Mention **four advantages of minimum tillage**

(2mks)

.....
16. Name **three crop diseases caused by viruses**

(1 ½ mks)

.....
17. Outline **three examples of joint products in crop production**

(1 ½ mks)

.....
18. State **three advantages of land fragmentation**

(1 ½ mks)

.....

19. Give **four** advantages of using zero grazing system of grazing (2mks)

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SECTION B. (20 MARKS)

Answer ALL questions in this section in the spaces provided

18. Study the diagram below and answer the questions that follow. The illustrations represent a method of crop propagation.



(a) Name the crops (s) propagated by illustrations:
(1mrk)

A:.....

B:.....

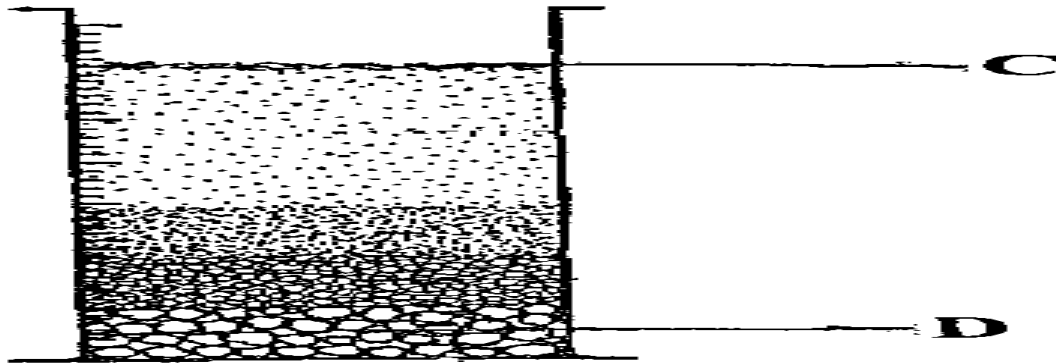
(b) Give **three** factors that promote the rooting of illustration A.
(3mrks)

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



(a) What was the aim of the experiment? (1mrk)

.....

(b) Name the parts labeled C and D. (2mrks)

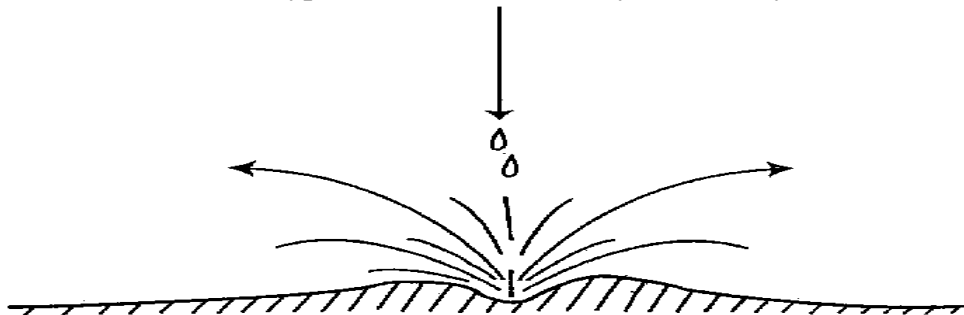
C:.....

D:.....

(c) Name the property of soil being investigated. (1mrk)

.....

20. The illustration below shows a type of soil erosion. Study it carefully and answer the questions that follow.



a) Identify the type of erosion illustrated. (1mrk)

.....

b) Give **two** soil factors that influence the rate of soil erosion. (2mrks)

.....

.....

c) Name **one** agent of soil erosion. (1mrk)

.....

 20. The illustration below represents a financial document . Study it carefully and answer the questions that follow.

No: 2004 26/07/2013			Date:
M/S MUHORONI FARMERS STORE			
DR.....ACHEGO FARMERS CO-OP UNION			
BOX 2, AWASI			
Particular	Quantity	Price per unit	Amount
Layers mash	20 bags	1,200.00	24,000.00
Urea	5bags	3,000.00	15,000.00
Sorghum seeds	10 pkts	300.00	3,000.00
Delivery details	Total		42,000.00
Discount - None			
Terms of payment: Cash in 30days upon receipt of Stamp &			Official
goods			signature

a) Identify the document illustrated above. (1mrk)

.....

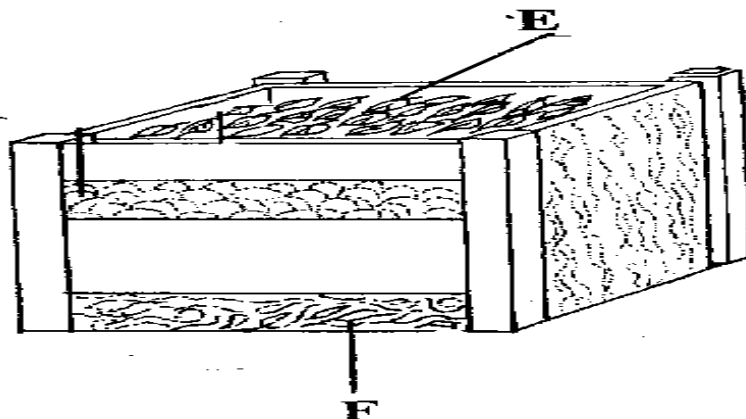
b) State **two** functions of the document. (2mrks)

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- 22 The diagram below represent a method of manure preparation. Study it carefully and answer the questions that follow.



- a) Identify the type of manure being prepared. (1mrk)
.....
- b) Name the parts labeled **E** and **F**. (1mrk)
E:.....
F:.....

SECTION C:

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

24. a) Outline **five** activities that may be undertaken in minimum tillage. (5mks)
b) State the qualities of a good farmer manager. (5mks)
c) Explain **five** ways in which farmers may overcome risks and uncertainties in farming business. (10mks)
25. (a) Describe **five** functions of agricultural marketing. (10mks)
(b) Explain the **four** types of water erosion. (4mks)
(c) Describe the nursery preparation and establishment in rice production. (6mks)

26. (a) Describe **five** factors that influence the demand of agricultural products.
(10mks)
- (b) Outline the different methods of pasture conservation and utilization. (5mks)
- (c) Give reasons for raising vegetable seedlings through a nursery. (5mks)

END OF TERM 1 EXAMS

AGRICULTURE

FORM FOUR

PAPER 2

TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN.....

INDEX NO:.....

DATE;.....

INSTRUCTIONS TO CANDIDATES:

- *Answer ALL the questions*
- *Answers should be written in the spaces provided*

1. State **two** reasons why lubrication or greasing of farm machines is important (2mks)

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2. State **three** practices which should be carried out when preparing a sow for farrowing (3mks)

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3. State **four** features of a good maize granary (2mks)

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4. Give **two** advantages of artificial calf rearing (2mks)

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5. Mention **two** advantages of embryo transplant (2mks)

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6. List **four** materials used for the construction of a gabion (2mks)

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7. State **two** reasons for washing the udder before milking (1mk)

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8. Name **two** livestock diseases controlled through use of A.I (1mk)

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9. Name **two** ways that show good feeding help to control livestock diseases (2mks)

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10. State **four** categories of farm tools and equipment (2mks)

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11. Give **two** main functions of the crop in the digestive system of poultry (1mk)

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12. Name **two** species of camels (1mk)

.....

.....

13. Explain the term stocking rate as used in livestock production (1mk)

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14. Name **four** tick borne diseases (2mks)

.....

.....

.....

.....

.....

15. Name **one** sheep breed which is resistant to foot rot disease (1mk)

.....

16. Name **two** diseases that affect female animals only (1mk)

.....

.....

.....

17. What is dry cow therapy? (1mk)

.....

.....

.....

18. Differentiate between pen mating and flock mating in poultry (1mk)

Pen mating

.....

Flock mating

.....

19. State **one** reason why hoof trimming is carried out in sheep (1mk)

.....

.....

20. State any **two** signs of ill-health in livestock (1mk)

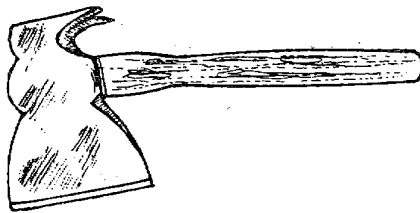
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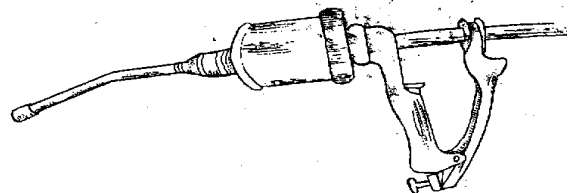
SECTION B (20 MARKS)

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

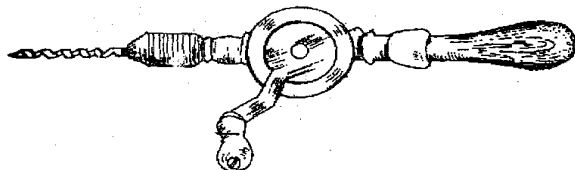
21. Below are illustrations of farm tools and equipment. Study them carefully and answer the questions that follows.



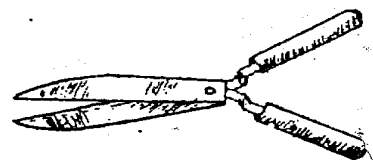
M



N



P



R

- (a) Identify the above tools.

(2mrks)

M:.....

N:.....

P:.....

R:

- (b) State **one** main use of each tool. (1mrk)

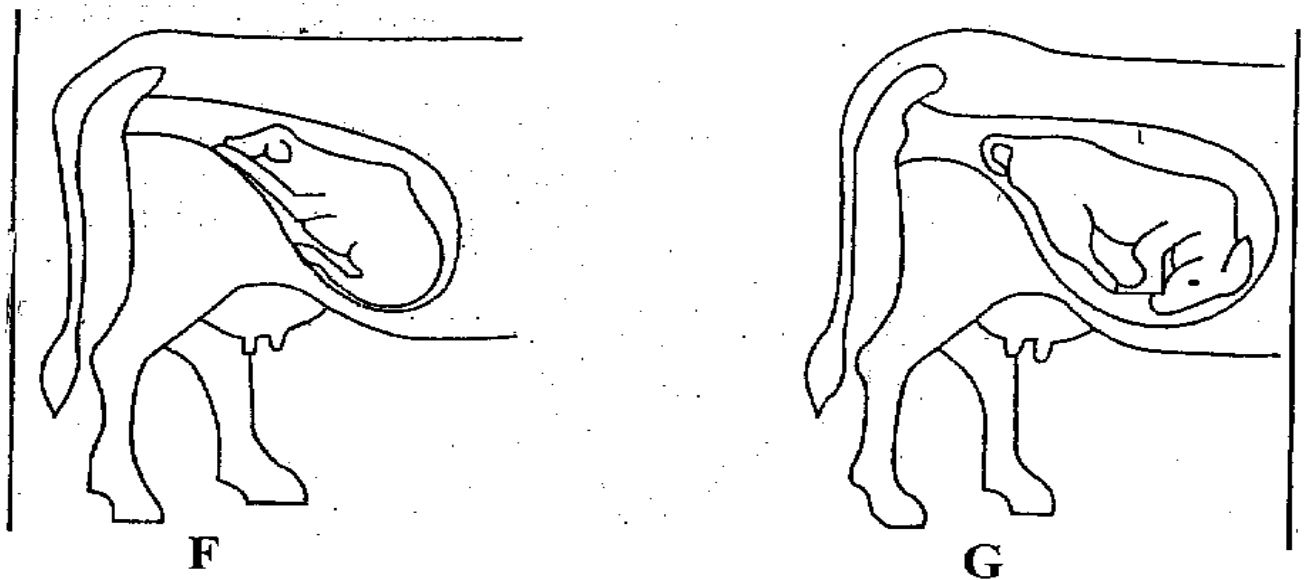
M:.....

R:.....

- (c) Explain **one** maintenance practice carried out on tool **P**. (1mrk)

.....
.....

22. Study the diagram below and use them to answer the questions that follow.



- (a) Which of the foetus is in the correct position of parturition? (1mrk)

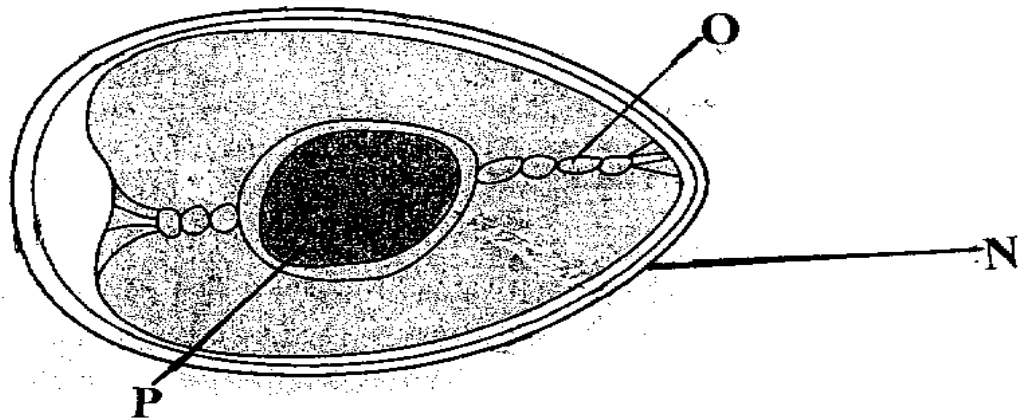
.....

- b) Name the type of parturition for the foetus **F** and **G**. (2mrks)

F:.....

G:.....

23. Study the diagram of an egg below and answer the question that follow.



- (a) Name the parts labeled: (1½ mrks)

N:.....

O:.....

P:.....

- (b) State the functions of the parts O and N. (2mrks)

O:.....

N:.....

- (c) Give any **three** qualities of eggs used for incubation. (1½ mrks)

.....

.....

.....

- 24 A farmer to prepare a **200kg** of chick ration containing **20% DCP**. Using person' square method, calculate the amount of maize containing **10%DPC** and sunflower containing **35% DCP** the farmer would need to prepare the ration.(*Show your workings*)
(5mrks)

25 (a) Name the method of identification shown below.

(1mrk)



.....
(b) Name the tool used for carrying out the above practice.

(1mrk)

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

(c) Name **two** other methods for identifying animals.

(1mrk)

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

Answer any TWO questions from this section in the spaces provided

24 (a) State and explain six methods of controlling internal parasites in livestock

(6 marks)

(b) Describe the management practices that a farmer should carry out to improve milk production in a herd of dairy goats.

(10 marks)

(c) State four disadvantages of natural mating as a method of breeding in dairy cattle production

(4 marks)

25 (a) Outline the daily maintenance practices that should be carried out on a farm tractor.

(10 marks)

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

(b) Describe the body conformation features of beef cattle (4 marks)

(c) Outline six causes of stress to a flock of layers. (6 marks)

26 (a) Describe mastitis in dairy cattle under the following subheadings

(i) Predisposing factors (4 marks)

(ii) Symptoms (3 marks)

(b) State factors considered when siting farm structures (8 marks)

(c) Outline the structural requirements of a deep litter house

END OF TERM 1 EXAMS

CHEMISTRY

FORM FOUR

PAPER 1
TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

INSTRUCTIONS TO CANDIDATES

- Write your **name** and **index number** in the spaces provided above
- **Sign** and write the **date of examination** in the spaces provided.
- Answer **all** the questions in the spaces provided.
- Mathematical table and silent electronic calculators may be used.
- **All** working must be clearly shown where necessary.

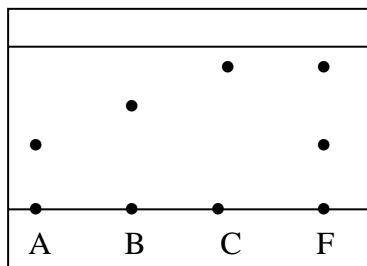
FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-26	80	

This paper consists of 13 printed pages.

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

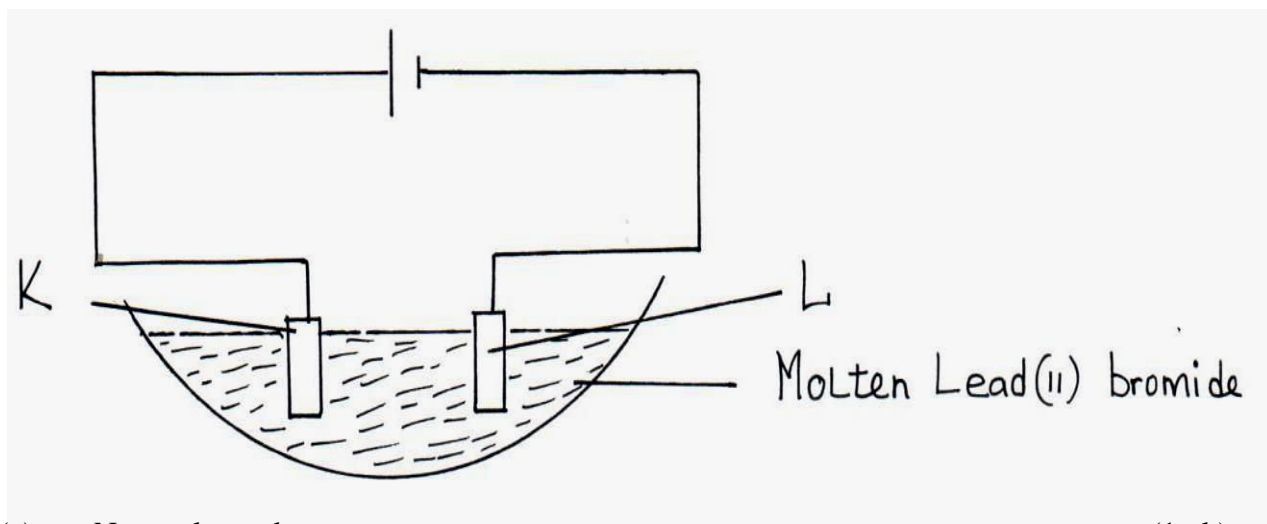
1. Three pure pigments were prepared and their spots placed on a filter paper as shown below. The three pigments are A, B and C. A mixture F was also placed on the filter paper at the same time with the pure pigments. The filter paper was then dipped in ethanol solvent and left for some half an hour. The results were obtained as follows.



- (i) Which of the three pure pigments is most sticky? Give a reason for your answer. (1mk)
 - (ii) Which pure pigment is not present in the mixture **F**? (1mk)
 - (iii) Show on the diagram the baseline. (1mk)
2. Describe how a pure sample of lead (II) carbonate can be prepared in the laboratory starting with lead II oxide. (3mks)
3. Write ionic equations for the reactions between : (4mks)
- (a) Aqueous solution of sodium chloride and lead nitrate
 - (b) Aqueous solution of barium chloride and magnesium sulphate
 - (c) Aqueous solution of potassium hydroxide and dilute nitric acid
 - (d) Zinc and an aqueous solution of copper (II) sulphate

4. If it takes 20 seconds for 200cm^3 of oxygen gas to diffuse across a porous plug. How long will it take an equal volume of sulphur (IV) oxide to diffuse across the same plug? (3mks)
5. Explain reaction of lithium, sodium and potassium with water and write down the chemical equations in each case. (6mks)
6. A mixture contains ammonium chloride, aluminium oxide and sodium chloride. Describe how each solid substance can be obtained from the mixture. (3mks)
7. State the difference between the following salts; Deliquescent and hygroscopic salts. (2mks)

- 8.. Below is a set-up of apparatus used to investigate the effect of electric current on molten lead (II) bromide.



- (a) Name electrode. (1mk)

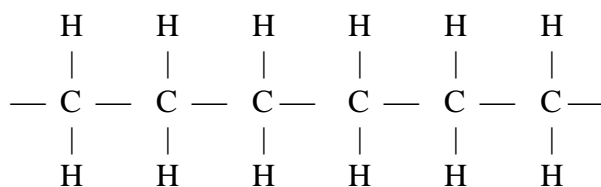
K

L

- (b) State the observation made at electrode **K**. (1mk)

- (c) Write an equation for the reaction taking place at electrode **L**. (1mk)

9.A sample of a polyethene polymer has the following structure.



