

# **F2 TERM 2 OPENER**

## **ALL SUBJECTS**

*Dear Students ,Attempt These Exams!*

**For Marking Schemes Call 0705525657**

**FORM TWO AGRICULTURE**

**TIME:2HOURS.**

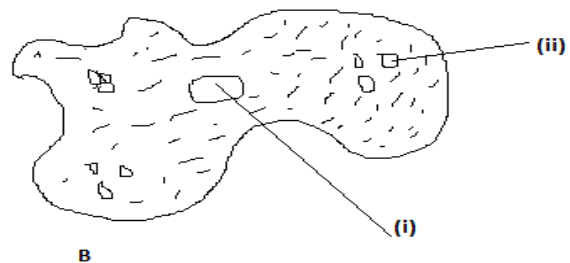
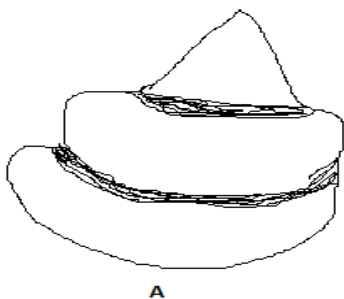
**Answer All the Questions**

1. List four characteristics of plantation farming (4mks)
2. Give four benefits of Agro forestry (4mks)
3. Differentiate between soil structure and soil texture (2mks)
4. State four reasons for treating water in the farm (4mks)
5. State four disadvantages of using organic manure (4mks)

6. Name two species of camel (2mks)
7. State four control measures of tsetse flies (4mks)
8. What is meant by BosInducus? (1mk)
9. Name four dairy breeds of goat (4mks)
10. Why do we keep farm record (1mk)

**SECTION B(2MKS)**

11. The diagram below illustrates some types of soil structure. Study and answer the question that follow



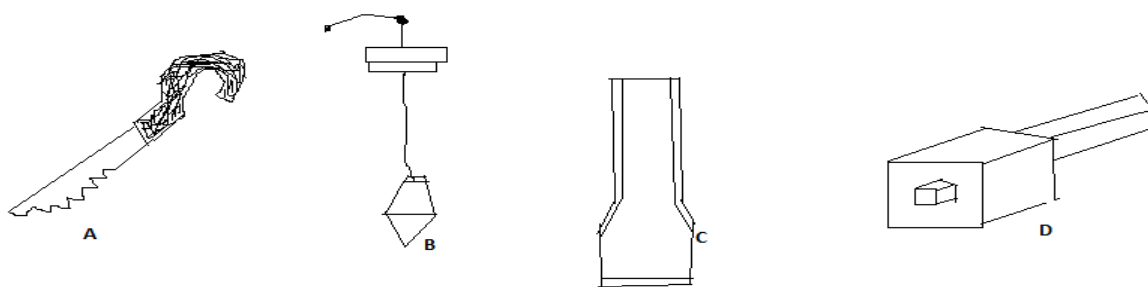
- (a) Identify the type of soil structure illustrated by (2mks)

- A
- B

(b) Name parts labeled (i) and (ii) (2mks)

(c) State two effects of soil structure A in crop production (2mks)

12. Below are farm tools



(a) Name the tool above (4mks)

- A
- B
- C
- D

b) State use of each tool above (4mks)

- A
- B
- C
- D

(c) State two maintenance that can be carried to tool D (2mk)

- (d) Classify the following tools at their appropriate categories (4mks)

	Categories
A	
B	
C	
D	

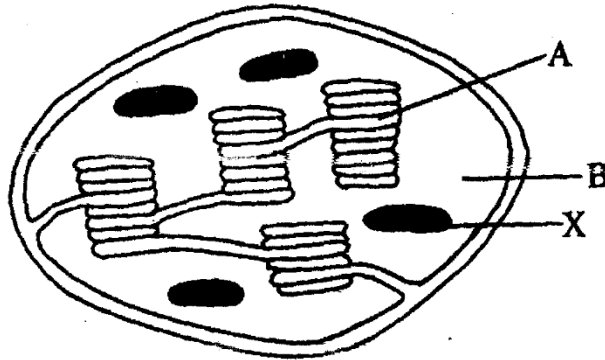
**SECTION C (40 MKS)**

13. (a) State the importance of livestock in the farm (4mks)  
(b) Explain differences between BosIndicus and Bos Taurus breeds (10mks)  
(c) List six breeds of rabbit (6mks)
14. (a) Describe the importance of livestock husbandly (15mks)  
(b) State four breeds of dairy cattles (4mks)  
(c) Which dairy breeds produce high butter fat content
- 15 (a) Discuss seven method by which soil is able to loss its fertility (14mks)  
(b) State six characteristic of a fertile soil (6mks)

# FORM 2 TERM 2 OPENER EXAMS

## FORM TWO BIOLOGY

1. The diagram below represents a plant cell organelle



a) Name the organelle. (1mk)

b) In which of the labelled parts does carbon (IV) Oxide fixation occur? (1mk)

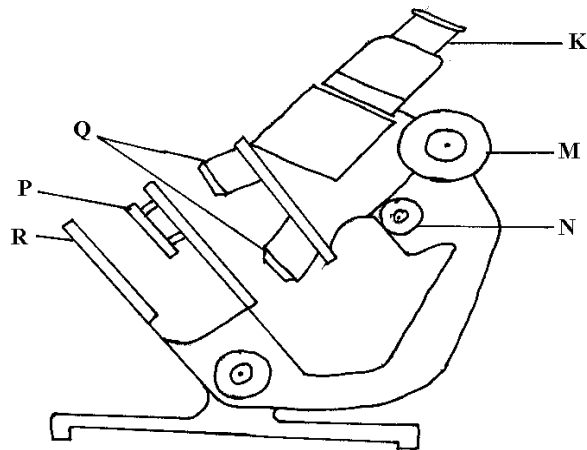
c) Name the parts labelled A and B and state how each is adapted to its functions. (4mks)

A.....  
.....

B.....  
.....

d) Explain what would have happened to the structures labelled X had the plant been kept in darkness for 48 hours. (2mks)

2. The diagram below shows some components of a light microscope.



a) Name the parts labeled (2mrks)

K

.....

M

.....

a) State the functions of (2mrks)

P

.....

Q

.....

b) A student was viewing a prepared slide of a plant cell under high power microscope. The features of the cell were blurred. Which one of the labelled parts of the microscope would the student use to obtain:-

(i) a sharper outline of the features. (1mrk)

.....

(ii) Give the formula used to calculate magnification in a light microscope. (1mrk)

.....

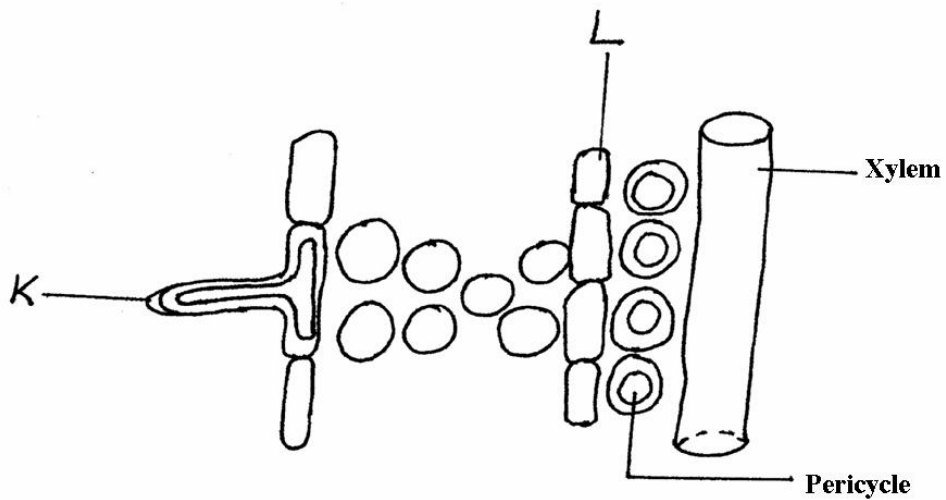
c) A student was preparing a section of a plant cell to be viewed on a light microscope. Give a reason for each of the following steps:-

(i)Cutting a very thin section (1mrk)

(ii)Staining the section (1mrk)

(iii)Putting the section in water (1mrk)

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



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

K

.....  
.....

L

.....  
.....

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

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

4.State three main functions of the stomach in human beings:- (3 mks)

5.Name the cell organelles responsible for :

i) Protein synthesis

ii) Destroying worn – out organelles and cells

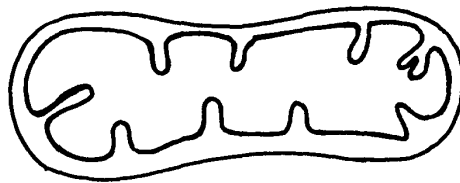
6.a) Lietego school biology student used a microscope with x40 objective lens and x5 eye piece lens which had 2mm radius. Calculate the area of the field of view in micrometers. (2mks)



b) What is the average size of the cell in micrometers

(2mks)

7.(a) Identify the organelle shown below:- (1mk)



(b) How is the organelle you have identified in (a) above suited to its function(2mks)

8.State **three** properties of the cell membrane (3mks)

9.a) What is the formula for calculating linear magnification of a specimen when using a hand lens (1mk)

10.Distinguish between the following terms :-(4mks)

a) Magnification and resolution of a microscope

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Mounting and staining of a specimen

11. Name the organelle that performs **each** of the following functions in a cell. (3mks)

- (a) Transport of packaged glycoproteins
- (b) Destruction of worn out cell organelles
- (c) Synthesis of proteins

12. Why are the following procedures done when preparing sections to be observed under a light microscope? (3mks)

- (a) Making of thin sections
- (b) Using a sharp blade to make the sections

c) Staining

13. State **three** physiological processes that are involved in movement of substances across the cell membrane (3mks)

14. Name the diseases caused by deficiency of : (2mks) (a) Iodine

(b) Vitamin C

15. What are the **two** functions of bile salts during the process of digestion?(2mks)

16. State **two** adaptations of herbivores which enable them to digest cellulose(2mks)

17. State **three** factors that affect the rate of osmosis(3mks)

18. State **three** roles of light in photosynthesis(3mks)

19. Explain how saliva is important in digestion (2mks)

20. Briefly explain the fate of the following products from the light stage of the process of

Photosynthesis (3mks)

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(a) Oxygen

b)Hydrogen

(c) ATP

21.State **three** ways by which plants compensate for lack of the ability to move from one place to another(3mks)

21.State **four** difference between monosaccharide and polysaccharides(4mks)

23.Describe how mammalian small intestine is adapted to its function (7mks)

# FORM 2 TERM 2 OPENER EXAMS

## FORM TWO BUSINESS

**TIME:2HOURS**State **FOUR** roles of entrepreneurship in the society

(4mks)

i).....

ii).....

iii).....

iv).....

