ALL FORM THREEE EXAMS

By.Madam.Mariam

For answers, text/Whatsapp/sms-074671189

NAME ---------- INDEX NO----------

DATE_____ CANDIATES SIGNATURE

_____

565/1

BUSINESS STUDIES

PAPER 1

TIME: 2HRS

INSTRUCTIONS TO CANDIDATES

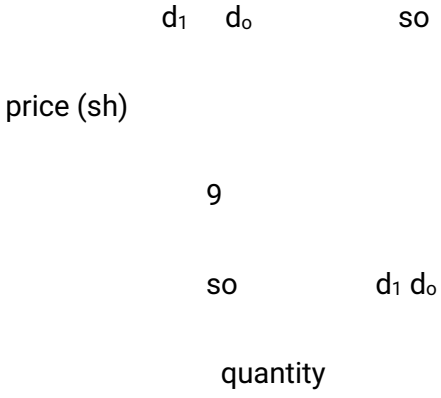
- Write your Name and index No in the spaces provided
- Answer all the questions
- All answers must be written in the spaces provided

This paper consist of 7 printed pages candidates should check the questions paper to ascertain that all the pages are printed as indicated and that no questions are missing

ANSWER ALL THE QUESTIONS

1. Name the discipline described below that is part of the subject Business Studies (4mks)

2. The diagram below shows a shift of the demand give of a commodity from dodo to d1d1. Outline any four factors that could have led to the shift (4mks)



3. Highlight four factors that may make communication in an organization to be ineffective (4mks)

4. Give four circumstances under which a cooperative society may be dissolved (4mks)

5. Outline any four characteristics of an imperfect competition market (4mks)

6. Write down the meaning of the following terms as used in business (4mks)

7. Give four benefits of electronic filing in an office (4mks)

8. Give four reasons why business firms advertise their products (4mks)

9. Mr Kigen is the managing director of Mbau furniture ltd. Which has a large, well equipped workshop with expensive machines. The company handles large sums of money. Outline four insurance policies that the company may have (4mks)

10. Outline four benefits to a firm that uses modern technology in its production activities(4mks)

11. Highlight four benefits to a retailer who uses a public warehouse to store goods (4mks)

12. A business wishes to communicate the arrival of much waited stock of goods to its customers. Give four reasons why it might describe to write a short text message(sms) to the customers instead of a business letter (4mks)

13. Outline any four advantages of using intermediaries in the chain of distribution (4mks)

14. List down four assumptions of the circular flow of income in a two sector economy (4mks)

15. Give any four challenges faced by human beings in their endevour to satisfy human wants (4mks)

16. Highlight any four benefits that the recently launched standard gauge railway from Mombasa to Kisumu would bring to Kenya's economy (4mks)

17. Name any four occupations that are found at the extractive level of production (4mks)

18. Outline any four advantages of small-scale retailers over large-scale retailers (4mks)

19. Highlight any four methods used to determine prices of goods and services in the economy (4mks)

20. Outline any four challenges that entrepreneurs face in Kenya (4mks)

21. Highlight four characteristics of free resources (4mks)

22. Give four advantages of self employment (4mks)

23. Outline any four duties of an office receptionist (4mks)

24. Name the types of advertising that are described below (4mks)

i. Brand name and other features of the brand features more prominently –

ii. Advertising that aims at popularizing a new product –

iii. Advertising that popularizes the business organization –

iv. Used by organization that deals with similar products to convince potential customers to buy their products and not the other –

25. Highlight any characteristics of subsistence production in Kenya (4mks)

NAME ---------- INDEX NO----------

DATE_____ CANDIATES SIGNATURE

_____

565/2

BUSINESS STUDIES

PAPER 2

TIME: 2 ½ HRS

INSTRUCTIONS TO CANDIDATES

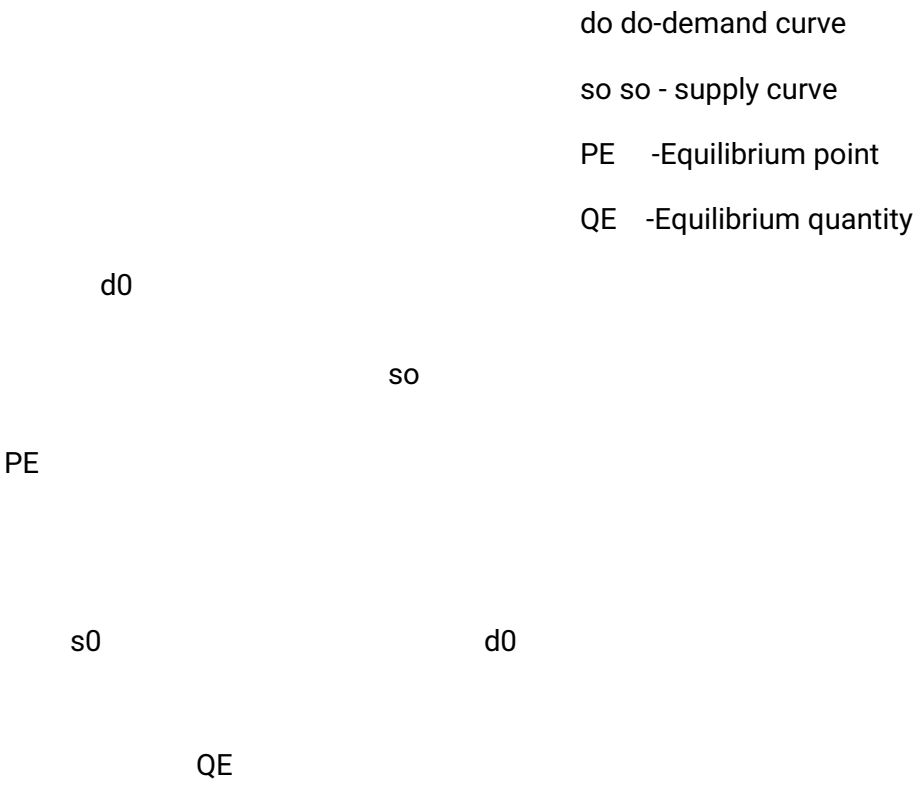
- This paper consists of six questions
- All questions carry equal marks
- Answer any five questions

This paper consist of 2 printed pages candidates should check the questions paper to ascertain that all the pages are printed as indicated and that no questions are missing

1. a) Outline any five differences between a public limited company and a public corporation (10mks)

b) Explain five factors that influence the location of business enterprises (10mks)

2. a) The diagram below shows the equilibrium price and quantity of commodity A which is produced jointly with commodity B.



   i. On the diagram show the effect of a decrease of tax charged on commodity B on the equi8librium price and quantity of commodity A (4mks)

   ii. Explain the effect of a decrease of tax charged on commodity B on the equilibrium price and quantity of commodity A (6mks)

   b) Bidco Kenya Ltd. is a manufacturer of soap and edible oil products. Highlight five reasons why the company chooses to distribute its products through wholesalers rather than selling directly to consumers (10mks)

3. a) Explain any four ways in which the Kenya government involves itself in government activities in the country (10mks)

   b) Discuss five ways which county governments in Kenya can use to attract entrepreneurs in their areas. (10mks)

4. a) Kenya association of manufactures (KMA) brings Kenyan manufacturers together to

solve problems faced by the manufacturers as well as consumers. Discuss five measures taken by the manufacturers to protect consumers (10mks)

b) Discuss five importances of natural resources in a country (10mks)

5. a) A recent economic survey showed a very big gap between the rich and the poor in Kenya Explain any five factors that could have led to this disparity in income distribution among individuals in Kenya (10mks)

b) Highlight any five reasons why there are so many small-scale business firms in Kenya despite the economies of scale enjoyed by large firms (10mks)

6. a) Discuss any five circumstances under which an insurer may not compensate the insured in the event of occurrence of a loss (10mks)

b) Explain any five functions of marketing boards in Kenya (10mks)

NAME …….. INDEX NO. ……..…

DATE ……. CLASS ……..

233/1

CHEMISTRY

PAPER 1 FORM 3

(THEORY)

2 HRS

TO CANDIDATES

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

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

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

(d) All working must be clearly shown where necessary.

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1 – 30		

1. Elements burn in oxygen to form basic or acidic oxides. Name two elements which form acidic oxides. (2 mks)

2. Element T has atomic number 9 while V has atomic number 11.
   (a) Write down the electronic configurations of elements T and V.
   T …….. ($^1/_2$ mk)

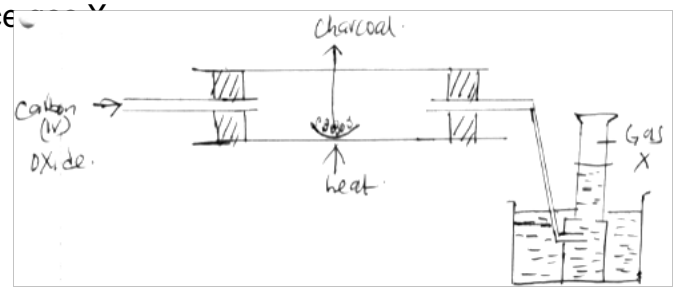
   V …….. ($^1/_2$ mk)

   (b) State the type of bond formed when T and V combine. (1 mk)

3. P, Q, R and S are metals. P reacts with steam whereas Q is not affected by either cold water or steam. R reacts violently with cold water while S bursts into flames as soon as it comes into contact with cold water. Arrange the metals in order of decreasing reactivity.
   (2 mks)

4. When 27.8g of hydrated aluminium oxide ($Al_2O_3.XH_2O$) was heated to a constant mass, 20.6g of aluminium oxide was obtained. Determine the value of x (H=1, O=16, Al=27).
   (3 mks)

5. The following diagram shows carbon(iv)oxide passed over heated charcoal to produce gas X.



   a) Identify gas X. (1 mk)

   b) Write an equation for the reaction which produces gas X. (1 mk)

   c) The above experiment should be carried out in a fume chamber. Why? (1 mk)

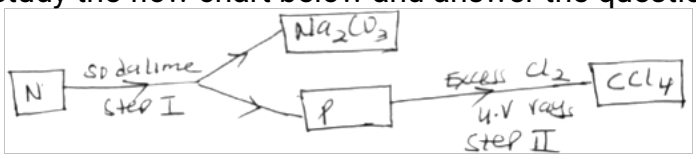
6. When a piece of sodium metal was put in a beaker of water, it darted on the surface before dissolving.

iii. Write an equation for the reaction between sodium metal and water. (1 mk)

iv. What is the effect of the solution formed in (a) above on red and blue litmus papers? Explain. (2 mks)

7. 22.2 cm^3 of sodium hydroxide solution containing 4.0g per litre of sodium hydroxide were required for complete neutralization of 0.1g of a dibasic acid. Calculate the relative formula mass of the dibasic acid. (Na=23.0, O=16.0, H=1.0).
(3 mks)

8. Study the flow chart below and answer the questions that follow.



a) Identify N and P. (2 mks)
N …….

P ……..

b) What name is given to the reaction in step II? (1 mk)

9. Molten Lead(ii)Bromide was electrolysed using graphite electrodes. Write half equations for the reaction occurring at each electrode.
(2 mks)
Cathode:

Anode:

10. Gas P diffuses through a porous material at a rate of $12cm^3\ s^{-1}$, whereas gas Q diffuses through the same material at a rate of $7.2cm^3\ s^{-1}$. Given that the molar mass of P is 16, calculate the molar mass of Q.
(3 mks)

11. Element R has an atomic number of 6 and s has an atomic number of 9. Using dot (.) and cross(x) diagram show how R and S combine to form a compound.
(2 mks)

12. The table below shows the Ph values of solutions I, II, III, and IV.

Solution	I	II	III	IV
PH	2	7	11	14

a) Which solution is likely to be sodium chloride solution. (1 mk)

b) A few drops of phenolphthalein indicator were added to solution (iv). State and explain the observations made. (2 mks)

13. The molecular formula of a hydrocarbon is C_6H_{14}. The hydrocarbon can be converted into two other hydrocarbons as shown by the equation below.
$C_6H_{14} \longrightarrow C_2H_6 + X$
(i) Name and draw the possible structural formula of X. (2 mks)

(ii) State the observation that would be made if a few drops of acidified potassium manganate(vii) were added to a sample of X. (1 mk)

14. When magnesium is heated in air, it forms a solid Q and solid P. when solid Q is reacted with water it produces a gas W that turns moist red litmus paper to blue. Identify;

a) Solid Q …… (1 mk)

b) Solid P ……. (1 mk)

c) Write an equation for the formation of gas W. (1 mk)

15. The empirical formula of hydrocarbon is C2H3. The hydrocarbon has a relative molecular mass of 54. (H=1.0, C=12.0).
    a) Determine the molecular formula of the hydrocarbon. (1 mk)

    b) Draw the structural formula of the hydrocarbon. (1 mk)

    c) To which homologous series does the hydrocarbon drawn in (b) above belong? (1 mk)

16. Give the name of each of the processes described below which takes place when salts are exposed to the air for sometime.
    (i) Anhydrous copper(ii)sulphate becomes wet. (1 mk)

    (ii) Magnesium chloride forms an aqueous solution. (1 mk)

    (iii) Fresh crystals of sodium carbonate become covered with white powder. (1 mk)

17. A gas occupies $4dm^3$ at a pressure of 152 mmHg. Calculate the gas pressure when the volume is reduced to $1.5dm^3$. (2 mks)

18. When a white powder P was heated it decreased in mass and produced solid X which was reddish brown when hot and yellow when cold. A gas R which formed a white precipitate with calcium hydroxide was also evolved.
    26. Identify substances P and X.
    P …… (1 mk)

    X …… (1 mk)

27. Write an equation for the formation of the white precipitate. (1 mk)

19. Starting with lead(ii)carbonate explain how you would prepare a pure sample of lead(ii)chloride. (3 mks)

20. Study the information in the table below and answer the questions that follow.

Element	Atomic radius(nm)	Ionic radius (nm)
W	0.114	0.195
X	0.072	0.136
Y	0.133	0.216
Z	0.099	0.181

v. Are the above elements metals or non metals? Explain. (2 mks)

vi. Select the most reactive element in the table above. Explain. (1 mk)

21. (a) Explain why the metals magnesium and aluminium are good conductors of electricity.

(1 mk)

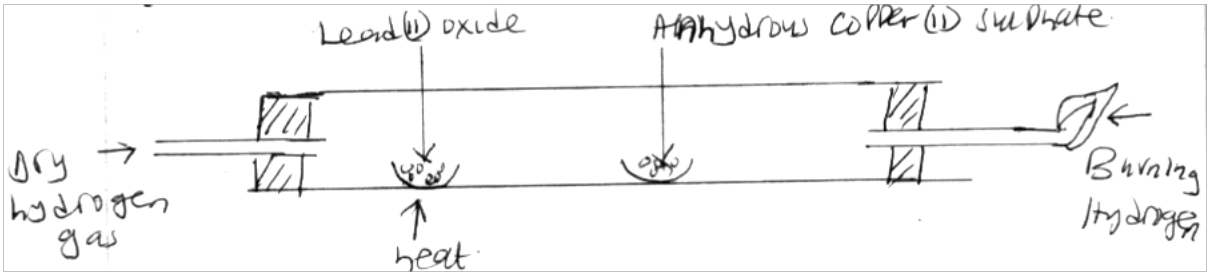
(b) Other than cost, give two reasons why aluminium is used for making electric cables while magnesium is not.
(2 mks)

22. Determine the volume of hydrogen gas formed when excess zinc metal is added to 1100cm^3 of 1m hydrochloric acid. (1 mole of gas occupies 24.0 litres at room temperature). (2 mks)

23. Metal P is a group II element in the periodic table and it lies below Q in the same group.
7. Explain how the reactivity of metal P and Q with bromine compare. (1 mk)

8. Given that the atomic number of Q is 12, determine the atomic number of P. show how you arrive at your answer. (2 mks)

24. Study the diagram below and answer the questions that follow.



- What is observed on the anhydrous copper(ii)sulphate? (1 mk)

- Write an equation for the reaction between lead(ii)oxide and hydrogen. (1 mk)

- State another observation apart from that one in (a) made in the combustion tube.(1 mk)

25. Iron roofs usually turn brown after some time as a result of formation of rust on their surfaces.
    - Explain whether rusting is a physical or a chemical change. (2 mks)

    - State one way of preventing rusting. (1 mk)

26. A student reacted lead(ii)carbonate with sulphuric(vi)acid in order to prepare lead(ii)sulphate salt.
    a) Explain why he was unable to prepare the lead(ii)sulphate salt using the above reagents. (2 mks)

    b) Give another acid he would use in place of sulphuric (vi) acid. (1 mk)

27. In a reaction to prepare ammonia gas 15 litres of hydrogen gas was reacted with 10 litres of nitrogen gas.

a) Determine the volume of the gas that was not completely used in the reaction. (2 mks)

b) Calculate the volume of ammonia gas produced in the reaction. (1 mk)

28. When sodium nitrate is heated, it produces sodium nitrite and gas C.

a) Identify gas C. (1 mk)

b) Name the type of reaction undergone by the sodium nitrate. (1 mk)

29. When an electric current was passed through two molten substances E and F in separate electrolytic cells. The observations recorded below were made.

Substance	Observation	Type of structure
E	Conducts electric current and a gas is formed at one of the electrodes.	
F	Conducts an electric current and is not decomposed.	

Complete the table above. (2 mks)

30. State two use of nitrogen gas. (2 mks)

NAME……CLASS……ADM……

233/2

TIME 2HRS

TERM 2

Instructions to candidates.

28. Write your name and index number in spaces provided in the question paper.
29. Answer all the questions in the spaces provided in question paper.
30. Mathematical tables and silent calculators may be used.
31. All working must be clearly shown where necessary.

QUESTIONS	STUDENT SCORE

1	
2	
3	
4	
5	
6	
7	
8	

1.a) Study the table below which shows properties of elements across period three and answer

the question that follow.

Element	A	B	C	D	E	F	G	H
Atomic radius (nm)	0.156	0.136	0.125	0.118	0.110	0.104	0.099	-
Ionic r Radius (nm)	0.095	0.065	0.050	-	-	0.184	0.181	-
Melting points (^{0}C)	97.8	650	660	1410	44.2	119	-101	-186

i)Explain why the atomic radius of G is smaller than its ionic radius.

(1mk)

……

……

ii) Explain why the melting point of D is higher than the other elements (2mks)

……

……

iiiGive the formula of the chlorides of element B (1mk)

…… ……

……

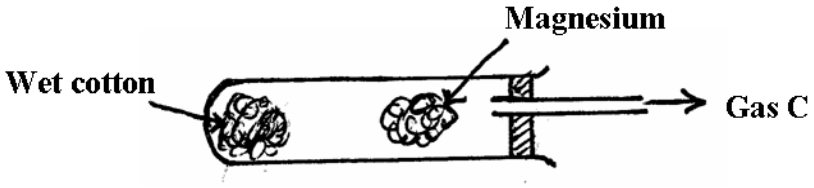
b) The ions of V^{3+} and U^{2-} have identical electronic configuration 2.8.

