BRILLIANT STUDENTS PRE-MOCK 2 EXAMS
ALL SUBJECTS TESTED



BRILLIANT STUDENTS PRE-MOCK 2 EXAMS

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NAME: ……..

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

443/1
AGRICULTURE
PAPER 1 (THEORY)
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the spaces provided above.
2. This paper consists of **THREE** sections: A , B and C
3. Answer **ALL** the questions in sections A and B and any **TWO** questions in section C
4. ALL answers **MUST** be written in the spaces provided.
5. Do not remove any pages from this booklet.

FOR EXAMINER'S USE ONLY

	Questions	Maximum score	Candidate's score
	01-18	**30 marks**	
	19-23	**20 marks**	
	24-26	**40 marks**	
		Total score	

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SECTION A (30 MARKS)

Answer ALL questions in this section.

1. Outline two ways in which agriculture promotes industrial growth in Kenya. **(1 mark)**

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2. Name two factors to consider when identifying a farming system. **(1 mark)**

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3. State two ways of increasing amount of light in a given field crop. **(1 mark)**

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4. Give four disadvantages of minimum tillage. **(2 marks)**

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5. State four influences of soil depth to crop production. **(2 marks)**

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6. Give four management practices carried out on bananas. **(2 marks)**

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7. State three basic economic concepts. **(1½ marks)**

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8. Mutua requires to apply 200kg/ ha of Nitrogen to produce a maize crop. The fertilizer available is Diammonium phosphate whose grade is 18 – 46 – 0. Calculate:

a) The amount of D.A.P he should apply. **(1 mark)**

b) The amount of P_2O_5 he should apply. **(1½ marks)**

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9. List any four ways in which soil is deprived of its fertility. **(2 marks)**

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10. State four factors considered when selecting a site for a tomato nursery bed. **(2 marks)**

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11. State any two ways of breaking seed dormancy during the preparation of planting materials.**(1 mark)**

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12. State four advantages of tissue culture in crop production. **(2 marks)**

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13. Outline the role played by trees in soil and water conservation. **(2 marks)**

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14. Give four different ways in which viral diseases may spread in a crop field. **(2 marks)**

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15. Give any four insect pests with biting and chewing mouth parts. **(2 marks)**

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16. List any four types of terraces. **(2 marks)**

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17. State two possible causes of swelling of roots in legumes. **(1 mark)**

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18. Give two general symptoms of fungal diseases in crops. **(1½ marks)**

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SECTION B (20 MARKS)

Answer ALL questions in this section.

19. A farmer wanted to know the cause of his low crop yield. Give four things that may be determined during the process of soil testing. **(2 marks)**

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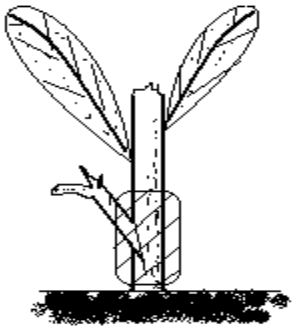
20. Study the illustrations below and answer the questions that follow.



A



C



B

a) Name the types of grafting labeled A, B and C above. **(3 marks)**

A……

B……

C……

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b) Name any two crops propagated by method C. **(2 marks)**

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c) Give any two tools or materials used in propagation method C. **(2 marks)**

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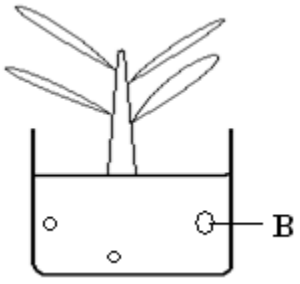
21. Calculate the plant population in a 5.4 ha plot of a bean crop planted at the spacing 45cm x 20cm. Assume one plant per hole. **(5 marks)**

22. The diagram below shows an established tea seedling in a polythene sleeve. Study the diagram and answer the questions that follow.



(i) State two functions of part B. **(1 mark)**

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(ii) Enumerate two advantages of raising seedlings in polythene sleeves. **(1 mark)**

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23. Outline four advantages of pure stand pastures. **(4 marks)**

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SECTION C (40 MARKS)

Answer ANY TWO questions in this section

24. Describe the process of water treatment. **(10 marks)**

Outline the importance of drainage as a land reclamation practice. **(10 marks)**

25. Describe production of tomatoes under the following subheadings.

(i) Ecological requirements. **(5 marks)**

(ii) Nursery establishment and management. **(8 marks)**

(iii) Control of pests. **(2 marks)**

(iv) Harvesting and marketing. **(5 marks)**

26. (a) Explain how the following factors influence agriculture.

(i) Cultural and religious beliefs. **(6 marks)**

(ii) Transport and communication. **(6 marks)**

(b) State four advantages and four disadvantages of using pesticides. **(8 marks)**

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

443/2
AGRICULTURE
PAPER 2 (THEORY)
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

6. Write your name and index number in the spaces provided above.
7. This paper has **THREE** sections: A , B and C
8. Answer **ALL** the questions in section A and B and any **TWO** questions in section C
9. ALL answers **MUST** be written in the spaces provided.
10. Do not remove any pages from this booklet.

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	Questions	Maximum score	Candidate's score
A	**01-17**	**30 marks**	
B	**18-22**	**20 marks**	
C	**23-25**	**40 marks**	
		Total score	

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SECTION A (30 MARKS)

Answer ALL questions in this section.

1. State four problems associated with nomadic pastoralism method of farming. **(2 marks)**

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2. State one use of the following tools in the farm. **(2 marks)**

a) Spoke shave

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b) Pipe wrench

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c) Stock and die

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d) Wire strainer

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3. Name one exotic dairy cattle breed in Kenya which produces milk with:

a) Highest butter fat content. **(1 mark)**

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b) Lowest butter fat content. **(1 mark)**

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4. Name two dual purpose breeds of dairy cattle reared in Kenya. **(1 mark)**

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5. Name two sources of energy concentrates. **(1 mark)**

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6. Using Pearson's square method, compute a 100kg ration with 20% DCP from sunflower seed cake which contains 10% DCP and simsim seed containing 60% DCP. **(4 marks)**

7. Name three livestock diseases transmitted by ectoparasites. **(1½marks)**

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8. Name an intermediate host for the following internal parasites. **(2 marks)**

a) Tapeworms

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b) Liver flukes

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9. Give any two reasons for docking in sheep rearing. **(1 mark)**

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10. State two functions of the queen in a beehive. **(1 mark)**

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11. State three maintenance practices carried out on a piggery unit. **(1½ marks)**

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12. State four disadvantages of an electrical fence. **(2 marks)**

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13. State four advantages of using a spray race for controlling parasites. **(2 marks)**

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14. Give four disadvantages of artificial insemination in livestock production. **(2 marks)**

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15. Give any four structural requirements that a calf pen should possess. **(2 marks)**

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16. List two signs of infertility in cows. **(1 mark)**

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17. Give two methods of introducing vaccines to livestock. **(2 marks)**

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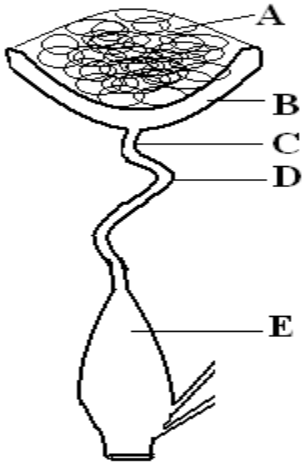
SECTION B (20 marks)

Answer ALL questions in this section.

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



(i) Name the parts labelled A, B, C, D and E in the diagram. **(2½ marks)**

A ……...

B ……...

C ……...

D ……...

E ……

(ii) State the function of each part. **(2½ marks)**

A

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B

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C

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D

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E

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19. Give two reasons why a jersey breed cattle is adapted to arid and semi arid areas. **(2marks)**

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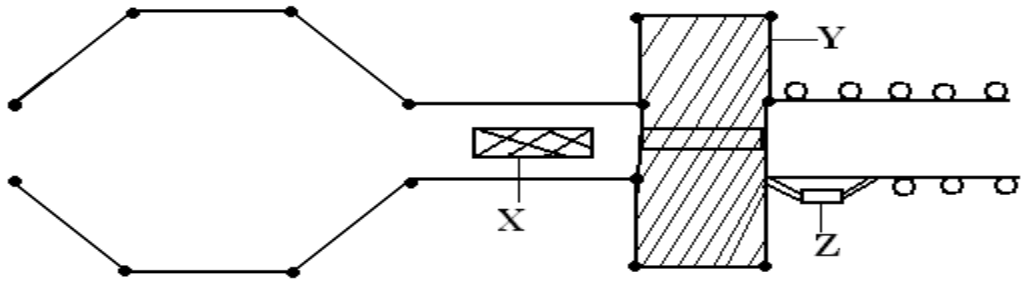
20. The diagram below represents an aerial view of a farm structure. Study it carefully and answer the questions that follow.



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

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b) Name the parts labeled X, Y and Z. **(3 marks)**

X……...

Y……...

Z……

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c) List two roles of the part labeled Y. **(2 marks)**

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21. Give two reasons for carrying out hoof trimming. **(1 mark)**

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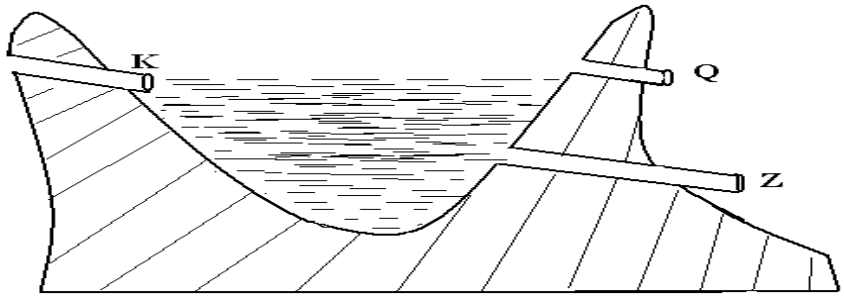
22. The illustration below is a farm structure.



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

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b) Name the parts labeled K, Q and Z. **(3 marks)**

K: ……...

Q:……..…

Z:……

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c) Give four maintenance practices carried out on the above structure. **(2 marks)**

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SECTION C (40 MARKS)

Answer ANY TWO questions in this section

23. **a)** Give five functions of vitamins in livestock production. **(5 marks)**

b) Describe the importance of colostrum to young animals within the first week of birth. **(10 marks)**

c) Outline five advantages of embryo transplant technology in cattle management. **(5 marks)**

24. **a)** Mention four methods of water harvesting. **(4 marks)**

b) Describe the different types of micro catchments used in water conservation. **(10 marks)**

c) Explain the importance of micro catchments. **(6 marks)**

25. **a)** Outline ten factors to consider when selecting gilt for breeding stock. **(10 marks)**

b) Explain the economic importance of parasites to livestock animals. **(10 marks)**

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

231/1

BIOLOGY

PAPER 1

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

- *Write your **name** and **index number** in the spaces provided.*
- *Sign and write **date** of examination in the spaces provided above*
- *Answer **all** the questions in the spaces provided;*

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QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
1- 30	80	

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1. State the function(s) of the following cell structures during cell division. (2mks)

(i) Centriole

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(ii) Centromere

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2. (a) State the function of co-factors in cell metabolism. (1mk)

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(b) Give **one** example of a metabolic co-factor. (1mk)

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3. Industrial wastes may contain metabolic pollutants. State how such pollutants may indirectly reach and accumulate in the human body if the wastes were dumped into rivers. (3mks)

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4. In an investigation the pancreatic duct of a mammal was blocked. It was found that the blood sugar regulation remained normal while , food digestion was impaired. Explain these observations. (2mks)

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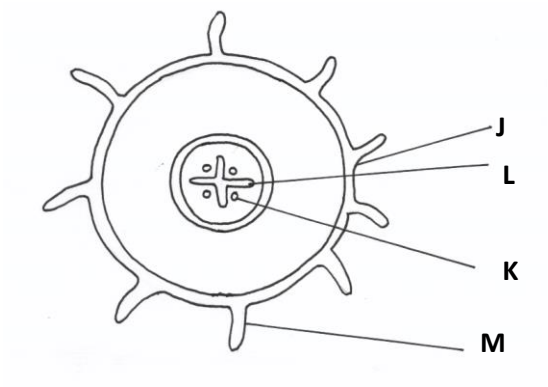
5. The diagram below represents a transverse section through a plant organ.



(a) From which plant organ was the section obtained. (1mk)

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

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6. State **two** structural differences between ribonucleic acid(RNA) and deoxyribonucleic acid (DNA). (2mks)

RNA	DNA

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7. (a) Explain why glucose does not appear in urine of a healthy person even though it is filtered in the Bowman's capsule of a mammal. (2mks)

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(b) In a certain person, glucose appeared in urine. State the disease the person was suffering from. (1mk)

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8. State the stage in cell division in which the following events occurs:-

(i) Replication of the genetic material. (1mk)

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(ii) Exchange of genetic material (1mk)

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9. In a blood test, a few drops of anti-B serum were added to two samples of blood. It was noted that agglutination occurred. What were the possible blood groups of the two blood samples. (2mks)

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10. Explain what would happen when a marine amoeba is transferred to a fresh water environment.(3mks)

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11. A small amount of chemical M was put on one side of maize celeoptiles. After some days, it was noted that the celeoptiles curved away from the side to which the chemical was applied.

(a) Suggest the possible identity of chemical substance M (1mk)

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(b) Explain how this chemical might have caused the celeoptiles to curve. (2mks)

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12. Name the division of the Kingdom plantae with the following spore producing bodies. (2mks)

(i) Sori

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(ii) Capsule

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13. (a) Name two fins in a bony fish which perform the following functions:-

Changing direction, control pitching. (2mks)

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(b) State the role of the swim bladder in a fish. (1mk)

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14. (a) In which part of the spinal cord is the cell body of the motor neurone found. (1mk)

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(b) Below are two features which make a neurone a specialised cell. State their roles. (2mks)

(i) Axon.

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(ii) Dendrites.

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15. (a) What is a natural selection? (1mk)

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(b)Distinguish between convergent and divergent evolution. (1mk)

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16. (a) Explain how the following parts of a mammalian reproductive system are adapted to their functions. (2mks)

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(i) Testis

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(ii) Uterus

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(b) Explain why removal of the ovary after four months of pregnancy does not terminate pregnancy. (1mk)

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17. Active yeast cells were added to a dilute sugar solution in a container. The mixture was kept in a warm room. After a few hours bubbles of gas were observed escaping from the mixture.

(a)Write an equation to represent the chemical reaction above. (1mk)

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(b) What is the economic importance of this type of chemical reaction in industry. (1mk)

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18. What are the functions of the odontoid process found on the axis bone of the cervical vertebra. (2mks)

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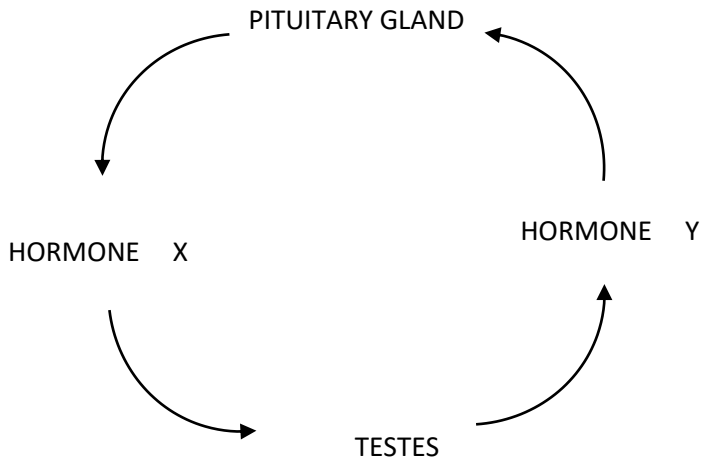
19. The diagram below represents a simple endocrine feedback mechanism in a human male.



(a) Name the hormone labeled **X** (1mk)

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(b) State **two** differences that may be observed between a normal male and one who is incapable of producing hormone labeled **Y** (2mks)

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20. (a) What is meant by double fertilization in flowering plants? (2mks)

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(b) State **two** advantages of cross pollination in a flowering plant. (2mks)

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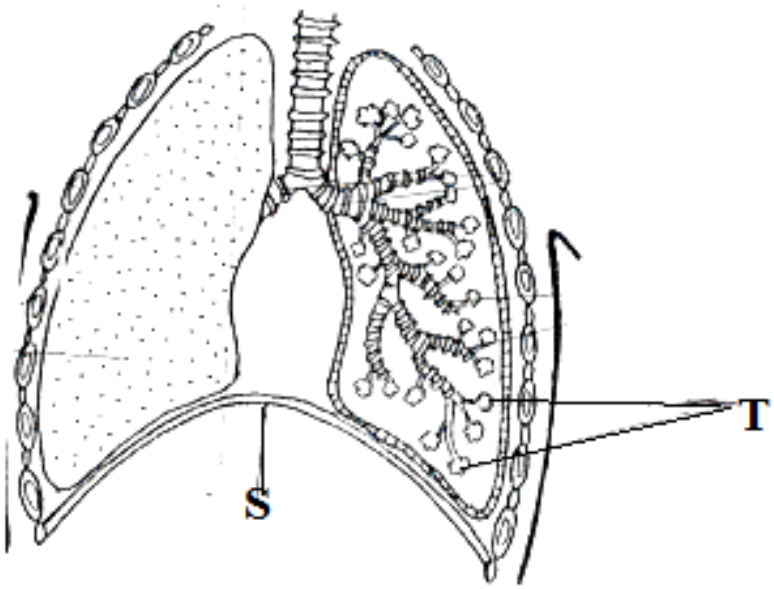
21. The diagram below shows part of a mammalian respiratory system.



