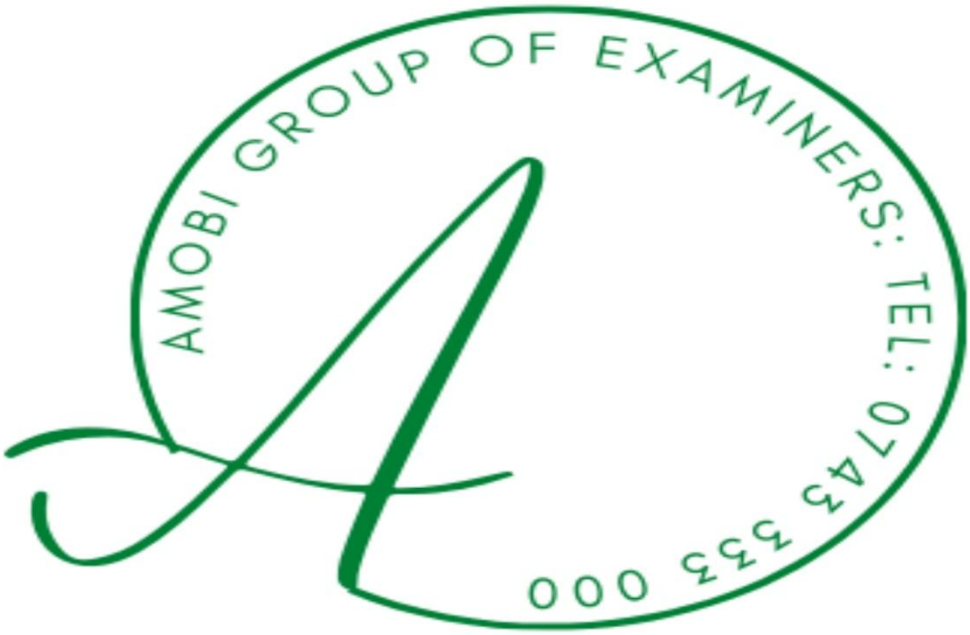
PROGRESSIVE STUDENTS F3 END TERM 2 SERIES 1 EXAMS *(14 SUBJECTS TESTED)*



PROGRESSIVE STUDENTS FORM THREE END TERM 2 SERIES 1 EXAMS

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***N/B** In Response to the Huge Costs Associated in Coming Up with Such/Similar Resources Regularly, We inform us All, MARKING SCHEMES ARE NOT FREE OF CHARGE. However Similar QUESTIONS, Inform of soft Copies, are Absolutely FREE to Anybody/Everybody. Hence NOT FOR SALE by Amobi Group of Examiners.*

ORDER OF THE 14 SUBJECTS TESTED

(ALPHABETICALLY ARRANGED)

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

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM 2
AGRICULTURE PP1
FORM THREE (3)
Time: 2 Hours

INSTRUCTIONS TO CANDIDATES:

- Write your **name, - school** and **admission number** in the spaces provided.
- Sign and write the date in the spaces provided above.
- Answer **all** the questions in section **A** and **B**
- Answer any **two** questions in section **C.**
- Answers should be written in the spaces provided in this booklet.

For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-16	30	
B	17	20	
C	25 - 27	20	
		20	
	TOTAL	90	

SECTION A (30 MARKS)

Answer all questions in this section in the spaces provided.

1. List **three** methods of castrating farm animals. **(1½mks)**

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2. List **two** appropriate tools used for deworming of animals during routine management practices. **(1mk)**

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3.(a) State any **three** advantages of multiple stem pruning over single stem pruning in coffee. **(1½mks)**

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(b) State any **three** post-harvest practices carried out on grains **(1½mks)**

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4. Name the tool used together with each of the following tools. **(2mks)**

(i) Canula_____

(ii) Wood Chisel_____

(iii) Screw Driver_____

(iv) Brace _____

5. Give the functional differences between a rasp and bastard file. **(2mks)**

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6. State **four** signs of heat in pigs. **(2mks)**

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7. State **four** desirable features of a rabbit hutch. **(2mks)**

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8. State **two** uses of phosphorous in livestock nutrition. **(1mk)**

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9. Name one vegetative material used to propagate each of the following crops. **(2mks)**

(a) Bananas _____

(b) Pineapples _____

(c) Irish potatoes _____

(d) Pyrethrum _____

10. State **four** sources of nitrogen in the soil. **(2mks)**

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11. A bull gained 100kg of live weight after eating 400kg of beef concentrates over a period of time. Calculate the feed conversion ratio. **(1mk)**

12. State **four** advantage of artificial calf rearing in dairy cattle management. **(2mks)**

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13. State **three** advantages of upgrading. **(1½mks)**

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14. State **four** reasons for treating timber used for fencing. **(2mks)**

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15. Give **four** reasons for docking a young ram. **(2mks)**

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16. Give **four** reasons for using certified seeds for planting **(2mks)**

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17. Give two farming practices that help to reduce water stress in crop. **(1mks)**

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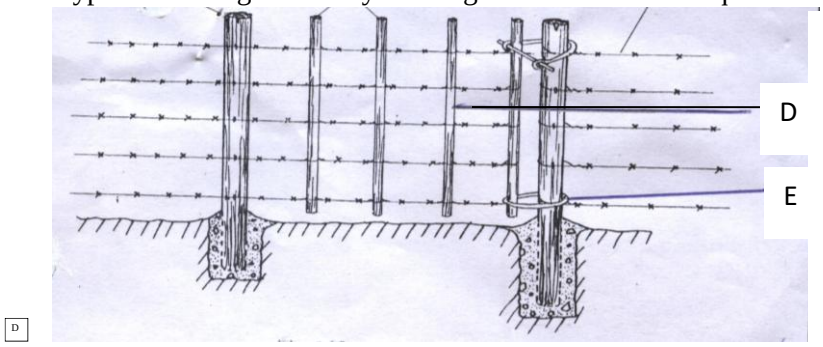
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SECTION B (20 MARKS)

Answer all questions in the section in the spaces

18. The diagram below shows a type of a farm gate. Study the diagram and answer the questions that follow.



D

a) Identify the type of gate shown. **(1mk)**

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b) Name parts labelled **D** and **E**. **(2mks)**

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c)i) State **<u>two</u>** functions of the part labelled E. **(2mks)**

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ii) State **<u>two</u>** functions of the gate illustrated above. **(2mks)**

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19. The diagram below illustrates a calf rearing practice.



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a) Identify the practice illustrated above. **(1mk)**

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b) i) Describe the procedure followed in the feeding practice named in (a) above. **(4mks)**

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ii) Give **<u>two</u>** precautions taken while using the rearing practice stated in (a) above. **(2mks)**

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20. Calculate the plant population in a 5.4 hectares plot of a bean crop planted at the Spacing (45cm x 20cm) assume 1 plant per hole. **(2mks)**

21.(a) Give the meaning of the term land tenure. **(1mk)**

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(b) Differentiate between

(i) Communal land tenure and co-operative land tenure. **(2mks)**

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(ii) Concession and state ownership. **(2mks)**

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SECTION C (40 MARKS)

Answer any two questions only

22. (a) List various methods of harvesting water in a farm **(5mks)**

(b) Outline farming activities which may encourage soil erosion **(5mks)**

(c) Explain how various farming practices would help to conserve soil in a farm. **(10mks)**

23.(a) Outline **six** desirable features of a good grain store. **(6Mks)**

(b) Outline **six** maintenance practices carried out on saws. **(6Mks)**

(c) Describe the digestion of grass in the rumen of an adult cattle. **(8mks)**

24 a) Explain **five** methods of drainage. **(5mks)**

b) Outline the procedure of castrating a bull using a burdizzo. **(7mks)**

c) Describe eight reasons why bees may abscond from a beehive. **(8mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

END TERM 2,

FORM 3 AGRICULTURE

PAPER 2

TIME: 2 HOURS

SECTION A (30 Marks)

Answer all questions in this section

1. Name **three** methods that are used in selection of breeding stock in livestock production. **(1½mks)**

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2. State **three** signs of heat in pigs. **(1½mks)**

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3. State **two** functions of a queen bee in a colony. **(1mk).**

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4. Name **two** breeds of sheep kept for dual purpose. **(2mks)**

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5. Give any **four** advantages of artificial insemination. **(2mks)**

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6. State **four** methods of identification in livestock. **(2mks)**

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7. Give reasons why roughage is necessary in ruminant animals. **(2mks)**

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8.What is a notifiable disease? **(1/2mk)**

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9. State **four** qualities of livestock ration. **(2mks)**

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10. Define the following terms**.** **(2mks)**

(i) Flushing

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(ii) Crutching

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(iii) Ringing

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(iv) Raddling

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11. A part from transmission of disease, give **three** harmful effects of ticks on cattle. **(1½mks)**

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12. State any **four** factors considered when siting farm structures **(2mks)**

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

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14. State **two** reasons for proper care and maintenance of farm tools and equipments **(1mks)**

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15. Give the functional difference between a rip saw and a cross cut saw. **(1mk)**

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16. Differentiate between a broiler and a capon **(1mk)**

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17. State **two** advantages of using embryo transplant. **(1mks)**

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18. Give **four** reasons for seasoning timber before use. **(2mks)**

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19. State any **four** reasons for castrating a goat. **(2mks)**

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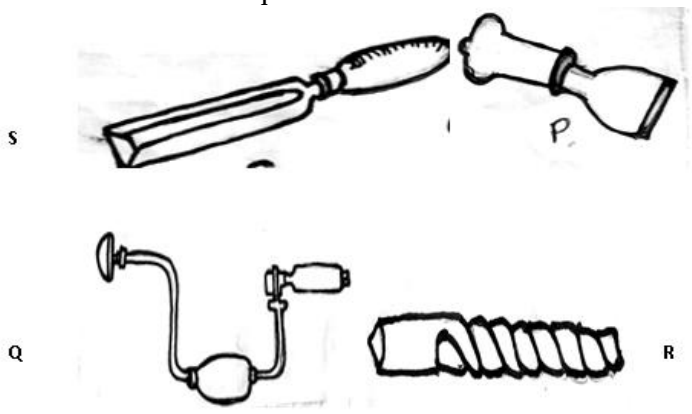
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SECTION B (20 marks)

Answer all questions in this section

20. If the maize meal contains 6% Digestible Crude Protein (DCP) and Fish meal contains 64% DCP, calculate the amount of each feed stuff in kilograms, required to Prepare 200kg of chick mash containing 18% DCP (Show your working) **(4mks)**

21. Study the farm tools below and answer the questions that follow



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(a) Identify the farm tools labeled S, P, Q and R **(2mks)**

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(b) State the use of each of the tools labeled S and P **(1mk)**

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(c) Give **two** safety precaution that should be taken when using the pair of tools Q and R above **(1mk)**

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(d) State **two** maintenance practices which should be carried out on the tool Q **(1mk)**

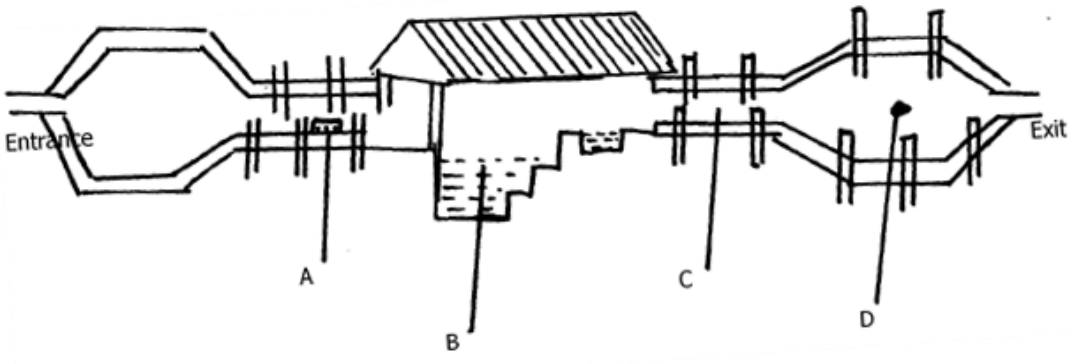
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22. The diagram below shows parts of a plunge dip.



i) Name parts A, B, C and D **(2mks)**

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ii) Give **two** reasons why cattle are held for some time in part C. **(2mks)**

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iii) State **two** maintenance practices carried out on part B. **(2mks)**

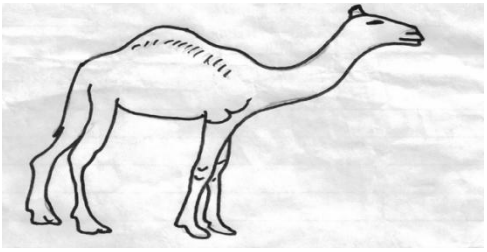
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23. Study the illustration of a camel below and answer the questions that follow



(a) Name the species of camel shown above **(1mk)**

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(b) Name the environmental condition under which the camel above survives better **(1mk)**

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(c) Give **two** reasons which make it possible for the livestock to survive in such environment **(2mks)**

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(d) Name another species of camel other than the one above **(1mk)**

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SECTION C (40MARKS)

Answer any two questions

24(a) Explain factors to consider during selection of a breeding stock. **(10mks)**

(b) Give reasons for maintaining a healthy stock on the farm **(10mks)**

25(a) Explain **ten** effects of strong wind on crop production. **(10mks)**

(b) Describe **ten** cultural or biological methods of controlling soil erosion. **(10mks)**

26 a) Draw the differences between the digestive system of a ruminant and a non-ruminant **(5mks)**

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

(c) State **ten** safety precautions which should be taken when using

Workshop tools in order to prevent injury **(10mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM 2
BIOLOGY – PAPER ONE (231/1)
FORM THREE (3)
Time - 2 Hours

Instructions to candidates:

- Write your name, class and admission number in the space provided above.
- Write the date of the examination and sign in the space provided above.
- Answer **all** the questions in the spaces provided.
- You may be **penalized** for wrong spelling, especially of technical terms.

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1-31	80	

1. State two environmental problems that can be solved by studying biology. **(2mks)**

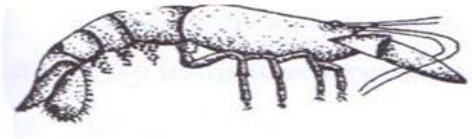
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2. Below is a photograph of an organism.



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(i) Identify the class to which this organism belongs. **(1mk)**

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(ii) Give reasons for your answer in (i). **(2mks)**

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3. Account for the difference in amount of energy yielded by aerobic and anaerobic respiration. **(3mks)**

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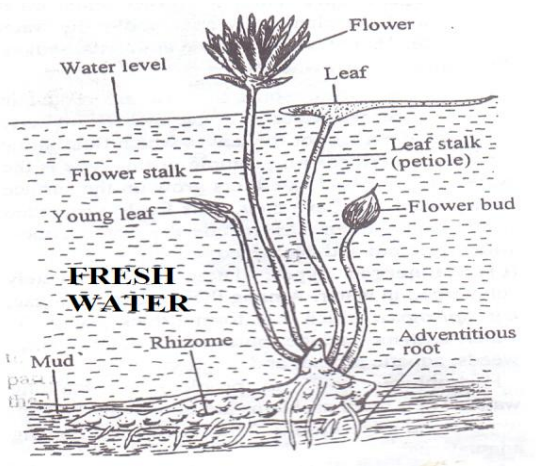
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4. The photograph illustrates an organism found in aquatic habitat.



(a) Give the type of the plant. **(1mk)**

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(b) Describe **three** adaptations of the organism to its habitat. **(3mks)**

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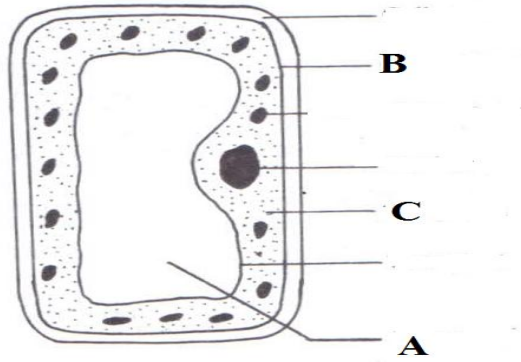
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5. Below is the basic functional unit of an organism.



State the functions of the parts labeled:

(i) **A……** **(1mk)**

(ii) B…… **(1mk)**

(iii) **C……** **(1mk)**

6. A student smeared the abdomen of a locust with Vaseline.

(a) What were the likely results after ten minutes? **(1mk)**

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(b) Account for the results obtained above. **(2mks)**

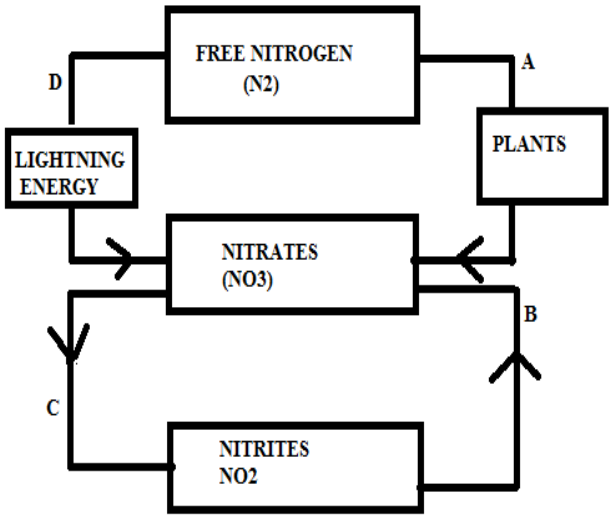
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7. Use the illustration below to answer questions that follow.



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(a) Name the processes labeled:

(i) B……. **(1mk)**

(ii) C…….. **(1mk)**

(b) Name the site where process **A** occurs. **(1mk)**

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(c) Explain why process C is not beneficial to plants. **(1mk)**

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8. What is the significance of photolysis? **(2mks)**

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9. The following table shows the volume of gases carried by $100cm^3$ of blood.

Gas	Blood entering lungs	Blood leaving lungs
Nitrogen	0.9 cm^3	0.9 cm^3
Oxygen	10.6 cm^3	19.0 cm^3
Carbon (IV) oxide	58.0 cm^3	50.0 cm^3

(a) Which blood has a higher content of carbon (IV) oxide? **(1mk)**

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(b) Explain the difference in the content of oxygen and carbon (IV) oxide in blood entering the lungs and that leaving the lungs. **(2mks)**

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10. State the function of the following apparatus.

(i) Specimen bottle **(1mk)**

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(ii) Bait trap **(1mk)**

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11. Name the causative agents of the following diseases:

(a) Cholera…… **(1mk)**

(b) Malaria …… **(1mk)**

12. Explain why young onion root tip is ideal for examining the stages of mitosis. **(1mk)**

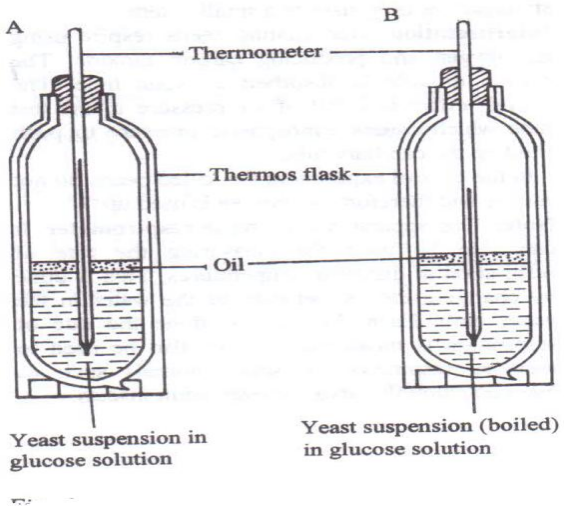
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13. Below is a set up to investigate a certain phenomenon.



(a) State the aim of the experiment. **(1mk)**

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(b) Account for the observations made after 30 minutes in set-up A **(2mks)**

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14. State the characteristics that can separate the following organisms into respective classes.

Millipede, tsetse fly, and spider. **(3mks)**

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15. Name the blood vessel that transports blood from:

(i) Heart to the lungs **(1mk)**

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(ii) Small intestines to the liver **(1mk)**

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16.a) State the role of light in the process of photosynthesis **(1mk)**

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b) Name one of the end products of dark reaction in photosynthesis **(1mk)**

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17. Give any two benefits of transport in plants **(2mks)**

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18.(a) Form three students carried out a practical activity to estimate the number of tsetse flies in a small bush near the school. At first they caught 600 tsetse flies, marked, and released them. After five days they caught 500 tsetse flies of which 200 had been marked.

i) Calculate the tsetse flies population in the study area. **(3mks)**

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(b) State one abiotic and one biotic factors that influence tsetse fly population in a bush. **(2mks)**

i) Abiotic factors

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ii) Biotic factors

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

(i) Coarse adjustment knob. **(1mk)**

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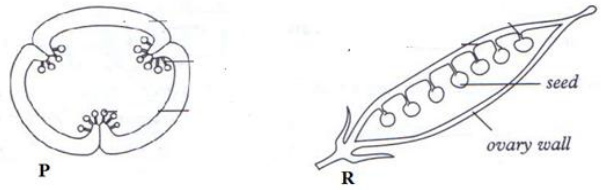
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(ii) Condenser. **(1mk)**

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20. Below are photographs of fruits

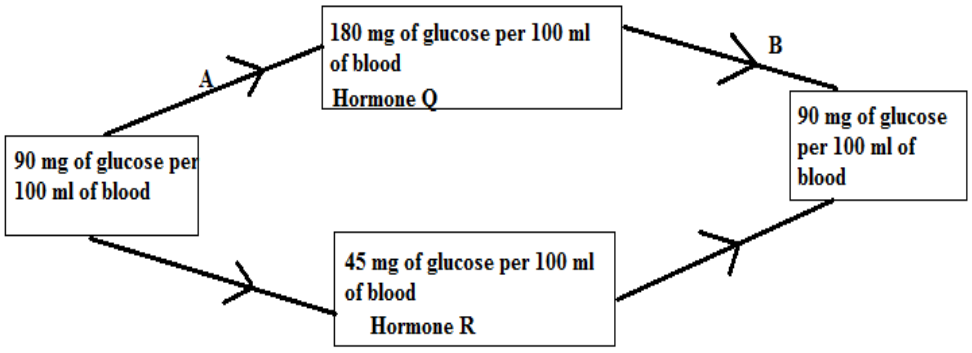


Identify the type of placentation shown above.

(i) P……. **(1mk)**

(ii) R……. **(1mk)**

21. Use the diagram below to answer questions that follow.



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(a) Name the feedback mechanism labeled B. **(1mk)**

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(b) Identify hormone **R** **(1mk)**

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22. Show that you understand the terms below as used in describing flowers.

(i) Polypetalous. **(1mk)**

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(ii) Staminate flowers. **(1mk)**

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23. Name ***three*** food substances acquired by herbivores feeding on green sprouting grass exposed to maximum sunlight during the day. **(3mks)**

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24. Define the following concepts of ecology

(i) Ecological niche. **(1mk)**

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(ii) Biomass. **(1mk)**

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25. A certain animal has no incisors, no canines, 6 premolars and 6 molars in its upper jaw while in its lower jaw there are 6 incisors, 2 canines, 6 premolars and 6 molars.

(a) Write its dental formula. **(1mk)**

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(b) Identify the mode of nutrition of the organism. **(1mk)**

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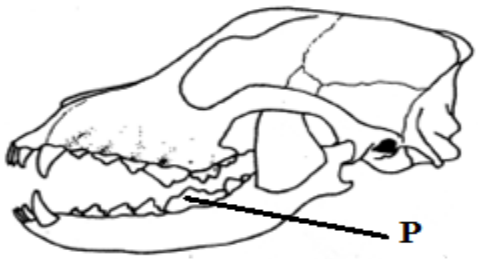
(c) Give a reason for your answer in (b) above. **(1mk)**

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26. The photograph below shows a skull of an organism



(i) Name the tooth labeled **P** and give its function. **(2mks)**

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27. State one roles of an acrosome. **(1mk)**

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28. Distinguish between

(i) cytology and entomology. **(1mk)**

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(ii) botany and zoology. **(1mk)**

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29. Explain the importance of the following processes when making microscopic sections:

(i) Cutting very thin sections. **(1mk)**

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(ii) Using a sharp scalpel to cut thin sections. **(1mk)**

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30. Describe how the granum is adapted to its photosynthetic function. **(2mks)**

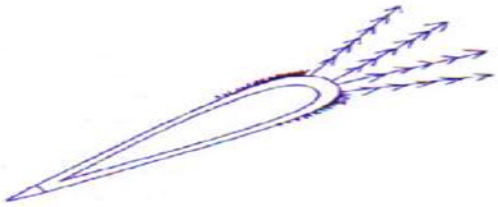
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31. Below is a photograph of a fruit.



(a) State the agent of dispersal of the fruit. **(1mk)**

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

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PROGRESSIVE STUDENTS FORM THREE END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

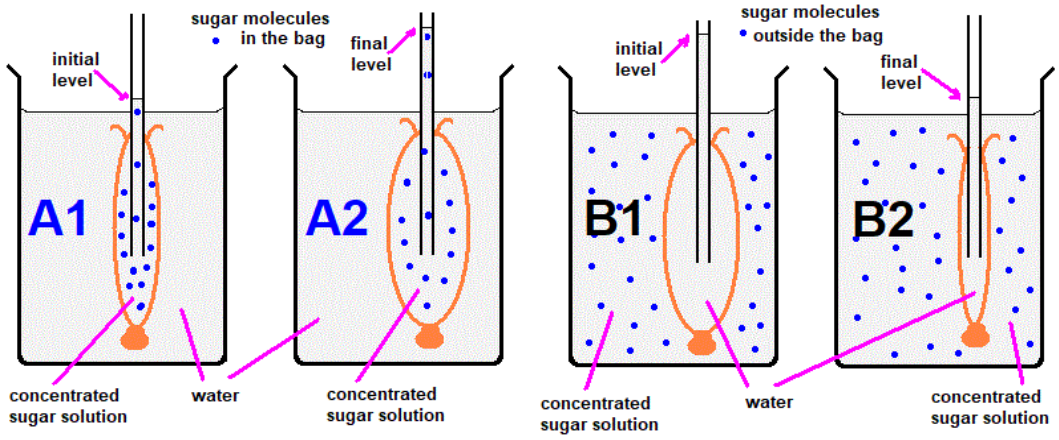
TERM 2
BIOLOGY – PAPER TWO (231/2)
FORM THREE (3)
Time - 2 Hours
INSTRUCTIONS

1. This paper has **two** sections: **A** and **B.**
2. All Questions in **Section A** are **compulsory.**
3. Question 6 is **compulsory.**
4. Choose one question between questions 7 or 8.
5. Write your answers in the spaces provided after each question.
6. Wrong spelling of technical terms shall be **penalized**.

Section	Question	Max Score	Student's Score
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7 or 8	20	
TOTAL SCORE		80	

SECTION A (40 Marks)

1. Form 2 students set out to study a physiological process by leaving set-ups **A1** and **B1** to stand for 30 minutes after which results were obtained as seen in **A2** and **B2** respectively.



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a) i) Name the physiological process that was being investigated. **(1mk)**

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ii) State **two** factors that affect the rate of the physiological process named in a (i). **(2mks)**

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b) Account for the observations made in:

i) A2 **(2mks)**

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ii) B2 **(2mks)**

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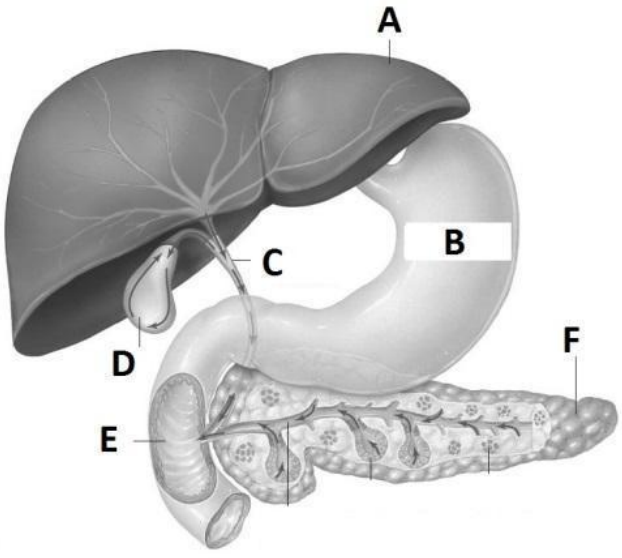
c)How is the process being investigated important in ensuring support in seedlings? **(1mk)**

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2. The following diagram is a section of the alimentary canal and its associated organs. Use it to answer questions that follow.



