BRILLIANT STUDENTS FORM 4 END TERM 2 SERIES 2 EXAMS *(ALL SUBJECTS TESTED)*



BRILLIANT STUDENTS FORM 4 END TERM 2 SERIES 2 EXAMS

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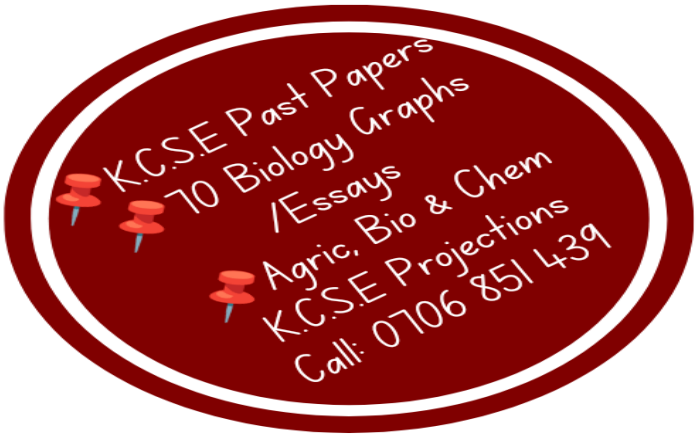
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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

443/1
AGRICULTURE.
PAPER 1
FORM 4

TIME: 2 HOURS

Kenya Certificate of Secondary Education

END OF TERM II EXAMINATION QUESTIONS

INSTRUCTIONS:-

1) Answer all questions in section **A** and **B** in the spaces provided.

2) Answer any **2** questions in section **C.**

SECTION A (30 MARKS)

Answer all questions in this section in the spaces provided.

1. Define the following terms as used in agriculture.

(i) Pomoculture **(1 mk)**

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(ii) Mixed farming **(1mk)**

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2. State two processes by which farmyard manure lose nutrients when exposed to the open during preparation. **(1mk)**

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3. How do the following factors affect seed rate? **(2mks)**

(i) Seed purity?

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(ii) Spacing?

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4. State any four non-chemical methods controlling storage pests in a maize granary. **(2mks)**

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5. What is fertilizer grade? **(1mk)**

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6. State four benefits of individual owner-operator land tenure system. **(2mks)**

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7. List four roles of trees in soil conservation. **(2mks)**

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8. Give four basis of classifying pests. **(2mks)**

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9. List four details that appear on a delivery note. **(2mks)**

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10. Give two reasons why farmers are encouraged to practice organic farming. **(1mk)**

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11. State four ways in which burning of vegetation may lead to loss of soil fertility. **(2mks)**

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12. State four features that should be considered when choosing water pipes for use on the farm. **(2mks)**

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13. Give three reasons for early seedbed preparation. **(1 ½ mks)**

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14. State three biotic factors that influence crop production. **(1 ½ mks)**

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15. State four advantages of row planting in crop production. **(2mks)**

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16. Give the reason for breaking seed dormancy. **(1mk)**

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17. State four reasons for pruning fruit crops. **(2mks)**

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18. What is profit maximized in agricultural economics. **(1mk)**

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SECTION B (20 MARKS)

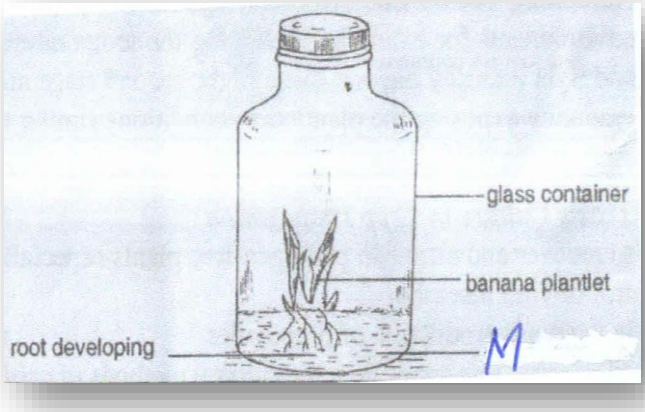
Answer all questions in this section in the spaces provided.

19. Mr. Mwangi wishes to know whether replacing 3 hectares of maize with Irish potatoes the following seasons would be worthwhile. The fertilizer cost would be increased from Ksh. 4,000 per hectare to Ksh. 6,000 per hectare. He also incurs cost of maize seeds at Ksh 1,200 per hectare. The cost of Irish potatoes seeds is Ksh. 3,000 per hectare. The income from maize was Ksh. 90,000 and for Irish potatoes will be Ksh. 120,000.

(a) Draw up a partial budget for Mr. Mwangi's farm. **(4mks)**

(b) With a reason, what advice can you give to Mr. Mwangi? **(1mk)**

20. The diagram below illustrates on method of crop propagation in bananas. Study it and answer the questions that follow.



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(a) Identify the method of propagation illustrated. **(1mk)**

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(b) Name solution labeled M

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(c) State three advantages of using this method in crop propagation. **(3mks)**

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21. The diagrams labeled A_1, A_2, A_3 and B below illustrate materials and methods of vegetative propagation. Study them and answer the questions that follow.



(a) Name the part labeled A_1 and A_2. **(2mks)**

A_1 .....

A_2 .....

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(b) Name the methods of propagation illustrated in diagrams A_3 and B**.(2mks)**

A 3 ……

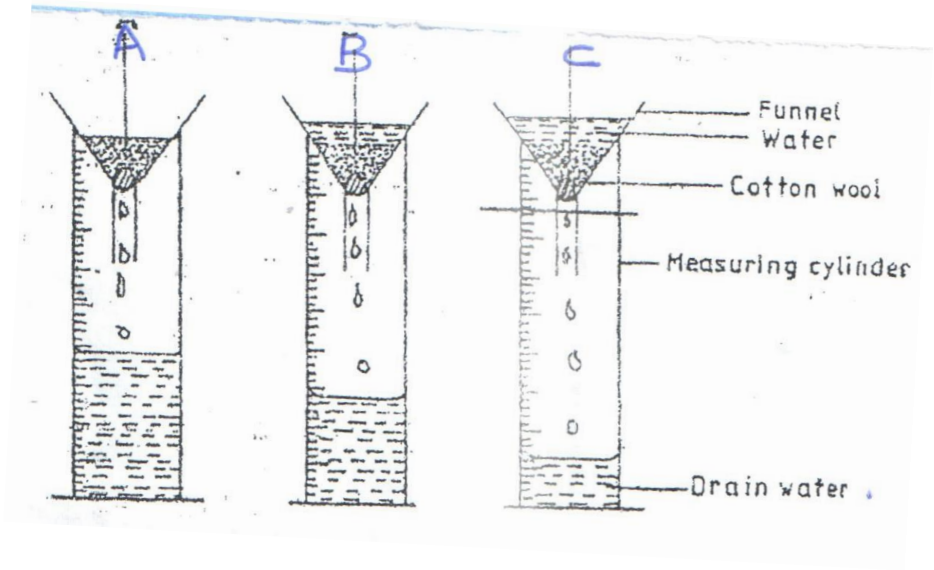
B ……..

(c)Give crop that is propagated using method B above. **(1mk)**

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22. The diagram below illustrates an experiment on soil. Study carefully and answer the questions that follow.



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

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(b) If the volume of water illustrated in the measuring cylinders was observed after one hour, identify the soil samples labeled A and B. (2mks)

A- ……

B-……

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(c) State two ways in which the soil structure of the soil sample labeled C above can be improved. **(2mks)**

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SECTION C (40 MARKS)

Answer any two questions from this section.

23. (a) Outline farming activities which may encourage soil erosion. **(8mks)**

(b) Explain four ways in which;-

(i) Health (eg HIV and AIDS) limits agricultural production. **(4mks)**

(ii) Government policy improves agricultural production. **(4mks)**

(iii) Low level of education and Technology influences agriculture. **(4mks)**

24. (a) Give four factors that determine the nutrient content of hay. **(4mks)**

(b) Explain ten roles of a farm manager in agricultural production. **(10 mks)**

(c) Describe the harvesting of tea. **(10 mks)**

25. (a) Explain ten cultural measures of controlling crop diseases.(**10 mks)**

(b) List four sources of capital to the Kenyan farmer. **(4mks)**

(c) (i) Give two reasons for proper drying of maize grains before storage. **(2mks)**

(ii) Explain four maintenance practices done to a maize store before storage. **(4mks)**

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NAME: ……..

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443/2
AGRICULTURE.
PAPER 2
FORM 4

TIME: 2 HOURS

END OF TERM II EXAMINATION QUESTIONS

INSTRUCTIONS:-

1) Answer all questions in section **A** and **B** in the spaces provided.

2) Answer any **2** questions in section **C.**

SECTION A (30 MARKS)

Answer all questions in this section in the spaces provided.

1. Name the part of the poultry digestive system in which cellulose is digested. **(1mk)**

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2. State three factors that would determine the amount of concentrate fed to dairy cattle. **(1 ½ mks)**

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3. Give two harmful effects of keds in sheep. **(1mk)**

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4. Name four structures which would assist in the control of livestock parasites on a farm. **(2mks)**

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5. Name the disease transmitted by tsetse fly in cattle. **(1mk)**

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6. State two maintenance parasites carried out on a green house structure. **(1mks)**

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7. Define the following terms as used in livestock breeding:-

(a) Mothering ability. **(1mk)**

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(b) Prolifically. **(1mk)**

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8. State two reasons that could lead to failure of a cow to conceive after service. **(1mk)**

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9. Give three benefits of dehorning. (1 ½ mks)

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10. State four benefits of aquaculture in Kenya. **(2mks)**

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11. State four factors that influence milk composition. **(2mks)**

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12. State four advantages of fold system of rearing poultry. **(2mks)**

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13. Give four limitations of using solar power on the farm. **(2mks)**

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14. State the function of each of the following tools:-

(a) Chaff cutter **(1mk)**

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(b) Tinsman snip **(1mk)**

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15. Give the appropriate term that refers to each of the following.

(a) Mature male goat. **(1mk)**

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(b) Young one of a rabbit. **(1mk)**

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(c) Mature castrated male cattle. **(1mk)**

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16. Give four reasons for proper maintenance of a harrow. **(2mks)**

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17. State four conditions that would encourage hens to eat eggs in poultry production. **(2mks).**

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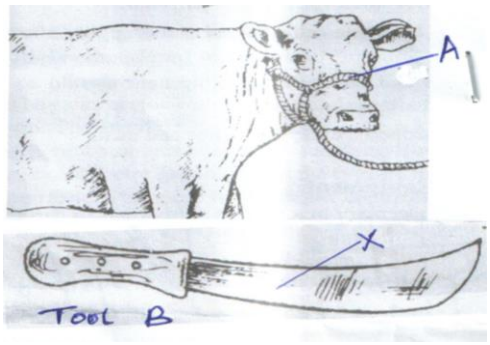
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SECTION B (20 MARKS)

Answer all questions in the spaces provided.

18. The diagram below shows a livestock production equipment labeled A and a garden tool labeled B. Study and answer the questions that follow.



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(a) State the function of the equipment labeled A. **(1mk)**

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(b) Name two other equipments used to carry out the function stated in (a) above. **(2mks)**

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(c) Explain two maintenance practices done on the part labeled X in tool B. **(2mks)**

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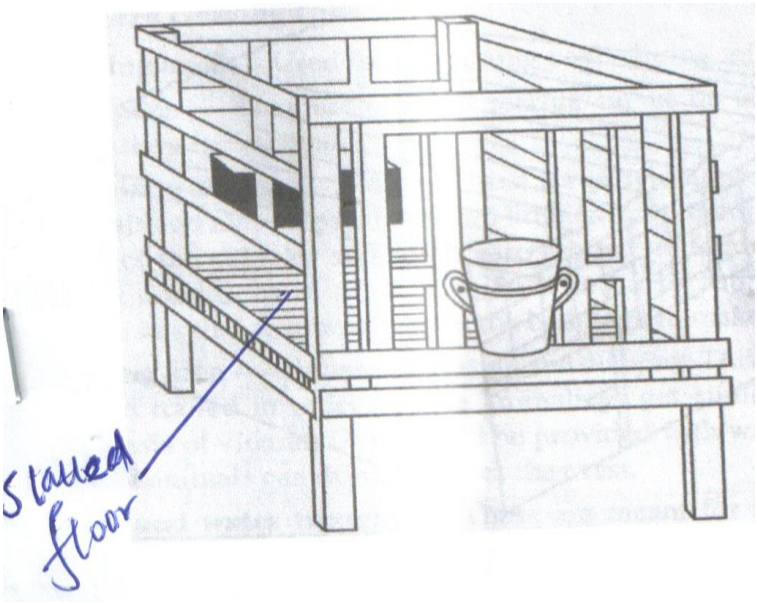
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19. Below is a diagram of a farm structure. Study it and answer the questions that follow.



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(a) Identify the farm structure. (1mk)

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(b) State two benefits of the type of floor in the structure illustrated above. **(2mks)**

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(c) Give two factors considered when sitting the structure. **(2mks)**

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20. In the preparation of feed, a sow with piglets is to be fed with 2.5kg of sow and weaner meal and an extra 0.25kg per piglet per day. The sow has 10 piglets.

(a) (i) Calculate the total amount of the feed the sow is given in a day. **(2mks)**

(ii) Name the type of ration that the 0.25kg of the feed per piglet per day represents. **(1mk)**

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(b) Explain how the following factors influence digestibility.

(i) Form in which feed is offered to animals. **(1mk)**

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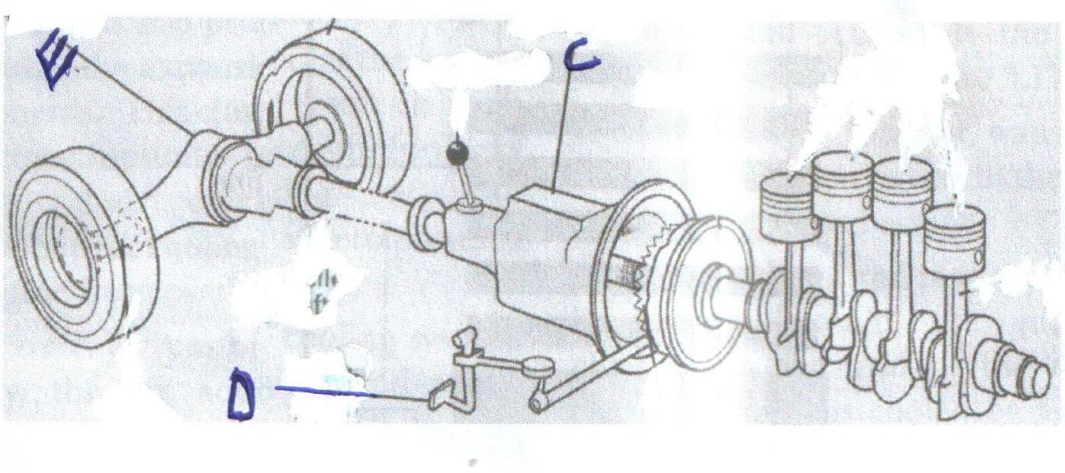
(ii) Ratio of energy to protein in feed. **(1mk)**

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21. Below is an illustration of tractor system. Study it and answer the questions that follow.



(a) Name the system of a tractor illustrated above. **(1mk)**

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(b) Identify the parts labeled C and D. **(2mks)**

C ……..

D ……..

(c) State two roles of the part labeled E. (2mks)

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SECTION C (40 MARKS)

Answer any two questions from this section in the space provided after question 24.

22. (a) Describe the uses of any ten tools/equipments used when establishing a barbed wire fence. **(10 mks)**

(b) Give five ways of improving productivity of draught animals. **(5mks)**

(c) Describe five symptoms of tapeworm attack on livestock. **(5mks)**

23. (a) Describe anthrax disease under the following sub-headings;-

(i) Cause **(1mk)**

(ii) Transmission **(2mks)**

(iii) Signs observed in carcass resulting from death by anthrax. **(4mks)**

(iv) Control measures. **(3mks)**

(b) Describe five physical features of an ideal dairy cattle. **(5mks)**

(c) State five management practices done in an incubator. **(5mks)**

24. (a) State six advantages of the battery cage system of rearing layers. (6mks)

(b) Describe five practices done immediately after furrowing. **(5mks)**

(c) (i) Define the term health as used in livestock production. **(1mk)**

(ii) Explain eight livestock disease general control measures

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SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

231/1
BIOLOGY
PAPER 1
FORM 4

TIME: 2 HOURS

END OF TERM II EXAMINATION QUESTIONS

ATTEMPT ALL THE QUESTIONS

1. Some form one students wanted to collect the following animals for study in the laboratory. State the suitable apparatus they should use.

   i) Flying insects **(1 mark)**

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   ii) Crawling stinging insects **(1 mark)**

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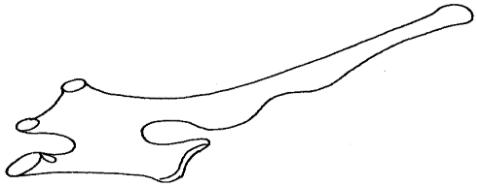
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   iii) Small animals from tree barks (1 mark)

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2. The diagram below represents a mammalian vertebra.



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(a) Identify the vertebra represented above. **(1mk)**

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

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3. (a) Explain the role of oxygen in Active transport **(1mk)**

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(b) Name two processes that depend on Active transport in animals **(2mks)**

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4. Explain how sunken stomata lower the rate of transpiration **(2mks)**

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5. State how xylem vessel is adapted to its function **(3mks)**

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6). a) Define the term immunity. **(1mk)**

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b) Distinguish between natural immunity and acquired immunity. **(1mk)**

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c) Identify one immunizable disease in Kenya. **(1mk)**

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7. State two adaptations of the alveolus to its functions. **(2mks)**

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(a) Why may an asthmatic patient produce a wheezing sound during breathing? **(1mk)**

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(b) What is the significance of the cartilage found in the human trachea being incomplete (c- shaped rings) **(1mk)**

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8. Define the following terms;

(i) Inter specific competition. **(1mk)**

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(ii) Carrying capacity **(1mk)**

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9. Suggest two methods that can be used to determine that type of food eaten by animals. **(2mks)**

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10. (a)State one significance of genetics counseling **(1mk)**

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(b) Part of a strand of DNA molecules was found to have the following sequence
A-T-C-G-G-G-A-T-C-T. What is the sequence?

(i) Of the complementary strand? **(1mk)**

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(ii) On a m- RNA strand copied **(1mk)**

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11). The paddles of whales and the fins of fish adapt these organisms to aquatic habitats.

a) Name the evolutionary process that may have given rise to these structures. **(1mk)**

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b) What is the name given to such structures? (1mk)

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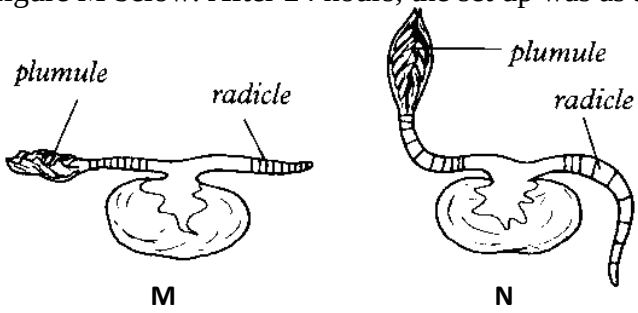
c) Give two examples of vestigial organs in man. **(2mk)**

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12). An experiment was set to investigate a certain aspect of response. A seedling was put on a horizontal position as shown in figure M below. After 24 hours, the set up was as shown in figure N.



a) Name the response exhibited. **(1mk)**

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b) Explain the curvature of the shoot upwards. **(3mk)**

13.The following is an equation representing a type of respiration

$$C_6H_{12}O_6 \longrightarrow 2C_2H_5OH + 2CO_2 + \text{Energy}$$

a) Identify the type of respiration. **(1mk)**

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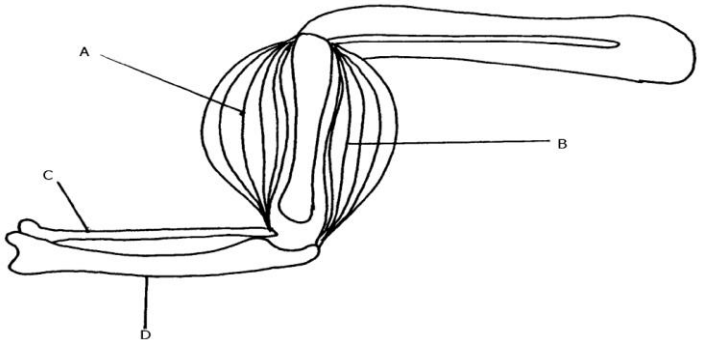
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b) Suggest one industrial application of the process shown in the equation above (1mk)

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14.



a) Name the bones labeled C and D. (2 mark)

C-……

D-……

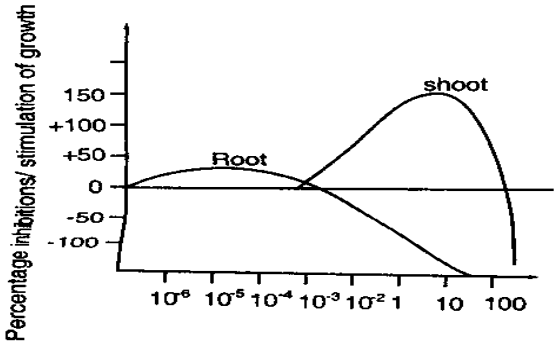
b) What happens to structure A and B as the arm is straightened (1 mark)

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15. Below is a graphical representation of the effects of different concentration of auxins on shoot and root growth. Study it carefully and then answer the questions that follow.



Auxin concentration (ppm)

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(a)Identify **any two** conclusions that can be drawn from the graph. (2mks)

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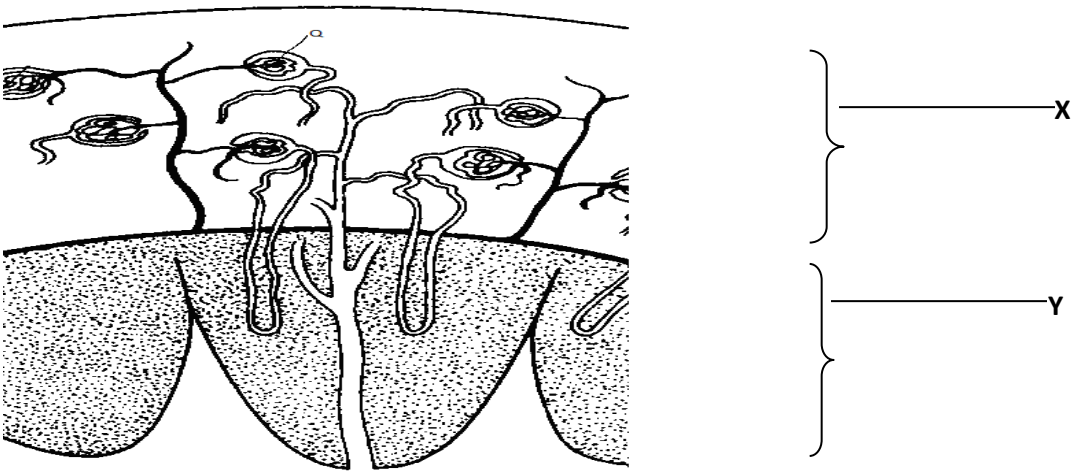
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(b)Name the growth hormone responsible for ripening of fruits. (1mk)

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16. The illustration below shows a transverse section through a mammalian kidney.



(a) Name the structures labelled **X** and **Y**.

X …….. **(1mk)**

Y …… **(1mk)**

(b) State the process in **Q** that leads to the formation of glomerular filtrate. (1mk)

……

……

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17. State **three** differences in composition between umbilical artery and umbilical vein. (3 marks)

Umbilical vein	Umbilical artery

18. (a)What is meant by the term taxonomy? **(1mk)**

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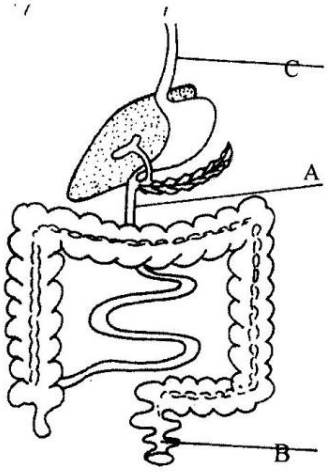
(b)When are two organisms considered to belong to the same species. **(2mks)**

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19).The diagram below shows part of alimentary canal of a mammal



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(i)Name the parts labeled A and C **(2mks)**

A – ……..

C – ……..

(ii)State the function of the part labeled B **(1mk)**

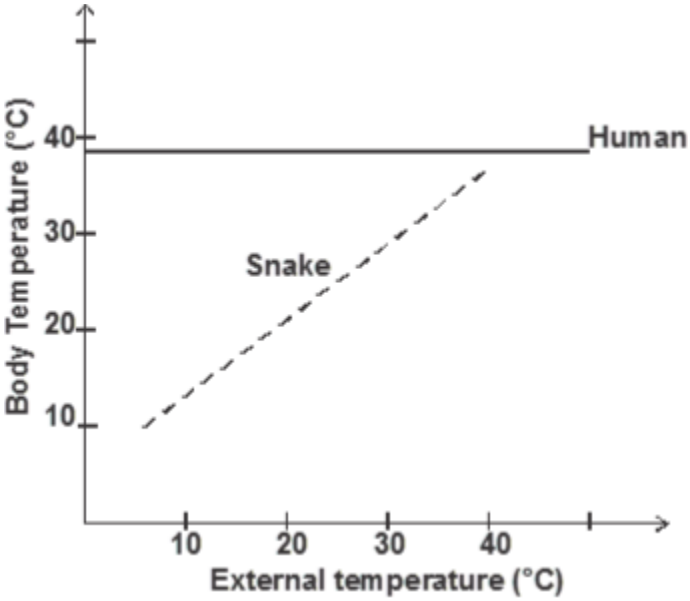
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20). The graph below shows the relationship between body temperatures and external temperatures in a human being and a snake. Study it and answer questions that follow.



a) What happens to the temperature of each organism as the external temperature increases. **(2 marks)**

Human –

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……

Snake –

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b) Humans are described as homoithermic. State the advantage of this condition. **(2marks)**

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21. **a)**Name two products of light stage during photosynthesis. **(2 marks)**

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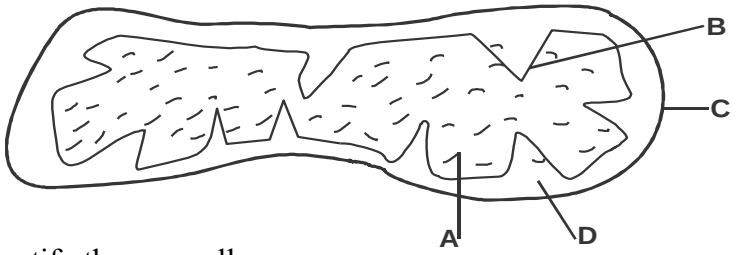
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b) State three differences between light stage and dark stage of photosynthesis. **(3 marks)**

Light	Dark

22.The diagram below represents a cell organelle.



a) Identify the organelle. **(1 mark)**

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b) Name the part labelled B **(1 mark)**

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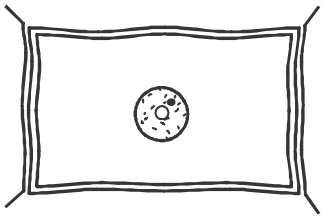
c) State the functions of the part labelled A **(1 mark)**

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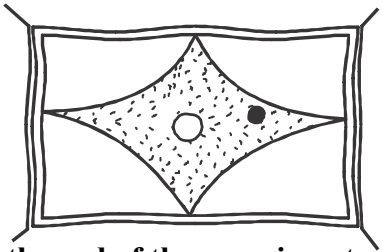
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23 **.**The diagram below represents a plant cell that was subjected to a certain treatment.