(a) Explain **two** ways in which the part labeled T is adapted to its functions. (2mks)

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(b) How does the part labeled S facilitate breathing in? (2mks)

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22. Define the term alleles. (1mk)

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23. (a) Explain why the body temperature of a healthy human being must rise upto 39°C on humid day. (2mks)

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(b) In an experiment a piece of brain was removed from a rat. It was found that the rat had large fluctuations of body temperature. Suggest the part of the brain that had been removed. (1mk)

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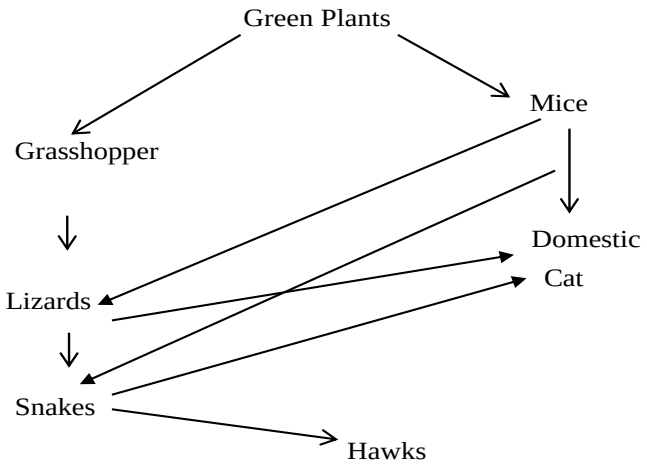
24. The chart below shows a feeding relationship in a certain ecosystem.



(a) Construct the food chains ending with a tertiary consumer in each case. (2mks)

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(b) Suggest **three** ways in which the ecosystem would be affected if there was prolonged drought. (3mks)

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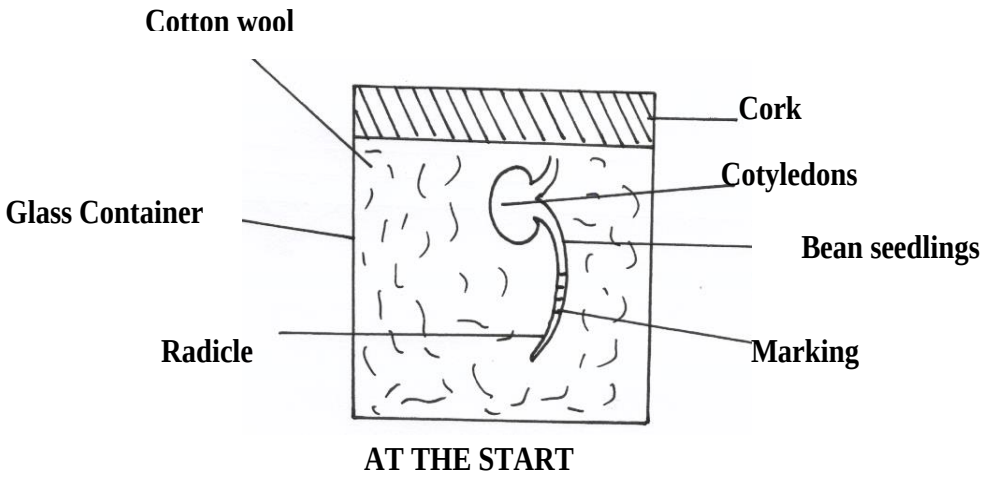
25. A student set up an experiment as shown in the diagram below.



(a) (i) What was being investigated in the experiment? (1mk)

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(ii) Draw a diagram to indicate the expected results of the experiment after three days. (1mk)

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(iii) Why was it necessary to have wet cotton wool in the container (1mk)

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(b) What is the role of the following in a germinating seed.

(i) Oxygen (1mk)

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(ii) Cotyledons (1mk)

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26. Give a reason why it its only mutations in genes of gametes that influence evolution. (1mk)

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27. A person was able to read a book clearly at arms length, but not at normal distance.

(a) State the eye defect the person suffered from. (1mk)

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(b) Why was he unable to read the book clearly at normal distance. (1mk)

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(c) How can the defect be corrected. (1mk)

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28 Some form three students took a germinating maize grain and placed it in a starch paste in a petri dish and put the Petri dish in a water bath maintained at 30°C. After 48 hours the starch paste was irrigated with iodine solution .The area around the maize grain changed to the colour of iodine solution while the rest turned blue –black.

(a) Account for the observation (2mks)

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(b) Why was the Petri dish put in a water bath maintained at 30°C? (1mk)

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29. State **two** functions of muscles found in the alimentary canal of mammals. (2mks)

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30. Explain **two** ways in which xylem vesseles are adapted to their function. (2mks)

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THIS IS THE LAST PRINTED PAGE

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

Biology
Paper 2
INSTRUCTIONS TO CANDIDATES:

- *Write **your name** and **index number** in the spaces provided.*
- *Answer **all** the questions in Section **A** in the spaces provided.*
- *In section **B** answer questions **6** (compulsory) and either question **7** or **8** in the spaces provided*

For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
	6	20	
	7	20	
	8	20	
	TOTAL	**80**	

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SECTION A (40 MARKS)

Answer all the questions in this section in the spaces provided

1. A couple has three children, the mother had **blood group A** and the father had **blood group B** while one of the children had **blood group 0.**

(a) (i) **What** were the genotypes of the parents? (1mark)

Father

……

Mother

……

(ii) What was the genotype of the child with blood **group 0?** (1mark)

……

……

(b) **Work out** using a **punnet** square the genotypes of the other children. (4 marks)

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(c) **Which** child can receive blood from any member of the family? (1mark)

……

……

……

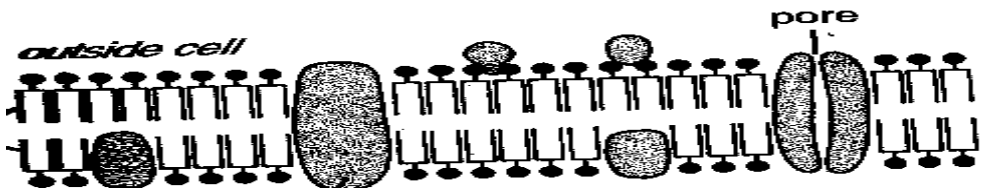
(d) **State** the percentage of children who can donate blood to all blood groups. (1mark)

……

……

……

2. Below is a diagram of a structure found in Eukaryotic cells? Study it and answer the questions that follow



a**) Identify** the structure (1 mark)

……

……

b) State **two** functions of the structure (2 marks)

……

……

……

……

c) (i) Name **one** organelle found in animal cells but absent in plant cells (1 mark)

……

……

……

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ii) State **one** function of the organelle you have named in(c) above (1 mark)

……

……

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d) Briefly **explain** cell biology as an evidence of evolution (3 marks)

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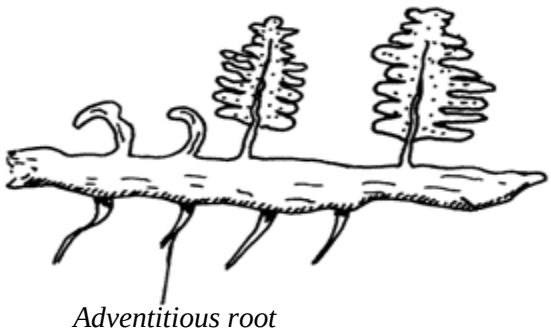
3. Below is a diagram of a plant a form three student collected while carrying out an ecological study?



Adventitious root

(a) With reasons identify the division into which the students classified the plant.

Division (1mark)

……

……

Reasons (2marks)

……

……

……

……

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b) (i) **Name** the structure that produces spores in this plant. (1mark)

……

……

State **two** differences between the plant division above and that of the division *spermatophyta.* (2 marks)

spermatophyta.	*Spermatophyte*

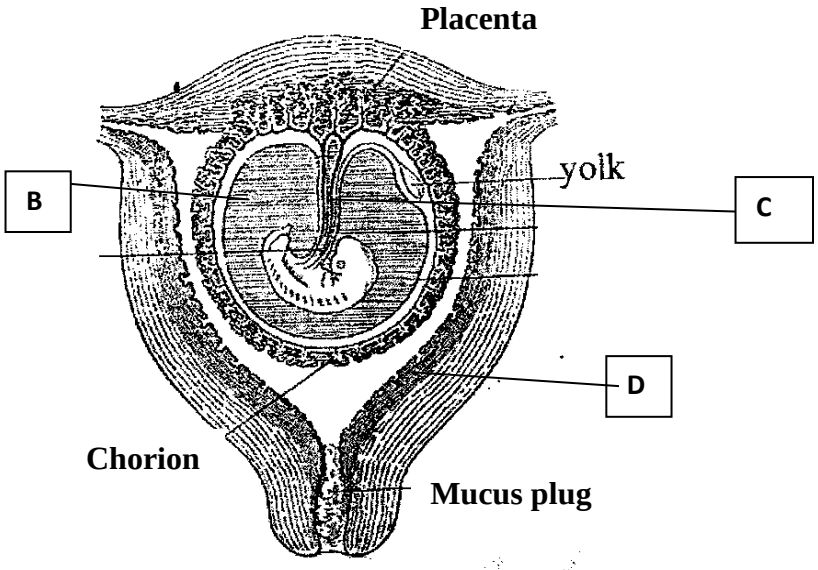
c) Give **two** distinguishing features of class *Amphibia* (2marks)

……

……

……

4. The diagram below represents human foetus in a uterus.



a) **Name** the part labeled D. (1 mark)

……

……

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b) i) **Name** the types of blood vessels found in the structure labeled C. (2 marks)

……

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ii) **State** the differences in composition of blood found in the vessels named in (b) (i) above. (2 marks)

iii) State **two** importance of the fluid found in part B (2 marks)

……

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iv) **State** the role of progesterone during pregnancy (1 mark)

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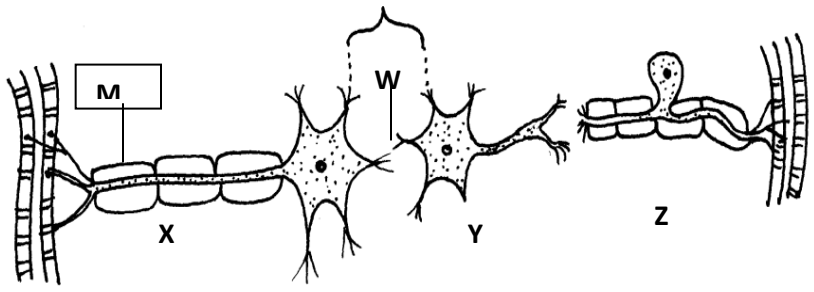
5. The diagram below represents three types of neurons found in a mammalian body.



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(a) Name the neurons **X, Y** and **Z** (3marks)

X: ……..

Y: …….

Z: ……

(b) Name the chemical substance responsible for the transmission of an impulse across the gap labelled **W**. (1mark)

……

……

(c) State **two** functions of the part labelled **M**. (2marks)

……

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……

……

(d) In which part of the spinal cord is neurone **Y** located? (1mark)

……

……

(e) Using arrows indicate on the diagrams the direction followed by nerve impulse leading to a response. (1mark)

SECTION B (40MARKS)

Answer questions 6(compulsory) and either questions 7 or 8 in the spaces provided

6. During germination and growth of a cereal, the dry weight of endosperm, the embryo and total dry weight were determined at two – day intervals. The results are shown in the table below.

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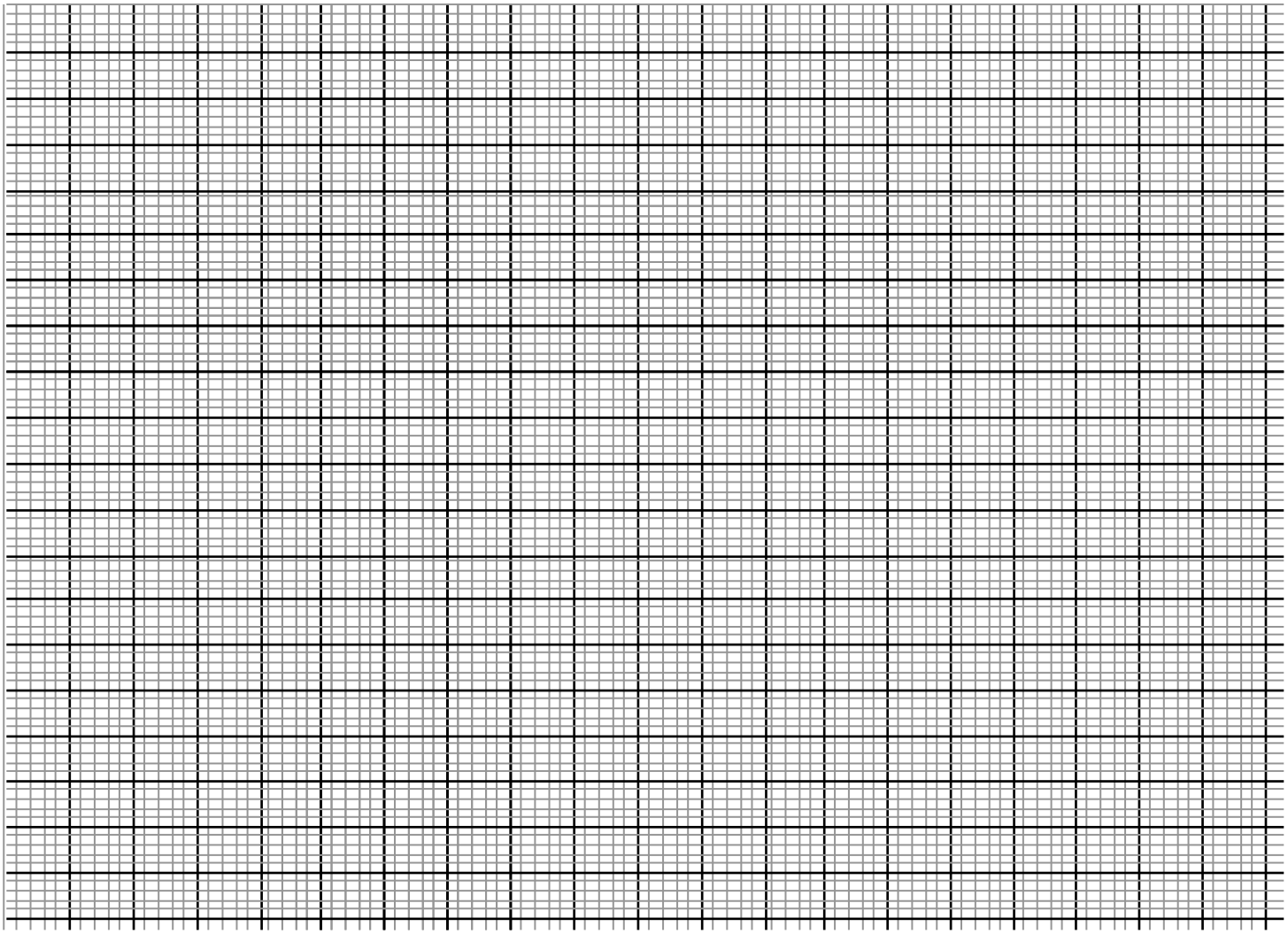
Time after planting(days)	Dry weight of endosperm	Dry weight of embryo (mg	Total dry weight (mg)
0	43	2	45
2	40	2	42
4	33	7	40
6	20	17	37
8	10	25	35
10	6	33	39

a) Using the same axes, draw graphs of dry weigh of endosperm, embryo and the total dry weight against time (8marks)



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b**) What** was the dry weight of the endosperm and embryo on the **5th day?** (2marks)

Endosperm

……

……

Embryo

……

……

c) **Account** for:

i) Decrease in dry weight of endosperm from day 0 to 10 (2marks)

……

……

……

……

ii) Increase in dry weight of embryo from day 0 day 10 (2marks)

……

……

……

……

iii) Decrease in total dry weight from day 0 to day 8 (2marks)

……

……

……

……

d) **State** the role of the following in germination (2marks)

i) Glucose

……

……

ii) Enzymes

……

……

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e) **How** are the foliage leaves adapted to their function (2 marks)

……

……

……

7 (a) **Describ**e the role of hormones in blood sugar regulation (10 marks)

(b) **Explain** how halophytes are adapted to their habitat (10 marks)

8 (a**) Explain** the adaptations of thoracic, cervical and lumbar vertebrae to their functions (12 marks)

(b) **Describe** the structural factors affecting transpiration (8 marks)

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

231/3

BIOLOGY

PAPER 3

PRACTICAL

1 ¾ HOURS

TOTAL SCORE	**MAXMUM SCORE**
	40

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Q1. You are provided with Four Test-tubes label as **A**, **B**, **C** and **D**. You are required to prepare the contents of test tube **A**, **B**, **C** and **D** as follows.

To test tube **A** add $2cm^3$ of solution **R** provided and test using the provided reagent.

To test tube **B** add $2cm^3$ of solution **T** provided and test using the provided reagent.

(5 marks)

(a)

Test tube	Procedure	Observation	Conclusion
A			
B			

(b) To test tube **C** and **D**, prepare them as follows:

To test tube **C** add $2cm^3$ of **R** and $2cm^3$ of solution **H** provided boil it and allow it to stand for 5 minutes.

To test tube **D** add $2cm^3$ of **R** and $2cm^3$ of solution **T** boil and allow it to stand for 30 minutes. For both **C** and **D** test using the provided reagents and tabulate your results below.