- a) Draw the structural formula of the monomer that makes the above polymer
- b)The polymer is found to have a molecular mass of 2268g. Determine the number of monomers in the polymer. (**H = 1, C = 12**). (2mks)

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

10. The isotopes hydrogen are ${}^1_1\text{H}$ and ${}^2_1\text{H}$. Determine the molecular masses of the molecules formed when each of these isotopes react with chlorine. (Cl = 37, H=1) (1mk)

11. The table below gives the atomic numbers of elements W,X,Y and Z. The letters do not represent the actual symbol of the elements

Element	A	B	C	D
Atomic number	9	10	11	12

a) Which **one** of the elements is unreactive? Explain (1mk)

b)i) Which **two** elements would react most vigorously with each other? (1mk)

ii) Give the formula of the compound formed when the elements in b (i) above react (1mk)

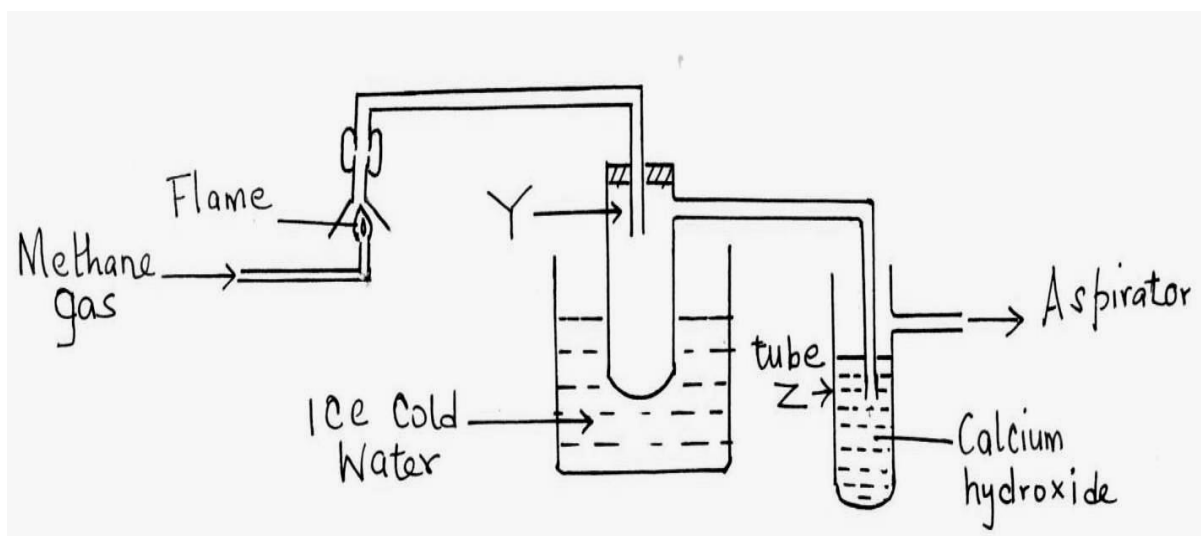
12a) Distinguish between a hydrogen bond and covalent bond (2mks)

b) Explain why the boiling point of water is higher than that of hydrogen Sulphide

(Relative molecular mass of water is 18 while that hydrogen sulphide is 34)

(2mks)

13. The set-up below was used to investigate the products of burning methane gas. Study it and answer the questions that follow:



(a) What product will be formed in the test tube Y?

(1mk)

(b) State and explain the observations made in tube Z.

(2mks)

14. Below are P^H values of some solutions.

Solution	Z	Y	X	W
P^H	6.5	13.5	2.2	7.2

(i) Which solution is likely to be

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

I Acidic rain. (½mk)

II Potassium hydroxide (½mk)

(ii) A basic substance **V** reacted with both solutions **Y** and **X**. What is the nature of **V**. (1mk)

15. In cold countries, salt is sprayed on the road to melt ice but in the long run it costs the motorists.

(a) How does the salt help in melting ice? (1mk)

(b) How does the salt affect the motorists? (1mk)

16. Using dots (•) and crosses (x) to represent electrons, show bonding in the compounds formed when the following elements react: (**Si=14, Na=11, Cl=17**).

(a) Sodium and chlorine. (2 Mks)

(b) Silicon and chlorine. (2 Mks)

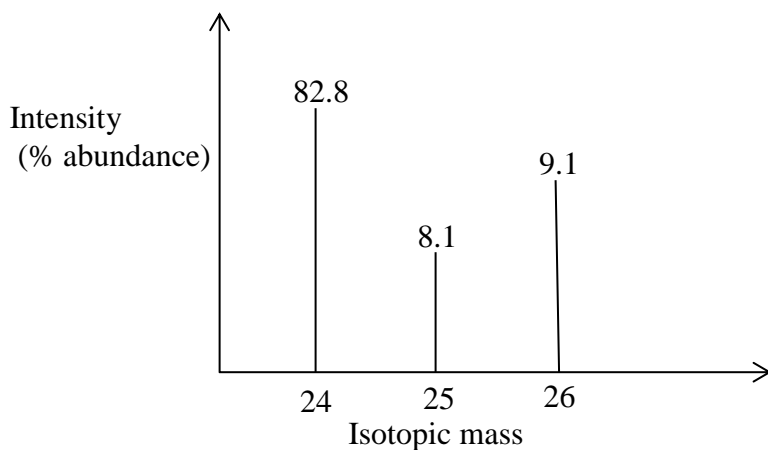
17. (a) State Graham's law of diffusion. (1mk)

(a) 20cm³ of an unknown gas Q takes 12.6 seconds to pass through a small orifice, 10cm³ of oxygen gas takes 11.2 seconds to diffuse through the same orifice under the same conditions

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

of temperatures and pressure. Calculate the molecular mass of unknown gas Q ($O = 16$).
(3mks)

18. The peaks below show the mass spectrum of element X.

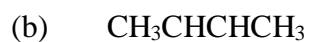


Calculate the relative atomic mass of X. (2mks)

19. Name the following compounds using the IUPAC rules.



_____ (1mk)



_____ (1mk)

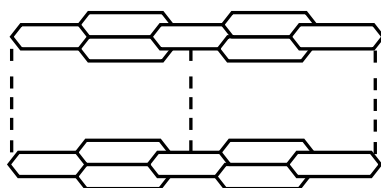
- (c) Draw TWO structural formulae of isomers of compound with the molecular formula $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_3$

(2mks)

20.(a) What is meant by allotropy?

(1 mk)

b) The diagram below shows the structure of one allotropes of carbon.



i) Identify the allotrope

(1 mk)

ii) State **one** property of the above allotrope and explain how it is related to its structure. (2mk) .

21. 24cm³ of a solution of 0.1 M potassium hydroxide were exactly neutralized by 30cm³ of a solution of sulphuric acid. Find the molarity of the acid.

(3 mks)

22. (a) Give **one** use of hygroscopic substances in the laboratory.

(1 mk)

(b) What is meant by the terms:

(2 mks)

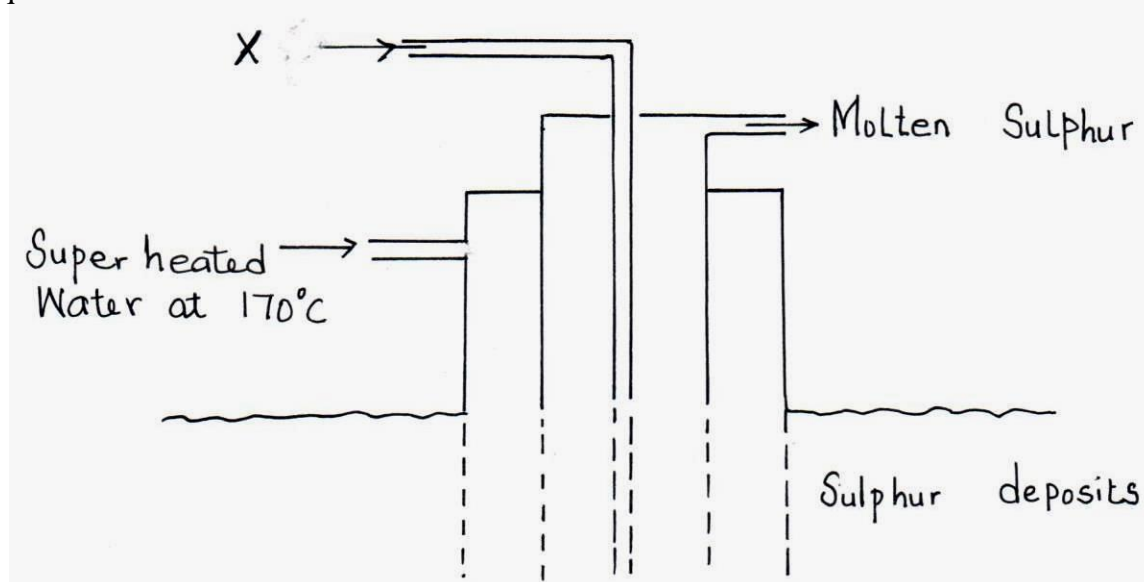
(i) Isotopes

(ii) Mass number

(c) The formulae for a chloride of phosphorus is PCl_3 . What is the formula of its sulphide?

(1 mk)

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



(i) Identify X.

(1mk)

(ii) Why is it necessary to use super heated water in this process?

(1mk)

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

(1mk)

24. A certain carbonate XCO_3 , reacts with dilute hydrochloric acid according to the equation given below:
 $\text{XCO}_{3(s)} + 2\text{HCl}_{(aq)} \longrightarrow \text{XCl}_{2(aq)} + \text{CO}_{2(g)} + \text{H}_2\text{O}_{(l)}$
 If 4g of the carbonate reacts completely with 40cm³ of 2M hydrochloric acid, calculate the relative atomic mass of X. (C=12.0 ,O=16.0, Cl=35.5).
 (3 Mks)

25. The table below gives some properties of three substances **I**, **J** and **K**. Study it and answer the questions that follow.

Substance	Mpt (°C)	Solubility in water	Electrical conductivity	
			Solid	Molten
I	1063	Insoluble	Conduct	Conduct
J	113	Insoluble	Doesn't	Doesn't
K	402	Sparingly soluble	Doesn't	Conduct and is decomposed

- (a) Suggest the type of structure in

- (i) **I** (1mk)
 (ii) **K** (1mk)

Explain why the molten **K** is decomposed by electric current but **I** is not decomposed.(2mks)

END OF TERM 1 EXAMS

CHEMISTRY

FORM FOUR

PAPER 2
TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

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.
- e) Mathematical tables or silent electronic calculators may be used.

QUESTIONS	MAX SCORE	STUDENT SCORE
1	14	
2	14	
3	14	
4	12	
5	13	
6	13	
TOTAL	80	

Q1(a) The grid below represents part of the periodic table. Letters are not actual symbols of the elements. Use it to answer the questions that follow.

A								B
				C		H		
J	E			D			G	
	F							

- (i) Name the family to which E and F belong. (1mk)
- (ii) Name the least reactive element and give a reason. (1mk)
- (iii) What type of structure is formed when E and G react. (1mk)
- (iv) Draw the structure of the molecular compound formed between D and G clearly showing the types of bonds that exist. (2mks)
- (v) Write the formula of the compound formed between E and H. (1mk)
- (vi) Name the product formed when sodium is burnt in insufficient oxygen and write the equation for reaction between the product and water. (2mks)
- (vii) Indicate using a tick on the grid the position of element M which forms an ion with formula M^{2-} and electronic arrangement 2.8.8.8 (1mk)

(b) Study the table below and use it to answer the questions that follow. (Letters are not actual symbols)

Element	Atomic number
L	13
M	16
N	19
P	9
Q	17

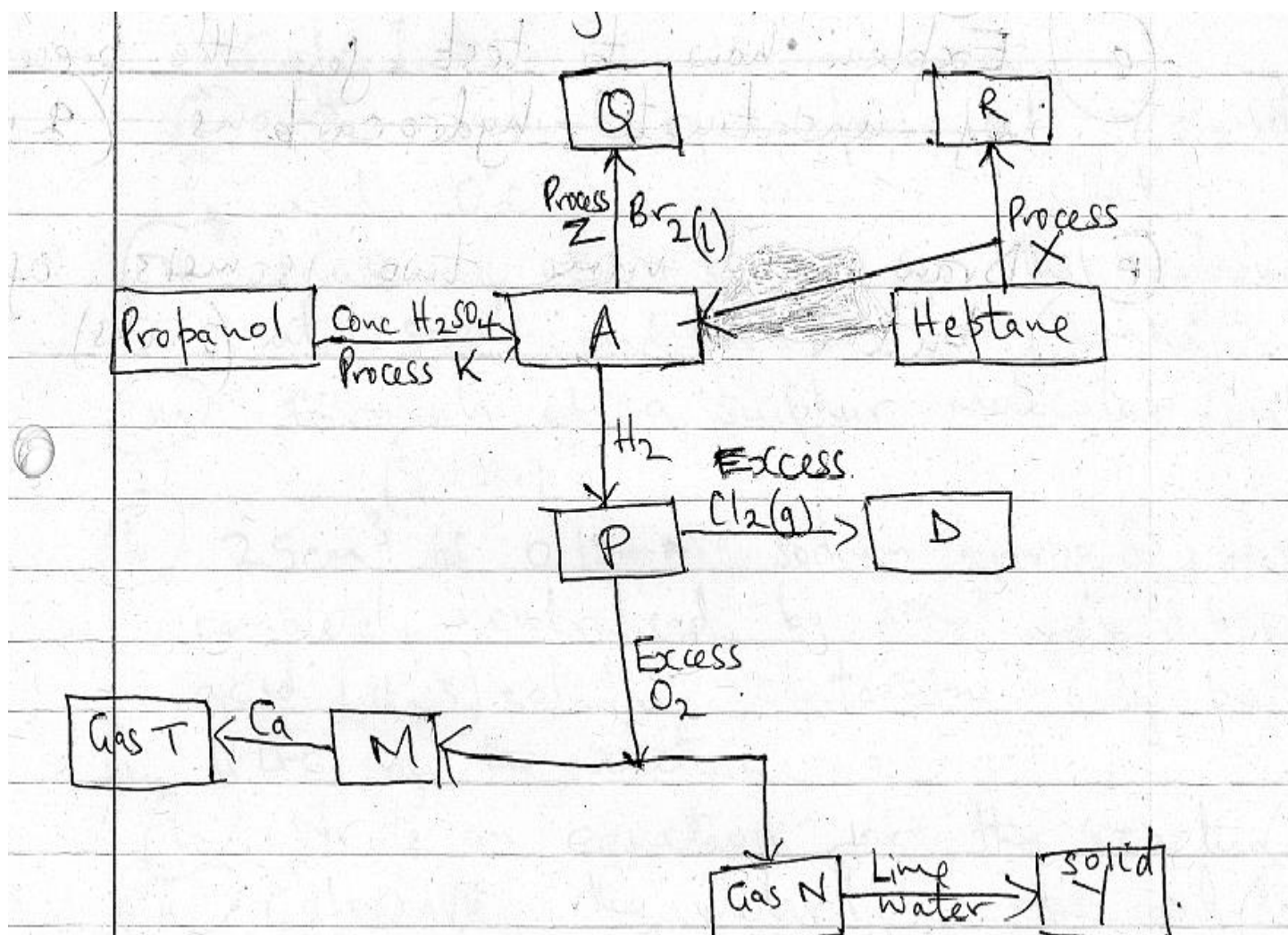
(i) Compare giving reasons the reactivity of P and Q. (2mks)

(ii) How does the radius of L and M compare (1mk)

(iii) Select the most reactive metal from the group. (1mk)

(iv) Write an equation for reaction between N and water. (1mk)

Q2 Use the flow chart below to answer the questions that follow.



(a) Name the substances

- (i) P
- (ii) R
- (iii) T
- (iv) Y

(4mks)

(b) Write equations using actual formula of substances for formation of

- (i) Q
- (ii) M and N
- (iii) Gas T

(3mks)

(c) Name the processes

- (i) X
- (ii) K

(iii) Z

(3mks)

(d) Draw the structures of

(i) A

(ii) D

(2mks)

(e) Draw and name two isomers of butene.

(2mks)

Q3(a) 2.56g of sulphur formed vapour at 546°C and 760mmHg. The vapour occupied a volume of 672cm^3 .

Calculate

(i) the volume of vapour at 760mmHg and 0°C .

(2mks)

(ii) Mass of 22.4 litres of the vapour at STP conditions.

(2mks)

(iii) Formula of a sulphur molecule. (S =32)

(2mks)

(b) 25cm³ of 0.154M sodium hydroxide, was completely neutralized by 30cm³ of mineral dibasic acid (H₂X) solution containing 6.3g per litre of the solution.

(i) Write an equation for the reaction.

(1mk)

(ii) Calculate the molarity of the acid.

(3mks)

(iii) Determine the RFM of the acid.

(2mks)

(iv) Identify x

(2mks)

(C=12,O=16,S=32,Cl=35.5,H=1,N=14)

.....
.....

Q4 Hydrogen gas is passed through solid Y in a U-tube before being burnt in air.

(i) Explain how to test for presence of hydrogen gas. (1mk)

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

(ii) What is the purpose of substance Y and suggest its identity. (2mks)

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

(b) The products of burning hydrogen were passed through a test tube dipped in ice-cold water.
Unburnt gas was then passed over heated CuO.

(i) Write an equation for burning of hydrogen in air. (1mk)

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.....

(ii) Name a substance that can be used to test for the substance collected in the test-tube dipped in ice-cold water. (1mk)

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(iii) What is the observation made on the copper(II) oxide after a short while. (1mk)

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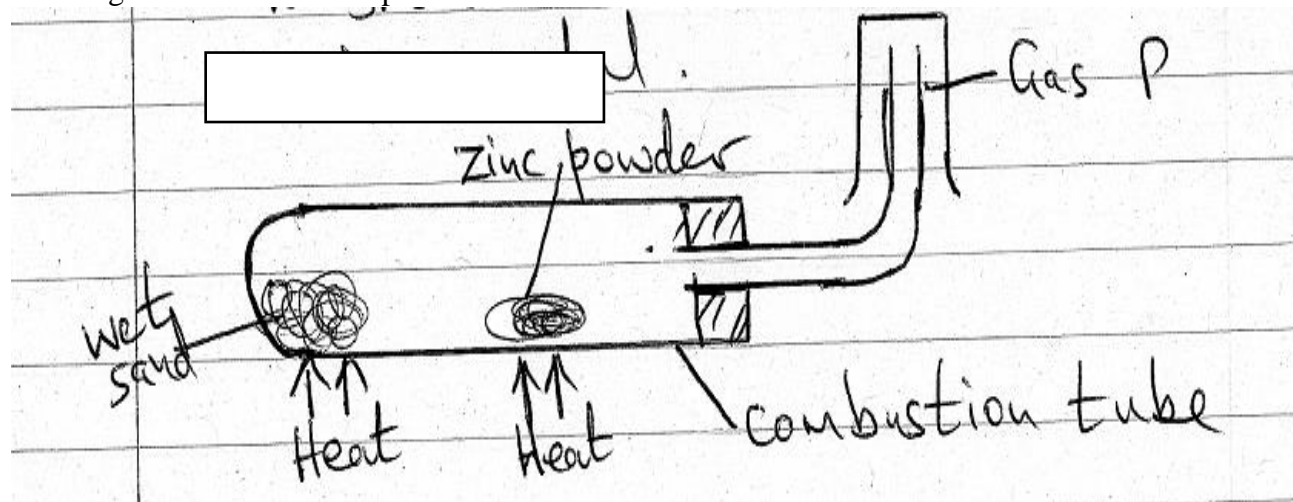
(iv) Write an equation for the reaction that takes place on the copper(II) oxide solid. (1mk)

.....
.....

(v) Other than for manufacture of ammonia and hydrochloric acid, , state another use of hydrogen. (1mks)

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

- (c) The diagram below is a set-up used to show how water reacts with zinc metal.



- (i) Why is wet sand used and not water. (1mk)
- (ii) Write an equation for the reaction in the combustion tube. (1mk)
- (iii) What observation is made in the combustion tube as heating went on. (1mk)
- (iv) Explain why potassium cannot be used in place of zinc. (1mk)

Q5(a) Carbon(II) Oxide gas can be prepared by dehydrating methanoic acid using concentrated sulphuric(VI) acid.

- (i) Give two physical properties of carbon(II) oxide gas. (2mks)
- (ii) Explain how carbon(II) oxide gas causes poisoning if inhaled. (1mk)

(iii) Describe a simple chemical test that can be used to distinguish between carbon(II) oxide and carbon(IV) oxide. (2mks)

(b) Soot is a form of impure carbon

(i) Name another form of carbon that is amorphous. (1mk)

(ii) State the difference in conductivity between the two crystalline allotropes of carbon. (2mks)

(iii) Give one use for each of the two crystalline allotropes. (2mks)

(c)(i) Write an equation for decomposition of ammonium carbonate on heating. (1mk)

(ii) Explain the observations made when each of the carbonates below is reacted with dilute sulphuric(VI) acid:

Lead carbonate

.....

.....

.....

.....

Copper(II) carbonate

.....

