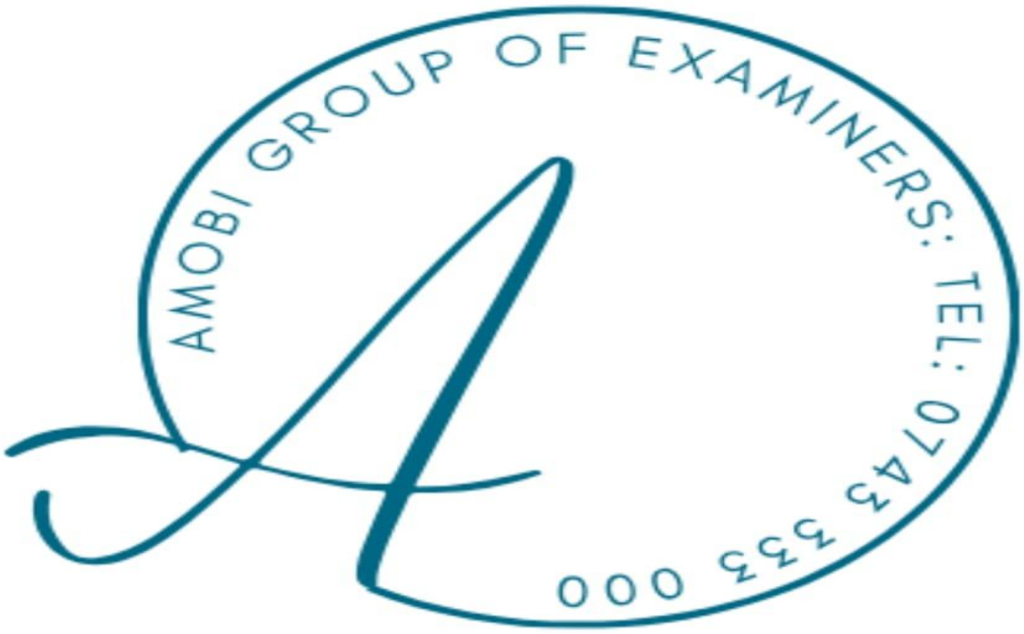
DETERMINED STUDENTS FORM 4 PRE-MOCK1 EXAMS *(13 SUBJECTS TESTED)*



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ORDER OF THE 13 SUBJECTS TESTED

(ALPHABETICALLY ARRANGED)

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

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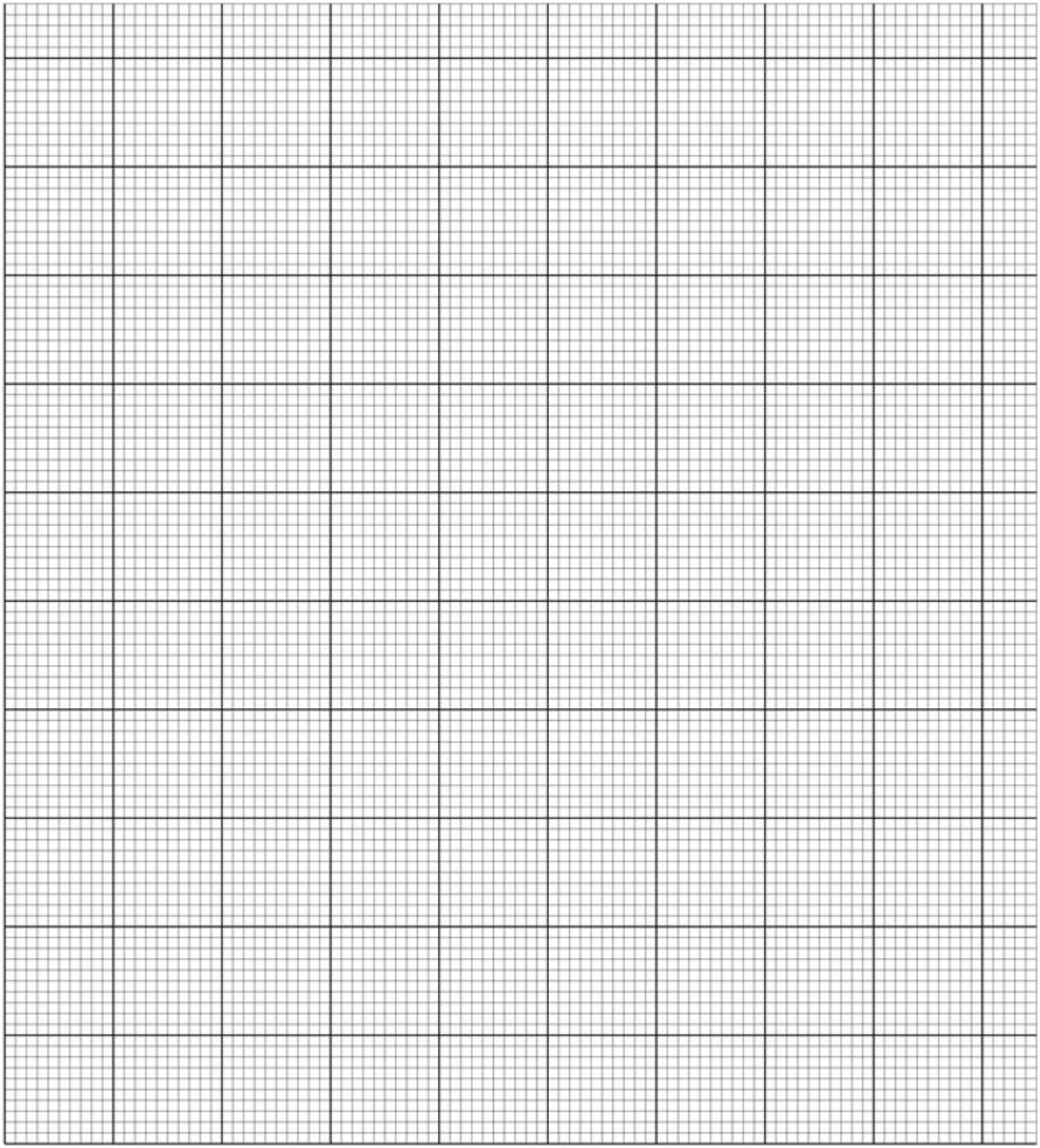
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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……..

443/1

AGRICULTURE PP1

EXAM

SECTION A (30 MARKS)

ANSWER ALL QUESTIONS IN SPACES PROVIDED.

1. Give four reasons for intercropping in crop production (2 mks)

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2. State four factors that determine the depth of cultivation (2 mks)

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3. Give four reasons for early seedbed preparation (2 mks)

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4. State four disadvantages of using organic manure in crop production (2 mks)

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5. Give two conditions in agricultural production when opportunity cost is zero (1 mk)

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6. Give five reasons for timely planting of annual crops (2 ½ mks)

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7. Name four categories of nursery beds (2 mks)

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8. Give five advantages of practicing crop rotation (2 ½ mks)

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9. State four reasons for processing coffee before selling (2 mks)

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10. a). Define land tenure reforms (½ mk)

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b). Give five reasons why land consolidation should be encouraged in Kenya (2 ½ mks)

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11. State four causes of crop diseases (2 mks)

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12. List four post – harvest practices that are carried out in maize production (2 mks)

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13. Name two classes of weeds on the basis of the following

a). Growth cycle (1 mk)

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b). Plant morphology (1 mk)

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14. Give four ways by which farmers minimize grain losses in stores (2 mks)

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15. Give two factors which characterize small scale farming (1 mk)

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SECTION B (20 MARKS)

Answer all the questions in the spaces provided

16. Diagram D and C shows common weeds in the field. Study them and answer questions that follow



C **D**

a). Identify weeds C and D (2 mks)

C ……

D ……

b). State one harmful effect of weed D on livestock production (1 mk)

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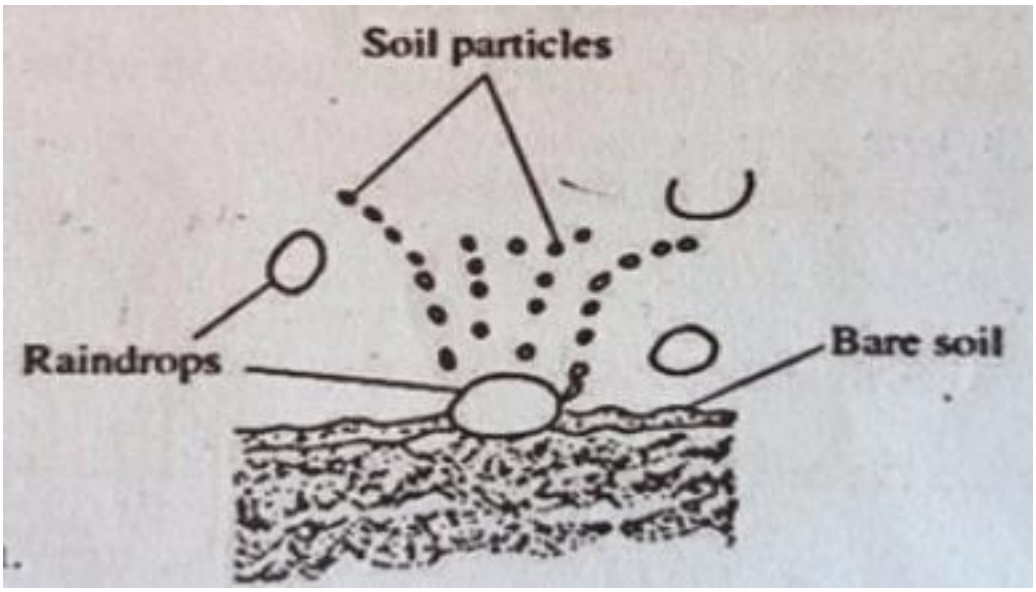
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c). Name two crops commonly attacked by weed C. (2 mks)

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17. The diagram below illustrates a type of soil erosion



a) Identify the type of soil erosion (1 mk)

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b) How does the type of erosion shown above occur? (1 mk)

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c) State three farming practices that can be used to prevent the occurrence of the above type of erosion (3 mks)

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18. The diagram below shows a crop disease



a) Identify the crop disease (1 mk)

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b) State three control measures of the disease (3 mks)

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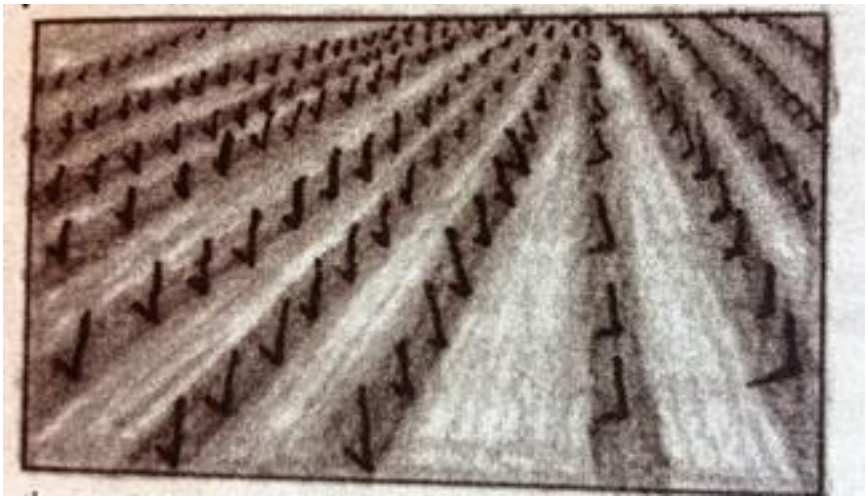
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c) Categorize the disease depending on causal organisms (1 mk)

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19. Below is a diagram of a method of planting crops



a) Identify the method (1 mk)

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b) State two advantages of using the above method in maize production (2 mks)

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c) Give two qualities of certified seeds (2 mks)

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SECTION C (40 MARKS)

Answer any two questions in the spaces provided

20. a) Explain how government policy improves agricultural production (10 mks)

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b) Describe measures used to minimize water pollution on the farm (6 mks)

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c). State four reasons for keeping livestock health records (4 mks)

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21. a) State and explain four factors influencing spacing of crops (8 mks)

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b). Describe the properties of nitrogen fertilizers (5 mks)

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c). Describe bulb onions under the following subheadings

i). Field management (4 mks)

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ii). Harvesting (3 mks)

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22. a). Describe seven methods used in water harvesting (7 mks)

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b). Describe field production of irrigated rice under the following subheadings

i) Land preparation (4 mks)

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ii). Water control (4 mks)

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c). Explain five factor that affect nutrient content of hay (5 mks)

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443/2

AGRICULTURE FORM FOUR

EXAM

SECTION A (30 MARKS)

ANSWER ALL QUESTIONS IN SPACES PROVIDED.

1. Give four reasons for proper maintenance of farm equipment (2 mks)

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2. Name four rabbit breeds reared in Kenya (2 mks)

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3. State four features on the animal that may predispose it to livestock diseases (2 mks)

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4. State four effects of fleas in poultry (2 mks)

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5. State four factors that determine the amount of water taken by an animal (2 mks)

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6. State four factors that are considered when formulating a livestock ration (2 mks)

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7. State four ways of controlling tsetse flies (2 mks)

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8. State four signs of heat in cattle (2 mks)

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9. State four signs of farrowing in pigs (2 mks)

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10. State four management practices in fish farming (2 mks)

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11. Name four parts of a farm building that can be reinforced using concrete (2 mks)

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12. Give four causes of scouring in calves (2 mks)

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13. State four candling qualities of good eggs for incubation (2 mks)

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14. Name four categories of poultry feeds according to the stages of growth of birds (2mks)

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15. State four practices that come immediately after complete milking in a milking shed (2 mks)

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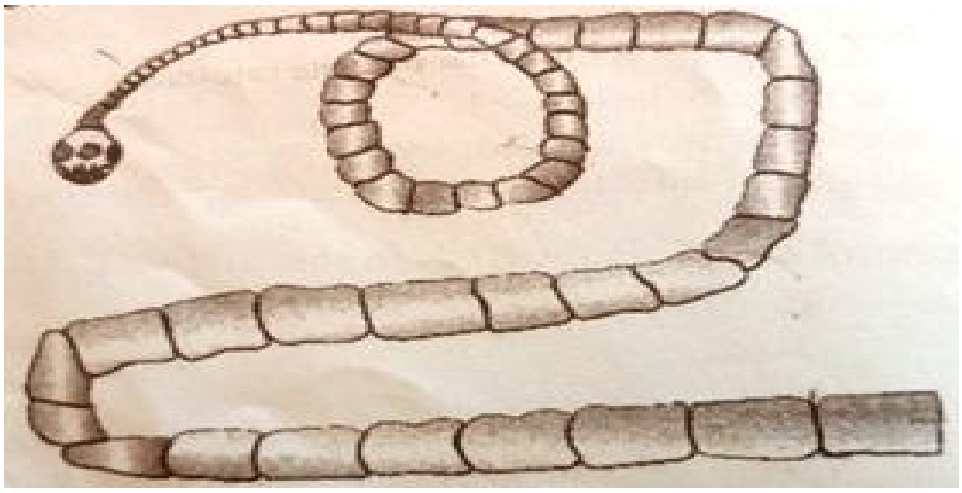
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SECTION B (20 MARKS)

ANSWER ALL QUESTIONS IN THE SPACES PROVIDED

16. The diagram below shows a livestock parasite



(a) Identify the parasite (1 mk)

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(b) Explain how the parasite is passed from:

(i) Livestock to human beings (1 mk)

……

ii) Human beings to livestock (1 mk)

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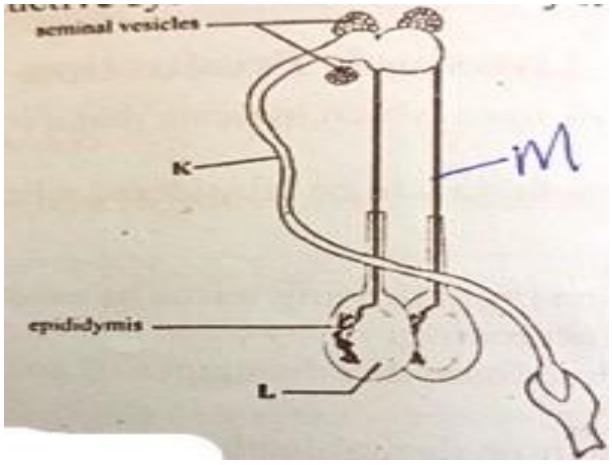
(b) Explain two control measures for the parasites in a zero-grazing unit (2 mks)

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17. Below is a diagram illustrating the reproductive system of a bull. Study it and answer the questions that follow



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(a) Identify the parts labelled (3 mks)

K……

L……

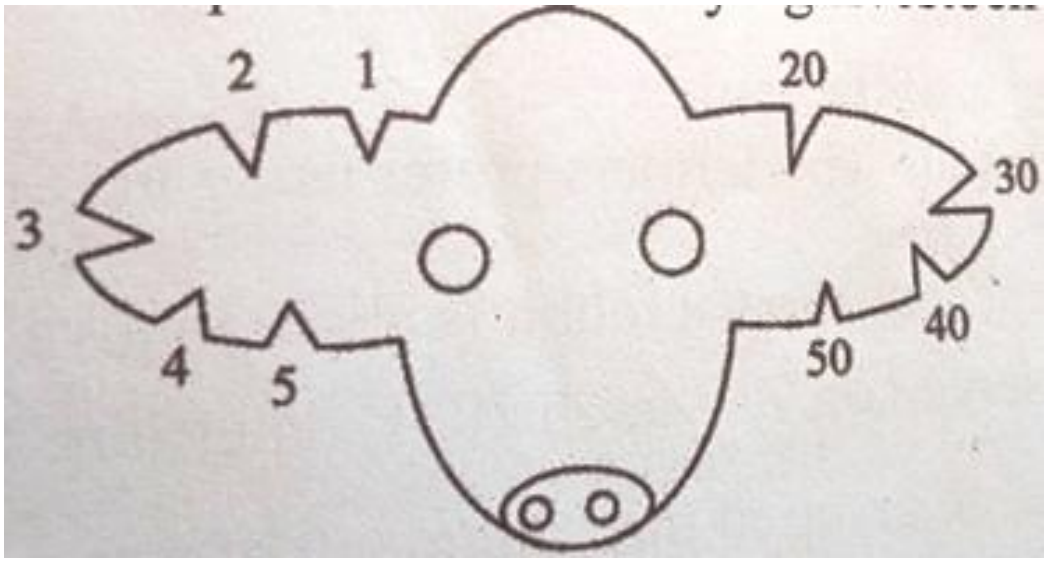
M……

(b) State the function of the part labelled

Epididymis …… (1 mk)

Seminal vesicles ……(1 mk)

18. The diagram below represents a practice of identifying livestock on a farm



(a) Identify the practice (1 mk)

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b)Determine the number that identifies the animal represented by the illustration (1 mk)

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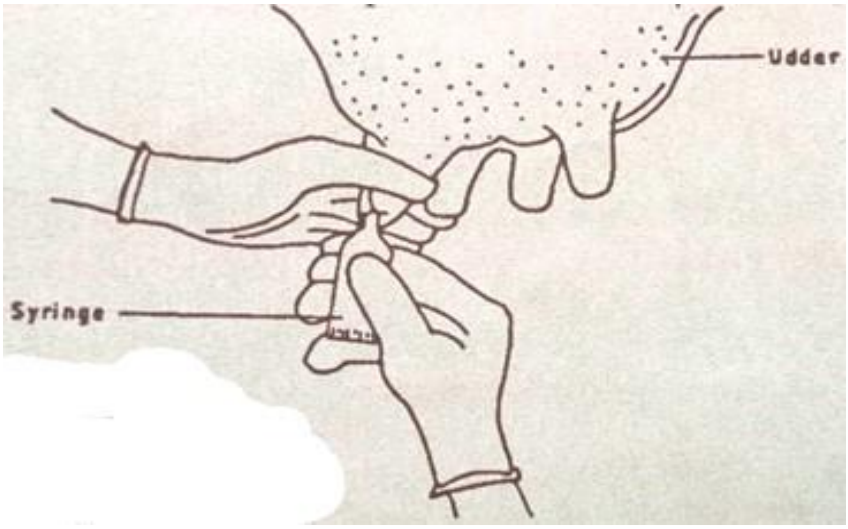
(c)Draw a diagram of the animal identified by the number 148 on the farm (1 mk}

(d) Give two reasons why this method of identification is discouraged in livestock (2 mks)

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19. The illustration below shows a practice carried out to prevent mastitis infection in a dairy cow



(a) Identify the practice (1 mk)

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b) At what stage is the practice carried out? (1 mk)

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(c) State three other practices that are carried out on the udder to prevent mastitis infection (3 mks)

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SECTION C (40MARKS)

ANSWER ANY TWO QUESTIONS IN SPACES PROVIDED

20. (a) State five conditions that necessitate the handling of farm animals (5 mks)

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(b)Explain five functions of water in nutrition (5 mks)

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(c)Discuss milk fever (Parturient paresis) under the following sub –headings

(i) Cause (1 mk)

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(ii) Predisposing factors (2 mks)

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(iii) Symptoms (5 mks)

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(iv) Control and treatment (2 mks)

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21 (a) Describe how natural incubation is set up and managed (8 mks)

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(b) Describe the uses of fences on the farm (7 mks)

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(c) State five materials / equipment required for hand milking (5 mks)

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22.(a) Describe ten signs of ill health in livestock (10mks)

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(b) Describe how a newly constructed pond is prepared and stocked with fingerlings (10 mks)

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231/1

BIOLOGY (Theory)

2 Hours

KENYA CERTIFICATE OF SECONDARY EDUCATION

Answer all the questions in the spaces provided.

1. State the significance of the rings of cartilages in the trachea. (2marks)

2. (a) Explain what happens when hydrogen peroxide is added to potato paste buffer mixture. (2marks)

   (b) Write down a balanced equation for the above process. (1mark)

3. (a) What is plasmolysis? (1mark)

   (b) How would you make a flaccid cell turgid? (1mark)

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4. Explain each of the following:

a) Variegated plant accumulates less food compared to non-variegated plants under similar conditions. (2marks)

b) A leaf cannot be tested for starch by adding Iodine solution directly. (2marks)

5. State the features that increase the surface area in the small intestines. (2marks)

6. Name two hormones that control metamorphosis in insect. (2marks)

7. A patient whose blood group is B died shortly after receiving blood from a person of blood group A. Explain the possible cause of the death. (3marks)

8. State three structural adaptation of guard cell to its functions. (3marks)

9. (a) Give a reason why secondary thickening does not occur in sorghum and maize plant. (2marks)

(b) State two roles of cotyledons to a germinating seed. (2mark)

10. Explain how sunken stomata reduces the rate of transpiration in the semi-arid and arid plants. (2marks)

11. Explain why it's not advisable to put a patient on a drip of distilled water for rehydration. (3marks)

12. (a) What is cell specialization? (1mark)

(b) Name the tissues that primarily protect plants and animals respectively against entry of pathogens and mechanical injury. (2marks)

13 Explain why transfer of energy from one trophic level to another is not 100% efficient. (2marks)

14 a) Name two features used to group organisms in the phylum Arthropoda into classes. (2marks).

b) Name two economic importance of organisms in kingdom Fungi. (2marks)

15 a) State three evidence of organic evolution. (3marks)

16. Name the organelle that is likely to be found in abundance in: (3marks)

(a) An enzyme secreting cell.

(b) Cells producing lipid related secretions.

(c) Areas where the cells have raptured

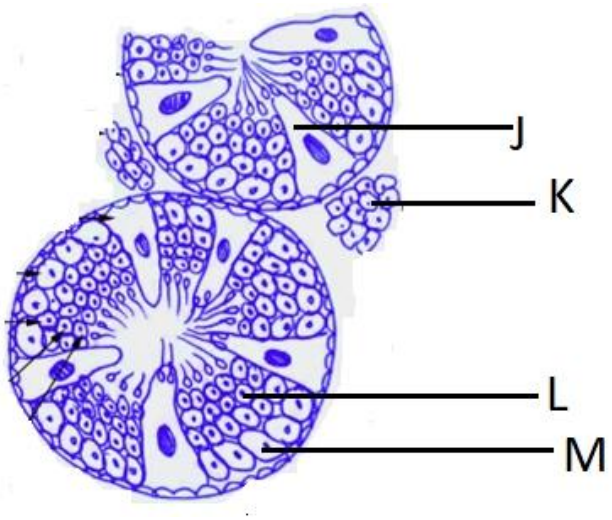
17. Name the causative organism of the following diseases.

(i) Malaria. (1mark)

(ii) Bilharzia. (1mark)

18. State two biotic factors that could affect an antelope living in Masai Mara. (2marks)

19. A cross section of human testis reveals the following details.



(a). Name the part labelled J. (1mark)

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(b). State the function of the part labelled K. (1mark)

(c). Cell M is a diploid cell from which cell L is formed.

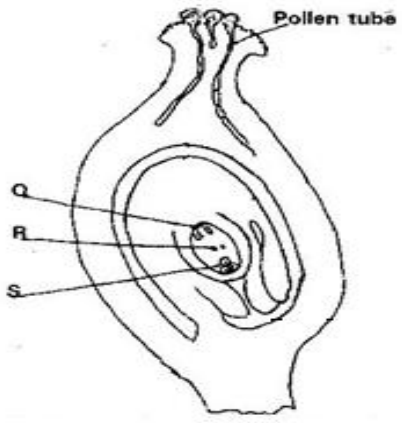
(i). By what type of cell division does structure L arise from cell M. (1mark)

(ii). State the number of chromosomes in L. (1mark)

20. (a) What is natural selection? (1mark)

(b) What are the advantages of natural selection? (2mark)

21. The diagram below shows a stage during fertilization in plants.



a) Name the parts labelled **Q** and **R**. (2marks)

Q

R

b) State one function of the pollen tube. (1mark)

c) On the diagram, label the micropyle. (1mark)

22. List two professional occupations that require the study of biology. (2marks)

23. State one reasons why Biotechnology is important in modern science. (1mark)

24. What characteristic of living organism is shown when;

i. A cat produces kittens. (1mark)

ii. A girl drops a hot plate. (1mark)

25. State Two disadvantages of using fats as respiratory substrates. (2marks)

26. Why does the rate of respiration reduce under the following conditions? (2marks)

i. Low temperature

ii. Metabolic poison

27. Name the plant excretory products used for the following. (2marks)

    a) Manufacture of vehicle tyres.

    b) Induce polyploidy in plant breeding research.

28. Name two hormones that are responsible for regulation of osmotic pressure in the human body.

    (2marks)

29. What is the meaning of each of the following terms;

    a) Deamination. (1mark)

    b) Detoxification. (1mark)

30. State the role of each of the following components of skin.

    a) Melanin. (1mark)

    b) Adipose tissue. (1mark)

31. Albinism is a genetic disorder that is carried by a recessive gene on autosomal chromosomes. Irene is normal for albinism and her mother is an albino while the father is normal. Irene is married to David who is heterozygote for the disorder.

    Using a punnet square work the phenotypic ratio of the offspring of Irene and David.

    (3marks)

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231/2

BIOLOGY (Theory)

2026

2 Hours

Instructions to candidates

a. Write your name and class in the spaces provided above.
b. Sign and write the date of examination in the spaces provided above.
c. This paper consists of **two** sections: **A** and **B**.
d. Answer **ALL** the questions in section **A** in the spaces provided.
e. In section **B** answer **question 6 (compulsory)** and **either question 7 or question 8** in the spaces provided after question **8**
f. Candidates should answer the questions in English.
g. Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing.

1. In certain experiment on fruit fly, the gene for long wings is dominant to the gene for vestigial wings. When long winged fruit flies were crossed with vestigial winged fruit flies, the eggs laid were allowed to hatch to F1 generation. The F1 flies grew to maturity and were allowed to mate and their eggs hatched producing two sets of wings as shown below
   - 68 had long wings
   - 21 had vestigial wings
   - 2 died

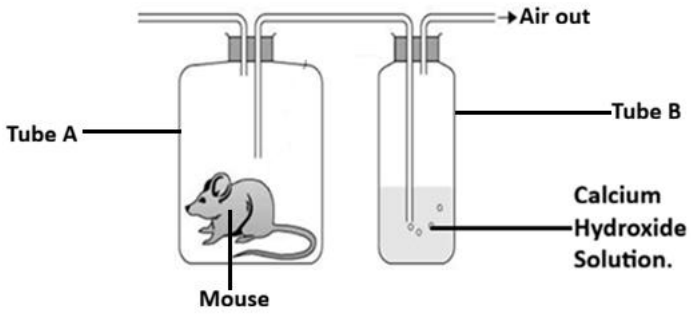
a) What would have been the genotypes of the first parents where R stands for long wing?
(2marks)

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b) Using a punnet square to represent the cross above, work out the F2 generation. (5 marks)

c) What is the phenotypic ratio? (1mark)

2. The setup below was used to demonstrate the products of expiration in a mouse. The set up was left undisturbed for 24 hours and observations were made.



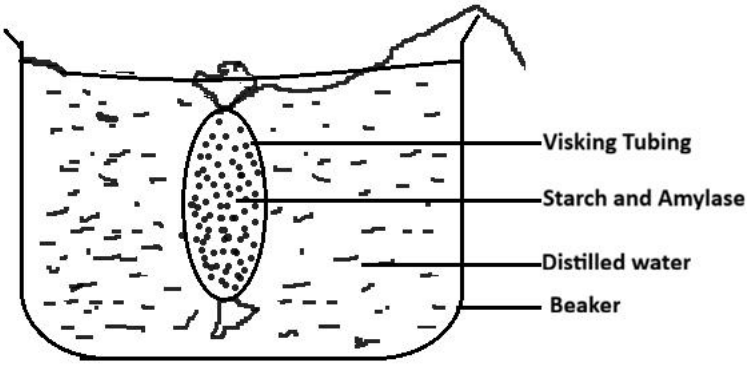
a) (i) State the observation made in the tube B. (1mark)

(ii) Account for the observation made in a (i) above. (2marks)

(b) Explain the observation made in the test tube in a similar set up if we include a young growing plant in the jar containing a mouse at the beginning of the experiment. (2marks)

(c) Name three gaseous exchange structures in higher plants. (3marks)

3. The following diagram illustrates a setup to investigate a certain physiological process. The setup was left undisturbed for 10 minutes.



(a) Name the physiological process under investigation. (1mark)

(b) State the observations made after 10 minutes. (2marks)

(c) Account for the observation made. (3marks)

(d) Explain why plant cells do not burst when placed in distilled water. (2marks)

4. Examine photographs A and B carefully and use them to answer the questions that follow.

photograph A



Photograph B



(b) i) State the type of germination exhibited in photograph B. (1mark)

ii) Give a reason for your answer. (1mark)

(c) using observable features only,classify the specimens into their respective classes from which the photographs were obtained.

their respective classes.