(5 marks)

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Test tube	Procedure	Observation	Conclusion
C			
D			

(c) To the provided visking tubing tie one end with the provided string and add solution R. Tie the remaining end and immerse it in a solution of iodine solution in a beaker (50ml). After 2 minutes remove it from the beaker and observe.

(i) What was your observation of the contents of the visking tubing atthe end of experiment? (1 mark)

.....
.....
.....
.....

(ii) Account for your results in (i) above. (3 marks)

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2. Study the kidney diagrams below:

FIGURE I

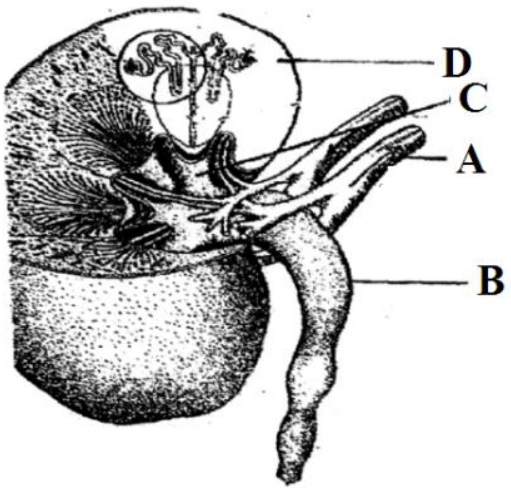
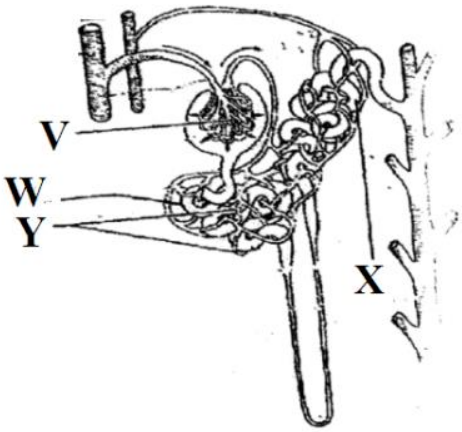


FIGURE II



a) i) Name the part labeled A in figure 1 (1mark)

A ……

ii) Name the process that takes place in the parts labeledV.

V ……

(1 mark)

b) State two homeostatic functions of the organ in the diagram above.(2marks)

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c) Explain what will happen to the process of urine formation in absence of ADH. (3marks)

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d) Below are photographs labeled B and C of organs obtained from different animals. The organs perform similar functions. Examine them and answer the questions that follow.



(i) Name the parts labeled B1, B2 and B3 in photographs B (3marks)

B1 ……

B2 ……

B3 ……

(ii) Identify the parts labeled K1, K2 and K3 in photograph C (3marks)

K1 ……

K2 ……

K3 ……

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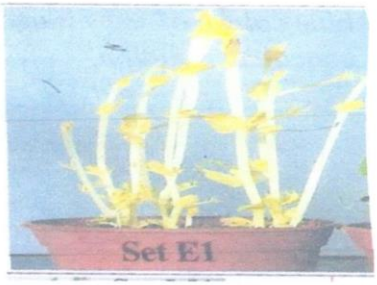
3. Study the diagrams set A_1, set E_1, set M_1 and set B carefully and answer the questions below









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

Set A_1 _____

Set E_1 _____

Set B _____

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

.....

.....

(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

.....

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Set M_1

.....

.....

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

Set A_1

.....

.....

Set M_1

.....

.....

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

.....

.....

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

.....

.....

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

565/1
BUSINESS STUDIES
Paper 1
Time: 2 hours

Instructions

- *Answer ALL the questions in the spaces provided.*

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

16	17	18	19	20	21	22	23	24	25

TOTAL

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1. Giving an example in each case, outline the difference between renewable and non-renewable resources (4 marks)

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2. State **four** reasons why diagonal communication needs to be encouraged in an organization. (4 marks)

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3. Mention **four** benefits enjoyed by a member of a producer cooperative society (4 marks)

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……

4. State **four** measures that the government can use to encourage increase in the country's volume of exports. (4 marks)

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5. Highlight **four** positive impacts of the physical environment on the operations of a business. (4 marks)

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6. Highlight **four** problems associated with monopoly market structure. (4 marks)

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7. Outline **four** role of the mass media in promoting consumer protection. (4 marks)

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8. Outline **four** services offered in agency banking as a trend in the banking sector. (4 marks)

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9. State the best type of machine one would use to perform the following tasks (4 marks)

	Functions	Name of machine
i)	Used to trim papers into desired sizes	
ii)	To post information to ledgers and to prepare payrolls	
iii)	To transmit printed messages such as letters, maps, diagrams and photographs	
iv)	To destroy sensitive but unwanted documents	

10. The following balance sheet belongs to Nyakwar Atiyo during the period ended 30th June 2000.

Nyakwar Atiyo Traders
Balance sheet
As at 30.06.2000

Assets	Kshs	Capital + Liabilities	Ksh
Machinery	45,000	Capital	65,000
Current assets		Creditors	45,000
Stock	7,750	Short term liability	
Debtors	1,375	Bank loan	10,000
Bank	25,375		
	79,500		79,500

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The following transactions took place on July 1 2000.

(i) Paid creditors Sh 2000 by cheque.

(ii) Nyakwar Atiyo took stock worth Shs 7500 from the business for his son's birthday.

(iii) Motor vehicle previously owned by Nyakwar Atiyo values at sh 200,000 was converted into business vehicles.

Required: Prepare the balance sheet of Nyakwar Atiyo traders as at 2nd July 2000.

11. Highlight **four** roles of advertising agencies in product promotion (4 marks)

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12. Distinguish between the following categories of government expenditure. (4 marks)

a) Recurrent expenditure

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b) Capital expenditure

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13. Highlight **four** differences between hypermarkets and departmental stores. (4 marks)

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14. The information below was extracted from the books of Lemayian Traders for the year ended 31. 12. 2015

Opening stock	45,000
Closing stock	15,000
Turnover	340,000
Margin	25%

Required:

(i) Gross profit (2mks)

……
……
……

(ii) Purchases (2mks)

……
……
……

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15. Distinguish between the following terms as used in National Income (3mks)

a) Gross Domestic Product

……

……

b) Gross National Product

……

……

c) Per capita Income

……

……

16. Highlight **four** ways in which the government of Kenya promotes entrepreneurial development (4mks)

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17. State **four** channels of distribution for importation of agricultural produce. (4mks)

……

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18. Outline **four** trends in transport sector. (4mks)

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19. Outline **four** benefits of indirect production. (4mks)

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20. Enter the following transactions in the relevant ledger accounts (4mks)

2015

April 1 Janet Cosmetics started a business with Ksh. 150,000 cash

,, 3 Bought stock of goods for Sh. 40,000 and paid in cash

,, 6 Opened a bank account and deposited Sh. 60,000 from the cash till

,, 9 Purchased an office machine for Sh. 25,000 and paid by cheque

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21. Give **four** reasons why a producer may need to have their own warehouse (4mks)

……

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……

22. State the name of the source document used to record the following transactions (4mks)

Transaction	Source Document
a) Received goods returned by a buyer who bought them earlier on credit	
b) Making of payment to a casual workers at the end of the week	
c) Bought goods for sale from Gilanis Supermarkets on credit	
d) A customer, Adhiambo, send a cheque for goods she bought earlier on credit	

23. Define the following terms as used in business studies (4mks)

(i) Annuity

……

……

(ii) Proposer

……

……

(iii) Speculative risk

……

……

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(iv) Grace period

……

……

24. In the table below fill in the missing figures S,T,U and V. (4 marks)

Business	Assets(shs)	Capital(shs)	Liabilities(shs)
A	20,000	S	5,000
B	42,000	32,000	T
C	U	17,000	53,000
D	18,000	V	6,000

S……

T……

U……

V……

25. Compute the consumer price index (CPI) from the following data giving explanation of your outcome (4mks)

Year	Price
2010	300
2011	375

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

BUSINESS STUDIES
PAPER 2
2 ½ HOURS

Instructions to candidates

- This paper consists of six questions
- Answer any five questions
- All questions carry equal marks
- Write your answers in spaces provided.

For Examiner's Use Only

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

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1. (a) Explain five principles of insurance.

(b) Study the following table of the demand and supply of product x.

Period 2010	Price / units	Qtn dd / units
July	Shs 300	500
August	Shs 300	400
September	Shs 300	200
October	Shs 300	80
November	Shs 300	50

Explain five factors that may have led to the trend above.

2. (a) Giving the types of unemployment, state the causes of the remedies.

(b) You are a sales executive with a local bank. Describe five steps that you must follow when sent to the field to promote the products of the bank. (10 marks)

3. (a) Discuss five reasons why a country's economy is showing slow increase in their National Income (10 marks)

(b) Explain five problems that are likely to face the process of implementation of well-prepared economic development plans (10 marks)

4. (a) On 1st June 2015, Ndovu Traders had cash in hand of sh.25,000 and sh.56,200 at bank. During the month, the following transactions took place:

2015

June 2 Cash sales, sh.42,000.
June 5 Received a cheque of sh.70,500 from Kiptala Traders after deducting a6% cash discount.
June 8 Paid salaries, sh24,000cash.
June 9 Yegon settled his account of sh.45,000 in cash and was allowed sh.l,800cash discount.
June 12 Cash sales sh46,500.
June 18 Paid Tuitoek's debt of sh.l00,000 by cheque after deducting 5% cash discount.
June 24 Withdrew sh.26,000 from the bank for office use.
June 30 Banked all the cash except sh.25,000.

Prepare a 3-column cashbook and balance it off on 30th June, 2015. (10 marks)

(b) Explain **five** factors that may hinder effective communication in an organization.(10 marks)

5. (a) Explain **five** factors that influence the choice of a product to produce. (10 marks)

(b) Discuss **five** errors that may not be noticed in a trial balance. (10 marks)

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6. (a) Discuss **five** canons of public expenditure. (10 marks)

(b) The following information was extracted from the books of Umeme Traders as at 31st December 2009.

	Shs
Bank loan	567,000
Bank loan interest	1,440
Capital	1,680,000
Closing stock	87,000
Creditors	272,400
Debtors	140,280
Discount allowed	170,400
Electricity	30,240
Furniture	489,804
Furniture repairs	86,436
Gross profit	624,720
Maintenance on premise	72,000
Motor vehicle	1,080,000
Motor vehicle maintenance	360,000
Premise	648,000
Rent received	144,000
Sundry expenses	122,520

Prepare:

(i) Profit and loss account for the year ended 31st December 2009.

(ii) Balance sheet as at 31st December 2009. (10 marks)

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

233/1
CHEMISTRY
Paper 1
THEORY
Time: 2 hours

Instructions to Candidates

- *Write your name and index number in the spaces provided above.*
- *Sign and write the date of the examination paper.*
- *Answer **ALL** the questions in the spaces provided in the question paper.*
- *ALL working **MUST** be clearly shown where necessary.*
- *Mathematical tables and silent electronic calculators may be used.*
- *Candidates should check the paper to ascertain that all the pages are printed as indicated and that no questions are missing.*

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1. (a) Give ***two*** differences between luminous and non-luminous flames. (2 marks)

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(b) How is the non-luminous flame produced? (1 mark)

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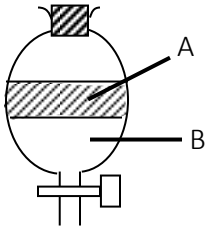
2. (a) The apparatus below were used to separate a mixture of liquid A and B.



State ***two*** properties of liquids that make it possible to separate using such apparatus. (2 marks)

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(b) Give the name of the above apparatus. (1 mark)

.....

.....

3. (a) Explain why solid Carbon (IV) oxide is preferred over ordinary ice for use by ice cream venders. (1 mark)

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(b) Name one piece apparatus used to measure volume of gases. (1 mark)

.....

.....

(c) Draw a diagram of a deflagrating spoon. (1 mark)

4. The table below shows the pH values of solutions P, R, Q and S.

Solution	P	R	Q	S
pH	2	7	6.5	13.5

(a) Which solution represent:

(i) Strong base - ..... (1 mark)

(ii) Weak acid - ..... (1 mark)

(b) Give an example of solution S. (1 mark)

.....

5. 6.95g of hydrated iron (II) sulphate $FeSO_4$. nH_2O was dissolved in 250 cm^3 solution resulting into a 0.1M solution. Determine the value of n. (3 marks) (Fe = 56, O = 16, S = 32, H = 1).

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6. Rusting leads to fast wearing out of farm tools and equipment as well as buildings.

(a) Give the chemical name of rust. (1 mark)

……..

(b) What ***two*** conditions accelerate rusting process? (2 marks)

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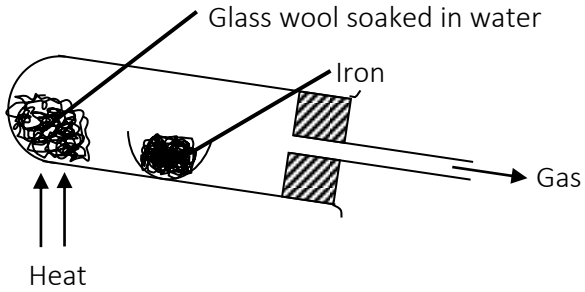
……

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



(a) Write an equation for the reaction that take place in the combustion tube. (1 mark)

……

……

(b) Why would it not be advisable to use potassium in place of iron in the set-up? (1 mark)

……

……

……

(c) Glass wool should be heated before heating iron. Explain. (1 mark)

……

……

……

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8. I. Name the following organic compounds.

(a) $CH_3\ CH\ CH_2\ CH\ CH_3$ (1 mark)

CH_3 Br

.....

(b) $HOCH_2$ - CHOH - CH_2OH (1 mark)

.....

II. Given

A $CH_3(CH_2)_{16}\ COO^-\ Na^+$

B $CH_3(CH_2)_6\ CH(CH_3)CH_2\ SO^-_3\ Na^+$

Identify detergent

A - ..... (1 mark)

B - ..... (1 mark)

9. In terms of structure and bonding, explain the following.

(a) Graphite is used as a lubricant. (1 mark)

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.....

.....

(b) Alluminium is better conductor of electricity then magnesium. (1 mark)

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(c) Water is a liquid at room temperature while hydrogen sulphide is a gas. (1 mark)

.....

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10. (a) Define the term molar latent heat of fusion. (1 mark)

.....

.....

.....

(b) The molar heat of fusion of ice at O^0C is 6kJ mol^{-1}. Calculate the heat change when 36g of ice is converted to 36g of water at 10^0C. (3 marks) (SHC = $4.2^{-1}g\ K^{-1}$, density = $1.0g/cm^3$, H = 1.0, O = 16.0)

11. Draw a well labeled diagram showing how blister copper is purified. (3 marks)

12. Gas Q with a relative molecular mass of 48 took 50 seconds to diffuse through a porous diaphragm. How long will it take for the same amount of hydrogen Chloride (HCl) to diffuse through the same diaphragm under similar conditions? (H = 1.0, Cl = 35.5).

(3 marks)

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

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

$2FeCl_{2(aq)} + Cl_{2(g)} \longrightarrow 2Fe Cl_{3(aq)}$

Oxidation - .....(1 mark)

Reduction - ..... (1 mark)

14. Given elements A, B and C with atomic numbers 11, 19 and 13 respectively.

(a) Compare the atomic radius of A and C. Explain. (2 marks)

.....

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(b) Compare reactivity of A and B. (1 mark)

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15. Haber process (the manufacture of ammonia gas) is given by the following equation.

$N_{2(g)} + 3H_{2(g)} \rightleftharpoons 2NH_{3(g)}$ $\Delta H = -92kJ\ mol^{-1}$.

State and explain the effect of:

(a) Introducing some drops of water to the equilibrium. (1 mark)

.....

.....

.....

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(b) Pumping nitrogen gas to the equilibrium mixture. (1 mark)

.....

.....

.....

(c) Lowering the temperature of the reaction. (1 mark)

.....

.....

.....

16. Elements P and Q have the following atomic numbers 19 and 8 respectively.

(i) Using dot ( ) and cross draw a diagram to show how the elements form bonds.
(1 mark)

17. Describe how sodium sulphate crystals can be prepared starting with $50cm^3$ of 2M sodium hydroxide and 1M sulphuric (VI) acid. (3 marks)

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18. Write ionic equations to show how;

(a) (i) Excess ammonia solution reacts with a solution containing Copper II ions. (1 mark)

.....

.....

(ii) Excess sodium hydroxide added to a solution containing Al^{3+} ions. (1 mark)

.....

.....

(b) Give the name of the following ion $[Zn(NH_3)_4]^{2+}$ (1 mark)

.....

.....

19. (a) Define electrolysis. (1 mark)

.....

.....

.....

(b) During the electrolysis of molten aluminium oxide, write the equations at the;

Anode - ..... (1 mark)

Cathode - ..... (1 mark)

20. (a) Give any ***two*** differences between alpha and beta particles. (2 marks)

.....

.....

.....

.....

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(b) A radioactive isotope T decays by emitting three alpha particles to form $^{214}_{83}Bi$ what is the atomic number and mass number T?