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a) Explain how organ **A** is important to the digestion processes in region **E**. **(2mks)**

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b) State **two** functions of muscles in the region marked **B.** **(2mks)**

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c)i) Name a hormone that is released by region **E.** **(1mk)**

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ii) What is the effect of the hormone named in c (i) on the organ labeled **F**? **(1mk)**

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d) Explain how structure **F** is important in lowering sugar level in the blood. **(2mks)**

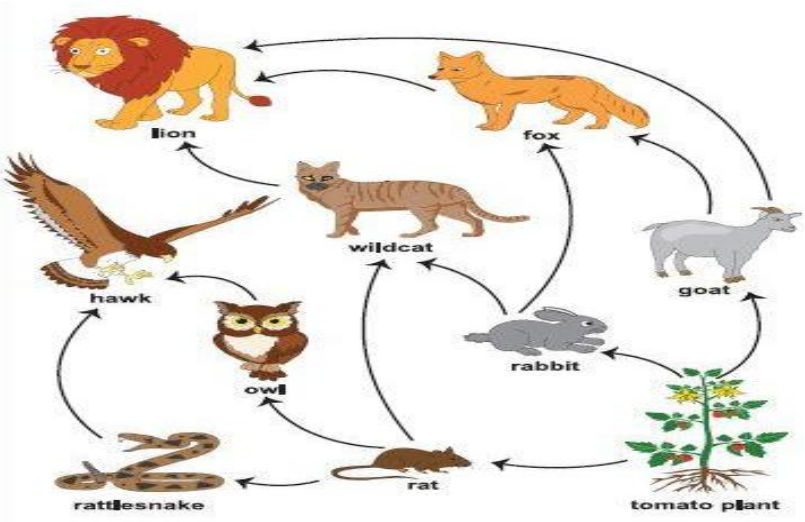
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3. A feeding relationship in an ecosystem is as shown below.



a) From the diagram above, write a food chain with Lion at the third energy level **(1mk)**

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b) Which **two** animals are the top predators from the relationship above? **(2mks)**

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c) Name an important member of an ecosystem missing in the above diagram and state its role. **(2mks)**

Name: ……..

Role: ……

d) Why is it important to have the population of tomatoes to be the highest in the ecosystem represented above? **(1mk)**

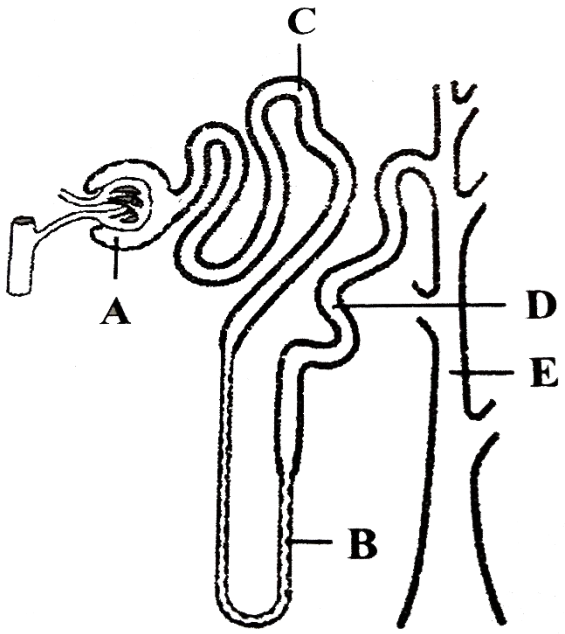
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e) The following biomass was established for a few of organisms: Rat (100g/m^2); Hawk (10g/m^2); Tomatoes (150g/m^2) and Owl (50g/m^2). Construct a pyramid of biomass. **(2mks)**

4. An illustration of the kidney nephron is shown below



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a) Name the parts labeled: **(2mks)**

i) A ……..…… …….

ii) C ……..…

b) i) Why is the amount of urea in the renal fluids higher in **E** than in **B**? **(1mk)**

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ii) How does the pituitary gland influence the function of part **D** when the osmotic pressure of blood is high above normal. **(3mks)**

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c)State **two** ways in which surface area is increased in the structure labeled **C** for effective function **(2mks)**

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5. Use the leaf specimens provided below to answer the questions that follow



M **N** **P** **Q** **R**

a) With a reason, name the class to which the plants with the leaves N and R belong:

i) N: Class …… ……..…… **(1mk)**

Reason **(1mk)**

……

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ii) R: Class ……..……..……. **(1mk)**

Reason **(1mk)**

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b) Using the features and sequence given below, construct a dichotomous key to identify the leaf specimens above.

(4mks)

1. Type of leaf

2. Venation

3. Leaf margin

4. Type of Compound leaf

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SECTION A (40 MARKS)

*Question 6 is **compulsory**, Choose either Question 7 or Question 8.*

6. The table below shows the result of an experiment on an enzyme-controlled reaction.

Temperature (°C)	ate of Product Formation (Mg/unit Ti
5	2
10	5
15	8
20	11
25	15
30	21
35	30
40	37
45	34
50	28
55	21
60	11

a) Name the enzyme formed if the following were the products from the reaction: **(2mks)**

i) Fibrin ……..……..

ii) Glucose and Galactose ……

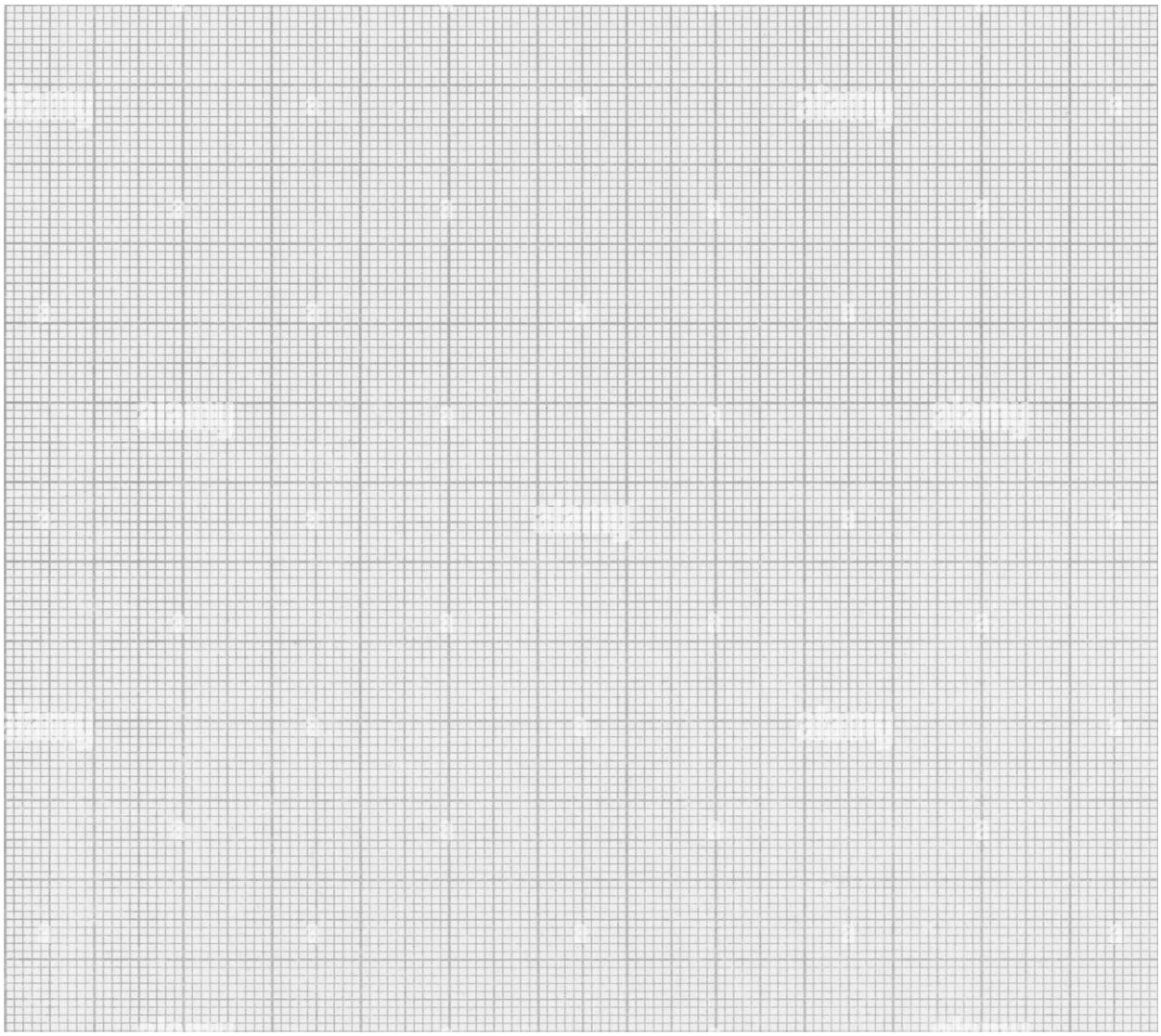
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b) Determine the rate of product formation was at the following temperature: **(2mks)**

i) 23ºC ……

ii) 48ºC ……

c) On the graph provided draw a graph of rate of product formation against change in temperature **(6mks)**



d) Account for the rate of product formation between the following temperatures:

i) 0 ºC - 5 ºC **(2mks)**

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ii) 50 ºC - 60 ºC **(2mks)**

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e) State **two** factors that can increase the rate of product formation at 40 ºC temperature. **(2mks)**

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f) Explain **four** properties of enzymes that enhance efficiency in metabolic processes. **(4mks)**

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7. a) Describe how various factors increase the rate of respiration in animals. **(8mks)**

b) Describe how the dermis layer adapts the mammalian skin to its functions. **(12mks)**

8. a) Explain the economic importance of members of Kingdom Fungi. **(14mks)**

b) Describe the various ways in which proteins are important to the functioning of the human body. **(6mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

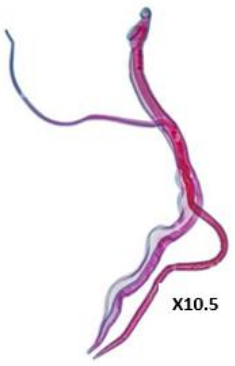
TERM 2
BIOLOGY – PAPER THREE (231/3)
FORM THREE (3)
Time - 2 Hours

INSTRUCTIONS

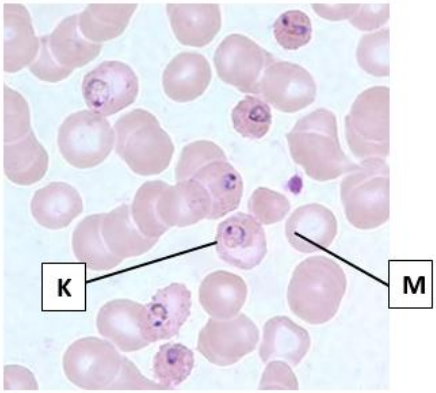
1. This paper consists of **THREE** questions that must all be attempted
2. You are required to spend the first **15minutes** of the time allocated to read through the questions before beginning the practical examination.
3. Write your Answers in the Spaces Provided
4. Wrong Spelling of Technical Terms shall be **Penalized**

QUESTION	MAX SCORE	STUDENT'S SCORE
1	15	
2	11	
3	14	
TOTAL	40	

1. The photographs below show two different types of parasites that affect human beings. Parasite **K** is present in Cell **M** as seen in photograph **Y**.



PHOTOGRAPH **X**



PHOTOGRAPH **Y**

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a) Name the following from the photographs above **(3mks)**

i) Parasite in Photograph **X** ……..……..……..

ii) Vector in Photograph **X** ……..……..

iii) Vector of parasite **K** ……

b) With a reason, give the identity of the cell labelled **M** **(2mk)**

Name**……..**

Reason

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c) State **TWO** observable adaptations that make parasite in picture **X** a successful parasite **(2mks)**

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d) Why does infection by parasite **K** quickly leads to anaemia in children **(1mk)**

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e) On the photograph **X** label the following **(2mks)**

i) Female parasite

ii) Sucker

f) i) Name the disease caused by parasite **K** **(1mk)**

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ii) State **TWO** measures a mother can use to prevent the spread of the disease named in g.i) above from an infected child to other children in the same house. **(2mks)**

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g) From photograph **X** shown, determine the actual length of the female parasite. **(2mks)**

2. You are provided with specimen labelled **Q**. Use it to answer the questions below

a) i) Name the class in which the plant from which the specimen was obtained belongs to **(1mk)**

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ii) Give **TWO** reasons for your answer in ai) above **(2mks)**

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b) Describe the following floral features of specimen **Q** **(2mks)**

Floral Feature	Description
Petals	
Gynoecium	

c) i) Name the type of pollination the flower in specimen **Q** experiences **(1mk)**

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ii) Give **TWO** observable adaptations to support your answer in ci) above **(2mks)**

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d) In the space provided below, draw **ONLY** the essential parts of the flower in specimen **Q** then label the various parts drawn. **(3mks)**

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3. You are provided with Specimen **L**, Solution **P**, Specimen **N** and various reagents.

a) i) Into a boiling tube labelled **A** place one piece of the specimen **N** then add 2ml of Hydrogen peroxide and immediately cover the mouth of the boiling tube using your thumb. Light a wooden splint then put off the flame and slowly uncover the mouth of the boiling tube and carefully lower the glowing splint into the boiling tube and note your observation in the table below. Boil a piece of specimen **N** in a test tube containing 2ml of water for 5minutes, transfer the boiled piece of specimen **N** into boiling tube labelled **B** then repeat the procedure carried out on boiling tube **A** after which note your observations in the table below. **(2mks)**

BOILING TUBE	OBSERVATION
A	
B	

ii) Account for the observation made in the two boiling tube **B** **(2mks)**

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iii) Write a word equation for the reaction in boiling tube **A** **(1mk)**

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b) Separately label two clean boiling tubes as **C** and **D**. Using pestle and mortar, mash the remaining piece of specimen **N** and place into boiling tube labelled **C**. Mash a cube of specimen **L** measuring 1 cm all sides then place in a boiling tube labelled **D**. Into each boiling tube add 2ml of Hydrogen Peroxide then make observation on the effervescence.

Account on the difference in the amount of effervescence observed **(3mks)**

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c) i) Using the reagents provided, carry out the tests indicated below on Solution **P** and provide your observations and conclusions under the column labelled 'before experiment'. Cut a cube measuring 1cm every side from Specimen **L** then dip it in 2ml of Solution **P** in a test tube and let the experiment stand for 30 minutes after which

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carry out the tests indicated on the solution and provide your observations and conclusions in the column labelled 'after experiment' in the table below. **(4mks)**

TEST	BEFORE EXPERIMENT		AFTER EXPERIMENT	
	Observation	Conclusion	Observation	Conclusion
Iodine				
Benedict's				

ii) From the results obtained above account for the results obtained after Iodine test was done **(2mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM TWO

565/1- BUSINESS STUDIES

FORM THREE

Time: 2½ Hours

INSTRUCTIONS TO CANDIDATES

a) Write your name and Index number in the spaces provided above.

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

c) Answer **ALL** the questions.

d) **ALL** answers must be written in the spaces provided in this booklet.

FOR EXAMINER'S USE ONLY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13
Marks													

Question	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL
Marks													

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Section A – 72 Marks (Answer all questions in this section)

1. Outline **four** elements that may comprise the external environment of a business. **(4mks)**

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2. State **four** benefits that a farmer may derive from being a member of a producer co-operative society. **(4mks)**

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3. A lucrative business has been consistently releasing toxic wastes into the neighbourhood. Outline **four** measures you can take to stop the firm from such malpractices. **(4mks)**

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4. Give **four** reasons why a person would send a message by mail rather than by telephone. **(4mks)**

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5.Give **four** factors that may encourage entrepreneurship development in Kenya today. **(4mks)**

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6. Ouma, a trader at Nangina Marketing Centre in Busia County sells cows but does not know how to determine the best prices for his commodities. Advice him on **four** methods of achieving this objective. **(4mks)**

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7. Outline **four** main problems encountered towards the satisfaction of human wants in the Kenyan economy.(**4mks)**

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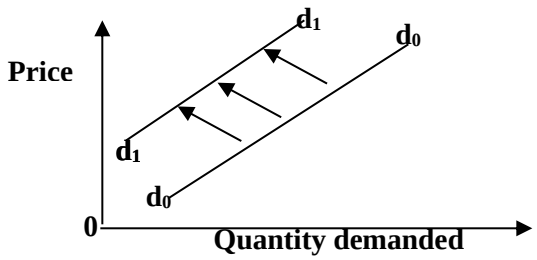
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8. Study the diagram below and answer the questions below.



State **four** possible factors which might have caused the shift in the demand curve above **(4mks)**

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9. Your father would like to take life assurance cover with the insurance company. Advise him on why he should undertake an endowment policy than a whole-life policy. **(4mks)**

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10. Highlight **four** circumstances under which air transport is suitable over other means of transport. **(4mks)**

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11. Highlight **four** ways that a manager can adopt to improve the productivity of labour. **(4mks)**

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12. Give **four** main benefits of establishing an electronic filing system in an organization. **(4mks)**

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13. Outline **four** circumstances that necessitate the use of shorter channels of distribution over longer channels in rural Kenya. **(4mks)**

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14. Draw **four** main problems associated with use of output approach by the government in measuring and determining the level of its national income **(4mks)**

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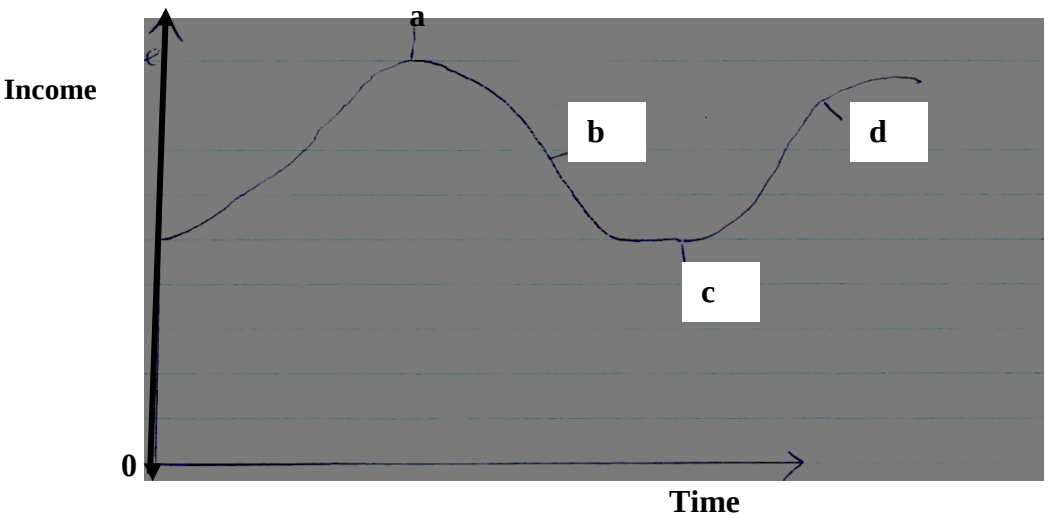
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15. Study the diagram below on cyclical unemployment and answer it by giving an appropriate term to the letters indicated. **(4mks)**



a ..... **c** .....

b ..... **d** .....

16. Identify **four** circumstances under which utility is created in a commodity within a firm. **(4mks)**

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17. Under what **four** circumstances would cheque payment be preferred more than cash payment? **(4mks)**

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18. Identify **four** common documents in home trade that are used for credit transactions in the Delivery stage.

(4mks)

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SECTION B – 28 Marks

(Answer question 19 and any other one question in this section)

19.(a) Fill in the table below. **(5mks)**

Fixed Assets	Current Assets	Long Term Liabilities	Current Liabilities	Capital
42,360	12,230		2,780	45,000
	234,510	67,455	56,470	456,780
123,670	234,170	34,700	56,600	
365,700		155,800	176,800	457,950
978,340	978,500	543,000		1,250,000

(b) The following balances were extracted from the books of Kazuri Enterprises on 31st December 2021.

Machinery	243,250.	Furniture	125,345.
Creditors	495,000.	Building	845,000.
Cash	148,650	Bank Overdraft	85,250.
Stock	745,400	Debtors	135,400.
4-year Bank Loan	650,000.		

The following transactions took place during the month of January 2022.

January 2	Received a cheque of Shs 57,450 from a debtor.
January 5	Sold goods worth shs 120,000 for shs. 232,000 duly banked.
January 12	Sold part of machinery worth shs 43,250 for 40,000 cash.
January 15	Paid a creditor shs. 200,000 by cheque.
January 20	Banked shs 150,000 from the cash till.

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Required:

(i) Kazuri Enterprises balance sheet as at 31st December 2021. **(6mks)**

(ii) Kazuri Enterprises balance sheet as at 31st January 2022. **(7mks)**

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20. (a) Highlight five channels for distributing fish from Lake Victoria to the Kenyan consumer. **(5mks)**

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(b) Give five importance of the Nairobi security market to the Kenyan economy. **(5mks)**

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21. (a) Highlight five merits of localization of industries. **(5mks)**

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(b) Businesses are currently employing new product promotional strategies as a way of boosting their sales volumes. Identify five such strategies. **(5mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

565/2
BUSINESS STUDIES
PAPER 2
FORM THREE
END TERM 2 EXAM
TIME: 2 ½ HOURS

INSTRUCTIONS:

Answer any five questions only.
All your answers must be written in the answer sheets provided.

1. (a) Explain five factors to consider when choosing a method of product promotion. **(10mks)**

(b) Explain five principles of insurance. **(10mks)**

2. (a) Describe five services rendered by retailers to consumers. **(10mks)**

(b) Despite the economies of scale enjoyed by large firms, some firms continue to operate on small scale basis. Explain five reasons. **(10mks)**

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3. (a) Explain five measures that would be taken to ensure smooth functioning of a warehouse. **(10mks)**

(b) The balances below were extracted from the books of Romano Traders as at 1st May, 2023

	Shs
Equipment	320,000
Stock	180,000
Bank	104,000
Cash	20,000
Capital	544,000
Creditors	80,000

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During the first week of May 2023, the following transactions took place.

May, 2023

May 2 - Romano Traders introduced additional funds into the business by depositing sh 76,000 into business bank account.

May 3 - Purchased a motor vehicle from CMC Motors worth sh 400,000 on credit.

May 5 - Paid a Creditor sh 12000 Cash

May 6 - Sold goods on credit to Wafula Sh 50,000

May 7 - Bought equipment Sh 100,000 by cheque.

Required:

Prepare the balance sheet of Romano Traders as at 7th May, 2023 showing the items in their relevant classes. **(10mks)**

4. (a) Explain five problems encountered when using the expenditure approach to compute national income. **(10mks)**

(b) Discuss five factors that may promote entrepreneurship in Kenya. **(10mks)**

5. (a) With the aid of a well labeled diagram, explain the effect on the equilibrium price and quantity when the supply of cabbages increases. **(10mks)**

(b) Explain five ways in which internal environment may contribute to the success of a business enterprise,. **(10mks)**

6. (a) Explain five reasons why human beings make choices on the wants to be satisfied. **(10mks)**

(b) On 1st September 2022, Mamboleo had Sh 55,000 in cash and sh 250,000 at bank. during the month, the following transactions took place.

September:

2nd - Cash sales banked Sh 35,260

3rd - Bought ribbons in cash sh 4,500

8th - Paid Wangila, a creditor Sh 94,000 by cheque in full settlement of his account after deducting 6% cash discount.

12th - Received a cheque for sh 58,800 from Wetu after allowing her a cash discount of sh 1,200

15th - Paid salaries Sh 34000 in cash

25th - Withdrew Sh 50,000 from bank for office use.

28th - Anyango, a debtor paid her account of sh 75,000 by cheque less 10% cash discount.

30th - Deposited all the cash into bank except sh 13,700

Required:

Prepare a three column cash book and balance it off. **(10mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM 2
CHEMISTRY – PAPER ONE (233/1)
FORM THREE (3)
Time - 2 Hours
Instructions to candidate

a) Write your name, admission number, and stream in the spaces provided.

b) Answer **ALL** questions in the spaces provided.

c) All working **MUST** be clearly shown where applicable.

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

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

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Question	Maximum Score	Candidate's Score
1 – 28	80	

1. Hydrogen is a **group I** element:

(a) It is the lightest known element but cannot be used in hot air balloons. Explain **(1mk)**

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(b) State any one use of hydrogen gas which is also a use of carbon (II) oxide gas **(1mk)**

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2. A piece of burning magnesium was lowered into a gas jar of nitrogen gas, and it was observed to be burning even brighter.

(a) Explain this observation **(1mk)**

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(b) Write an equation for the reaction which took place in the gas jar in **(a)** above **(1mk)**

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(c) Water was added to the product formed above and the resultant solution was tested with litmus paper. State and explain the observation that was made. **(2mks)**

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3.

(a) What is a saturated solution? **(1mk)**

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(b) Describe a laboratory procedure that can be used to determine that a given solution is saturated. **(2mks)**

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4. Trona is a double salt that contains sodium carbonate and sodium hydrogen carbonate. It exists in alkaline lakes, mixed with sodium chloride. Name the method of separation that is used to obtain it from its mixture with sodium chloride. **(1mk)**

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5. Using the listed reagents only, describe the steps that can be used to obtain a dry sample of lead (II) sulphate in the laboratory: lead (II) carbonate powder, sodium sulphate solution, and dilute nitric (V) acid solution. **(3mks)**

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6. Iron (II) bromide can be prepared in the laboratory by passing dry bromine vapour over hot iron wool.

(a) Name this method of salt preparation **(1mk)**

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(b) Iron (II) bromide must be prepared in a dry environment. Explain. **(1mk)**

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(c) During this preparation, calcium oxide is preferred to anhydrous calcium chloride as a drying agent. Explain. **(1mk)**

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7. When iron filings and sulphur powder are put together in a glass beaker, the resultant substance is only said to be a mixture. When the beaker is heated gently, a red glow is observed, and the resultant substance is now said to be a compound.

(a) Explain these observations. **(2mks)**

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(b) State any characteristics of the type of change that occurs when the glass beaker is heated **(2mks)**

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8.

(a) State Charles' Law. **(1mk)**

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(b) An L.P.G. gas cylinder had gas which occupied 300cm^3 when the warehouse temperature was 47^{o}C. what volume will the gas occupy when the warehouse temperature is reduced to the s.t.p. in readiness for refilling? **(2mks)**

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9. 15cm^3 of an acid with the formula $\mathbf{H_2Y}$ required 25cm^3 of 0.1M NaOH for complete neutralization.

(a) How many moles of sodium hydroxide reacted with the acid? **(1mk)**

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(b) Calculate the concentration of the acid in moles per litre. **(2mks)**

10. An oxide of element **Q** has the formula Q_2O_3.

(a) State the valency and oxidation number of element **Q** **(1mk)**

Valency_____Oxidation number _____

(b) What is the most likely structure of the compound Q_2O_3? **(1mk)**

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11. Distinguish the term 'allotrope' from 'isotope'. **(2mks)**

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12. A hot piece of aluminium metal was lowered into a gas jar of chlorine gas. The resulting residue was mixed with water and filtered. 3 drops of methyl orange indicator were added to the filtrate.

(a) State and explain the observation made when methyl orange was added to the filtrate. **(2mks)**

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(b) Name the process that occurred when the residue was added to water **(1mk)**

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13. A hydrated salt has the following composition by mass: Iron 20.2%, Oxygen 23.0%, sulphur 11.5% and the rest is water. Determine the formula of the hydrated salt (Fe = 56, S = 32, O = 16, H = 1) **(3mks)**

14. A sample of the compound CH_3CCH was burnt in the laboratory. State and explain the observations made during the burning process. **(2mks)**

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15. Concentrated hydrochloric acid was added to potassium manganate (VII) crystals in flat bottomed flask. The gas produced was bubbled through water.

(a) State the colour of solution formed **(1mk)**

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(b) Blue litmus paper was dipped into the solution. State and explain the observation made. **(2mks)**

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(c) Write an equation for the reaction that occurred in **(b)** above. **(1mk)**

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16. Solid **W** is a white crystalline substance. It readily dissolves in water to form a colourless solution. It melts at low temperature to yield a liquid that does not conduct electricity. Its solution does not cause a bulb to light when inert electrodes are introduced. State and explain the most likely structure of solid **W**. **(2mks)**

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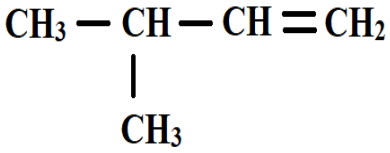
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17. Study the compound shown and use it to answer the questions that follow.