At the start



At the end of the experiment

a) Account for the shape of the cell at the end of the experiment. **(2 marks)**

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b) Draw a diagram to illustrate how an animal cell would appear if subjected to the same treatment.**(1 marks)**

24.a) Give a reason why each of the following steps are followed when preparing cross sections of a leaf for examination under a microscope.

i) Cutting thin sections. **(1 mark)**

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ii) Placing the sections in water. **(1 mark)**

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25.a) Name two tissues in plants that provide mechanical support. **(2 marks)**

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b. Name the types of joints formed by each of the following pairs of bones:

i) Axis and atlas. (1 mark)

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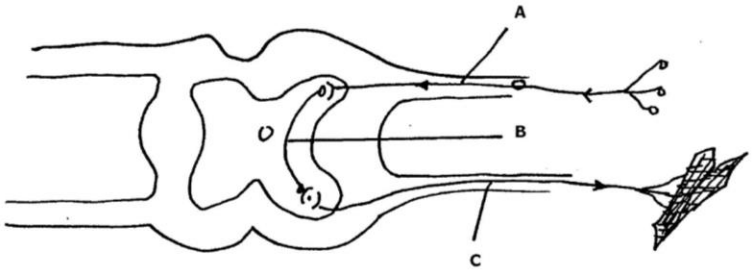
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ii) Humerus with clavicle and scapula. (1mk)

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26.) The diagram below represents a simple reflex ark



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

A –……..

B—…….

C—…….

(b)What is the role of part A (1mk)

……

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

231/2
BIOLOGY
PAPER 2
FORM 4

TIME: 2 HOURS

Kenya Certificate of Secondary Education

END OF TERM II EXAMINATION QUESTIONS

1.In human beings, baldness is controlled by a dominant gene N located on the Y chromosome

a) Work out a cross between a bald headed man and his wife

b) i) What is the probability of the couple getting girls who would develop baldness **(1mrk)**

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

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c.) Apart from the above trait name **two** other sex linked traits in human beings associated with Y chromosome. **(2mks)**

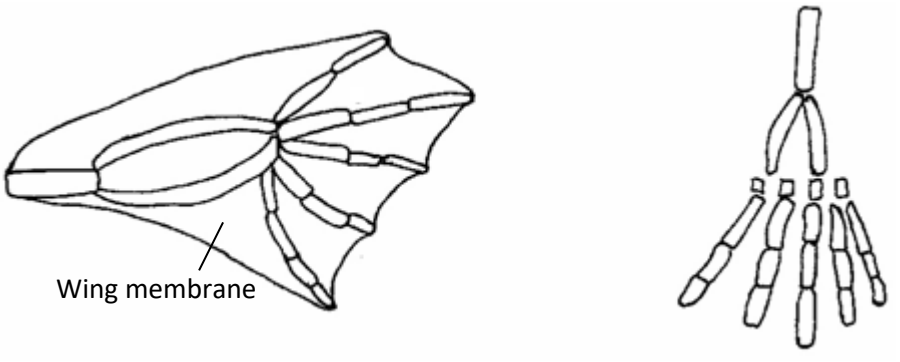
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2. The diagram **below** shows structures of the bat wing and human arm.



(a) These structures are thought to have same ancestral origin. State **one** structural similarity and **one** adaptational difference between the two.

(i) Structural similarity. **(1mk)**

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(ii) Adaptation difference. **(2mks)**

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(b) Give **two** other examples of structures in nature that show the type of evolution as in (a) above. **(2mks)**

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(c) Distinguish between the terms ‘chemical evolution’ and ‘organic evolution’. **(2mks)**

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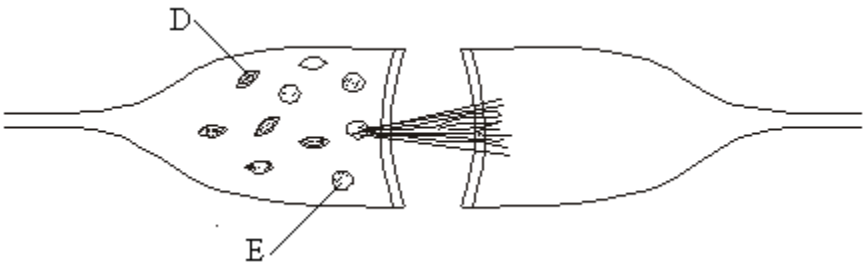
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(d) What is the study of fossils called? **(1mk)**

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……

3. The diagram below shows a synapse.



a) Indicate the direction of the impulse on the diagram. **(1 mark)**

b) Label D and E **(2 marks)**

……

……

……

c) Compare a simple reflex action with a conditioned reflex action. **(3 marks)**

Simple reflex	Conditioned reflex

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d) State two functions of hormones in animals. **(2 marks)**

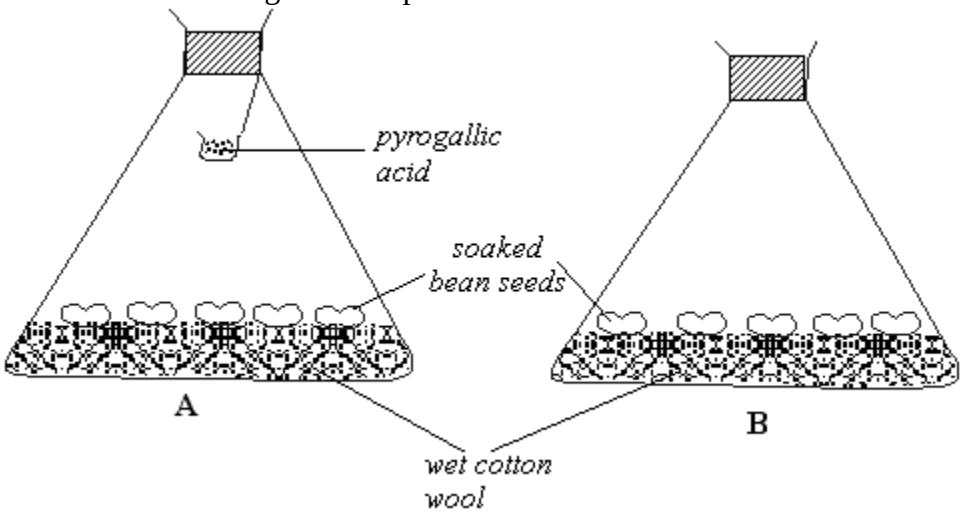
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4. Science club members designed an experiment as shown below. Examine it.



The set up was kept at room temperature for one week.

(a) What was the aim of the experiment? **(1mark)**

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(b) What observation was made after one week.in A and B **(2marks)**

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(c) (i) Explain the role of water in seed germination. (3marks)

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d.) What was the role of pyrogallic acid in the above set up? **(1mk)**

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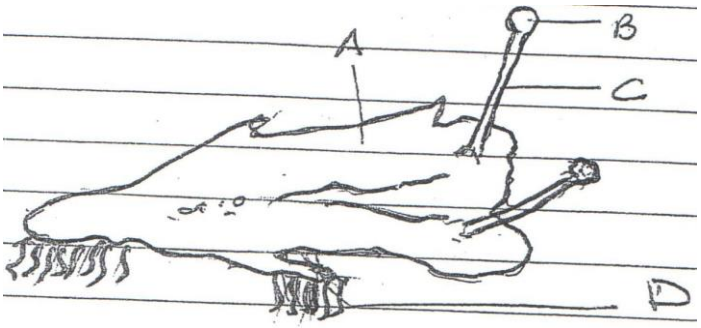
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e.) Name one internal factor necessary for seed germination **(1mk)**

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5. The diagram below represents a certain organism observed by a student in an ecological tour.



a) Name the parts labeled A and C **(2mks)**

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b) Name the division to which the organism belongs **(1mk)**

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c) Give two observable reasons for your answer in (b) above **(2mks)**

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d) Define the following terms **(1mk)**

i) Taxa

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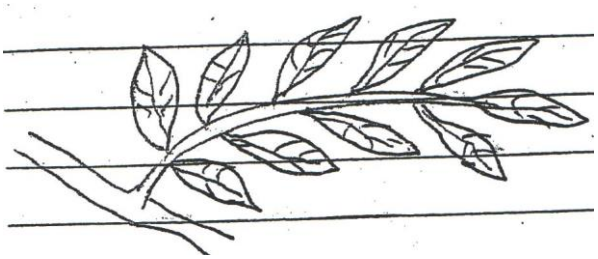
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ii) Binomial nomenclature **(1mk)**

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e) Give the name of the following leaf form observed in plants **(1mk)**



SECTION B.

6. An experiment was carried out to investigate the effect of temperature on the rate of reaction catalyzed by an enzyme. The results are shown in the table below

Temperature (^{0}C)	Rate of reaction in mg of products per unit time
5	0.2
10	0.5
15	0.8
20	1.1
25	1.5
30	2.1
35	3.0
40	3.7
45	3.4
50	2.8
55	2.1
60	1.1

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a). On the grid provided draw a graph of rate of reaction against temperature **(6 mks)**

(PROVIDE A GRAPH PAPER)

b). When was the rate of reaction 2.6 mg of product per unit time? **(2 mks)**

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(c) Account for the shape of the graph between

(i) 5^0 C and 40^0 C **(2 mks)**

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(ii) 45^0 C and 60^0C **(3 mks)**

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(d) Other than temperature name two ways in which the rate of reaction between 5^0C and 40^0C could be increased **(2 mks)**

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(e) (i) Name one digestive enzymes in the human body which works best in acidic condition **(1 mk)**

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(ii) How is the acidic condition for the enzyme named in (e) (i) above attained? **(2 mks)**

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(f) The acidic conditions in (e) (ii) above is later neutralized

(i) Where does the neutralization take place? **(1mk)**

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ii) Name the substance responsible for neutralization **(1 mk)**

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7. Explain the role of human skin in:

a) Thermo- regulation. **(14mks)**

b) Protection **(6mks)**

8.(a) State the structural adaptation of the insects tracheal system **(10 marks)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……..……

ADM NO: …….. SIGN: …….. DATE: ……..

231/3
BIOLOGY
PAPER 3
FORM 4
TIME: $2\frac{1}{4}$ HOURS

END OF TERM II EXAMINATION

QUESTIONS

1. a.) Carryout food tests for solution Y and X using the reagents provided. **(6mks)**

Solution	Food substance	Procedure	Observation	Conclusion
Solution X				
Solution Y				

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b.) Tie one side of the visking tubing with one of the threads provided. Pour 5ml of solution X in the visking tubing and tie the other end with the remaining piece of thread. Immerse the visking tubing in solution Y in the beaker and leave the set up for 20 minutes. After 20 minutes perform food test using the solution in the visking tubing and solution in the beaker and record your result in the table below. **(3mks)**

Solution	Food substance	procedure	observation	conclusion
Solution in visking tubing				
Solution in the beaker				

c.) Which process was being investigated. **(1mk)**

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d.) Account for the results obtained **(3mks)**

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e. state two importances of the process above in living organisms. **(2mk)**

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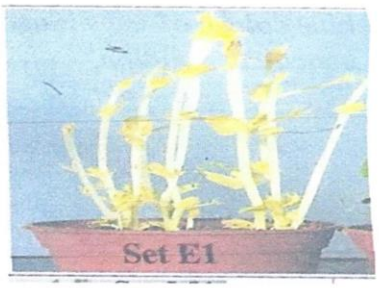
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2. Study the diagrams set **A_1**, set **E_1**, set **M_1** and set **B** carefully and answer the questions below









(a) State the conditions under which each set up was grown. **(3mks)**

Set A_1

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Set E_1

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Set B

(b) (i) Name the phenomenon exhibited by seedlings in set E_1 **(1mk)**

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(ii) Give a reason why plants exhibit the phenomenon named in (b) (i) above **(1mk)**

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(c) (i) Name the response exhibited by the seedlings in set B. **(1mk)**

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(ii) Explain how the response named in (c) (i) above occurred **(2mks)**

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(d) (i) State the type of germination exhibited by seedlings in set A_1 and set M_1. **(2mks)**

Set A_1

Set M_1

(ii) Give a reason for your answer in (d) (i) above **(2mks)**

Set A_1

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Set M_1

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(iii) State the mode of dispersal in set A above when mature. **(1 mk)**

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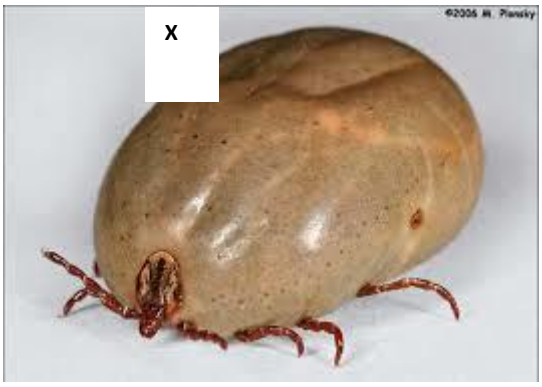
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(iv) Name the type of fruit formed by M1 on maturity. **(1 mk)**

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3. Study the photographs below and hence answer the questions that follow







(i) To which phylum does organisms x,y and z belong to. **(1 mark)**

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(ii) Name the classes to which X, Y and Z belongs to. **(3 marks)**

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(iii) Give two important economic roles of specimen Y. (2 marks)

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(iv) Give one harmful effect of specimen X to animals. 1 mark)

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(v) With reasons identify two modes of locomotion of specimen Y . (4 marks

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

565/1
BUSINESS STUDIES.
PAPER 1
FORM 4

TIME: 2 HOURS

Kenya Certificate of Secondary Education

END OF TERM II EXAMINATION

QUESTIONS

1.State four ways in which knowledge of business studies would benefit a secondary school leaver. **(4mks)**

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2.Give four reasons why one would prefer a partnership instead of a sole proprietorship? **(4mks)**

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3.Identify (by √) whether the following factors form the external or internal environment. (4mks)

Factors	External	Internal
a) Recruitment of workers b) Political stability c) Development of infrastructure d) Purchase of modern equipment		

4.State four characteristics of economic resources. **(4mks)**

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5.Highlight four roles of warehousing in promotion of trade. **(4mks)**

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6.Highlight four circumstances under which an insurance contract can be terminated. **(4mks)**

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7.Outline four reasons why government of Kenya preferred to privatize state owned business enterprises.**(4mks)**

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8.State the books of original entry in which each of the following transactions would be recorded.

Transactions	Book of original entry
a) Sold machine on credit b) Received sh 40,000 cash from Mutua a debtor. c) Sold goods worth sh 20,000 on credit to jirani stores. d) Returned goods previously bought to rajab traders.	

9.State four advantages of using m-pesa account to an individual. **(4mks)**

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10. Outline four steps involved in personal selling. **(4mks)**

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11. Highlight four challenges that may be encountered by using a long channel to distribute farm produce. **(4mks)**

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12. State four business documents to which each of the following relates.

Statement	Document
(a) Informs the buyers when goods were dispatched. (b) A request by seller for payment in advance (c) Used to correct undercharge in an invoice (d) Show details of transaction between sellers and buyers.	

13. State four circumstances which a firm may choose to operate on small scale basis. **(4mks)**

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14. The following information was extracted from the books of Juma stores on 31st march 2010

	Sh
Stock 1st april 2010	8000
Stock 31st march 2011	9000
Purchases	4500
Sales	21000

Calculate

i. Margin **(2mks)**

ii. Rate of stock turnover. **(2mks)**

15. Outline four causes of demand pull inflation. **(4mks)**

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16. The following balances were extracted from books of Rapu merchants for the year ended 31st Dec 2006.

	Sh
Land	110,000
Debtors	64,000
Capital	166,100
Sales	95,000
Purchases	58,000
Stock	35,000
Creditors	47,700
General expenses	41,800

Prepare a trial balance as at 31st Dec 2016 **(4mks)**

17. Highlight four negative implication of rapidly growing population in a country **(4mks)**

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18. Mention four circumstances under which a producer will find it necessary to transport goods by train.

(4mks)

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19. State four features of oligopoly market. **(4mks)**

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20. In the spaces provided write decrease, increase or no effect to show the effects of each one of the following transactions on assets, liabilities or capital.

Transaction	Asset	liabilities	capital
(a) Bought furniture on credit (b) Paid creditors by cash (c) Withdrew goods for personal use (d) Converted personal van for business use.			

21. Give four reasons why a manufacturer may offer after sale services to his customers. (4mks)

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22. Outline four features of capital as a factor of production. **(4mks)**

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23. State four characteristics of direct production. **(4mks)**

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24. Identify the office equipment that is used in each of the purposes. **(4mks)**

(a) Printing postage impressions on envelope **……**

(b) Preparing cash receipts**……**

(c) Cutting unwanted documents into tiny pieces**……**

(d) Pinning papers together**……**

25. Give four circumstances under which a person could use signals to communicate with another. **(4mks)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

565/2
BUSINESS STUDIES.
PAPER 2
FORM 4

TIME: 2 HOURS

Kenya Certificate of Secondary Education

END OF TERM II EXAMINATION QUESTIONS

1. a) Explain five functions of money **(10mks)**

   b) Differentiate between a public limited company and a partnership **(10mks)**

2. a) Explain five principles that guide the tax system in a country **(10mks)**

   b) Labour is one of the basic factors of production. Outline five measures that a business can take to increase the productivity of its labour force **(10mks)**

3. a) With the aid of a diagram, explain the effects of an increase in supply on equilibrium price and quantity of a commodity **(10mks)**

b) Discuss five causes of unfavourable balance of payment for most developing countries **(10mks)**

4. a) Explain five factors that influence the choice of a channel for distributing flowers **(10mks)**

   b) Explain five circumstances that would influence a producer to use wholesalers in distributing farm produce **(10mks)**

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5. a) The following balances relate to Msafiri traders as at 31st December 2014

	Sh
Purchases	900,000
Stock 1.1.2014	230,000
Buildings	1,200,000
Motor vehicles	750,000
Returns outwards	50,000
Debtors	190,000
Creditors	310,000
Loan from IDB	600,000
Cash	130,000
Bank	270,000
Drawings	100,000
Capital	1,840,000
Net profit	170,000

Additional information

i) Stock 31/12/14 280,000

ii) Expenses (including carriage inwards Shs. 150,000) 250,000

Required

a) Balance sheet as at 31st December 2014 **(6mks)**

b) Calculate

i) Mark-up percentage **(5mks)**

ii) Return on capital employed **(2mks)**

b) Explain five problems associated with a sole proprietorship form of a business **(10mks)**

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6.a) Businesses are adopting new technology in their operations. Explain five limitations of adoption of this practice **(10mks)**

b) The following balance sheet was extracted from the books of Sagana traders on 1st April 2015

Sagana Traders

Balance sheet

As at 1st April 2015

	Sh		Sh.
Equipment	200,000	Capital	415,000
Furniture	82,000	Mutai (creditor)	27,000
Stock	140,000		
Cash	20,000		
	442,000		442,000

The following transactions took place during the month of April 2015

4th April: Sagan traders sold her personal assets for sh. 30,000 receiving payment by cheque which she invested in the business

10th: She purchased goods for sh. 29, 000 on credit from Mutai

19th April: She returned goods worth sh. 3,000 to Mutai after they were found defective.

Required

a) Open the ledger accounts record the above transactions and balance them off.

(b) Extract a trial balance **(10mks)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

233/1
CHEMISTRY
PAPER 1
FORM 4

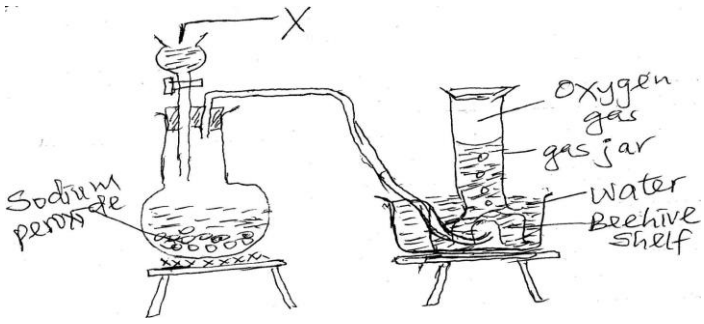
TIME: 2 HOURS

END OF TERM II EXAMINATION QUESTIONS

INSTRUCTIONS

ATTEMPT ALL THE QUESTIONS

Q.1The set up below can be used to prepare oxygen gas. Study it and answer the questions that follow.



a) Identify X **(1mk)**

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……

B What property of oxygen makes it possible for it to be collected as shown in the above set up. **(1 k)**

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c)State two uses of oxygen . **(1km)**

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2.Write an equation to show the effect of heat on each of the following:

a) Silver nitrate **(1mk)**

……

……

b) An hydrous iron (ii) sulphate **(1mk**)

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c) Sodium hydrogen carbonate . **(1mk)**

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3.i) What name is given to the process by which alcohol is formed from a carbohydrate.?. **(1mk)**

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ii)Explain why the solubility of ethane in water is lower than that of ethanol**. (2mks)**

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4.I) Complete the nuclear equation below **(1mk)**

$^{131}_{53}I \rightarrow {}^{131}_{54}Xe + _____$

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ii) The half –life of $^{131}_{53}I$ is 8 days
Determine if 50 grammes decayed for 40 days. **(1mk)**

iii) Give one agricultural use of radio isotope. **(1MK)**

5.Charcoal is a fuel that is commonly used for cooking. When it burns it forms two oxides.

a) Name the two oxides **. (2mks)**

b)State one use of any of the two oxides . (1mk)

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

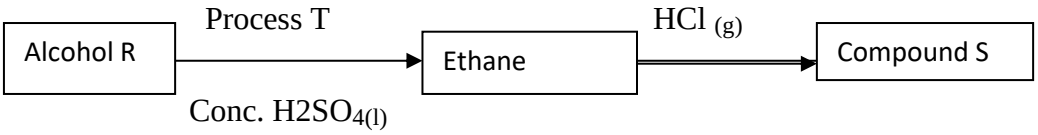
i) Determine the charge of element X (1 Faraday = 96,500c) . **(2mks)**

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

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7.Study the following flow chart and answer the questions that follow:



a)Write the formula of

i) Alcohol R **(1MK**

……

……

ii) Compound S **(1mk)**

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……

b)Name process T **(1MK)**

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8) 60cm^3 of oxygen gas diffuses through a porous plug in 50 seconds. How long will it take 80cm^{3}of sulphur (iv) oxide to diffuse through the same plug under the same conditions.(S = 32 O = 16) **(3MKS)**

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

Salt	Solubility	g/100g water
	At 50^o C	At 80^{o}c
G	43	58
Y	82	138

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A mixture containing 40g salt G and 120g salt Y in 100g of water at 80^o was cooled to 50^o .

i) Which salt crystallized out?. Give a reason **(2mks)**

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

10 a) State two conditions necessary for rusting to occur. **(1mrk)**

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.b) State the two reasons why tin coating is used in food cans**. (2mks)**

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11.A form one student was supplied with a colourless liquid which was suspected to be water.

i)Describe one chemical test that could be carried out to show that the liquid is water**. (2mks)**

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ii)How could it have been shown that one liquid was pure water /(1mk)

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……

12.During extraction of copper, the ore is first concentrated and roasted to produce copper (I) Sulphide.

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i) Name the ore from which copper is commonly extracted. **(1mik)**

……

……

ii)Write an equation for the reaction in which copper (I) sulphide is produced by roasting the ore in air. **(1mk)**

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iii)Give one effect that the process in (ii) above could have on the environment**. (1mk)**

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iv)Give one use of copper metals **(1mk**

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13.a)Name two cations that are present in hard water**. (1mk)**

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b) Explain how the ion exchange resin softened had water**. (2mrks)**

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14. Below is a representation of an electrochemical cell.

$Pb_{(s)}/ Pb^{2+}_{(aq)} // Ag^{+}_{(aq)} / Ag_{(s)}$

a) What does / / represent ? **(1mk)**

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b) Given the following: E^{Θ} (V)

$Pb^{2+}_{(aq)} + 2e \rightarrow Pb_{(s)}$ - 0.13

$Ag^{+}_{(aq)} + e \rightarrow Ag_{(s)}$ + 0.80

(aq)

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Calculate the e.m.f of the electrochemical cell. **(2 mks)**

15. Distingush between ionization energy and electron affinity of an element **(1 mk)**

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16. Calculate the percentage by mass of copper in copper (ii) carbonate salt.
(Cu = 64, C= 12, 0 = 16 **)** **(3mks)**

17.What name is given to elements which appear in group (II) of the periodic table? **(1mk)**

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18. Explain why the following substances conduct an electric current
a) Magnesium metal (1mk)

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b) Molten magnesium chloride **(1 mk)**

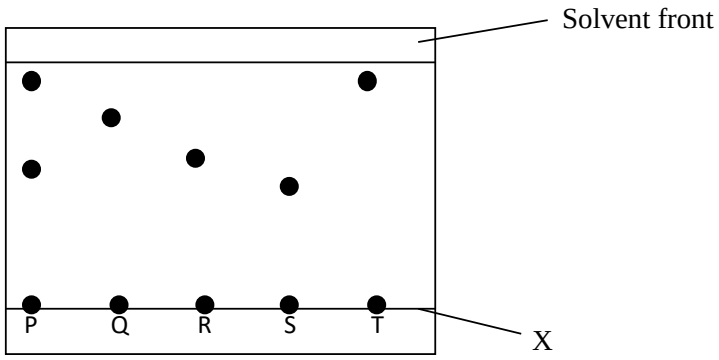
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19)The chromatography below was obtained from a contaminated food sample P. Contaminants Q, R, S and T are suspected to be in P. Use it to answer the following questions.



i)Name line labelled X. **(1MK)**

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II)Identify the contaminants in mixture P. **(1mk)**

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Iii) Which is the most soluble contaminant in P. (1MK)

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20. a) Diamond and graphite are allotropes of carbon. What is meant by an allotrope? **(1 mk)**

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c) Explain why graphite can be used as a lubricant while diamond cannot**. (2mks)**

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21.Where 15cm^3 of a gaseous hydrocarbon, p, was burnt in 100 cm^3 of oxygen, the resulting gaseous mixture occupied 70cm^3 at room temperature and pressure. When the gaseous mixture was passed through potassium hydroxide solution, its volume decreased to 25cm^3 .

a) What volume of oxygen was used during the reaction?. **(1MK)**

b) Determine the molecular formular of the hydrocarbon**. (2mks)**

22.In terms of structure and bonding, explain the following observations:

a) The melting point of aluminium is higher than that of sodium. **(1 ½ mks)**

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c) Melting point of chlorine is lower than that of sulphur. **(1 ½ mks)**

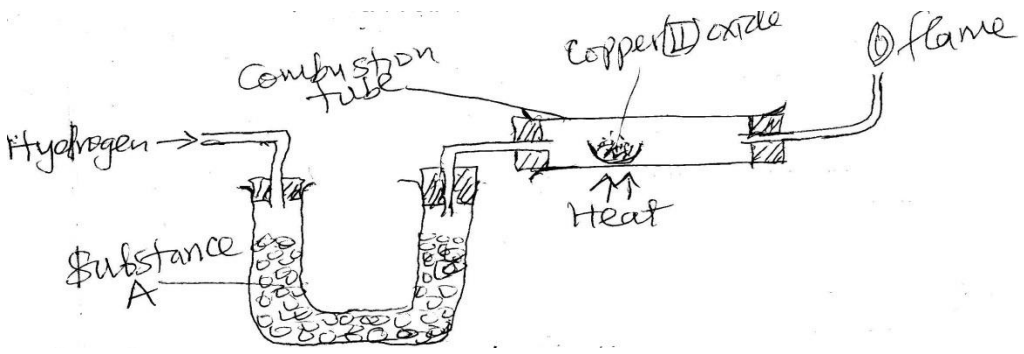
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23. The set up below was used to investigate the reaction between dry hydrogen gas and copper (II) oxide.