Atomic number - ..... (1 mark)

Mass number - ..... (1 mark)

21. (a) Using acidified potassium dichromate (VI) solution, describe how you would differentiate between sulphur (IV) oxide and hydrogen sulphide. (2 marks)

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(b) Identify the catalyst preffered in contact process. Explain. (2 mark)

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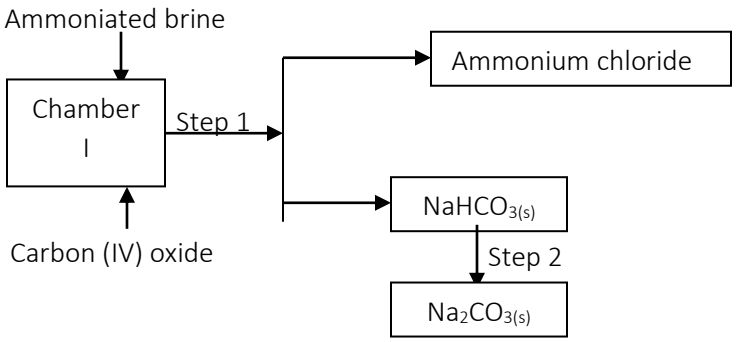
22. Study the following part of the solvay process for the manufacture of sodium carbonate and answer the questions that follows:



(i) State the main source of Carbon (IV) oxide in the process. (1 mark)

.....

.....

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(ii) Write down the overall equation for the reaction in chamber I. (1 mark)

.....

.....

(iii) Name process in step 1. (1 mark)

.....

.....

23. (a) The following equation involve hydrochloric acid.

$MnO_{2(s)} + 4HCl_{(aq)} \longrightarrow MnCl_{2(aq)} + 2H_2O_{(l)} + Cl_{2(g)}$

State the type of reaction taking place in the reaction. (1 mark)

.....

.....

(b) State ***two*** contrasting chemical properties of hydrogen and chlorine. (2 marks)

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24. (a) An element O has two isotopes $^{16}_{8}O$ containing 90% and Isotope $^{18}_{8}O$.

(i) What are isotopes? (1 mark)

.....

.....

(ii) Find the R.A.M of O. (2 marks)

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25. (a) When a hydrocarbon is completely burnt in oxygen 4.2g of Carbon (IV) oxide and 1.71g of water were formed.

(a) Determine the empirical formular of the hydrocarbon. (3 marks)

(b) Given that formula mass of compound above is 28. Find the molecular formular. (1 mark)

26. (a) Name the ***two*** types of polymerization. (1 mark)

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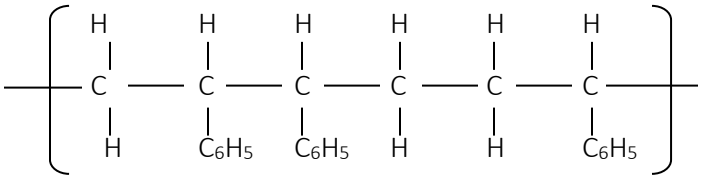
(b) Study the section of the polymer below and answer the questions that follow.



(i) Give the name of the polymer above. (1 mark)

.....

.....

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

CHEMISTRY
233/2
THEORY
2 Hours

INSTRUCTIONS TO CANDIDATES:

- *Write your **name** and **index number** in the spaces provided above.*
- ***Sign** and write the **date** of examination in the spaces provided.*
- *Answer **all** the questions in the spaces provided.*
- *All working **must** be clearly shown where necessary.*
- *Mathematical tables and electronic calculators may be used.*

For Examiner's Use Only:

Question	Maximum score	Candidate's score
1	**12**	
2	**12**	
3	**14**	
4	**08**	
5	**13**	
6	**10**	
7	**11**	
Total	**80**	

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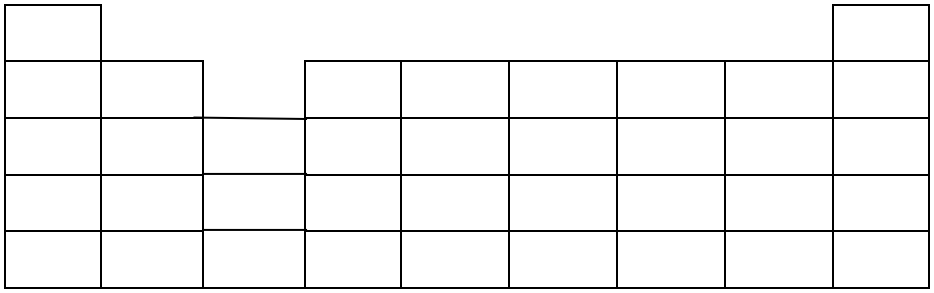
1.The grid below shows part of the periodic table. Use it to answer the questions that follow. The letters do not represent actual symbols.



(a)Which of the elements has the highest atomic radius? Explain. (2 marks)

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(b)Identify the most reactive Oxidizing agent. Explain. (2 marks)

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(c) Compare the atomic radius of P and R. Explain (2 marks)

……

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(d)Give the formula of one stable ion with an electron arrangement of 2.8 which is:

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(i) A Negatively charged divalent ion. (2marks)

……

……

(ii) A Positively charged monovalent.

……

……

(e)Given that the mass number of W is 40. Write down the composition of its nucleus. (2 marks)

(f)Write the formula of the compounds formed between.

(i)Element R and X. (1 mark)

……

……

(ii)Give one property of the structure formed when R and X bond. (1 mark)

……

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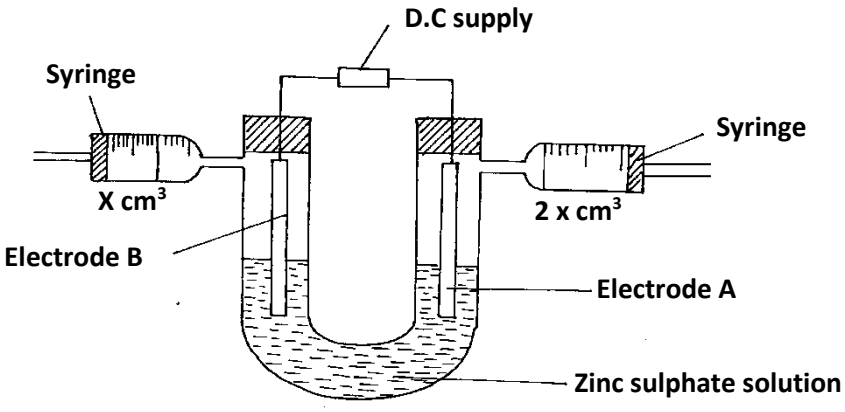
2. An aqueous solution of zinc sulphate is electrolysed using platinum electrodes as shown in the set up below.



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(a) (i) Write a half equation for the reaction taking place at electrode **A.** (1mark)

……

……

(ii) Identify electrodes A and B (2 marks)

……

……

……

(iii) State and explain the observation at electrode **B** if copper plate was used instead of platinum electrode. (2marks)

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(b) 0.22g of metal **Q** is deposited by electrolysis when a current of 0.06A flows for 99 minutes.

(RAM of **Q** = 184, 1F = 96500c)

(i) Find the number of moles of **Q** deposited. (1mark)

(ii) Determine the value of n in the metallic ion $\mathbf{Q^{n+}}$ (3marks)

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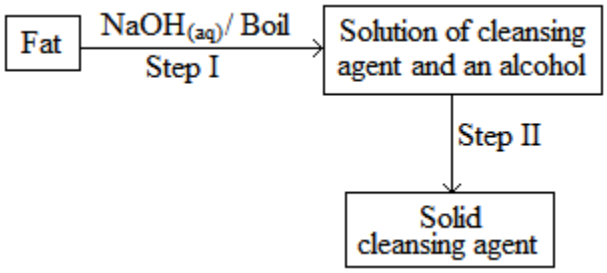
(c) Determine oxidation number of chlorine in ClO_3^- (1mark)

(d) An iron spoon is to be electroplated with silver. Draw a labelled diagram to represent the set-up that could be used to carryout this process. (2marks)

3. (a)The scheme below was used to prepare a cleansing agent. Study it and answer the questions that follow.



(i)What name is given to the type of cleansing agent prepared by the method above? (1mark)

……

……

(ii)Name one chemical substance added in step II (1mark)

……

……

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(iii)What is the purpose of adding the chemical substance named in a (ii) above? (1mark)

……

……

(iv)Name any other suitable substance that can be used in step I (1mark)

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(v)Explain how an aqueous solution of the cleansing agent removes oil during washing (2marks)

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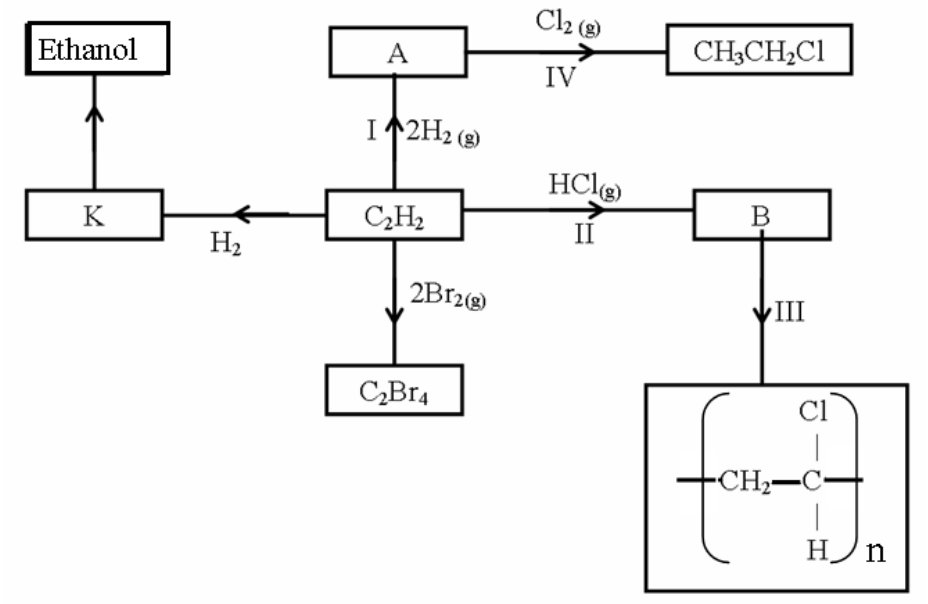
(b).Study the scheme below and answer the questions that follow.



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(i)Identify the catalyst used in step I (1mark)

……

……

(ii)Name the compounds A and B (2 marks)

A…….

B……..……

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

……

……

……

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

I…….

IV.....

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

……

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4. (a) State the Hess' law. (1 mark)

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(b) The enthalpies of combustion of calcium, carbon and decomposition of calcium carbonate are indicated below;

$C(s) + \frac{1}{2}O_2(g) \longrightarrow CaO(s)$: $\Delta H = -635\ kJmol^{-1}$

$C(s) + O_2(g) \longrightarrow CO_2(g)$ $\Delta H = -394\ kJmol^{-1}$

Enthalpy of decomposition of $CaCO_3 = +178\ kJmol^{-1}$

(i)Draw an energy cycle diagram that links the enthalpy of formation of calcium carbonate to enthalpies of combustion of calcium, carbon and decomposition of calcium carbonate. (2 marks)

(ii)Determine the enthalpy of formation of calcium carbonate. (2 marks)

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(c)Some average bond energies are given below.

Bond	Energy in kJ mol^{-1}
C – C	348
C – H	414
Cl – Cl	243
C – Cl	432
H – Cl	340

Calculate the energy change for the reaction below. (3 mks)

$C_2H_{6\,(g)} + Cl_{2\,(g)} \longrightarrow CH_3CH_2Cl_{(g)} + HCl_{(g)}$

5.(a) Define the term solubility. (1 mark)

……

……

……

……

(b)In an experiment to determine the solubilities of two salts X and Y at different temperatures, a candidate recorded her observations as shown below.

Temperature (^oC)	0	10	20	30	40	50	60	70	80	90
Solubility of X in g/100 g of H_2O	14.3	17.4	20.7	25.0	28.5	33.3	40.0	47.0	55.0	64.0
Solubility of Y in g/100 g of H_2O	25.0	27.5	30.0	32.5	35.0	37.6	40.1	42.4	45.0	48.0

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(a)On the same axes plot the solubility curves of X and Y. (4 marks)

PROVIDE A GRAPH PAPER

(b)From your graph to determine;

(i)The solubility of X and Y at 47 ^{o}C

Solubility of X (1 mark)

……

……

Solubility of Y (1 mark)

……

……

(ii)The temperature at which the two salts are soluble in water. (1 mark)

……

……

(c)If 60g of X is dissolved in 100 g of water and heated to 90°C, calculate the amount of salt that crystallized out if cooled to 20 ^{o}C.(1 mark)

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(d)State what would happen if a mixture salt X in 100 g of water and 30 g of Y in 100 g of water were cooled from 90 ^{o}C to 70 ^{o}C. (3 marks)

(e)State one application of solubility.(1 mark)

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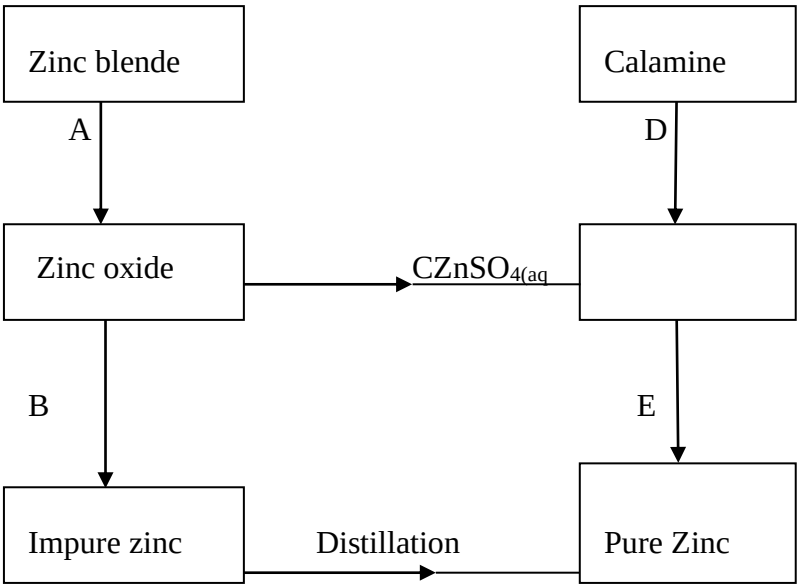
6. The flow chart below shows some processes in the extraction of zinc. Study it and answer the questions that follow.



(a) Name the processes represented by A and E. (2 marks)

A……

E……

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(b) State the reagents required for processes B, C and D. (3marks)

B ……

C ……

D ……

(c) Write a chemical equation of the reaction that occurs in process B. (1mark)

……

……

(d) With an aid of a diagram, explain how you would obtain a pure sample of zinc by process E(3 marks)

……
……
……

(e) State two commercial uses of zinc metal. (1 mark)

……
……
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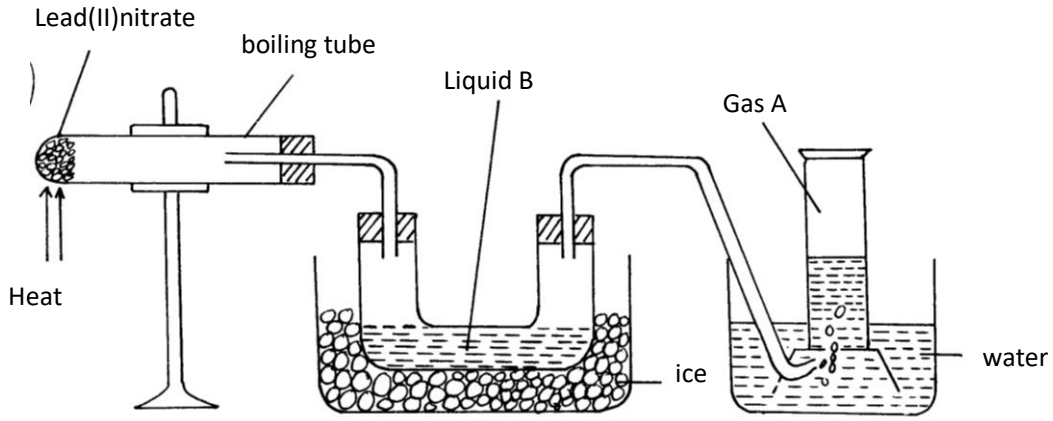
7. The diagram below shows a set-up of apparatus that can be used to prepare nitrogen (IV) oxide. Study it and use it to answer the questions that follow



(a) (i) Write the equation for the reaction that takes place in the boiling tube. (1 mark)

……

……

(ii) State the observations made in the boiling tube. (2 marks)

……

……

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(iii) Explain why lead (II) nitrate is preferred over other metal nitrates in this experiment. (1 mark)

……

……

……

(iv) Describe how gas A can be identified. (1 mark)

……

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(b) (i)Name liquid B (1 mark)

……

……

(ii) Write a chemical equation to show how liquid B is formed in this experiment. (1mark)

……

……

(c) (i) In another experiment, excess aqueous lead (II) nitrate solution was reacted with a solution which contained 2.34g of sodium chloride. Calculate the mass of precipitate formed in this reaction. (Pb = 207, Cl = 35.5, Na = 23) (3 marks)

(ii) Write an ionic equation for the reaction that takes place when nitrogen (IV) oxide reacts with aqueous sodium hydroxide. (1 mark)

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

233/3

CHEMISTRY

Paper 3

Time: 2 ¼ Hours

INSTRUCTIONS TO CANDIDATES

- Write your name and Index Number in the spaces provided above.
- Sign and write date of examination in the spaces provided above.
- Answer all questions in the spaces provided in the question paper.
- All workings must be clearly shown where necessary. Mathematical tables and silent electronic calculators may be used.

For Examiners use only.