1. Classify the factors listed in the table below as either internal or external. (tick appropriately)

factors	Internal	External
(i) Employees		
(ii) Inflation		
(iii) Technology applied		
(iv) Invested funds		
(v) Cultural factors		
(vi) Tools		
(vii) Entrepreneur		
(viii) Political factors		

2. State **FOUR** personal attributes that an office worker should possess.

(4mks)

i).....

ii).....

iii).....

iv).....

3. State **FOUR** ways through which government control businesses.

(4mks)

i).....

ii).....

iii).....

iv).....

4. State **FOUR** factors that a consumer should consider in satisfying competing needs. (4mks)
- i).....
  - ii).....
  - iii).....
  - iv).....
5. State **FOUR** ways through which organizations can improve efficiency of their workers. (4mks)
- i).....
  - ii).....
  - iii).....
  - iv).....
6. State four **FACTORS** that can to the success of a business. (4mks)
- i).....
  - ii).....
  - iii).....
  - iv).....
7. State **FOUR** advantages of indirect production. (4mks)
- i).....
  - ii).....
  - iii).....
  - iv).....
8. Mention **FOUR** demerits of using middle-men in distribution of goods and services. (4mks)
- i).....
  - ii).....
  - iii).....
  - iv).....
9. State **FOUR** advantages of buying goods on credit over hire purchase buying. (4mks)
- i).....
  - ii).....
  - iii).....

- iv).....
10. List **FOUR** factors to consider before choosing the type of business to start. (4mks)
- i).....
- ii).....
- iii).....
- iv).....
11. State **FOUR** ways used by organizations to safeguard and protect its property. (4mks)
- i).....
- ii).....
- iii).....
- iv).....
12. State **FOUR** macro-environment factors that affect business performance. (4mks)
- i).....
- ii).....
- iii).....
- iv).....
13. State any **FOUR** government initiated methods of consumer protection. (4mks)
- i).....
- ii).....
- iii).....
- iv).....
14. Explain any **FOUR** circumstances a buyer may be required to pay cash with order. (4mks)
- i).....
- ii).....
- iii).....
- iv).....
15. State any **FOUR** limitations of consumer initiated methods of consumer protection. (4mks)
- i).....
- ii).....
- iii).....

iv).....

16. Give **FOUR** reasons why an office is necessary in an organization. (4mks)

i).....

ii).....

iii).....

iv).....

17. State **FOUR** benefits of business ethics. (4mks)

i).....

ii).....

iii).....

iv).....

18. Mention **FOUR** features of a sole trader. (4mks)

i).....

ii).....

iii).....

iv).....

19. Highlight **FOUR** causes of business failure. (4mks)

i).....

ii).....

iii).....

iv).....

20. Give four reasons why a cheque may be dishonored by a bank. (4mks)

i).....

ii).....

iii).....

iv).....

21. A trader gives 20% trade discount on the value of goods bought above and also a cash discount 10% if payments are made within one week. Onyango bought goods from the trader on the credit worth 200,000 on 3<sup>rd</sup> march 2013 and settled his debts on 8<sup>th</sup> of the same month. Find how much he paid. (4mks)

22. Mention **FOUR** characteristics of services. (4mks)



- i).....
- ii).....
- iii).....
- iv).....

23. Highlight **FOUR** circumstances where a trader may issue a credit note. (4mks)

- i).....
- ii).....
- iii).....
- iv).....

## FORM 2 TERM 2 OPENER EXAMS

### FORM TWO CHEMISTRY TIME:2HOURS

1((a). The table below shows some properties of chlorine, bromine and iodine .

element	formula	Colour and state room temperature	Solubility in water
Chlorine	Cl <sub>2</sub>	(i)	Soluble
Bromine	Br <sub>2</sub>	Brown liquid	(ii)
iodine	I <sub>2</sub>	(iii)	Slightly soluble

Complete the table by giving the missing information in (i), (ii) and (iii) above. (3mks)

(b). Chlorine gas is prepared by reacting concentrated hydrochloric acid with either Manganese (IV) oxide or Potassium permanganate.

(i). Write the equation for the reaction between concentrated hydrochloric acid and Manganese (IV) oxide. (1mk)

(ii). What is the role of manganese (iv) oxide in this reaction? (1mk)

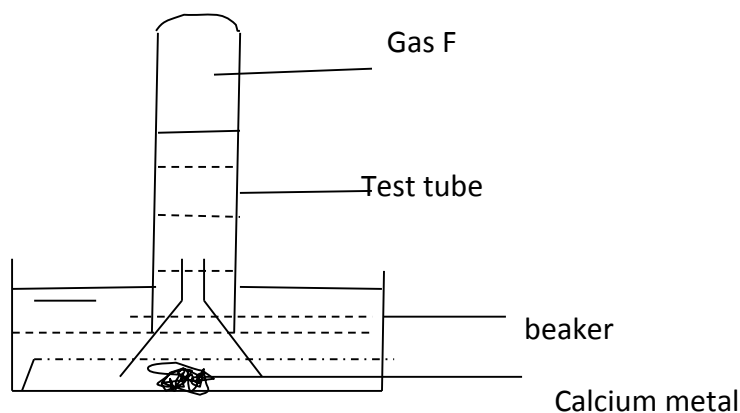
(iii). When potassium permanganate is used instead of manganese (iv) oxide, heating is not required. Explain. (1mk)

(iv). Give two advantages of using potassium permanganate over manganese (IV) oxide. (2mks)

(v). Iron metal reacts with chlorine to form substance E. identify substance E. (1mk)

(vi). Write a chemical equation to represent the reaction in (V) above .(1mk)

(c). The set up below was used to collect gas F produced between water and calcium metal.



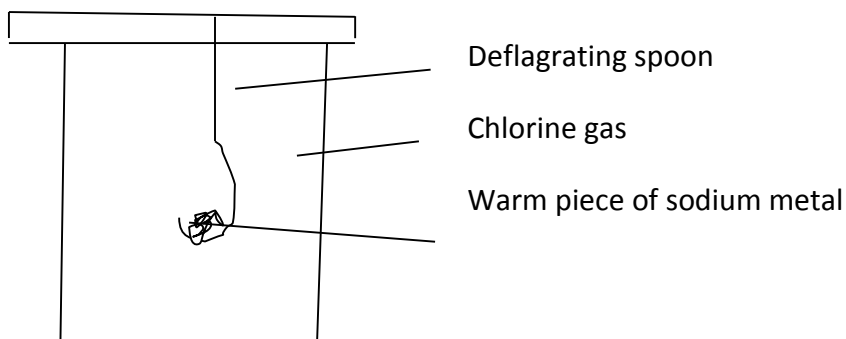
(i). Name gas F. (1mk)

(ii). Write an equation for the production of gas F. (1mk).

(iii). At the end of the experiment, the solution in the beaker was found to be a weak base. Explain why the solution was a weak base. (2mks)

(iv). Give one laboratory use of the solution formed in the beaker. (1mk)

2(a). The set up below was used to investigate the reaction of sodium metal with chlorine gas. Study it and answer the questions that follow.

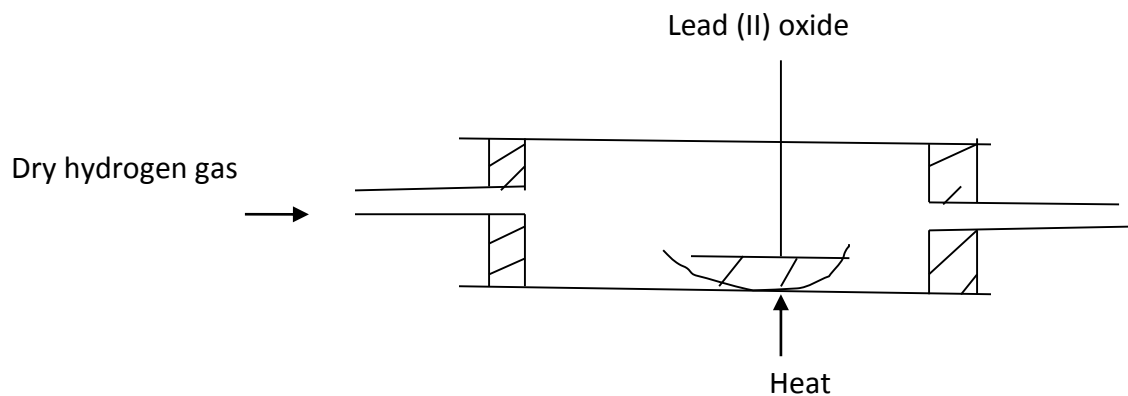


(i). State two observations that would be made in the gas jar. (2mks)

(ii). Write an equation for the reaction that occurred. (1mk)

(iii). Name one use of the product formed. (1mk)

(b). In an experiment , dry hydrogen gas was passed over heated lead (II) oxide as shown below.

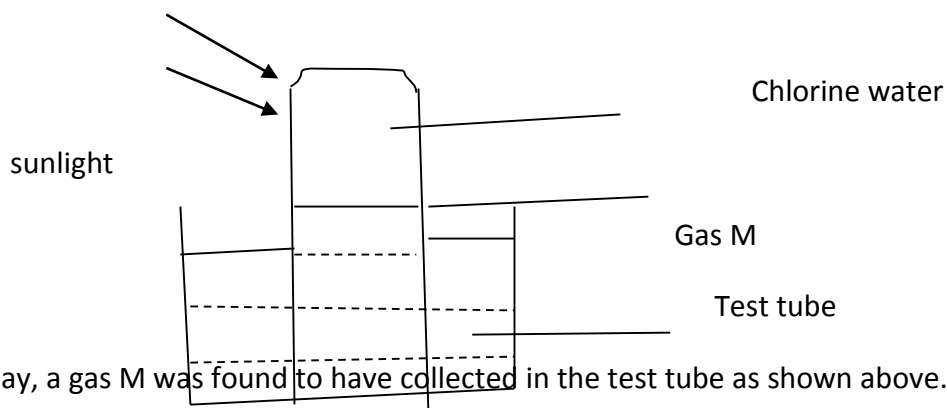


(i). State the two observations made in the combustion tube after the experiment. (2mks)

(ii). Write a chemical equation for the reaction that occurred in the combustion tube.(1mk)

(iii). What property of hydrogen gas is shown by the reaction in b (ii) above? (1mk)

3. In an experiment, a test tube of chlorine gas was inverted in water as shown in the diagram. It was then left to stand in sunlight for one day.