(a) To which homologous series does the compound belong? **(1mk)**

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(b) State the IUPAC name of the compound **(1mk)**

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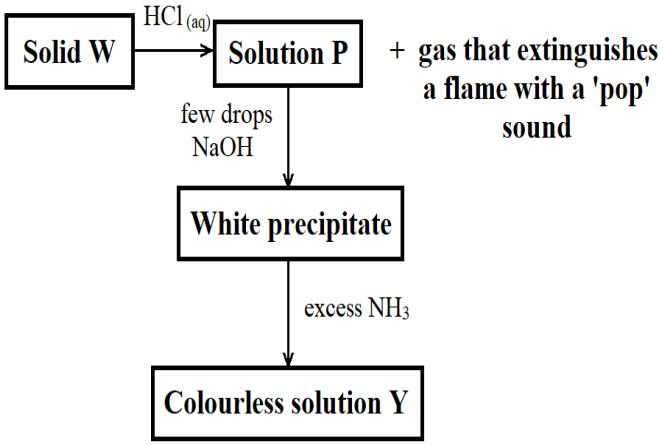
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(c) Draw the structure of any isomer of the compound. **(1mk)**

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18. A form three student weighed a piece of plain paper and wrote his name on it using a pencil of pure graphite. He then re-weighed the paper and obtained the following results:
Mass of plain paper = 1.042g
Mass of paper after writing = 1.143g
Determine the number of carbon atoms present in the pencil marks (C = 12.0, L = $6.023X10^{23}$) **(2mks)**

19. The scheme below shows a series of reactions, starting with a solid **W**.



(a) Identify solid **W** **(½mk)**

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(b) Write an equation for the reaction that occurs between solid **W** and dilute hydrochloric acid **(1mk)**

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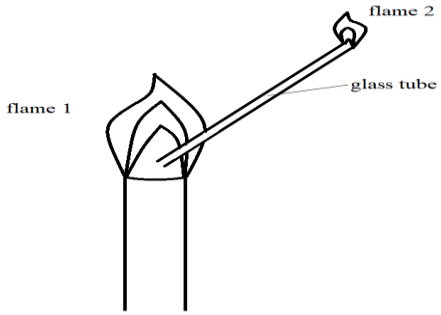
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(c) Write the formula of the complex ion present in solution **Y**. **(½mk)**

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20. The setup below was arranged and used to study the characteristics of a Bunsen burner flame.



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(a) What does the experiment show? **(1mk)**

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(b) Name the type of flame labelled **flame 1**. **(1mk)**

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(c) What type of flame is shown by **flame 2**? Explain. **(2mks)**

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21. Some potassium carbonate of unknown mass was dissolved in water and the solution made up to the $250cm^3$ mark. $25cm^3$ of this solution neutralized $20cm^3$ of 0.25M nitric (V) acid solution. Determine the unknown mass of potassium carbonate used. (K = 39, O = 16, C = 12) **(3mks)**

22.

(a) State Gay Lussac's Law. **(1mk)**

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(b) What volume of a hydrocarbon gas (CH_4) would remain if a burner containing $40cm^3$ of the gas burns in $40cm^3$ of enclosed air? (Assume oxygen is 20% by volume of air) **(2mks)**

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23. During the laboratory preparation of carbon (II) oxide, an acid **G** is added to solid substance **L**. The product is bubbled through concentrated potassium hydroxide solution, and carbon (II) oxide gas collected over water.

(a) Name:

(i) Acid **G** _____ **(1mk)**

(ii) Solid **L** _____ **(1mk)**

(b) What is the role of the concentrated potassium hydroxide solution? **(1mk)**

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(c) What would be observed if the concentrated potassium hydroxide solution was replaced with calcium hydroxide solution? **(1mk)**

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24. Organic compounds CH_3CH_2OH and $CH_3CH_2CH_2CH_3$ have close molecular masses.

However, CH_3CH_2OH exists as a liquid at room temperature, while $CH_3CH_2CH_2CH_3$ exists as a gas at room temperature. Explain this observation **(2mks)**

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25. Element **R** has two isotopes $^{69}_{31}\mathbf{R}$ and $^{71}_{31}\mathbf{R}$ the percentage composition of the isotope with lower mass is 60%.

(a) Calculate the R.A.M. of **R**. **(2mrks)**

(b) Isotopes have similar chemical properties but may have different physical properties. Explain this observation. **(2mks)**

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26. A 5.0g of an alloy of platinum and zinc was reacted with excess dilute hydrochloric acid. 840cm^3 of hydrogen gas was evolved at s.t.p. Calculate the percentage of zinc in the alloy.
(Zn = 56, molar gas volume at s.t.p. = 22400cm^3). **(3mks)**

27. When a few drops of aqueous ammonia are added to a copper (II) nitrate solution, a pale blue precipitate is formed. On addition of more aqueous ammonia, a deep blue solution is formed.

(a) Identify the pale blue precipitate **(1mk)**

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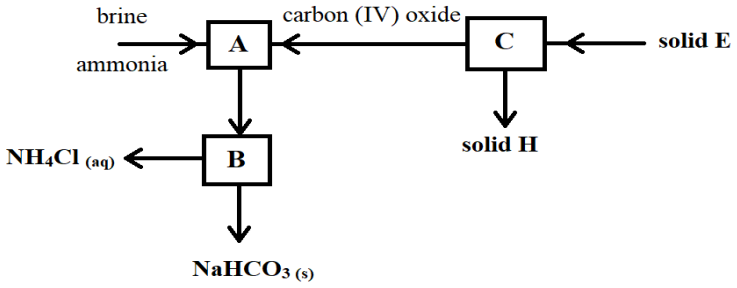
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(b) Write the formula of the complex ion present in the deep blue solution **(1mk)**

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28. The diagram below shows a part of the Solvay Process



(a) Write the overall equation for the reaction that takes place in **A** **(1mk)**

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(b) Name solid **E** **(1mk)**

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(c) State any **one** use of solid **H** **(1mk)**

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(d) Name any one apparatus/material that can be used in the laboratory to carry out the process that takes place in chamber **B** **(1mk)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM 2
CHEMISTRY – PAPER TWO (233/2)
FORM THREE (3)
Time - 2 Hours

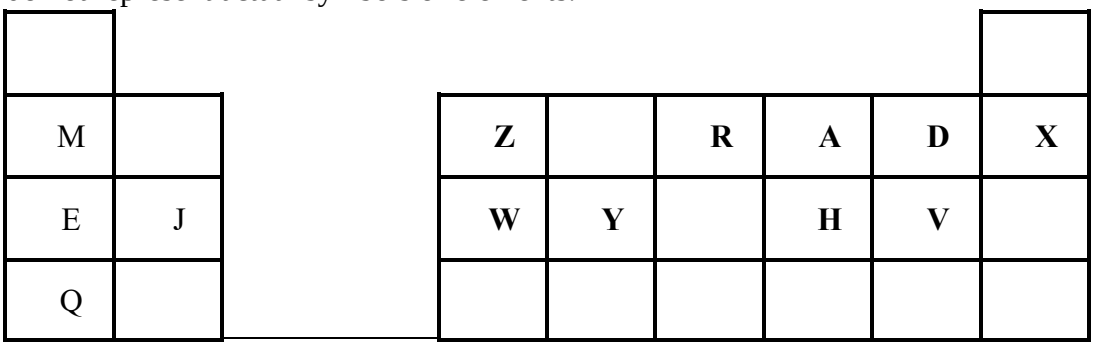
Instructions to candidate

a) Write your name, admission number, and stream in the spaces provided.
b) Answer **ALL** questions in the spaces provided.
c) All working **MUST** be clearly shown where applicable.
d) KNEC mathematical tables and silent non-programmable electronic calculators may be used.
e) The candidate should check the question paper to ascertain that all the pages are printed as indicated and that no question is missing.

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Question	Maximum Score	Candidate's Score
1 – 8	80	

1. Below is a grid representing part of t]he periodic table. Study it and use it to answer the questions that follow. The letters do not represent actual symbols of elements.



(a) Compare the atomic radii of **M** and **A**. Explain **(2mks)**

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(b) Using dots and crosses to represent elements, show the bonding in the compounds formed between atoms of:

(i) D to form a molecule **(2mks)**

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(ii) W and **V** **(2mks)**

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(iii) 6 atoms of **M** **(2mks)**

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(c) State **two** attributes of element **W** that makes it the preferred material for use in making overhead power cables **(2mks)**

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(d) Element **W** was heated in the presence of chlorine gas. The residue was dissolved in water. State and explain the observations made when a spatula of sodium hydrogen carbonate is added to the resultant solution. **(2mks)**

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(e) A burning sample of element **J** was lowered into a gas jar of carbon (IV) oxide.

(i) State and explain the observation made **(2mks)**

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(ii) Write an equation for the reaction that took place in the gas jar **(1mk)**

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2. During the laboratory preparation of hydrogen gas, 3g of Zn metal was added to $50cm^3$ of 1.5M hydrochloric acid solution. The following information was indicated on the label of the bottle containing the stock solution used to prepare the 1.5M hydrochloric acid solution: (Zn = 56)

Percentage purity – 37%

Density – 1.18g/cm^3

Formula mass – 36.6

(a) Determine the reactant that was in excess **(2mks)**

(b) If all the products were collected, and the setup was cooled to room temperature after the experiment, determine the volume of gas collected (molar gas volume at r.t.p. = $24,000cm^3$) **(2mks)**

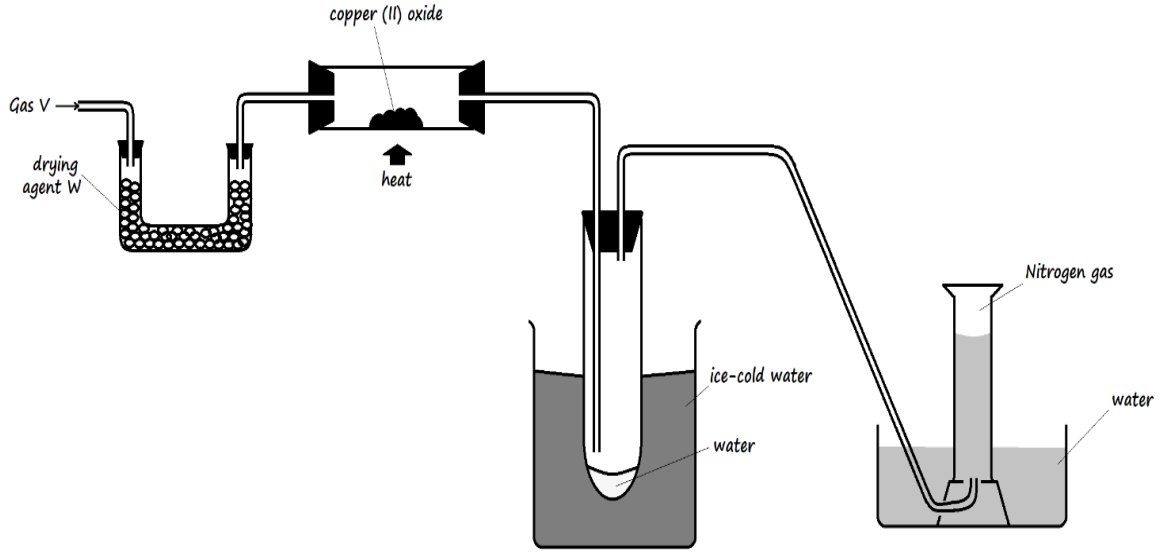
(c) Calculate the molarity of the concentrated acid that was used in preparing the $50cm^3$ of 1.5M hydrochloric acid solution **(2mks)**

(d) Calculate the volume of the concentrated acid that was diluted to form the 1.5M hydrochloric acid solution **(2mks)**

(e) If each student in a class of 45 was to carry out the experiment individually, determine the total volume of dilute acid to be prepared **(1mk)**

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3. The setup below was used to prepare and collect nitrogen gas in the laboratory. Study it and use it to answer the questions that follow.



(a) What property of nitrogen allows it to be collected as shown? **(1mk)**

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(b) State and explain the observation made in the combustion tube during the experiment **(2mks)**

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

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(d) State and explain the observation made in the combustion tube if copper (II) oxide is replaced with magnesium oxide. **(2mks)**

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(e) Describe a positive chemical test for the gas collected when copper (II) oxide is replaced with magnesium oxide **(2mks)**

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(f) What property of gas V is demonstrated in the experiment? **(1mk)**

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(g) Name any **one** gas that can be used to replace **gas V**. **(1mk)**

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4. 300cm^3 of nitrogen gas at 30^oC takes 40 seconds to diffuse through a membrane at 740mmHg pressure.

(a) How long will it take 70cm^3 of oxygen to diffuse through the membrane under the same conditions of temperature and pressure? (N = 14, O = 16) **(3mks)**

(b) What is the molecular mass of 200cm^3 of gas **M**, that takes 11.7 seconds to travel through the same membrane? **(2mks)**

(c) What will be the volume of gas **M** at 50^oC and 760mmHg? **(2mks)**

(d) The pressure of a fixed mass of gas increases with a decrease in volume at constant temperature. Explain this observation. **(2mks)**

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5. Compound **W** is a white crystalline substance. When heated strongly in a boiling tube it yielded a solid residue **G** and fumes of a brown gas **L**. Residue **G** was added to warm dilute hydrochloric acid to form a colourless solution **V** which formed a white precipitate when the setup was allowed to cool to room temperature.

(a) Name:

(i) Compound **W** _____ **(½mk)**

(ii) Residue **G** _____ **(½mk)**

(b) Write a chemical equation for:

(i) The thermal decomposition of compound **W** **(1mk)**

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(ii) The formation of solution **V** **(1mk)**

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(c) State another observation that is made in the boiling tube during the process. **(1mk)**

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(d) State and explain the observation made if residue **G** was added to warm dilute sulphuric (VI) acid. **(2mks)**

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(e) During the process of heating, the gas **V** was passed through a U-tube dipped in a large beaker with ice-salt mixture to form substance **E**

(i) Name substance **E** **(1mk)**

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(ii) Describe the appearance of substance **E**. **(1mk)**

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(f) The metal in compound **W** is not suitable for use in making overhead power transmission cables. Give **two** reasons for this. **(2mks)**

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6. The following is a list of reagents that were assembled for use in the preparation of some substances in the laboratory: Sodium sulphate, copper (II) carbonate, copper (II) oxide, dilute hydrochloric acid, calcium granules, sodium hydroxide solution, and dilute sulphuric (VI) acid, dilute nitric (V) acid, distilled water.

(a) Name the reagent which would react with dilute sulphuric (VI) acid and give off:

(i) Hydrogen gas **(1mk)**

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(ii) Carbon (IV) oxide **(1mk)**

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(b) What name is given to the reaction between sodium hydroxide and the two acids in separate boiling tubes? **(1mk)**

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(c) Write an ionic equation for the reaction between solid copper (II) oxide and dilute hydrochloric acid **(1mk)**

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(d) Name **three** reagents in the list above that can be used to efficiently prepare calcium sulphate **(3mks)**

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(e) Describe how calcium sulphate may be prepared using the reagents named in **(d)** above. **(3mks)**

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7. When a 10g sample of zinc carbonate was heated in a boiling tube, 6.48g of residue was left.

(a) State the observation made in the boiling tube during reaction. **(1mk)**

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(b) Write a chemical equation representing the reaction in **(a)** above. **(1mk)**

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(c) If $25cm^3$ of hydrochloric acid reacted completely with the residue determine:

(i) The expected colour change in the reaction vessel if methyl orange indicator was used. **(1mk)**

(ii) The concentration of the acid. (Zn = 65, C = 12, O = 16, Cl = 35.5) **(3mks)**

(iii) The mass of salt that may be obtained if the solution is crystallized and all the salt recovered **(2mks)**

8. Study the table below and use it to answer the questions that follow.

Element	A	D	E	G	J	L	M	Q
Atomic number	11	12	13	14	15	16	17	18
Atomic radii (nm)	0.191	0.160	0.130	0.118	0.110	0.102	0.099	0.095
Boiling point (°C)	890	1110	2470	2360	280	445	34.2	-186
Formula oxide		DO			J_2O_5		M_2O	
Boiling point of oxide (°C)	1193	3075	2045	1728	563	-72	-91	

(a) Complete the table to show the formulae of the oxides of **A**, **E**, **G**, and **L** **(2mks)**

(b) Select an oxide that reacts with both sodium hydroxide solution and dilute hydrochloric acid solution **(1mk)**

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(c) Explain the difference in atomic radii between elements **E** and **M** **(2mks)**

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(d) Write the formula of the compound formed between elements **E** and **M** **(1mk)**

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(e) Explain the difference in boiling points between the oxides of elements **D** and **L** **(2mks)**

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(f) Write a chemical equation for the reaction between the oxide of element **D** and water. **(1mk)**

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(g) State and explain an observation made in the reaction vessel in **(f)** above **(1mk)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM 2 -
CHEMISTRY – PAPER THREE (233/3)
FORM THREE (3)
Time - 2¼ Hours

Instructions to candidates

(a)Write your name and index number in the spaces provided above.
(b) Sign and write the date of examination in the spaces provided above.
(c) Answer **ALL** the questions in the spaces provided in the question paper.
(d) KNEC Mathematical tables and silent electronic calculators may be used for calculations.
(e) All working **MUST** be clearly shown where necessary.
(f) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing
(g) Candidates should answer the questions in English

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Question	Maximum score	Candidates score
1	24	
2	10	
3	06	
Total	40	

1. You are provided with:

- **Solution R** – a solution containing 15.75g of $M(OH)_2.8H_2O$ per litre.
- **Solution Q** – Sodium carbonate solution containing 1.325 g in 250 cm^3 of solution.
- **Solution J** – a monobasic acid **HA**
- Methyl orange indicator.

You are required to:

a) Standardise **solution J.**

b) Determine the relative atomic mass of element M in $M(OH)_2.8H_2O$

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Procedure 1

I.Fill the burette with solution J.

II.Pipette 25cm^3 of solution Q into a clean 250ml conical flask and add 2 drops of methyl orange indicator.

III.Titrate solution Q with solution J and record your results in **Table 1** below.

IV.Repeat the procedure and complete the **table 1**.

N/B: Retain the solution J in the burette for use in procedure II.

(4mks)

Table 1	I	II	II
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
The volume of solution J (cm^3) used.			

Determine the:

(a) Average volume of solution J used. **(1mk)**

(b) Number of moles of solution Q in moles per litre. (Na = 23, C = 12, O = 16) **(1mk)**

(c) Number of moles of solution Q used. **(1mk)**

(d) Write the equation for the reaction between solution J and solution Q **(1mk)**

(e) Number of moles of solution J used. **(1mk)**

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(f) The molarity of solution J. **(1mk)**

Procedure 2

I. Using a 25cm^3 measuring cylinder, transfer 25cm^3 of solution R into a clean 250 ml conical flask.

II. Using a 100ml measuring cylinder, transfer 75cm^3 of solution Q into the conical flask with solution R.

III. Boil the mixture for about 5 minutes. After cooling, filter the mixture into a conical flask and transfer the filtrate into a clean 100 ml measuring cylinder. Add distilled water to make exactly 100cm^3 of solution. Label this solution S.

IV. Pipette 25cm^3 of solution S into a clean conical flask and titrate with solution J using two drops of methyl orange indicator. Record your results in **table 2** below.

V. Repeat procedure IV two more times and complete **table 2**.

Table 2

Table 2	I	II	II
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
The volume of solution J (cm^3) used.			

(4mks)

(a) Calculate the average volume of solution J used. **(1mk)**

(b) Determine the number of moles of:

i. The monobasic acid, HA, in the average volume. **(1mk)**

ii. Sodium carbonate in 25cm^3 of solution S. **(1mk)**

iii. Sodium carbonate in 75cm^3 of solution S **(1mk)**

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iv. Sodium carbonate in the original $75cm^3$ of solution Q. **(1mk)**

v. Sodium carbonate that reacted with solution R. **(1mk)**

vi. $M(OH)_2.8H_2O$ in $25cm^3$ of solution R. **(1mk)**
(1 mole of $M(OH)_2.8H_2O$ reacts with 1 mole of sodium carbonate.)

(c) Determine:

i. Concentration of solution R in moles per litre. **(1mk)**

ii. Relative formula mass of $M(OH)_2.8H_2O$. **(1mk)**

iii. The relative atomic mass of M. (O = 16, H = 1) **(1mk)**

2. You are provided with solid G. Carry out the following tests and write your observations and inferences in the spaces provided.

(a) Place all solid G in a boiling tube. Add 10 cm^3 of distilled water and shake. Divide the resulting solution into four equal portions.

Observations	Inferences
(1mk)	**(1mk)**

(b) To the first portion, add 2M sodium hydroxide solution dropwise until in excess.

Observations	Inferences
(1mk)	**(1mk)**

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(c) To the second portion, dip a clean glass rod in the solution and burn it directly in a non-luminous flame.

Observations	Inferences
(1mk)	**(1mk)**

(d) To the third portion, add three drops of barium nitrate solution.

Observations	Inferences
(1mk)	**(1mk)**

(e) To the mixture in (d) above, add 3 cm^3 of 2M nitric (V) acid and shake.

Observations	Inferences
(1mk)	**(1mk)**

3. You are provided with **solid F.**
Carry out the tests below and write your observations and inferences in the spaces provided

a. Place about half of solid P in a metallic spatula and burn it in a non-luminous flame.

Observations	Inferences
(1mk)	**(1mk)**

b. Place the remaining solid F in a boiling tube, add about 6 cm^3 of distilled water, and shake the boiling tube. Divide the solution into two portions of 2 cm^3 each. To the first portion, add 2 drops of bromine water.

Observations	Inferences
(1mk)	**(1mk)**

c. To the second portion, Test for the pH using universal indicator.

Observations	Inferences
(1mk)	**(1mk)**

This is the last printed page

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM TWO EXAMINATIONS

COMPUTER STUDIES
FORM THREE
TIME – 2 ½ HOURS

INSTRUCTION TO CANDIDATES

- Write your name and index number in the spaces provided above
- This paper consists of **Two** sections **A** and **B**
- Answer **ALL** questions in section **A**
- Answer question 16 and any other **THREE** questions from section **B**
- All answers should be written in the spaces provided on the question paper

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	CANDIDATE'S SCORE
A	1 -15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

SECTION A (40 MARKS)
Answer ALL the questions in SECTION

1. Explain the term procedural language as used in computer programming **(2mks)**

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2. List three symptoms of a computer infected with a computer virus (**3mks**)

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3. Given that 1011_2 is a negative number workout its three possible decimal equivalent **(3mks)**

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4. Describe three ways of deleting a line of text in a Microsoft Word document **(3mks)**

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5. Name three types of graphical objects that can be inserted in a Microsoft Word document **(3mks)**

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6. Briefly describe two features of the Random file organization method **(2mks)**

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7. List three human features used by Biometric systems installed in a computer to authenticate users **(3mks)**

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8. Describe three ways in which human beings issue commands to the computer **(3mks)**

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9. Give three file management tasks that would be carried out by an operating system **(3mks)**

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10. Collins connected new multimedia speakers to his computer and tried to play his favorite music CD, but no sound came out. Suggest two problems that might have occurred **(2mks)**

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11. State how the following printing problems can be resolved **(3mks)**

(a) Paper jam

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(b) Lack of communication between the printer and the computer

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12. Give four benefits of computerizing the organization filling system **(4mks)**

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13. Explain the following measures against unauthorized access **(2mks)**

(a) Security policy

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(b) Security monitor

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14. Describe two worksheet data management tools supported by spreadsheet **(2mks)**

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15. What does the term gutter mean in relation to column setting in DTP **(2mks)**

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SECTION B (60 MARKS)

16.

(a) Name three causes of syntax errors **(3mks)**

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(b) Define the following terms as used in Computer Programming

i. Machine dependent **(2mks)**

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ii. Bug **(2mks)**

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(c) Study the Pseudo code below and answer the questions that follows.

i. Begin
ii. Input Y, X
iii. Check if Y and X > 0 Then else go to step 9
iv. Multiply Y and X
v. Is product > 20 then?
vi. Display Product
vii. Repeat steps 2, 3,4,5,6
viii. Else go to step 9
ix. Stop

i. Draw a flowchart for the pseudo code above **(8mks)**

17.

(a) Below is an extract of an Excel worksheet. Use it to answer the questions that follow.

	A	B	C	D	E	F	G
1	**Product ID**	**Product Name**	**Received Quantity**	**Sold Quantity**	**Balance Stock**	**Unit Price**	**Total**
2	PW00012	Ball	1000	300	700	60	
3	PW00023	Ruler	200	150	50	50	
4	PW00045	Pen	130	130	0	10	
5	PW00029	Bread	400	200	200	50	
	GRAND TOTAL						

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(i) Write down the formula used to:
Calculate the balance stock (**2mks)**

Calculate the Total cost **(2mks)**

(ii) Given that customers who purchased Rulers were allowed 10% trade discount write a formula that would be used to get the Total cost **(2mks)**

(iii) Use named reference to calculate the Grand Total **(2mks)**

(b) State two differences between Disk Operating System (DOS) and a Window based Operating System **(4mks)**

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(c) State three reasons why computer technicians prefer using command line operating system when troubleshooting a computer **(3mks)**

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18.

(a) List two types of domain names given to institutions of learning **(2mks)**

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(b) Explain the function of each button on the navigation toolbar of a web browser **(3mks)**

(i) History

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(ii) Home

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(iii) Download

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(c) Peter Kenneth bought a PC for his personal use at home. He wanted to do online writing at home to earn a living but there was no internet connectivity at home. Mention three internet connectivity requirement Peter Kenneth need to consider to get full internet connectivity **(3mks)**

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(d) Give three reasons to justify why companies like Alibaba, Kilimall, Jumia, Copia, and Masoko prefer selling their products on e-commerce platforms **(3mks)**

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(e) Describe three factors to consider when choosing a file organization method **(2mks)**

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(f) State two challenges facing electronic data processing modes in the current society **(2mks)**

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19.

(a) Convert the following numbers

i. 7.5625_{10} to Binary **(3mks)**

ii. $DDFF34_{16}$ to Binary **(3mks)**

(b) Bit patterns can be interpreted in a number of different ways. A computer word contains the bit pattern 0011101110. What is its decimal value if it represents a pure binary integer **(3mks)**

(c) Given that the number on the extreme left is a sign bit work out the decimal equivalent of the following binary numbers **(3mks)**

i.100110101

ii.010011010

iii.1

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(d) Use twos complement to subtract 20_{10} from 15_{10} **(3mks)**

20.

(a) List two types of field in a database used to create relationships between multiple tables **(2mks)**

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(b) Describe three types of relationships used in a databases to link multiple tables **(3mks)**

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(c) Describe the following field data types as used in Databases

(i) Calculated **(2mks)**

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(ii) Attachment **(2mks)**

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d) Briefly describe three factors to consider when choosing an ISP **(3mks)**

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e) List three reasons why companies prefer email instead of postal mail **(3mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

COMPUTER STUDIES PAPER II 451/2
Kenya Certificate of Secondary Education (K.C.S.E)
(PRACTICAL)

FORM THREE

TIME 2½ Hrs.

INSTRUCTIONS TO CANDIDATES:

(a) Indicate your name and index number at the top right-hand corner of each printout.

(b) Write your name and index number on the CD/Removable storage medium provided.

(c) Write the name and version of the software used for each question attempted in the answer sheet provided.

(d) Answer all the questions.

(e) All questions carry equal marks.

(f) Passwords **should not be used** while saving in the CD/Removable storage medium.

(g) All answers must be saved in your CD/Removable storage medium.

(h) Make a printout of the answers on the answer sheet.

(i) Arrange your printouts and tie/staple them together.

(j) Hand in all the printouts and the CD/Removable storage medium used.

(k) This paper consists of 4 printed pages.

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

(m)Candidates should answer the questions in English.

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1. **FutureTech Company Ltd** deals with sales of **three** types of electronic goods namely television sets, radio systems and DVD players. Below is a table showing details of April 2013 sales.

FutureTech Company Ltd. Sales as per 30th April 2013							
Category Code	Type	Item Description	Unit Price	Sold	Sub-Total	Tax	Net Amount
TV001	TV	21" LG TV	16000	8			
TV003	TV	38" Samsung TV	60000	2			
RD001	Radio	JVC 3CD Changer	21000	12			
DV001	Radio	Philips DVD Player	5500	6			
TV004	TV	14" JVC TV	11000	22			
DV002	Radio	LG DVD Player	6200	18			
TV005	TV	21" Sony TV	15800	14			
DV003	DVD	Sony DVD Player	4500	20			
RD002	Radio	Panasonic Radio	3200	30			
RD003	Radio	Samsung Radio Player	4700	8			
TV007	TV	14" ZEC TV	8200	4			
DV001	Radio	Panasonic DVD Player	6500	16			
Tax Rates			TV	15%			
			DVD	12%			
			Radio	8%			

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Required:

(a) Enter the data in a worksheet and save it as **FutureTec.** **(16mks)**

(b) Format the worksheet as follows:

(i) Center the Title across columns. **(2mks)**

(ii) The text should be Arial, 18 points, bold and centered within a box. **(2mks)**

(iii) Column Headings to be wrapped within the cells and centered. horizontally and vertically. **(2mks)**

(iv) The Unit Price to be in two decimals and currency prefix Ksh. **(3mks)**

(c) Use appropriate cell references to calculate:

(i) The Subtotal, rounded to two decimals places. **(2mks)**

(ii) The TAX is based on the type of the item. Use the rates given in the table above to calculate tax payable on each item sold. **(2mks)**

(iii) The Net Amount, which is the subtotal less tax. **(2mks)**

(d) Sort the worksheet in ascending order according to category. **(2mks)**

(e) Calculate the **subtotals** and **grand total** for **the three** types of electronic goods. **(6mks)**

(f) On a separate sheet, create a bar graph that compares sales for the three. types of electronic goods. Label it appropriately. **(6mks)**

(g) Print the worksheet showing all formulae used instead of values and the graph. **(4mks)**

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2. HIGH SEASONS is a holiday resort firm. It has several branches all over the world. In order to keep track of its employees, a database to organize employee. information is required.