Write down the electron arrangement of the elements U and V
(2mks)

U ……

V ……

c) The diagram below shows how magnesium reacts with steam



i) Gas C would not be produced as is in the set-up but when certain condition is introduced gas C is produced. Identify the condition which was omitted in the set-up
(1mk)

……

ii) Describe how gas C is produced after the mistake was corrected in the above set-up
(2mk)

……

……

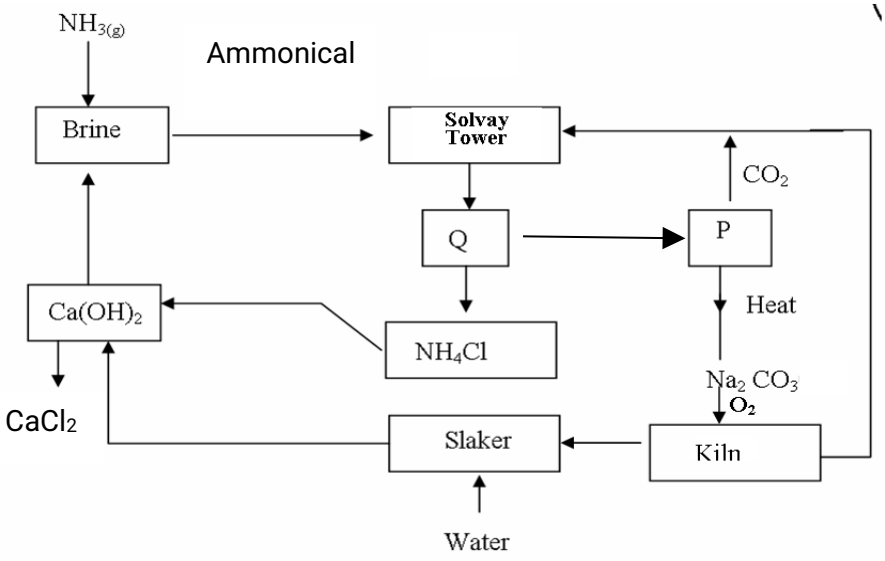
iii) Why is it not advisable to use potassium in place of magnesium?

(1mk)

……..

……

2. The flow chart below shows the manufacture of sodium carbonate. Study it carefully and answer the questions that follow.



a) i) What is ammonical brine?

(1mk)

……..

ii) Ammonical brine reacts with carbon (IV) oxide to form a mixture of two salts which produce Q. Write an equation to show formation of Q (1mk)

……..

……..

iiiName two processes that are used to separate Q into NH_4Cl and P(2mks)

……..

……

b) Give two uses of sodium carbonate produced in the process (2mks)

……..

……..

c) i) Name the substance that reacts with water that comes into the slaker (1mk)

……

ii) What happens at the kiln? (1mk)

……

……

d) Write an equation for the reaction that occurs when P is heated to form solid Na_2CO_3 (1mk)

……

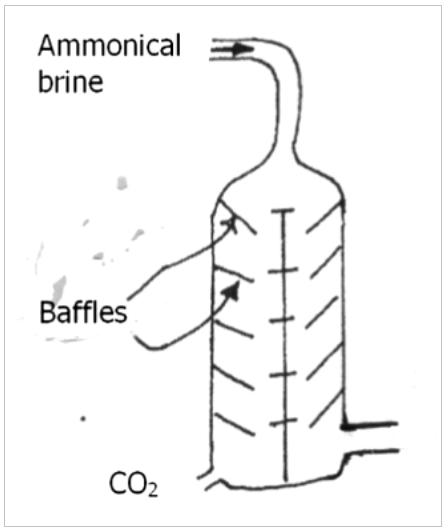
……

e) Name two substances that are recycled in the process. (1mk)

……

……

f) Solvay tower is as shown below. Study the diagram and answer the question below



Give two reasons why the baffles are used in the solvay

(2mks)

……

……

g) A factory produces 63.6 tonnes of anhydrous Na_2CO_3 on a certain day by this process.

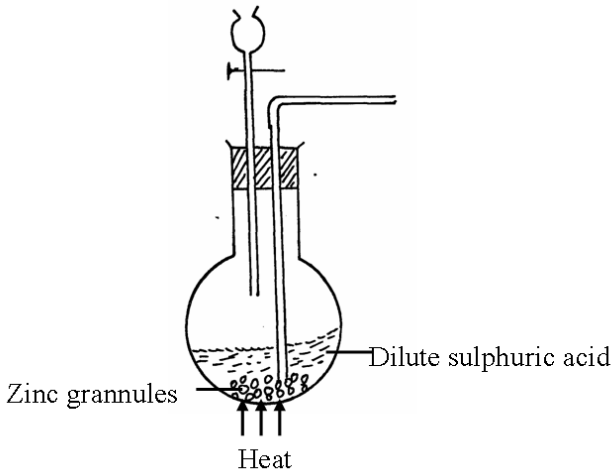
Calculate the number of tonnes of sodium chloride used upon on this particular Day.

Assume the plant is working at 100% efficiency.

(C = 12, H = 1, Cl = 35.5, Ca = 40, Na = 23)

(3mks)

3. A student set-up the arrangement below to prepare and collect dry hydrogen gas



(a) Identify two errors from the section of the arrangement shown above(2mks)

I:

II:

(b) Complete the diagram to show how dry hydrogen gas can be collected.(2mks)

(c) (i) Explain the effect of hydrogen gas on a wet red litmus paper(1mk)

……

……

(ii) Write a balanced chemical equation for the reaction that takes place

when hydrogen gas is burnt in air.
(1mk)

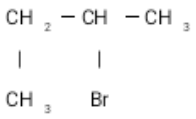
……

……

(d) Determine the relative atomic mass of zinc, given that when 6.54g of zinc was used, 2.4litres of hydrogen gas was produced. (molar gas volume = 24 litres)
(3mks)

e) State any two non-industrial uses of hydrogen gas (1mk)

4 a) Name the following compounds(1mk)

(i) 

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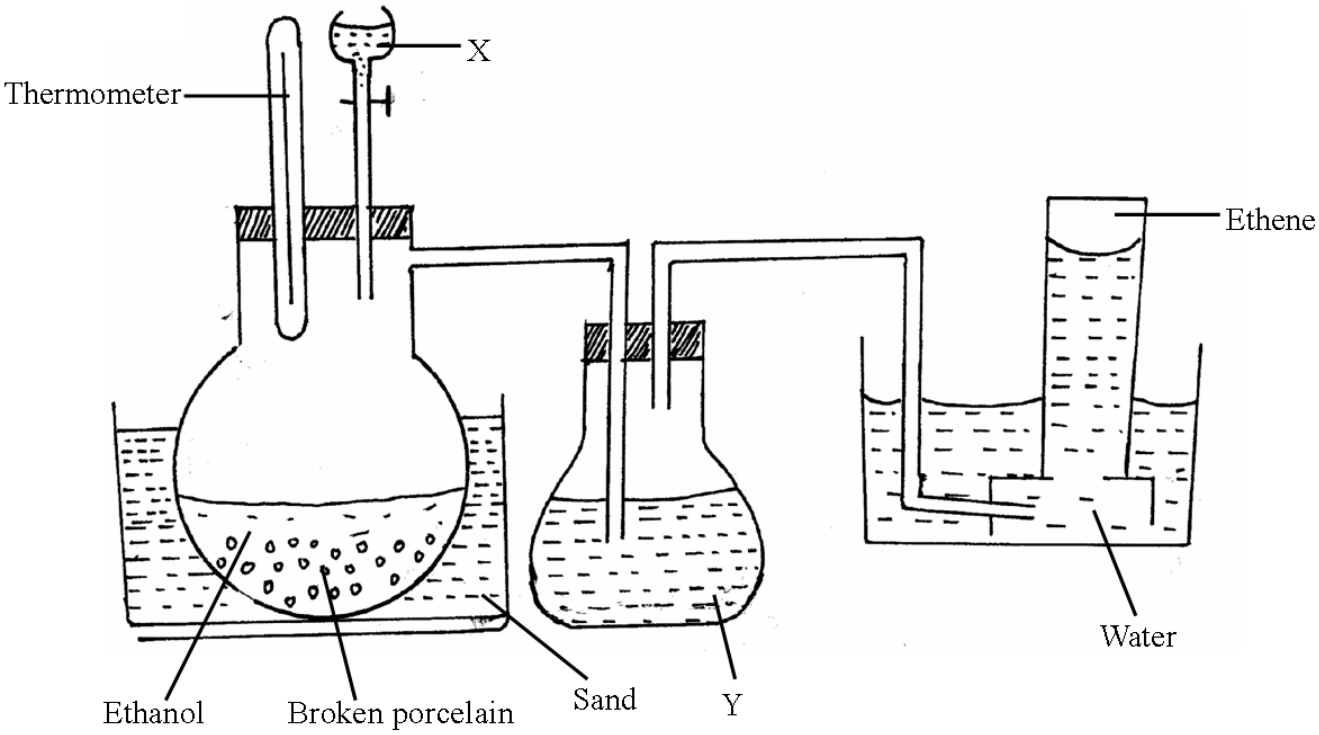
(ii) H_2SO_4

……

d) The diagram below is for the preparation of ethene gas in the school laboratory.



(i) Name substance (1mk)

X_____

Y_____

(ii) What is the use of substance Y?

……

……

(iii) State one condition missing in the set up (1mk)

……

……

(iv) Explain why ethene can't be collected by either upward or downward delivery.

(1mk)

……

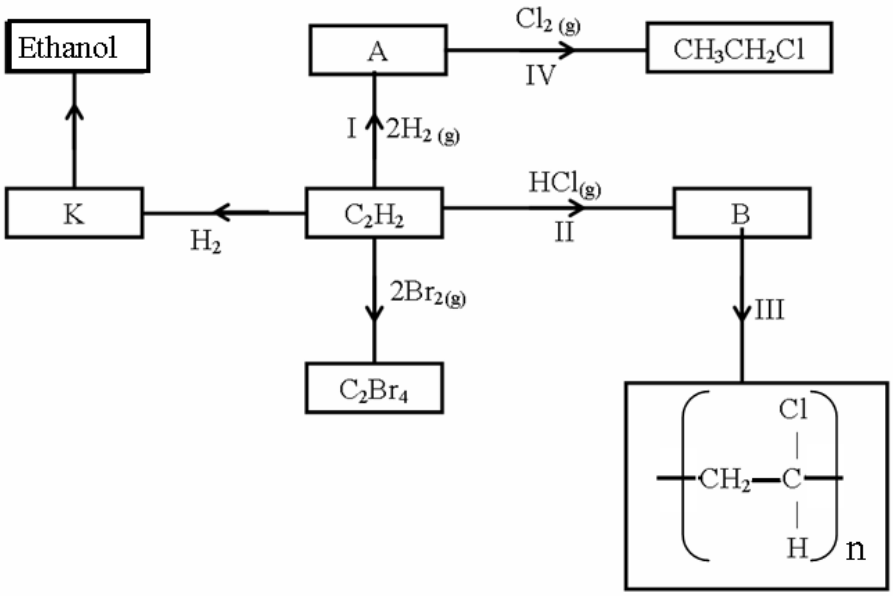
……

(v) Write down an equation for the production of ethene in the above set up (1mk)

……

……

c) Study the scheme below and answer the questions that follow.



(i) Identify the catalyst used in step I

(1mk)

……

……

(ii) Name the compounds A and B (1mk)

A_____

B_____

(iii) Give one disadvantage of compound formed in step III (1mk)

……

……

(iv) Name the reactions taking place at steps: (1mk)

III_____

IV_____

(v) Describe how substance K is converted to ethanol (2mks)

……

……

……

……

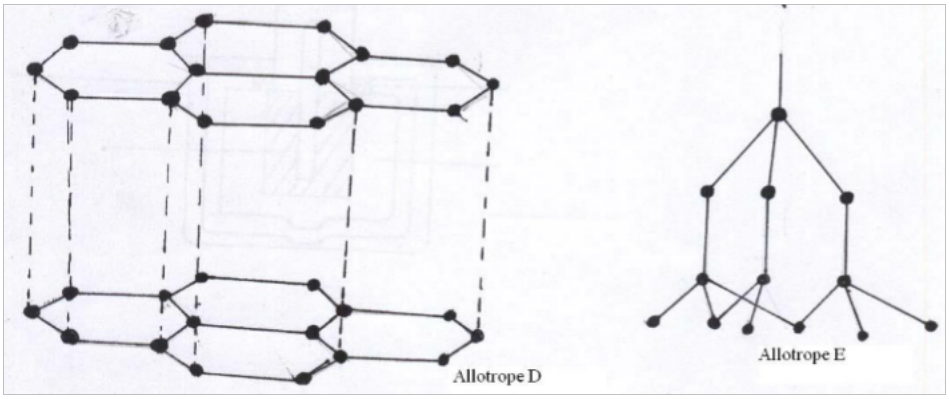
d) Under certain conditions, heptane can be converted to two products. The formula of one of the products is C_4H_{10}. Write down the structural formula of the other products. (1mk)

5. (a) Carbon has two allotropes. **What** is meant by the term allotropy? (1mk)

……

……

(b) The following diagrams show the structures of two allotropes of carbon. Study them and answer the questions that follow.



d) **Name** the allotrope (2mks)

D

……

E

……

e) Give one use of D (1mk)

……

……

f) Which allotrope does not conduct electricity. **Explain** (2mks)

……

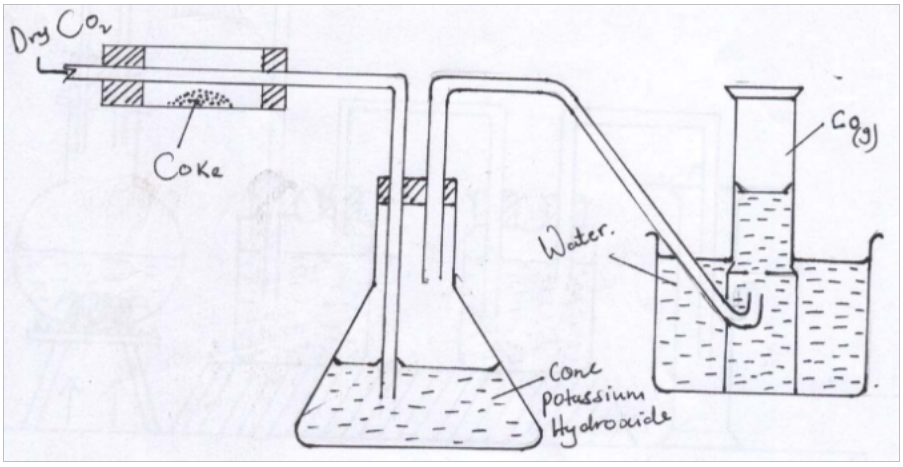
……

(c) **State two** properties of Carbon (IV) Oxide that make it suitable for use in fire extinguishers. (2mks)

……

……

(d) In an experiment, Carbon (IV) Oxide gas was passed over heated coke and the gas produced collected as shown in the diagram below.



v. **Write** an equation for the reaction that took place in the combustion tube. (1mk)

vi. **Name** another substance that can be used instead of Potassium Hydroxide. (1mk)

……

vii. **Describe** a simple chemical test that can be used to distinguish Carbon (II) oxide. (2mks)

……

……

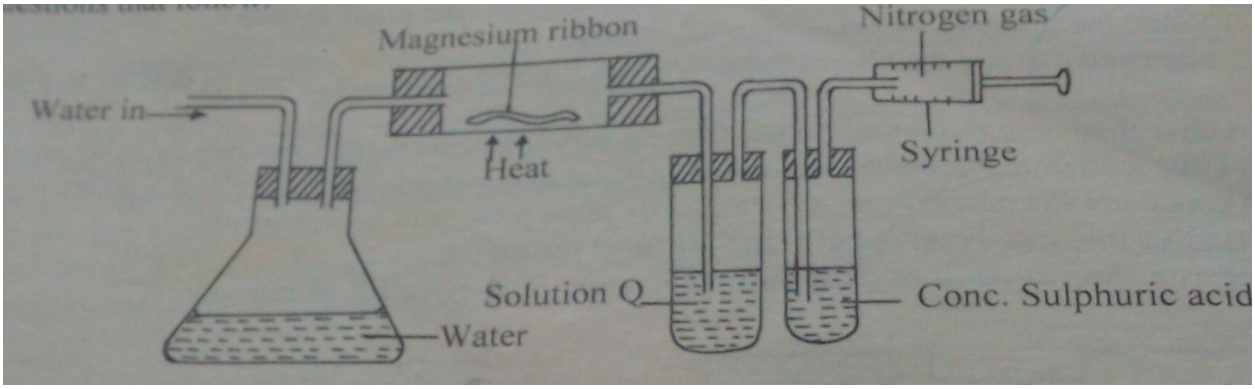
……

viii. **Give one** use of carbon(II) Oxide (1mk)

……

……

6. The set up below was used to obtain dry nitrogen gas from air .study it and answer the questions that follows.



i)name the method used above.(1mks)

……

ii)identify solution q.(1mks)

……

……

iii)state the observation made in the combustion tube .(1mks)

……

……

iv)What is the function of concentrated sulphuric acid in the set up above.(1mks)

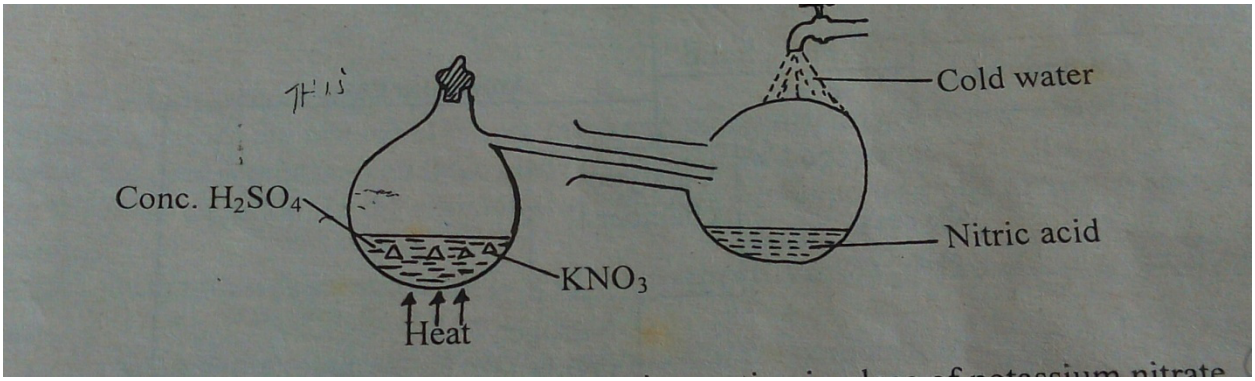
……

……

v)Name 1 impurity in the nitrogen gas collected by this method.(1mks)

……

b)the set up below was used to prepare Nitric(v)acid in the laboratory using concentrated sulphuric acid on potassium nitrate crystals.study it and answer the questions that follows.



i)Explain why sodium nitrate is not appropriate option in place of potassium nitrate.(1mk)

……

……

ii)A reddish brown gas was observed in the retort.explain.(1mk)

……

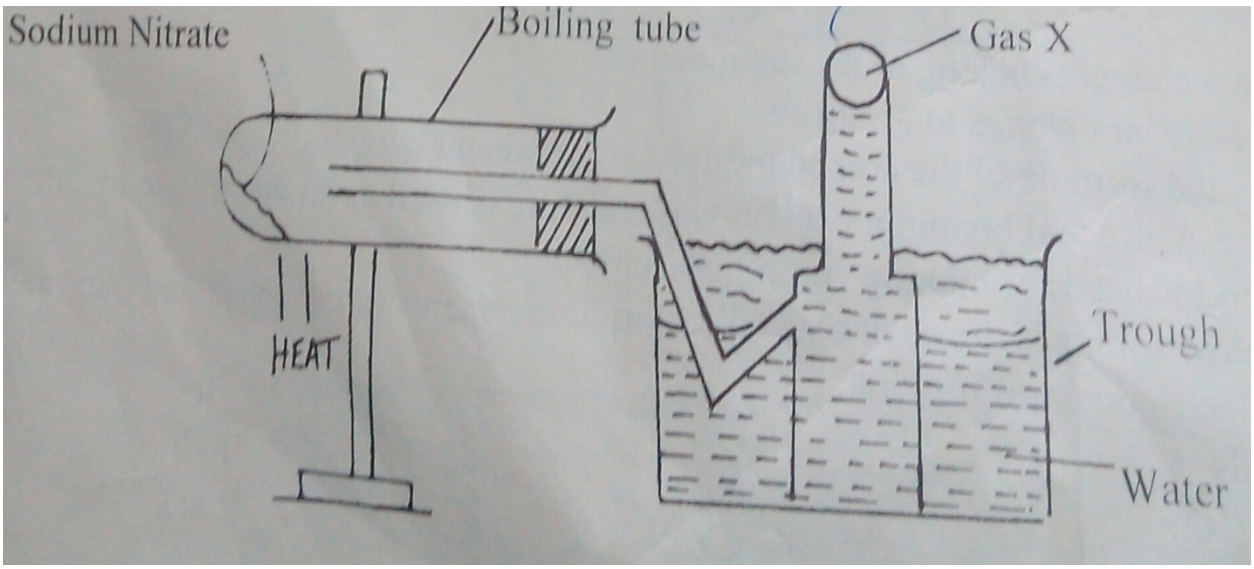
……

c)60-50 % Nitric(V) acid is produced from the absorption chamber in the industrial manufacture of the nitric acid.Describe how the percentage of the acid can be increased.(2mks).,……

……

……

7a.The diagram below represents a set up used by a student to investigate the effect of heat on sodium nitrate.use it to answer the questions that follow.



a)Write the chemical equation of the reaction in the boiling tube(2mks)

……

……..

b)state the property of the gas that makes it to be collected by the method shown.(1mk)

……..