After one day, a gas M was found to have collected in the test tube as shown above.

(i). identify gas M. (1mk)

(ii). Suggest whether the PH of the solution the beaker would increase or decrease after one day. Give an explanation. (2nks)

(iii). The colour of chlorine water was observed to have changed from pale yellow to colourless after one day. Explain. (2mks)

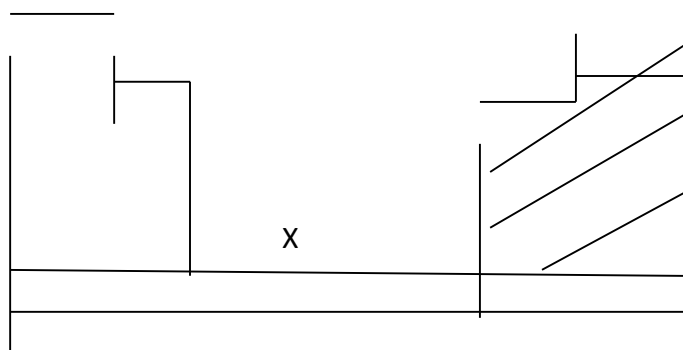
(iv) Write an equation to support your answer in 3(iii) above. (1mk)

(v). State and explain the observation made when a moist blue litmus paper was placed at the mouth of the test tube containing chlorine gas. (3mks)

(vi). Write an equation to show how the process in 3(v) above occurs. (1mk)

(vii). Give two uses of chlorine gas. (2mks)

4(a). The chart below is an outline of part of the periodic table.



(i). With the help of vertical and horizontal lines, indicate the direction of increasing non-metallic nature of the elements. (2mks)

(ii). Which type of elements are represented :

I. By X ? (1mk)

II. In the shaded area? (1mk)

(b)(i). Element A is in the same group of the periodic table as chlorine. Write the formula of the compound formed when A reacts with magnesium. (1mk)

(ii). Soot is one of the environmental pollutants.

I.Explain the term pollutant. (1mk)

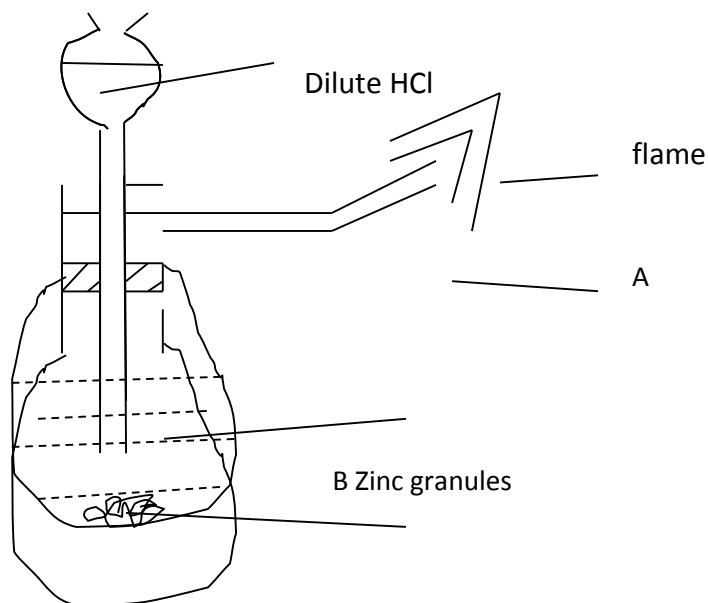
II.State how soot is formed from hydrocarbons. (1mk)

(iii). What role do the following play in the commercial preparation of oxygen gas?

I. Concentrated sodium hydroxide. (1mk)

II. Concentrated Sulphuric (VI) acid. (1mk)

(b). Study the diagram below and answer the questions that follow.

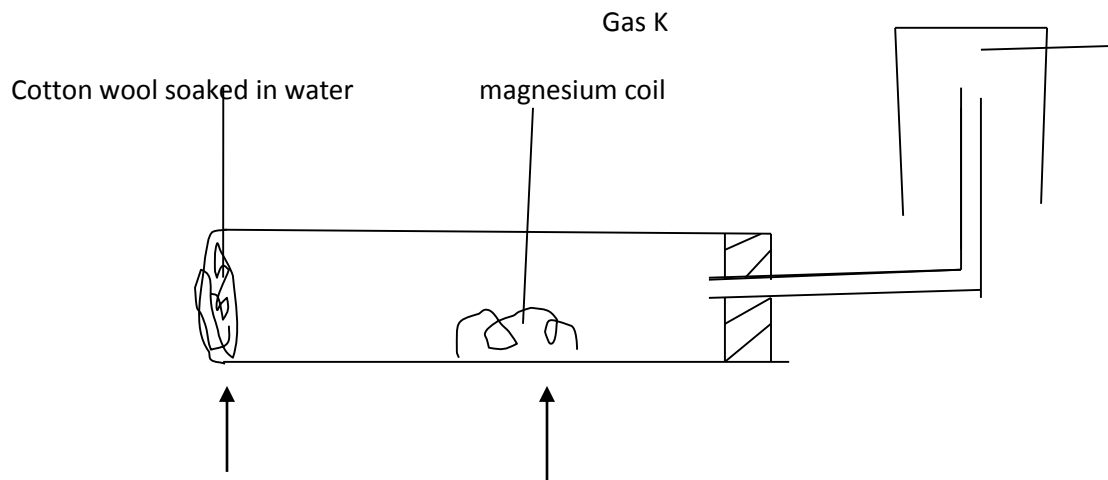


(i). Write a chemical equation for the reaction that occurred at points:

I. A (1mk)

II. B (1mk)

(ii). A student set up the experiment below to collect gas K. the glass wool was heated before heating the magnesium coil





heat

heat

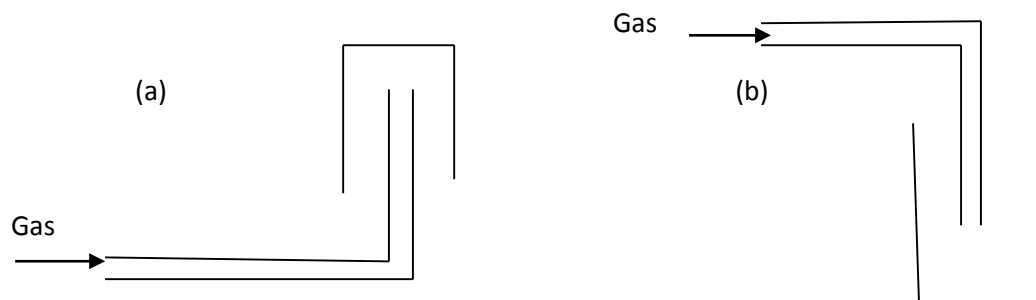
(a). Explain why it was necessary to heat the moist cotton wool before heating the magnesium. (2mks)

(b). Identify gas K. (1mk)

(c). what property of gas K makes it possible to be collected by the method shown? (1mk)

(d). Write a chemical equation for the reaction that produced gas K. (1mk)

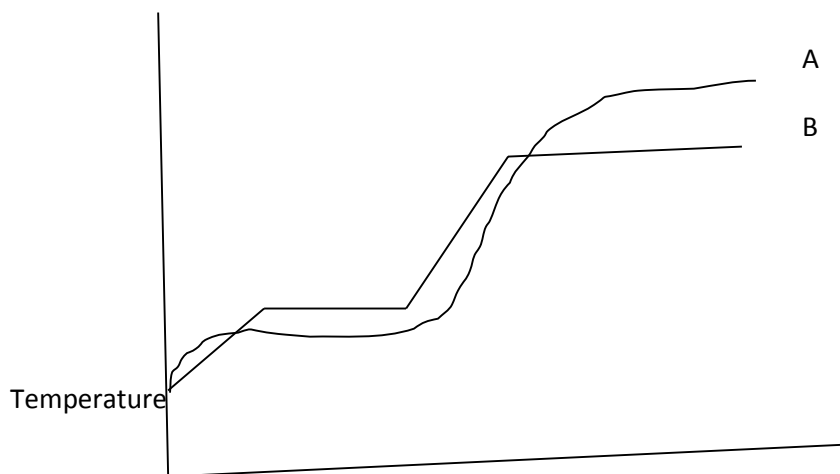
(e). The diagram represents two methods of gas collection in the laboratory.



(i). Name the methods of gas collection above. (2mks)

(ii). Which method is suitable for collecting dry carbon (IV) oxide gas? Give a reason. (2mks)

5. The curves below represent the variation of temperature with time when pure and impure samples of a solid were heated separately.