(a) Create a database file and save it as **SEASONS** in the removable storage. provided. **(2mks)**

(b) (i) Create a table containing the following fields with correct data type and define field properties as follows: **(4mks)**

Field Name	Field Properties
EmployeeNo.	4 characters
Date of Birth	MM/DD/YY
Grade	1 character

(ii) Make the field Employee No. the primary key and save the table as EMPLOYEES. **(3mks)**

(c) (i) Create a form based on the EMPLOYEES table with the title as EMPLOYEESFORM. and save it as EMP FORM **(4mks)**

(ii) Use the form to enter the records below: **(5mks)**

EmployeeNo.	Date_of_Birth	Grade
EMP01	5/15/1960	G
EMP02	4/28/1978	H
EMP03	10/30/1972	R
EMP04	12/5/1975	H
EMP05	2/28/1974	G
EMP06	1/3/1970	G
EMP07	11/24/1956	H
EMP08	3/10/1984	G
EMP09	4/4/1956	S
EMP10	8/11/1964	R

(d) (i) Create another table containing the following records: **(4mks)**

Job Group	Salary
G	24,000.00
H	32,000.00
R	48,000.00
S	52,000.00

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(ii) Give the table appropriate primary and save as Job Grade. **(2mks)**

(e) Create a relationship that enforces referential integrity. **(3mks)**

(f) **(i)** Create a query and save it as EMPLOYEESQUERY based on the EMPLOYEES table that would display the entire employees in Grade H, R and their salaries. (5 marks)

(ii) Sort the records in the EMPLOYEESQUERY in alphabetical of Grade field. **(2mks)**

(iii) Add the Salary field on the EMPLOYEESQUERY to display each employee salary and save the changes. **(2mks)**

(g) **(i)** Create a columnar report with portrait orientation from the EMPLOYEESQUERY. Save the report as EMPLOYEESREPORT. **(4mks)**

(ii) Enter a function to compute the salaries grand total displayed in the report. **(3mks)**

(iii) Insert a header EMPLOYEES IN GRADE H AND R in the report having font size 20pts to the left of the page. **(2mks)**

(iv) Create a query from EMPLOYEESQUERY to display Empno, Date of Birth and age of every Employee. Save as age. **(4mks)**

(h) Print the EMPLOYEES Table, EMPLOYEESFORM, EMPLOYEESQUERY and EMPLOYEESREPORT. **(2mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

CRE PP1
FORM THREE
Time 2 ½Hrs
ANSWER ANY FIVE QUESTIONS

Question	1	2	3	4	5	6	Total
Total	20	20	20	20	20	20	100

1a) What is meant by the expression "the Bible is the word of God"? **(6mks)**

b) State **four** reasons why the Bible had to be compiled into its present form by early Christians. **(8mks)**

c) Identify any **six** causes of evil in Kenya today**?** **(6mks)**

2a) Give **four** conditions that made it difficult for Prophet Elijah to stop idolatry in Israel **(8mks)**

b) With reference to 1st King 21:17-29, give the forms of punishment prophesied by Prophet Elijah to King Ahab and Queen Jezebel **(6mks)**

c) Explain how Church leaders are put to test today **(6mks)**

3a) Outline Pauls teaching on love (1st Corinthian 13**)** **(7mks)**

b) State **six** reasons why the use of the gifts of the Holy Spirit brought disunity in the Church at Corinth **(6mks)**

c) Give ways in which Christians prevent divisions in the Church in Kenya today **(7mks)**

4a) Identify **six** characteristics of false prophets in the Old Testament **(6mks)**

b) Explain why Israel would face God's judgement according to teachings of prophet Amos **(8mks)**

c) How does the Church in Kenya punish errant members **(6mks)**

5a) Describe the personal life of Jeremiah **(6mks)**

b) Explain **four** evils condemned by Prophet Jeremiah during the Temple sermon**.** **(8mks)**

c) List **eigh**t moral values that a Christian can acquire from the life of Prophet Jeremiah **(6mks)**

6a) Explain six factors that have affected the traditional African people's dependence on God **(6mks)**

b) Identify the moral values acquire during marriage in traditional African communities**.``** **(8mks)**

c) Give reasons why female circumcision is being discouraged in Kenya. **(6mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

313/2
CHRISTIAN RELIGIOUS EDUCATION
PAPER 2
FORM THREE
END OF TERM 2 EXAMS
TIME: 2 ½ HOURS

Answer any five questions from this paper.

1. **(a)** Outline Isaiah's prophecy on the suffering servant. (Isaiah 53) **(7mks)**
(b) Describe the annunciation of the birth of John the Baptist (Luke 1:5-25) **(8mks)**
(c) State five ways in which a Christian couple should respond to childlessness. **(5mks)**

2. **(a)** Describe the commissioning of the Twelve Disciples of Jesus according to Luke 9:1-9 **(8mks)**
(b) Give six reasons why Jesus faced opposition from the Pharisees and the scribes during his Galilean ministry. **(6mks)**
(c) State six ways in which Christians are taking care of the needy. **(6mks)**

3. **(a)** Outline the preparations made towards the celebration of the last supper. **(7mks)**
(b) Relate the parable of the prodigal son Luke 15:11-32. **(7mks)**
(c) State the lessons learnt about God from the parable of the prodigal son. **(6mks)**

4. **(a)** Outline Paul's instructions on the use of spiritual gifts for the purpose of order in the church. **(7mks)**
(b) In what ways was unity demonstrated by Christians in the early church? **(7mks)**
(c) State six factors that threaten unity in the church today. **(6mks)**

5. **(a)** Describe the call of the first disciples of Jesus. **(7mks)**
(b) Give reasons why Christians should observe Jesus teaching on the cost of discipleship. **(5mks)**
(c) With reference to the sermon on the plain describe four teachings of Jesus from the beatitudes. **(8mks)**

6. **(a)** Describe the body of Christ(Corinthians 12:12-27) **(8mks)**
(b) What lessons can Christians learn from the events of the day of Pentecost? **(5mks)**
(c) Outline seven ways in which the gift of prophecy is used in the church today. **(7mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

ENGLISH
PAPER 1 (101/1)
FORM THREE (3)
Time: 2 ½ Hours

Instructions to the candidates

i. Write your name and admission number in the spaces above.

ii. Questions one and two are compulsory.

iii. Choose any one question in question three.

iv. Check to ascertain that the paper has all questions.

v. The paper has 2 printed pages.

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SECTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	10	
3	30	
TOTAL SCORE	60	

1. FUNCTIONAL WRITING ***20MARKS***

Your school's Journalism Club is planning to hold an Annual General Meeting to discuss the following; Club's Achievements in the year 2022, Election of the new officials, and a visit to Citizen TV, Journalism Day and the Club's Uniform. As the secretary of the club, the chairperson has requested you to invite members for the same. Write a memo inviting them for the meeting.

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CLOZE TEST **(10 MARKS)**

Fill in the blank space with the most appropriate words.

A new research title "Underage Drinking in Kenya" has (1) _____ that nearly one third of form four students aged below 18 years take alcohol (2) _____. As our society ponders this sad (3) _____, the urgent message to children who are taking alcohol (4)_____, do not drink another sip. Advice to those children is to strongly say "no."

(5) _____ irresponsible behavior and to alcoholism. There are many (6) _____effects of alcohol. It is therefore wrong and illegal for children to drink alcohol.

The report also states that 46 percent of the children receive (7) _____ first pint from friends and (8) _____ .How do you offer alcohol to a child? As a parent or guardian, do you nurture (9) _____ ? How much time do you spend with them? Notably, (10) _____ of guidance and supervision are stimuli to underage drinking.

3. ORAL SKILLS **(30 marks)**

a) Read the following oral narrative and answer the questions that follow. *(10mks)*

a) ORAL SKILLS

Read the oral narrative below and answer the questions that follow.

One afternoon a big wolf waited in a dark forest for a little girl to come along carrying a basket of food to her grandmother. Finally, a little girl did come along and she was carrying a basket of food. "Are you carrying the basket to your grandmother?" asked the wolf. The little girl answered, "Yes I am." So the wolf asked her where her grandmother lived When the girl told him, he disappeared to the woods. When the little girl opened the door of her grandmother's house she noticed that there was somebody in bed with a night cap and a night gown. She had approached no nearer than twenty-five feet from the bed when she saw that it was not her grandmother but the wolf, for even in a night cap the wolf does not look any more like any grandmother than the metro-Goldwyn lion looks like Casper milquetoast. So the little girl took an automatic gun out of her basket and shot the wolf dead.

i) How would you prepare yourself to narrate the above story? **(4mks)**

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ii) If you were narrating the story, how would you say the words of the girl and the wolf? **(4mks)**

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iii) What two aspects of narration would you use to tell this story? **(4mks)**

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b. Write another word that has similar pronunciation as the following **(4mks)**

i. Colonel-**……..**

ii. Ball-**……..**

iii. Faint-**……**

iv.Idle – **…….**

c. Underline the silent letter(s) in the following words **(4mks)**

i. Sandwich

ii. Guilt

iii. Wretch

iv. Castle

d. Your teacher of English has organized for a discussion on the topic "Drug and substance abuse is harmful to students". How would you know it is your turn to contribute? **(5mks)**

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e. The school Principal has invited an English resource person to speak about the newly introduced set text "Fathers of Nations". What would you do to make sure you don't miss on anything during the talk? **(5mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

ENGLISH
PAPER 2 (101/2)
FORM THREE (3)
Time: 2 ½ Hours

Instructions to the candidates

- Write your name and admission number in the spaces above.
- Questions one and two are compulsory.
- Choose any one question in question three.
- Check to ascertain that the paper has all questions.
- The paper has 2 printed pages.

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

1. COMPREHENSION PASSAGE

Read the passage below then answer the questions that follow *(20mks)*

Problem drinkers and alcoholics pay severe penalties for their drinking. It has been estimated that alcoholics are likely to die ten to twelve years sooner than non-alcoholics half die before the age of fifty, which is one reason there are so few elderly alcoholics. The mortality rate (that is, the number of persons per 100,000 who die each year) among alcoholics is more than two and a half times higher than that of the general population.

Alcoholics often die violent circumstances; serious accidents, homicide, and suicide are not uncommon. This, together with the physical deterioration accompanying alcoholism, helps explain the limits on life expectancy. No one really knows how many deaths are directly attributed to drinking, and all such statistics are estimates. One

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reason for our limited knowledge is that many physicians do not report alcoholism as the main cause of death out of concern for the feelings of the family of the deceased.

Research on the physiological effects of alcoholism has increased in the last few years. Heavy drinking is known to be associated with various types of cancer, particularly among persons who also use tobacco. Alcohol abuse also increases the probability of hypertension, stroke and coronary heart disease. Alcoholics frequently suffer illness and death from cirrhosis of the liver, a disease in which the liver becomes fatty, scarred, and incapable of functioning normally. In large urban areas, cirrhosis is the fourth most common cause of death among men aged twenty-five to forty-five.

Alcohol affects the brain, often permanently damaging the mental functioning of alcoholics. Drinking may reduce the number of living cells in the brain. Since brain cells do not grow back, alcoholics may suffer from organic psychosis (a mental illness traceable to brain damages), loss of memory, and poor physical and mental co-ordination. One out of four persons who are admitted to mental hospitals are diagnosed as alcoholics and 40 percent of all admissions are alcohol related. Many of the alcoholic inmates are unlikely to recover.

The unborn children of female alcoholics are subject to harm from drinking in what is called foetal alcohol syndrome.

Because alcohol tends to be a substitute for a balanced diet, alcoholics are often malnourished. Consequently, the infants of alcoholic women are likely to be less healthy and less well developed than other babies. Moreover, when a pregnant woman drinks, so, in effect, does her foetus. The new born children of alcoholic women may die shortly after birth unless they are medically treated from the shock to their systems for suddenly being cut off from alcohol. Furthermore, the impact of alcohol on the woman and her foetus is a major cause of birth defects and originally based mental deficiency among the new born. The effects of foetal alcohol syndrome on the children of female alcoholics are usually chronic and may be permanently disabling.

Clearly, it is not too much of an exaggeration to say that alcohol kills and mains people. When abused, alcohol is a highly dangerous drug.

Questions

(i) What are the major causes of death among alcoholics? **(2mks)**

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(ii) Which reason does the writer give as to why physicians do not report alcoholic related deaths? **(2mks)**

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(iii) One out of four persons who are admitted to mental hospitals are diagnosed as alcoholics. (Rewrite using a few……) **(2mks)**

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(iv) Alcoholics often die under violent circumstances. (Add a question tag) **(1mk)**

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(v) What is the attitude of the writer towards people who abuse alcohol? **(3mks)**

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(vi) Explain what the following sentence means. Alcohol tends to be a substrate for a balanced diet **(2mks)**

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(vii) Make notes on the effects of alcohol to expectant mothers and their children **(4mks)**

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(viii) Supply a suitable title for the passage. **(1mk)**

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(ix) Explain the meanings of the following words and phrases as used in the passage. **(3mks)**

a) Attributable

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b) Scarred

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c) Statistics

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2. EXCERPT – FATHERS OF NATIONS **25 MARKS**

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

The door to the bathroom opened. Fiona emerged and started walking but stopped. Her eyeshad not adjusted to the darkness in the living room. "Where are you?" she asked.

"Over here" he said. "I have taken a couch in the living room. Go take the bed in thebedroom."

"You're acting as if you might have a wife," she said, "Do you?""No, she divorced me last year." "Did she?" "Yes"

"Let's see now. You studied in America at a marriageable age."

"So let me guess." "Go ahead."She is American."

"Who? Pamela?"

"Yes, it is. And, yes, she is American. Enough about me now. Let's turn to you. Shouldn'tyour name still be Fiona McKenzie?"

"Who told you it might hye changed?" She started walking to khe bedroom. Her eyes hadadjusted to the only light.

"Why was the Liberian Mauler calling you Joy instead?""It's local slang for a streetwalker."

"He was calling you a streetwalker?"

"Yes. Do you want me to draw a picture for you? Where are you from anyway? Mars?"No: Nigeria. Married?" "Me?"

The phone rang. He rose and answered the landline by the couch. When he ended the call, hismood had darkened.

"What's the matter?" she asked him. "You seem upset all of a sudden. Who was on thephone?"

"One Chineke Chiamaka," he said. "The man was claiming that I chided him for being drunk,when all he had had was a"Péisi." He wriggled in his improvised bed to protest hisinnocence against that claim. "It beats me how he got my suite phone number in the firstplace," he added. "Anyway, I did not chide him. Why do people like to tell lies?"

QUESTIONS

(a) Place the excerpt to its immediate context. **(4mks)**

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(b) Discuss two-character traits of Abiola and one character trait of Fiona McKenzie. **(6mks)**

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(c) **(i)** Why do people like to tell lies? (Report) **(1mk)**

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(ii) The phone rang. (Add a question tag) **(1mk)**

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iii) No, she divorced me last year.(Rewrite in the passive) **(1mk)**

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(d) Highlight two themes raised in the excerpt. **(4mks)**

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(e) Identify and illustrate two features of style used in the excerpt. **(4mks)**

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(f) Explain the meaning of the following words and phrase as used in the excerpt. **(3mks)**

• improvised

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• darkened

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• Chided

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3. POETRY 20 MARKS

Read the poem below and answer the questions that follow.

“Sympathy”

I know what the caged bird feels, alas!
When the sun is bright on the upland slopes;
When the wind stirs soft through the springing grass
And the river flows like a stream of grass;
When the first bird sings and the first bud opes,
And the faint perfume from its petals steals –
I know what the caged bird feels!

I know why the caged bird beats its wing
Till its blood is red on the cruel bars;
For he must fly back to his perch and cling
When he rather would be on the branch a –swing;
And a pain still throbs in the old, old scars
And they pulse again with a keener sting –
I know why he beats his wing!

I know why the caged bird sings, ah me,
When his wing is bruised and his bosom sore,
When he beats his bars and would be free;
It is not a song of joy or glee,
But a prayer that he sends from his heart’s deep core,
But a plea, that upward to heaven he fings –
I know why the caged bird sings!

(Adapted from the poem by Laurence Donbar in ‘American Negro Poetry’ edited by ArnaBomtemps. New York: Hill and Waug 1974)

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Questions

a) Explain briefly what the poem is about. **(3mks)**

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b) What does the poet focus on in each of the three stanzas? **(6mks)**

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d) How would you describe the persona's feelings towards the caged bird? **(4mks)**

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d) What can we infer about the persona's own experiences? **(3mks)**

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e) Identify a simile in the first stanza and explain why it is used. **(2mks)**

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f) Explain the meaning of the following lines:

(i) And the faint perfume from the petals steals **(1mk)**

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g) Supply another suitable title for this poem. **(1mk)**

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4. GRAMMAR 15 MARKS

(a)Rewrite each of the following sentences according to the instructions given after each. Do not change the meaning. **(4mks)**

(i)Apart from those two, everyone else is disciplined. (*Rewrite beginning: Save……*

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(ii) Milkah is a Kenyan student who is 16 years old.
(*Rewrite to end in……student*.)

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(iii) My certificate was released only after I had cleared the balance.
Begin: Not until …

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(iv) Joan did not know that the dog was behind her.
(*Begin: Little……..*)

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(b) Fill in the blanks with the appropriate prepositions. **(4mks)**

(i) He was charged **…….**forging property inheritance documents.

(ii) Kamau deals **……..**groceries.

(iii) She was diagnosed **……** cancer.

(iv) He was forced to kill the cat**……** his will.

c. Change the following sentences into the passive. **(4mks)**

i) The farmer had planted the beans.

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ii) The principal gave the education officer the forms.

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iii) We expect the strike to end soon.

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iv) The principal summoned the students in his office.

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d. Fill in the blanks spaces using the **correct form** of the word. **(3mks)**

(i) The man could not stand the _____ (vulgar) of his actions.

(ii) The criminal's _____ (scandal) behaviour in court appalled the judge.

(iii) He walked _____ (caution) since the flour was wet.

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

Term 2
ENGLISH
PAPER 3 (101/3)
FORM THREE (3)
Time: 2 ½ Hours

Instructions to the candidates

i.Write your name and admission number in the spaces above.

ii. Questions one and two are compulsory.

iii. Choose any one question in question three.

iv. Check to ascertain that the paper has all questions.

v.The paper has 2 printed pages.

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1. Imaginative/Creative Writing	20	
2. Compulsory Set Book Essay	20	
3. Optional Set Book Essay	20	
	60	

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1. Imaginative Composition (Compulsory) 20 Marks

Either

a.Write a composition beginning with**. One look at his face and I knew I would regret my actions for the rest of my life…**

Or

b.Write a composition to illustrate the saying: **' A bird in the hand is worth two in the bush.'**

2. Compulsory Set Text

Greed is an inherent trait in most Africans in power. With appropriate illustrations from The Samaritan by John Lara, write an essay showing the truthfulness of this statement. **(20marks)**

3. The Optional Set Texts 20 Marks

Godwin Siundu, ***A Silent Song and Other Stories***

a.Some cultural practices do not add value and hence should be done away with. Show the truthfulness of this assertion based on Eric Ng'maryo's story *Ivory Bangles* **(20mks)**

b. Kazuo Ishuguro's ***An Artist of the Floating World*****.**

'War is a social evil that should be avoided at all costs owing to its adverse consequences.' Validate the statement referring to Kazuo Ishuguro's novel ***An Artist of the Floating World.***

c)"Betrayal pervades every level of the society." Basing your illustrations on play, Parliament of Owls, by Adipo Sidang, write a composition to show the truth of this assertion. **(20mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

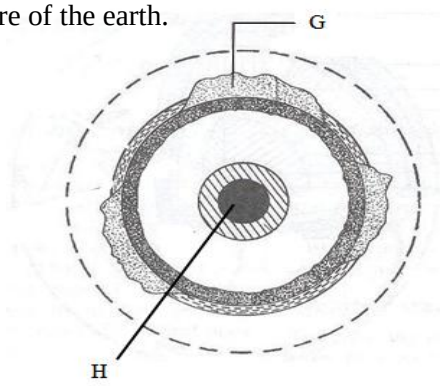
Term 2
GEOGRAPHY PP1
FORM THREE
TIME: 2 ¾ HOURS
INSTRUCTIONS TO CANDIDATES:

- 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

SECTION A: 25 MARKS
Answer all the questions from this section.

1. (a) What is the relationship between Geography and Chemistry? **(2mks)**

(b) The diagram below shows the internal structure of the earth.



(i) Name the parts marked **G** and **H**. **(2mks)**

(ii) Name the dominant mineral in the mantle. **(1mk)**

2. (a) Differentiate between absolute and relative humidity. **(2mks)**

(b) State the significance of humidity in the atmosphere. **(3mks)**

3.(a) Differentiate between a mineral and a rock **(2mks)**

b) Highlight three methods of alluvial / placer mining **(3mks)**

4. a) Define the terms

i) Forest **(1mk)**

ii) Forestry **(1mk)**

b) State three main types of forests **(3mks)**

5.(a) Identify two scales used to measure the intensity of an earthquake. **(2mks)**

(b) Give three major earthquake zones of the world. **(3mks)**

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SECTION B: 75MARKS

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

6. Study the photograph below and answer the questions that follow.



a) Name the type of photograph shown above. **(2mks)**

b) Name the drainage feature represented by the photograph above. **(1mk)**

c) Name two erosional features that can be seen from the drainage system shown in the photograph above. **(2mks)**

d) Name two indicators seen on the photograph that show the drainage feature above might be in its old stage. **(2mks)**

e) Describe the relief of the area covered by the photograph**.** **(2mks)**

f) Citing evidences from the photograph, give two economic activities that likely takes place in the area in the area shown by the photograph. **(4mks)**

g) Draw a rectangle measuring 15cm by 10cm to represent the photograph above and on it show the main features. **(6mks)**

h) Students in a school near the feature conducted a field study in this region.

i.Name two tools they would need. **(2mks)**

ii. State one objective for their study **(1mk)**

iii. Name three methods they would use to collect data. **(3mks)**

7.

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

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

b)i) With, the aid of a well labeled diagram, describe how a rift valley is formed by compressional forces. **(6mks)**

ii) Explain three ways in which faulting may influence drainage system. **(6mks)**

c) Explain three ways in which faulting is of significance to human activities. **(6mks)**

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8

a. i. What is an air mass? **(2mks)**

ii. Distinguish between maritime and continental air masses. **(2mks)**

b. Explain briefly how the following factors influence rainfall.

i. Forests. **(4mks)**

ii. Water bodies. **(2mks)**

c. i. State any two ways in which climate change can result from natural causes. **(2mks)**

ii. State five effects of aridity and desertification. **(5mks)**

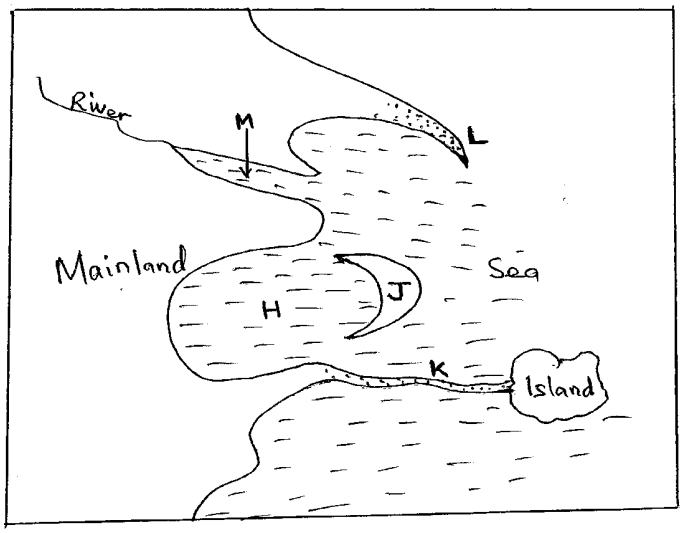
iii. Explain any four possible solutions to aridity and desertification **(8mks)**

9

(a) (i) Differentiate between a barrier reef and a fringing reef **(2mks)**

(ii) Give three causes of oceans currents **(3mks)**

(b) The diagram below shows Coastal features. Use it to answer questions b (i).



(i) Name the coastal features marked **H**, **J**, **K**, **L**. **(4mks)**

(c) With the aid of diagrams describe how a wave – cut platform is formed **(6mks)**

(d) Explain how the following factors influence development of coasts

(i) Climate **(2mks)**

(ii) Gradient of the Coast **(2mks)**

(e) Your class intends to carry out a field study on the features along the coast of Kenya.

(i) Why would they need to carry out reconnaissance **(3mks)**

(ii) Give three disadvantages of using observation to collect data **(3mks)**

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10.a. **i**. Name two types of desert surface. **(2mks)**

ii. Give two reasons why wind action is effective in the hot desert. **(2mks)**

iii. Explain processes of wind erosion in desert areas. **(4mks)**

b.i. Apart from rock pedestal, name two other erosional features formed by wind in desert**.** **(2mks)**

ii. With aid of well labeled diagrams, describe the formation of rock pedestal. **(6mks)**

c. i. State three factors that influence the transportation of materials in the desert by wind. **(3mks)**

ii. Explain three negative effects of desert land forms. **(6mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

312/2
GEOGRAPHY PAPER 2
FORM 3
TIME: 2 ¾ HOURS

END OF TERM TWO EXAM
FORM THREE

INSTRUCTIONS TO CANDIDATES

- ***Answer all questions***

1. a.i) Differentiate between forestry and forest. **(2mks)**

ii) Name three indigenous soft wood species in Kenya. **(3mks)**

b .i) Explain four importance of forests and forest products in Kenya. **(8mks)**

ii) Explain four problems facing forests in Kenya. **(8mks)**

iii) State four measures taken to manage and conserve forests in Kenya. **(4mks)**

2. Use table below to answer the following questions: Transport value in Ksh. Million

Year	2009	2010	2011	2012
Road	21,500	25,600	36,200	38299
Air	20,000	23,100	27,500	35,000
Railway	10,500	16,200	22,130	24,600

a.i) Calculate the total transport for the year 2012. **(2mks)**

ii) Draw a comparative bar graph for the Road, Air and Railway transport between the years 2009 – 2012. **(6mks)**

b.i) what are advantages of using a comparative bar graph? **(4mks)**

ii) Explain three challenges facing internet services in Kenya. **(6mks)**

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c. Students of Star boys went for a field study of a forest near their school.

i. State three methods they used to collect data. **(3mks)**

ii. Mention two objectives of their study. **(2mks)**

iii) List three methods they used to record their data. **(3mks)**

3.a) Mention the types of minerals mined in the following areas. **(3mks)**

i. Mwadui

ii. Kwale

iii. Kilembe

b.i) Identify three Middle East countries that produce oil. **(3mks)**

ii) Mention three conditions for the occurrence of petroleum. **(3mks)**

iii) Explain four benefits of petroleum to the economics of the middle East countries. **(8mks)**

c.i) Students of Mogotio boys went for field study of rocks near their school. Give reasons why they carried the following instruments:

1. A jembe
2. A bag
3. Hammer

ii. Mention how they prepared for the field study. **(5mks)**

4.a.i) Define the following terms; **(3mks)**

- Afforestation
- Reforestation
- Agroforestry

ii) Explain four factors that have favoured forestry in Canada. **(8mks)**

b.i) Compare soft wood forests in Kenya and Canada. **(6mks)**

ii. State four importance of forest exploitation in Canada.

iii) State four problems facing soft wood forests in Canada. **(4mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

HISTORY AND GOVERNMENT PP1

FORM THREE (3)

END TERM 2

Time: 2½ Hours

Instructions to candidates:

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

b) Answer all questions in section A, Three questions from section B and Two questions from section C.

c) Answers to all Questions must be written in the Answer booklet provided.

d) Candidates should check the Question paper to ascertain that all pages are printed as indicated and no Questions are missing.

e) Answer all questions in English

For Examiner's use only

SECTION A		SECTION B		SECTION C		TOTAL	
1-17		18-21		22-24		24	
25		45		30		100	

SECTION A (25 MARKS)

Attempt all the questions from this section.