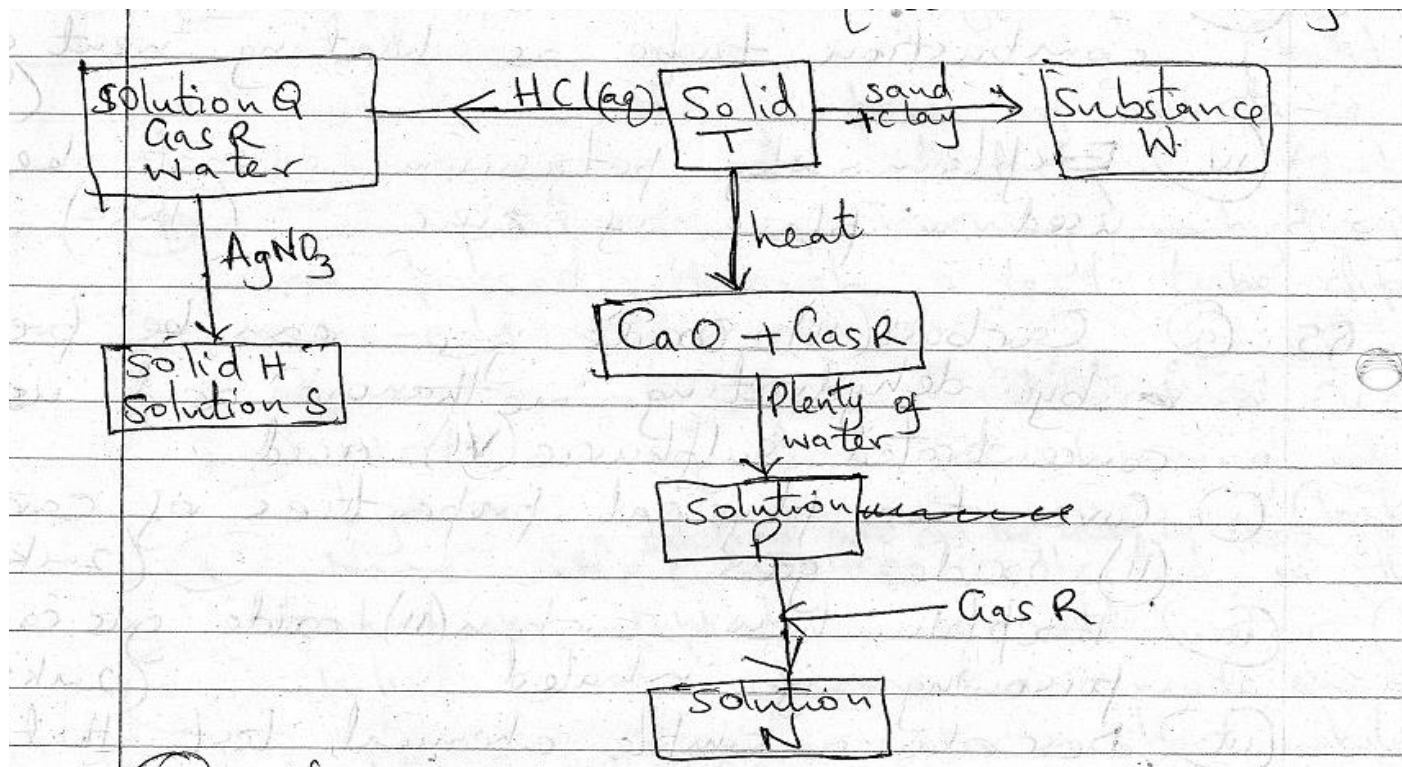
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(2mks)

- Q6 The flow chart below shows some reactions undergone by some salts. Use it to answer the questions that follows.



- (a) Name
- (i) Gas R
 - (ii) Solution N
 - (iii) Solid H

(3mks

- (b) Write equations for the following reactions.
- (i) Addition of AgNO_3 to solution Q
 - (ii) Heating solid T

(iii) Formation of solution P

(3mks)

(c) Give one use for the substances below

(i) Gas R

(ii) Substance W

(iii) Silver bromide

(3mks)

(d)(i) Name the method used to prepare salts H and S

(1mk)

(ii) Name another salt that can be prepared using the method in d(i) above. (1mk)

(e) Ammonium ferrous sulphate hexahydrate an example of a double salt. Write its formula.
(1mk)

(f) Give one example of a salt contained in fertilizers. (1mk)

END OF TERM 1 EXAMS

CHRISTIAN RELIGIOUS EDUCATION

FORM FOUR

PAPER 1

TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

Instructions

Select any five questions.

1. a) Identify the national goals that are achieved through the study of CRE. (5mks)
b) Outline the literary forms used in writing Biblical books. (7mks)
c) Explain how Christians are continuing with God's work of creation. (8mks)
2. a) Outline seven ways in which God demonstrated His mercy to the Israelites at Mt. Sinai. (7mks)
b) Describe the covenant making process between God and Abraham as indicated in Genesis 15: 1-19 (8mks)
c) What are the features of marriage that qualifies it to a covenant? (5mks)
3. a) Give seven duties performed by Samuel after his call until his death. (7mks)
b) Give six factors which contribute to schism between Judah and Israel. (6mks)
c) List the qualities of Prophet Elijah that a Christian leader should possess in Kenya today. (7mks)
4. a) Give seven similarities between the traditional Africa prophets and the Old Testament Prophets. (7mks)
b) Explain the hypocritical religious practices of the Israelites during the time of Prophet Amos. (8mks)
c) Identify five attributes of God that Christians can learn from Prophet Amos. (5mks)

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

5. a) Explain Jeremiah's prophecy about the new covenant Jeremiah 23:5-6; 30-33 (7mks)
b) Give six similarities in the life and experience of Nehemiah and Jesus Christ. (6mks)
c) What lessons does Christian learn from Prophet Jeremiah's teaching on the new covenant? (7mks)
6. a) Explain the importance of marriage in African traditional society. (8mks)
b) Give five changes that have taken place in property ownership in traditional African community. (5mks)
c) What are the causes of divorce in the society today? (7mks)

END OF TERM 1 EXAMS

CHRISTIAN RELIGIOUS EDUCATION

FORM FOUR

PAPER 2

TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

Instruction

Select any five questions.

1. Give eight ways in which Jesus fulfilled the prophecies of suffering servant of Yahweh. (8mks)
 - b) Outline the content of Mary's song, the Magnificat. (5mks)
 - c) State seven reasons why Christians must be baptized. (7mks)
2.
 - a) Describe the healing of the woman with flow of blood. (Lk. 8: 43-48) (8mks)
 - b) How did people react towards Jesus' use of miracles? (7mks)
 - c) State five ways the church continues with the healing ministry of Jesus. (5mks)
3.
 - a) Outline seven events that took place during triumphant entry to Jerusalem. Lk. 19: 28- 44. (7mks)
 - b) Narrate Jesus' teaching on Eschatology. Lk. 21:5-36. (8mks)
 - c) How are Christians preparing for Jesus' parousia? (5mks)
4.
 - a) Outline the teaching of Peter concerning the people of God. 1st Peter 2: 9-10. (10mks)
 - b) Show ways through which Christians can promote unity. (6mks)

c) State ways in which kindness as a fruit of Holy Spirit is abused in Kenya today. (4mks)

5. a) Identify similarities between the Christian and Tradition Africa on marriage. (8mks)

b) Give reasons why young people are choosing to remain unmarried in Kenya today. (6mks)

c) Show ways in which the church is helping to solve domestic violence in Kenya today. (6mks)

6. a) What is the Christian view on plastic surgery? (10mks)

b) Ways through which science and Technology has negatively affected the environment created by God. (4mks)

c) Shows ways in which the youth in the church can carry out environmental restoration in Kenya today. (6mks)

END OF TERM 1 EXAMS

ENGLISH

FORM 4

PAPER 1

NAME.....**ADM NO:**.....

SIGN..... **INDEX NO:**.....

FUNCTIONAL WRITING

1. Write a letter to a presenter of your local radio requesting her to come and speak to the journalism club in your school (20 marks)

CLOZE TEST

2. *Fill in the blank spaces in the passage with the most appropriate word.* (10marks)

Reading a diary extensively can help you to.....(1)out about life in other parts of the world. In this.....(2),you are likely to find solutions to your.....(3), especially when you.....(4) about people whose problems are.....(5) to yours. Reading could also.....(6) you new insights into life. You should also learn to read.....(7) pleasure and enjoyment. As you(8)for your examinations, there will be time you feel like relaxing. At such a.....(9) you could read your favorite novel.....(10) your favourite magazine.

ORAL SKILLS

THE BRIDE

Why do you wear that dress so white?

Why do you wear that veil so light?

Why do your young eyes shine so bright?

Is it your wedding?

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

Questions

1. Describe the rhyme scheme of the poem. (2mks)
.....
.....
.....

2. Which intonation would use on the following lines? (2mks)

a) Why do wear that dress so white?
.....
.....
.....

b) Is it your wedding?
.....
.....
.....

3. How has the poet achieved rhythm? (2mks)
.....
.....
.....

4. How would you perform the last line of the poem and why? (2mks)

5. *Underline the syllable that should be stressed in each of the following words.* (5mks)

- a) Increase (v)
- b) Colleague
- c) Discuss

d) Present (N)

e) Deadly

6. In the sentences below, identify the words that begin with the same consonant sound. (6mks)

i) The chief chef has shaped cakes beautifully.

.....
.....

ii) They chose to do the household chores with great care.

.....
.....

iii) The honourable minister has no sense of humour.

.....
.....

iv) It took an hour for his heir to sport the girl with curly hair.

.....
.....

v) The polite pharmacist said he was psychologically disturbed by the fan in his study room.

.....
.....

vi) The jet transporting gem stones and garments has arrived.

.....
.....

7. Your school has invited a guest speaker to give a talk on discipline. At the end of the speech, the students comment that the talk was well delivered. Suggest reasons why they commented so. (5mks)

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.....

8. Complete the following conversation appropriately. (6 mks)

Mary:

Mary:

Mary:

Mary:

END OF TERM 1 EXAMS

ENGLISH

FORM FOUR

PAPER 2

TIME 2hrs 30 mins

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

QUESTION 1

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

Happiness arises largely from the mental qualities of contentment, confidence, serenity and active good-will. It includes the pain of losing as well as the pleasure of finding. It thrives best in a crowded life. The men and women who are recorded in history and biography as the most happy were with always somewhat to do than they could possibly do. Every waking hour of their lives was occupied with ambitious projects, literature, love, politics, science, friendship, commerce, professions, trades, their religious faith, and a thousand other matters. The secret of happiness may be found by making each of these interests count to its utmost as part of the fabric of life.

We need to avoid the extremes of sluggish placidity and feverish activity. we are not going to be satisfied with felicity which resembles that of a stone, unfeeling and unmoving, but will look back from future ears with sorrow and regret if we run to and fro, giving it what Socrates called ‘the itch’.

Happiness obviously includes two sorts of behavior: active and passive. We may say the active consists in searching and sharing, while the passive part is made up security and possession. Neither part is complete in itself, nor does neither yield full satisfaction if it is over-emphasized. Philosophers from the ancient Greeks to present day have been extolling a balanced life as the most happy life, and many unhappy people can, when they face the issue, trace their discontent to imbalance.

The recipe for happiness cannot be given in any single word, because its many virtues have to be combined in their proper quantities, at the proper times for proper purposes.

It is legitimate to seek happiness. We cannot help observing that while followers of some schools of thought are telling us to avoid seeking happiness; they intimate that if we do so we shall be happy.

The search requires a plan. We need to know what sort of happiness we seek, what the ingredients are, what our strongest wants are, and what we have to start with. We should train ourselves to keep the programme simple, and free from complications and side trips, to pay attention to little things to deflate quickly after being praised and to bounce back quickly after disappointment, to seize to create opportunities to put our special abilities to work, to seek excellence in everything we do, to remain modest and to review and revise periodically.

Most of us do not really have to seek far and wide. Happiness grows at our fireside, if we cultivate it.

- a) According to the writer, what is the source of happiness? (2mks)
- b) What two sorts of behavior does happiness include? (2mks)
- c) What does the writer mean when he talks about a balanced life? (2 mks)
- d) In a paragraph of about 30 words, summarize the things we must know as we search for happiness? (4mks)
- e) Explain the writers point in the last paragraph of the passage. (2mks)
- f) The recipe for happiness cannot be given in any single word.(1mk)
(Rewrite the sentence beginning: No single word...)
- g) Identify and comment on the figures of speech used in the following: (2marks)
 - (i) *It (Happiness) thrives best in a crowded life.*
 - (ii) *... as part of the fabric life.*
- h) Describe the tone of this passage. (1mark)

i) Explain the meaning of the following words as used in the passage. (4mrks)

(i) Extolling-

(ii) Intimate-

(iii) Felicity-

(iv) Legitimate-

QUESTION 2

Read the extract below and answer the questions that follow. (25 marks)

Nora: It's a shame to say that. I do really save all I can.

Helmer: (laughing) That's very true, - all you can. But you can't save anything!

Nora: (smiling quietly and happily) You haven't any idea how many expenses we skylarks and squirrels have, Torvald.

Helmer: You are an odd little soul. Very like your father. You always find some new way of wheedling money out of me, and as soon as you have got it, it seems to melt in your hands. You never know where it has gone. Still, one must take you as you are. It is in the blood: for indeed it is true that you can inherit these things, Nora.

Nora: Ah, I wish I had inherited many of papa's qualities.

Helmer: And I would not wish you to be anything but just what you are, my little skylark. But do you know, it strikes me that you are looking-rather—what shall I say- rather uneasy today?

Nora: do I?

HELMER: You do, really. Look straight at me.

Nora :((looks at him) well?

Helmer: (wagging his finger at her) Hasn't Miss Sweet Tooth been breaking rules in town today?

Nora: No; what makes you think that?

Helmer: Hasn't she paid a visit to the confectioner's?

Nora: No, I assure you, Torvald-

Helmer: Not been nibbling sweets?

Nora: No, certainly not.

Helmer: Not even take a bite at a macaroon or two?

Nora: (going to the table on the right) I shouldn't think of going against your wishes.

Helmer: No, I am sure of that: besides, you gave me your word- (Going up to her) Keep your little Christmas secrets to yourself, my darling. They will be revealed tonight when the Christmas tree is lit, no doubt.

Nora: Did you remember to invite Doctor Rank?

Helmer: No. But there is no need; as a matter of course, he will come to dinner with us. However, I will ask him when he comes this morning. I have ordered some good wine. Nora, you can't think how I am looking forward to this evening.

Nora: So am I! And how the children will enjoy themselves, Torvald!

Helmer: It is splendid to feel that one has a perfectly a safe appointment, and a big enough income. It is Delightful to think of, isn't it?

Nora: It's wonderful!

1. Place this extract in its immediate context.(4 marks)
2. Explain the dramatic irony in this extract (3marks)
3. Helmer says here" it is splendid to feel that one has a perfectly safe appointment". What is he referring to?
4. What issues on money and gender emerge in this extract? (4 marks)

5. Identify and illustrate any two ways the playwright has used language to achieve foregrounding in this extract.(4 marks)

6. What do we learn about the character of Nora in this extract.(4 marks)

7. Imagine you are directing this play. Which quality would you look for in an actor to play the role of Torvald(2 marks)

8. Explain the meaning of the following expressions as used in the extract? (3 marks)

9.
 1. Wheedling money out of me

 2. Confectioner's

 3. you gave me your word

QUESTION 3

Read the song below and answer questions that follow.

LISTEN DEAR BRIDE

Oh my sister, listen

From this day, you won't go dancing,

From this day, you won't go to the dance,

From this day, you won't go dancing

You'll dance only on the path to the river.

My sister, will you listen?

From this day, you won't go chatting,

From this day, you won't sit to chat,

From this day, you won't sit chatting,

You'll only chat on the path to the farm.

Daughter of my mother, listen!

From this day, you won't enjoy teasing,

From this day, you won't enjoy to tease,

From this day, you won't enjoy teasing,

You'll only tease the baby on your lap.

Listen, my dear sister!

You'll only dance on the path to the river,

You'll only chat on the path to the farm,

You'll only tease the baby on your lap,

From this day, life will change.

Have you heard daughter of my mother?

You'll not go dancing, dance today.

You'll not go sit chatting, chat today.

You'll not enjoy teasing, tease today.

From this day, life will change.

1. With explanation, classify the above item.

(2mks)

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

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2. Who do you think are the singers in this song? Give reasons (3mks)

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3. Identify two features which qualify this text as a song. (4mks)

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4. Briefly explain what the society expects of a married woman as brought out in the song. (2mks)

.....

.....

.....

5. Giving illustrations, give two functions of this song. (2mks)

.....

.....

.....

6. According to the song, how do you think the bride will behave when this song is sung? (3mks)

.....

.....

.....

.....

7. Explain the relationship between stanza 4 and the first three stanzas. (2mks)

8. Explain the effect/impact of the phrase “daughter of my mother” instead of “my sister” (1mk)

9. Add an appropriate question tag to the statement below. (1mk)
- a) Listen, my sister

- b) You’ll only dance on the way to the river

QUESTION 4 GRAMMAR(15MKS)

A) Rewrite the following sentences as instructed. Do not change the meaning of the sentences (3mks)

a) Marylyn Monroe was the most beautiful woman in Hollywood in the sixties(Begin:No.....)

b) I did not know that there was trouble ahead (Begin; Little....)

c) All except Maina went for games. Rewrite using “save for”

B) Fill in the blank spaces in the following sentences with the most appropriate preposition.(3mks)

a) Innoculation gives protection _____infection.

b) We agreed_____the general procedure.

c) It has been the same old story ever_____ he was a small boy.

C) Use the correct form of the word in brackets to fill in the blanks.(3mks)

a) There was enough_____ (prove) that examination had leaked.

b) The student gave a very good _____ (describe) of the party.

c) The painting_____ (steal) from the museum.

D) Explain the difference in meaning between these two sentences

a) The hawker was selling ten day- old chicks.

The hawker was selling ten- day old chicks. (2mks)

E) For each of the following sentences, replace the underlined phrasal verb with a word that has the same meaning.(4mks)

a) I expect him to pull through within a week.

b) I have been at the police station. Our house was broken into last night.

c) Everybody knows how good you are. There is no need to show off.

d) After a hard day's work, I sat on a cosy chair and dozed off.

END OF TERM 1 EXAMS

ENGLISH

FORM FOUR

PAPER 3

TIME 2hrs 30 mins

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

1. **Imaginative composition (Compulsory)**

Either

- a) Write a story to illustrate the saying;
‘where there is a will there is a way’

Or

- b) Write a composition that has the following: a bride, a swarm of bees and a hospital.

2. **The Novel, Blossoms of the Savannah (Compulsory)**

Gender bias is tantamount to violation of human rights. Write an essay in support of the assertion drawing illustrations from blossoms of the savannah By H.R Ole Kubet

3. **Optional Texts**

- a) **Short story:** Memories we lost and other stories compiled by Chris Wanjala
Explain the truth of the saying, "He who desires all loses all." Draw your illustrations from Leo Tolstoy's 'How much land does man need?

b) **The Novel**

The Pearl by John Steinbeck

'Our lives are controlled by destiny'

Using illustrations from 'The Pearl', write an essay to support this statement.

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c) Drama

Inheritance by David Mulwa

A person's weaknesses can lead to their downfall. Justify the statement using the character Lacuna Kasoo in "inheritance."

END OF TERM 1 EXAMS

GEOGRAPHY

FORM FOUR

PAPER 1

TIME 2 ¾ HOURS

NAME.....ADM NO:.....

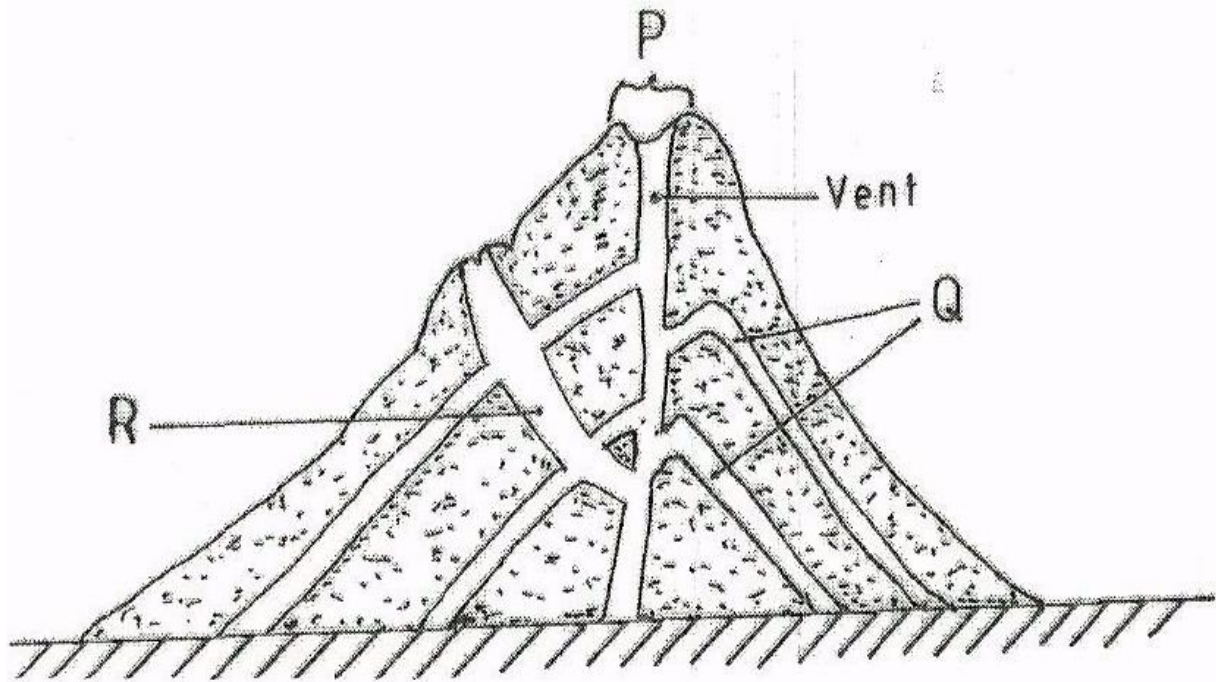
SIGN..... INDEX NO:.....

INSTRUCTIONS.

- a. *This paper has two sections A and B*
- b. *Answer all the questions in section A.*
- c. *Answer questions 6 and any other two questions from section B.*

SECTION A.

1. Give three components of the solar system. (3mks)
 - b. Identify two types of high level clouds. (2mks)
2. Draw a well labeled diagram of a hydrological cycle. (5mks)
 - b. What is weathering? (1mk)
3. Give three factors that influence the rate of weathering. (3mks)
 - b. The diagram below shows a composite volcano.
Name the feature marked P,Q and R. (3mks)



4. How is a parasitic cone formed? (3mks)
State three characteristics of the outer core in the interior structure of the earth. (3mks)
5. Name the two layers of discontinuity that are part of the interior structure of the earth. (2mks)

Section B

Answer question 6 and any other two questions from this section.

