FORM 4 PRE-MOCK 3 EXAMS

Subjects Tested: 1.AGRIC 2.BIO 3.BST 4.CHEM 5.CRE 6.ENG 7.GEOG 8.HIST 9.KISW 10.MATHS & 11. PHY Respectively.



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FORM FOUR

PRE-MOCK 3 EXAMS

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@ 0706 851 439

for Marking Schemes

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NAME……

INDEX NO…… STREAM ……..…….

ADM NO……. DATE: ……..

SIGN: ……..……

443/1 AGRICULTURE

PAPER 1 (THEORY)

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Instructions to candidates

a) Write your name and index in the spaces provided above

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

*c) This paper consists of **three** sections **A, B** and **C**.*

*d) Answer **all** the questions in sections **A** and **B**.*

*e) Answer any **two** questions in section **C***

*f) **All** answers should be written in the spaces provided in the question paper.*

*g) **This paper consist of 8 printed pages***

For Examiner's Use Only

Section	Question	Maximum Score	Candidates Score
A	1 – 17	30	
B	18 - 20	20	
C	21 - 23	20	
		20	
Total Score		90	

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SECTION A (30 Marks)

*Answer **ALL** questions from this section in the spaces provided.(30mks)*

1. State **four** limitations of pastoral nomadism (1mk)

2. List **four** environmental conditions that may lead to low crop yields. (2mk)

3. Give **four** factors which determine the depth of ploughing (2mks)

4. List **four** features of plastic pipes a farmer should consider before buying the pipes (2mks)

5. State **four** advantages of using farmyard manure over straight fertilizers (2mks)

6. State **four** qualities of certified maize seeds (2mks)

7. State **three** disadvantages of tenancy system of farming (1$^{1}/_{2}$mks)

8. Give **four** natural factors that encourage soil erosion (2mks)

9. State **four** field conditions that may favour the choice of chemical weed control (2mk)

10. Give **three** damages caused by squirrels($1^1/_2$mks)

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11. Name the type of farm record from which each of the following information could be obtained: ($1^1/_2$mks)

(a) Common Livestock disease occurring in a given farm.

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(b) The number of jembes a farm owns.

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(c) The sire used to obtain the calves on the farm.

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12. State **three** changes that would indicate improvement in labour efficiency in a farm ($1^1/_2$mks)

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13. State the use of each of the following financial documents (1mk)

(a) Invoice

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(b) Cash receipt

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14. State **four** functions of calcium in plant growth and development (2mks)

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15. Give**four** reasons for sowing annual crops early in the planting season (2mks)

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16.a) Per capital income is one of the measures of a country's development, what does it mean? (1mk)

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b) Mention any **two** ground sources of water. (1mk)

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17. (a) Distinguish between monopoly and monopsony (1mk)

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(b) State the law of demand (1mk)

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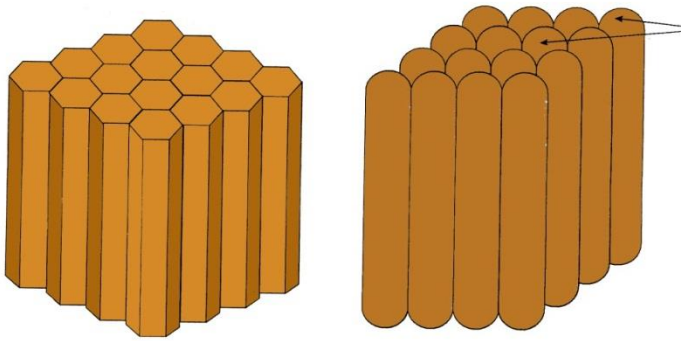
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SECTION B (20MARKS)

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

18. The diagram below illustrates two types of soil structures. Study them carefully and answer the questions that follow



A B

(a) Identify the type of structure illustrated in A and B (2mks)

A……

B……

(b) Identify the areas where the two structures are commonly found (1mk)

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(c)State **three** ways in which soil structure influence crop production (3mks)

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19. (a) Outline the procedure for planting maize manually once you get to the farm with all the materials.

(4mks)

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(c) List **two** uses of micro catchments(2mks)

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20. (a) What do we mean by production function? (2mks)

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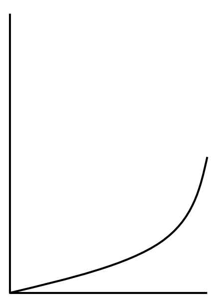
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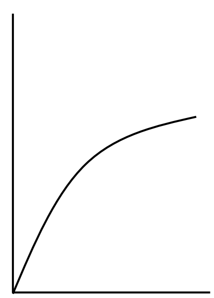
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(b) Below are graphical representations showing different types of production functions.

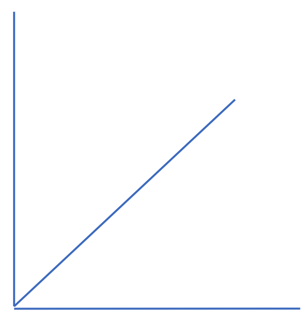
Studythem and answer the questions that follow



A



B



C

(i) Identify the types of production function represented by diagrams A,B and C (3mks)

A ………………………………………………………………………….

B ………………………………………………………………………….

C ………………………………………………………………………….

(c) List **three** circumstances in which illustration (B) above occurs (3mks)

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SECTION C

Answer any TWO questions in this section

21.(a) Describe cabbage production under the following subheadings

i) Major varieties(2mks)

ii) Field management practices (4mks)

iii) Harvesting of cabbages (4mks)

(b) The following information was extracted from Mr. Njuguna's farm

Cash at hand ksh 5,000

Bank overdraft ksh40,000

Land value ksh 500,000

Lorry worth ksh 3000,000

Grains in store ksh 80,000

Dairy cattle ksh 150,000

Cash at bank ksh 50,000

Debts receivable from dairy co-operative ksh 12,500

Layers ksh 30,000

Debts payable ksh 26,100

(i) Using the above information, prepare a Balance sheet for Njuguna's farm as at 31st Dec 2017 (9mks)

(ii) What is the net worth of the farm? (1mk)

22. (a) Describe 6 methods of draining water logged land (12mks)

(b) Explain four methods of preventing water pollution (4mks)

(c) Explain **four** factors that influences seed rate (4mks)

23. (a) Outline **five** qualities of good silage (5mks)

(b) Explain **five** roles of farm manager in production (5mks)

(c) State and explain **five** factors affecting selectivity of herbicides (10mks)

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NAME…….

INDEX NO. …… CLASS/STREAM……

ADM NO…….. DATE: …….. SIGN: ……...

443/2

AGRICULTURE

PAPER 11 2 HRS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary education (K.C.S.E)

- Write your name and number in the spaces provided at the top of this page.
- Sign and write the date of the examination in the space provided above.
- This paper consists of three sections A, B and C.
- Answer ALL questions in section A and B.
- Answer any TWO questions in section C.
- Candidate should answer the questions in English.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE SCORE
A		30	
B		20	
C		20	
		20	
TOTAL SCORE		90	

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SECTION A (30 MARKS)

Answer all the questions in this section in the spaces provide

1. Give the terms used to refer to the following farm animals

(a) Mature female goat ½ mk

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••

(b) Mature castrated male cattle ½ mk

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••

(c) A young female pig from weaning up to the first parturition. ½ mk

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••

(d) Young female bird from eight weeks to point of laying. ½ mk

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2. State four characteristics of Romney Marsh sheep breed. 2mks

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3. State three uses of camels in the arid and semi-arid regions. 1 ½ mks

4. State three qualities of a creep feed that makes it suitable for piglets. 1 ½ mks

5. State three reasons for spreading a polythene paper (PVC) on the slab of a permanent farm building. 1 ½ mks

6. Classify livestock diseases by cause 2mks

7. How does proper nutrition help in control of livestock diseases? 2mks

8. State four reasons why it is important to know the life cycle of a parasite in livestock production. 2mks

9. Define the following terms as used in livestock nutrition.

a) Starch equivalent ½ mk

b) Dry matter ½ mk

••

••

c) Digestible crude protein ½ mk

••

••

d) Crude protein ½ mk

••

••

10. Kadogo secondary school has a deep litter poultry house measuring 10 m x 4m. if the space allocated per bird is $0.28m^2$, how many birds can the school keep. 2mks

11. What are the advantages of a spray race over a plunge dip 2mks

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••

12. Give the most appropriate tools used in the following operations.

a) Removing metal clippings in files ½ mk

b) Cutting wood along grains ½ mk

c) Cutting threads on pipes ½ mk

13. Give four methods of treating timber 2mks

14. State the importance of fish farming in Kenya 2mks

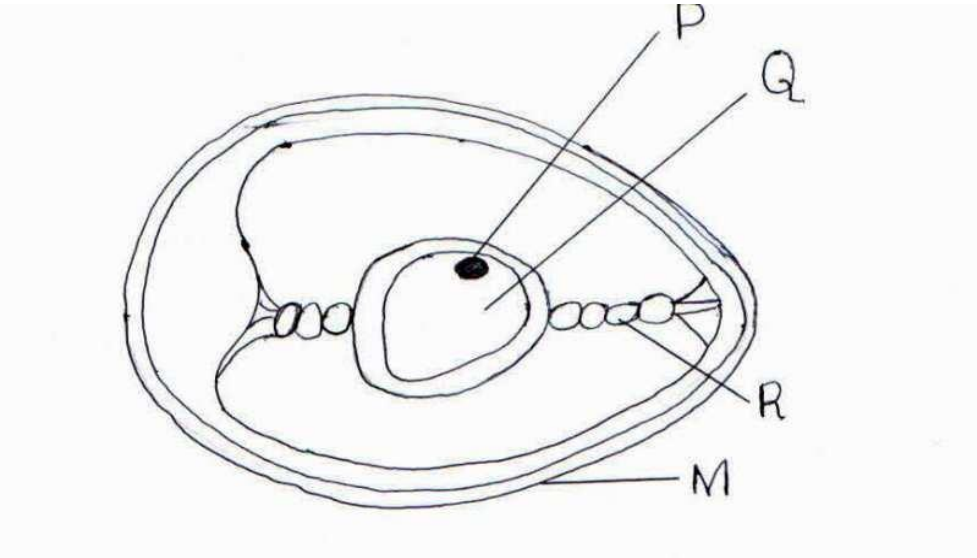
15. Give reasons why bees swarm. 2mks

16. Give the importance of carrying out identification practice in animals. 2mks

SECTION B (20MKS)

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

17. The diagram below shows the internal structure of an egg. Use it to answer the questions that follows:



a) Name the parts marked P,Q and R 3mks

P ……

Q ……..

R ……

b) Give two defects that may be found on the part marked M that can make the egg unsuitable for incubation. 2mks

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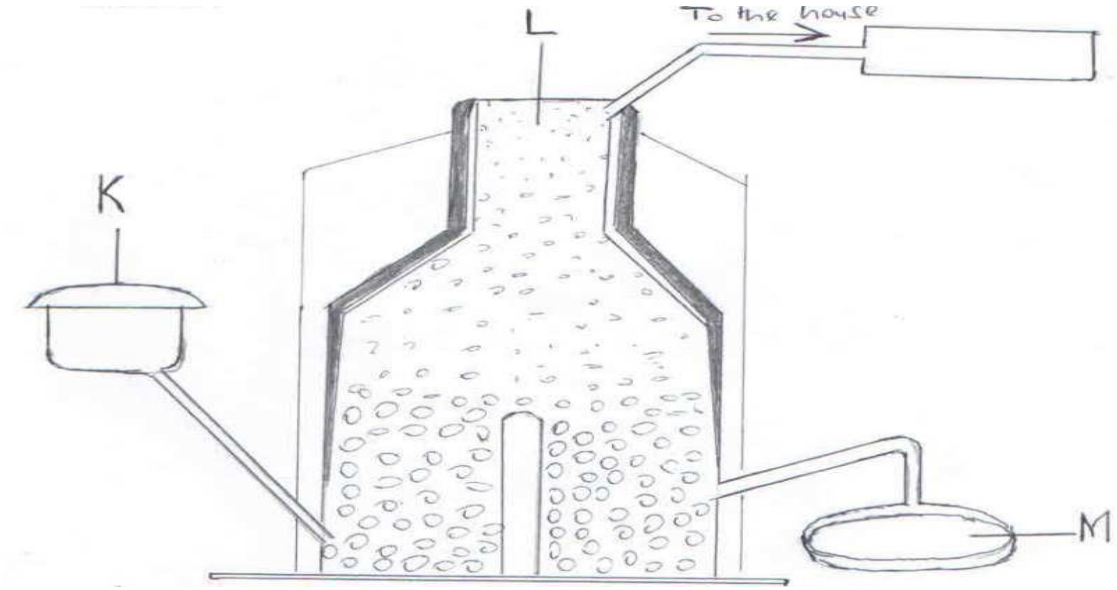
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18. Study the diagram of a biogas digester plant Shown below and answer the questions that follow.



a) Name the major component of biogas that is trapped in part L 1mk

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b) Give the name and use of the material deposited in the part labeled M 2mks

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c) What is the component of K in the biogas digester? 1mk

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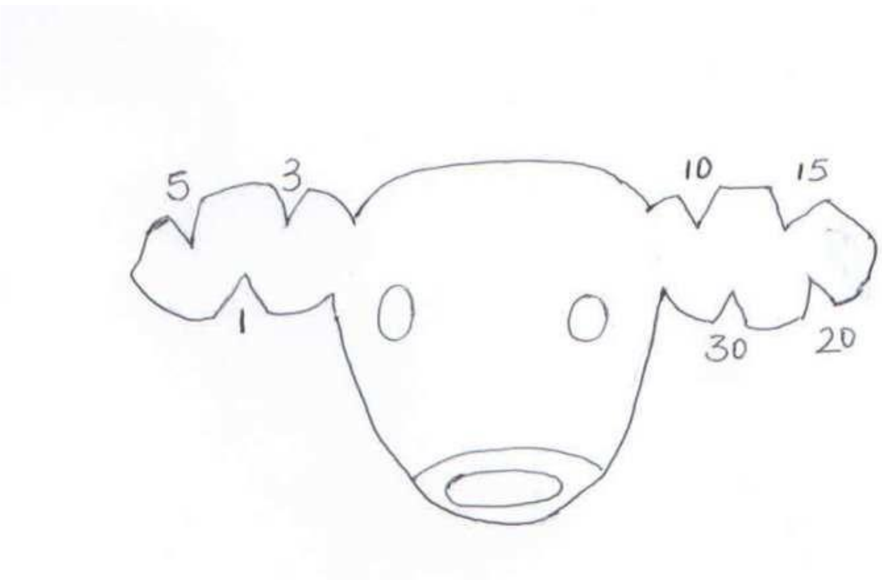
d) Outline two disadvantages of biogas as a source of farm power 1mk

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19. Study the diagram below and then answer the questions that follows



a) Identify the method of identification shown above 1mk

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b) Give the identification number of the animal shown above. 1mk

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c) Name three other methods used in identifying animals 3mks

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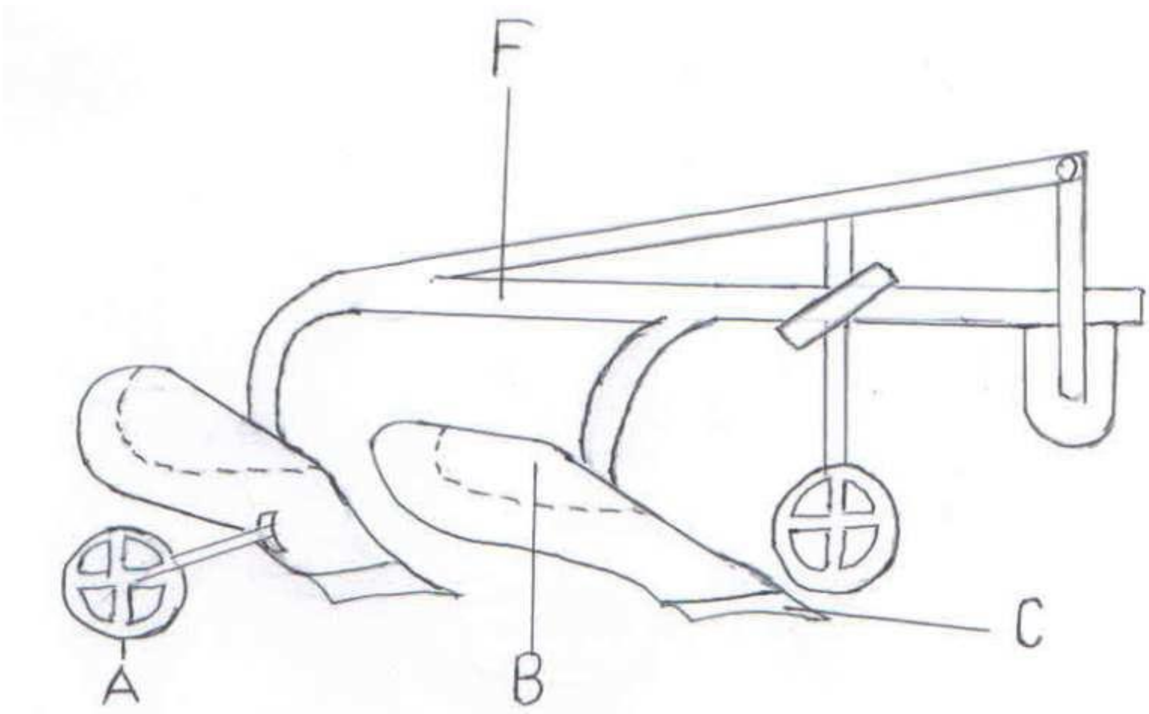
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20. The diagram below shows a farm implement. Study it carefully and then answer the questions that follows:



a) Identify the implement 1mk

••

••

b) Name the pars labeled A and C 2mks

A …….

C ……

c) State the functions of the part labeled B and F 2mks

B

……

……

F

……

……

SECTION C (40 MARKS)

Answer any **two** questions from this section in the spaces provided.

21.

a) Describe the life cycle of round worms. (AscarisSPP) 10mks

b) State and explain five factors that influence the power output of draught animals. 10mks

22.

a) Describe the construction of a rabbit hutch under the following subheadings:

i. Siting the hutch 3mks

ii. Selection of construction materials. 4mks

iii. Requirements of a rabbit hutch 3mks.

b) Describe the maintenance practices carried out on a tractor before it is put to daily use. 10mks

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23.

a) State the advantages of four stroke cycle engines. 5mks

b) State the causes of stress in poultry. 8mks

c) Explain the control measures of cannibalism in poultry. 7mks

NAME……...

INDEX NO…… CLASS/STREAM…….

ADM NO ……..…..... DATE…….....… SIGN…….…..……..

231/1
BIOLOGY
PAPER 1
(THEORY)
TIME: 2 HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary Education (K.C.S.E.)

BIOLOGY
PAPER 1
(THEORY)
TIME: 2 HOURS
INSTRUCTIONS TO CANDIDATES:

1. Write your **Name**, **Index Number, Admission Number** and **School** in the spaces provided above.
2. **Sign** and write the **date** of examination in the spaces provided above.
3. Answer **all** the questions in the spaces provided.
4. Answers must be written in the spaces provided in the question paper.
5. Additional pages **must not** be inserted.

FOR EXAMINER'S USE ONLY:

Question	Maximum Score	Candidate's Score
1 – 30	**80**	

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

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••

b) Ribosome

••

••

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

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••

b) Name the structure from which the above process occurs. (1mk)

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

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ii) Fraternal (1mk)

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4.State three reasons why it is important for plants to lose water to the atmosphere. (3mks)

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

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

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

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8. State three activities in human digestive system that depend on respiration. (3 mks)

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8. In the table below, indicate the deficiency diseases caused by lack of given nutrients in man. (2mks)

Nutrient	**Deficiency disease**
Iron	
Vitamin A	

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

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••

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••

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

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

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

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••

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

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

a) i) Cow

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ii) Tick.

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

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c) Write a food chain arising from the above feeding relationship (1 mk)

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14. State two roles of water in germinating seeds? (2mks)

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

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(b) State an idea that led to the formulation of Lamarck's theory of evolution. (1mk)

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16. Explain what happens to red blood cells placed in distilled water for 20 minutes. (3 mks)

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

DNA strand

C A T G A G T

RNA strand

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

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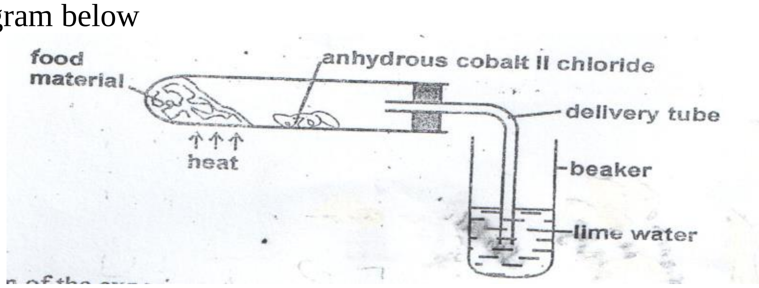
18. Why are animal cells put in isotonic solution when performing an experiment? (2mks)

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19. Study the diagram below



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

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b) Account for the results observed at the end of the experiment. (2mks)

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20. Explain why a camel has a longer nephron than a whale. (3 mks)

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

a) Nitrosomonas.

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b) Nitrobacter

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c) Azotobacter

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

a) Teeth. (1mk)

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b) Saliva (1mk)

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

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b) Name one kingdom with:

i) Prokaryotic cells …………………………………………………………………………(1mk)

ii) Eukaryotic cells ………………………………………………………………………(1mk)

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

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

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

25. How do sunken stomata lower the rate of transpiration? (2 mks)

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

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

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(b) State the function of blood platelets (1mk)

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28. Calculate the diameter of the cells in micro-metre(µm) given that the diameter of the field of view is 3mm and that they are 10 cells across the field of view, the total magnification was x100. (3mks)

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

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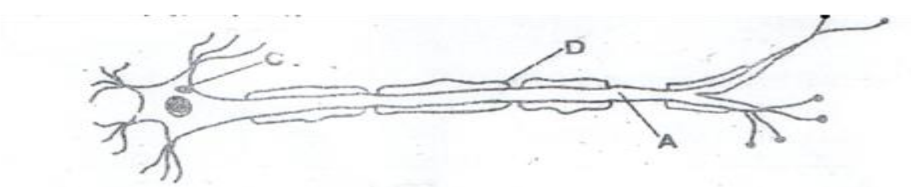
(b) State **one** way by which HIV/AIDs is transmitted from mother to child. (1mk)

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30 (a). Below is a diagram of a specialized cell:



i) Name parts (2mks)

A .....

D.....

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

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b. State two roles of progesterone. (3mks)

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NAME ……..

INDEX NO.…… SIGNATURE…….

DATE…… ADM NO…… STREAM……

BIOLOGY (THEORY)
PAPER 2
TIME: 2 HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

INSTRUCTIONS TO CANDIDATES

- Write your name, school and index number in the spaces provided above.
- Write the date of examination and sign in the spaces provided above.
- Answer **ALL** the questions in **section A** by filling in the spaces provided.
- In **section B**, answer **question 6 (compulsory question)** and any other **one question** from the remaining two questions. (i.e. 7 or 8)
- Candidates may be penalized for false information and even wrong spellings of technical terms.
- This paper consists of **10** printed pages.
- Candidates should check to ensure that all pages are printed as indicated and no questions are missing.

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	Questions	Maximum score	Candidate's score
Section A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
Section B	6	20	
	7	20	
	8	20	
	Total Score	80	

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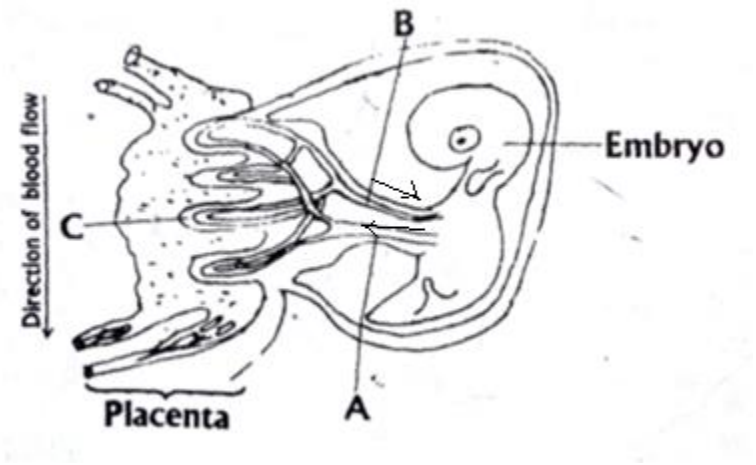
1.A specimen of Drosophila has red eye and when crossed with a purple mutant all the F1 had red eyes.The offspring's were mated among themselves and the following proportions of flies were produced; 201 gad red eyes and 67 had purple eyes.Using R to represent the dominant gene and r to represents the recessive gene,answer the following questions.

i)By the help of diagrams shows how the ratio of 201:67 was arrived at ,in the F2 generation.

(5mks)

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ii)Draw diagrams to show the genetic details of a cross between the heterozygous red eyed and a purple eyed individual form F2. (3mks)



2.The diagram below shows the relationship between blood supplies of the embryo, placenta and the uterus.Use it to answer the question that follow.

a) Name the part labeled A and C. (2mks)

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b) State any two functions of placenta in mammals. (2mks)

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c) .(i)What kind of flow does maternal and foetal capillaries exhibit at the placenta. (1mk)

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(ii)Why is this kind of flow(c) (i) have an advantage. (1mk)

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d) If the maternal and foetal blood circulatory system were to be directly connected at the placenta suggest what may happen. (1mk)

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e) In lactating mammals if the pituitary gland is removed, explain what happens. (1mk)

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3.A student was given four test tubes A, B, C and D, each containing a different mixture among the following:

i) Starch +amylase + maltase+water

ii) Starch +Pepsin +Water

iii) Starch +Glucose +Water

iv) Cellulose +amylase+trypsin+Water

She placed the test tubes in an incubator at 30^0C until all possible reactions had taken place.She then took samples from each test tube and tested them separately for starch,reducing sugar and protein.The results obtained are given in the following table.

Tube	Starch	Reducing	Protein
A	Present	Present	Absent
B	Absent	Absent	Present
C	Present	Absent	Present
D	Absent	Present	Present

a) Name a reagent used to test for reducing sugar and state the appearance of a positive result.(2mks)

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b) Identify the contents of each of the test tube A,B,C and D according to the results obtained.(4mks)

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c) State the role of enzyme in respiration. (2mks)

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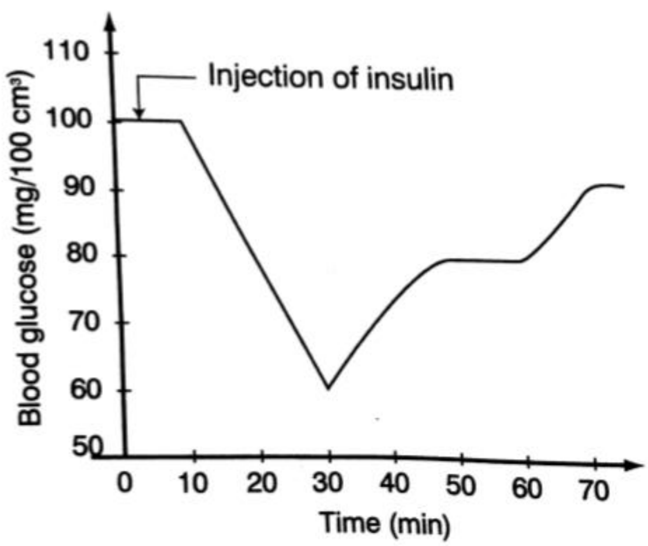
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4. The graph below shows the effect of injecting one unit of insulin into aperson . The concentration of glucose in the blood is measured at regular intervals



a) Why is insulin injected into blood stream directly instead of being taken orally. (2mks)

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

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

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d) Name the hormone responsible for the conversion of glycogen to glucose. (1mk)

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e) State the effects of each of the following in human beings.

i)Too much glucose in the blood. (1mk)

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ii) Very little glucose in the blood. (1mk)

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5. The diagram below shows a stem of a passion fruit twining around a post.



a) What is the name given to the type of growth movement shown above? (1mk)

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b) What is the biological importance of this growth? (1mk)

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c.i) Account for the twining growth pattern. (3mks)

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ii) Name three other types of growth responses exhibited by plants. (3mks)

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SECTION B(40 MARKS)

Answer question 6 and either question 7 or 8

6.The formation of acid rain is a serious environmental concern.Sulphuric acid is present in acid rain and has adverse effects on both plants and animals.

a) Name two other acids (other than sulphuric acid) that can be found in acid rain. (2mks)

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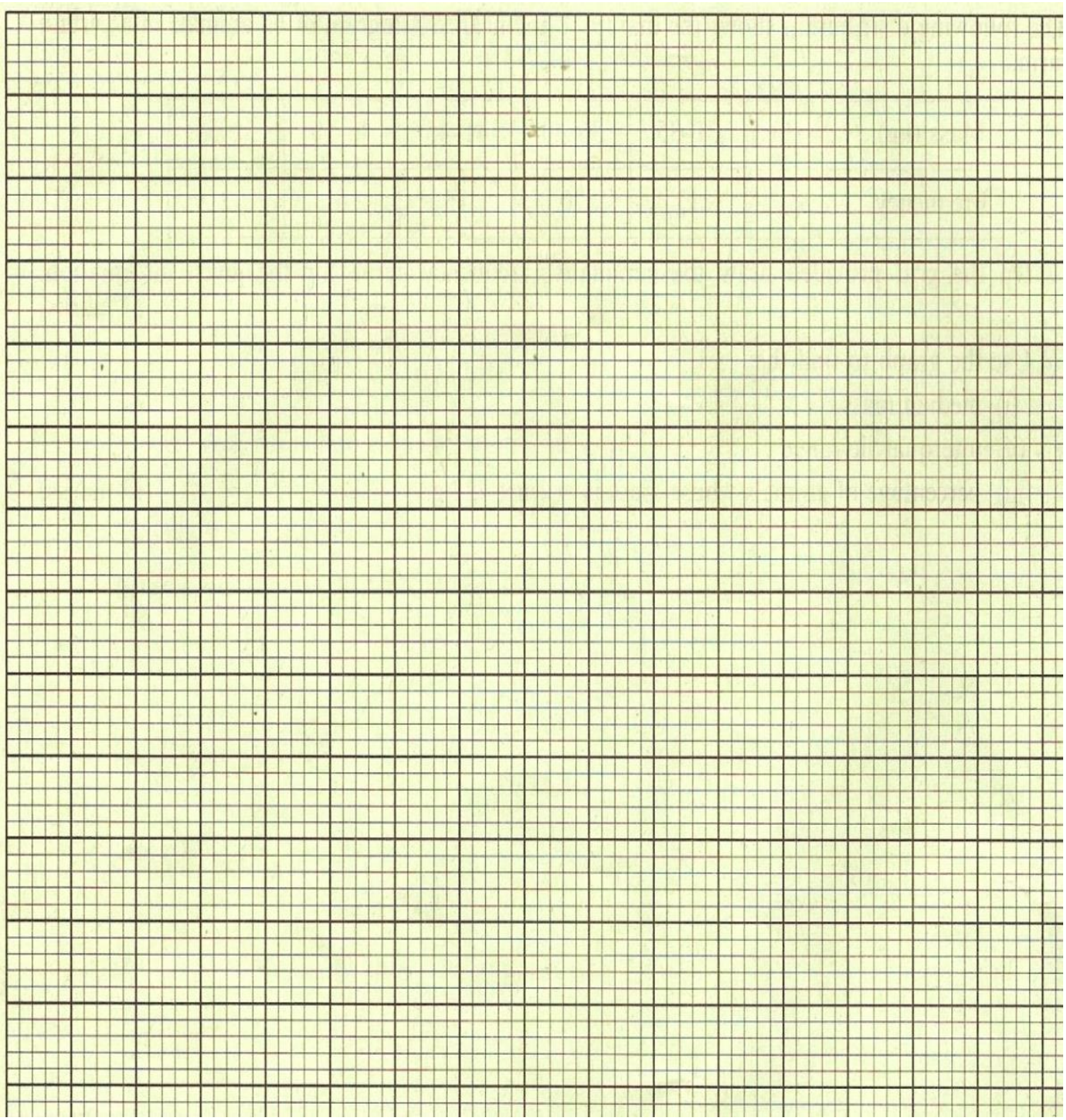
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b)An experiment was carried out to investigate the effects of dilute sulphuric acid on the growth of plant seedlings.Batches of seedlings were grown in glass dishes on filter paper to which dilute sulphuric acid was added.The dishes were then incubated.The root and shoot lengths were measured after 65 hours.The results obtained are as shown in the table below.