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i)Name substance A**. (1 mk)**

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……

ii)State the observation made in the combustion tube. **(1mk)**

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iii)Explain the observations made in (ii) above. **(1 mk)**

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24.Hydrogen chloride gas can be prepared by reacting sodium chloride with an acid.

a) Write an equation for the reaction between sodium chloride and the acid. **(1mk)**

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b) Give two chemical properties of hydrogen chloride gas **(1mk)**

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c)State two uses of hydrogen chloride gas. **(1mrk)**

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25.State and explain what would happen if a dry red litmus paper was dropped in a gas jar of dry Chlorine. (2mks)

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26. By using aqueous sodium chloride describe how a student can distinguish calcium ions from lead ions. (2mks)

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27. Given the following substances: wood ash lemon juice and sodium chloride

a) Name one commercial indicator that can be used to show whether wood, lemon juice and sodium chloride are acidic, basic or neutral**.** **(1mk)**

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b)Classify the substances in 27(a) above as acids, bases or neutral. (2mks)

Acid	Base	Neutral

28.A solution was made by dissolving 8.2g of calcium nitrate to give 2 litres of solution. Determine the concentration of nitrate ions in moles per litre**.** **(3mks)**

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NAME: ……..

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

233/2

CHEMISTRY

PAPER 2

FORM 4

TIME: 2 HOURS

END OF TERM II EXAMINATION
QUESTIONS

INSTRUCTIONS: Answer all the questions in the spaces provided

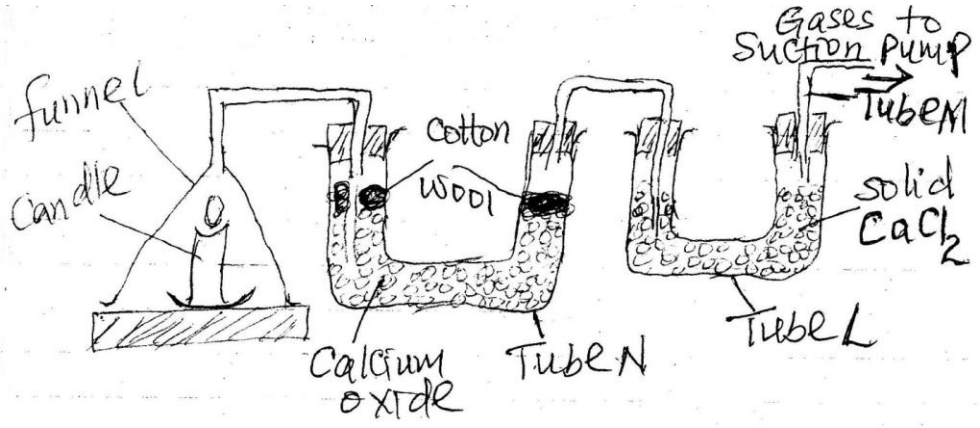
1.(a) A candle wax is mainly a compound consisting of two elements. Name the two elements.

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b) The set up below was used to investigate the burning of a candle. Study it and answer the questions that follow;



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(i) What would happen to the burning candle if the pump was turned off? **(2mks)**

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(ii) State and explain the changes in mass that are likely to occur in tube N by the end of the experiments. **(3mks)**

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(iii) Name two gases that comes out through tube M. **(2mks)**

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(iv) What is the purpose of calcium chloride in tube L? **(1mk)**

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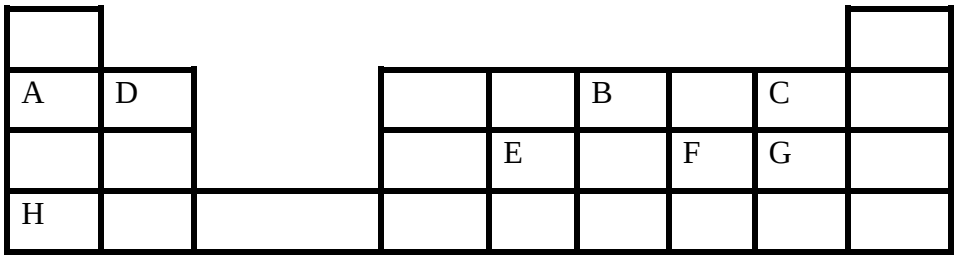
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(v) Name another substance that could be used in the place of calcium oxide in tube N. **(1mk)**

……

……

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



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(i) Select the most reactive metal. Explain. **(2mks)**

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(ii) Select an element that can form an ion with a charge of 3-. **(1mk)**

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(iii) Select an alkaline earth metal. **(1mk)**

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(iv) Which group I element has the highest first ionization energy? Explain. **(2mks)**

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(v) Element A combine with chlorine to form a chloride of A. state the most likely PH value of a solution of a chloride of A. Explain. **(2mks)**

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b) (i) Explain why molten calcium chloride and magnesium chloride conduct electricity while carbon tetrachloride and silicon tetrachloride do not. **(2mks)**

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3.(a) Distinguish between a neutron and a proton. **(1mk)**

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b) What is meant by a radioactive substance? **(1mk)**

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c) Differentiate nuclear fussion and nuclear fission. **(2mks)**

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d) State two industrial uses of radioactive elements. **(2mks)**

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e) The two isotopes of hydrogen deuterium (^2_1D) and tritium (^3_1T) reacts to form element Y and neutron particles according to the equation below:

$(^2_1D) + (^3_1T) = (^a_bY) + (^1_0n)$

(i) What is the atomic; **(2mks)**

(I) Mass of Y

……

……

(II) Number of Y

……

……

(ii) What name is given to the type of reaction undergone by the isotopes of hydrogen? **(1mk)**

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(iii) What is meant by half life of a radioactive substance? **(1mk)**

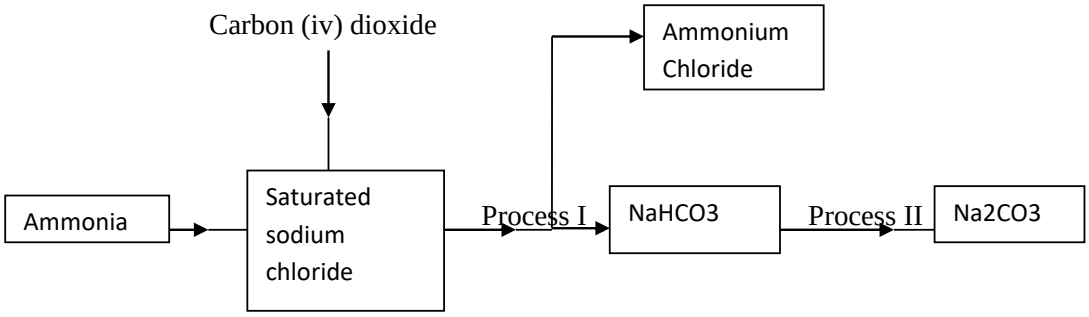
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f) 288g of a radio active substance decayed to 9 grammes in 40 days. Determine the half life of the radio active substance. **(2mks)**

4.(a) The schematic diagram shows part of the solvary process used for the manufacture of sodium carbonate.



(i) Explain how the sodium chloride required for this process is obtained from sea water. **(2mks)**

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(ii) Two main reactions take place in UNIT I. the first one is the formation of ammonium hydrogen carbonate.

(a) Write an equation for this reaction. **(1mk)**

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(b) Write an equation for the second reaction. **(1mk)**

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……

(iii) State how the following are carried out;

(a) Process I **(1mk)**

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(b) Process II

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(iv) In an experiment to determine the percentage purity of the sample of sodium carbonate produced in the solvary process 2.15g of the sample reacted completely with 46.0cm^3 of 0.5M sulphuric (vi) acid.

(a) Calculate the number of moles of sodium carbonate that reacted. **(2mks)**

(b) Determine the percentage of sodium carbonate in the sample. (Na = 23, C=12, O=16).

(2mks)

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(c) Name two industrial uses of sodium carbonate. (2mks)

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5.(a) Define the standard enthalpy of formation of a substance. (1mk)

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b) Use the thermo chemical equations below to answer the questions that follow:

(I) $C_2H_{6(g)} + 3\frac{1}{2} O_{2(g)} \longrightarrow 2CO_{2(g)} + 3H_2O_{(l)}$ $\Delta H_1 = -1560KJ/mol$

(II) $C(graphite) + O_{2(g)} \longrightarrow Co_{2(g)}$ $\Delta H_2 = -394$ KJ/mol

(III) $H_{2(g)} + \frac{1}{2} O_{2(g)} \longrightarrow H_2O_{(g)}$ $\Delta H_3 = -286$ KJ/mol

(i) Name two types of changes represented by ΔH_3 **(2mks)**

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(ii) Draw an energy level diagram for the reaction represented by equation (I) **(2mks)**

(iii) Calculate the standard enthalpy of formation of ethane. **(2mks)**

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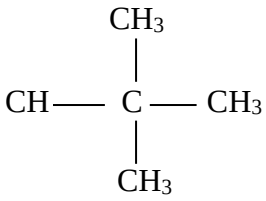
(iv) When a sample of ethane was burnt, the heat produced raised the temperature of 500g of water by 21.5k (Specific heat capacity = $4.2Jg^{-1}K$). Calculate;

(I) Heat change for the reaction. **(2mks)**

(II) Mass of ethane that was burnt. (R.A.M of ethane = 30). **(2mks)**

6.(a) Give the names of the following compounds; **(2mks)**

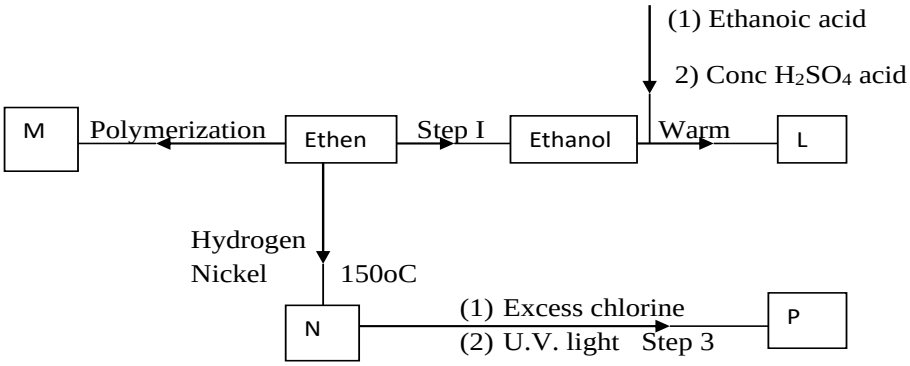
(i)



(ii) $CH_3C \equiv C\ CH_2\ CH_3$

b) Determine a chemical test that can be carried out in order to distinguish between the compounds in (a) above. **(2mks)**

c) Study the flow chart below and answer the questions that follow;



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(i) Name the compounds; **(1mk)**

(I) L……..

(II) N…….

(ii) Draw the structural formula of compound M showing two repeat units. **(1mk)**

(iii) Give the reagent and the condition used in step I. **(1mk)**

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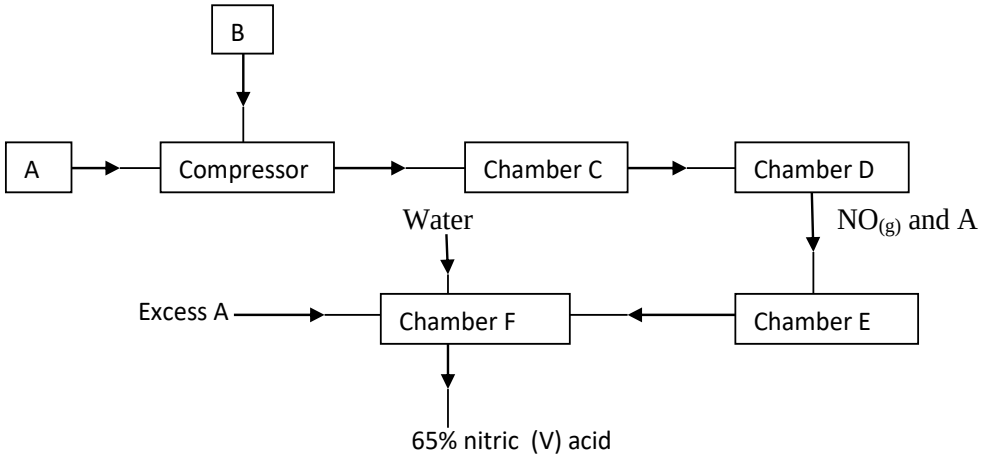
(iv) State the type of reaction that take place in:

(I) Step 2**……**

(II) Step 3**……**

d) The molecular formula of compound P is $C_2H_2Cl_4$. Draw the structural formula of compound P. **(2mks)**

7.The flow chart below illustrates the major steps in the manufacture of nitric acid. Study it and answer the questions that follows;



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(a) Give reason for purifying the raw materials A and B. **(1mk)**

……

……

……

(b) Name the substances; **(1mk)**

A _____

B_____

(c) Name the parts labeled; **(3mks)**

D _____

E _____

F _____

(d) Write chemical equations for the reactions taking place in;

(I) Chamber D. **(1mk)**

……

……

(II) Chamber F. **(1mk)**

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……

(e) Name any other condition required in chamber D apart from maintaining temperature at 900^{o}C. **(1mk)**

……

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(f) A mixture that comes out is 65% acid and 35% water. How could the concentration of nitric (v) acid be increased. **(1mk)**

(g) Give one use of nitric acid. **(1mk)**

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(h) When copper metal is reacted with dilute nitric (v) acid, a brown gas is evolved. Explain. (1mk)

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

233/3
CHEMISTRY
PAPER 3
FORM 4

TIME: $2\frac{1}{4}$ HOURS

Kenya Certificate of Secondary Education

END OF TERM II EXAMINATION
QUESTIONS

INSTRUCTIONS: Answer all the questions in the spaces provided

1.You are provided with potassium manganate (VII)
solution A
solution B, containing 6.3 g' litre of dibasic acid $H_2X.nH_2O$
Solution C_1 containing 4.0g/litre of Sodium hydroxide solution.
You are required to determine :

a) The value of n in H_2X . nH_2 O
b) How the rate of reaction of solution A with solution B varies with change in temperature.

Procedure 1

Fill the burette with solution B . Pipette 25cm^3 of solution C into a conical flask and titrate solution B with Solution C using phenolphthalein indicator.
Record your results in table I below and repeat the titration to obtain consistent results:
Table 1.

Burette readings	1	2	3
Final readings (cm^3)			
Initial readings ($cm^{3)}$)			
Volume of solution B used (cm^3)			

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a) Determine the average volume of solution B used . **(1mk)**

b)Calculate the concentration of solution C in moles per litre.
(Na = 23.0, 16.0, H= 1.0) **(1mk)**

c)Given that the equation of the reaction taking place and R.F.M of X = 88

$H_2X + 2NaOH \longrightarrow Na_2X + H_2O$

(aq) (aq) (aq) (l)

CaLculate

1.The number of moles of the dibasic acid solution B that reacted **(2mks)**

ii) The number of moles of the dibasic acid solution B in $1000cm^3$ of solution. **(1mk)**

-

iii) The R.F.M of the dibasic acid, hydrated. **(1mk)**

iv) The value of n in the formula of the hydrated acid . (0 =16.0 H = 1.0) **(2mks)**

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Procedure II

1.Using a measuring cylinder , place $10cm^3$ portion of solution A into 5' test tubes placed in a test tube rack.

ii) Clean the measuring cylinder and use it to place 10.0 cm3 of solution B into a boiling tube.

iii) Insert a thermometer in the solution B in the boiling tube and place the boiling tube in the attains a temperature of 40^o C.

IV) Remove the boiling tube from the water bath and place it in a test- tube rack and add the first portion of solution A. and at the same time start the stopwatch.

V) Record the time taken for the purple colour and the mixture to decolourise in table II

VI))Repeat the experiment using $10cm^3$ of solution B at 50^o , 60^o c, 70^o c and 80^Oc. Record the time in the Table. Complete the table by computing 1h/t sec -1.

Table II

Temperature of solution B	40	50	60	70	80
Time of colour to decolourise (seconds)					
$1/t\ sec^{-1}$					

(5mrks)

a)Plot a graph of 1/t (sec -1) against temperature. **(3MKS)**

(PROVIDE A GRAPH PAPER)

b) From the graph , determine the time taken for decolourisation of the mixture, if the temperature of solution B was 65^OC **(1 MK)**

C) How does the rate of reaction of potassium manganite (VII) with oxalic acid vary with temperature. **(1mk)**

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2.You are provided with solid Q . Carry out the tests below and record your observations and inferences In the spaces provided.

a) Strongly heat a spatula – end full of solid Q in a dry test – tube.

6.i) Place the remaining solid Q in a boiling tube. Add 10cm^{3}of distilled water. Divide the solution Into five portions.

Observation	Inferences
(½mk)	**(½mk)**

ii)To the first portion, add aqueous lead (II) nitrate solution .

Observation	Inferences
(1mk)	**(1mk)**

iii)To the second portion add dilute nitric (V) acid followed by barium nitrate solution .

Observation	Inferences
(1mk)	**(1mk)**

iv)To the third portion add a few drops of sodium hydroxide until in excess.

Observation	Inferences
(1mk)	**(1mk)**

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v) To the fourth portion add few drops of aqueous ammonia until in excess'

Observation	Inferences
(½mk)	**(½mk)**

vi) To the fifth portion add few drops HCL acid. Warm the content

Observation	Inferences
(½mk)	**(½mk)**

3.You are provided with solid L. Carry out the tests and your observations and inferences.

a) Place about one third of solid L on a metallic spatula and burn it using Bunsen burner.

Observation	Inferences
(½mk)	**(½mk)**

b)Place the remaining solid L in a test tube . Add about $6cm^3$ of distilled water and shake well. Retain the mixture for use in tests (C)

Observation	Inferences
(½mk)	**(½mk)**

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c.i) To about $2cm^3$ of te mixture add a small amount of sodium hydrogen carbonate .

Observation	Inferences
(1mk)	**(1mk)**

ii) To about $1cm^3$ of the mixture add $1cm^3$ of acidified potassium dichromate (VI) and warm

Observation	Inferences
(1mk)	**(1mk)**

ii))To about $2cm^3$ of the mixture add two drops acidified potassium manganite (VII)

Observation	Inferences
(1mk)	**(1mk)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

451/1
COMPUTER STUDIES
PAPER 1
FORM 4 EXAMINATION
2½ HOURS

END OF TERM II EXAMINATION
QUESTION PAPER

INSTRUCTIONS TO CANDIDATES

- *This paper consists of **2** sections **A** and **B**.*
- *Answer all the questions in sections **A***
- *Answer question **16** and any other **three** questions from section **B***

For Examiners Use Only

Section	Question	Score
A	1 - 15	
B	16	
	17	
	18	
	19	
	20	
	Total marks	

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SECTION A (40 MARKS)

1. State two practices to be observed in order to ensure the safety of the computer user **(2mks)**

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2. State the function of the following keys on the computer key board **(2mks)**

(a) Insert

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(b) Delete

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3. Name three responsibilities that are carried out by a network administration **(3mks)**

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4. List and describe three guidelines that should be followed when conducting an interview during information gathering **(3mks)**

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5. (a) Define portability as used in software selection **(1mk)**

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(b) List four ways of acquiring software in an organization **(2mks)**

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6. (a) Subtract 110_2 from 11010_2 **(1mk)**

(b) Find the sum of binary number 101.101_2 and 110.100_2 **(1mk)**

(c) Convert binary number 11010110.1001_2 into octal number. **(1mk)**

7. List three uses of DVDs **(3mks)**

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8. State the function of each of the following

(a) Network Interface Card **(1mk)**

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……

(b) Modem **(1mk)**

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(c) Repeaters **(1mk)**

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9.How does an operating system manage computer memory **(2mks**)

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10. List four factors to be considered when purchasing an operating system **(2mks)**

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11. Write a PSEUDO CODE to compute the area of a circle (2mks)

12. (a) List three ways by which you can provide a common link or relationship between the tables in a database software **(3mks)**

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(b) What is referential integrity **(1mk)**

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13. List four types of publications that ca be designed using DTP software **(2mks)**

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14. (a) List four stages in data collection **(2mks)**

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(b) What is meant by the following (2mks)

(i) Reference file

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(ii) Report

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15. Explain the following terms **(2mks)**

(a) Computer fraud

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……

……

(b) Alteration

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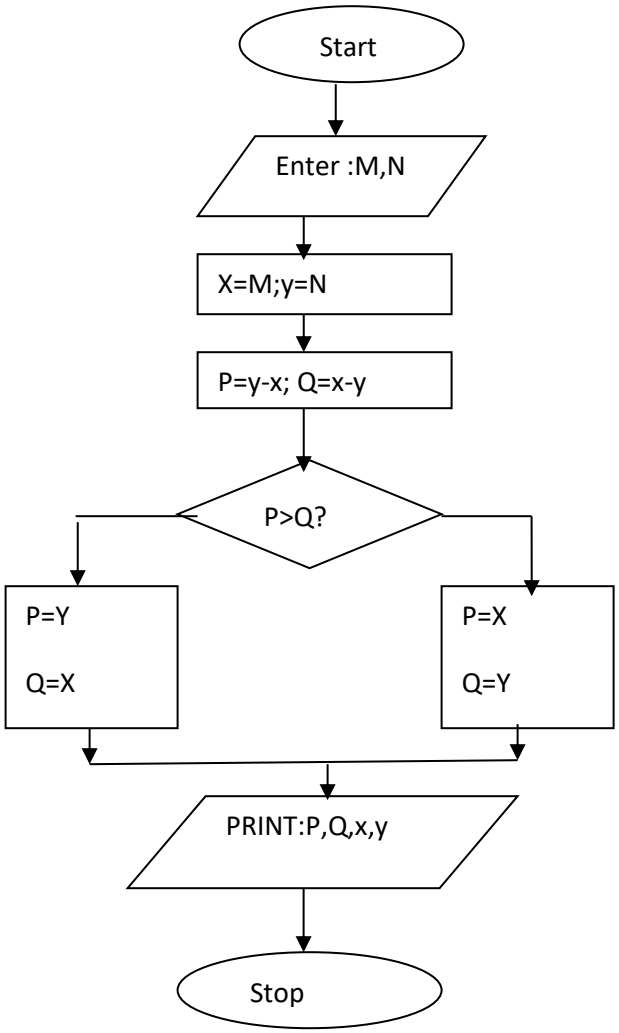
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SECTION B (Answer question 16 and any other three questions from this section)

16. Study the flowchart below and answer the questions that follow.



(b) Name the control structure shown in the flow chart **(2mks)**

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(c) Assuming the user keys in 8 and 14 when prompted to enter values for M and N respectively, determine the printed values of P,Q,x and y **(4mks)**

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(d) Write a pseudo code that would be used in place of the flowchart. **(9mks)**

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17. (a) List three advantages and three disadvantages of fibre optic cable **(6mks)**

Advantages

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Disadvantages

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(b) Describe the following signals and state where each is applied in network communication. **(4mks)**

Analog

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Digital

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(e) Name two types of coaxial cables **(2mks)**

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(f) (i) Distinguish between microwave and satellite transmissions **(2mks)**

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(ii) Give an example of internet protocol (1mk)

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18. The information below is maintained by the sales lady at the school canteen. Study it and answer the questions that follow.

	A	B	C
1	Item	units (kg)	value (ksh)
2	oranges	12	2000
3	mangoes	13	1000
4	tomatoes	12	1400
5	cabbages	15	2500

(a) Describe the basic data types used in this spreadsheet (4mks)

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(b) Provide a single formula that would be used to

(i) Count the number of items whole units are equal; to 15 **(2mks)**

(ii) Sum the values of items whole units are equal to 12 **(2mks)**

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(c) (i) :List and describe four areas of application of spreadsheets (4mks)

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(ii) Explain data range legend and axis as used in spreadsheet charts (3mks)

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19. A computer diskette in drive A has folders for MEMOS for an administrator. Each of these folders is labelled according to the relevant months. The secretary created the folders for each months memo for each of access. Study the table below

MEMO 1	MEMO 2	MEMO 3
Warning	Inaccuracies	Careless talk
Lateness	Auditing	Inefficient
Assembly	Fraud	Meeting

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(a) Assuming that the secondary was working from the diskette, draw the corresponding tree structure **(6mks)**

(b) (i) The secretary wanted to create a folder to store a memo in Fraud folder. State the path for that folder **(2mks)**

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(ii) Suggest how the secretary can ensure that the work in that diskette is not spoilt **(1mk)**

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(iii) The content of the file is not viewed by any other person apart from her. **(1mk)**

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(c) (i) List any two devices under the control of the operating system **(2mks)**

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(ii) Explain how each one of these devices are controlled by the OS

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20. (a) List and describe four strategies for converting from an old system to a new system **(4mks)**

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(b) (i) Distinguish between private data and confidential data **(2mks)**

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(ii) What can be done to stop illegal access to a computer laboratory by unauthorized people **(3mks)**

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(c) (i) List four areas that would be considered in the requirement specification **(4mks)**

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(ii) Name any two areas covered in a feasibility report during system analysis and design. **(2mks)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

451/2 – COMPUTER STUDIES – Paper 2 (PRACTICAL)

2 ½ hours

Instructions to Candidates

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

(b) Write your name and index number on the CD-RW storage medium provided

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

(d) Answer both questions

(e) All questions carry equal marks

(f) Passwords should not be used while saving in the CD-RW storage medium provided.

(g) All answers must be saved in your CD-RW storage medium provided

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

(i) Arrange your printouts and staple them together.

*(j) Hand in all the **printouts** and the CD- RW **storage medium** used.*

(k) This paper consists of 5 printed pages.

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

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QUESTION 1 - SPREADSHEET

A Company in Mombasa sells computer spare parts to its customers. The Company wishes to work out the pay details for its employees.