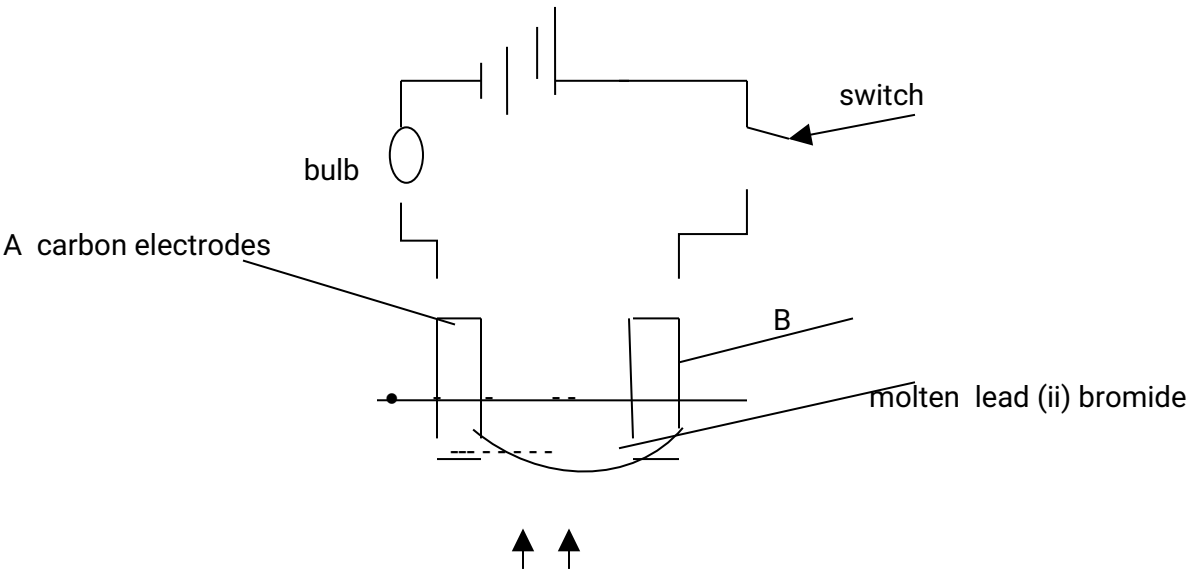
c)predict the effect of water in the trough on the litmus paper after the experiment(2mks)

……

……..

……..

B)study the set up below and answer the questions that follows .



heat

I)State and explain the observations that would be made when the circuit is completed.(3mks)

……

……

……

ii)Name the electrodes A and B

A……

B…….

8 . 8.4g of sodium hydrogen carbonate are completely decomposed by heating.calculate the mass of the resulting solid and the volume in litres of the gas produced at s.t.p.(molar gas volume 22.4litres)

a) (i) write a balanced chemical equation(2mks)

……

……

ii) calculate the mass of solid formed(2mks)

……

……

iii) calculate the volume of the gas produced in litres at s.t.p(2mks)

……

……

……

……

b)During an experiment on the reduction of an oxide of copper the following data was obtained.

Mass of empty boat……25.0g

Mass of empty boat + oxide of copper……..29.0g

Mass of boat+copper(after reaction)……28.2g

(cu=64.0 0=16)

Find the emphirical formula of copper oxide.(4mks)

……
……
……
……
……
……

(c) A volume of 375cm^3 of a gas has a pressure of 20 atmospheres.what will be its volume if pressure is reduced to 15 atmospheres?(3mks)

C.R.E PP1

TIME: 2½ HOURS

INSTRUCTIONS TO CANDIDATES

ANSWER ANY FIVE QUESTIONS IN THE ANSWER SHEETS PROVIDED.

Answer any five questions in the answer sheet provided

e) a) Name the five books of the Bible which are referred to as Pentateuch (5mks)

b) Write down five teachings about marriage from the Biblical stories of creation (10mks)

c) Give five reasons why Christians read the Bible (5mks)

f) a) State seven promises that God made to Abraham (7mks)

b) Give eight reasons why circumcision was important to the Jews (8mks)

c) State five consequences of breaking taboos in Traditional African communities (5mks)

g) a) Describe the characteristics of False prophets in the old Testament (7mks)

b) State the Teachings of prophet Amos about the day of the Lord (8mks)

c) How can Christians assist the church leaders to perform their duties effectively? (5mks)

h) a) Give six reasons why Jeremiah was not willing to accept the call of God to become a prophet (6mks)

b) Explain four evils condemned by prophet Jeremiah during the Temple sermon (8mks)

c) State six ways in which church leaders communicate God's message to people in Kenya today (6mks)

i) a) From the call of Jeremiah identify eight qualities of God. (Jeremiah 1) (8mks)

b) Give six characteristics of the new covenant foreseen by Jeremiah (6mks)

c) Give six ways in which Christians assist victims of disasters (6mks)

j) a) Outline six rituals performed during the birth of a baby in Traditional African communities (6mks)

b) Give six reasons why children are important in Traditional African communities (6mks)

c) List eight duties of diviners in Traditional African communities (8mks)

NAME _____ ADM NO _____

DATE _____ Class _____

CRE PP/2 313/2

TIME: $2^{1}/_{2}$ hours

INSTRUCTIONS:

Answer any Five questions in the answer sheets provided

ANSWER FIVE QUESTIONS

1. a) What were the expectations of the Jews concerning the messiah.
(8mks)

b) Identify what angel Gabriel said about person and mission of John the Baptist to Zacharia according to St Luke gospel 1; 13 – 17. (6mks)

c) Identify ways that showed that Jesus came from a poor background.
(6mks)

2. a) Describe the call of the first disciples of Jesus in accordance to Lk 5: 1 – 11
(8mks)

b) Outline six reasons why Jesus chose the twelve disciples.
(6mks)

c) State six instructions given by Jesus to the twelve disciples before sending them on a mission.
(6mks)

3. a) Give four teaching about Jesus from the cure of the paralytic. (8mks)

b.) Identify seven teachings of Jesus in the parable of the coin and the lost sheep.
(7mks)

c.) State five ways used by Christians to spread the gospel of Jesus today.

(5mks)

4a) Relate the story of the widow and the unjust judge.

(6mks)

b) Give eight reasons why Jesus used parables in his teaching.

(8mks)

c) State six actions of Jesus which showed that he loved the needy.

(6mks)

5. Narrate Jesus triumphant entry into Jerusalem before his arrest LK 19 ; 28 – 40

(8mks)

b) Give six reasons that made Judas Iscariot betray Jesus.

(6mks)

c) Identify 6 occasions when Jesus prayed as recorded in st Luke gospel.

(6mks)

6.a) Explain the teachings of Jesus on the unity of believers as illustrated in the vine and branches (6mks)

b) Identify 8 gifts of the holy spirit.

(8mks)

c) State six ways in which the gifts of the holy spirit are abused in the church today.

(6mks)

NAME: _____ ADM NO:_____

DATE: _____

MARCH

ENGLISH 101

MARCH FORM 3 JOINT EXAMINATION

K.C.S.E

101/1 ENGLISH

TIME: 2HRSENGLISH PAPER 1

ix. Imagine that it is your first day in a new school. Write an entry in your journal indicating the things that surprised you, those that scared you and those that made you happy. (20 marks)

x. Cloze test

The new constitution has bestowed the Supreme Court all_____ , role of arbitrating the _____ arising out of presidential elections. The court currently has a golden opportunity to clearly_____ that it is worth the confidence of Kenyans Kenya's are_____ with bated breath to see the _____making a determination on the _____ lodged by the CORD Alliance in an_____ and completely impartial manner that will_____ all the parties. Indeed, the_____ of Kenyans are varied and either way, the court's _____ will be interpreted as either a win or loss for jubilee or CORD alliance.

ORAL SKILLS (30marks)

(a). Read the following poem and answer the questions below:-

I want to Die While You Love Me

I want to die while you love me
While yet you hold me fair
While laughter lies upon my lips
And lights are in my hair

I want to die while you love me
I could not bear to see
The glory of this perfect day
Grows dim- or crease to be

I want to die while you love
Oh! Who would care to live
Till love has nothing more to ask
And nothing more to give.

I want to die while you love me
And bear to that still bed
Your kisses turbulent unspent
To warm me when I'm dead

Questions

c) Construct the rhyme scheme of this poem.

d) Which pair of words rhyme in this poem?

e) Which words would you stress in the first and second line and why?

f) What is the effect of repetition in this poem?

g) How would you perform the first two lines?

h) How would you say the last stanza.

b) Explain what each of the following non-verbal cues mean in a conversation

k) Frowning …….

l) Pacing up and down ……

m) Shrugging shoulders ……

n) Winking ……

o) Raising both hands up the sky …….

c) Identify any four pairs of words in the following list that have the same vowel sounds;

Mad	eat	full	lap
Cat	it	mud	bet
Cut	look	feat	if
Love	boot	fit	

Beat	pool	further
Lit	father	hut

d) Explain how you would avoid speaking in monotonous manner to make your listeners attentive. (6 mks)

e) The following words have been misspelt. Rewrite them correctly

g) The prefect was privileged to have special diet.

h) The students managed to rescue their colleague's from the burning dormitory.

i) The professor managed to convince the crowd to vote for him.

j) The collage will close for one week to allow for repairs.

k) Lack of proper maintenance on any machine makes it to break down frequently.

NAME: _____ ADM NO:_____

DATE: _____

ENGLISH 101

K.C.S.E

101/2 ENGLISH

TIME: 2½ HRS

ENGLISH PAPER 2 – FORM 3

xi. Read the passage below and answer the questions that follow:-

THE DETOX DEBATE

Detox kits and supplements are recent health feds. But can they really help you lose weight fast? Online weight loss coach Adrew Cate investigates.

We've heard a lot about the need to detox lately. It is the term used to describe a strict program of elimination and supplementation that's meant to rid your body of impurities, cleaning your liver and kidneys, and flushing your bowel. It's suggested that toxins build up from consuming too much fat, sugar, alcohol, caffeine, preservatives, and pollution.

There's no shortage of detox books, kits, and programs claiming to help you shed weight, improve your well being, cause your skin to radiate, and make you feel younger. The kits usually contain a dietary program, which is supplemented with a variety of vitamins, minerals, tonics, digestive aids, and laxatives. They are particularly popular in January as people feel the urge to begin the New Year afresh after overindulging during the festive season.

People will make drastic changes when they go on a detox diet and often feel better for starting a structured regime. However, detox kits made up of herbal laxatives and diuretics are unnecessary and have generally to have no blood of fats, alcohol, and other nasties – all without the help of a fancy box from your local pharmacy. There is no scientific evidence to support specific detox diets, programs, or supplement kits. However, there's no debate about the fact that eating less junk food, cutting out cigarettes and your alcohol intake, etc will benefit your health. For example, drinking more water and cutting out caffeine will improve your hydration levels, while reducing

your portion sizes and increasing your vegetable intake will improve bowel function. These changes will enhance your well-being, but there's nothing magical about the detox diet itself. Rather, it's the associated lifestyle changes that benefit your health.

Detox kits that contain laxatives and diuretics to encourage you to fast could, potentially, do more harm than good. Laxatives speed up your bowel motions, but also prevent the absorption of nutrients, while diuretics can result to partial dehydration.

The fasting components of a detox should only be minimal, and not extend beyond a day or two. By eating next to nothing, you are not getting enough nutrients for the essential functions of your body. Supplements are no substitute for real food, and relying solely on them can result in vitamin deficiencies. Fasting is also known to slow down your metabolic rate, which encourages your body to store fat, making it harder to lose body fat in the future.

If you've spent weeks, months or years overindulging drinking and smoking you can't hope to fix yourself in a few days. Detox diets aren't an instant cure to health and wellness. Short-term changes to your diet and lifestyle over the long term, there's no point starting them, as they won't have any serious impact upon your health.

d) What is **detoxing**? (2 mks)

e) From the information given in the passage, what builds up toxins in the body? (2 mks)

f) Give the contents of the detox kit. (2 mks)

g) When do detox kits sell most? (1 mk)

h) In about 80 words, summarize the writer's arguments on whether we need to detox or not.

(5mks)

Rough copy

Fair copy

i) Outline the dangers of detox diets. (3 mks)

j) Add a question tag to the following statement. (1 mks)
Detox diets aren't an instant cure to health and wellness, ……..

k) We've heard a lot about the need to detox lately. (Rewrite the sentence as a question without changing the meaning). (1 mks)

l) Explain the meaning of the following words as used in this passage. (3 mks)

Laxatives

Overindulging

Deficiencies

Read the story below and then answer the questions that follow;

KAHURU THE CROW

One day Wamabuku, the rabbit decided to give a party. He invited all the other animals that had invited him before to similar parties. For the party Wamabuku had slaughtered many fat goats and cows. On the day of the party, Wamabuku got all his servants to decorate his house for the fiesta. All the animals arrived in rapid succession – Wamuthige the hyena and his family, Wamacege the porcupine, Kahuru the crow and may others.

The animals ate the meat to their satisfaction. After the meal they began to dance. In the evening, the party was over and animals prepared to leave. Wamuthige the hyena and his family being greedy animals decided to get more meat from Wamabuku was surprised at their greed and decided to teach them a lesson. Wamabuku told the hyena that only the "undesirable" fat meat was remaining. Since hyena love fat meat their mouths became moist with saliva.

Wamabuku then sent his servants to the garden to collect all his young thriving gourds. The gourds were split into halves. The succulent white inside called "mego" was removed. Since it is exceedingly bitter so liquid fat was poured over the 'mego'. The hyenas were shown the melting mego. At the sight, the hyenas became panicky.

Wamuthige, after some thinking, called “Kahuru,” he said, please get a thread and needle. Then come and knit out outlets tight so that when we have eaten all this melting meat, we shall not water any. It is so sweet and we can’t afford to have delicacies waster.”

Kahuru, being a kind-hearted family, went to fetch a needle and thread. Meanwhile the hyenas ate nearly all the mego. When Kahuru returned with the needle and thread he was asked to start his operation on the hyenas.

The mego in the hyenas stomachs had intermingled with the meat and other food. All the hyenas were suffering from flatulence. When Kahuru started, the hyenas started to get stouter and stouter due to the air in their stomachs. The hyenas brought their hindquarters as near to Wakahuru as possible so that Wakahuru did not miss any.

When the hyenas were so swollen up that they could swell not more all their back openings burst with pressure. All the stuff from inside the hyenas liquid and solid, was deposited on him. So much was put there, that he lay covered all over and helpless. The hyenas left without helping Kahuru from his disgrace. Kahuru did not know what had happened and anyway, he was not to blame.

That night, the rain fell in abundance and drenched the countryside. Kahuru was cleaned. He flew to the nearest tree and perched there. In the morning he found he could see and flew to his home.

A few weeks later Kahuru decided to give a feast especially for the hyenas. He notified Wamuthige, who collected all the hyenas. The party was to be in Kahuru’s home. Kahuru was to carry all the hyenas up, since hyenas don’t fly. Kahuru chose a spot where the hyenas could assemble, and told them to hold each other by the tail. Then Kahuru would take Wamuthige who would be in the front. Thus all the other hyenas would be pulled behind in along string.

While they were waiting, the hyenas hanced, singing.

We are going up high to eat fat, fat meat,
And we we say ‘fat’
We mean meat purely white

When Kahuru arrived and picked up the first hyena all others followed still singing happily. When they had flown up many miles, Kahuru shouted at the last hyena, “Can you still see the ground?” “Yes,” was the reply. They flew on, still singing until they could see the ground no longer.

Then Kahuru told the hyenas to stop singing and make ready for “white” meat. Then all of a sudden, he let Wamuthige go, and through the air the hyenas dropped. The fall was a great one. Kahuru flew down, and from a safe distance, jeered teasingly at the groaning, fractured cripples. Then he flew happily back to his home.

QUESTIONS:

p) Classify this narrative. Give reasons (2 mks)

q) Identify three features in the narrative and explain the effect of each. (3 mks)

r) State and explain the character trait of

i) Wamuthige (1 mks)

j) Kahuru (1 mks)

s) What do we learn about the socio-economic activities of the people from whom this narrative was taken? (4 mks)

t) What is the function of a song in this narrative. (4 mks)

u) (i) Give **one** moral lesson that we learn from this narrative. (1 mks)

(ii) Suggest a proverb to summarize the lesson you have given. (2 mks)

(iii) State **two** performance techniques that would be used to make this narrative enjoyable.