1. State **one** disadvantage of using anthropology. **(1mk)**

2. Identify **two** reasons why Kenyan communities fought against each other during the pre-colonial period. **(2mks)**

3. Give the **main** reason for the coming of the Portuguese. **(1mk)**

4. List down **two** economic duties of a Kenyan citizen. **(2mks)**

5. Identify **one** colour of the National flag of Kenya. **(1mk)**

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6. State **two** rights of an accused person during trial in a court of law in Kenya. **(2mks)**

7. Give the **main** reason why the British were able to conquer Kenya. **(1mk)**

8. State **two** roles of trade unions in the struggle for independence in Kenya. **(2mks)**

9. Identify **one** education commission established in Kenya before independence. **(1mk)**

10. Give **two** characteristics of Macadamized roads. **(2mks)**

11. Identify **two** early sources of energy. **(2mks)**

12. Give **one** reason that led to decline of Meroe as an early urban centre. **(1mk)**

13. State **two** economic activities of the Shona during pre – colonial period. **(2mks)**

14. Name **one** type of constitution**.** **(1mk)**

15. State **two** methods used by Europeans to acquire colonies in Africa. **(2mks)**

16. Identify the Chartered Company that was used to administer South Africa on behalf of the British colonial government. **(1mk)**

17. Give **one** method used by the Europeans to administer their colonies in Africa. **(1mk)**

SECTION B (45 MARKS)

Attempt any three questions from this section.

18. a) Give **five** sub – groups of the Abaluhya. **(5mks)**

b) Describe the political organization of the Borana in the 19th Century. **(10mks)**

19. a) State **three** benefits of the Omani rule along the Kenyan Coast. **(3mks)**

b) Explain **six** effects of long distance trade in Kenya. **(12mks)**

20. a) State **five** recommendations of Devonshire White Paper. **(5mks)**

b) Explain **five** factors which led to migration of Africans to urban areas during the colonial period. **(10mks)**

21 a) Identify three advantages of using electricity. **(3mks)**

b) Outline six factors that have facilitated industrialization in South Africa. **(12mks)**

SECTION C (30 MARKS)

Attempt any two questions from this section.

22 a) Outline **five** economic activities of the Asante during the 19th Century**.** **(5mks)**

b) Describe the social organization of the Buganda Kingdom during the pre – colonial period. **(10mks)**

23 a) State **five** factors which influenced the British use of Indirect rule in Northern Nigeria. **(5mks)**

b) Explain **five** challenges which were experienced in the implementation of the assimilation policy in Senegal. **(10mks)**

24. a) Give **three** importance of the Kenyan constitution**.** **(3mks)**

b) Explain **six** features of the independence constitution. **(12mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

311/2
HISTORY & GOVERNMENT
PAPER 2
TIME: 2 ½ HOURS
FORM 3

INSTRUCTIONS TO CANDIDATES

- This paper consists of **three** sections; **A, B** and **C.**
- Answer ALL the questions in section **A, THREE** questions from section **B** and **TWO** questions from section **C.**
- Answers to all the questions **MUST** be written on the answer sheets provided.

FOR EXAMINER'S USE ONLY

	QUESTION	SCORE
SECTION A	1 – 17	
SECTION B	18	
	19	
	20	
	21	
SECTION C	22	
	23	
	24	
TOTAL SCORE		

SECTION A (25 Marks)

(Answer ***ALL*** the Questions in this section)

1. State ***two*** arms of Government. **(2Mk)**

2. Identify ***one*** theory explaining the origin of man. **(1Mk)**

3. Name ***two*** species of Homo sapiens. **(2Mks)**

4. Name any ***two*** centers of Agricultural Revolution. **(2Mks)**

5. State the ***two*** main methods of trade. **(2Mks)**

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6. Give ***two*** examples of regional trade. **(2Mks)**

7. Identify ***two*** means of transport that comprised early land transport. **(2Mks)**

8. Identify the sailing ship used by the Greeks. **(1Mk)**

9. Identify ***one*** early source of energy. **(1Mk)**

10. Give the major limitation of using water as a source of energy. **(1Mk)**

11. List ***two*** factors for the growth of Meroe. **(2Mks)**

12. Identify ***one*** historical building in Kilwa. **(1Mk)**

13. Identify the symbol of national unity among the Shona. **(1Mk)**

14. State ***two*** sources of the principles on which the British constitution is made. **(2Mks)**

15. Name ***one*** missionary society that came to spread Christianity in Africa. **(1Mk)**

16. State ***one*** function of Emirs in Northern Nigeria. **(1Mk)**

17. Who was the first Prime Minister of India. **(1Mk)**

SECTION B (45 Marks)

(Answer ***Any Three*** Questions from this section)

18. (a) State ***five*** stages of evolution of man before Homo erectus. **(5Mks)**

(b) Describe the way of life of human beings during the late stone age period. **(10Mk)**

19. (a) Give ***three*** negative impacts of scientific inventions in agriculture. **(3Mks)**

(b) Explain factors that have hindered industrialization in Africa. **(12Mks)**

20. (a) State ***five*** methods used by the British to colonize Buganda kingdom. **(5Mks)**

(b) What benefits did the Buganda people get as a result of their collaboration? **(10Mks)**

21. (a) How did the attainment of independence of Ghana contribute to liberation of other African countries? **(3Mks)**

(b) Describe African Nationalists activities that intensified the struggle for independence in South Africa. **(12Mks)**

SECTION C (30 Marks)

(Answer ***Any Three*** Questions from this section)

22. (a) Identify the privileges enjoyed by assimilated Africans in the four communes in Senegal **(5Mks)**

(b) Explain reasons why French policy of assimilation failed. **(5Mks)**

23. (a) Outline three features of direct rule in Zimbabwe. **(3Mks)**

(b) What were the disadvantages of indirect rule system of administration? **(12Mks)**

24. (a) State the terms of the Rudd Concession treaty of 1883. **(3Mks)**

(b) State six grievances of the Ndebele and the Shona during the Chimurenga war of 1896- 1897 **(12Mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM TWO EXAMINATIONS

HOME SCIENCE PP1 THEORY

FORM THREE

TIME – 2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

- Write your name and number in the spaces provided.
- Sign and date the examination in the spaces provided.
- This paper consists of three sections **A**, **B** and **C**.
- Answer **ALL** questions in section **A** and **B** and any **two** questions from section **C**.
- Answers must be written in the spaces provided.

For Examiners use only.

Section	Question	Maximum Score	Candidate's Score
A	1-20	40	
B	21	20	
C		20	
		20	
Total		100 marks	

SECTION A (40 MARKS)

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

1. List down **two** examples of foods used as appetizers in a meal. **(1 mark)**

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……

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2. State **two** types of patterns used in garment construction. **(1mk)**

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3. Give **three** reasons why pockets should be emptied before washing. **(3mks)**

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4. Identify the correct direction to press the following darts during garment construction. **(2mks)**

a) Bust dart

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b) Front shoulder dart

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c) Elbow dart

……

d) Back waist dart

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5. Suggest **three** physiological changes in old people that greatly affect their choice of meals. **(3mks)**

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6. State **two** functions of openings on a garment. **(2mks)**

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7. List **two** decorative methods of arranging fullness on a dress for a three-year-old baby girl. **(1 mk)**

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8. Arrange the following laundry process in the correct order. **(2mks)**

Stain removal Steeping Sorting Repairing

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9. Highlight **two** precautions to take when cleaning a toilet. **(2mks)**

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10. Give functions of the following small sewing equipment in needlework. **(3mks)**

a) Stiletto

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b) Bodkin

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c) Tailor's chalk

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11. State **two** factors to look for when selecting frying pans. **(2mks)**

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12. Highlight **two** challenges one might face when planning meals for vegetarians. **(2mks)**

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13. Give **two** signs of active/true labour in an expectant mother. **(2mks)**

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14. Mention **four** ways one can use to pay for goods and services. **(2mks)**

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15. Differentiate between easing and gathering in clothing construction. **(2mks)**

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16. Give **two** reasons for blanching vegetables. **(2mks)**

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17. Highlight **two** reasons why it is important to leave batter mixture to stand for at least half an hour before cooking. **(2mks)**

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18. State **two** principles of wise buying one can follow in purchasing goods or services. **(2mks)**

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19. Mention **two** reasons why habit training is important in child development. **(2mks)**

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20. State **two** reasons why school children should be encouraged to engage in physical body exercises. **(2mks)**

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SECTION B (20 MARKS)

Compulsory question.

Answer question 21 in the space provided after the question.

21. You are assisting your mother to take care of your younger brother during the mid-term break.

a) Describe how to launder his fast coloured pyjamas with a milk stain. **(10mks)**

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b) Giving reasons outline the procedure you would use to thoroughly clean his synthetic bag without a base board. **(10mks)**

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SECTION C (40 MARKS)

*Answer any **TWO** questions in the space provided after question 24.*

22. a) Explain **three** conditions that can make a mother turn to bottle feeding. **(6mks)**

b) Highlight **four** preparations to take before bathing a baby. **(4mks)**

c) Give **four** situations that can make a traditional birth attendant refer an expectant mother to a hospital. **(4mks)**

d) Outline **three** disadvantages of artificial feeding. **(6mks)**

23. a) Mention **four** reasons for cooking food. **(4mks)**

b) Giving a reason in each case state **four** properties of acetate fabrics which make it suitable for making garments. **(8mks)**

c) Identify three remedies for each of these sewing machine faults.

i) Needle breaking **(3mks)**

ii) Fabric puckering **(3mks)**

iii) Missed stitches **(2mks)**

24. a) Explain **three** factors that determine the type of seam to be used on a garment. **(6mks)**

b) State **four** rules to observe when making short-crust pastry giving reasons in each case. **(8mks)**

c) Explain **three** problems faced by consumers in Kenya today. **(6mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

FORM THREE END OF YEAR EXAMINATION

441/2
CLOTHING AND TEXTILES
Paper 2
PRACTICAL
Time: 2½ hours

A pattern of a girl's skirt is provided. You are advised to study the sketches, the question paper and the layout carefully before you begin the test.

MATERIALS PROVIDED

1. Pattern pieces:
- **A** Skirt front
- **B** Skirt back
- **C** Pocket
- **D** Front yoke

2. Light weight cotton fabric 50cm by 90 cm wide.

3. Sewing thread to match the fabric.

4. One large envelope.

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THE TEST

Using the materials provided, cut out and make up the RIGHT HALF of the skirt to show the following processes:

(a) Cutting out. **(14½mks)**

(b) The making of the back skirt dart. **(6½mks)**

(c) Preparation of the gathers on the skirt front piece. **(3mks)**

(d) Attachment of front yoke piece to the skirt front piece using a neatened overlaid seam. **(10mks)**

(e) Attachment of the front pocket piece to the skirt front and the back pocket piece to the skirt back.

(8mks)

(f) The making of a neatened open seam at the side above and below the pocket mouth. **(15mks)**

(g) The joining of the pocket bag and neatening half of the pocket bag using loop stitches.

(7½mks)

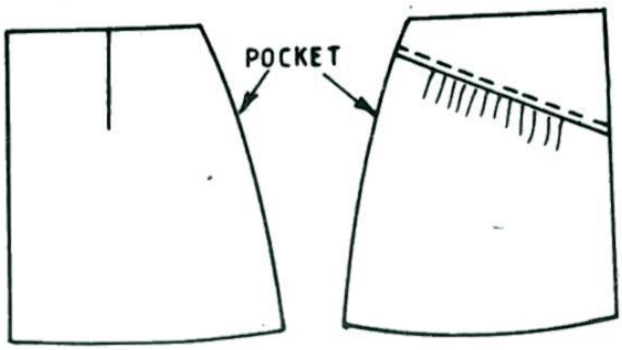
(h) Managing the hem, slip hem half of the hem. Do not remove tacking stitches. **(19mks)**

(i) Final presentation. **(6½mks)**

At the end of the examination, firmly sew onto your work, on a single fabric a label bearing your name and index number. Remove the needle and pins from your work, then fold your work carefully and place it in the envelope provided. Do not put scraps of fibre in the envelope.

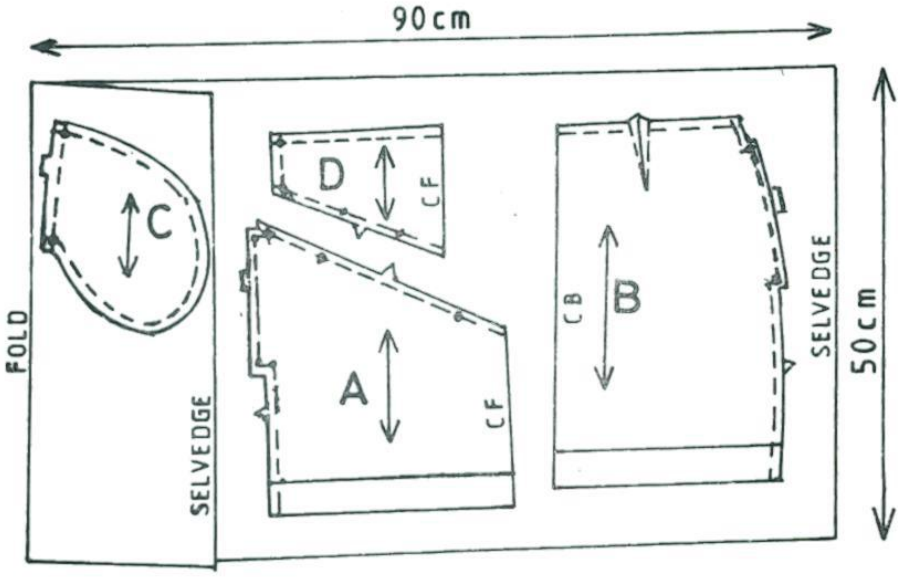
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SKIRT VIEW



BACK FRONT

THE LAYOUT (Not drawn to scale)



PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

441/3
HOMESCIENCE
FOODS AND NUTRITION
Paper 3
PRACTICAL

PLANNING SESSION: 30 minutes
PRACTICAL TEST SESSION: 1 ¼ hours

INSTRUCTIONS TO CANDIDATES
1. Read the test carefully
2. Write your name and admission number on every sheet of paper used
3. Textbooks and recipes may be used during the planning session as reference materials
4. You will be expected to keep your order of work during the practical
5. You are allowed to take away **only** your materials at the end of the planning session
6. You are not allowed to bring additional notes to the practical sessions

You are going for a picnic with two of your friends.
Using the ingredients listed below, prepare, cook and pack two suitable items for the picnic for the three of you. Include a refreshing drink.

Ingredients

- ✓ Eggs/sausages
- ✓ Salt
- ✓ Plain wheat flour
- ✓ Eggs
- ✓ Oil/cooking fat
- ✓ Milk
- ✓ Oranges/pineapple
- ✓ Sugar

PLANNING SESSION- 30 minutes

For each task below, use separate sheets of paper and a carbon paper to make duplicate copies then proceed as follows:

1. Identify the dishes and write their recipes.

2. Write your order of work.

3. Make a list of foodstuff and equipment you will require.

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

ISLAMIC RELIGIOUS EDUCATION PP1
FORM THREE (3)
Time: 2½ Hours

INSTRUCTIONS:

1. This paper contains six (5) questions.

2. Answer ALL the questions

3. Write your answers in the answer sheet provided.

4. All answers must be in English.

1. a) Discuss the need for revelation of the holy Quran **(8mks)**

b) Explain how the holy Qur'an was preserved during the time of the prophet (pbuh**)** **(7mks)**

c) With reference to *suratul Nur* state five effects of slander in the society **(5mks)**

2. a) Explain the forms of hadith **(8mks)**

b) Describe the characteristics of a *sahih* hadith. **(7mks)**

c) Explain five relevance of the belif in *Qiyamah* by Muslims **(5mks)**

3. a) Identify five conditions that must be met before observing swalat **(5mks)**

b) Distinguish between Islamic *shariah* and secular law **(10mks)**

c) State the contributions of *Imam Shafi* to the development of *fiqh*. **(5mks)**

4. a) Explain the moral implications of giving out zakat by Muslims. **(6mks)**

b) State the rationale for the prohibition of abortion in Islam. **(7mks)**

c) Identify the rights of a Muslim husband. **(8mks)**

5. a) Highlight seven teachings of the prophet's speech during Hijjatul Widaa (farewell pilgrimage). **(7mks)**

b) State six achievements of *sayyidna* Abubakar during the prophet's (pbuh) time **(6mks)**

c) Outline the objectives of the Muslim Brotherhood which was established by Hassan Al-Banna in Egypt **(7mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

ISLAMIC RELIGIOUS EDUCATION PP2

TERM ONE ACADEMIC YEAR

FORM THREE

TIME: $2^1/_2$ HRS

INSTRUCTIONS:

1. This paper contains five(5) questions.

2. Answer all questions

3. Write your answers in the answer sheet provided.

4. All answers must be in English.

1 a) Why is it important to memorize the Qur'an **(7mks)**
b) Explain the Qur'an as a book of guidance **(5mks)**
c) With reference to Surah An-Nur, describe the prescribed punishments for Zina and for Qadhf (slander). **(8mks)**

2. a) Identify four subject matter of Hadith Qudsy. **(4mks)**
b) Mention the ***six*** authentic books of Hadith (Sahihul Sitta) and their compilers **(6mks)**
c) Explain ***five*** ways in which the Prophets of Allah facilitated divine guidance. **(10mks)**

3. a) State six duties of an *Imam* in the Muslim society **(6mks)**
b) Describe how the performance of Hajj creates unity among Muslims. **(6mks)**
c) Explain four differences between zakat and sadaqa **(8mks)**

4. a) Identify the rights of a woman in Islam (7marks)
b) Explain seven effects of fornication in the society. **(7mks)**
c) Describe the machinery for *Talaq* **(6mks)**

5. a) Describe the relationship between the *Muhajirun* and the *Ansar* after *Hijra*. **(5mks)**
b) Explain the achievements of Prophet Muhammad (p.b.u.h) **(7mks)**
c) b) Discuss four contributions made by Sheikh Al-Amin Ali Al-Mazrui in promoting education among Muslims in Kenya. **(8mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

JINA: ……

SHULE: ……

NAMBARI YA USAJILI: ……. SAHIHI:……..… TAREHE: ……..

MUHULA WA PILI
KISWAHILI
KARATASI YA KWANZA(102/1)
KIDATO CHA TATU (3)
MUDA: SAA 2 ½

MAAGIZO KWA MTAHINIWA:

1) Andika jina lako, nambari ya mtihani na tarehe katika karatasi ya majibu.

2) Karatasi hii ina maswali manne.

3) Jibu maswali mawili pekee.Kila swali lina alama 20.

4) Swali la kwanza ni la lazima. kisha chagua swali la pili kutoka miongoni mwa matatu yaliyosalia.

5) Majibu yote yaandikwe katika lugha ya Kiswahili.

KWA MATUMIZI YA MTAHINI PEKEE

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

Maswali.

1. Chama cha Kiswahili shuleni mwenu kilifanya mkutano katika ukumbi wa shule. Wewe ni katibu wa chama hicho. Andika kumbukumbu za mkutano huo.

2. Jadili madhara ya rununu (simutamba) miongoni mwa wanafunzi shuleni.

3. Tunga Kisa kitakachodhihirisha maana ya methali ifuatayo: Mlenga jiwe kundini hajui limpataye.

4. Tunga kisa kitakachomalizika kwa maneno yafuatayo: Nilitamani sana kumwona mfadhili wangu.

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

JINA: ……

SHULE: ……

NAMBARI YA USAJILI: ……. SAHIHI:……..… TAREHE: ……..

MUHULA WA PILI
KISWAHILI
KARATASI YA PILI(102/2)
KIDATO CHA TATU (3)
MUDA: SAA 2 ½

Maagizo

Jibu maswali yote
Majibu yote yaandikwe katika nafasi ulizoachiwa katika kijitabu cha maswali

Majibu yote yaandikwe kwa lugha ya Kiswahili

Kwa matumizi yam tahini pekee

SEHEMU	UPEO	ALAMA
	15	
	15	
	40	
	10	
JUMLA	80	

1. <u>UFAHAMU (alama 15)</u>

Soma kifungu kifuatacho kisha ujibu maswali.

Aibu kubwa ya taifa kushindwa kukabiliana na tatizo sugu la ajali barabarani bado inaendelea.Licha ya matumizi ya vidhibiti mwendo na kanda za usalama,ajali za barabarani zinaangamiza idadi kubwa ya watu kila mwaka,wakiwemo viongozi na watu mashuhuri .

Miongoni mwa sababu ambazo zinaleta maafa barabarani ni pamoja na uendeshaji kasi kupita kiasi inavyotakikana ,yaani kukiuka masharti yaliowekwa na wizara ya uchukuzi .Madereva wengi hung'oa vidhibiti mwendo vilivyowekwa ,hawarekebishi mikanda ya usalama ,wala hawapeleki magari yao kwa ukaguzi mara kwa mara kama inavyopaswa ,kutelekeleza kanuni zilizowekwa kwa hivyo hutegemea hongo kuwa barabarani.Fauka ya hayo,madereva wa malori na matrela mara nyingi huendesha magari yao wakiwa walevi.Dawa za kulevya kama vile miraa na bangi hutumiwa sana na watu hawa, na matokeo yake huwa ajali mbaya.

Hata hivyo ,lawama haiwezi kuelekezewa madereva pekee.Ukiangazia barabara nchini utapata kuwa barabara nyingi nchini Kenya haziko katika hali nzuri.Zile za lami zimekuwa na mashimo makubwa ambapo mvua

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ikinyesha hufanya vidimbwi mithili ya machimbo ya madini yaliojaa maji baada ya kuachwa wazi.Aidha, barabara zisizokuwa za lami zimeharibika kiasi kwamba ni vigumu kuzitofauisha na njia za ng'ombe kwenye maeneo kame. Kinachohitajika ni serikali kuzifanyia ukarabati ili kuzirudisha katika kiwango ambacho zitaweza kufaa.

Wananchi pia inafaa waelimishwe ili wasikubali kuingia kwenye magari ambayo tayari yamejaa kupita kiasi.Hili litawasaidia wananchi wenyewe kudumisha usalama wao barabarani .Pia inafaa watambue ya kwamba wana jukumu la kuwaarifu walinda usalama endapo dereva ameendesha kwa kasi sana kuliko ile ya kilomita 80 kwa saa iliyokubaliwa.

Inafamika kuwa baadhi ya maafisa wa usalama ni wafisadi ,hivyo basi huchangia katika kuongeza idadi ya vifo barabarani. Katika vita vya ufisadi na ajali za barabrani, ni mwananchi mwenyewe ambaye atawezesha kukomesha hali hii.Kwa mfano ,afisa wa usalama akipatikana akichukua hongo ,yeye pamoja na yule aliyetoa hongo wapelekwe kwenye vituo vya kukabiliana na ufisadi na achukukuliwe hatua kali, matatizo haya yataisha. Hata hivyo,ni muhimu kumhamasisha mwananchi kuhusu haki zake na namna ya kukabiliana na suala la ufisadi. Hali hii inatuonyesha kwamba mipango maalum inapaswa kufanywa na serikali ili kuwaelimisha wananchi kama hatua ya kwanza ya kukabiliana na ufisadi hatimaye izilainishe sekta zote wala si ya uchukuzi pekee .

Maswali

a) Mbali na ajali za barabarani, taja tatizo lingine sugu ambalo linakumba nchi ya Kenya. **(alm2)**

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b) Ajali za barabarani zinasababishwa na nini? **(alm3)**

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c) Mwandishi anapendekeza hatua zipi zichukuliwe na serikali ili suluhisho la kudumu lipatikane? **(alm2)**

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d) Taja hatua ambazo serikali imechukua ili kuimarisha uchukuzi**.** **(alm3)**

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e) Ni kitu gani ambacho kinatuonyesha kuwa serikali imeshindwa kukabiliana na ajali za barabarani **(alm3)**

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f) Eleza maana ya maneo haya; **(alm3)**

i) tatizo sugu

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ii) ukarabati

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iii) kuhamasisha

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2.UFUPISHO (alama 15)

Soma taarifa hii kisha ujibu maswali

Maelefu ya watu duniani wako hatarani kupoteza maisha yao kwa sababu ya uvutaji wa sigara.Wataalamu wanasema mtu anayevuta pakiti mbili za sigara kwa siku moja ,anapunguza muda wa maisha yake kwa asilimia thelathini.Inaelezwa kwamba ingawa wavutaji wengi wa sigara katika nchi za Ulaya na Marekani wanapunguza au kuacha uraibu huo,wavutaji sigara katika nchi zinazoendelea wanazidi kuongezea kila kukicha.

Kwa muijbu wa wataalamu ,vijana huanza kuvuta sigara kwa sababu ya utundu na kutaka kujua ladha ama mhemko unaosababishwa na sigara. Wengine huanza kuvuta sigara wakifuatisha wacheza sinema maarufu ,wanamuziki au baadhi ya watu wanaowaenzi.

Sigara au tumbaku husababisha athari mbalimbali kwa watumiaji wake ,miongoni mwake yakiwemo magonjwa ya kifua kikuu, kansa ya mapafu ama utumbo na wakati mwingine kifo. Kwa mujibu wa watafiti, watu wanaovuta sigara kwa miaka 20 na Zaidi wako hatarini kufa kwa ugonjwa wa kansa ya utumbo.Hii ni kwa sababu moshi wa sigara unaweza kusababisha uvimbe ktika utumbo mkubwa na rektamu.

Uvutaji sigara unachangia asilimia 80-90 ya magonjwa yanayohusiana na kifua ama njia ya hewa ikiwemo kikohozi ,pumu ,homa ya mapafu na kansa ya mapafu. Mvutaji sigara hushambuliwa mara kwa mara na magonjwa ya koo ,mafua na kikohozi kisichokuwa na dawa.

Uraibu huu pia huchangia aslimia 30 ya vifo vinavyosababishwa na magonwa ya moyo.Hewa ya sumu ilioko kwenye sigara huongeza kiasi cha sukari mwilini ambayo huziba mishipa ya damu .Uvutaji sigara husababisha kuta za mishipa za damu zikakamae ; hali ambayo ni hatari na inaweza kusababisha mishipa ya damu ipasuke.Kemikali ya ‘nicotene’ iliyopo ndani ya sigara inaweza kuongeza shinikizo la damu ,mapigo ya moyo kuongezeka na kupunguza kiasi cha oksijeni kwenye misuli hasa moyo. Mvutaji sigara anaweza kufa ghafla kwani mapigo ya moyo wake yanaweza kusimama ghafla kwa sababu ya shinikizo kwenye moyo wake linalosababishwa na moshi ama kemikali zilizopo kwenye sigara.

Kwa wanawake , uvutaji sigara ni hatari zaidi kuliko kwa wanaume. Mwanamke ambaye anatumia vidonge vya kuzuia mimba na anavuta sigara anaweza kupatwa na athari kubwa za kiafya na kuhatarisha maisha yake. Hatari zinazomkabili ni pamoja na damu kuganda kwa mishipa katika sehemu za miguuni na katika moyo. Matatizo

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hayo yanaweza kusababisha athari zaidi wakati wa ujauzito ama wakati wa kujifungua na hivyo kupelekea mama kufa ghafla kabla ama wakati wa kujifungua.

Kwa mujibu wa utafiti ,watoto wanaozaliwa na akina mama wanaovuta sigara wakati wakiwa wajawazito aghalabu pia wao huanza kuvuta sigara wakiwa na umri mdogo sana. Uvutaji wa sigara kwa mama mjamzito pia huathiri ulimi wa mtoto tumboni na kuwafanya wawe na uzito kuongea ,wazito kujifunza mambo mageni na pia huathiri mapafu yao katika siku zao za baadaye za uhai wao.

Nchini Kenya Serikali imeanzisha mbinu na sheria za kuhakikisha kuwa wavutaji sigara hawavutii katika maeneo ya umma. Sheria hizo zinapiga marufuku uvutaji sigara kwenye maeneo ya umma.Tayari, taasisi mbalimbali za umma na za kibinafsi zimeandika mabango ya kuwaonya wavutaji dhidi ya kuvuta sigara katika mazingira ya taasisi hizo.

Maswali

a) Eleza athari ya uvutaji sigara kwa wanawake .(maneno 25-30) **(alm7)**

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b) Dokeza madhara ya uvutaji sigara.(maneno 45-50) **(alm8)**

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3. MATUMIZI YA LUGHA(alama 40)

a) Andika neno lenye sifa zifuatazo; kiwamizo sighuna cha ufizi, irabu ya nyuma kati, nazali ya kaakaa gumu na irabu ya chini kati**.** **(alm2)**

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b) Eleza muundo wa silabi katika neno hili **(alm1)**
Imeundwa

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c) Andika upya sentensi hii kwa kutumia –o-rejeshi ya kati

Choo ambacho kinachimbwa kimeporomoka. **(alm1)**

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d) Tunga sentensi zifuatazo; **(alm2)**

i) Kiulizo

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ii) Kauli

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d) Tunga sentensi moja yenye kiwakilishi cha a-unganifu ,kitenzi kishirikishi kikamilifu na kijalizo **(alm3)**

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e) Andika sentensi ifuatayo katika hali ya ukubwa. **(alm1)**

Kijana yule amekataa kitabu.