EMPLOYEE NAME	YEARS WORKED	BASIC PAY [KSHS]	DEPARTMENT	SALES [KSHS]	HOURS OF OVERTIME
RUKENYA KWENA	5	24,000	ADMIN	16,000	10
BILLY LUCAS	13	28,000	SALES	25,000	11
LILIAN OKOTH	7	17,000	MARKETING	22,000	12
EVANS ONDIEKI	11	18,000	SALES	12,000	15
GEOFFREY MUTUMA	15	26,000	ACCOUNTS	11,000	22
HUMPHREY LOKI	10	25,000	ADMIN	30,000	12
CEDRIC MUKUI	11	19,000	SALES	35,000	33
FREDRICK CHEGE	15	25,000	MARKETTING	14,000	14
OSMAN HUSSEIN	14	23,000	ADMIN	25,000	0
JEREMY NYAMU	18	27,000	ACCOUNT	14,000	7

(a) Using the information above, design a spreadsheet and enter the given data as it appears. Give it the title "COMPANY PAYMENTS". Save the workbook file as **COMPANY1** **(14marks)**

(b) (i) Copy the data into Sheet 2 and rename it as **COMPANY2** and use it to answer the questions that follow **(2 marks)**

(ii) Calculate the total sales and total mileage giving them an appropriate label **(2marks)**

(iii) Rotate the column headings to 45° **(2 marks)**

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(iv) The employee's sales commission is calculated as 12% of the employee's sales. Input this commission rate in cell C20 and label it appropriately. Bold the label and change its font to size 16 **(4marks)**

(v) Insert a new column labeled **'Sales commission'** between 'sales' and 'hours of overtime'. **(2marks)**

(vi) Create a formulae to give the amount of sales commission for each employee by making references to sales commission cell. **(3marks)**

(c) (i) Convert the basic pay and sales to two decimal places. **(2marks)**

(ii) Use a function in a new column labeled REMARK to put the remark 'EXCELLENT' for only those employees whose sales is greater than 22,000, 'GOOD' those employees whose sales are between 15000 to 21999 otherwise the remark should be 'LOW SALES. **(6marks)**

(iii) Apply both outline and inside double line border to the worksheet portion with data **(3marks)**

(d) Overtime payment is done by multiplying 5% of sales with the hours worked. Use a formula to calculate the overtime pay for each of the employees in a new column labeled "OVERTIME PAY" **(2marks)**

(e) Use a function to compute the Total payment of each employee. It should be summation of Basic pay, Sales Commission and Overtime pay. Give it the heading TOTAL PAYMENT. Save the changes. **(2marks)**

(f) Use an appropriate subtotals function to show how much TOTAL PAYMENT the company gives to employees in each department **(4marks)**

(g) Print **COMPANY1, COMPANY2** and **all the formulas used in company2.** **(3marks)**

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QUESTION 2 - DATABASES

Assuming that you have been approached by an automobile Showroom company to help manage their vehicles database whose details are given below:

(a) Create database named **Magari** **(2marks)**

Car Make	**RegNo**	**Type**	**Year**	**Value**	**Owner ID**	**Owner Name**
Toyota	KBD 949U	Coupe	2010	1,200,000	M0001	Faith N.
Nissan	KCT 149E	Wagon	2014	2,500,000	M0002	Jacob W.
Izuzu	KDD 977W	Troupe	2016	4,500,000	M0003	Dan C.
Toyota	KBA 241V	Troupe	2009	900,000	M0002	Jacob W.
Toyota	KBD 049X	Coupe	2010	1,150,000	M0004	Rachael R.
Nissan	KCV 518C	Saloon	2012	1,700,000	M0004	Rachel R.
Subaru	KCY 123Z	Saloon	2014	2,100,000	M0001	Faith N.

(b) Design two Tables named **Cars** and **Owners** to be used to hold the above data. Assign appropriate primary keys for each table. Prepare appropriate input masks to help validate both RegNo and Owner ID field entries **(18marks)**

(c) Create a relationship between the tables. **(2marks)**

(d) Create forms named "**CarDetails**" with a heading and "**OwnerDetails**". Use them to add car details and owner details records respectfully. **(4marks)**

(e) Insert the record below having the following respective details. **(4marks)**

Volkswagen	KCV 321D	Beatle	2012	1,325,000	0002	Jacob W.

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(f) Add a column into the car table labeled “Date of Service”, and add the following dates. Save the changes made. **(4marks)**

Date of Service	OwnerID
20/092021	M0001
21/10/2021	M0002
10/10/2021	M0003
11/10/2021	M0002
19/11/2021	M0004
21/10/2021	M0004
22/11/2021	M0001

(g) Create a query that retrieves a list of cars and their owners to be serviced on 21/10/2021 or on 22/11/2021. Name it **Service Query.** **(5marks)**

(h) Create a tabular report named **NumbOfCars** displaying the cars and their owners; indicating the number of cars each owner has; sort the records with Name in ascending order. **(6marks)**

(i) Create a report named **TotalValue Report** that computes and displays the total value of the cars owned by each owner. **(5marks)**

(j) Print

(i) The two tables

(ii) The query

(ii) The two reports

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

313/1
CRE PAPER 1 2½ HOURS

END OF TERM II EXAMINATION
QUESTION PAPER

INSTRUCTIONS: ANSWER ANY FIVE QUESTIONS
ALL ANSWERS MUST BE WRITTEN IN ENGLISH

1 a) From Genesis stories of creation, outline seven teachings about human beings. **7mks**

b) Outline the differences in the two accounts of creation in Genesis 1 and 2. **8mks**

c) How do Christians take care for God's creation today? **5mks**

2 a) Describe how God prepared the Israelites for the making of the covenant at Mt. Sinai (Exodus 19) **7mks**

b) Give four reasons that made the Israelites to break the covenant while at Mt. Sinai (Exodus 32:1-35)**7mks**

c) What do Christians learn about the nature of God from the Exodus? **6mks**

3 a) Explain seven functions of Jerusalem temple. **7mks**

b) Identify six expressions of syncretism in Israel at the time of Prophet Elijah **6mks**

c) State seven qualities of a good leader that modern leaders can learn from King David **7mks**

4 a) Identify five visions of Amos. **5mks**

b) Outline five teaching of prophets Amos on Israel's election. (Amos 9:8-15)**7mks**

c) What evils would Amos condemn if he would come to Kenya today? **8mks**

5 a) State the causes of judgement and punishment on Israel as stated by Jeremiah. **7mks**

b) Explain four differences between the Sinai covenant and the new covenant as foretold by Jeremiah**.8mks**

c) Identify five methods used by Christians to communicate God's message today **5mks**

6 a) Give the Traditional African concept of a community. **8mks**

b) What are the responsibilities of the living towards ancestors in the Traditional African Community?**6mks**

c) Identify the factors that undermine the role of traditional medicine men in modern society **6mks**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

313/2 CRE PAPER 2
2½ HOURS

END OF TERM II EXAMINATION
QUESTION PAPER

INSTRUCTIONS: ANSWER ANY FIVE QUESTIONS

ALL ANSWERS MUST BE WRITTEN IN ENGLISH

1a) What does Mary's song (the Magnificat) reveal about the nature of God. **(7mrks)**

b) Outline six activities that took place when Jesus was born. **(6mrks.)**

c) Write down seven ways through which Christians in Kenya express their joy for the birth of Jesus. **(7mrks)**

2a) Giving examples state seven methods used by Jesus to spread the gospel. **(7mrks)**

b) What are the Reasons why Jesus chose the twelve disciples? **(6mrks)**

c) Identify seven problems faced by new converts in the church today. **(7mrks)**

3a) With reference to the life and ministry of Jesus, show how he tried to promote social equality. **(7mrks)**

b) With the story of the sinful woman as a reference, explain Jesus teachings on forgiveness. **(5mrks)**

c) Give ways in which Christians engage themselves in the healing ministry. **(8mrks)**

4a) Give seven reasons why Jesus sent the Holy Spirit to his disciples after ascension **(7mrks)**

b) List seven fruits of the Holy Spirit **(7mrks)**

c) How are the gifts of the Holy Spirit manifested in the church today? **(6mrks)**

5. a) Outline eight Christians teachings on work **(8mks)**

b) Give six factors that cause increased unemployment in Kenya today **(6mrks)**

c) How does the church help to reduce the rate of unemployment in Kenya **(6mrks)**

6 a) Explain how unfair distribution of wealth can lead to social disorder in Kenya today **(6mrks)**

b) Give reasons why Christians should not involve themselves in gambling **(7mrks)**

c) How is corruption affecting the society in Kenya today? **(7mrks)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

101/1 English
Paper 1
(Functional Skills)

END OF TERM II EXAMINATION

QUESTION PAPER

ENGLISH
Paper1
2 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 this paper.

d) Candidates should check the question paper to ascertain that all the pages are printed as indicated and

e) That no questions are missing.

f) Candidates must answer the questions in English.

Question	Maximum Score	Candidate's Score
1	20	
2	10	
3	30	
Total Score		

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1. FUNCTIONAL WRITING (20MKS)

You are the secretary of Debating Club in your school, recently the club held a meeting and the following issues were discussed;

- Election of officials
- Income generating activities in the club
- Preparation for the great debate.

In the meeting, 8 members were present, 3 including the vice chairperson sent apologies and the whereabouts of 2 members were unknown. The club patron also attended the meeting. Apart from the main issues, members raised some issues from the previous meeting. Write down the minutes of the meeting.

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2.CLOZE TEST (10MKS)

The broadened freedom of speech bestowed upon people **..... ……..1** the rise of social media platforms does have its merits, as many now**..... ……..2** a platform where they can**……3……..**their concerns about injustices within the society. **……..…..4**everything has its good things and bad things as **..... ……5** The freedom on social media has also renderedthese avenues **..... ……6…**grounds for hate**……...7.** Many use it to promote theirbigoted ideology. They encourage hatred **……..8.**warring individuals or parties simply because they are**..... ……9.**to the views, beliefs, or behavior that differ from**……10…...**

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

a) Read the oral poem below and respond to the questions that follow.

A BAREFOOT BOY

A barefoot boy! I mark him at his play...
For May is here once more, and so is he,...
His dusty trousers, rolled half to the knee,
And his bare ankles grimy, too, as they:
Cross- hatchings of the nettle, in array
Of feverish stripes, hint vividly to me
Of woody pathways winding endlessly
Along the creek, where even yesterday
He plunged his shrinking body - gasped and shook
Yet called the water 'warm' with never lack
Of joy. And so, half enviously I look
Upon this graceless barefoot and his track,...
His toe stubbed..., his big toe-nail knocked back
Like unto the clasp of an old pocketbook.

i) Identify and illustrate two devices that make the poem musical. **.(2mks)**

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ii) How would you effectively recite line 13 of this poem? **(2mks)**

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(iii) Which word would you stress in line 12? Give reason **(2mks)**

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b) One of the features in listening skills is maintaining a meaningful eye contact with the speaker. Why do you think it is important to do so? **.(3mks)**

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c) Consider the following oral literature item. Kiugo kiu kiuru kiario kina kiundu kiuru (That bad word that has been spoken has something bad)

(i) Classify the above genre (1mk)

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(ii) Identify and illustrate <u>two</u> features of sound in the above genre. **(2mks)**

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(iii) Identify what is lost when the item above is translated from its original language **(2mks)**

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(iv) Give one role of the above item **.(1mk)**

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d) Underline the silent letter (s) in the following words. **(3mks)**

i) word	iv) bouquet
ii) debris	v) victual
iii) grandmother	vi) corps

e) Which is the odd one out in the following groups of words based on the underlined sounds (3mks)

a) b<u>ee</u>r	b<u>are</u>	b<u>ear</u>	p<u>air</u>
b) tou<u>gh</u>	gira<u>ffe</u>	dou<u>gh</u>	photogra<u>ph</u>
c) <u>h</u>onest	<u>h</u>onour	<u>h</u>eifer	<u>h</u>eir

e) Imagine you are the leader of a discussion group in class. How would you ensure that the discussion is fruitful? **(5mks)**

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f) There were two candidates for an interview. One was successful while the other one was not. State and explain his or her conduct before the interview that could have made him or her to be successful. **(4mks)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

101/2 – ENGLISH – Paper 2

(Comprehension, literary Appreciation and Grammar)

Instructions

a) All questions in this paper are compulsory.
b) Answer ALL questions in the spaces provided.

For Official use only

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

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1.Read the following passage and answer the questions that follow. 20 mks

Poor generation Z. Amid a time of cultural tumult, today's teens, inheritors of our future challenges, are ever our cultural curiosity. Every few days another article lending another attempt at cultural anthropology of our wayward Tiktok generation pops up. Combed through with a needle-toothed comb, dissected under a mega-zoom, and surveyed through X-ray glasses, one wouldn't blame them for feeling a bit, eh, under the microscope.

Our collective observations are but an introductory point for subsequent hand-wringing about a generational apocalypse. And there's a lot to be nervous about, at least if the studies and the articles are to be believed: According to various pieces, Gen-Z's are addicted to social media, with short attention spans and severe screen addictions. They're addicted to the dopamine rush from the click-click-click and **instantaneous gratification**. As such, their sleep schedules are messed up and they're sacrificing their social lives for a near perpetual screen-induced zombie-like addictive paralysis.

Thanks to a 24/7-tech-based existence, Gen-Z's don't hang out with their friends. They aren't forming relationships. And, as such, they're afraid of growing up. They're so depressed they're committing suicide in massive numbers. They're more tolerant photogenically but they're the most fragile ideological generation ever recorded. Burrowed behind the safety of their screens, they feel hopeless about their prospects, and as such are the most politically radical generation on record. They feel **disenfranchised** from society even more than their millennial predecessors, and are less trusting and more fearful. They cling to each other for a sense of moral direction, and reject the lessons of their parents. Having never faced "real" hardship, they have a tendency to make mountains out of molehills with a general inability to distinguish things that are truly important from those they merely wish were important. The list goes on.

Generation Z are the guinea pigs showing us both the opportunities and the pitfalls in our social media-based new world order. They're the first ones whose entire existence has been **awash** in this new reality. Their struggles are easier to put in context once you imagine yourself in a body in which the 24/7 social media dopamine world has never not been the order of the day. While Facebook stresses everybody out, it's made abundantly less destructive on the fibers of one's consciousness when you're old enough to remember a time when you could step away and breathe the fresh air. That isn't an option for the Gen-Z's.

Not only does the eternal social media landscape and rat race for instantaneous approval they eternally face breed competitiveness and insecurity – these are reported on extensively – but, perhaps more importantly, it has cultivated an endless relentlessness of interactivity that almost paradoxically has offered them very little sense of agency, autonomy, or ownership in the world. This is an entirely different kind of public square from what we've known in the past. Reddit, for instance, one of the favorite Gen-Z playgrounds, is amazing, connected, fun, and **egalitarian**. With no barrier to entry, anyone can engage on anything, and the scoring of anyone's opinion is governed only by whether their peers agree with it. It truly is a portal to the world, and it's fun to seek the approval of one's peers. But it doesn't build the tactile confidence that used to derive from taking one's place in a public square that carried with it a higher barrier to entry and a greater burden of consequence. There's nothing quite like waiting your turn to finally get your moment in the spotlight, putting your reputation on the line, stepping up to the microphone, grabbing the sides of the podium, looking directly into the eyes of your audience, speaking calmly and confidently to them with confidence and gravitas, and owning the room to warm smiles, constructive disagreement, authentic learning, and healthy dialogue.

This new egalitarian ease of the internet has drowned out the processes that used to give people their sense of mission, purpose, and accomplishment in life, and it's made it so the rest of us have no idea who to listen to. When everything is accessible, nothing is, because the kinds of efforts it would take to get noticed in the past no longer offer a value-add. And when everybody has a voice, nobody does, because, well, most voices aren't really worth listening to. When the entire world is easy, quick, egalitarian, and faceless, and when reward comes not from a sense of genuine accomplishment but from instantaneous dopamine-fueled peer approval, it also runs the risk of being soulless and leaving people wandering the wilderness for their sense of personal obligation or practical achievement. It leaves many Gen-Z's feeling like they don't have a voice, and like they can't break in in a more meaningful way. All of the things that are harming their prospects are a natural follow-on.

Questions

a) Why are Gen-Z referred to as a cultural curiosity? **2mks**

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b) Is there a need to worry about Gen-Z according to the passage? **3mks**

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c) Why are Gen-Z referred to as guinea pigs? **3mks**

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d) Identify an instance of the use of <u>parenthesis.</u> **1mk**

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e) What is the tone of the passage? **3mks**

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f) Explain the paradox in the last paragraph? **2mks**

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g) In note form, state the effects of technology on Gen-Z's interaction with society. **3mks**

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h) Explain the meaning of the following words as used in the passage: 3mks

i) egalitarian

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disenfranchised

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ii) awash

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2.Read the excerpt below and then respond to the questions that follow.

“What do you mean?” he asked, suddenly sitting up. “I hope you don’t imply that our culture comes second. Do you?

" Not really, my husband," she said ruefully, beating a hasty retreat. " Our culture is everything and it rules our lives."

" Good," he said authoritatively. " Now listen, you must immediately start counselling the girls to Understand their roles as potential wives of the men of Nasila. Prepare them to appreciate and accept their future responsibilities as mothers and home builders.

" I'll do that, my husband," she said quietly.

" One other thing," he said evenly. " I'll ask Simiren to request the young teacher called Parmuat, who is of our clan and therefore a brother to the girls, to find time to teach them a few home truths. After that we shall call enkamuratani to play her part before we give them away.

Those were the words, whose utterance she so dreaded.

And once uttered, she knew, the words instantly because an inviolable edict. Now that he had spoken, the pain was already harrowing and the torment in her heart Unbearable. She was torn between her love for her daughters and her dutiful role of a faithful and obedient wife of Ole Kaelo.

But in her culture there was no room for dissent, especially if the subject was in conformity with the culture. Who would side with her if she were to oppose the cultural rituals?

Her only ally would be the woman the elders of Nasila contemptuously called entangoroi or the wasp. Those who honoured her called her Emakererei, for she was said to have attended Makerere University in Uganda, where she obtained her degree in veterinary science. Mama Milanoi knew her well. Her actual names were Minik ene Nkoitoi. Outside Nasila, she was respected and honoured. At thirty, she was already managing an expansive government sheep ranch reputed to hold hundreds of thousands of sheep, about one hundred kilometers away from Nasila. Under her were hundreds of employees who worked at the ranch.

Questions

a) " I'll ask Simiren to request the young teacher called Parmuat, who is of our clan and therefore a brother to the girls…” mention the clan and the sub clan that Parmuat belongs to. **(2mks)**

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b) "What do you mean?" he asked, suddenly sitting up. "I hope you don't imply that our culture comes second. Do you?" What has triggered this reaction from Ole Kaelo? **(2mks)**

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c) Discuss the significance of the dialogue between Mama Milanoi and Ole Kaelo? (**4mks)**

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d) Identify two people who have influenced Ole Kaelo to initiate his daughters and how. **(4mks**

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e) Ole Kaelo appoints Parmuat to educate the girls about their culture. What is the reaction of each of the daughters? **(4mks)**

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f) "Her only ally would be the woman the elders of Nasila contemptuously called entangoroi or the wasp" From elsewhere in the text explain why Emakererei was hated. **(2mks)**

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g) Other than dialogue, comment on any other style used in the excerpt. **(2mks)**

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h) Discuss any social concern evident in this excerpt. (2mks)

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i) Comment on the character of Mama Milanoi as brought out in the excerpt. **(2mks)**

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j) " I'll do that, my husband," she said quietly. (rewrite in reported speech) **(1mk)**

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6.Read the following poem and answer the questions that follow 20mks

MY FATHER BEGAN AS A GOD

My father began as a god,
full of heroic tales
of days when he was young.
His laws were as immutable
as if brought down from Sinai,
which indeed he thought they were.

He fearlessly lifted me to heaven
by a mere swing to his shoulder,
and made me a godling
by seating me astride
our milch-cow's back, and, too
upon the great white gobbler
of which others went in constant fear.

Strange then how he shrank and shrank
until by my time of adolescence
he had become a foolish small old man
with silly and outmoded views
of life and of morality.

Stranger still
that as I became older
his faults and his intolerances
scaled away into the past,
revealing virtues
such as honesty, generosity, integrity.

Strangest of all
how the deeper he **recedes** into the grave
the more I see myself
as just one more of all the little men
who creep through life
no knee-high to this long-dead god.

(By Ian Mudie)

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a) Who is the persona in the poem? **2mks**

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b) What is the poem about? **4mks**

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c) Comment on the suitability of the title of the poem. **2mks**

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d) What is the attitude of the persona towards his father? **3mks**

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e) Identify any three stylistic devices used in the poem. **6mks**

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f) Why do you think the persona feels that his father has shrunk? **2mks**

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g) Give the antonym of the word <u>recedes</u> as used in the poem. **1mk**

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7.Grammar (15mks)

a) Rewrite the following sentences according to the instructions given after each. Do not change the meaning. **(3mks)**

Sharleen said the young girls had stolen her macaroons. (Rewrite beginning with: Sharleen…)

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i) It required a lot of planning and great courage to introduce free primary education in Kenya. (Begin: The…)

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ii) She wondered what her daughters knew about F.G.M.
(identify by underlining the noun clause in the given sentence)

b) Filling in the blanks with the correct form of the word given in bracket. (3mks)

i) Women in most societies strive to fight against **……** cultures. (patriarchy)

ii) The issue was **……** by prejudices. (devil)

iii) She ran into an old **……** at the bank. (acquaint)

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c) Fill in the blank spaces using the most appropriate pronoun. (3mks)

i) Between you and …… who is wiser. (1, me)

ii) It was…… that reported the matter to the area chief. (her, she)

iii) The teacher sent James and …… to the library. (me,1)

d) Complete the following sentences with the most appropriate phrase to complete the idiom. (3mks)

i) Getting fired turned out to be a blessing ……..……...

ii) After some reflection, he decided to bite……...……

iii) I go out for walks once……...

e) **Fill in the blank spaces in each of the following sentences with the most appropriate preposition. (3mks)**

(i) The president will preside **.....** the function.

(ii) The exercise was conducted in accordance **.....** the regulations.

(iii) inoculation gives protection …… infection.

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

101/3

ENGLISH

PAPER 3

CREATIVE COMPOSITION AND ESSAYS BASED ON SET TEXTS

Time: 2 hour 30 minutes

Instructions to candidates

- Write your name and index number in the spaces provided
- Answer three questions only
- Each essay must not exceed 450 words

QUESTION	Maximum Score	Candidates Score
1	20	
2	20	
3	20	
Total Score		

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1.Imaginative composition (compulsory) 20 marks
Either

a) Write a composition beginning with: *"The events of the previous day filled me with anxiety…"*

Or

b) Write a story to illustrate the saying that: "*Hurry hurry has no blessings"*

2.Compulsory set text
A Doll's House by John Steinbeck

The society in *A Doll's House* is portrayed as one that inhibits personal freedom. Show the truth of this statement using Nora. **(20Marks)**

3.Optional set texts
Answer any one of the following three questions
Either

a.Novel
***The Pearl* by John Steinbeck**

Juana is the pillar of strength for her family. Show the validity of this statement using illustrations from *The Pearl* by John Steinbeck.

Or **(20 Marks)**

The Short Story

***Memories we lost* by Chris Wanjala(Ed.)**

Drawing illustrations from *Window Seat* by Benjamin Branoff, show the truthfulness in the observation that "Travellers are sometimes subjected to pathetic travelling conditions on most of the Kenyan roads**."(20mks)**

Or

Drama

***Inheritance* by David Mulwa**

Closely referring to David Mulwa's text *Inheritance,* illustrate how most citizens in most African countries suffer because of the behaviour of their leaders. (20 mks)

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

312/1
GEOGRAPHY
PAPER 1
FORM 4

TIME: $2\frac{3}{4}$ HOURS

Kenya Certificate of Secondary Education

END OF TERM II EXAMINATION QUESTIONS

INSTRUCTION TO CANDIDATES

a. This paper consists of section A & B.
b. Answer all the questions in section A.
c. Answer questions 6 and any other two sections from section B.
d. All questions must be written in the answer booklet provided.
e. Candidates must check the question paper to ascertain that all pages are printed as indicated and that no question is missing.
f. Candidates should answer the questions in English

SECTION A

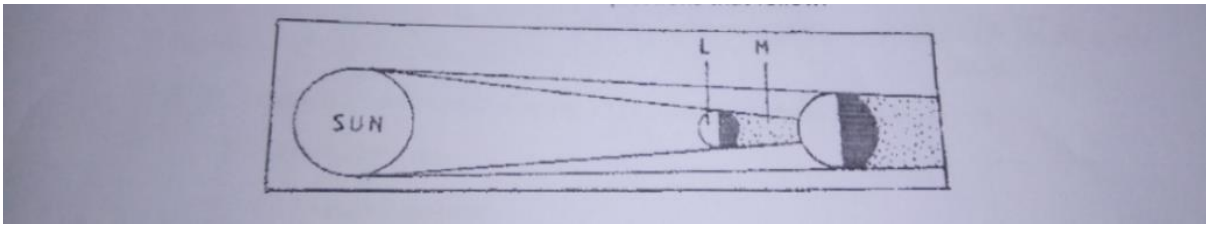
1.(a)What is natural vegetation **2 marks**

(b)State three characteristics of the Mediterranean type of vegetation **2 marks**

2.(a)What is solar system **2 marks**

(b) Use the diagram below to answer the questions that follow

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DIAGRAM

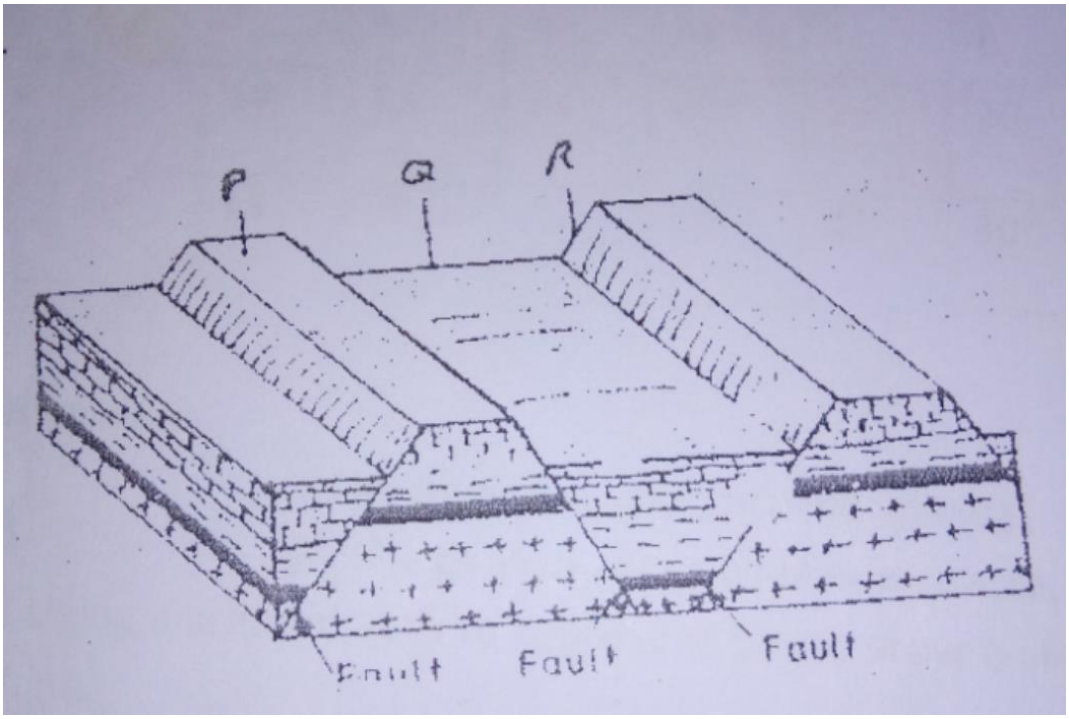
(i)What type of eclipse is represented by the diagram?