Photograph A (1mark)

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Reason (1mark)

Photograph B (1mark)

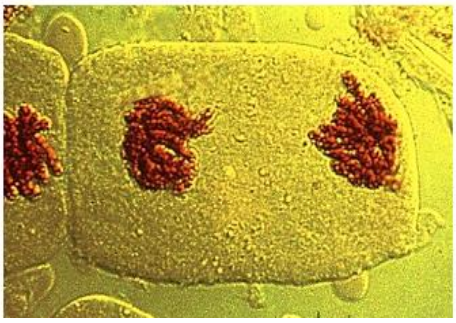
Reasons (3marks)

5. Below are micrographs of tissues showing mitosis. Examine them and answer the questions that follows.

R



T



a) i. Identify whether the micrographs were obtained was from plant or animal tissues. (1mark)

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

iii). Name the stages represented in micrograph R and T. (2marks)

R -

. T -

b) State two significance of mitosis to an organism. (2marks)

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c) Name two regions in higher plants where cells actively undergo mitosis. (2marks)

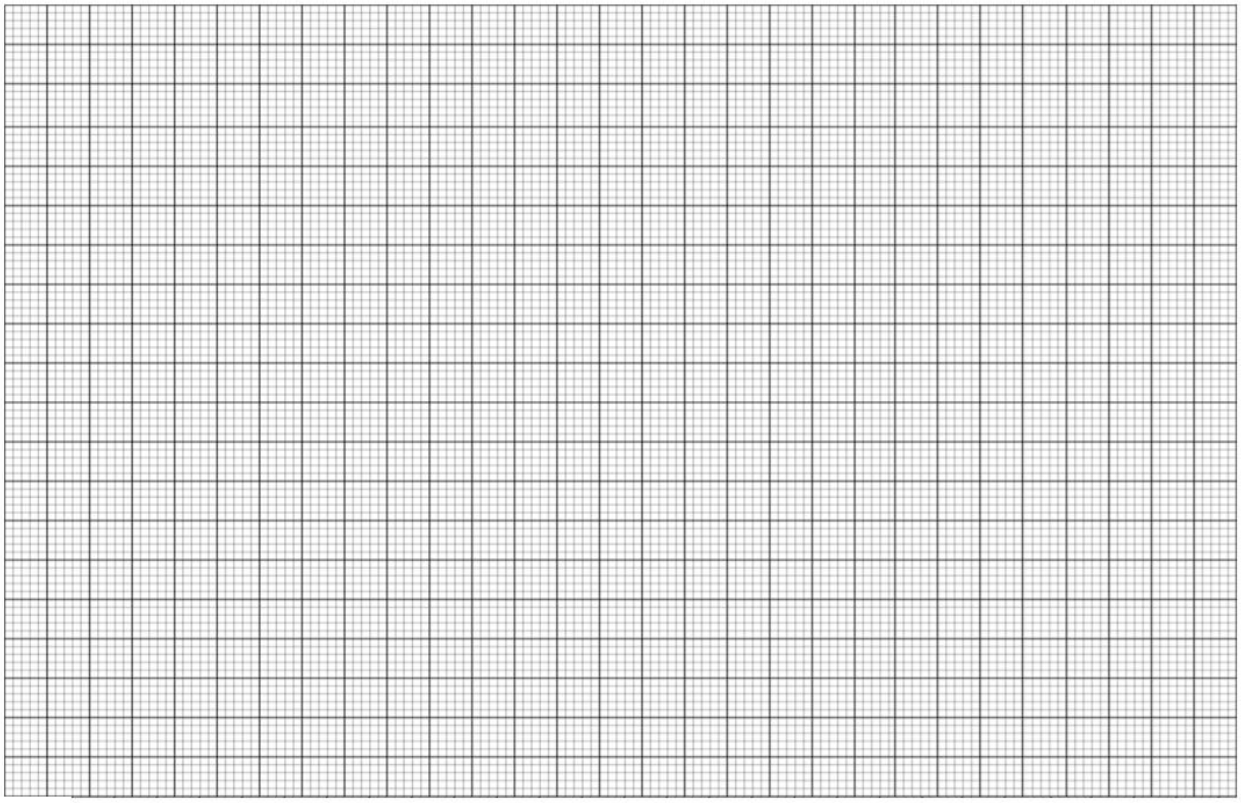
SECTION B

answer question 6 (compulsory) and either question 7 or question 8 in the spaces provided after question 8

6. An experiment was carried out to determine the effect of drinking on excess amount of water on the flow of urine. A person drinks one litre of water and urine was collected at intervals of 15minutes. The results were as shown below:

Time in minutes	0	15	30	45	60	75	90	105	120	135
Urine output ml/min	1.6	1.6	1.6	5.4	9.0	9.0	7.6	3.0	0.8	0.8

(a) Plot a suitable graph to represent urine output agaist time. (6marks)



(b) State the amount of urine output at 50^{th} minute. (1mark)

(b) Explain the rate of flow of urine between the following times;

(i) 30 and 60minutes. (3marks)

(ii) 60 and 75minutes. (4marks)

(iii) 75 and 135 minutes. (4marks)

(c) Name **two** hormones responsible for regulation of relative amount of salts and water in man. (2marks)

7. a) Explain the factors that determine energy requirement in human. (12marks)
   b) Describe aerobic respiration. (8marks)

8. Describe the nitrogen cycle. (20marks)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……..

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

231/3

BIOLOGY (Theory)

2026

1 3/4 Hours

KENYA CERTIFICATE OF SECONDARY EDUCATION

Answer all the questions in the spaces provided.

1. You are provided with a young seedling of a plant, examine it and answer the questions that follows.
   (a) Draw and label any 3 parts of the specimen given. (5marks)

   (b) Using observable features only, state the class to which the plant belongs to. (1mark)

   (c) Give the reason for your answer in (a) above. (3marks)

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(d) Name the type of germination exhibited by the seedling. Give a reason for your answer. (3marks)

(e) What is the significance of the food stored in the cotyledons. (2mark)

2. The photographs below represents parasitic interrelationship. Study them and answer the questions that follows.



a) Identify the type of parasite represented by Photograph A and B. (2marks)

A –

B-

b) State two benefits the parasite in B gets from the host. (2marks)

c) How is parasite A transmitted to man. (2marks)

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d) State two effects of the parasite in A to the Host. (2marks)

e) Name two control measures to prevent infection with parasite A. (2marks)

f) State four ways in which parasite A is adapted to stay on the host body. (4 marks)

3. You are provided with a specimen labelled D, which is part of a plant.

(a) (i) Using external features only, identify the organ of the plant. (1mark)

(ii) Give four reasons for your answer in a (i) above. (4 marks)

(b) Peel off the epidermis of the lower surface of the specimen. Mount a portion of the epidermis in a drop of water on a microscope slide. Cover with a cover slip, observe the specimen under medium power objective lens and count the number of stomata in the field of view. Record the number of stomata in the upper epidermis in the table below.

(c) Repeat the procedure above using the epidermis from the upper surface. Record the number of stomata in the upper epidermis in the table below.

Number of stomata	
Upper epidermis	**Lower epidermis**

(2mark)

(d) Record the following from the microscope you used to count the stomata.

(i) Magnification of eyepiece lens. (1mark)

(ii) Magnification of objective lens used. (1mark)

(iii) From the data in d (i) and (ii) above, calculate the total magnification. Show your working. (2marks)

(e) Account for the difference in number of stomata on each surface of the specimen. (2marks)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

FORM 4 BUSINESS STUDIES

PAPER 1 (565/1)

EXAMS

DURATION : 2 HOURS

INSTRUCTIONS :
Answer all the questions in the spaces provided.

1. State the factor of production described by the following statements.

Statement	Factor of production
a) It's subject to the law of diminishing returns.	
b) It's a man made resource.	
c) It's quality can be improved through education,training and experience.	
d) It's reward is profit and loss.	

2. Highlight four means of land transport.

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

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3. Outline four banking services that customers can access in an agent location.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

4. State four characteristics of services.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

5. The table below shows population trend of a certain country over a period of four years.

Year	**population**
2015	24,500,000
2016	23,650,000
2017	22,300,000
2018	21,010,350

Outline four positive effect of the population trend on the economy of the country.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

6. Highlight four reasons why the government inspects goods in the bonded warehouse.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

7. The following balances were extracted from the books of Rotich stores.

Opening stock	100,000
Sales	720,000
Clossing stock	92,000
Margin	20%

Determine :

i. Cost of sales.(2mks)

ii. Rate of stock turnover.(2mks)

8. Outline four circumstances under which a credit note can be issued.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

9. Highlight four features of a perfect competition market structure.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

10. State the relevant book of original entry into which information extracted from the documents given below would be recorded.

Source document	**Book of original entry**
a) Outgoing credit note	
b) Incoming invoice	
c) Incoming credit note	
d) Invoice issued	

11. Highlight four reasons why the government of Kenya is engaged in business activities.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

12. Identify the type of business environment described by each of the following statements.(4mks)

a) Influence on the business activities by the government_____

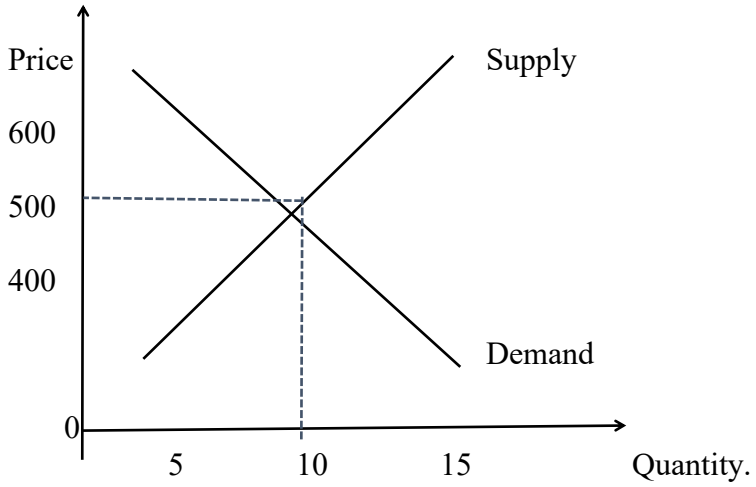
b) Change in number of people_____

c) Methods used in production_____

d) Business performance affected by other businesses with better resources_____

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13. The following diagram shows the equilibrium of cooking oil as set by the interplay of demand and supply.



What are the effects of setting the price below 500 ksh?(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

14. Jane owned a motor vehicle valued at ksh. 1,000,000.she comprehensively insured the motor vehicle at ksh. 800,000.The motor vehicle was involved in an accident and declared written off.Calculate amount Jane should get from the insurer.(4mks)

15. Identify any four components of partnership deed.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

16. Janet is the personal secretary of CEO of holiday cabs company.State four of her responsibilities in the company.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

17. Outline four ways in which the size of a firm could be determined.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

18. State four circumstances under which oral communication is used.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

19. Highlight four benefits of middlemen in the chain of distribution.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

20. List four market gaps whose existence can create a business opportunity. (4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

21. The following information relates to Kasuku retailers for the year ended 31st December ,2025.

Capital as at 31st december ,2025	70,000
Drawings	10,000
Net loss for the year	5,000
Extra capital introduced during the year	25,000

Determine the amount of capital as at 1st January ,2025.(4mks)

22. Outline four reasons why a business firm may not prefer to advertise its product through news paper.

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

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23. Identify the national income measurement approach under which each of the following items would be considered.(4mks)

a) Wages and salaries_____

b) Value of intermediate goods_____

c) Expenditure on imports_____

d) Transfer payments_____

24. Outline four limitations of barter trade.(4mks)

a) _____

_____

b) _____

_____

c) _____

_____

d) _____

_____

25. The following information relates to Highrise traders for the month of December,2024.

Details	
Loan from bank	24,000
Stock	40,000
Cash	60,000
Debtors	12,000
Salaries	8,000
Creditors	18,000
Furniture	16,000

Required: work out the net worth of Highrise traders.(4mks)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……..

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

FORM 4 BUSINESS STUDIES

PAPER 2 (565/2)

DURATION : 2 HOURS 30 MINUTES

INSTRUCTIONS :

Answer any five questions.

1. (a) Explain five functions or services rendered by commercial banks .(10mks)

(b) Explain five differences between public limited company and partnership form of business units.(10mks)

2.(a) Explain five assumptions associated with the circular flow of income in a two sector economy.(10mks)

(b) Explain five factors that an office manager has to consider before buying an office machine.(10mks)

3 (a) The following balances were extracted from the books of Gucci stores on 31st December, 2025.

Machinery	360,000
Furniture	430,000
Stock(1/1/2025)	75,000
Sales	500,000
Rent income	72,000
Purchases	395,000
General expenses	60,000
Debtors	62,000
Creditors	101,000
Bank	202,000
Cash	90,000
Capital	1,000,000

Additional information: Stock as at 31st December,2025 was valued at 170,000.

Required.

(i) Prepare Trading ,Profit and Loss Account for the year ending 31st December,2025.($5^1/_2$ marks)

(ii) Balance sheet as at 31st December,2025.($4^1/_2$marks)

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(b) Most of the mobile phones used in Kenya are imported to Kenya from China.Describe five channels used to distribute China made mobile phones in Kenya.(10mks)

4.(a) The table below represents the supply schedule for sugar in Kiambu county for a period of four years.

year	2022	2023	2024	2025
Quantity supplied (kgs)	500,000	450,000	300,000	250,000

Explain five possible reasons for the trend in the supply of sugar over the four years.(10mks)

(b) Explain five reasons for which traders need to observe ethical practices in product promotion.(10mks)

5.(a) An insurance company has received an application from Jambo enterprises , requesting for insurance cover for stock against the risk of fire.Explain five factors the insurance company should consider in deciding the amount of premium to be paid.(10mks)

(b) Explain five circumstances under which a bank may dishonour a cheque.(10mks)

6. (a) The following transactions took place during the month of January 2022.
January 2:deposited 450,000 cash into the bank.
January 3:bought stock in cash sh.40,000.
January 12:took sh.20,000 cash for personal use.
January 19:paid salaries sh.120,000 by cheque.
January 20:cash sales 85,000.

Required:
Open ledger accounts and record the transactions above.

(b) The Kenyan government has been promoting entrepreneurship in the country.Explain five reasons that make it necessary for the Kenyan government to promote entrepreneurship.(10mks)

DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. **INDEX NO:** ……. **SIGN:**……

233/1

CHEMISTRY PAPER 1 (THEORY)

THEORY

TIME: 2 HOURS

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

INSTRUCTIONS TO CANDIDATES

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

(b) Sign and write the date the examination is done.

(c) Answer **all** the questions in the spaces provided.

(d) Non-programmable silent electronic calculators and KNEC mathematical tables may be used.

(e) ALL workings **MUST** be clearly shown where necessary.

(f) **This paper contains 10 printed pages.**

(g) ***Candidates should check the question paper to ascertain that all pages are printed as indicated and that no question is missing.***

(h) **Candidates should answer questions in English.**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

18	19	20	21	22	23	24	25	26	27

Total Score

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1. The grid **below** represents part of the periodic table. Study it and answer the questions that follow. The letters given are not the actual symbols of the elements.

						A		
	B		**C**		**D**		**E**	
F	**G**							
							H	

(a) What is the family name given to elements E and H. (1 mark)

……

(b) Explain the following observations

(i) The boiling point and melting point of H is higher than that of E. (1 mark)

……

(ii) The atomic radius of G is smaller than that of F. (1 mark)

……

2. (a) State the Boyles law. (1 mark)

……

……

(b) A given mass of gas occupies a volume of 200 cm^3 at a pressure of 5 atmospheres. At what pressure will the gas have a volume of 800 cm^3? (2 marks)

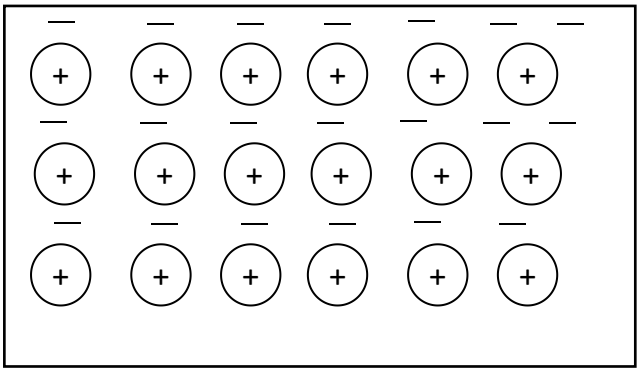
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3. The diagram below is a section of a model of the structure of element K



(a) State the type of bonding that exist in K (1 mark)

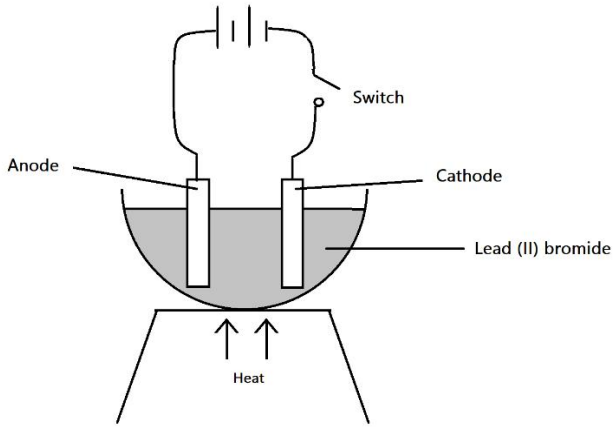
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(b) Identify the chemical family to which the element belongs. Give a reason for your answer (2 marks)

……

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4. The diagram below shows the set up used to investigate the effect of an electric current on molten lead (II) bromide



(i) Explain what happens to the lead (II) bromide during electrolysis. (2 marks)

……

……

(ii) Why is it important to carry out the experiment in a fume chamber? (1 mark)

……

5. Describe how sodium chloride crystals can be obtained from a solid mixture of sodium chloride and lead(II)chloride. (3 marks)

……

……

……

6. Nitrogen (ii) oxide, NO, is a neutral colourless gas but if tested in open air using a moist blue litmus paper, it turns into a brown gas and the blue litmus turns red.

(a) Write a chemical equation to show the formation of;

(i) the brown gas. (1 mark)

……

(ii) the substance that turns the blue litmus paper red. (1 mark)

……

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(b) Why is nitrogen (II) oxide gas prepared in a fume chamber? (1 mark)

……

……

7. Use the bond energies below to calculate the enthalpy change of the reaction. (3 marks)

$$CH_{4(g)} + 2Cl_{2\,(g)} \rightarrow CH_2Cl_{2\,(g)} + 2HCl_{(g)}$$

Bond	Bond energy $kJmol^{-1}$
C – H	414
Cl – Cl	244
C – Cl	326
H – Cl	431

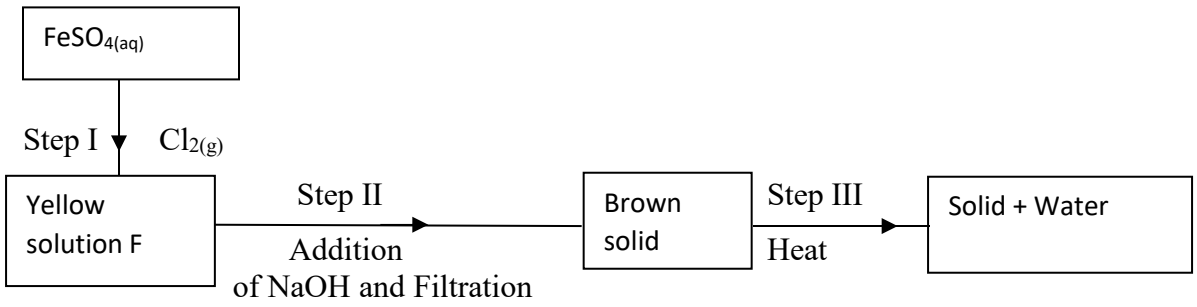
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8. Study the scheme below and answer the questions that follow.



(i) Write down the formula of the yellow solution F. (1 mark)

……

(ii) Which property of chlorine is shown in step I (1 mark)

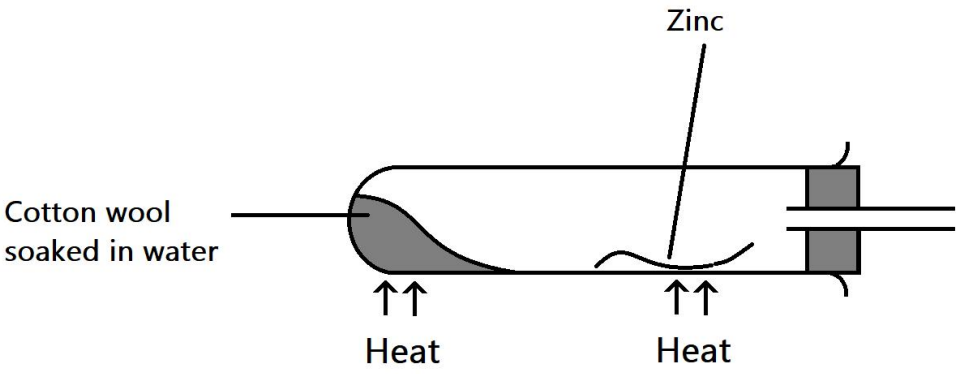
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(iii) Write an equation for the reaction which occurs in step III (1 mark)

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9. Jane set-up an experiment as shown below to collect a gas. The wet sand was heated before heating zinc.



a) Complete the diagram to show how the gas being produced is collected. (2 marks)

b) Explain why it is necessary to heat the cotton wool soaked in water before heating the zinc. (1 mark)

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10. In the manufacture of sulphuric acid, Sulphur (IV) oxide is oxidized to Sulphur (VI) oxide.

a) Name the catalyst used (1 mark)

.....

b) Write the equation representing the conversion of Sulphur(IV) oxide to Sulphur(VI)oxide. (1 mark)

.....

.....

c) Describe how Sulphur(VI)oxide is converted to sulphuric(VI) acid. (1 mark)

.....

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11. Study the following tests and observation and answer the questions that follow: -

	TEST	**OBSERVATION**
I	- Add few drops of aqueous ammonia to copper (II) nitrate solution	- Pale blue precipitate is formed
II	- Add excess of ammonia to copper (II) nitrate solution	- Deep blue solution
III	- Add cold dilute hydrochloric acid to substance E1 and warm gently	- Gas evolved, smells of rotten eggs and blackens lead acetate paper

Identify: -

(a) Substance responsible for:

I. Pale blue precipitate……. (1 mark)

II. Deep blue solution …… (1 mark)

(b) Gas evolved in **test III** above …… (1 mark)

12. Magnesium carbonate decomposes when reacted according to the equation.

$$MgCO_3(s) \rightarrow MgO(s) + CO_2(g)$$

Calculate the volume of carbon(IV) oxide which is produced when 8.4g of the carbonate is decomposed at s.t.p. (Mg =24.0, C =12.0, O =16.0, molar gas volume = 22.4 litres) (3 marks)

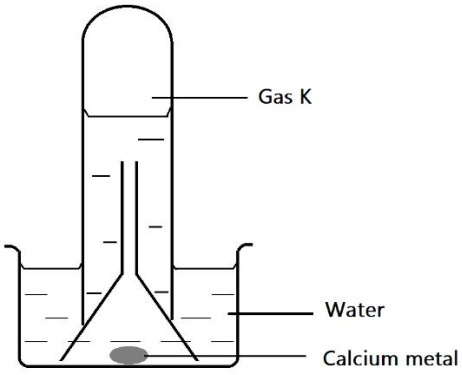
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13. The set up below was used to collect gas **K,** produced by the reaction between water and calcium metal**.**



(a) Name gas **K** (1 mark)

……

(b) The solution formed in the beaker was tested using phenolphthalein indicator. Explain the observation that was made (2 marks)

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14. The table below shows the relative atomic masses and the percentage abundance of the isotopes L1 and L2 of element L. Calculate the relative atomic mass of L. (2 marks)

Isotopes	L1	L2
relative atomic mass	69.09	64.93
percentage abundance	62.93	30.91

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15. (a) One of the reactions undergone by ethene is addition polymerization. Draw and the name of the structure of the polymer it forms. (2 marks)

……

……

(b) State one disadvantage of using synthetic polymers. (1 mark)

……

……

16. State the use of:

(a) Spatula (1 mark)

……

(b) Deflagrating spoon (1 mark)

……

(c) Mortar and pestle (1 mark)

……

17. State the observation made when the following elements burn in air. (3 marks)

(i) Sodium

……

(ii) Potassium

……

(iii) Copper

……

18. The table below shows pH values of solutions A, B, C, D and E.

Solution	**A**	**B**	**C**	**D**	**E**
pH	6.5	2.0	8.5	14.0	7.0

(a) Which solution is likely to be. (2 marks)

(i) Rain water?

……..…….

(ii) Sodium chloride?

……..…….

(b) Which of the solutions is suitable for relieving pain after being stung by a bee. (1 mark)

……..…….

19. Starting with barium nitrate solution, describe how a pure sample of barium carbonate can be prepared in the laboratory. (3 marks)

……..…….

……..…….

……..…….

……..…….

20. During a class experiment, chlorine gas was bubbled into a solution of potassium iodide.

(a) State and explain the observations made. (2 marks)

……..…….

……..…….

(b) Write an ionic equation for the reaction. (1 mark)

……..…….

21. Dry carbon (II) oxide gas reacts with heated lead (II) oxide as shown in the equation below

$PbO(s) + CO(g) \rightarrow Pb(s) + CO_2(g)$

(a) Name the process undergone by the lead (II) oxide (1 mark)

……

(b) Identify the method used to collect carbon(IV)oxide (1 mark)

……

(c) Name another gas that can be used to perform the same function as carbon (II) oxide gas in the above reaction. (1 mark)

……

22. A gas occupies a volume of $600cm^3$ at a pressure of 760mmHg and temperature of 25^0C. What volume would it occupy at a pressure of 780mmHg and a temperature of 50^0C? (3marks)

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23. (a) Give the name of the 2nd member of the alkyne homologous series. (1 mark)

……

(b) Draw and name 2 isomers of butyne. (2 marks)

……

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24. 0.42 g of a metal carbonate, MCO_3 completely neutralizes 20 cm^3 of 0.5M hydrochloric acid.
Determine the relative atomic mass of M. (C=12, O=16) (3 marks)

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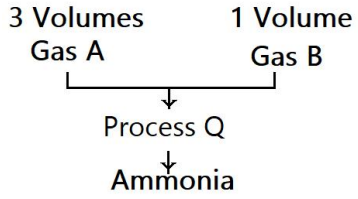
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25. Study the flow chart below and answer the questions that follow.



(a) Identify (1½ marks)

(i) Gas A

……

(ii) Gas B

……

(iii) Process Q

……

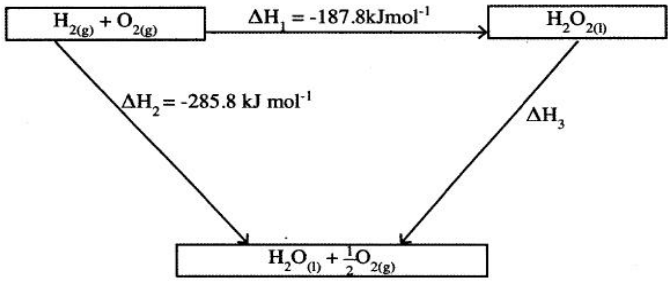
(b) Explain why gases A and B must be purified before being taken through process Q. (1 mark)

……

(c) State one use of ammonia gas. (½ mark)

……

26. The figure below shows an energy cycle.



(a) Give the name of the enthalpy change ΔH_1. (1 mark)

……

(b) Determine the value of ΔH_3. (2 marks)

……

……

27. (a) Explain why permanent hardness in water cannot be removed by boiling. (2marks)

……

……

(b) Name two methods that can be used to remove permanent hardness from water. (1mark)

……

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THE END

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

233/2

CHEMISTRY PAPER 2 (THEORY)

TIME: 2 HOURS

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

INSTRUCTIONS TO CANDIDATES

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

(b) Sign and write the date the examination is done.

(c) Answer **all** the questions in the spaces provided.

(d) Non-programmable silent electronic calculators and KNEC mathematical tables may be used.

(e) ALL workings **MUST** be clearly shown where necessary.

(f) **This paper contains 12 printed pages.**

(g) ***Candidates should check the question paper to ascertain that all pages are printed as indicated and that no question is missing.***

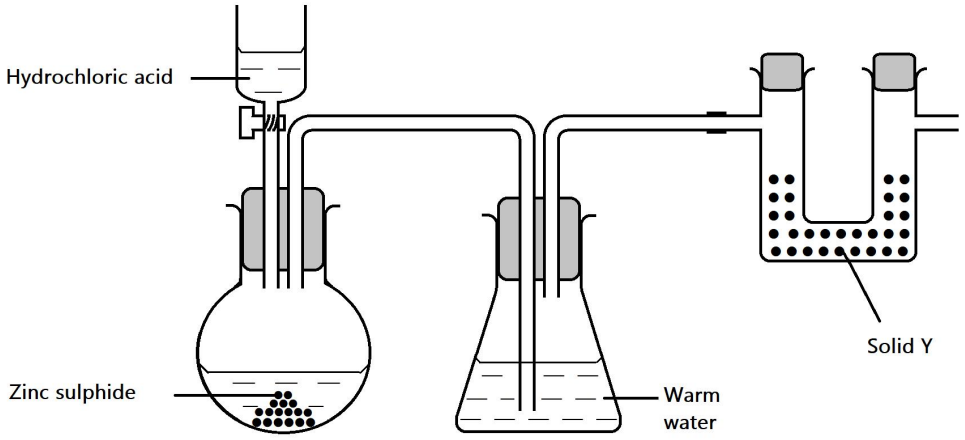
(h) **Candidates should answer questions in English.**

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1	9	
2	14	
3	13	
4	11	
5	12	
6	9	
7	12	
Total Score	80	

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1. The set up below is used to prepare hydrogen sulphide gas.



(a) i) Complete the diagram to show how dry hydrogen sulphide can be collected. (1mk)

ii) Write an equation for the reaction taking place in the round bottomed flask. (1mk)

iii) What precaution is necessary when preparing hydrogen sulphide. (1mk)

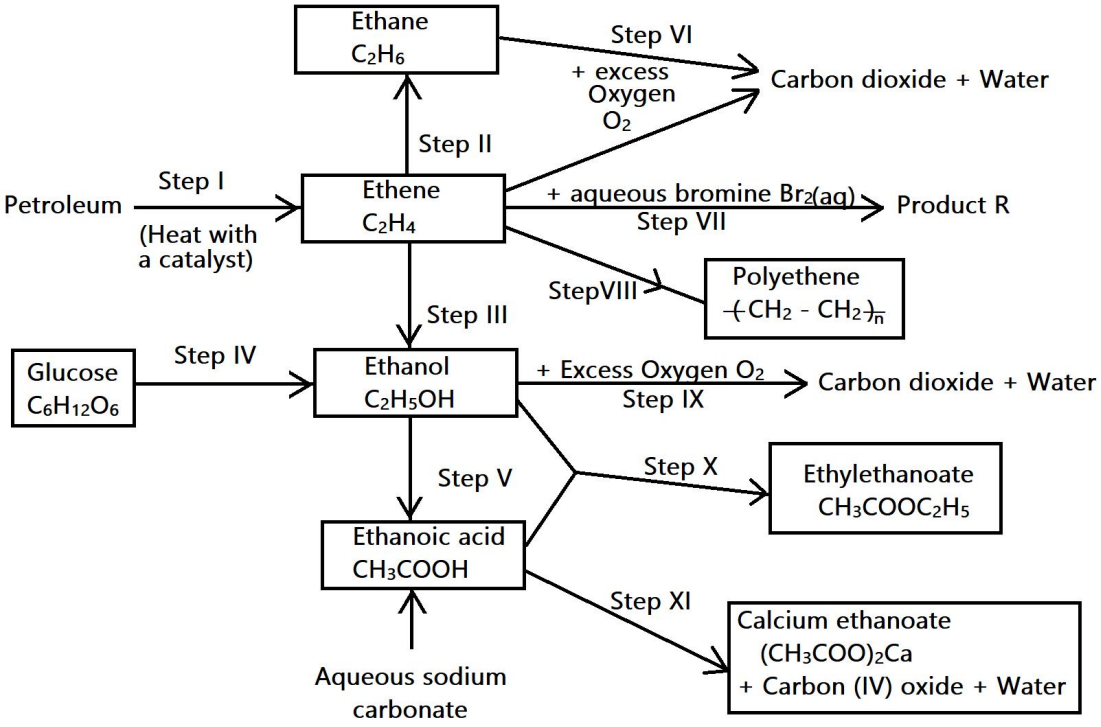
iv) Name solid Y. (1 mk)

v) State **the** function of warm water in the conical flask. (1mk)

(b) State and explain the observations that would be made when hydrogen sulphide gas is bubbled through dilute Nitric (V) acid in boiling tube. (2 mks)

(c) Using an equation, state the observation made when hydrogen sulphide burns in a limited supply of oxygen. (2 mks)

2. The flow chart below are some reactions in organic chemistry. Study the flow chart and answer the questions that follow.



(a) Name the process in step I (1mk)

(b) State the conditions and reagents for the reaction in step II. (1mk)

Condition

Reagent

(c) (i) Name the reaction in step III. (1 mk)

(ii) Suggest a reagent that could be used in step III. (1mk)

(iii) Give **two** conditions that would be necessary for this reaction to occur. (1mk)

(d) Describe step IV under the following headings:

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(i) Name of reaction (1 mk)

(ii) Conditions (1 mk)

(iii) Equation (1 mk)

(e)(i) With reference to steps V and X, complete the table below. (1 mks)

Step	Name of reaction
IV	
X	

(f) Write equations for the reactions in:

i) Step V. (1mk)

ii) Step VII (1mk)

iii) Step X (1mk)

(g) Name the type of reaction in each of the reactions marked:

i) Step VII (½ mk)

ii) Step IX (½ mk)

iii) Step XI (½ mk)

(h) State **one** use of the product in step VIII. (½ mk)

3. a) The grid below represents part of a periodic table. Study it and answer the questions that follow. The letters do not represent the actual symbols of elements.