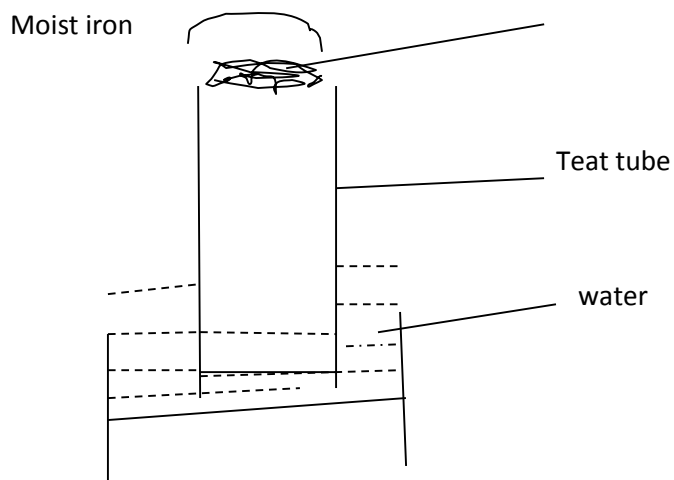


(a). Which curve represents the variation in temperature for pure solid? Explain. (2mks)

(b) State the effect of an impurity on the melting and boiling points of a pure substance. (2mks)

(c). Name two gases used with oxygen in welding. (2mks)

6. The set up bellow was used to study some properties of air.



(i) .Draw another diagram to show the level of water in the test tube after 24 hours. Explain the observations. (3mks)

(ii). State and explain one observation made on the moist iron after 24 hours. (2mks)

(iii). State one disadvantage of rusting. (1mk)

(iv). Fractional distillation of liquid air is usually used to separate various gaseous mixtures in air. Explain how nitrogen is obtained. ( 1mk)

(v). The PH of a soil sample in a given area was found to be 5.5. an Agricultural officer the addition of lime (calcium oxide). State the function of lime in the soil. (1mk)

# FORM 2 TERM 2 OPENER EXAMS

## FORM TWO CRE

TIME:2HOURS

1. a) Give seven differences between the first and the second account of creation stories.(7mks)
- (b)State six consequences of sin according to (Gen 3, 4, 6 – 9, 11) (6mks)
- (c)Outline seven ways in which wrongdoers were punished in Africa society. (7mks)
2. a)Outline **seven** reasons for the call of Abraham. (7mks)
- b) Describe how Abraham demonstrated his faith in God. (8mks)
- c) Identify ways in which Christians demonstrate their faith in God. (5mks)
3. a) Outline the Old Testament prophecies about the Messiah. (8mks)
- b) Outline what angel Gabriel revealed to Mary about Jesus Christ during the annunciation of his birth. (6mks)
- c) State **Four** ways in which church leaders are preparing the people for the second coming of Christ. (6mks)
4. (a)Explain the circumstances that led to the spread of idolatry in Israel. (8mks)
- (b)Give **seven** reasons why Elijah faced hostility and danger as a prophet of God. (7mks)
- (c)Outline the practices of idolatry in the society today. (5mks)
5. a) Explain ways in which Jesus fulfilled the Old Testament prophecies about the Messiah (7 mks)

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b) From the infancy stories(Luke 1&2) explain four occasions when people are given  
divine revelation that Jesus is the promised messiah (8 marks)

c) State five ways in which Christians spread the gospel of Christ (5 marks)

6. (a) State **seven** factors which promote harmony and mutual responsibility in Traditional  
African Communities. (7mks)

(b) Explain the **role** of healers in Traditional African Communities (7mks)

(c) Identify **six** factors undermining kinship ties in modern society (6mks)

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# FORM 2 TERM 2 OPENER EXAMS

## FORM TWO ENGLISH

### 1. FUNCTIONAL WRITING

In not more than 250 words,

Write a letter of apology to the head teacher of your school giving reasons as to why you did not attend the school's academic day. (20mks)

### CLOZE TEST (10MKS)

Fill in the blank spaces with the most appropriate word.

'I am done! I am done!' my voice echoed in the forest. I wept aimlessly. I did \_\_\_\_\_ know whether I was weeping because my friend was dying \_\_\_\_\_ because I had very little hope of \_\_\_\_\_ the next sunrise \_\_\_\_\_ fell like a heavy \_\_\_\_\_ covering the whole country around us. A hyena, which was apparently watching \_\_\_\_\_ helplessness, made a noise which sounded like a hoarse laughter. \_\_\_\_\_ frightened me so much that I could hear my own \_\_\_\_\_ beating. I shouted as \_\_\_\_\_ as my empty stomach would allow me and the \_\_\_\_\_ ran to the forest. From that day to this, when I am telling this story, I have never been confronted by such a problem.

### ORAL SKILLS (30MKS)

1. Read the poem below and answer the questions that follow.

I had a dream last night. I dreamed

I had to pick a mother out.

I had to pick a father too  
At first, I wondered what to do,  
There were so many there, is seemed,  
Short and tall and thin and stout,  
But just before I sprang awake,  
I knew what parents I would take.

And this surprise and made me glad;  
They were the ones I always had!

Questions.

- i) Explain how the poet achieves rhythm in the poem (3mks)
- ii) Which words would you stress in line 7 of this poem? (2mks)
- iii) How would you say the last line of this poem? (1mk)
- iv) You are performing this poem to your classmates. How would you know that they are not concentrating? (4mks)
- i)
- ii)

iii)

iv)

2. Identify the shortcomings in Nyasuguta's telephone skills in the following conversation.

Nyasuguta: (Dialing a number) Is that Turbo wholesalers?

Voice 1: Sorry, wrong number

Nyasuguta: (Tries several other numbers unsuccessfully and eventually gets it right) Is that Turbo wholesalers?

Voice2: Yes it is. Can I help you?

Nyasuguta: I want to order Maize flour.

Voice 2:How many bales, Madam?

Nyasuguta: Just a minute (turns from the phone and asks her husband how many bags they need). Ten bales.

Voice 2:Any preference in the brand?

Nyasuguta: of course! Everybody goes for pembe brand.

Voice 2:Anything else, Madam?

Nyasuguta: No. But I want them delivered

Voice 2:When and what address?

Nyasuguta: Before too long to shop number eight, Musembe shopping centre.

Voice 2:Pardon, what was the number again?

Nyasuguta: (Impatiently and shouting) 8-9-5

Voice 2:We will deliver them in an hours time. Thank you Madam. It has been a pleasure doing business with you.



a) Shortcomings (5mks)

i)

ii)

iii)

iv)

v)

b) Identify instances of etiquette as used by voice 1 and 2 (4mks)

i)

ii)

iii)

iv)

3. Identify the silent letter / sound in each of the following words. (6mks)

i) Fracas –

ii) Bomb –

iii) feign-

iv) Psychology-

v) wrap -

vi) Juice-

4. In the following sets of words identify/ underline the odd one out.

i) Choir chord chore chain

ii) Gas germinate grace guise

iii) cynic cycle census chat

iv) Chef chain chores charge

v) Ambush Amass Amoeba Amaze

## 2. COMPREHENSION

(20 MKS)

Read the passage below and answer the questions that follow

### TATII'S PROBLEMS

She has lived a state of uncertainty since 1982. Her life has been dreary and full of disappointments. Her parents have been strict and demanding. She has had not time to visit her friends and cousins living upcountry. Every time, she has asked her parents to let her go and pay a visit to her friends, they have said, "You cannot go to visit your friends until you have finished your studies. Life had become very difficult in this country because of too many jobless young people. The situation has been made worse by the great number of examinations failures. No daughter of ours is going to be

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like these unemployed people. So you see, Tatii, you cannot go upcountry until your 'O' levels are over.

It has been like that for the past four years. Her life has been that of a zombie. She has listened to her mother's sighs and her father's preaching. The 'O' level results are out and her parents won't believe that she has not passed.

What is she going to tell them? She had hoped to please her parents by securing entrance to the university, but all is now lost. Yes nearly lost. All would have been lost if Mrs. Ngueso, the school career teacher, hadn't been called in to calm down Tatii and advise her parents.

Poor Mrs. Ngueso! She has had quite a task to save Tatii from her harsh parents. Tatii's father has been the most difficult one to convince that Tatii is not the only girl who has failed her 'O' level examinations. As soon as he had seen Mrs Ngueso, he had started complaining that teachers no longer caned the children to make them work hard enough to pass their examinations. at some point in his discussion with Mrs. Ngueso, Tatii's father had nearly lost his temper. But Mrs. Ngueso had been his match! She had braved his sour looks and insisted that it was Tatii they had met to discuss and not just any other school child.

She said, Tatii has worked well, but I has constantly appeared as if she has lacked the social support she needed to succeed. Tatii is a very girl but she has been very unhappy. Particularly lately. Sir, the girl needed moral support from you, her parents, as well as from school. The school can give some moral support and the academic support a child needs. But most of all the parents have always been expected to encourage their children in the most crucial movements of their life. May be you and to some extent the school, owe Tatii some assistance.

Now Tatii's mother spoke for the first time. "Baba Tatii, let us do as Mrs. Ngueso says. The child has been very unhappy. I haven't told you this bhut since the appearance of the examination results I

have lived in fear. Tatii has behaved very strangely at times. Her friends have reported that she was planning to run away from home. Please let us give her a second chance”

Tatii’s father turned and looked at his wife for the first time sine Mrs. Ngueso arrival. He saw in her pleading eyes the pain of a loving mother. He quickly looked away. At that moment he realized how very blind he had been to his wife and daughters suffering. He rose to leave, turned and extended his hand to Mrs. Ngueso and said, ;Thank you very much, mwalimu Tatii will be in school at the beginning of term. Then he left the room.

2.1 Why does the author describe Tatii life as having been dreary? ( 1mk)

2.2 What excuse have Tatii parents constantly given for not allowing her to visit her relatives and friends. ( 2mk)

2.3 Why was Tatii so unhappy after the results of the examinations came out. ( 1mk)

2.4 What was Tatii father reactions to her results? ( 1mk)

2.5 State the reasons Mrs. Ngueso gives for Tatii problems (2mks)

2.6 What evidence is there in the passage to show that Tatii mother was more understanding than the father? ( 3mks)

2.7 Compare Mrs Ngeuso's character and that of Tatii's father. Put your answer in the table below.  
( 4mks)

Character	Character Trait	Illustrations from the text
Mrs. Ngeuso		
Tatii's Father		

2.8 Explain the meaning of the following words and phrases as used in the passage

Dreary

Demanding

Zombie

Security entrance

Harsh

Braved

(6mks)

GRAMMAR. (20MKS)

1. Give the plural forms of the words listed below.

a) Ox –

b) stadium –

c) Radius-

d) Oasis –

e) Goose-

(3mks)

2. Rearrange the following words the order in which they would appear in the dictionary.

a) trachea, tweet, tragedy, thump, thirst.

b) Mongrel, Frenzy, target, puzzle.

c) climate, cataract, cockpit, captive, cock

d) Head lamp, headgirl, headboy, head teacher

(2mks)

3. Complete the following collective nouns using the appropriate word.

a) A \_\_\_\_\_ of journalists.

b) A \_\_\_\_\_ of flowers.

c) A \_\_\_\_\_ of judges

d) A \_\_\_\_\_ of monkeys

e) A \_\_\_\_\_ of sheep. (2 ½ mks)

4. The words below are misspelled, correct them.

a) profesar

b) Tomorrow

c) Immediately

d) Pronounciation (2mks)

5. Use suitable pronouns to replace the underlined nouns.

a) The wheather is changing. The wheather is becoming rather chilly.

b) Mary took the book. She said it was Mary's.

c) People don't like liars. People say liars are no better than murderers.

d) Otieno is a very good leader. (2mks)

6. Join the following sentences using the conjunctions listed below.

Avoid unnecessary repetition, and, but so also, or.

a) Tigers are beautiful animals. Tigers are dangerous animals.

b) You can borrow my pen. You can buy one from the shop.

c) They went to the theatre. They bought tickets for “passion of Christ”

d) The train was booked up. I went by Akamba bus. (2mks)

7. Rewrite the following sentences using either the comparative or superlative form of adjectives in brackets.

a) Statistics show that (much) energy is consumed by industry than by individuals.

b) Susan is the (tall) girl in our class.

c) This book is (expensive) than that one.

d) The Atacama Desert in Chile is the (dry) in the world. (2mks)

8. Fill in the blanks in the following passage with appropriate prepositions.

Breakfast was usually served \_\_\_\_\_ 6.30 am. Every recruit \_\_\_\_\_ the camp was expected to be \_\_\_\_\_ the parade ground \_\_\_\_\_ 7.15 am.