(2 mks)

The River and the source by "Margaret Ogola pg 22-23
Feel free to do so…… Ayie, I have accepted.
32. Place the extract in its immediate context (4mrks)

33. “Women are all the same Owour- lets get out of here” said Otieno. Write in reported speech. (2mrks)

34. Explain the character of

c) The chief- Owour

d) Odero

e) Otieno (6mrks)

35. Explain the meaning of the underlined words

- You will be Owour Kemboi a man of style the famous or who paid up without <u>demur.</u>

- Why should these people <u>vip</u> us like this.

- A son in law had to <u>comport</u> himself with great dignity. (3mks)

36. Identify and explain two styles used in the extract.

c)

d)

37. “All women are not the same”. The Chief observed. Explain what happens later in the novel to justify this in the life of the chief (2mrks)

38. Why is Akoko feeling that her father should give her a piece of land.
(2mrks)

39. Why is the “ Mikai” important in this culture”
(2mrks)

GRAMMAR

Use the correct form of words in brackets to complete each of the following sentences

(3mks)

9. Nobody expected the company to make _____ (lose)

10. The three_____ (passer-by) were arrested.

11. She has spent a lot of time_____ (beautiful) her compound.

Correct the errors in the following sentences

vii. It is an important occasion

viii. The cite was lovely

ix. It is embracing to mispronounce words (3mks)

Fill in the blank forming adjectives from the given in brackets.

l) John was _____ of his neighbours success (envy)

m) I felt _____ about not being able to help (awe)

n) He took a _____ leave after the father died (compassion) (3mks)

Fill the blank spaces with the correct preposition

31. I am indebted _____ him for the help he gave me.

32. She has always confided_____ him.

33. The ailing man has been in bed_____ the whole week. (3mrks)

Rewrite the following sentences according to the instructions given. Do not change the meaning.

- He threatened us. He was insolent

  (Begin: Not only)

- You will only succeed if you work hard

  (Rewrite using unless)

- When the people burst into the councillors office he had not even sat down.

  (Begin hardly)

AGRICULTURE

Paper 1

Form 3

TIME:2hrs

NAME.....DATE.....

ADM NO.....SIGNATURE.....

SECTION A [30 MAKRS]

1.State four practices that make Agriculture to be considered a science [2mks]

3.Give two advantages of organic farming [1mk]

4.Give 2 branches of crop farming[1 mk]

5. State 2 negative impacts of high temperature.(1mk)

6.Mention four farming practices that help to improve soil structure[2mks]

7. State three factors that have negative impacts on Agriculture

8.State four aspects of rainfall that affect crop production [2mks]

9.State 2 properties of the soil that are influenced by the texture [1mk]

10.Name four human factors that influence efficiency of Agriculture production[2mks

11.State four factors that determine the type of irrigation that can used in a given area (2mks)

12.State four disadvantages of using farmyard manure(2mks)

13.Give four disadvantages of minimum tillage(2mks)

14.Outline two methods used by farmers to harden off seedlings in a nursery bed (2mks)

15(a)Name two types of inventories used on the farm for the purpose of record keeping(1mk)

(b)What is the importance of taking farm inventories?(1mk)

16.Give 2 reasons why farmers should establish seedling first in a nursery bed during the growing of cabbages(1m)

17(a).What is vegetative propagation?(1m)

(b).State the materials used to propagate;

Sisal

Pineapples

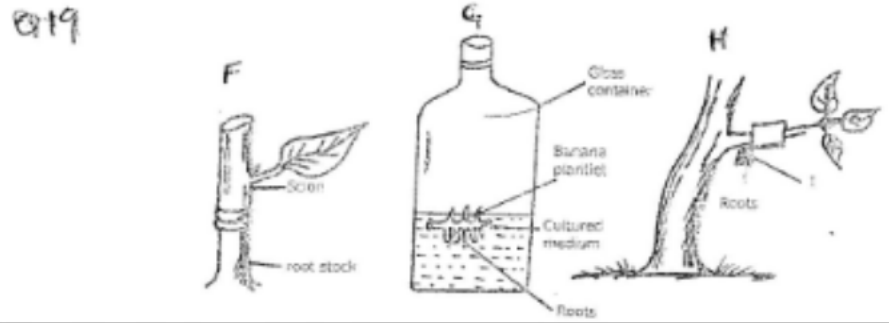
Irish potatoes

18(a)A farmer was advised to apply a fertilizer labeled 18:47:0 on the sack.What do labeled figures stand for?(1½mks)

(b)A farmer was advised to apply 200kg of C.A.N fertilizer per hectare,which top dressing the bean crop C.A.N contains 21% nitrogen. Calculate the amount of nitrogen applied per hectare [show your working]1½mk]

SECTION B 20MKS

19 Study the methods of crop propagation F, G, and H illustrated below and answer the questions that follow



[a] Identify the methods of crop propagation illustrated above[11/2 mks]

F

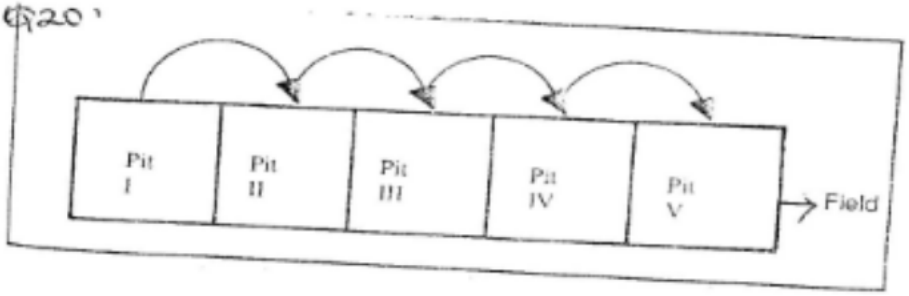
G

H

[b]Give 2 conditions under which H is carried out [2mks]

[c]Give 3 advantages of using the method of propagation illustrated in G above[11/2mks]

20 The following diagram shows a method of compost preparations

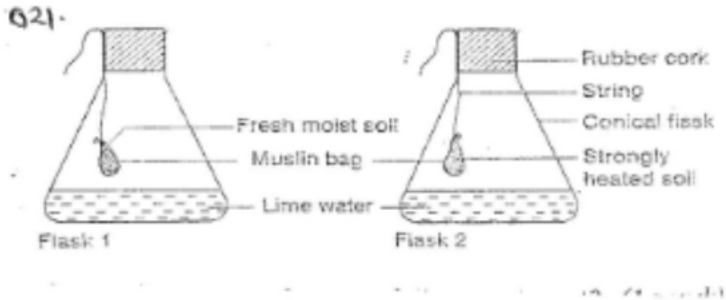


[a]Identify the method [1mk]

b)Give two factors that should be considered when siting the compost pit.(2mks)

[b] Give 2 factors that determine the time the manure would be ready for use in the field.(2mks)

21 The diagram below shows an experiment that was carried out by a form one class . Study it carefully and answer the questions that follow



[a]What was the aim of the experiment [1mk]

[b] What observations did the students make at the end of the experiment in the 2 flasks[2mks]

Flask 1

Flask 2

[c] Give the reason for the observations in flask 1.(1mk)

[d]Why did the students heat the garden soil in flask 2 strongly?[1mk]

22 Explain the meaning of the following practices in crop production

1 Chilting[1mk]

2 Seed dressing [1mk]

3 seed inoculation [1mk]

4 Earthing up [1mk]

5 Roguelling [1mk]

SECTION C 40 MKS

Answer any two questions in this section

23 [a] State and explain the factors considered when determining spacing of crops in the field [10mks]

[b] Determine the process of chemical water treatment [10mks]

24 [a] what are the uses of farm records [10mks]

[b] Explain 8 ways in which soil loses fertility [10mks]

25Describe the field production of tomatoes under the following sub-headings

[a] Ecological requirements [3mks]

[b] Land preparations [4mks]

[c] Transplanting [5mks]

[d] Field management practicals [5mks]

[e] Marketing [3mks]

AGRICULTURE

Paper 2

FORM 3

TIME:2hrs

NAME.....DATE.....

ADM NO.....SIGNATURE.....

SECTION A

1. Name a tool recommended for the following practices on the farm.
   a. Smoothening a very rough surface of flat wood(1/2mk)

   b. Making threads on metallic pipes.(1/2mk)

   c. Breaking stones during construction and ballast in masonry work.(1/2mk)

   d. Cutting wood along the grains(1/2mk)

2. Give four signs that show a rabbit doe is about to give birth.(2mks)

3. Give four reasons for steaming up a dairy cow.(2mks)

4. Sate four reasons for castrating male calves(2mks)

5. Outline two disadvantages of using embryo transplant.(1mk)

6. a.State four reasons for dehorning /disbudding livestock.(2mks)

   b.State two chemical methods of disbudding livestock.(1mk)

7. Give three types of feed additives given to livestock.(11/2mk)

8. State two features in a gizzard that enable it to carry out its functions (1mk)

9. Sate four economic importance of internal parasites in livestock (2mks)

10. State four problems that may necessitate a farmer calling a qualified stockman during calving down of a cow.(2mks)

11. .a.What is Zoonotic disease?(1mk)

b.Whta do you understand by the term quarantines in livestock production.(1mk)

12. Study the table below and fill in the missing words(4mks)

Desorption	Cattle	Pigs	Poutlry
Young form birth/hatching to weaning	a)	b)	Chick
Young female before first parturition	c)	Gill	d)
Mature for breeding	Bull	e)	f)
Mature after first parturition	g)	h)	hen

13. Sate the gestation of the following animals

i. Pigs

ii. Cattle

iii. Rabbits

14. Sate the difference between a vector and an intermediate host.(2mks)

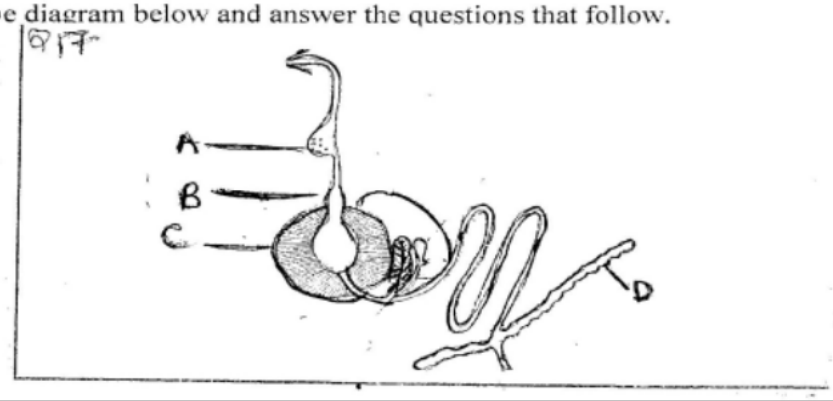
15. State four functions of carbohydrates in animals body.(1mk)

SECTION B(2OMKS)

16. a.Using Pearson's square method compute a 400kg ration with 20% DCP from wheat containing 15% DCP and cotton seed cake containing 60% DCP.Clearly show your working

b.Apart form the method above, state one other method farmer can use to complete a livestock ration.(1mk)

17. Study the diagram below and answer the questions that follow.



a. I)Identify the above digestive system.

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

iii)State one function of the part labeled D mentioned in (ii) above.(2mks)

iv)What makes the part labeled C be more effective in its functions.(2mks)

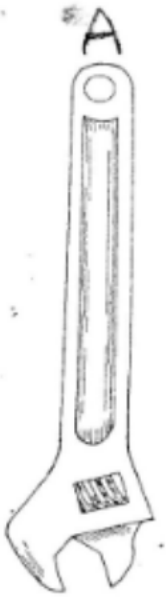
18. a. Below is diagram method of identifying livestock.

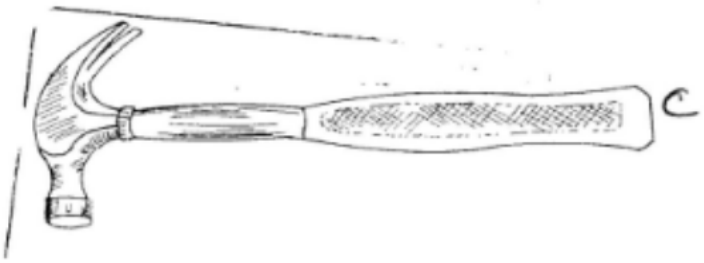
i)Name the type of identification method used above.(1mk)

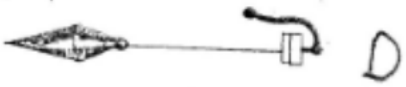
ii)Name the identification number on the diagram shown above.(1mk)

iii)Using the above system, draw a diagram representing livestock number.(1mk)

19. State 1 use of each of the following farm tools and equipment.(4mks)







A

B

C

D

SECTIONC(40MKS)

Answer any TWO questions in this section.

20. With aid of a fully labeled diagram, describe the processing formation in hen.(20mks)

21. a)Describe the life cycle of a two-host ticks(7mks)

b)Explain the measure used to control external parasites in livestock.(8mks)

c)State five factors that affect digestibility in livestock nutrition.(5mks

22. a.Describe twelve measures of controlling livestock diseases(12mks)

b.Outline eight diseases predisposing factors in livestock production.(8mks)

BIOLOGY

PAPER 1

FORM 3

TIME:2hrs

NAME.....DATE.....

ADM NO..... SIGNATURE.....

1. Sate two ways in which the rough endoplasmic reticulum is adapted to its function.(2mks)

2. State three characteristics that are used to divide phylum arthropoda into classes.(3mks)

3. Distinguish between diffusion and active transport.(2mks)

4. An organism was found to have the dental formula:
   I $\frac{1}{1}$, $C\frac{0}{0}$ $PM\frac{3}{2}$,$m\frac{4}{4}$
   i. Calculate the total number of teeth in the organism.(1mk)

   ii. Giving a reason ,suggest the mode of feeding of the organism.(2mks)

5. a)Give a reason for the biconcave shape of the red blood cells.(1mk)

b) Name the enzyme that speeds up loading of carbon (iv) oxide in the red blood cells.(1mk)

6. a. Name the vitamin, an enzyme and a mineral element that are involved in blood clotting.(1½mks)

i. Vitamin

ii.Enzyme;

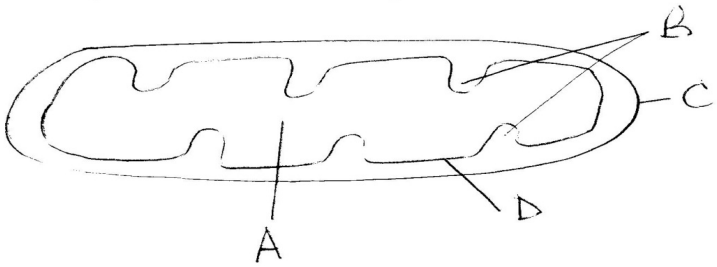
iii.Mineral element

b.Differenciate between heparin and histamine.(2mks)

7. a.Name the part of the brain that influences breathing rate.(1mk)

b.State two advantages of breathing through the nostrils instead of through the mouth in mammals.(2mks).

8. The diagram below resents a cell organelle.



a. Name the main product of the organelle's activity.(½mk)

3

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

A-

B-

C-

D-

9. a.State the cause of diabetes mellitus.(1mk)

b.How may the disease in (9)(a) above be tested in a School laboratory?(2mks)

10. a.Distinguish between ecological niche and habitat.(2mks)

b.State two reasons why plants are included in a fish pond other than provision of food.(2mks)

11. State the functions of the following parts of a light microscope.

a) Diaphragm.(1mk)

b) Objective lenses.(1mk)

12. a.Define the term respiratory quotient.(1mk)

b (i) After respiration of a certain substrate $50cm^3$ of carbon (iv) oxide was produced and $70cm^3$ of Oxygen was used .Calculate the respiratory quotient of the substrate.(1mk)

ii.Name the substrate in (12) (c) above. (1mk)

13. (a) If a person who lives at low attitude moves to a higher attitude, changes occurring his blood consumption. Name two of these changes.(2mks)

c. State the importance of these changes.(1mk)

14. How are leaves of submerged plants adapted for photosynthesis? (2mks)

15. Name the causative agents of the diseases below:-

a. Anthrax (1mk)

b.Gonorrhea (1mk)

C.Whooping cough(1mk)

16. Explain why plants in waterlogged soils dry up.(3mks)

17.a) Name the antigens that determine human blood groups(2mks)

c) Explain why people who have blood group AB are called universal recipients.(2mks)

18. Name three processes in the human body in which homeostasis is involved.(3mks)

19. a) How are root hairs adapted to their function?(2mks)

b) Name the process by which food is transported in plants.(1mk)

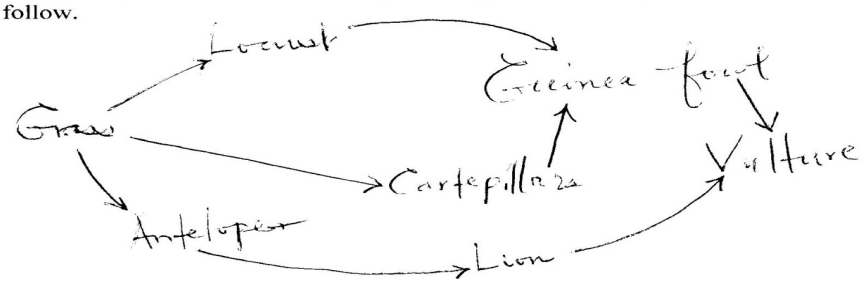
20. State the significance of the following adaptations in a leaf.

a. Thinness (1mk)

b.Presence of airspaces(1mk)

c.Stomata (1mk)

21. Study the food web below representing a certain ecosystem and use it to answer the questions that follow.



a. State the trophic level occupied by the lion in the food web.(1mk)

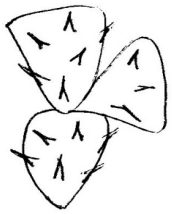
b. Write down a food chain in which the vulture is a tertiary consumer(1mk)

c. i.Name the organism with the largest biomass(1mk)

Ii.Give two reasons for your answer in (c)(i) above.(2mks)

22. Explain how temperature affects an enzyme controlled reaction.(3mks)

23. The diagram below represents a certain plant.



a. What is the likely habitat of the plant?(1mk)

b.Give two reasons for your answer in (a) above.(2mks)

24.The number of stomata on the lower and upper surfaces of two leaves from plant species x and y were counted under the field of view of a light microscope. The results were as shown below.

Leaf	Number of stomata	
	Upper surface	Lower surface
x	4	12
x	20	23

a. Which of the two leaves would be expected to have a lower rate of transpiration?(1mk)

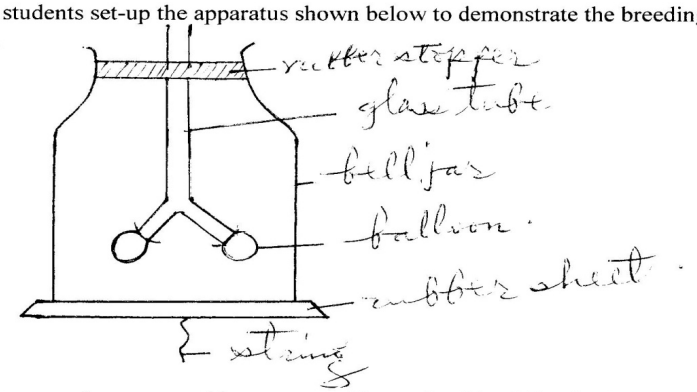
b. Give a reason for your answer in (a) above.(1mk)

25.Construct a dichotomous key for the animals listed below. Part of the key has already been constructed.Bird,Snake,Lizard,Hyena.(4mks)

a. Animal a mammal,…….. Hyena.
b. Animal not a mammal….. go to R.