S				**R**	**E**		**X**	
								V
Q	**Z**					**M**		
							T	

i) Identify the most reactive non-metal. (1 mk)

ii) Which of the metals is most reactive? Explain. (2 mks)

iii) What name is given to the family of elements to which elements X and T belong. (1mk)

iv) Give reasons for the following

a) Atomic radius of Q is bigger than that of M. (1mk)

b) Atomic radius of Q is greater than that of S. (1mk)

v) Give an element which does not form compounds under ideal conditions. Explain. (2mks)

vi) Give the formula of the compound formed between element R and Z. (1 mk)

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

Substance	A	B	C	D	E	F
M.P (^oC)	801	119/113	139	-5	-101	1356
B.P (^oC)	1410	445	457	54	-36	2860
Electrical conductivity (solid)	Poor	Poor	Good	Poor	Poor	Poor
Electrical conductivity (liquid)	Good	Poor	Good	Poor	Poor	Poor

i) Identify a substance with;

a) Giant metallic structure. (½ mk)

b) Simple molecular structure (½ mk)

ii) Suggest a reason why substance B has two melting points. (1 mk)

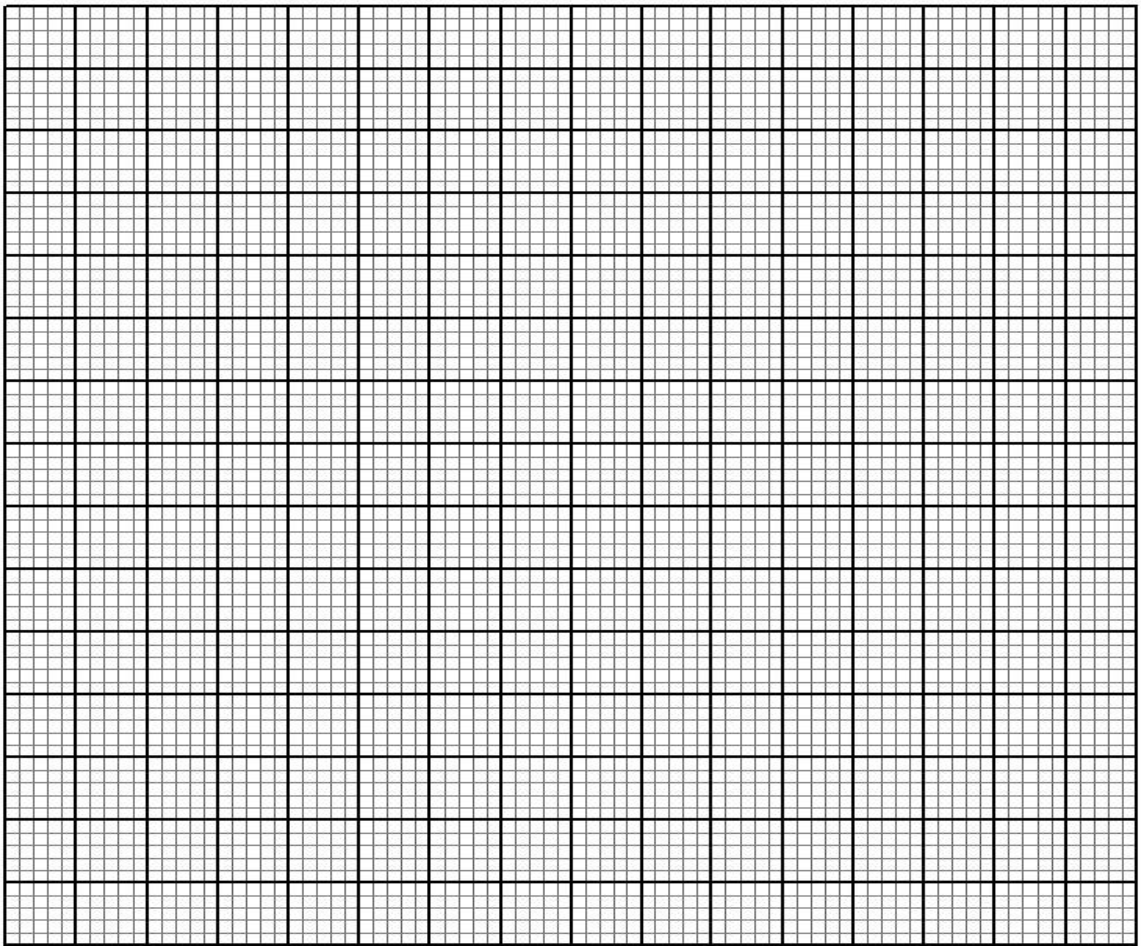
iii) Substance A and C conduct electric current in the liquid state. State how the two substances differ as conductors of electric current. (2 mks)

4. a) The solubility of salt X at various temperatures is as shown in the date given below.

Temperature (°C)	0	20	40	60	80	100
Solubility (g/100g of water)	10	15	26	40	63	100

i) Using a suitable scale draw a graph of solubility against temperature on the grid provided below. (3 mks)

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ii) A solution containing 20g of salt X in 100g of water was cooled from 50°C.

I. At what temperature will crystals of salt X first form? (1mk)

II. Determine the mass of X that crystallizes if the solution is cooled to 12°C. (2mks)

b) Use the information below on solubility to answer questions that follow.

Salt	Solubility g/100g of water	
	80°C	20°C
$KCLO_3$	55	12
Na_2CO_3	80	36

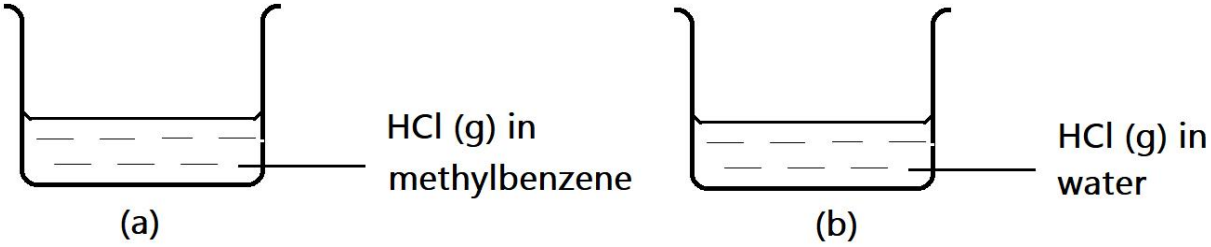
A mixture containing 30g of potassium chlorate and 30g of sodium carbonate in 100g of water at 80°C was cooled to 20°C. Some crystals were formed.

i) Which of the two salts crystallized. (1 mk)

ii) Name the method that can be used to obtain the crystals. (1 mk)

iii) State the salt that would be unsaturated at 20°C. (1 mk)

c) Magnesium powder was added to the mixture shown in beaker (a) and sodium carbonate added to the mixture in beaker (b). Study the set ups and answer the questions that follow.



i) In which beaker will there be effervescence. (1 mk)

ii) Explain why there is no reaction in the other beaker. (1 mk)

5. In an experiment to determine the heat of displacement of copper by Iron, $50cm^3$ of 0.2M Copper (II) sulphate solution was reacted with excess iron filings and following results obtained.

Initial temperature of copper (II) sulphate = 25.0°C

Final temperature of copper (II) sulphate = 31.0°C

Mass of iron fillings used =1.0g

(Density of solution $1.0g/cm^3$, specific heat capacity $4.2Jg^{-1}K^{-1}$

(a) Calculate

i) Temperature change (½ mk)

ii) Mass of solution (½ mk)

iii) Heat evolved during reaction (2 mks)

iv) Molar heat of displacement in kilojoules mol^{-1} (2 mks)

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

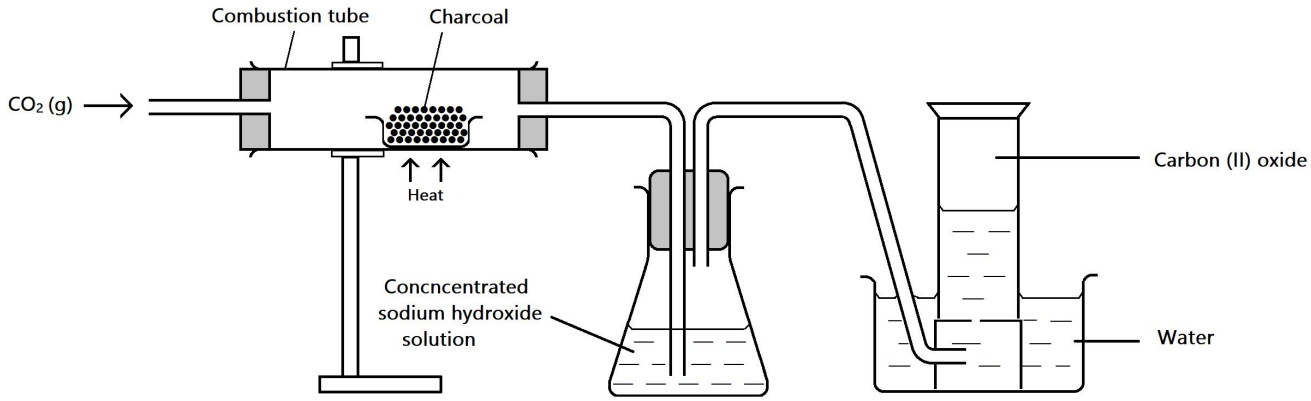
vi) Explain why excess iron filings were used. (1 mk)

vii) Draw an energy level diagram for the above reaction. (2 mks)

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

ii) Give two factors to consider when choosing a fuel for use. (2 mks)

6. In an experiment carbon (IV) oxide was passed over heated charcoal and the gas produced collected as shown in the diagram below.



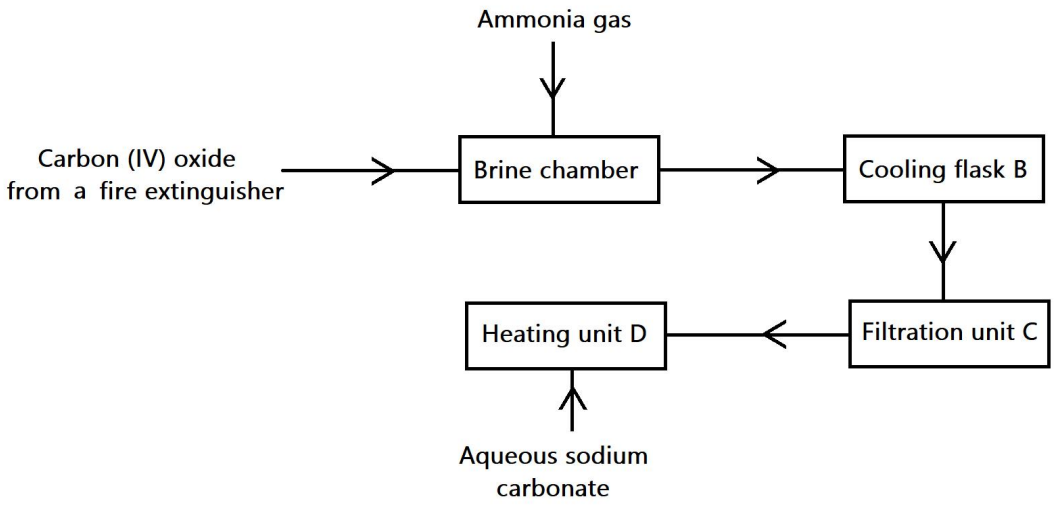
a) (i) Write an equation for the reaction that took place in the combustion tube. (1 mk)

(ii) Name another chemical substance that can be used instead of sodium hydroxide. (1 mk)

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

(iv) State one use of carbon (II) oxide. (1 mk)

(b) In another experiment to synthesize sodium carbonate in the lab students passed carbon (IV) oxide and ammonia gas into brine as shown in the flow diagram below. Use it to answer the questions that follow.



i) Why is the mixture obtained in brine chamber cooled in chamber B. (1 mk)

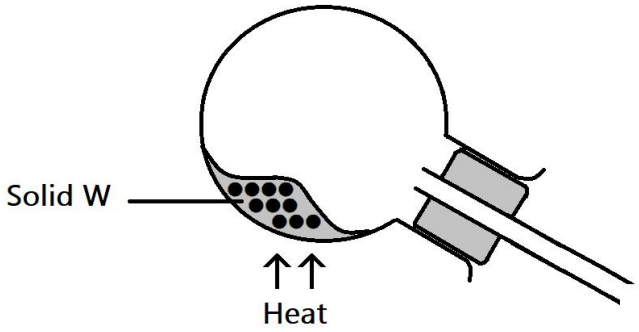
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ii) Give a reason why it is difficult to synthesize potassium carbonate by the same method.

(1mk).

iii) State two properties of carbon (IV) oxide that enables it to be used in the fire extinguishers. (2mks)

7. The diagram below show an incomplete set-up for apparatus used in preparation and collection of dry ammonia gas.



a) (i) Complete the diagram to show how a dry sample of ammonia can be obtained. (3 mks)

(ii) Name appropriate substance that can be used as solid X. (1 mk)

(iii) Write equation of reaction that produces ammonia in the above experiment. (1 mk)

b) In the space provided below draw a diagram to show how a sample of aqueous ammonia can be prepared. (2 mks)

c) Use dot(.) and cross(x) diagram to show bonding in (2 mks)
i) Ammonia molecule

ii) Ammonium ion

d) i) State and explain the observations that would be made when excess ammonia gas is bubbled through a solution Iron (II) sulphate. (2 mks)

iii) Write ionic equation for reaction that occurs in d(i) above. (1 mk)

LAST PRINTED PAGE.

DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:…….

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

233/3

CHEMISTRY PRACTICAL

TIME: 2 ¼ HOURS

Instructions to candidates:

*(a) Write your **Name, Index Number/Admission number** in the spaces provided above.*

*(b) **Silent and non-programmable electronic calculator** may be used*

(c)** The candidate is encouraged to take **first 15 minutes to read the instruction and find out if all reagents and apparatus are provided

*(d) Answer **ALL** the questions in the spaces provided and calculations **MUST** be clearly shown*

(e)

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Questions	Maximum Score	Candidate's Score
1	23	
2	09	
3	08	
	40	

This paper consists of 6 printed pages; please check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

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1. You are provided with:

- Solid M – 5g of dibasic organic acid in a stoppered container.
- Solution N made by dissolving 8g of sodium hydroxide per litre of solution.

You are required to determine:

(i) The solubility of solid M

(ii) The number of moles of water of crystallization in solid M

PROCEDURE I

i) Fill the burette with distilled water.

ii) Place all solid M in the boiling tube provided.

iii) Transfer 4cm^3 of distilled water from the burette into the boiling tube containing solid M.

iv) Heat the mixture while stirring **carefully** with a thermometer to about 80^{o}C (or until all the solid dissolves).

v) Allow the solution to cool while stirring with the thermometer (cooling can be fastened by dipping the boiling tube in a beaker containing cold water while stirring with the thermometer). **Record the temperature at which crystals start to form** in Table I below.

vi) Add a further 2 cm^3 of distilled water from the burette to the mixture. Repeat procedure (iv) and (v) above and record the corresponding crystallization temperature.

vii) **Complete Table I** below by adding the **volumes of distilled water to get the total volume of water** as indicated in the table I below and repeating procedure (iv) and (v) above.

N.B. RETAIN THE CONTENTS OF THE BOILING TUBE FOR USE IN PROCEDURE II

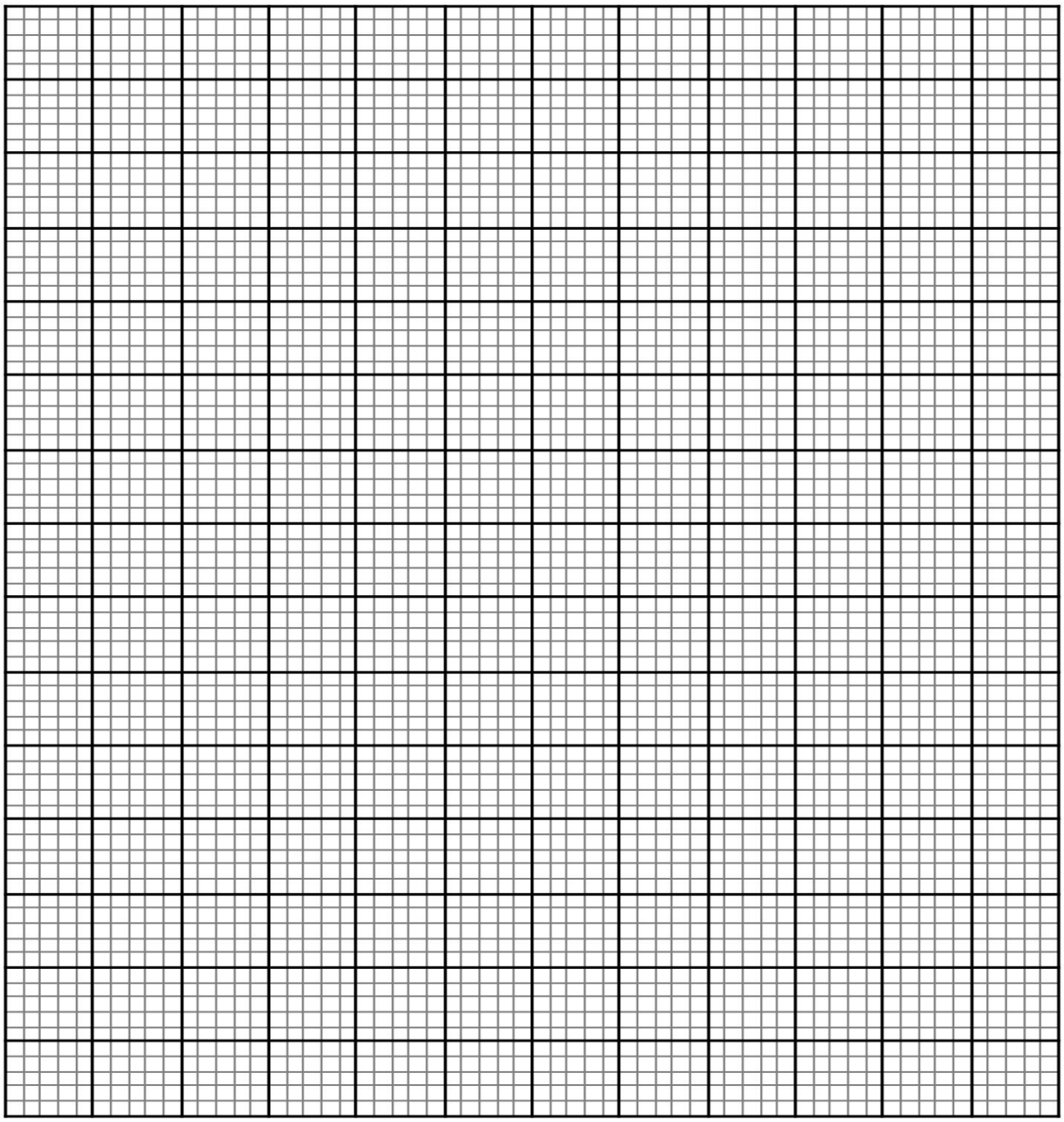
a) Complete table I by calculating the solubility of solid M at the different temperatures.

Table 1

Total Volume of water in the boiling tube (cm^3)	Temperature at which crystals of solid M first appear (°C)	Solubility of solid M (g/100g of water)
4		
6		
8		
10		
12		

(6marks)

b) On the grid provided, plot a graph of solubility of solid M (y-axis) against crystallization temperature (x-axis). (3 marks)



c) From your graph,

i) determine the solubility of M at 55^{o}C. (1 mark)

ii) the temperature at which 42g of solid M dissolves in 70g of water (2mk)

PROCEDURE II

i) Transfer the contents of the boiling tube in **procedure I** into a clean 250ml volumetric flask.

ii) Rinse the boiling tube and thermometer and transfer the contents to a 250ml volumetric flask (i) above. Add distilled water to the mark. **Label** the resulting solution **M**.

iii) Fill the burette with solution **M**. Pipette 25cm^3 of solution N into a clean 250ml conical flask.

iv) Add 3 drops of phenolphthalein indicator.

v) Titrate **M** against **N** and record your results in table II below.

vi) Repeat the experiment two more times and complete table II below.

Table II

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

(4 marks)

Calculate:

a) Average volume of M used. (1 mark)

b) (i) The number of moles of sodium hydroxide solution N in 25cm^3 of solution used (Na=23,O=16,H=1). (2 mark)

ii) The number of moles of dibasic acid, solution M in the average volume used (1 mark)

iii) The concentration of the organic acid, solution M in moles/litre. (1marks)

iv) Given the formular of the organic acid was $H_2C_2O_4.nH_2O$, find the value of n in the formular (2mk)

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2. You are provided with **solid D.** Carry out the tests below and record your observations and inferences in the spaces provided.

Place **solid D** in a clean boiling tube, add 10cm^3 of distilled water and shake well. Use about 2cm^3 portions of the filtrate for the tests below.

i) Add aqueous sodium hydroxide dropwise until in excess to the 1st portion.

Observations (1mk)	Inferences (3 mks)

ii) Dip a glass rod to solution D and burn it in a non luminous flame

Observations (½ mk)	Inferences (½ mk)

iii) To the 2nd portion, add 3 drops of barium nitrate solution followed by 2cm^3 of dilute nitric (v) acid

Observations (1mk)	Inferences (1mk)

iv) To the 3rd portion, add 3 drops of acidified potassium dichromate (vi) solution

Observations (1mk)	Inferences (1 mk)

3.You are provided with solid H. Use it to carry out the tests below.

a) Put solid H in a boiling tube. Add about $10cm^3$ of distilled water and shake well

Observations (1mk)	Inferences (1mk)

b) Divide the mixture into four, about $2cm^3$ portions in test tubes.

i) Test the pH of the first portion

Method (1 ½ mk)	Observation (½ mk)	Inferences (½ mk)

ii) Add ½ spatula of solid B to the second portion and warm.

Observations (½ mk)	Inferences (1mk)

iii) Add 3 drops of acidified $KMnO_4$ to the 3rd portion.

Observations(1mk)	Inferences(1mk)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

FORM 4 COMPUTER STUDIES

TIME: 2 ½ Hours

SECTION A (40 MARKS):

Answer All Questions in this Section

1. Explain the difference between data and information. (2mks)

_____

_____

2. a) Describe THREE characteristics of fifth-generation computers. (3mks)

_____

_____

_____

_____

b) State TWO limitation of early (first generation) computers. (2mks)

_____

_____

_____

3. Explain THREE measures an organization can implement to enhance data security. (3mks)

_____

_____

_____

_____

4. Differentiate between compiler and interpreter. (2mks)

_____

_____

_____

5. Distinguish between validation and verification in data processing. (4mks)

6. Describe THREE functional elements of the CPU. (3mks)

7. a) Define the term Cloud Computing. (2mks)

b) State TWO advantages of using cloud storage services. (2mks)

8. Explain THREE types of system documentation used during system development. (3mks)

9. Describe THREE ethical issues related to computer crime. (3mks)

10. Differentiate between phishing and hacking. (2mks)

11. Define the following terms: (2mks)
i) Primary key

ii) Foreign key

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12) State TWO types of charts and give one use for each. (2mks)

13) Define the term computer virus and State TWO ways of preventing virus infection. (3mks)

14. State FOUR factors to consider when selecting a transmission medium. (2mks)

15. List two types of fonts as used in Word Processing. (1mk)

SECTION B (60 MARKS)

Answer Question 16 (Compulsory) And any other THREE questions in this section.

16. A school wishes to develop a program to calculate examination grades for students.

a) Define the following terms: (3mks)

i) Constant

ii) Identifier

iii) Debugging

b) State FOUR characteristics of a good program. (4mks)

c) Write pseudocode that will: (8mks)
Input student name
Input marks for five subjects
Calculate total and average
Assign grades as follows:
70 – 100 : Grade A
60 – 69 : Grade B
50 – 59 : Grade C
40 – 49 : Grade D
Below 40 : Grade E
Display name, total, average and grade

WRITE YOUR PSEUDO-CODE HERE

17. a) One of the functions of an operating system is job scheduling. Explain What is mean by job scheduling. (1mk)

b) List and explain three types of user interfaces. (6mks)

c) Describe the following categories of software:
i) Firmware (1mk)

ii) Proprietary software (1mk)

d) A new company XYZ intends to go into the business of desktop publishing. Advise the company on three computer hardware system specification features to consider as a measure of enhancing performance. (6mks)

18. a) A manager wishes to replace the current manual system with a computerized one. Describe three main areas that must be evaluated to justify the replacement. (6mks)

b) List the three areas that would be considered in the requirements specifications. (3mks)

c) State and explain three ways that can be followed to replace the current system. (6mks)

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19. a) i) Define normalization. (2mks)

ii) State three objectives of normalization. (3mks)

b) i) What is a distributed system? (3mks)

ii) State any three advantages of distributed systems. (3mks)

c) State any four criteria for choosing an operating system (4mks)

20. (a) A firm intends to purchase new software. List three items that should accompany the software (3mks)

(b) State and explain three ways that computer technology could make office work more efficient. (6mks)

(c) Convert the hexadecimal number FC1 to its binary equivalent (6mks)

DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……..

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

451/2

Computer Studies Paper 2

(PRACTICAL)

2 Hours 30 Mins

Kenya Certificate of Secondary Education

INSTRUCTIONS TO CANDIDATES

1. Type your name and Adm number at the top right-hand corner of each printout
2. Write your name and Adm number on the storage device provided
3. Write the name and version of the software used for each question attempted in the answer sheet
4. Passwords should not be used while saving in the compact disks
5. Answer all the questions
6. All questions carry equal marks
7. All answers must be saved in the storage media provided
8. Make a printout of the answers on the answer sheets provided
9. Hand in all the printouts and the storage media

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Question 1

Using a word processor, type the following document as it appears. Save your document as **Artificial Intelligence** (22 marks)

Technology has greatly improved Transformation worldwide.

Technology offers a powerful toolkit to address different challenges facing urbanization in Africa. Computer studies students proficient in technology can play a crucial role in developing and implementing these solutions:

Technological Solution	Description
(a) Smart City Planning	Geographic Information Systems (GIS), readily accessible through software like ArcGIS (data can be visualized and reports created in Word), can be used to analyse urban growth patterns, identify areas for development, and optimize infrastructure planning.
(b) Improved Infrastructure Management	IoT (Internet of Things) devices can monitor infrastructure performance, predict maintenance needs, and optimize resource allocation.
(c) Job Creation and Skills Development	Online platforms can connect job seekers with employers, provide access to online education and training, and promote entrepreneurship.
(d) Affordable Housing Solutions	Building Information Modeling (**BIM**) software can be used to design and construct affordable and sustainable housing.
(e) Sustainable Waste Management	Smart waste management systems can optimize collection routes, reduce landfill waste, and promote recycling.

.

a) Apply each of the following formats to the text in the document:

   i) **Drop cap** the word technology in the first paragraph with a spacing of 7.6mm. (2 marks)

   ii) Align the heading "Technology has greatly improved *Transformation* worldwide" to the center, set its character size to 13 pts and set the character spacing to 130%. (4 marks)

b) Apply each of the following formats to the table:

   i) Cell spacing of 0.8mm (1 mark)

   ii) Insert a caption "***Table 1: Role of technology in solving urbanization problems"*** (1 mark)

   iii) An orange shading to the entire table. (1 mark)

c) Fairmount School intends to use mail merge feature to create a letter inviting different candidates from neighboring schools to their ICT Career Awareness Day.

Open a blank word processing document and create the following invitation letter. Save the document as **ICTDay**.

(7 marks)

P.O. Box 4700-1000
Suswa

To <<School name>>
P.O. Box <<Address>>
<<Email address>>
<<City>>

RE: ICT CAREER AWARENESS DAY

It is my **pleasure to invite you** to our **ICT Career Awareness Day**, scheduled for **Saturday, March 6, 2026, starting at 9:00 AM**.

We have invited **highly sought-after industry experts** to inspire candidates on how to leverage technology to solve real-life issues facing our society through diverse career opportunities in ICT.

Your presence at this event would be greatly appreciated.

Yours faithfully,

ICT Patron

Create a data source as it appears in the table below. Save the data source as **GUESTS.** (4 marks)

SCHOOLNAME	ADDRESS	EMAILADDRESS	CITY
Luckyview High	700 - 1022	luckyviews@gmail.com	Maweni
Topgrade Girls	58 - 1001	topgradegirls@gmail.com	Kieni
Momentum Boys	302 - 2304	momentumboys@gmail.com	Molo
Excellent Mixed	52 - 1910	excellentmixed@gmail.com	Nakuru

d) Merge the data source with the ICTDay document. Save the merged document as **ICTDayInvitees.** (5 marks)

e. Print out the following:

- **Artificial Intelligence** (1 mark)
- Guests (1 mark)
- Merged letter for Excellent Mixed (1 mark)

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Question 2

Table1 and table 2 are extracts of records kept by a Montana Elite school of students joining form one on a scholarship program in Nairobi County.

i) Using a database application package, create a database file named **SCHOLARSHIP.** **(1 mark)**

ii) Create three tables: **STUDENT** and **FEE PAYMENT** table in the database file created above using the given data types and field properties in the respective tables. (12 marks)

STUDENTS TABLE

Field name	*Data types and properties*
Student Number	Text (Size = 8, Required = Yes)
Student Names	Text (Size = 25)
Gender	Text (Look up values, Male, Female)
Date Of Birth	Date and time, Format = Short Date)
Class	Text (Size = 2) Look up values, 1N, 1S, 1W,1R
Primary School Name	Text (Size = 30)

FEE PAYMENT TABLE

Field name	*Data types and properties*
Payment ID	Text (Size = 8, Required = Yes)
Payment Date	Date and time, Format = Medium Date)
Student Number	Text (Size = 8
Sponsor ID	Text (Size = 8)
Scholarship Type	Text (Size = 15, Required = Yes)
Sponsor Name	Text (Size = 25

iii) Set the primary key for each table. (2 marks)

iv) Create the relationships among the tables and enforce referential integrity. (2 marks)

v) Enter the data in their respective tables below using forms. (12 marks)

STUDENTS TABLE

Student Number	Student Name	Gender	Date of Birth	Class	Primary School
St-120	John Mulika	Female	14/08/2002	1N	Mema
St-121	Silas Maru	Male	04/03/2003	IS	Lawina
St-122	James Wasike	Male	24/08/2005	1W	Freetown
St-123	Lena Abdi	Female	19/05/2004	1R	Township

FEE PAYMENT TABLE

Payment ID	Payment Dates	Student Number	Scholarship Type	Sponsor Name
100	7th March 2022	St-120	Full	CDF
200	18th March 2022	St-123	Quarter	COUNTY
300	23rd March 2022	St-121	Partial	CDF
400	7th March 2022	St-120	Full	NGAAF
500	17th March 2022	St-121	Partial	COUNTY
600	7th March 2022	St-122	Full	KCB
700	7th March 2022	St-123	Quarter	NGAAF
800	27th March 2022	St-121	Partial	COUNTY
900	7th March 2022	St-122	Full	KCB
1000	21st March 2022	St-123	Partial	NGAAF

vi) Modify the Fee Payment Table so as to capture the amount of money received by the school from respective sponsors on different dates for each student. (4 marks)

Sponsor Name	Amount Per Sponsor
KCB	38000.00
COUNTY	30000.00
CDF	25500.00
NGAAF	20300.00

vii) Create a query to display each of the following:

a) Student Number, Student name, class, primary school, gender, sponsor and Date of Birth and compute the student's age. Save the query as **STD AGE** (4 marks)

b) Student name, primary school, gender, amount paid per sponsor, Payment Dates, sponsor Name and scholarship type. Compute total amount of money the school received. Save query as **SPONSOR AMT**. (4marks)

c) Student name, primary school, gender, sponsor, amount per sponsor, Payment Dates and scholarship type, Show list of students sponsored by **NGAAF** only. Save query as **NGAAF.** (4 marks)

viii) Using **SPONSOR AMT** query, in (d)(ii) above create a report. Group records per sponsor, Title the report as "**BURSARY 2022 REPORT**" and save the report as **SPONSOR REPORT.** (5 marks)

ix) Print the following: (3 marks)

- Table: **STUDENTS TABLE** and **FEE PAYMENT TABLE**
- Query: **STD AGE** and **NGAAF**
- Report: **SPONSOR REPORT**.

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

FORM FOUR

CHRISTIAN RELIGIOUS EDUCATION

QUESTION PAPER 1

TIME: 2 HOURS 30 MINUTES

INSTRUCTIONS:

- ***Answer any five questions***
- ***All answers must be written in English***

QUESTIONS

1. a. Outline eight minor prophetic books in the bible. (8mks)
b. Explain six effects of the bible translation into local languages. (6mks)
c. State six ways in which Christians use the bible to spread the gospel today. (6mks)

2. a. Explain why marriage is considered to as a covenant. (7mks)
b. State seven conditions that Yahweh gave to the Israelites during the renewal of the Sinai covenant Exodus 34:1-35. (7mks)
c. Give six reasons why Christians are commanded not to steal. (6mks)

3. a. State six promises God gave to king David through prophet Nathan. (6mks).
b. Give seven reasons why it was difficult for Prophet Elijah to stop idolatry in Israel. (7mks)
c. Outline seven factors that have led to the increase of Christian denominations in Kenya today. (7mks)

4. a. Explain four differences between African Traditional Prophets and Old Testament Prophets. (8mks)
b. State seven ways in which the rich oppressed the poor during the time of Prophets Amos. (7mks)
c. Give five ways in which the church is carrying out its prophetic role in Kenya today. (5mks).

5. a. Describe the call of prophet Jeremiah. (8mks)
b. State six reforms carried out by Nehemiah to restore the worship of God in Judah. (6mks)
c. From Nehemiah's experience, identity six ways in which church leaders can eradicate evils in the society.(6mks)

6. a. State six similarities between the Christian and Traditional African way of showing respect to God. (6mks).
b. Explain the significance of rituals performed after the death of a person in Traditional African Communities. (7mks)
c. Identify seven practices in Traditional African Communities that show their believe in life after death.(7mks)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

FORM FOUR.
CHRISTIAN RELIGIOUS EDUCATION PAPER TWO
TIME: 2 HRS 30 MIN.

INSTRUCTIONS

- **Answer any five questions.**
- **All answers must be written in English**.