(ii)Name the features marked L and **M** **2 marks**

3.(a)What is an isobar? 2 marks

(b)What is the effect of the International Date Line on time? **2 marks**

4.(a)The diagram below represents features produded by faulting.Use it to answer the question that follows



(a)Name the features marked P,Q and **R** **3 marks**

(b)Differentiate between a normal and reverse fault **2 marks**

5.(a)Describe carbonation as a process of chemical weathering **3 marks**

(b)Give two reasons why there are few settlements in a Karst landscape **4 marks**

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SECTION B

Answer question6 any ant other two questions

Study the map of Kitale 1:50,000 sheet no 75/3 and answer the questions that follows

6.(a)(i)What type of map is Kitale 1 mark

(ii)Convert the scale used to draw the map of Kitale into a statement scale **2 marks**

(iii)Give the height in metres of the trigonometric station in the grid square 2311 **2 marks**

(iv)What is the latitude extent of the area covered by the map? **2 marks**

(v)Measure the length in Kilometres of R.Koitobos from Mc.Call's bridgeto the grid point 304110 **2 marks**

(vi)What is the bearing of the trigonometric station at grid square 2823 from the Air photo principal point at grid square 2918 2 marks

(b)Draw a rectangle enclosed by Easting 23 and 31 and Northing 11 and 16

On it mark and name :

(i)Seasonal swamp 1 mark

(ii)River Koitobos 1 mark

(iii)Municipality boundary 1 mark

(iv)Railway line 1 mark

(c)Describe the drainage of the area covered by the map of Kitale 5 marks

(d)Citing evidence from the map,state two functions of Kitale town 4 marks

7.(a)(i)Use the table below showing rainfall and temperature figures recorded for station W in Kenya

Months	J	F	M	A	M	J	J	A	S	O	N	D
Temp °c	15	14	13	23	20	21	20	18	15	14	13	13
Rainfall (mm)	10	15	12	45	50	41	30	19	16	13	12	11

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(i)Determine the diurnal range of temperature **2 marks**

(ii)The diurnal range of temperature **2 marks**

(b)(i)Using a scale of 1 cm to represent 5 mm, draw a simple bar graph drawn for station W

(ii)Describe the climate of station W **5 marks**

(iii)List two instruments found in the Stevenson's Screen **2 marks**

(d)Give five reasons for carrying out weather forecasting **5 marks**

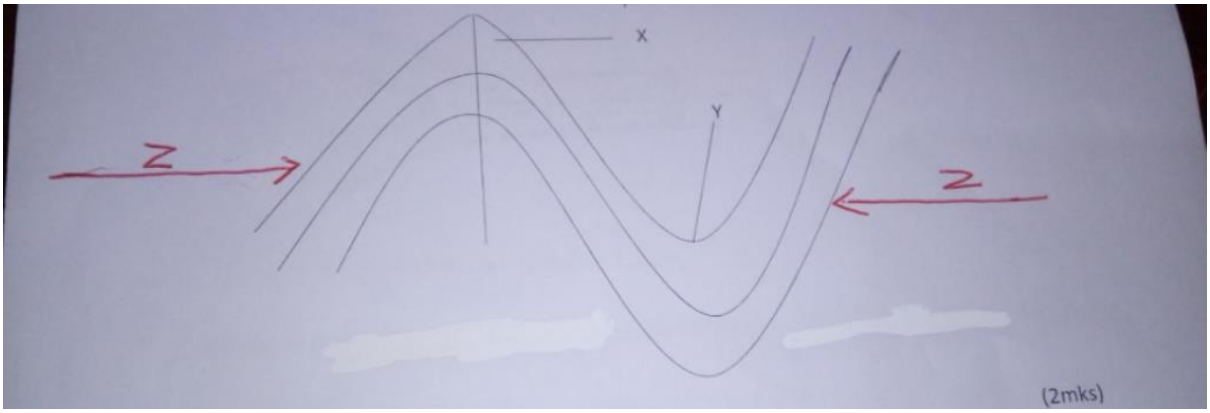
8.(a)(i)Draw an outline map of Africa on it showing :

(i)Atlas mountain

(ii)Cape ranges

(ii)Name four types of folds **4 marks**

(b)Study the diagram below and answer the question that follows



(i)Name the parts marked X and Y

(ii)Name the force marked Z

(c)While using a well labelled diagram, describe the formation of Fold Mountain **8 marks**

(d)Explain three positive ways in which fold mountains influences human activities **6 marks**

9.(a)(i)Name two types of deserts **2 marks**

(ii)Name and describe three process of wind transportation in deserts **6 marks**

(c)While using a well labelled diagram,describe how the following features are formed

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(i)Zeugen **6 marks**

(ii)Rock pedestal **6 marks**

(d)Your school carried out a field study on desert vegetation

(i)State three ways how you noted the vegetation have adapted themselves to the hot desert climate **6 marks**

(ii)Which measures would you recommend to control desertification **2 marks**

10.(a)(i)What is an ice sheet? **2 marks**

(ii)Give two reasons why there are no ice sheets in Kenya **2 marks**

(b)Describe how a pyramidal peak is formed **5 marks**

(c)The diagram below shows types of moraines in a valley glacier



(i)Name the type of moraine marked S,T AND V

(ii)Explain four effects of glaciated features in upland areas **8 marks**

(d)Students from a school near Mt.Kenya were planning to carry out a field study on the glaciated features on the mountain

(i)Give three reasons why it would be difficult to undertake the field study on glaciated features on the mountain **3 marks**

(ii)Desccribe how the students would use a photograph of Mt.Kenya to identify the glaciated features on the mountain

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

312/2
GEOGRAPHY
PAPER 2
FORM 4

TIME: $2\frac{3}{4}$ HOURS

Kenya Certificate of Secondary Education

END OF TERM II EXAMINATION QUESTIONS

INSTRUCTION TO CANDIDATES

a. This paper consists of section A & B.
b. Answer all the questions in section A.
c. Answer questions 6 and any other two sections from section B.
d. All questions must be written in the answer booklet provided.
e. Candidates must check the question paper to ascertain that all pages are printed as indicated and that no question is missing.
f. Candidates should answer the questions in English

SECTION A
Answer all the question in this section
1.a)What is nodamism? **(2 mks)**

b)State three characteristics of shifting cultivation. **(3 mks)**

2.(a)Name the areas where these minerals are mined in East Africa

(i)Diamond in Tanzania (**1 mk)**

(ii)Phosphate in Uganda **(1 mk)**

(b)Describe how solution mining method is carried out. **(4 mks)**

3.(a)Define package tour **(2 mks)**

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(b)State two problems facing tourists along the coastal regions of Kenya. **(2 mks)**

4.(a)Apart from noise pollution,name two other types of pollution. **(2 mks)**

(b)State four effects of wind as an environmental hazard in Kenya. **(2 mks)**

5.(a)Name two reclaimed regions of the Zuider-Zee in Netherlands. **(2 mks)**

(b)Give three benefits of the Delta Plan Project in Netherlands. **(2 mks)**

SECTION B

Answer Question 6 and any other two questions from this question

6.The table represent information on population of the Counties in Central Kenya according to the 2009 census report.Use it to answer question a.

COUNTIES	TOTAL POPULATION
Nyeri	693,558
Kirinyaga	528,054
Muranga	942,581
Kiambu	1,623,282
Nyandarua	596,268
TOTAL	4,383,743

a)(ii)While using a radius of 4 centimetres,draw a simple pie-chart to represent the above information.

(ii)Apart from using a simple pie-chart,list two statistical methods that can be used to represent the data.

b)State four reasons why the North Eastern part of Kenya has sparce population.

c)Compare the population in Kenya and that of Sweden under the following:

(i)Dependency ratio. **(2 mks)**

(ii)Life expectancy **(2 mks)**

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d)Explain three consequences of population growth to Kenya. **(6 mks)**

7.(a)State four physical conditions necessary for the growth of Cocoa in Ghana. **(4 mks)**

(b)Draw an outline map of Ghana. **(2 mks)**

On it show the following:

(i)Cocoa growing area. **(1 mk)**

(ii)Takoradi port. **(1 mk)**

(c) (i)Describe Cocoa growing from harvesting to marketing in Ghana. **(7 mks)**

(ii)State four problems facing Cocoa farmers in Ghana. **(4mks)**

(d)You intend to carry out a field study which process wheat in Kenya.

(i)Name two possible regions in Central Kenya where wheat would be sourced by the factory. **(2 mks)**

(ii)Give two reasons why content analysis may not be suitable for data collection during the field study. **(2 mks)**

(iii)What two information would you collect to enable you to achieve the objectives of your study. **(3 mks)**

8.(a) Define the term industrial inertia. (2 mks)

(b)Identify one agricultural non-food based industry located in the following town:

(i)Thika **(1 mk)**

(ii)Webuye **(1 mk)**

(c)State four reasons for decentralization of industries in Kenya**. (4 mks)**

(d)(i)Apart from iron and steel,name three other industries found in Ruhr region of Germany. **(8 mks**

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(ii)Explain three factors which influenced the location of iron and steel industry in the Ruhr region of Germany in the 19th century **6 marks**

(e)Students from Komothai Secondary School went out for a field study on a nearby fruit processing factory in a nearby town:

(i)State three reasons why it would be necessary for one of themto visit the factory before the actual field study.**(3mks)**

(ii)Give three follow up activities they would carry out after the field study. **(3 mks)**

9(a)(i)What is Agro-forestry . **(2 mks)**

(ii)State four reasons why afforestation is being encouraged in Kenya. **(4 mks)**

(b)Explain how the following factors influence the distribution of forests.

(i)Relief. **(2 mks)**

(ii)Soils **(2 mks)**

(c)(i)List three indigenous soft wood trees species in Kenya**. (3 mks)**

(ii)State two physical problems facing forests in Kenya. **(2 mks)**

(d)(i)Name two major lumbering provinces in Eastern Canada. **(2 mks)**

(ii)State four characteristics of Coniferous forests **(4 mks)**

(iii)Discuss forestry in Kenya and Canada under the following sub-heading:

Transport **(2 mks)**

Harvesting of trees. **(2 mks)**

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10.(a)Study the map of the world provided showing the major fishing grounds and answer the questions that follows:



(i)Name the fishing ground labelled C**.** **(1 mks)**

(ii)List three species of fish caught in the fishing ground labelled B**.** **(3 mks)**

(iii)Name the oceans current labelled D**.** **(1 mk)**

(iv)State the influences of the ocean current labelled D on fishing activities. **(2 mks)**

(v)Name two countries sharing the fishing ground labelled E. **(2 mks)**

(b)Explain how the following factors influences fishing in the major fishing grounds:

(i)Indented coastline **(2 mks)**

(ii)Continental shelf **(2 mks)**

(iii)Technology **(2 mks)**

(c)Describe how Basket method is used in fishing**.** **(5 mks)**

(d) (i)What is aqua-culture? **(2 mks)**

(ii)State three reasons why fish farming has been on the increase in Kenya. (3 mks)

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

311/1
HISTORY.
PAPER 1
FORM 4

TIME: 2 HOURS

Kenya Certificate of Secondary Education

END OF TERM II EXAMINATION QUESTIONS

SECTION A

1.Give the meaning of history. **(1mk)**

2.Identify one age-grade for elders among the Akamba. **(1mk)**

3.State the first settlement area of the Luo during their migration fro Sudan. **(1mk)**

4.Name one early Christian missionary who worked in Kenya. **(1mk)**

5.Identify two contributions made by early Christian missionaries in the field of education in Kenya. **(2mks)**

6.Define the term "National Integration" **(1mk)**

7.What constitutional amendment made Kenya return to multi-party state. **(1mk)**

8.Give Two reasons why a Kenya citizen should obey the law. **(2mks)**

9.Give two way in which education has promoted national unity in Kenya. **(2mks)**

10. State two advantages of representative democracy. **(2mks)**

11. Name the First African to be appointed in the council of ministers in Kenya by the colonial government. **(1mk)**

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12. Identify the leader who stepped down as the president of African Union for Jomo Kenyatta. **(1mk**)

13. State two ways in which the Harambee spirit promote National Unity in Kenya. **(2mks)**

14. State two ways through which the saving and credit cooperative societies in Kenya benefit their members**.** **(2mks)**

15. State two qualifications that a person must fulfill in order to be allowed to Register as a voter in Kenya. **(2mks)**

16. Name the two branches of National Police Service in Kenya**.** **(2mks)**

17. Give the main difference of the commission on Revenue Allocation in Kenya**.** **(1mk)**

SECTION B. (45 MARKS)

ANSWER THREE QUESTIONS IN THIS SECTION.

18. (a) Give five reasons which influenced the migration of the plain Nilotes to Kenya during the Pre-Colonial period**.** **(5mks)**

(b) Explain five results of the migration and settlement of the Maasai in Kenya during the pre-colonial period. **(10 mks)**

19. (a) State three reason for the coming of the Portuguese to Kenyan Coast in the 15th century**.** **(3mks)**

(b) Explain six effects of the Portuguese rule on the East African Coast**.** **(12mks)**

20. (a) Give five grievances of the Kikuyu Central Association which were Presented by Jomo Kenyatta to the colonial secretary in 1929. **(5mks)**

(b) Explain five factors which led to the migration of African to the urban areas in Kenya during the colonial period. **(10mks)**

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(a) State three factors that have contributed to high illiteracy levels in Kenya since Independence**.** **(3mks)**

(b) Discuss six factors that have facilitated industrialization in Kenya since Independence. **(12mks)**

SECTION C

ANSWER ANY TWO QUESTIONS FROM THIS SECTION.

21. (a) State three circumstances that can make a Kenyan citizen to be denied the right to life**. (3mks)**

(b) Describe the functions of the Republic of the Kenyan**. (12 mks)**

22. (a) State five ways through which Independence of the Judiciary is guaranteed in Kenya**. (5mks)**

(b) Explain five functions of the Independent Electoral and Boundaries Commission of Kenya**. (10mks)**

23. (a) State three objectives of devolving the government of Kenya. **(3mks)**

(b) Explain six functions of the National Assembly in Kenya. **(12mks)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

311/2
HISTORY.
PAPER 2
FORM 4

TIME: 2 HOURS

Kenya Certificate of Secondary Education

END OF TERM II EXAMINATION QUESTIONS

SECTION A (25MARKS)

ANSWER ALL QUESTIONS IN THIS SECTION

1. List two examples of material remains in an archaeological site.
2. What was the name of Charles Darwin's book in which he published his on evolution theory. **(1mks**
3. Identify two centers of early Agriculture. **(2mks)**
4. Names two West African Kingdoms that were involved in Trans- Saharan trade. **(2mks)**
5. State two features of the camel that enables it to be the most suitable animal for transport in arid areas. **(2mks**)
6. State one theory that explains the origin and spread of iron working in Africa**.** **(1mk)**
7. What was the main discovery William Morton? **(1mk)**
8. Identify two major factors that contributed to the decline of Meroe. **(1mk)**
9. Which company ruled southern Rhodesia on behalf of the British**?** **(1mk)**
10. Give the main reason why European powers held the Berlin conference of 1884-1885. **(1mk)**
11. Identify two positive result of Lewanika's collaboration with the British**.** **2mks)**
12. State one European nation that was led by a dictator after the First World War. **(1mk)**
13. Name one member country of the common wealth in Africa which is not a former British colony**.** **(1mk)**
14. Identify two military facts formed during cold war**.** **(2mks)**
15. Identify two African delegates who attended the fifth pan African conference in Manchester in 1945. **(2mks)**

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16. What was the main reason that led to the army muting in Congo in 1960**.** **(1mk)**

17. Which is the highest court in India**.** **(1mk)**

SECTION B (45 Marks)

Answer any three questions in this section

18a) State three differences between apes and man's ancestors. **(3mks)**

b) Explain the impact of early agriculture on people Way of life. **(12mks)**

19.a) Identify three traditional forms communication **(3mks)**

(b) Explain six positive impacts of telecommunications today.

20. State three conditions that an African had to fulfil so as to be assimilated in Senegal. (3mks)

b) Explain six effects of direct rule in Zimbabwe. **(12mks)**

21a) Mention three ways in which Julius Nyerere assisted African nationalist in Mozambique in their struggle for independence**.** **(3mks)**

b)Explain methods used by African nationalists in their struggle against apartheid rule. **(12mks)**

SECTION C (30mks)

Answer Any Two Question in this section

22a) Identify three kinds of spirits in the shone kingdom **(3mks)**

b) Describe the political organization of the Shona in the 19th century **(12mks)**

23a) Mentor three aims of common market for east and southern Africa.(COMESA). **(3mks)**

B) Explain six challenges facing East African community. **(12mks)**

24.A) Identify five source of British constitution. **(5mks)**

b) Explain the functions of the monarchy in Britain**.** **(10mks)**

25.Identifly five sources of British constitution. **(5mks)**

b) Explain the function of the monarchy in Britain. **(10mks)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

441/1

HOME SCIENCE

PAPER 1

THEORY

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the spaces provided above.
2. Sign and write the date of examination in the spaces provided above.
3. This paper consists of THREE SECTIONS, A, B AND C
4. Answer all the questions in Section A and B and any 2 questions from Section
5. Answer must be written in the spaces provided in the question paper.
6. Additional pages must NOT be inserted.

EXAMINERS USE ONLY

SECTION	QUESTIONS	MAXIMUM SCOR	CANDIDATE'S SC
A	1-20	40	
B	21	20	
C	22	20	
	23	20	
	24	20	
TOTAL SCORE	100		

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PAPER 1

SECTION A- (40MKS)

ANSWER ALL THE QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED.

1.State two important rights that each consumer should be aware of:- **(2mks)**

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2.Name two groups of synthetic fibres **(2mks)**

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3.Mention two methods used to coat food before frying. **(2mks)**

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4.State two qualities of a well- made dart **(2mks)**

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5.Name four foods that can be given to a child in the management of Kwarshiokor **(2mks)**

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6.Name two seams commonly used when joining side seams of trousers made of heavy fabric **(2mks)**

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7.State two points to look for when buying a seam ripper **(2mks)**

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8.Name two surfaces that are cleaned by scrubbing. **(2mks)**

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9.List down two uses of takum powder when applied on the feet. **(2mks)**

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10. State two dangers of smoking during pregnancy . **(2mks)**

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11. Point out two reasons for lining a cake tin. **(2mks)**

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12. Which two reasons make stainless steel unsuitable for cooking food? **(2mks)**

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13. In two well stated points say why babies who are fed on formula diarrhoea **(2mks)**

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14. Mention two advantages of having labels on consumer products. **(2mks)**

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15. Two good qualities of a well made sleeve include.:-

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16. Point out two advantages of habit training. **(2mks)**

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17. Suggest four ways of decorating an apron **(2mks)**

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18. List down two important uses of opening on garments. **(2mks)**

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19. State four different forms in which laundry is found. (2mks)

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20. Give two advantages of using soft water for laundry work. (2mks)

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Section B (Compulsory) 20mks

You have been left at home on a Saturday afternoon and are expected to carry out some tasks.

a) Explain how you will clean a neglected brass ornament. **(6mks)**

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b) Weekly- cleaning of a hurricane lamp. **(6mks)**

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c) Laundering your school acrylic sweater. OR **(8mks)**

White cotton table- cloth with a fresh tea stain.

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Section C. (40mks)

Answer any two questions from this section

22 (a) Outline five reasons for finishing plain wooden surfaces. **(5mks)**

(b) Suggest five practices that are harmful to woolen articles. **(5mks)**

(c) List down Five activities at the antenatal clinic. **(5mks)**

(d) Explain five qualities of a good waistband. **(5mks)**

23. (a) State and explain on five differences between cotton and polyester fabrcs. **(10mks)**

(b) Point out five requirements of a good kitchen floor. **(5mks)**

(c) Outline five qualities to look for when purchasing labour saving cleaning equipment **(5mks)**

24. (a) State at least five remedies of needle breaking when machining. **(5mks)**

(b) Briefly and in point form discuss five disadvantages of convenience foods. **(5mks)**

(e) Explain five modern methods of food preservation. **(5mks)**

(d) Using relevant diagrams, give the procedure for making a French seam on the side seam for a child's dress.

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

441/2

Home science

(CLOTHING CONSTRUCTION)
PAPER 2

PRACTICAL

2 ½ HOURS

A Pattern of a child's dress is provided. You are advised to study the sketches, the questions paper and the layout before the test.

1.MATERIALS PROVIDED

Pattern pieces

A Front bodice

B Back bodice

C sleeve

D Collar

E cuff

F Neck binding

G Sleeve opening strip

N.B Use pattern piece D to cut interfacing for collar.

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2. Light weight plain cotton fabric 65cm long by 90 cm wide.

3. Sewing cotton thread to match the fabric

4. One button 1 cm in diameter.

THE TEST

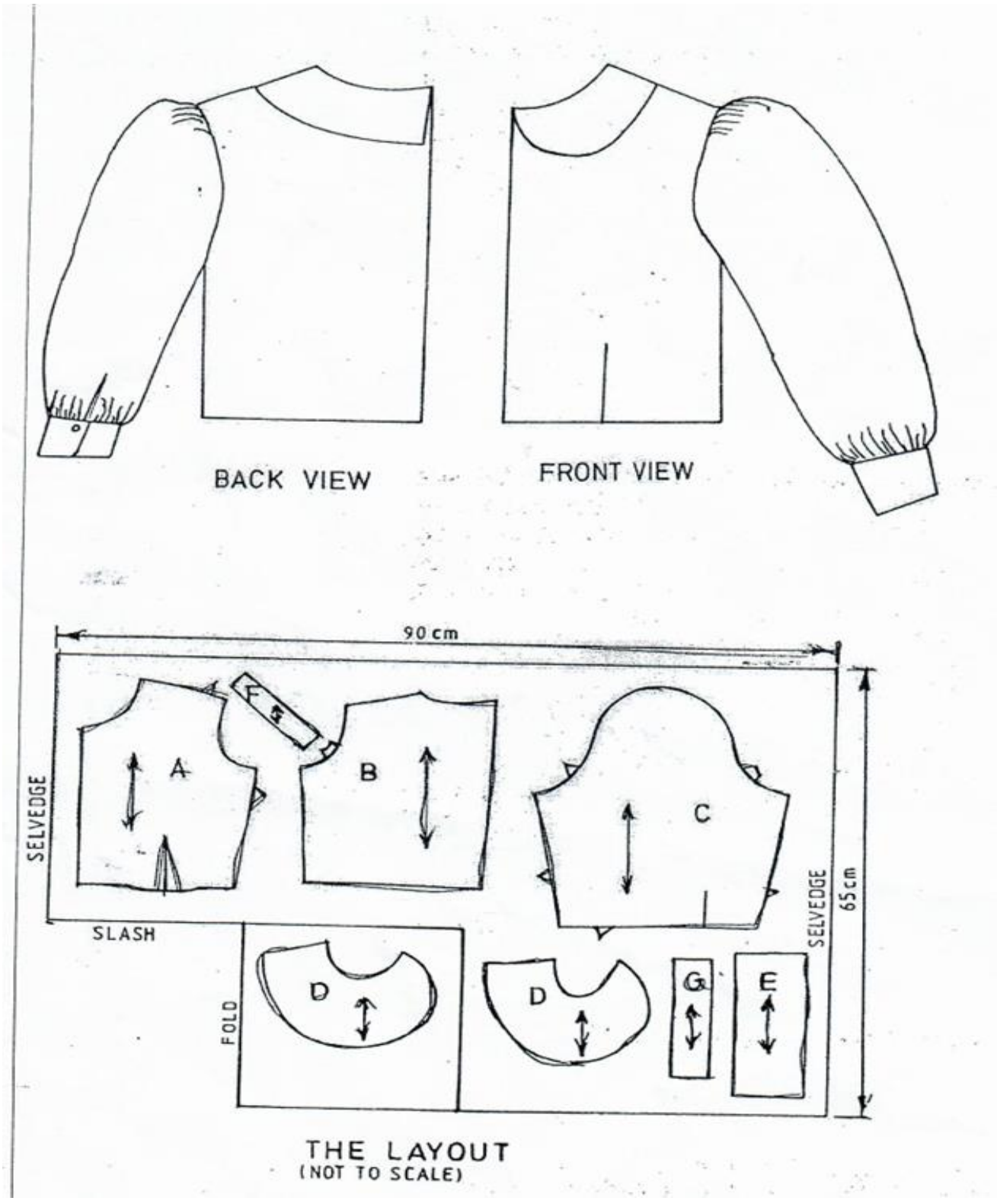
Using the materials provided , cut and make the left half of child's dress bodice to show the following:-

1) The working of the waist dart
2) The working of a machine fell seam at the shoulder and French seam at the side and under arm seams.
3) Preparation of an interfaced collar and attaching it to the bodice.
4) The making of the continuous straight strip opening at the sleeve.
5) Attaching of the sleeve cuff
6) The preparation and attaching of the sleeve to the bodice and leaving the seam untrimmed and un neatened.
7) The making of the button hole
8) The attaching of the button.

At the end of the examination, firmly sew on your work, on a single fabric a label bearing your name and index number. Remove the needles and pins from your work, then fold your work carefully and place it in the envelope provided.

DO NOT put scraps of fabric in the envelope.

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

HOMESCIENCE

FOOD AND NUTRITION

PAPER 3 (PRACTICAL)

1 ¾ HOURS

END OF TERM II EXAMINATION

KENYA CERTIFICATE OF SECONDARY EDUCATION

INSTRUCTIONS TO CANDIDATES

- Read the test carefully
- Textbooks and recipes may be used during the planning session as reference materials
- You will be expected to keep to your order of work during the practical session
- You are only allowed to take away your reference materials at the end of the planning session
- You are not allowed to bring additional notes to the practical session.
- Candidates should check the questions paper to ascertain that no page is missing

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THE TEST

You are left with your cousin who has been discharged from hospital. Using all the ingredients provided below, prepare, cook and present a two course lunch for both of you.

Ingredients
Liver/ chicken/ minced beef.
Rice/ green bananas/ Irish potatoes
Green leafy vegetables
Sugar
Green pepper
Onions
Tomatoes
Carrots
Cooking fat/ oil
Salt
Fruits in season

Use separate sheets of paper for each task listed below and a carbon paper to make duplicate copies
i) Identify the food items & write down their recipe.
ii) Write down your order of work
iii) Make a list of food stuffs, materials and equipments you will require

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

JINA: ……

SHULE: ……..……

NAMABARI YA USAJILI: …….. SAHIHI: ……. TAREHE: ……

102/1
KISWAHILI
KARATASI 1 (INSHA)
KIDATO CHA NNE

MUDA: *SAA* $1\frac{3}{4}$
HATI YA KUHITIMU ELIMU YA SEKONDARI

MTIHANI WA MWISHO WA MUHULA WA PILI

MAAGIZO

1.Jibu maswali mawili pekee

2.Swali la kwanza ni la lazima

3.Maswali yote yana alama 20, kila mija

4.Tumia lugha ya Kiswahili

INSHA

1.Lazima.