Use the map of Busia (1:50,000) provided to answer the questions that follow

6. a. i. Identify three physical features in grid square 2539. (3mks)
- ii. Give the six – figure grid reference of the air-photo point at Kisoko along river Sio. (1mk)
- iii. Give the approximate height of Nangoma hill in grid square 2838. (2mks)
- iv. Measure the distance along the regional boundary from where it intersects, all-weathered road, loose surface number (526 to its intersection with road B⁸/₃) give answer in kilometer. (2mks)
- b. Calculate the bearing of Nangina dispensary from the chief's house in grid square 2531. (2mks)
- ii. Calculate the area to the east of road B²/₃ and C526 to the south of northing 40 excluding the area covered by thickets vegetation. Give the area in Km². (2mks)
- iii. Identify two drainage features along river sio. (2mks)
- c. Citing evidence from the map, give three social services provided in the

- area covered by the map. (6mks)
- d. Describe the relief of the area covered by the map. (5mks)

7. What is a mineral? (2mks)

ii. Describe the following characteristics of minerals (6mks)

- Luster
- Colour
- Density

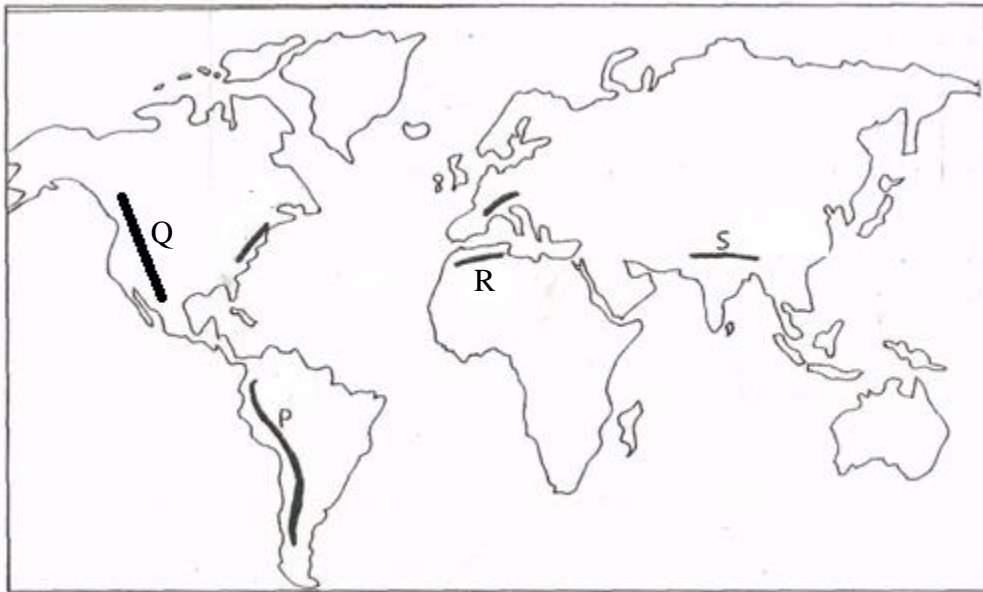
b. Name two examples of extrusive igneous rocks. (2mks)

ii. Describe three ways in which sedimentary are classified. (9mks)

c. Explain the significance of rocks to the economy of Kenya under the following sub headings. (6mks)

- Tourism
- Energy
- Water

8. The maps below show the location of some mountain ranges.



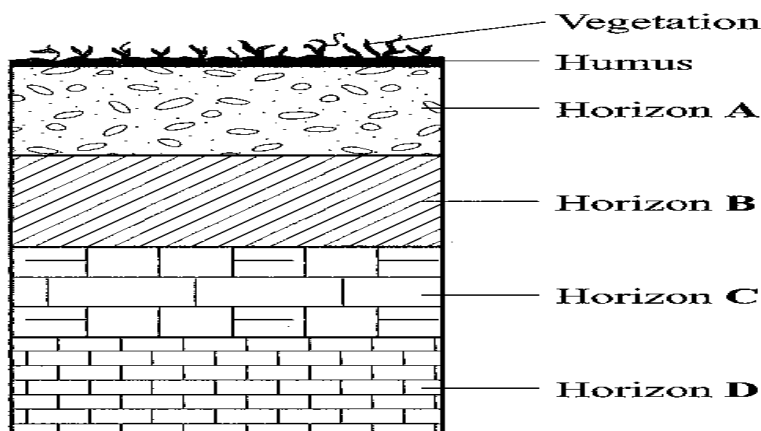
a. Name the ranges marked P,Q,R and S. (4mks)

b. Apart from fold mountains, name three other features resulting from folding. (3mks)

c. With the aid of labeled diagram, describe how fold mountains are formed. (10mks)

d. Explain the significance of fold mountains to human activities. (8mks)

9. a) i. Outline two factors that influence the development of drainage patterns.
(2mks)
- ii. Outline five characteristics of a river in its youthful stage.(5mks)
- b. Describe the following processes of river erosion.
- i. Attrition (2mks)
- ii. Corrosion (4mks)
- c. Explain three negative effects of rivers to the human environment.
(6mks)
- d. Your class is planning to carry out a field study of a river in its old stage.
- i. State three reasons why it would be necessary to pre-visit the area of study. (3mks)
- ii. State the three activities you would carry out to determine why deposition occurs at this stage. (3mks)
10. The diagram below represents a well developed soil profile. Use it to answer question (a)
- a. Describe the characteristics of Horizon B. (3mks)
- ii. Apart from humus, name three other components of soil. (3mks)
- iii. State three ways in which humus contributes to the quality of soil. (3mks)



- b. Differentiate between soil structure and soil texture. (2mks)
- ii. Explain how the following factors influence the formation of soil;
- Topography
 - Time (6mks)
- c. Explain how the following farming practices may lead to loss of soil fertility.
- i. Overgrazing (2mks)
- ii. Frequent ploughing (2mks)
- iii. Continuous irrigation (2mks)

END OF TERM 1 EXAMS

GEOGRAPHY

FORM FOUR

PAPER 2

TIME 2 ¾ HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

INSTRUCTIONS.

- d. *This paper has two sections A and B*
- e. *Answer all the questions in section A.*
- f. *Answer questions 6 and any other two questions from section B.*

SECTION A.

Answer all the questions in this section.

1. a) State two ways in which minerals occur. (2mks)
b) Describe panning as a method of mining. (3mks)
2. a) Differentiate between a forest and forestry. (2mks)
b) Give three characteristics of tropical hard wood forest. (3mks)
3. a) Name two main rivers which supply water to mwea tebere irrigation scheme (2mks)
b) State three environmental problems faced by farmers in Mwea – Tebere Irrigation scheme. (3mks)

4. a) State two factors that lead to the development of nucleated settlement patterns. (2mks)
- b) Identify two differences in the function of Nairobi and New York. (4mks)
5. a) Identify two methods used to control tsetse flies in Kenya. (2mks)
- b) State three negative effects of uncollected garbage on the environment. (2mks)

SECTION B

Answer question 6 and any other two questions from this section.

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



- i. Name the type of photograph shown above. (1mk)
- ii. What time of the day was the photograph taken if the camera was held facing south? (1mk)
- iii. Draw a rectangle measuring 16cm by 9cm to represent the area of the photograph. On it sketch and label the main features shown on the photograph. (5mks)

iv. Describe the landscape of the area represented by the photograph. (3mks)

b) Identify two counties in the Rift Valley where ranching is practiced. (2mks)

ii. Name one exotic breed of beef cattle reared in Kenya. (1mk)

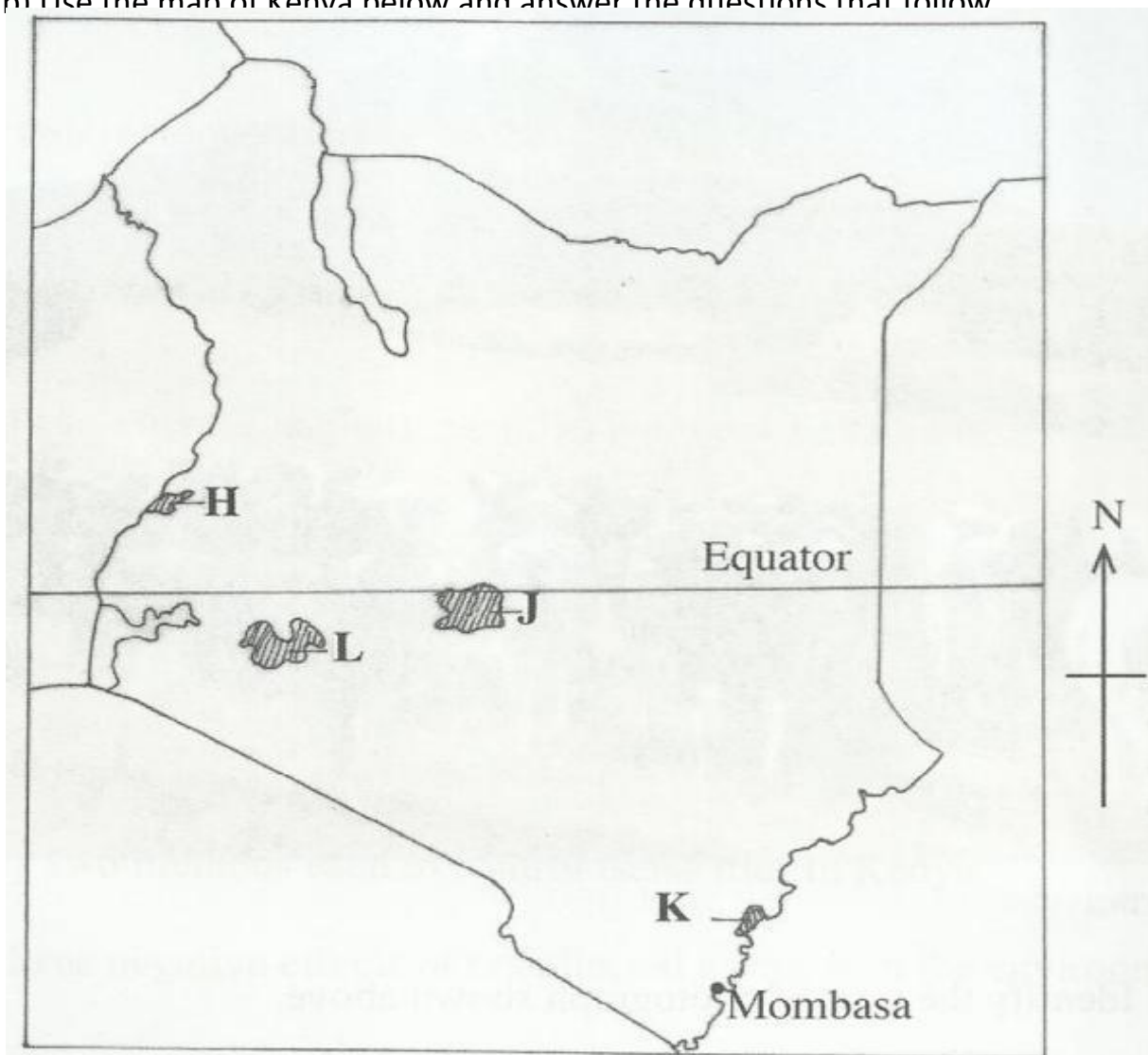
c) State four physical factors which favour beef farming in Argentina. (4mks)

d) Explain four benefits of beef farming to the economy of Argentina. (8mks)

7. a) What is agro-forestry? (2mks)

ii. Give four reasons why agro-forestry is encouraged in Kenya. (4mks)

b) Use the map of Kenya below and answer the questions that follow



i. Name the forest reserves marked H, J and K. (3mks)

ii. Explain four factors that favour the growth of natural forest in the area marked L. (8mks)

c) Explain four problems facing forestry in Kenya. (8mks)

8. a) What is mixed farming? (2mks)

b) State three economic factors influencing agriculture. (3mks)

c) Give four physical factors influencing coffee growing in Kenya. (4mks)

ii. Describe coffee production in Kenya from harvesting to marketing. (8mks)

iii. Give three differences between coffee farming in Kenya and Brazil. (6mks)

d) You intend to carry out field study of coffee growing in a farm near your school. State two disadvantages of using secondary data during data collection.

(2mks)

9. a) Identify three sources of renewable energy. (3mks)

b) Name three main hydroelectric power stations along the river Tana.

(3mks)

ii. Apart from providing electric power, state four other benefits of the dam along the River Tana.

(4mks)

iii. Identify two problems that affect the production of power along river Tana.

(2mks)

c) Explain four measures the Government of Kenya has taken to conserve energy.

(8mks)

d) Some students carried out field study on sources of energy by sampling the households around the school.

i. Identify two sampling technique the students may have used during the study.

(2mks)

ii. Give three advantages of sampling the households for the study. (3mks)

10. a) Differentiate between a rural settlement and an urban centre. (2mks)

b) Explain how the following physical factors influence human settlement.

i. Relief (6mks)

ii. Climate (4mks)

c) Explain the causes of the following problems in urban centres in Kenya.

i. Traffic congestion (4mks)

ii. Environmental degradation (4mks)

d) Name two towns in Kenya that started as agricultural collection centres .

(2mks)

ii. Give three social functions of Kisumu town.

(3mks)

END OF TERM 1 EXAMS

HISTORY AND GOVERNMENT

FORM FOUR

PAPER 1

TIME: 2 ½ HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

1. How can anthropology be used to source information on history and government. (1mk)
2. Identify **one** agent among the Nandi (1mk)
3. Give **two** positive contributions of Seyyid said to the economy of Kenyan coast upto 1700 AD. (2mks)
4. Identify **one** way of becoming a Kenyan citizen as per the new Constitution. (1mk)
5. Give the **main** cause of political conflicts in Kenya. (1mk)
6. Give **two** remedies that have been employed to curb food shortages in Kenya. (2mks)
7. State **two** main features of the 1962 constitution of Kenya . (2mks)
8. Give **two** rights of persons with disabilities in Kenya. (2mks)
9. Identify **one** role of religion during the Agiriyama resistance. (1mk)
10. Give **one** impact of local government in colonial Kenya. (1mk)

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11. State **two** roles of Africans in the provision of health services during the colonial period. (2mks)
12. . Give **two** ways in which h the first World War contributed to African political awareness in Kenya.
(2mks)
13. Give **one** contributed of Daniel Moi in environmental conversation in Kenya. (1mk)
14. State **two** functions of the County Executive Committee. (1mk)
15. Identify **one** settlement scheme established by the government in former European farms. (1mk)
16. State **two** achievements of the Kenya African Democratic Union in Kenya.
(2mks)
17. Identify **one** principle of public finance in Kenya. (2mks)

SECTION B (45MKS)

(Answer any three question)

18. (a) Give **three** reasons for the migration of Kenyan communities at the beginning of the 19th C. (3mks)
(b) Describe the social organization of the Somali in pre-colonial period. (12mks)
19. (a) State **five** factors that facilitated the coming of Arabs to the Kenyan coast by 1500AD. (5mks)
(b) Explain **five** factors that contributed to the decline of early city states along the Kenyan coast.
(10mks)
20. (A) Give **three** reasons for the rise of independent churches during the colonial period. (3mks)
(b) Explain **six** problems that were encountered by Trade Unions during the colonial period. (12mks)
21. (a) Give **three** reasons why Africans were denied the right to grow cash crops during the colonial period. (3mks)
(b) Explain **six** problems faced by settlers in colonial Kenya. (12mks)

SECTION C (30MKS)

(Answer any 2 questions)

22. (A) State **three** functions of the national Security Council in Kenya. (3mks)
(b) Describe the courts structure in Kenya. (12mks)

- 23(a) Give **three** reasons that may lead to the impeachment of a governor from the officer. (3mks)
- (b) Explain **six** challenges facing county governments. (12mks)
- 24(a) mention **five** political challenge faced by Kenya Between 1964 to 1991. (5mks)
- (b) Discuss any **five** factors that led to re- introduction of multiparty system in Kenya. (10mks)

BLANK SHEETS PROVIDED

END OF TERM 1 EXAMS

HISTORY AND GOVERNMENT

FORM FOUR

PAPER 2

TIME: 2 ½ HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

INSTRUCTIONS:

This paper consists of three sections; A, B and C. Answer all the questions in section A, three questions in section B and two questions in section C.

SECTION A: 25 MARKS)

Answer all the questions from this section.

1. Give the name of the tools made by early man during the New Stone Age period. (1 mk)

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.....

2. State two distinct characteristics of Homo Erectus. (2 mks)

.....
.....

3. Identify one form of writing during the early civilizations resulting from early agriculture.

(1 mk)

.....
.....

4. State two factors that promoted large-scale farming in Britain during the Agrarian Revolution.

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

(2 mks)

5. State two ways in which poor transport system has contributed to food shortages in Africa.

(2 mks)

6. Identify two political benefits of Trans-Saharan trade to the people of Western Sudan.(2 mks)

7. State two characteristics of Macadam roads.

(2 mks)

8. Give one early source of energy.

(1 mk)

9. State two political results of industrial Revolution in Europe.

(2 mks)

10. State one contribution of Joseph Lister in the field of medicine in the nineteenth century.

(1 mk)

11. Identify two factors that facilitated colonization of Africa in the nineteenth century.(2 mks)

.....
.....
.....
12. Give one reason why the Shona supported the British forces against the Ndebele during the Anglo-Ndebele war of 1893. (1 mk)

.....
.....
13. State one reason why Kabaka Mwanga of Buganda collaborated with the British. (1 mk)

.....
.....
14. Give two political developments in South Africa which facilitated establishment of a multi-racial government. (2 mks)

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.....
15. Give the name given to Germany and her supporters during the First World War. (1 mk)

.....
.....
16. Give the main reason why the League of Nations was established in 1919. (1 mk)

SECTION B: (45 MARKS)

Answer any three questions from this section.

17. (a) Outline the physical changes that occurred on man as he developed from ape like to man like creatures. (3 mks)
- (b) Discuss the cultural and economic practices of early human beings in New stone age period. (12 mks)
18. (a) Identify five ways in which iron working spread in Africa. (5 mks)
- (b) Explain five factors that led to emergence of Japan as an industrial power. (10 mks)
19. (a) Give five causes of the Maji Maji rebellion of 1905 to 1907 in Tanganyika. (5 mks)
- (b) Explain five reasons why Samori Toure resisted the French for so long. (10 mks)
20. (a) Give five qualifications for one to be assimilated in Senegal. (5 mks)
- (b) Describe five effects of direct rule in Zimbabwe. (10 mks)

SECTION C: (30 MARKS)

Answer any two questions from this section.

21. (a) State three economic activities of the Baganda during the pre-colonial period. (3 mks)
- (b) Describe the social organization of Asante Kingdom in the eighteenth century. (12 mks)

22. (a) Give three targeted areas of co-operation among East Africa community member states. (3 mks)

(b) Explain six factors that led to collapse of East Africa community in 1977. (12 mks)

23. (a) Name any three political parties in India. (3 mks)

(b) Explain six ways how the powers of American president are controlled. (12 mks)

BLANK SHEETS PROVIDED

END OF TERM 1 EXAMS

KISWAHILI

KIDATO CHA NNE

END OF TERM 1 EXAMS

KISWAHILI

KIDATO CHA NNE

PAPER 1

TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

MAAGIZO:

1. Jibu maswali mawili.
2. Swali la kwanza ni la Lazima.
3. Chagua swali moja kati ya maswali matatu yaliyobaki.
4. Kila insha isipungue maneno 400.

1. Swali la LAZIMA

Ukiwa Gavana Mtajika wa Kaunti yako umealikwa kuwazungumzia wanafunzi wa kidato cha nne katika shule ya Mafanikio. Andika Tawasifu utakayowasilisha. (alama 20)

2. Eleza jinsi udanganyifu katika mitihani utaathiri maisha ya kizazi kijacho. (alama 20)

3. Andika kisa kitakachothibitisha maana ya methali: Mtenda mema kwa watu atendea nafsiye. (alama 20)

4. Kamilisha tukio kwa maneno yafuatayo:

“...waliwasili saa tatu baadaye. Uharibifu wa mali na maisha ulikuwa umeshatendeka wala kufika kwao hakukusaidia kwa lolote.” (alama 20)

PAPER 1

TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

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(alama 20)

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(alama 20)

END OF TERM 1 EXAMS

KISWAHILI

KIDATO CHA NNE

PAPER 2

TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

Maagizo.

Jibu maswali yote .

1. UFAHAMU (ALAMA 15)

Soma kifungu kifuatacho kisha ujibu maswali

Tangu opresheni ya Usalama kuanza kutekelezwa na maafisa wa usalama katika mtaa wa Eastleigh, kumekuwa na propaganda kuwa inalenga watu wa jamii na dini Fulani.

Harakati hizi za kuwasaka magaidi sharti ziendeleo na zichangiwe na kila raia ili zizae matunda tatunayoazimia kupata; kuwanasa wote wanaohusika.