1. a.Outline the Jewish expectations concerning the Messiah (6mks).
   b. Describe the events that took place the night when Jesus was born in Luke 2:1-19. (8 mks).
   c. Give six ways in which the birth and life of Jesus was to be extraordinary.(6mks)

2. a. State six reasons why Jesus chose the twelve disciples. (6mks)
   b. Describe the transfiguration of Jesus as recorded in Luke 9:28-36. (8mks)
   c. Give six importance of the transfiguration of Jesus to Christians today. (6mks)

3. a. Identify six reasons that made Judas Iscariot betray Jesus. (6mks)
   b. Outline the events that took place from the time Jesus was arrested up to the time he was sentenced to die. (8mks)
   c. State six lessons Christians learn from the suffering and death of Jesus. (6mks)

4. a. Outline the activities that took place on the day of Pentecost. (Acts 2:1-41) (7mks)
   b. Describe how the unity of believers is expressed in the body of Christ. (7mks).
   c. Give Six factors that bring misunderstanding among church leaders. (6mks)

5. a. Identify six sources of Christian ethics. (6mks)
   b. Give eight reasons that lead young people to engage in premarital sex. (8mks)
   c. State six ways in which the church responds to the challenges posed by HIV/AIDS. (6mks)

.

6. a. Explain Christian teachings on marriage. (7mks)
   b. State the similarities in the Christian and Traditional African view on the family. (7mks)

c. Give six ways in which the church can help single parents. (6mks)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

ENGLISH FORM FOUR

PAPER ONE: FUNCTIONAL SKILLS 101/1

TIME: 2 HOURS

Instructions to candidates

1. Write your name and admission number in the space provided above.
2. Sign and write the date of examination in the space provided above.
3. Answer all the questions in this question paper.
4. All your answers must be written in the spaces provided in this question paper.
5. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

ALL ANSWERS MUST BE IN ENGLISH

FOR EXAMINER'S USE ONLY

		MAXIMUM SCORE	CANDIDATE'S SCORE
QUESTION 1	FUNCTIONAL WRITING	20	
QUESTION 2	CLOZE TEST	10	
QUESTION 3	ORAL SKILLS	30	
	TOTAL SCORE		

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SECTION A: FUNCTIONAL WRITING (20 MARKS)

The Ministry of Sports and Youth Affairs is seeking to recruit Form 4 graduates in a campaign aimed at creating awareness about the dangers of drug and substance abuse among the youth.

Applicants must be:

- Citizens of Kenya
- 16 years and above
- In possession of a national identification card
- Fluent in English and Kiswahili
- In possession of KCSE, Grade C+ and above
- Able to demonstrate knowledge and experience on issues of drug and substance abuse
- Creative and innovative
- Computer literate

Interested persons are required to send their application by 31st November, 2026 to:

The Principal Secretary
Ministry of Sports and Youth Affairs
P.O. Box 5038 – 00200
Nairobi

(a) Write a **letter of application** in response to the advertisement. (10 marks)

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(b) Write a **Curriculum Vitae** to accompany your application letter. (10 marks)

SECTION B: CLOZE TEST (10 MARKS)

Read the passage below and fill in each blank space with the most appropriate word.

There are some easy steps to follow as you plan your career. (a) …… you should do a self-assessment. This will help you to discover your interests, skills and personality.(b) …… , you should gather information (c) …… different jobs and occupations. You (d) …… find all this from books, magazines and people. The (e) …… most important things that you need to learn is how much it will take to (f) …… for your career and how much (g) …… will cost. Next, you will need to get the (h) …… skills. You can do this by getting more (i) …… at a college, university (j) ……..…… a technical school.

SECTION C: ORAL SKILLS (30 MARKS)

(a) Read the oral item below and then answer the questions that follow:

<u>Pounding Song</u>

At Kitili's home are herdsmen
Both boys and girls
There are goats and lambs and cattle:
Mwesya, do I not call you in my poverty?
I have no relative to call upon
Death, I will not give him food nor water,
Seeing he has denied me my father and my family

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E! Grinding
E! Grinding

Musyoka, I have no family, I have no mother,
The mother of my sister Vika, Lonza and Linda,
How forlorn I am? Do I not call you?
I do not share the sleeping mat with Lonza
How forlorn I am, I have nothing of my own

(i) Explain two features that contribute to the oral nature of the above item. (4 marks)

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(ii) If you were performing this oral song, how would you capture the attention of the audience? (2 marks)

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(iii) How would you perform the fourth line of the song and why? (2 marks)

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.....

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……

(b) Provide another word that has the same pronunciation as the ones given below: (6 marks)

i. Cruise - …….

ii. Where - …….

iii. Suite - …….

iv. Sowing - …….

v. Some - …….

vi. Flu - …….

(c) Underline the stressed part of the words in bold in the sentences below: (3 marks)

i. The **a.larm** was set to go off at noon.

ii. His daughter is having a **chal.lenge** applying for a degree course online.

iii. Their relationship ended due to mutual **mis.trust**.

(d) Identify the intonation to use in the following sentences: (3 marks)

i. Please accompany us tomorrow.

……

ii. How interesting the lesson was!

……

iii. You know the man in the red shirt?

……

(e) Consider the following conversation between a successful interview and a panel of interviewers and then answer the questions that follow:

Mustafa: (knocks at the door gently and waits)

Hamisi: Come in please. Good afternoon.

Mustafa: Good afternoon Sir! (Remains standing)

Maria: Please have a seat and let me have your documents.

Mustafa: Thank you Madam. Here they are. (He removes neatly arranged documents from a satchel)

Mwadime: Welcome to this interview. I am Mwadime (stretching his hand) to my left is Mr. Hamisi and to my right is Madam Maria. Please tell us which job you applied for, why you have interest in this job and how you got the information.

Mustafa: (Sitting upright, looking at the interviewers and smiling) Thank you sir. I applied for the position of a laboratory technician after reading the advertisement in the Daily Nation newspaper. I am interested in the job because I love working in the laboratory. I also have the necessary qualifications and a one-year working experience in an institution with a big laboratory.

Maria: (Nodding as she looks at the documents) It is true you had good grades in sciences. I also noted that you arrived quite early for the interview.

Mustafa: Thank you Madam. I am humbled.

Hamisi: That is all Mustafa. We shall get back to you in a short while.

Mustafa: Thank you all. Goodbye. (Smiling and gently closing the door behind him.)

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i. Mention **two** things the interviewee did before the interview which could have contributed to his success. (2 marks)

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.....

ii. Identify the things that Mustafa did during the interview to ensure success. (2 marks)

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(f) Pick the odd one out according to pronunciation of the underlined sound: (3 marks)

i. Misse**d** Guesse**d** Turne**d** Kicke**d**

.....

ii. **Ch**andelier Para**ch**ute **Ch**ampagne Ar**ch**

.....

iii. R**e**ligion D**e**liver R**e**present **E**xperience

.....

(g) What would you say in the following situations? (3 marks)

i. Your best friend buys you a gift for your birthday.

.....
.....

ii. You accidentally step on your classmate.

.....

.....

iii. You are the chairperson of your literature group. During a discussion, you want Max to give his contribution.

.....

.....

DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

ENGLISH PAPER 101/2
(COMPREHENSION, LITERARY APPRECIATION AND GRAMMAR)
TIME 2 ½ HOURS

INSTRUCTIONS

1. **Answer all the questions**
2. **All the questions should be written in the spaces provided.**
3. **This paper consists of 7 printed pages. Check to ensure that all the pages are printed and that no questions are missing.**

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

QUESTION 1.

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Read the comprehension below and answer the questions that follows

"Today, our fellow citizens, our way of life, our very freedom came under attack in a series of deliberate and deadly terrorist acts. The victims were in aeroplane or in their offices: secretaries, business men and women, military and government workers, mothers and fathers, friends and neighbours. Thousands of lives were suddenly ended by evil **despicable** acts of terror. The picture of acroplans flying into buildings, fires burning, huge structures collapsing have filled us with disbelief, terrible sadness and quiet, unyielding anger. These acts of mass murder were intended to frighten our nation into chaos and **retreat**. But they have failed. Our country is strong."

A great people has been moved to defend a great nation. Terrorist attack can shake the foundations of our biggest buildings, but they cannot touch the foundation of our country. These acts shatter steel but they cannot dent the steel of our resolve. We were **targeted** for attacks because we are the brightest beacon for freedom and opportunity in the world. And no one will keep that light form shinning.

Immediately following that first attack, I implemented or governments emergency response plans. Our emergency teams are working to help with local rescue teams. Our first priority is to get help to those who have been injured, and take precaution to protect our citizens at home and around the whole world from further attacks. The functions of our government continue without interruption. Our financial institutions remain strong, and the economy will be open for business as well.

The search is **underway** for those who were behind these acts. I have directed the full resources of our intelligence and law enforcement officers to find those responsible and bring them to justice.

This is a day in all of us in our resolve for justice and place. We had defeated enemies before , and we will do so this time. None of us will ever forget this day, yet we go forward to defend freedom and all that is good and just I our world.

(Adapted from speeches that changed the World The Stories and Transcripts of the Moments that Made History London: Quercus Publishing Ltd (8th Edition) 2007

a. According to paragraph one, what are the emotional effects of the terror attack? (2mks)

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b) What is the position of the speaker on terrorism? Explain your answer. (3mks)

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c) Using information in the third and forth paragraph, identify three things said by the speaker to reassure the audience about their security. (3mks)

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d) Identify and explain the use of two metaphors in the passage. (4mks)

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e) What is the tone of the passage? Explain your answer. (3mks)

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f) The functions of the government continue without interruption. Our financial institutions remain strong. (combine into one sentence using "not only") (1mk)

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……..

g) Explain the meaning of the following words as used in the passage. (4mks)

i. Despicable ……

…….

ii) Retreat ……

……

iii) Targeted ……

…….

iv) Underway ……

……...

QUESTION 2

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

'Good. It is decided ,then. Exellencies , Path *Alpha* is our choice. *"Alhamdulillah*!" dared Engineer Tahir, in Arabic. " Praise be to God!"

For Professor Kimani, Pastor Chiamaka and Engineer Tahir, as well as Comrade Melusi in absentia, that moment of victory was therapeutic. In *Path Alpha*, there was a chance that action , concrete action, would be taken to right the wrongs they had each suffered .

The chair had begun walking back to his seat. Now he stopped. "Good stuff," he said appreciatively. Then he began walking again. "President Bangoura, come."

" Bien sur . Of course." The old fellow started to flow behind the Chair. "*Au revoir,* Mam-Biram. Goodbye," he said to the youth at the projector.

" Goodbye, Sir."

"Senks." The old man flowed on, trailed by Dr Afolabi and Minister Zinto.

When all four were back at their seats, the Chair began to wrap up.

"Excellencies, we've come to the end of our summit." He smiled, and why not?

Had The Trick not saved the day? Had it not eliminated the need for the

consensus he could not achieve? "Go back home safely, Excellencies. As we say

in my country, travel like lions, without fear of attack or worry about supper. And,

speaking about supper, the Pinnacle informs me that, to **cap** our summit, it has

organised a closing ceremony on the mezzaninefloor. Things will start **sizzling**

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in thirty minutes. So we'll meet there soon." Gavel hit wood. Bang. "I now declare the summit itself formally closed." Bang. Bang.

President Dibonso sprang to hit feet at once. "Mr Chairman, don't insult our intelligence withthat rubbish." His voice was grating on all ears with tones of rage. "What rubbish are you referring to? President Dibonso?" asked the Chair. He was rising tothe challenge.
"The Choice Matrix indeed! Do you really expect us to buy into that madness? Can't you see that some of us are not senile? We reject the matrix, lock, stock and barrel." "I said thesummit stands closed," insisted the Chair. Bang. Bang.
"And I say it is open again," retorted President Dibonso.
"But, President Dibonso, you do not have the power to do so."
"Who says I do not have the power to do so? See this?" He pulled out a pistol, pocket-size.The other heads of state scrambled to hide under their desks.
"President Dibonso, put that thing away!" demanded the
Chair."Make me!" retorted President Dibonso,
The pistol clicked, It was ready to start spitting fire at the Chair.

QUESTIONS

a) Briefly explain what happens just before the excerpt. (3 marks)

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……

b) Identify and illustrate one-character trait of: . (4 marks)

a) the Summit Chair

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……

……

b) President Dibonso

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c) What two themes are brought out in the excerpt? (4 marks)

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d) "President Dibonso, put that thing away!" demanded the Chair. (Rewrite in the reported speech) (1 mark)

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e) Discuss two stylistic devices used in the excerpt. (4 marks)

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f) I said the summit is closed. (Rewrite using a question tag) (1 mark)

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g) From your knowledge of the story, what is the Trick? (2mks)

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h) What happens after this extract? (3mks)

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i) Explain the meaning of the following words as used in the excerpt. (3 marks)

i. Consensus……

…….

ii) Cap……

…….

iii) sizzling……

……

QUESTION 3

Read the poem below and answer the questions that follow (20 marks)

HE PROMISED ME HEAVEN

He promised me heaven
As side by side walked we down the aisle
As the chime of the wedding bell brightened the day
As sweet – sounding songs soothed our souls
As he held my hand and inserted this ring
into my finger I knew that my heaven had
come For then he promised me heaven.
As we sat close and cherished our moon of honey
As he whispered cream icing into my ears
Dramatically conjuring metaphor after metaphor

Humming lullaby after lullaby
How elated I felt for being so much elevated
For here he was, my guardian angel
To take me to heaven
For he promised me heaven
As one year later he slapped me again and again
I quickly forgave and forgot
For he was my idol Who had promised me heaven
Even as the floodgate of blow after blow
Kick after kick
O pened from its cage of disaster
Defacing and eroding the beauty he so much praised
Converting me into a shell of torture
How patiently I clung to him
Anticipating the heaven he had promised me
Now as I lie in the hospital bed
Unable to rise from his violent battery
Waiting for
the Angel of
Death I
realize he
kept his
promise
For I am soon going to heaven
Because he promised me heaven,

Questions

a. Identify the persona. (2 marks)

……

……

……

b. Explain the main theme of the poem. (2 marks)

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b. Using the plot of the poem, explain the major changes in the subject matter. (4 marks)

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c. What is the speaker's mood in the last six lines of the poem? (2 marks)

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……

e. Give one character trait of the :

i)persona. (2 marks)

……
……
……

ii)The He of the poem (2mks)

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f. Explain the irony in the poem. (2 marks)

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g. Apart from irony, identify and illustrate one style used in the poem. (2 marks)

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h) Explain the meaning of the following lines: (2 marks)

i. As he whispered cream icing into my ears

……
……

ii. For he was my idol.

……
…….

QUESTION 4 GRAMMAR (15 Marks)

1. Re-write the following sentences according to the instructions given after each. (3mks)

a) I will clean the room if he asks me to. (Re-write using the word "unless".)

……

……

……..

b) The principal is addressing parents. (Re-write to end with…. Principal.)

……

…….

c)I like tea more than coffee. (Re-write using the words …prefer.)

……

…….

2. Complete each of the following sentences using the correct phrasal verb formed from the word given in brackets. (3mks)

a) The fact that you have quarreled with your sister does not mean you cannot work together. You should …….. (Make) and continue collaborating.

b) The meeting has been …….. (Put) till next week. At first I had thought it had been ……. (Call) altogether.

3. Change the following sentences from direct to indirect speech. (3mks)

a) "You must clean your clothes," the lady told her daughter.

……

b) "Have you taken breakfast?" Tom asked his son.

……

c) “We will be travelling tomorrow,” Kim informed his wife.

……

……

……..

4. Join the following pairs of sentences using appropriate correlative conjunctions formed from the words given in brackets. (3mks)

a) The farmers got high yields from their farms. They got ready market for their produce. (…not only…)

……

……

……

b) The man stepped out of the house. The rain started pouring. (…no sooner…)

……

……

……

c) The man does not attend wedding ceremonies. His sons too do not attend wedding ceremonies. (…neither…)

……

……

……

5. Fill in each of the blank spaces in the following sentences with the correct preposition. (3mks)

a) Susan has been accused…….. stealing Kamau’s bananas.

b) Many students are ignorant……. the dangers of drug abuse.

c) The accident resulted …….the death of two people.

DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

ENGLISH

PAPER 3 (101/3)

CREATIVE COMPOSITIONS AND ESSAYS BASED ON SET TEXTS

TIME:2 HOURS 30 MINUTES

1. Imaginative composition (20mks)

Either

(a) Write a composition ending with the words
----------It was then that I realized I had ruined my life by associating with the wrong friends.

OR

(b) Write a composition describing a prize giving day that was recently held in your school.

2. **Compulsory set text:** The Samaritan by John Lara (20mks)
When citizens elect selfish leaders, they end up suffering.
Write an essay in support of this assertion drawing illustrations from John Lara's play, The Samaritan.

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OPTIONAL TEXT.

3. (a) **Short Story:** A man of Awesome power by Nabuib Mahtouz. (20mks)
When an individual is given too much power, they are likely to misuse it.
Write an essay in support of this statement using illustrations from the short story, A man of Awesome Power.

b) Drama –Adipo Sidang'-Parliament of Owls.
Choices have consequences. With relevant examples from Sidang's Parliament of Owls, discuss the validity of this statement. (20 marks)

OR

c) The novel-Kazuo Ishiguro. An Artist of the Floating World
War causes many negative results. Drawing examples from Ishiguro's An Artist of The Floating World, write an essay to show the truth of this statement. (20 marks)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

GEOGRAPHY PAPER 1 FORM FOUR

312/1

Time: 2 ¾ Hours

INSTRUCTIONS TO CANDIDATES:

- ***This paper consists of two sections: A and B***
- ***Answer all the questions in section A***
- ***Answer question 6 and any two questions from section B***
- ***All answers must be written in the answer booklet provided***

For official use only

Question	Max score	Student score
Section A	25	
6	25	
	25	
	25	
Total	100	

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SECTION A: 25 MARKS

Answer all the questions from this section.

1. a) Define environment **(2mks)**

   b) Give **three** importance of studying geography **(3mks)**

2. a) Apart from planets, name **two** other members of the solar system **(2 mks)**

   b) State **three** characteristics of planets **(3 mks)**

3. a) Give **three** ways through which rocks may be metamorphosed. **(3 mks)**

   b) State **two** uses of rocks **(2 mks)**

4. a) State **two** characteristics of a plug volcano **(2 mks)**

   b) State **three** types of Earthquakes based on their focal depth **(3 mks)**

5. Describe the formation of **yardangs.** **(5 mks)**

SECTION B: 75 MARKS

Answer question 6 any other two questions in this section

6. Study the map of Kipkabus 1:50,000 (Sheet 104/1) provided and answer the following questions.

   a) i) Give **two** ways of identifying the map provided. **(2 mks)**

   ii) What was the magnetic declination of the map as at 1970? **(1 mks)**

   iii) What is the latitude and longitude of the South West corner of the map? **(2 mks)**

   b) i) Calculate the area of Chof/ Chop forest. Give your answer in square kilometres. **(2 mks)**

   ii) What is the approximate height of the DC'S camp office in grid square 8440 **(1 mk)**

   c) i) Describe the distribution of natural vegetation in the area covered by the map. **(6 mks)**

   ii) Citing evidence from the map give **three** economic functions of Kipkabus town. **(6 mks)**

   d) Draw a rectangle 12cm by 8 cm to represent the area bound by eastings **80** and **86** and northings **30** and **34**. **(1 mk)**

   On the rectangle mark and name the following: **(4 mks)**

   (ii) Dry weather road.

   (iii) Waterhole.

   (iv) Air photo principal point 68.

   (v) Forest.

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7. a) i) What are earth movements? **(2 mks)**

ii) State **three** causes of earth movements **(3 mks)**

b) i) Define folding **(2mks)**

ii) Describe how a recumbent fold is formed **(4 mks)**

c) i) Apart from recumbent fold name **two** other types of folds **(2 mks)**

ii) Name **two** features resulting from folding apart from fold mountains **(2 mks)**

iii) Name **two** examples of fold mountains in the world **(2 mks)**

d) Explain **four** significance of fold mountains to human activities **(8 mks)**

8. a) Name **two** types of submerged highland coasts. **(2 mks)**

b) Describe how the following factors influence wave erosion

i) Nature of the rock **(3 mks)**

ii) Gradient **(2 mks)**

c) Using well labeled diagrams, describe how the following features are formed

i) A spit **(6 mks)**

ii) Blow-bole **(6 mks)**

d) Explain **three** economic importance of coastal landforms. **(6mks)**

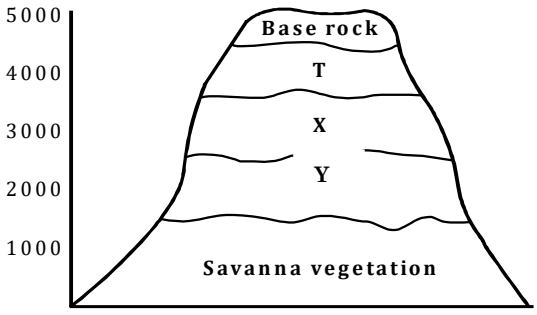
9. a) What is vegetation? **(2 mks)**

b) Explain how the following factors influence vegetation distribution in Kenya.

i) Soil **(2 mks)**

ii) Relief **(2 mks)**

c) The diagram below represents zones of natural vegetation on a mountain in Africa. Use it to answer questions (i) and (ii)



i) Name the vegetation zones marked W, X and Y. **(3 mks)**

ii) State the characteristics of vegetation zones marked W. **(4 mks)**

iii) State **two** examples of temperate grasslands**.** **(2 mks)**

d) i) Explain **three** impacts of climate change on vegetation. **(6 mks)**

ii) You are planning to carry out a field study on a rainforest vegetation. Identify **four** challenges you are likely to face. **(4 mks)**

10. a) (i) Identify **two** components of soil apart from organic matter **(2 mks)**

ii) Describe the process of soil formation through decomposition of organic matter **(3 mks)**

b) i) Give **three** types of soil structure **(3 mks)**

ii) State **two** causes of soil degeneration **(2 mks)**

c) i) State **two** factors that determine the colour of the soil **(2 mks)**

ii) Describe how laterization occurs **(4 mks)**

iii) State **two** economic uses of soil **(2 mks)**

d) You are supposed to carry out a field study on soil within your division

i) State **two** reasons for conducting reconnaissance trip **(2 mks)**

ii) State **two** techniques you would use to collect samples **(2 mks)**

iii) State **three** methods of collecting data you would use apart from collecting samples **(3 mks)**

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……..

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

GEOGRAPHY 312/2
MULTILATERAL EXAMINATION
PAPER 312/2
TIME: 2HR: 45 MIN
QUESTION PAPER

INSTRUCTIONS TO CANDIDATES.

(A) THIS PAPER HAS TWO SECTION A AND B
(B) ANSWER ALL THE QUESTIONS IN SECTION A . IN SECTION B, ANSWER QUESTIONS 6 AND ANY OTHER TWO.

SECTION A (25MARKS Section A

Answer All Questions in This Section

1. (a). State three areas of study in practical geography **(3Marks)**

(b). Outline two relationships between geography and biology **(2Marks)**

2.(a)Identify three factors that influence the occurrence of minerals **(3Marks)**

(b). Give locations where the following minerals are found

(i).Diatomite- **(1Marks)**

(ii).Salt: **(1Marks)**

3. (a).Give two reasons why it is necessary to conserve wildlife in Kenya **(2Marks)**

(b). State thee effects of human encroachment into the wildlife habitat **(3Marks)**

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4.(a).Name three agricultural food processing industries in Kenya **(3marks)**

(b). Give two reasons why paper industries are located near rivers. **(2Marks)**

5. (a). Name two deep sea fishing methods **(2Marks)**

(b). State three physical conditions that favour fishing in North Atlantic fishing ground **(3Marks)**

SECTION B

Answer Question Six And Any Other Two Questions** in **This Section

6. The table below shows contribution of various energy sources in Kenya in thousand dollars.

Type of power	2018	2019	2020	2021
Hydropower	90,000	110,000	119,000	150,000
Geothermal	110,000	121,000	151,000	190,000
Thermal	28,000	43,000	52,000	38,000
Total	228,000	274,000	322,000	378,000

a. (i). Using a scale of 1cm represent 50,000 dollars, **draw** proportional circles to represent the total revenue earned from Various energy sources during the period of 2019 to 2021. Use diameter method. **(6Marks)**

(ii). Give THREE advantages of using proportional circles in representing data (**3Marks)**

(b).(i).Outline FOUR disadvantages of using draught animals as a means of transport in Kenya. **(4Marks)**

(ii)State THREE factors that have hindered the development of solar energy in Kenya **(3Marks)**

c.(i).State THREE ways in which Kenya can reduce the use of petroleum as a source of energy **(3Marks)**

(ii). Explain THREE benefits that would result from rural electrification in Kenya **(6 Marks)**

7. (a) (i) Identify TWO processes used to reclaim swamps in Kenya **(2marks)**

(ii). List THREE irrigation methods used in Kenya **(3marks)**

(b). Explain how the following geographical factors favour irrigation in Mwea Tembere.

(i).Topography : **(2Marks)**

(ii).Climate: **(2 Marks)**

(iii).Soils: **(2Marks)**

(c). Explain how the following problems affect irrigation farming in Kenya

(i). Prescence of weeds in the farm: **(2Marks)**

(ii). Low volume of water during the dry season: **(2Marks)**

(iii): Expensive Farm inputs: **(2Marks)**

(d). Explain FOUR differences between land reclamation in Kenya and the Netherlands **(8Marks)**

8.a(i) What is dairy farming? (**2Marks)**

(ii)Name TWO exotic dairy breeds of cattle reared in Kenya. **(2Marks)**

b(i). State THREE human factors that favour dairy farming in Rift Valley (**3Marks**)

(ii). Explain four ways in which the Government of Kenya assists Dairy farmers. **(4Marks)**

(c) Explain FOUR problems facing dairy cattle farming in Kenya. (**8Marks)**

(d)Explain THREE reasons why dairy farming is highly developed in Denmark than Kenya. **(6Marks)**

9. (a).(i) Differentiate between forest and forestry **(2marks)**

(ii). Explain FOUR factors influencing distribution of natural forests in Kenya **(8 Marks)**

(b). (i).Name THREE types of hardwood trees found in Kenya. (**3 Marks)**

(ii). Give FOUR characteristics of coniferous forests (**4Marks)**

(c). Explain FOUR ways in which clearing of forests has affected natural environment of Kenya (**4Marks)**

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(d) Give the difference in exploitation of softwood in Kenya and Canada under the following sub headings

(i).Period of harvesting **(2Marks)**

(ii)Transportation **(2Marks)**

10. (a)(i). what is agriculture ? **(2marks)**

(ii). Identify THREE features of intensive crop farming **(3Marks)**

(iii). State THREE problems facing plantation farming **(3Marks)**

b.(i)Name TWO cocoa growing area in Ghana **(2Marks)**

(ii). Describe commercial growing of Cocoa from harvesting to processing **(6Marks)**

(c).(i).Name THREE cocoa growing countries in Africa **(3Marks)**

(ii). Explain THREE factors favouring Cocoa growing in Ghana **(3Marks)**

(iii). What is the significance of cocoa in Ghana's economy **(3Marks)**

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

HISTORY AND GOVERNMENT
FORM FOUR PP1

INSTRUCTIONS

This paper consists of three sections A,B and C

ANSWER ALLQUESTIONS IN SECTION A, THREE IN SECTION B AND TWO IN SECTION C
SECTION A-25MARKS

Answer all the questions

1. State two ways in which the study of History and Government promotes a sense of patriotism in the learner. (2mks)
2. Name the community in Kenya that belongs to the southern cushites .(1mk)
3. Give the main significance of circumcision in Africa traditional societies in Kenya. (1mk)
4. Give two factors which influenced Seyyid to develop Agriculture in Zanzibar in the 19th Century. (2mks)
5. Name the missionary society that established a home for the freed slaves at the coast of Kenya in the 19th century. (1mk)
6. Name two economic factors that promote national unity in Kenya. (2mks)
7. State the main duty of the governor during the colonial period. (1mk)
8. State two ways in which the National Accord and reconciliation Act 2008 affected the composition of the government of Kenya. (2mks)

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9. State two ways in which direct democracy is exercised in Kenya. (2mks)

10. Name the treaty which marked the colonial spheres of influence in East Africa in 1886. (1mk)

11. Name the leader of the Wanga who collaborated with the British. (1mk)

12. Name the body that made laws in Kenya during the colonial period. (1mk)

13. Name two methods used by the British to administer Kenya colony between 1920 and 1963. (2mks)

14. Name two Asians who took part in the struggle for independence in Kenya.(2mks)

15. Give categories of elected leaders of the national Assembly in Kenya. (2mks)

16. Name one national philosophy used as development strategy in Kenya. (1mk)

17. Name the author of the sessional paper No.10 of 1965. (1mk)

SECTION B: 45 MARKS

18. (a) Name five age sets of the Nandi community in the precolonial period in Kenya.(5mks)

(b) Describe the economic organization of the Somali during the pre-colonial period in Kenya. (10mks)

19. (a) Outline five characteristics of the coastal city states along the East African coast in the pre-colonial period. (5mks)

(b) Explain five factors that led to the decline of Portuguese rule along the East African Coast. (10mks)

20. (a) Identify the reasons why African moved to urban centers during the colonial period in Kenya. (5mks)

(b)Explain five problems experienced by settler farmers in Kenya during the colonial period. (10mks)

21. (a) State five challenges faced by the early political associations up to 1939 during the colonial period. (5mks)

(b) Describe the roles of women in the struggle for independence in Kenya. (10mks)

SECTION C: 30 MARKS

22.(a) State three instances under which a Kenyan citizenship by registration can be revoked. (3mks)

(b) Explain six peaceful methods of conflict resolution in Kenya. (12mks)

23.(a) Identify three rights of the elderly members of the society in Kenya. (3mks)

(b) Describe the features of the new constitution of Kenya, 2010. (12mks)

24.(a) State five functions of the Chief Justice in Kenya. (5mks)

(b) Explain five measures that have been introduced to improve the work of the police in Kenya. (10mks)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. **INDEX NO:** …… **SIGN:**……

HISTORY AND GOVERNMENT PAPER 2

INSTRUCTIONS

1. **This paper consists of three sections A,B and C**
2. **Answer all questions in section A,THREE in section B and TWO in section C**

SECTION A – (25 MARKS)

Answer all the questions from this section -25MARKS

1. Differentiate between pre-history and History. (1mk)
2. State any two uses of fire as a method of hunting in the Middle Stone age. (2mks)
3. Give two ways in which HIV/AIDS has contributed to food shortage in the Third World Countries. (2mks)
4. Mention two Arab families that administered the city states of the East Africa Coast. (2mks)
5. Identify the main challenge of sailing ships as a means of transport. (1mk)
6. Name two theories that explain the origin and spread of Agriculture in Africa. (2mks)
7. Give two examples of international trade. (2mks)
8. Mention one early source of energy. (1mks)
9. Give two ways by which poor transport hinders industrialization in Third World countries. (2mks)
10. State two factors that led to the growth of Athens as an early urban centre. (2mks)
11. Name the official who represented the judicial arm of the Buganda Kingdom. (1mk)
12. Identify two chartered companies that were used to administer European colonies in Africa. (2mks)

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13.What was the main reason for the Maji Maji rebellion? (1mk)

14.Name two leaders who spearheaded the re-birth of the East African community. (2mks)

15.Identify the immediate cause of the first world war (1mk)

16.Name one founder member of the Non Aligned Movement. (NAM)(1mk)

17.Identify the executive organ of the East African Community (2001) (1mk)

SECTION B -45MARKS

ANSWER ANY 3 QUESTIONS

18.a. Identify five ways through which upright posture improved man's way of life (5marks)

b). Explain five impacts of agrarian revolution in Britain (10marks)

19.a). Identify five major canals in the world (5marks)

b). Explain five results of internet as a modern means of communication (10marks)

20 a. Identify three non-violent methods used by Africans to express their nationalistic feelings (3marks)

B). Explain six internal factors that led to the rise of nationalism in Mozambique (12marks)

21 a). Identify three European powers that formed tripple entente during the first world war (3 marks)

b). Explain six social results of the second world war between 1939-1945 (12marks)

SECTION C (30 MARKS)- ANSWER ANY TWO QUESTIONS

22 a). Name five officials who assisted mwene mutapa of the Shona kingdom in the administration (5marks)

b) Describe political organization of the Asante empire in the 19th century(10marks)

23 a) Identify the three administrative units used by the British in northern Nigeria (3marks)

b) Explain six effects of direct rule in Zimbabwe during the colonial period (12marks)

24 a) Give five structural organs of African union (5marks)

b) Explain five challenges facing the commonwealth organization (10marks)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

HOME- SCIENCE

TIME:- 2 ½ HOURS

SECTION A- 40 MARKS

1. State 2 advantages of traditional housing designs (2mks)

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2. Mention 2 methods of disinfecting bath towels (2mks)

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3. List down 2 errors that cause breaking of thread while machine stitching (2mks)

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4. Gives 2 effects of poor rinsing of clothes (2mks)

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5. Point out 2 advantages of fixing care labels on ready made clothes (2mks)

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6. State 4 precautions to take to prevent bedsores when taking care of the sick at home (2mks)

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7. Identify 3 precautions to take when using an oven when baking cakes (3mks)

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8. Write down 3 types of beverages as used in meal planning (3mks)

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9. Give 4 factors that influence the choice of a seam (2mks)

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10. Identify 3 ways of conserving fuel energy (3mks)

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11. Outline 2 problems related to the use of electricity as a fuel (2mks)

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12. Point out 2 reasons for providing appropriate lighting for a room with a sick person (2mks)

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13. Identify 2 points to consider when choosing a hurricane oil lamp (2mks)

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14. Differentiate between food poisoning and food spoilage (2mks)

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15. State 3 factors to consider when choosing fabric for making curtains (3mks)

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16. Mention 2 ways of ventilating a room (2mks)

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17. Point out 2 factors to bear in mind when choosing shoes (2mks)

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18. Differentiate protein fibres from cellulosic fibres (2mks)

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SECTION B- 20 MARKS (COMPUSORY)

1. Give the procedure you would follow in carrying out each of the following tasks
   a) cleaning a glass window(8mks)

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b) Dry- cleaning a polyester scarf at home (7mks)

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c) Cleaning of an aluminium sufuria (5mks)

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SECTION C- ANSWER ANY 2 QUESTIONS

20. a) State and explain any 4 factors to consider when weaning a baby (8mks)

b) Describe 3 types of drainage (6mks)

c) Explain 3 factors to consider when buying a sewing machine (6mks)

21 a) Explain any 4 circumstances that can make the sick to be nursed at home (8mks)

b) Discuss any 4 causes of malnutrition in Kenya today (8mks)

c) Mention 4 advantages of renting a house(4mks)

22 a) Explain 4 methods of lighting (8mks)

(b) Explain any 4 types of play (8mks)

(c) State 4 substances added to soaps and soap less detergents and their function (4mks)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. **INDEX NO:** ……. **SIGN:**……

441/2

HOME SCIENCE

CLOTHING CONSTRUCTION

PAPER 2

Kenya Certificate of Secondary Education

441/2

HOME SCIENCE

CLOTHING CONSTRUCTION

Paper 2

Time: 2 ½ hours

This paper consists of 4 printed pages Candidates should check the question paper to ensure that all pages are printed as indicated and that no questions are missing.