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f) Andika katika usemi wa taarifa**;** **(alm2)**

"Watoto hawa wenu wakicheza hapa watachafua nyumba"Mlezi alisema.

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g) Changanua sentensi hii kwa njia ya jedwali **(alm4)**

Tarakilishi nzuri ilikuwa imenunuliwa jana jioni.

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h) Onyesha yambwa katika sentensi ifuatayo; **(alm3)**

Mshali alishonewa suruali na kijakazi kwa uzi mwembamba.

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j) Eleza tofauti ya kisarufi ya maneno yaliopigiwa mstari. **(alm2)**

i) Kucheka kwake kulikuwa kwa kipekee.

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ii) Mwanaisha anapenda **kucheka** kila wakati.

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k) Tunga sentensi kuonyesha wakati ujao wakati ujao hali ya mazoea. **(alm2)**

……

……

……

……

l) Tumia neno **paka** katika sentensi kama

i) nomino

ii) kitenzi

……

……

……

m) Kwa kutunga sentensi onyesha ngeli mbili za neno **upwa.** **(alm2)**

……

……

……

……

n) Andika maana mbili zinazojitokeza katika sentensi hii.

Salome alimsimulia Mwakamba kisa chake. **(alm2)**

……

……

……

……

o) Rubani nikwa ndege ---------- ni kwa meli na ---------- ni kwa matwana**.** **(alm2)**

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p) Tumia alama ya ritifaa katika sentensi kuonyesha matumizi mawili tofauti. **(alm2)**

……

……

……

……

q) Bainisha viambishi katika neno hili **(alm3)**
waliotupiga

……

……

……

……

r) Unda sentensi yenye muundo ufuatao;
W+V+T+E

……

……

s) Tunga sentensi yenye kivumishi cha pekee chenye dhana ya kutojali **(alm2)**

……

……

……

……

4. ISIMUJAMII **(alm10)**

a) Saiji ya lugha ni nini**?** **(alm2)**

……

……

……

b) Eleza baadhi ya sifa bainifu za sajili nyingi. **(alm8)**

……

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

JINA: ……

SHULE: ……

NAMBARI YA USAJILI: ……. SAHIHI:……..… TAREHE: ……..

MUHULA WA PILI
KISWAHILI
KARATASI YA TATU (102/3)
KIDATO CHA TATU (3)
MUDA: SAA 2 ½

Maagizo-

- Swali la kwanza ni la lazima**.**
- Chagua maswali mengine matatu kutoka kwa sehemu zililosalia.
- Usijibu maswali mawili kutoka sehemu moja.
- Majibu yote yaandikwe kwa lugha ya Kiswahili.
- Kila swali ni alama ishirini.

Sehemu hii imetengewa mtahini

SEHEMU	UPEO	ALAMA
1	20	
2	20	
3	20	
4	20	
JUMLA	80	

SEHEMU: A

Swali la kwanza-Fasihi simulizi **(alama 20)**

1. Soma utungo ufuatayo kisha ujibu maswali

Wajukuu wangu nina furaha isiyo na kifani kuchukua jukumu hili la kutoa nasaha zangu kwenu hasa wakati huu mnapojiandaa kufunga nikahi yenu. Ni jambo la kutia moyo kwangu kuona nasaba yetu inaendelea kupanuka na si hapa kijijini tu, bali imevuka mipaka ya nchi.

Wajukuu wangu, ndoa ni asasi muhimu sana maishani mwa mwanadamu yeyote katika sehemu yoyote duniani. Ni asasi inayotukuzwa na kuenziwa na jamii nyingi .Hii ni kwa kuwa ndoa huwawezesha wawili kuungana na kuwa kitu kimoja ili kutegemeana na kuondoa upweke kama wahenga walivyosema ‘mtu pweke ni uvundo’.Wajukuu wangu nawapongeza kwa kuupa upweke kisogo.

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Wanangu, ulimwengu umebadilika .Sasa dunia imekuwa kijiji kimoja ambapo watu kutoka sehemu mbalimbali wanaingiliana. Huu ndio wanaouita utandarithi.Nyinyi ni wapenzi kutoka nchi mbili tofauti na mmekuwa kielelezo cha mabadiliko haya duniani. Mmevunja vikwazo na vizuizi vya mipaka ya nchi.bara pamoja na utamaduni.Mmedhihirisha kuwa mke au anaweza kupatikana kutoka eneo lolote duniani mradi tu pawe na maelewano.

Maharusi ,sasa ndio mnaanza safari.Mkondo huu wa kujenga nyumba ni mgumu ila mkivumiliana na kuelewana mtafaulu.Wengi wamefaulu .Mbona nyinyi msiweze?Changamoto kubwa kwenu sasa ni uwezo wa kuelekeza fikra zenu ili ziweze kuingia katika mkondo mmoja wa mawazo na uamuzi.Itabidi mtupilie ubinafsi kando na kuwa lolote mtakalokuwa mkitekeleza litakuwa ni uamuzi wa pamoja.

Mnapaswa kuelewana na kila mmoja kukamia kumwelewa mwenzake.Ni muhimu kuwa wavumilivu na kila mmoja kukamia kumwelewa mwenzake.Ni muhimu kila mmoja kujaribu kuuelewa utamaduni wa mwenzake kwani utamaduni humjenga mtu na huchangia sana maamuzi yoyote anayofanya maishani.Ni lazima ung'amue kwamba huwezi kumbadilisha mwenzio kiutamaduni kwa ghafla kwani kila mmoja ana dini, imani, ada,,chakula anachokitukuza ,mtazamo na falsafa fulani kuhusu maisha .Tofauti ya asili zenu zisiwe sababu za kuisambaratisha ndoa yenu bali ziwe msingi thabiti wa mapenzi na ndoa yenu!

Maswali

a) Kwa kutolea mifano tambua kipera cha utungo huu. (**alm2)**
b) Eleza changamoto zinazowakabili wanandoa hawa ? **(alm5)**
c) Kwa nini msimulizi anasema ndoa ni asasi muhimu katika maisha ya binadamu. **(alm2)**
d) Je,msemaji ni nani katika usimulizi huu? **(alm1)**
e) Kulingana na utungo huu tambua umuhimu wa utamaduni kwa binadamu**.** **(alm2)**
f) Kwa kutolea hoja nane onyesha umuhimu wa kipera hiki katika jamii. **(alm8)**

SEHUMU B: TAMTHILIA-BEMBEA YA MAISHA na Timothy Arege

2. Anwani bembea ya Maisha inaafiki tamthiliya hii. Jadili kwa kutoa hoja ishirini **(alm20)**

AU

3. "Huko ndiko kuvumilia hasa. Tazama faraja ilivyoalika sasa."
a) Weka dondoo hili katika muktadha. **(alm4)**
b) Eleza sifa na umuhimu wa mhusika huyu katika Tamthilia ya Bembea ya maisha. **(alm6)**
c) Kwa kutolea hoja kumi onyesha jinsi faraja ilivyoalika katika maisha ya mlengwa wa maneno kwenye dondoo. **(alm10)**

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SEHEMU YA: C

HADITHI FUPI-MAPAMBAZUKO YA MACHWEO NA HADITHI NYINGINE

4. Wanaume katika mataifa mengi barani afrika wametawaliwa na ubabedume. Jadili kauli hii ukirejelea hadithi ya "Fadhila za Punda" **(alm20)**

AU

5. "Kwa nini nisilipe ?Mnadhani mashaibu kama sisi ni mafukara hohehahe hatuna pesa mfukoni ?Hebu twende naona dereva yule ana haraka sana.Mkimbize!"

a) Tambua muktadha wa dondoo hili. **(alm4)**

b) Onyesha mbinu za kimtindo zinazojitokeza katika dondoo hili. **(alm4)**

c) Msemaji wa dondoo hili ana sifa gani? **(alm6)**

d) Migogoro tofauti tofauti imeshuhudiwa katika hadithi hii .Thibitisha. **(alm6)**

SEHEMU YA: D

RIWAYA YA: NGUU ZA JADI

6)"Binadamu ni viumbe katili" Thibitisha ukweli wa madai haya kwa kurejelea riwaya ya Nguu za Jadi. **(al.20)**

AU

7. Soma dondoo lifuatalo kisha ujibu maswali yanayofuata

"...kiongozi si mwanasiasa pekee. Kila mmoja wetu ni kiongozi namna yake ya kipekee."

a) Weka maneno haya katika muktadha wake. **(alm4)**

b) Eleza mbinu iliyotumika. **(alm2)**

c) Eleza umuhimu wa mnenaji**.** **(alm6)**

d) Tathmini ukweli wa maneno yaliyopigiwa mstari. **(alm8)**

SEHEMU: E

8. USHAIRI

Soma shairi lifuatalo kisha ujibu maswali yanayofuata.

Angajiita mzuri, umbo lake limewanda
Angatiwa na uturi, hakosi katu kuvunda
Mpe ubani fakiri,ahadi ataivunda
Hajifichi mnafiki ,sifaze humfichuwa.

Ja bozi kule jangwani, juhudi kujisitiri
Nyeupe kanzu mwilini, masafa ni ya shubiri
Ni mwongo tangu zamani, hatendi kwa tafakuri
Hajifichi mnafiki, sifaze hufichuwa.
Kujikalifu usende ,kusaka na ithibati
Bahati kama mtende, usiazimu kunuti
Amana mpe alinde, hafikishi zamarati
Hajifichi mnafiki ,sifaze humfichuwa.

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Wa wazi nduli heri, kuliko mpulizaji
Hutubu akaghairi ,kanama udanganyaji
Zandiki likashamiri, halina muokoaji
Hajifichi mnafiki, sifaze hufichuwa.

Duniya tunamoishi ,madhara tunayopata
Katika aushi yetu ,shiya wa bukurata
Mnafiki ni mzushi,yakizidi huyabwata
Hajifichi mnafiki, sifaze hufichuwa.

Manani wetu wahidi, aso katu mshirika
Hutujaliya weledi, pasi rika na tabaka
Tukatambuwa fisadi, tusipate kudhurika
Hajifichi mnafiki, sifaze hufichuwa.

Maswali

a) Lipe kichwa mwafaka shairi hili. **(alm1)**
b) Onyesha dhamira ya mshairi wa shairi hili. **(alm2)**
c) Onyesha muundo wa shairi hili. **(alm4)**
d) Tambua sifa za nafsinenewa. **(alm4)**
e) Toa mfano wa usambamba katika shairi hili. **(alm1)**
f) Andika ubeti wa kwanza kwa lugha ya tutumbi. **(alm4)**
g) Onyesha mbinu nne alizotumia malenga ili kutosheleza mahitaji ya kiarudhi katika shairi hili. **(alm4)**

AU

9. ***Soma shairi lifuatalo kisha ujibu maswali yafuatayo***

1.Mkata ni mkatika, harithi hatoridhiwa
Sina ninalolishika, wala ninalochukuwa
Mlimwengu kanipoka, hata tone la muruwa!
Mrithi nini wanangu?

2. Sina ngo'mbe sina mbuzi, sina konde sina buwa
Sina hata makaazi, mupasayo kuyajuwa
Sina mazuri makuzi, jinsi nilivyoachwa
Mrithi nini wanangu?

3. Sina kazi sina bazi, ila wingi wa shakawa
Sina chembe ya majazi, mno nikukamuliwa
Nakwa'cheni upagazi, ngumu kwenu ku'tuwa
Mrithi nini wanangu?

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4.Sina sikuachi jina, mkata hatasifiwa
Hata nifanye la mana, mno mi kulaumiwa
Poleni wangu sana, sana kwenu cha kutowa
Mrithi nini wanangu?

5.Sina leo sina jana, sina kesho kutwaliwa
Sina zizi sina shina, wala tawi kuchipuwa
Sina wanangu mi sina , sana la kuacha kuraduwa
Mrithi nini wanangu?

6.Sina utu sina haki, mila yangu meuliwa
Nyuma yangu ili dhiki, na mbele imekaliwa
N'nawana na miliki, hadi nitakapofukiwa
Mrithi nini wanangu?

7. Sina ila kesho kwenu, wenyewe kuiongowa
Muwane kwa nyinyi mbinu, mwende pasi kupumuwa
Leo siyo kesho yenu, kama mutajikamuwa
Mrithi nini wanangu?

MASWALI

(a) Taja mambo yoyote mawili ambayo mtunzi angewarithisha wanawe. **(alm2)**

(b) Eleza sababu ya mtunzi kutoweza kuwarithisha wanawe. **(alm3)**

(c) Andika ubeti wa nne kwa lugha nathari. **(alm4)**

(d) Dondoa mifano miwili miwili ya : **(alm2)**

(i) Inkisari

(ii) Tabdila

(e) Chambua shairi hili kwa upande wa :

(i) Dhamira **(alm2)**

(ii) Muundo **(alm4)**

(f) Eleza maana ya vifungu vifuatavyo kama vilivyotumiwa katika shairi**.** **(alm3)**

(i) Mlimwengu kanipoka

(ii) Sina konde sina buwa.

(iii) Wingi wa shakawa.

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

FORM THREE
TERM 2
121/1
MATHEMATICS PAPER 1 (Alt. A)

Instructions to candidates

a) Write your name and admission number in the spaces provided above.
b) Write your class, and the date of examination, and sign in the spaces provided above.
c) This paper consists of **two** sections; **Section I** and **Section II**.
d) Answer all the questions in **Section I** and only **five** questions from **Section II**.
e) Show all the steps in your calculations, giving your answers at each stage in the spaces provided below each question.
f) Marks may be given for correct working even if the answer is wrong.
g) Non – programmable silent electronic calculators **and** KNEC Mathematical tables may be used, except where stated otherwise.
h) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
i) Candidates should answer the questions in English.

For Examiner's Use Only

Section I

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

Section II

17	18	19	20	21	22	23	24	Total

Grand Total

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SECTION I (50 Marks)

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

1. Without using a mathematical table or a calculator, evaluate leaving your answer as a fraction in its simplest form. **(3mks)**

$$\frac{\frac{5}{6}of\left(4\frac{1}{3}-3\frac{5}{6}\right)}{\frac{5}{12}\times\frac{3}{25}+1\frac{5}{9}\div2\frac{1}{3}}$$

2. Three bells in a school are set to ring after every 40 minutes, 48 minutes and 1 hour. They are set to ring simultaneously on Monday 8.00 a.m. Find the number of times they will ring together by Thursday 4.00 p.m. in the same week. **(3mks)**

3. A salesman is paid a monthly salary of Ksh 36 000. In addition, he gets a commission of 4% on the amount of sales above Ksh 400 000. In a certain month, he earned Ksh 45 120. Calculate the amount of sales he made in that month. **(3mks)**

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4. A Kenyan bank buys and sells foreign currencies as shown.

	Buying (Kshs.)	Selling (Kshs.)
1 Euro	84.15	84.26
100 Japanese Yen	65.37	65.45

A Japanese travelling from France to Kenya had 5000 Euros. He converted all the 5000 Euros to Kenya shillings at the bank. While in Kenya, he spent a total of Kshs. 289,850 and then converted the remaining Kenya shilling to Japanese Yen. Calculate the amount in Japanese Yen that he received. **(3mks)**

5. Use tables of reciprocal only to evaluate $\frac{1}{0.325}$ hence evaluate : $\sqrt[3]{\frac{0.000125}{0.325}}$ **(3mks)**

6. The size of the interior angle of a regular polygon with n sides is 5° more than the size of the interior angle of another regular polygon with $(n-1)$ sides. Calculate the value of n. **(4mks)**

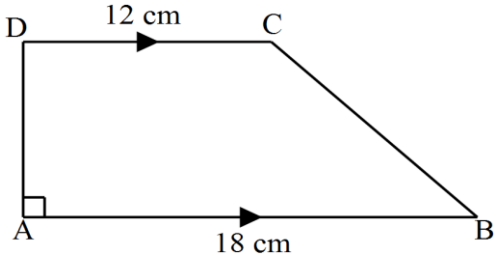
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7. Given that $\sin(2x+15)^\circ = \cos(3x-10)^\circ$, find $\tan(2x-4)^\circ$ without using a calculator or mathematical tables.

(3mks)

8. Machine A working alone can do a piece of work in 4 hours. Machines A and B working together can complete the same work in 2 hours 24 minutes. Find the duration that machine B would take to complete the same piece of work alone. **(3mks)**

9. ABCD is a trapezium in which AB is parallel to DC and angle $DAB = 90^\circ$. AB = 18 cm, DC = 12 cm and the area of the trapezium is $120\ cm^2$.



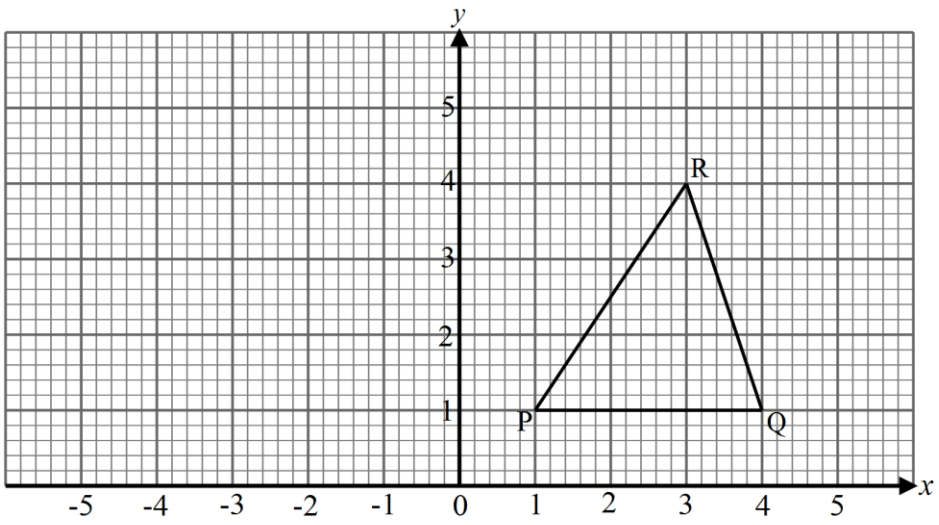
Calculate the perimeter of the trapezium. **(3mks)**

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10. The total cost of a book and a pen in a shop is Ksh 360. If the price of a book is increased in the ratio 6:5 while that of a pen is decreased in the ratio 4:5, the total cost of the items becomes Ksh 346. Find the price of each item. **(3mks)**

11. Simplify $\frac{3x^2+2xy-y^2}{2y^2-18x^2}$. **(3mks)**

12. Triangle PQR has vertices at P(1,1), Q(4,1) and R(3,4) as shown in the figure below. $P'Q'R'$ is the image of triangle PQR under a $+90^\circ$ turn about the origin followed by a reflection in the line $y=-x$. On the grid below, draw the triangle $P'Q'R'$. **(3mks)**

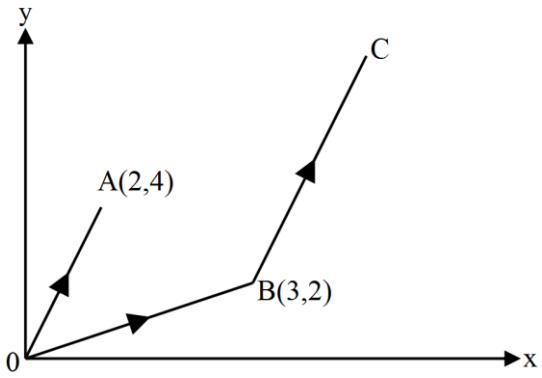


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13. Use the inequality below to find the integral values of x that satisfy the inequality and show the solution on the number line. **(4mks)**

$3x + 1 \leq 4x + 5 \leq x + 13$

14. In the figure below, A and B are points (2,4) and (3,2) respectively. 5**OA** = 2**BC** and M is the midpoint of **AC**.

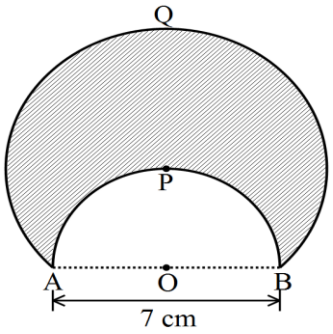


Find the coordinates of M. **(3mks)**

15. Solve the equation $64^x - 121 = 7 - 4^x$ **(3mks)**

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16. In the figure below, P is the centre of the arc AQB and O is the centre of the semi – circle APB.

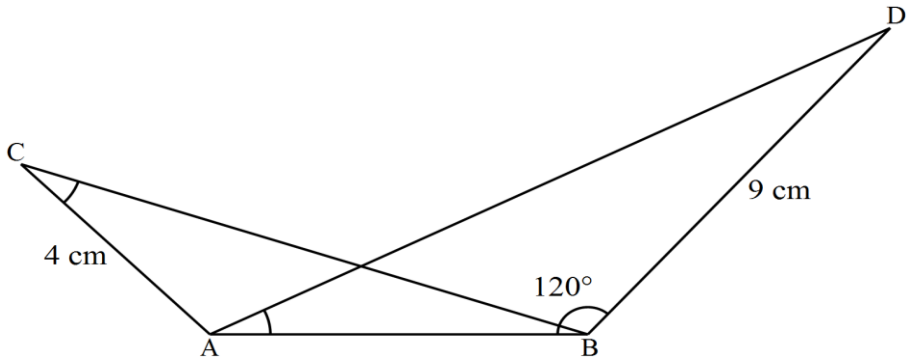


Given that AB = 7 cm, and taking π to be 3.142, calculate the area of the shaded region correct to 1 decimal place. **(4mks)**

SECTION II (50 Marks)

*Answer only **five** questions from this section in the spaces provided.*

17. In the figure below, AC = 4 cm and BD = 9 cm. $\angle ADB = \angle ABC$, $\angle DAB = \angle ACB$ and $\angle ABD = 120^\circ$.



(a) Calculate:

(i) The length of AB. **(3mks)**

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(ii) The perpendicular height of point D from AB produced correct to 1 decimal place. **(2mks)**

(b) Calculate correct to 2 decimal places:

(i) The length of AD. **(3mks)**

(ii) The size of angle ADB. **(2mks)**

18. The data below are marks scored by 45 students in a Mathematics test.

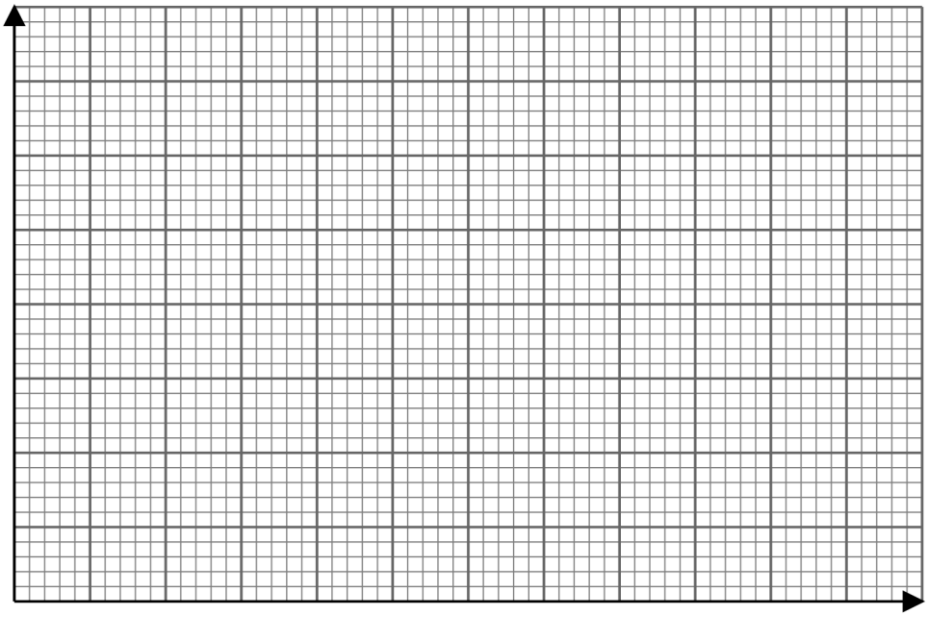
32	82	79	52	41	40	46	80	60
81	74	83	65	53	43	50	42	31
38	80	81	43	76	45	70	51	54
84	39	42	80	46	71	54	72	45
35	83	41	84	70	50	78	53	55

(a) Using the data above, complete the frequency distribution table below. **(2mks)**

Marks	30 – 39	40 – 44	45 – 54	55 – 69	70 – 79	80 – 84
Frequency						

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(b) Draw a histogram to represent the data above. **(3mks)**



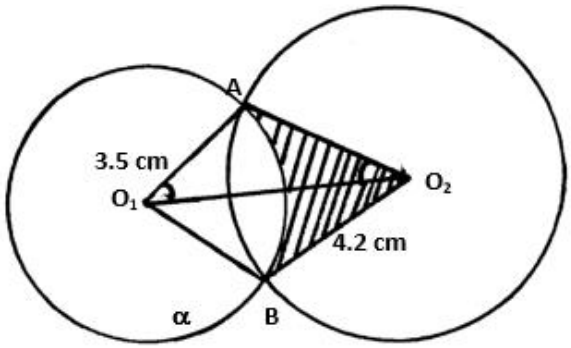
(c) Using the histogram in (b) above, determine:

(i) The median mark. **(3mks)**

(ii) The number of students that failed if the pass mark was 49.5. **(2mks)**

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19. Two circles of radii 3.5 and 4.2 cm with centres O_1 and O_2 respectively intersect at points A and B as shown in the figure below. The distance between the two centres is 6 cm.



Calculate

(a) The size of $\angle AO_1B$ (to the nearest degree) **(3mks)**

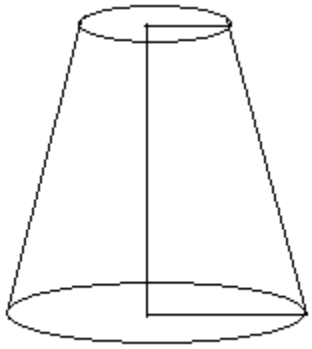
(b) The size of $\angle$ A O_2 B (to the nearest degree) **(3mks)**

(c) The area of quadrilateral O_1AO_2B, correct to 2 decimal places. **(2mks)**

(d) The shaded area correct to 2 significant figures. (take $\pi\ ^{22}/_{7}$) **(2mks)**

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20. The figure below shows a frustrum container with base radius 8 cm and top radius 6 cm. The slant height of the frustrum is 30cm . The container 90 percent full of water.



(a) Calculate the surface area of the frustrum **(3mks)**

(b) Calculate the volume of water. **(4mks)**

(c) All the water is poured into a cylindrical container of circular radius 7cm, if the cylinder has the height of 35cm; calculate the surface area of the cylinder which is not in contact with water. **(3mks)**

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21. A straight line L_1 passes through the points $A(-3,6)$ and $B(9,-2)$. Another line L_2 is the image of L_1 after a translation vector $\mathbf{T} = \begin{pmatrix} -2 \\ 1 \end{pmatrix}$.

(a) Find:

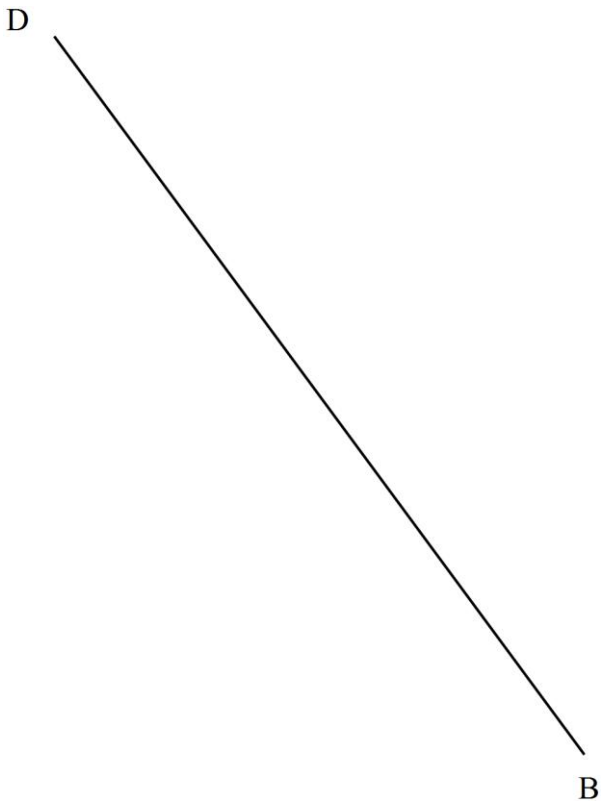
(i) The equation of L_1 in the form $ax + by = c$ where a, b and c are positive integers. **(3mks)**

(ii) The x and y intercepts of line L_2. **(3mks)**

(b) Another line L_3 passes through point $(2,-2)$ and is perpendicular to L_2 at point P. Find the coordinates of P. **(4mks)**

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22. In the figure below, BD is a minor diagonal of a rhombus ABCD. Angle $ABC = 105^\circ$ and the diagonals of the rhombus ABCD intersect at O.