Wakenya tumeishi kwa miaka mingi bila kubaguana katika misingi ya dini na ukabila. Iweje tuanze sasa miaka zaidi ya hamsini baada ya uhuru? Ndiposa tunawasihi Wakenya wote wenye nia njema kukumbuka kwamba hatuna njia ya mkato katika suala hili la ugaidi. Sharti tupambane nao. Hawa ni watu; ni ndugu zetu, rafiki zetu na watoto wetu.

Hakuna mzazi atakayejitokeza hadharani na kukiri kuwa mtoto wake ni gaidi! Hata kama atajua wazi mwanawe ni gaidi na amelipua Wakenya na ataendelea kufanya hivyo akizidi kupewa nafasi. Atanyamaza na kumtetea kwa hali na mali.

Madhara ya mashambulizi hayo ya kigaidi tayari yameanza kuonekana ambapo wamiliki wa mahoteli ya kifahari wanalalama kuwa idadi ya wageni imepungua maradufu. Hali kama hii ni hatari kwa uchumi wa nchi.

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

Sisi tukiwa Wakenya wapenda amani hatuna budi kuungana mkono katika oparesheni hiyo na kushirikiana na maafisa wa usalama kwa kutoa habari muhimu kuhusu washukiwa wa ugaidi. Hakuna operesheni dhidi ya wahalifu ambayo inaweza kuendeshwa bila jamii ambapo wamejificha kuathiriwa. Heri nusu shari kuliko shari kamili; magaidi wana madhara makubwa kuliko operesheni ya usalama.

Sisi Wakenya kwa sasa tuko katika hali hii tatanishi ya kushindwa kuamua; tupambane na magaidi tuumize na Wakenya wachache wasio na hatia ama tuache tu magaidi wakae kwa sababu tunaogopa kuwasumbua hao wachache.

Kadhalika, badala ya kuangazia maeneo yenye visa vingi vya mashambulizi ya ugaidi operesheni ya usalama inafaa kuelekezwa pia katika maeneo mengineyo ambayo yamekuwa yakikumbwa na visa vya utovu wa usalama mara kwa mara.

Vikosi vya usalama vinafaa kuhakisha kuwa magenge ya aina hii hayasazwi katika operesheni hiyo. Aidha, serikali inapaswa kutoa makataa kwa kila Mkenya ambaye anamiliki bunduki kinyume cha sheria kuselimisha silaha hizo mara moja katika vituo vya polisi, la sivyo wachukuliwe hatua kali za kisheria.

Wakenya wote wafaa kuonyesha ushirikiano kwa kuwa makini zaidi. Wajiepushe na maeneo hatari ambayo yaweza kuwa makazi ya magaidi ama ya washukiwa wa ugaidi. Aliye kando haangukiwi na mti ama mshausahau huo maarufu.

- (a) (i) Eleza uongo unaosambazwa kuhusu operesheni ya usalama mtaani Eastleigh. (alama 1)

.....

- (ii) Operesheni hii ina lengo lipi? (alama 1)

.....

- (b) Eeleza jinsi Wakenya wamekuwa wakiishi tangu uhuru. (alama 1)

.....

- (c) (i) Magaidi wana uhusiano upi nasi kwa mujibu wa kifungu? (alama 1)

.....

- (ii) Eleza namna wazazi wanavyochangia kuwepo kwa ugaidi nchini. (alama 2)

.....

.....

- (d) Fafanua athari mbili zinazokumba nchi kutokana na ugaidi. (alama 2)

.....

.....

.....

.....

(e) Wakenya wamepewa changamoto ipi ili kusaidia katika kuangamiza ugaidi?

(alama 2)

.....
.....

(f) “Wakenya wako kwenye njia panda.” Tetea kauli hii ukirejelea kufungu. (alama 2)

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

(g) Serikali inapaswa kuchukua hatua ipi dhidi ya wamiliki haramu wa bunduki?

(alama 2)

.....

(h) Eleza maana ya methali hii kulingana na taarifa.

(alama 1)

Aliye kando haangukiwi na mti.

.....
.....

2. MUHTASARI.

Soma kifungu hiki kisha ujibu maswali.

Lugha imekuwa kikwazo kikubwa katika kukuza teknolojia ya habari na mawasiliano (TEKNOHAMA) barani Afrika . Lugha ambazo zimekuwa zikitumiwa ni za kimagharibi kama vile kijerumani , kifaransa na kiingereza. Idadi kubwa ya waafrika ,hasa wanaoishi vijijini hawazifahamu lugha hizi.

Uamuzi wa shirika la *Microsoft* wa kutumia lugha ya kiswahili katika *program* za kompyuta kuanzia mwaka 2005 ni mchango mkubwa. Kuzinduliwa kwa mradi huu ni tukio la kipekee kuimarisha teknolojia sehemu za mashambani.

Mradi huu umewawezesha wananchi takribani milioni 150 wa janibu za Afrika Mashariki kufaidika na huduma za tarakilishi.

Utekelezaji wa mradi halikuwa jambo jepesi. Kwanza, ilibidi shirika la *microsoft* chini ya uongozi wa *Bill Gates* kulishawishi Bodi lake la wakurigenzi. Bodi liliposhawishika kuwa Kiswahili ni lugha inayo tumiwa na mamilioni ya watu liliidhinisha kuzinduliwa kwa mradi. Hatua iliyofuatia ilikuwa kuteua maneno 700,000 ya kimsingi ya kiiingereza ambayo yangetafsiriwa kwa kiswhili.

Hatua iliyofuata ilikuwa ya kutafuta ushirikiano na dola pamoja na mashirika ya kibiashara na taasisi za elimu ulimwenguni. Ilipobainika kuwa matumizi ya lugha ya Kiswahili yangehanasisha Uwekaji katika vituo vya mtandao vijijini, ushirikiano katika kuendesha mradi huu uliafikiwa bila shida. Mradi huu ulichukua muda wa miezi 18 kukamilika.Uliwashirikisha wahisika katika uwanja wa teknolojia ya habari mawasiliano, elimu biashara na idara za Kiswahili katika vyuo vikuu vya Africa Mashariki. Vyuo –vikuu ni pamoja na Dar es Salaam . Nairobi, Kenyatta na Makerere.

Waatalamu walioshirikishwa walisaidia katika kubuni faharasa ya istilahi za Kiswahili 3,000. Hizi ni zile ambazo zinafaa kwa matumizi ya kompyuta ya kawaida na ya kila siku.

Mradi huu umeshangiliwa na wakereketwa na wapenzi wa Kiswahili katika nyanja zote. Wasomi, wanariadha, wanamuziki, watalii, wafanyabiashara, wanasiasa, wafuasi wa dini mbalimbali na wakulima; wote wamefurahia hatua ya Kiswahili kuingizwa kwenye mtandao.

Watu ambao walikuwa hawawezi kutumia tarakilishi kwa sababu ya kutojua Kiingereza sasa hawana kisingizio. Matumizi ya kiswahili yatapanua na kuimarisha mawasiliano baina ya watu wanaoishi vijijini na pembe zote za ulimwengu.

Jambo la kutia moyo zaidi ni kuwa sasa vyuo vikuu vinavyotoa masomo kwa kutumia mitandao vimepewa idhini ya kutumia programu hizi. Walimu na wanafunzi wanapata habari moja kwa moja kwa kiswahili bila kutafsiri. Kuna uwezekano sasa wa kusambaza mafonzo katika nyanja na viwango vyote kwa mfumo wa elimu ya mbali.

Katika ulimwengu wa utandawazi, tukio kama hili lina manufaa makubwa. Wananchi wa vijijini wanaweza kupata habari na maarifa kutoka pembe zote za dunia na kuhusu masuala tofauti tofauti kwa lugha wanyoielewa barabara.

Kusambaa kwa matumizi ya ngamizi vijijini kutaimarisha biashara inayofungamana na teknolojia na mawasiliano. Hali hii itainua maendeleo ya teknolojia na kiwango cha maisha vijijini. Bila shaka mwachano uliopo baina ya sehemu za mijini na vijijini utapunguwa.

Haya ndiyo maendeleo anayokamia kila mja wa siku hizi. Lililopo ni serikali kupania kupanua na kusambaza muundo mbinu kama –umeme na simu katika sehemu zote za nchi. Pamoja na haya, kuna haja ya kupunguza bei ya ngamizi na vipuri vyake ili kuwatia motisha watu kununua kompyuta kwa wingi. Ikumbukwe – kuwa lengo la kuanzisha mradi huu ilikuwa kuisaidia serikali kupanua na kusambaza matumizi ya huduma za kompyuta na mtandao katika shule, vituo vya kijami na maeneo ya makaazi. Huduma hizi ni msigi wa elimu, biashara na mawasiliano ya makaazi.

Maswali.

(a) Bila kubadilisha maana, fupisha aya tatu za kwanza. (Maneno 45-55)

(al.6)

Matayarisho :

Jibu :

- (b) Fupisha faida za mradi wa kutumia Kiswahili katika *program* ya kompyuta. (Maneno 45-55) (al.6)

Matayarisho :

Jibu :

- (c) Eleza kwa ufupi serikali inahitaji kufanya nini ili kufanikisha maradi huu? (Maneno 15 -20)

MATUMIZI YA LUGHA

a) *Eleza tofauti kati ya sauti za vipasuo na vikwamizo* (al.2)

.....
.....

b) *Tunga sentensi ukitumia vitenzi vifuatavyo.* (al.2)

(i) Kitenzi kishirikishi kipungufu

(ii) Kitenzi kishirikishi kikamilifu

(i).....

(ii).....

c) *Unda nomino ya dhahania kutokana na vitenzi vifuatavyo* (al.2)

(i) Cheza

(ii) Pika

(i).....

(ii).....

d) *Tambulisha aina ya virai vilivyotumika katika sentensi zifuatazo*

(i) Walisomba changarawe (al.1)

.....

(ii) Kwa hofu alimkabidhi matokeo (al.1)

.....

(e) *Changanua sentensi ifuatayo kwa kutumia matawi.*

Simba waliojeruhiwa jana walikimbia vichakani (al.4)

(f) *Taja aina tatu kuu za sentensi kwa kuzingatia muundo.* (al.3)

(i).....

(ii).....

(iii).....

g) *Andika sentensi zifuatazo katika hali ya kutendewa*

i)Paka alimla panya mkubwa jana jioni (al.2)

.....

.....

(ii)Mwalimu mkuu amenisamehe kosa langu (al. 2)

.....

.....

(h) *Kanusha sentensi zifuatazo kwa umoja*

(i) Nywele zenu hukatika mnapochana (al 3)

.....

.....

(ii)Nyinyi ndio mnaopenda kuchezea mbeleko za mtoto (al.2)

.....

.....

(i) *Tunga sentensi ukitumia viungo vifuatavyo ili kudhihirisha maana ya dhana katika mabano.*
(al 2)

(i)Kwa.....(umilikaji)

(ii)Ku.....(Nafsi)

(j) *Eleza maana mbili zinazojitokeza katika sentensi hii* (al 2)

Walichukua pesa waliporudi

.....

.....

(k) *Andika katika usemi wa taarifa.*

“ Lazima ufike leo asubuhi na mapema ama sivyo hutanipata” Juma alimwambia mamake.
(al.4)

.....
.....

(l) *Onyesha tofauti kati ya sentensi hizi:* (al 2)

(i) Amefika.

(ii) Amefika!

(i).....

(ii).....

(m) *Eleza matumizi mawili ya “ ki” kisha utunge sentensi moja moja kuonyesha matumizi hayo*
(al 4)

(i).....

.....

(ii).....

.....

(n) *Tumia kirejeshi tamati katika sentensi hii.* (al 2)

Malipo ambayo anapewa ni yale ambayo yanaridhisha

.....

.....

ISIMU JAMII

Maenezi ya Kiswahili Afrika mashariki punde baada ya uhuru yalikuwa na chagamoto tele. Fafanua zozote tano.
(al 10)

.....

.....

.....

.....

.....

.....

.....

.....

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

END OF TERM 1 EXAMS

KISWAHILI

FORM FOUR

KISWAHILI KARATASI YA 3 - FASIHI

TIME 2hrs 30 mins

NAME.....ADM NO:.....

SIGN.....INDEX NO:.....

Swali la lazima.

1. **Soma kifungu kifuatacho kisha ujibu maswali.**

Hapo zamani za kale paliishi sungura na ndovu. Wanyama hawa waliishi baharini. Maulana alikuwa amewatunukia mapenzi si haba. Makazi yao yalikuwa yamepambwa yakapambika. Walitegemea matunda mbalimbali yaliyokuwa baharini kama mapera, matomoko, matikitimaji na kadhalika. Siku moja usiku wa manane, maji yakaanza kupwa. Ndovu aliathirika zaidi. Alijaribu kuinama majini lakini hakuweza. Alimwita sungura amsaidie lakini sungura alikuwa ametoweka. Ndovu aliamua kwenda kumtafuta sungura. Alimtafuta hadi msituni lakini hakumpata. Alihofia kurudi baharini na hadi wa leo yumo msituni.

Maswali

- (a) Tambua utanzu na kijipera chake. (al.2)
- (b) Taja fomyula zingine mbili za kutanguliza kifungu hiki. (al.2)
- (c) Eleza umuhimu wa kijipera hiki. (al.5)
- (d) Eleza sifa za kifungu hiki. (al.5)
- (e) Eleza umuhimu wa fomyula:
 - (i) Kutanguliza (al.3)
 - (ii) Kuhitimisha (al.3)

TAMTHILIA ; KIGOGO NA TIMOTHY AREGE

2. Tulipoanza safari hii matangazo yalikuwa bayana, dhahiri shahiri babu!

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

- (a) Eleza muktadha wa dondoo hili. (al.4)
 - (b) Tambua mbinu za uandishi zilizotumika katika kifungu hiki. (al.4)
 - (c) Eleza matatizo yanayoikumba safari inayorejelewa. (al.12)
3. Eleza nafasi ya mwanamke katika jamii ya kigogo. (al.20)

RIWAYA YA CHOZI LA HERI NA ASHUMTA K. MATEI

4. Matatizo mengi yanayowakumba wahusika wengi katika riwaya hii ni mwiba wa kujidunga. Jadili (al.20)
5. Kwa kurejelea riwaya hii, fafania mbinu zifuatazo. (al.20)
- (i) Kinaya
 - (ii) Mbinu rejeshi
 - (iii) Sadfa
 - (iv) Jazanda

HADITHI FUPI : TUMBO LISILISHIBA.

6. Kwa kurejelea hadithi ya *Mapenzi ya kifaurongo* na *shogake dada ana ndevu* fafania changamoto zinazowakumba vijana. (al.20)
7. ***Mame Bakari***
 “Una nini ? Umeshtuka mwanangu ! Unaogopa? Unaogopa nini?”
- (a) Weka dondoo hili katika muktadha wake. (al.4)
 - (b) Tambua mbinu **mbili** za lugha zilizotumika katika dondoo. (al.2)
 - (c) Eleza sifa za mrejelewa. (al.6)
 - (d) Eleza umuhimu wa msemaji. (al.4)
 - (e) Tambua maudhui yanayojitokeza katika kifungu hiki. (al.1)
 - (f) Fafania maudhui katika swali la (e) kwa kurejelea hadithi nzima. (al.3)

USHAIRI.

Soma shairi hili kisha ujibu maswali.

Sinusubuwe akili, nakusihi e mwandani
Afiya yangu dhahili, mno nataka amani
Nawe umenikabili, nenende sipitalini Sisi tokea
azali, twende zetu mizimuni Nifwateni sipitali, na dawa
ziko nyumbani?

Mababu hawakujali, wajihisipo tabani
Tuna dawa za asili, hupati sipitalini
Kwa nguvu ya kirijali, mkuyati uamini Kaafuri pia kali,
dawa ya ndwele fulani Nifwateni sipitali, na dawa ziko
nyumbani.

Mtu akiwa halali, tumbo lina walakini
Dawa yake ni subili, au zogo huauni
Zabadi pia sahali, kwa maradhi yalo ndani Au kwenda
wasaili, wenyewe walo pangani
Nifwateni sipitali, na dawa ziko nyumbani

Mtu kwenda sipitali, nikutojuwa yakini.
Daktari kona mwili, tanena kansa tumboni
Visu vitiwe makali, tayari kwa pirisheni Ukatwe kama figili,
tumbo nyangwe na maini
Nifwateni sipitali, na dawa ziko nyumbani

Japo maradhi dhahili, kuteguliwa tegoni,
Yakifika sipitali, huwa hayana kifani
Waambiwa damu, kalili ndugu msaidieni
Watu wakitamali, kumbe ndio buriani
Nifwateni sipitali, na dawa ziko nyumbani

Mizimu wakupa kweli, wakueleze undani
Maradhiyo ni ajali, yataka vitu dhamani
Ulete kuku wawili, wamajano na wa kijani Matunda pia asali,
vitu vyae chanoni Nifwateni sipitali, na dawa zi mlangoni?

Maswali.

1. Lipe shairi hii anwani mwafaka. (al.1)
2. Toa sababu zinazofanya mshairi kutaka kwenda hospitali. (al.3)
3. Andika ubeti wanne kwa lugha ya nathari/ tutumbi. (al.4)
4. Taja bahari **mbili** zilizotumika katika shairi hili. (al.2)
5. Tambua nafsini katika shairi hili. (al.1)

6. Tambua toni ya shairi hili. (al.1)
7. Eleza muundo wa shairi hili. (al.4)
8. Fafanua uhuru wa mshairi unavyojitokeza katika shairi hili. (al.2)
9. Andika maana ya maneno yafuatayo kama yalivyotumika katika shairi hili. (al.2)
- (i) dhalili
- (ii) azali

END OF TERM 1 EXAMS

MATHEMATICS

FORM FOUR

PAPER 1

TIME: 2 ½ HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

SECTION I (50 MARKS)

Answer all the questions in this section in the space provided

1. A boy cycles a certain distance from **X** to **Y** at 10km/hr, he returns at 12km/hr. The total time taken is 1hr 50min. find the distance **XY**. (3mrks)

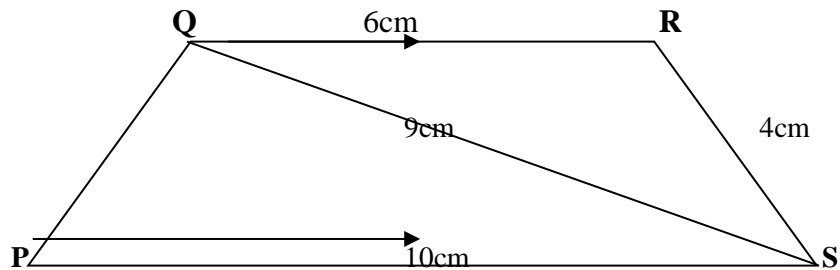
2. Simplify $\frac{p^2 - 2pq + q^2}{2p^2 - 3pq + q^2}$ (3mrks)

3. Solve for X in the equation.

(3mrks)

$$\frac{1}{2} \log_2 81 + \log_2 (x^2 - x/3) = 1$$

4. In the figure below **PQRS** is a trapezium with **QR** parallel to **PS**. **QR**=6cm, **RS**=4cm, **QS**=9cm and **PS**=10cm



Calculate

- (a). The size of angle **SQR**

(2marks)

- (b). The area of triangle **PQS**

(2marks)

5. Find the value of x in the equation.

(3marks)

$$\cos(3x - 180^\circ) = \frac{\sqrt{3}}{2} \text{ in the range } 0^\circ \leq x \leq 180^\circ$$

6. A farmer has a piece of land measuring 840m by 396m. He divides it into square plots of equal sizes. Find the maximum area of one plot. (3marks)

7. A liquid spray of 384g is packed in a cylindrical container of internal radius 3.2cm. Given that the density of the liquid is 0.6g/cm^3 , calculate to 2 decimal places the height of the liquid in the container. (3marks)

8. (a) Find the inverse of the matrix. (1mark)

$$\begin{bmatrix} 5 & -3 \\ -3 & 4 \end{bmatrix}$$

(b) Hence solve the simultaneous equation using the matrix method.

(2marks)

$$4x + 3y = 6$$

$$3x + 5y = 5$$

9. Two pipes **A** and **B** can fill an empty tank in 3hrs and 5hrs respectively. Pipe **C** can empty the tank in 4hrs. If the three pipes **A**, **B** and **C** are opened at the same time find how long it will take for the tank to be full.
(3marks)

10. A tourist arrived in Kenya with sterling pound (£) 4680 all of which he exchanged into Kenyan money. He spent Ksh.51790 while in Kenya and converted the rest of the money into US dollars. Calculate the amount he received in US dollars. The. Exchange rates were as follows. (4marks)

	<u>Buying</u>	<u>Selling</u>
US dollars \$	65.20	69.10
Sterling pounds £	123.40	131.80

11. The gradient of a straight line L_1 , passing through the point $\mathbf{P}(3, 4)$ and $\mathbf{Q}(a, b)$ is $-\frac{3}{2}$. A line L_2 is perpendicular to L_1 through \mathbf{Q} and $\mathbf{R}(2, -1)$. Determine the values of a and b . (3marks)

12. Find the number of sides of a regular polygon whose interior angle is 5 times the exterior angle. (3marks)

13. The points A, B and C lie on a straight line. The position vectors of A and C are $2\mathbf{i} + 3\mathbf{j} + 9\mathbf{k}$ and $5\mathbf{i} - 3\mathbf{j} + 4\mathbf{k}$ respectively; B divides AC internally in the ratio $2:1$. Find the:

(a) Position vector of B (2marks)

(b) distance of B from the Origin (1mark)

14. The sum of digits in a two digit number is 16. When the number is subtracted from the number formed by reversing the digits the difference is 18. Find the number. (3marks)

15. In Blessed Church Choir the ratio of males to females is 2:3. On one Sunday service ten male members were absent and six new female members joined the choir as guests for the day. If on this day the ratio of males to females was 1:3, how many regular members does the choir have? (3marks)

16. A businessman makes a profit of 20% when he sells a carpet for Ksh. 36000. In a trade fair he sold one such carpet for Ksh. 33600. Calculate the percentage profit made on the sale of the carpet during the trade fair. (3marks)

SECTION B: ANSWER ANY 5 QUESTIONS

17. A Matatu and a Nissan left town A for town B 240km away at 8.00am travelling at a speed of 90km/hr and 120 km/h respectively. After 20minutes the Nissan had a puncture which took 30minutes to mend.