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 For Marking Schemes

A pattern of a short is provided. You are advised to study the sketches, instructions and the layout carefully before you begin the test.

MATERIALS PROVIDED

1. Pattern pieces

   A - FRONT SHORT

   B - BACK SHORT

   C - FRILL

   D - WAISTBAND

   E - POCKET

2. Plain light weight cotton fabric 55 cm by 90 cm.
3. Sewing thread to match the fabric
4. 1 large envelope.

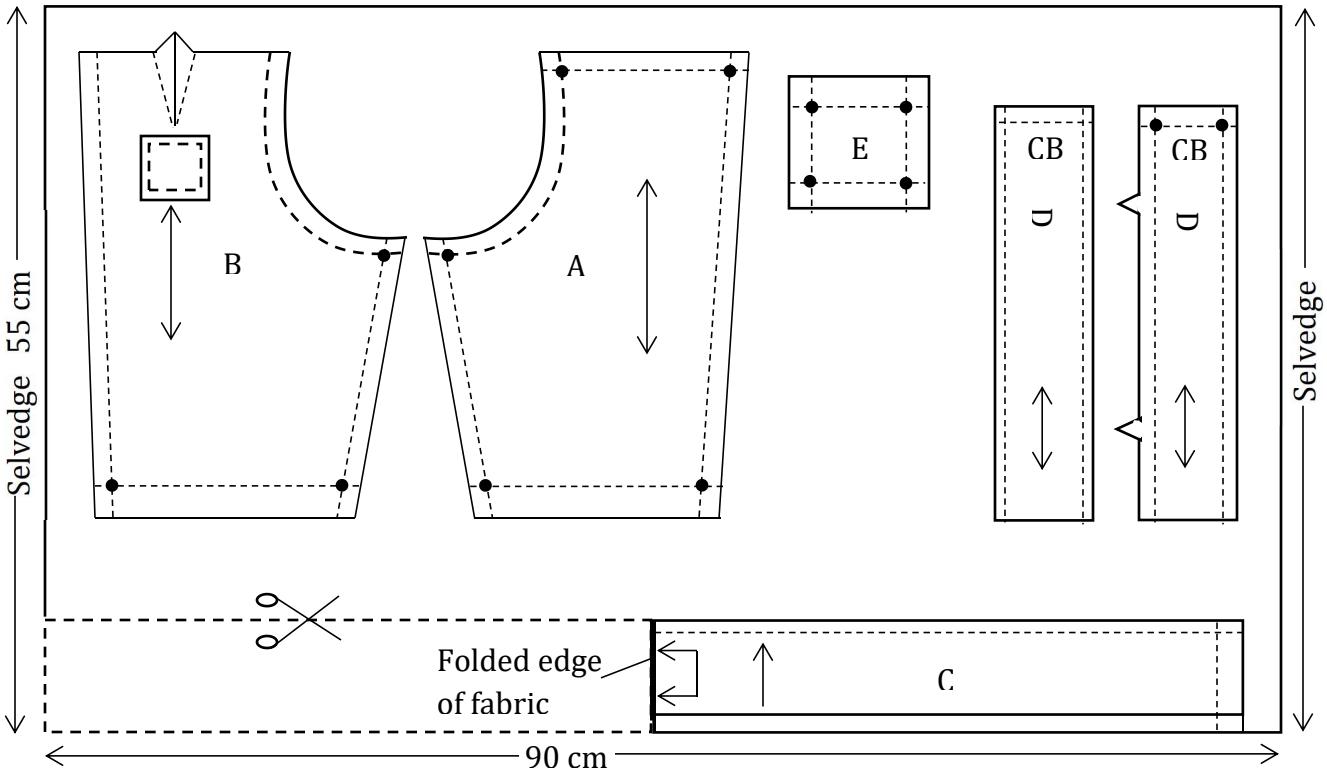
THE TEST

Using the materials provided, cut out and make up the **LEFT HALF** of the short to show the following;

1. Cutting out. (13mks)
2. Working a single pointed dart at the back short (5mks)
3. Preparation and attachment of the patch pocket (17mks)
4. Working the inner leg seam using double stitched seam. (8mks)
5, Control of fullness at the frill (3mks)
6. Joining the frill to the short using overlaid seam (10mks)
7. Joining the front short to back short at the side using open seam. (6mks)
8. Preparation and attachment of the waistband and hold it using hemming stitches. (15mks)
9. Management of the hem and hold usimg machine stitches (7mks)
9. Presentation. (6mks)

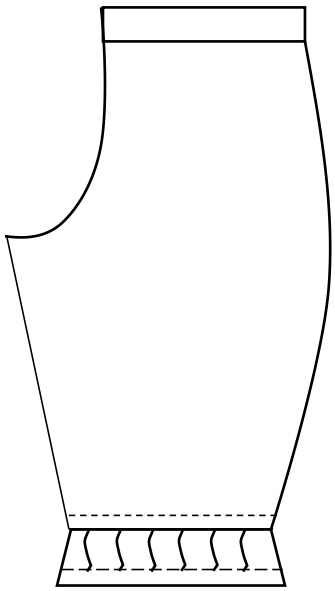
   NOTE: At the end of the test, firmly sew on to your work on a single fabric a label bearing your name and admission number. Remove needles and pins from work. Then fold your work carefully and place it in the envelope. **DO NOT PUT SCRAPS OF MATERIALS IN THE ENVELOPE AND DO NOT SEAL THE ENVELOPE.**

LAYOUT – NOT DRAWN TO SCALE

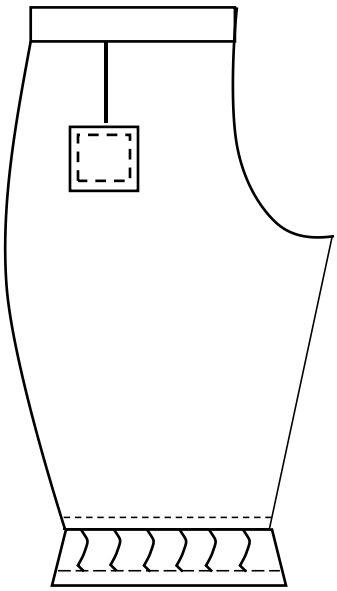


VIEWS

FRONT



BACK



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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

441/3

HOME SCIENCE

FOOD AND NUTRITION PRACTICAL (PP3)

INSTRUCTIONS TO CANDIDATES:

PLANNING SESSION 30 MINUTES

PRACTICAL TEST SESSION 1 HOUR 15 MINUTES

a) Read the test carefully
b) Write your name and admission number on every sheet of paper used
c) Text books and recipes maybe used during the planning sessions as reference materials.
d) You will be expected to keep to your order of work during the practical session.
e) You are not allowed to bring additional notes to the practical session.

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THE TEST

Your friend is visiting you over the weekend. Using the ingredients listed below, prepare, cook and present a two dish meal for both of you and include a dessert.

INGREDIENTS

Rice

Chicken/Beef

Green peas

Salt

Fat/oil

Onions

Carrots

Tomatoes

coriander

Garlic

Ginger

Pilau masala

Watermelon

Pineapple

Ripe bananas

Lemon

PLANNING SESSION (30 MIN)

For each task listed below, use separate sheets of paper and make duplicate copies using carbon paper then proceed as follows:

1. Identify the food items and write down their recipes.
2. Write down your order of work.
3. Make a list of the food stuffs and equipment you will require.

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

JINA:_____

DARASA: _____ **NAMBARI YA USAJILI:** _____

TAREHE: _____

102/1 – INSHA

KISWAHILI

MUDA: $1^{3}/_{4}$

KIDATO CHA NNE

Maagizo

a. Andika jina lako na nambari ya usajili katika nafasi ulizoachiwa hapo juu.
b. Tia sahihi yako kisha andika tarehe.
c. Andika insha mbili. Insha ya kwanza ni ya **lazima.**
d. Kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.
e. Kila insha isipungue maneno 400.
f. Kila insha ina alama 20.
g. Kila insha lazima iandikwe kwa lugha ya Kiswahili.
h. Karatasi hii ina kurasa mbili zilizopigwa chapa

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
1	20	
2	20	
Jumla	**40**	

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1. Lazima

Wewe ni katibu wa kamati inayochunguza sababu za matokeo duni ya mtihani wa kitaifa katika Eneo-bunge la Kazakamba. Andika ripoti ukitoa mapendekezo ya kamati.

2 (a) Uimarishaji wa viwanda mashinani una faida na hasara. Jadili.

au

(b) Tunga kisa ambacho kitadhihirisha maana ya methali:

Cha kuzama hakina rubani.

au

(c) Andika kisa ambacho kitemalizika kwa maneno yafuatayo:

… Nilipopiga darubini nilikumbuka nasaha za baba yangu. Kumbe alikuwa akinielekeza kwenye nyota ya jaha. Machozi ya furaha yalinilengalenga njia mbilimbili.

HUU NDIO UKURASA WA MWISHO ULIPIGWA CHAPA

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

JINA:.....**DARASA:**.....**NAMBARI:**.....

SAHIHI:.....**TAREHE:**.....

102/2
KISWAHILI
KARATASI YA 2
LUGHA
MUDA: Saa 2 ½

KIDATO CHA NNE

Maagizo

a) *Andika jina lako na nambari yako ya mtihani katika nafasi ulizoachiwa hapo juu.*
b) *Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.*
c) *Jibu maswali **yote**.*
d) *Majibu yote yaandikwe katika nafasi ulizoachiwa katika kijitabu hiki cha maswali.*
e) *Usitoe ukurasa wowote kutoka kwenye kijitabu hiki.*
f) *Karatasi hii ina kurasa **10** zilizochapishwa.*
g) *Watahiniwa ni lazima wahakikishe kuwa kurasa zote za karatasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo.*

Kwa matumizi ya mtahini pekee

Swali		Upeo	Alama
1	Ufahamu	15	
2	Ufupisho	15	
3	Matumizi ya Lugha	40	
4	Isimujamii	10	
	Jumla	80	

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1. UFAHAMU **alama 15**

Chumba chetu ni cha kupanga. Kiko ndani ya nyumba moja iliyoko Tandale, Kwatumbo,eneo la Uswahilini hilo au Uswazi, maneno ya vijana. Halikupimwa na Mipango Miji eneo lenyewe. Lakini ni makazi ya umati mkubwa wa pangu pakavu, akina sisi-**Wasakatonge**. Ujenzi wake ni ule usio na mpangilio maalumu. Chumba chetu, kwa mfano, kimekumbatiana na choo cha jirani. Harufu yote itapikwayo na domo la choo mmoja wa chumba chetu unaoga maji ya mfereji wa China, kama unavyoitwa. Mfereji huo ni wa maji machafu. Nao hutema uchafu wake katika mto Msimbazi.

Yote hayo niliyoyataja ni tisa, kumi ni mvua zinaponyesha. Hiyo ni fursa kubwa kwani wakazi wa Tandale hupatiza kutapisha vyoo vyao. Mbali na kubeba uchafu wa kila aina,mfereji huo huongezewa mzigo wa matapishi ya vyoo. **Hapo tena huwa apewaye ndiye aongezwaye**. Nisikilizie uvundo huo. Hata mzoga uko nyuma! Sisi huomba dua lakini mfereji wa China usifurike. Kipindi hicho kwetu huwa cha maafa makubwa. Kuna majira na nyakati ambazo sisi huchagua kutumia choo cha karatasi au choo fataki tupendavyo kukiita. Haja zetu zote; kubwa na ndogo, kwa watoto wetu na sisi watu wakubwa huzifanya ndani ya karatasi za plastiki. Na muda si muda kwenye giza na ukungu utasikia prruuuuu....pwaaa! mtu kutupa fataki yake nje. Ole wako ukipatana nayo usoni. Na mvua nazo zinazozidisha mafuriko. Ndipo utakaposikia sauti za vigogo zikitangaza kuwa watu wa mabondeni wahame. Waende wapi? Hawasemi lakini! Nyumba yetu nzuri kuiangalia kwa nje. Ina paa la madebe yaliyopiga rangi ya chuma. Ishara ya kuchoka labda. Na yenyewe hayajifichi kila msimu wa mvua ukifika. Husema kwa vitendo kuwa yamechoka kazi. Utayaona yakimwaga michirizi ya maji kama chekeche! Lakini hayo twayajua wenyewe tu. Ni siri yetu. Ndiyo sababu ya kuambiwa: Siri ya mtungi iulize kata au kitanda usichokilalia huwajui kunguniwe! Ikianza kunyesha chumbani hamkaliki. Mchakamchaka si wa kawaida. Ungedhani sisi ni askari mgambo katika operesheni bomoabomoa!

Ukiacha hayo, chumba chetu hakitutoshi tena. Baada ya mimi na Waridi, kuna wengine saba. Sita kati yao walizaliwa kwa pacha tatu, na mmoja pekee. Huo ni uvyazi wetu, watoto tuliowazaa wenyewe. Kuzaa kupona, ndivyo tusikiavyo. Usiku binti zetu walibanana na mama yao kwenye kijichumba chetu. Wavulana walilala jikoni kama nyau, jikoni kwa Chakupewa, jirani yangu. Alinikubalia walale kwake baada ya kumpigia goti anisaidie. Sikuwa na jinsi.

Nikamshukuru kwa kunikubalia. Mimi mwenyewe nililala kazini. Nilikuwa mlinzi katika kampuni moja ya Zuia Wizi Security (ZWS) iliyopo jijini. Saa zangu za kuingia nyumbani ni mbili au tatu asubuhi. Na huo ndio muda wangu mwafaka wa kulala angaa kidogo. Watoto walishazoea. Na majira hayo wao hucheza mbali na nyumbani.

Aidha, chumba hicho hakikuwa na vitu vingi. Kwanza, tungevinunulia nini? Mshahara wenyewe mkia wa mbuzi! Na pili, vingekaa wapi? Na sisi je, tungechutamia wapi? Hakikuwa na meza wala kiti. Hakikuwa na kitanda wala godoro. Mke wangu akilalia mayowe na wanetu wa kike, chini, kwenye mbacha. Kukicha hukunjwa mbacha wenyewe, ukaegemezwa kwenye pembe ya chumba.

Vitu haba vilivyokuwemo ni vyombo vya maji na vya kupikia. Na hata meko yenyewe yalikuwa nje. Ndani tulipikia siku za mvua na ambapo jiko lenyewe liliwekwa juu ya kinu. Chungu kilichoinjikwa kiliwekewa chano cha juu kwa minajili ya kupambana na mbubujiko wa maji kutoka paani.

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Maswali

a) Wasimamizi wa mji walichangia hali duni ya maisha ya wakaazi wa Tandale. Thibitisha. (alama 2)

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b) Onyesha madhila matano yayowakumba wakaazi wa Tandale kulingana na kifungu hiki. (alama 5)

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c) Kwa kurejelea kifungu, onyesha namna hadhi ya binadamu imeshushwa. (alama 3)

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d) Mwiba wa kujidunga hauna pole. Thibitisha ukweli wa methali hii ukizingatia hali ya Wanatandale. (alama 3)

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e) i) Andika kisawe cha neno“wasakatonge” kama lilivyotumiwa kwenye kifungu. (alama 1)

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ii) Eleza maana ya kauli “**Hapo tena huwa apewaye ndiye aongezwaye”** kama ilivyotumiwa kwenye kifungu. (alama 1)

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Ukrasa 3 wa 10

2. UFUPISHO alama 15

Mbinuishi ni ujuzi wa kimsingi unaomsaidia mwanafunzi kukabiliana na changamoto za maisha ya kila siku kwa njia bora. Katika kipindi hiki cha ujana, mwanafunzi hukumbana na vishawishi, shinikizo la marafiki, na changamoto za kiakili na kihisia. Maisha ya mwanafunzi yanajengwa juu ya msingi wa malengo, nidhamu, na juhudi za kila siku. Katika safari hii ya kielimu, kuna mbinuishi mbalimbali ambazo zinaweza kumsaidia mwanafunzi kuimarika kielimu, kijamii, na kiakili. Mbinu hizi si tu njia za kufanikisha masomo, bali pia ni nguzo zinazomjenga mwanafunzi kuwa mtu mwenye maadili, uwezo wa kujitegemea, na mchango chanya katika jamii.

Muda ni rasilimali muhimu sana kwa mwanafunzi. Mbinu ya kupanga muda vizuri humsaidia mwanafunzi kutenga nafasi kwa ajili ya masomo, kupumzika, kushiriki shughuli za kijamii na kujiendeleza binafsi. Matumizi ya daftari la ratiba au kalenda husaidia kupanga kazi za kila siku na kuepuka kufanya mambo kwa pupa.

Vilevile, mwanafunzi anatakiwa kuwa na ari ya kujifunza kwa bidii na kuwa na shauku ya kupata maarifa mapya. Hii ni pamoja na kufanya utafiti, kusoma vitabu mbalimbali, kuuliza maswali, na kujihusisha na mijadala ya kielimu. Kujifunza kwa bidii huimarisha uelewa na kumwezesha mwanafunzi kufaulu mitihani na kushinda changamoto mbalimbali.

Nidhamu ni msingi wa mafanikio. Mwanafunzi mwenye nidhamu hujiheshimu, hufanya kazi kwa bidii bila kushurutishwa, na hujizuia dhidi ya vishawishi vinavyoweza kuvuruga masomo yake. Nidhamu humsaidia mwanafunzi kudumu katika njia ya mafanikio hata anapokumbana na vikwazo.

Isitoshe, ni vyema kufahamu kuwa mafanikio hayaji kwa urahisi. Kila mwanafunzi atakutana na changamoto, kushindwa, na wakati mwingine kukata tamaa. Mbinu ya kuwa na uvumilivu na moyo wa kujituma humsaidia mwanafunzi kuendelea kupambana hadi pale anapofikia malengo yake. Kujifunza kutokana na makosa ni sehemu muhimu ya ukuaji binafsi.

Mwanafunzi anafaa aelewe kuwa hawezi kufanikiwa peke yake. Kushirikiana na walimu, wazazi, na wanafunzi wenzake ni muhimu. Kupitia majadiliano ya vikundi, mwanafunzi huweza kupata mitazamo tofauti na kuongeza uelewa wake. Pia, msaada wa kisaikolojia na kijamii kutoka kwa wengine humsaidia mwanafunzi kudumisha afya ya akili

Mbinu ya kujitambua humwezesha mwanafunzi kuelewa uwezo wake, udhaifu wake, na jinsi ya kujiboresha. Kuweka malengo ya muda mfupi na muda mrefu humpa mwelekeo wa maisha. Malengo humfanya mwanafunzi kuwa na sababu ya kufanya kila kitu kwa makusudi na kwa bidii.

Afya njema ni nguzo ya mafanikio ya mwanafunzi. Kula chakula bora, kufanya mazoezi ya mwili, na kupata usingizi wa kutosha ni muhimu. Vilevile, kuepuka msongo wa mawazo, kujipa muda wa kupumzika, na kuzungumza na washauri wanapohitajika husaidia kudumisha afya ya akili.

Kwa kumalizia, mbinuishi hizi ni kama zana muhimu katika maisha ya mwanafunzi. Kwa kuzitumia kwa ufanisi, mwanafunzi hujijengea msingi imara wa maisha mazuri ya sasa na baadaye. Mafanikio yanahitaji juhudi endelevu, nidhamu, na mtazamo chanya.

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a) Fupisha aya za kwanza tano kwa maneno 100 – 110 (alama 8, 1 utiririko)

Matayarisho

Jibu

Ukrasa 5 wa 10

b) Kwa maneno 75, eleza ujumbe wa mwandishi katika aya nne za mwisho. (alama 5, 1 utiririko)

Matayarisho

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Jibu

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3. Matumizi ya Lugha **alama 40**

a) Andika neno lenye muundo ufuatoa wa sauti:

i) Kimadende, irabu ya chini, irabu ya nyuma juu, kipasuo sighuna cha kaakaa laini, irabu ya chini (alama 1)

.....

ii) Andika tofauti kati ya sauti zilizoandikwa kwa herufi nzito katika neno lifuatalo: (alama 1)

wayo

.....

b) Onyesha muundo wa silabi katika neno lifuatalo: (alama 1)

wanaomcha

.....

c) Tambua aina ya sentensi hii kidhamira. (alama 1)

Tia maji lita moja kwenye kibuyu kisha usuke vizuri.

.....

d) Eleza maana ya mzizi. (alama 1)

.....

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e) Onyesha maana ya kisarufi ya mofimu huru katika neno: (alama 1)

aliwasubiria

.....

f) Yakinisha: (alama 2)

Mjumbe wetu hajakuwa akipatana tangu kuchaguliwa.

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g) Tumia kiunganishi cha kinyume kuunganisha sentensi zifuatazo: (alama 2)

Nilisoma kwa bidii. Nilipata alama ambayo sikutarajia.

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h) Andika sentensi ifuatayo katika wingi. (alama 2)

Mbuni uliokauka utakatwa kwa shoka na baba.

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i)Andika kinyume cha sentensi ifuatayo: (alama 2)

Wakulima walianika nafaka zao kabla ya mvua kunyesha.

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j) Andika sentensi zifuatazo upya ukizingatia maagizo kwenye mabano.

i) Mama Kazili aliamrishwa na Matweba atoke nje. (Anza; Matweba…) (alama 1)

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ii) Kijana yule ni mwalimu wa Hisabati. (Geuza neno kijana liwe kivumishi) (alama 1)

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iii) Ami atamwalika shangazi shereheni. (Andika katika hali ya mazoea) (alama 1)

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k) Onyesha yambwa na chagizo katika sentensi ifuatayo: (alama 3)

Salome alichapishiwa matini nyingi kwa muda mfupi.

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l) Akifisha: (alama 3)

waziri wa elimu dkt Mwema amezindua mradi wa chakula shuleni wa Tap to Eat

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m) Weka sentensi hii katika hali ya ukubwa. (alama 2)

Gari lililonunuliwa jana liliwabeba watoto wengi.

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n) Maneno haya yamo katika ngeli gani? (alama 2)

i) Kucheza

.....

ii) chuma

.....

o) Eleza aina za maneno yaliyopigiwa mstari katika sentensi: (alama 2)

Wale kondoo wote walikuwa malishoni kule.

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p) Tunga sentensi moja katika wakati ujao hali timilifu. (alama 2)

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q) Tunga sentensi yenye muundo ufuatao. (alama 2)

S $\longrightarrow$ KN(N+RH) + KT(T+RE)

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r) Tambua aina za virai vilivyopigiwa mstari. (alama 2)

Duka lile la Juma huuza bidhaa za bei ghali.

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s) Tunga sentensi **moja** kutafautisha maana ya **tata** na **dada**. (alama 1)

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t) Shungi ni la nywele _____ni kwa mtama na pamba ni kwa _____(alama 2)

u) Tunga sentensi ukitumia kisawe cha neno “Mzee” (alama 1)

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v) Je, utatumia methali gani kumhimiza mwenzake ambaye huogopa kuinua mkono darasani kuuliza swali kuhusu jambo asilolielewa kwa kuhofia wenzake watamcheka kwa kutojua? (alama 1)

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4. ISIMU JAMII alama 10

Mhusika I: Bwana Masumbuko, mnamo tarehe 20 mwezi wa Mei mwaka wa 2025, wewe pamoja na wenzako wanne, ambao hawako hapa, mliingia katika Jumba Kuu la Mauzo na mkatekeleza uhalifu. Unakubali au unakataa?

Mhusika II: Nakataa, Mheshimiwa.

Mhusika I: Kwa mujibu wa sheria za nchi hii, Kifungu nambari 3 sehemu ya A, umepatikana na hatia ya kuvuruga amani ya raia wapenda amani kwa kuwatusi na kuwajeruhi baadhi yao kwa kuwapiga. Upande wa mashtaka umethibitisha haya waziwazi kupitia kwa mashahidi walioletwa mbele yako. Kwa hivyo… Order! Mshukiwa, unajua unaongeza makosa yako? Koma tabia hiyo. Kwa hivyo, ninakufunga kifungo cha miaka miwili jela bila faini ili iwe funzo for you na wengine wenye tabia kama zako.

a) Tambua sajili ya makala haya. (alama 2)

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b) Eleza sifa nane za sajili hii zinazojitokeza katika kifungu hiki. (alama 8)

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HUU NDIO UKURASA WA MWISHO ULIOPIGWA CHAPA

DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

JINA:…… …….....NAMBARI YA USAJILI:……

SAHIHI YA MTAHINIWA:…….....TAREHE:……..

FASIHI: 102/3

KARATASI 3

MUDA: SAA 2½

KIDATO CHA NNE

MAAGIZO KWA WATAHINIWA

• Andika jina lako, shule na nambari ya mtihani kisha utie sahihi katika nafasi ulizoachiwa hapo juu.

• Jibu maswali manne pekee.

• Swali la kwanza ni la lazima.

•Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki yaani Tamthilia,Riwaya,Ushairi na Hadithi Fupi.

• Usijibu maswali mawili kutoka sehemu moja

• Majibu yote lazima yaandikwe kwa lugha ya Kiswahili pekee

KWA MATUMIZI YA MTAHINI PEKEE

Swali	Upeo	Alama
1	20	
	20	
	20	
	20	
JUMLA	80	

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SEHEMU YA A:FASIHI SIMULIZI **(ALAMA 20)**

SWALI LA LAZIMA

1.Soma utungo ufuatao kisha ujibu maswali yafuatayo;

EWE WANGU**.**

Wewe ndie nyota yangu

Usiku wanimulikia.

Uniachi peke yangu

Ukiniacha ninalia.

Nikabaki peke yangu

Nakupenda ewe wangu

Kwengine siwezi kwenda

Wewe ndie mwezi wangu

Usiku kucha waniangazia

Ewe ndie taa yangu

Mwanga wanimulikia

Wewe ndie nuru yangu

Wewe ndio langu pazia.

Nakupenda ewe wangu

Kwengine siwezi kwenda.

Maswali

a.Tambua aina ya wimbo uliosoma. (alama 1)

b.Jadili umuhimu wa utungo huu katika jamii. (alama 3)

c.Umepewa nafasi ya kuwasilisha kipera hiki mbele ya hadhira teule.Eleza sifa tano utakazotumia kufanikisha uwasilishaji wako. (alama 5)

d.Unanuia kufanya utafiti kuhusu wimbo uliosoma;

(i) Eleza hatua tatu utakazofuata katika utafiti wa utungo huu. (alama 3)

(ii) Unanuia kutumia mbinu ya kushiriki kutafitia wimbo huu.Kwa kufafanua hoja nne eleza udhaifu wa kutumia njia hii. (alama 4)

e. Eleza sifa nne zitakazopotea wimbo huu ukiandikwa badala ya kuimbwa. (alama4)

SEHEMU YA B:TAMTHILIA

BEMBEA YA MAISHA (TIMOTHY M. AREGE)

Jibu swali la 2 au 3

2.Hiyo ndiyo ajabu!Kizazi hiki hakitaki kufanya kazi.Kinataka kuja kazini kwa sababu ya mshahara tuu.Wachapa kazi hodari ni njozi iliyopotea.Nilipokuwa na afya yangu tulishirikiana kutafuta riziki ya kuwalea hao watoto wetu.Kweli,japo mara nyingi haikuwa rahisi tulijitolea hadi tukashinda.Leo hali ni tofauti na bila yeye na moyo wake rahimu wa kusaidia,sijui wenzake wangekuwaje.Wasichana wengi wakiolewa huwasahau ndugu zao.Hutupa jogoo na mti wake.Sisi tuna bahati ya mtende mtoto kutusikiliza na kutupiga jeki.

MASWALI.

a) Changanua mbinu tano za uandishi katika dondoo lililo juu ya swali hili. (alama 5)

b)Tambua na utolee mifano masuala/maudhui yanayojitokeza katika dondoo lililo juu ya swali (a) (alama 4)

c) Tambua toni katika kauli iliyopigiwa mstari. (alama 2)

d) Jadili jinsi suala la nafasi ya mwanamke linavyoshughulikiwa kwa kutoa mifano tisa kutoka tamthilia ya Bembea ya Maisha. (alama 9)

AU

3.“Mwenyewe huyo analipia kila kitu.Ninakwambia kila kitu!Mtu huyo atakosaje kuwa zawadi kwako?”

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

b) Bainisha toni katika dondoo hili. (alama 2)

c) Tambua vipengele viwili vya kimtindo vinavyobainika katika dondoo hili. (alama 2)

d) Fafanua umuhimu wa msemaji katika kujenga tamthlia ya Bembea ya Maisha (alama 4)

e) Jadili jinsi suala la uwajibikaji linavyoshughulikiwa katika tamthilia ya Bembea ya Maisha. (alama 8)

SEHEMU YA C: RIWAYA

NGUU ZA JADI:*CLARA MOMANYI*

Jibu swali la 4 au 5

4. Uchumi wa nchi umewatia wengi taflisi. Viongozi wamevimba kichwa. Ninayosoma yote haya katika mitandao ya mawasiliano nikiwa huko ughaibuni.Wamewaacha watu kutumbukia mashimoni na washikilia kukutu kwamba wasalie humo”.“Wamehiari kuwafukarisha ili wazidi kuwatawala. Dunia ya walalaheri hii.Chuma chao ki motoni. Tusubiri tu. Wengine watapigwa na bumbuazi wasalie kuokota taka mitaani.” Aliongeza “Wapi! Wengi wao wataabiri vyombo wakimbilie ughaibuni.Watuachie sisi gofu la nchi tusalie

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kuchinjana tu," alitamka Lombo kwa huzuni. Kisha alimtazama Mashauri kwa muda na Kusema, "Tell me the truth, do you think babangu atashinda?"

a) Tambua mbinu zozote nane za kimtindo katika dondoo hili. (alama 8)

b) Jadili changamoto inayopitia jamii ya Matuo kutokana na uongozi mbaya wa Mtemi Lesulia na vibaraka wenzake kwa kurejelea riwaya Nguu za Jadi. (alama 12)

AU

5."Vuta fikira…Jihadhari usimkubatie simba ukidhani amelala.Au anakutafutia mke mwingine?"

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

b) Tambua mbinu mbili za lugha zinazojitokeza katika dondoo. (alama 2)

b) Fafanua umuhimu wa mnenaji katika kuendeleza ploti ya riwaya hii. (alama 4)

c) "Maisha ya mnenaji yalijaa machungu na mateso."Jadili mbinu alizotumia kukabiliana na hali hii. (alama 10)

SEHEMU YA D:USHAIRI

Jibu swali la 6 au 7

6. *Soma shairi hili kisha ujibu maswali yanayofuata*

1. Nakumbuka kwa dhiki Mto Monyara

Tuliochelea kukaribia kingo zake

Tukatulia kwanza; ukakamavu kujihamia

Kwa kunyenyekea wingi wa yake maji

Yaliyojiendea utadhani yamesimama

2.Ni katika mto huu

Ambapo samaki wakubwa tulivua

Maguo kuyatakasa japo kwa kunyemelea

Na walevi stadi wakachelea kuuvuka

Ulipofura na kupita kwa kiburi

Kwa kushiba maji yake

Yaliyofanya mawimbi madogo.