Question	Maximum Score	Candidates Score
1	1 4	
2	13	
3	13	

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1. You are provided with:

Solution **M** containing 3.95g Potassium Manganate (vii), ($KMnO_4$) per litre of solution.

Solution **N**, containing 49.0g of ammonium Ferrous Sulphate $(NH_4)_2SO_4$. $FeSO_4.6H_2O$ per litre of solution.

You are required to determine the reacting mole ratio of manganate (VII) Ions, MnO_4 with Iron (II) ions Fe^{2+}.

PROCEDURE:

Using and pipette filter transfer 25.0cm^3 of solution N into a conical flask. Titrate with solution M in the burette. No indicator is required for this experiment. Record your results in the table below. Repeat the procedure to obtain the accurate volumes.

Table I (4mk)

	1st	2nd	3rd
Final burette readings cm^3			
Initial burette readings cm^3			
Volume of solution M used cm^3			

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

b) Calculate:

i) The concentration of solution M in moles per litre. (K = 39, Mn = 55, O = 16) (1mk)

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ii) The number of moles of solution M that reacted with N (2 mks)

iii) The concentration in moles per litre of solution N in moles per litre (1mks) (Fe=56, S=32, N=14, H=1)

iv) The number of moles of solution N that reacted with solution M in this experiment (2mks)

c) Given that 1 mole of solution M gives 1 mole of Mno_4^- ions and 1 mole of solution N gives 1 mole of Fe^{2+} ions. Calculate the reaction mole ratio of Fe^{2+} ions to MnO_4^- ions (3mks)

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2. You are provided with:

Solution WI – containing 40g of substance Y per litre.

Solution WII – 1M hydrochloric acid solution.

You are required to investigate experimentally the rate of reaction of Y with hydrochloric acid. Y reacts with hydrogen ions in the hydrochloric acid to give a final yellow precipitate. You will in each experiment measure at room temperature, the time taken to produce a certain amount of precipitate that will make the cross on the white piece of paper just invisible.

PROCEDURE

On the white piece of paper, make a cross using a pen. Measure $10cm^3$ of solution W_I using a $10cm^3$ measuring cylinder provided and put into $100cm^3$ glass beaker provided and place on the cross. The cross should be visible through the solution from a view point directly above the beaker. Using another measuring cylinder transfer $10cm^3$ of the acid W_{II} to the beaker containing W_I and start the stopwatch immediately after the addition. Looking from above the beaker, stop the watch as soon as the cross becomes invisible. Enter the time taken in the table below. Repeat the experiment using the volumes indicated in the table below each time adding appropriate quantity of distilled water to make up the volume to $10cm^3$ before adding $10cm^3$ of solution W_{II}.

xpt. No	Vol. of W_I used cm^3	Vol. of water cm^3	Vol. of W_{II} cm^3	Time Seconds
1	10	0	10	
2	8	2	10	
3	6	4	10	
4	4	6	10	
5	2	8	10	

(4mks)

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a) Plot a graph of volume W_I against time in seconds (provided graph paper) (3mks)

b) From your graph, state how the volume of W_I varies with time (1mk)

c) What time would 7.0cm^3 of W_I take to react with 10cm^3 of W_{II} (1mk)

d) State two factors which must be kept constant during the experiment (1mks)

e) Could the time taken for experiment be shorter or longer if temperature of reacting mixture was at

(i) 50^0C? Sketch a graph on the same axis that would appear for this experiment.(3 mks)

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

a) Place about half of solid F on a metallic spatula and burnt it using a non-luminous flame

Observations	inferences
(1mk)	(1mk)

b) Place the remaining solid F in a clean boiling tube and add about $10cm^3$ of water and shake thoroughly.

i) To about $2cm^3$ of the solution F, put the universal indicator solution provided.

Observations	inferences
(½ mk)	(½ mk)

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ii) To about $2cm^3$ of solution F, add $2cm^3$ of acidified potassium dichromate (VI) and warm to boiling

Observations	inferences
(1mk)	(1mk)

iii) To about $2cm^3$ of solution F, add three drops of bromine water

Observations	inferences
(1 mk)	(1mk)

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You are provided with solid P. Carry out the tests below and record your results in the table.

1. (i) Place all solid P in a boiling tube. Add about 10 cm^3 of distilled water and shake vigorously, filter and keep both the residue and filtrate.

Observations	Inferences
(½ mk)	(½ mk)

(ii) To about 2 cm^3 of the filtrate add sodium hydroxide dropwise till in excess.

Observations	Inferences
(½ mk)	(½ mk)

2. (a) (i) To about 2 cm^3 of the filtrate add ammonia solution till in excess.

Observations	Inferences
(½ mk)	(½ mk)

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(ii) To about 2 cm^3 of the filtrate add four drops of solution K (lead (II) Nitrate)

Observations	Inferences
(½ mk)	(½ mk)

(b) Carefully transfer the residue into a test tube and add 5 cm^3 of dilute niric (V) acid.

(i) To about 2 cm^3 of the solution add a few drops of dilute sulphuric (VI) acid.

Observations	Inferences
(½ mk)	(½ mk)

(ii) T o about 2 cm^3 of the solution add ammonia solution drop wise till in excess.

Observations	Inferences
(½ mk)	(½ mk)

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

Computer Studies
Paper 1
(THEORY)
2½ hours
INSTRUCTIONS TO CANDIDATES
Write your name and index number in the spaces provided above.
*This paper consists of **TWO** sections; **A** and **B.***
*Answer **ALL** the questions in section **A**.*
*Answer question **16** and any other **THREE** questions from section **B**.*
All answers should be written in the spaces provided on the question paper.

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Section	Question	Candidates Score
A	1-15	
	16	
	17	
	18	
	19	
	20	
TOTAL SCORE		

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SECTION A (40 MARKS)

ANSWER ALL QUESTIONS FROM THIS SECTION

1. State THREE factors to be considered when setting up a computer laboratory. (3marks)

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2. A mobile phone is regarded as a computer. Give two reasons why. (2marks)

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3. What is the difference between a Gas Plasma Display and Liquid Crystal Display (2marks)

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4. In reference to CPU explain **fetch-execute** cycle (3marks)

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5. Give anyTHREE reasons why magnetic Ink Character recognition are too popular in banking industry for processing cheques (3marks)

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6. Mention any THREE parameters that makes up the access time of storage media (3marks)

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7. Highlight the use of the following keys found on a standard keyboard. (2marks)

a) Esc

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b) Home

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8. a) Define a candidate key (1 mark)

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b) Describe any THREE data integrity constraints in a database. (3 marks)

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9. Mr Matano is a teacher at Kassu High school and wishes to use Spreadsheet to process the marks obtained by his students during the term. The worksheet below shows the details used.

A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**
1	**NAME**	**CAT-1**	**CAT-2**	**CATTOTAL**	**EXAM**	**TOTAL**	**GRADE**	**RANK**
2	Susan M.	14	06		56			
3	Peter K.	13	08		34			
4	Mary Ann. N	10	04		59			
5	Paul P.	11	07		57			
6	Janet F.	06	09		48			
7	Justin G.	08	07		50			

NB:CAT -1 and CAT -2 are out of 15 marks each and EXAM is out of 70 marks

a) Write a function that displays "PASSED" when the total marks is >60 otherwise display "FAIL". (2 marks)

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b) Write a function that arranges the students according to their performance (2marks)

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10. State any TWO duties of a database administrator (2marks)

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11. A student in KASSUHigh School was working with computer using windows operating system. After sometime he started experiencing the following problems.

- The computer failing to load the operating system during the booting process.
- The computer hangs (stops responding) now and then.
- Abnormal restarting.
- Displays a blue screen with the message such as fatal exception error has occurred.

State any TWO possible causes of the above problems? (2marks)

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12. List any THREE ways in which ICT can be used to enhance security in a supermarket. (3marks)

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13. Mention any TWO components of an expert system (2marks)

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14. State any TWO negative impacts of ICT on the environment (2marks)

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15. State what should beconsidered when carrying out requirement analysis for selecting a computer system? (3marks)

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SECTION B (60 MARKS)

Answer Question 16 (compulsory) and any other <u>THREE</u> questions from this section.

16. A lecturer is in need of calculating the percentage mark for individual students who took two CATs that were marked out of 30 marks each, for a class of 150 students and grade the student as follows.

- Marks from 95 and above, one would get grade 'A'
- Marks from 80 and above, one would get grade 'B'
- Marks from 60 and above, one would get grade 'C'
- Marks from 50 and above, one would get grade 'D'
- Anyone whose score is less that 50, would get a 'F'

a. Draw a flowchart that can be used to compute the percentage markand output Grade for each student. (8marks)

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b. Write a pseudo code for the above flow chart. (7marks)

17. (a) Do the binary calculations in binary numbers (2marks)

i.$11101.0011_2 + 101.011_2$

ii.$101001.10101_2 - 110.01101_2$

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iii. Using twos complement, perform the following calculation leaving your answer in decimal number. (4marks)

$23_{10} - 41_{10}$

iv. Determine the BCD representation of $(- 890_{10})$ (2marks)

(a) With a relevant example Distinguish between the following terms as used in data processing.

(i) Online processing and real time processing. (2marks)

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(ii) Backup file and Archive file. (2marks)

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(b) (i)During manual data entry, the data entry clerks need to verify and validate their data to ensure that it is free from errors. Define the term error as used in this context (1 mark)

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(ii) In an exam, where the subject marks for each student was summed and the mean calculated from the sum, the students realized that their marks were inaccurate by a fraction of the mean mark.Likewise a great difference between the actual class mean and the sum of the recorded mean mark.
Describe any two types of errors that may have caused the difference between the recorded mean marks and the actual mean marks. (2 marks)

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18. (a) Prime systems Ltd. is a record label company. It wishes to introduce a computerized system, so it has asked a team of consultants to investigate the possibility.

i.The consultants first carried out an initial study and produced a feasibility report. Explain the purpose of a feasibility report (2marks)

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ii. Give TWO reasons why some clerical staff at Prime systems Ltd. might have been worried with the prospect of computerization. (2marks)

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(b) State the stage at which the following activities are performed in system development lifecycle (3marks)

(i) Flowcharting.

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……

(ii) Staff training

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(iii) Changeover

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(c) (i) What is pilot running in system development? (1mark)

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……

(ii) State TWO circumstances under which pilot strategy may be used during system changeover.(2marks)

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(d) (i) State THREE disadvantages of observation method of information gathering (3marks)

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(ii) Explain the importance of using automated methods of fact finding (2marks)

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19. a) Describe the following wireless communication devices (6 marks)

i. Access point (AP)

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ii. Wireless Antenna

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……

iii. PCMCIA cards

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b) Explain the following (4marks)

i. Search engine

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ii. Web browser

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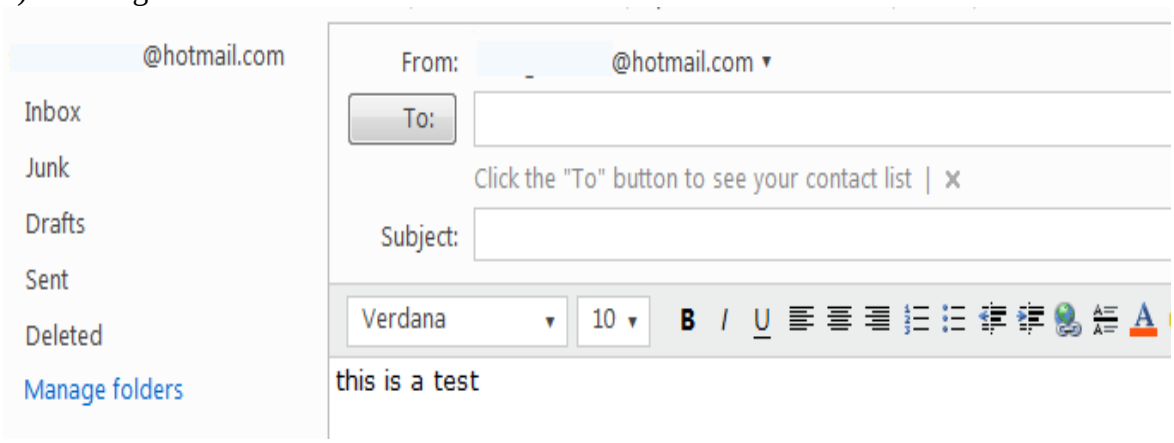
c) The diagram below shows an e-mail extract.



What is purpose of the following folders? (2 marks)

a) Junk

……

……

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b) Drafts

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d) Differentiate between Pasteboard, master page and printable area as used in desktop publisher. (3marks)

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20. a) Explain each of the following type of operating systems (4marks)
i. Distributed

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……

ii. Multi-user.

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b) List any TWO types of embedded operating systems used in modern cell phones (2marks)

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c) Mostoperatingsystemsprovide a*filesystem*. Mention any TWO file systems used in windows environment. (2 marks)

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d) (i) Mwangingi an IT expert would like to create *tableofcontents* for his 50 page dossier. Explain to him how he could do this. (3marks)

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(ii) As an IT expert, explain how a 20 page document can be formatted to have first five pages numbered i,ii,iii,iv,v while the remaining pages numbered from1,2,3,4….15. (4marks)

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

451/2

COMPUTER STUDIES

PAPER 2

(PRACTICAL)

TIME: 2½ HOURS

INSTRUCTIONS TO CANDIDATES

(a) Type your name and index number at the top right hand corner of each print out
(b) Write your name and index number on the diskette/CD-R provided
(c) Write the name and version of software used in each question on the answer sheet
(d) Answer **ALL** the questions
(e) Passwords **should not be used** while saving in the diskette/CD-R
(f) All answers **MUST** be saved in the diskette/CD-R
(g) Make print out of answers on the answer sheet provided

FOR EXAMINER'S USE ONLY

Question	Candidate's score
1	
2	
Total score	

This paper consists of 4 printed pages.

Candidates should check to ensure that all pages are printed as indicated and no questions are missing

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QUESTION ONE

1. (a) Assume you are the Director AMACO INSURANCE COMPANY LTD you want to update your customers on the current dues as per the insurance cover each client have. Use mail merge to write an official letter to **FIVE CUSTOMERS** informing them of this. Your letter must meet the following conditions.

i. Must have the header at the top with the company's name as the letter head (2mks)

ii. Must have footer at the bottom indicating the current date and time, left aligned. (2mks)

iii. The insurance will cover the vehicles and each client due, car number will not be the same. (2mks)

iv The address lines will include Title

First name

Last name

Address

Country

Car no plate

Amount due

(14mks)

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(b) (i) Prepare the table below in Ms word and then apply formatting as follows and save as MSS (8 mks)

MEYSA SYSTEMS AND SERVICES					
Technical information			**Action taken**		
Machine description	Problems found		Diagnostic checks	Solutions	
Compaq / evo	hardware	software	Memory video	1	Replacing vga
6522	☐	☐	Faulty component	2	Installing drivers
Desktop	No display		VGA CARD	3	Rebooting system

(ii) Format the table with border line colour red and choose double line (5mks)

(iii) Shade the table to tight green colour for the first two rows and light blue shading for therest of the table (5mks)

(c) Type the paragraph below, save it as computer and apply formatting as stated (4mks)

Computer Program is a set of instructions that direct a computer to perform some processing function or combination of functions. For the instructions to be carried out a computer must execute a program, that is, the computer reads the program, and then follows the steps encoded in the program in a precise order until completion. A program can be executed many different times, with each execution yielding a potentially different result depending upon the options and data that the user gives the computer.

(i) The text "computer program" should be the title, change its case to upper case font TREBUCHET MS size 16, colour green (2mks)

(ii). Find the word 'instructions' look for its meaning in the computer dictionary and finally replacethe word with new meaning from the dictionary (3mks)

(iii). Format the whole paragraph to justified alignment shading colour light green (3mks)

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2.