Sulphuric acid Concentration (mol/dm^{-3})	Mean root Length(mm)	Mean shoot Length(mm)
0	55.5	25.2
$1x10^{-3}$	63.4	18.4
$3x10^{-3}$	6.5	9.5
$4x10^{-3}$	2.0	4.6
$6x10^{-3}$	1.8	0.8
$7x10^{-3}$	1.5	0.5
$8x10^{-3}$	1.3	0.3
$9x10^{-3}$	1.3	0.0
$10x10^{-3}$	1.0	0.0

Plot a graph of the mean root length and the mean shoot length against the sulphuric acid concentration on the same grid. (7mks)



c) Describe the relationship between the concentration of sulphuric acid and the:

i)Growth of the shoots. (2mks)

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ii)Growth of the roots. (2mks)

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d) Estimate the mean root and mean shoot lengths when the concentration of sulphuric acid is $5x10^{-3}$. (2mks)

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e) State two other effects of acid rain. (2mks)

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f) State three ways of preventing acid rain. (3mks)

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SECTION C(Answer one question only)

7.(a) Describe the following terms:

(i) Secretion

(ii) Excretion

(iii) Egestion (3 mks)

b)Explain how the mammalian kidney is adapted to its functions. (17 mks)

8.Explain the role of hormones in the growth and development of plants. (20mks)

NAME: ……..

INDEX NO…… STREAM…….…… ADM NO: .....

DATE……. SIGN……

231/3

BIOLOGY

PAPER 3

PRACTICAL

TIME: 1 ¾ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary Education(K.C.S.E.)

Instructions to candidate

- Answer ALL questions
- You are required to spend the first 15 min of $1^{3}/_{4}$ hours allowed for this paper reading the whole paper before carefully before commencing your work.
- Answer must be written in the spaces provided in the question paper
- Don't insert additional page /paper

FOR EXAMINER USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATE SCORE
1	14	
2	13	
3	13	
TOTAL	40	

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1. You are provided with specimen A and B

   a) Name the sub-division to which the specimen belong (1mk)

……

……

   b) Name the class to which the specimens belong (2mks)

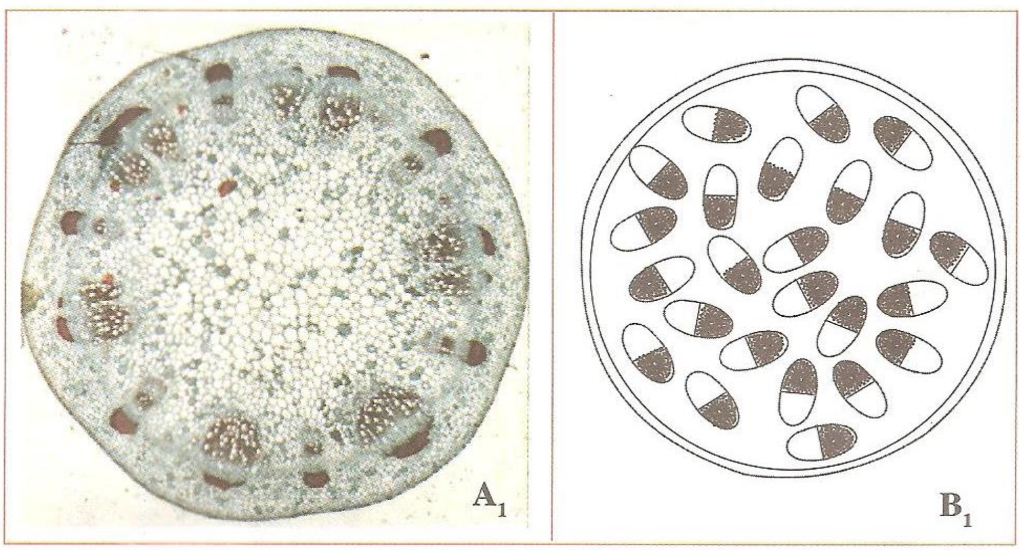
   A……………………………………………..

   B……………………………………………..

   c) State three observable differences between the leaves of specimen A and B (3mks)

Leaves A	Leaves B

   d) The diagram below show the cross-sections of stems obtained from specimens A and B



(i) Match the stem cross-sections with the specimens (2mks)

(ii) Outline three differences between the two stems (3mks)

Specimen A_1	Specimen B_1

e) Suggest the agent of pollination of the flowers of specimen A (1mk)

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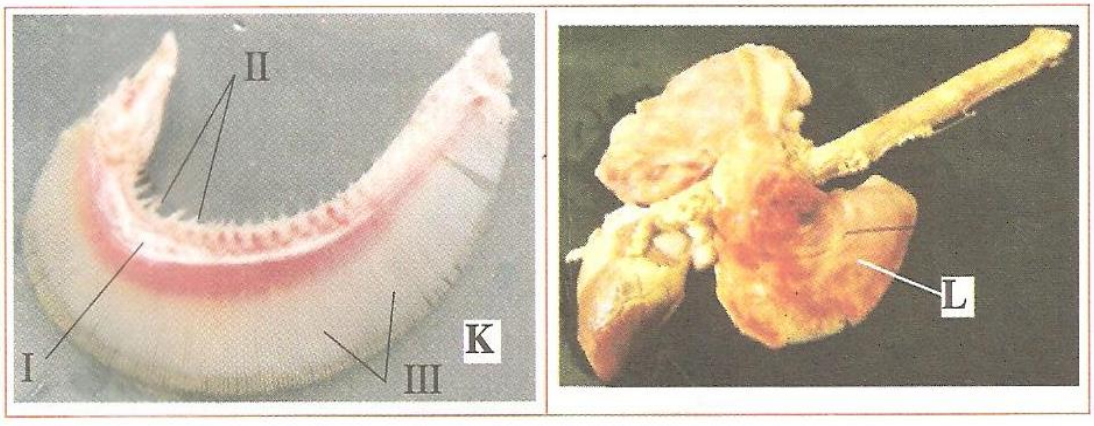
(f) Give reason for your answer (1mk)

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2. You are provided with photographs of specimens labeled **K (gills)** and **L (lungs).** Examine them and answer the questions that follow



(a) Name the class of organisms from where the specimens were obtained (2mks)

Specimen	Class
K	
L	

(b) Label all the parts of specimen K on the photograph (3mks)

I……..

II……

III……..

(c) State the functions of each of the parts you have labeled in (b) above (3mks)

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(d) State three ways in which the part labeled L is adapted to its functions (6mks)

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(e) State the functional relationship between specimens K and L (1mk)

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2. You are provided with:
   - 1ml Olive oil
   - K_1 (Concentrated sodium hydrogen carbonate solution)
   - K_2
   - Irish potato
   - Test tube
   - Iodine solution

   Label two test tubes X and Y. Into each test tube; put $2cm^3$ of water and 8 drops of Olive oil. To the test tube labeled X, add 8 drops of Liquid K_1. Shake both test tubes and allow the contents to stand for 2 minutes

 a)(i) Record your observation in: (2mks)

Test tube X

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Test tube Y

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

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(iii) Stage the significance of the process named in (a) (i) above in digestion (1mk)

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(iv) Name the:

I. Digestive juice in human beings that has the same effect on oil as liquid K_1 (1mk)

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II. Region of alimentary canal where the juice is secreted (1mk)

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b) Label two test tubes E and F. place $2cm^3$ of liquid K_2 into each. Add a drop of iodine solution into each test tube

(i) Record your observations (1mk)

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(ii) Suggest the identity of liquid K_2 (1mks)

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(iii) Cut out a cube whose sides are 1cm from the irish potato provided. Crush the cube to obtain a paste and place the paste in the test tube labeled E. Leave the set up for at least 30minutes

Record your observations (2mks)

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(iv) Account for the results in (b) (iii) above (2mks)

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NAME……

INDEX NO……. CLASS……. ADM NO ……..

DATE……..... SIGN……

565/1

BUSINESS STUDIES

PAPER 1

TIME 2HRS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary Education (K.C.S.E)

INSTRUCTIONS TO CANDIDATES

1. Write your name, school and index number in the spaces provided above
2. Write the date of examination and sign in the spaces provided above
3. Answer all the questions
4. All answers should be written in the spaces provided
5. Candidates should ensure that no questions are missing
6. Candidates should answer the questions in English.

For examiners use only

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Marks																						

Question	23	25	25
Marks			

TOTAL

MARKS

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1. Identify four roles that equipments play in an office. (4 marks)

2. Highlight four internal weaknesses that may affect business performance (4 marks)

3. Identify four common means of verbal communication (4 marks)

4. State the type of co-operative society that fits the description given below (4 marks)

DESCRIPTION	TYPE OF CO-OPERATIVE
a. A co-operative formed to improve production and selling of goods by members b. An association of buyers formed to be buying goods in bulk and selling at fair prices c. An association of persons who save regularly and obtain loans at low interest d. Formed by members who save into a common pool and funds using to construct houses for members	

5. Outline four principles that guide a government in collecting and spending public finance(4 marks)

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6. Highlight four disadvantages of monopoly markets (4 marks)

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7. Identify four factors that may cause demand- pull inflation too occur in a country (4 marks)

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8. State four problems facing small scale business in Kenya (4 marks)

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9. Identify four differences between trade discount and cash discount in the table below (4 marks)

Trade discount	Cash discount

10. Identify how each of the transactions changes the amount of stock in the stock

Transaction	Effects on stock
a. purchase of goods from suppliers b. sale of goods to customers c. sales return by customers d. purchase returns by suppliers	a. b. c. d.

11. Name four functions of the central bank of Kenya in the economy

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12. Identify four benefits of indirect production to a community (4 marks)

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13. Fill the missing figures in the table below

	Fixed asset	Current Assets	Capital	Liabilities
a.	275 500		315 000	115 500
b.	182 000	108 700		217 100
c.		76 400	123 100	91 900
d.	313 450	211 340	189 170	

14. Name four measures that a firm can take to improve efficiency of its workers (4 marks)

15. Outline four ways in which consumers can benefit from services of a warehouse (4 marks)

16. The following information relates to Ali General Stores for the year ended 31st Dec 2018.

Opening stock	shs 24 000
Carriage on sales	shs 12 000
Purchases	shs 370 000
Sales	shs 442 500
Closing stock	shs 40 000
Expenses 10% on gross profit	

Prepare Trading profit and loss account for the year ended 31st Dec 2018 (5 marks)

17. State three pieces of information contained in an insurance policy for goods (3 marks)

18. Name four types of warehouses. (4 marks)

19. Outline four ways in which households contribute to national income in a country (4 marks)

20. Identify four measures taken by government to reduce mortality rate in a country. (4 marks)

21. State four uses of a computer in an organization. (4 marks)

22. Identify four elements of effective communications. (4 marks)

23. Highlight four circumstances under which the capital of a business may change. (4 marks)

24. Name four accounting documents that are used in home trade

25. Identify four contents of a memorandum of association. (4 marks)

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**** THE END ****

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NAME……..……..

INDEX NO……..… CLASS…….. ADM NO ……..

DATE……..... SIGN…….……

BUSINESS STUDIES

PAPER 2

TIME: 2½ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary Education (K.C.S.E)

INSTRUCTIONS TO CANDIDATES

1. Write your name, school and index number in the spaces provided above.
2. Write the date of examination and sign in the spaces provided above.
3. This paper consists of **6** questions.
4. Answer **any five** questions.
5. All questions carry equal marks.
6. Candidates should check to ensure that all pages are printed as indicated and no questions are missing.

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's score
1	20	
2	20	
3	20	
4	20	
5	20	
6	20	
	Total score	

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1. a)Explain **five** methods and legislations which the Kenyan government has put in place to protect consumers. (10 marks)

   b) Explain **five** characteristics of human wants. (10 marks)

2. a) Explain **four** advantages of a bonded warehouse to the importer. (8marks)

   b) On 1st January 2010, Umoja stores had cash in hand Kshs. 30,000 and at bank Shs. 105,000.

   The following transactions took place during the month of January 2010

January	1st	Bought goods in cash	Shs. 20,000
"	2nd	Paid salaries by cash	Shs. 65,000
"	4th	Received a cheque from the following debtors after allowing 2% discount in each case Luka Shs. 9,800, Mwengesh Shs. 19,600, Raju Shs. 10,700 and Alice Shs. 24,500	
"	8th	Paid the following accounts by cheque and in each case deducting 5% discount: Mogi Shs. 30,000, Abdul Shs. 12,000 and Moses Shs. 40,000	
"	10th	Bought office machinery by cheque Shs. 50,000	
"	13th	Juma settled his account of Shs. 20,000 in cash having deducted 2% cash discount	
"	15th	Withdraw Shs. 10,000 for private use	
"	18th	Paid John Shs. 4,750 in cash having deducted 5% cash discount	
"	22nd	Cash sales Shs. 45,000	
"	25th	Received cash Shs. 29,100 from Aberi after having allowed him 30% cash discount	
"	31st	Banked all the cash except Shs. 12,000	

   Required: prepare three column cash book and balance it off (12mks)

3. a)Explain **five** benefits of expanding railway transport in Kenya as witnessed in the recent past. (10 marks)

   b)Outline **five** uses of National income statistics to a country. (10 marks)

4. (a)Explain **five** limitations of using posters as a medium of product promotion(10mks)
   (b)Explain **five** benefits that Kenya may realize if economically viable oil deposits were exploited in Turkana County (10mks)

5. a) Explain **five** services offered by commercial banks to their customers. (10marks)

   b) Describe **five** types of unemployment. (10marks)

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6. a) Explain any **five** measures a country may adopt to increase its volume of exports. (10 marks)

   b) Explain **five** factors that encourage entrepreneurial development in Kenya. (10marks)

NAME……

INDEX NO. ……. STREAM ……. ADM NO…….

DATE: ……. SIGN: ……

233/1

CHEMISTRY (THEORY)

PAPER 1 TIME: 2HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary education (K.C.S.E)

Instructions to candidates

- Write your name and index number in the spaces provided above
- Sign and write the date of the examination in the spaces provided above.
- Answer all the questions in the spaces provided after each question
- Mathematical tables and electronic calculators may be used.
- All working must be clearly shown where necessary.
- This paper contains 10 printed pages.

FOR EXAMINER'S USE ONLY

Questions	Maximum score	Candidate's score
1-29	**80**	

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Q1. Distinguish between a thistle funnel and a dropping funnel (1mark)

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Q2. a) Define an acid. (1 mark)

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b) An ammeter was used to test electrical conductivity of sodium hydroxide and ammonia solution.State and explain the observation made. (2 marks)

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Q3. a)What name is given to the process by which alcohol is formed from a carbohydrate?(1mark)

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b) Explain why the solubility of ethane in water is lower than that of ethanol. (1 mark)

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Q4. An isotope of Uranium 234-U, decays by emission of an alpha particle to thorium Th-92

a) Write the equation for the nuclear reaction undergone by the isotope. (1 mark)

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b) Explain why it is not safe to store radioactive substances in containers made from aluminum sheets. (1 mark)

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Q5. a) Methane reacts with oxygen as shown by the equations I and II below:

I $CH_4(g) + 2O_2(g) \longrightarrow CO_2(g) + 2H_2O(l)$

II $2CH_4(g) + 3O_2(g) \longrightarrow 2CO(g) + 4H_2O(l)$

Which one of the two reactions represents the complete combustion of methane? Explain. (2marks)

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b) $80cm^3$ of ethane reacted with $150cm^3$ of oxygen forming carbon (IV) oxide and water. Calculate:

(i) The volume of carbon (IV) oxide formed (1 mark)

(ii) The residual air. (1 mark)

Q6.The table below gives the atomic numbers of elements **W, X, Y,** and **Z.** The letters do not represent the actual symbols of the elements.

Element	W	X	Y	Z
Atomic Number	9	10	11	12

a) Which one of the elements is least reactive? Explain. (1mark)

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

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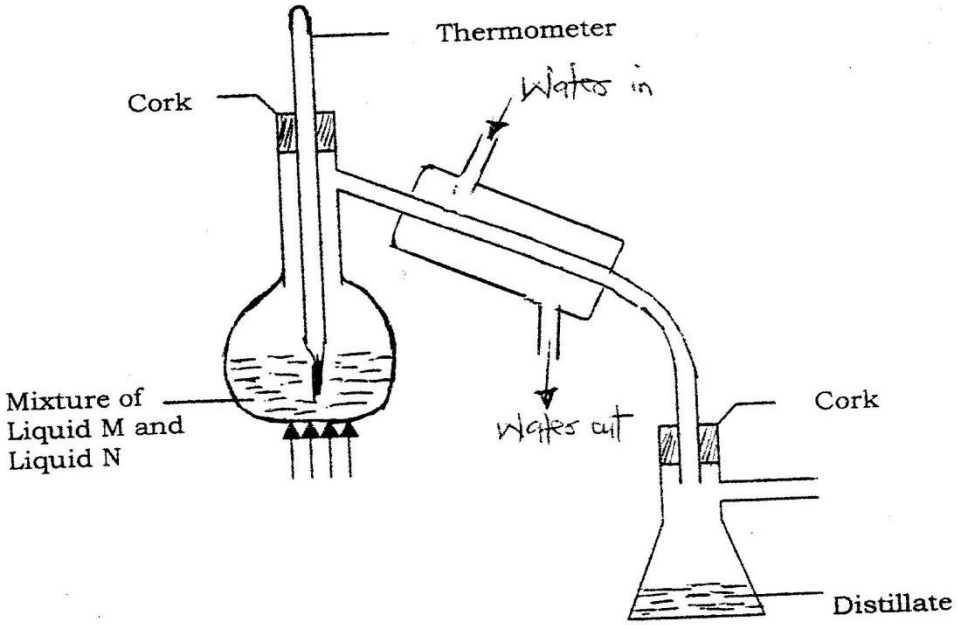
ii) Give the formula of the compound formed when the elements in b(i) react. (1mark)

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Q7. In an experiment to separate a mixture of two organic liquids, liquid M (b.p 56^oC)

And liquid N (b.p. 118^oC), a student set up the apparatus shown below.



a) Identify two mistakes in the set – up. (2marks)

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b) What method would the student use to test the purity of the distillates obtained? (1mark)

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Q8. When lead (II) nitrate is heated, one of the products is a brown gas.

a) Write the equation of the reaction that occurs. (1 mark)

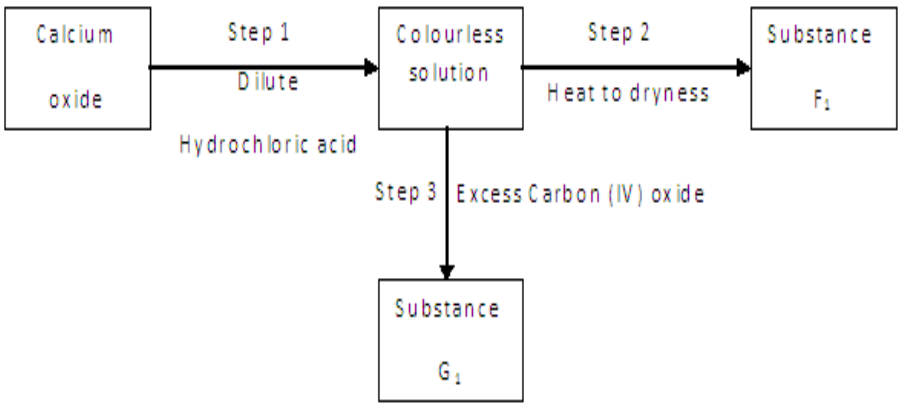
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b) If 0.290dm^3 of the brown gas was produced, calculate the mass of the lead(II)nitrate that was heated.

(R .F.M of lead (II) nitrate = 331; Molar gas volume = 24dm^3).(2marks)

Q9.



a) Give the name of the process that takes place in step 1. (1mark)

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.....

b) Give;

i) The name of substance G_1(1mark)

.....

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ii) One use of substance F_1(1 mark)

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Q10. When extinguishing a fire caused by burning kerosene, carbon (IV) oxide is used in preference to water .Explain. (2 marks)

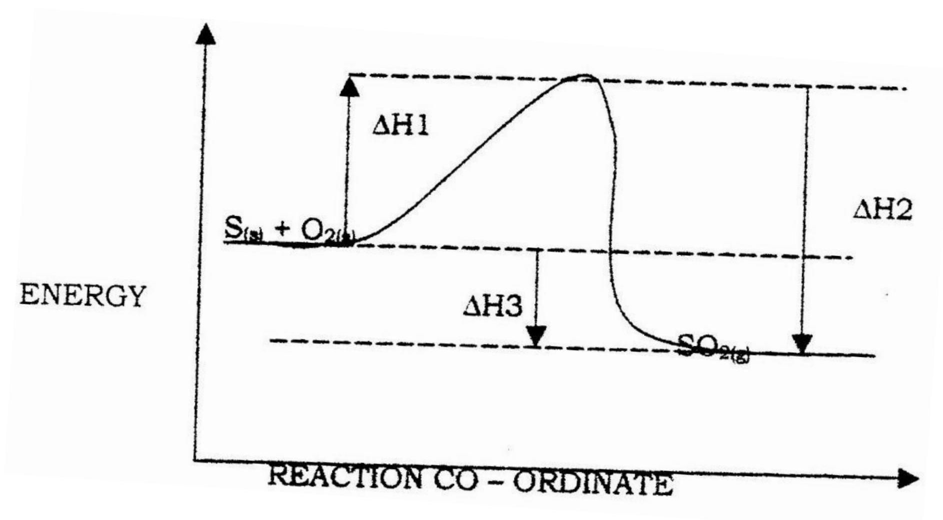
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Q11. Sulphur burns in air to form sulphur (IV) oxide.A simple energy level diagram for the reaction is given below. Study the diagram and answer the questions that follow.



a)What do $\triangle H_3$ and $\triangle H_1$ represent? (1 mark)

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b) Write an expression, for $\triangle H_3$ in terms of $\triangle H_1$ and $\triangle H_2$. (1mark)

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Q12. Describe how a solid sample of zinc carbonate can be prepared starting with zinc oxide. (3 marks)

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Q13. An element X has a relative atomic mass of 88. When a current of 0.5ampere was passed through a fused chloride ofX for 32 minutes 10 seconds, 0.44g of X was deposited.

(i) Determine the charge of element X (1 Faraday = 96500C) (2 marks)

(ii) Write the formula of the hydroxide of X. (1 mark)

Q14. A hydrocarbon slowly decolorizes bromine gas in the presence of sunlight but does not decolorize acidified potassium permanganate(VII).

Name and draw the structural formula of the fourth member of the series to which the hydrocarbon belongs. (2marks)

Q15. Potassium sulphite solution was prepared and divided into two portions. The first portion gave a white precipitate when reacted with barium nitrate. On addition of dilute hydrochloric acid the white precipitate disappeared.

a) Write the formula of the compound which formed as the white precipitate. (1mark)

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b) Write the equation for the reaction between dilute hydrochloric acid and the compound whose formula is written in (a) above. (1mark)

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c) What observation would be made if one drop of potassium dichromate

solution was added to the second portion followed by dilute sulphuric(VI) acid? (1mark)

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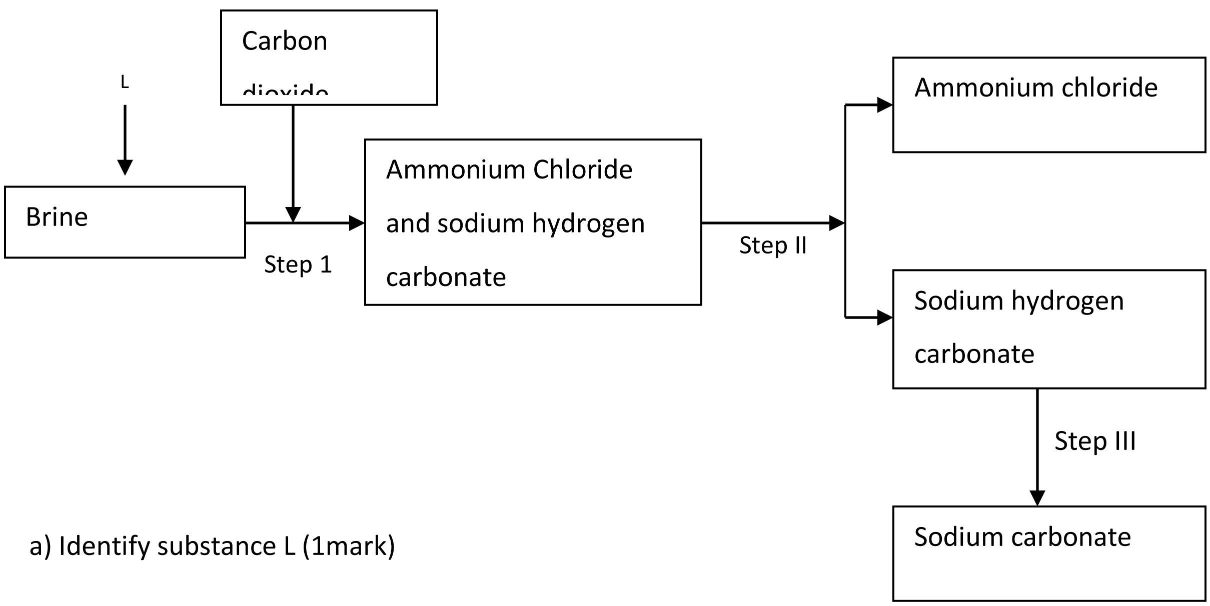
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Q16. A compound of carbon, hydrogen and oxygen contains 57.15% carbon, 4.76% hydrogen and the rest oxygen. If its relative molecular mass is 126, find its molecular formula. (C = 12, H = 1, O = 16) (3 mks)

Q17.The simplified flow chart shows some of the steps in the manufacture of sodium carbonate by the Solvay process



a) Identify substance L (1mark)

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b) Name the process taking place in step II(1mark)

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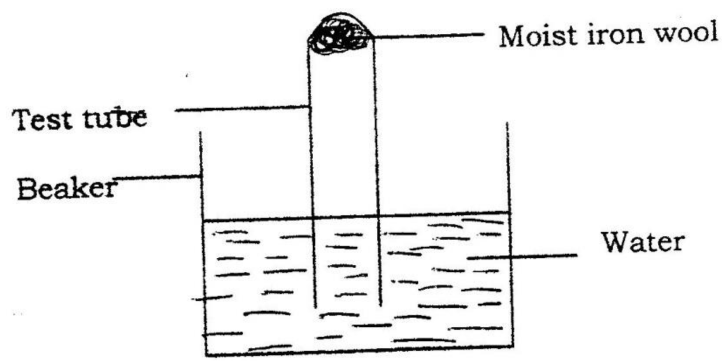
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c) Write an equation for the reaction which takes place in step III.(1mark)

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Q18.The set – up below was used to study some properties of air.