3.Ni hapa ambapo marehemu nyanya

Mkono alinishika na njia kuniongoza

Juu ya ulalalo wa miti

Vikapu vyetu hewani vikielea;

Mimi nikishika changu kwa mkono mmoja

Naye akikiachilia chake kujishikisha kichwani

Masafa baina yetu na mtambo

Uliokwenda kwa maji

Tuliyapunguza kwa kila hatua tulopiga.

4.Ni katika mto huu ambapo

Samaki tuliowavua tuliwapasua na kuwasafisha

Na hivyo kuuficha umaskini wetu

Ulotuzuia kununua mnofu wa bucha

Ni hapa ambapo wanawake walifika

Mawe ya kusagia kupata

Ni katika mto huu ambapo

Waumini walifika kutakaswa kwa ubatizo

Baada ya ulevi, uzinzi na kufuru nyinginezo.

5.Ni hapa ambapo ilisimuliwa kuwa

Hata wachawi walifika kufanya vitimbi vyao

Baada ya utawala wa jua kumezwa na nguvu za giza

Sasa Monyara nilioijua haipo tena

Zimebaki kingo zilizokaukiana

Kama uso wa mrembo aliyekosa mafuta

Siku ayami.

Ukurasa 5 wa 8

6.Mto huu ambapo pembeni mwake

Watoto walipashwa tohara

Maji yake yakishangilia, umekonda

Na mbavu zake nje kutoa

Na sasa vitoto vikembe vinazikanyaga

Vikijiendea zao kusaga mahindi

Juu mlimani

Katika mtambo wa Kizungu

Usioisha kulalamika

Nao wanawake hawaji tena

Kutafuta mawe ya kusagia wimbi

Imebaki njia ya walevi warejeao nyumbani

Nayo miti iliyosimama wima ukingoni

Iliisha kuanguka kwa kuleweshwa na pumzi za walevi

Wasioisha kupita hapa.

MASWALI

(a) Tambua aina ya shairi hili. (alama 1)

(b) Mto Monyara una umuhimu upi kwa wanakijiji kwa mujibu wa shairi?. (alama 3)

(c)Toa mifano ya mishata inavyojitokeza shairini. (alama 2)

(d)Kwa mifano tambua aina mbili za taswira zinazojitokeza katika shairi hili. (alama 2)

(e) Fafanua mbinu tatu za lugha katika shairi hili. (alama 3)

(f) Jadili mbinu tatu ambazo mshairi ametumia kutosheleza mahitaji ya kiarudhi katika shairi hili. (alama 3)

(g) Andika ubeti wa pili katika lugha kawaida. (alama 4)

(h) Tambua toni ya shairi hili. (alama 2)

AU

Ukurasa 6 wa 8

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7. *Soma shairi hili kisha ujibu maswali yanayofuata*

Binadamu hatosheki, ni kiumbe chenye zani, kweli mja hapendeki
Kwa kweli haaminiki, hila ameficha ndani, la wazi ni unafiki
Ukweliwe haafiki, njama zake zi moyoni, usimwone ni rafiki
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka

Wengine watakuuwa, wakiona una pesa ,hata zikiwa kidogo
Hizi kwao ni maua, hupupiwa zikatesa, wakazifuata nyago
Hadi kwenye wako ua, pasipo hata kupesa, wala kukupa kisogo
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka

Pindi kinunua kitu, hafurahi shaitani, bali tajawa chukizo
Mtu kiwa mtukutu, tanuna mtimani, kwalo lako tekelezo
Tamko lake “subutu!”, kuondoa tumaini, na kukuulia wazo
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka

Aliye na taraghani, taabu kuishi naye, kazi yake kujidai
Takusema faraghani, asosema kiwa naye, kupendeza maadui
Hana faida nyumbani, ni mtu akuchimbaye, mradi usitumai
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka

Kwa hakika ni balaa, kumkirimu mchawi, aliyejaa uchoyo
Bahati ina hadaa, kukupa alo sadawi, aibatili rohoyo
Mipangoyo kwake jaa, na nia ya ustawi, huwiza kuvunja kaniyo
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka

Ninacho changu kilio, ninalia sanasana, kinyesi nimetupiwa
Ningetoa azimio, lakini uwezo sina, kwa mazito kuambiwa
Ama nitimue mbio, fuadini ninanena, akilini nazuiwa
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka.

Ukurasa 7 wa 8

MASWALI

a) Lipe shairi hili anwani mwafaka. (alama 1)

b) Eleza ujumbe unaojitokeza katika shairi hili. (alama 2)

b) Fafanua bahari zozote tatu za ushairi zinazobainika katika shairi hili. (alama 3)

c) Tambua mbinu zozote mbili za uandishi zilizotumika katika shairi hili. (alama 2)

d) Tambua aina mbili za urudiaji zilizotumika katika shairi. (alama 2)

e) Eleza muundo wa shairi hili. (alama 4)

f) Taja kwa kutolea mifano namna mshairi amefanikia kutumia uhuru wake wakishairi. (alama 2)

g) Andika ubeti wa nne katika lugha nathari. (alama 4)

SEHEMU E: HADITHI FUPI

D.W Lutomia na P. Muthama (Wah): Mapambazuko ya Machweo na Hadithi Nyingine

8. ***R.Wangari: Fadhila za punda***

a) Jadili ufaafu wa anwani 'Fadhila za Punda' kwa kurejelea mifano mwafaka kutoka hadithi husika. (alama 10)

b) Matamanio ya mwanamke kujitawala na kujiendeleza kimaisha yamekumbwa na vizingiti na vikwazo vingi sana.Jadili ukweli wa kauli hii ukirejelea hadithi ya Sabina. (alama 10)

HUU NDIO UKURASA WA MWISHO ULIOPIGWA CHAPA

Ukurasa 8 wa 8

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

121/1
MATHEMATICS
PAPER 1
TIME: 2½ HOURS

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 l and Section II.***

*3. Answer all questions in section **l and 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.*

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

This paper consists of 15 printed pages. Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.

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SECTION I (50 MARKS)
Answer all the questions in this section.

1. Evaluate (3Marks)

$$\frac{\frac{1}{2}\text{ of } 3\frac{1}{2} + 1\frac{1}{2}\left(2\frac{1}{2} - \frac{2}{3}\right)}{\frac{3}{4}\text{ of } 2\frac{1}{2} \div \frac{1}{2}}$$

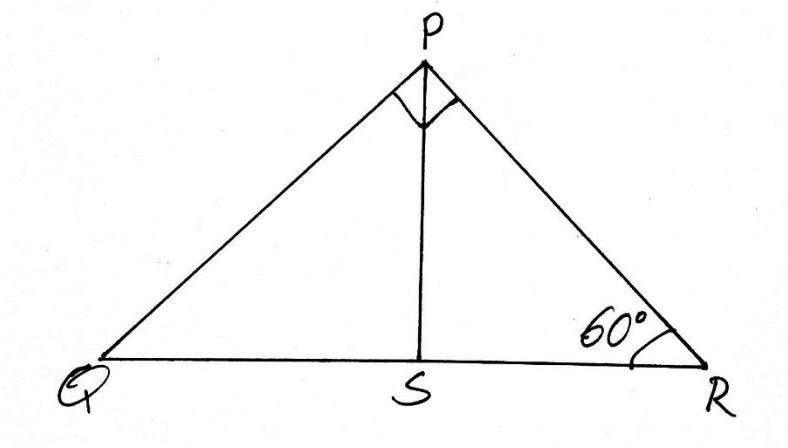
2. Use squares, squares roots and reciprocal tables only to evaluate the following giving your answer correct to 2 decimal places.
(4mks)

$$\frac{1}{\sqrt{31.47}} + \frac{3}{8.54^2}$$

3. Solve for x in the above expression
$48(2^x) - 2(2^{2x}) = 256$ (3marks)

4. Find the integral value that satisfy the inequality (3marks)
   $3x - 2 \geq -4 < -1 - 2x$

5. The figure below represents a right angled triangular plot of land PQR.PS is perpendicular to QR.If angle PQR=60^0 and PS is 6.5cm.Find the area of the plot. (Answer in 1 d.p) (3marks)



6. When two wires of length 179m and 234m are divided into pieces of equal lengths a Remainder of 3m is left in each case. Find the least number of pieces that can be obtained. (3 marks)

7. Simplify the expression

$$\frac{12x^2 + bx - 6b^2}{9x^2 - 4b^2}$$

8. Two similar containers have base areas $25cm^2$ and $324cm^2$ respectively. Calculate the Capacity of the larger container correct to one decimal place if the capacity of the smaller one is $8cm^3$

(3mks)

9. Thirty men working at a rate of 10 hours a day can complete a job in 14 days. Find how long it would take 40 men working at the rate of 7 hours a day to complete the same job. (3marks)

10. Using a ruler and pair of compasses construct a triangle ABC in which AB =5cm BC =5.9cm and < BAC $=45^0$ (3marks)

11. Solve for χ and y in the simultaneous equation. (3 marks)

$3^{2\chi} \times 3^{y} = 27$

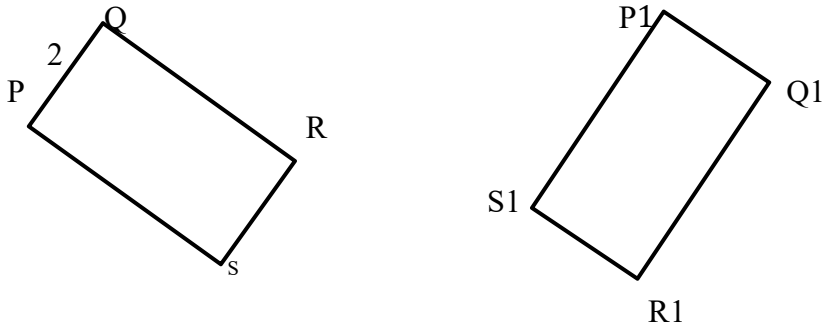
$2^{\chi - y} \times 2^{\chi} = 32$

12. The table below shows the marks scored by form four students in a mathematics test in sabasaba secondary school.

Marks (%)	40-44	45-49	50-54	55-59	60-64	65-69	70-74
No of students	3	30	29	33	13	1	1

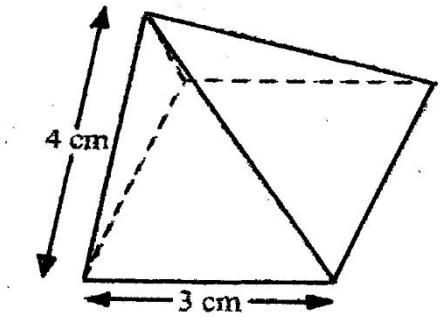
find the median. (3 marks)

13. A square PQRS is rotated to give the image $P^1 Q^1 R^1 S^1$. By construction locate the centre of rotation and angle of rotation.



(3marks)

14. The diagram below represents a right pyramid on a square base of side 3 cm. The slant Height of the pyramid is 4 cm.



a) Draw a net of the pyramid (2 marks)

b) On the net drawn, measure the height of a triangular face from the top of the Pyramid (2mark)

15. Given that Sin $\theta = 2/3$ and θ is an acute angle, find without using tables or calculators
(a) Tan θ, giving your answer in surd form. (2mks)

b. Cos $(90 - \theta)$ (1mk)

16. The line y=o.5 – 0.5x is perpendicular to a line L. Line L passes through point(4 , -2). Determine the equation of L in the form y=mx+c where m and c are constant (3marks)

SECTION 11(50 MARKS)
Answer only FIVE questions from this section.

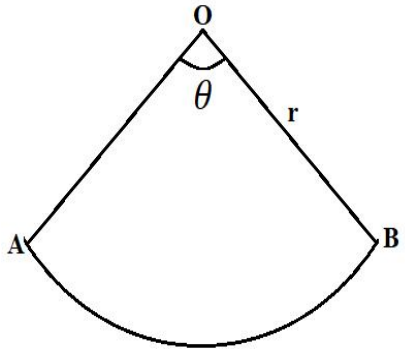
17. A group of people planned to contribute equally towards a water project which needed kshs. 2,000,000 to complete. However, 40 members of the group withdrew from the project. As a result, each of the remaining members were to contribute ksh 2500 more.

(a) Find the original number of members in the group. (5mks)

(b) Forty five percent of the value of the project was funded by Constituency Development Fund (CDF). Calculate the amount that would be made by each of the remaining members of the group. (3mks)

(c) Members contribution were in terms of labour provided and money contributed. The ratio of the value of labour to the money contributed was 6:19, calculate the total amount of money contributed by the members (2mks)

18. The figure below represents a sector of a circle radius r units. The area of the sector is 61.6 cm^2 and the length of the arc AB is one tenth of the circumference of the circle from which the sector was obtained. (Take π=227)



a. Calculate;

i. the angle subtended by the sector at the centre. (2 marks)

ii. The radius r of the circle. (3 marks)

b. If the sector above is folded to form a cone;

i. Calculate the base radius of the cone. (2 marks)

ii. The volume of the cone. (3 marks)

19. A straight line L whose equation is 3y +2 =2x meets the x-axis at point K.

(a) Determine the coordinate of K (3marks)

(b) A second line L_2 is perpendicular to L at K. Find the equation of L_2(3marks)

(c) A third line L_3 is parallel to L and pass through (-2, 0.5). Find the equation of L_3 (2marks)

(d) Find the coordinate N where L_2 meet L_3 (3marks)

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20. Matrix **P** is given by $\begin{pmatrix} 4 & 7 \\ 5 & 8 \end{pmatrix}$

(a) Find $\mathbf{p}^{-1}$ (3marks)

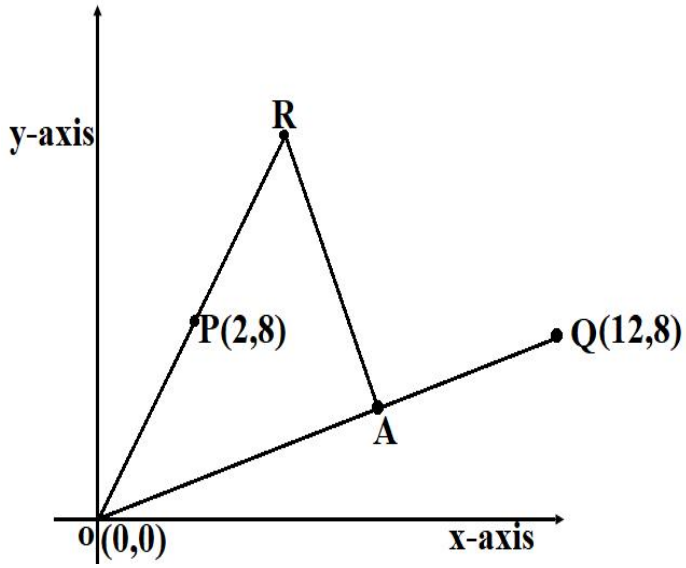
(b) Two institutes Regional and Alphax purchased beans at sh.B per bag and maize at sh.M per bag. Regions purchased 8 bags of beans and 14 bags of maize for sh. 47,600. Alphax purchased 10 bags of beans and 16 bags of maize for sh. 57,400.

(i) Form a matrix equation to represent the information above.
(2marks)

(ii) Use the matrix p-1 to find the prices of one bag of each item
(3marks)

(c) The price of bean later went up by 5% and that of maize remain constant. Regional bought the same quality of beans but spent the same total amount of money as before on the two items. State the new ratio of beans and maize. (2marks)

21. In the diagram below, the coordinates of points O, P and Q are (0,0), (2,8) and (12,8) respectively. A is a point on **OQ** such that 4**OA**=3**OQ**. Line **OP** produced to R is such as **OR**=5**OP**.



a. Find vector **RA**. (3 marks)

b. Given that point L is on **PQ** such that **PL**: **LQ**=12:5, find vector **RL**. (4 marks)

c. Show that R, L and A are collinear. (2 marks)

Find the ratio of **RL**:**LA**. (1mark)

22. Using a ruler and a pair of compasses only construct a:

(a)

I. Triangle PQR with PQ = 4C < RPQ =30^0 and < PQR = 105^0 (3marks)

II. A circle passing through the vertices PQR (3marks)

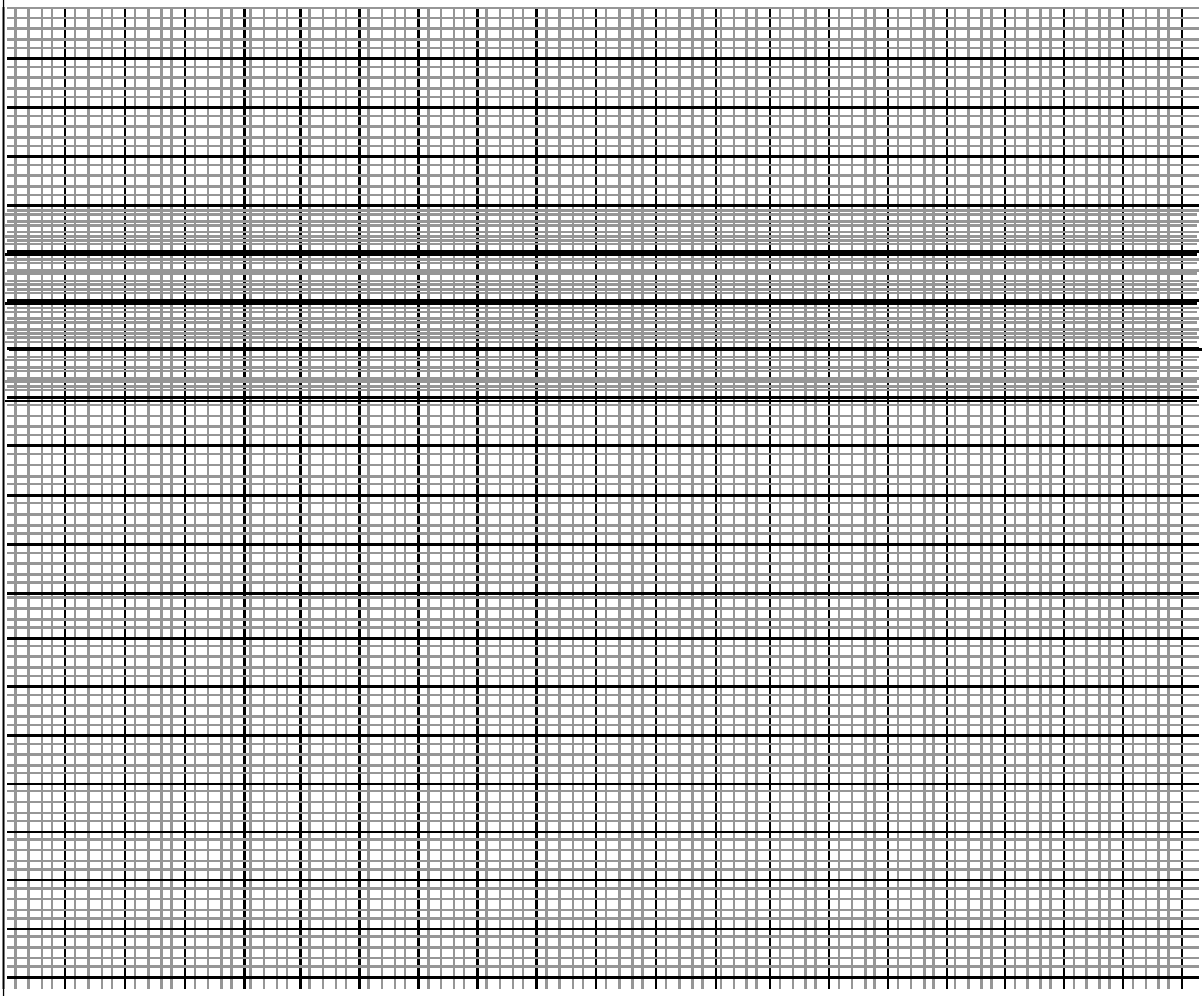
III. The height of the triangle with PQ as the base measure the height (3marks)

(b) Determine the area of the circle that lies outside the triangle (2marks)

23. The following data was obtained for masses of some pregnant women in a maternity clinic

Mass x (kg)	$1.5 \leq x < 5.5$	$5.5 \leq x < 7.5$	$7.5 \leq x < 13.5$	$13.5 \leq x < 15.5$	$15.5 \leq x < 20.5$
No. Of women	16	20	18	14	15

(a) Represent the information in the table above on a histogram, on the graph paper provided. (5marks)

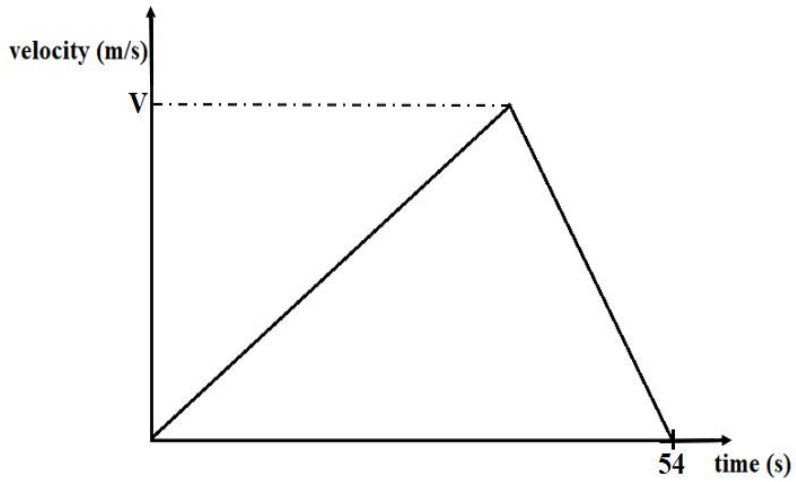


(b) Use the information in the table above to estimate:

(i) the mean mass. (2marks)

(ii) the median mass. (3marks)

24. The figure below shows a velocity-time graph of an object a which accelerates from rest for 30sec to a velocity of V ms-1 then decelerated to rest in a total time of 54 seconds.



a. If it covered a distance of 2100metres;

i. Find the value of V. (2 marks)

ii. Calculate its deceleration (2 marks)

b. A bus left town X at 9.45 am and travelled toward town Y at an average speed of 65km/h. A car left town X at 10.45 am on the same day and travelled along the same road toward Y at an average speed of 110km/h. The distance between town X and town Y is 600km.

i. Determine the time of the day when the car overtook the bus. (3 marks)

ii. Both vehicles continued towards town Y at their original speeds. Find how long the car had to wait in town Y before the bus arrived. (3 marks)

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DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. **INDEX NO:** ……. **SIGN:**……

121

MATHEMATICS

FORM 4 PAPER 2

TIME: 2 ½ HOURS

Kenya Certificate of Secondary Education 2026

INSTRUCTIONS TO CANDIDATES

1. *Write your name and admission 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 in 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. ***KNEC** Mathematical tables may be used.*

For Examiner's Use Only

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

17	18	19	20	21	22	23	24

Grand Total

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SECTION A
Answer all questions in this section

1. Use logarithms tables to evaluate. (4mks)

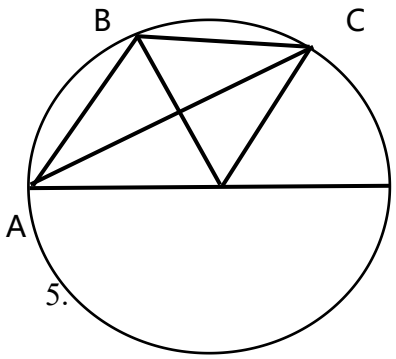
$$\sqrt[3]{\frac{36.72\times(0.46)^2}{185.4}}$$

2. Simply and leave answer in surd form. (3 marks)

$$\frac{-9}{\sqrt{13}+\sqrt{3}}+\frac{5}{\sqrt{13}-\sqrt{3}}$$

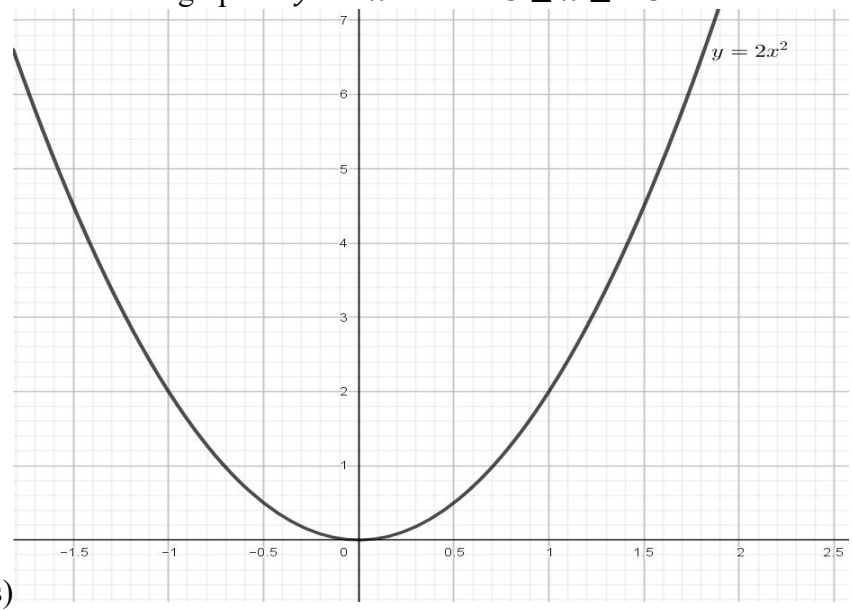
3. Water flows from a circular pipe of diameter 3.5cm into a rectangular tank 66cm long, 35cm wide and 45cm high. If it takes 18 minutes to fill the tank completely, determine the rate of flow of the water in the pipe in cm/s? **(3 marks)**

4. In the figure below O is the centre of the circle ABCD and AOD is a straight line. If AB=BC and angle DAC=80 calculate <BAC



5.

5. The figure below is a graph of $y = 2x^2$ for $-1.5 \leq x \leq 2.5$.



(3marks)

Use the graph to find the rate of change at:

i. $x = 1.5$

ii. $x = -0.8$

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6. Working together two taps A and B can fill a tank in 2 hours. By itself tap A can fill the tank in 6 hrs. Tap A and B are opened at the same time and after running for 1 hours, an outlet tap which can drain the full tank by itself in 12 hours is opened and Tap A is closed. Find the total time taken to fill the tank. (4 marks)

7. A Kenyan bank buys and sells foreign currencies as shown below

	Buying	Selling
	Ksh	Ksh
1 Hong kong dollar	9.74	9.77
1 South African rand	12.03	12.11

A tourist arrived in Kenya with 105,000 Hong kong dollars and changed the whole amount to Ksh while in Kenya she spent Ksh 403,897 and changed the balance to South African rand before leaving for South Africa. Calculate the amount in South African rand she received (3mks)

8. a) Expand and simplify the binomial expression $(2 + x)^5$ upto the term in x^3. (2 marks)

b) Use your expression to estimate the value of $(1.97)^5$ (2 marks)

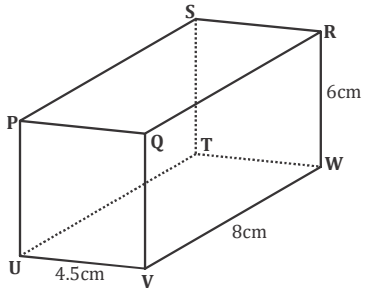
9. Make y the subject of the formula in: (3marks))

$$v = \frac{A\sqrt{x^2 + y^2}}{y}$$

10. Using Logarithms evaluate

Log(x-1) + Log(x+1) = 1+ Log4 (3 marks)

11. Below represents a cuboid PQRSTUVW in which UV = 4.5cm, VW = 8cm and WR = 6cm

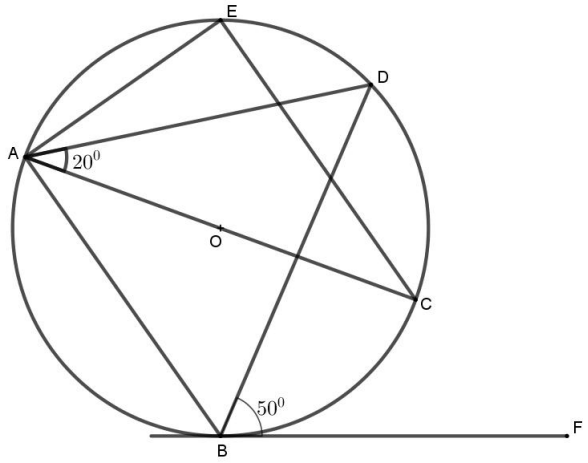


Calculate the size of the angle between the lines UR and UW (3 marks)

12. Find the length of an arc of a circle which subtends an angle of 0·8 radians at the centre of the circle. The radius of the circle is 15 cm. (3 marks)

13. The Length of a triangle is 8.3cm and its windth is 5.4cm. Calculate the percentage error in the area
(3mks)

14. The diagram below shows a circle center **O.** BF is a tangent to the circle at **B.** Angle $DAC = 20^0$ and angle FBD $= 50^0$



Giving reasons find;
a) Angle AEC (2 marks)

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15. The position vectors of points P and Q are $\boldsymbol{p} = -2\boldsymbol{i} - \boldsymbol{j} + \boldsymbol{k}$ and $\boldsymbol{q} = 4\boldsymbol{i} - 5\boldsymbol{j} - 2\boldsymbol{k}$ and respectively. Find the magnitude of **OM** if M is a point that divides **PQ** in the ratio 1:2 correct to 4 significant figures. (3marks)

16. A triangular plot PQR is such that PQ=72m, QR=80m and PR=84m. If the area of the plot is in square metres is 2648.2. Find the acute angle between PQ and PR. (3marks

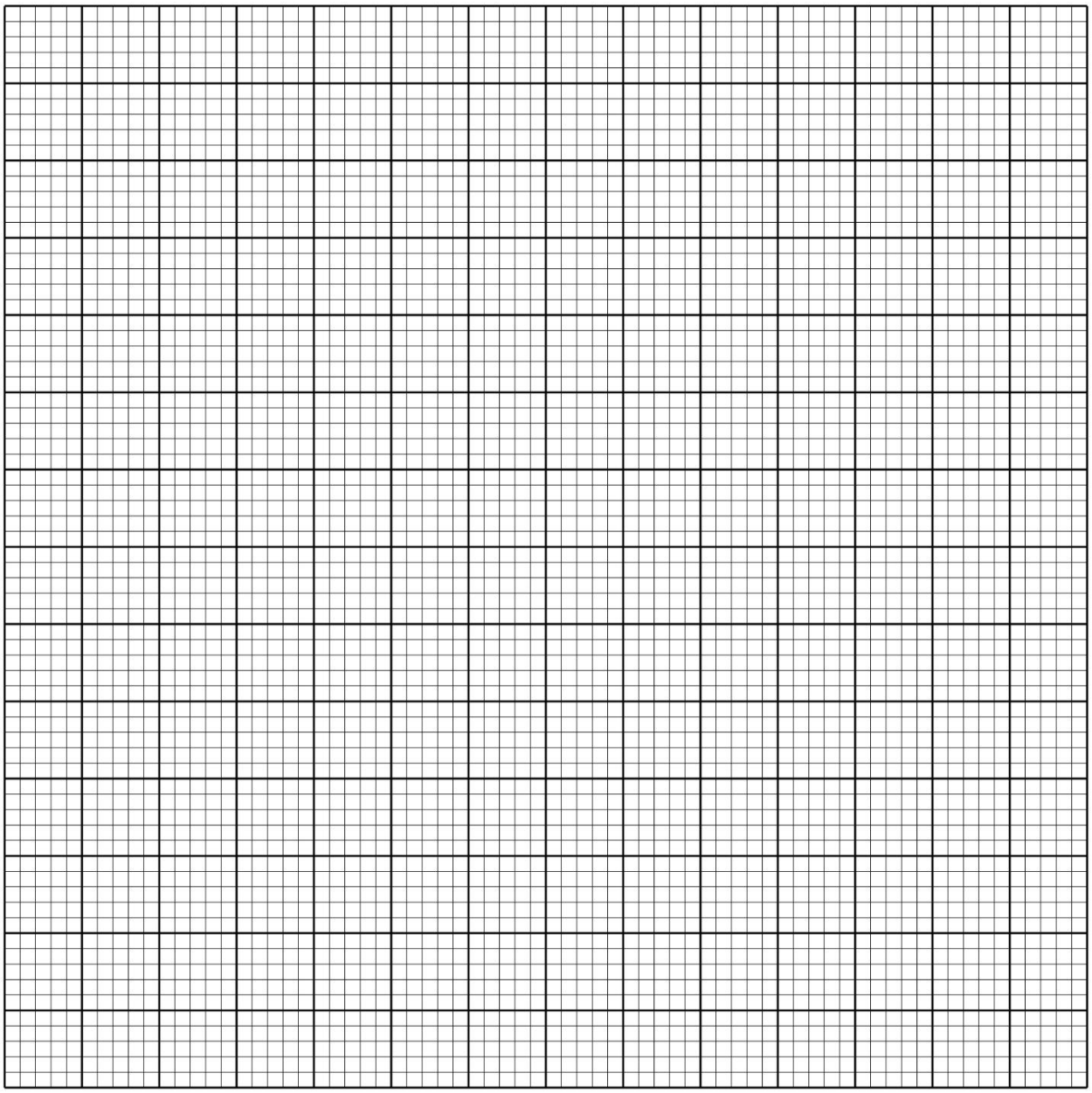
SECTION B

Answer five question only on this section

17. The table below shows the distribution of marks scored by 60 students in a test.

Marks	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90
Frequency	2	5	6	10	14	11	9	3

a) On the grid provided draw a cumulative frequency curve of the data. (3 marks)
(Take 1cm to represent 5 students on the vertical scale and 1 cm to represent 10 marks on the horizontal scale).



b) From the curve in (a) above

i. Estimate the median mark (1 mark)

ii. Determine the quartile deviation. (2 marks)

iii. Determine the 10^{th} and 90^{th} percentile range. (2 marks)

c) It is given that students who score over 45 marks pass the test. Use your graph in (a) above to estimate the percentage of students that pass. (2 marks)

18. The following table shows the rate at which income tax was charged during a certain year.

Monthly taxable income in Ksh.	Tax rate %
0 - 9860	10
9861 - 19720	15
19721 - 29580	20
29581 - 39440	25
39441 - 49300	30
49301 - 59160	35
over 59160	40

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A civil servant earns a basic salary of Ksh.35750 and a monthly house allowance of sh.12500 and non taxable allowance of ksh 10000. The civil servant is entitled to a personal relief of sh.1062 per month. Calculate:

a) Taxable income (2 marks)

b) Calculate his net monthly tax (5 marks)

c) Apart from the salary the following deduction are also made from his monthly income.