NAME	BASIC PAY	DEPARTMENT	AGE	STATUS
Peter	15000	Computer	34	Single
John	17000	Computer	44	Married
Kamau	19000	Finance	33	Divorced
Charles	21000	Research	33	Single
Johns	23000	Research	25	Single
Thomas	25000	Computer	26	Married
Ann	27000	Finance	28	Married
Susan	29000	Finance	29	Divorced
Tina	31000	Research	24	Divorced
Andrew	33000	Computer	40	Single
Hardy	35000	Finance	20	Married
Njeri	37000	Finance	43	Single
Kimani	10000	Research	15	Single
Silamtoi	15000	Finance	35	Divorced
Tina	35000	Computer	25	Married
Moses	59000	Research	33	Single
Miriam	70000	Finance	56	Divorced
Maurice	32876	Computer	70	Divorced
Alphie	43876	Research	98	Divorced
Albert	48098	Research.	32	Single
Langat	6500	Computer	12	Single
Phenny	29000	Finance	70	Single
Hilda	32000	Computer	13	Married

Create data base called personnel and create a table named department (5 mks)

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(b) Create queries to determine (save each query using the alphabet numbers below)

i. Number of people with basic salary greater than 32,000= (5 mks)

ii. Number of people with basic salary less than 45,000= AND come from computerdepartment(5mks)

iii. Names of people who are either married or single. (4 mks)

iv. Those whose salary fall between 25,000/= and 50,000= (3mks)

v. Those whose name begin with letter M or end in letter S (3 mks)

(c) (i) Create a query to compute the new salary if there is an increment of basic pay by 50% (7mks)

(ii) Filter using query those who earn above 33000/= and aged between 39 and 70 (5 mks)

(d) (i) Create a form using form wizard using the Departmental table above. (3mks)

(ii) Create a form in design view using the departmental table above on the form calculate the total basic salary for the whole table, add current date and time on the form header (5 mks)

(iii) Create a report for THE ABOVE table using design view and print. (5mks)

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

313/1
CHRISTIAN RELIGIOUS EDUCATION
PAPER 1

INSTRUCTIONS TO CANDIDATES

- *Answer any **five** questions in this paper in the answer booklet provided*

Questions	1	2	3	4	5	6	Total
Score							

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1. (a) Outline **seven** importance of CRE to a secondary school student in Kenya. (7mks)

   (b) Describe the second account of creation in Genesis 2:4b-25. (7mks)

   (c) Give **six** traditional African views of creation. (6mks)

2. (a) Describe the call of Moses in Exodus 3:1-22. (8 mks)

   (b) Give reasons why Moses was reluctant to go back to Egypt. (6 mks)

   (c) What do Christians learn about God from the call of Moses? (6 mks)

3. (a) Outline seven ways in which King Jeroboam promoted the spread of idolatry in Israel. (7 mks)

(b) Give seven reasons why Elijah was uncompromising in his attitude to the worship of Baal. (7 mks)

(c) State six reasons why Christians should fight against the spread of devil worship in the society. (6 mks)

4. (a) State **six** titles given to prophets in the Old Testament. (6mks)

   (b) Explain the evils committed by other nations that were to be punished by God according to Prophet Amos. (7mks)

   (c) Mention **seven** ways how Christians can avoid God's punishment today. (7mks)

5. (a) Describe how the people of Judah renewed their covenant with God under the leadership of Ezra. (8 mks)

   (b) Give **five** reasons why Nehemiah carried out religious reforms in Judah. (5 mks)

   (c) In what ways do Christians renew their covenant faith with God? (7 mks)

6. (a) Identify **seven** occasions when prayers were conducted in Traditional African societies. (7 mks)

(b) Outline **seven** roles of kinship system in traditional African society. (7 mks)

(c) What changes have taken place in property ownership in Traditional African communities.(6 mks)

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

Kenya Certificate of Secondary Education

CHRISTIAN RELIGIOUS EDUCATION

Paper 2

21/2 hours

Instructions to candidates

a) Write your name, admission number and class in the spaces provided above.
*b) This paper consists of **six** questions.*
*c) Answer any **five** questions in the answer booklet provided.*
d) Each question carries 20 marks.
e) Candidates should answer questions in English

For Examiner's Use Only

Questions	1	2	3	4	5	6	Total
Score							

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1. (a) Explain the Jewish expectations of the Messiah. (7 marks)

(b) Explain **four** differences between the annunciations of the birth of John the Baptist and Jesus Christ. (8 marks)

(c) State **five** ways in which Christians should respond to childlessness in Kenya. (5 marks)

2. (a) Describe the feeding of 5000 people as narrated in Luke 9:10-17. (7 marks)

(b) State **seven** impacts of the miracles of Jesus in his ministry. (7 marks)

(c) Show how Christians carry on with the work of Jesus today. (6 marks)

3. a) Describe the **three** incidents that Jesus used to teach on duties and privileges of discipleship in Luke 9: 57-62. (6marks)

b) Outline **seven** lessons that Christians learn from the parable of the dishonest steward in Luke 16:1-18. (7marks)

c) List **seven** signs that have been fulfilled today from Jesus' teaching on eschatology (7marks)

4. (a)Explain the gifts of the Holy Spirit as taught by Saint Paul. (7 marks)

(b)Explain the New Testament teaching on the people of God. 1 Peter 2:9-10. (5 marks)

(c)State **seven** causes of disunity in the church in Kenya today. (7 marks)

5. (a) State **seven** ways in which self-employment is important in Kenya today. (7 marks)

(b) Outline **seven** factors that may lead to the misuse of leisure. (7 marks)

(c) What is the role of the church in promoting self-employment? (6 marks)

6. a) Identify **eight** areas of co-operation between the Church and the State in Kenya.(8marks)

b) Explain the Christian view on organ transplant. (6marks)

c) State **six** ways how Christians help in transforming the Kenyan social life. (6marks)

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

101/1
ENGLISH
Paper 1
(Functional writing, cloze test
and oral skills)
2 Hours

Instructions to students

1. Write your name, admission number and class in the spaces provided above.
2. Answer **all** questions in this question paper.
3. All you answers **must** be written in the spaces provided in this question paper.
4. **This paper consists of 7 printed pages.**

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Question	Max. Score	Student's Score
1	**20**	
2	**10**	
3	**30**	
Total	**60**	

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1. Your class, Form 4 East, has been the best stream whenever examinations are done. During the release of pre-mock results, the Principal mentioned to the other three streams that they should emulate what you do in order to compete favourably with you. After the meeting, he requested you as the class prefect to write a **report** on what your class has done to consistently post good results in all the examinations that are being done in school. **(20 marks)**

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CLOZE TEST (10 MARKS)

2. Fill each of the blank spaces in the passage below with the most appropriate word.

Ngugi wa Thiong'o, original name James Thiong'o Ngugi was in Limuru on January 5, 1938. He is East Africa's (1)**……..…**novelist, (2)**……**popular *Weep Not Child* was (3)**……..…….**first major novel in English by an East African. As he became sensitized (4)**……..…….**the effects of colonialism in Africa, he adopted his traditional name and wrote in the Bantu language of Kenya's Kikuyu people.

Ngugi (5)**…….……**bachelor's degrees from Makerere University, Kampala, Uganda, in 1963 and from Leeds University, Yorkshire, England, in 1964 (6)**……..…….**doing graduate work at Leeds, he (7)**…….**as a lecturer in English (8)**……..……**University College, Nairobi, Kenya, and as a visiting professor (9)**……..….**English at Northwestern University, Evanston, Illinois, U.S. From 1972 to 1977 he was senior lecturer and chairman of the (10)**……..……..**of literature at the University of Nairobi.

(Adapted from: Weep Not Child by Ngugi Wa Thiongo: Nairobi: Heinnemann, 1964)

ORAL SKILLS (30 MARKS)

3. A: Read the story below and answer the questions that follow. (10 marks)

There lived two men who were good friends. One of them was very wise one the other very foolish. One day, they agued between themselves, and one said, "I am the wisest man in the country." The other said, "No, I am the wisest." As there was no way of measuring wisdom, the two men did not know who was wiser than the other.
One day they were discussing the ill-behaviour of their wives and one of them said, "If we want them to behave well we must beat them up. Women are like children, beat them up and they will behave well."
The other said, "No! If you beat your wife, she will become worse." After arguing for a long time, they kept quiet and went home. On reaching his house, the man who was in favour of beating wives began to beat an ox-skin vigorously. When the other heard this, he thought the sound came from his friend beating his wife and he took a stick and beat his wife severely until she fell sick and later died.
When the two men met later, it was now clear who between them was wiser than the other.

(Adopted from: The Hyena and The Rock by B. M. Lusweti: Nairobi: the Macmillian Press Ltd. 1992))

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(i) Suppose you are the one narrating this story, what would you do first before the narration to capture the attention of the audience? (2 mks)

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(ii) How would you deliver the speech by the 2nd speaker? "No! I am the wisest." (2 mks)

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(iii)If you are listening to this story, what would you expect the story teller to do so as to make the story interesting? (4 mks)

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(iv) As the performer how would you know that your audience is paying attention to your performance. (2 mks)

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B: You are a radio presenter and you are scheduled to interview a prominent politician about the current debate on IEBC commissioners.

(i) What preparations would you carry out before the interview? (2 mks)

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(ii) What strategies would you employ during the interview session? (2 mks)

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C: As the school captain, you are part of the reception committee that is receiving the guest of honor who has just arrived for the Annual Prize Giving day. Complete the conversation below using the most appropriate language. (6 mks)

Guest: Good morning. I guess you are the school captain, am I right?

You:

……

……

……

……

(3 mks)

Guest: Thank you. I have heart a lot about you. It's my pleasure to meet you.

You:

……

……

(2 mks)

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Guest: I hope the current class with do as well as last year's class. Have you set a target?

You: Yes sir. We have set a higher target.

Guest:

……

……

(1 mk)

You: Actually sir, that class was first of all very motivated and secondly they were determined to break a record.

Guest: I am glad to hear that. Keep up the good work.

D: Which intonation would you use at the end of each line of the following verse: (3 mks)

And behold in walked the groom. ……..

But wait, is that the bride? ……..……

Without her wedding gown? ……...

E: Underline the part you would stress in the **bolded** words. (2 mks)

(i) You need to **appreciate** my efforts

(ii) I gave her a **surprise.**

F: Give a homophone for each of the following words. (3 mks)

(i) Barren ……..

(ii) Bore ……..

(iii) Mean ……..

G: Using the pronunciation of the vowel sounds highlighted in the following sets of words, pick the odd one out. (2 mks)

(i) Sl<u>o</u>w h<u>o</u>nk pl<u>o</u>t

(ii) F<u>e</u>nd h<u>e</u>n m<u>e</u>re

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

101/2
ENGLISH
Paper
(Comprehension, Literary
Appreciation and Grammar)
$2^{1}/_{2}$ hours

Write your name and index number in the spaces provided above.
Answer all the questions in this question paper.
All answers must be written in the spaces provided in the question paper.

For examiner's use only

Question	***Maximum***	***Score***
1	***20***	
2	***25***	
3	***20***	
4	***15***	
Total	***80***	

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1. ***Read the Passage below and answer the questions that follow.*** ***(20 marks)***

Society has failed and parents have not played their role fully in raising their children. This is according to Jeff Ngari, a counseling psychologist and a deacon with the Reformed Catholic Church. Jeff says the issue of teenage mothers is so big that it should be considered a cry for help. He adds that today, children lack the guidance they require when it comes to having independent social interactions.

"The idea is not to block them from *forming* their own relationships, but to make them understand what it means to be in a relationship, especially with the opposite sex, and how far this relationship should go," says Jeff.

And just like the rest of society, parents have not been spared by the wave of moral decay and thus, according to Jeff, they have failed as role models for their children. Due to this, many teenagers are picking up social ills from their parents-the very people they are supposed to look up to.

"For instance, a teenager who has seen his or her mother repeatedly sleep out or come home in the wee hours of the morning will most likely be excited about staying out late out of curiosity, "he says, adding, "this is happening to most of our homes today."

Jeff says many parents are engaging carelessly in extra-marital relationships that leave very little to the imagination of their children, and this is likely to be seen as a normal thing by children, especially teenagers. As a result, there are many avenues through which teenagers can explore the issue of sex and the greatest worry is that girls need to be rescued.

"The boy invariably walks away scot-free as the school, society and church turn their full attention on the girl and judge her," he says that adding that it is one of the issues that the Reformed Catholic Church is trying to address so that children such as these can be recognized instead of being neglected.

"This is not to say that teenage pregnancy is right, but it is a social ill that must be fought from family level, within the school setting, in the church and the wider society," he says.

Most teenage mothers experience rejection and abuse by their families, friends and wider community, including the church. "No wonder these girls abandon their babies either in toilets or litter bins. The effects of rejection can be fatal. Rejection by society is the worst thing anybody can suffer. It kills from within. That is why teenage motherhood is a cry for help and family support is very important, as the result is children giving birth to, and trying to raise babies."

Jeff notes that without any know-how, finances or proper structures, teenage mothers face a big challenge. Add to this the stigma that comes with being regarded as immoral. "Yet we know that not all teenage sex is consensual. There are cases of grown men preying on innocent girls."

Abortion, or an attempt to carry it out, complicates an already complicated situation, especially if crude methods are used. Besides, there is a post-abortion self-stigma that does not go away.

"In the course of my career, I have met mature women who tell me they had abortions when they were very young and they still feel guilty decades later. Some even go to the extent of saying, 'My first-born would be this or that age.' It is very painful."

In Kenya, four in every 10 women who die from unsafe abortion are adolescents; 70% of adolescents engage in high-risk unprotected sex. This is according to a research paper presented by Dr. Richard O. Muga of the National Coordinating Agency for Population and Development, Nairobi-Kenya, 2006.

The alarming figures are why Margaret Muyanga, a counseling psychologist, says open communication between teenagers and parents can be very instrumental in curbing any post- pregnancy abortion or even worse, suicidal tendencies.

(Adopted from Daily Nation Wednesday July .30", 2008)

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a) Explain how parents have contributed to the moral decay of their children. (2marks)

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b) Give the factors leading to teenage pregnancy, according to the passage. (3marks)

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c) What is the consequence of the rejection and abuse that teenage mothers experience? (2marks)

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d) Jeff says the issue of teenage mothers is so big that it should be considered a cry for help. **Rewrite** the sentence above in direct speech. (1mark)

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e) **In not more than 50 words, summarize** the consequences of teenage pregnancy.(4marks)

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Rough Copy

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Fair Copy

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f) What solution does the writer offer to curb teenage pregnancy? (2marks)

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g) Identify and explain an instance of **irony** in the passage. (3marks)

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h) Explain the **meaning** of the following words as used in the passage. (3marks)

(i) Scot-free

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(ii) Stigma

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(iii) Consensual

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2. Read the following extract from the play "The Samaritan" by John Lara and then answer the questions after. *(25 marks)*

Nicole: I have been reading the posts on The Samaritan and they are all about leaders, public officials and even private individuals. You have not been singled out in any way

Mossi: Far from the truth! Take the issue of development, for example. Everywhere in The Samaritan, I am being accused of inflating the cost of projects and presiding over shoddy Municipal works. Am I indeed responsible for that?

Nicole: Maybe it is because you are the overall leader. The buck with you, as they say.

Mossi: Oh, yes, it's easy to think so because I am the overall custodian of the public good in our Municipality. But take any project, such as the construction and maintenance of secondary roads in our town. Are any roads ever constructed? I will tell you what happens. Only a few kilometres of road are usually dug up and then levelled. Then the contractor pours old black oil and claims the road is tarmacked. Today, our

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secondary roads look like part of an abandoned battlefield where bombs were detonated. Even tractors can get stuck in those roads! Yet, the Council pays top dollar for these roads each year! Am I responsible?

Nicole: Tell me, Your Worship.

Mossi: (Standing up and pacing about the boardroom) It is my Deputy! That irredeemable gossip and broker! As you know, he doubles up as our Municipal Secretary for the Department of Physical infrastructure. He uses this position to ensure only his companies or those of his relatives win tenders for road construction in our Municipality. The same happens with regard to tenders for the construction of bridges, pavements, drains and watercourses. Sadly, they don't de de any meaningful work! They simply **misappropriate** the funds!

Nicole: So what does that have to do with the people?

Mossi: Doesn't bother you that the people overwhelmingly voted for this kind of a person knowing very well he has never accomplished anything in his life other than swindle the people?

Nicole: Oh, did they know?

Mossi: Of course, they did! There is hardly any person he has not conned in this town! You always find him leaning on the street poles in cur town's backstreets, gazing vacantly into empty spaces like an evil spirit-waiting for fake title deeds to be printed. He prints ten title deeds for the same plot, and then sells the same plot to ten different people. Yet the people went ahead and voted for him! Why do the people glorify evil and mediocrity, and then turn and whine when it hurts them? And you know what?

QUESTIONS

(a) Place this excerpt in its immediate context. **(4mks)**

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(b) Mayor Mossi claims that Hon. Ramdaye has conned almost everyone in their town. Mention one Council leader who has been conned and explain how. **(2mks)**

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(c) Discuss **two themes** raised in the excerpt**.** **(4mks)**

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(d) Identify two character traits of Hon. Ramdaye brought out in the excerpt. **(4mks)**

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(e) What two stylistic techniques the writer has employed in the excerpt? **(4mks)**

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(f) (i) They simply misappropriate the funds! *(Rewrite in the passive)* **(1mk)**

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(ii) Only a few kilometres of road are usually dug up and then levelled.*(Rewrite in the active voice)* **(1mk)**

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(iii) Maybe it is because you are the overall leader. *(Rewrite replacing "may be" with another word)*

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(iv) The buck stops with you, as they say. *(Rewrite adding a question tag)* **(1mk)**

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(v) Everywhere in The Samaritan, I am being accused of inflating the cost of projects and presiding over shoddy Municipal works. (Rewrite replacing the underlined word with a phrasal verb) **(1mk)**

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(g) Explain the meanings of the following words used in the excerpt. **(2mks)**

- Misappropriate

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- Inflating

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3. ***Read the poem below and then answer the question that follow.*** ***(20 marks)***

DEATH OF MY FATHER

His sunken cheeks, his inward-looking eyes,
The sarcastic, scornful smile on his lips
The unkempt, matted, grey hair,
The hard, coarse sand-paper hands,
Spoke eloquently of the lifehe had lived.
But I did not mourn for him.

The hammer, the saw and the plane,
These were his tools and his damnation,
His sweat was his ointment and his perfume.
He fashioned dining tables, chairs, wardrobes,
And all the wooden loves of colonial life.
No, I did not mourn for him.

He built colonial mansions,
Huge,unwieldy,arrogant constructions;
But he squatted in a sickly mud-house,

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With his children huddled stuntedly,
Under the bed-bug bed he shared with Mother.
I could not mourn for him.

I had already inherited
His premature old-age look,
I had imbibed his frustration;
But his dreams of freedom and happiness
Had become my song, my love.
So, I could not mourn for him.

No, I did not shed any tears;
My father's dead life still lives in me,
He lives in my son, my father,
I am my father and my son.
I will awaken his sleepy hopes and yearnings,
But I will not mourn for him,
I will not mourn for me.

a) Identify the persona. (2 marks)

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b) What is the poem talking about? (3 marks)

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c) Comment on the **alliteration** that is used in the poem? (2 marks)

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d) Apart from alliteration, identify and explain any other **two** aspects of style that the poet has used.(4 marks)

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e) What reason does the persona give for not mourning his father's death? (3 marks)

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f) What is the father's profession from the poem? (1 mark)

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g) Explain the **meaning** of the following lines as used in the poem: (3 marks)

i)The hard, coarse sand-paper hands,

Spoke eloquently of the life he had lived.