(a) How far from town A did the Nissan catch up with the Matatu? (6marks)

(b) At what time did the Nissan catch up with the Matatu? (1mark)

(c) At what time did the Matatu reach town B (3marks)

18. The displacement, S metres of a moving particle from point O , after t seconds is given by:

$$S = t^3 - 5t^2 + 3t + 10$$

a) Find S when $t = 2$ **(2marks)**

b) Determine:

i) The velocity of the particle when $t = 5\text{sec}$ **(3marks)**

ii) The value of t when the particles is momentarily at rest . **(3 marks)**

c) Find the time, when the velocity of the particle is maximum. **(2 marks)**

19. Four towns P, R, T and S are such that R is 80km directly to the north of P and T is on a bearing of 290° from P at a distance of 65km. S is on a bearing of 330° from T and a distance of 30 km. Using a scale of 1cm to represent 10km, make an accurate scale drawing to show the relative position of the towns. (4mks)

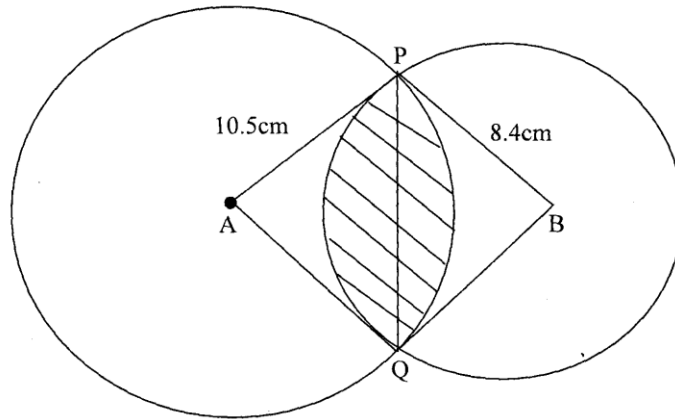
Find:

- (a) The distance and the bearing of R from T (3mks)

- (b) The distance and the bearing of S from R (2mks)

- (c) The bearing of P from S (1mk)

20. The figure below shows two circles of radii 10.5 and 8.4cm and with centres A and B respectively. The common chord PQ 9cm.



(a) Calculate angle PAQ. (2 mks)

(b) Calculate angle PBQ. (2 mks)

(c) Calculate the area of the shaded part. (6 mks)

21. The following measurement were recorded in a field book using XY as the baseline. XY = 400m.

	Y	
C60	340	
	300	1200
	240	160E
	220	160F
B100	140	
A120	80	
	X	

a) Using a scale of 1:4000 draw an accurate map of the farm. (4 marks)

b) Determine the actual area of the farm in hectares. (4 marks)

c) If the farm is on sale at sh.80,000 per hectare find how much the farm costs.

(2 marks)

22. The length and breadth of a rectangle are given as $(6x - 1)$ and $(x - 2)$ metres respectively. If the length and breadth are each increased by 4 metres, the new area is three times that of original rectangle.

i) Form an equation in x and solve it.

(4 marks)

ii) Find the dimensions of the original triangle

(2 marks)

iii) Express the increase in area as a percentage of the original area.

(4 marks)

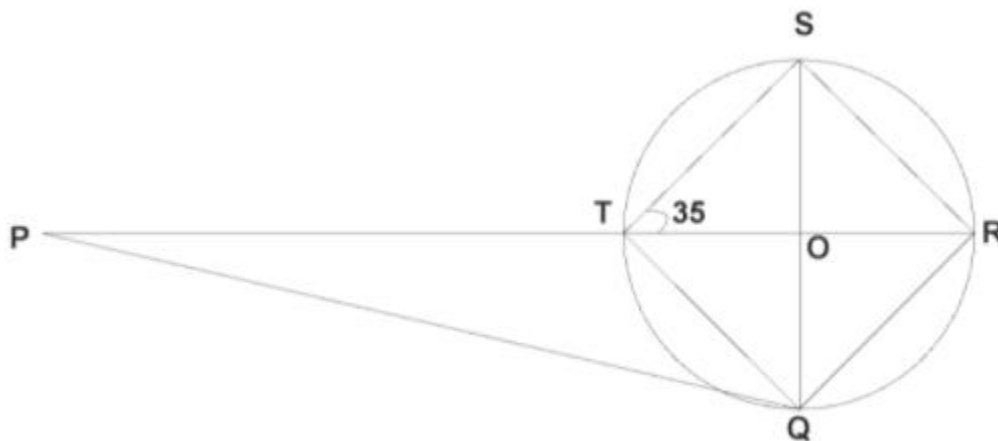
23. X, Y and Z are three quantities such that X varies directly as the square of Y and inversely as the square root of Z.

a) Given that $X = 18$ when $Y = 3$ and $Z = 4$, find X when $Y = 6$ and $Z = 16$. {5 marks}

b) If Y increases by 10% and Z decreases by 19%, find the percentage increase in X.
marks}

{5

24. The diagram below a circle, centre O. PQ is a tangent to the circle at Q and PTOR is a straight line. QRST is a cyclic quadrilateral in which angle RTS = 35° and RT and QS are diameters. Giving reasons for your answer, find the size of:



a) Acute angle ROS.

(2marks)

b) Angle RQS.

(2 marks)

c) Angle PQR.

(2 marks)

d) Angle QPT.

(2 marks)

e) Angle PQT.

(2 marks)

END OF TERM 1 EXAMS

MATHEMATICS

FORM FOUR

PAPER 2

TIME: 2 ½ HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

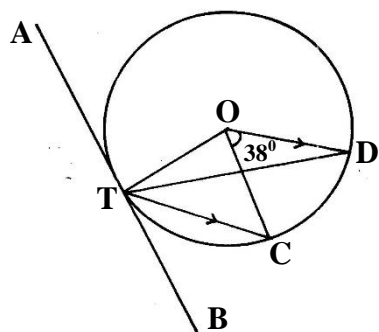
SECTION 1 (50MARKS)

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

1. The length and width of a rectangular window pane measured to the nearest millimeter are 8.6cm and 5.3 respectively.
Find to four significant figures, the percentage error in the area of the window pane. (3mks)
(Answer to 4 significant figures)

2. Without using a calculator or mathematical tables, express $\frac{\cos 30^\circ}{\tan 45^\circ + \sqrt{3}}$ in surd form and simplify leaving your answer in the form $a + b\sqrt{c}$ where a, b and c are rational numbers. (3mks)

3. In the figure below, **O** is the centre of the circle which passes through the points **T, C** and **D**. Line **TC** is parallel to **OD** and line **ATB** is a tangent to the circle at **T**. Angle **DOC** = 38° . Calculate the size of angle **CTB** (3mks)



4. A coffee dealer mixes two brands of coffee, x and y , to obtain 40kg of the mixture worth Ksh. 65 per kg. If brand x is valued at Ksh. 70 per kg and brand y at Ksh. 55 per kg. Calculate the ratio, in its simplest form, in which the brands x and y are mixed. (2mks)

5. Find the radius and the coordinate of the centre of the circle whose equation is $2x^2 + 2y^2 - 6x + 10y + 9 = 0$ (3mks)

- 6 a) Expand $(1 + \frac{1}{4}x)^4$ (2mks)
- b) Use your expansion in (a) above to evaluate $(0.975)^4$ to 4 significant figures. (2mks)
7. When Ksh. 60,000 was invested in a certain bank for 8 years it earned a simple interest of Ksh. 14,400. Find the amount that must have been invested in the same bank at the same rate for 5 years to earn a simple interest of Ksh. 12,000 (3mks)
8. Given that $\mathbf{P} = \frac{2\mathbf{q} - \mathbf{r}}{\mathbf{q} + 3\mathbf{r}}$, express \mathbf{q} in terms of \mathbf{p} and \mathbf{r} (3mks)
9. If $\vec{\mathbf{OA}} = 3\mathbf{i} + 2\mathbf{j} - 4\mathbf{k}$ and $\vec{\mathbf{OB}} = 4\mathbf{i} + 5\mathbf{j} - 2\mathbf{k}$, \mathbf{P} divides \mathbf{AB} in the ratio 3:-2. Determine the modulus of \mathbf{OP} leaving your answer to 1 decimal place. Given that $\tilde{\mathbf{O}}$ is the origin. (3mks)

10. Solve for x in $2 + \log_7(3x-4) = \log_7 98$ (3mks)
11. A carpenter wishes to make, a ladder with 18 cross-pieces. The cross pieces are to diminish uniformly in lengths from 65cm at the bottom to 31cm at the top. Calculate the length in cm, of the eighth cross-piece from the bottom. (3mks)
12. A quantity P varies partly as Q and partly as the square root of Q , given that $P=30$ when $Q=9$, and $P=14$ when $Q=16$. Find P when $Q=36$. (3mks)
13. Seven people can build five huts in 30 days. Find the number of people, working at the same rate that will build 9 similar huts in 27days. (3mks)

FOR MARKING SCHEMES CALL/WHATSAPP 0705525657

14. (a) **A** and **B** are two points on earth's surface and on latitude 40° N. The two points are on the longitude 50° W and 130° E respectively. Calculate the distance from **A** to **B** along a parallel of latitude in kilometers. (2mks)

- b) The shortest distance from **A** to **B** along a great circle in kilometres (Take $\pi = \frac{22}{7}$ and radius of the earth = 6370km) (2mks)

15. Find the inverse of the matrix $\begin{pmatrix} 3 & 1 \\ 2 & -1 \end{pmatrix}$ hence find the coordinates of the point Of intersection of the line $3x + y = 4$ and $2x - y = 1$ (3mks)

16. Evaluate $\int_{-2}^3 \frac{(1-x^2) dx}{(1+x)}$ (4mks)

SECTION II

Answer any Five questions in this section

17. The following are marks scored by form four student in Mathematics test.

Marks	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99
Frequency	2	6	10	16	24	20	12	8	2

Using an assumed mean of 54.5, calculate the

- a) Mean mark (4mks)

- b) Variance (4mks)

c) Standard deviation (2mks)

18. A bag contains 5 red, 4 white and 3 blue beads. Three beads are selected at random without replacement. Find the probability that

a) The first red bead is the third bead picked. (2mks)

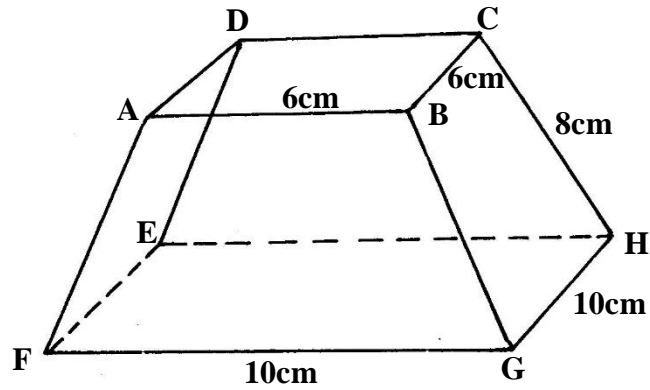
b) The beads selected were, white and blue: (2mks)
i) In that order

ii) In any order (2mks)

c) No red bead is picked (2mks)

d) Beads picked are of the same colour. (2mks)

19. The figure below shows solid frustum of a pyramid with a square top of side 6cm and a square base of side 10cm. The slant edge of the frustum is 8cm.



- a) Calculate the total surface area of the frustum (4mks)
- b) Calculate the volume of the solid frustum. (3mks)
- c) Calculate the angle between the planes **BCHG** and the base **EFGH**. (3mks)

20. a) Using a ruler and pair of compasses only construct triangle **ABC** in which **AB** = 6.5cm, **BC** = 5.0cm and angle **ABC** = 60^0 . Measure **AC** (3mks)
- b) On same side of **AB** as **C** (3mks)
- i) Determine the locus of a point **P** such that angle **APB** = 60^0 (3mks)
- ii) Construct the locus of **R** such that **AR** = 3cm. (1mk)
- ii) Identify the region **T** such that **AR** \geq 3 and $\angle\text{APB} \geq 60^0$ by shading the unwanted part. (3mks)

21. The table below shows income tax rates

Monthly income (Kshs)	Tax Rate (%)
Up to 9680	10
9681 – 18800	15
18801-27920	20
27921-37040	25
37041 and above	30

Omari's monthly taxable income is Ksh. 24200

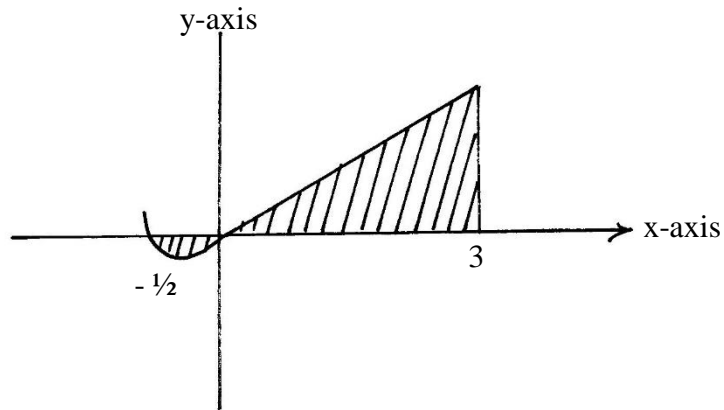
a) Calculate the tax charged on Omari's monthly earnings. (4mks)

b) Omari is entitled to the following tax relief of 15% of the premium paid.

Calculate the tax Omari pays each month if he pays a monthly insurance premium of Ksh. 2400 (2mks)

c) During a certain month, Omari received additional earnings which were taxed at 20% each shilling. Given that he paid 36.3% more tax that month, calculate the percentage increase in his earning. (4mks)

22. The curve of the equation $y = x + 2x^2$, has $x = \frac{1}{2}$ and $x = 0$ as x -intercepts. The area bounded by the x -axis, $x = \frac{1}{2}$ and $x = 3$ is shown by the sketch below.



Find

a) $\int (x + 2x^2) dx$

(3mks)

- b) The exact area bounded by the curve, x axis
 $x = -\frac{1}{2}$ and $x = 3$ (Give your answer to 2dp)

(7mks)

23. a) Fill in the table below to 2 decimal places for the graph of $y = \sin x$ and $y = 2\sin(x-30)$ for the range $-180 \leq x \leq 180$ (2mks)

x°	-180	-150	-120	-90	-60	-30	0	30	60	90	120	150	180
$\sin x^\circ$	0			-1.0	-0.87		0		0.87			0.5	
$2 \sin(x-30)^\circ$	1			-1.73	-2.0		-1		1.0			1.73	

- b) On a graph, using a scale of 1cm to represent 30° on the x-axis and 1cm to represent 0.5 units on the y-axis, draw the graph of $y = \sin x^\circ$ and $y = 2 \sin(x-30)^\circ$ on the same axes (4mks)
- c) Using your graph
- i) State the amplitude and the period of the graph $y = 2 \sin(x-30)^\circ$ (1mk)
- ii) Solve the equation
 $\sin x^\circ = 2 \sin(x-30)^\circ$ (1mk)
- iii) Describe fully the transformation that will map $y = 2 \sin(x-30)^\circ$ on $y = \sin x$ (2mks)

24. A tailor makes two types of garments **A** and **B**. Garment **A** requires 3 metres of material while garment **B** requires $2\frac{1}{2}$ metres of material. The tailor uses not more than 600 metres of material daily in making both garments. He must make not more than 100 garments of type **A** and not less than 80 of type **B** each day.

(a). Write down all the inequalities from this information. (3mks)

- b) Graph the inequalities in (a) above (3mks)
- c) If the business makes a profit of shs. 80 on garment **A** and a profit of shs. 60 on garment **B**, how many garments of each type must it make in order to maximize the total profit? (4mks)

END OF TERM 1 EXAMS

PHYSICS

FORM FOUR

PAPER 1
TIME: 2 HOURS

NAME.....ADM NO:.....

SIGN..... INDEX NO:.....

INSTRUCTIONS TO THE CANDIDATE

- (a) Write your name and the admission number in the spaces provide above
- (b) Answer all questions

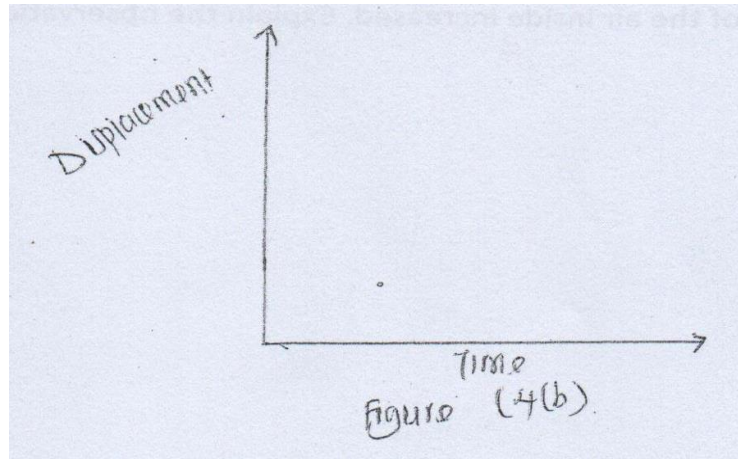
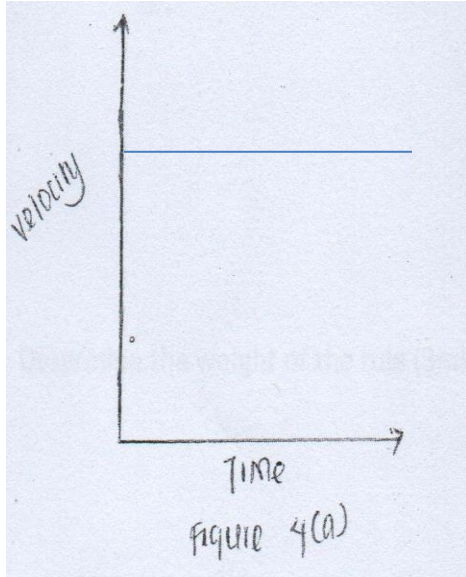
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SECTION	QUESTION	MAXIMUM SCORE	CADIDATE SCORE
A	1-11	28	
B	12-20	52	

PHYSICS QUESTIONS

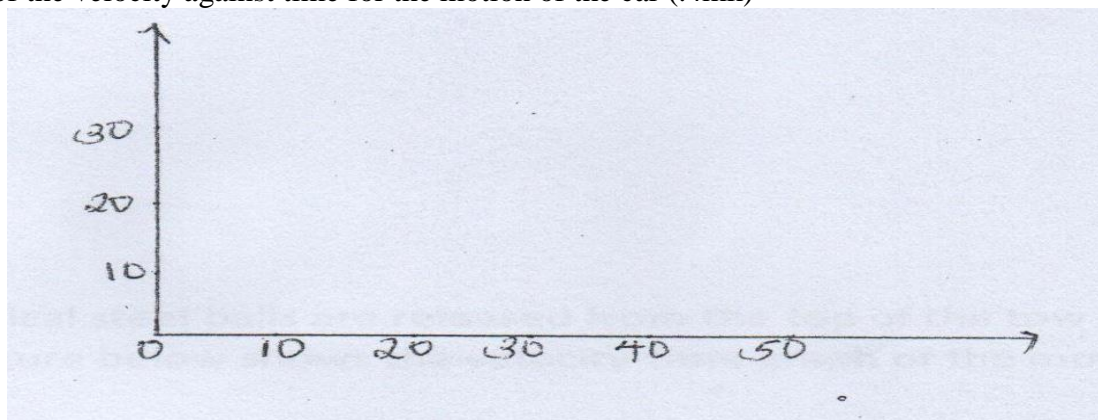
SECTION 1

1. Figure (a) below shows a velocity-time graph of motion an object



Sketch on the axis the provided In figure (b) the displacement-time graph of the motion (2mks)

2. A car starts from rest accelerates uniformly for 5seconds to reach 30m/s. It continues at this speed for the next 20 seconds and then decelerates uniformly to come to stop in 10 seconds. On the axis provided, draw the graph of the velocity against time for the motion of the car (.4mk)



3. Water in a tin-can was boiled for some time. The tin-can was then sealed and cooled. After some time it collapsed. Explain this observation.2mks

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4. When a bicycle pump was sealed at the nozzle and the handle slowly pushed towards the nozzle the pressure of the air inside increased. Explain the observation. 2mks

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5. An immersion heater rated 90W is immersed in a liquid of mass 2kg. When the heater is switched-on for 15 minutes the temperature of the liquid rises from 20°C to 30°C . Determine the specific heat capacity of the liquid (assume no heat losses). 3mks

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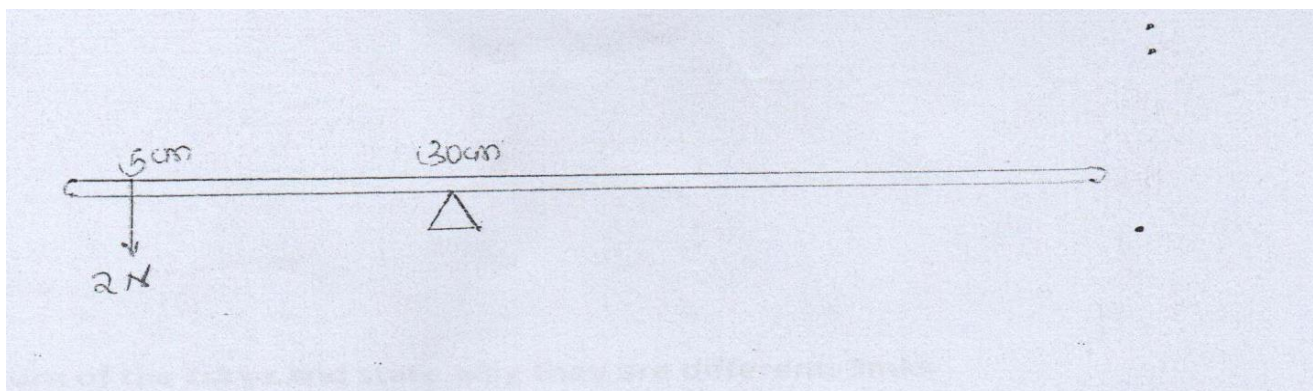
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6. The figure below show a uniform meter rule pivoted at 30cm mark. It is balanced by weight of 2N suspended at the 5cm mark.