State and explain two observations that would be made at the end of the experiment. (2 Marks)

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Q19.(a) A sample of water in a beaker was found to boil at 102^0C at 1 atmospheric pressure. Assume that the thermometer was not faulty explain this observation (1mk)

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(b) Study the information in the table below and answer the questions that follow.

Salt	Solubility g/100g of water	
	at 40°C	of 60°C
$CuSO_4$	28	38
$Pb(NO_3)_2$	79	98

A mixture containing 35g of $CuSO_4$ and 78g of $Pb(NO_3)_2$ in 100g of water at 60°C was cooled to 40°C.

i) Which salt crystallised out? Give a reason. (2 marks)

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ii) Calculate the mass of the salt that crystallized out. (1 mark)

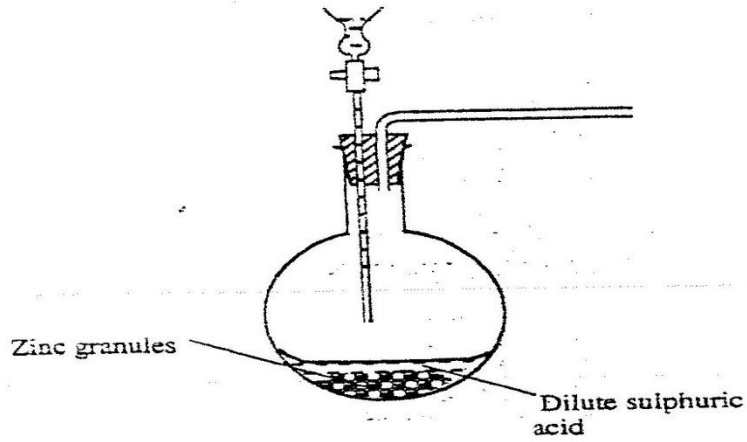
Q20.Consider the following reaction at equilibrium.

$PCl_{5\,(g)} \rightleftharpoons PCl_3\,(g) + Cl_{2\,(g)}$

Complete the table below to show the effect of different factors on the position of equilibrium. (3mks)

Factor	Effect on the equilibrium position
(i) Decrease pressure	
(ii) Removing chlorine	
(iii) Adding Helium gas to mixture	

Q21. The set – up below was used to prepare hydrogen gas



a) Complete the diagram to show how a dry sample of hydrogen gas can be collected(3mks)

b) Write an equation for the reaction, which takes place when hydrogen gas burns in air.(1mk)

.....

.....

22. In a certain reaction, 18.7cm^3 of a dibasic acid required 25cm^3 of 0.1M NaOH for complete neutralization.

(a) How many moles of Sodium hydroxide are contained in 25cm^3? (1mk)

(b) Calculate the molarity of the dibasic acid. (2mks)

Q23 In an experiment to prepare nitrogen (I) oxide, ammonium nitrate was gently heated in a flask.

a) Write the equation for the reaction that took place in the flask. (1 mark)

••

••

b) State and explain how the gas was collected.(1 mark)

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c) A sample of the gas was tested with damp blue and red litmus papers. What observations were made? (1mark)

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Q24.Under certain conditions, chlorine gas reacts with sodium hydroxide to form sodium

hypochlorite.

(a) Name the condition under which sodium hydroxide reacts with chlorine to form

Sodium hypochlorite.   (1 mark)

••

••

(b) State two uses of sodium hypochlorite. (1 mark)

••

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••

Q25. (a) Calculate the oxidation state of chromium in the ion $Cr_2 O^{2-}$. (1 mark)

(b) Using oxidation numbers, determine from the equation below the species which undergoes oxidation and reduction.

$$2FeCl_2(aq) + Cl_2(g) \dashrightarrow 2Fe\,Cl_3(aq)$$

Oxidation - (1 mark)

Reduction - (1 mark)

Q26. The table below gives some properties of three elements in group (VII) of the periodic table. Study it and andanswer the questions that follow:

Element	Atomic No.	Melting Point (^0C)	Boiling Point (^0C)
Chlorine	17	101	-34.7
Bromine	35	-7	58.8
Iodine	53	114	184

a) Which element is in liquid form at room temperature? Give a reason.(2 marks)

••

••

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••

b) Explain why the boiling point of iodine is much higher than that of chlorine. (2 marks)

••

••

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••

Q27. Study the standard reduction potential given and answer the questions that follow.

(The letters are not the actual symbols of the elements).

			E^{θ} (volts)
$M^{2+}_{(aq)}$ + 2e	→	$M_{(s)}$	-0.76
$N^{2+}_{(aq)}$ + 2e	→	$N_{(s)}$	-2.37
$P^{+}_{(aq)}$ + e	→	$P_{(s)}$	+0.80
$Q^{2+}_{(aq)}$ +2e	→	$Q_{(s)}$:	-0.14

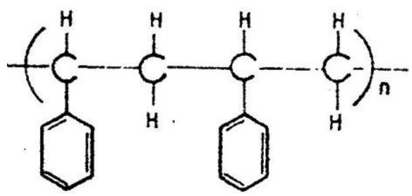
a) The standard reduction potential for Fe^{2+}(aq) is -0.44 volts. Select the element which would best protect iron from rusting.(1 mark)

••

••

b) Calculate the E $^{\emptyset}$ value for the cell represented as $M_{(s)}$ / $M^{2+}_{(aq)}$ // $P^{+}_{(aq)}$ /P(s). (1mark)

Q28.The formula given below represents a portion of a polymer



Give:

a) The name of the polymer. (1mark)

••

••

b) Draw the monomer. (1mark)

c) One disadvantage of continued use of this polymer. (1mark)

••

••

Q29. A sealed glass tube containing air at s.t.p was immersed in water at 100^{0}c. Assuming that there was no increase in the volume of the glass tube due to the expansion of the glass, calculate the pressure of the inside tube. (standard pressure = 760mmHg,) (2marks).

NAME……

INDEX NO. ……CLASS…….. ADM NO…….

DATE: …….. SIGN: ……..……...…

233/2
Chemistry paper two
Time 2 hours.

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary education (K.C.S.E)

INSTRUCTIONS

1. write your name and index number in the space provided
2. sign and write the date of examination in the space provided above
3. Answer all questions in the space provided after each question
4. mathematical tables and electronic calculators may be used
5. all working must be clearly shown where necessary

FOR EXAMINER'S USE ONLY

Questions	Maximum score	Candidate's score
1-	**80**	

1. The grid below forms part of the periodic table. Study it and answer the questions that follow. The letters do not represent the actual symbols of the elements.

P				T	V	W	Y	M
	Q		S	U		X		
	R						Z	

a) Write the general name given to the elements to which Y and Z belong. (1mk)

.....

.....

b) An element N has an atomic number of 15. Write down its electronic arrangement and hence fix it in its right position on the grid above. (2mks)

Electronic arrangement _____

c) Compare the size of the atom of R and that of its ion. Explain your answer.(2mks)

.....

.....

.....

.....

d) Give the formula of the compound formed between

i. P and W _____ ½ mk

ii. T and Y _____ ½ mk

e) Compare the melting points of element Q and S. Explain (2mks)

.....

.....

.....

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f) State the least reactive element in the grid. Give a reason for your answer (2mks)

Element_____

Reason

_____

_____

_____

g) Give two advantages that element S has over element Q in making electric cables (2mks)

.....

.....

.....

.....

h) Draw (a) dot (.) and cross (x) diagram to represent the bonding in compound formed between T and Y (2mks)

2. Study the condensed formulae below and answer the questions that follow
(a) I $CH_3CH\ (CH_3)\ CH_2CHCH_2$

II $CH_3CH_2CH\ (OH)\ CH_2OH$

i. Draw the structural formula of each of the compounds I and II (2mks)

I. .

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II. .

ii. Give the systematic name of each of the compounds represented by the formulae above (2mks)

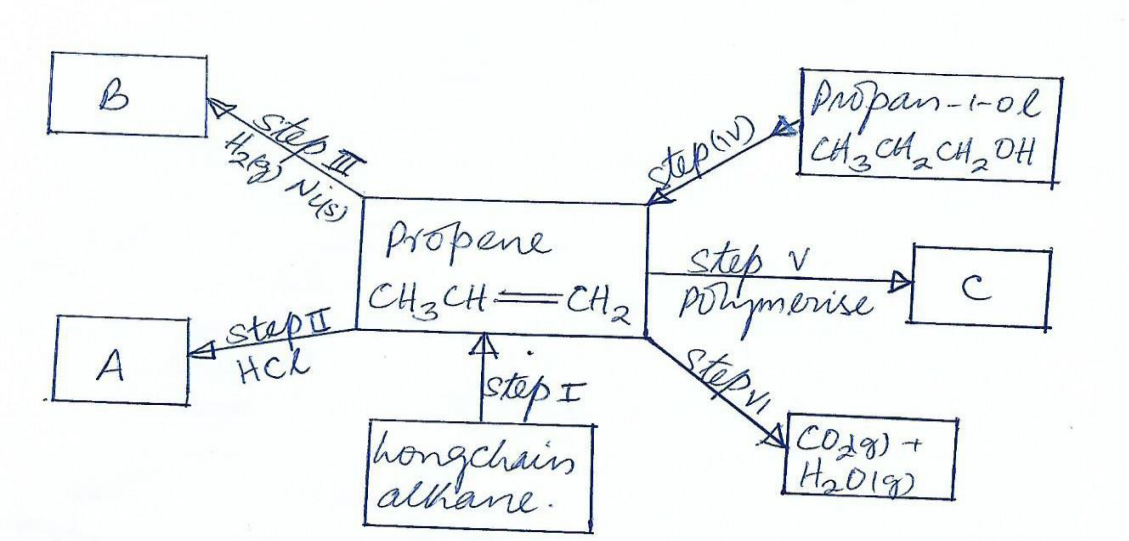
I _____

II _____

iii. To which homologous series does the compound represented by I belong (1mk)

.....

.....



(b) The flow chart below shows some reactions starting with a long chain alkane. Study it and answer the questions that follows.

i. Name substance (3mks)

A _____

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B______________________________

C_______________________________

ii. What is the name given to the process represented by

Step I__________________________ ½ mk

Step III_________________________ ½ mk

Step IV_____________________________ ½ mk

Step VI_________________________½ mk

iii. Write down the chemical equation represented by the reaction in step VI (1mk)

••

••

(a) The following table shows the standard reduction potentials for four half cells. Study it and answer the questions that follow. The letters do not represent the actual symbols of the elements

E θ volts

$W_{2(g)} + 2e- \quad \rightarrow 2W -_{(aq)} + 0.54$

$X^{2+}_{(aq)} + 2e- \quad \rightarrow X_{(s)} \qquad - 0.44$

$Y^{2+} \; + 2e- \; \rightarrow \quad Y_{(s)} \qquad + 0.34$

2Z (aq) + 2e- $Z_{2\,(g)}$ $\rightarrow$ $Z_{2(g)}$0.00

i. Explain why the Z half- cell has 0.00 voltage (1mk)

••

••

••

ii. Identify the strongest reducing agent (1mk)

••

••

iii. Write the equation for the reaction which takes place when solid X is added to the solution containing Y^{2+} ions (1mk)

••

••

iv. Which two half-cells above would provide the highest voltage if connected?(1mk)

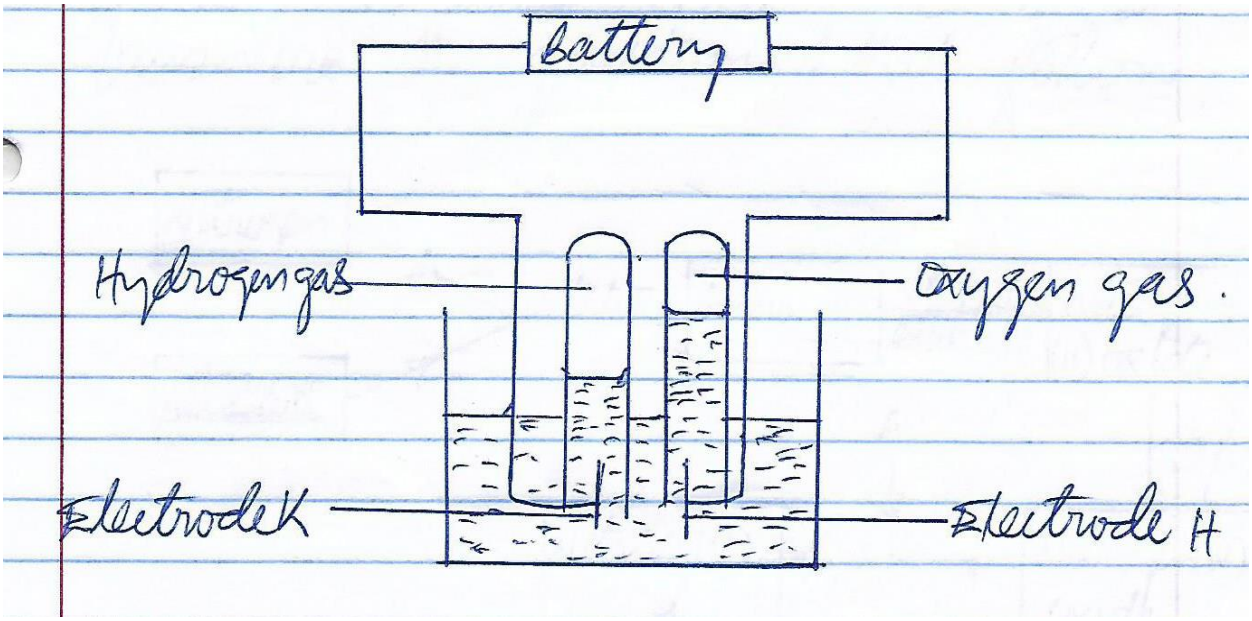
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••

••

v. Calculate the voltage generated by the half-cell you have mentioned in (IV) above (2mks)

(b) The following diagram shows the electrolysis of water that is slightly acidic study it and answer the questions that follows.



i. Identify (1mk)

Electrode K ……

ii. Why was it necessary to acidify the water? (1mk)

……

……

……

iii. Explain why the water could not be acidified using hydrochloric acid if the desired products were oxygen and hydrogen (1mk)

……

……

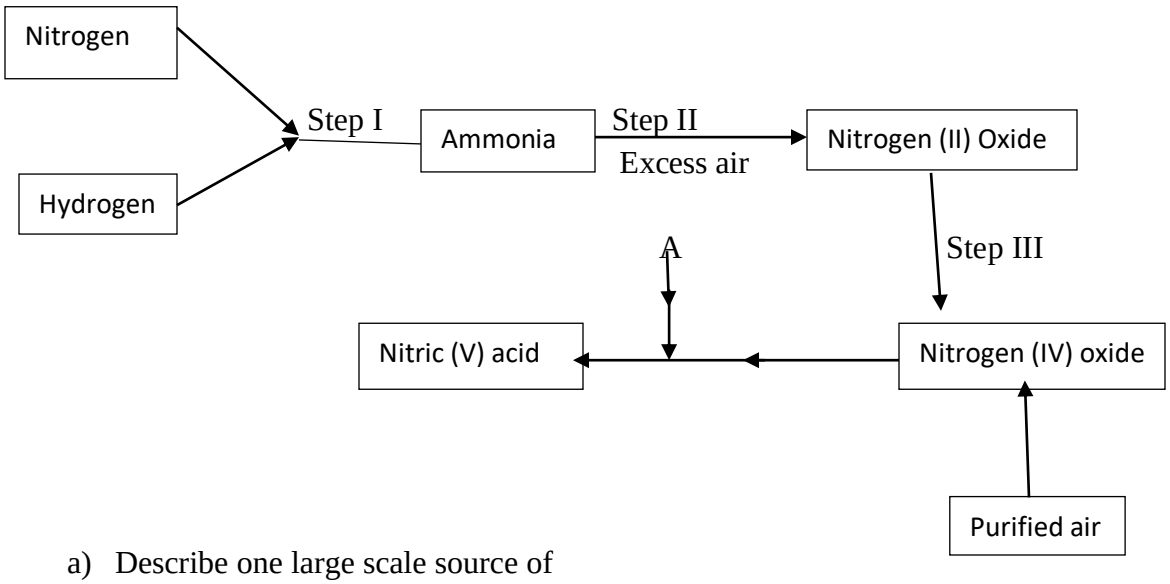
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iv. During the electrolysis of aqueous copper (II) sulphate 48,250 coulombs of electricity were used. Calculate the mass of copper that was deposited at the cathode (2mks)

(IF=96500columbs Cu=63.5)

3. The diagram below represent two industrial processes; one leading to the manufacture of ammonia and the second leading to the manufacture of Nitric acid. Study it and answer the questions that follow.



a) Describe one large scale source of

i. Nitrogen (1mk)

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ii. Hydrogen (1mk)

••

••

b) Name the catalyst required in

i. Step II____

ii. Write the chemical equation for the reaction that takes place between ammonia and oxygen in the presence of the catalyst you have named in b (i) above (1mk)

••

••

c) Ammonia reacts with nitric acid to form substance P.

i. write the chemical equation for the formation of substance P (1mk)

••

••

ii. Give one possible use of substance P (1mk)

••

•••

d) Give the general name given to the process represented by Step I (1mk)

••

••

••

e) Nitrogen and hydrogen reacts according to the following equation at 450°c and 200 atmospheres

$N_{2\,(g)} + 3H_{2\,(g)} \rightleftharpoons 2NH_{3\,(g)}\ \Delta H = -92kJ$

i. State and explain how the yield of ammonia would be affected if the pressure is reduced (2mks)

.....

.....

.....

.....

ii. Name one use of nitric acid apart from making substance P named in (c) above (1mk)

.....

.....

f) Name substance A and write an equation to show how it reacts with nitrogen (IV) oxide to form nitric (V) acid

Substance A_____

Equation

.....

.....

4. (a) Draw a diagram in the space provided below to show how the heat of combustion of ethanol can be measured experimentally (3mks)

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(b) In an experiment to measure the heat of combustion of ethanol the following data was collected.

Volume of water	$450cm^3$
Initial temperature of water	25°c
Final temperature of water	46.5°c
Mass of ethanol + lamp before heating	125.5g
Mass of ethanol + lamp after heating	124.0g

i. calculate:

I. Heat evolved during the experiment (Density of water $=1g/cm^3$. Specific heat capacity of water $=4.2KJ\ Kg^{-1}K^{-1}$) (2mks)

II. Molar heat of combustion of ethanol (C=12, O=16, H=1) (2mks)

ii. The molar heat of combustion obtained from an experiment like the one above is usually lower than the theoretical value. Explain (2mks)

••

••

••

(c) The molar heat of combustion of hydrogen is given as $-286KJmol^{-1}$

i. Write the thermochemical equation for the reaction above (1 ½ mk)

••

••

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ii. Draw an energy level diagram for the reaction in c(i) above (2mks)

d) (i) What is a fuel? (1mk)

••

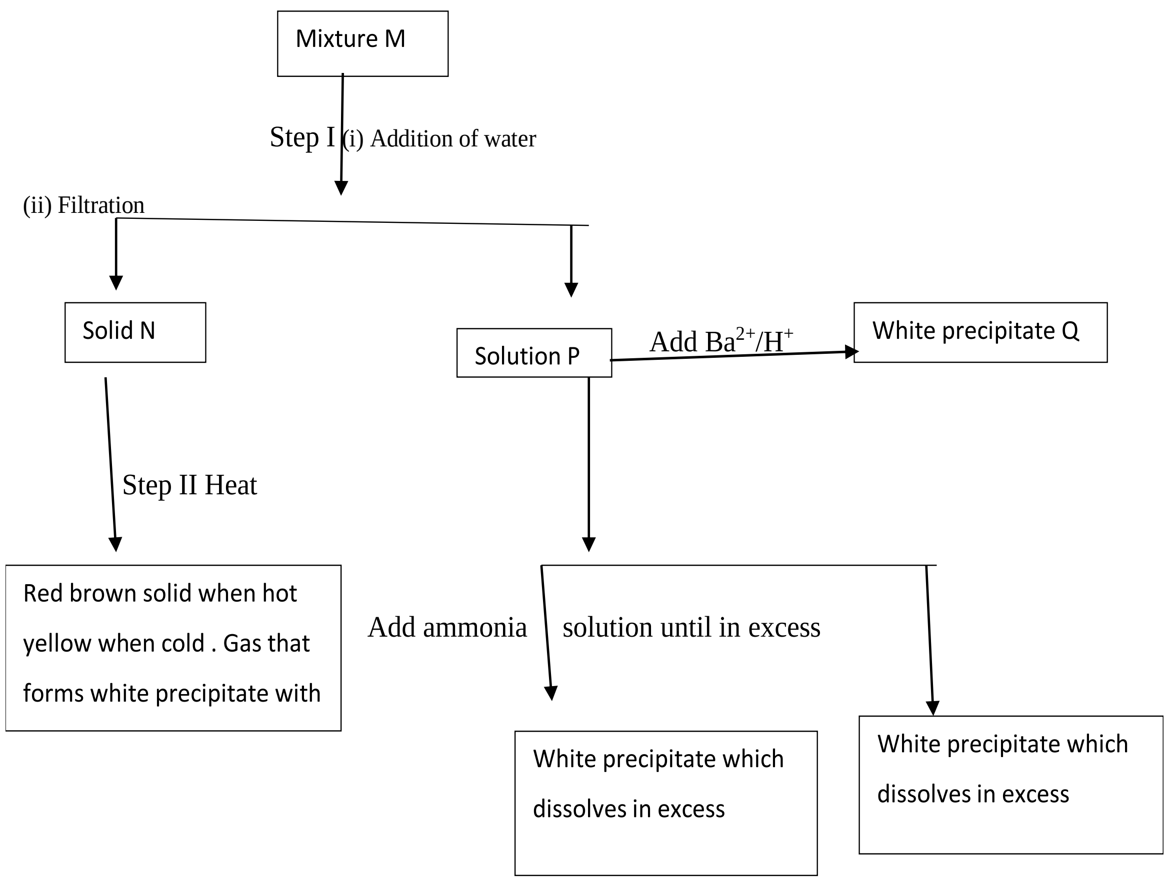
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(ii) Name one environmental effect of using carbon and some of its compounds as fuels(½mk)

••

••

5. (a)



The diagram above shows some reactions starting with mixture M. Study it and answer the questions that follow.

i. Name the possible identity of

Solid N_____ (1mk)

Solid P_____(1mk)

ii. Write the formula of the identity of white precipitate Q

.....

.....

iii. Describe the test that can be carried out to test for the presence of the cation in solid N and give the possible observations if the test is positive. Fill this information in the table below.

Test	Observation
1. (1mk)	(1mk)
2. (1mk)	(1mk)

(b) Starting with Copper (II) Oxide, explain a step by step method that can be used to prepare crystals of copper (II) sulphate (3mks)

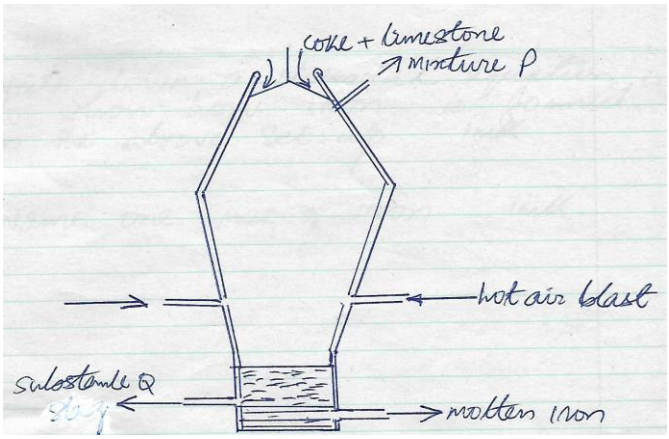
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6. The diagram below shows a blast furnace that is used in the extraction of iron



a) State the composition of mixture P (2mk)

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.....

.....

.....

b) Write down the use of the following in the process above.

i. Limestone .(1mk)

.....

.....

.....

ii. Coke (1mk)

.....

.....

.....

c) Name substance Q and write chemical equations to show how it is formed

Name ____(1mk)

Chemical equations (2mks)

……

……

……

d) Write down a chemical equation to show how iron is formed in the above set-up. (1mk)

……

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e) Name one use of iron (1mk)

……

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……

This is the last printed page.

NAME……

INDEX NO. …… CLASS…… ADM NO……

DATE: …….. SIGN: ……..……..

CHEMISTRY

PRACTICAL

233/3

TIME: 2 ¼ Hours

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary education (K.C.S.E)

INSTRUCTIONS TO CANDIDATES

- Write your **name** and **indexnumber** in the spaces provided.
- **Sign** and write the **date** of examination in the spaces provided.
- Answer ***all*** the questions in the spaces provided in the question paper.
- You are not allowed to start working with the apparatus for the first 15 minutes of the 2 ¼ hours allowed for this paper. This time is to enable you to read the question paper and make sure you have all the chemicals and apparatus you need.
- All working **must** be clearly shown where necessary.
- Mathematical tables and electronic calculators may be used

For examiners use only

Question	Maximum Score	Candidate's Score
1	22	
2	10	
3	08	
TOTAL	40	

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1. You are provided with;
    - Solution **A**, 2M Hydrochloric acid
    - Solution **B**, 0.2M Sodium hydroxide
    - 6 pieces of 2cm length of **magnesium** ribbon.

You are required to determine the mass of magnesium ribbon that reacted with hydrochloric acid.

PROCEDURE I

i) Using clean measuring cylinder, measure $50cm^3$ of solution **A** into a 100ml glass beaker

ii) Put one piece of **magnesium ribbon**into solution **A** in the 100ml glass beaker and **simultaneously** start the stop watch

iii) Record the **time taken** by magnesium ribbon to get completely finished in the table I.

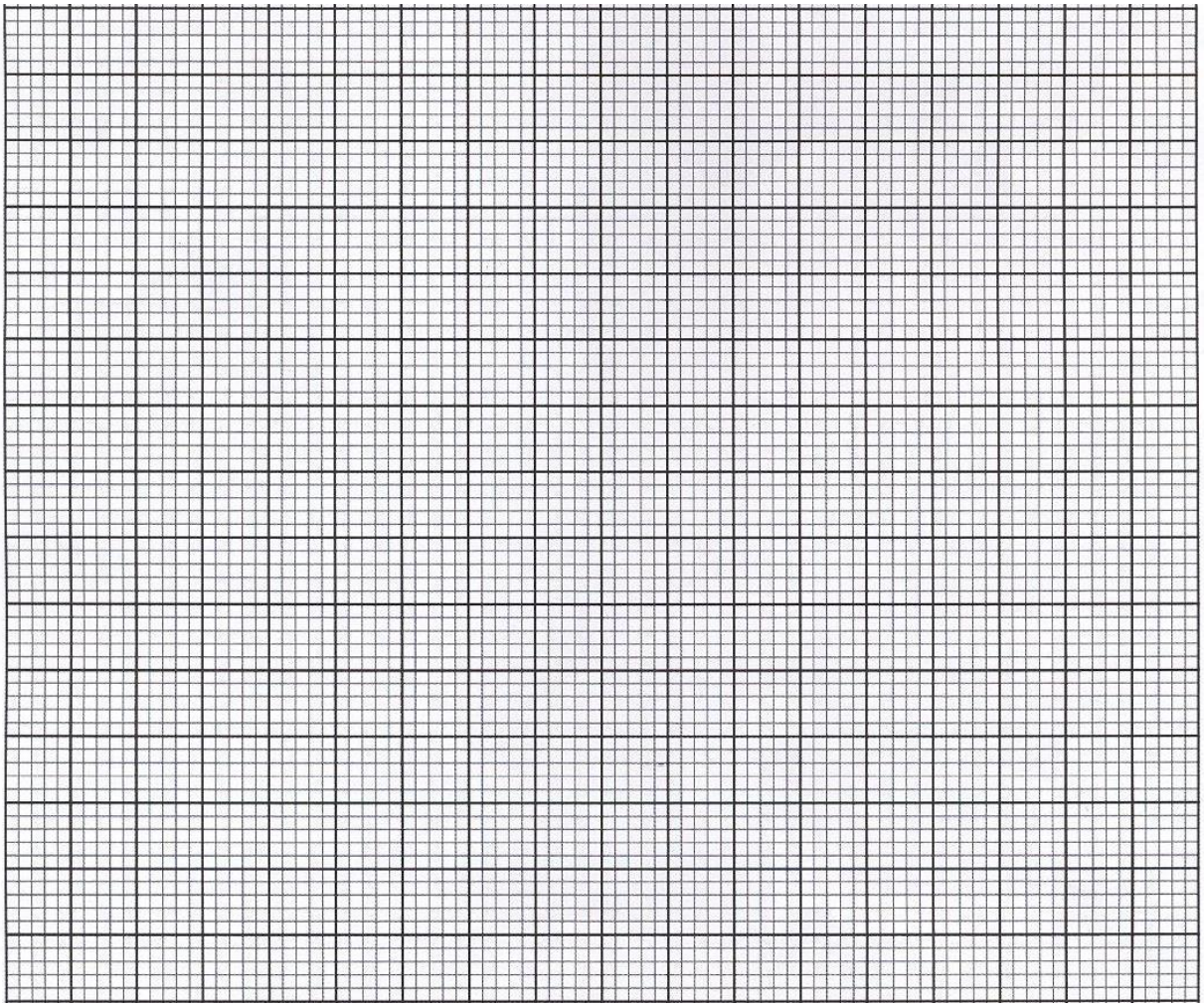
Repeat procedure (ii) and (ii) using the same solution in procedure (i) adding each piece of solution, M and **RETAIN** it for procedure II (5marks)

TABLE I

Magnesium ribbon	1^{st}	2^{nd}	3^{rd}	4^{th}	5^{th}	6^{th}
Time taken(s)						
$\frac{1}{\text{time}}$ (s^{-1})						

a) Plot graph of 1 (vertical axis) against the magnesium ribbon. (3marks)
time

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b) From the graph determine the time that would be taken for 5cm piece of the ribbon to get completely finished. (2marks)

PROCEDURE II

Transfer all the solution **M** from procedure I into a 250ml volumetric flask. Top up the flask to the mark with distilled water and shake. Label as solution **N.**

- Fill the burette with solution **N.**
- Using a pipette and pipette filler, place 25cm^3 of solution **B** in a 250ml conical flask. Add 2 drops of phenolphthalein indicator and titrate with solution **N.**
- Record your results in table II. Repeat the titration two more times and complete the table.