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ii) His premature old-age look,

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iii) I will awaken his sleepy hopes and yearnings,

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h) What is the **attitude** of the persona towards his father's life? (2 marks)

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4. a) Rewrite the following sentences according to the instructions after each (2marks)

i) The young man wept uncontrollably when he learnt that his whole family had perished in Gate Mall terrorist attack. (**Begin**: Having……)

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ii) Muchangi regrets not having campaigned much for the post of a school captain. He realized he was not the students' favourite after the polls. (Rewrite using the **present participle**)

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b) *Rewrite the following sentences using* ***impersonal passives****.(2 marks)*

i) The motorist could not use the southern by-pass. People believed the lions had been let loose.

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ii) People say Chapakazi works 18 hours a day.

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c) Using the verb in brackets form ***a phrasal verb****to replace the underlined word. (3marks)*

i) It takes a lot of challenge to <u>nurture</u> a child into an adult. (bring)

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ii)The politicians' dirty tricks did not <u>succeed.</u> (come)

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iii)It is not good to <u>desert</u> one's family. (walk)

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d)*Fill in the blanks with an appropriate* ***preposition*** *(3 marks)*

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i) We wondered if there was need **……**such equipment.

ii) Oundo, get **…….……** the wet wall immediately!

iii)She was born **……..……** rich parents.

e) Rewrite the following sentences according to the instructions given. (2 marks)

i) The teacher was so disappointed. She ordered the students to leave the scene. (Rewrite into one sentence beginning with **'so'**)

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ii) If you have nothing else to say, we will adjourn the meeting now.(**Begin with**: Unless…)

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*f) Fill in the gaps with the given **adjectives** in the correct order. (2 marks)*

i) Wayne Rooney drives a …….car.(Italian, silver, small, flashy, sports)

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ii) The ……Member of Parliament was thrown out of the house by the sergeant-at-arms.

(Light-skinned, arrogant, tall, young)

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

ENGLISH
Paper 3
21/2 hrs

INTRUCTIONS TO CANDIDATES

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

FOR EXAMINER'S USE ONLY

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

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1.Imaginative Composition **20 marks**

Either

a) Write a story ending with the following sentence: Truly, to be successful, you must always be humble.

Or

b) Write a story to illustratethe proverb 'Never count your chicks before they hatch'

2.Compulsory Set Text: The Samaritan **20 marks**

Write an essay on the disputes that arise and how each is resolved in the novel **Fathers of Nations** by **Paul B. Vitta**.

Optional Set Texts

Answer one question only

Either

a) The Short Story: A Silent Songs

Lack of courtesy between the police and civilians leads to lethal conflicts. Justify the validity of this statement using illustrations from Meja Mwangi's Incident in the park. **(20mks)**

OR

b) **Kazuo Ishiguro: Artist of The Floating World.**

The author has been able to effectively employ symbolism to bring out the message of the text. Illustrate the effectiveness of this style in the text An Artist of The floating world by Kazuo Ishiguro **(20mks)**

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

312/1

GEOGRAPHY

Paper 1

Time: 2 $^{3}/_{4}$ Hours

Instructions to Candidates

- This paper has two sections A and B
- Answer ALL the questions in section A. In section B, answer question 6 and any other two questions.

FOR EXAMINER'S USE

SECTION A	
QUESTION 6	
QUESTION 7	
QUESTION 8	
QUESTION 9	
QUESTION 10	

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SECTION A

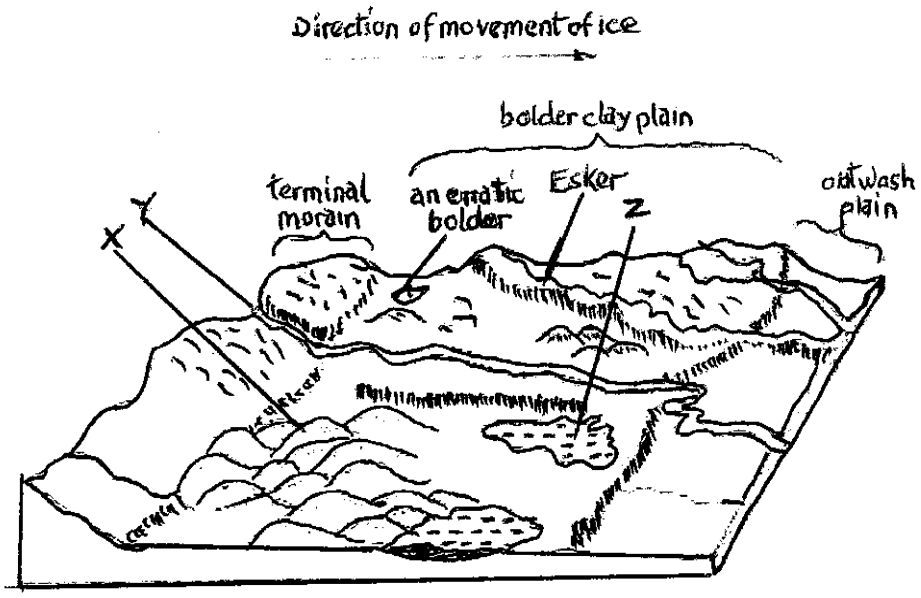
Answer All the questions in this section

1. (a) State three effects of revolution of the earth. (3marks)
(b) The local time at Tema on 0^0 longitude is 12.00 noon. Calculate the local time at Hola 40^0E.(2marks)

2. (a) What is temperature? (2marks)
(b) Give three factors that determine the amount of solar isolation received on the earth's surface.(3marks)

3. (a) What are extrusive volcanic features? (2marks)
(b) Apart from basic lava domes, name three other vent eruption volcanic features. (3marks)

4. (a) State two conditions that may lead to glacial deposition. (2marks)
(b) The diagram below shows some features formed from glacial deposition in lowland areas. Name the features marked X,Y and Z. (3marks)



5. (a) Give two processes through which wind erodes the desert surface. (2marks)
(b) Describe how a mushroom block is formed. (3marks)

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SECTION B

Answer question 6 and any other Two from the remaining.

6. Study the map of Busia 1:50,000 (sheet 101/1) provided and answer the following questions.

(a) (i) What is the vertical interval of the area covered by the map? (1mark)

(ii) Give the six figure grid reference of the chief's house, (2marks)

(iii)What was the magnetic variation of the area when the map was drawn? (1mark)

(iv) What is the height of Odhiado hill? (2marks)

(b) (i) Measure the distance of the international boundary from point where it crosses northing 41 to Northing 50 (Give your answer to the nearest 100 meters) (2marks)

(ii) Calculate the area enclosed by river sio, south of Northing 50, west of all-weather road. Loose surface (B8/3) and East of the international boundary. (2marks)

(c) (i)Using a vertical scale of 1cm to represent 40 meters, draw a cross section along Northing 37 from Easting 24 to Easting 31. On the cross-section mark and name;

- All weather road; loose surface
- River
- Swamp
- Hill
- Riverine trees

(ii)Calculate the vertical exaggeration of the cross section (2marks)

(iii) Determine the intervisibility of the cross section you have drawn. (2marks)

(d) Describe the drainage of the area covered by the map. (5marks)

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7. (a) Identify four causes of earth movements. (4marks)

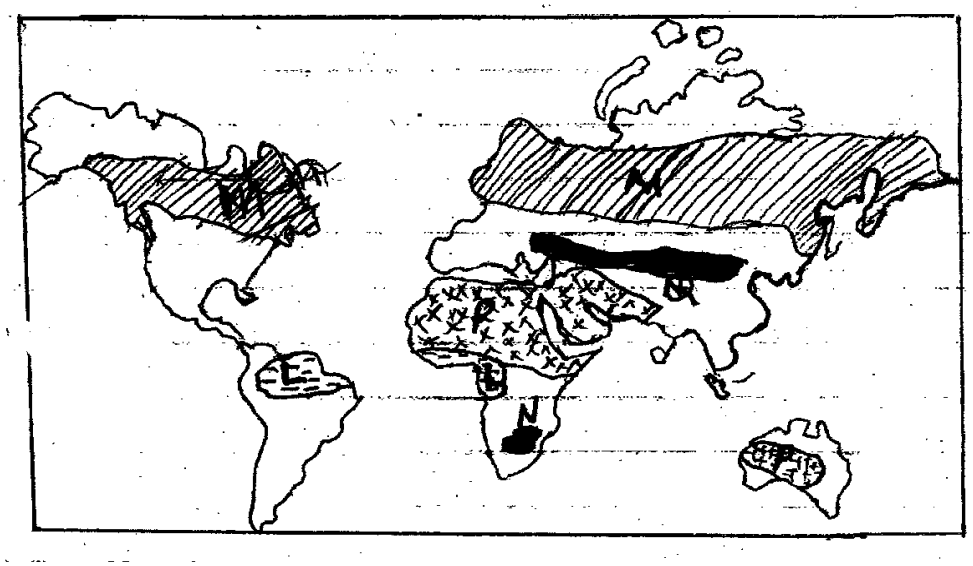
(b)(i) Name three types of tectonic plate boundaries. (3marks)
(ii) Give four reasons why it is necessary to study the plate tectonic theory. (4marks)

(c)The map below shows the location of some fold mountains ranges.



(i) Name the mountains ranges marked W, X Y and Z (4marks)
(ii) Apart from Fold Mountains, name two other features associated with folding.
(2marks)
(iii)Explain four positive effects of Fold Mountains to human activities.
(8marks)

8. Use the map below to answer question (a) and (b)



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(a)(i) Name the:

- Vegetation marked L,M (2marks)
- Grasslands marked N,Q (2marks)

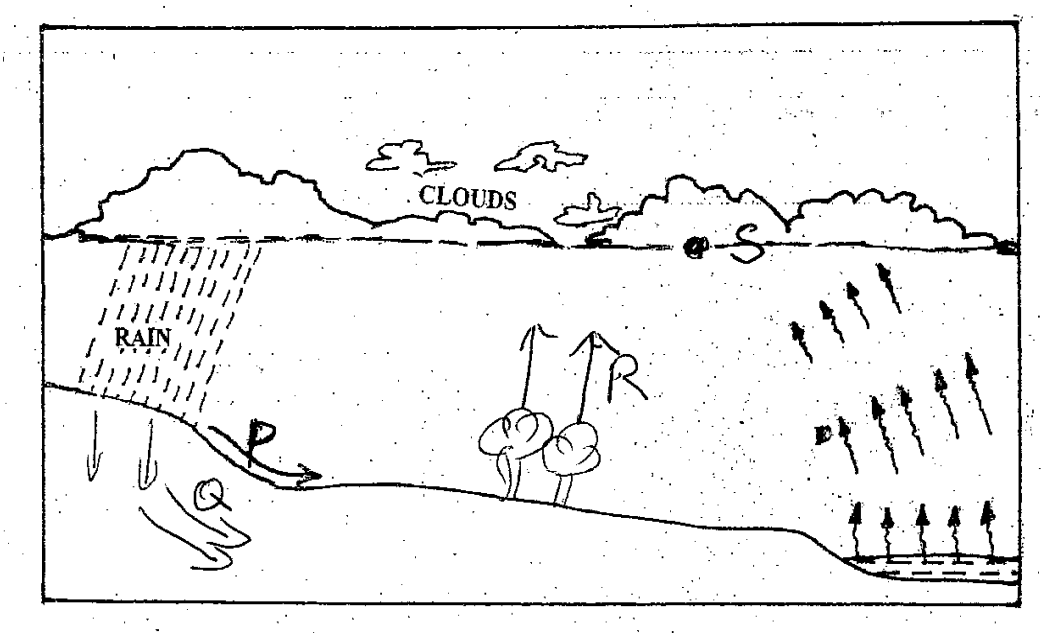
(ii) Identify the type of climate marked P. (1mark)

(b) Explain four ways in which vegetation in the region marked P has adopted to the climatic conditions. (8marks)

(c)(i) Describe the characteristics of the equatorial climate. (5marks)
(ii) What is climate change? (2marks)
(iii)State two natural causes of climate change. (2marks)

(e) State four consequences of climate change on the physical environment. (4marks)

9. (a)(i) Distinguish between a river divide and interfluves. (2marks)
(ii) The diagram below shows the processes of hydrological cycle. Name the processes marked P,Q,R and S (4marks)



(iii)Explain two significance of the hydrological cycle. (4marks)
(b) Describe two processes by which a river transports its load. (4marks)
(c) Describe the following drainage patterns:
(i) Superimposed (3marks)
(ii) Dendritic (2marks)

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(d)Your class is planning to carry out a field study on a river in its old stage.

(i) Apart from flood plain, name two other features you are likely to identify (2marks)

(ii) State three activities students would engage in during the field study. (3marks)

(iii)Describe three characteristics of the flood plain they would identify. (3marks)

10. (a)(i) Define the term soil profile. (2marks)

(ii) Outline three factors that contribute to the development of soil catena. (3marks)

(b) Explain how the following factors influence the formation of soil.

- Parent rock (3marks)
- Biotic factors (3marks)

(c) You intend to carry out a field study on the management and conservation of soil in the area near your school.

(i) Explain how the following influences the characteristics of the soil.

- Irrigation (4marks)
- High temperature (2marks)

(ii) Give three reasons why you are likely to rely on observation as a method of data collection. (3marks)

(d) Describe laterisation as soil forming process. (5marks)

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NAME: ……..

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SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

312/2
GEOGRAPHY
Paper 2
Time: 2¾ hours

INSTRUCTIONS TO STUDENTS

- *This paper has **two** sections **A** and **B***
- *Answer **ALL** the questions in section **A**. In section **B** answer questions **6** and any other **TWO** questions.*

SECTION A	
QUESTION 6	
QUESTION 7	
QUESTION 8	
TOTAL	

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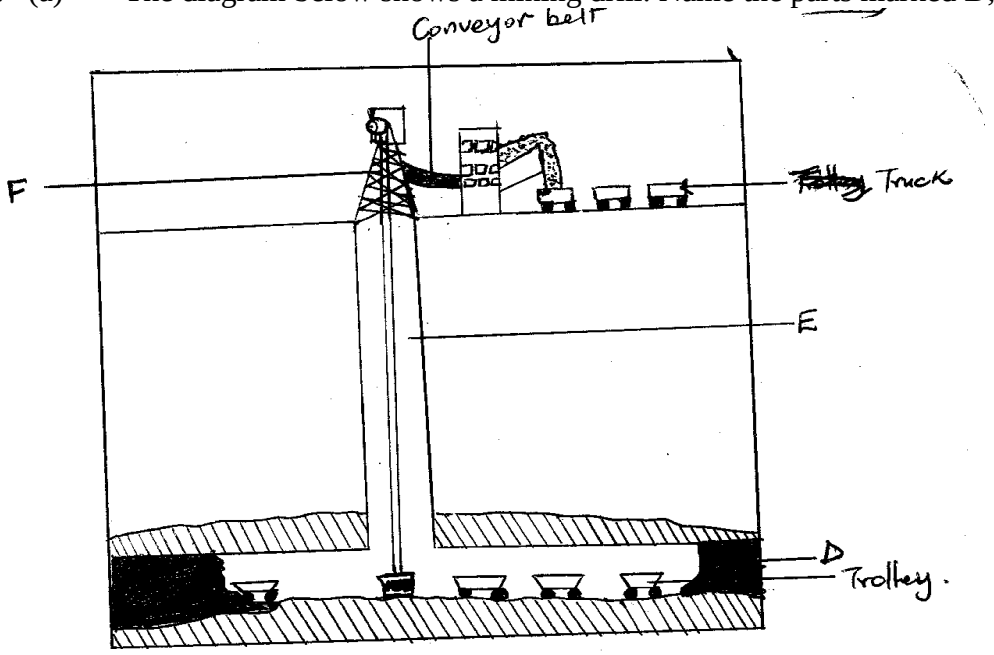
SECTION A

*Answer **ALL** the questions in this section.*

1. (a) The diagram below shows a mining drill. Name the parts marked D, E & F. (2 mks)



(b) State <u>two</u> factors necessary for the occurrence of oil. (2 mks)

2. (a) Give <u>two</u> characteristics of softwood forests in Canada. (2 mks)

(b) State <u>three</u> problems that affect forestry in Canada. (3 mks)

3. (a) State <u>three</u> physical conditions necessary for the growing of cocoa. (3 mks)

(b) Outline two problems which are experienced in cocoa farming in Ghana.(2 mks)

4. (a) Distinguish between balance of trade and balance of payment. (2 mks)

(b) State <u>three</u> efforts made by the Kenya government to promote external trade. (3 mks)

5. (a) Identify <u>three</u> causes of lightening. (3 mks)

(b) State <u>two</u> advantages of windstorms. (2 mks)

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SECTION B

6. The photograph below shows beef farming in Kenya. Use it to answer question (a).



(a) (i) Identify the type of photograph. (1 mk)

(ii) Describe the features shown on the photograph. (3 mks)

(iii)What indicators show that the area is suitable for beef farming. (3 mks)

(b) Explain <u>four</u> measures taken by the Kenyan government to improve beef farming in Kenya. (8 mks)

(c) (i) Name <u>two</u> exotic beef cattle kept in Argentina. (2 mks)

(ii) List <u>two</u> areas in Argentina where beef cattle rearing is practised. (2 mks)