26. Other than transport of substances, state two other functions of mammalian blood.(2mks)

27.Some students set-up the apparatus shown below to demonstrate the breeding mechanism in a mammal.



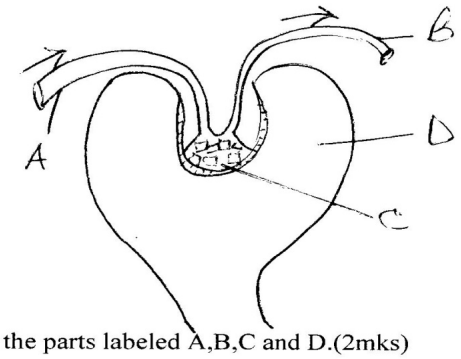
a. What structure in a mammal is represented by each of the following?

i. The glass tube.(1mk)

ii.The ballons.(1mk)

iii.The bell jar.(1mk)

28.The diagram shown below represents a part of the nephron.Use it to answer the questions that follow .



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

A-

B-

C-

D-

ii.Name the fluids found in C and D.(2mks)

C-

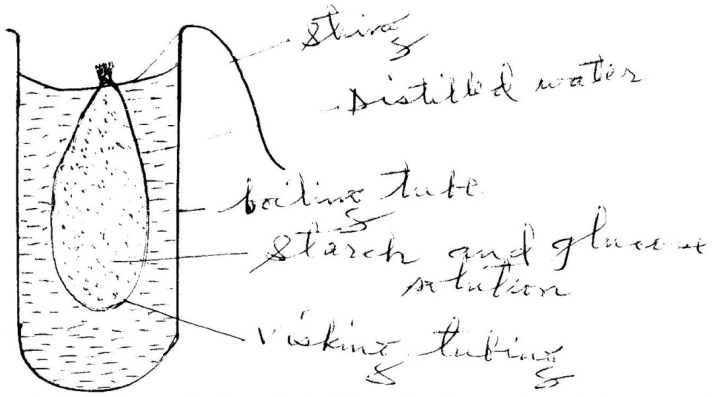
D-

iii.Name the process by which the fluid found in D is formed(1mk)

iv.Mention one difference in the composition of the fluids in C and D.(1mk)

29. Apart from having many features in common, state another characteristic of members of a Species (1mk)

30.An experimental set-up shown below was used to investigate a certain process.



After 20minutes, a student tested the sample from the boiling tube for starch and glucose and recorded the results as shown in the table below.

	Start	After 20 minutes
Start	Absent	Absent
Glucose	Absent	Present

a. Explain the presence of glucose in the water sample.(2mks)

b. What change occurred in the volume of liquid in :
   i. The boiling tube(1mk)

   ii. The visking tube(1mk)

31.State and explain how respiratory surfaces are adapted for gaseous exchange.(3mks)

32.The equation below shows a process that takes place in mammals.

Amino acids ⟶ Organic Compound + Urea

a. Identify the process(1mk)

b. State the importance of this process to a mammal.(1mk)

c. In which organ does this process take place? (1mk)

BIOLOGY

PAPER2

TIME:2hrs

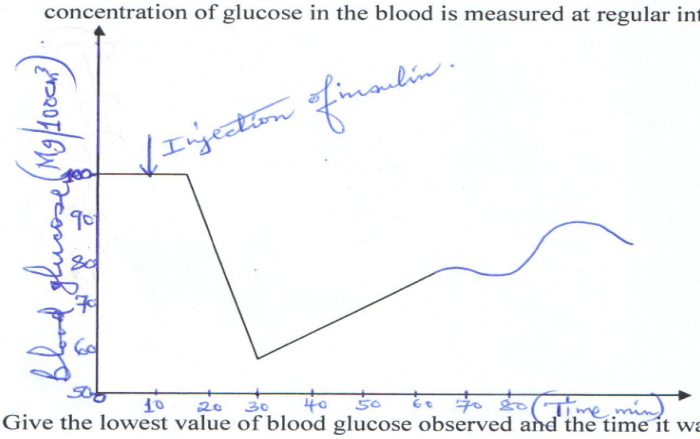
NAME.....DATE.....

ADM NO..... SIGNATURE.....

SECTION A(60MKS)

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

1. The graph below shows the effect of injecting one unit of insulin into a person. The concentration of glucose in the blood is measured at regular intervals.



a. Give the lowest value of blood glucose observed and the time it was recorded.(1mk)

b. Explain the fall in blood glucose level.(2mks)

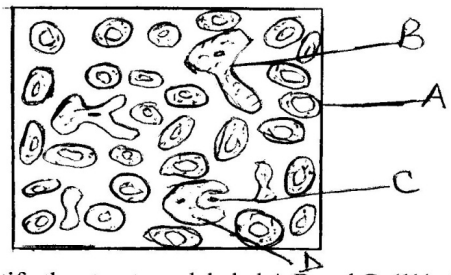
c. Name the mechanism that led to the increase in blood glucose level when it had been falling.(1mk)

d. Name the hormone responsible for the conversion of glycogen to glucose.(½mk)

e. State the effect of each of the following in human beings.
   i. Too much glucose in the blood(1mk)

ii. Very little glucosein the blood(1mk)

2. The diagram below shows a smear of blood on a microscope slide.



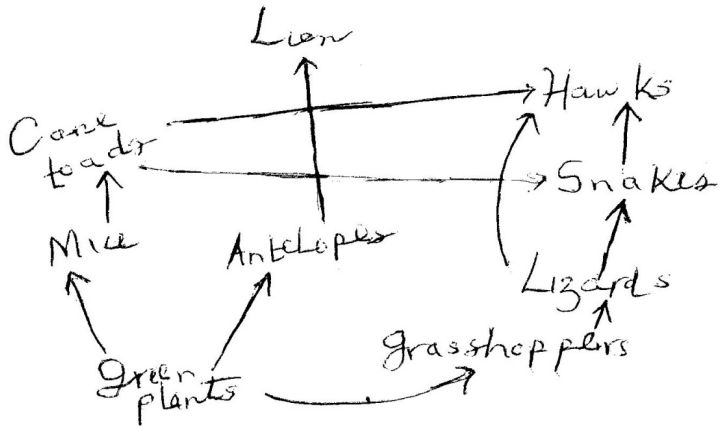
a. Identify the structures labeled A,B and C .(1½mk)
A-
B-
C-

b. State the importance of the large number of structures A in the blood smear.(1mk)

c. Name the process by which structure D would engulf C and state its importance.(1½mks)

d. State one adaptation of the structure labeled A to its function.(1mk)

3. The flow chart below shows a food web in a terrestrial ecosystem.



3

a. From the food web, construct a food chain with five organisms.(1mk)

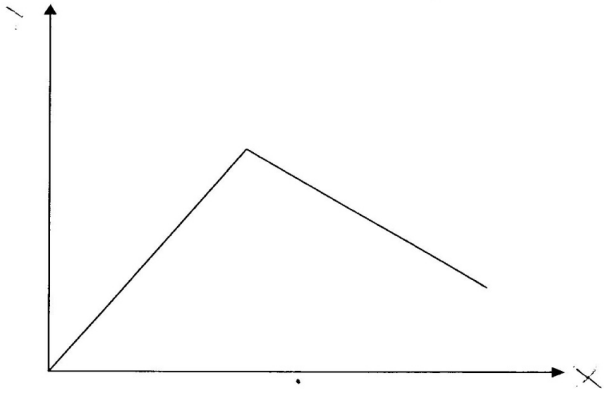
b. Name the trophic level occupied by:
   i. Hawks(½mks)

   ii. Cane toads(½mk)

c. What would happen if leopards were introduced into the ecosystem.(2mks)

4. Describe the processes that occurs in the chest cavity during inspiration.(6mks)

5. The graph below represents the effect of temperature on the rate of photosynthesis.



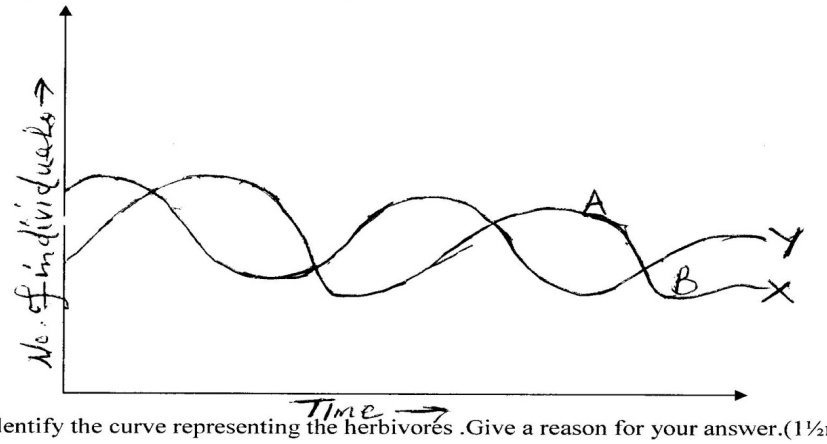
4

a. On the diagram, label the axes(1mk)

b. Comment on the general trend of the graph.(2mks)

c. List two other factors that may affect the shape of the graph.(2mks)

6. The graph below shows the relationship between number of herbivores and carnivores in a park.



a. Identify the curve representing the herbivores .Give a reason for your answer.(1½mk)

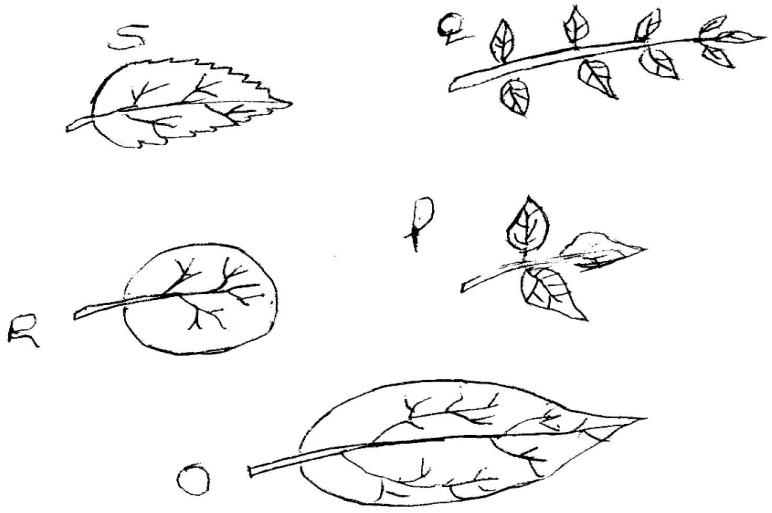
b. Suggest a reason for the slope of graph x between points A and B.(2mks)

c. I)Name the relationship between the two types of organisms as portrayed by the graph.(1mk)

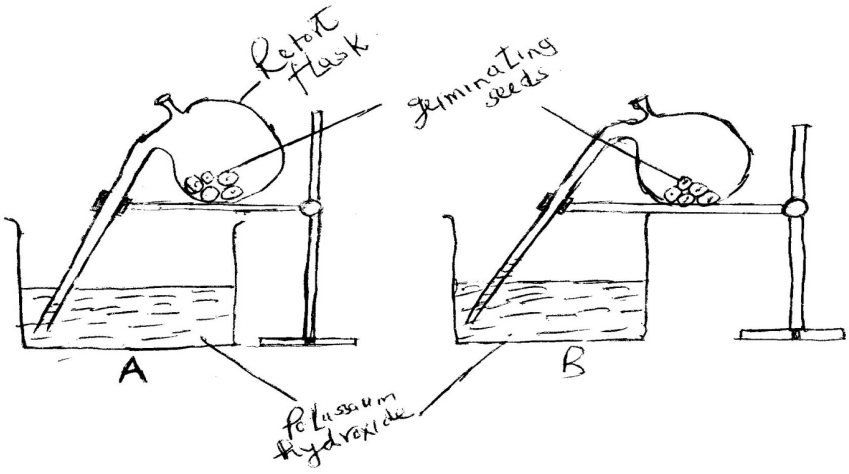
ii)State the significance of the relationship you have stated in (c)(i) above.(1mk)

d. Describe the long-term effect on the parks ecosystem if the species of the carnivores were to become extinct.(2mks)

7. Use the diagrams of leaves below to construct dichotomous keys. Identify the steps you followed to identify leaves O,P,Q and R.(12mks)



8. In an experiment, germinating pea seeds were put in a retort flask which was placed in a beaker containing potassium hydroxide solution as shown in diagram A below. At the end of the experiment, the results were as shown in diagram B.



a. Suggest the aim of the experiment(1mk)

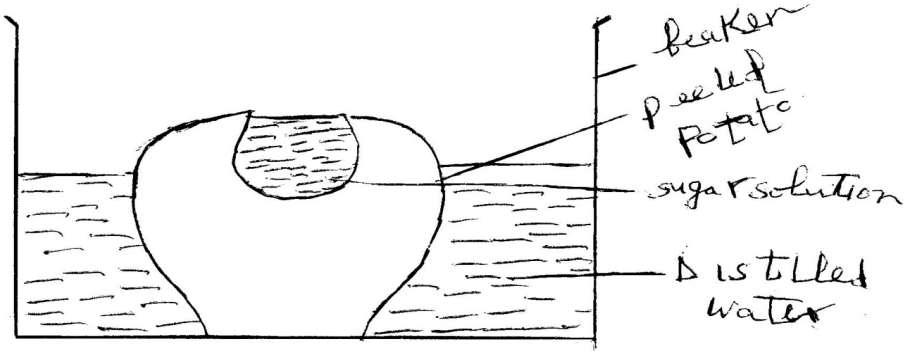
b. State the observable changes that occurred as shown in the diagram .(2mks)

c. Account for the changes noted in (b) above.(3mks)

d. Name the chemical process taking place in the peas.(1mk)

e. How would a control for this experiment be set.(1mk)

9. A group of students set up an experiment to investigate a certain physiological process as shown in the figure below. After some time, the students observed that the level of the sugar solution had risen.



a. What physiological process was being investigated?(1mk)

b. Account for the rise in the sugar solution in the experiment.(2mks)

c. Suggest with a reason the results that the students would obtain if they repeated the experiment using a piece of boiled potato.(1mk)

d. Explain why the cells of the potato above, would not burst when immersed in distilled water and left for some time.(2mks)

SECTION B(20MKS)- Compulsory.

10. Leaves were collected from the plant of a certain species growing in a shaded site and a plant from the same species growing in an open site. The surface area of each leaf was worked out. The results obtained are shown in the table below.

Surface area of leaves(cm^3)	
Shaded site	Open site
21	15
14	17
16	18
18	17
19	17
21	19
19	13
22	14
18	21
16	13
13	16
22	13
21	16
23	12
19	14
18	22
15	20
Mean surface area = x_1	Mean surface =x_2

a. Calculate the mean score x_1 and x_2(2mks)

b. Suggest one reason for the differences in the mean surface areas between the leaves from the two sites. Explain your answer.(2mks)

c. Briefly state the adaptations of plant leaves to a desert habitat.(6mks)

d. The leaves of a plant exposed directly to sunlight are often thicker than leaves found in the shade. Suggest two reasons for this observation.(2mks)

e. How does the observation in (d) improve the efficiency of leaves exposed to direct sunlight?(2mks)

f. Apart from photosynthesis, state two other functions of a leaf.(2mks)

g. State how a leaf is adapted for the functions you have stated in (f) above(3mks)

h. Some plants have rolled leaves. Explain the importance of such leaves to the plant.(1mk)

SECTION C(20MKS)

Select and answer only one questions in this section in the spaces provided.

11. a) Explain how the gills of a fish are adapted to the process of gaseous exchange.(5mks)

b)Describe the mechanism of gaseous exchange in the gills of a bony fish(15mks)

FORM 3

HISTORY & GOVERNMENT PAPER 1

SECTION A: (25mks)

Answer all questions in this section

o) Give two branches in the study of History and Government in Kenya (2mks)

p) Name the pre-historic site in Kenya where the Kenyapithecus fossil was discovered (1mk)

q) Identify two original inhabitants that the Agikuyu came across in Central Kenya as they settled in the area (2mks)

r) Give two economic reasons why the Cushites migrated form their original homeland (2mks)

s) Name two Historical monuments built by the Portuguese along the Kenyan Coast (2mks)

t) Give two types of Human Rights (2mks)

u) Name the Executive head of the colony in colonial Kenya (1mk)

v) Identify one condition when one may be denied the right to life (1mk)

w) Which was the main reason that enabled the British to conquer Kenya? (1mk)

x) What is democracy? (1mk)

y) Name the type of constitution used in Kenya (1mk)

z) Identify two development rights of children (2mks)

aa) Name two communities in Kenya that showed mixed reaction to colonial Kenya (2mks)

ab) Name the person who mobilized the Agiriama resistance against the British (1mk)

ac) Name the agreement that marked the end of the scramble and partition of East Africa (1mk)

ad) Name the Agikuyu leader who led the raid against the British at Fort Smith (1mk)

ae) Give two reasons why the Bukusu resisted British invasion (2mks)

SECTION B (45mks)

Answer any 3 questions from this section

af) a) Give the duties of Portuguese captains along the coast (3mks)

b) Explain the impact of Portuguese rule along the coast (12mks)

19. a) Give three ways in which the Luo interacted with the Abagusii in the 19th century (3mks)

b) Describe the social and political organization of the Luo (12mks)

20. a) State the causes of the Nandi resistance to British rule (5mks)

b) Explain the results of Nandi resistance (12mks)

21. a) State reasons why Nabongo Mumia of Wanga kingdom collaborated (5mks)

b) Explain the impact of Wanga collaboration (10mks)

SECTION C (30mks)

Answer any two questions

22. a) Give three symbols of National Unity (3mks)

b) Explain six factors which undermine National Unity in Kenya (12mks)

23. a) State three methods used by the British to establish their rule in Kenya (3mks)

b) Describe the organization of the central government in Kenya during the colonial period

(12mks)

24. a) Give five political duties of a Kenyan citizen (5mks)

b) Explain five reasons why national integration is important in Kenya (10mks)

.