TABLE I

	I	II	III
Final burette reading			
Initial burette reading			
Volume of solution **N** used (cm^3)			

(4marks)

c) Calculate the;

i. Average volume of solution **N**(1mk)

ii. Mole of sodium hydroxide, solution **B** used (1mk)

iii. Moles of hydrochloric acid, solution **N,** used. (1mk)

iv. Moles of hydrochloric acid in 250cm^{3}of solution **N**. (1mk)

v. Moles of hydrochloric acid in 50cm^3 of solution **A.**(1mk)

vi. Moles of hydrochloric acid in solution **A** that reacted with all the pieces of magnesium ribbon. (1mk)

vii. Mass of magnesium ribbon used in the reacted (Mg = 24) (2mks)

2. You have provided with solid K carry out the test below and record your observation and inferences in the spaces provided.

   a) Place all of solid K in a boiling tube. Add 10cm^3 of distilled water and shake. Keep the mixture for the test in part (b) below.

Observations	**Inferences**
(1mark)	(1mark)

b) Divide the mixture from (a) above into 4 portions

i) To the first portion, add aqueous ammonia drop wise until in excess.

Observations	Inferences
(1mark)	(1mark)

Dip a clean end of glass rod into the second portion, and place in on a non-luminous flame.

Observation	Inferences
(1mark)	(1mark)

ii) To the third portion, add four drops of barium chloride solution.

Observations	Inferences
(1mark)	(1mark)

iii) To the fourth portion, add two drops of acidified potassium manganate (VII) solution

Observations	Inferences
(1mark)	(1mark)

3. You are provided with liquid Z. Carry out the tests below.

a) Place about $1cm^3$ of liquid Z on a watch glass and light using a burning splint.

Observation	Inference
½ mk	½ mk

b) Place about $5cm^3$ of liquid Z in a boiling tube. Add 3cm3 of distilled water and shake the mixture.

Observation	Inference
½ mk	½ mk

c) Divide the solution above into four portions;

(i) To the first portion test with litmus papers

Observation	Inference
½ mk	½ mk

(ii) To the 2nd portion, add 2-3 drops of universal indicator.

Observation	Inference
1 mk	1 mk

(iii)To the 3rd portion, add a little Sodium Carbonate

Observation	Inference
½ mk	½ mk

(iv)To the fourth portion add 2-3 drops of acidified Potassium dichromate (VII) solution then warm

Observation	Inference
1mk	1mk

NAME……

INDEX NO…….. DATE…… SIGN……

ADM NO ……. SREAM …….

313/1
CHRISTIAN RELIGIOUS EDUCATION
PAPER 1
TIME: 2½ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary Education (K.C.S.E)

INSTRUCTION TO CANDIDATES

Answer any **five** questions

This paper has two printed pages

QUESTION	**1**	**2**	**3**	**4**	**5**	**6**
MARKS						

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ANSWER ANY FIVE QUESTIONS

1 (a)**Identify** ways in which teaching CRE in schools can lead to national unity(7marks)

(b)**Describe** the translation of the bible from the original language to the local language inKenya (7marks)

(c) Give **seven** ways in which the bible suits the contemporary Christian living (6marks)

2 (a) Outline the instructions given to Abraham concerning circumcision in Genesis 17:10-14 (6marks)

(b) Identify **seven** ways in which the promises of Abraham were later fulfilled(7marks)

(c) Identify the elements of Jewish worship which are found in Christian worship today(7marks)

3(a) Give **six** conditions that made it difficult for Elijah to stop idolatry in Israel (6marks)

(b) Differentiate between Yahweh worship and Canaanitesworship (8marks)

(c) What purpose do church premises serve in today's Christianity (6marks?)

4(a) Outline **seven** similarities between the Old testament and the traditional African prophets(7marks)

(b) State **seven** ways in which God would punish Israel for their evil according to prophet Amos(7marks)

(c) How does the church in Kenya punish errant members (6marks)

5 (a) State the promises that the Israelites made when they renewed their covenantwith God during the time of Nehemiah (7marks)

(b) Give **six** reasons why Nehemiah carried out religious reforms in Judah (7marks)

(c) Outline **five** ways in which the government of Kenya supports church leaders in their work(6marks)

6 (a) Why was naming ceremony important in traditional African society(6marks)

(b)State seven practices in traditional African society that show their belief in life after death (7marks)

(c) Give seven reasons why single parenthood was rare in traditional African community (7marks)

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NAME……

INDEX NO. …… CLASS…… ADM NO……..…

DATE: …….. SIGN: ……..…….……

CRE PAPER2 313/2

TIME 2 ½ hours

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary education (K.C.S.E)

CRE PAPER2 313/2

TIME 2 ½ hours

INSTRUCTIONS TO THE CANDIDATES

a) Write your name and index number in the spaces provided
b) Sign and write the date of the examination in the spaces provided above
c) This paper consists of six questions
d) Answer any five questions in the answer booklet provided
e) Each question carries20 marks
f) Candidates should answer the questions in English

For examiner's use only.

Q.I	Q.2	Q.3	Q.4	Q.5	Q.6

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Q1. (a) Outline Nathan's prophecy concerning the messiah (2 Sam 7:3-17) 6 marks.

(b) What took place when Mary visited Elizabeth? (Luke 1:39-56) 7mks.

(c) What is the significance of what happened at the time of Jesus'birth to a Christian today?7mks.

Q2 (a) Outline the teachings of John the Baptist in the wilderness.(Luke 3:7-20) 7 marks.

b) Describe the incident when Jesus was tempted in the wilderness (Luke 4:1-13) 7marks.

c) Outline **six** ways in which a Christian can be tempted today. 6 marks.

Q3 (a) Describe the raising of Jairus' daughter (Luke 8:40-56) 7marks.

(b) Give an account of the preparation of the last supper (Luke22:7-13) 6marks.

(c) State **seven** lessons that Christians learn about Jesus from the events which took place on the cross.7marks

Q4 (a) How did the Holy Spirit manifest Himself on the day of Pentecost? 5marks

(b) Outline the teachings of St.Paul on the unity of believers in the image of the body of Christ.8marks

(c) Outline **seven** leadership qualities demonstrated by Peter on the day of Pentecost. 7marks

Q5 (a) Describe **seven** Christian teachings on human sexuality. 7marks

(b)Outline **seven** qualities of good leisure from a Christian point of view.7marks

(c) Give reasons why children should participate in church activities.6marks

Q6 (a) Identify ways in which wealth is acquired in the traditional African society. 6 marks

(b)Explain **eight** causes of poverty in Kenya today. 8marks

(c) Suggest **six** ways in which the government of Kenya reduces problems related to land conflict. 6marks

Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

NAME……

INDEX NO……DATE……..…… SIGN ……

STREAM …… ADM NO …….

English paper 1

Time: 2hrs232/2

AMOBI PUBLISHERS GROUP OF EXAMINERS PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary Education (KCSE)

INSTUCTIONS TO CANDIDATES

a)Write your name and index number in the spaces provided at the top of the page.

b)Write the date of the examination in the spaces provided above.

c)Answer all the questions in the spaces provided

d)The paper consists of6printed pages.

e) Students should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

f)Ensure your work is neat.

FOR EXAMINER'S USE ONLY

QUESTION	**MAXIMUM SCORE**	CANDIDATES'S SCORE
FUNCTIONAL WRITING	**20**	
CLOZE TEST	**10**	
ORAL SKILLS	**30**	
TOTAL	**60**	

1. **FUNCTIONAL WRITING**

Imagine that you have just been appointed the secretary of Save the Orphans club,a clubbased in your sub-county. One of your duties is to embark on recruiting as many members as possible.The key considerations for recruitment are: performance in academics,area of residence, health and religious background.

Design a form you would expect them to fill in. 20marks

Prefer Calling Sir Obiero Amos @ 0706 851 439 for Marking Schemes

2. **CLOZE TEST**

Read the passage below and then fill in the gaps with the most appropriate word. Use only one word in each space. **10marks**

Handwriting speaks volumes of an individual.So,next time you are hard pressed for time in analyzing an individual, just look at his 1 _____ and you will understand his personality,temperament and behavior. Handwriting is a personal expression, and 2_____who the individual is on the inside.Everybody's handwriting is unique like one's fingerprint.Since there is so much of science behind a person's handwriting,researchers have come up with a term called3,_____ which is indeed the study of handwriting.

First and foremost,when analyzing a person's handwriting,it is 4_____to look at the slant of his writing.If a person's writing slants towards the left, it means that he 5_____ not express his emotions well.If there is a lack of slant in a person's writing, it means that he thinks with his heart and mind; he uses both emotions and logic to understand a situation. On the other hand, people who write with a forward slant,or a right slant,6._____more caring and emotional.

A signature of a person is 7._____aspect of handwriting too.Elaine Ness,a professional handwriting analyst, believes that a signature reflects a person's communication skills and how he wants to be perceived 8._____ the public.If a person's signature is legible,it means that he is comfortable with what he9._____expressed.An illegible signature implies that an individual is10._____interested in gaining public recognition.

3. **ORAL SKILLS** **30marks**

a) Identify the genre that the following item falls into:

i) Fail not to first carve a lean calf, four fat calves and five fine vine leaves 1**mark**

.....

.....

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ii) State two features of the above genre 2**marks**

••

••

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••

iii) State two functions of the genre 2**marks**

••

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••

b) Provide words that are similar in pronunciation to the following 4marks

i)pale ……………………………

ii)Tor……………………………….

iii) Clew…………………………………

iv)Watt…………………………………….

C) State whether a falling intonation or rising intonation has been used in following: 4marks

i) Kimen is gone forever.

••

••

ii) Is Kamau an artist?

••

••

iii)Come right away!

••

••

iv)Where is your dirty shirt?..

d) Underline the part of the word in boldface that you would stress in the sentence. 4marks

i)The **in.tern**will soon get his reward from the doctor.

ii)No one can **con.test** what you have said.

iii)The death of his father made us to**con.sole**him

iv)Whose**pres.ent** is this?

e) The following words have either an /s/ or /z/ sound. Group them according to the sound. 5marks

Rise hose

President advise

Loose precedent

Advice rice

Clause lice

f) What non-verbal skills would you use in the following situations? 2marks

i)Telling someone to keep quiet.

••

••

ii)Bidding someone bye.

••

••

g) You are asked to narrate your favourite oral narrative. List the things you would do to ensure an effective and meaningful performance. 6marks

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Name……

INDEX NO…….. ADM NO ……DATE……

SCHOOL……Sign……

101/2 English Paper Two

Comprehension, Literary Appreciation, Grammar =

Time: 2 ½ HRS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

INSTRUCTIONS TO CANDIDATES

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

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

(c) Answer all the questions in this paper.

(d) All your answers must be written in the spaces provided.

(e) This paper consists of 10 printed pages. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

For Examiner's use only

Question	Maximum Score	Candidate's Score
1	20	
2	25	
3	20	
4	15	
Total Score	80	

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QUESTION 1: UNSEEN TEXT COMPREHENSION.

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

The question is at least as old as Socrates: If we know what the right thing to do is, why do we not do it? It is an especially acute question when applied to global warming. The scientific evidence showingthat carbon dioxide emissions are already changing the planet's climate, and are likely to have severe effects (melting ice caps, sea-level rise and species extinction), is compelling and now barely disputed. Almost 90% of Europeans say they recognizeclimate change as a major issue, and 75% identify fossil fuel emissions as a major cause.

And yet, as was widely discussed at a conference of environmentalists, geologists and writers in May 2006 in Ankelohe, Germany, public understanding has not translated into even the simplest of public actions. Less than 1% of Britons, for example, have switched their home electricity to renewable sources, even though it requires little more than a phone call to one's existing provider. Proportions on the continent are slightly higher, but there is clearly no rush to go green or - shudder – stopdriving cars.

Why such a **disconnect** between information and action? Part of the problem is that environmental advocates emit mixed messages. In mid-May 2006, Britain's *Guardian* published a front-page story showing that five companies in Britain produce more carbon dioxide pollution in a year than all the country's motorists combined. That must be a strong argument for targeting industries, but the average reader could hardly be blamed for thinking, "Why should I bother to cut down my driving?"

Similarly, not enough thought has been devoted to the best role for government. Climate change is too vast a problem for individuals to solve alone, and some big businesses have an incentive not to solve it. That leaves government to take the lead, which is tricky, because over-reliance on government can allow individuals to **fob off** their own responsibilities. What is worse, government power seems to tickle autocratic fantasies. In my experience, environmentalists spend far too much energy advocating hardline government 'solutions' that do not stand a chance of being enacted.

Sure, it might be good for the planet if governments banned the use of sports-utility vehicles or, for that matter, of all fossil fuels. Yet not only is it hard to sell outright prohibitions to voters, but the sad truth is that governments have a woeful record in even the mildest interventions. One of the most significant innovations in the last decade has been Europe's carbon-emission trading scheme: some 12,000 companies, responsible for more than half of the EU's emissions, have been assigned quotas. Companies with unused allowances can sell them; the higher the price, the greater the **incentive** for firms to cut their use of fossil fuels. The systemseemed to work for about a year — but now it turns out that Europe's governments allocated far too many credits, which will likely hinder the program's effectiveness for years.

Perhaps the real reason that well-intentioned consumers do not change is that they do not see any benefit. Climate change may be a frightening, irreversible **calamity**, but its worst effects will not be felt next week or next year. The planet looks the same regardless of whether we use environmentally friendly technology or we do not care how much carbon dioxide we emit. But as surely as the sun rises and sets every day, if we do not cut down on carbon emissions, then we may not have a planet to hand over to the next generation.

a) According to the passage, what are the effects of global warming? ……………. (4 marks)

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b) What, according to the passage, is the main cause of global warming?......................(2 marks)

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……………………………………………………………………………………………

c) How does Britain encourage people to use renewable electricity? ……………………(2 marks)

……………………………………………………………………………………………

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d) Make notes on why climatic pollution is a difficult problem to solve ………….(3 mks)

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e) That must be a strong argument for targeting industries, ______________________________

(Add a question tag) (1 mk)

f) Paraphrase the following sentence: If we do not cut down on carbon emissions, then we may not have a planet to hand over to the next generation (1 mark)

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

g) What message does the writer communicate in this passage? (2 marks)

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……

h) Explain the meaning of the following words and expression as used in the passage..(4 marks)

(i) fob off

……

……

(ii) incentive

……

……

(iii) calamity

……

……

(iv) Disconnect

……

……

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QUESTION TWO: SEEN TEXT COMPREHENSION (25 MARKS)

Read the extract below and answer the questions that follow.

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

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

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

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

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

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

Nora: Do I?

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

Nora :(*Looks at him*) Well?

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

Nora: No; what makes you think that?

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

Nora: No, I assure you, Torvald-

Helmer: Not been nibbling sweets?

Nora: No, certainly not.

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

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

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

Nora: Did you remember to invite Doctor Rank?

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

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

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

Nora: It's wonderful!

1. Place this extract in its immediate context….(4 marks)

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2. Identify one use of metaphorical language and explain its significance………(3marks)

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3. Helmer says here "It is splendid to feel that one has a perfectly safe appointment". What is he referring to?... (1 mark)

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4. What issues on money and gender emerge in this extract?............................... (4 marks)

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5. What dietary habit is Helmer discouraging Nora from? Illustrate your answer… (2 mks).

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6. What do we learn about the character of Helmer from this extract? …….(4 marks)

7. "Did you remember to invite Doctor Rank?" (Re-write in reported speech) …… (1 mark)

8. Based on what happens later in the play, how does the prevailing mood in this excerpt change and why?(3 marks)

••

••

••

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

   1. **Wheedling money out of me**

••

••

••

   2. **Confectioner's**

••

••

   3. **You gave me your word**

••

••

QUESTION THREE: LITERARY APPRECIATION. (20MKS)

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

The owner of yam peels his yam in the house:
A neighbour knocks at the door
The owner of yam throws his yam in the bedroom:
The neighbour says, "I just heard
A sound, 'kerekere', that is why I came,"
The owner of the yam replies,
"That was nothing, I was sharpening two knives."
The neighbour says again, "I still heard

Something like 'bi' sound behind the door."
The owner of the yam says,
"I merely tried my door with a mallet."
The neighbour says again,
"What about this huge fire burning on your hearth?"
The fellow replies,
"I am merely warming water for my bath."
The neighbour persists,
"Why is your skin all white, when this is not the Harmattan season?'
The fellow is ready with his reply,
I was rolling on the floor when I heard the death of Agadapidi."
Then the neighbour says, "Peace be with you."
The owner of the yam starts to shut,
"There cannot be peace
Unless the owner of food is allowed to eat his own food!"

Questions.

(a) Briefly explain what the poem is about. (2 marks)

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••

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••

(b) What does the neighbor hope to achieve by being so persistent? .(3 marks)

••

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(c) Using illustrations, describe any **two** character traits of the owner of the yam..(4 marks)

••

••

(d) Identify the ideophones words in the poem……(2 marks)

(f) How do we know that the neighbour is observant? (3 marks)

(g) Describe the tone of the owner of the yam…….(1 mark)

(g) The neighbour says, “peace be with you.” Why is this statement ironic?.....(3 marks)

••

••

(h) What lesson can we learn from this poem?..(2 marks)

••

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QUESTION 4: GRAMMAR (15 MARKS)

A: *Complete the following sentences by choosing the appropriate expressions tofill the gaps*.

(3mks)

(1) She chose her career __________________________ her father. (independent of, independent to, independent from, independent off)

(2) We decided to stay longer in Mombasa since we had_______a__little_______________ money left. (little, a little).

(3) The time keeper had ______________________ the bell before time.

***B: Rewrite the sentences below according to the instructions given after each without changing the meaning*. (3mks)**

(1) My father would not allow us to attend night parties under any circumstances.

(**Begin**: Under no ……………………….

••

••

••

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(2) The visitor spoke for one hour. I did not understand anything he said. (Join into one sentence using **however**)

••

••

••

(3) The meeting was <u>called off</u> because there was no quorum. (Replace the underlined phrasal verb using a single word with the same meaning)

••

••

C: Fill in the gaps in the following sentences using the correct prepositions(3mks)

(1) The rat ran ____________________ the hole when it saw the cat.

(2) The students travelled _____________________________ bus to Mombasa.

(3) My mother is fond ______________________ singing Christian hymns.

D: Combine each of the following pairs of sentences into one sentence using the instructions in the brackets (3 mks).

(1) Naliaka joined our school this term. Nalika is very good at grammar. (Use a relative clause)

••

••

(2) The elephant is a very big animal. The elephant is also very strong. (Use not only…….)

••

••

••

(3) The generator had been left on the whole night. The generator broke down in the morning. (Use having…..)

••

••

••

E. Answer the following questions on gender sensitivity as instructed. (2mks)

(1) The steward who served us in the plane is my cousin. (Replace the underlined word with a gender sensitive term).

••

••

••

(2) My uncle has recently bought a goose. (Replace the underlined word with a gender opposite one).

••

••

F: Give two possible meanings of the following sentence (1 mk).

Flying planes can be dangerous.

••

••

••

••

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NAME……..……

INDEX NO……..… CLASS…… ADM NO…….

DATE: ……..SIGN: ……

ENGLISH

Paper 3

2 1/2 hrs

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary education (K.C.S.E)

INTRUCTIONS TO CANDIDATES

(a) Answer three questions only
(b) Question 1 and 2 are compulsory.
(c) In question three answer only one of the optional texts you have prepared on.
(d) Where a candidate presents work on more than one optional text only the first one to appear will be marked.
(e) Each of your essay must not exceed 450 words
(f) This paper consists of two printed pages.
(g) Candidates should check the question paper to ascertain that no questions are missing.
(h) Candidates must answer the questions in English.

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	20	
3	20	
	TOTAL SCORE	

ANSWER THREE QUESTIONS ONLY

1. **Imaginative composition (compulsory) (20 marks)**
   Either
   (a) Write a composition ending in the following words …….. "If I was given another chance I would do things in a different way".
   Or
   (b) Write a story to illustrate the saying. "Once bitten twice shy".

2. **Compulsory set text.**

   Henry Ole Kulet, BLOSSOMS OF THE Savannah (20marks)

   "For Oloisudori and Olarinkoi there is no lesser evil." With illustrations from Henry Ole Kulet's, BLOSSOMS OF THE SAVANNAH write an essay illustrating the truth of this statement.

3. **The optional set texts (20marks)**
   Answer any of the following three questions.
   Either
   (a) The short story

   Chris Wanjala (Ed) Memories we lost

   "A strong desire to accumulate more wealth can lead one to making imprudent decisions" Using the short story HOW MUCH LAND DOES MAN NEED by Leo Tolstoy, write an essay to justify the above proposition.

   Or

   (b) Drama
   David Mulwa, Inheritance

With illustrations from David Mulwa's INHERITANCE write an essay showing how Neo-slavery manifests itself in African countries.

Or

(c) The Novel

John Steinbeck, The Pearl

"Fortune can sometimes lead us to calamities and bad omens." Discuss this statement with reference to THE PEARL by John Steinbeck.

NAME……..

INDEX NO…… CLASS…….. ADM……..

DATE…….....SIGN……..

312/1

GEOGRAPHY

PAPER 1

2 ¾ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary Education (K.C.S.E)

INSTRUCTIONS TO CANDIDATES:

a. The paper has **two** sections: **A** and **B**.
b. Answer all questions in section **A**.
c. In section **B** answer **6** and any other two questions.
d. All answers must be written in the foolscaps provided.
e. Candidates should check the question paper to ensure that all the pages are printed as indicated and that no question(s) are missing.

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM	CANDIDATE'S

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			SCORE
A	1-5	25	
B	6	25	
		25	
		25	

SECTION A

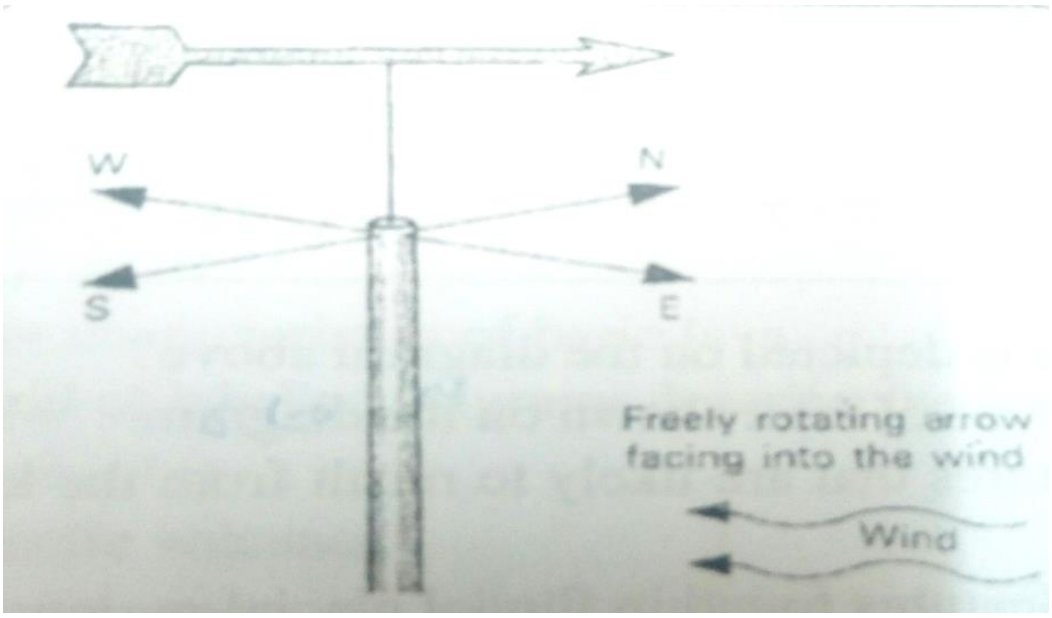
Answer all questions in this section

1. a) What is geography? (2marks)

(b) Name the **two** types of environment. (2marks)

2 .Give **three** proofs that the earth is almost spherical in shape. (3marks)

3. Use the diagram below to answer questions (a) below.



a.(i) Name the weather measuring instrument shown in the diagram. (2marks)

(ii) State the element of weather measured by the instrument named in a. (i) above. (2marks)

(iii) From the diagram, which direction is the wind blowing. (2marks)

b.Differentiate between absolute humidity and relative humidity. (2marks)

4. The diagram below shows a coastal landform.



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(a) Name the features marked **P** and **K**. (2marks)

(b) List down **three** types of ocean tides. (3marks)

5 (a) Name the types of earth movements that occur within the earth's crust. (2marks)

(b) Describe the origin of continents according to the theory of continental drift. (3marks)

SECTION B

Answer question 6 and any other two from this section.

6. Study the map of **Taita Hills (1:50,000 (189/4)** provided and answer the questions that follows

a (i) Identify the Province and the District shown on the map. (2marks)

(ii) Which **two** methods of showing relief have been used in the map? (3 marks)

b. (i) Calculate the area covered by Ronge forest. (2marks)

(ii) Give **two** natural features found in the grid square 3419. (2marks)

(iii) Calculate the bearing of the church in grid square **3218** from the school in grid square **3522**. (2marks)

c. (i) Using a vertical scale of **1cm** to represent **100Metres**, draw a cross section between Grid reference 300190 and grid reference 360190. (4marks)

(ii) On the cross section, mark and label the following features; (4 marks)

i. A hill
ii. A river
iii. Thicket
iv. Main track (motorable)

(iii) Calculate the vertical exaggeration of the cross section. (2marks)

(d) Citing evidence from the map, explain two factors influencing the distribution of settlement in the area covered by the map. (4 marks)

7. a. (i) Name **three** types of faults. (3marks)

(ii) Apart from compressional forces, describe **two** other processes that may cause faulting. (4 marks)

b. With the aid of diagrams, describe how compressional forces may have led to the formation of the Great Rift Valley. (8marks)

c.Explain **five** effects of faulting on human activities. (10 marks)

8.a. (i) Define the term Aridity. (2marks)

(ii) State **three** factors that makes wind an effective agent of erosion and deposition in the hot deserts. (3 marks)

(b) Describe how a rock pedestal is formed. (5 marks)

(c) Explain **four** significance of desert features to human activities. (8 marks)

(d) A group of form **four** students went out for a field study on action of water in an arid area.

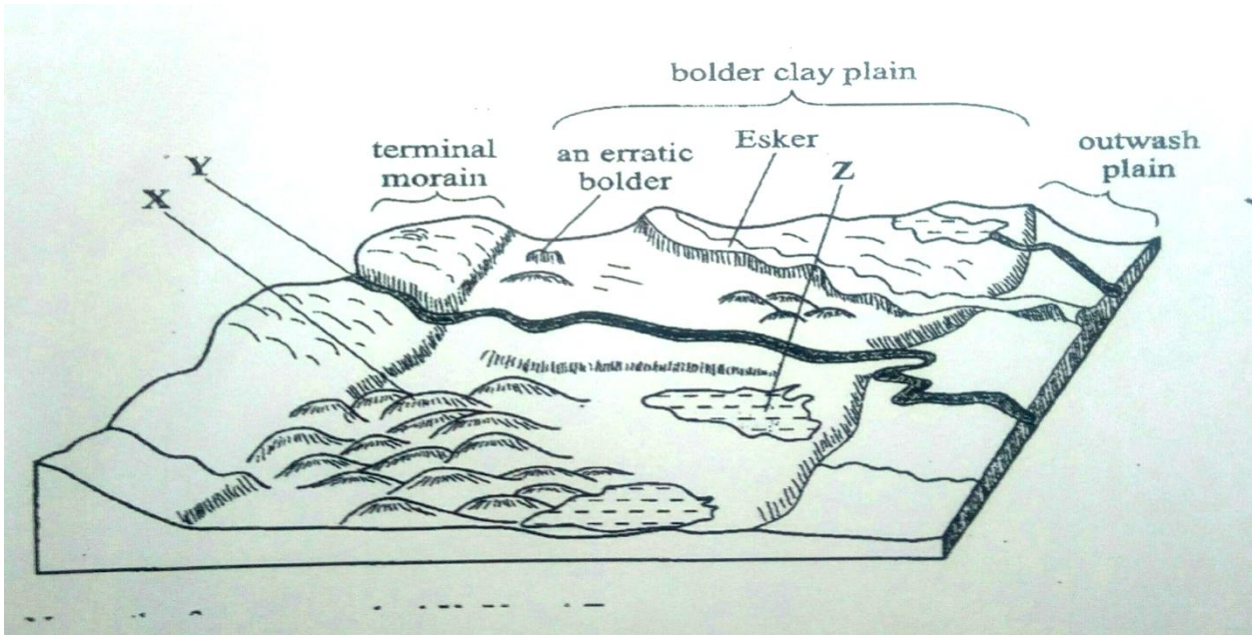
(i) Give **three** methods of data collection they may have used. (3 marks)

(ii) State **four** problems they have encountered during the field study. (4marks)

9 (a) Describe plucking as a process in glacial erosion. (4 marks)

(b) Explain three conditions that lead to glacial deposition. (6 marks)

(c) The diagram below shows features resulting from glacial deposition in a lowland area.