\_\_\_\_\_ this particular Wednesday I had woken up feeling very low and my head was clouded \_\_\_\_\_ a myriad \_\_\_\_\_ thoughts \_\_\_\_\_ the impending events \_\_\_\_\_ the camp. (4 ½ mk)

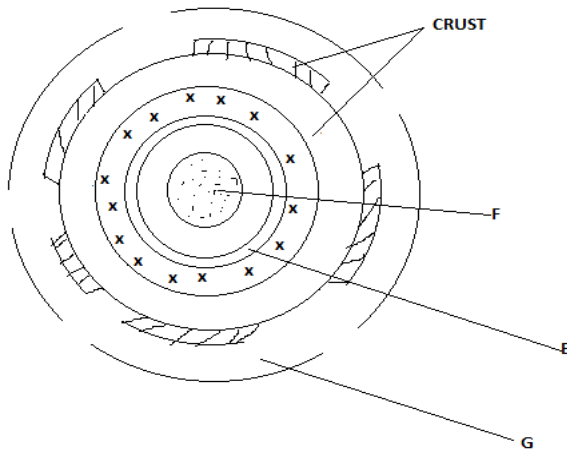


# **FORM 2 TERM 2 OPENER EXAMS**

## **FORM TWO GEOGRAPHY**

**TIME:2HOURS**

- 1 (a) What is an eclipse? (2mks)
- (b) State the characteristics of the earth's core (4mks)
2. The diagram below shows the structure of the earth. Use it to answer question(a)



- (a) Name the parts marked E,F and G (3mks)
- (b) State four characteristics of the part labeled G. (4mks)
3. (a) Identify three forms of rock metamorphism. (3mks)
- (b) State the extrusive equivalent of earth of the following intrusive igneous rocks (3mks)
- (i) Granite
- (ii) Diorite
- (iii) Gabbro
- 4 (a) What is a seismic wave? (2mks)

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- (b) State 4 ways in which earthquake affects human activities (4mks)
- 5 (a) Differentiate between fissure and vent eruption (2mks)
- (b) Describe how the following features are formed
- (i) Batholiths (6mks)
  - (ii) Volcanic plug (5mks)
- (c) Explain 4 negative effects of Volcanicity on human activities (8mks)
- (d) You are planning to carry out a field study on features formed by volcanicity on the landscape
- (i) Formulate two null hypotheses (2mks)
  - (ii) Name two drainage features you are likely to study (2mks)
- 6 (a) State four ways in which minerals occur (4mks)
- (b)(i) Other than shaft method name two other underground methods of mining (2mks)
- (ii) Kenya recently discovered petroleum in Ngamia II Turkana. State five positive effects that Kenya is likely to benefit from (5mks)
- (c) Explain four ways in which Kenya has benefited from the mining of soda ash from Lake Magadi (8mks)
- (d) State six adverse effects of gold mining to the environment of South Africa (6mks)

# **FORM 2 TERM 2 OPENER EXAMS**

## **FORM TWO HISTORY/GOVERNMENT**

**TIME:2HOURS**

### **SECTION A (25MKS)**

*Answer all questions in this section.*

1. Defines the government. (2mks)
2. Name two oral sources of information on history and government. (2mks)
3. Define the term citizenship. (2mks)
4. Identify two main methods of trade. (2mks)
5. Name the first deputy chief justice under the new constitution. (1mk)
6. Name the highest court in Kenya today. (1mk)
7. Name two groups of the Luo who migrated and settled into Kenya. (2mks)
8. State two causes of Bukusu resistance during the establishment of colonial rule in Kenya.(2mks)
9. Name two Christian missionaries at work in Kenya by the19th century . (2mks)
- 10 .Give one environmental reason for the migration of Cushites into Kenya. (1mk)
11. How many constituencies do we have in Kenya? (1mk)
12. Apart from Fort Ternan, name two other sites in Kenya where Kenyapithecus was discovered. (2mks)
  
13. Identify two groups of people that comprise the Eastern Cushitic speakers in Kenya. (2mks)
14. Name the two deputies prime minister in the coalition government. (2mks)
15. Who is the last minister of sports and youth affairs in the coalition? (1mk)

### **SECTION B (45MKS)**

*Answer any THREE questions.*

16. (a) What factors influenced the growth of Nairobi? (5mks)  
(b)Discuss the problems facing Nairobi. (10mks)
17. (a) Describe the economic organization of the Nandi during the pre-colonial period. (5mks)

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- (b) Explain the functions of the Orkoiyot among the Nandi up to the 17<sup>th</sup> century (10mks)
18. (a) State THREE factors which facilitated the spread of Islam in East Africa. (3mks)
- (b) Explain the factors that contributed to the growth and rise of Coastal city States. (12mks)
19. (a) State THREE political parties that are members of the Coalition of Reforms and Democracy (3mks)
- (b) Explain the achievements of the coalition government. (12mks)

SECTION C (30mks)

*Answer any TWO questions.*

20. (a) State THREE symbols of National unity. (3mks)
- (b) Discuss SIX factors that promote National unity. (12mks)
21. (a) Mention FIVE factors promoting National intergration. (5mks)
- (b) Classify and discuss human rights. (10mks)
22. (a) State features of Macadam Roads. (5mks)
- (b) Explain the advantages of road transport. (10mks)

# MTIHANI WA KIDATO CHA KWANZA

## KISWAHILI KIDATO CHA KWANZA

MARCH/APRIL

MUDA:SAA 2 ½

### 1. UFAHAMU

Soma makala yafuatayo kisha ujibu maswali.

Nairobi, mji mkuu wa Kenya ,ni jiji la maajabu na mastaajabu chungu nzima.Nadhari ya mtu anayewahi kuingia jiji hili kwa mara ya kwanza huvutiwa na huo msheheneko wa majumba ya fahari, marefu ajabu ,kiasi chaminazi mitano-sita ,iliyounganishwa kuelekea juu. mbinguni.

Jumba linalowavutia watu wengi ni lile la makongamano ya kimataifa liitwalo kwa Kiingereza Kenyatta International Conference Centre Jumba hili,hadi miaka michache iliyopita, ndilo lililokuwa refu zaidi mjini Jumba lenyewe- lina ghorofa ishirini na tisa hivi ,usipohesabu hilo pambo kama kofia kileleni mwake,linalojulikana kama mwavuli. Hata hivyo ,miaka michache iliyopita jengo hili lilipitwa urefu na Mnara wa Nyakati (Times Tower).Mnara huo hasa ni jumba linaloafiki lakabu yake ya kikwaruza mawingu.Jumba hili lina ghorofa zisizopungua thelathini na mbili.

Mbali na majumba haya mawili ,kuna majumba mengine zaidi ya ishirini katikati ya jiji ambayo ,japo mengine ni mafupi kiasi ,yana maumbo ya kustaajabisha kweli kweli.Hebu zingatia mwenyewe jumba liitwalo “mdomo wa kengele” au “bell —bottom” ambalo ni vioo vitupu ,toka chini hadi juu.Fauka ya ,umbo lake ni la kipekee ulimwenguni kote. Jumba hili lina kama miguu, kisha kiuno mithili ya kinu hivi japo si mviringo.Linapaa juu ,mbali sana ,likichukua umbo pana kuliko lilivyo chini;umbo la fua pana kama kengele.

Halafu rudia barabara .hizi hazina hesabu katikati ya jiji na ni pana, tena safi sana.Magari yanayotumia barabara hizi ni kochokocho,ya kila ama yanashindania nafasi,

Ajabu kubwa ya Nairobi hata hivyo ni idadi ya watu.Hakuna hasa anayejua idadi kamili ya watu wa Nairobi ,lakini sio kupiga chuku ninaposema kwamba ,hasa nyakati za kuelekea kazini asubuhi ,kwenda kula chakula cha mchana ,kuelekea nyumbani baada ya kazi na kuvuka barabara wakati wa

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msongamano, watu hukanyangana .Mtu anayesema kwamba watu wa Nairobi ni wengi kama chungu ,au kama mchanga wa ufuo wa bahari, hatii chumvi.

Watu wa Nairobi ,kwa tabia na mavazi, si kama watu wa kwingineko nchini Kenya .Watu hawa huvalia nadhifu sana.Wanawake ni warembo ajabu na hutengeneza nywele zao mithili ya hurulaini peponi.Wengi huvaa suruali ndefu. Kucha zao na midomo yao hupaka rangi maridadi sana.Huzungumza Kiswahili na Kiingereza takriban wakati wote.Wanawake wengi ajabu huendesha magari yao wenyewe ,jambo ambalo litakushangaza mara tu uingiapo jijini ,hasa kama ulilelewa ukidhani maskani mwafaka ya wanawake ni jikoni peke yake;yaani kuzingatia ile falsafa kuwa “kuoa ni kupata jiko”.Wanaume nao huvaa suti safi ,maridadi na shingoni wamefunga tai stahiki yao.Wanaume hao huendesha magari na kuyaegesha karibu na afisi zao.Huingia afisini mwao kwa maringo na madaha,huku funguo za magari yao zikining’inia vidoleni. Hawa nao husema na Kiingereza kupitia puani, utadhani ni waingereza hasa.

Kwa upande mwingine ,watoto ni nadhifu kweli kweli hasa watoto wa shule.Hawa huvalia sare zilizofuliwa na kunyoshwa vizuri kwa pasi. Wake kwa waume ,shingoni huvalia tai Watoto wa shule za Nairobi huongea Kiswahili, Kiingereza na sheng,ambayo ni “lahja” yao waliyoibuni.”Lahja” hii ni mchanganyiko wa Kiswahili,Kingereza na msamiati mchache wa lugha nyingine za Wakenya zisemwazo jijini Nairobi na vitongoji vyake.