Umepata kazi ya utangazaji katika kampuni moja nchini. Umealikwa kwa mahojiano. Andika mahojiano kati yako na mkurugenzi wa kampuni hiyo (al.20)

2.Andika kisa kitakachodhihitisha maana ya methali sikio la kufa halisikii dawa (al.20)

3.Jadili mikakati inayotumiwa na serikali kupambana na tishio la usalama nchini (al.20)

4.Andika kisa kitakachomalizia kwa maneno haya

…….nilitamani ardhi ipasuke inimeze mzima mzima. (al.20)

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

JINA: ……

SHULE: ……..……

NAMABARI YA USAJILI: …….. SAHIHI: ……. TAREHE: ……

102/2
KISWAHILI
KARATASI 2 (MATUMIZI YA LUGHA)
KIDATO CHA NNE
MUDA: *SAA* 2 $^{1}/_{2}$
HATI YA KUHITIMU ELIMU YA SEKONDARI

MTIHANI WA MWISHO WA MUHULA WA PILI

MAAGIZO

1.Jibu maswali yote katika nafasi uliyopewa.

2.Andika majibu yako kwa lugha ya Kiswahili.

	SWALI	UPEO	ALAMA
1.	Ufahamu	15	
2.	Ufupisho	15	
3.	Matumizi ya lugha	40	
4.	Isimujamii	10	
	Jumla	80	

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SEHEMU YA KWANZA (ALAMA 15)

UFAHAMU

MAJILIO ya wakoloni barani Afrika ambao walidumisha utawala wao katika'bara jeusi' kwa takriban kipindi cha miaka sabini kulisababisha mivutano ya kiisimu mpaka leo (Ngugi,1993,uk 42)

Wakoloni walizipa kipaimbele lugha za kigeni na kuzikandamiza zile za kiasili zisiweze kuelezea uhalisi wa maisha katika viwango vya teknolojia. Kwa hakika, itazichukua lugha hizi muda mrefu kwenda sambamba na maendeleo ya fikra na teknolojia kwa kutoandaliwa vyema kutekeleza wajibu huu.

Lugha ni kipengele muhimu sana cha utamaduni. Hivyo basi serikali zinawajibika kuzilinda, sio tu kwa sababu lugha zimejaa maarifa mengi ya tangu jadi, bali pia kwa sababu lugha ni chombo cha maendeleo ya binadamu.

Maarifa yote na ufanisi wa binadamuu huelezwa kupitia kwa lugha. Mwelekeo ulioonekana kishika sana katika mataifa megi barani afrika, ikiwemo Kenya, ni kuhusudu lugha na tamanduni za kigeni. Lugha za kigeni zimehusishwa na maendeleo na ustaarabu.

Hatua iliyochukuliwa na serikali ya Tanzania ya kufunza masomo yote kwa lugha ya Kiswahili kuanzia darasa la kwanza hadi chuo kikuu ilizua kejeli na kicheko kwa baadhi wa wakenya; hususan katika stesheni za fm. Kisa na maana: jambo hili haliwezekani!

Je, ni lazima tutegemee lugha za kigeni kupiga hatua kimaendeleo? La hasha! Kuna ushahidi wa mataifa kama vile Uchina, Ufini,Sweden, Indonesia,Japan,Malaysia, India,Uyahudi n.k. yalioendeleza lugha zao kimakusudi ili ziweze kukidhi haja kufundishia masomo yote hadi viwango vya juu sana vya elimu.

Katika sherehe za kuadhimisha siku ya kimataifa ya 'lugha mama' miongoni mwa mataifa wanachama wa umoja wa mataifa (united Nations International Mother Language Day) mnamo februari, 2000, mkurugenzi wa shirika la umoja wa mataifa kuhusu Elimu,sayansi na utamanduni(UNESCO), jenerali koichiro Matsuura alisema: 'mojawapo ya vigezo vitumiwayo na wataalmu kukadiria iwapo lugha Fulani inatishiwa kuangamia au kufa ni iwapo watoto wanajifunza lugha hiyo…

Iwapo takribani asilimia 30 ya watoto, hawajifunzi lugha yao'ya mama', basi lugha hiyo inatishiwa kuangamia… lugha hiyo bila shaka huenda ikafa pamoja na kizazi kinachoizungumza.'

Kwa mujibu wa UNESCO, lugha nyingi ambazo zimetishiwa kufa au kutoweka zinapatikana katika mabara ya merakani na Australia. Shirika hililinaongeza kuwa, nchini Kenya, lugha kama vile suba,El Molo, Lorkoti, Yaaku sogoo,kore,Segeju,Omotik, na KInare' zimekufa' au kutoweka huku Bong'om na Terik/Tiriki zimo kwenye hatari ya kutoweka.

Lugha pia huangamia wakati ambapo lugha hizo zinashindwa kuzihudumia jamii zao ipasavyo kama chombo mahsusi cha mtagusano wa kijamii. Baadhi ya lugha huku na kusambaa huku zingine zikididimia na hatimaye'kumezwa' na lugha zilizoshaimiri au hata kutoweka kabisa. Kwa mfano, jamii ya Seng'wer 'imemezwa' na makabila kama vile Wapokot, Wamarakwet, Wakeiyo, Watugen, Wanandi na Waluhya, ilhali Wakipsigis,Watugen na Wamaasai'wammeza'jamii ya Ogiek.

Hata hivyo,mkaoni nyanza ya kusini nchini Kenya, wakakti wa uchaguzi mdogo wa useneta katika gatuzi ya Homabay, tulisikia kupitia kwa profesa….(aliyewania kiti), kwamba jamii ya Abasuba ipo-wala'haijamezwa' na jamii ya waluo.

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Msimamo wa wizara ya elimu nchini Kenya kuhusu ufundishaji wa 'lugha ya mama' unaonekana kuyumba. Mara tunaambiwa lugha ya mama itafundishwa katika madarasa ya chini katika shule za mashambani; mara tunaambiwa itafundishwa katika madarsa ya chini katika maeneo Fulani; ilimradi wizara haijitokeza waziwazi na sera wala mwongozo mwafaka.

Njogu (2003) anahoji;'mkondo uliopo nchini Kenya hivi sasa ni ule wa jamii nyingi kuwahimiza watoto wao kuzungumza lugha za kigeni kama vile kiingeraza, kifaransa, na hata kijerumani na kupuuza lugha ya kwanza. Hii inatokanan na imani kuwa lugha za kigeni ndizo zitakazofungua njia za kigeni ndizo zitakazofungua njia za maendeleo hapo baadaye.

Mkondo huu usipozuiliwa, huenda ukasababisha vifo vya lugha za kiasili' Njogu anaendelea: 'uwezo wa kuongea lugha nyingine pamoja na yenye asili ya kikoloni huweza kujenga jisia za kujiamini miongoni mwa watu wasiokuwa na uwezo mwingi wa kiuchumi-nako kujiamini ni hatua ya awali ya kuleta maendeleo ya jamii'MAKIWA! Familia, jamaa na marafiki wa Grace Ogot aliyeandika baadhi ya kazi zake kwa lugha ya mama.

Maswali

1. Ni nini kisababishi cha mivutano ya kiisimu katika bara la afrika **(al. 2)**

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2. Serikali zinafaa kuwajibika katika kuzilinda lugha . eleza **(al. 2)**

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3. Ni hatua gani ambayo ilichukuliwa nan chi ya Tanzania ambayo ilizua kejeli na kicheko kwa baadhi ya wakenya **(al. 1)**

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4. Lugha ya mama inasemekana kuwa katika tishio la kuangamia kwa kutumia vigezo gani? **(al. 2)**

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5. Kwa nini jamii nyingi huwahimiza watoto wao kuzungumza lugha za kigeni kigeni **(al. 2)**

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6. Kuna mabara ambayo yametajwa kuwa na lugha nyingi ambazo zinatishiwa na kufa au kutoweka. Yataje mabara hayo. **(al. 2)**

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7. "Msimamo wa wizara ya elimu kuhusu ufundishaji wa lugha ya mama unaonekana kuyumba " Eleza **(al. 2)**

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8. Eleza maana ya msamiati ufuatayo kwa mujibu wa taarifa au ufahamu

a) Takriban

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b) Mtagusano

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UFUPISHO

TUMEKWISHA kueleza katika makala ya hapo awli kuwa lugha ni maalum kwa binadamu tu na kwamba hakuna kiumbe yeyote ambaye si mwanadamu mwenye uwezo wa kujua, kujifunza na kutumia lugha zaidi ya binadamu.

Bila shaka, mawasiliano ya binadamu yanaweza kujumuishwa kama mawasiliano ya wanyama yaliyoendelezwa. Utafiti wa mawasiliano ya wanyama, uitwao'zuosemiotiki'(zoosemiotics) tofauti na 'athroposemiotiki'(utafiti wa mawasiliano ya binadamu), umechangia pakubwa katika ukuzaji wa uwezo wa mnyama wa kutambua. Jambo hili ni dhahiri kwani binadamu wanaweza kuwasiliana na wanyama kwa kutumia njia za kipekee lakini si'lugha'.

Makala haya yanalenga kuthmini na kuzamia sifa au tabia za lugha ya mwanadamu. Kimsingi sifa ai Tania hizi ndizo zinazoitofautisha lugha ya mwanadamu na aina nyinginezo za mawasiliano zitumiwazo na ndege au wanyama.

Unasibu wa lugha ya binadamu unaangaliwa katika ukweli kwamba binadamu hazaliwi na lugha, anakutana nayo kwa unasibu tu. Hakuna uhusiano wa moja kwa moja au wa aili kati ya kitajwa(kitu au umbo linalomaanishwa au maana).

Uhusiano wake ni wa unasibu na unatokana na makubaliano ya watu wajua – lugha yao. Hata makubaliano haya ya kwamba kitu kiitwe au dhana Fulani iitwe na kuelezwa kwa namna Fulani ni ya kinasibu tu. Hapa tunamaanisha kwamba mkutano au kikao ambaco binadamu amewahi kukaa akasema mathalani neno "chuki" limaanishe hali ya kutompenda mtu au neno "upendo" limaanishe hali ya kuonesha huba kwa mtu. Kila jamuiya-lugha ina namna yake ya kuufasili na kuelekezea ulimwengu kwa lugha yake ambayo inatofautiana na jamuiya-lugha nyingine.

Lugha ya mwanandamu inao uwezo wa kuambukiza utamanduni kutoka katika kizazi kimoja kwenda kizazi kingine au kutoka katika jamuiya-lugha moja kwenda katika nyingine. Leleweke kuwa, uwezo huu wa kuambukiza maarifa ya lugha hufanyika kwa njia ya kusoma au kujifunza na si kurithi. Kwa mfano, mtu anaweza kurithi. Kwa mfano, mtu anaweza kurithi maumbile kutoka kwa wazazi wake, mathaalan aina ya nywele, macho, pua, kucha au masikio lakini mtu hawezi kurithi lugha.

Lugha inamfikia kwa kuambukiza katika jamuiya-lugha anayokulia na kulelewa. Yatupasa tukumbuke kuwa, ingawa mwanadamu anazaliwa na ule uwezo(kitengo cha lugha) wa kujifunza lugha"language Acquisition Device"kama anavyoeleza mwanaisimu Naom Chomsky, lakini hazaliwi na lugha. Hii ndiyo sababu mwanandamu anaweza kujifunza lugha yeyeote ile na kwa wakati wowote maadamu yupo katika mazingira na hali ya kawaida na saidizi.

Lugha ya mwanandamu imepangwa katika viwango viwili ambavyo vinashirikiana na kukamilishana. Kiwango cha kwanza I kile kiwango cha utamkaji wa sauti au utoaji wa sauti kwa kutumia ala mbalimbali za matamshi. Sauti hizi zikisimama peke yake hazina maana yoyote, ni kama milio tu kama kupiga chafya, au kelele zinazotokana na kubururwa kwa meza kwenye sakafu au kelele za injini ya pikipiki.

Sauti hizi zinapounganishwa (kwa kufuata sheria, kanuni na taratibu za lugha husika) tunapata kiwango kingine cha pili cha maana. Sifa ya uwili inadhihirisha sifa ya uwekevu katika lugha ya mwanadamu kwani kwa kutumia sauti hizi chache mzungumza lugha anaweza kutunga na kutamka sentensi nyingi au tungo nyingi na zenye maana tofauti tofauti bila kikomo

Suala jingine la msingi ni kwamba, tunaposema kuwa lugha imegawika katika viwango viwili, kiwango cha sauti na kiwango cha maana haimaanishi kwamba binadamu anatumia viwango hivi kuipekepeke. Hata siku moja mwanadamu hasemi kwamba sasa naanza kutamka sauti za neno Fulani, halafu ndiyo niweke maana yake. La hasha!

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Binadamu hutamka kwa mara moja sauti pamoja na maana zikiwa zimebebana ndani kwa ndani(hutamka sauti pamwe na maana). Yaani, wakati anatamka sauti na kuziunganisha ndiyo wakati anaambatanisha na maana ndani yake. Hii ndiyo sifa au uwili katika lugha ya mwanadamu.

Uzalikaji katika lugha ya binadamu unajidhihirisha katika uwezo wa mwanandamu kubuni na kuunganisha maneno na miundo mbalimbali ya tungo bila kikomo. Mjuzi wa lugha anastahili kutunga na kuzielewa tungo mbalimbali ikiwa ni pamoja na zile ambazo hajawahi kuzisikia wala kuzitunga yeye mwenyewe.

Aidha, anapaswa kuelewa tungo zilizotungwa na watu wengine na kufahamu maana ya kisemantiki na ile kipragmatiki zinazodhihirika kadri anaposimbua jumbe zilizomo. Anapaswa kuzielewa tungo sahihi na zile zisizo sahihi. Hivyo uwezo huu unatofautiana na aina nyingine ya mawasiliano inayotumiwa nan a wanyama wengine, kwa mfano,"nyenje ni mnyama mwenye milio au ishara nne za kuchagua ili awasiliane, tumbili ana miito sita tu. Hivyo wanyama wote hawa wana idadi isiyobadilika ya milio na sauti au ishara na hawana uwezo wa kubuni namna nyingine ya kuwasiliana au kubuni milio mingine ya kuwezesha na kudumisha mawasiliano yao.

Maswali

a)kwa maneno kati ya 50- 60 fupisha aya tau za kuanza (al. 8. 1 mtiririko)
matayarisho

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Jibu

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b) kwa kutumia maneno 60-70 bainisha ujumbe ambao mwandishi anaibua katika ya tatu za mwisho (al. 7, 1 mtirirko) matayarisho

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Jibu

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SEHEMU YA TATU: SARUFI NA MATUMIZI YA LUGHA (ALAMA 40)

1. Bainisha sifa za sauti ifuatayo /o/ **(al. 2)**

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2. Kambishi ni nini? **(al. 1)**

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3. Onyesha matumizi ya kiambishi “ku” katika sentensi ifuatayo
Nitakupa fedha za mchango ili uende ukaniwakilishe **(al. 2)**

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4. Nyambua vitenzi vifuatavyo katika kauli zilizowekwa katika mabano
i) pa(kutendeka)

……
……

ii) ha(kutendewa) **(al. 2)**

……
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5. Tunga sentensi moja katika wakati ujao hali timilifu **(al. 1)**

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6. Onyesha aina za virai katika sentensi ifuatayo.
Mteja wangu atawasili kesho saa tatu **(al. 2)**

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7. Tumia kivumishi kionyeshi kisisitizi cha mbali kidogo pamoja na nomino katika ngeli ya li-ya kutunga sentensi **(al. 2)**

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8. Tunga sentensi moja yenye kishazi huru na kishazi tegemezi ukitumia'o' rejeshi tamati **(al. 2)**

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9. Changanua sente4nsi ifuatayo kwa jedwali/visanduku
Mkulima alilima kwa bidii lakini hakupata mazao mengi **(al. 4)**

10. Onyesha aina za shamirisho katika sentensi uliyopewa
Babu alisomewa barua na mjukumu wake

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11. Tunga sentensi mbili ili kuonyesha matumizi ya kiambishi ‘po’ cha
(i) Wakati

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(ii) Mahali

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12. Changanua kitenzi kufuatacho **(al. 4)**
Alimlisha.

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13. Kwa kutunga sentensi eleza matumiz mawili tofauti ya kiakifishi **(al. 2)**
Parandesi

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14. Eleza maana ya sentensi ya masharti **(al. 1)**
Tunga sentensi ya masharti **(al. 2)**

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15. Andika visawe vya maneno yaliyopigiwa mstari
Daktari alipokuwa akimtibu alishikwa na kisulisuli **(al. 2)**

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16. Bainisha kihisishi na kihusishi katika sentensi
Naam! Ameingia kabla ya mwalimu kufika **(al. 2)**

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17. Andika sentensi ifuatayo kwa msemo wa taarifa
"nitaweza kuondoka kwangu kesho asubuhi."mwalimu akasema **(al. 3)**

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18. Bainisha kiima na chagizo katika sentensi
Mwenyewe alimpenda kwa dhati **(al. 2)**

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SEHEMU YA NNE: ISIMU JAMII (ALAMA 10)

1. Taja dhana au nadharia zinazohusiana na chimbuko la lugha ya Kiswahili **(al. 3)**

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2. Eleza maana ya istalahi zifutatazo kama zinavyotumika katika isimujamii
i) misimu

ii) lafudhi

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iii) pijini **(al. 3)**

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3. Taja sifa nne za sajili ya maabadini **(al. 4)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

JINA: ……

SHULE: ……..……

NAMABARI YA USAJILI: …….. SAHIHI: ……. TAREHE: ……

102/3 KISWAHILI Karatasi ya 3

FASIHI

Muda: Saa 2 ½

MAAGIZO

*Jibu maswali manne **pekee**.*

*Swali la **kwanza** ni la **lazima***

Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki yaani; Tamthilia, Riwaya, Hadithi fupi, na Ushairi.

*Usijibu maswali **mawili** kutoka **sehemu moja**.*

Majibu yote yaandikwe kwa lugha ya Kiswahili

Kwa Matumizi ya Mtahini Pekee

Swali	Upeo	Alama
1	20	
	20	
	20	
	20	
	Jumla	

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SEHEMU A: FASIHI SIMULIZI
1.LAZIMA Alama 20

(a) Taja hatua tano za kufanya utafiti **(alama 5)**

(b) Eleza kwa hoja tano, umuhimu wa kushiriki kama njia ya kukusanya data **(alama 5)**

(c) Kikundi cha Tamasha Bora kiliwasilisha maigizo katika ukumbi wa shule yenu. Fafanua kwa hoja tano sababu za uwasilishi wao kufanikiwa. **(alama 5)**

(d) Eleza msamiati ufuatao **(alama 5)**

(i) ulumbi

(ii) mbazi

(iii) lakabu

(iv) matambiko

v) rara nafsi

SEHEMU B: TAMTHILIA
KIGOGO PAULINE KEA

Jibu swali la 2 au la 3

2.'Wewe ni popo: Kwa ndege hupo na kwa wanyama hupo.'

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

b. Taja na ueleze tamathali za usemi katika dondoo hili. (al 4)

c. Eleza sifa sita za msemaji wa maneno haya. (al 6)

d. Huku ukitoa mifano sita mwafaka, fafanua maudhui ya usaliti kama yalivyojitokeza katika tamthilia hii. (al 6)

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Au

3.a. Kwa kutolea hoja kumi, onyesha matumizi ya kinaya ili kufanikisha maudhui mbalimbali katika tamthilia ya Kigogo . **(al 10)**

b. Jumuiya ya Sagamoyo inakumbwa na udhalimu chungu nzima. Thibitisha kwa hoja kumi. **(al 10)**

SEHEMU C: RIWAYA

ASSUMPTA MATEI: *CHOZI LA HERI*

Jibu swali la 4 au la 5

4.Eleza ufaafu wa anwani "Chozi la Heri" **(al20)**

AU

5."Kuukata mkono niliostahili kuubusu yalinifika ya kunifika"

a) Eleza muktadha wa dondoo hili **(Alama 4)**
b) Eleza tamathali ya usemi inayoojitokeza katika dondoo hili. **(alama.2)**
c) Msiba huandamwa na msiba mwingine. Thibitisha kauli hii ukirejelea msemaji wa maneno kwenye dondoo **(alama 4)**
d) Eleza jinsi haki za watoto zimekiukwa katika riwaya ya Chozi la Heri. **(alama 10)**

SEHEMU D: HADITHI FUPI
Chokocho na Kayanda (Wah) *Tumbo Lisiloshiba na Hadithi Nyingine*

Jibu swali la 6 au la 7

Tulipokutana Tena

6. Ingawa mimi nilikuwa kitoto cha miaka mitano, nilihisi siku ile ilikuwa mbaya kwangu.

(a) Fafanua muktadha wa dondoo hili**.** **(alama 4)**

(b) Eleza toni ya dondoo hili. **(alama 2)**

(c) Eleza sifa sita za mzungumzaji wa kauli hii. **(alama 6)**

(d) Fafanua umuhimu wa usimulizi wa mzungumzaji katika kuijenga hadithi ya Tulipokutana Tena. **(alama 8)**

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Au

7. Huku ukirejelea hadithi ya **Tumbo lisiloshiba** na **Shibe inatumaliza**, Fafanua madhui yaliyoonyeshwa kwenye mabano;

Tumbo lisiloshiba (ukiukaji wa haki.) **(alama 10)**

Shibe inatumaliza (ubadhirifu**)** **(alama 10)**

SEHEMU E: USHAIRI

8. **Soma shairi lifuatalo kisha ujibu maswali yanayofuata.**

Binadamu hatosheki, ni kiumbe chenye zani, kweli mja hapendeki
Kwa kweli haaminiki, hila ameficha ndani, la wazi ni unafiki
Ukweliwe haafiki, njama zake zi moyoni, usimwone ni rafiki,
Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka.

Wenginea watakuua, wakiona una pesa, hata zikiwa kidogo
Hizo kwao ni maua, hupupiwa zikatesa, wakizifuata nyago
Hadi kwenye wako au, pasipo hata kupesa, walakukupa kisogo
Mtu kuwa tamaa, akitaka kiso chake, ni hatari kama nyoka.

Pindi kinunua kitu, hafurahi shaitani, bali tajawa chukizo
Mtu kiwa mtukutu, tanuna mtimani, kwato ako tekelezo
Tamko lake ‘subutu’, kuondoa tumaini, na kukuliza wazo
Mtu kuwa tamaa, akitaka kiso chake, ni hatari kama nyoka.

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Aliye na taraghani, taabu kuishi naye, kazi yake kujidai

Takusema faraghani, asosema kiwa naye, kupendeza maadui

Hana faida nyumbani, ni mtu akichimbaye, mradi usitumai

Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka.

Kwa hakika ni baka, kumkirimu mchawi, aliyejaa uchoyo

Bahati ina hadaa, kukupa alo sodawi, aibarili rowoyo

Mipangayo kwake jaa, na nia ya ustawi, huwiza kuvunja kaniyo

Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka.

Ninacho changu kilio, ninalia sanasana, kinyesi nimetupiwa

Ningetoa azinio, lakini uwezo sina, kwa mazito kuambiwa

Ama nitimue mbio, fuadinininanena, akilini nazuiwa

Mtu kuwa na tamaa, akitaka kiso chake, ni hatari kama nyoka.

Maswali

a) Jadili dhamira ya shairi hili. **(Alama 1)**

b) Eleza sababu za mtungaji kulalamika katika shairi hili. **(Alama 3)**

c) Eleza umbo la shairi hili. **(Alama 4)**

d) Andika ubeti wa tatu katika lugha nathari/ tutumbi. **(Alama 4)**

e) Taja na utoe mifano ya aina nne za tamathali za usemi zilizotumika katika shairi hili **(Alama 4)**

f) Toa mifano miwili tofauti ya uhuru wa kishairi katika shairi hili . **(Alamfa 2)**

g) Eleza maana ya msamiati ufuatao kama ulivyotumika katika shairi**.** **(Alama 2)**

i) Zani

ii) Faraghani

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

121/1
MATHEMATICS
PAPER 1
FORM 4
TIME: 2 $\frac{1}{2}$ HOURS

END OF TERM II EXAMINATION
QUESTIONS

INSTRUCTIONS TO CANDIDATES

1.Write your name, admission number and school in the spaces provided.
2.This paper consists of two sections; Section I and Section II.
3.Answer ALL the questions in Section I and ONLY FIVE questions in Section II.
4.All answers and working must be written on the question paper in the spaces provided below each question.
5.Show all the steps in your calculations, giving your answer at each stage in the space provided below each question.
6.Marks may be given for correct working even if the answer is wrong.
7.Non programmable silent electronic calculators and KNEC mathematical tables may be used except where stated otherwise.
8.Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.

FOR EXAMINORS USE ONLY

SECTION I

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

SECTION II

Question	17	18	19	20	21	22	23	24	TOTAL
Marks									

Grand Total

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SECTION I (50 Marks)

1. Use square roots, reciprocal and square root tables to evaluate to 4 significant figures the expression; **(4 marks)**

$$(0.06458)^{\frac{1}{2}} + \left(\frac{2}{0.4327}\right)^{2}$$

2. Find the equation of the perpendicular bisector of line AB where A is (3, 9) and B (7, 5) giving your answer in the form $ax + by + c = 0$**.** **(3 marks)**

3. It takes 40 road construction workers 8 days working 10 hours a day to complete a section of a road. How many days would 60 road construction workers working 8 hours a day take to complete the same section of the road working at the same rate**?** **(3 marks)**

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4.A solid cylinder with radius 7 cm and height 5 cm is melted down and recast into a spherical ball. Calculate to 2 decimal places the radius of the ball**.** **(3 marks)**

5.The currency exchange rates of a given bank in Kenya are as follows;

Currency	**Buying**	**Selling**
1 Sterling pound	**135.50**	**135.97**
1 US dollar	**72.23**	**72.65**

A tourist arrived in Kenya with 5 000 US dollars which he converted to Kenya shillings. He spent Kshs. 214 500 and converted the remaining to sterling pounds. How many pounds did he receive? **(3 marks)**

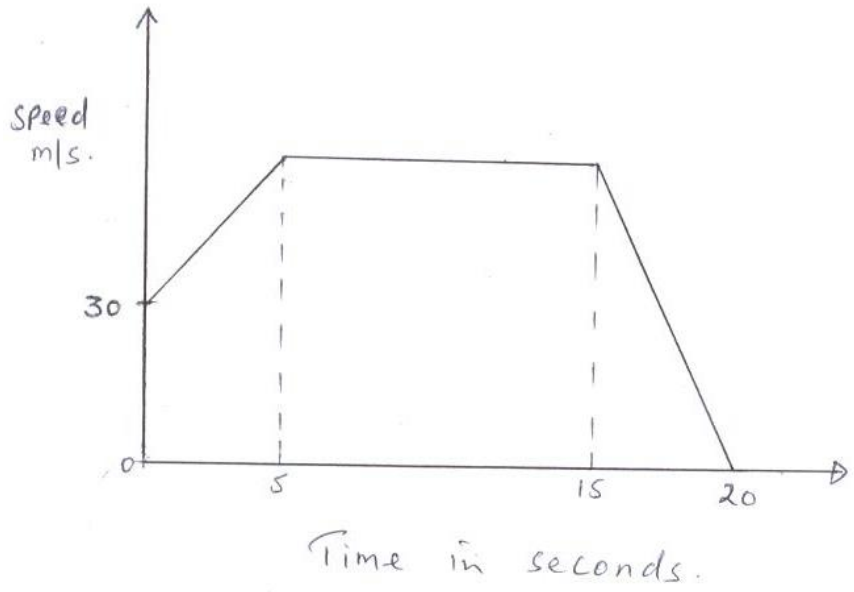
6.Find the value of n in $4^{n+1} + 2^{2n+1} = 384$. **(3 marks)**

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7.The exterior angle of a regular polygon is $(x-50)^0$ and the interior angle is $(2x+20)^0$. Find the number of sides of the polygon. **(3 marks)**

8.Find x if $\cos(3x-30^0) = \sin(7x+50^0)$. **(2 marks)**

9.The figure below shows the motion of a particle in 20 seconds. The particle starts off at a speed of 30 m/s and accelerates at 4 m/s^2 for 5 seconds. Calculate the total distance covered by the particle in 20 seconds.
(4 marks)



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10. Construct triangle PQR such that PQ = 7 cm, QR = 5 cm and $\angle RPQ = 30^0$. Construct the locus L_1 of all points equidistant from P and Q to meet the locus L_2 of points equidistant from Q and R at M. Measure PM. **(4 marks)**

11. The surface areas of two cylindrical water tanks are 50 m^2 and 162 m^2 respectively. Given that the volume of water in the second tank is 36 450 cm^3, find the volume of water in the first tank if it's half full. **(4 marks)**

12. Solve the inequalities below and represent the solutions on a single number line. **(3 marks)**

$1 - 2x < 5, \quad 5 - 3x \geq -10.$

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13. From the roof of a house, a boy can see an avocado tree which is 20 m away from the house. He measures the angle of elevation of the top of the tree as 21^0 and the angle of depression of the bottom of the tree as 31^0. Find the height of the avocado tree**.** **(3 marks)**

14. Simplify **(2 marks)**

$$\sqrt[2]{\frac{12\,x^4y^{-1}z^5}{3x^{-2}y^{-3}z^3}}$$

15. The position vector of **p** and **q** is $3i - 2j + k$ and $2i + j - 3k$ respectively. Determine the column vector PQ and hence calculate its length to 2 decimal places. **(2 marks)**

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16. The table below shows the height of 50 bean plants, six weeks after planting.