(a) Using a ruler and a pair of compasses only, complete the rhombus. **(3mks)**

(b) Draw and measure:

(i) The major diagonal AC. **(1mk)**

(ii) The shortest distance from O to the side AB. **(2mks)**

(c) Draw the circle that touches the sides of the rhombus hence, calculate the area in the rhombus not covered by the circle. Take π to be 3.142. **(4mks)**

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23. Two friends Sheryl and Emmy live 40km apart. One day Sheryl left her house at 9.00a.m and cycled towards Emmy's house at an average speed of 15km/hr. Emmy left at 10.30a.m on the same day and cycled towards Sheryl's house at an average speed of 25km/hr.

a) Determine

i) The distance from Sheryl's house, where the two friends met **(4mks)**

ii) The time they met **(2mks)**

iii) How far Sheryl was from Emmy's house when they met **(2mks)**

b) The two friends took 10 minutes at the meeting point and they cycled to Emmy's house at an average speed of 12km/hr. Find the time they arrived at Emmy's house. **(2mks)**

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24. Four towns P, Q, R and S are such that town Q is 120km due East of town P, Town R is 160km due North of Town Q, Town S is on a bearing of 330^o from P and on a bearing of 300^o from R

a) i) draw a sketch to show the relative positions of the town. **(1mk)**

ii) Using a ruler and a pair of compasses only, show the relative positions of towns P, Q R and S. Take a scale of 1 cm rep 50km. **(5mks)**

b) determine

i) the distance SP in km **(2mks)**

ii) the bearing of S from Q **(2mks)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

END-TERM EXAMINATIONS
121/2- MATHEMATICS ALT. A
Paper 2
FORM 3
Time - 2½ Hours

INSTRUCTIONS TO CANDIDATES

(a) Write your name, admission number, school and class in the spaces provided at the top of this page.
(b) Sign and write the date of the examination in the spaces provided above.
(c) This paper consists of **two** sections: **Section I** and **Section II.**
(d) Answer **ALL** questions in **Section I** and **all** the questions from **Section II.**
(e) Show all the steps in your calculations, giving your answers at each stage in the spaces provided below each question.
(f) Marks may be given for correct working even if the answer is wrong.
(g) Non-programmable silent electronic calculators and KNEC Mathematical Tables may be used.
(h) Candidates should check the question paper to ensure that all, the pages are printed as indicated and no questions are missing.

For Examiners' Use Only
SECTION I

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

SECTION II

17	18	19	20	21	22	23	24	Total		
									Grand Total	

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SECTION 1: (50 MARKS) ANSWER ALL QUESTIONS

Answer all questions in this section in the spaces provide.

1. Use logarithms to evaluate to 4 significant figures **(3mks)**

$$\frac{(0.5241)^2 \times 83.59}{\sqrt[3]{0.23 + 0.126}}$$

2. The height of a cone is exactly 12cm. Calculate the percentage error in the volume if the radius is 7cm correct to the nearest centimeter. **(3mks)**

3. Make h the subject of the formula **(3mks)**

$$V = \sqrt[3]{\frac{ax^2h}{b-h}}$$

4. **Z** is directly proportional to $\mathbf{x^2}$ and inversely proportional to **y**. If **x** is increased by 20% and **y** is decreased by 20%. Find the percentage change in **Z.** **(3mks)**

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5. Given that OA = $3\underset{\sim}{i}+2\underset{\sim}{j}-4k$ and $\underset{\sim}{OB} = 4\underset{\sim}{i}+5\underset{\sim}{j}-2\underset{\sim}{k}$ and a point **P** divides line **AB** externally in the ratio 3:2, determine the magnitude of **OP** to 2 decimal places **(3mks)**

6. Given that $2\cos(2x-30^0) = -\frac{6}{5}$ find x where $180^0 \le x \le 360^0$ **(3mks)**

7. Irene buys a printer on hire purchase. She pays a deposit of sh.4000 and 12 monthly installments of sh.1500 each. Calculate the cash price if a compound interest of 5% per month is charged on the amount borrowed. **(3mks)**

8. Find the value of ***x*** in the equation

$\log(15-5x) - \log(3x-2) - 2 = 0$ **(3mks)**

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9. Rationalize the denominator and simplify **(3mks)**

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

10. Given that $\mathbf{A} = \begin{bmatrix} 1 & 0 \\ 3 & 1 \end{bmatrix}$ and $\mathbf{B} = \begin{bmatrix} 4 \\ 9 \end{bmatrix}$

Find $A^{-1}B$ **(3mks)**

11. Solve the equation $2x^2 + 3x = 5$ by completing the square method. **(3mks)**

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12. The number of birds in a sanctuary was originally 1.2million. Due to a mysterious diseases this number halved itself after every one week. Determine the number of birds remaining in the sanctuary at the end of the 5th week. **(3mks)**

13. Simplify the expression $\frac{3x^2 - 4xy + y^2}{9x^2 - y^2}$ **(3mks)**

14. Construct triangle PQR with PQ = 5.8 cm, QR = 3.4 cm and PR = 4.1 cm. Construct a circle passing through P, Q and R. Measure its radius **(4mks)**

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15. The cost of an article is sh. 1,200. Find the rate of inflation if the cost of the article after 5 years is sh. 1,932.60. **(3mks)**

16. The product of the third and fourth terms of an arithmetic sequence is 3000. Find the first term if the common difference is 10. **(3mks)**

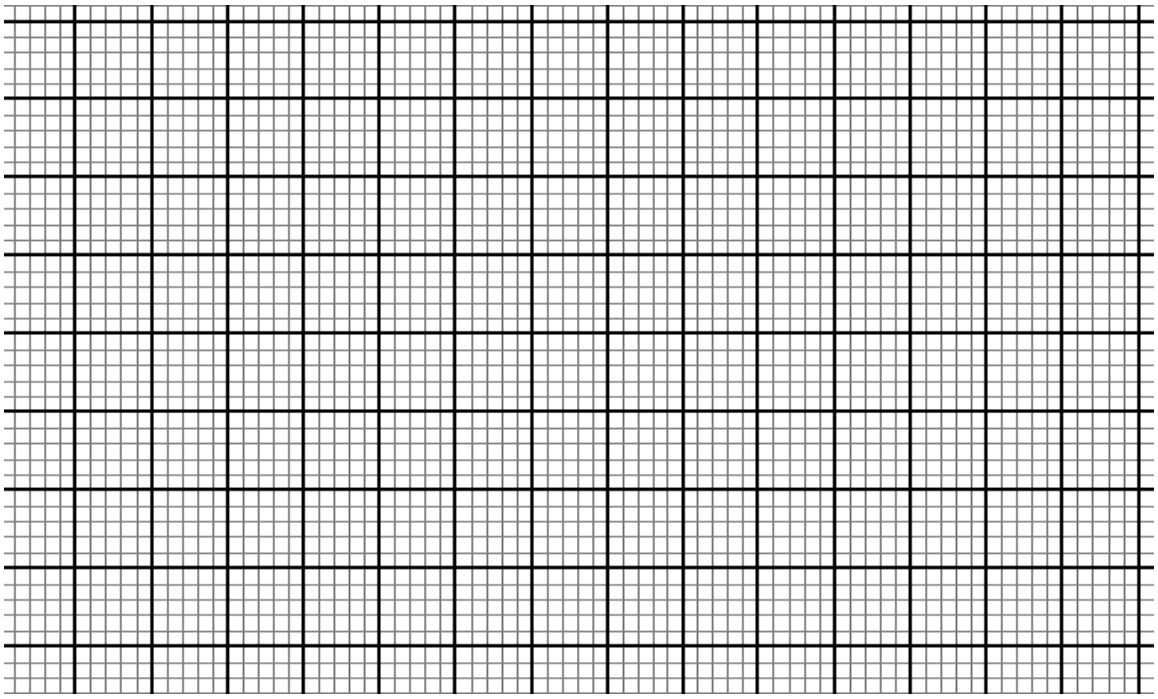
SECTION II: (50 MARKS) ANWER FIVE QUESTIONS ONLY

Answer any five questions from this section in the spaces provided after each.

17. (a) Complete the table below for the function $y = 2x^2 + 4x - 3$ **(2mks)**

X	-4	-3	-2	-1	0	1	2
$2x^2$	32		8	2	0	2	
4x-3			-11		-3		
Y			-3			3	13

(b) Draw the graph of the function $y = 2x^2 + 4x - 3$ on the grid provided. Use the scale: 2cm rep 1 unit on the x-axis and 1cm rep 2 units on the y-axis. **(3mks)**



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(c) Use your graph to estimate the roots of the equation $2x^2 + 4x - 3 = 0$ **(1mk)**

(d) Use your graph to obtain the roots of the equation $2x^2 + x - 5 = 0$ to 1 decimal place. **(3mas)**

(e) Draw the line of symmetry to pass through the turning point of this curve. **(1mk)**

18. The table below shows how income tax was charged on income earned in a certain year.

Taxable income per year(Kenyan shillings)	Rate
1-72,600	10%
72,601- 145,200	15%
145,201 -217,800	20%
217,801 - 290,400	25%

Mr. Mwongula is an employee of a certain company and earns a salary of ksh.15,200 per month. He is housed by the company and pays a nominal rent of Ksh. 1050 per month. He is married and is entitled to a family relief of ksh. 450 per month.

i. Calculate his taxable income in Ksh p.a **(2mks)**

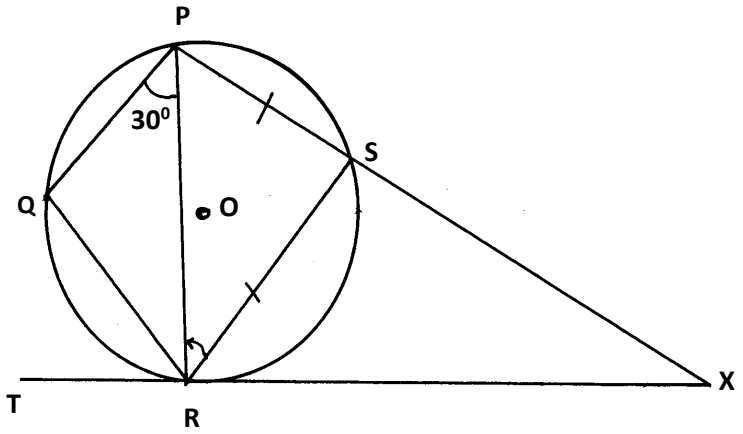
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ii. Calculate his gross tax per month. **(4mks)**

iii. Calculate his net tax per month **(2mks)**

iv. Calculate his net salary per month **(2mks)**

19. The figure below is a cyclic quadrilateral PQRS**.** Given that **TRX** is a tangent at **R** and **O** is the centre of the circle and that **PSX** is a straight line. Angle **PRS** = 50^0 and angle **QPR** = 30^0 and chord **RS** = PS.



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(a) Giving reason in each case, find;

(i) Angle **SRX** **(2mks)**

(ii) Angle **RXS** **(2mks)**

(iii) Angle **PQR** **(2mks)**

(iv) Reflex angle **QOR** **(2mks)**

(b) Given that **RX** = 12cm, **SX** = 8cm, find the length of chord PS **(2mks)**

20. The first term of a **G.P** is 1 while the first term of an **AP** is 4. The third term of the **G.P** is the first term of the **AP**. The ratio of the common difference to the common ratio of the progression is 3:2 the (Common ratio is greater than O). Find;

(a) The common ratio of the **G.P** and common difference of the **A.P** **(4mks)**

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(b) The fifth term of the **A.P** **(2mks)**

(c) The 6^{th} term of the **G.P** **(2mks)**

(d) The sum of the first four terms of the **G.P**. **(2mks)**

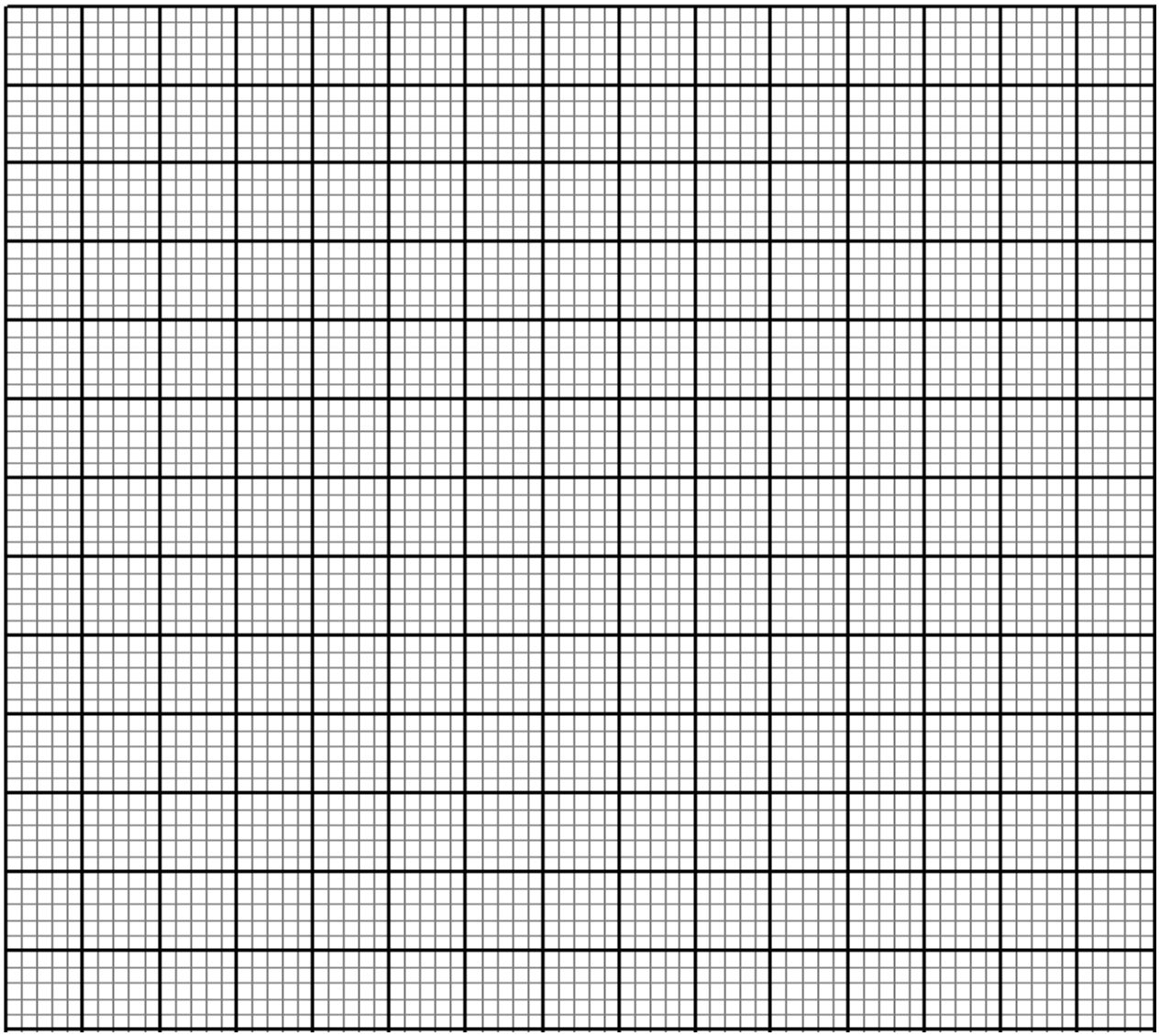
21. (a) Complete the table below for the functions $y = 3\sin(2x - 30)$ and $y = \cos(x + 60)$ in the domain $-180^0 \leq x \leq 180^0$ **(2mks)**

x^0	-180^0	-150^0	-120^0	-90^0	-60^0	-30^0	0^0	30^0	60^0	90^0	120^0	150^0	180^0
$y = 3\sin(2x - 30)$	-1.5			1.5	-1.5			1.5	3			-3	
$y = \cos(x + 60)$	-0.5			0.87	1			0	-0.5			-0.87	

(b) On the same axes draw the graphs of $y = 3\sin(2x - 30)$ and $y = \cos(x+60)$

Use the scale: 1cm rep 30^0 on the x-axis and 1cm rep 1 unit on the y- axis. **(5mks)**

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(c) Use your graphs to solve:

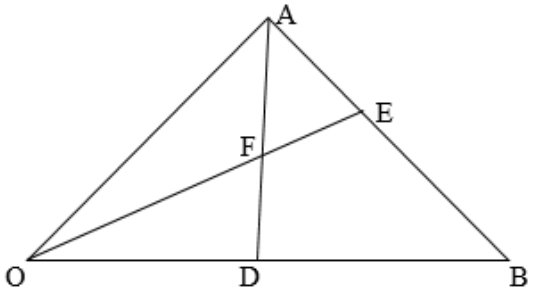
(I) $3 \sin (2x - 30)^0 = 0$ **(1mk)**

(II) $\cos (x + 60)^0 = 0$ **(1mk)**

(III) $3 \sin (2x - 30)^0 - \cos (x + 60)^0 = 0$ **(1mk)**

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22. In the figure below, E is the midpoint of AB, OD:DB=2:3 and f is the point of intersection of OE and AD.



Given **OA**= ***a*** and **OB**= ***b***

a) Express in terms of ***a*** and ***b***

i.**AD** **(1mk)**

ii.**OE** **(2mks)**

b) Given that **AF**= s**AD** and **OF**= t**OE** find the values of s and t **(5mks)**

c) Show that E,F and O are collinear. **(2mks)**

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23. (a) A quantity P varies directly as the cube of Q and inversely as the square root of R. When P = 189, Q = 6 and R = 16. (i) Determine the value of P when Q = 8 and R = 25. **(3mks)**

(ii) Find the percentage change in Q when P is increased by 15% and R is decreased in the ratio 4:5. **(3mks)**

(b) The charge C shillings per person for a seminar in a hotel is partly fixed and partly varies inversely as the total number of persons attending the seminar. When 100 people attend, the charge is Ksh 2 036 per person while when 80 people attend, the charge is Ksh 2 045 per person. Calculate the charge per person when 200 people attend the seminar. **(4mks)**

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24. In an n-sided polygon, two angles are right angles and each of the remaining angles is 150^0.

a) Find the value of n hence the sum of interior angles of this polygon. **(4mks)**

b) Name the polygon. **(1mk)**

c) Find the area of a regular octagon of sides 4cm to 5 s.f. **(5mks)**

THE LAST PRINTED PAGE

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM 2
PHYSICS – PAPER ONE (232/1)
FORM THREE (3)
Time - 2 Hours

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, mathematical tables may be used.
- All numerical answers **should be expressed** in the **decimal** notations.
- You may use:

➢ 'Gravitational acceleration, g, as $10m/s^2$
➢ Density of water = $1000kg/m^3$

For Examiner use only

SECTION	QUESTION	MAX MARKS	ANDIDATE'S SCO
A	1 – 12	25	
B	13	11	
	14	11	
	15	14	
	16	10	
	17	09	
	TOTAL	80	

1. A stop watch reads 06:30:94 and 09:10: 20 at the start and end of an experiment respectively. Determine:
a) The accuracy of the stop watch used **(1mk)**

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b) The duration of the experiment in SI units. **(2mks)**

2. In an experiment to demonstrate Brownian motion, smoke was placed in an air cell and observed under a microscope, Smoke particles were observed to move randomly in the cell.

i. Explain the observation **(1mk)**

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ii. Give a reason for use of smoke in this experiment **(1mk)**

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3. The reading on a mercury barometer at Mombasa is 760mm. Express this pressure in SI units. (density of mercury = 1.36×10^4 Kg/m^3) **(2mks)**

4. When a mercury thermometer is used to measure the temperature of hot water, it is observed that the mercury level first drops before beginning to rise. Explain. **(2mks)**

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5. Figure below shows a u-tube manometer containing a liquid L. One end of the tube is connected to a gas tap. Given that the atmosphere pressure is 1.0×10^5pa, determine the pressure of the gas (density of liquid L is 900kg/m^3, g=10N/kg) **(2mks)**

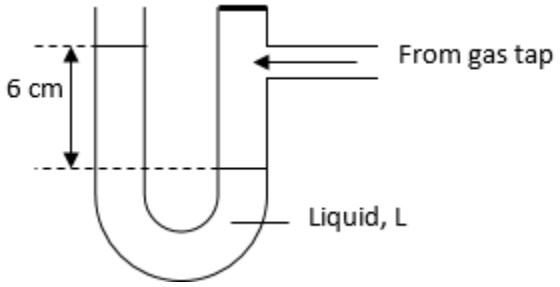


Figure 1

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6. For a fluid flowing at a velocity, V in a tube of cross-sectional area, A, VA= constant. State two assumptions made in deriving this equation. **(2mks)**

7. The figure 2 shows the graph of extension against force for a certain spring.

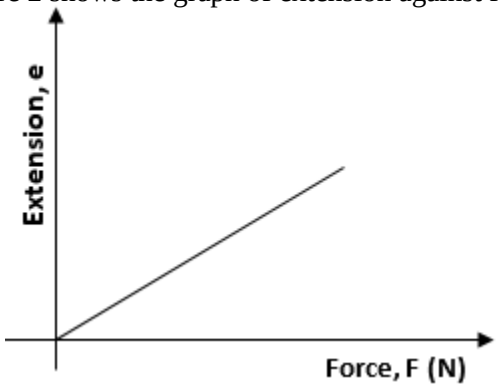


Figure 2

On the same diagram, sketch the graph of extension against force for a spring with a lower value of spring constant. **(1mk)**

8. An object is thrown vertically upwards at an initial velocity of 30m/s. Determine its maximum height. **(2mks)**

9. A solid marble is resting in a bowl as shown below.

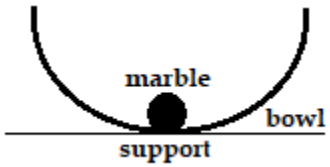


Figure 3

Suggest its state of equilibrium. Explain your answer **(2mks)**

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10. The diagram below (not drawn to scale) shows part of the motion of a tennis ball, which is projected vertically upwards from the ground and allowed to bounce on the ground.

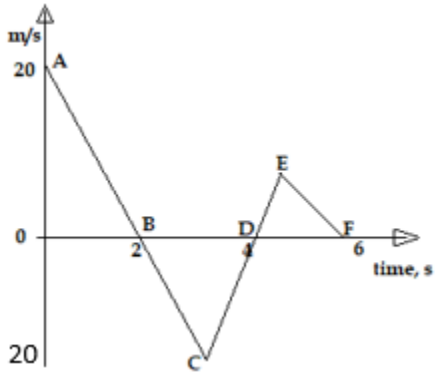


Figure 4

Calculate the height of the ball above the ground at the end of the 3rd second

(3 marks)

11. The figure below shows a uniform metal rod balanced at its centre by various forces.

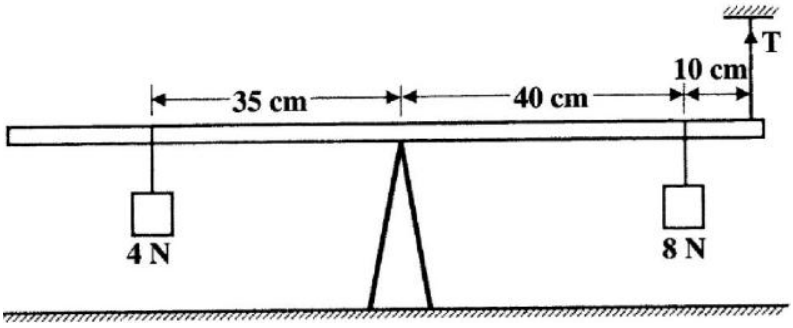


Figure 5

Determine the tension, T. **(3mks)**

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12. A high jumper lands on saw dust. Explain how the saw dust helps in reducing the force of impact. **(1mk)**

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SECTION B (55 MARKS)

13.

a) Define 'Centre of gravity' of a body **(1mk)**

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b) Explain why a lorry loaded with bags of maize packed high up is likely to topple when negotiating a corner. **(2mks)**

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c) The figure below is an aluminium metal sheet used for manufacturing bodies of motor vehicles.

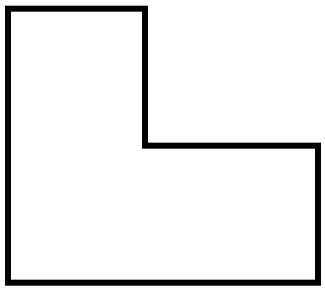


Figure 6

Determine its Centre of gravity **(2mks)**

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d) You are provided with the following apparatus: Plumb-line, thread, stand, irregular cardboard. Using a suitable set-up diagram, describe how you would determine the Centre of gravity of the irregular cardboard. **(6mks)**

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14.

a) State Bernoulli's principle **(1mk)**

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b) It is dangerous to stand close to a railway line on which a fast-moving train is passing. **(2mks)**

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c) The diagram below shows the mercury levels when no air is blown into the tube.

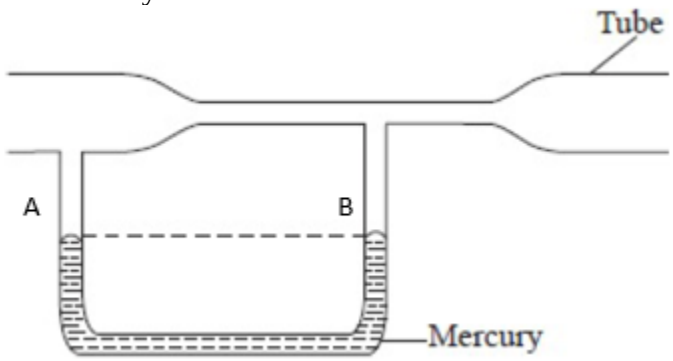


Figure 7

On the same diagram, indicate the new level of mercury when air is continuously moving fast through the tube. Explain your answer. **(3mks)**

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d) A pipe has a cross-sectional area of 40cm^2. The speed of water is 9 m/s at this end. if the speed increases to 15m/s in a constriction in the pipe, find the area of the narrow part of the pipe. **(3mks)**

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e)

i. Other than density, state any other factor which affect pressure in fluid **(1mk)**

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ii. State the assumption on which Pascal's principle is based **(1mk)**

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15.

a) Define the term 'velocity ratio' of a machine **(1mk)**

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b) The figure below shows part of a hydraulic press. The plunger is the position where the effort is applied while the Ram piston is the position where the load is applied. The plunger has cross-section area, a m^2 while the Ram piston has cross-section area, A m^2.