Determine the weight of the rule (2mks)

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7. Small quantities of hydrogen and helium at the same temperature are released simultaneously at one end of a laboratory. State with reason which gas is more likely to be detected earlier on the other end. 2mks

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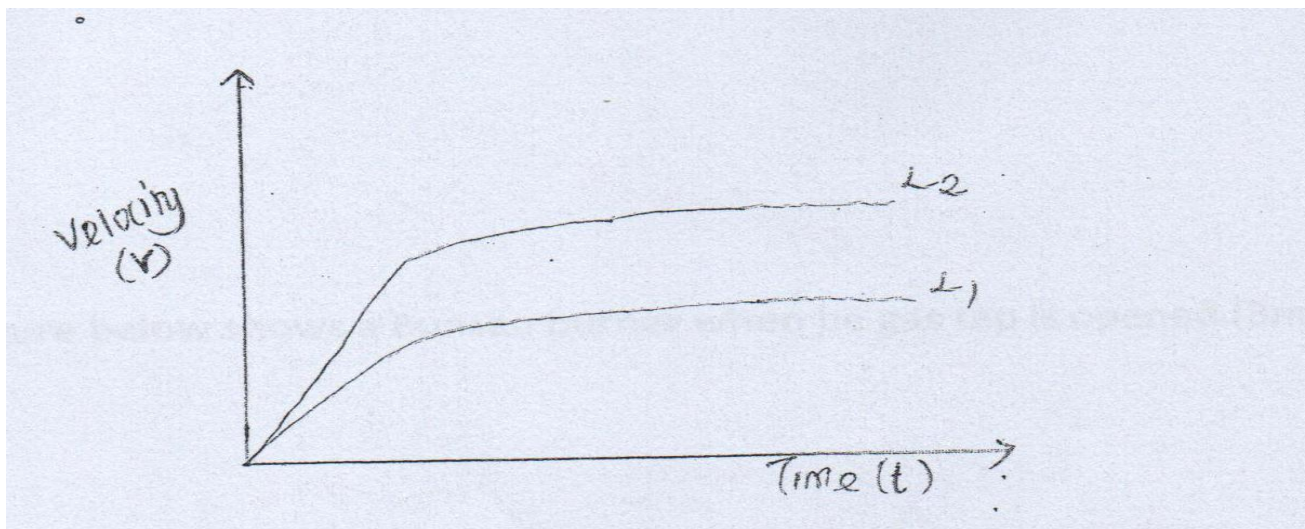
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8. Two identical spherical steel balls are released from the top of two tall jars containing liquid L_1 and L_2 respectively. The figure below shows the velocity-time graph of the motion of the balls.



Explain the nature of the curve and state why they are different. 3mks

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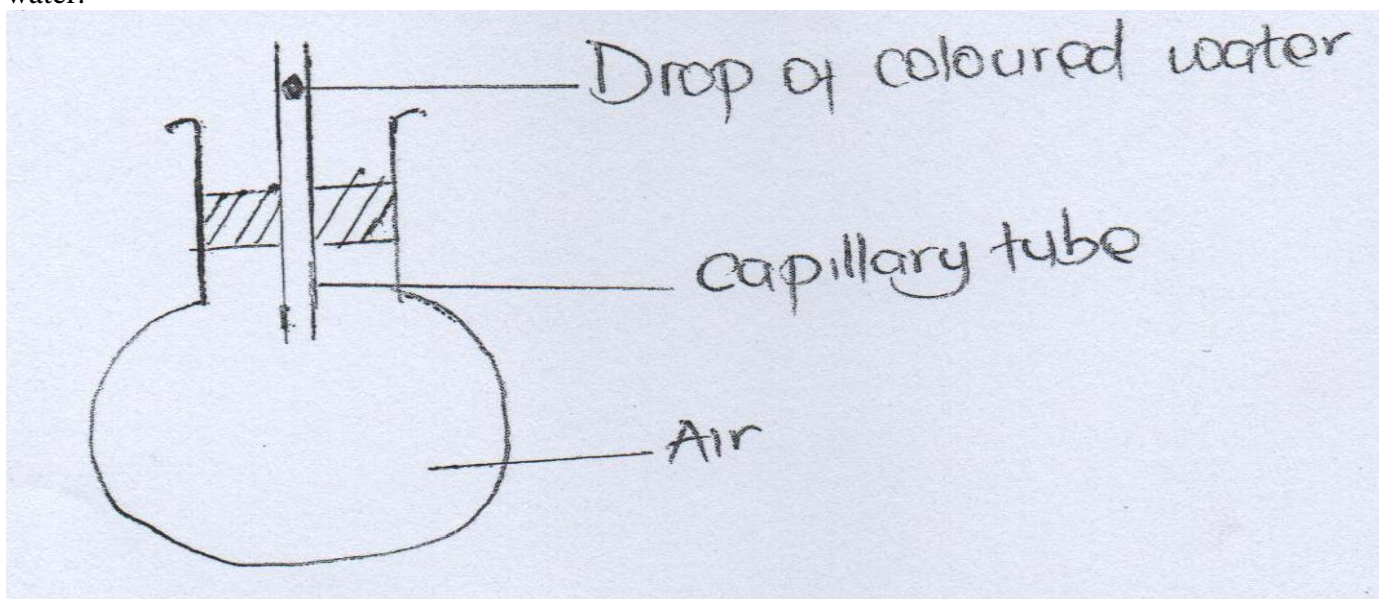
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9. The figure below shows a round bottom flask fitted with a long capillary tube containing a drop of coloured water.



The flask is immersed in ice for some time. State the observation made (2mks)

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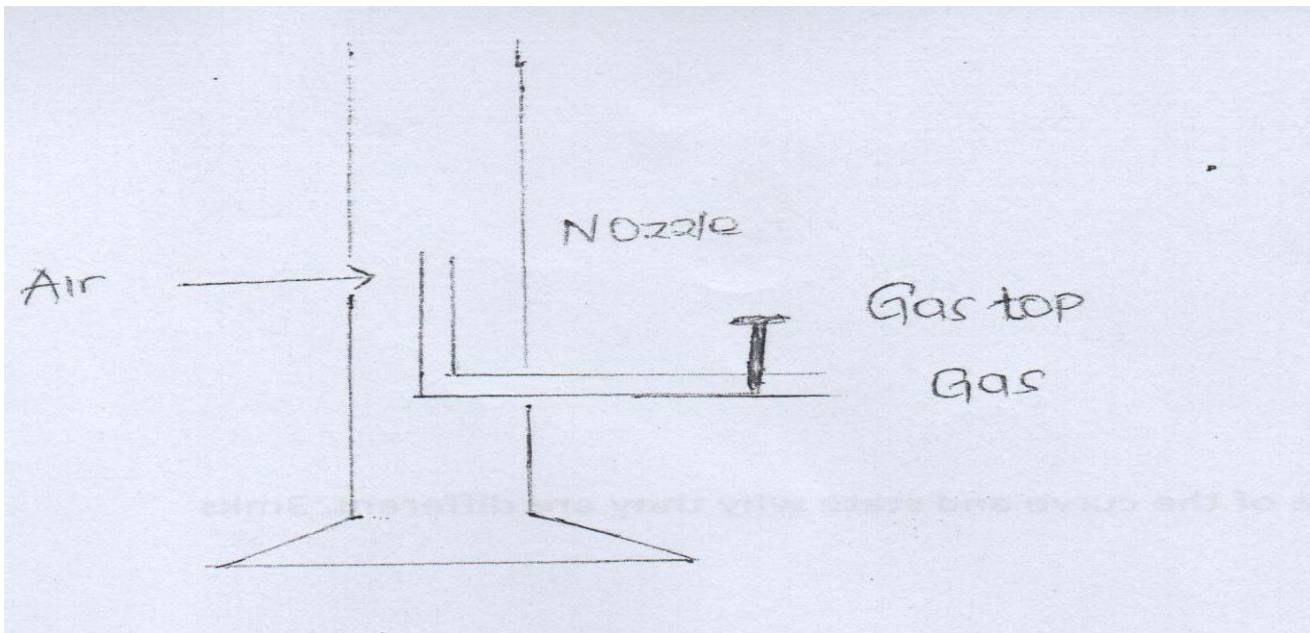
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10. The figure below shows a Bunsen burner when the gas tap is opened.



Explain how air is drawn into the burner when the gas tap is opened.(3mks)

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11. A bag of sugar is found to have same weight on the planet earth as an identical bag of a dry saw dust on the planet Jupiter. Explain why the masses of the two bags must be different. 2mks

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SECTION B

12 (a)A hole of area 2.0cm^2 at the bottom of the tank 2.0M deep is closed with a cork. Determine the force of the cork when the tank is filled with water.(density of water is 1000kg/m^3 and acceleration due to gravity is 10m/s^2) 4mks

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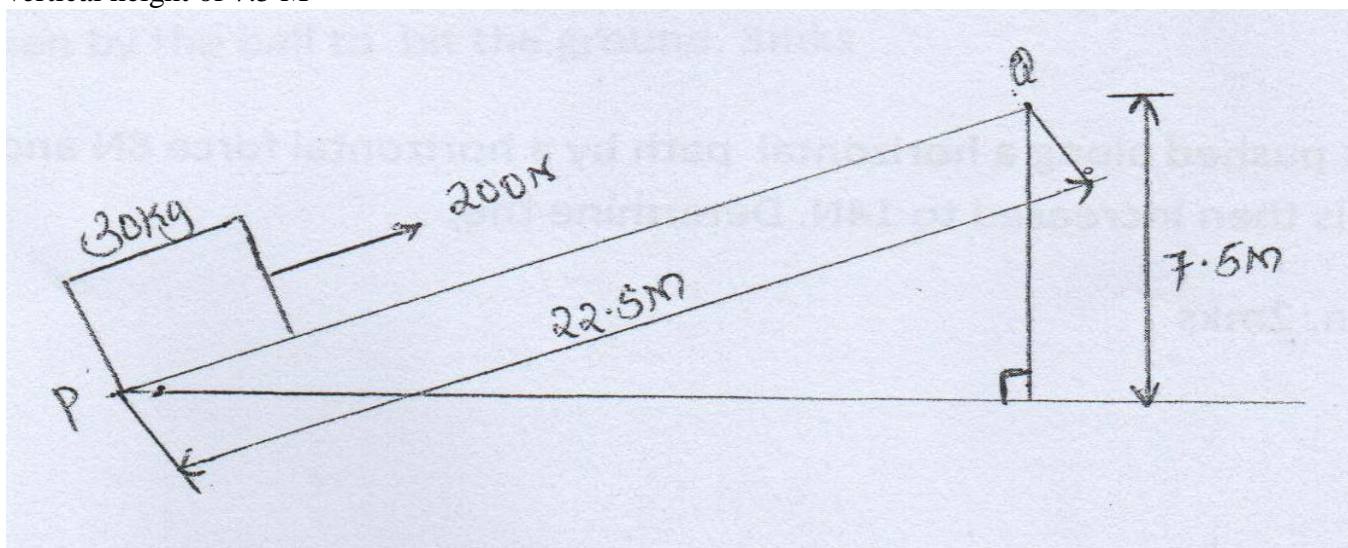
(b)The total weight of car with passengers is $25,000\text{N}$.The area of contact of each of the four tyres is 0.025m^2 . Determine the minimum pressure (3mks)

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(c).A cyclist initially at rest moved down a hill without peddling .He applied brakes and continually stopped. State the energy changes as he cyclist moved down a hill. (1mk)

13 The figure below shows a mass of 30kgs being pulled from the point P with force of 200N Parallel to an inclined plane .The distance between P and Q is 22.5 M . In being moved from P to Q it is raised through a vertical height of 7.5 M



Determine the work done

- (i) by force (2Mks)

- (ii) On the mass (2mks)

- (iii) To overcome friction (1mk)

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(iv) Determine the efficiency of the inclined plane .(2MKS)

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14. A cart of mass 30kgs is pushed along a horizontal path by a horizontal force 8N and moves with constant velocity. The force is then increased to 14N. Determine the;
(a)The resistance to the motion of the cart. 2mks

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(b) The acceleration of the cart. 2mks

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14 (C) A horizontal force of 2N is applied on a wooden block mass of 2Kgs placed on horizontal surface .It causes the block to accelerate to 5ms^{-2} .Determine the frictional force between the block and the surface.
(3mks)

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(i) The time taken by the ball to hit the ground. 3mks

(ii) the initial horizontal velocity of the ball. 3mks

(iii) Vertical velocity of the ball just before striking the ground (take acceleration due to gravity, g , as 10ms^{-2}).

16. A long horizontal capillary tube of uniform bore sealed at one end contains dry air trapped by a drop of mercury. The length of the air column is 142mm at 17°C. Determine the length of air column at 25°C. (3mks)

(b) The pressure of air inside a car tyre increases if the car stands out in the sun for some time on a hot day. Explain the pressure increase in terms of the kinetic theory of the gas (3mks)

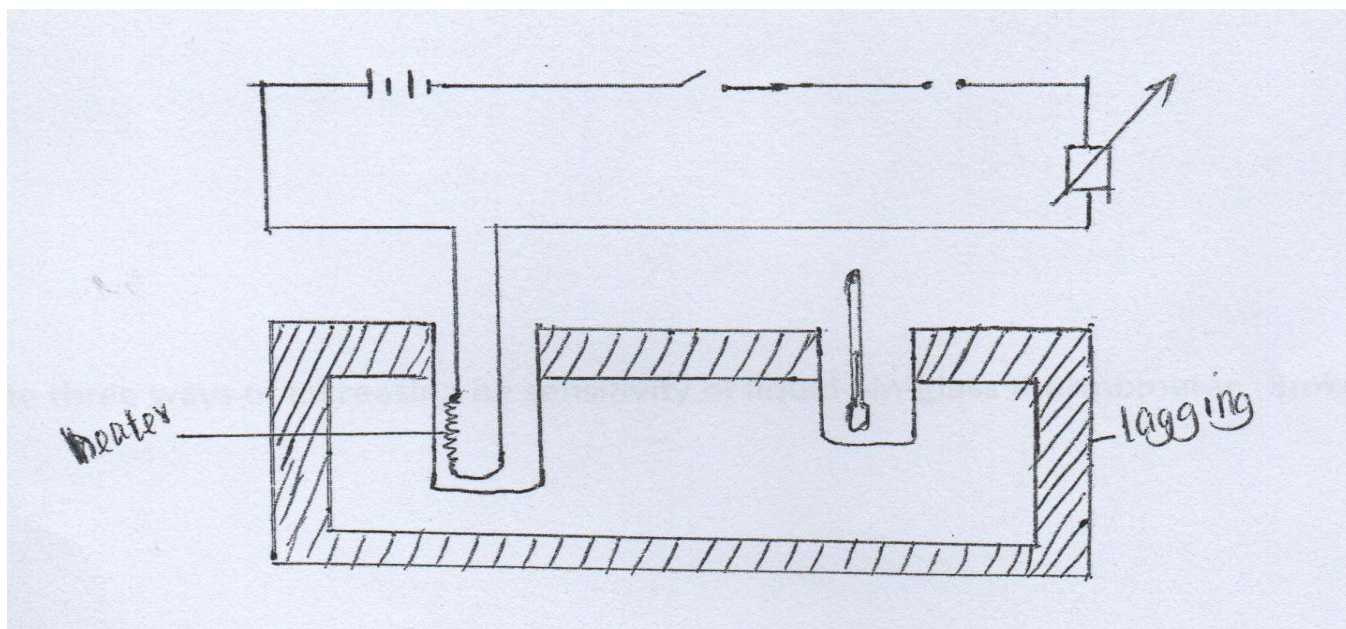
17. An immersion heater rated 2.5KW is immersed into a plastic jug containing 2kg of water and switched on for 4 minute . Determine.

(i) The quantity of heat gained by water 3mks

(ii) The temperature change of water. (3mks)

(Take specific heat capacity of water as $4.2 \times 10^3 \text{ J kg}^{-1} \text{ K}^{-1}$)

18. The figure bellow shows an incomplete set up that can be used in an experiment to determine specific heat capacity of a solid of mass M and temperature θ_1 by electrical method.



(i) Complete the diagram by inserting the missing component of the experiment. 2mks

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(ii) Other than temperature state three measurements that should be taken (3mks)

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(iii)The final temperature was recorded Θ_2 , write an expression that can be used to determine the specific heat capacity of the solid. 2mks

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(B) State three ways of increasing he sensitivity of liquid –in-glass thermometer. 3mks

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END OF TERM 1 EXAMS

PHYSICS

FORM FOUR

PAPER 2

2 HOURS

NAME.....ADM NO:.....

SIGN.....INDEX NO:.....

INSTRUCTIONS TO CANDIDATES

- a) Write your name and Index No. in the spaces provided above.
- b) Sign and write the date of the examination in the space provided above
- c) This paper consists of Two sections; A and B
- d) Answer ALL the questions in Section A and B in the spaces provided.
- e) All working MUST be Clearly shown
- f) Non-programmable silent electronic calculators and KNEC Mathematical tables may be used for calculations

FOR EXAMINER'S USE ONLY

Section	Question	Maximum score	Candidates score
A	1-12	25	
B	13	13	
	14	11	
	15	12	
	16	11	
	17	8	
	TOTAL	80	

This paper consists of 13 printed pages. Candidates should check the question paper to ascertain that all pages are Printed as indicated and that no question is missing

SECTION A (25 MKS)

1. Figure 1 shows a pencil lying in front of a plane mirror. The pencil is moved 2cm towards the mirror in the same orientation.