FORM 3

HISTORY & GOVERNMENT PAPER 2

SECTION A: (25mks)

Answer all questions in this section

ag) Identify one specific tool invented by Homo Sapiens that greatly improved his way of life (1mk)

ah) Identify the term used to refer to animal and plant remains found by Charles Darwin (1mk)

ai) Identify two sub species of the Homo Sapiens (2mks)

aj) Why is the period of early man referred to as Stone Age? (1mk)

ak) Name the famous building in Athens built in honour of the goddess Athena (1mk)

al) Who discovered penicillin? (1mk)

am) State two advantages of using bicycles as a mode of transport (2mks)

an) State two factors responsible for the decline of Merowe as an urban centre (2mks)

ao) Identify the title given to the state kings in the Asante Kingdom (1mk)

ap) Give the main advantage of the cell phone (1mk)

aq) Identify two treaties that Lewanika of the Lozi signed with the British (2mks)

ar) Which European leader was responsible for convening of the Berlin conference 1884 – 1885? (1mk)

as) Give two strategies employed by Samori Toure in his war of resistance against the

French (2mks)

at) Apart from river Congo, name the river that was declared free to all Europeans for navigation at the Berlin conference (1mk)

au) What was the main contribution of religion in the Maji maji uprising against German rule in Tanganyika? (1mk)

av) Give two reasons why the British adopted the system of indirect rule in Northern Nigeria (2mks)

aw) Define the term the Egyptian question in the scramble and partition of Africa (1mk)

ax) List two communes in Senegal where Assimilation was successfully applied (2mks)

SECTION B (45mks)

Answer any three questions

ay) a) What factors led to the development of early agriculture in Mesopotamia? (5mks)
b) Explain five factors that have led to shortage of food in Third World countries (10mks)

20. a) Give three stages of evolution of man (3mks)

b) Describe six ways in which the discovery of fire improved man's way of life (12mks)

21. a) Identify three ways in which water was used in industries during the 18^{th} century (3mks)

b) Explain six social results of the Industrial revolution in Europe during the 18^{th} century (12mks)

22. a) Identify five causes of Maji maji rebellion in 1905 – 1907 (5mks)

b) Why were the African communities defeated by the Germans during maji maji

rebellion? (10mks)

SECTION C (30mks)

Answer any two questions

23. a) Identify 3 European powers that acquired colonies in Africa. (3mks)

    b) Explain six reasons why the Lozi collaborated with the British during colonization (12mks)

24. a) Give three economic activities of the Baganda in the pre-colonial period (3mks)

    b) Describe the political organization of the Buganda in the pre-colonial period (12mks)

25. a) Outline five reasons why Samori Toure's second empire was not suitable (5mks)

    b) Explain five factors that led to the defeat of Samori Toure by the French (10mks)

PHYSICS PAPER3 CONFIDENTIAL

QUESTION 1

APPARATUS

az) Two dry cells

ba) One bulb

bb) Voltmeter (0 – 3 v or o – 5v)

bc) Ammeter (0 – 2.5A)

bd) A mounted nichrome wire on millimetre scale;

be) Switch

bf) Seven connecting wire at least two with crocodile clips.

bg) Micrometer screw gauge

QUESTION2.

APPARATUS

v) A Complete retort stand

w) A Stop watch/stop clock

x) A Metre rule

y) Two identical springs labeled R and P.

z) A Weighing balance (to be shared)

aa) A Set of masses 10g, 20g, 50g and 100g

ab) A Pendulum bob

NAME _____ INDEXNO._____

DATE: _____ CLASS_____

KENYA CERTIFICATE OF SECONDARY EDUCATION

312/1
GEOGRAPHY
PAPER I
FORM 3
TIME: 2¾HRS

INSTRUCTION TO CANDIDATES

bh) This paper consists of two sections: A and B.

bi) Answer ALL the questions in Section A. in section B, answer question 6 and any two other questions

bj) All answers must be written in the answer booklet provided.

SECTION A (25 MARKS)

ANSWER ALL QUESTIONS IN THIS SECTION

1. (a) Name two theories put forward to explain the causes of earth movements

(2mks)

(b) Define three main boundaries that separate tectonic plates
(3mks)

2 (a) Name two types of Igneous rocks (2mks)

(b) State the three classes of Igneous rocks based on their chemical composition

(3mks)

3. (a) Name the three layers of the atmosphere from the surface of the earth upwards

(3mk)

(b) Name two boundaries separating layers of the atmosphere
(2mks)

4. (a) A part from the sun name three other components of the solar system
(3mks)

(b) Give two reasons why the sun is considered a unique start
(2mks

5. (a) In your answer booklet draw and label diagram of a simple fold
(3mks)

(b) Name two fold mountains in Africa
(2mks)

SECTION B

Answer question 6 and any other two questions from this section

6. Study the Map of Kitale 1 = 50000 (sheet 75/3) provided and answer the following questions

x. (i) Name two administrative division of Kitale Map extract (2mks)

(ii) Give six figure grid reference of Kipsain Police Post (2mks)

(iii) Mention two methods used to represent relief on the Map extract (2mks)

xi. (i) Calculate the area of Kitale Municipality. Give your answers in 59Km^2 (2mks)

(ii) Name two functions of Kitale township (2mks)

(iii) Give longitudinal extent of Kitale Map extract (2mks)

(iv) Identify two types of vegetation found on the area covered by the Map extract

(2mks)

xii. Draw a rectangle measuring 10cm by 12cm between Easting 24 to 29 and Northing 12 to 18

(5mks)

On the rectangle mark the following:

xii. Seasonal Swamp South of Northing 14

xiii. River Kiotobos

xiv. Road C641

xv. Sandrums bridge

xiii. Farmer at deigany farm carried out a study at colleagues farm at Longieat estate

- State two reasons why they would need the Map of Kitale (2mks)

- Name two methods they would use to collect data (2mks)

- Identify two data information they would collect (2mks)

2

7. (a) (i) Differentiate between an ocean and a sea (2mks)

(ii) Name any two types of waves along the African Coast (2mks)

(b) Describe three ways in which waves erode the coasts (6mks)

(c) Using diagrams describe how a stack is formed (5mks)

(d) (i) Name three types of Coasts (3mks)

(ii) State three conditions necessary for growth of coral polyps (3mks)

xiv. Students of Budonga School went for a field study along the coast. Identify four wave depositional features they may have observed (4mks)

8. (a) (i) Name any two deserts in Africa (2mks)

(ii) Name three types of deserts according to the nature of their surfaces (3mks)

(b) (i) State two factors which influence wind transportation (2mks)

(ii) Describe three ways through which wind transport its load (6mks)

(c) Using illustrations describe the formation of Mushroom block (6mks)

(d) Students of Kirima school carried out a field study of a desert region
(i) State two ways in which students prepared (2mks)

(ii) Name four desert water features they may have seen (4mks)

9. (a) (i) Name three sources of ground water (5mks)

(ii) Give four features (factors) which influence the existence of ground water (2mks)

(iii) State four conditions ideal for the formation of artesian walls (4mks)

(b) (i) Name three surface features found in Karst Sceneries (3mks)

(ii) Describe how a stalactite is formed (5mks)

(c) Explain three significance of resultant features in limestone areas (6mks)

3

10. (a) Draw a Map of Africa and on it mark and name (5mks)
- The Benguela current
- The canary current

- Regions of tropical continental climate
- Mozambique current

(b) (i) State six characteristics of tropical continental climate (6mks)

(ii) Explain how the following factors influence the climate of a region

k) Latitude (2mks)

l) Aspect (2mks)

m) Ocean currents (2mks)

(c) You intend to carry out a field work in a weather station around the school

ac) State four preparations you would make before the field study (4mks)

ad) Name two instruments you would observe in the Stevenson, screen (2mks)

ae) Give two follow up activities you would undertake after the field study

(2mks)

NAME …….. INDEX NO. ……..…

DATE ……. CLASS ……..

KENYA CERTIFICATE OF SECONDARY EDUCATION

312/2
GEOGRAPHY
PAPER II
FORM 3
TIME 2 $^{3}/_{4}$ HOURS

INSTRUCTIONS TO CANDIDATES

12. This paper consists of two sections: A and B.
13. Answer ALL the questions in section A. in section B, answer question 6 and any two other questions.
14. All answers must be written in the answer booklet provided.

SECTION A: 25 MARKS

Answer all the questions

af) (a) Name two areas where gold is mined in Tanzania. (2 mks)

(b) State three industrial use of copper as a mineral. (3 mks)

(c) Name three methods of alluvial mining (placer mining). (3 mks)

ag) (a) A photograph is divided into 3 parts. Name them. (3 mks)

(b) State three limitations of using photographs. (3 mks)

ah) (a) List three main types of sampling. (3 mks)

(b) Name the methods that are used to analyse statistical data. (3 mks)

ai) Name two types of questionnaires. (2 mks)

aj) Outline three types of field work. (3 mks)

SECTION B:

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

ak) Use the table below to answer the questions that follow.

(a) The table below shows the quantity of minerals produced in Kenya in tonnes in 2010 and 2011.

MINERALS/YEARS	2010	2011
Soda ash	290,000	350,000
Fluorspar	40,000	80,000
Salt	20,000	40,000
Others	10,000	20,000
TOTAL	360,000	490,000

(i) Draw proportional circles to present the information above. (14 mks)

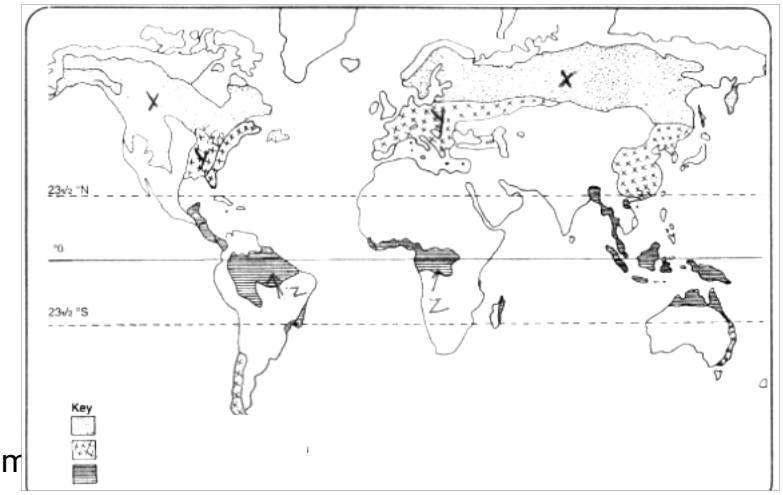
(ii) State two advantages of using proportional circles in data representation. (2 mks)

(b) (i) Name any two fuel minerals. (2 mks)

(ii) Name three major oil producers in the Middle East. (3 mks)

(iii) State four contribution of oil to the economies of the Middle East countries. (4 mks)

al) Study the map below showing the distribution of world's natural forests.



a) Nam Y and Z. (3 mks)

b) State three characteristics of temperate hardwood forests. (3 mks)

c) (i) Differentiate between afforestation and Re-afforestation. (2 mks)

(ii) Explain four measures the government has taken to realize effective management of the forests. (8 mks)

(iii) State five problems facing forests in Kenya. (5 mks)

(d) Explain two importance of forest exploitation in Canada. (4 mks)

am) (a) Name two major types of aerial photographs. (2 mks)

(b) To describe the major relief features in a photograph, some clues are used. Name four of them.
(4 mks)

(c) Explain how each of the following features would be indentified in a photograph.(8 mks)
(i) Settlement

(ii) Planted trees

(iii) Mining

(iv) Manufacturing

(d) (i) Name two methods of open cast mining. (2 mks)

(ii) Briefly explain the shaft method of underground mining. (5 mks)

(iii) Name the areas where the following minerals are mined in Kenya. (4 mks)

i. Fluorspar –

ii. Diatomite –

iii. Gold –

iv. Titanium –

an) (a) What is field work? (2 mks)

(b) Name three types of fieldwork. (3 mks)

(c) You plan to carry out a field study of an open air market near your school.

(i) State four types of information you would collect during the field study. (4 mks)

(ii) List four methods you would use to collect the data. (4 mks)

(iii) Explain three ways in which the local authority would use your findings to improve the open air market.
(6 mks)

(iv) State two hypothesis for the study. (2 mks)

(v) What are the advantages of learning geography through fieldwork. (4 mks)

ao) (a) The table below represents Kenya's export crops 2009-2011 in '000 tonnes.

COMMODITY	2009	2010	2011
Coffee	230	200	190
Tea	210	240	320
Sisal	50	30	40

(a) (i) Using the table above, draw a comparative bar graph to present the data. (7 mks)

(ii) State two advantages of using comparative bar graphs to present data. (2 mks)

(iii) Name three other methods of data presentation that can be used to present the data above. (3 mks)

(b) Name two methods used in taking measurement as a way of collecting statistical data.
(2 mks)

(c) Name three secondary sources of statistical data. (3 mks)

(d) Explain four factors you would consider when setting up questions in a questionnaires. (8 mks)

MASWALI YA INSHA

KIDATO CHA TATU

JIBU MASWALI MAWILI PEKEE.

IDADI YA MANENO ISIPUNGUE 400

bk) Swali la kwanza ni la lazima
bl) chagua lingine kutoka kwa matatu yaliyobaki

Swali la lazima

Wewe ni mwanahabari kutoka Gazeti la 'KENYA STAR'

Andika mahojiano yako na Mbunge kuhusu mpango wa miradi ya hazina ya eneo – bunge analowakilisha.

Swali la pili

Wewe ni wakili uliyefuzu kutoka chuo kikuu cha Nairobi. Andika barua ya kuomba nafasi ya kazi ikiandamana na wasifu kazi wako katika 'Mugoh Kangi Law firm'.

Swali la tatu

Mti ukifa shinale na tanzuze hukauka.

Swali la nne

Andika insha itakayoishia kwa maneno haya.

……. niliinua kichwa juu nikapiga magoti na kumshukuru

Mungu kwa kuyanusuru maisha yangu.

JINA……NAMBARI…….

KISWAHILI KIDATO CHA TATU

KARATASI YA PILI

MUDA: SAA 2

MAAGIZO

JIBU MASWALI YOTE

SWALI	UPEO	ALAMA
1	20	
2	15	
3	55	
4	10	
jumla	100	

Mjumbe huyu aliishauri Kusadikika kama iliweza kufikiri kutengeneza tayari bandari na viwanja vya kutua vyombo hivyo. Kwa shauri hili, alidhihakiwa kuwa alikuwa kama mama aliyekuwa akimwandalia mtoto aliyekuwa bado kuzaliwa. Ilisadikika kuwa watu wa Ardhi walikuwa hawawezi kuvumbua njia ya kuunda vyombo vya kusafiri hewani hata kama waliweza kusafiri baharini na barani. Kwa hivi, Kusadikika ilikuwa haina haja ya kutengeneza tayari bandari wala viwanja kwa ajili ya vyombo vya Ardhi. Andao lolote kwa ajili ya wakati ujao lilikuwa upuzi kwa washauri wa Kusadikika.

Amini aliwaonya kuwa kama wakati ujao hauandaliwi mbele vema, hasara zake zitakuwa kubwa. Lakini walishikilia kusema kuwa maharibiko ya wakati huo yalikuwa si juu yao, ingawa walikuWa barabara kuwa watu watakaoishi katika wakati huo ni watoto wao wenyewe. Shairi hili lilikuwa si upuzi. Lilikuwa ni shauri la hekima sana.

Udhahiri wa mambo ni kuwa ulimwengu uliumbwa kabla ya wakaaji wake. Kama ulimwengu usingatangulia kuumbwa, wakaaji wake wasingalikuwa na mahali pa kukaa. Ukitaka biashara ya vitabu istawi watu hawana budi kufunzwa kusoma kwanza. Kusoma kusipotangulia, vitabu vizuri vitaonekana vibaya. Kabla ya kujenga msikiti, watu lazima wafunzwe utukufu wa dini mbele. Bila ya hivyo msikiti mtukufu utakuwa kama mkahawa mchafu tu. Kadhalika mfano, kama nchi haina bandari ya namna yoyote, haiwezi kutazamia kufikiwa na vyombo. Kila azimio katika maisha hutaka neno fulani kufanyizwa mbele ili kuyashawishi maendeleo yake. Watu watakao kustawi katika maisha huelekeza bidii zao juu ya mshawasha wa makusudi yao kwanza. Kama hili si shabaha ya kwanza katika maisha, basi, haiwi ya pili kwa nyingine yoyote. Mambo yaliyo makubwa na madogo yamefungamana na utaratibu huu.

MASWALI

(a) Kwa kutoa sababu, Kusadikika ilikuwa katika hali gani kimandeleo. (alama 2)

_____

_____

(b) Je, ni vema mama kumwandalia mtoto ambaye hajazaliwa? Tetea jibu lako.

(alama 2)

_____

_____

(c) Andika hoja alizozitoa mwandishi dhidi ya busara ya methali: Usikate kanzu kabla Mtoto hajazaliwa"

(alama 3)

_____

_____

_____

_____

_____

(d) Wakati ujao usipoandaliwa vema, hasara zake zitakuwa gani? (alama 2)

(e) Kutokana na habari hii, ni kwa nini nchi ya Kusadikika haikufikiwa na wajumbe kutoka nchi nyingine? (alama 2)

(f) "Watu watakao kustawi katika maisha huelekeza bidii zao juu ya mshawasha wa makusudi yao kwanza" Fafanua. (alama 2)

(g) Eleza maana ya maneno haya kama yalivyotumiwa kifunguni. (alama 2)

(i) Kutazamia_____

(ii) Mshawasha_____

2. UFUPISHO

Soma taarifa ifuatayo kisha ujibu maswali

Dawa za kulevya zinaweza kugawika katika makundi wawili makuu: dawa hasi na dawa sugu. Katika kundi la kwanza zinaingia dawa zozote ambazo hunywewa, hunuswa au hutumiwa kwa nia ya kulevya au kumwingiza mtumiaji katika hali ya kujihisi amepanda. Dawa za aina hii huwa na matokeo hasi kwenye mwili wa mtumiaji. Inawezekana jamii ikakubali kuwepo kwake, pamoja na kutumiwa kwake, lakini, matumizi ya kipindi kirefu huwa na matokeo mabaya sana kwa watumiaji. Baadhi ya dawa hizi ni bidhaa za tumbaku ambazo huwa na aina za kemikali inayoitea nikotini. Nyingine ni vileo kama wiski, bia, divai, miraa au mairungi, gundi ya viatu na bidhaa zinazotokana na petroli.

Hebu sasa tuangalie zile zinazoitwa dawa sugu. Hizi ni dawa ambazo kimsingi humchangamsha mtumiaji na kumfanya apandwe na nishati za ajabu. Dawa hizi hufanya hivi kwa kuzitekenya seli za ubongo wa anayehusika. Katika kulifanya hili dawa zenywe huishia kuzuia seli za ubongo huo. Huu ndio msingi wa mtumiaji kuwa na ustahimilivu fulani wa dawa zenyewe. Ustahimilivu huu ndio unaomfanya awe kama aliyetawaliwa na dawa hizo. Yaani mtumiaji huwa hana njia nyingine ya kujizuia na huishia kuwa mtumwa wa dawa hizo. Baadhi ya dawa sugu ni bangi, afyuni, heroini, mihadarati na kokeini. Baadhi ya wataalamu wanajumlisha miraa katika kundi hii pia.

Jibu

(b) Eleza hatua anazopitia mtumiaji wa dawa za kulevya (maneno 90 – 100)

(alama 8, 1 ya utiririko)

Matayarisho

Jibu

3. MATUMIZI YA LUGHA (ALAMA 40)

(a) Ainisha vielezi katika sentensi ifuatayo kisha ueleze ni vya aina gani. (alama 2)

Mama alipoukaribia msitu huo alijikaza kiume huku akitembea harakaharaka.

_____

_____

(b) Yakinisha sentensi ifuatayo kwa nafsi ya tatu wingi. (alama 2)

Sitaenda shuleni wala hospitalini kesho.