WCPS at 2% of the basic salary

Loan repayment Ksh.1325

NHIF sh.480

Calculate his net monthly earning. (3 marks)

19. a) The first and the last terms of an arithmetic progression are 4 and 134 respectively. Given that the sum of the terms is 1,863

Find, (i) The number of terms in the sequence (2 marks)

(ii) The common difference of the sequence (2 marks)

(b) The third, fifth and eighth terms of another Arithmetic Progression form the first three consecutive terms of a Geometric Progression. If the common difference of the Arithmetic Progression is 3,

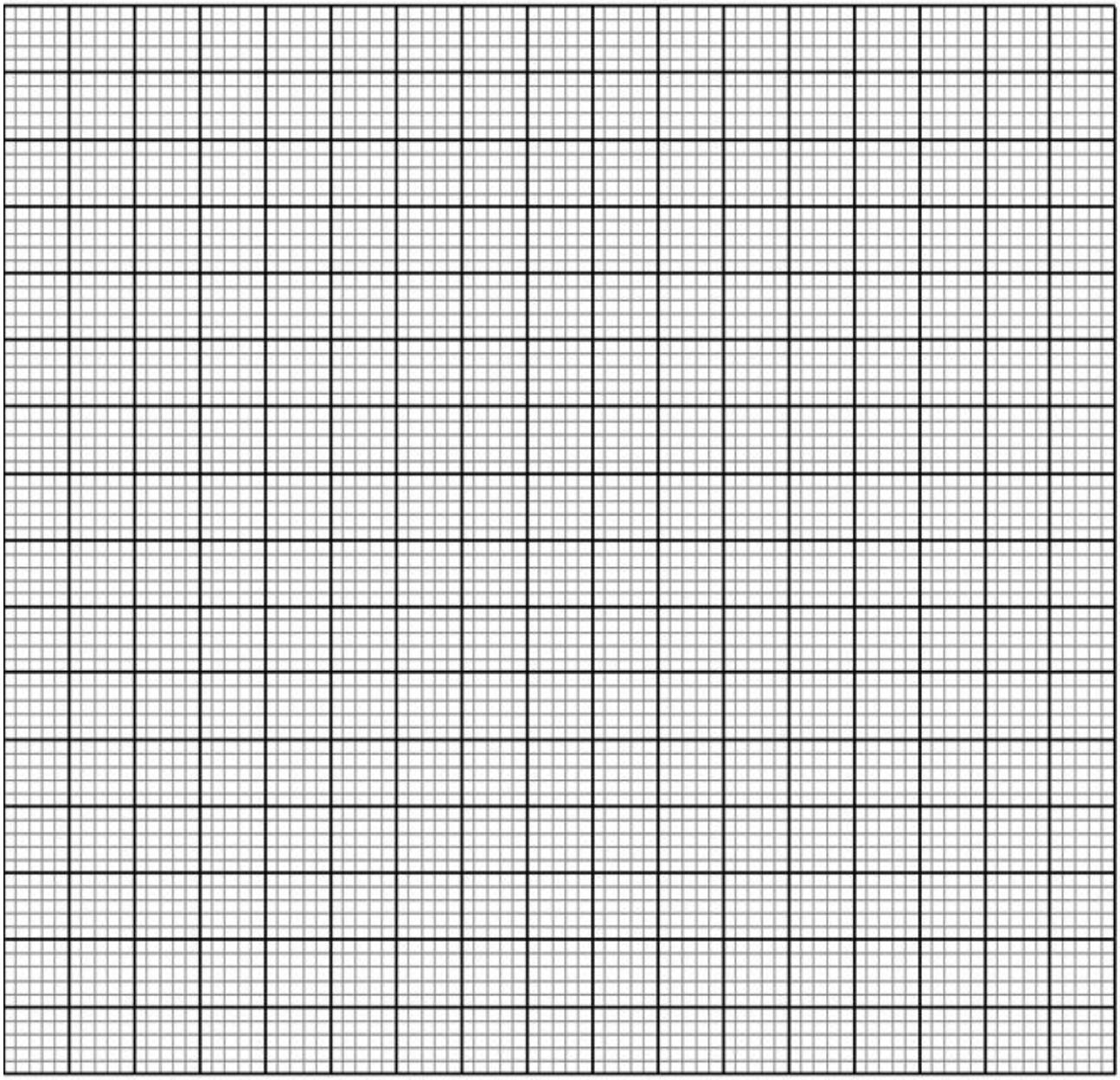
Find: (i) Ther first term of the Geometric Progression. (4 marks)

(ii) The sum of the first twelve terms of the Geometric Progression. (2 marks

20. ABC is a triangle with vertices A (-7, 2) B (-2, 1) and C (2, 8). $A^1B^1C^1$ is the image under transformation. $\begin{bmatrix} -1 & 0 \\ 0 & -1 \end{bmatrix}$

a. (i) Find the co-ordinates of $A^1B^1C_1$ (2marks)

(ii) On the grid provided draw ABC and $A^1B^1C^1$ (2marks)



b. (i) Find the co-ordinates of $A^{11}B^{11}C^{11}$ the image of a triangle $A^{1}B^{1}C^{1}$ under transformation matrix. $\begin{bmatrix} 0 & -1 \\ -1 & 0 \end{bmatrix}$ (2marks)

(ii) On the same grid draw $A^{11}B^{11}C^{11}$ (1marks)

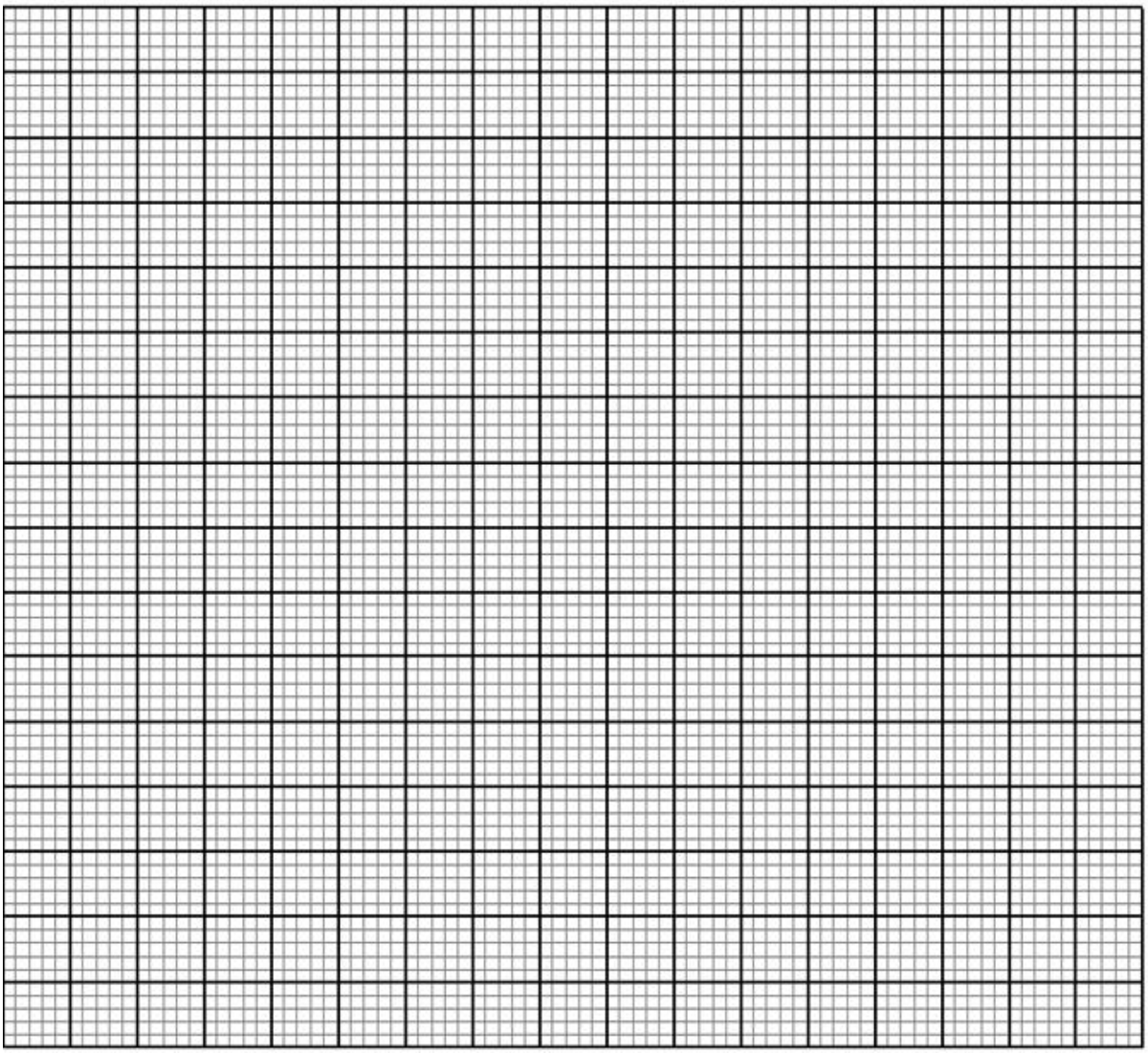
c. (i) Find the single matrix that maps $A^{11}B^{11}C^{11}$ onto $A^{1}B^{1}C^{1}$ (2marks)

(ii) Describe the transformation represented by the matrix in c(i) above (1mark)

21. a) Complete the table below for $y = -2\ sin\ x$ and $y = 3\ cos\ x$. (2 marks)

x	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	330°	360°
-2 Sin x	0.00		-1.73			-1.00	0.00			2.00	1.73		
3 Cos x	3.00		1.50			-2.60	-3.00			0.00	1.50		

b Draw the graph $y = -2\ Sin\ x$ and $y = 3\ cos\ x$ using 1 cm to represent 30° horizontal axis and 2 cm to represent 1 unit on the vertical axis. (5marks)



c) Use the graph to solve:

i) $3 \cos x + 2\sin x = 0$ (1 mark)

ii) $1 - 2\sin x = 2$ (2 marks)

22. A number is selected at random from numbers 10,11,12, and 13. A second number is selected at random from the numbers 3,4,5 and 6. Afterwards a product of the numbers is obtained by multiplying the first number selected by the second number

i) Complete the table below (2marks)

x	10	11	12	13
3				
4				
5				
6				

ii) Determine the probability that the product obtained is an odd number (2mks)

iii) Determine the probability of that the product obtained is a number less or equal to 40 (1mk)

b) A bag contains 2 red balls and 7 green balls. The balls are identical except for the colours. Two balls are pickedat random without replacement.

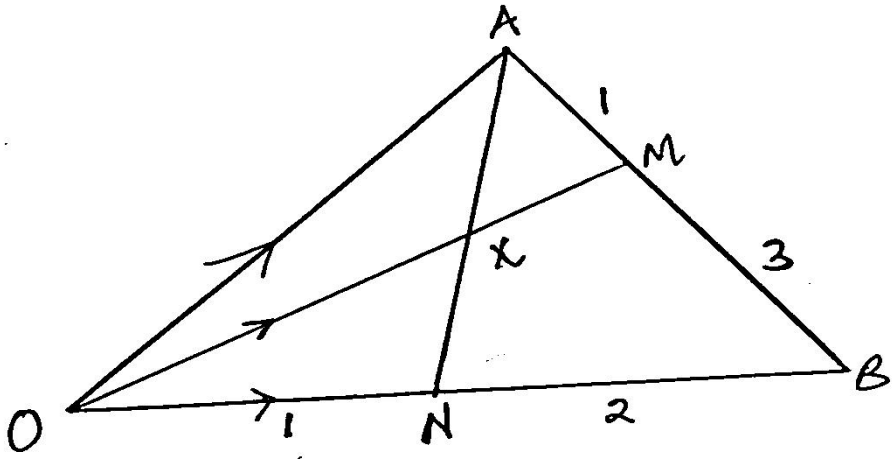
i) Draw a tree diagram to show all the possible outcomes (1mk)

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ii) Determine the probability that the balls picked are of the same colours (2mks)

iii) Determine the probability that the balls picked are of different colours. (2mks)

23. In the triangle OAB, $\overrightarrow{OB} = \underset{\sim}{b}$, $\underset{\sim}{OA} = \underset{\sim}{a}$. Point N is on OB such that the ratio ON:NB=1:2 and the point M divides AB in the ratio 1: 3 line OM and AN intersect at point X.



(a) Express in terms of vectors $\underset{\sim}{a}$ and $\underset{\sim}{b}$,

(i) $\overrightarrow{ON}$ (1mark)

(ii) $\overrightarrow{OM}$ (2marks)

b) Further given that $\overrightarrow{OX}$ =h $\overrightarrow{OM}$ and OX =kAX, where k &h are scalars,

(i) Express $\overrightarrow{OX}$ in two different ways. (2marks)

(ii) Find the value of k and h. (4marks)

(c) Find the ratio AN: NX (1mark)

24. Three quantities P, Q and R and such that P varies directly as the square of Q and inversely as the square root of R.

a)Write an expression of P in terms of Q and R (1 mark)

b)Given that when P = 40, Q = 10 and R = 16. Find the value of P when Q = 7 and R = 64 (4 marks)

d) If Q is increased by 10% and R is decreased by 19%, find the percentage change in P.(5 marks)

DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

232/1
Physics
FORM 4
Paper 1

Instructions to candidates

- This paper consists of two sections ***A*** and ***B***.
- Answer **all** the questions in the two sections in the spaces provided after each question
- All working **must** be clearly shown.
- Electronic calculators and Mathematical tables may be used.
- All numerical answers **should be expressed** in the **decimal** notations.

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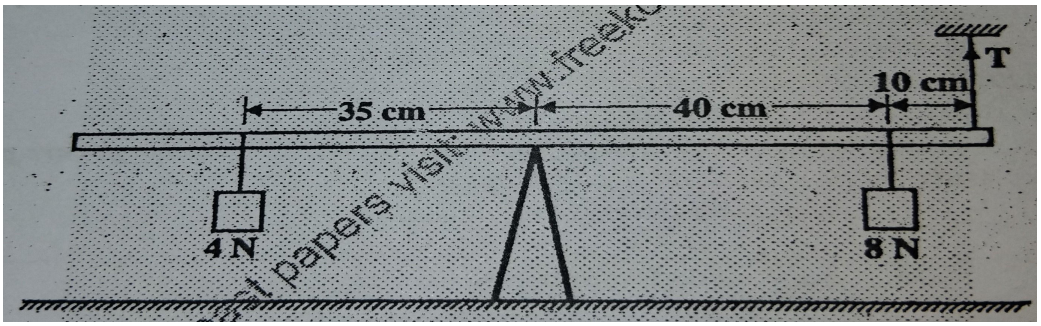
SECTION	CANDIDATE'S SCORE
A (25MKS)	
B(55MKS)	
TOTAL	

SECTION A (25 Marks)

1)State two factors that determine pressure at a point of a liquid (2mks)

2)A student wearing sharp pointed heeled shoes is likely to damage a soft wooden floor. Explain (2mks)

3)The figure below shows a uniform metal rod balanced at its centre by different forces.

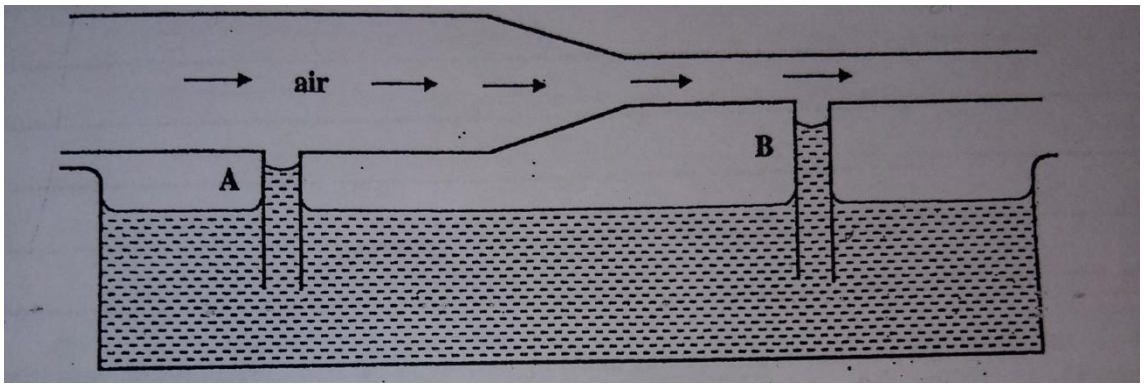


Determine the value of T (3mks)

4)A spring extends by 6 cm when supporting a mass of 0.06 kg on earth. When the spring is used to support the same mass on the moon, it extends by 1 cm . Determine the moon gravitational strength (take g as 10 N/kg)
(3mks)

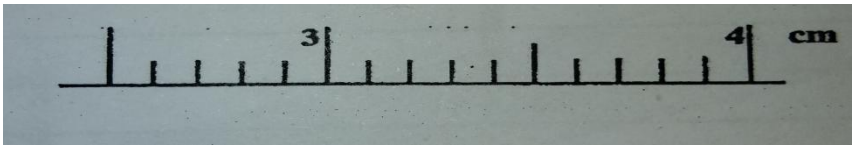
.

5)The figure below shows air flowing through a pipe of different cross-sectional areas. Two pipes A and B are dipped in water.



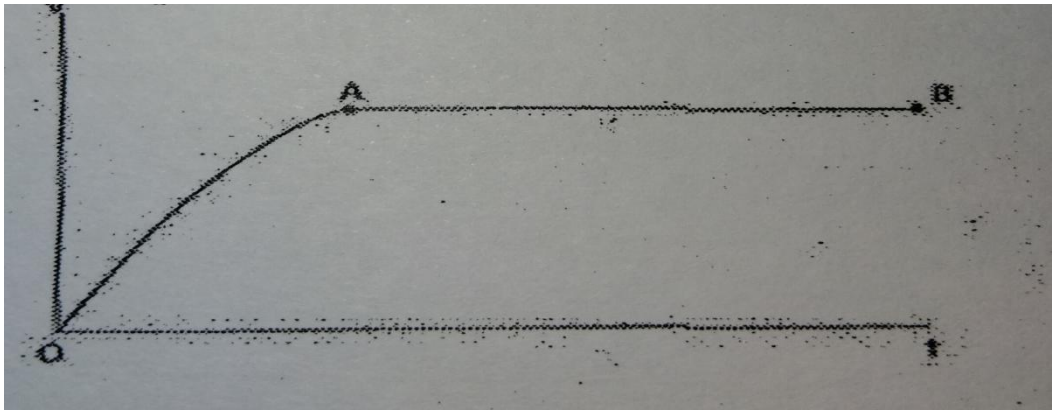
Explain the cause of difference in the levels of water in the pipes A and B (2mks)

6)The figure shows part of a vernier callipers.



Insert the vernier scale to show a reading of 3.14 cm (1mks) 7)A horizontal force of 12 N is applied on a wooden block of mass 2 kg placed on a horizontal surface. It causes the block to accelerate at 5 m/s2. Determine the frictional force between the block and the surface (3 mks)

8)The figure below shows a graph of velocity against time for a ball bearing released at the surface of a viscous liquid

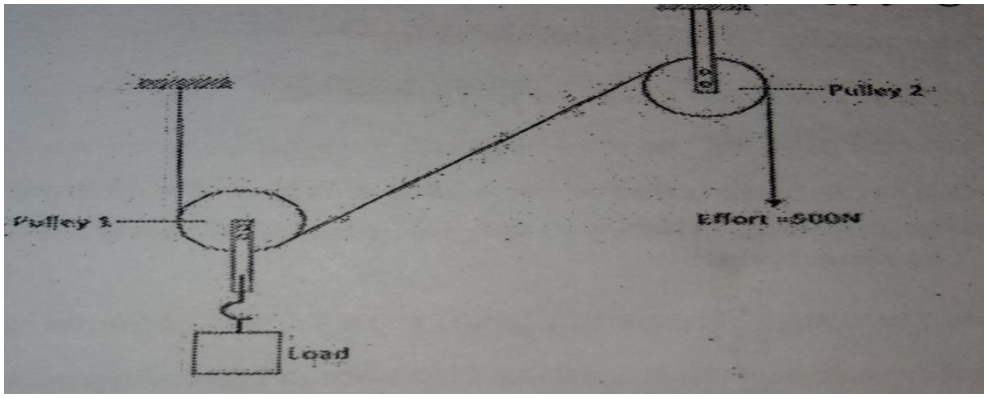


Explain the motion of the ball bearings for parts:

i)OA (2 mks)

ii)AB (2 mks)

9 The figure below shows a pulley system used to raise a load by applying an effort of 500N.



State the:
i)Velocity ratio of the system (1mk)

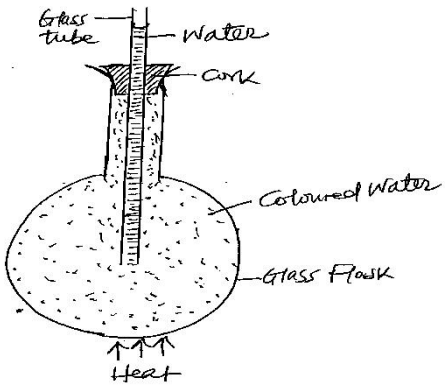
ii)The purpose of pulley 2 (1mk)

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iii)Given that the machine has an efficiency of 80%, determine the maximum load that can be raised (3mks)

SECTION B (55MKS)

10. (a) In the setup shown in the figure below it is observed that the level of the water initially drops before starting to rise.



Explain this observation (2mks)

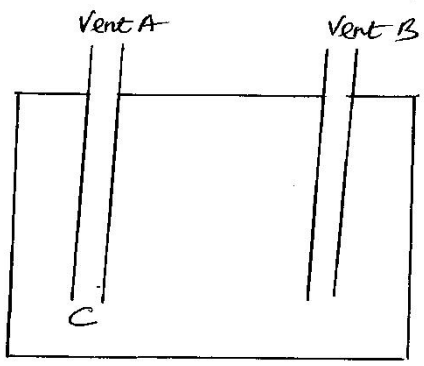
(b) The temperature of the water in a measuring cylinder is lowered from about 20°C to 0°C. On the axes provided, sketch the graph of the volume against temperature assuming the water does not freeze. (1mk)

(c) Glass stem is one feature of a common thermometer. State its function. In the thermometer (1mk)

(d) A wooden bench and a metal bench are both left in the sun for a long time. Explain. Why the metal bench feels hotter to touch (2mks)

(e) An electric heater is placed at equal distances from two similar metal cans A and B filled with water at room temperature. The outer surface of can A is shinny while that of can B is full black. State with reason which can will be at a higher temperature after the heater is switched on for some time. (2mks)

(f) The figure below shows how an underground room was ventilated. It had two vents are at A and the other at B. a fire was lit at point c.



(i) Explain what happened to the ventilation when the fire was lit. (3mks)

(ii) Explain how a vacuum flask minimizes loss of heat through radiation (1mk)

11.(a) State what is meant by the term specific latent heat of vaporization (1mk)

(b) In an experiment to determine the specific latent heat of vaporization of water, steam at 100°c was passed into water contained in a well lagged copper calorimeter. the following measurements were made

Mass of calorimeter =50g

Initial mass of water =70g

Initial temperature of water =5°c

Final mass of calorimeter + water + condensed steam =123g

Final temperature of mixture = 30°C

Specific heat capacity of water = 4200$Jkg^{-1}k^{-1}$ and specific heat capacity for copper = 390 $Jkg^{-1}k^{-1}$

Determine the:

i. Mass of condensed steam (1mk)

ii. Heat gained by the calorimeter and water (5mks)

iii. Given that L is the specific latent heat of vaporization of steam,

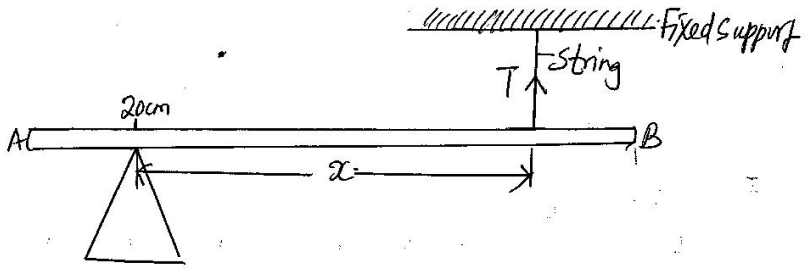
I. Write an expression for the heat given out by steam (2mks)

II. Determine the value of L (3mks)

12(a) State the principle of moments (1mk)

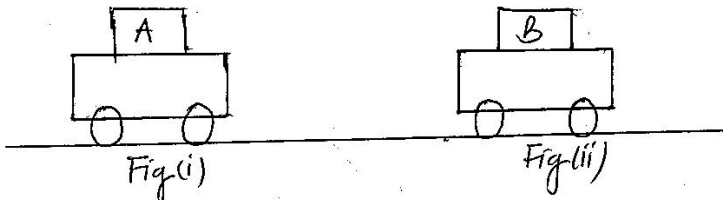
(b) The figure below shows a uniform rod AB of length (100cm) and weight 8N pivoted at 20cm from one end. It is balanced by supporting it with a string attached to a fixed support

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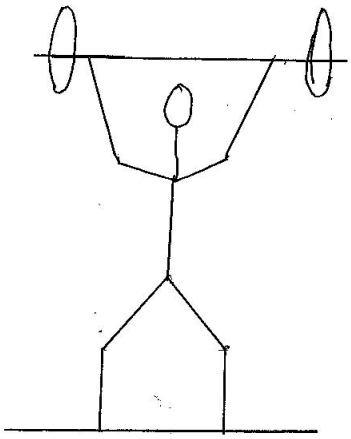
The tension in the string is 4N. Determine the position of the string from end A. (3mks)

(c) The figures below shows two identical trolleys with loads A and B. the loads are identical in shape and size.



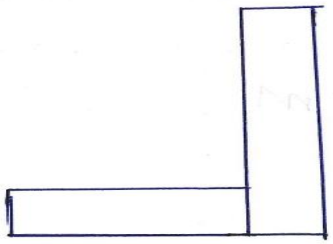
Given that the density of A is greater than that of B, explain why the trolley in fig (ii) is more stable (2mks)

(d) The figure below shows an athlete lifting weights while standing with the feet apart.



Explain why standing with the feet apart improves the athlete's stability (1mk)

(e)The figure below shows an L shaped wooden structure. On the diagram construct appropriate lines to show the position of the centre of gravity for the structures (2mks)



13. (a) A bus starts from rest and attains a velocity of 90km/hr in 20 seconds. It moves steadily for 10 seconds and decelerates to a stop after 12 seconds.
(i) Setch a velocity – time graph (3mks)

(ii) using the graph calculate the distance moved by the bus. (3mks)

(b) A wooden block mass 200g is placed at distance of 9cm from the centre of a turn table. When the turntable is rotated at a constant angular velocity the block begins to slide off the table. If the frictional force between the block and the turntable is 0.8N.
Determine
The linear speed of the block (3mks)

(ii) The angular velocity in the turn table (3mks)

14. (a) A cube of side 4cm x 4cm x 4cm weights 1.12N in air. It is immersed in a liquid of density 0.9g/cm^3

(i) Determine the mass of liquid displaced (3mks)

(ii) Calculate the apparent weight of the cube when immersed in the liquid. (3mks)

(iii) Calculate the density of the material of the cube (2mks)

(iv) A piece of solid weighs 3N in air and 0.22N when immersed in water. Calculate its relative density. (2mks)

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SCHOOL: ……

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232/2
Physics
FORM 4
PAPER 2

Instructions to candidates

- This paper consists of two sections ***A*** and ***B***.
- Answer **all** the questions in the two sections in the spaces provided after each question
- All working **must** be clearly shown.
- Electronic calculators and Mathematical tables may be used.
- All numerical answers **should be expressed** in the **decimal** notations.

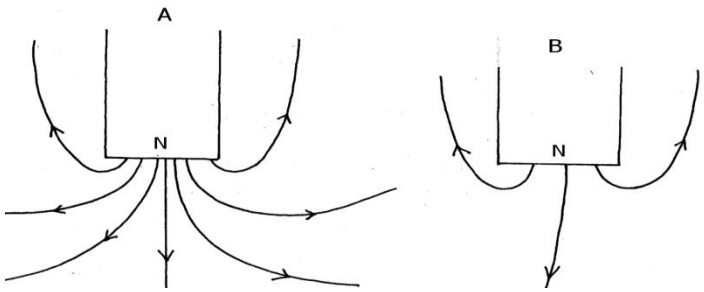
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SECTION	CANDIDATE'S SCORE
A (25MKS)	
B(55MKS)	
TOTAL	

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Paper 2 section A

1. Two magnets A and B in the figure below were brought from a point high above a table towards a steel pin.



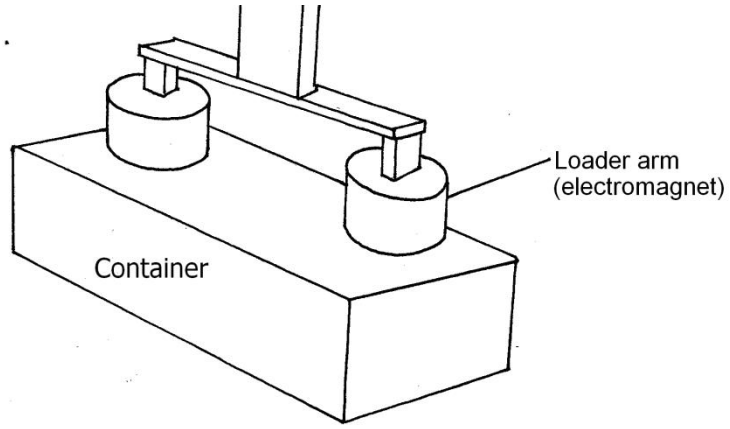
State with reason which magnet will attract the pin at a bigger height above the table.

(2mks)

……

……

2.(a) The figure below shows container loader which uses electromagnet to offload containers from a ship.



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(i) Why should the container be made of iron or steel (1mk)

……

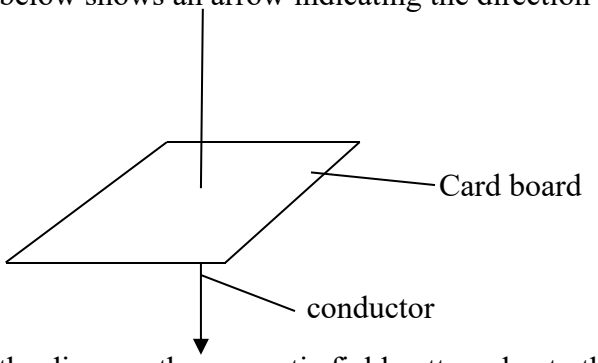
……

(ii) State two ways in which the loader can be made to lift heavier container (2mks)

……

…….....

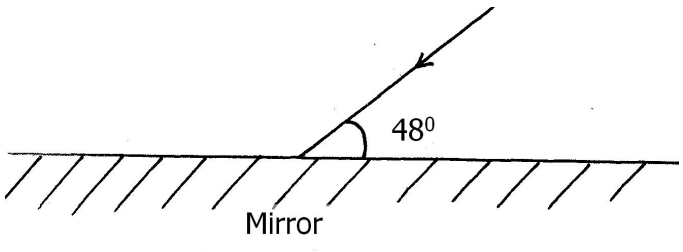
(b) The figure below shows an arrow indicating the direction of a current in conductor.