Height (h) in cm	Cumulative frequency
$h \leq 4$	4
$h \leq 8$	15
$h \leq 12$	31
$h \leq 16$	44
$h \leq 20$	50

Estimate the mean height of the seedlings**.** **(4 marks)**

SECTION II (50 Marks)

Answer any five questions in this section in the spaces provided.

17. A trader sold an article at Ksh. 4 800 after allowing a customer a 12% discount on the marked price of the article. In so doing he made a profit of 45%.

a) Calculate to 2 decimal places;

i. The marked price of the item**.** **(3 marks)**

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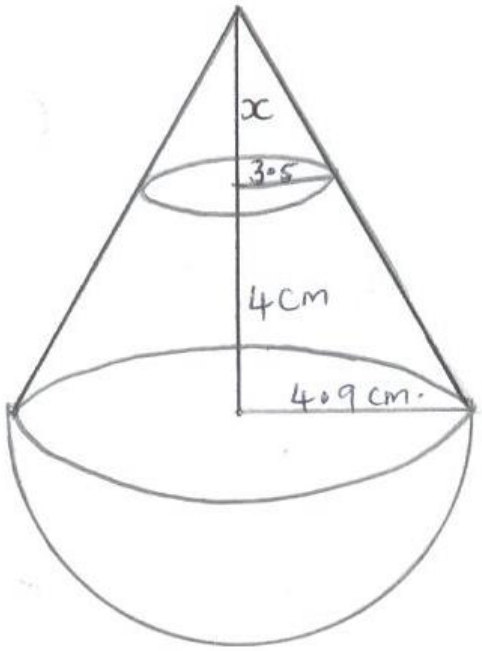
ii. Price at which the trader had bought the article**.** **(2 marks)**

b) If the trader had sold the same article without giving a discount, calculate the percentage profit he would have made**.** **(3 marks)**

c) To clear his stock, the trader decided to sell all the remaining articles at a loss of 12.5%, calculate the price at which he sold each article**.** **(2 marks)**

18. The diagram below represents a solid consisting of a hemispherical bottom and a conical frustum at the top.

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a) Determine the value of x and hence the height of the big cone. **(2 marks)**

b) Calculate the surface area of the solid. **(4 marks)**

c) Calculate the volume of the solid**.** **(4 marks)**

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19. (a) Find the equation of a straight line L_1 that passes through the points P $(-6, -3)$ and Q $(1, 3)$ in the form $ay + bx = c$ where a, b and c are constants**.** **(2 marks)**

(b) A second line L_2 is parallel to L_1 and passes through $(2, -3)$. Find the equation of L_2 in the form $y = mx + c$**.** **(2 marks)**

(c) A third line L_3 passes through $(2, 3)$ and is perpendicular to L_1. Find the equation of L_3 in the form $ay + bx = c$. **(2 marks)**

(d) Use matrix method to find the coordinates of R the point where L_1 and L_3 intersect.
(4 marks)

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20. A factory blends three types of juice in the ratios $A:B = 3:4$ and $B:C = 1:2$

a) Determine;

i. The ratio $A:B:\boldsymbol{C}$ **(1 mark)**

ii. The amount of type A juice in a 20 litre mixture. **(2 marks)**

b) The cost of producing one litre of A is Ksh. 80, one litre of B is Ksh. 84 and one litre of C is Ksh. 90.

i. Find the cost of producing one litre of the mixture. **(2 marks)**

ii. Calculate the selling price of one litre of the mixture if the factory makes a profit of 25%.
(2 marks)

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c) The factory uses types of machines P and Q to blend the juices. Machine P takes 7 hours to blend 14 000 litres and Q takes 5 hours to blend 12 000 litres. Determine the time it would take the factory to blend 550 000 litres**.** **(3 marks)**

21. A motorist is to follow the route ABCD. B is 250 km from A on a bearing $N75^0E$ from A. C is on a bearing of $S75^0E$ from A and 275 km from B. D is 300 km on a bearing of $S80^0E$ from B. using a scale 1 cm to represent 50 km;

a) Show the relative position of ABCD**.** **(4 marks)**

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b) Determine;

i. The distance of A from C**.** **(2 marks)**

ii. The bearing of B from C**.** **(1 mark)**

iii. The distance of A from D**.** **(2 marks)**

iv. The compass bearing of C from D. **(1 mark)**

22. Two towns P and Q are 550 km apart. A bus starts from town Q and travels towards P at 8: 45 a.m. at an average speed of 80 km/hr. A car starts from P towards Q at 10: 00 a.m. at an average speed of 100 km/hr. Calculate:

a.The distance covered by the bus before the car starts its journey. **(2 marks)**

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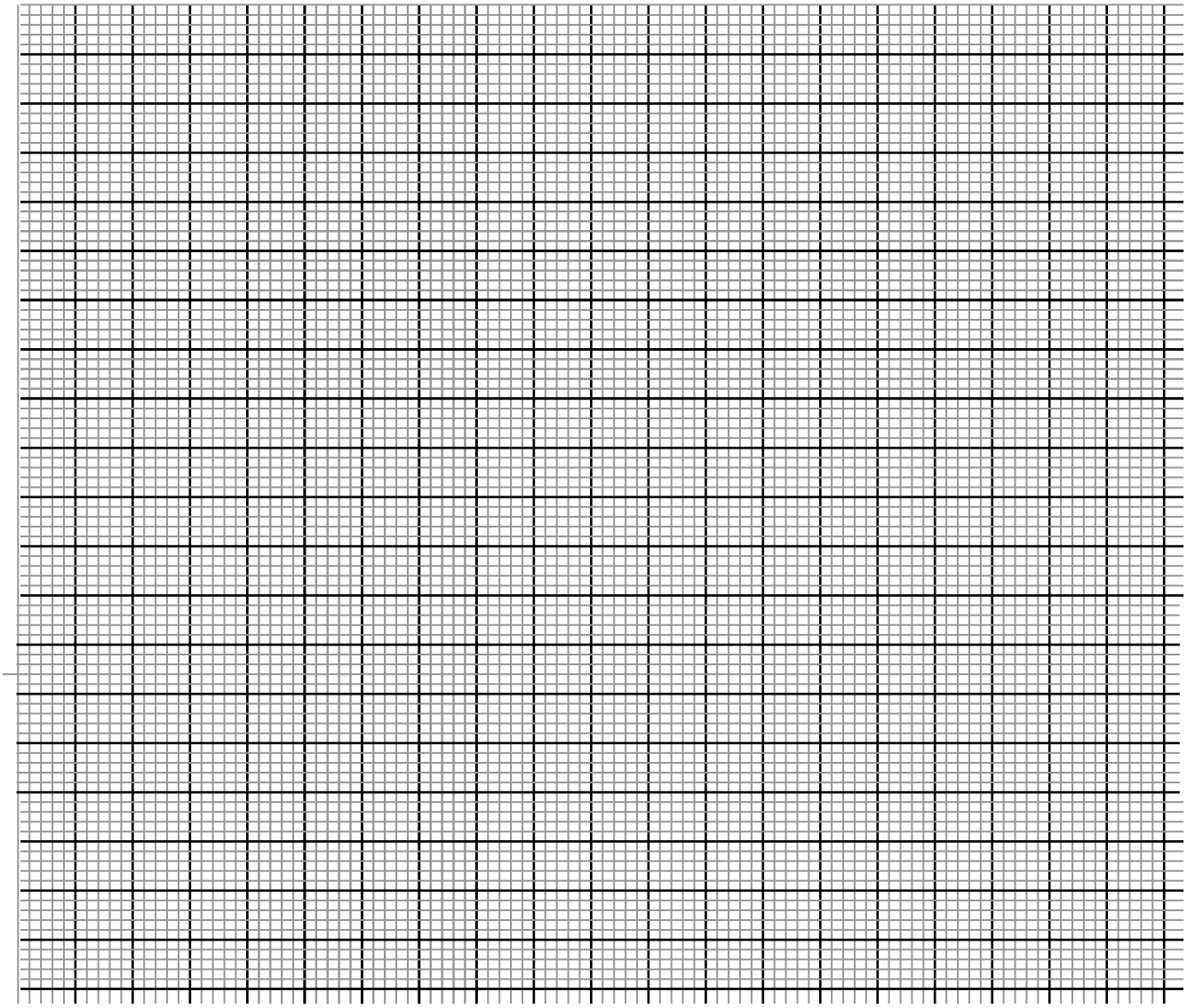
b. How far from Q the vehicles met. **(3 marks)**

c. The time the two vehicles met**.** **(2 marks)**

d. The time the car arrived at town Q. **(3 marks)**

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23. Triangle ABC has vertices A (1, 2) B (2, 3) and C (4, 1) while triangle A′B′C′ has vertices A′ (1, -2) B′ (2, -3) and C′ (4, -1).



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a. Draw triangle ABC and $A'B'C'$ on the same grid. **(2 marks)**

b. Describe fully a single transformation that maps ABC onto triangle $A'B'C'$ **(2 marks)**

c. On the same grid, draw triangle $A''B''C''$ the image of ABC under a reflection in the line $y = -x$. **(2 marks)**

d. Draw triangle $A'''B'''C'''$ such that it can be mapped onto triangle ABC by a negative quarter turn about the origin. **(2 marks)**

e. Find the matrix of transformation that maps triangle ABC onto triangle $A'''B'''C'''$. **(2 marks)**

24. An investment group decided to raise Shs. 960 000 to buy a piece of land costing Kshs. 80 000 per hectare. Before they paid, four of them pulled out and those that remained were supposed to pay an additional Kshs. 40 000.

a. If the initial number of members was x, write down;

i. An expression of what each was to contribute originally. **(1 mark)**

ii. An expression of what each of remaining members contributed. **(1 mark)**

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b.Calculate the number of members who were initially in the group using the expression in (a) above **(5 marks)**

c.If the land was sub divided equally, calculate what size each member got. (3 marks)

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

MATHEMATICS
PAPER 2

FORM 4

TIME: 2 $\frac{1}{2}$ HOURS

END OF TERM II EXAMINATION QUESTIONS

INSTRUCTIONS TO CANDIDATES

a) Write your name, admission number and school in the spaces provided.
b) This paper consists of two sections; Section I and Section II.
c) Answer ALL the questions in Section I and ONLY FIVE questions in Section II.
d) All answers and working must be written on the question paper in the spaces provided below each question.
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FOR EXAMINORS USE ONLY
SECTION I

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

SECTION II

Question	17	18	19	20	21	22	23	24	TOTAL
Marks									

Grand Total

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SECTION I (50 Marks)

Answer all questions in this section in the spaces provided.

1.Use logarithms to evaluate**;** **(4 marks)**

$$\left(\frac{6.79 \times 0.3911}{\log 5}\right)^{\frac{3}{4}}$$

2.The equation of a line is $-\frac{3}{5}x + 3y = 6$. Find the

a) Gradient of the line**.** **(1 mark)**

b) Equation of a line passing through point $(-1, 2)$ and perpendicular to the given line.
(3 marks)

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3.A shirt whose marked price is sh. 800 is sold to a customer after allowing him a discount of 13%. If the trader makes a profit of 20%, find how much the trader paid for the shirt. **(3 marks)**

4.Simplify $\frac{\sqrt{11}}{\sqrt{11}-\sqrt{7}}$ **(2 marks)**

5.The length and width of a rectangular signboard are $(3x + 12)\ cm$ and $(x - 4)cm$ respectively. If the diagonal of the signboard is 200 cm, determine its area. **(4 marks)**

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6.Find the value of x given that**;** **(3 marks)**

$\log(x-1)+2=\log(3x+2)+\log 25$

7.Use the expansion of $(x-y)^5$ to evaluate $(9.8)^5$ correct to 4 d.p**.** **(3 marks)**

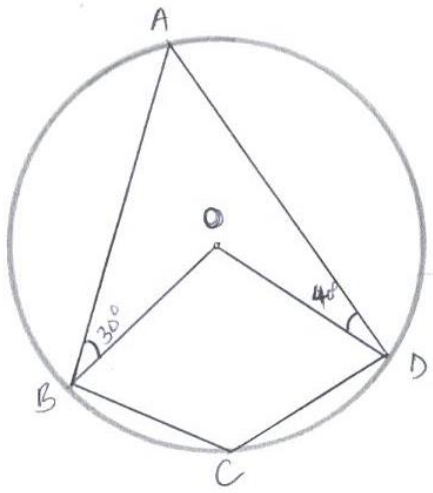
8.Evaluate $\int_2^4 (x^2+2x-15)\,dx$ **(3 marks)**

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9.Make y the subject of formula: **(3 marks)**

$$P = \frac{xy}{x - y}$$

10. In the figure below, ABCD is a cyclic quadrilateral. Point O is the centre of the circle. $\angle ABO = 30°$ and $\angle ADO = 40°$.



Calculate the size of angle BCD. (**2 marks)**

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11. Find the number of terms of the series $2 + 6 + 10 + 14 + 18$ ... that will give a sum of 800. **(2 marks)**

12. A bag contains 10 balls of which 3 are red, 5 are white and 2 are green. Another bag contains 12 balls of which 4 are red, 3 are white and 5 are green. A bag is chosen at random and then a ball chosen at random from the bag. Find the probability that the bell chosen is red**.** **(3 marks)**

13. The point $(5, 2)$ undergoes the transformation $\begin{bmatrix} 3 & 2 \\ -1 & 0 \end{bmatrix}$ followed by a translation $\binom{-6}{11}$. Determine the coordinates of the image**.** **(3 marks)**

14. The latitude and the longitude of two stations A and B are $(47°N, 25°E)$ and $(47°N, 70°E)$. Calculate the distance in nautical miles between A and B along latitude 47^0 N. **(3 marks)**

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15. Using a ruler and a pair of compass only;

a) Construct a parallelogram PQRS in which PQ = 6 cm, and QR = 4 cm and $\angle SPQ = 75°$ **(3 marks)**

b) Determine the perpendicular distance between PQ and SR. **(1 mark)**

16. The mass of a mixture A of beans and maize is 72 kg. The ratio of beans to maize is 3:5 respectively.

a) Find the mass of maize in the mixture. **(1 mark)**

b) A second mixture B of beans and maize of mass 98 kg is mixed with A. The final ratio of beans to maize is 8:9 respectively. Find the ratio of beans to maize in B. **(3 marks)**

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SECTION II (50 Marks)

Answer any five questions in the spaces provided in this section

17. Given the simultaneous equations

$5x + y = 19$

$-x + 3y = 9$

a) Write the simultaneous equations in matrix form. Hence solve the simultaneous equations. **(6 marks)**

b) Find the distance of the point of the intersection of a line $5x + y = 19$ and $-x + 3y = 9$ from the point $(11, -2)$ **(4 marks)**

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18. A particle was moving along a straight line. The acceleration of the particle after t seconds was given by $a = (9 - 3t)ms^{-2}$. The initial velocity of the particle was 7 m/s. Find:

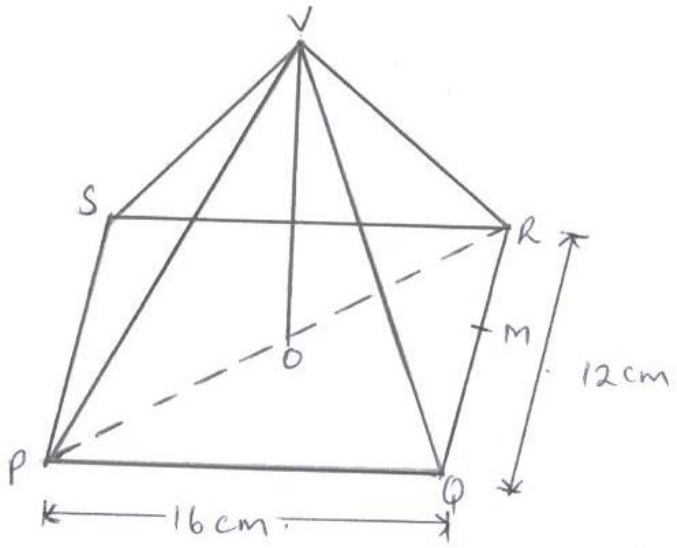
a) The velocity (V) of the particle at any given time (t). **(4 marks)**

b) The maximum velocity of the particle**.** **(3 marks)**

c) The distance covered by the particle by the time it attained maximum velocity**.** **(3 marks)**

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19. The figure below represents a right pyramid with vertex V and a rectangular base PQRS. $VP = VQ = VR = VS = 18\ cm$ PQ = 16 cm and QR = 12 cm. M and O are the mid points of QR and PR respectively.



Find;

a) The length of the projection of line VP on the plane PQRS. **(3 marks)**

b) The size of the angle between line VP and the plane PQRS. **(3 marks)**

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c) The size of the angle between the planes VQR and PQRS. **(4 marks)**

20. Two towns A and B lie on the same latitude in the northern hemisphere. When it is 8:00 a.m. at A, the time at B is 11:00 a.m.

a) Given that the longitude of A is $15°$ E, find the longitude of B**.** **(3 marks)**

b) A plane leaves A for B and takes $3\frac{1}{2}$ hours to arrive at B travelling along a parallel of latitude at 850 km/h. Find,

i. The radius of the circle of latitude of towns A and B**.** **(4 marks)**

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ii. The latitude of the two towns**.** **(3 marks)**

21. The gradient function of a curve is given by the expression $2x + 1$. If the curve passes through the point $(-4, 6)$,

a) Find;

i. The equation of the curve. **(3 marks)**

ii. The values of x at which the curve cuts the x- axis**.** **(3 marks)**

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b) Determine the area enclosed by the curve and the x- axis. **(4 marks)**

22. The transformation A given by the matrix $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$ maps $\begin{pmatrix} 17 \\ 0 \end{pmatrix}$ to $\begin{pmatrix} 15 \\ 8 \end{pmatrix}$ and $\begin{pmatrix} 0 \\ 17 \end{pmatrix}$ to $\begin{pmatrix} -8 \\ 15 \end{pmatrix}$

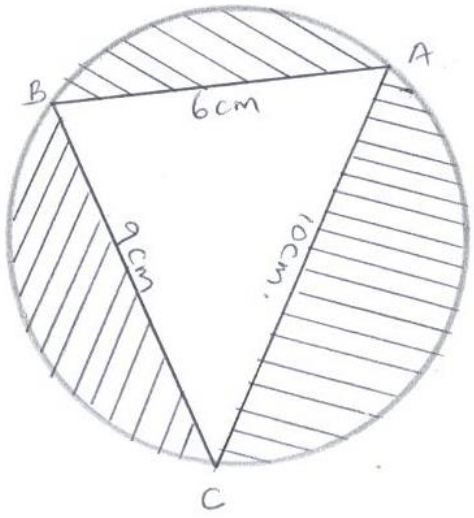
a) Determine the matrix A giving a, b, c and d as fractions**.** **(4 marks)**

b) Given that A represent a rotation through the origin, determine the angle of rotation. **(3 marks)**

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c) S is a rotation through 180^0 about the point (2, 3). Determine the image of (1, 0) under followed by A. **(3 marks)**

23. The figure below shows a triangle ABC inscribed in a circle (not drawn to scale.) AB = 6 cm, BC = 9 cm and AC = 10 cm.



Calculate;

a) The radius of the circle**.** **(6 marks)**

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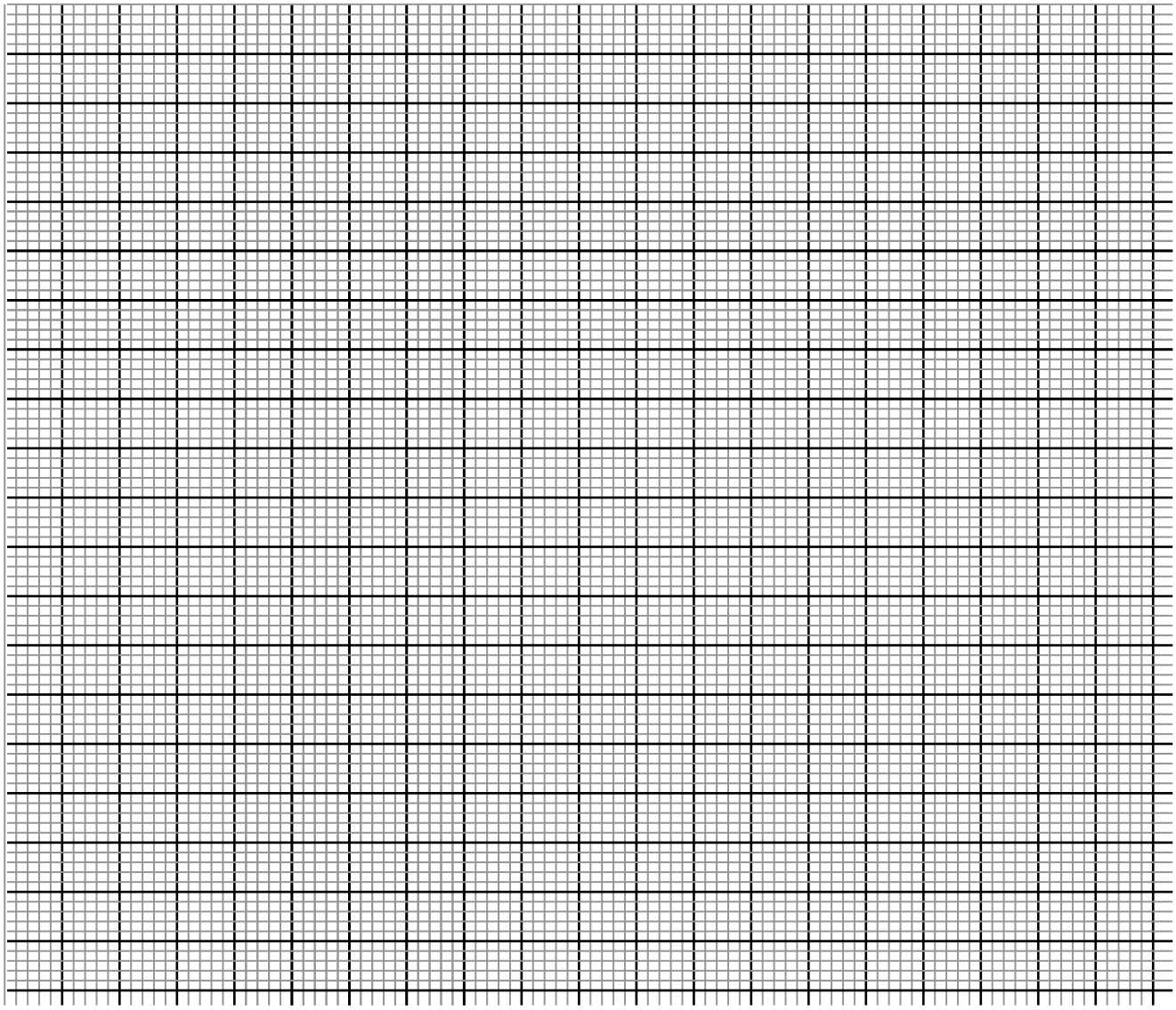
b) The area of the shaded parts**.** **(4 marks)**

24. In an experiment involving two variables t and r, the following results were obtained.

t	1.0	1.5	2.0	2.5	3.0	3.5
r	1.50	1.45	1.30	1.25	1.05	1.00

a) On the grid provided, draw the line of best fit for the data. **(4 marks)**

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i. The values of **a** and **k**. **(3 marks)**

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ii. The equation of the line of best fit. **(1 mark)**

iii. The value of t when $r = 0$**.** **(2 marks)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

END OF TERM II EXAMINATION
QUESTION PAPER

232/1

PHYSICS

PAPER 1

Instructions to candidates

i) Write your name, admission number and other particulars in the spaces provided ;
ii) Answer all questions in section A and B in the spaces provided after each question;
iii) All working for numerical questions must be clearly shown;
iv) Non programmable silent electronic calculators may be used
v) This paper consists of 8 printed pages, check and ascertain all pages are printed
vi) The paper is out of 80 marks;

Constants

You may use the following constants where necessary

i) Earth's gravitational strength = $10Nkg^{-1}$;
ii) Density of water = $1,000kgm^{-3}$;
iii) Density of mercury = $13,600kgm^{-3}$
iv) Atmospheric pressure = 76cmHg
v) Speed of Sound is $330ms^{-1}$
vi) Refractive index of glass = $^3/_2$
vii) Refractive index of water = 4/3

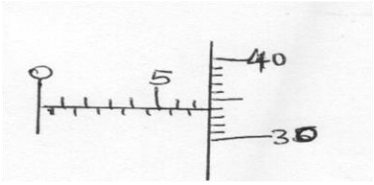
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Section	Question	Maximum Score	Candidate's Score
A	1-11	25	
	12	9	
	13	14	
	14	11	
	15	13	
	16	8	
Total Score		80	

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SECTION A (25MKS)

1.Figure I shows a reading of a micrometer screw gauge when a metallic spherical ball of mass 31.2g is measured in it.