Kwa jumla ,watu wote wa Nairobi hutembea kasi sana.Hawana hata wakati wa kutembea polepole na kuangazaangaza huku na huko.lwapo wewe ni mgeni jijini,ukizubaa utapigwa kumbo na waendeleo na hamsini zao kama vile hapakutokea jambo.Hili linapojiri, usidhani limefanywa maksudi.La, hasha.Ni vile tu kwamba Wanairobi hawana muda wa kupoteza.

**Maswali**

(a) Kwa nini majumba ya jiji la Nairobi yana majina au lakabu za Kiingereza? (ala 2)

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(b) (i) Baadhi ya maajabu ya Nairobi ni barabara safi, msongamano wa magari na majumba marefu. Ongeza maajabu mengine matatu. (ala 3)

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(ii) Watu wa Nairobi wanajipenda kweli kweli, Fafanua  
(ala 3)

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(c) (i) Je, Unadhani watu wa Nairobi kweli hukanyagana? Eleza ni kwa nini msimulizi  
ametoa maelezo hayo  
(ala 1)

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(ii) Unafikiri ni kwa nini hasa wanawake wa Nairobi wanaonekana nadhifu? (ala 2)

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

(d) Kwa nini neno “lahja” limewekwa alama za mtajo?

(ala 1)

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(e) Eleza maana ya maneno na tamathali za usemi zifuatazo.

(ala 3)

(i) Nadhari

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.....

(ii) Linaloafiki

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(iii) Waendeleo na hamsini zao

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## 2. UFUPISHO

Kiswahili nchini Kenya kilisambazwa kwa njia ya biashara kutoka upwa wa Kenya kwenda bara yake ,ingawa si kwa wingi sana kwa sababu wenyeji wa upwa wa Kenya —Mombasa, Siu na Pate- walikuwa katika vita vya kupigana na utawala wa Kisultani wa Seyyid Said, Sayyid Majid na Seyyid Barrgash.Hata hivyo kuna baadhi ya misafara iliyokwenda bara na kueneza Kiswahili.Kwa mfano, Waswahili wa kutoka Jomvu na Mvita walifanya biashara na Wakamba.Baadhi yao walioa Ukambani na mpaka wa leo kuna milango ya Waswahili ambao nyanya zao wanatoka Ukambani.Wafanyabiashara wengine Waswahili walifika mpaka Umaasaini.

Utawala wa kikoloni ulikitweza sana Kiswahili. Waingereza walitilia mkazo utumiaji wa lugha za kikabila kwa vile walisema kwamba mtu angeeleza hisia zake vizuri kwa kutumia lugha yake ya

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kwanza.Kiswahili kilitweza na kuchukuliwa kuwa ni lugha ya maboi.Wajerumani walikitweza sana nchini Kenya.Wamisheni pia walikipinga Kiswahili kwa sababu ya ufungamano na Uislamu,

Hata hivyo, Kiswahili kilikuwa kinatumika katika mawasiliano, kwa hivyo wakakata shauri kwamba kitumike katika kufundashia shuleni.Lugha za makabila zilitumiwa katika madarasa ya chini-Kiswahili katika madarasa ya kati, na Kiingereza katika madarasa ya juu.Mtihani wa Kenya African Preliminary Examination (KAPE), ulikuwa ukifanywa katika lugha ya Kiswahili nchini Kenya, uliondolewa,

Kiswahili kilitumika katika kuwaunganisha wakenya katika shughuli za ukombozi wa nchi na pia kama lugha ya umma.Mnamo mwaka wa 1964,Tume ya Ominde ilipendekeza kwamba Kiswahili kitumike kwa vile ndiyo lugha ya kumuunganisha Mwafrika, na pia ingetuwezesha kuwasiliana na nchi zingine za Afrika Mashariki na Kongo,

Mnamo mwaka wa 1969, chama cha Kenya National Africa Union (KANU) ,kilifanya Kiswahili kuwa lugha ya taifa, Raisi wa kwanza wa KANU alikuwa akitolea hotuba zake nyingi katika lugha ya Kiswahili, na alitoa kwa Kiingereza kwa ajili ya mabalozi tu.Fasihi ya Kiswahili ilianzishwa mwaka wa 1973, na kwa hivyo wanafunzi wakaanza kuifanya katika kidato cha nne na cha sita.

Ingawa Kiswahili kilitweza sana na Waingereza, bado kinatumika na watu wengi kama lugha ya mawasiliano.Mwaka wa 1968, Berndt Heine alifanya uchunguzi na aliona kwamba asilimia 85.25 ya Wakenya hutumia Kiswahili kama lugha yao ya pili na ndiyo lugha ya mawasiliano.Hivi sasa lugha ya Kiswahili imepewa kipaumbele;ni lugha ya taifa na pia lugha rasmi.Katika sekta ya elimu,Kiswahili ni somo la lazima katika shule za msingi na za sekondari.Ni somo ambalo linanaendeelezwa hata katika vyuo vikuu vya Kenya.

Ni muhimu kutaja kuwa Kiswahili hakikuenea katika bara ya Kenya kama kilivyoenea Tanganyika. Kiswahili kilienea sana Tanzania kwa sababu ya wakoloni, yaani Wajerumani,waliosisitiza matumizi ya Kiswahili;lakini Waingereza walikitweza katika nchi ya Kenya

Licha ya hayo,nchi ya Tanzania ina lugha 120, na Kenya ina lugha kama 41.Nchi ikiwa na lugha nyingi na watu wachache wanaoitumia kila mojawapo ya lugha hizi,ni rahisi kukuza au kuinua lugha moja kuwa lugha ya taifa inayotumiwa na watu wengi.Hoja hii ilifanya Kiswahili kisienee sana Uganda na Kenya ,lakini kikaenea sana Tanzania.

Kiswahili hakikuenea sana nchi ya Kenya kwa sababu biashara haikufana sana katika pwani ya Kenya kama mji wa Unguja.Wanyamwezi na Wayao waliokuwa wakishughulika na biashara huko

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Nakala safi

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(b) Kwa kuzingatia aya za mwisho, eleza mambo muhimu yanayoshughulikiwa na  
mwandishi (maneno 60 – 70) (ala 8)

Nakala chafu

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Nakala safi

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**MATUMIZI YA LUGHA**

(a) (i) Eleza tofauti kati ya sauti /z/ na /d/

(ala 1)

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(ii) Toa kigezo chochote kimoja cha kuainishia konsonanti.

(ala 1)

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(b) Sentensi ifuatayo ina maana mbili tofauti. Zieleze.

(ala 2)

Huyu amekuja kutuliza.

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(c) Ikanushe sentensi ifuatayo kwa udogo.

(ala 2)

Nyumba yenyewe ilijengwa bondeni karibu na mto.

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(d) Onyesha shadda katika maneno yafuatayo:

(ala 2)

(i) Mbono (mti)

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(ii) Barabara (sawasawa)

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.....

(e) Andika sentensi kuonyesha matumizi mawili ya:

(i) Kinyota

(ala 2)

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.....

(ii) Ritifaa .  
(ala 2)

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(f) Tunga sentensi mbili tofauti zinazobainisha maana tofauti kati ya  
(ala 2)

(i) Nduni

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.....

(ii) Duni

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(g) Taja aina zozote mbili za sentensi. (ala 2)

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(h) Andika sentensi ifuatayo iwe katika hai ya -ki- ya masharti (ala 2)

Tulilala sana tukachelewa kwenda shuleni.

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(i) (1) Taja aina nne za nomino. (al2)

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(2)Tambua aina za vihusishi vilivyo pigwa mistari katika sentensi zifuatazo. (al2)

(a)Hassan anacheza vizuri kuliko Kiprini.

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...

(b)Simtambui kwa vile amebadilisha nguo.

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(j) Taja ngeli za nomino zifuatazo (ala 3)

(1)Ujinga .....

(2)Ugonjwa .....

(3)Kucheza

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(4)Sukari

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(5)Barua

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(6)Mti

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(k) Tunga sentensi ukitumia nomino ifuatayo pamoja na kivumishi kisisitizi cha mbali  
kidogo,

Mgomba

(ala 2)

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.....

(l) Tunga sentensi mbili ukitumia neno kisabuni kama:

(ala 2)

(i) Nomino

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.....

(ii) kielezi

.....



(m) Andika visawe vya

(ala 2)

(i) Hidaya

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.....

(ii) Ngeu

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.....

(n) landike sentensi ifuatayo upya ukitumia '0" rejeshi tamati

(ala 2)

Chumvi iliyochafuka si ile unayoizungumzia.

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(o) Onyesha kishazi huru na kishazi tegemezi katika sentensi ifuatayo

(ala 2)

Mwanasiasa shupavu aliyewachochea wananchi amekamatwa.

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(p) Yakinisha sentensi ifuatayo katika umoja

(ala 2)

Nyuzi zisingekatika zisingepotea.

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(q) Taja matumizi ya kiambishi ku\_

(ala 1)

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(r) Taja aina mbili za mofimu

(ala 2)

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4. ISIMU JAMII

a. Taja sababu mbili zinazomfanya mzungumzaji kutumia zaidi ya lugha moja katika  
mzungumzo (ala 2)

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b. Kwa kutoa mfano, eleza maana ya uwingi lugha. (ala 2)

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c. Fafanua mambo sita yanaoweza kuifanya lugha yeyote ife,

(ala 6)

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# FORM 2 TERM 2 OPENER EXAMS

## FORM TWO MATHEMATICS

TIME:2HOURS

Evaluate without using tables or calculators.