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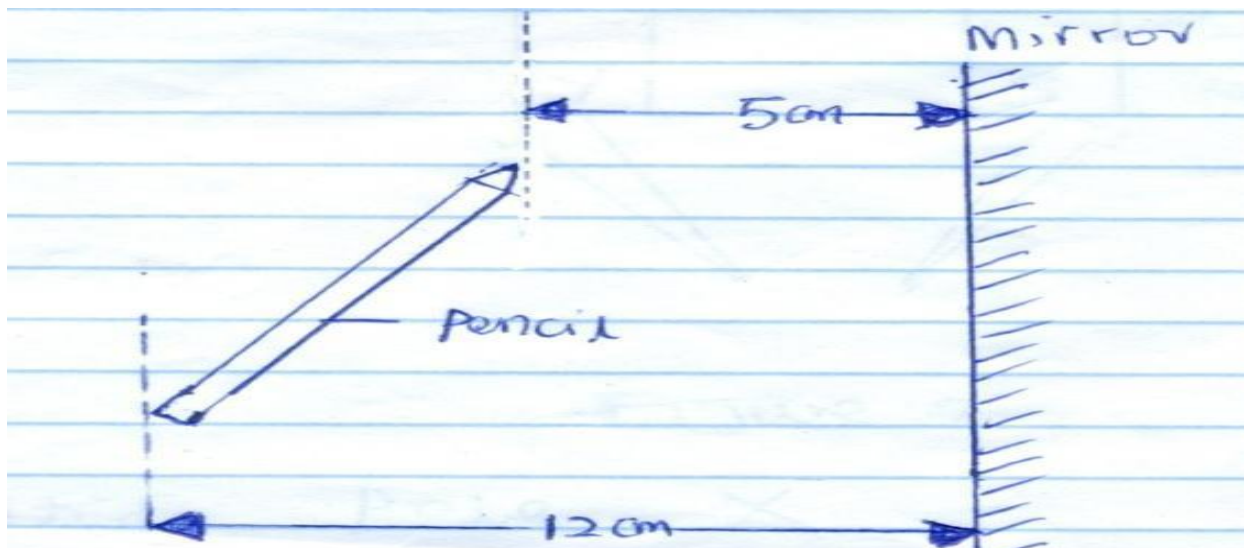


Figure 1

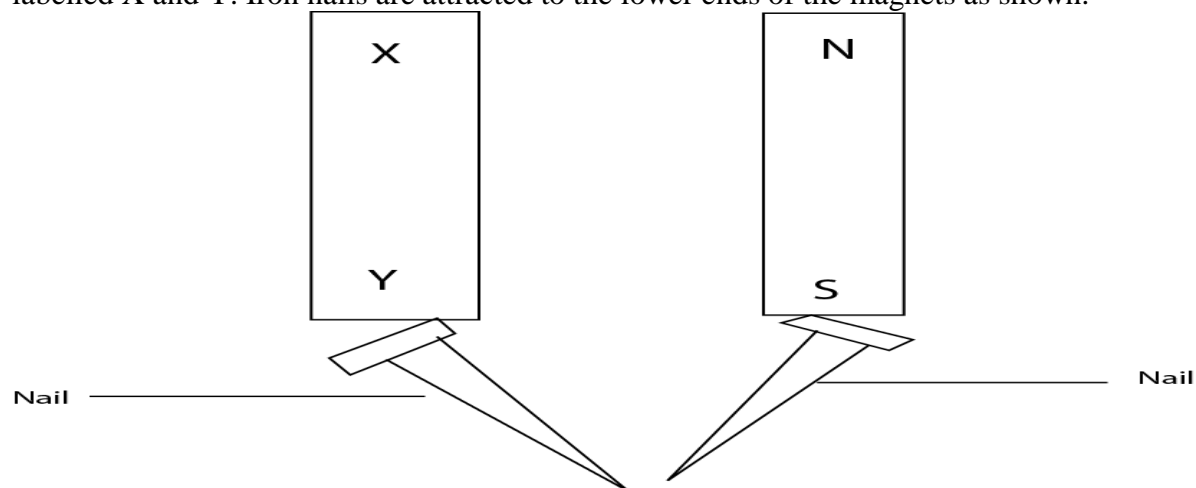
Determine the distance between the new position of the tip of the pencil and its image.
(2mks)

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2. (a) State the basic law of magnetism. (1mks)

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b) Figure 2 shows two bar magnets, one whose poles are labelled and a second one whose poles are labelled X and Y. Iron nails are attracted to the lower ends of the magnets as shown.



(1mk)

Figure 2

Identify pole X

3. State the reason why convex mirror is preferred over a plane mirror for use as a driving mirrors in cars.
(1mk)

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4. Figure 3 shows the displacement-time graph for a certain wave.

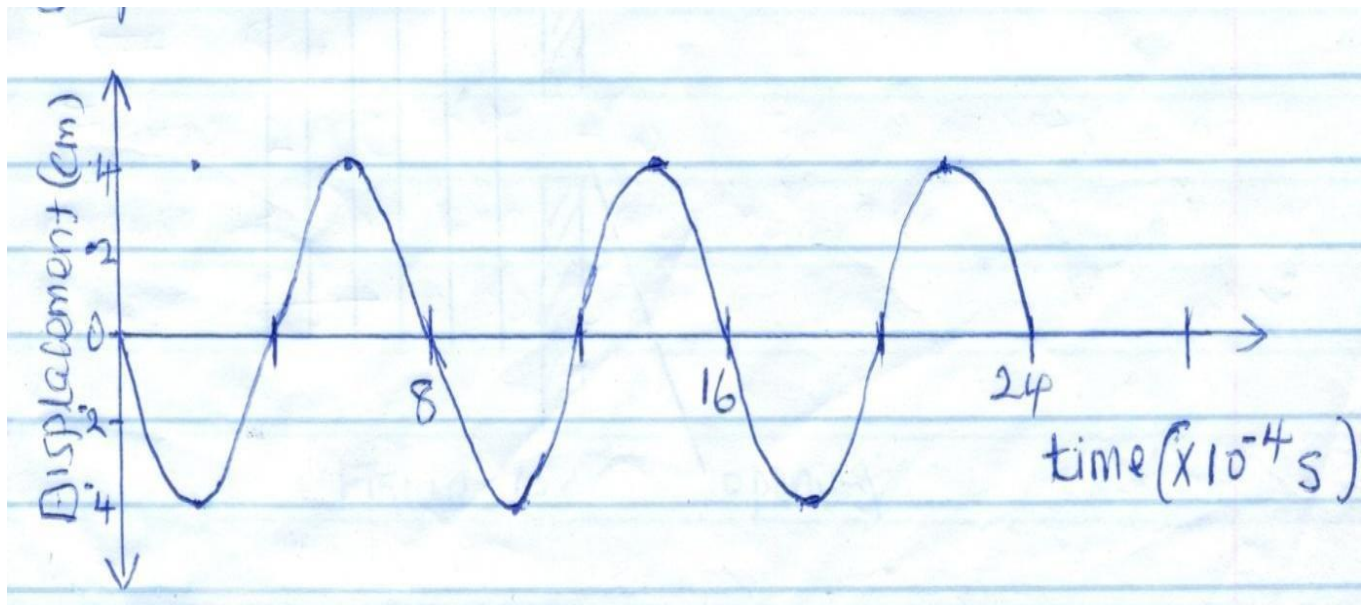


Figure 3

a) Determine the frequency of the wave.

(2mks)

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b) On the same diagram, draw a wave with half the amplitude and twice the frequency of the one shown.

(1mk)

5. (a) State the main difference between primary chemical cells and secondary chemical cells.

(1mk)

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b) State how the design of a dry Leclanche cell reduces polarization.

(1mk)

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6. Figure 4 shows a wave incident on a narrow opening.

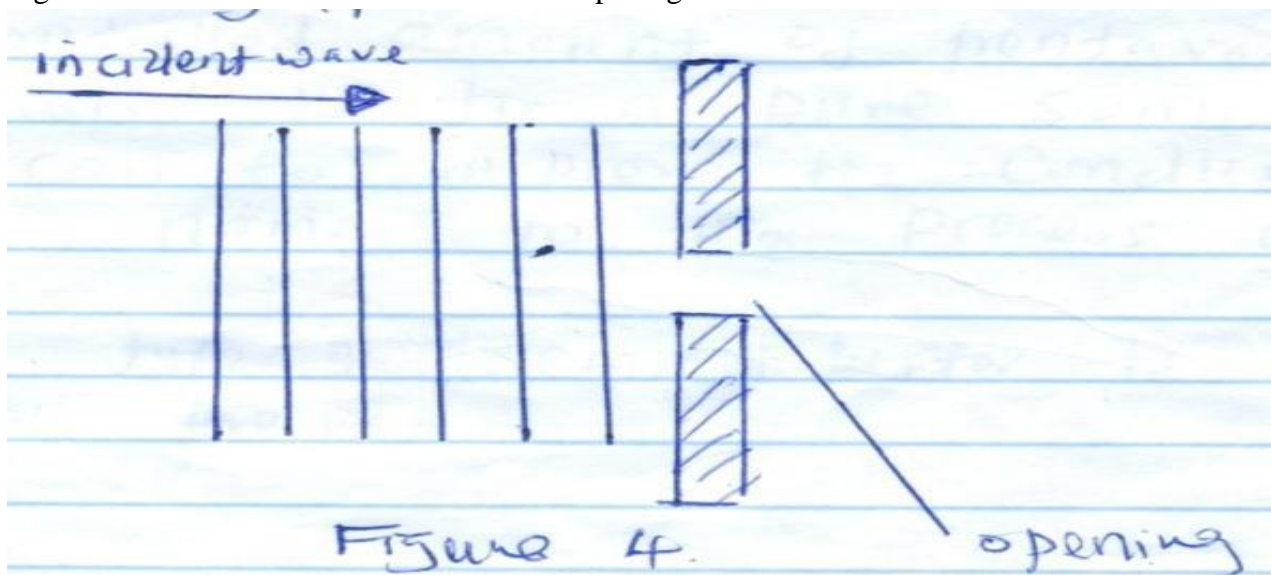


Figure 4

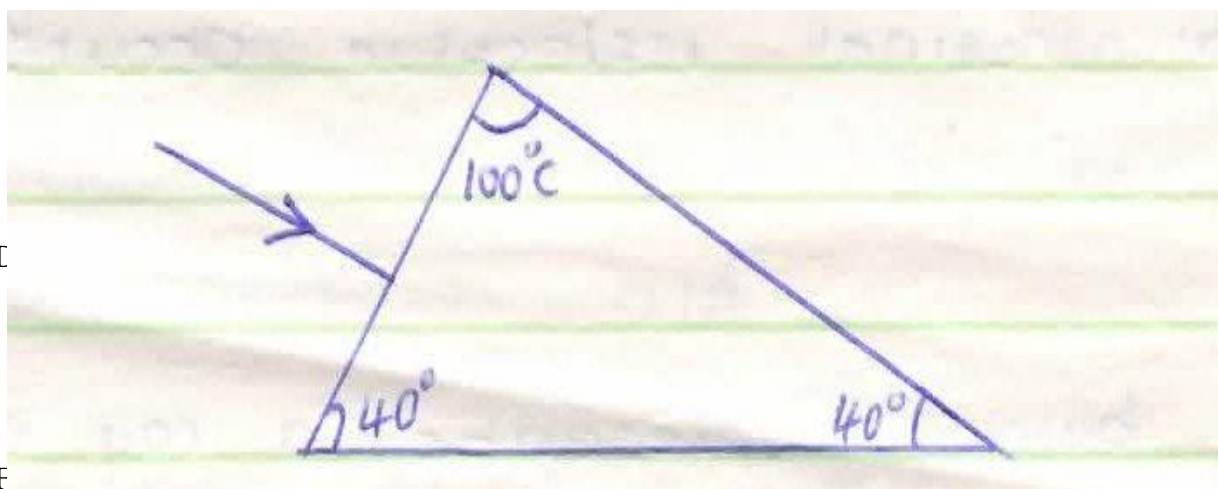
Draw the appearance of the wave after passing through the opening.

(1mk)

7. A student stands between two classroom walls and claps. After 0.6 seconds, she hears the first echo and hears the second echo after 0.8 seconds. Determine the distance from the student to the further wall. Take speed of sound in air = 320m/s. (3mks)

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8. In the fig. 4 shown below (not drawn on scale) sketch the path of a ray till it emerges from the prism. (1mk)



9. I

10. F

them. The direction of current is into the paper.



Conductor

Figure 5

- a) indicate with an arrow the direction of force experienced by the conductor. (1mk)
 b) State one way in which the force on the conductor above can be reduced. (1mk)

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11. Distinguish between transverse and longitudinal waves. (2mks)

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12. a) State Ohm's law.

(1mk)

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b) Figure 6 shows an electrical circuit.

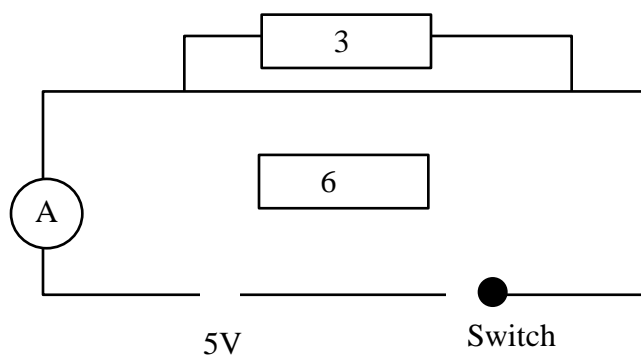


Figure 6

Determine the Ammeter reading in a closed circuit.

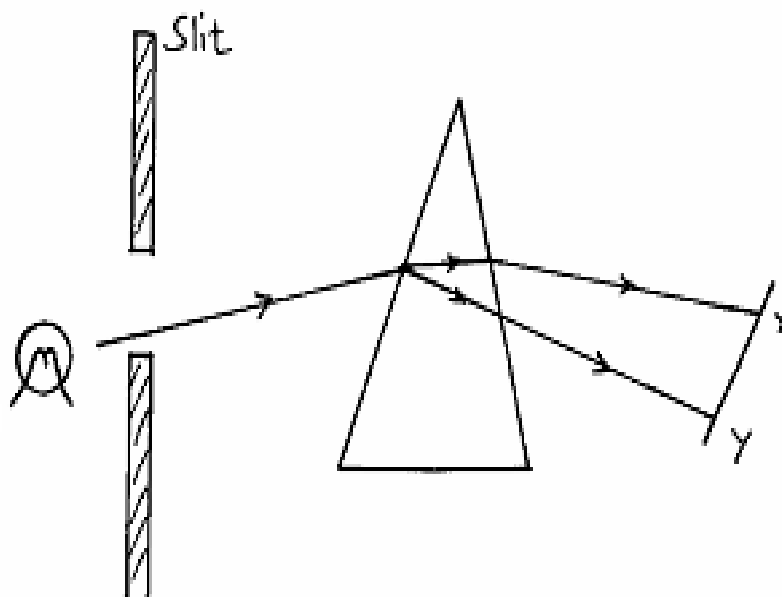
(3mks)

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SECTION B (55 MARKS)

13. Figure 7 below shows a narrow beam of white light onto a glass prism.

Figure 8



(i) What is the name of the phenomenon represented in the diagram?

(1mk)

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- (ii) Name the colour at **X** and **Y**. Give a reason. (3mks)

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- (iii) What is the purpose of the slit? (1mk)

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- (b) Figure 8 below shows the path of ray of yellow light through a glass prism. The speed of yellow light in the prism is $1.8 \times 10^8 \text{ m/s}$.

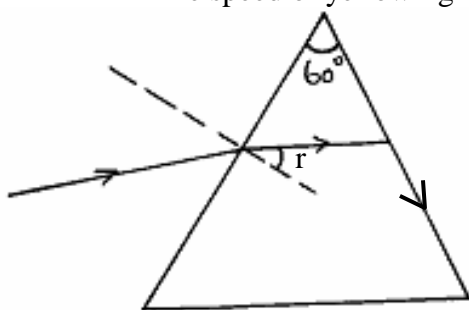


Figure 8

- (i) Determine the refractive index of the prism material (speed of light in vacuum $C = 3.0 \times 10^8 \text{ m/s}$). (3mks)

.....

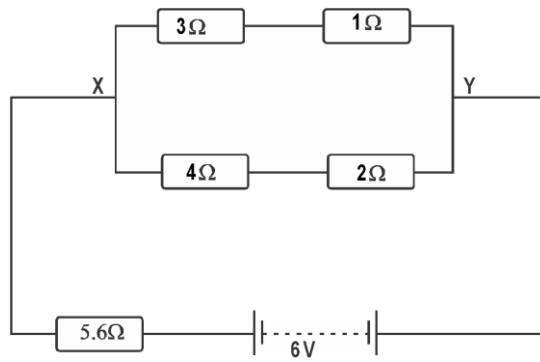
- (ii) Show on the same diagram, the critical angle, c , and hence determine its value. (3mks)

.....

- (iii) Given that $r = 31.2^\circ$, determine the angle \angle . (3mks)

.....

14. (a) The figure below shows resistors in a circuit. The internal resistance of the battery is negligible.



i) Calculate the effective resistance of the circuit. (3 marks)

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ii) Find the total current in the circuit. (3 marks)

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iii) P.d between X and Y (2 marks)

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(b) Define the term “e.m.f” of a cell. (1 mark)

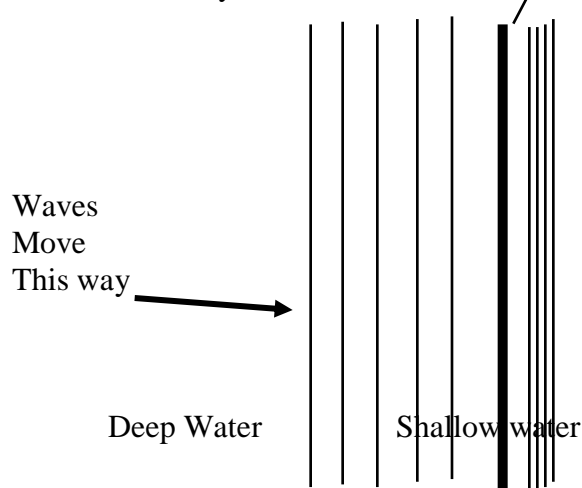
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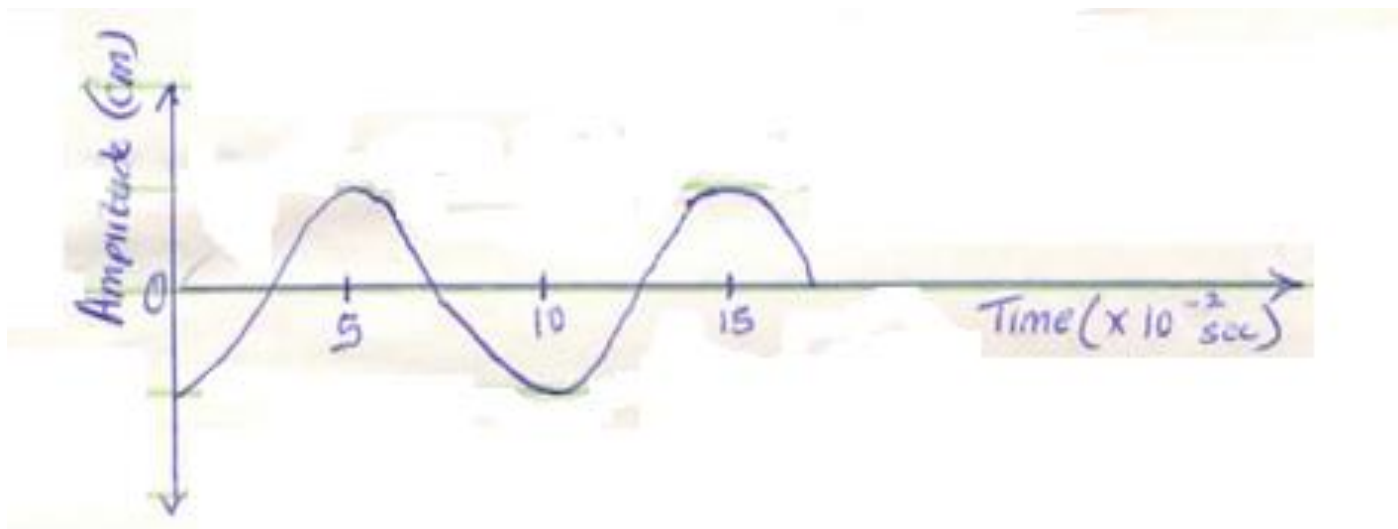
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(c) Why is repulsion the surest way for polarity of a magnet. (1 mk)

15. Some plain water waves were produced in a ripple tank. They pass from a region of deep water into a region of shallow water. The figure shows what the waves look like from above



- a. State what happens at the boundary to:
 - i. The frequency of the waves (1 mark)
 - ii. The speed of the waves (1 mark)
 - iii. The wave length of the waves (1 mark)
- b. The waves have a speed of 0.12m/s [in the deep water. Wave crests are 0.08m apart to the deep water. Calculate the frequency of the sources producing the waves. (3 marks)
- c. State two differences between a stationary wave and a progressive wave. (2 marks)
- d. The wave shown in the figure below has a velocity of 200ms^{-1}



Determine:

(i) The period T of the wave. (2mks)

(ii) The frequency of the wave. (2mks)

(iii) The wavelength of the wave. (2mks)

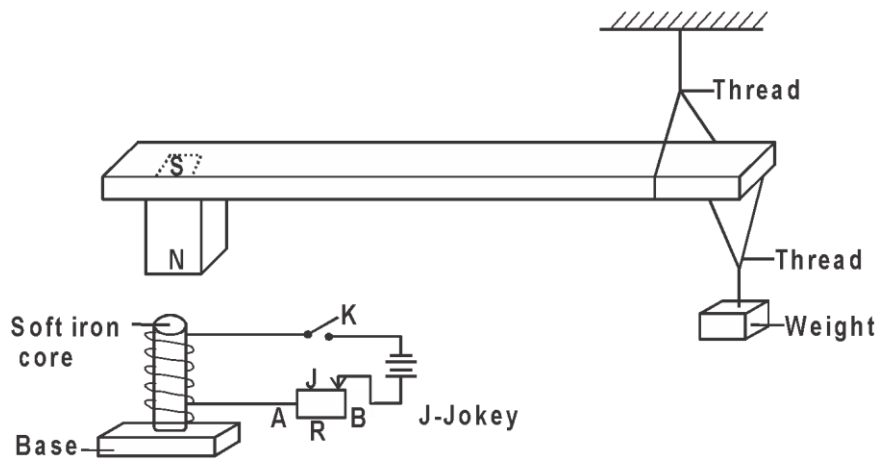
e. State two difference between electromagnetic waves and mechanical waves. (2 mks)

16. a) State two factors that affect the strength of an electromagnet. (2 mks)

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b)Figure below shows suspended metre rule in equilibrium balanced by the magnet and weight shown. The iron core is fixed to the bench.



i) State and explain the effect on the metre rule when the switch S is closed. (3 marks)

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ii) State and explain the effect on the metre rule when the terminals of battery are reversed. (2 marks)

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iii)Suggest how J on the set up can be varied to have metre rule tilt anticlockwise faster. (1 mark)

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iv)Explain your suggestion in b(iii) above. (3 marks)

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