If the micrometer screw gauge had a zero error of -0.01; what is

a) The diameter of the sphere **(2mks)**

b) The density of the ball **(2mks)**

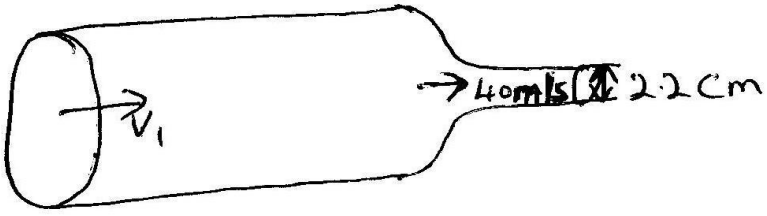
2.Name one force that may determine the meniscus of liquid in a glass (**1mk)**

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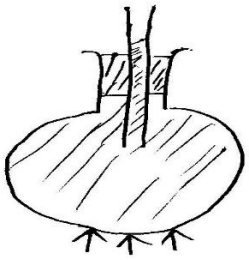
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3.A water pipe of diameter 8.8cm is connected to another pipe of diameter 2.2cm .the speed of the water in the smaller pipe is 40m/s. What is the speed, V_1 of the water in the larger pipe?



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4.The figure below shows a volumetric flask fitted with a glass tube filled with coloured water which was heated to a temperature of 80^0c



a) What was observed when the flame was withdrawn and left for some time? **(1mk)**

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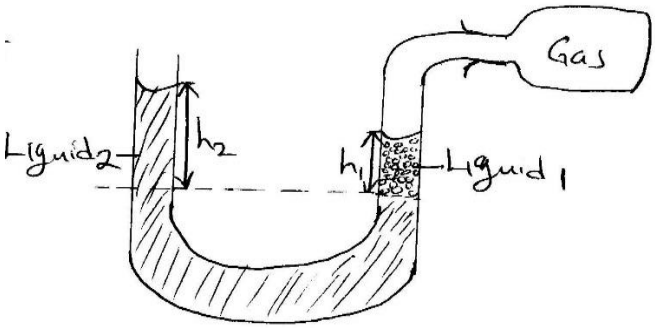
b) Explain the observation made in 4(a) **(1mk)**

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The figure below shows a u-tube connected to a gas supply containing liquids L_1 and L_2 of densities $1.8g/cm^3$ and $0.8g/cm^3$ respectively in equilibrium.



Given that h_1=8cm and h_2=12cm and the atmospheric pressure is $1.02x10^5$pa. Determine the gas pressure.
(3mks)

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5.A cart of mass 35kg is pushed along a horizontal path by a horizontal force of 14N and moves with a constant velocity. The force is then increased to 21N .Determine:

a) The resistance to the motion of the cart. **(1mk)**

b) The acceleration of the cart. **(2mks)**

6.State the unit for spring constant. **(1mk)**

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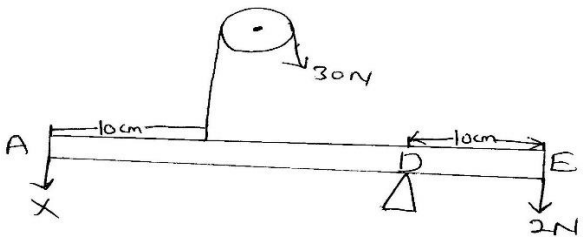
7.(a) How does the position of C.O.G affects the stability of a body? **(1mk)**

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(b)The figure below shows a uniform rod AE which is 40cm long .It has a mass of 2kg and pivoted at D. If 2Nis acting at a point E and 30N force is passed through a frictionless pulley, find the value of x acting at end A. **(3mks)**



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8.A turntable of radius 16cm is rotating at 960 revolutions per minute .Determine the angular speed of the turntable. **(2mks)**

9.Distinguish between solid and liquid states of matter in terms of intermolecular forces. **(1mk)**

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10. State two environmental hazards that may occur when oil spills over a large surface area of the sea.**(2mks)**

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SECTION B: 55MKS

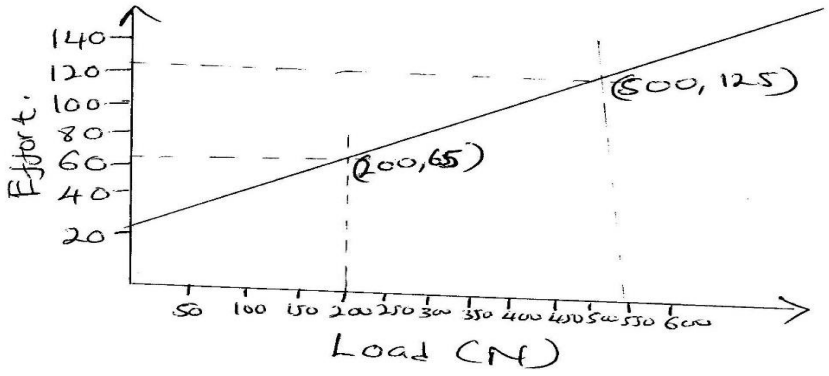
11. (a)Define mechanical advantage of a machine. **(1mk)**

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(b)In an experiment to investigate the performance of a pulley system with a velocity ratio of 5 the following graph was plotted.



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From the graph find

i. The effort when the load s 450N **(1mk)**

ii. M.A when the load is 450N **(2mks)**

iii. The efficiency corresponding to the load of 450N **(2mks)**

(C) Otieno uses the system in (b) above to exit a body of mass 50kg.It rises with a velocity of 0.15m/.Determine the power developed by Otieno. **(3mks)**

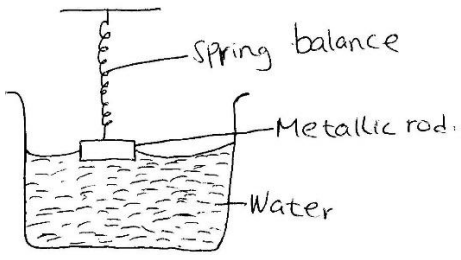
12. (a) State the law of floatation **(1mk)**

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(b) The figure below shows metallic rod of length 10cm and uniform cross section area $4cm^2$ suspended from a spring balance with 7.5cm of its length immersed in water. The density of metallic rod is $1.5g/cm^3$ (Take density of water $=1.05g/cm^3$)



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Determine

i. The mass of the rod **(2mks)**

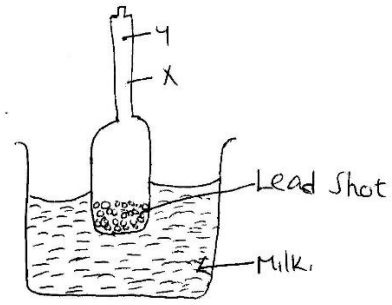
ii. The up thrust acting on the rod **(2mks)**

iii. The reading of the spring balance **(2mks)**

iv. The reading of the spring balance when the rod is wholly immersed in water **(3mks)**

(c)The figure below shows a special type of a hydrometer for testing relative density of milk.

The range of the readings of the hydrometer is 1.015 - 1.045



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i. State the purpose of lead shot **(1mk)**

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ii. How would the hydrometer be made more sensitive **(1mk)**

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iii. Indicate appropriately on the diagram the given range of the readings of the hydrometer that correspond to the points marked X and Y. **(1mk)**

iv. The milk is then mixed with another liquid whose density is higher. State what is observed on the hydrometer. **(1mk)**

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13. (a) What is meant by specific latent heat of vaporization of a substance? **(1mk)**

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(b)In an experiment to determine the specific latent heat of vaporization of water steam at 100^0c was passed into water contained in a well lagged copper calorimeter .The following measurements were made.

- Mass of calorimeter=60g
- Mass of water and calorimeter=145g
- Final mass of calorimeter +water +condensed steam =156g
- Final temperature of the mixture = 48^0c

Take specific heat capacity f water =$420Jkg^{-1}k^{-1}$

Specific heat capacity of copper=$390Jkg^{-1}k^{-1}$

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Determine the

i) Mass of condensed steam **(1mk)**

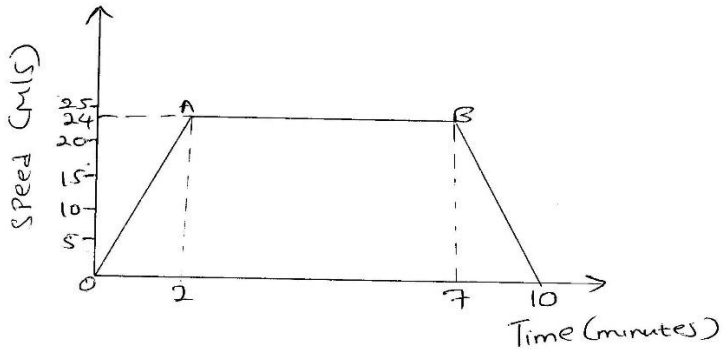
ii) The gained by the calorimeter and water if the initial temperature of the calorimeter and water is 20^0c. **(3mks)**

iii) Given that Lv is the specific latent heat of vaporization of steam, write a simplified expression for the heat given out by steam. **(2mks)**

iv) Determine the value of Lv above **2mks)**

v) State the assumption made in the experiment above **(1mk)**

14. (a)The speed of a train hauled by a locomotive varies as shown below as it travels between two stations along a straight horizontal track.



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Use the graph to determine

i) The maximum speed of the train **(1mk)**

ii) The acceleration of the train during the first 2min f the journey**(2mks)**

iii) Time during which the train is slowing down. **(1mk)**

iv) The total distance between the two stations **(3mks)**

v) The average speed of the train **(2mks)**

(b)A string of negligible mass has a bucket tied at the end. The string is 60cm long and the bucket has a mass of 45g. The bucket is swung horizontally making 6 revolutions per second.

Calculate

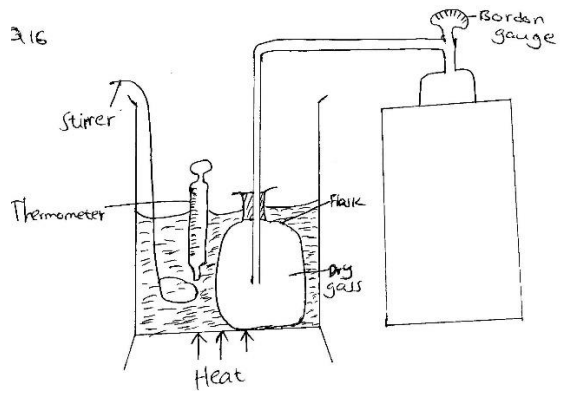
i) The angular velocity **(2mks)**

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ii) The angular acceleration **(2mks)**

iii) The tension on the string. **(2mks)**

15. (a)The diagram below shows asset up that a student used to investigate pressure law of a gas.



i) State the measurements that should be taken in the experiment **(2mks)**

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ii) Explain how the measurement in (i) above may be used to verify the pressure law. **(1mk)**

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(b)Name one limitation of the gas laws. **(1mk)**

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(c)Oxygen gas of volume of 2500cm^3 at 10^0c and pressure of 3N/m^2 is compressed until its volume is 500cm^3 at a pressure of 6N/m^2 .Determine the new pressure of the gas after this compression in Kelvin. **(2mks)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

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SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

232/2
PHYSICS
PAPER 2
2 HOURS

END OF TERM II EXAMINATION
QUESTION PAPER

i) Write your name, admission number and other particulars in the spaces provided ;
ii) Answer all questions in section A and B in the spaces provided after each question;
iii) All working for numerical questions must be clearly shown;
iv) Non programmable silent electronic calculators may be used
v) This paper consists of 7 printed pages, check and ascertain all pages are printed
vi) The paper is out of 80 marks;

Constants

You may use the following constants where necessary

viii) Speed of Sound is $330ms^{-1}$
ix) Refractive index of glass = $^3/_2$
x) Refractive index of water = 4/3

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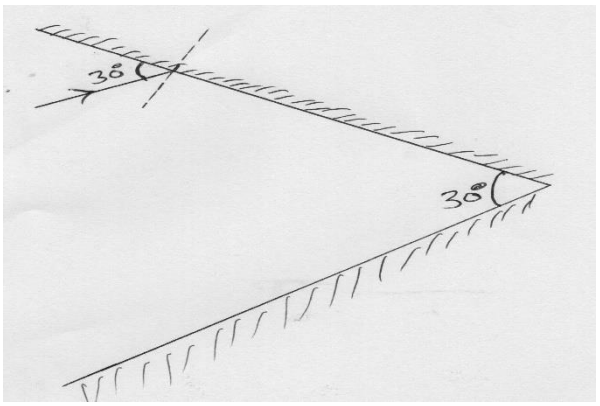
Section	Question	imum Score	lidate's Score
A	1-13		
	14		
	15		
	16		
	17	11	
	18		
Total Score			

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SECTION A (25 Marks)

Answer all the questions in this section in the spaces provided

1. The following diagram alongside shows two mirrors at an angle of 30^o to each other. A ray of light is incident on one mirror at 30^0 as shown. Sketch the path of the ray until it leaves the mirrors indicating the angles at each point of contact with the mirrors. **(3mks)**



2. A ray of right passes from air into a certain liquid at an angle of 50^0 to the normal. The ray is refracted such that the angle of refraction is 35^0 as it enters the liquid. Calculate the refractive index of the liquid **(3mks)**

3. State the necessary conditions for total internal reflection to take place. **(2mks)**

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4.A wire of resistance 27Ω is cut into three equal lengths. If the three wires are connected in parallel, determine the effective resistance. **(2mks)**

5.Explain briefly how a P-type semiconductor is made. **(1mk)**

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6.A current of 5A is passed through a conductor whose resistance is 10Ω. How much energy is converted to heat in one hour **(3mks)**

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7.An electromagnet is made by winding insulated copper wire on an iron core. State two changes that could be made to increase the strength of the electromagnet. **(2mks)**

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8.Define the term 'line of force' as applied to magnetic fields. **(1mk)**

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9. A vibrator is sending out 8 ripples per second across a ripple tank. The ripples are observed to be 4cm apart. Calculate the velocity of the ripples. **(2mks)**

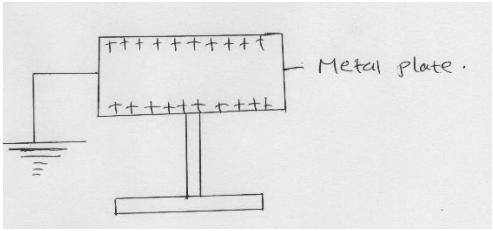
10. Give a reason why x-rays but Not radio waves are used to detect fractured bones **(1mk)**

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11. State two properties of cathode rays **(2mks)**

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12. The figure below shows a positively charged metal plate with an earthing connection. Using an arrow, show the direction of charges through the earth connection and explain the final charge of the plate. **(2mks)**



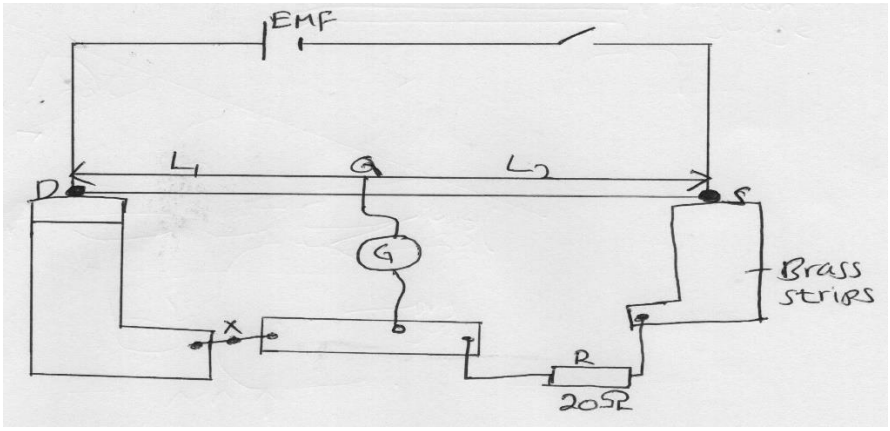
13. What is photoelectric effect? **(1mk)**

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SECTION B (55Mks)

14. a) The diagram below represents a metre bridge used to determine the resistance of an electrical component x



From the diagram,

i) Explain why wide brass strips are used as terminals. **(1mk)**

ii) Explain why a cell of low e.m.f. is preferable. **(1mk)**

iii) If null deflection was obtained when L_1 was 60.0cm. Calculate the resistance of component marked X. **(2mks)**

iv) State three ways of ensuring that error are minimized during the experiment **(3mks)**

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b) A uniform resistance wire of length 2.0m conducts a current of 0.25A when connected in series with a cell of e.m.f. 1.6V. How much current would be conducetd if the wire is now cut into two equal lengths which are then arranged in parallel? **(4 marks)**

15. a) The distance of separation between the plates of a certain capacitor is reduced. State how this affects the capacitance of the capacitor. **(1mk)**

b) You are provided with the following apparatus used for studying charging of a capacitor; an uncharged capacitor, voltmeter, milliameter, 6v battery, connecting wires, a switch and a load resistor R.**(1mk)**

i) Draw a circuit diagram that can be used to charge the capacitor. **(2mks)**

ii) Use the circuit diagram drawn above to explain how the capacitor gets charged. **(3mks)**

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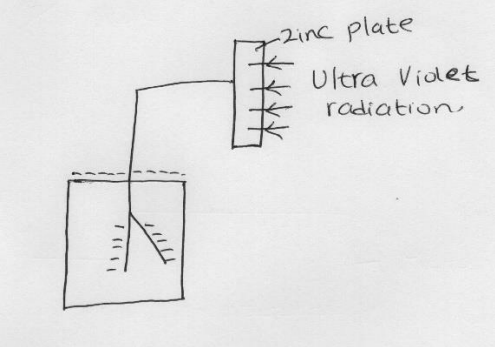
iii) State the purpose of resistors R. **(1mk)**

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c) The zinc plate shown below is connected to a negatively charged electroscope and is exposed to ultra violet radiation.



i) Explain what happens to the leaf of the charged electroscope. **(3mks)**

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ii) If the same experiment is repeated using a positively charged electroscope, explain the observation **(3mk)**

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16. a) State one difference between transformers and an induction coil. **(1mk)**

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b) State two way through which energy is lost in a transformer. **(2mks)**

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……

c) A transformer has 1000 turns in its secondary coil and 10 turns in its primary coil. An alternating current of 2.5A flows in the primary circuit when it is connected to a 12V a.c supply.

i) State the type of transformer **(1mk)**

……
……

ii) Calculate the power input to the transformer. **(3mk)**

iii) Calculate the e.m.f across the secondary coil. **(3mks)**

iv) Determine the maximum current that could flow in a circuit connected to the secondary coil if the transformer if its 80% efficient.(use the e.m.f in secondary as calculated in (iii) above). **(3mks)**

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v) In transmitting power, why is it necessary to step up voltage before transmission? Explain. **(2mks)**

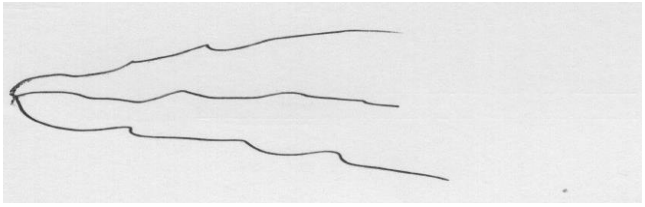
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17. a) Define radioactivity. **(1mk)**

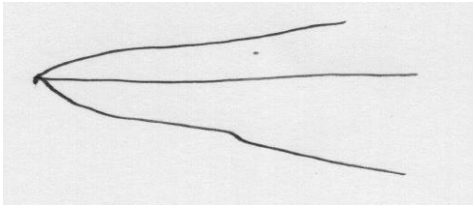
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b) Identify the radiations of tracks in the figures below. **(2mks)**

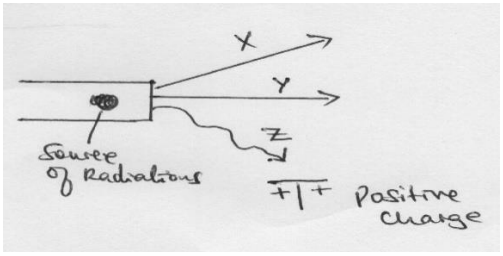
i)



ii)



c) Identify radiations X, Y and Z using the figure below. **(2mks)**



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d) The following reaction is part of radioactive series.

$$^{210}_{83}X \xrightarrow{h} {}^{210}_{84}Y \xrightarrow{\alpha} {}^{c}_{b}Z$$

Identify radiation h and find figures of b and c. **(3mks)**

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18. a) State Ohm's law. **(2mks)**

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……

b) State two factors that affect heating by electric current **(2mks)**

……

……

……

……

c) Determine the power of a motor which has a p.d of 240v applied across it when a current of 0.30A passes through it. **(2mks)**

d) Explain why a fuse is always connected to the line wire in an electrical appliance **(1mk)**

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BRILLIANT STUDENTS F4 END TERM 2 SERIES 2 EXAMS

NAME: ……..

SCHOOL: ……...……

ADM NO: …….. SIGN: ……. DATE: ……..

232/3
PHYSICS
PAPER 3
2½ HOURS

END OF TERM II EXAMINATION
QUESTIONS

Instructions to candidates

i) Write your name, admission number and other particulars in the spaces provided ;
ii) All working for numerical questions must be clearly shown;
iii) Non programmable silent electronic calculators may be used
iv)This paper consists of 4 printed pages, check and ascertain all pages are printed
v) The paper is out of 40 marks;

QUESTION 1

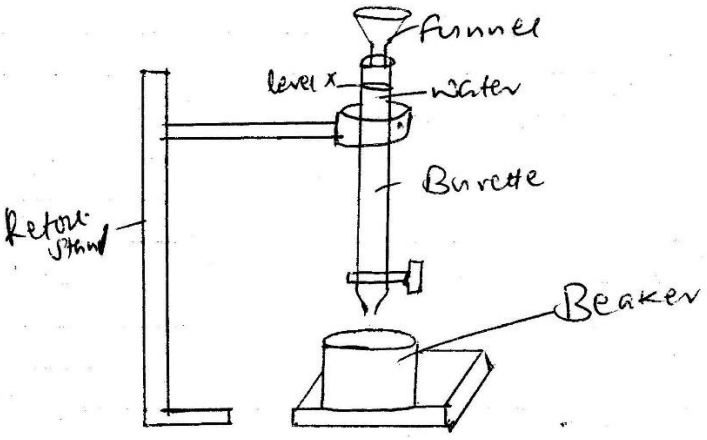
You are provided with the following apparatus

- Two beakers.
- A complete retold stand.
- Funnel.
- Cotton wool.
- Access to water.
- Stop watch.
- A burette with a tap (50cm3).
- 100ml measuring cylinder.

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Proceed as follows:

a) Set the apparatus as follows:



I Support the burrete on a result as shown above

II Close the tap of the burrete and fill it with water to the brim

III Transfer the water to the 100ml measuring cylinder and record the volume of the water

Volume V_1**…….** **(1mk)**

b) Fill the burrette with water up to the 0cm3 mark. Drain this water into 100ml measuring cylinder and record its volume V_2

V_2**……..** **(1mk)**

The excess water above the zero mark is given by

$V_0 = V_1 – V_2$

V_0 = **……** **(1mk)**

(This volume should be added to the final volume of the burette reading when water has been drained)

c) Fill the burrete with water to the brim. Finally open the tap at once and start the stop watch simultaneously. Obtain the time, t taken for the level of water to reach X=10cm^3

Volume drained = (V_0+10) cm3

Refill the burette with water. Finally open the tap at once and start the stopwatch simultaneously. Obtain the time taken for the level of water to reach x = 20cm^3

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Volume drained = $(V_0+20)\ cm^3$

d) Repeat the procedure for other values of the burette readings.

Record the volume drained and the corresponding time in the table below.

Burette reading X(cm^3)	Volume of water drained v=(V_0 + x)cm^3	Time t(s)	Log_{10} V
10			
20			
30			
40			
45			
50			

(9marks)

i) Plot the graph of log_{10}v (vertical axis) against time t. **(5mks)**

ii) Using your graph, calculate the value for b and n from the equation**.** **(3mark)**

$Log10\ V = \frac{4.2t}{b} + n$

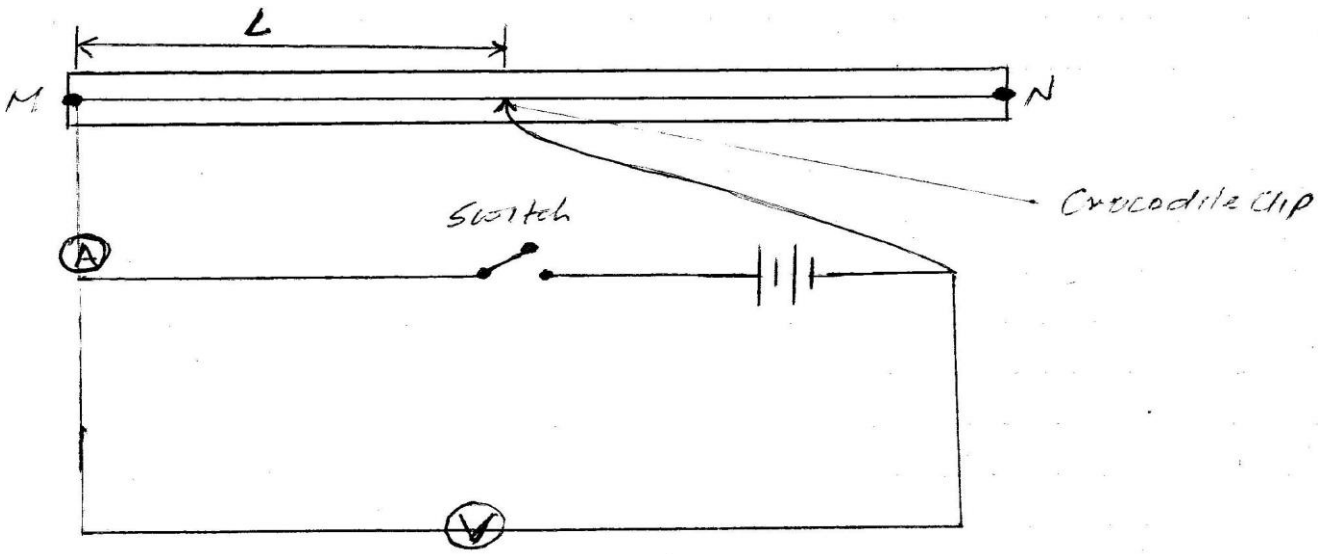
QUESTION 2

a) You are provided with the following apparatus:

- Resistance wire fitted on a scale labelled MN
- Switch
- Voltmeter (0.3v) or(0.5v)
- Ammeter (0.1A)
- Two dry cells
- Six connecting wires

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i) Set up the apparatus as shown in the fig 1 below.



ii) Remove the crocodile clip from the resistance wire MN and close the switch. Record the voltmeter reading.
Y=…..V **(1mk)**

iii) Attach the crocodile clip to the resistance wire such that L=10cm.

iv) Record the voltmeter and ammeter reading in the table below.

v) Repeat the procedure in (iii) and (iv) for L= 20 cm, 30 cm, 40 cm, 50cm, 60 cm, 70cm and 80 cm.

vi) Complete the table below. **(9mks)**

Length L(cm)	10	20	30	50	80
Current I(A)					
p.d V(V)					
y-v					
$\frac{V}{Y-V}$					
$\frac{V}{I}$ = R (Ω)					

vii) a) Plot the graph of $\frac{V}{Y-V}$, vertical axis against R **(5mks)**

b) Determine the slope, m of the graph **(2mks)**

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c) The graph is given by the equation

$\frac{V}{Y-V} = \frac{MR}{5} + d$

Determine the value of m and d **(3mks)**

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