(i) Name the features marked **X, Y**, and **Z**. (3 marks)

(ii) Describe how terminal moraine is formed. (4 Marks)

(d) Explain **four** positive effects of glaciation in low land area. (8 marks)

10. a) What is soil catena? (2 marks)

ii) Draw a well labeled diagram showing the structure of a well-developed soil profile. (5 marks)

b) Differentiate between mineralization and humification in soil formation. (2 marks)

c) State **three** factors that determine the color of soil. (3 marks)

d) (i) State **four** factors that influence soil formation. (4 marks)

(ii) Explain how the following farming practices can cause soil degradation:

- Burning. (2 marks)

- Continuous application of fertilizer on farm land. (2 marks)

- Monoculture. (2 marks)

iii) State **three** uses of soil. (3 marks)

NAME:……

INDEX NO: …… ADM NO…….. SIGN……..……

DATE:……. STREAM……..

312/2
GEOGRAPY
Paper 2
2hrs 45 minutes

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AMOBI PUBLISHERS GROUP OF EXAMINERS
PRE-MOCK 3 EXAMS

Instructions to candidates

a) This paper has two sections: A and B
b) Answer all the questions in section A.
c) Answer question 6 and any other two questions form section B.
d) All answers must be written in the answer foolscaps provided.
e) Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.
f) Candidates should answer the questions in English.

TOTAL MARKS

SECTION A

Answer all the questions in this section

1. (a)Define eco-tourism. (2mks)

(b) State three benefits of eco-tourism. (3mks)

2. (a) Name **two** counties in Kenya where wheat is grown in large scale. (2mks)

(b) List **three** problems facing wheat farmers in Kenya. (3mks)

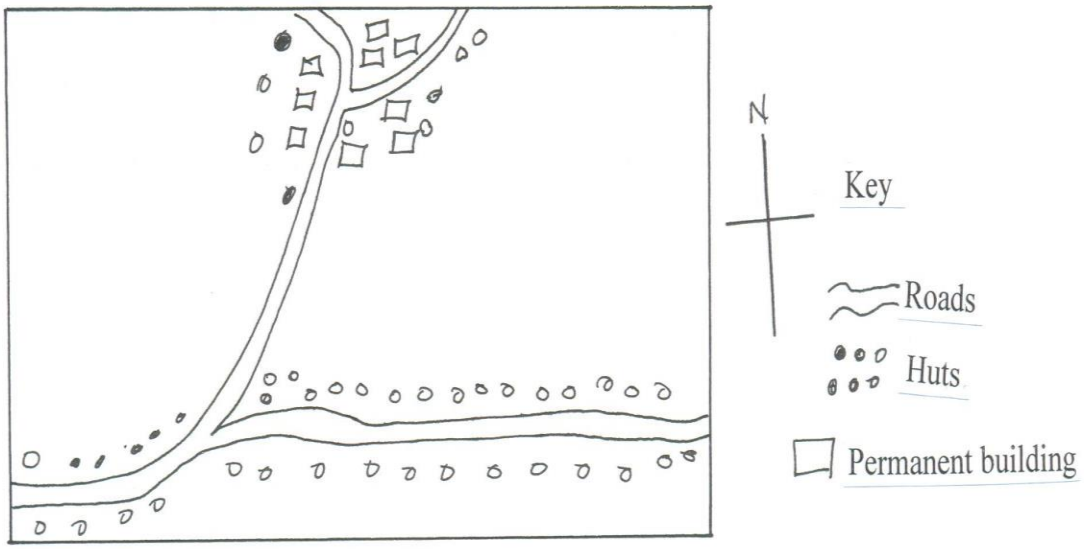
3. (a) (i) Give **two** types of domestic trade. (2mks)

(b) State**three** factors influencing internal trade in Kenya. (3mks)

4. (a) Differentiate between environmental management and environmental conservation. (2mks)

(b) Give **three** natural environmental hazards you know. (3mks)

5(a) Study the sketch map below and answer the questions that follow



Identify **two** settlement patterns represented by the sketch map. (2mks)

(b) State **three** causes of rural to rural migration. (3mks)

6(a) The table below shows East Africa's milk production in '000' litres from 1998 – 2001

Country /Year	1998	1999	2000	2001
Kenya	30	41	36	25
Uganda	20	25	27	29
Tanzania	52	60	65	70

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(i) Draw a compound bar graph to represent the above data. Use a vertical scale of 1cm represents 10 ,000 litres. (7mks)

(ii) State **two** limitations of compound bar graph in representing data. (2mks)

(b) (i) Name **three** counties in Kenya where dairy farming is practiced in large scale. **(**3mks)

(ii) State **four** similarities between dairy farming in Kenya and Denmark. (4mks)

(c)(i) Mention **three** types of dairy animals reared in Kenya. (3mks)

(ii) Explain **three human** factors favoring dairying in Denmark. (6mks)

7.(a) (i) Distinguish between transport and communication. (2mk)

(ii) Explain how construction of transport networks is affected by the following factors.

- Relief (2mks)

-Economic factors. (2mks)

(b) (i) State **four** factors that hinder the development of air transport in Africa. (4mks)

(ii) Name **two** canalsthat are found in Africa. (2mk)

(c) State **five** recent developmentthat have taken place in Kenya to improve communication. (5mks)

(d) Explain **four** ways in which transport and communication has improved economic development in Africa. (8mks)

8.(a) (i) What is fishing? (2mks)

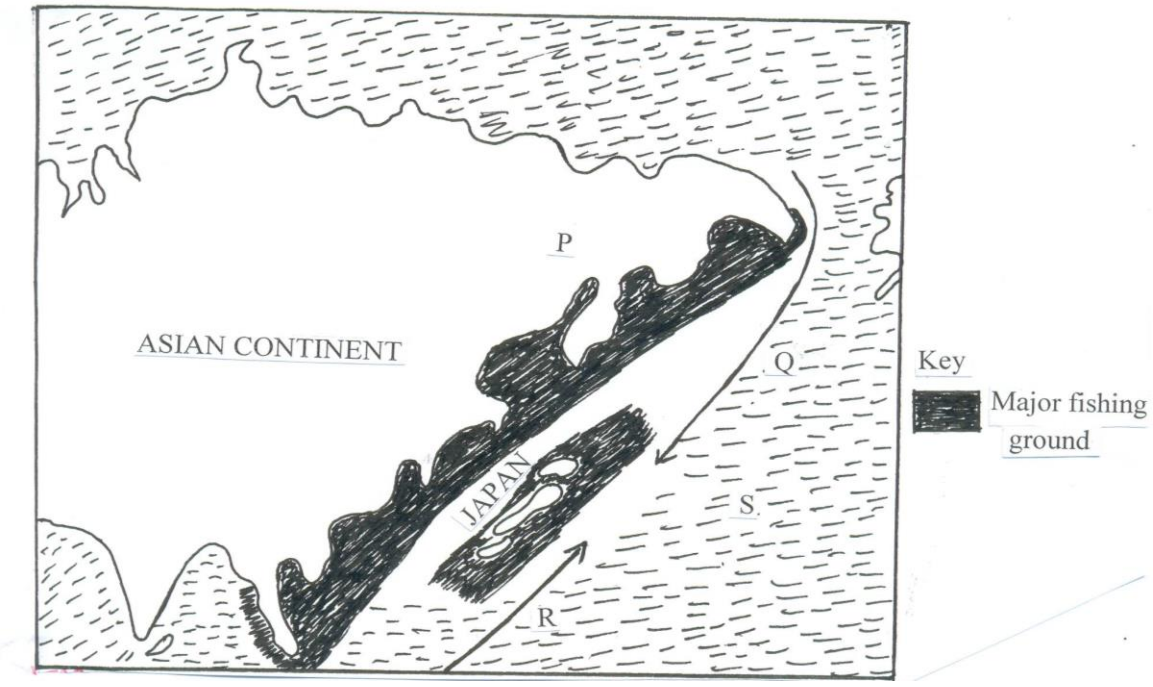
(ii) Explain **three** ways in which the nature of coastline affects fishing. (6mks)

(b) (i) State **three** types of fishing carried out in Kenya. (3mks)

(ii) Describe seining as a modern method of fishing. (3 mks

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(c)The map below shows the fishing ground East of the Asian Continent. Use it to answer thequestions that follow.



(i) Give the name given to the major fishing ground shown on the map. (1mk)

(ii) Identify the ocean currents marked **Q** and **R**. (2mks)

(iii) Explain **four** factors that havefavoredfishing in the ground mentioned in (i) above.

(8mks)

9(a) (i) Apart from those in EastAfrica, name **four** large scale H.E.P projects in Africa (4mks)

(ii) Other than water, give **three** other sources of renewable energy. (3mks)

(b) Explain **four** factors that have hindered full development of H.E.P production in Kenya

(8mks)

(c) Mention **four** areas in Kenya with high potential for Geothermalpower. (4mks)

(d) A form four class in Machakoscountyis planning a field study to Gitaru H.E.P. dam.

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(i) State **three** reasons why they need to inform the school authority. (3mks)

(ii) Give **three** follow-up activities they engaged in school after the study. (3mks)

10. (a) i) What is industrialization? (2 mks)

ii) Explain**three** reasons why some industries consider regular supply of water as the main reason for their location. (6 mks)

(b) Outline **four** similarities between Jua Kali industry in Kenya and cottage industry in India. (4 mks)

(c) Explain **three** factors that have influenced the location of iron and steel industry in the Ruhr region of Germany in the 19th century. (6 mks)

(d) You intend to carry out a field study in Thika industrial area.

i) State **four**effects of the industries on the environment you are likely to observe.(4mks)

ii) State **three** reasons why it is important to prepare a working schedule for the study. (3mks)

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AMOBI PUBLISHERS GROUP OF EXAMINERS
PRE-MOCK 3 EXAMS

HISTORY AND GOVERNMENT

PAPER 1

TIME 2 ½ HOURS

INSTRUCTION TO CANDIDATES

a) This paper has three sections **A**, **B** and **C**.
b) Answer **ALL QUESTIONS** in **SECTION A**, **THREE** from **SECTION B** and **TWO** from **SECTION C**.
c) All answers must be written in the space provided after question 24.
d) Candidate should check the question paper to ensure that all the pages are printed.
e) Candidates should answer the question in English.

For Examiners use only.

Section	Question	Maximum score	Candidates score
A	1-17	25	
B		15	
		15	
		15	
C		15	
		15	

SECTION A (25 MARKS)

Answer all the questions in this section in the space provided at the end of question 24.

1. Name **two** types of Australopithecus. (2mks)
2. Identify **one** community that belong to the plain Nilotes. (1mks)
3. Mention **two** importance of age-set among the Nandi community during pre-colonial period. (2mks)
4. Give **two** ancient documents that contained the historical information about East African coast before the 7th century. (2mks)
5. Mention **one** peaceful method of conflict resolution. (1mk)
6. State **one** function of the constitution. (1mk)
7. Identify two rights of the old members of the society. (2mks)

8. Name the person who came up with the indirect rule policy used in Kenya by the colonial government. (1mk)
9. State **two** problems faced by the independent schools and churches in Kenya during the colonial era. (2mks)
10. Identify the **main** borne of contention between KADU and KANU in the eve of independence. (1mk)
11. Outline **two** guiding principles of the electoral system in Kenya. (2mks)
12. Give **one** reason why Kenya adopted the National Philosophy of Africa socialism after independence. (1mk)
13. State **two** components included in the budget estimates in the National Budget. (2mks)
14. Mention **one** member of the County Executive Committee. (1mks)
15. Highlight **two** roles played by the trade unions in the struggle for independence. (2mks)
16. State the main reason why the 1957 elections are important in the history of Kenya. (1mk)
17. Who is the chief administrator and accounting officer of parliament? (1mk)

SECTION B (45 MARKS)

18. (a) Give **three** communities that belong to the coastal Bantu. (3mks)
    (b) Discuss **six** effects of the migration and settlement of the Cushites in Kenya. (12mks)
19. (a) Identify **five** positive impacts of the Portuguese rule at coast of East Africa. (5mks)
    (b) Explain **five** Negative effects of the Indian Ocean Trade. (10mks)

20. (a) Highlight **five** results of the Akamba reaction to the British rule in Kenya. (5mks)
    (b) Discuss **five** methods used by the colonial government to obtain labour for the white settlers. (10mks)

21. (a) Give **three** political parties that were formed after 1945 which were involved in the struggle for independence in Kenya. (3mks)

    (b) State and Explain **six** challenges facing culture and sports in Kenya since independence. (12mk)

SECTION C (30 MARKS)

Answer Two questions from this Section.

22. (a) Give **five** characteristics of a good constitution. (5mks)
    (b) Discuss **five** factors that promotes National Integration in Kenya. (10mks)
23. (a) Identify **three** National Security Organs in the Kenyan government (3mks)
    (b) Explain **six** powers of the President of Kenya according to the new constitution of 2010. (12mks)
24. (a) State **five** importance of the Government Budget. (5mks)
    (b) In which **five** ways does the National Government control the use of public finance? (10mks)

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HISTORY & GOVERNMENT

PAPER II

TIME: 2 ½ HOURS.

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PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary education (K.C.S.E)

INSTRUCTIONS TO CANDIDATES.

- This paper has **three** sections A, B and C.
- Answer **all** questions in section A, **three** questions in section B and **two** questions in section C
- All questions in section B and C carry equal marks.
- All your answers must be written in English.

TOTAL SCORE

SECTION A (25MKS)

1. Identify any two classifications of written sources of information on History and Government. (2mks)
2. Give one of social activity that was practised by early man during the New Stone Age period (1mk)
3. State two effects of the Land Enclosure System in Britain during the Agrarian Revolution (2mks)
4. Highlight two negative effects of the Trans-Saharan trade. (2mks)
5. Name the first woman astronaut to travel into space (1mk)

6. State two importance of the radio as a form of communication. (2mks)
7. Give two ways how scientific inventions have negatively impacted on Agriculture (2mks)
8. What was the title given to the highest political and religious leader among the Shona?(1mk)
9. Identify one chartered company that was used by the Europeans to acquire colonies in Africa. (1mk)
10. State one way how the Lochner treaty benefitted King Lewanika individually,(1mk)
11. Outline one social factor that led to the rise of nationalism in Africa (1mk)
12. State one military alliance that was formed by European nations before the First World War.(1 mk)
13. Name two permanent member states of the United Nations security council (2 mks)
14. State one way how the cold war was witnessed in Africa (1mks)
15. Give two organs of the Economic Community of West African States (ECOWAS) (2mks)
16. State two political challenges facing the Democratic Republic of Congo (DRC) since independence (2mks)
17. State the system of government practised in Britain. (1mk)

SECTION B (45MARKS)

ANSWER ANY THREE QUESTONS IN THIS SECTION.

18.

a) State five physical changes that early man underwent to mark a clear distinction between apes and modern man. (5mks)
b) Explain five features of early man's culture during the Neolithic period (10mks)

19. a. State five disadvantages of using animals as a means of transport (5mks)

b). Explain five economic effects of modern forms of transport. (10mks)

20. a) State five uses of Gold in Africa in the early days. (5mks)

b) Explain five effects of iron working technology in Africa. (10 mks)

21 a) State five causes of the Mandinka rebellion. (5mks)

b) Explain five results of the Chimurenga war. (10mks)

SECTION C (30 MARKS)

ANSWER ANY TWO QUESTIONS IN THIS SECTION.

22. (a) State three factors that led to the growth of nationalism in Mozambique. (3mks)

b) Explain six factors that favoured FRELIMO in the war against the Portuguese colonial government. (12mks)

23 (a) State three conditions given to the Germans to surrender at the end of world war one (WWI) (3mks)

b) Explain six causes of the second world war . (12mks)

24 a) Identify any three political parties in India (3mks)

b) Explain six powers and functions of the president in India. (12mks)

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PRE-MOCK 3 EXAMS

102/1 KISWAHILI

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KARATASI YA 1

INSHA SAA:1 ¾

Kenya Certificate of Secondary Education (K.C.S.E)

MAAGIZO

1. ANDIKA INSHA MBILI. INSHA YA KWANZA NI LAZIMA.
2. KISHA CHAGUA INSHA NYINGINE MOJA KATI YA HIZO TATU ZILIZOBAKI.
3. KILA INSHA ISIPUNGUE MANENO MIA NNE. 400
4. KILA INSHA INA ALAMA ISHIRINI. 20
5. KILA INSHA LAZIMA IANDIKWE KWA LUGHA YA KISWAHILI.

KWA MATUMIZI YA MTAHINI PEKEE

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

1. Andika barua kwa mhariri wa gazeti la Zindukeni ukitoa maoni kuhusu sekta ya usafiri wa pikipiki.

2. Fafanua njia mbalimbali za kustawisha michezo nchini.

3. Andika insha inayoafikia methali, Ukiona vyaelea vimeundwa.

4. Tunga kisa kinachoanza kwa maneno yafuatayo:

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Nilijaribu kuuinua mguu wangu uliojaa maumivu kutokana na jeraha…..

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NAME…….

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KISWAHILI

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KARATASI YA 2

SAA: $2^{1}/_{2}$

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Maagizo

1. Andika jina lako na namba yako katika nafasi ulizoachiwa hapo juu.
2. Tia sahihi yako na tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.
3. Jibu maswali yote. Andika majibu yako katika nafasi zilizoachwa katika kijitabu hiki cha maswali.
4. Karatasi hii ina kurasa kumi na mbili zilizopigwa chapa.
5. Watahiniwa ni lazima wahakikishe kwamba kurasa zote za karatasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo.

Kwa matumizi ya mtahini pekee

SWALI	UPEO	ALAMA
1	15	
2	15	
3	40	
4	10	
	JUMLA	

I. UFAHAMU (ALAMA 15)

Soma taarifa ifuatayo kisha ujibu maswali yanayofuatia

Kitengo cha familia Kimesakamwa na wimbi kali la mabadiliko katika jamii. Namna ambavyo familia zinaendeshwa siku hizi ni tofauti na taratibu za azali. Waama hakuna kipenge cha maisha yetu ambacho hakijaathiriwa na kile ambacho kimekuja kujulikana kama ‘usasa’.

Familia nyingi hasa katika maeneo ya mijini zinategemea sana watu wa kuajiri kuzishughulikia. Wazazi wengi hawatengi muda wa kukaa nyumbani na watoto ili kuwapa mwongozo na mapenzi yaliyo muhimu katika hatua mbalimbali za ukuaji wao. Wazazi huondoka mapema sana kwenda kazini na kurejea wakiwa wamechelewa mno. Watoto wao

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wakati huo huwa ama hawajaamka au tayari washalala. Kwa upande mwingine wapo wazazi ambao wanafanya kazi katika miji iliyo mbali na wanapokaa watoto wao au nchi za kigeni. Uhusiano kati ya mzazi na mtoto unakosa rotuba ya kuuneemesha na matokeo yake huwa ni vijana waliokosa mwelekeo. Walivyosema Waswahili, samaki hukunjwa akiwa bado mbichi. Tabia za watoto hawa zinaweza tu kuandaliwa katika maadili wakiwa wadogo.

Tofauti kati ya wazazi, Pamoja na kuzaliwa kwa watoto nje ya ndoa kumebadilisha sura ya kitengo cha familia. Tofauti na zamani, hii leo utapata familia ambazo zinaendeshwa na mzazi mmoja – anaweza kuwa baba au mama tu. Ni kweli kwamba mtoto huhitaji malezi ya wazazi wote wawili. Mwongozo wa ushirikiano wa wazazi wote wawili ni imara na bora zaidi kuliko wa mzazi mmoja. Hii haimaanishi kuwa mtoto hawezi kulelewa vizuri na mzazi mmoja au vibaya na wazazi wote. Mtoto huweza kukosa huduma za kimsingi kwa kosa lisilo lake.

Jukumu la jamii katika malezi ya watoto limepungua. Zamani malezi ya mtoto yalikuwa jukumu la kila mwanajamii. Mtoto alipothubutu kufanya kosa aliweza kuadhibiwa palepale na mwanajamii yeyote ambaye hakusita kujitwika jukumu la mzazi. Hata hivyo hali ni tofauti hii leo. Kumwadhibu mtoto wa mtu ni kichocheo tosha cha kuleta mfarakano usiokwisha katika jamii. Kila mtu anauchelea ugomvi wa kujitakia. Kila mtoto sasa anaelewa na vipimo vya mzazi wake na siyo vya jamii pana. Watoto nao wamegundua hili na hawakusita kujivika mavazi mawili tofauti, zuri mbele ya wazazi wao na jinginelo popote pasipo hao wazazi. Sasa wazazi wanaweza kuishi na wahalifu waliokubuhu bila kufahamu.

Jambo lingine linalohusiana na hilo ni kutupiliwa mbali kwa tamaduni za Kiafrika. Ni kama jamii iliyotupa jongoo na mti wake. Si siri kuwa kuna masuala ya kitamaduni yaliyopitwa na wakati na ambayo inahalisi kuyapiga teke. Hata hivyo hatuwezi kukitia kila kipengee cha tamaduni zetu jalalani. Utamaduni wetu mbali na kututambulisha kama jamii, pia hutekeleza jukumu adhimu la kutuwezesha kuyaona mambo kwa mtazamo mmoja. Mtazamo huo mmoja ndio unaotupa umoja wetu. Hatuwezi kuwa na utangamano bila kuwa na uzi unaotufunga Pamoja. Maadili ya jamii hayawezi kubainika bila ya watu kuwa na Mwongozo na mtazamo mmoja kuhusu hali yao ya maisha.

Familia za kisasa zina idadi ndogo za watu ikilinganishwa na hapo awali. Hali ngumu ya maisha imewasukuma watu katika kupata watoto wachache ambao wanaweza kumudu kuwalea vizuri. Nako kupungua kwa nafasi za ajira kunawazuia vijana kuingia katika nikahi mapema.

Hali hii imechangia katika kupunguza idadi ya watu na pia kupunguza kasi za uchipukaji wa familia mpya. Hali ngumu ya maisha imepunguza upana wa familia kama ilivyokuwa awali. Siku hizi mtu na mkewe au mumewe Pamoja na watoto wanaikamilisha familia. Vikoa vimekwisha na kubaki kuwa kila mtu na lake. Wengine hawako tayari kuwatilia pondo ndugu zao.

Maswali

1. Kwa mujibu wa taarifa eleza matatizo yanayoweza kuikabili familia inayoendeleshwa na mzazi mmoja. (alama 2)

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2. Ni nini kiini cha utengano wa wazazi katika ndoa. (alama 1)

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3. Jadili nafasi ya utamaduni katika kuijenga jamii bora kwa kurejelea makala. (alama 2)

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4. Kwa nini familia za kisasa zina idadi ndogo ya watu? (alama 2)

5. Taja huku ukitoa mifano ya tamathali zozote tatu za lugha zilizotumiwa katika taarifa. (alama 3)

6. Eleza maana ya maneno yafuatayo kama yalivyotumiwa kifunguni. (alama 5)

i. Kimesakamwa –

ii. Mfarakano usiokwisha

iii. Wahalifu waliokubuhu

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iv. Vikoa vimekwisha

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v. Kujivika mavazi mawili

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2. UFUPISHO

Soma *taarifa ifuatayo kisha ujibu maswali yafuatayo*

Ki1a walimwengu wanapotajiwa kuwa shambulizi la kigaidi limetokea mahali fulani, wimbi la taharuki huwakumba. Mashambulizi ya kigaidi yameongezeka katika siku za hivi majuzi ambapo kundi Ia watu linalohisi kuwa linaonewa na kukandamizwa huitumia mbinu ya kushambulia kwa kuvizia, hasa kutumia mabomu au kuteka ndege na kutishia kuilipua na wakati mwingine kuilipulia angani. Kuna mabomu yaliyotegwa na kulipuka katika maegesho ya magari au kwenye vizuizi vya magari. Mengine hutegwa na kulipuliwa katika afisi, mikahawa, makao ya watu, n.k. Katika baadhi ya mashambulizi, wapo waliojitoa mhanga ambao hujilipua katika shambulizi

.

Makundi ya watu wanaohasimiana ndio chanzo cha matendo ya kigaidi. Kundi linalohisi kuwa linaonewa au ambalo kweli linaonewa na ambalo ni dhaifu kuliko lile jingine, hufanya juu chini kushambulia kisirisiri. Nia ni kulipisha kisasi kwa jambo wanalohisi wamehiniwa. Kwa kuwa kundi hilo hudhani kuwa dhaifu halina njia wala uwezo wa kuyakabili moja kwa moja matendo

waliyotendewa au wanayoendelea kutendewa, njia ya pekee, kwa maoni yao, huwa hii ya kushambulia kwa kushitukiza. Kiini cha uonevu kinaweza kuwa dini, uchumi, maamuzi ya kisiasa au jambo lingine lolote lile. Kinachobainika katika suala zima Ia mashambulizi ya kigaidi ni kuwa lipo jambo ambalo linazikera nyoyo za kundi fulani Ia watu walio wanyonge ambao huona kuwa njia ya pekee ya kudhihirisha hisia zao ni kupitia mashambulizi ya aina hii.

Mashambulizi ya aina hii yana athari zake nyingi. Kuna watu wanaouawa na wengine wengi kulemaa. Maisha ya watu hawa au jamaa zao wanaowategemea hubadilika na kujaa mvurugano uliokithiri. Kuna watoto ambao ndoto zao za kupata elimu zimetumbukia nyongo baada ya wazazi wao kuzikwa hai katika vifusi. Mbali na kukosa elimu na mahitaji mengine ya kimsingi, watoto hawa hupatwa na matatizo ya kisaikolojia baada ya kuona maafa yaliyowafika wavyele wao. Hata wale wanaosalimika kutoka kwenye vifusi hivi hawaishi kuandamwa na majinamizi yasiyoisha.

Mashambulizi ya kigaidi hayaathiri tu watu pamoja na kuharibu mali ya thamani ya lukuki ya pesa. Zipo athari nyingine hasi ambazo hudhihiri. Kwa mfano usalama wa nchi huwa mashakani. Wananchi na wageni vilevile hujihisi kuwa dhaifu na dhalili katika nchi illyovamiwa. Serikali husika hujikuta katika shutuma kwa kushindwa kutambua mipango hiyo mapema na kuzuia hasara ya nyoyo na mali. Aidha, jamii ya kimataifa huiona nchi hiyo kama yenye kukosa usalama na hivyo kuwaonya raia wake dhidi ya kuizuru. Iwapo nchi husika inategemea utalii kama kitega uchumi muhimu, basi hukosa wateja na waajiriwa katika sekta hii kupigwa kalamu.

Tatizo la ugaidi si Ia nchi moja au mataifa fulani mahususi wala hakuna nchi au taifa linaloweza kudai kuwa haliwezi kukabiliwa na tishio la kigaidi. Kuanzia Dar es Salaam, Nairobi hadi New York na London au hata Cairo hadi Riyadh na Baghdad, sote tunakabiliwa na tatizo hili hili. Hakuna ajuaye lini, vipi au wapi magaidi wamedhamiria kutekeleza unyama huu.

Labda swali Ia kujiuliza ni kwamba; Je, upo uwezekano wa mwenendo huu wa kuwaangamiza watu, wengi wa wahasiriwa wakiwa wale wasio na hatia, kudhibitiwa na kumalizwa kabisa?

Serikali za nchi mbalimbali zimejaribu kutumia uwezo wao wa kiuchumi na kiteknolojia ili kujaribu kuiondoa hali hii. Njia waliyoitumia ni ya mtutu wa bunduki ambapo makombora mazito yaliyogharimu pesa nyingi yanadondoshwa katika makao ya washukiwa. Hata katika hatua hii nayo, upo uwezekano mkubwa wa kuuawa watu wasio na hatia vilevile. Pia ni wazi kwamba uhasama unalipwa kwa uhasama na matokeo yake ni ulipizaji kisasi usioisha. Amani inakuwa nadra.

Juhudi za ulimwengu kulaani vitendo hivi ni nzuri ila hazitoshi. Utumiaji nguvu kutafuta ufumbuzi wa kitendawili hiki si suluhisho. Kama wanavyoeleza wanasosholojia, kila kitendo kina sababu zake zilizofichama. Sababu hizo ndizo kichocheo cha vitendo vinavyojidhihiri. Hivyo basi jukumu lipo katika kutambua vichochezi vya mashambulizi na kujitahidi kuvitatua kwa njia ya mashauriano yaliyojengwa katika nia safi ya kuleta usawa na usalama duniani.