(3mks)

$$\frac{0.036 \times 0.0049}{0.07 \times 0.048}$$

1. The sum of interior angles of a regular polygon. Find the size of each exterior angle. (3mks)

2. The length of an arc of a circle is  $\frac{1}{5}$  of its circumference. If the area of the circle is  $346.5\text{cm}^2$ , find the angle subtended by the arc at the Centre of the circle. (4mks)

3. Given that  $x=2y$  and  $3y=5z$ . find the ratio  $x:y:z$  hence or otherwise find the amount of money Ali got if Ali, Ben and Chris shared Kshs. 36000 in the ratio  $x:y:z$  respectively. (4mks)

4. A plane leaves town A for town B at 0540 hours. If the journey takes 6.5 hours, at what time does the plane reach its destination? (3mks)

5. A cylindrical solid metal is 3m long and has a mass of 4kg. if its density is  $5.6\text{g/cm}^3$ , find the radius of its end. (take  $\pi=3.142$ ) (4mks)

6. Express the number 9000 as a product of its prime factors. (1mk)

b) Find the value of P if the number 9000P is a perfect cube. (2mks)

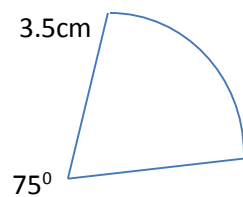
7. Find the value of T given that  $T = \frac{ab}{a^2 + bc}$  and  $a=2$ ,  $b=-1$ , and  $c=-3$  (3mks)

8. A shop keeper sells a shirt for Kshs. 350 thereby making a profit of 40%. Calculate the buying price of the shirt. (3mks)

The GCD of three numbers is 45 and their LCM is 18900. Two of the numbers are 675 and 540. Find the other possible numbers. (2mks)

9. Find the perimeter of the figure below. (Take  $\pi=22/7$ ).

(3mks)



John is twice as old as his friend Peter. Peter is 5 years older than Alice. In 5 years John will be three times as old as Alice. How old is Peter now? (3mks)

10. Ondieki had travelled from Texas to Kenya and arrived with U\$17500 on 12/2/2013. On arrival he changed the dollars into Kenya shillings and immediately used Kshs. 850,000. Later on 15/2/2013 he had some immediate use of £3600 and therefore changed all the money he had into sterling pounds. Finally on 18/2/2013 he converted what remained to Kenya shillings.

Buying	Selling
Kshs.Kshs.	
12/2/2013 U\$ 82.36	85.74
15/2/2013 £ 110.14	118.26
18/2/2013 £ 112.64	119.56

How much did he remain with in Kenya shillings? (3mks)

11. The sum of the digits of a two digits number is 13. If the digits are reversed the number decrease by 27. Find the number. (3mks)

12. A man walks to work at 16km/hr and back home at 5km/hr. find the distance from his work place if the whole journey takes him 2 hours 12 minutes. (3mks)

13. If  $3 = \frac{1}{4x} = \frac{1}{8x}$ , find the ratio  $\frac{1}{2x} + 2 : \frac{1}{3x} + 1$   
(3mks)

**SECTION II (50 MARKS)**

**ANSWER ANY FIVE QUESTIONS**

14. (a) Using a ruler and a pair of compasses only construct a triangle ABC such that AB=4cm, BC=5cm and  $\angle ABC = 120^\circ$ . Measure AC. (4mks)



b) On the diagram, construct a circle which passes through the vertices of the triangle ABC.  
Measure the shortest distance from the centre of the circle to line BC. (4mks)

c) Measure the radius of the circle. (2mks)

15. Two aero planes P and Q leave an airport at the same time. P flies on a bearing of  $240^{\circ}$  at 900km/h while Q flies due East at 750km/h.

a) Using a scale drawing of 1cm to represent 100km, make a scale drawing to show the positions of the planes after 40 minutes. (5mks)

b) Determine the bearing of

i) P from Q (2mks)

ii) Q from P (2mks)

c) Find the shortest distance between plane P and plane Q after 40 minutes. (1mk)

16. A construction company requires to transport 144 tonnes of stones to sites A and B. the company pays Kshs. 24000 to transport 48 tonnes of stone for every 28 km. kimani transported 96 tonnes to a site A, 49km away.

a) Find how much he paid. (3mks)

b) Kimani spends Kshs. 3000 to transport every 8 stones to the site. Calculate his total profit. (4mks)

- c) Achieng transported the remaining stones to sites B, 84km away. If she made 44% profit, find her transport cost. (3mks)

17. A tank has two inlet taps P and Q and an outlet tap R. when empty, the tank can be filled by tap P in  $4\frac{1}{2}$  hours and by tap Q in 3 hours. When full the tap can be emptied in 2 hours by tap R.

- a) The tank is initially empty, find how long it would take to fill up the tank;
- i) If tap R is closed and taps P and Q are opened at the same time. (3mks)
- ii) If all the three taps are opened at the same time. (3mks)

- b) Find the fraction of the tank that would be filled by 9.00am if initially the tank is empty and the taps are opened as follows. (4mks)

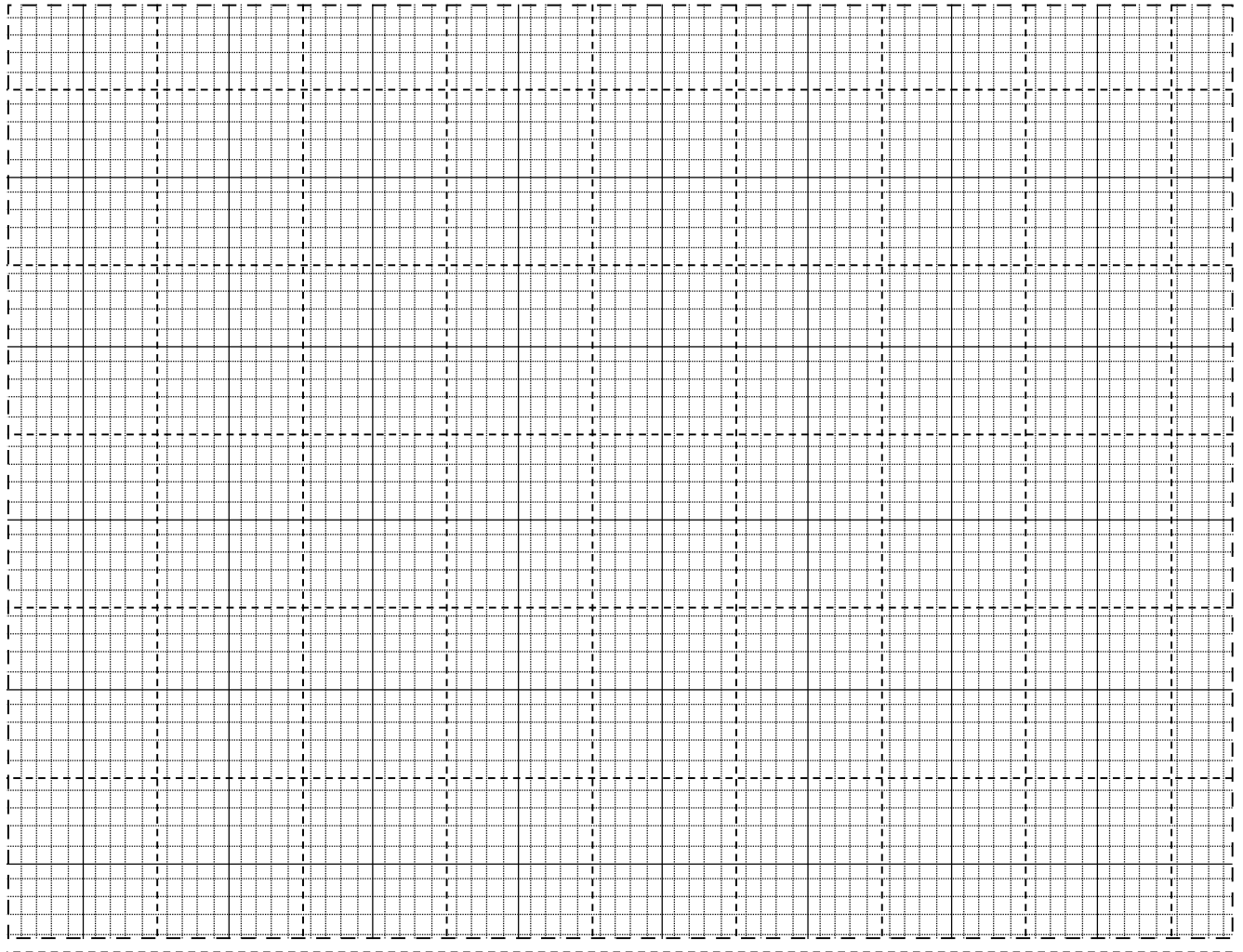
P at 8.00 am

R at 9.00 am

Q at 8.45 am

a) Plot the graphs of the equations  $y=2x + 3$  and  $y=-\frac{1}{2}x + 3$ .

(4mks)

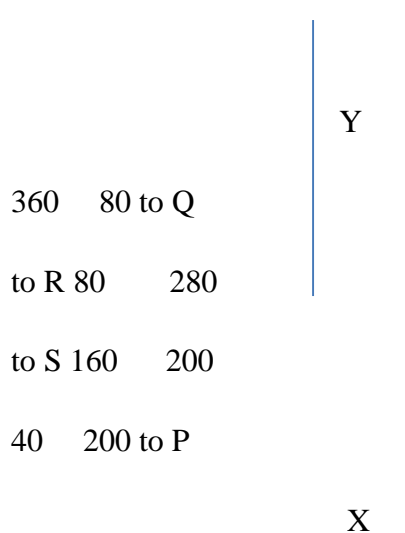


b) Use your graph to find the coordinates of the point of intersection of the two lines. (2mks)

c) Hence, state the solutions to the equations  $y=2x + 3$  and  $y=-\frac{1}{2}x + 3$ . (2mks)

d) Find the angle made by the line  $y=2x+3$  and the x-axis. (2mks)

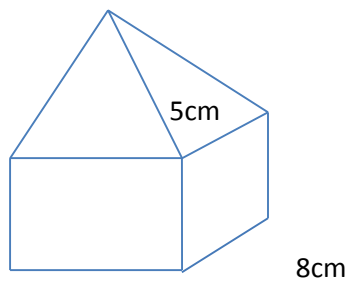
18. A coffee farm was surveyed and its measurements entered in a field book as shown below.  
(Take XY=400m as the baseline.)



a) Using a scale of 1cm to represent 40m, draw the map of the coffee farm. (3mks)

b) Find the area of the coffee farm in hectares. (7mks)

19. A model of a tent consists of cube and a pyramid on a square base as shown below.



8cm

a) Draw accurately the net of the model.