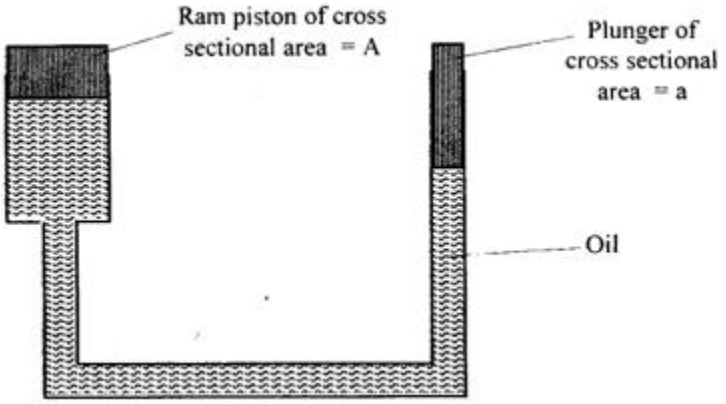


Figure 8

When the plunger moves down a distance, d the Ram piston moves up a distance, D.

i.State one property of the oil used in the hydraulic press **(1mk)**

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c) Determine the velocity ratio of the press in terms of A and a **(4mks)**

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d) A machine of velocity ratio 45 overcomes a load of 4500N when an effort of 135N is applied. Determine:

i.the mechanical advantage of the machine **(2mks)**

ii.the efficiency of the machine **(3mks)**

iii.percentage of work that goes to waste **(2mks)**

16. Figure 9 shows a threaded bolt.

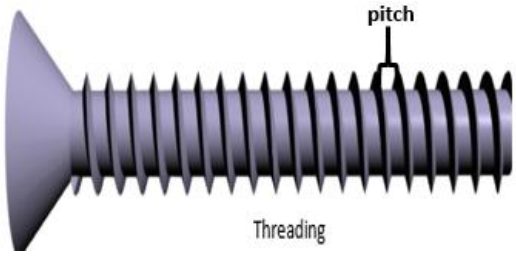


Figure 9

a) Explain how a metre-rule can be used to measure the pitch (distance between adjacent peaks) of the threading **(2mks)**

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b) Figure 10 is a screw-jack whose pitch is 1mm and has a handle of 25 cm long. Determine the velocity ratio of the jack (3 marks)

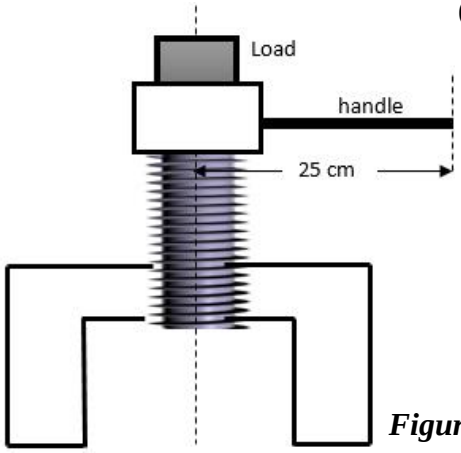


Figure 10

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c) A bullet of mass 60g is travelling at 800m/s hits a tree and penetrates a depth of 15 cm before coming to rest.

i. Describe the energy changes of the bullet as it penetrates the tree **(2mks)**

ii. Determine the average retarding force of the bullet **(3mks)**

17.

a) Define 'atmospheric pressure' and state it's SI unit **(1mk)**

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b) In an experiment to demonstrate the existence of atmospheric pressure, a plastic bottle is partially filled with hot water and the bottle is then tightly corked. After sometime the bottle starts to get deformed.

i. State the purpose of the hot water **(1mk)**

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ii. Explain why the bottle gets deformed **(2mks)**

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c) A trolley is pulled a long a smooth horizontal surface by a constant force as shown below:

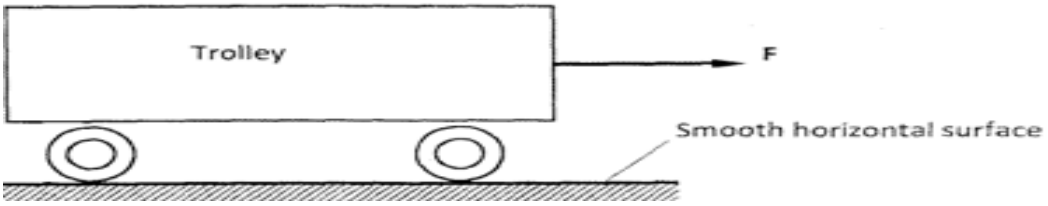
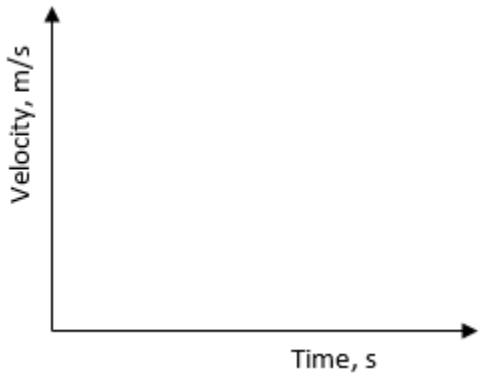


Figure 11

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i.On the axes provided, sketch the velocity-time graph for the motion **(1mk)**



ii. State the assumption made in part (i) above (1 mark)

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iii.A parachute falling through air soon attains terminal velocity. Explain the meaning of the term terminal velocity **(2mks)**

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d) State the equation showing the relationship among the various forces acting on the parachute soon after it attains the terminal velocity. **(1mk)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM 2
PHYSICS THEORY – PAPER 2 (232/2)
FORM THREE (3)
Time - 2 Hours

Instructions to Candidates

- *Write your name, admission number, class and signature in the spaces provided at the top of the page. This paper consists of two sections; **A** and **B.***
- *Answer **ALL** the questions in the spaces provided.*
- *Mathematical tables and electronic calculator may be used.*
- *All working MUST be clearly shown.*
- *This paper consists of **15** printed pages.*
- *Candidates should answer the questions in English and check to ensure that no question(s) is missing.*

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 12	25	
B	13	11	
	14	15	
	15	11	
	16	8	
	17	10	
TOTAL SCORE		**80**	

SECTION A: 25 MARKS

1. Give one difference between luminous and non-luminous sources of light. **(1mk)**

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2. When a negatively charged rod is brought near the cap of a leaf electroscope, the leaf rises. Explain this observation. **(2mks)**

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3. Figure 1 represents a displacement-time graph for a wave.

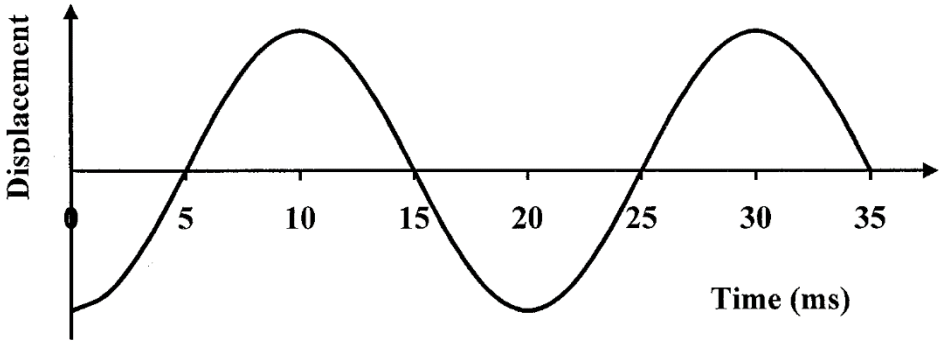


Figure 12

Determine the frequency of the wave. **(3mks)**

4. *State* the conditions necessary for a wave incident on a slit to be diffracted**.** **(2mks)**

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5. Figure 2 shows the magnetic field pattern round a current-carrying conductor. Indicate on the conductor the direction of the current**.** **(1mk)**

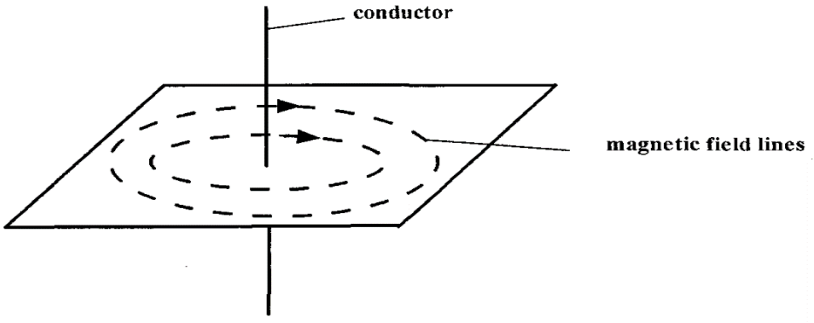


Figure 13

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6. In an experiment to determine the focal length of a concave mirror, magnification M was determined for various image distances v. Figure 3 shows a graph of magnification M against image distance v for the results from the experiment.

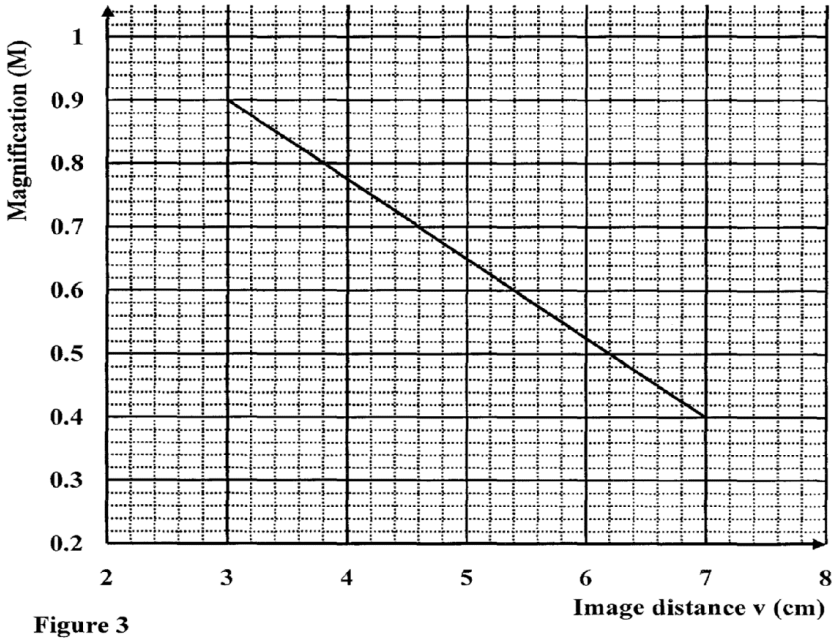


Figure 3

Figure 14

Given that M = $1 - \frac{v}{f}$, determine the focal length f of the mirror. **(3mks)**

7. Why is repulsion the sure test for a magnet? **(1mk)**

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8. A positively charged material was brought close to an insulated metallic ball as shown in **Fig 4.** State and explain the distribution of charge in the ball **(2mks)**

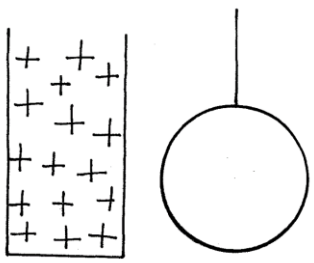


Figure 15

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9. Figure 5 shows a ray of light incident on an air bubble which is inside water,

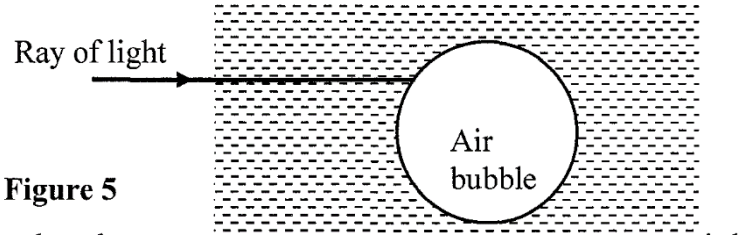


Figure 5

Figure 16

Complete the ray to show the path it follows through the air bubble. **(1mk)**

10. Explain how polarization of a cell increases the cell's internal resistance. **(2mks)**

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11. Explain why sound cannot be heard from far when one shouts in a forest **(1mk)**

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12. A cell of internal resistance O.5 Ω is in a circuit containing a 10 Ω resistor. A current of 2A flows in the circuit. Determine the emf of the cell. **(3mks)**

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13. A glass of thickness 14 cm is placed on a mark drawn on a plain paper. The mark is viewed is normally through the glass. Calculate the apparent depth of the mark and hence the vertical displacement (Refractive index of glass = 3/2) **(3mks)**

SECTION B. (55 MARKS)

Answer all questions in this section

14. (a) State the laws of refraction. **(2mks)**

(b) Give two advantages of totally internally reflecting prisms over plane mirrors**.** **(2mks)**

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(c) A ray of light is incident on a kerosene water interface as shown in figure 6 below.

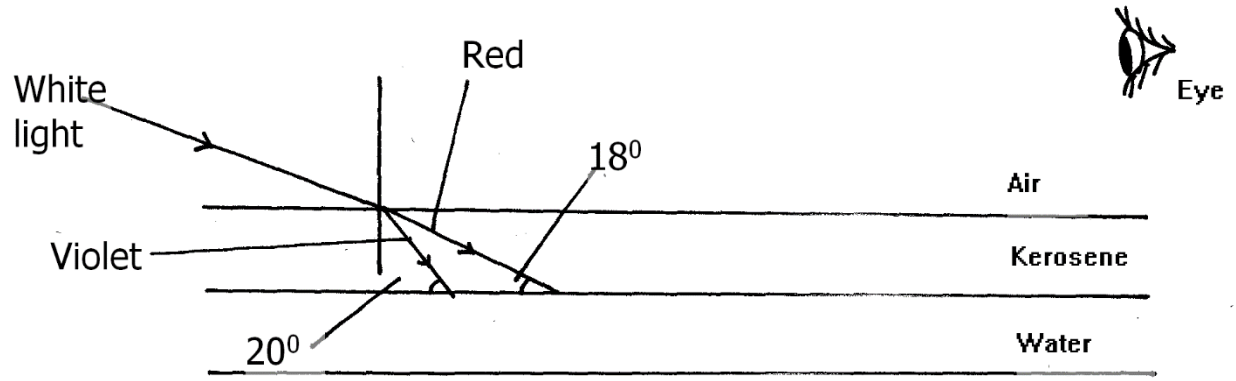


Figure 17

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Given that the refractive index of water and kerosene are 1.33 and 1.44 respectively,

Determine

(i) The refractive index for the kerosene – water interface **(3mks)**

(ii)determine and show on the figure the path of the rays of light between the

Kerosene-water surface **(3mks)**

(iii) Why does the colors of the light separate at the kerosene layer? **(1mk)**

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(iv) State and explain the observation that the eye above the two surfaces would see. **(2mks)**

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15.(a) State Ohm's law **(1mk)**

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(b) State two factors that affect the resistance of a metallic conductor**.** **(1mk)**

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(c) Use the circuit in figure 7 below to answer the questions that follow (i) Calculate the total resistance in the circuit. **(3mks)**

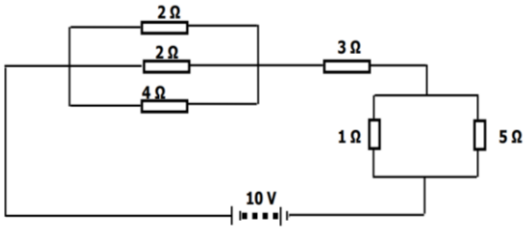


Figure 18

(ii) Determine the current flowing through the 5Ω resistor. **(3mks)**

(d) The figure 8 below shows a simple cell.

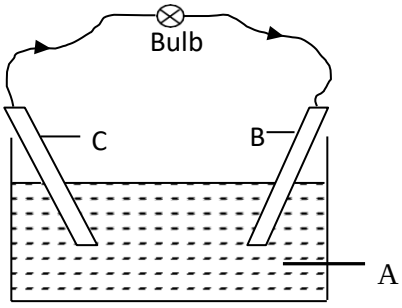


Figure 19

I. Name the electrolyte **A……..** **(1mk)**

II. When the switch is closed the current flows in the direction shown making the bulb to glow for a while.

Name the metals B and **C** **(2mks)**

B…….

C…….

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III. How can the bulb be made to light again for a longer period**.** **(1mk)**

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16. (a) Define capacitance of a capacitor **(1mk)**

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(b) The figure 9 below shows a charged electroscope two aluminium plates A and B arranged a shown

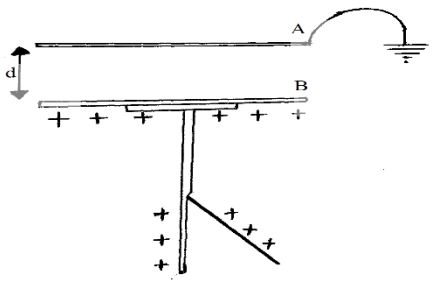


Figure 20

State and explain the observations made when:

(i) d is reduced **(2mks)**

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(ii) The plate A is more horizontally **(2mks)**

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(iii) A sheet of polythene is placed between A and B **(2mks)**

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(c) The figure 10 below shows an arrangement of three capacitors of 4 µF, 6 µF, and 8 µF connected to a 12.0 V d.c power supply.

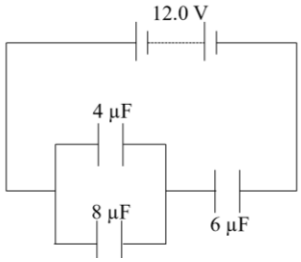


Figure 21

(i) Calculate the effective capacitance of the arrangement. **(3mks)**

(ii) Calculate the charge on the 8 µF capacitor. **(3mks)**

17. In an experiment to study interference in sound waves, two identical loudspeakers are connected to an audio frequency generator so that they act as coherent sources S1 and S2 as shown in the figure 11 below

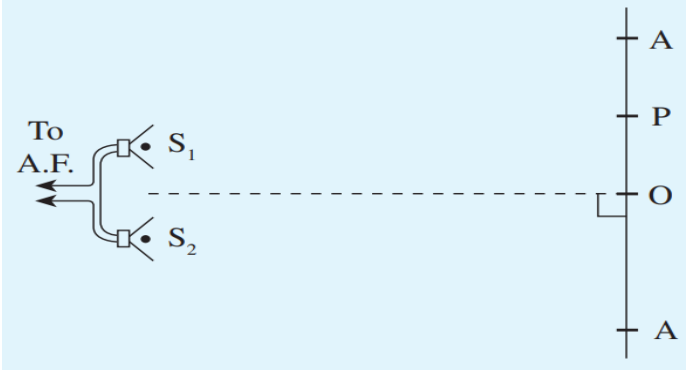


Figure 22

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An observer walking several meters ahead and along a line parallel to S1 S2 identifies points A and A1 as the first positions of loud sound on either side after the loud sound at the middle position O between the two sources

(a) What is meant by the term coherent sources? **(1mk)**

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(b) Name the type of interference occurring at points O, A andA1**.** **(1mk)**

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(c) What name is given to the interference that occurs at point P exactly midway between O and A? **(1mk)**

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……

(d) What is an echo? **(1mk)**

……

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(e) A person standing 110 m from the foot of a cliff claps his hands and hears a sound 0.75 seconds later. Find the speed of sound in air**.** **(3mks)**

18. (a) State Fleming's left-hand rule. **(1mk)**

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(b) The figure 12 below shows a coil PQRS lying between two unlike magnetic pole of pieces A and B of an electric motor.

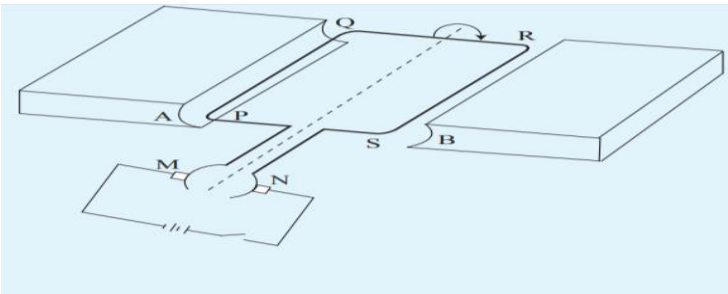


Figure 23

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I. Identify the parts**:** **(2mks)**

M. ……

N. ……

II. Given that PQRS rotates in a clockwise direction, state the polarity of A. **(1mk)**

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III. State three ways how you would increase the speed of rotation of the coil. **(3mks)**

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(c) (i) Distinguish between soft and hard magnetic materials. **(1mk)**

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(ii) Which of the two types of materials is suitable for use as:

• Compass needle? **(1mk)**

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• Core of an electromagnet**?** **(1mk)**

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PROGRESSIVE STUDENTS FORM THREE
END TERM 2 SERIES ONE EXAMS

NAME: ……

SHOOOL: ……

ADM NO: ……. SIGN:……..… DATE: ……..

TERM 2
PHYSICS – PRACTICAL (232/3)
FORM THREE (3)
Time – $2\frac{1}{2}$ Hours

INSTRUCTIONS:

- Answer all the questions in this paper
- You are supposed to spend the first 15 minutes of the $2\frac{1}{2}$ hours allowed for this paper reading the whole paper carefully before starting your work.
- Marks are given for clear record of the observations made, their suitability and accuracy and the use made of them.
- Candidates are advised to record observations as soon as they are made
- Mathematical table and electronic calculators may be used.
- **The earth's gravitational pull, $g = 10Nkg^{-1}$**

For Examiner's use only:

QUESTION	TOTAL MARKS	CANDIDATE'S SCORE
1	20	
2	20	
GRAND TOTAL	40	

QUESTION 1

You are provided with the following apparatus:

- One dry cell
- A cell holder
- A volt-meter (0-3V)
- An ammeter (0-1A)
- A switch
- Amounted resistance wire labelled AB
- Micrometer screw-gauge

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PROCEED AS FOLOWS:

a) Set up the apparatus as shown in the circuit below, figure 1

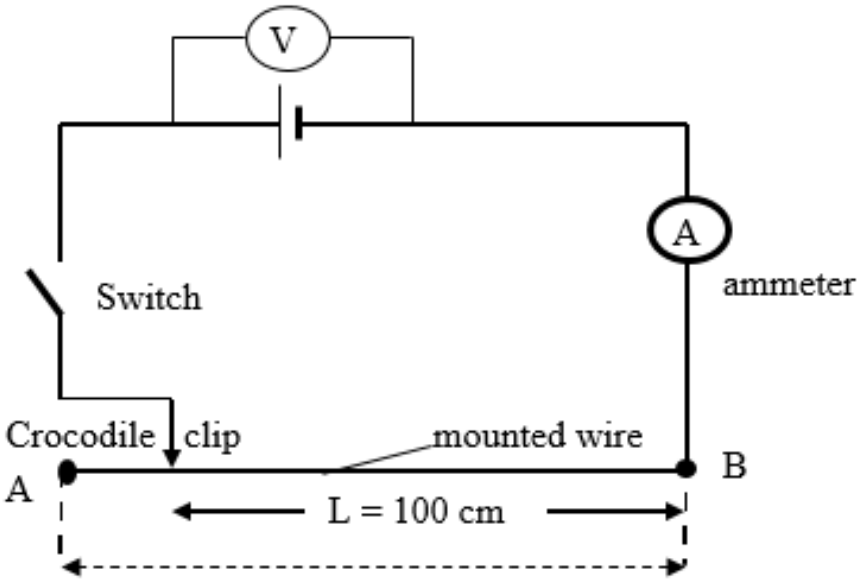


Figure 24

b) Using the micrometer screw-gauge provided, measure the diameter, D of the mounted wire.

D = ...mm **D = ...m** **($1\frac{1}{2}$ *mks*)**

c) Determine the cross-sectional area, A of the mounted wire given that:

$A = \pi R^2$ where, R is the radius of the wire **(2mks)**

d) While the switch is open, record the voltmeter reading, V_0

$V_0 =$ ..... **($\frac{1}{2}$ mark)**

e) Put on the switch. While the crocodile clip is at A (i.e. L = 100 cm) take the volt-meter reading (V) and the ammeter reading (I). Record V and I in the table, 1 below:

Table 1

Length, ***L*** (cm)	100	80	60	40	20	0
Voltage (V)						
Current, I (A)						
R = $\frac{v}{I}$ (Ω)						

(10mrks)

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f) Repeat the procedure in (c) above for the lengths shown and complete the table 1 above.

g) Determine, R_{av}, the average value of resistance, R **(2mks)**

h) The relationship between resistance, R and length, l is given by the equation:

$R_{av} = \frac{\rho l}{A}$, determine the value of the constant, ρ when $l = 100cm$ **(3mks)**

i) State the significance of the constant, ρ **(1mk)**

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QUESTION TWO

You are provided with the following:

- a metre rule
- 3 optical pins
- 2 small wooden blocks
- a stop watch
- a stand, a boss and clamp
- a piece of sello-tape

Proceed as follows:

a) Using the two wooden blocks, clamp two optical pins about 4 cm apart in the stand so that they project out of the blocks in a horizontal plane.

b) Using a piece of sellotape, attach the third optical pin across the metre rule at a distance x = 10 cm from the 50 cm mark. Now suspend the metre rule on the two clamped pins so that it can swing freely in a vertical plan with the third pin as the axis. (See **figure 2**)

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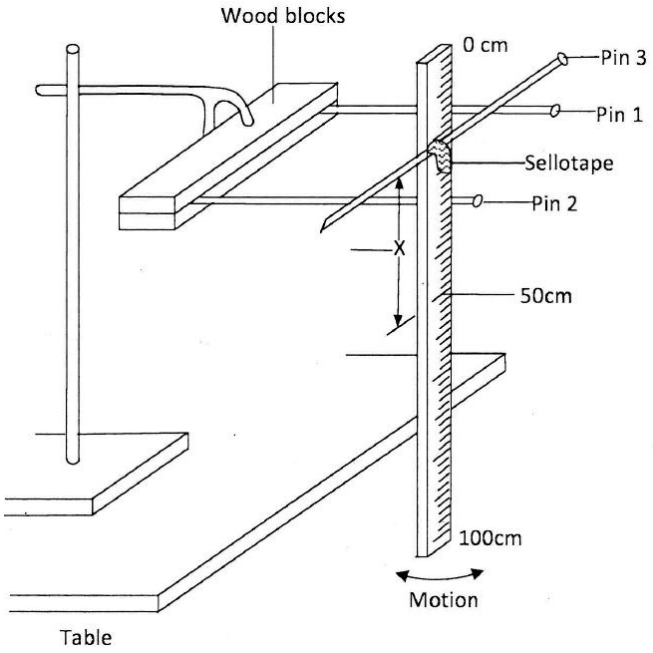


Figure 25

c) Displace the lower end of the metre rule slightly and let it oscillate as shown in the **figure 2**. Measure and record in table 2 the time t (s) for 20 oscillations.

d) Repeat the procedure in (b) and (c) for the values of x shown in table 2.

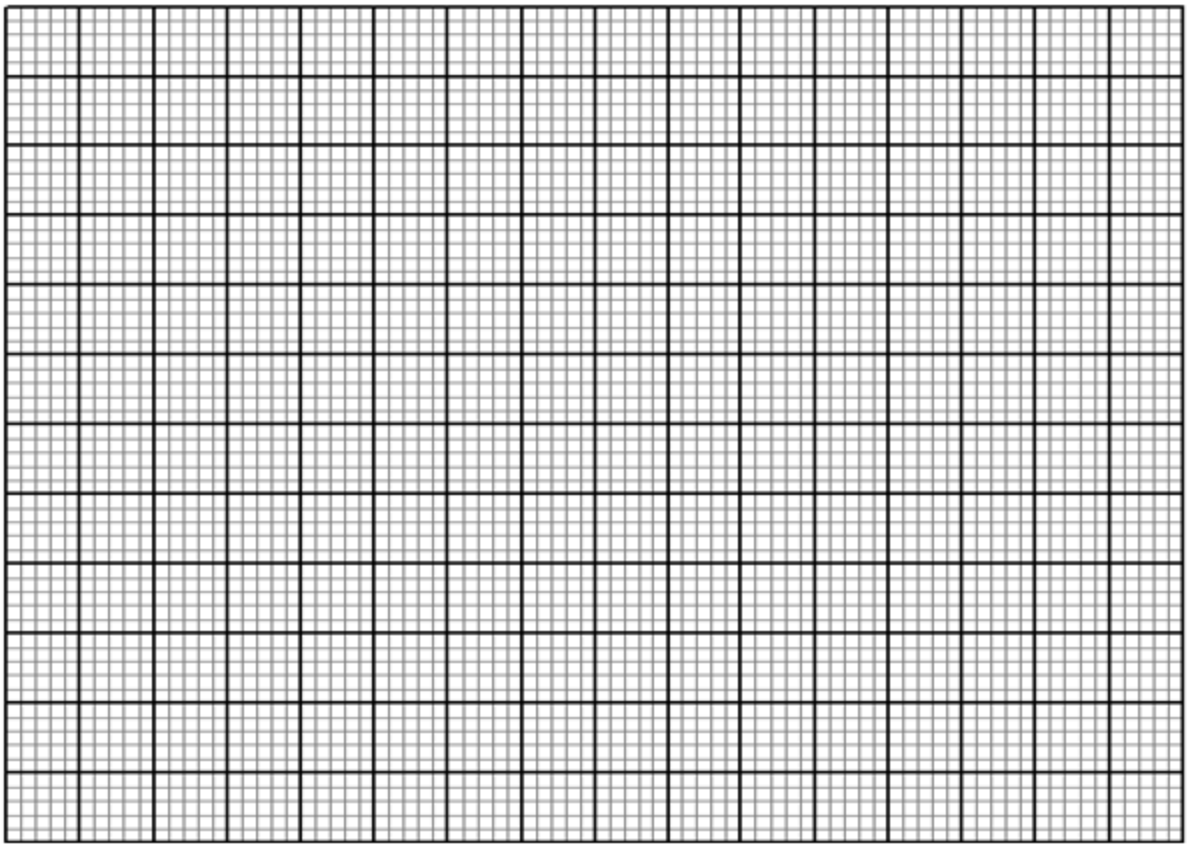
e) For each value of x shown in the table, determine the period T(s), and complete the table. (The period T is the time for one complete oscillation).

Distance X(cm)	10	14	18	22	26	30
Time t (s)						
Period T (s)						
T^2. X (correct to 1 decimal place)						
X^2 (cm^2)						

(9mks)

f) On the grid provided, plot a graph of T^2. X (y-axis) against X^2 **(5mks)**

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g) From the graph, determine:

i. the slope S of the graph. **(3mks)**

ii. The value of constant r given that: $rS = 39.5$ **(3mks)**

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