Sketch on the diagram the magnetic field pattern due to the current. (2 mks)

3. A current of 0.5A flows in a circuit. Determine the quantity of charge that crosses a point in 4 minutes . (3mks)

4. The figure 3 shows a ray of light incident on a mirror.



Determine the angle of reflection when the mirror is rotated 10^0 anticlockwise (2mks)

5. Two 12V lead acid accumulators are rated 60Ah and 70Ah. State two physical differences between the accumulators (2mks)

6. A wave with a periodic time of 0.2 seconds is travelling at a speed of $50cms^{-1}$. What is the wavelength of the wave? (3 mks)

7. State one advantage and one disadvantage of a convex mirror when used as a driving mirror. (2 mks)
   Advantage:

   Disadvantage:

8. A girl holds a large concave mirror of focal length 1m, at a distance of 80 cm from her face. State two characteristics of her image in the mirror. (2 mks

9. The chart below shows an arrangement of different parts of the electromagnetic spectrum.

Radio wave	A	Infrared rays	B	Ultra-violet	χ-Rays

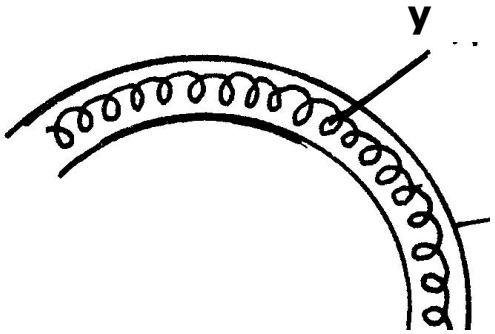
Name the radiation represented by

A …… (1mark)

State one use of radiation represented by B (1mark)

……
……
……..

10. The figure below shows part of electric cooker coil.



i. Why is the material labeled Y coiled? (1mk)

……

……

……

ii. State the property of material Y that makes it suitable for its use. (1mk)

……

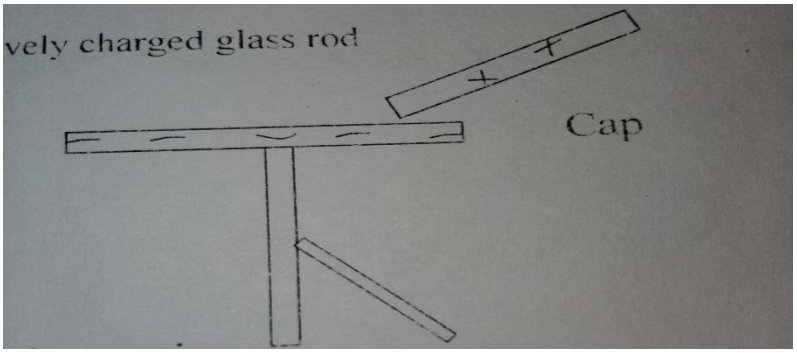
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SECTION B (55 Marks)

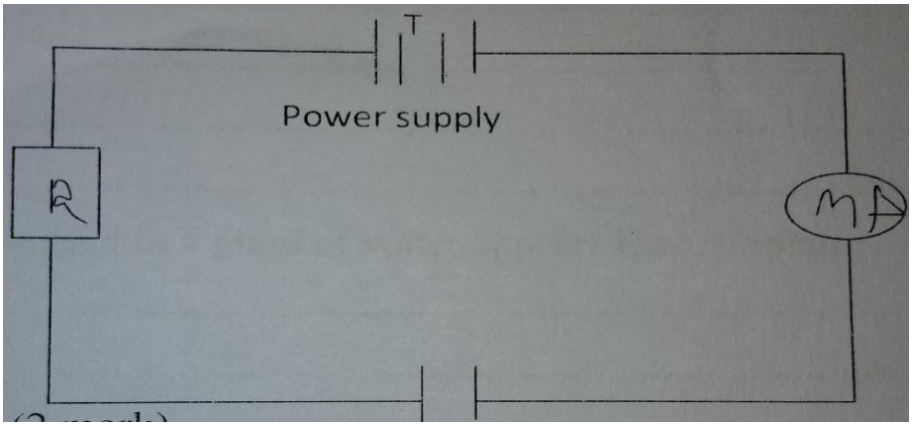
11. a)State the law of electrostatic charges (1mks)

b) The figure below shows a highly positively charged rod being brought slowly near the cap of a negatively charged gold leaf electroscope. It is observed that the leaf initially falls then rises.



Explain the observation (1 mk)

c) (i)The figure below shows an electric circuit used to charge a capacitor C. When switch is closed ,it is observed that the millimetre records some current which gradually reduces to zero with time

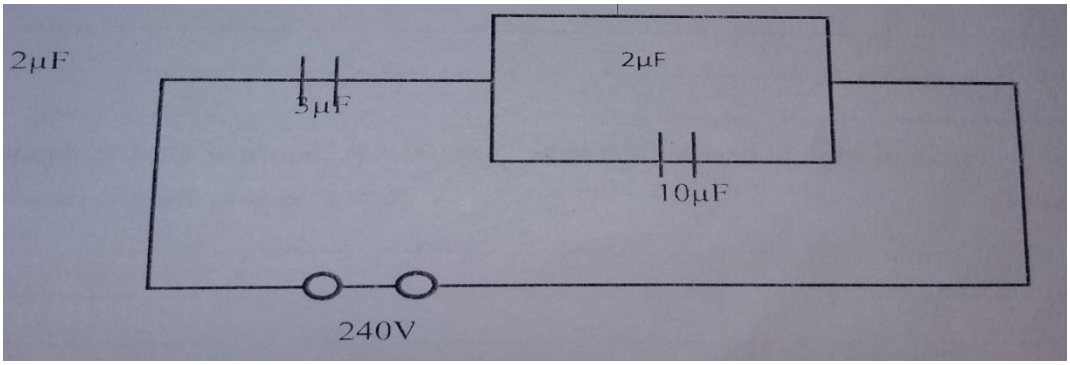


Explain the observation (2mks)

(ii)State one factor that reduces the capacitance of a parallel plate capacitor (1mks)

d)The figure shows an electrical circuit with three capacitors of 10μF, 2μF and 3μF capacitance connected to a 240V supply.

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Determine:

(i) The effective capacitance of the capacitor combination (2mks)

(ii) The charge stored in the circuit (2mks)

(iii) The potential difference across the 2μF capacitor (2mks)

12. (a) A spoon partially submerged in a glass of water appears bent. Explain(1mks)

(b)A coin placed at the bottom of a tall gas jar. When the jar is filled with paraffin to a depth of 32.4 cm, the coin is apparently seen displaced 9.9 cm from the bottom. What is the refractive index of paraffin? (3mks)

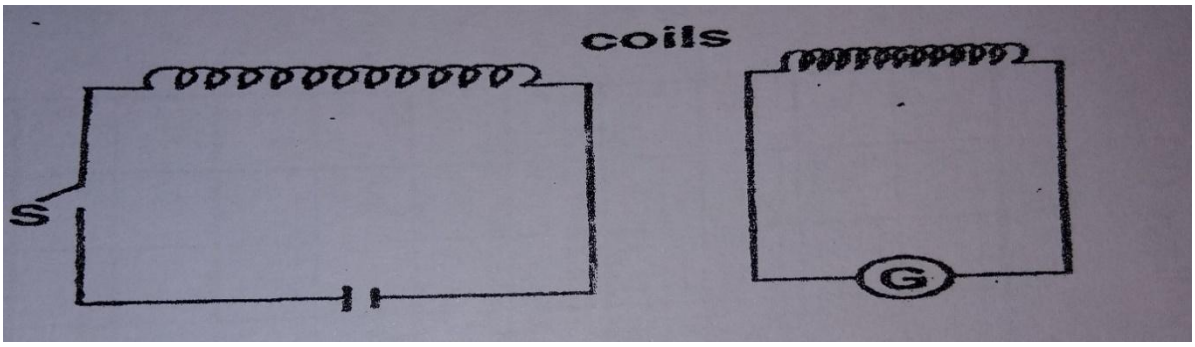
(c)State two conditions necessary for total internal reflection (2mks)

(d)The speed of light in air is 3.0×10^{8} m/s. What is the speed of light in glass? (3mks)
(Take refractive index of glass=1.5)

(e)State Snell's law (1mk)

13. (a) State Lenz's law (1mk)

b) The figure below shows two circuits close to each other



(i)State the observation made on the galvanometer when the switch is closed (1mks)

(ii)Explain the observation (1mks)

(iii)Give one adjustment that can be done to the arrangement so that:

I)The galvanometer gives bigger deflection in the same direction (1mk)

II)The galvanometer deflects in the opposite direction (1mk)

c)In a transformer, a voltage of 240V is to be stepped down to 24V. The primary current is found to be 1.5A while the secondary current is 14A. Calculate:

i)Power output (2mks)

ii)Power input (1mks)

iii)Efficiency of the transformer(2mks)

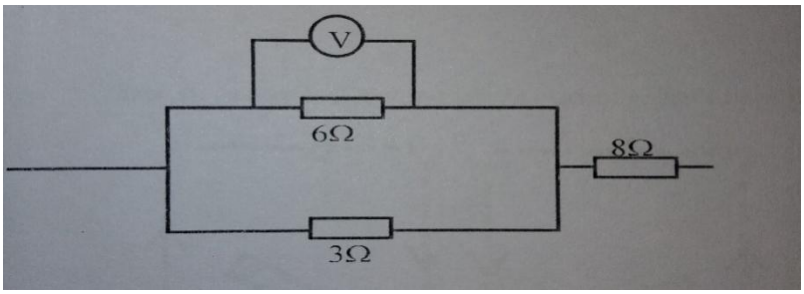
iv)State one way in which the power in a transformer is lost (1mks)

14. a) State one condition under which ohms law is obeyed in a metal conductor (1mk)

b)You are provided with three resistors R1, R2, R3 connected in parallel. If the p.d across them is V, show that an expression for the effective resistance of the three resistors is given by.

$\frac{1}{Rt} = \frac{1}{R1} + \frac{1}{R2} + \frac{1}{R3}$ (3mks)

c) The figure below shows three resistors as shown



If the voltmeter reads 4V, find the

i)Effective resistance (2mks)

ii)Current through the 3Ω resistor (3 mks)

iii)Potential difference across the 8Ω resistor if the total voltage in the circuit is 10V (1mk)

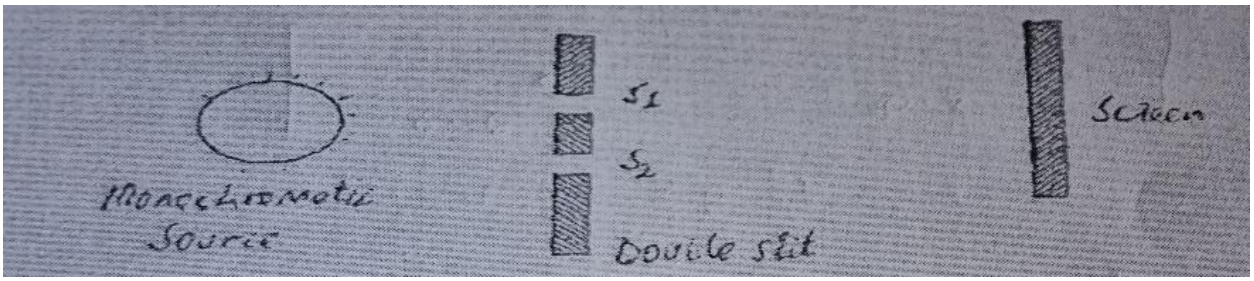
d)draw a circuit diagram showing three bulbs A,B and C, an ammeter and a 12V supply connected in such a way that they operate at same potential and all light with equal brightness (2mks)

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15. a) State the difference between progressive waves and standing waves (2mks)

b)Sketch a graph of displaced against time for a transverse wave of frequency 50 Hz with at least two cycles with amplitude of 2cm (2mks)

c)The figure shows an experiment to observe interference of light waves . Waves are incident to double slits closed t a source of monochromatic light.



i)State what is meant by a monochromatic source of light (1mk)

ii)State the function of the double slit (1mk)

iii)State and explain what is observed on the screen (3mks)

iv)state what is observed on the screen when the slit separation S1 and S2 is reduced (1mk)

v)White light is used in place of monochromatic source (1mk)

DETERMINED STUDENTS FORM 4 PRE-MOCK 1 EXAMS

NAME:……

SCHOOL: ……

DATE:…….. INDEX NO: ……. SIGN:……

232/3

Physics

FORM 4

PAPER 3

Instructions to candidates

- This paper consists of two sections ***A*** and ***B***.
- Answer **all** the questions in the two sections in the spaces provided after each question
- All working **must** be clearly shown.
- Electronic calculators and Mathematical tables may be used.
- All numerical answers **should be expressed** in the **decimal** notations.

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SECTION	CANDIDATE'S SCORE
A (20MKS)	
B (20MKS)	
TOTAL	

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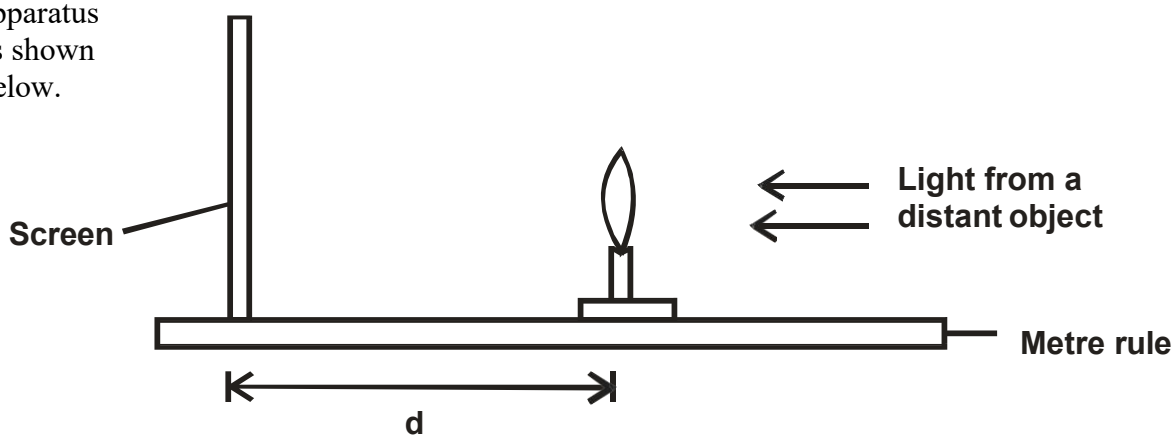
QUESTION 1

You are provided with the following;

- A candle
- A white screen
- A metre rule
- A lens
- A lens holder
- A piece of plasticine.

Proceed as follows:

a) Arrange the apparatus as shown below.

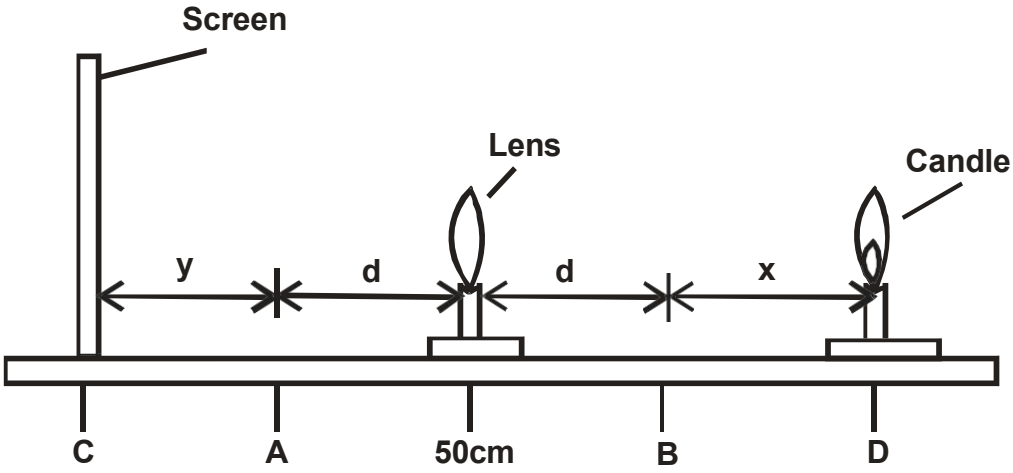


b) Adjust the distance of the lens from the screen until a well-focused image of a very distant object like a tree, is seen on the screen. Record the distance between the screen and the lens as d.

d = _____cm (1 mark)

d = _____m (1 mark)

c) Now place the lens at the midpoint of the metre rule.
(**It will remain at this point throughout the entire experiment**) Arrange the screen and lit candle as shown below.



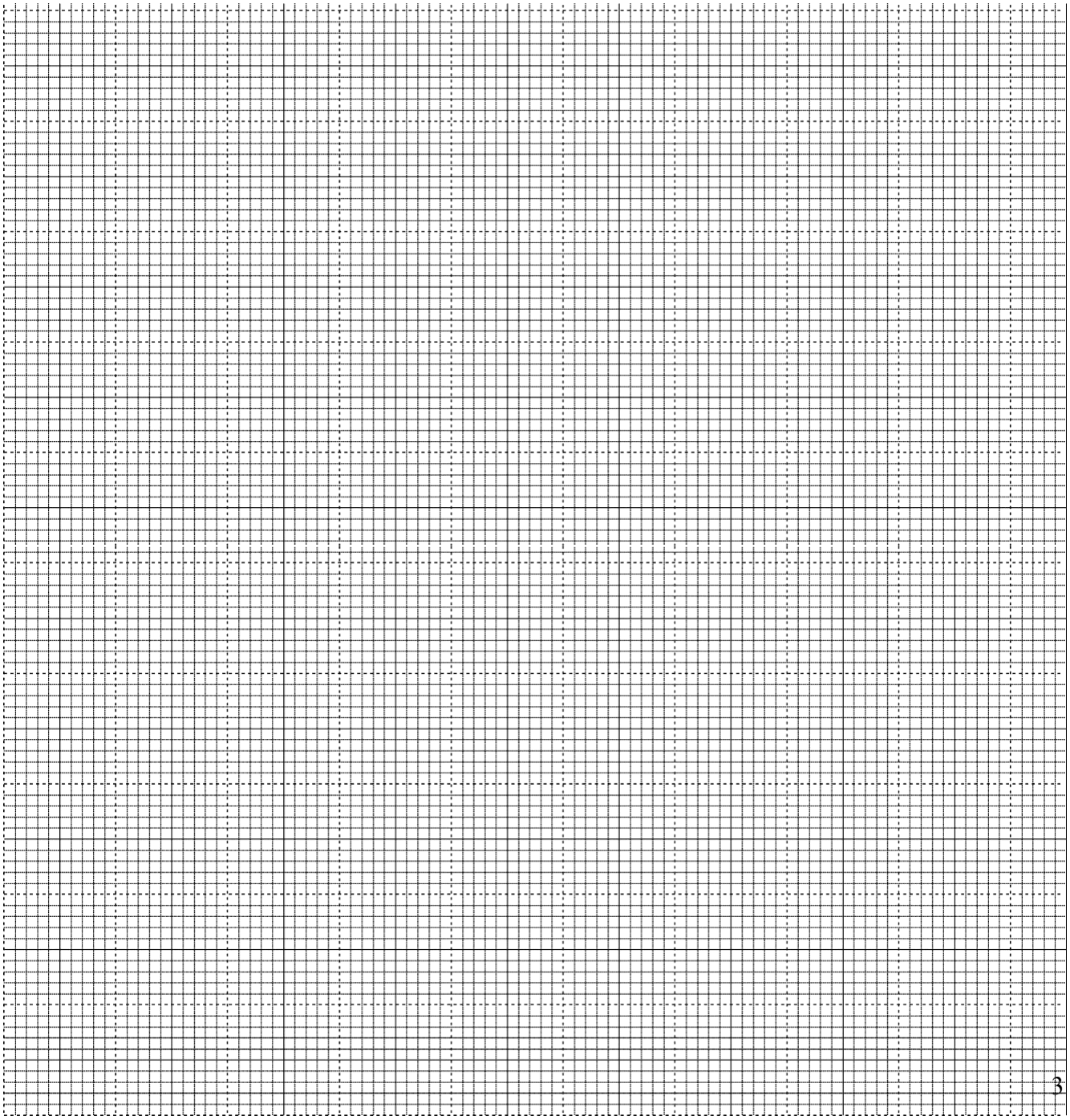
Mark the point A and B each of which is distance d (obtained in part b above) from the lens

d) Place the lit candle at point D, 30cm from B. Adjust the position of the screen until a sharp image appears on it. The screen is at C. Measure BD and AC and record them as x and y respectively in the table below.

BD = x (cm)	AC = y (cm)	$\frac{1}{}$ (cm^{-1})
30		
25		
20		
15		
10		

e) Repeat the procedure in (d) above for other values of x in the table and complete it. (6 marks)

f) i) Draw a graph $\frac{1}{}$ (y-axis) against x. (5 marks)



ii) Determine the slope S of the graph. (3 marks)

iii) Calculate the value of m given that

$$m = \sqrt{\frac{1}{}}$$

(2 marks)

iv) Comment on values of m and d. (2 marks)

_____

_____

_____

_____

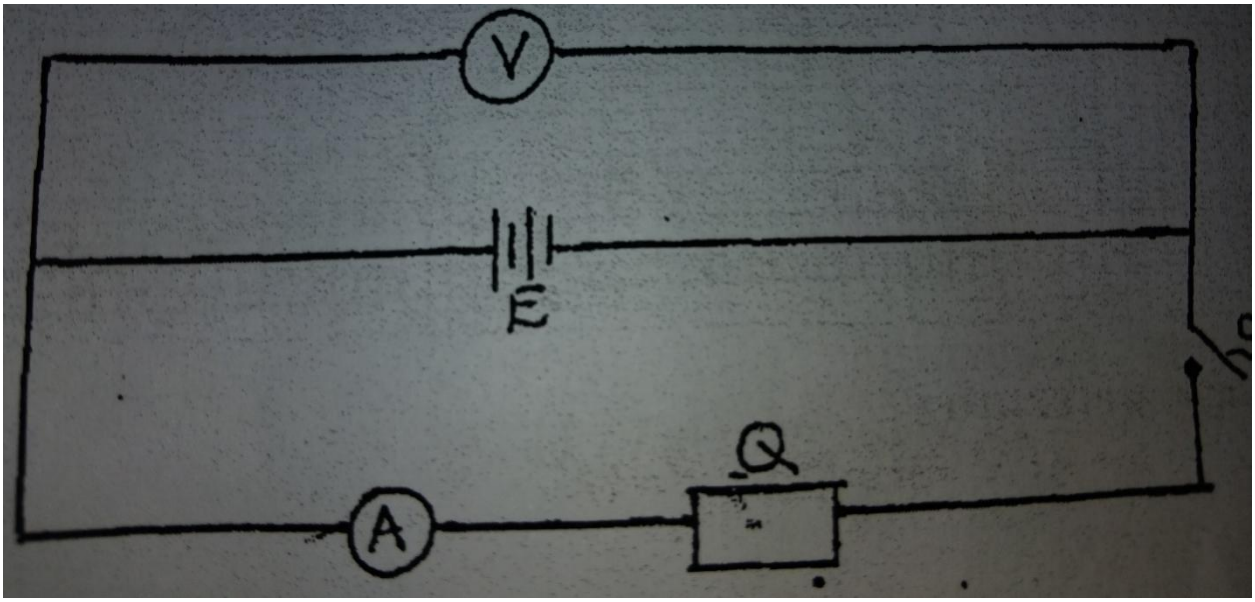
QUESTION2

You are provided with the following apparatus

- Two new dry cell
- A resistor of 10Ω labeled Q
- Wire mounted on a millimeter scale (G28)
- 6 connecting wires with crocodile clips on one end of at least three
- A voltmeter
- An ammeter
- A switch

Proceed as Follows:

a) Connect the apparatus provided as shown in figure below



i) Take the voltmeter reading when the switch S is open

V_1 = ……. volts (1mk)

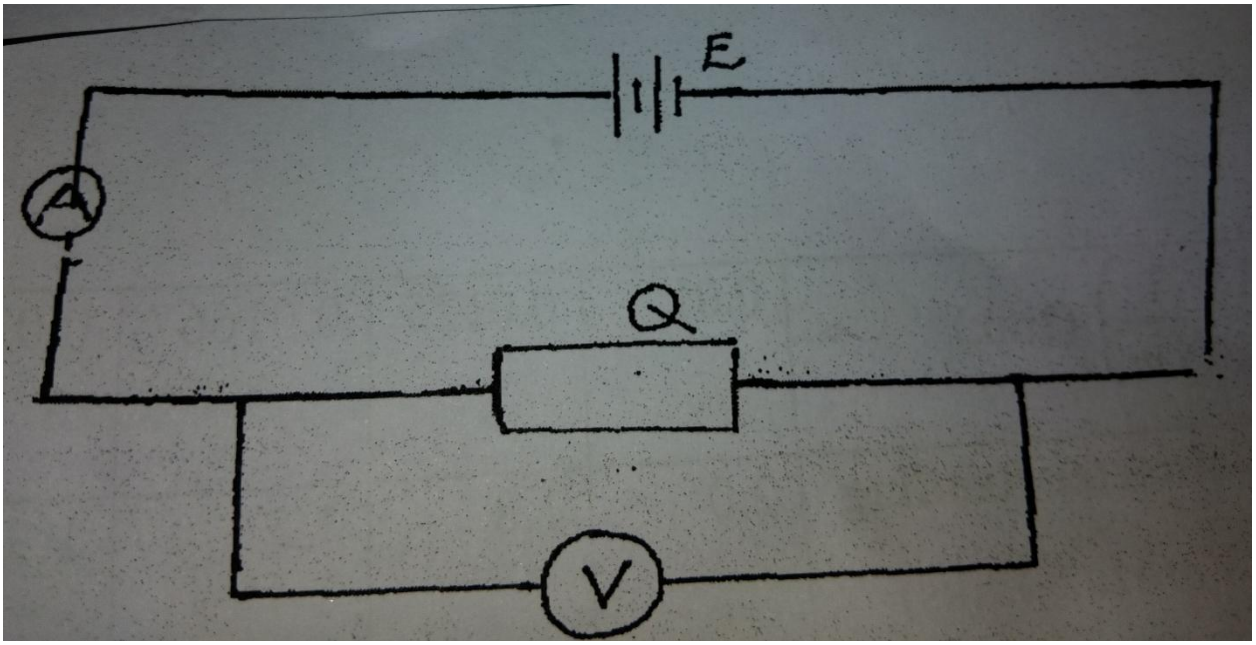
ii) Close the switch S, and take the voltmeter reading V_2 and the ammeter reading I

V_2 = ……..……volts (1 mk)

I = …….……..Amperes (1 mk)

iii) Calculate the quantity $\frac{P = V_1 - V_2}{I}$ (2mks)

b) Set up the circuit as shown in figure below.



i) Take the voltmeter reading V and the ammeter reading I (2mks)

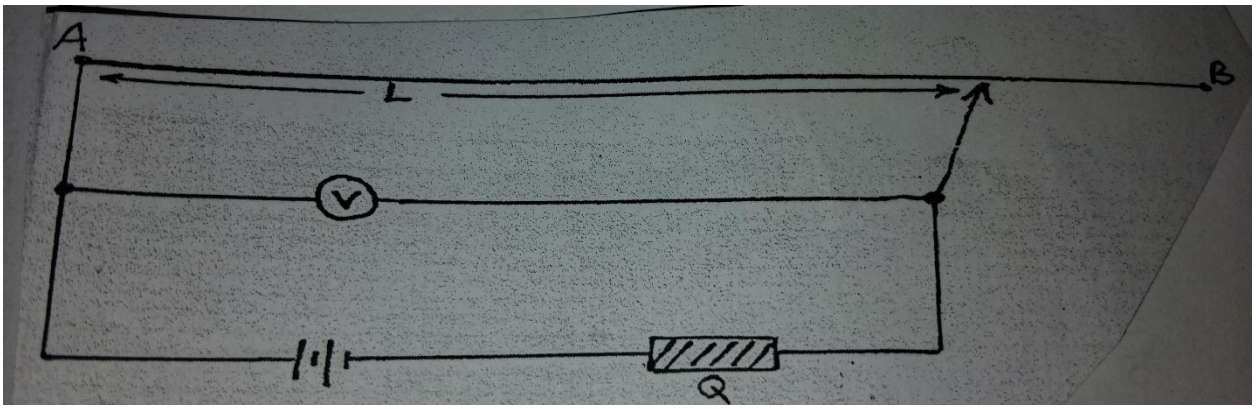
V = ……

I = …… ……

ii) Determine the resistance R of Q given that (2mks)

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c) Set up the circuit shown in figure



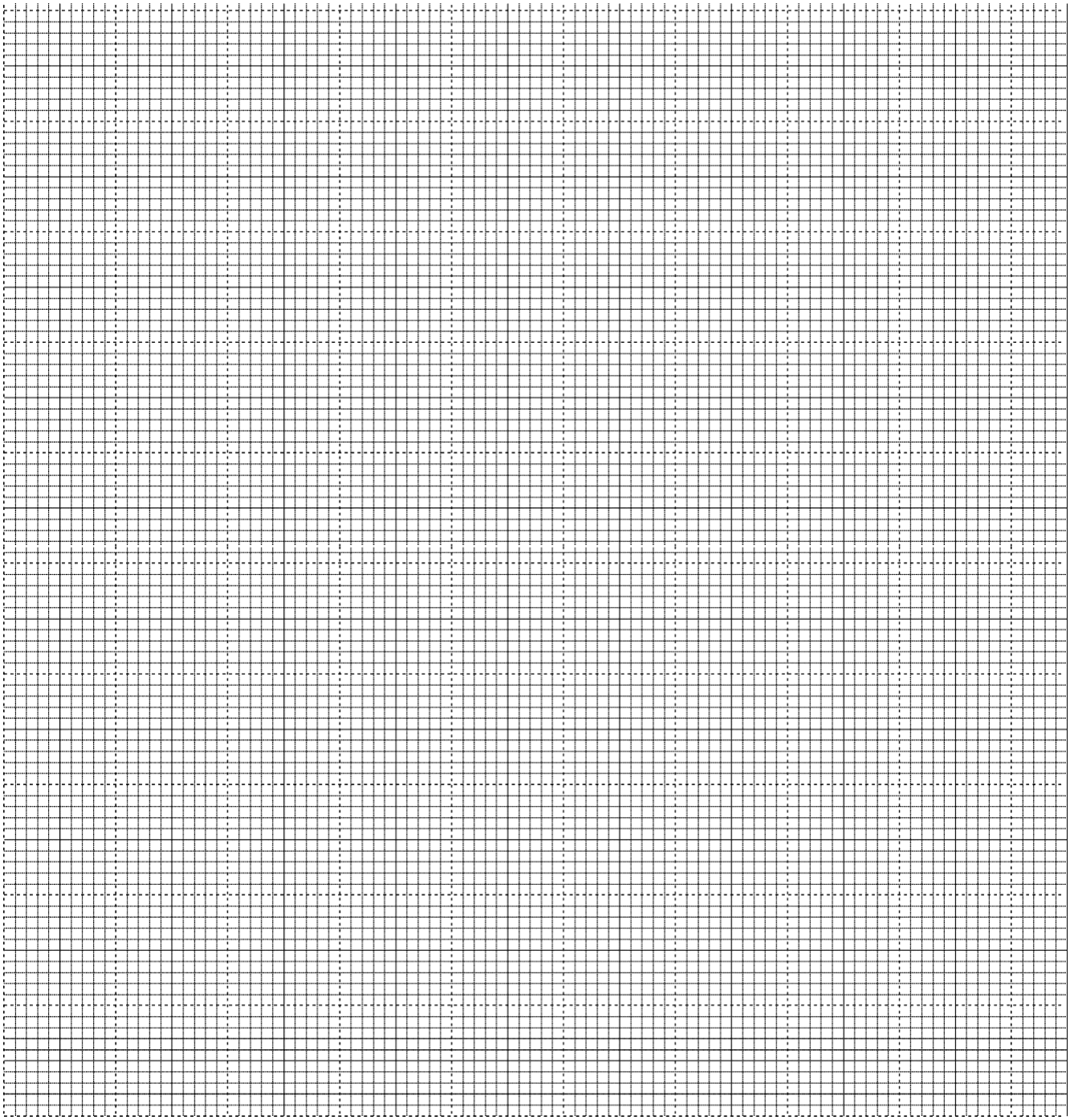
d) Move the crocodile clip along the wire AB to a point such that L = 100cm
Note: the voltmeter reading and record in table 2.

e) Repeat (d) above for values of L = 80cm, 60cm, 40cm, 20cm and 0cm, tabulate your results.

(6mks)

Length L (cm)	100	80	60	40	20
$\frac{1}{L}\left(\frac{1}{cm}\right)$ 1(mk)					
Voltmeter Reading (V) (Max 4mks)					
$\frac{1}{V}\left(\frac{1}{V}\right)$ (1mk)					

f) Plot the graph of $\frac{1}{V}$ against $\frac{1}{L}$ (6mks)



g) Find the slope of the graph. (2mks)

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