(2mks)

b) Use the net to calculate the total surface area of the model. (4mks)

c) If the ratio of the area of the model to the area of the actual is 1:10000, find the area of the material required to make the tent (floor area inclusive) in  $m^2$ . (4mks)

20. a) Water and alcohol are mixed in the ratio 1:4. Find the density of the mixture if the density of water is  $1g/cm^3$  and that of alcohol is  $0.8g/cm^3$ . (4mks)

b)  $40\text{ cm}^3$  of water is poured into an empty measuring cylinder. A stone of mass 129g is put into the cylinder. If the density of the mixture of the stone is  $8.6g/cm^3$ , find the new reading of the cylinder. (4mks)

c) Convert  $8.6g/cm^3$  into  $kg/m^3$ . (2mks)



# FORM 2 TERM 2 OPENER EXAMS

## FORM TWO PHYSICS

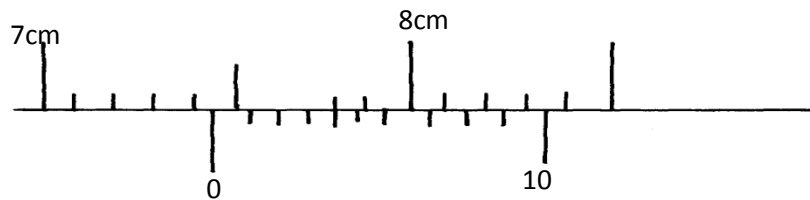
TIME:2HOURS

### SECTION A (25MARKS)

Answer all question this section

1. Distinguish between mass and weight of a body stating the S.I units for each. (2mks)

2. The figure below shows part of scale of vernier calipers.



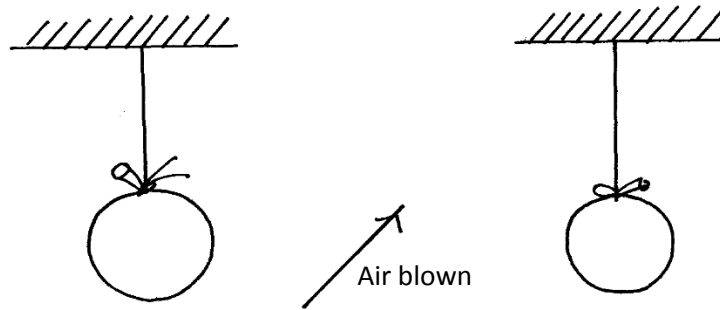
What is the reading indicated on the scale ..... (1mk)

3.  $180\text{cm}^3$  of fresh water of density  $100\text{kg/m}^3$  is mixed with  $2200\text{cm}^3$  of sea water of density  $1025\text{kg/m}^3$ . Calculate the density of the mixture (4mks)

4. Explain why fish can survive under water when the surface is already frozen (2mks)

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5. Two inflated balloons are at the same level while suspended from threads a short distance apart as shown below;



Some air is blown gently in the space between the balloons in horizontal direction. Explain what happens to the balloons.

(2mks)

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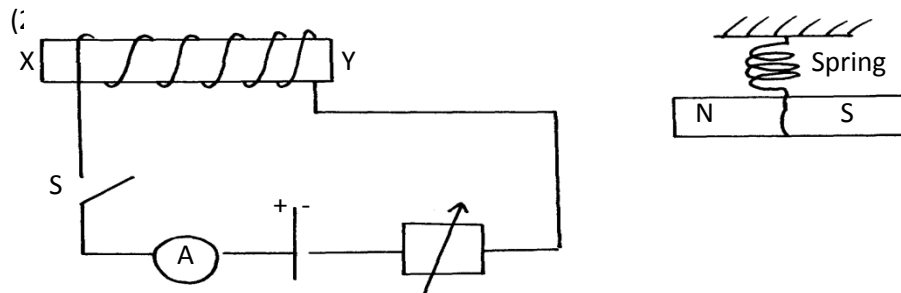
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6. State **one** advantage of an alkaline battery over a lead acid battery.

(1mk)

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7. The diagram below shows a permanent magnet suspended by a spring. State with reason the behaviour of the magnet when the switch is closed.



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8. Convection and diffusion both involve motion of fluids. Distinguish between the two. (2mks)

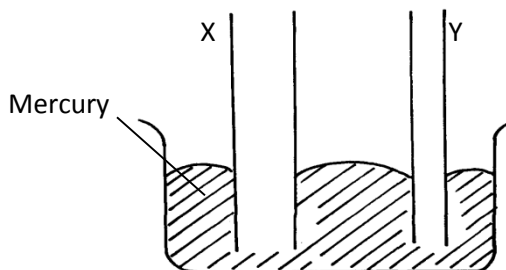
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A negatively, charged rod is brought close to (but not touching ) an uncharged sphere. If the sphere is momentarily earthed and then the rod is removed, briefly explain what happens.

(2mks)

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9. Indicate on the diagram below, the level of mercury in the tubes X and Y (2mks)



10. An object weighs 1200N on a certain planet. What is the gravitational field strength of this planet if the object is 60kg? (3mks)

11. State **two** properties of a thermometric liquid.

(2mks)

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**SECTION B (55MARKS)**

**Answer all question this section**

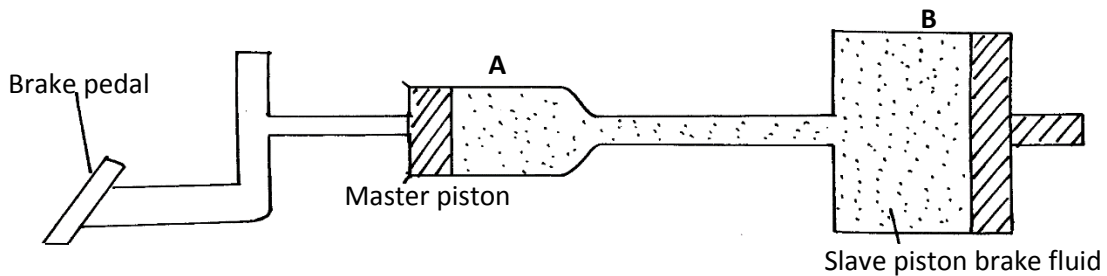
12.

a) Define **pressure** and give its S.I nits.

(2mks)

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b) The diagram below represents a motor car hydraulic braking system;



i. State **two** properties of the liquid used as a brake fluid

(2mks)

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ii. Given that in the diagram (b) above the master piston has an area of  $15\text{cm}^2$  and the slave

piston has an area of  $50\text{cm}^2$  a force of  $100\text{N}$  is applied on the master piston. Find the force

used to stop the car.

(3mks)

- c) Compare the values of pressure in the two pistons above and give a reason for your answer. (2mks)

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- d) Give a reason why gas is not suitable for use in place of the brake fluid. (1mk)

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- e)  $X\text{cm}^3$  of substance A which has density of  $800\text{kg/m}^3$  is mixed with  $100\text{cm}^3$  of water with a density of  $1000\text{kg/m}^3$ . The density of the mixture is  $960\text{kg/m}^3$ . Determine the value of X (3mks)

13.

- a) Give reasons why it is necessary to leave the caps of the cells open when charging an accumulator ( 1mk)

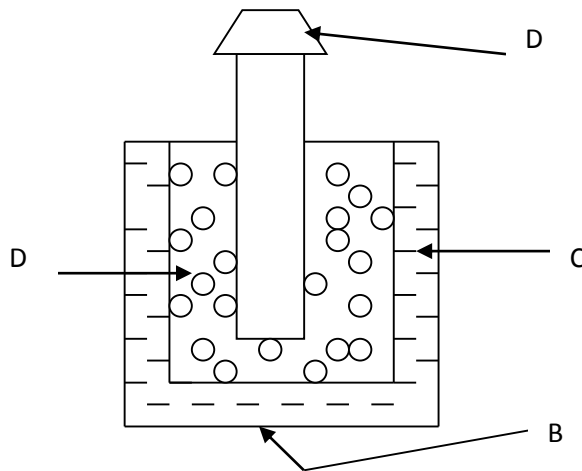
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b) Define current and state its SI unit  
( 2mks)

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c) A charge of 120 coulombs flow through a 1 am every minute. Calculate the current flowing through the lamp.  
( 3mk

d) What do you understand by open and closed circuits. ( 2mks)



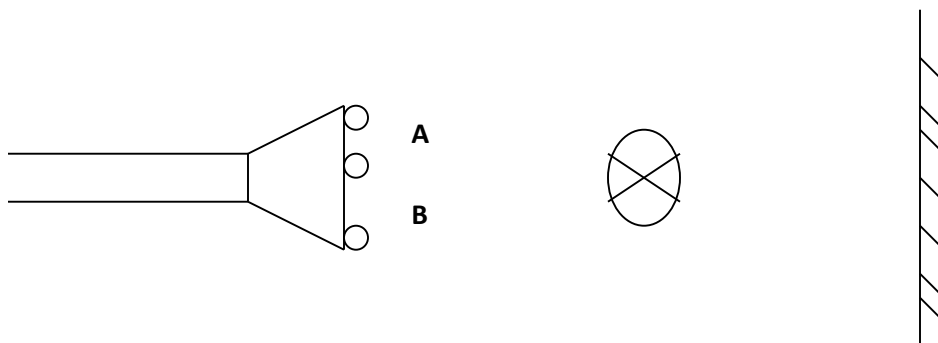
i. State the polarities of A and B. (2 mks)

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- ii. Name the chemical substances in the parts labeled C and D  
( 2mks)
- .....
- .....

14.

- a) The figure shows an arrangement of source of light, an opaque object and a screen.  
Using A, B and C as point sources, sketch on the same diagram labeled a ray diagram to  
show what is observed on the screen.  
(3mks)



- b) In a certain pinhole camera, the screen is 10cm from the pinhole. When the pinhole is placed 6cm away from a tree, a sharp image of a tree 16cm high is formed on the screen. Find the height of the tree.  
( 3mks)

- c) Distinguish between Lunar and Solar eclipse by stating the events that lead to the formation of each  
(4mks)

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- d) A girl stands 4 m in front of a plane mirror
- i. What is the distance between the girl and the mirror  
(3mks)

- ii. Explain how you would use an electroscope to distinguish between a conductor and an insulator  
(3mks)



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15.

- a) Fill in the table of charges appropriately  
( 5mks)

Charge on Electroscope	Charge brought near cap	Effects on leaf divergence
+	+	
-	-	
+ or -	Uncharged body	

- b) What is the name given to the method of charging an electroscope where it requires an opposite charge to the one of the charging materials? (1mk)

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- c) Distinguish between a basic physical quantity and a derived physical quantity giving an example of each.  
(3mks)

Physical quantity	Derived physical quantity

d) State any **two** ways by which frictional force between two surfaces can be reduced.

(1mk)

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e) Explain why large mercury drops form oral ball on a glass slide (2mks)

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f) Explain why a man using a parachute falls through air slowly while a stone falls through air very fast.

(2mks)

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