Wapo watu wanaoona kuwa vitendo vya mataifa yaliyoendelea kwa nchi changa ndivyo kilele cha ugaidi. Watu wanaona kuwa tabia ya mataifa hayo yenye uwezo kiuchumi na kiteknolojia kuamua na kudhibiti sera na imani za nchi changa ni ugaidi uliokubuhu. Vikwazo hivi huwaacha viongozi hoi na wananchi kuteseka kufuatia ulazimishaji wa sera za kiuchumi na kisiasa zisizohusiana na mahitaji ya watu wa nchi husika wala kuambatana na mahjtajj ya nchi hizi. Hii ni hali inayoyatia mataifa yanayoendelea katika wasiwasi usioisha kutokana na dhiki zisizoisha kusababishwa na mataifa ya kigeni.

II. UFUPISHO

a) Kwa kutumia maneno yasiyozidi 80, fupisha aya ya pili, tatu na nne. (alama 10)

alama1, mtiririko

Matayarisho

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b) Eleza njia zinazotumiwa na mataifa ulimwenguni kupambana na ugaidi. (Maneno 40) alama 5; 1 ya mtiririko Matayarisho

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Jibu

MATUMIZI YA LUGHA (ALAMA 40)

(a) i.Taja vigezo viwili vya kuanisha irabu. (alama 1)

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ii. Tofautisha sauti zifuatazo.(alama.2)

a. /a/ na /i/

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b. /e/ na /o/

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(b) Ainisha aina za vivumishi katika sentensi ifuatayo.(alama. 2)

Mwalimu mzee alitufundisha vizuri ile mada ngumu.

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i. i.Eleza maana ya kirai. (alama.1)

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ii. Tunga sentensi iliyo na kirai kivumishi na kirai nomino chenye muundo wa W+ V (alama 1)

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(c) Andika sentensi hii upya bila kubadilisha maana ukitumia “O” rejeshi. (alama 2)
Mwanafunzi alitumwa nyumbani juzi na hajapata karo hadi leo.

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(d) Badilisha sentensi ifuatayo iwe katika hali ya udogo wingi.
Kono lake lilivimba baada ya kuumwa na jibwa. (alama 2)

……

……

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……

(e) Tunga sentensi iliyo: (alama 3)
Kitenzi kishirikishi kikamilifu

……

……

Kivumishi kimilikishi nafsi ya pili wingi

……

……

Kiwakilishi cha nafsi ya tatu tegemezi wingi.

……

……

(f) Kanusha sentensi ifuatayo kisha ueleze maana yake katika hali kanushi (alama 2)
Angeongoza darasa lake, angepewa tuzo.

.....

.....

(g) Onyesha sehemu za kisarufi katika neno lifuatalo. (alama 2)

Kililiwa

.....

.....

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.....

.....

(h) Kanusha katika hali timilifu wakati uliopita.

Kamati ya uchaguzi iliandaa ripoti kuhusu utovu wa nidhamu shuleni. (alama 2)

.....

.....

.....

(i) Changanua kwa kutumia mchoro wa matawi

Hatukuondoka na yeye japo tulirudi naye. (alama 4)

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(j) Tumia kiambishi KA katika sentensi ili kuleta dhana ya: (alama 2)

i. Wakati usiodhihirika

.....

.....

ii. Kuonyesha matokeo yanayosababishwa na kitendo.

.....

.....

(k) Chane kwa mtama_____ kwa udongo. (alama 1)

(l) a. Eleza maana ya fungu tenzi. (alama 1)

.....

.....

b.Taja aina mbili za fungu tenzi. (alama.2)

.....

.....

(m) Geuza sentensi hii hadi usemi halisi.

Wanakijiji walikuwa wanataka kujua iwapo vipakatalishi vya shule za msingi vingeweza kuinua kiwango cha elimu. (alama 3)

.....

.....

.....

(n) a. Eleza maana ya yambwa. (alama 1)

.....

.....

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b. Tunga sentensi iliyo na: shamirisho kipozi na chagizo cha kiasi kamili. (alama.2)

.....

.....

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(o) Tunga sentensi kwa kutumia kiunganishi cha wakati.(alama 2)

.....

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.....

(p) Andika visawe vya maneno yaliyopigigwa mstari . (alama 2)
Tulienda <u>kusali</u> siku ya <u>Jumapili.</u>

.....

.....

SWALI LA 4: ISIMU JAMII

Eleza changamoto zinazokumba ukuaji wa lugha ya Kiswahili nchini Kenya. (alama 10)

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NAME ……

INDEX NO…….. ADM NO……. SIGN……..……

DATE…… STREAM ……..……..

KISWAHILI

KARATASI YA 3 **SAA: $2^1/_2$**

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

MAAGIZO:

1) *Jibu maswali **Manne** pekee.*
2) *Swali la **kwanza** ni la **Lazima**.*
3) *Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki, yaani; Hadithi Fupi, Fasihi Simulizi, Riwaya na Ushairi.*
4) *Usijibu maswali **Mawili** kutoka **Sehemu moja**.*
5) *Maswali yote yajibiwe kwa lugha ya Kiswahili.*
6) *Karatasi hii ina kurasa 6 zilizopigwa chapa.*
7) *Watahini lazima wahakikishe kurasa zote zimepigwa chapa na kuwa maswali yote yamo.*

KWA MATUMIZI YA MTAHINI

SWALI	MADA	TUZO
1	TAMTHILIA	
2	RIWAYA	
3	HADITHI FUPI	
4	USHAIRI	
5	FASIHI SIMULIZI	
	JUMLA	

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SEHEMU YA A:TAMTHILIA

1. **Lazima**
   K. Pauline: Kigogo

   Majoka alitumia njia nyingi kudhibiti uongozi wake. Thibitisha ukweli huu. (alama 20)

SEHEMU B: RIWAYA

K.Matei: Chozi la Heri

Jibu swali la 2 au 3

2. Wanawake wamesawiriwa kwa mtazamo chanya katika jamii ya chozi la Heri. Jadili ukweli huu kwa kutoa ithibati mwafaka. (alama. 20)

3. "Ni mara ngapi mimi na babako husafiri na kukupagaza ulezi wa ndugu zako hawa? …umeweza kumuelekeza… katika kipindi hiki ambacho anatafuta utambuaji. Wewe pekee ndiwe dawa ya hasira … ya kivolkano. Bila wewe malezi ya hawa wadogo wako yangekuwa magumu."

   a)Eleza muktadha wa dondoo hili. (alama 4)

   b)Tambulisha mbinu tatu za sanaa zilizotumika katika dondoo hili. (alama 3)

   c)Eleza sifa sita za mhusika "babako" aliyerejelewa katika dondoo hili. (alama 6)

   d) "Ulezi ni ujima". Thibitisha kauli hii kwa kurejelea dondoo hili na riwaya yote kwa jumla. (alama 7)

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SEHEMU YA C:HADITHI FUPI

A. Kochokocho A na D. Kayanda(Wah.): (Tumbo Lisilishiba na Hadithi Nyingine)

Jibu swali la 4 au 5

4. Jadili matatizo yanayokumba sekta ya elimu huku ukirejelea hadithi zozote tano katika diwani ya Tumbo Lisiloshiba. (alama. 20)

5. "…hata mapenzi yako yawe mazito namna gani…ni bora kuliko kasoro ya mapenzi."

   a)Eleza muktadha wa dondoo hili. (al. 4)

   b)Tathmini umuhimu wa mnenewa. (al 6)

   c)Thibitisha ukweli kuwa mapenzi yanayorejelewa yaligeuka na kuwa mazito kuliko ilivyotarajiwa na yakawa na kasoro nyingi. (al.10

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SEHEMU YA D: USHAIRI

Jibu swali la 6 au 7

6. *Soma shairi hili kisha ujibu maswali*.
   Jicho, tavumiliaje, kwa hayo uyaonayo?

   Kicho, utasubirije, maonevu yapitayo

   Kwacho, lijalo na lije, nimechoka vumiliyo

   Naandika!

   Moyo, unao timbuko, maudhui tuyasikiayo

   Nayo, visa na mauko, wanyonge wayakutayo

   Kwayo, sina zuiliko, natoa niyahisiyo

   Naandika!

   Hawa, wanotulimiya, dhiki wavumiliayo

   Hawa, mamiya mamiya, na mali wazalishayo

   Hawa, ndo wanaoumiya, na maafa wakutayo

   Naandika!

   Hawa, sioni wengine,kwao liko angamiyo

   Hawa, uwapa unene, watukufu wenye nayo

   Hawa, bado ni wavune, kwa shida waikutayo

   Naandika!

   Bado, wawapo mabwana, wenye pupa na kamiyo

   Bado, tafauti sana, kwa pato na mengineyo

   Bado , tuling'owe shina, ulaji pia na moyo

   Naandika!

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Maswali

a) Shairi hili laweza kuwekwa katika bahari zipi? Thibitisha kila jibu lako (ala4)

b) Eleza dhamira ya mshairi (ala2)

c) Onyesha mifano miwili ya uhuru wa kishairi jinsi ulivyotumika katika shairi (ala2)

d) Andika ubeti wa tatu kwa lugha nathari. (al.4)

e) Tambulisha kwa mifano mbinu zozote mbili za sanaa katika shairi. (ala2)

f) Fafanua sifa za kiarudhi zilizotumika katika ubeti wa tano. (al.3)

g) Eleza maana ya maneno haya kama yalivyotumiwa katika shairi. (ala3)

i) Zuiliko

ii) Wavune

iii) Wenye pupa na kamiyo.

7. *Soma shairi hili kisha ujibu maswali*.

Amka!
Uondoe utandu machoni
Uone mtandao duniani
Uchawi wa karne hii
Uunganishavyo watu.

Amka!
Uwe mtu mpya
Uabiri mtandao ulimwenguni
Ukuvushe milima na mabonde

Ujuane na watu.

Amka!
Uwe na yako anwani
Udhibiti wavuti mkononi
Uone na uonekane kote
Uzungumze na watu
Ufurahie malimwengu

Amka!
Uone huu ulimwengu
Ulivyofanywa mdogo sasa
Ulivyopea kimawasiliano
Unganike na watu.

Amka!
Ukalie tarakilishi
Uangaze usioyajua
Uwasiliane kwa meme
Uunganike na watu.

Amka!
Uone nukulishi
Ubebe yako rununu
Useme na ulimwengu
Useme na watu

Maswali

a)Lipe shairi hili anwani mwafaka. (al. 2

b)Shairi hili ni la aina gani? Thibitisha. (al.2

c)Andika maneno manne yanayotaja teknolojia ya kisasa. (al.2

d)Andika ubeti wa mwisho kwa lugha ya nathari. (al.4

e)Eleza toni ya shairi hili. (al.2

f)Tambulisha nafsi neni na nafsi nenewa. (al.2

g)Tambulisha kwa mifano mbinu mbili za lugha katika shairi hili. (al.2

h)Ni nini maana ya vifungu vifuatavyo kama vilivyotumika katika shairi. (al.4)

i) Uchawi wa karne katika shairi

ii) Ukavushe milima na mabonde

SEHEMU YA E: FASIHI SIMULIZI

(a) Eleza sifa nne za kimtindo zinazopatikana katika methali za Kiswahili. (alama 8)

(b) Eleza mbinu tatu ambazo hutumiwa kuzua misimu. (alama 6)

(c) Ni jukumu la jamii kudumisha fasihi simulizi. Dhihirisha. (alama 6)

NAME…….

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MATHEMATICS ALT. A
PAPER 1 **TIME: 2 ½ HOURS**

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

INSTRUCTIONS TO THE CANDIDATES

*a) Write your **name** and **Random no.** the spaces provided above.*
*b) Sign and write **date** of examination in the spaces provided above.*
*c) This paper consists of **two** sections; **SectionI** and **Section II.***
*d) Answer **All** questions in **Section I** andonly **Five**questions from **section II***
*e) **All** answers and working **must** be written on the question paper in the spaces provided below each question.*
f) Show all the steps in your calculations giving answers at each stage in the spaces provided below each question.
g) Marks may be given for correct working even if the answer is wrong.
h) Non-programmable silent electronic calculators and KNEC Mathematical tables may be used except where stated otherwise.
*i) **This paper consists of 16printed pages. Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.***
*m) Candidates should answer questions in **English.***

For examiner's use only.

Section I

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

Section II

17	18	19	20	21	22	23	24	**Total**

GRAND TOTAL

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1. Evaluate $\dfrac{-4 \text{ of } (-4 + -15 \div 5 + -3 - 4 \div 2)}{84 \div -7 + 3 - -5}$ (3 mks)

2. Simplify $\dfrac{9x^2 - 1}{3x^2 + 2x + 1}$ (2 mk)

3. Solve the following inequality and state the integral solutions. (3 marks)

$\frac{1}{2}(24 - 4x) > 6(3x - \frac{4}{3}) \geq -\frac{2}{3}(42 + 3x)$

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4. The position vector of P is **OP = 2i – 3j** and M is the mid – point of PQ. Given **OM = i + 4j**, Obtain the vector **PQ.** (3 marks)

5. Use tables of reciprocals only to work out. (3 mks)

$$\frac{5}{0.0396} + \frac{12}{0.593}$$

6. A straight line passes through points A (-2,6) and B (4, 2).

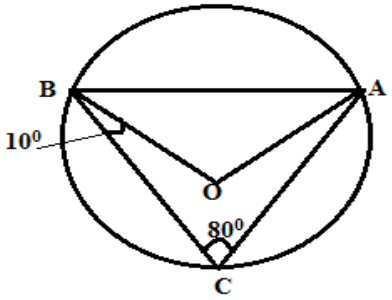
(a) M is the midpoint of line AB. Find the coordinate of M. (2 mks)

(b) Determine the equation of a straight line passing through point M and is perpendicular to AB. (2 mks)

7. An open right circular cone has radius of 5cm and a perpendicular height of 12cm. Calculate the surface area of the cone. (take $\pi = 3.142$). (3 mks)

8. Mary spends a total of sh. 970 on buying 3 text books and 5 pens. If she had bought 2 textbooks and 8 pens, she would have saved sh. 90. Find the cost of one textbook.(3 mks)

9. In the figure below O is the centre of the circle. $<BCA = 80^0$ and $<CBO = 10^0$. Determine the size of $<CAB$. (3 mks)



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10. In a bookstore, books packed in cartons are arranged in rows such that there are 50 cartons in the first row, 48 cartons in the next row, 46cartons in next and so on.

(a) How many cartons will be there in 8^{th} row. (2 mks)

(b) If there are 20 rows in total, find the total number of cartons in the books store. (2 mks)

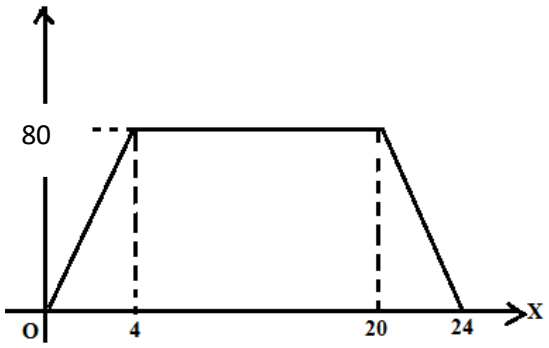
11. Find the value of x if. (3 mks)

$$\left(\frac{27}{8}\right)^{x+7} = \left(\frac{4}{9}\right)^{-3x}$$

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12. The image of a point K (1,2) after translation is K^1 (-1,2). What is the coordinate of the point R whose image is R^1 (-3,3) after undergoing the same translation? (3 mks)

13. The figure below is a velocity time graph for a car.



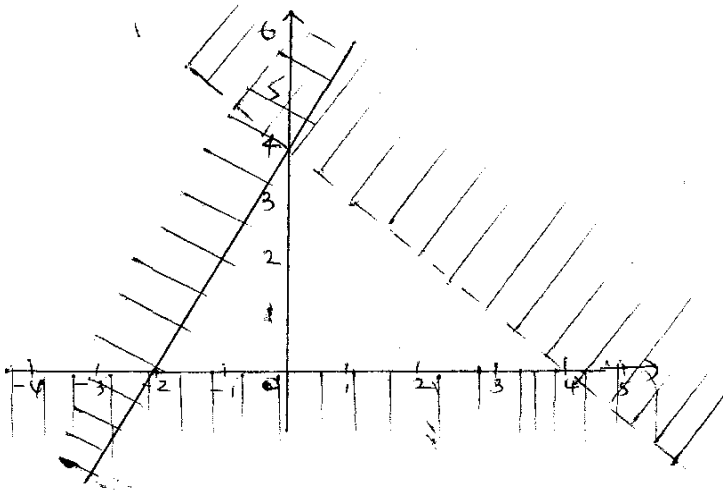
(a) Find the total distance travelled by the car (2 mks)

(b) Calculate the deceleration of the car. (2 mks)

14. Security light poles have been erected along both sides of a street in Bahati town. The poles are 50m apart along the left-hand side of the road while they are 80m apart along the right-hand side. At one end of the road the poles are directly opposite each other. How many poles will be erected by time the poles are directly opposite each other at end of the road? (3 mks)

15. The exterior angle of a regular polygon is equal to one third of the interior angle. Calculate the number of number of sides of the polygon. (3 mks)

16.Write down the inequalities that define the unshaded region marked R in the figure, below.
(3 mks)



17. Nakuru county government is to construct a floor of an open wholesale market whose area is $800m^2$. The floor is to be covered with a slab of uniform thickness of 200mm. In order to make the slab, sand, cement and ballast are to be mixed such that their masses are in the ratio 3:2:3 respectively. The mass of dry mass of dry slab of volume $1m^3$ is 200kg.

(a) Calculate

(i) The volume of the slab. (2 mks)

(ii) The mass of the dry slab. (2 mks)

(iii) The mass of cement to be used. (2 mks)

(b) If one bag of cement is 50kg, find the number of bags to be purchased. (1 mk)

(c) If a lorry carries 10 tonnes of ballast, calculate the number of lories of ballast to be purchased. (3 mks)

18. Paul is a sales executive earning sh 20,000 and a commission of 8% for the sales in excess of 100,000. In January 2014 he earned a total of 48000 in salaries and commissions.

(a) Determine the amount of sales he made in that month. (4 mks)

(b) If the total sales in the month of February and march increased by 18% and then dropped by 25% respectively. Calculate.

(i) Paul`s commission in the month of February. (3 mks)

(b) His total earnings in the month of March. (3 mks)

19. Two tanks are similar in shape. The capacity of the tanks are 1,000,000 litres and 512,00 litres respectively.

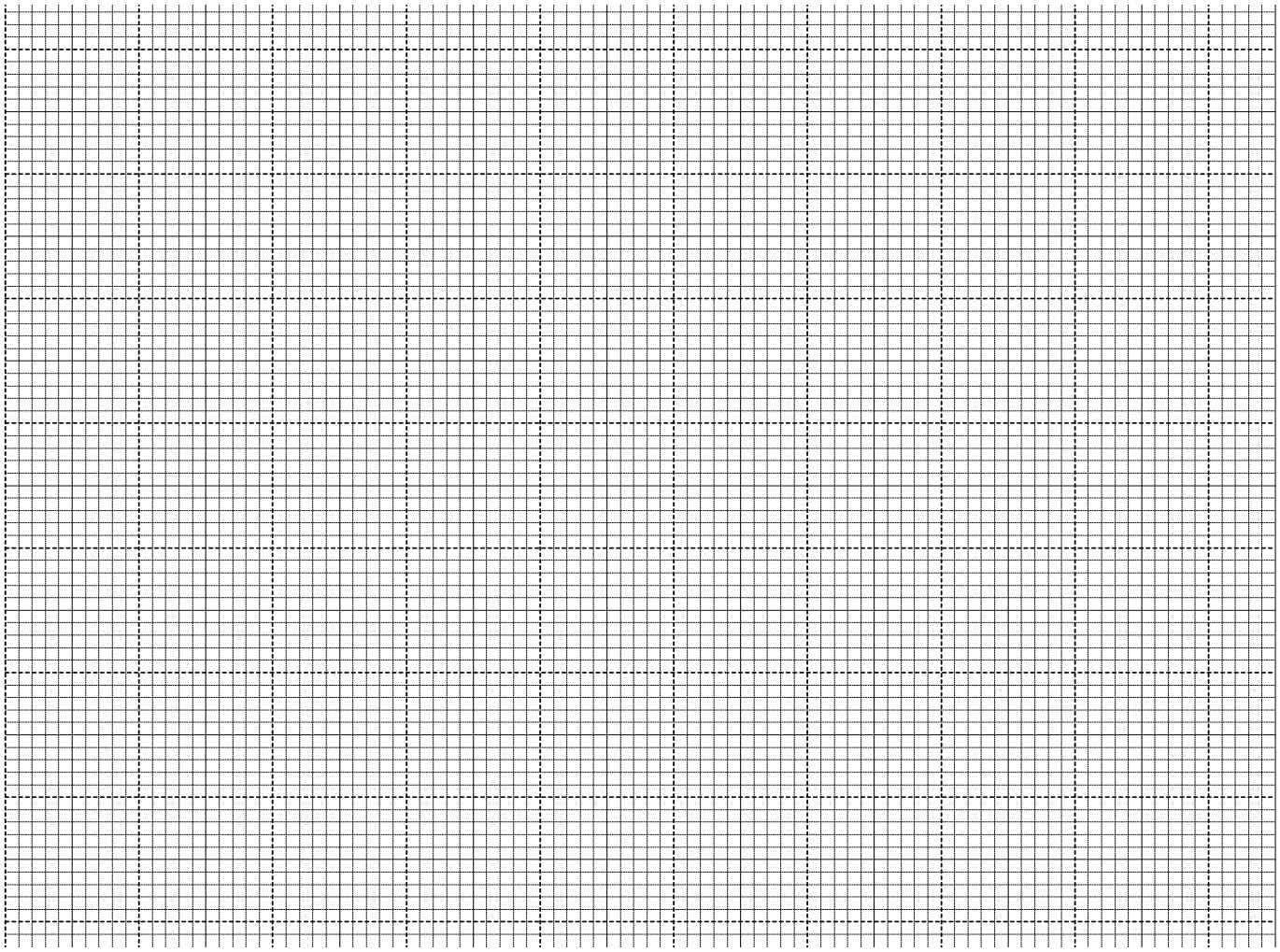
(a) Find the height of the smaller tank if the larger one is 300cm tall. (5 mks)

(b) Calculate the surface area of the tank if the smaller one has a surface area of $768cm^3$(3 mks)

(c) Calculate the mass of the larger tank if the mass of the larger one is 800kg. (2 mks)

20. The vertices of a triangle ABC are A (2,5) B (4,3) and C (2,3). It rotates half-turn about the origin.

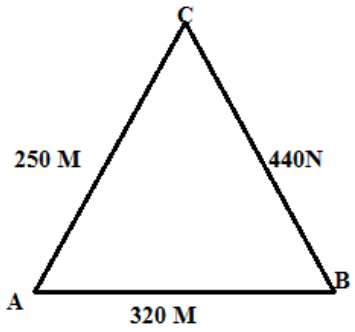
(a) Draw triangle ABC and $A^1B^1C^1$ under it. (4 mks)



(b) The image A'B'C is mapped onto A''B''C'' under a reflection R in the line x=0 followed by a translation T = $\begin{pmatrix} 0 \\ -2 \end{pmatrix}$. Find the coordinates of A''B'' and C'' and A'''B'''C'''. Hence draw triangle A'''B'''C'''. (4 mks)

(c) Find the area of the triangle A''B''C''. (2 mks)

21. Ombati owns a farm that is triangular in shape as shown below.



(a) Calculate the size of angle BAC. (2 mks)

(b) Find the area of the farm in hectares. (3 mks)

(c) Ombati wishes to irrigate his farm using a sprinkler machine in the farm such that it is equidistant from points A. B and C.

(i) The sprinkler rotates in a circular motion so that the maximum point reached by the water jets is the vertices A, B and C. Calculate the area outside the farm that will be irrigated. (5 mks)

22. Trasnsline bus left Nairobi at 8.00 am and travelled to Nakuru at an average speed of 80km/h. A car left Nakuru at 3.30 am and travelled to Nairobi at an average speed of 120km/h. Given that the distance between Nairobi and Nakuru is 400km, Calculate.

(a) The time the car arrived in Nairobi. (3 mks)

(b) The time the two vehicles met. (4 mks)

(c) The distance from Nairobi to the meeting point. (2 mks)

(d) The distance of the bus from Nakuru when the car arrived in Nairobi. (2 mks)

23. Town B is 102km on the bearing of 122^0 from town A. Town C is 94 km on bearing of 062^0 from B. Town D is on a bearing of 073^0 from A and 336^0C.

(a) Using a scale of 1cm to represent 20km, draw a scale diagram to show the relative positions of town A, B, C and D. (4 mks)

(b) Using your diagram, determine.

(i) The bearing B from D. (1 mk)

(ii) The bearing of A from C. (1 mk)

(iii) The distance from town A to D. (1 mk)

(iv) The distance from town B and D. (1 mk)

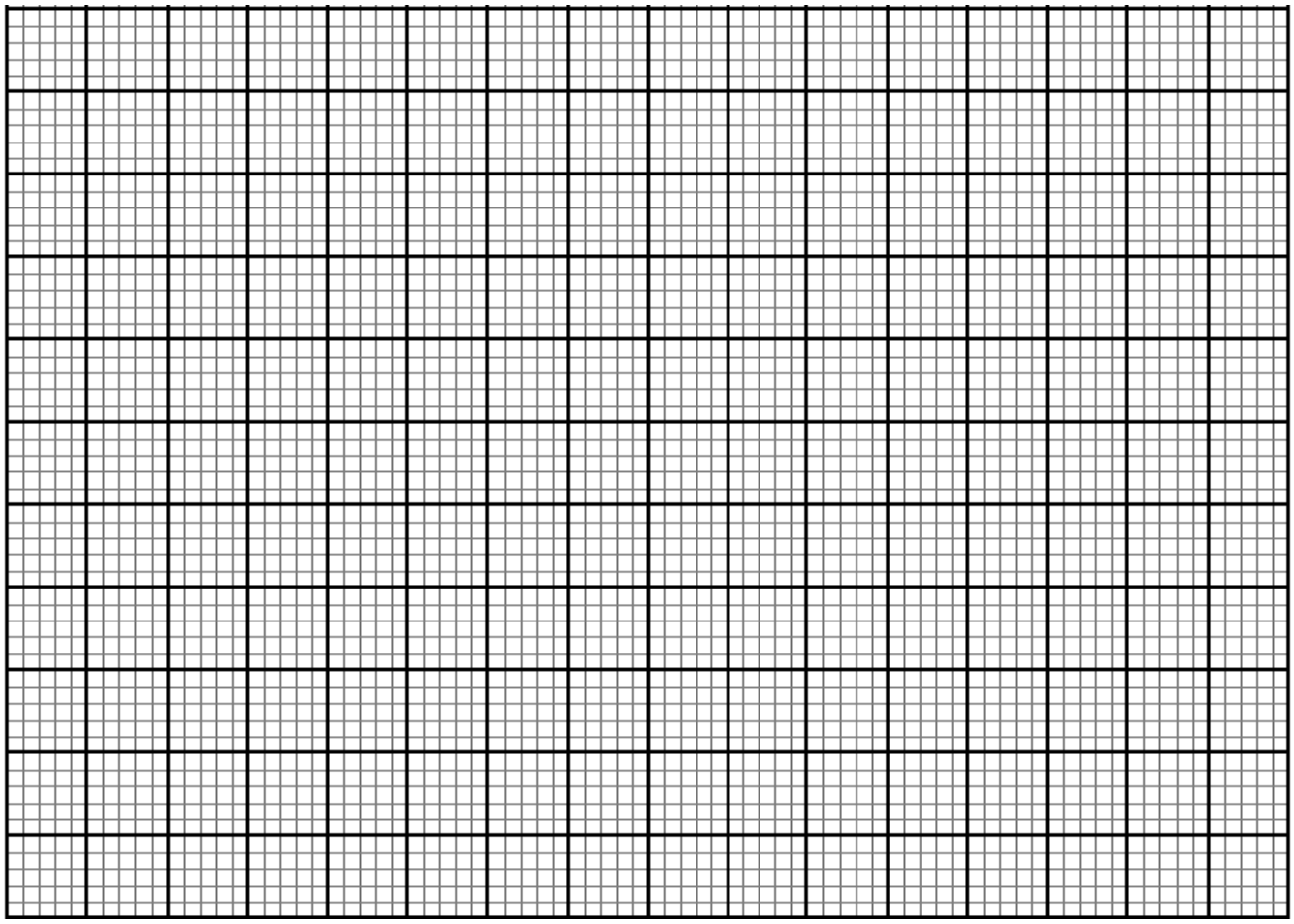
24. The table below gives some of the values of x and y for the functions $y= ½x^2 +22x + 1$ in the interval $0 \leq x \leq 6$.

x	0	1	2	3	4	5	6
y	1					23.5	

(a) Complete the values in the table above. (1 mk)

(b) Use the values in the table to draw the graph of function on the grid provided below.
(2 mks)

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(b) Using the graph and the mid-ordinate rule with 6 stripes, estimate the area bounded by the curve, the x-axis, the y-axis and the line x=6. (3 mks)

(d) Using integration, calculate the exact area and hence find percentage error made when mid-ordinate rule is used. Give your answer correct to 2.dp. (4 mks)

NAME……

INDEX NO. ……CLASS……..…ADM NO…….