_____

_____

(c) Ainisha silabi katika neon (alama 2)

Daktari _____

(d) Andika katika usemi halisi. (alama 2)

Mwalimu alisema kuwa siku hiyo aliamini kuwa akili ni nywele na kila mtu ana zake. (alama 2)

_____

_____

(e) Akifisha. (alama 4)

Usula alimwambia rafikiye njoo kesho nikufunze na wenzako angaa uelewe somo hilo rafikiye aliuliza mimi peke yangu nije.

_____

_____

_____

(f) Huku ukitoa mfano mmoja mmoja eleza matumizi matatu ya 'ni'. (alama 3)

_____

_____

_____

_____

g) Andika katika hali timilifu (alama 2)

Halima alimpikia mgeni wa Asha licha ya hayo alimpeleka hadi kituo cha basi.

_____

_____

(h) Andika katika umoja (alama 1)

Wepi waliobahatika siku hiyo?

_____

(i) Eleza matumizi ya 'kwetu' katika sentensi zifuatazo (alama 2)

i) Kwetu ni huku

ii) Mahali kwetu ni huku

_____

_____

(j) Eleza matumizi ya 'hu' katika sentensi hizi. (alama 2)

(i) Hukuja karamuni jana.

_____

(ii) Walimu huwapa wanafunzi ahadi za kweli

_____

(k) Andika katika umoja. (alama 1)

Maasi yaliyotekelezwa jana mabandani yamewatia watu wahka.

_____

_____

_____

(l) Nyambua kitenzi 'jua' katika kauli zifuatazo: (alama 2)

(i) Kutendeana

_____

(ii) Kutendana

_____

(m) Eleza maana mbili za sentensi hii (alama 2)

Watu wa pwani hawaogopi bahari kama watu wa bara.

_____

_____

(n) Tunga sentensi tatu ukitumia neno kifupi kama: (alama 3)

(i) Kielezi

_____

(ii) Kiwakilishi

_____

(iii) Kivumishi

_____

(o) Changanua kwa kielelezo mishale (alama 4)

Nguo yangu maridadi imeliwa na panya wa jirani.

(p) Nomino zifuatazo zimeundwa kutokana na vitenzi vipi? (alama 2)

(i) Kinywaji _____

(ii) Hotuba _____

(q) Kanusha (alama 1)

Siku hiyo ikifika tutaimba nyimbo nyingi za kumtukuza mungu.

_____

(r) Andika katika udogo (alama 1)

Mlango wake ulivunjwa na mwizi yuyu huyu.

_____

4. ISIMUJAMII (ALAMA 10)

Eleza maana ya dhana zifuatazo

(a) Lahaja (alama 2)

(b) Lugha (alama 2)

(c) Usanifishaji (alama 2)

(d) Sajili (alama 2)

(e) Lugha rasmi (alama 2)

HUU NDIO UKURASA WA MWISHO ULIOPIGWA CHAPA.

MATHEMATICS

PAPER 1

FORM3

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

Section 2	17	18	19	20	21	23	24	total	

SECTION 1

Answer all questions in this section

1.Find without using tables or a calculator the value of

(3mk|)

2. The ratio of the size of the exterior angle to the interior angle of a regular polygon is 1:3. Determine the number of sides of the polygon and name it.

(3mk)

3. Given that $2x^2-kx+18$ is a perfect square, find k and hence solve the equation

$2x^2 - kx + 18 = 0$ by factorization.

(4mk)

4. Work out using logarithms to 4 s.f

$$\frac{\sqrt{(6.225 \log 1.001)}}{(56.7 \times 0.031)^3}$$

(4mk)

5. Mr. Kanja,Miss Kanene and Mrs Nyaga have to mark a form three math contest for 160 students. They take 5mins, 4mins, and 12mins respectively to mark a script. If they all start to mark at 9.00 am non-stop, what is the shortest time they can take to complete the marking?

(3mk)

6. Jackie takes 5minutes to run a distance of 1km in a race. Express her speed in

a) km/hr

b) m/s (2mk)

7. Use reciprocal tables to find the value of f given that (3mk)

8. A man left of his estate in Kerugoya to his wife and to each of his two sons .The remainder was to be shared equally among his six brothers. If the estate was worth sh 3 456 000, how much did each of those people get?

(3mk)

9. A distance of 12km is represented by a length of 4cm on a map. Given that the scale of the map is 1:n, find the

a) value of n

b) actual area in hectares of a field on the map with an area of 32cm²

(3mk)

10. Solve the equation $\frac{1}{3}(x+4)-\frac{1}{2}(2x-4) = 2$

(2mk)

11. The sides of a right angled triangle measured to the nearest cm are 5cm, 12cm and 13cm

Determine the

a) limits within which the measured dimensions lie

(1mk)

b) percentage error in the area of the triangle. (3mk)

12. Form a quadratic equation in the form $ax^2+bx+c=0$ whose roots are b and twice the negative reciprocal of b.

(3mk)

13. The coordinates of points A and B are A (2, 3).B (4,–5). M is the midpoint of vector AB.

Determine the coordinates of point M and the magnitude of vector BM.

(3mk)

14. The equation of line L is y=3x–4 and is perpendicular to line H. They cross each other at the y-intercept of line L. Find the equation of line H.

(3mk)

15. In a circle radius 10cm, an arc PQ subtends an angle of radians at the centre of the circle. Calculate the radius of another circle whose circumference is equal to the length of arc PQ

(4mk)

16. Solve for a in 2187 (3mk)

SECTION 2

Answer any 5 questions in this section

17. Four towns are situated in such a way that town Q is 500km on a bearing of 120º from P. Town R is 240km on a bearing of 210º from town P, while town S is due north of town Q and due east of town P.

a) Draw a sketch diagram showing the relative positions of P, Q, R and S.
(2mk)

b) Find by calculation

i) the distance QR (2mk)

ii)the distance QS (2mk)

iii)the angle PRQ (2mk)

iv)area of triangle PQS (2mk)

18. a) Represent the following inequalities graphically by shading the unwanted region

$x \geq 0$, $y \geq 0$, $x+y \geq 5$, $x+y \leq 10$, $y \leq 7$, $x \leq 7$ (6mk)

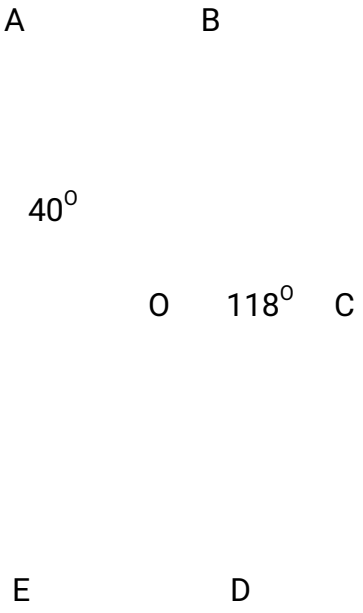
b) write down the coordinates of one point that is inside the wanted region (1mk)

c) Name the figure formed by the unshaded region

(1mk)

d)measure and find the sum of all the angles in the figure formed in c) above. (2mk)

19. In the figure below, O is the centre of the circle and ∟EAD=40º,∟BCD=118º



Find giving reasons

a)∟ADE (2mk)

b) reflex ∟EOD (2mk)

c)∟EBD (2mk)

d)∟EAB (2mk)

e)∟DAB (2mk)

20. The marks scored in a form three maths exam were recorded as follows

69 70 72 40 52 60 22 31 78 53 28 67 63 54 57 48 47 56 55 62

75 38 37 44 62 64 58 39 45 48 65 50 85 46 47 57 35 34 58 64

- 37 41 42 36 54 82 48 53 57 56 72 56 48 44 55 78 59 50 45

a) Make a grouped frequency table with classes 20—29,30—39,40—49,etc (2mk)

b) What is the modal distribution of the test

(1mk)

c) Calculate the mean of the data (4mk)

d) Calculate the median mark (3mk)

21. The velocity(v)of a vehicle measured at intervals of time(t) were recorded as follows

t(s)	0	2	4	6	8	10	12
v(m/s)	0	20	40	40	30	8	0

ap) Represent this motion on a graph (3mk)

aq) Calculate the acceleration (2mk)

c) Calculate the total distance travelled by the vehicle (3mk)

d) Calculate the average velocity of the vehicle (2mk)

22. A wooden stool is in the form of a frustum of a cone with slant edge 40cm,top diameter 30cm and bottom diameter 50cm.

a) calculate the perpendicular height of the stool

(3mk)

b)calculate the total surface area of the stool in terms of

(3mk)

c)calculate the volume of wood used to make the stool in terms of (3mk)

d)given that the density of the wood used to make the stool is 0.8g/cm³, calculate

the mass of the stool in kg

(1mk)

23. Using ruler and compasses only,

a) construct triangle ABC in which AB=5cm,BC=6cm and angle ABC=120º.

(3mk)

b)measure angle ACB (1mk)

c)drop a perpendicular from C to cut AB produced at P. Measure CP.

(2mk)

d)hence calculate area of triangle ABC to 1dp (2mk)

e)calculate the radius of a circle that passes through the vertices of triangle ABC

(2mk)

24. The distance between two towns A and B is360km.A minibus left town A at 8.15a.m and travelled towards B at an average speed of 90km/hr. A matatu left town B at 10.35a.m on the same day and travelled towards A at an average speed of 110km/hr.

a)i)how far from A did they meet?

(4mk)

ii)at what time did the two vehicles meet?

(2mk)

b) A motorist left his home at 10.30a.m on the same day and travelled at an average speed of 100km/hr. He arrived at B at the same time as minibus. Calculate the distance from B to his home.

(4mk)

FORM THREE MATHEMATICS PAPER 2

121/2

TERM 1

INSTRUCTIONS

1. This paper consists of two sections. Answer all the questions in section 1 and any 5 questions in section 2.

2. KNEC mathematical tables and non-programmable calculators may be used when necessary

3. Answer all the questions in the spaces provided.

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

Section 2	17	18	19	20	21	22	23	24	total

Grand total

SECTION 1

Answer all the questions in this section

1.Evaluate $36 - 8 \times -4 - 15 \div -3$

$-3 \times -3 - 8(-6 + -2)$ (3mk)

2.Simplify $\frac{a+b}{2} - \frac{2a-b}{3}$ (3mk)

3.Find the greatest number which divides 181 and 236 and leaves a remainder of 5 in each case

(2mk)

4.A rectangle measures 20cm by 15cm.If each dimension is increased by 2.5cm, by what percentage is

a) the perimeter of the rectangle increased

(2mk)

b)the area of the rectangle is increased (2mk)

5.The angle of elevation of the top of a tree from a point P on horizontal ground is 30º. From another point Q 8 metres from the base of the tree, the angle of elevation of the top of the tree is 48º.

a) Calculate to one decimal place the height of the tree.

(1mk)

b) Calculate the distance between P and Q

(2mk)

6.Given that $\cos \theta = -0.8070$, find θ for $0 \leq \theta \leq 720$

(3mk)

7.A piece of wire 40cm is bent to form a right-angled triangle whose hypotenuse is 17cm long. Find the lengths of the other two sides of the triangle

(4mk)

8.Solve for x in $\log 5 - 2 + \log(2x+10) = \log(x-4)$ (3mk)

9. Solve the quadratic equation by completing of squares giving your answer to 3sf

$11x^2 - 13x + 3 = 0$ (4mk)

10. Rationalize the denominator and simplify

$\frac{4\sqrt{5}+3\sqrt{2}}{2\sqrt{2}-\sqrt{5}}$ (4mk)

11.Use a calculator to work out

a) (1mk)

b) (1mk)

12. A tourist from Kenya left for Ethiopia. He exchanged sh 9898 into Ethiopian Birr at the rate of 1 Eth.Birr=ksh7.95. He spent ¾ of the money he got and converted the balance back to Kenyan money at the rate of 1Eth.Birr=ksh7.98 Calculate what he finally got to 2dp (3mk)

13. Simplify the expression

$$\frac{9t^2-25a^2}{6t^2+19at+15a^2}$$ (3mk)

14. Three types of tea costing sh203,sh146 and sh197 per kg are blended in the ratio of 2:5:k. Find the value of k,if the blend when sold at sh221 per kg gives 30% profit

(3mk)

15. A two digit number is such that 4 times the units digit exceeds the tens digit by1. If the digits are reversed, the number formed is decreased by 45. Find the number.

(3mk)

16. A triangular field has dimensions 21m by 52m by 47m.

a) calculate the area of the field to the nearest m^2. (2mk)

b)calculate the length of a straight ditch dug from the largest angle meeting the opposite side at right angles.

(1mk)

SECTION 2

Answer any 5 questions in this section

17. A bookseller bought a number of cartons of books at a cost of ksh 57600 from Kagumo bookstore. Had he bought the same books from Kerugoya bookstore, it would have cost him ksh 480 less per carton. This would have enabled him to buy 4 extra cartons of books for the same amount of money. By taking x to be the number of cartons of books he actually bought;

a) write an expression in x

i) for the cost of each carton he bought at Kagumo bookstore

(1mk)

ii)for the cost of each carton had he bought from Kerugoya bookstore

(1mk)

b)find the value of x (6mk)

c)the bookseller later sold all the books he had bought each carton at ksh 720 more than he had paid for it. Determine the percentage profit he made

(2mk)

18. A cylindrical metal bar of diameter 14cm and length 2m is melted and moulded into spherical balls. In the process, 5% by volume of metal is lost and what remains makes balls of radius 3.5cm.

a)calculate the volume of metal used to make the balls.

(3mk)

b)find to the nearest whole number the number of balls made

(3mk)

c)find the total surface area of the metal bar

(2mk)

d)find the total surface area of the balls made (2mk)

19.a) Draw the graph of $y=(2x-3)(x-1)$ for the interval $-2 \leq x \leq 4$

(6mk)

b)use your graph to solve

i)$2x^2-5x+3=0$ (1mk)

ii)$2x^2=3x+2$ (3mk)

20. a)Plot triangle ABC with coordinates A(1, 1), B(3, 1) and C(1,3) (1mk)

b)Plot A'B'C' the image of ABC under an enlargement scale factor 2 centre A and write down it’s coordinates

(2mk)

c)Plot A''B''C'' the image of A'B'C' under a reflection in the line x+y=0 and write down it's coordinates (3mk)

d)A''B''C'' is then reflected in the line y=0 to give A'''B'''C'''. Give the coordinates of A'''B'''C'''

(2mk)

e)Describe fully a rotation that maps A'''B'''C''' onto A'B'C'

(2mk)

21Three businessladies Wanjiku, Muthoni and Njoki decided to buy a lorry. The .marked price of the lorry was 2.8million shillings. The dealer agreed that the ladies could pay a deposit of 60% of the marked price and the rest to be paid within a year.The ladies raised the deposit in the ratio of 3:2:5 respectively. At the end of the year the lorry had realized 2.08million shillings which the three shared in the ratio of their contribution. However, they were required to contribute for the balance of the lorry from these earnings again in the ratio of their original contributions.

a)calculate amount to be paid as deposit

(1mk)

b)how much did each contribute to pay for the deposit?

(3mk)

c)how much did Njoki receive at the end of the year? (1mk)

d)calculate the total amount Muthoni and Njoki contributed to pay for the balance.

(3mk)

e)how much money did Wanjiku remain with after paying her share of the balance?

(2mk)

22.a)Make a table and draw the graph of y= sinx–cosx for x in the range 0, with y values to 2dp and x intervals of 30 (6mk)

b)use the graph to find the value of y when

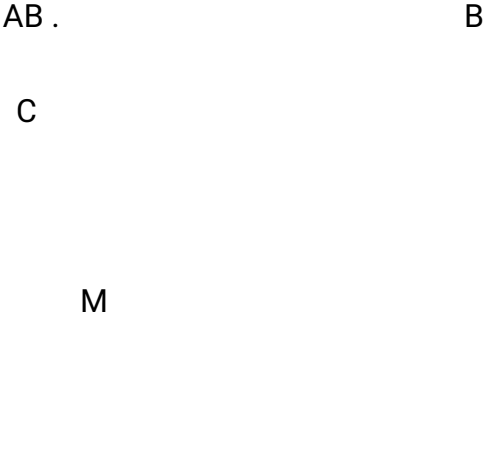
i) x=75 (1mk)

ii) x=255 (1mk)

c)find the values of x for which y= –0.9 (2mk)

23.The figure below is a segment of a circle centre O radius r units.CM is the

perpendicular bisector of AB .



Given that CM=1cm and AB=2cm,

a)calculate the radius of the circle centre O from which the segment was cut

(3mk)

b)calculate the angle that chord AB subtends at the centre of the circle

(2mk)

c)hence calculate

i)the length of arc ACB (2mk)

ii)the area of the segment AMBC (3mk)

24.A rectangular sheet of metal which measures 120cm by 0.8m is 1.5mm thick and is made of material whose density is 2.2 g/cm³. From each of the four corners of the rectangle, a square of side 10cm is cut off and the remaining part folded to form an open cuboid.

a)calculate

i) the capacity of the cuboid in cm³ to the nearest whole number

(3mk)

ii)the mass of the empty cuboid in kg to the nearest whole number

(3mk)

b)the cuboid is filled with a liquid whose density is 0.75g/cm³. Calculate the mass in kg of the cuboid when full of the liquid

(2mk)

c)calculate the mass of metal lost in kg (2mk)

FORM3

PHYSICS PAPER 3

NAME……ADM.NO……

INSTRUCTIONS TO THE CANDIDATES:

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

bn) Answer ***all*** questions in the spaces provided in the question paper.

bo) You are supposed to spend the first 15 minutes of the 2 ¼ hours allowed for this paper reading the whole paper carefully.

bp) Marks are given for a clear record of the observation actually made, their suitability, accuracy and the use made of them.

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

br) Mathematical tables, slide rules and calculators may be used.

bs) Record your observations as soon as you make them.