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MATHEMATICS ALT. A
PAPER 2
TIME: 2 ½ HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS
PRE-MOCK 3 EXAMS

INSTRUCTIONS TO CANDIDATES

1. *Write your name and index number in the spaces provided at the top of this page.*
2. *This paper consists of two sections: **Section I and Section II.***
3. *Answer **all** questions in **section I** and **any five questions** from **Section II.***
4. *Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.*
5. *Marks may be given for correct working even if the answer is wrong.*
6. *Non- programmable silent electronic calculators **and KNEC** Mathematical tables may be used, except where stated otherwise.*

For Examiner's Use Only

SECTION I

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

SECTION II

17	18	19	20	21	22	23	24	Total

Grand Total

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SECTION I (50 marks)

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

1. Evaluate without using tables or calculators. (3 marks)

$$\frac{\log 1/2 + \log 64}{\log\left(\frac{1}{32} \div \frac{1}{8}\right)}$$

2. Make *x* the subject of the equation (3 marks)

$$\frac{t}{s} = \frac{b}{\sqrt{x-4}}$$

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3. Two pipes, P and Q can fill an empty tank in 3 hours and 4 hours respectively. It takes 5 hours to fill the tank when an outlet pipe R is opened the same time with the inlet pipes. Calculate the time pipe R takes to empty the tank. (3 marks)

4. Given that $M=i-3j+4k$, $W=6i+3j-5k$ and $Q = 2M + 5N$, find the magnitude of Q to 3 significant figures. (3 marks)

5. A triangle ABC is such that a =14.30 cm, b =16.50 cm and B =56º. Find the radius of a circle that circumscribes the triangle. (3 marks)

6. Construct a circle centre O and radius 3 cm. Construct two tangents from a point T, 6.5 cm from O to touch the circle at W and X. measure Angle WTX. (3 marks)

7. Grace deposited Ksh 16 000 in a bank that paid simple interest at the rate of 14% per annum. Joyce deposited the same amount of money as Grace in another bank that paid compound interest semi- annually. After 4 years, they had equal amounts of money in the banks.

Determine the compound interest rate per annum, to I decimal place, for Joyce's deposit.(4 marks)

8. Simplify $\frac{\sqrt{7}}{\sqrt{7-3}}$, leaving your answer in the form $a+b\sqrt{c}$, where a, b, and c are integers.

(2 marks)

9. Solve the equation (4marks)

$$x-y=1$$
$$x^2+2y^2=1$$

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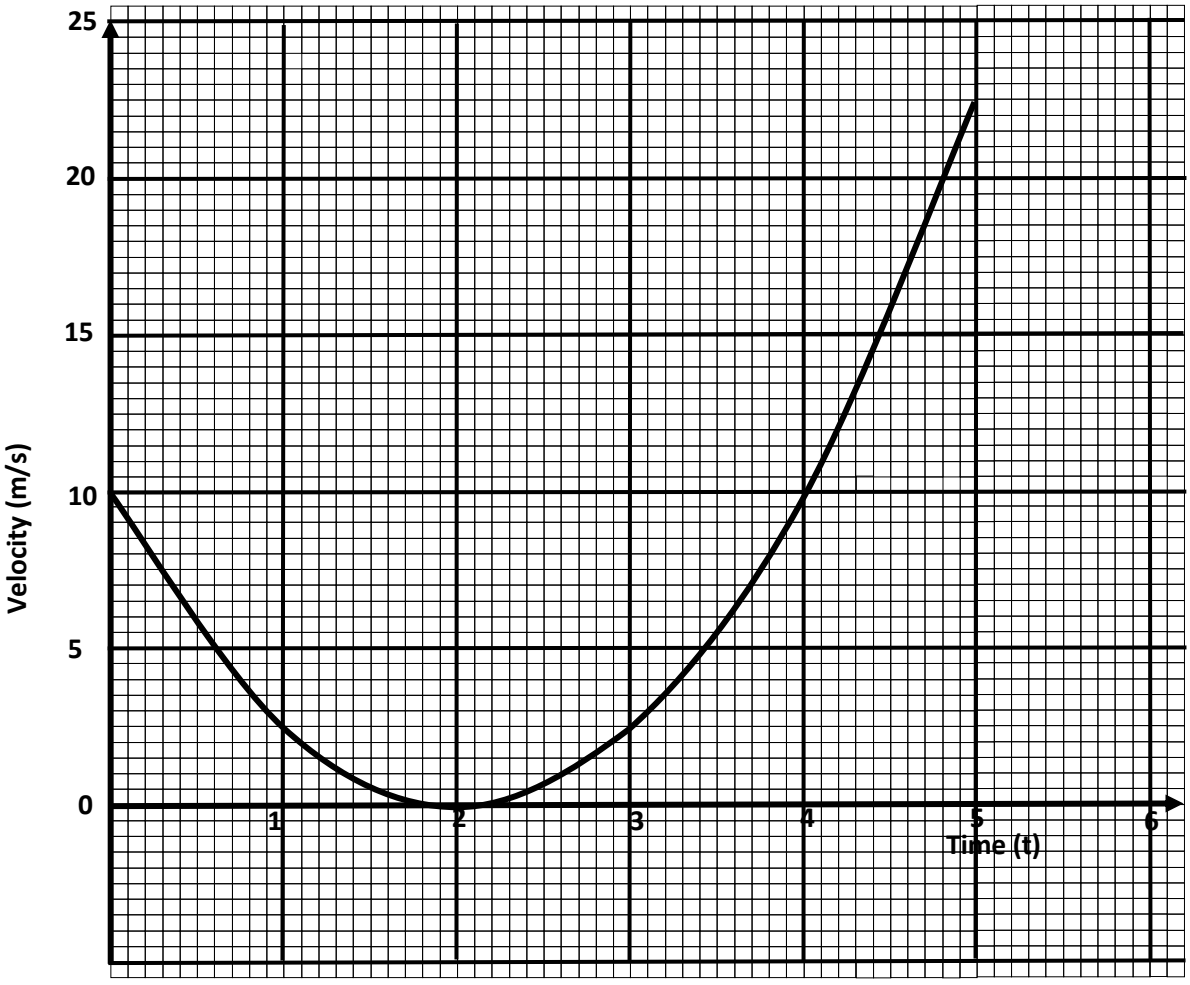
10. Grade I coffee cost sh 500 per kilogram while grade II coffee costs sh 400 per kilogram. The grades are mixed to obtain a mixture that costs sh 420 per kilogram. In what ratio should the two grades be mixed? (3 marks)

11. The base length and height of parallelogram were measured as 8.4 cm and 4.5 cm respectively. Calculate the maximum absolute error in the area of the parallelogram. (3 marks)

12. (a) Expand $(1 + \frac{1}{2}x)^{10}$ up to the fourth term.

(b) Hence, find the value of $(0.84)^{10.}$ (3 marks)

13. The graph below shoes the relationship between velocity of a body and time (t) seconds in the interval $0 \leq t = 5.$



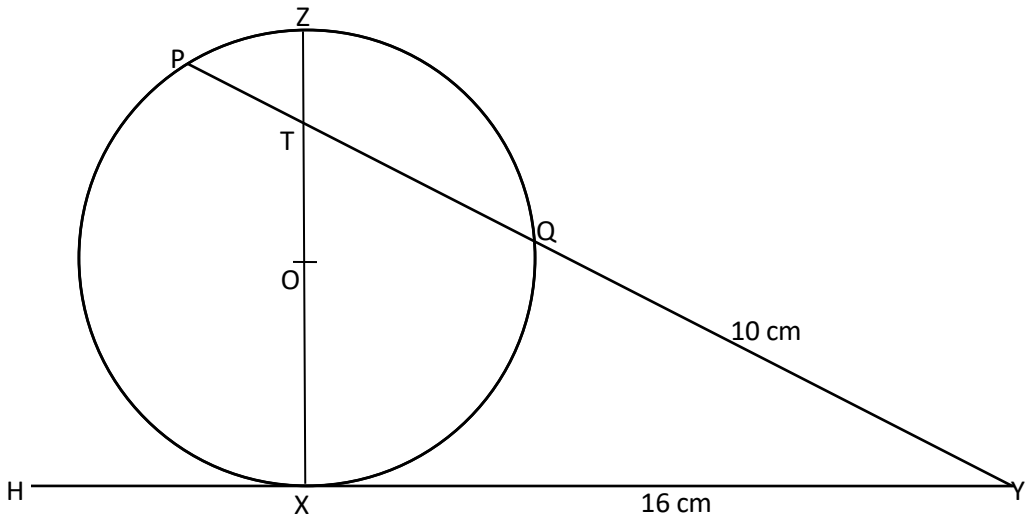
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Use the graph to determine ;

(a) the average rate of change of velocity between $t = 2.5$ seconds and $t = 5$ seconds. (2 marks)

(b) the instantaneous rate of change at $t = 4$ seconds. (2 marks)

14. In the figure below, the tangent HXY meets chord PQ produced at Y. Chord XZ passes through the centre, O, of the circle and intersects PQ at T. Line XY = 16 cm and QY = 10 cm.



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(a) Calculate the length PQ. (2 marks)

(b) If ZT = 4 cm and PT: TQ = 3:5, find XT. (2 marks)

15. Quantity P varies partly as Q and partly varies inversely as square of Q. When Q = 1, P = 1 and when Q = ½, P = -3. Find the equation of the relationship connecting P and Q. (3 marks)

16. $OA = \begin{pmatrix} 4 \\ 1 \\ 0 \end{pmatrix} and\ OB = \begin{pmatrix} 1 \\ -2 \\ 3 \end{pmatrix}$. A point Q divides line AB externally the ratio 5:2. Find the position vector of point Q. (3 marks)

SECTION II (50 Marks)

Answer any five questions from this section.

17. Two tanks of equal volume are connected in such a way that one tank can be filled by pipe A in 1hour 20minutes. Pipe B can drain one tank in 3hours 36minutes but pipe C alone can drain both tanks in 9 hours. **Calculate**:

(a) The fraction of one tank that can be filled by pipe A in one hour. (2mks)

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(b) The fraction of one tank that can be drained by both pipes B and C in one hour. (4mks)

(c) Pipe A closes automatically once both tanks are filled. Assuming that initially both tanks are empty and all pipes opened at once, calculate how long it takes before pipe A closes. (4mks)

18. An examination involves a written test and a practical test. The probability that a candidate passes the written test is $6/11$ if the candidate passes the written test, then the probability of passing the practical test is $3/5$, otherwise it would be $2/7$

(a) **Illustrate** this information on a tree diagram. (2mks)

(b) **Determine** the probability that a candidate is awarded

(i) Credit for passing both tests. (2mks)

(ii) Pass for passing the written test. (2mks)

(iii) Retake for passing one test. (2mks)

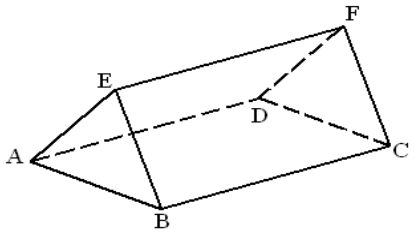
(iv) Fail for not passing the written test. (2mks)

19. (a) Conctruct triangle PQR with PQ = 7.2cm, QR = 6.5cm and angle PQR = 48^0 (3mks)

(b) The locus L1, of points equidistant from P and Q, and locus , L2 of points equidistant from P and R, meet at M. Locate M and measure QM (4mks)

(c) A point x moves within triangle PQR such that QX $\geq$ QM. Shade and label the locus of X. (3mks)

20. The figure below represents a prism with a cross section of an equilateral triangle of side 8cm and length 12cm, as shown below.



(a) Draw the net of the prism ABCDEF (2mks)

(b) **Calculate** the angle between the plane ABCD and the line BF. (2mks)

(c) M is the midpoint of EF. **Calculate**

(i) The length BM (2mks)

(ii) The perimeter of triangle BMD. (2mks)

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(d) **Calculate** the angle between the plane ABM and the base plane ABCD. (2mks)

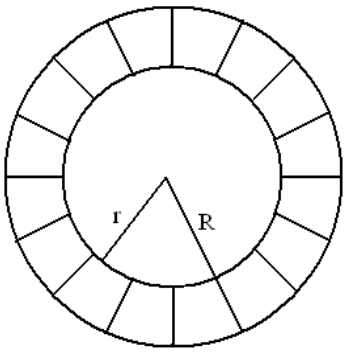
21. Give the matrix $A = \begin{pmatrix} -1 & -4 \\ 1 & 3 \end{pmatrix}$

(a) (i) **Calculate** A^2 and A^3 (2mks)

(ii) **Find** the values of the constants p and q for which $A^2 = pA + qI$ where I is the identity matrix. (3mks)

(iii) The triangle ABC maps onto $A^1B^1C^1$ under the transformation represented by matrix A. **Find** the area of triangle ABC if the area of triangle $A^1B^1C^1$ is $21cm^2$ (3mks)

(b) The figure shows two concetric circles such that the ratio of their radii is 1: 3. If the area of the shaded region is 78.4 square units, **calculate** the area of the larger circle. (2mks)



22) . A certain uniform supplier is required to supply two types of shirts: one for girls labelled G and the other for boys labelled B. The total number of shirts must not be more than 400. e as to supply more of type G than of type B. However the number of type G shirts must not be more than 300 and the number of type B shirts must not be less than 80. by taking x to be the number of type G shirts and y the number of type B shirts,

(a) **Write down** in terms of x and y all the inequalities representing the information above. (3mks)

(b) On the grid provided **draw** the inequalities and shade the unwanted regions. (4mks)

(PROVIDE A GRAPH PAPER)

(c) Given that type G costs Shs. 500 per shirt and type B costs Shs. 300 per shirt.

(i) Use the graph in (b) above to **determine** the number of shirts of each type that should be made to maximize profit. (1mk)

(ii) **Calculate** the maximum possible profit. (2mks)

23. (a) The equation of a curve is given by $y = X^3 + X^2 - bx$. **Show** that the value of X at the minimum turning point is $\frac{-1+\sqrt{19}}{3}$ (3mks)

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(b) The displacement X metres of a particle moving along a straight line after t seconds is given by $X = 4t + 2t^2 - t^3$

(i) **Find** its initial acceleration (2mks)

(ii) **Calculate** the time when the particle was momentarily at rest. (2mks)

(c) (i) **Find** the values of X where the curve $y = X^2 (x - 2)$ crosses the x-axis. (1mk)

(ii) Hence **find** the area enclosed by the curve $y = X^2 (x - 2)$, the lines $x = 0$, $x = 2\frac{2}{3}$ and the x- axis (2mks)

24. The marks of 50 students in a mathematics test were taken from a form 4 class and recorded in the table below.

Mark (%)	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
Frequency	2	5	7	9	11	8	5	3

(a) On the grid provided, **draw** a cumulative frequency curve of the data. (3mks)
Take: 1cm to represent 5 students on the vertical scale and 1cm to represent 10 marks on the horizontal scale.

(PROVIDE A GRAPH PAPER)

(b) From your curve in (a) above

(i) **Estimate** the median mark. (1mk)

(ii) **Determine** the Interquartile deviation. (2mks)

(iii) **Determine** the 10^{th} to 90^{th} percentile range. (2mks)

(c) It is given that students who score over 45 marks pass the test. Use graph in (a) above to **estimate** the percentage of students that pass. (2mks)

NAME…….

ADM NO……... INDEX NO ……. CLASS..……...

232/1 **Candidate's Signature….…….**

Date: …….

Physics
Paper 1
2 hours

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Instructions to candidates

- Write your name and class in the space provided.
- This paper consists of two sections; **SECTION A** and **B**
- Answer **all** the questions in the spaces provided
- **ALL** working **MUST** be clearly shown.
- Mathematical tables and electronic calculators may be used
- Take: Acceleration due to gravity: **g = 10m/s^2**

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

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	**1 – 12**	**25**	
B	**13**	**10**	
	14	**11**	
	15	**12**	
	16	**10**	
	17	**12**	
	Total Score	**80**	

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SECTION A (25 MARKS)

1. With a reason identify in which state is diffusion faster between gas and liquid. (2marks)

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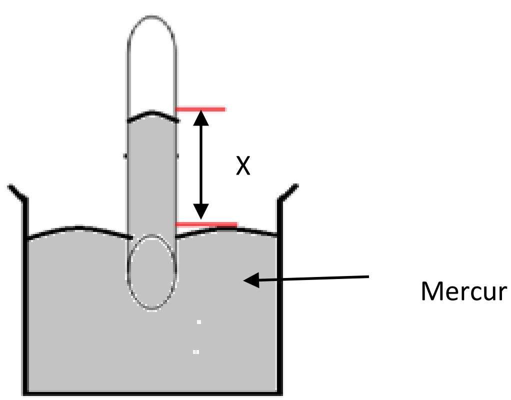
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2. The length of the spring is 20.0cm. It becomes 24.0cm when a weight of 8.0N hangs on it. Calculate the length of the spring when supporting a weight of 200N. (2marks)

3. The figure below shows the instrument used to measure pressure



   a. Name the instrument (1mark)

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b. What would be observed if the test tube is tilted assuming the instrument is functioning normally (1mark)

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4. The rate of heat flow in thermal conductivity increases with increase in cross-section area. Explain this observation (1mark)

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5. Explain why a small car travelling at a very high speed is likely to be dragged into a long track travelling in the opposite direction (2marks)

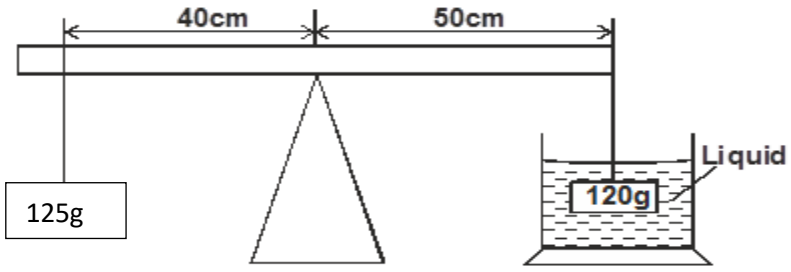
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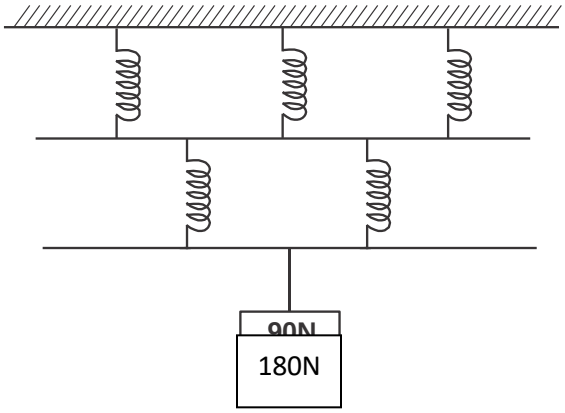
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6. A uniform meter rule is balanced by two masses as shown in the figure below.



By displacement method, the immersed object is found to occupy 13.5cm^3. Determine the density of the liquid in SI units. (3 marks)

7. The springs shown in the arrangement in figure 4 below are identical.



Given that the 180N weight causes a total extension of 30cm, determine the spring constant of each spring. (The weight of each spring is negligible) (3 marks)

8. i) Distinguish between elastic collision and inelastic collision.(1 mark)

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ii) State the energy transformation during inelastic collision. (2 marks)

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9. State the branch of physics that deal with kinetic energy of matter. (1 mark)

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10. The water in a burette is $30.6cm^3$, 50 drops of water each of volume V are added to the water in the burette. The final reading of the burette was $20.6cm^3$. Calculate the radius of the drop of water .(3 marks)

11. State two factors that affect the stability of an object (2 marks)

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12. State a reason why a burn from steam at 100^0cis more severe than a burn from boiling water at the same temperature (1 mark)

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SECTION B: (55 MARKS)

13. a) An astronaut in orbit round the earth may feel weightless even when the earth's gravitational field still acts on him. Explain (2 marks)

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b) Distinguish between angular velocity and linear velocity (1 mark)

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c) a stone is whirled with uniform speed in a horizontal circle of radius 15 cm. it takes the stone 10 seconds to describe an arc of length 4cm. calculate

i) Angular velocity (3 marks)

ii) Linear velocity of the stone (2 marks)

iii) Periodic time (2 marks)

14. a) State the Bernoulli's principle of fluids (2 marks)

b) In derivation of equation of continuity in fluids, state two assumptions to be made. (2marks)

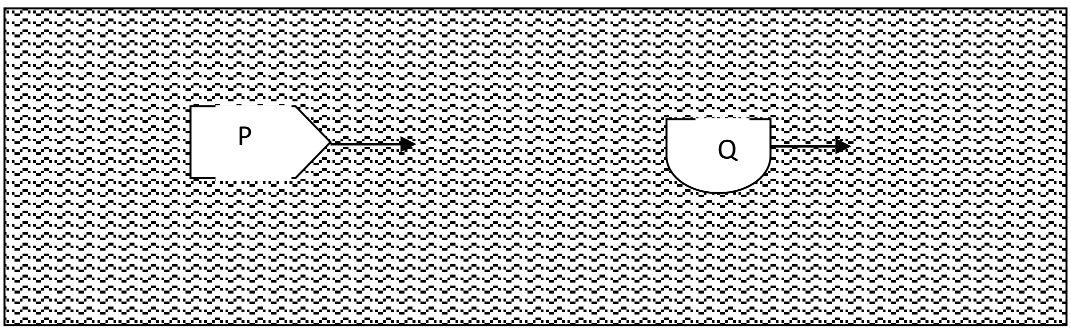
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b) The figure below shows cross-section of two submerged bodies P and Q in an ocean. The bodies were then pulled by a ship in the direction shown.



i) State with a reason, which body is easier to pull if they have equal volume and density (2 marks)

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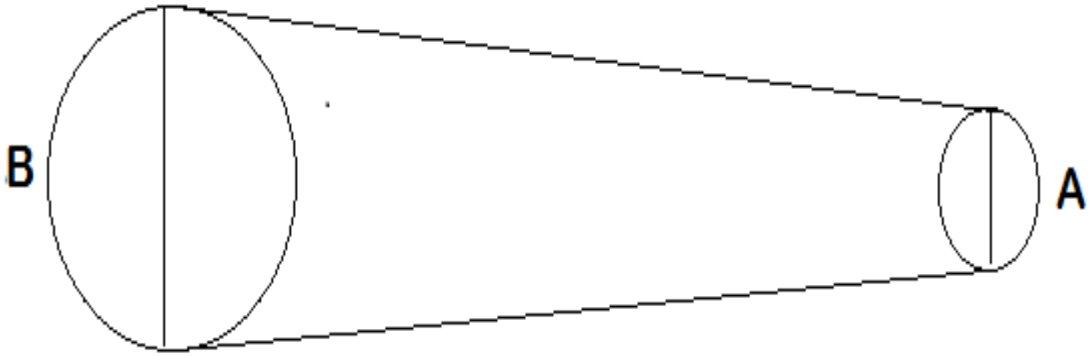
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ii) On the same diagram, show the path followed by each body and their streamlines (2 marks)

c) Water flows steadily a pipe as shown in the figure below. The diameter of A and B are 3cm

and 5cm. if the volume flux at A is 45cm^3/s. find the speed of water at B.(3 marks)



15. a) State the law of floatation (1 mark)

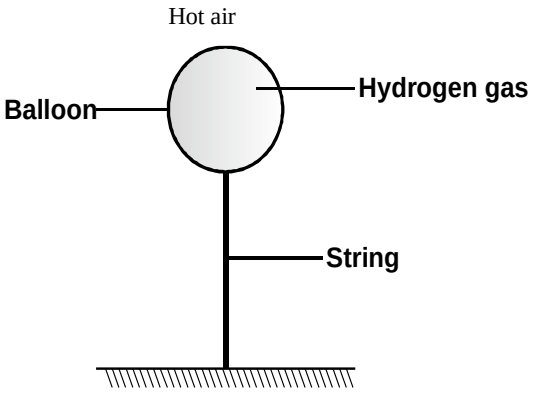
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b) The diagram below shows a hot air balloon tethered to the ground on a calm day. The balloon contains 1300cm^3 of hot air of density 0.82 kg/m3. The mass of the material making the balloon without hot air is 420kg. The density of the surrounding air is 1.35 kg/m^3. Determine



i) The total weight of hot air balloon (3 marks)

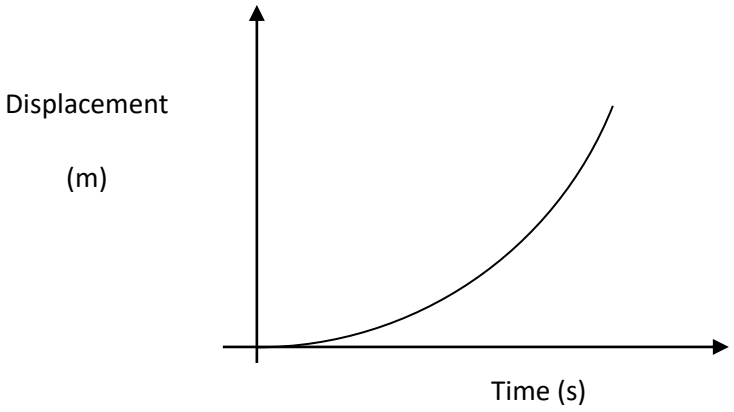
ii) The weight of air displaced by the balloon (2 marks)

iii) Upthrust force on the balloon (1 mark)

iv) the tension in the rope holding the balloon in the ground. (2 marks)

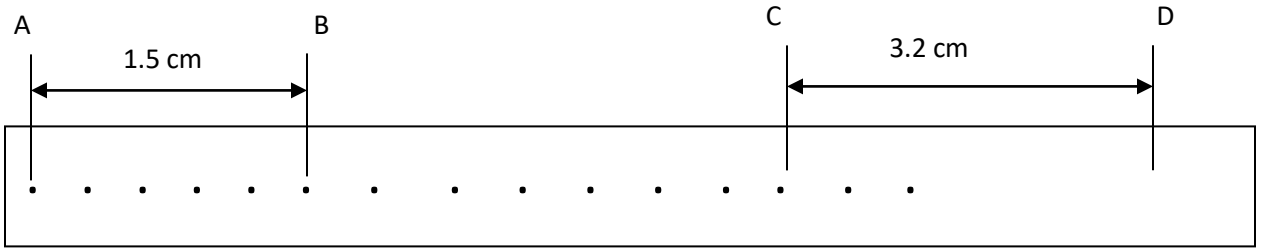
v) the acceleration with which the balloon begins to raise when released.(3marks)

16. a) the graph below represents a body moving with variable speed



on the same graph sketch the results of the same body moving at a lower velocity. (1 marks)

b) A paper tape was attached at a moving trolley and allowed to run throw a ticker timer. If the frequency of the tape is 100Hz. Determine

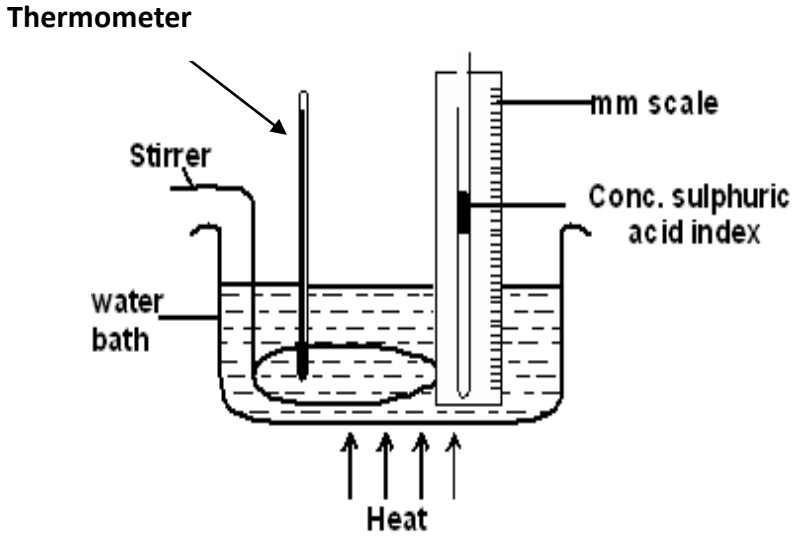


i)The period of the ticker timer (2 marks)

ii)Velocity AB and CD (4 marks)

ii)The average acceleration (3 marks)

17. **a)**Figure 9 shows a set up to investigate one of the gas laws. All equipment are standardized.



i) Name the gas law being investigated. (1 mark)

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ii) Give two reasons for using the concentrated sulphuric acid index. (2 marks)

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iii) What is the purpose of the water bath? (1 mark)

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iv) State two measurements that should be taken in this experiment. (2 marks)

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v) Explain how the measurements taken in (iv) above may be used to verify the law. (3 marks)

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b) A gas has a volume of $30cm^3$ at 18^oC and normal atmospheric pressure. Calculate the new volume of the gas if it is heated to 54^oC at the same pressure. (3 marks)

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Name…….

Index No…….. Adm No ……Sign…….

School…… Date……..