QUESTION 1

You are provide with the following;

ar) Two dry cells

as) One bulb

at) Voltmeter (0 – 3 v or o – 5v)

au) Ammeter (0 – 2.5A)

av) A mounted nichrome wire on millimetre scale;

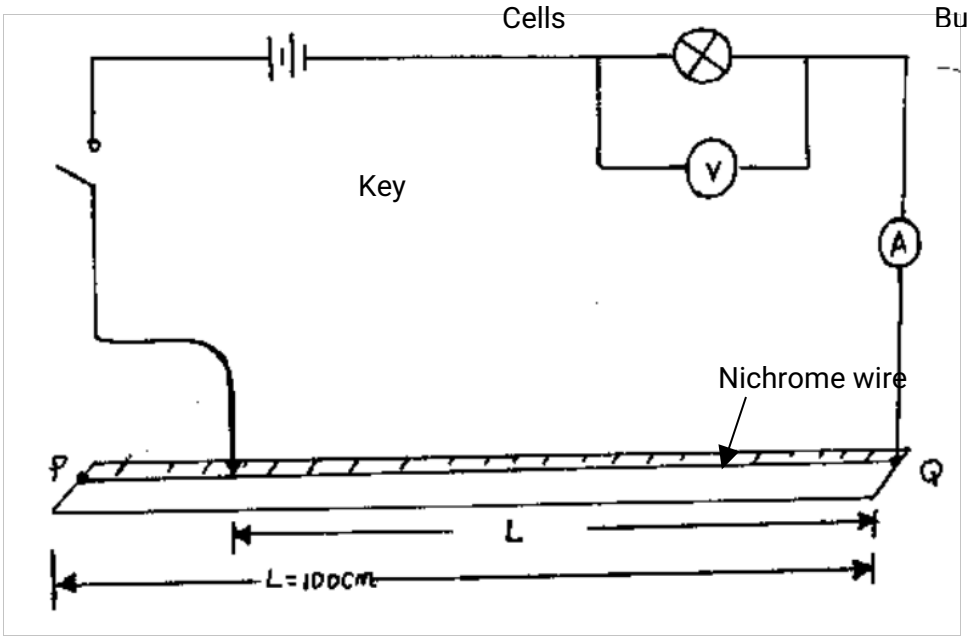
aw) Switch

ax) Seven connecting wire at least two with crocodile clips.

ay) Micrometer screw gauge

Procedure as follows;

a) (i) Set up the circuit as shown in figure below;



ii) With the crocodile clip at P take the voltmeter reading and the ammeter reading. Record V and I. Repeat the readings for L = 80,60,40,20 and 0 cm respectively. Complete the table below;

Length L (cm)	100	80	60	40	20	0
Voltage V (v)						
Current, I (A)						

(4mks)

(iii) What changes do you observe on the bulb as L decreases from P ? (1mk)

(iv) Plot a graph of the ammeter reading (y = axis) against voltmeter reading (5mks)

v) Determine the slope of your graph at V = 1 volt (3mks)

(vi) What physical quantity is represented by the slope of the graph at any given point.? (1mk)

b) (i) Given the apparatus in a (i) above, draw a diagram of the a circuit you would use to determine the current through the resistance wire and the potential difference across it.
(1mk)

(ii) Set up the circuit you have drawn. Record the ammeter reading I and the voltmeter reading

V, when L = 100cm.
(2mks)

V = …….

I = ……..

(iii)Using a micrometer screwgauge, measure the diameter d of the wire. (1mk)

d = ……m

(iv) Calculate the quantity,

p = 0.785 $\left(\frac{V}{I}\right)\left(\frac{d^2}{L}\right)$ and give its units, where L is one metre.

(2mks)

QUESTION2. You are provided with the following;

xvi. A Complete retort stand

xvii. A Stop watch/stop clock

xviii. A Metre rule

xix. Two identical springs labeled R and P.

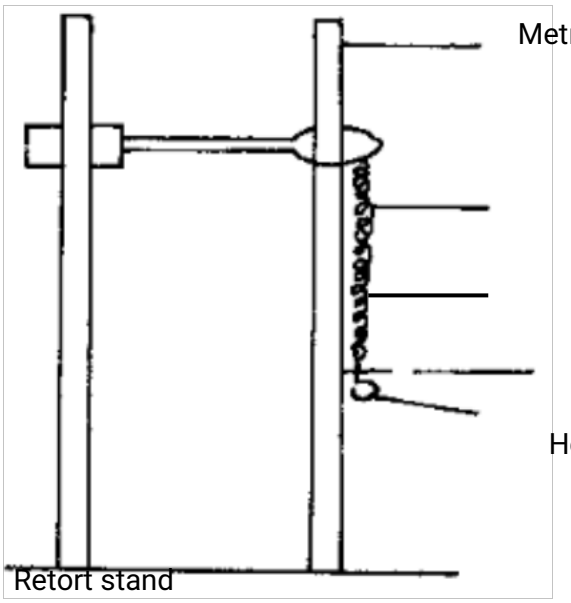
xx. A Weighing balance (to be shared)

xxi. A Set of masses 10g, 20g, 50g and 100g

xxii. A Pendulum bob

Proceed as follows

n) Join springs R and P in parallel so that it has only one hook at one end and then arrange the apparatus as shown in the figure below.



Note and record the initial pointer reading.

Initial pointer reading = ……cm mark.

(This mark should be maintained throughout the experiment)

o) Hang the 30g mass on the hook of the combined spring balance and record the final pointer reading. Hence calculate the extension, e, for m = 30g.

p) With mass, m = 30g, still suspended, slightly displace the mass vertically and time 20 complete oscillations

q) Repeat the experiment for m = 50, 70, 100, 120 and 150g and record your results in the table below.

Mass m (g)	Extension *e* (cm)	*e* (m)	Time, *t*, for 20 complete oscillations	Periodic time, T (s)	$T^2(s^2)$
30					
50					

70					
100					
120					
150					

(7mks)

r) (i) On the grid provided, plot a graph of e(x – axis) against T^2 (5 mks)

ii) determine the slope, S, of the graph. (2 mks)

s) If the experiment obeys the law T = $2\pi\sqrt{\frac{e}{k}}$ where *k* is a constant, determine the value of *k* (π = 3.142)
(2 mks

t) Weigh and record the mass of the pendulum bob provided.

Mass, m of pendulum bob = ……..……..g = ……kg (1 mk)

u) Suspend the pendulum bob on the combined spring balance and note the extension

produced.

extension e_1 = ……..cm = ……..m (1 mk)

v) If $\nu = \frac{mg}{e}$ where m = mass of the pendulum bob and e is the extension produced, find the value of ν where ν is the elastic constant of the springs.
(2 mks)

232/2

FORM THREE PHYSICS PAPER 2

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

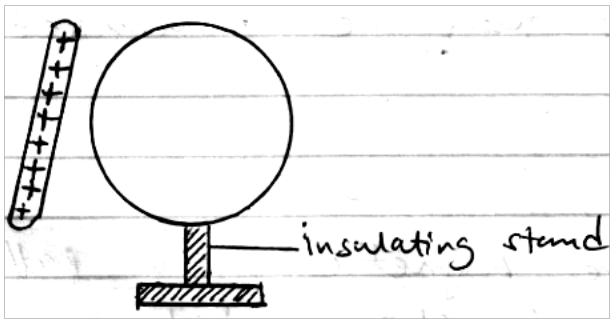
(iv) Write your name, admission number and class in the spaces provided
(v) This paper consists of TWO sections: section A and B
(vi) Answer all question in the both section A and B in the spaces provided
(vii) Mathematical tables and electronic calculators may be used
(viii) All working MUST be clearly shown.
(ix) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
(x) Candidates should answer the questions in English.

SECTION A: (25 MARKS)

xv. State two properties of the image formed by a plane mirror
(2mks)

xvi. Two mirrored walls stand at an angle to each other. A student standing in the room counts nine images of himself in the mirrors. Determine the angle between the walls
(3mks)

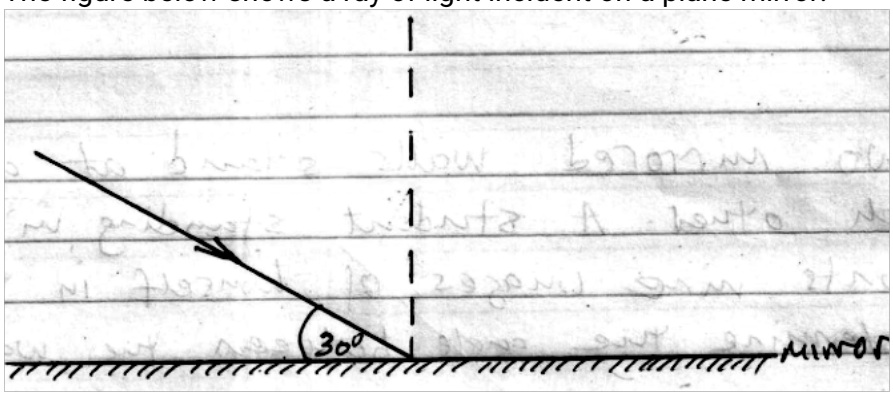
xvii. The figure below shows a positively charged rod brought near a metallic sphere. Draw the distribution of charges on the sphere (2mks)



xviii. 200 coulombs of charge passes through a point in a circuit for 0.6 minutes. What is the magnitude of the current flowing? (3mks)

xix. Using the domain theory, explain magnetic saturation (2mks)

xx. The figure below shows a ray of light incident on a plane mirror.

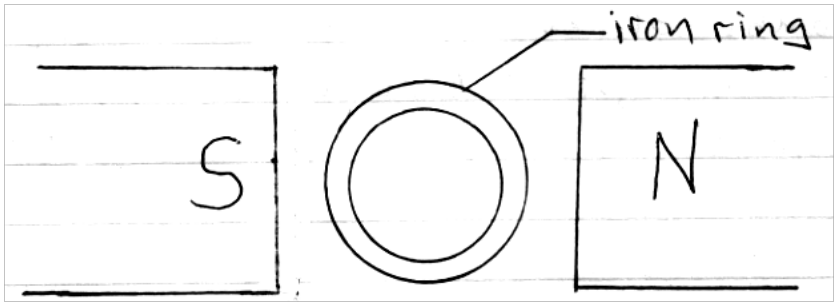


az) What is the angle of reflection? (1mk)

ba) The mirror is rotated clockwise through an angle of 10^{o}. Through what angle does the reflected ray rotate? (2mks)

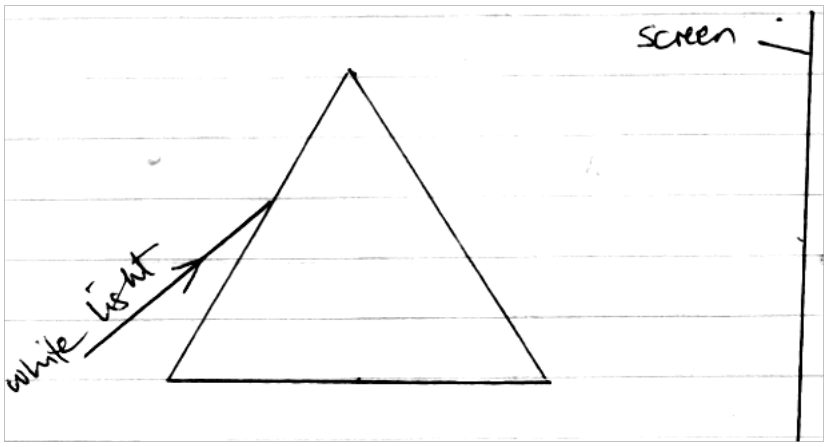
xxi. A simple cell has two major defects. State the two and how they are minimised. (2mks)

xxii. Draw the magnetic field pattern around the arrangement shown below (2mks)



xxiii. State two factors that affect the speed of sound in air. (2mks)

xxiv. The figure below shows white light entering a triangular prism. Complete the diagram to show what appears on the screen (2mks)



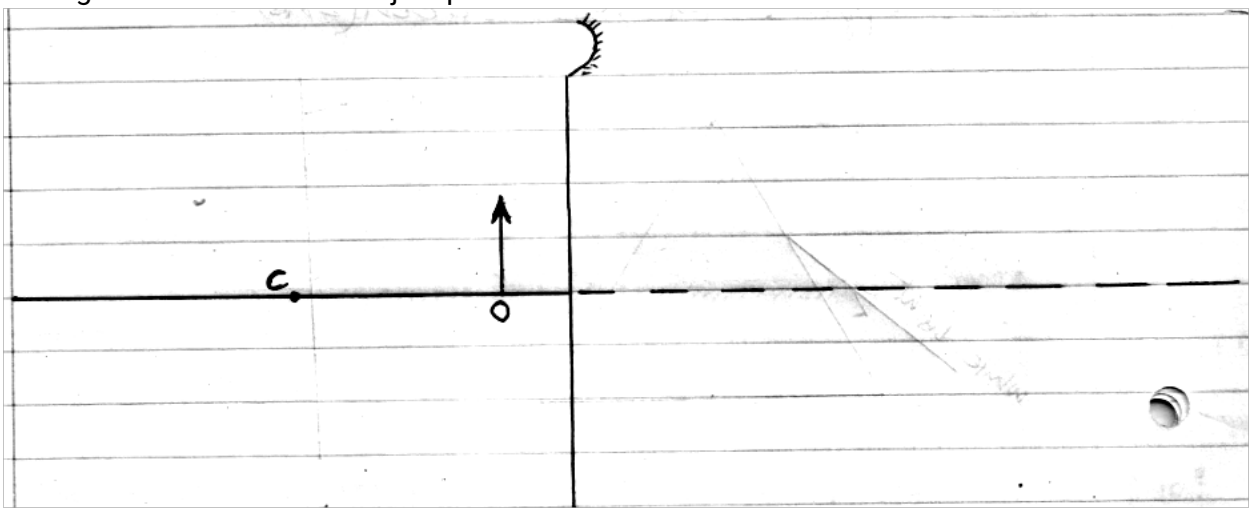
xxv. Draw a ray diagram to show how a ray of light may be totally internally reflected two times in an isosceles right angled glass prism. (Assume that the critical angle of glass is 42^{o}) (2mks)

SECTION B: (55mks)

xxvi. a) With reference to a concave mirror explain the meaning of:
i) Focal length (1mk)

ii) Principal focus (1mk)

34. The figure below shows an object placed in front of a concave mirror



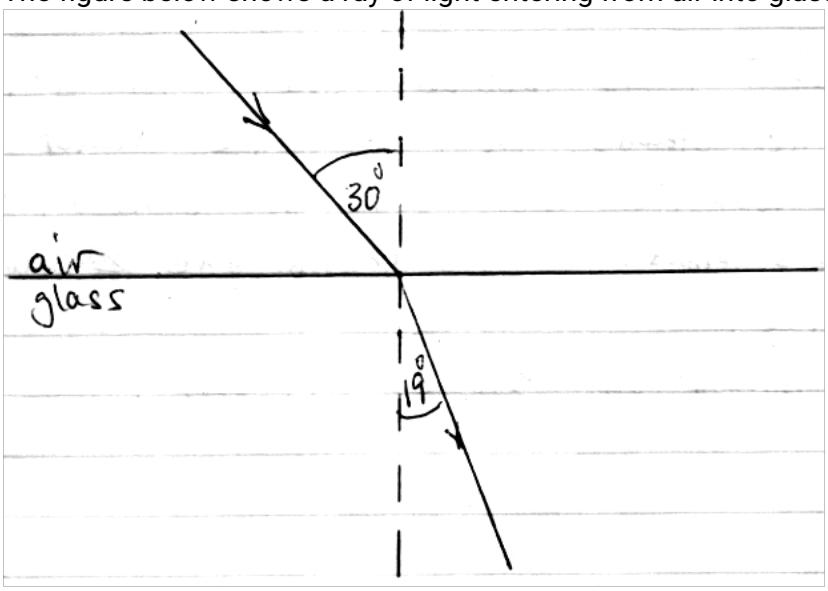
- On the same diagram, locate the position of the image (3mks)
- What is the magnification of the image? (3mks)

35. The photographic film of a pinhole camera is 15cm away from the pinhole. A girl of height 1.2m stands 6m away from the pinhole. Find the height of the girl's image. (3mks)

36. Draw a diagram to show the appearance of the sun during the annular eclipse (2mks)

xxvii. a) State two conditions necessary for total internal reflection to occur (2mks)

b) The figure below shows a ray of light entering from air into glass.



Determine:

i) The refractive index of glass (3mks)

ii) The critical angle of glass (3mks)

iii) The speed of light in glass (3mks)
(Speed of light in air = $3.0 \times 10^{8} ms^{-1}$)

c) State two applications of total internal reflection. (2mks)

40. A dam appears 3m deep when viewed from above. If the refractive index of water is $^{4}/_{3}$, what is the depth of the dam?
(2mks)

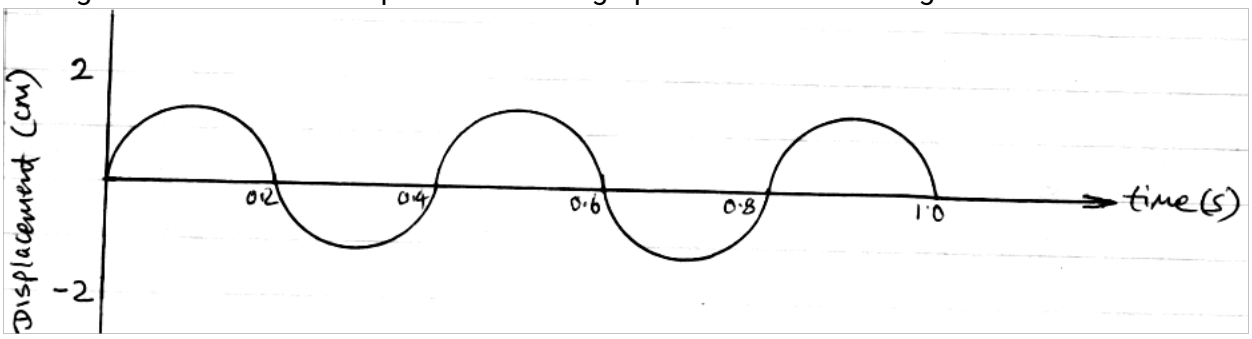
xxviii. a) Differentiate between longitudinal and transverse waves (2mks)

bt) A person stands between two high walls d metres apart. He stands 400m from the nearer wall. He blows a whistle and hears two echoes, the first one after 2.5 seconds and the second one 2 seconds later. Determine:

i) The speed of sound in air (3mks)

ii) The value of d (3mks)

41. The figure below shows a displacement-time graph for a wave travelling at 0.4ms-1



i) How many complete waves are shown? (1mk)

ii) Determine:

c) The periodic time of the wave (1mk)

d) The frequency of the wave (2mks)

e) The wavelength of the wave (3mks)

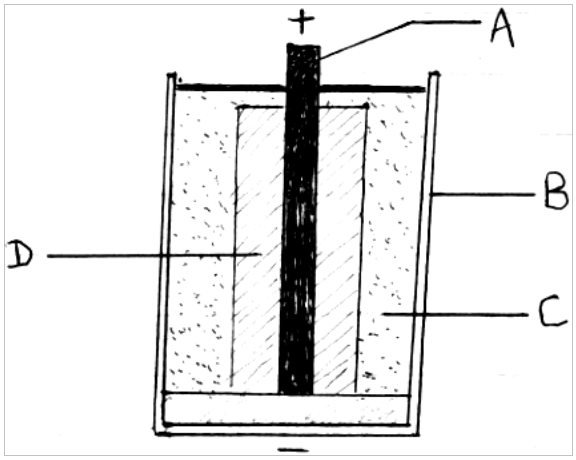
xxix. a) State two factors that affect the strength of an electromagnet (2mks)

b) Between iron and steel, which one would you recommend for use as the core of an electromagnet and why? (2mks)

c) Draw the magnetic field pattern around a conductor carrying current into the page

(2mks)

d) The diagram below shows a dry leclanche cell



i) Name the parts labelled A, B and C (3mks)

A –

B –

C –

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

37. State two precautions necessary to maintain the well being of a lead-acid accumulator

(2mks)

For more:

👉***Friendly high school & primary Notes***

👉 ***Primary-secondary school exams***

👉***2020 updated schemes of work (primary-secondary)***

👉***All KASNEB notes(CPA,CICTCIFA,CS,ATD,ICT &IT)***