232/2
PHYSICS
PAPER 2
TIME: 2 HOURS

AMOBI PUBLISHERS GROUP OF EXAMINERS

PRE-MOCK 3 EXAMS

Kenya Certificate of Secondary Education (KCSE)

INSTRUCTIONS TO THE CANDIDATES:

- Write your **name** and **index number** in the spaces provided above
- This paper consists of **two** sections **A** and **B.**
- Answer **all** questions in section **A** and **B** in the spaces provided.
- All working **must** be clearly shown in the spaces provided.
- Mathematical tables and electronic calculators may be used.
- Take'g' l0m/s 2

For Examiners' Use Only

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 - 14	25	
B	15	15	
	16	14	
	17	14	
	18	12	
TOTAL		**80**	

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SECTION A

1 . What property of light is suggested by the formation of shadows? (1 mks)

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2. You are provided with the following; A cell and holder, a switch, a rheostat, an Ammeter, a voltmeter and connecting wires. Draw a diagram for a circuit that could be used to investigate the variation of the potential difference across the cell with the current drawn from the cell. (2mks)

3. An un-magnetized steel rod is clamped facing North-South direction and then hammered repeatedly for some time. When tested, it is found to be magnetized. Explain this observation. (2mks)

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4. A lady holds a large concave mirror of focal length 1 m, 80 cm from her face, state two characteristics of her image in the mirror. (2 mks)

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5.A girl brought a positively charged rod close to the cap of a gold leaf electroscope; she observed that the gold leaf diverged further. Explain this observation. (2mks)

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6. In an experiment using a ripple tank the frequency, f, of the electric pulse generator was reduced to one third of its value. How does the new wavelength compare with the initial wavelength? (3

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7. Figure 1 shows a ray of light incident on the face of a water prism

FIG.1

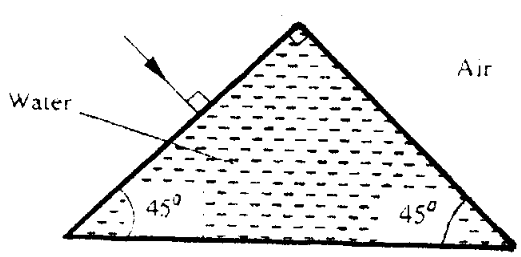


FIG.1

Sketch the path of the ray as it passes though the prism. Critical angle for water is 49^0 (1mk)

8. A heating coil is rated 100W, 240V. At what rate would it dissipate energy if it is connected to a 220V supply? (3mk)

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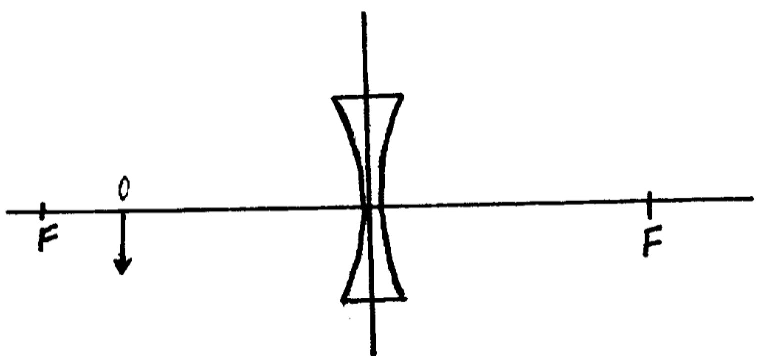
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9. Figure 2 shows an object 0 placed in front of a concave lens with principal foci F and F Construct a ray diagram to locate the position of the image (1mk)



10. State the difference between X-rays and Gamma rays in the way in which they are produced. (1mk)

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11. A 60W bulb is used continuously for 36 hours. Determine the energy consumed. Give your answer in kilowatt hour (kwh). (2mks)

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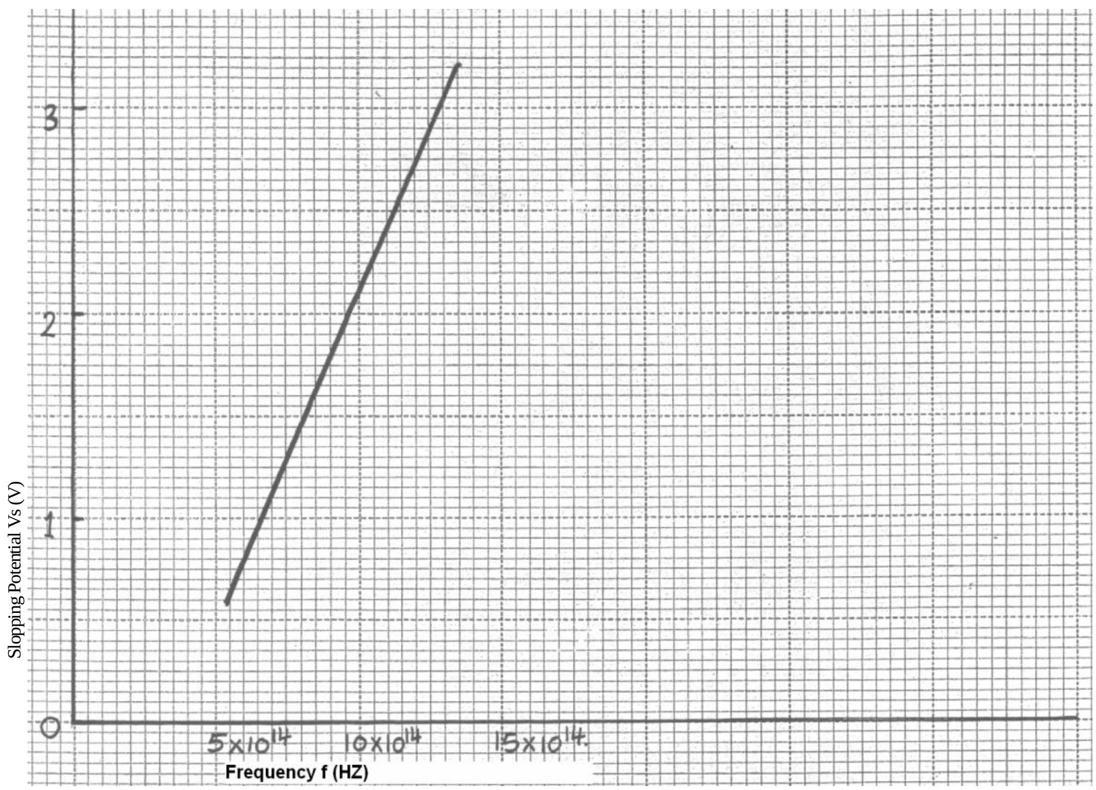
12 A narrow beam of electrons in a cathode ray oscilloscope (CR0) strike the screen producing a spot. State what is observed on the screen if a low frequency a.c source is connected across the y-input of the CRO (1mk)

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In an experiment on photo- electricity using metal X, the graph shown in figure 3 was obtained Use the graph to answer questions 13.



13. Determine the minimum frequency Fo below which no photoelectric emission occurs. (1mk)

14 .You are provided with 12V a. c source, four diodes and resistor. Draw a circuit diagram for a full wave rectifier and show the points at which the output is taken. (2mk)

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15. (a) Given a bar magnet, an iron bar and a string

(i) Describe a simple experiment to distinguish between the magnet and the iron bar

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(ii) State with reasons the observation that would be made in the experiment. (2mks)

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(b) In an experiment to magnetize two substances P and Q using electric current, two curves (graphs) were obtained as shown in figure 4

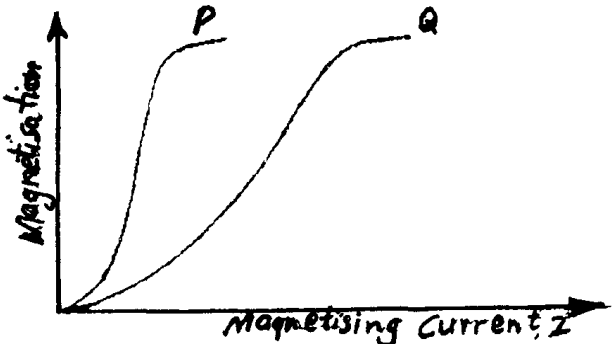


FIG.4

Using the information in fig. 4 explain the differences between substances P and Q with references to the domain theory (6mks)

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(c) In the set up in figure 5, the suspended metre rule is in equilibrium balanced by the magnet and the weight shown. The iron core is fixed to the bench.

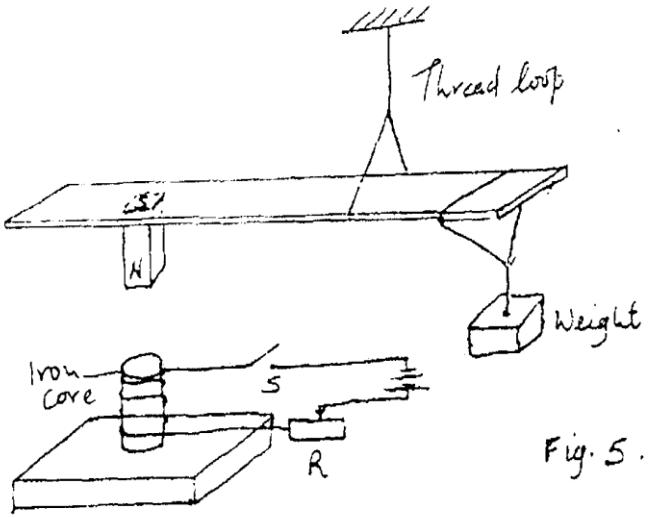


Fig. 5.

(i) State the effect on metre rule when the switch S is closed. (1mk)

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(ii) What would be the effect of reversing the battery terminals? (1mk)

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(iii) Suggest how the set up in figure 5 can be adapted to measure the current flowing in the current circuit. (3mk)

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16. (a) (i) What is the difference between longitudinal and transverse waves? (1mk)

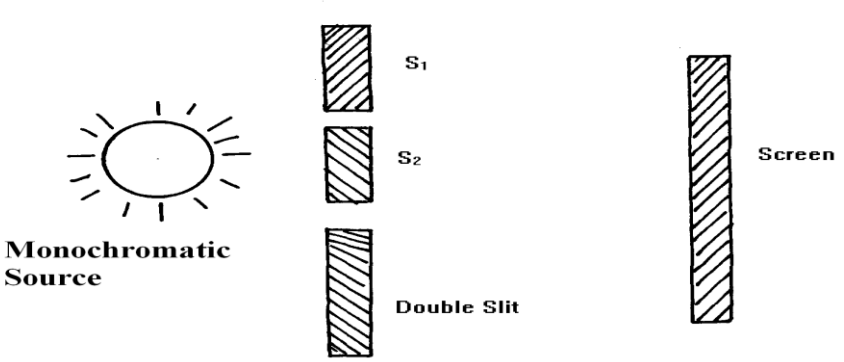
(ii) State two distinctions between the way sound waves and electromagnetic waves are transmitted (2mk)

(b) A mineworker stands between two vertical cliffs 400m from the nearest cliff. The cliffs are X distance apart. Every time he strikes the rock once, he hears two echoes, the first one after 2.55 , while the second follows 2s later. From this information; calculation:

(i) The speed of the sound in air (2mk)

(ii) The value of X (3mk)

(c) In an experiment to observe interference of light waves a double slit is placed close to the source. See figure 5



(i) State the function of the double slit (1mk)

(ii) Describe what is observed on the screen (2 mks)

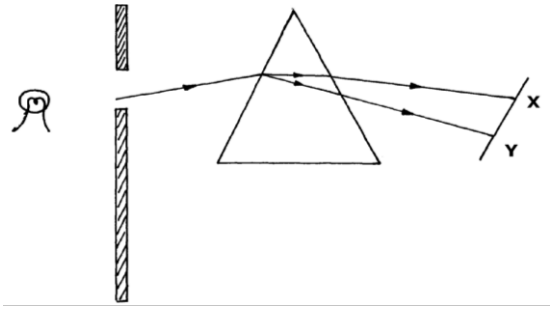
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(iii) State what is observed on the screen when

i). The slit separation S1S2 is reduced (1mk)

ii) White light source is used in place of monochromatic source (1mk)

17. a) The diagram in figure 6 below shows a narrow beam of white light onto a glass Prism.



(i) What is the name of the phenomenon represented in the diagram? (1mks)

(ii) Name the colour at x and Y. (2mk)

(iii) Give a reason for your answer in part (ii) above. (1mk)

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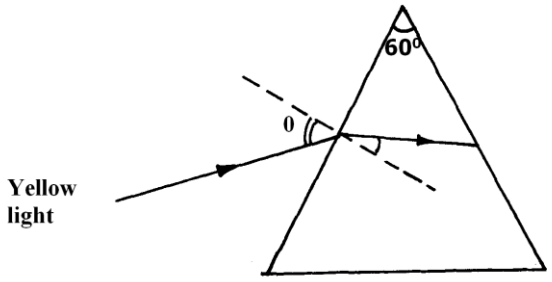
(iv) What is the purpose of the slit? (1mk)

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b) Figure 7 below shows the path of ray of yellow light through a glass prism. The speed of yellow light in the prism is 1.8×10^8 m/s.



i) Determine the refractive index of the prism material (Speed of light in vacuum, C = 3.0×10^8 m/s) (3mks)

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

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(iii) Given that r = 31.2^0, determine the angle 0. (3mks)

18. (a) X- rays are used for detecting cracks inside meta' beams (i)State the type of the X- rays used.

••

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••

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

••

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(b) Figure 1 shows the features of an X- ray tube

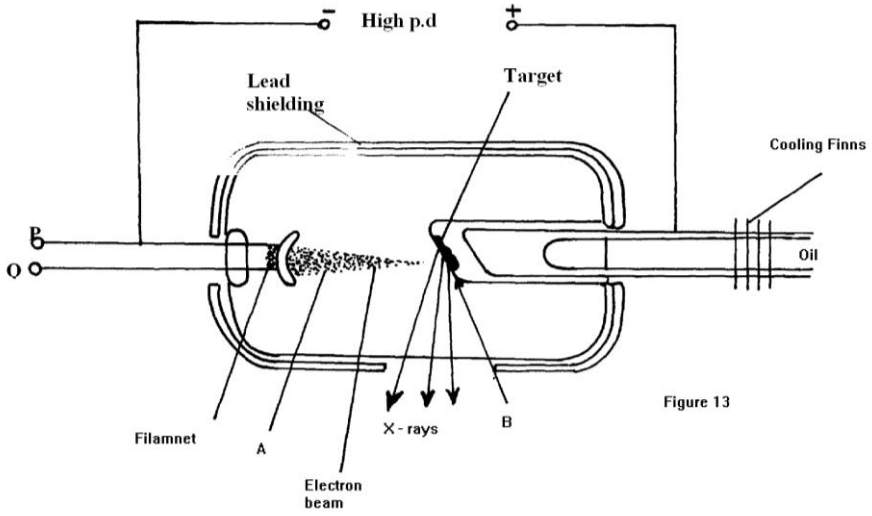


Figure 13

i) Name the parts labelled A and B. (2mks)

.....

.....

.....

(ii) Explain how a change in the potential across P changes the intensity of the X- rays produced in the tube. (2 mks)

.....

.....

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(iii) During the operation of the tube, the target becomes very hot. Explain how this heat is caused. (2 mks)

.....

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(iv) What property of lead makes it suitable for use as shielding material? (1mk)

.....

.....

.....

(c) ln a certain X- ray tube, the electrons are accelerated by a Pd of 12000V. Assuming all the energy goes to produce X- rays, determine the frequency of the X- rays produced. (Plank's constant h= 6.62×10^{-34} is and charge on an electron, e = 1.6×10^{-19}C). (3mks)

END

Name……..

Index No…… School…….

Date…… Candidate's signature……

PHYSICS

PAPER 3

TIME: 2 HOURS

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PRE-MOCK 3 EXAMS

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INSTRUCTIONS TO THE CANDIDATES:

- Write your **name** and **index number** in the spaces provided above
- This paper consists of **two question.**
- Answer **all** questions in section **A** and **B** in the spaces provided.
- All working **must** be clearly shown in the spaces provided.
- Mathematical tables and electronic calculators may be used.

For Examiners' Use Only

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1	18	
B	2	22	
TOTAL		**40**	

This paper consists of 9 Printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.

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QUESTION ONE

You are provided with the following apparatus

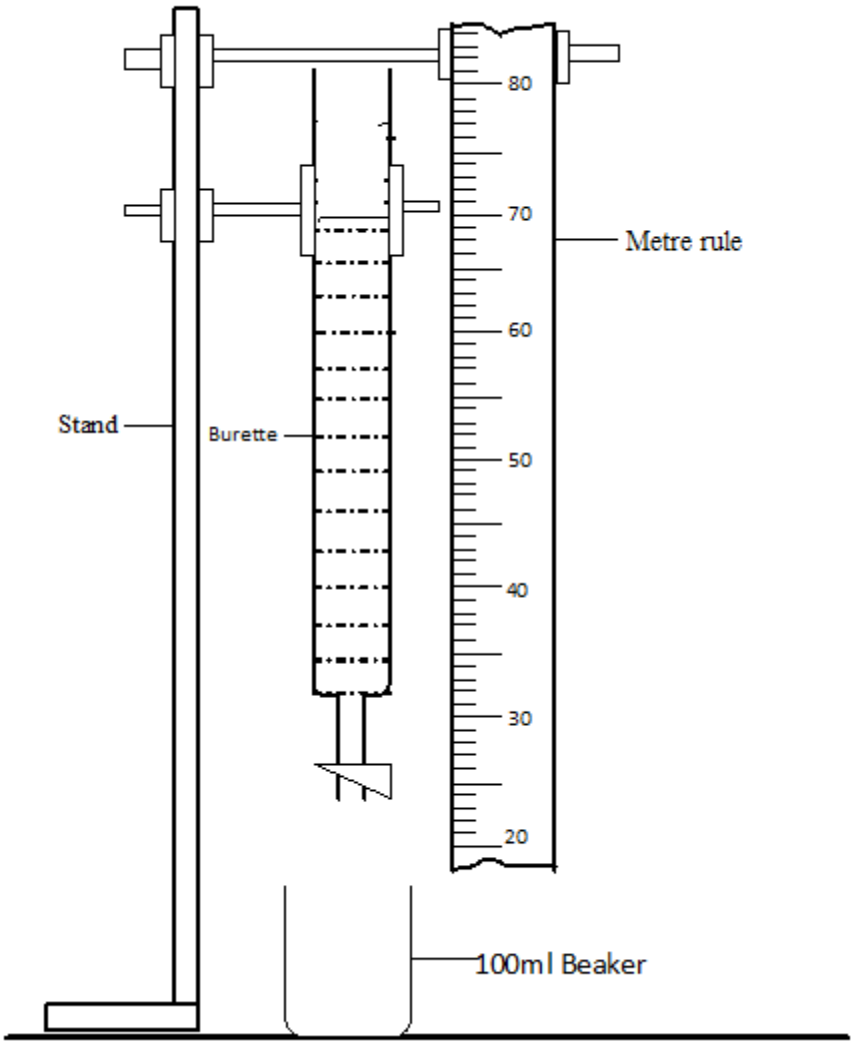
- A clean tap burette
- Retort stand
- Two clamps and 2 bosses
- A metre rule
- Water
- 100ml beaker
- A stop watch

PROCEDURE

a) Clamp the burette and metre rule vertically and as close to each other as possible

b) Adjust the position of the burette so that its lower end is 15cm above the bench and place the 100ml beaker underneath it.

c) Fill the burette with water to a height above the 70cm mark of the metre rule as shown below.



- By trial and error method adjust the rate of flow of the water until the time taken for the water to flow from 70cm mark to 65cm is between 25-30 seconds.
- Once this flow rate has been achieved do not alter the flow rate for the rest of the experiment.
- Fill the burette again with water to a level above the 72cm mark.
- With the water level at the 70cm mark (at t=0) start the stop watch. Note the time taken for the height h of the water surface in the burette to decrease by 5cm;Do not stop the watch.

- Continue to record the time taken for the height h of water surface to decrease by successive 5.0cm marks till you have 10 more readings.

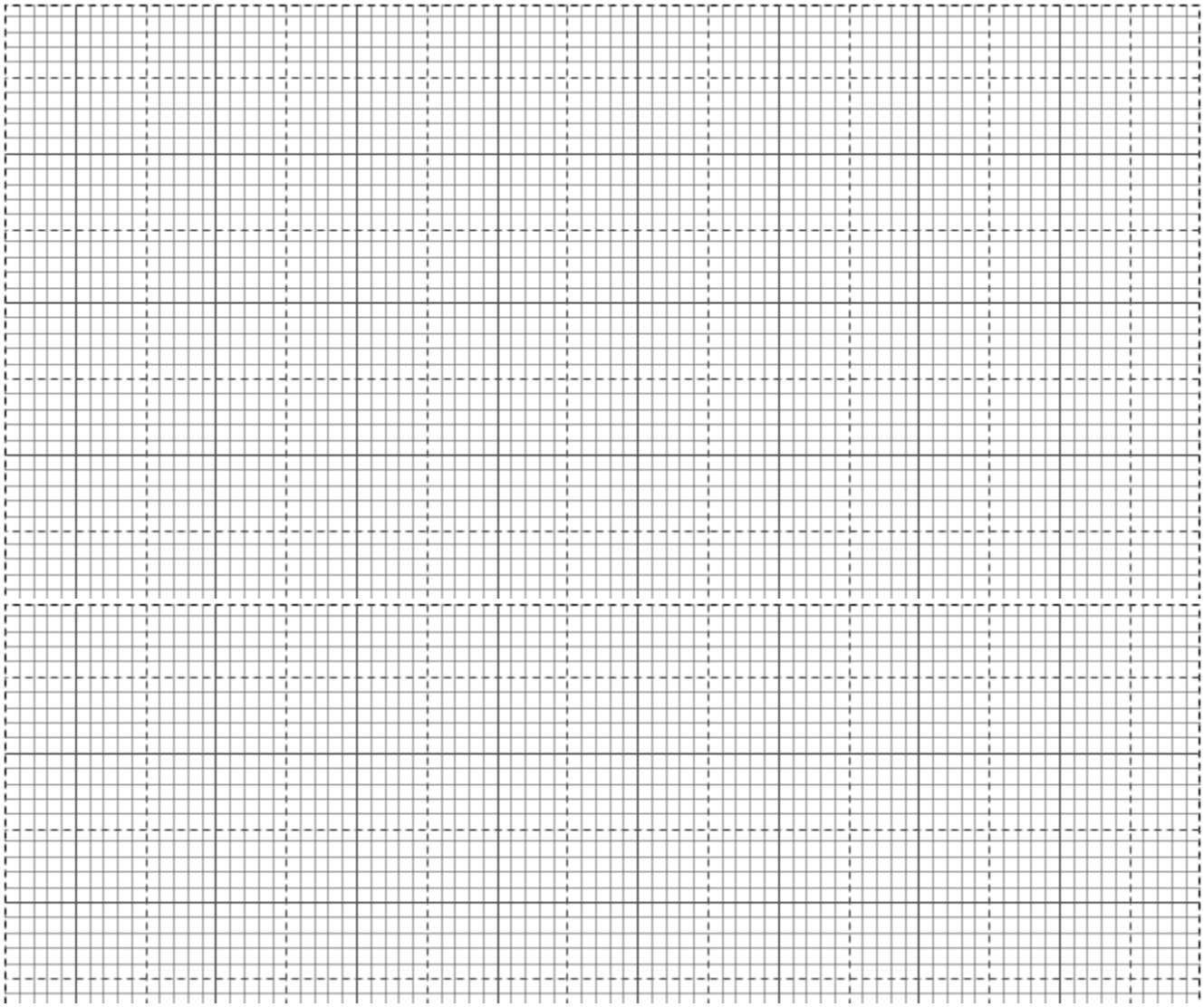
- Enter the results in the table below
- Reset the watch and refill the burette .
- Repeat the procedure to get second and third set of readings for t.

Height h(cm)	Trial 1	Trial 2	Mean time t
70			
65			
60			
55			
50			
45			
40			
35			

(8marks)

Complete the table above and calculate the mean time t

c) Plot a graph of height h (y-axis) against mean time t (5marks)



d) Use your graph to determine the time taken for the height h to change from 64cm to 42cm.
(2marks)

e) Find the gradient of the graph when h is 47 cm 3mks

QUESTION 2

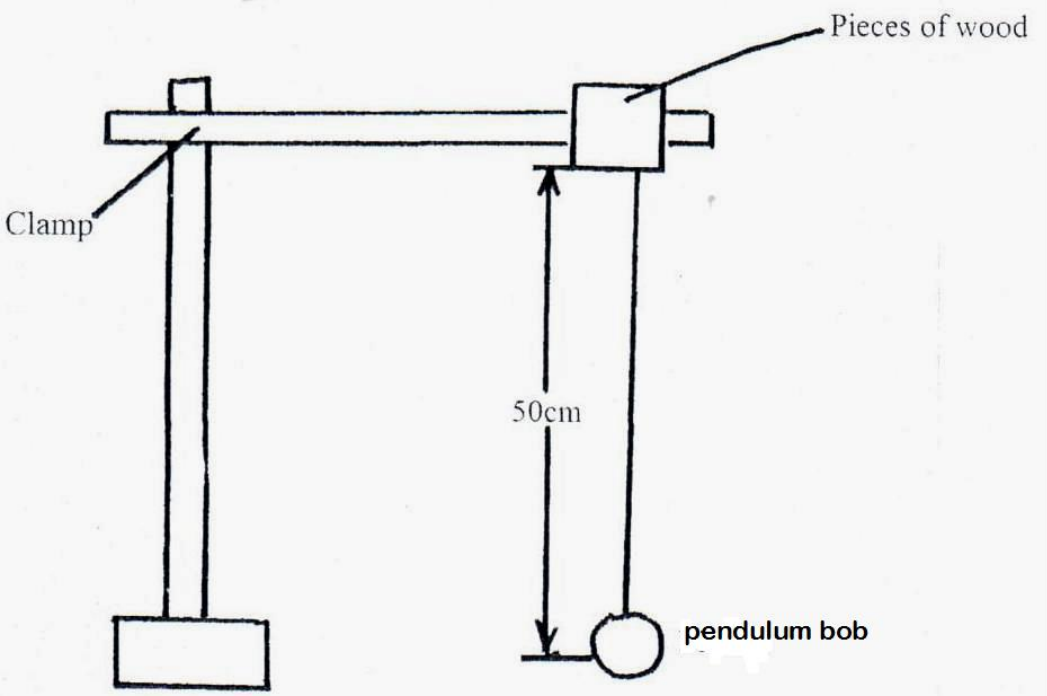
PART A

You are provided with the following:

- Lens
- Lens holder
- Metre rule
- Screen
- A 70cm long thread.
- Stopwatch.
- Clamp, boss and retort stand.
- Small pieces of wood.
- Pendulum bob

Proceed as follows:

(i) Using the provided thread, tie the marble to be used as a pendulum clamp the thread so that the length l of the pendulum to the centre of the marble is 50cm as in figure 2.



Displace the marble slightly so as to oscillate along the vertical plane.

Time and record the time, t, for 20 oscillations.

t_1 = _____ S (1mk)

t_2 = _____ S (1mk)

t_{ave}=_____ S (1mk)

(ii) Calculate the period, T=_____ S (2mk)

(iii) Calculate the frequency, f =_____ S (2mk)

(iv) T^2=_____ S (1mk)

(v) Convert L to metres, L= _____ (1mk)

(v) Calculate $\frac{T^2}{L}$ (1mk)

(iv) If the oscillation of the marble is given by the formula

$$\frac{T^2}{L} = \frac{4\pi^2}{g}$$

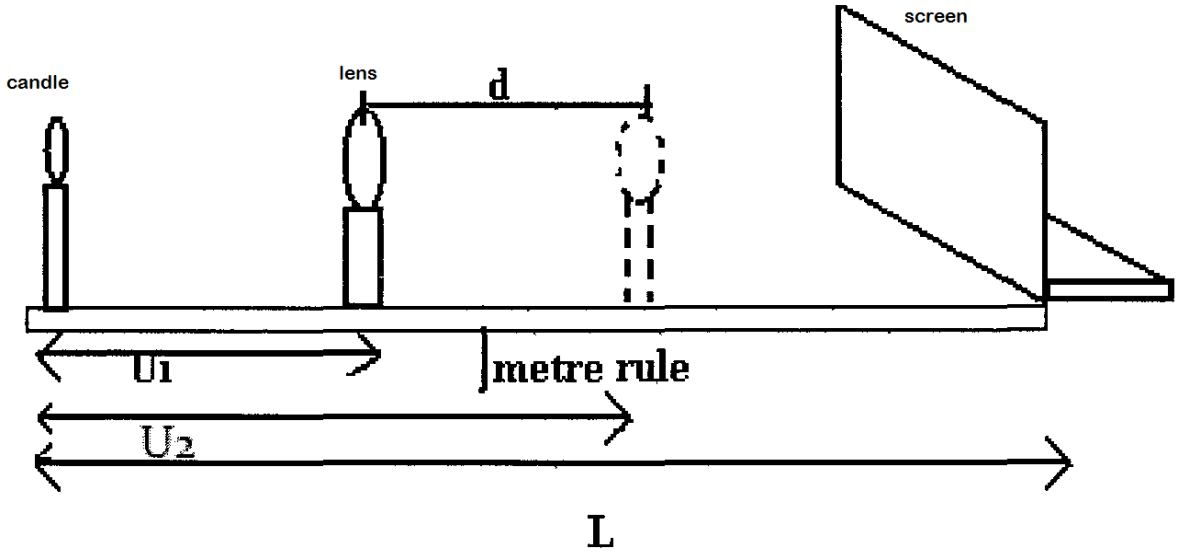
.

determine the value of g. (3mks)

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PART B

i Set up the apparatus as shown in figure 2 below. (ensure that the candle and the lens are in the line)



ii) With the candle placed a distance L =100cm from the screen, determine the position of a magnified image of the candle on the screen by moving the lens

iii) Determine the distance of the lens from the candle U_1

U_1…….. .cm (1 mk)

iv) Now move the lens towards the screen until you get a sharply focused diminished image. Determine the new distance of the lens from the candle U_2

U_2……cm (1 mk)

v) Calculate the displacement d of the lens (2 mk)

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d = U_2 — U_1 = ……cm

vi) Give that $\lambda = \frac{L^2 - d^2}{4L}$, calculate the value of λ (3 mks)

vii) By using a distant object, find the focal length f of the lens (1mk)

viii) compare the value in vi and vii (1mk)

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