(iii)Explain <u>three</u> physical favouring beef farming in Argentina. (6 mks)

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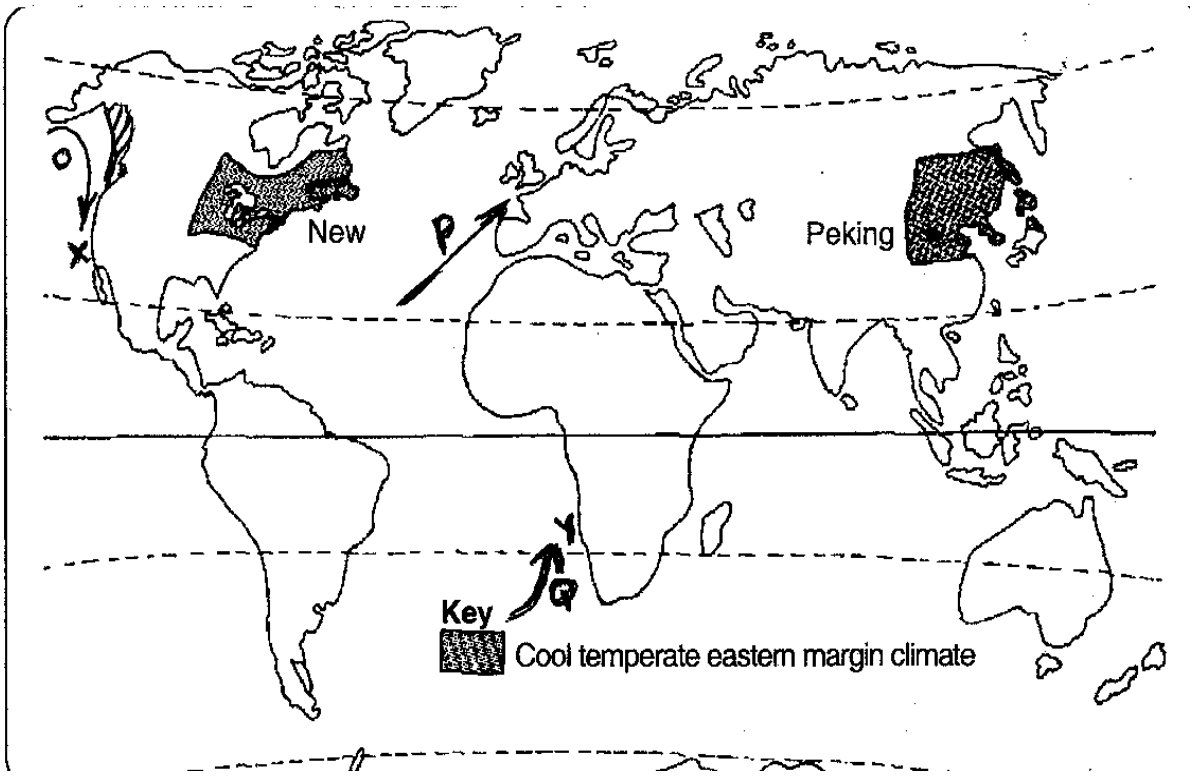
7. (a) (i) Name three types of fish. (3 mks)

(ii) State three conditions for the growth of planktons in the ocean. (3 mks)

(b) Study the world map provided and answer the questions that follow.



(i) Name the fishing grounds marked X & Y. (2 mks)

(ii) Identify the Ocean currents marked O,P, Q. (3 mks)

(c) Describe three major physical conditions that favour development of fishing ground X. (6 mks)

(d) (i) Apart from Purse siene method, name three modern methods of fishing.(3 mks)

(ii) Describe how purse seine method is used to catch fish. (5 mks)

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8. (a) (i) What is geothermal power? (2 mks)

(ii) Mention <u>three</u> locational sites of geothermal power production in Kenya. (3 mks)

(iii)State <u>four</u> problems facing geothermal power development in Kenya. (4 mks)

(b) (i) Give <u>three</u> reasons why Kenya must develop wind energy. (3 mks)

(ii) Name <u>three</u> areas in Kenya where wind mills have been installed.(3 mks)

(c) (i) What is management of energy. (2 mks)

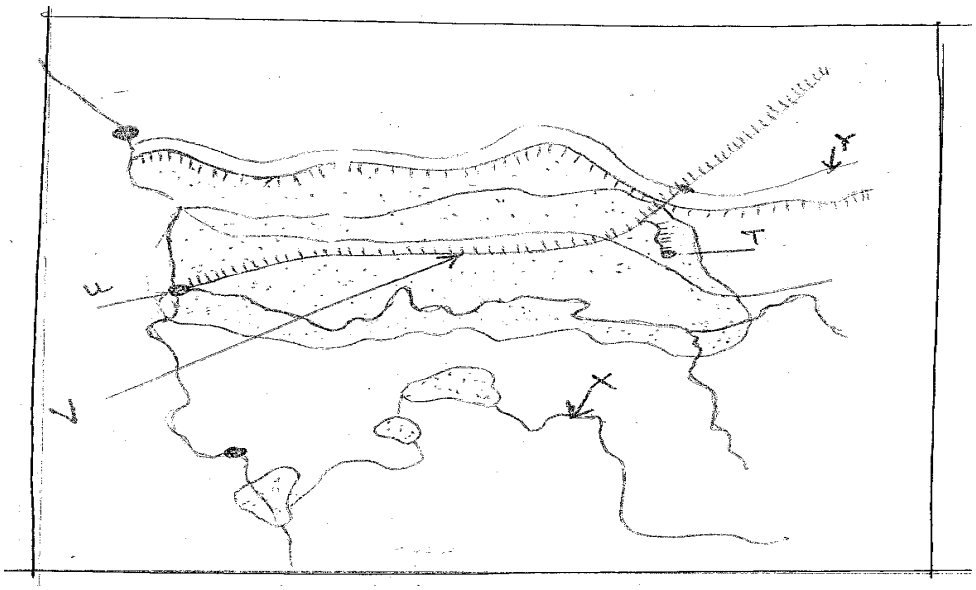
(ii) Explain <u>four</u> measures taken by the Kenya government to manage and conserve energy. (8 mks)

9. (a) Define the term cottage industry. (2 mks)

(b) Outline <u>four</u> reasons why the county government of Nakuru should encourage foreign investors to establish jua-kali industries in the county. (4 mks)

(c) Explain <u>three</u> factors which may lead to industrial inertia. (6 mks)

(d) The map below represents the Ruhr industrial region of Germany. Use it to answer the questions that follow.



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Ruhr – industrial Region and Transportation Lines

(i) Name the rivers marked X and Y. (2 mks)

(ii) Identify the towns labeled T and U. (2 mks)

(iii) Name the canal labeled V. (1 mk)

(iv) Name any <u>two</u> forms of power used in the Ruhr region apart from coal. (2 mks)

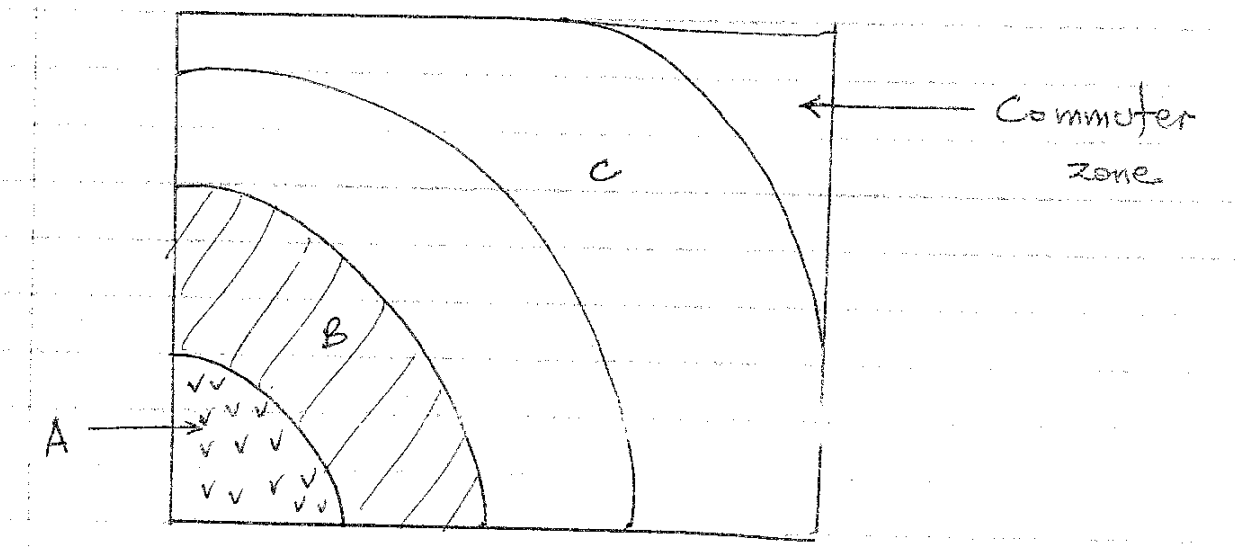
(v) Explain <u>three</u> factors that led to the growth of industries in the Ruhr region. (6 mks)

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

(ii) State <u>three</u> physical factors which influence the location of settlement. (3 mks)

(b) Give <u>three</u> social problems experienced in Kisumu city. (3 mks)

(c) The diagram below represents the functional zones of an urban centre. Use it to answer questions (i) and (ii).



(i) Name the zone marked B. (1 mk)

(ii) Give <u>four</u> characteristics of the zone A. (4 mks)

(d) Explain <u>three</u> factors that led to the growth of growth of Eldoret Town.

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

Kenya Certificate of Secondary Education

HISTORY AND GOVERNMENT

Paper 1

Instructions to candidates

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

*(b) Answer **all** the questions in section **A, three** questions from section **B** and **two** questions from section C.*

(c) Answers to all the questions must be written in the answer booklet provided.

*(d) **This paper consists of 3 printed pages**.*

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

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SECTION A (25 marks)

*Answer **all** the questions in this section*

1. Identify the **main** source of information on Pre-history. (1 mark)

2. State **two** reasons for the migration of the Borana from their cradleland into Kenya. (2 marks)

3. Give **one** step the Kenya Government has taken to solve food shortages. (1 marks)

4. What was the **main** importance of age set systems among the Kenyan communities during the pre-colonial period? (1 mark)

5. Give **two** special rights of the older members of the society as provided for in the New Kenya constitution. (2 marks)

6. Identify **two** main groups that offered education in Kenya during the colonial period. (2 marks)

7. What was the **main** reason why Africans were not allowed to grow cash-crops in colonial Kenya? (1 mark)

8. Give the **main** outcome of the lyttelton constitution of 1954. (1 mark)

9. Identify the representative of Africans in the legco before the appointment of Eliud Mathu. (1 mark)

10. Give **two** laws that regulate elections in Kenya. (2 marks)

11. Give the **main** function of the National Police Service Commission. (1 mark)

12. State **one** role of the supreme court of Kenya. (1 mark)

13. Identify **two** social contributions of Daniel Arap Moi in the history of Kenya. (2 marks)

14. Identify **one** characteristic of African socialism that promotes national development in Kenya. (1 mark)

15. Identify **two** agricultural schemes established in Kenya after independence. (2 marks)

16. Name **two** members of the county executive committee. (2 marks)

17. Identify **one** fund established by the constitution of Kenya 2010. (1 mark)

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SECTION B (45 marks)

*Answer any **three** questions in this section*

18. (a) Identify **three** groups of Eastern Cushites in Kenya. (3 marks)

(b) Describe the social organization of the Cushites. (12 marks)

19. (a) What were the terms of Anglo-German Agreement of 1886? (3 marks)

(b) Explain **six** reasons why the British applied indirect rule in Kenya. (12 marks)

20. (a) Name **three** early political movements in Kenya (3 marks)

(b) Explain **six** challenges faced by the early political movements in Kenya. (12 marks)

21. (a) Give **five** characteristics of independent movements in Kenya. (5 marks)

(b) Explain **five** achievements of KAU. (10 marks)

SECTION C (30 marks)

*Answer any **two** questions in this section*

22. (a) State **five** resolutions reached after the Second Lancaster Conference of 1962. (5 marks)

(b) Describe the features of the independence constitution. (10 marks)

23. (a) State **three** functions of cabinet secretaries. (3 marks)

(b) Explain **six** functions of the Independent Electoral and Boundaries Commission. (12 marks)

24. (a) Identify **three** members of the County Assembly. (3 marks)

(b) Explain **six** roles of the County Assembly. (12 marks)

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

Kenya Certificate of Secondary Education

HISTORY AND GOVERNMENT

Paper 2

Instructions to candidates

*(f) This paper consists of **three** sections; **A, B** and **C.***

*(g) Answer **all** the questions in section **A, three** questions from section **B** and **two** questions from section C.*

(h) Answers to all the questions must be written in the answer booklet provided.

*(i) **This paper consists of 3 printed pages**.*

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

TOTAL SCORE

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

SECTION A (25 marks)

*Answer **all** the questions in this section*

1. State **one** feature of a government. (1 mark)

2. Give **two** reasons why early man moved from the forest to settle in the grasslands.

   (2 marks)

3. Identify the earliest method of trade used during the Trans-Saharan trade. (1 mark)

4. State **two** forms of picture writing during the early civilization. (2 marks)

5. Name **two** countries that pioneered space exploration in the world. (2 marks)

6. Give **one** way in which poor transport network hinders industrialization in the Third World countries. (1 mark)

7. Identify the contribution of Dr. Christian Bernard in the field of medicine. (1 mark)

8. State **one** way in which centralization of power contributed to success in the Buganda Kingndom. (1 mark)

9. Identify **two** ways in which the Industrial Revolution in Europe promoted European colonization of Africa. (2 marks)

10. Name **one** fighting technique that Samouri Toure employed against the French. (1 mark)

11. Give **two** reasons why the Schlieffen plan failed during the First World War. (2 marks)

12. State **two** permanent members of the Security Council. (2 marks)

13. Identify the head of the Commonwealth of Nations. (1 mark)

14. Give **two** roles played by Dr. Kwame Nkrumah in the Pan-African Movement. (2 marks)

15. Identify **two** ways in which the Organisation of African Unity contributed to the liberation of the Southern African countries. (2 marks)

16. State **one** political challenge faced by the Democratic Republic of Congo since Independence. (1 mark)

17. Name the Act of Parliament which marked the beginning of parliamentary control of the

Monarchy in Britain. (1 mark)

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SECTION B (45 marks)

*Answer any **three** questions in this section*

18. (a) Identify **three** irrigation methods used in Egypt. (3 marks)

(b) Explain six similarities in Early agriculture in Egypt and Mesopotamia. (12 marks)

19. (a) State **five** factors for early urbanization in Africa. (5 marks)

(b) Explain how industrial and agrarian growth contributed to urbanization. (10 marks)

20. (a) Identify **three** features of macadamized roads. (3 marks)

(b) Explain **six** advantages of railway transport. (12 marks)

21. (a) Identify **three** types of nationalism in South Africa. (3 marks)

(b) Explain **six** roles of Nelson Mandela in the struggle for independence in South Africa. (12 marks)

SECTION C (30 marks)

Answer any two questions in this section

22. (a) Identify **three** types of spirits in Shona. (3 marks)

(b) Describe the political organization of the Shona. (12 marks)

23. (a) State **five** causes of the Second World War. (5 marks)

(b) Explain **five** reasons why the Axis were defeated during the Second World War. (10 marks)

24. (a) How can one become a member to the House of Lords in Britain? (3 marks)

(b) Explain **six** roles of the Prime Minister in Britain. (12 marks)

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

Kenya Certificate of Secondary Education
Home Science
Paper 1
(THEORY)
2½ hours

INSTRUCTIONS TO CANDIDATES

- This paper contains 3 sections: A, B and C
- Answer **ALL**questions in section A and B and **ANYTWO**questions from section C
- Write your name and index number in the spaces provided above.
- Sign and write the name of examination in the spaces provided above.
- Answer **ALL** the questions in section **A**.
- All answers should be written in the spaces provided on the question paper.

For official Use Only

SECTIONS	**QUESTION**	**MAX. SCORE**	**ACTUAL SCORE**
A	1 – 37	40 MARKS	
B	38	20 MARKS	
C	39 – 41	40 MARKS	
TOTAL			

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SECTION A (40 Marks)

1. Give **four** reasons for preserving food. (2mks)

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2. State **two** aspects of development brought about by child play. (1mk)

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3. Mention **two** desirable qualities of baking flour. (1mk)

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4. Identify **two** pattern symbols that need not to be transferred after cutting out. (1mk)

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5. Give **two** ways of disinfecting towels. (1mk)

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6. Give **two** reasons for dry cleaning clothes. (1mk)

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7. Give **two** reasons why corners of a bed are mitred. (1mk)

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8. Identify **two** preparations done on fabric before cutting out (1mk)

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9. Give **two** reasons for covering food during cooking. (1mk)

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10. Give **two** reasons why aluminum is commonly used to make kitchen utensils (1mk)

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11. Give **two** reasons why it is preferable to include whole grain cereals inthe diet. (1mk)

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12. List **two** stitches used in embroidery. (1mk)

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13. State **four** factors which affect the efficiency of laundry soap. (2mks)

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14. Differentiate between **fastenings** and **opening.** (1mk)

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15. Define **glazing** as used in cookery. (½mk)

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16. Give **two** ways of preventing scalds. (1mk)

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17. Write down **two** desirable properties of acrylic fibres. (1mk)

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18. Differentiate between **thin batter** and **thick batter.** (1mk)

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19. List **two** examples of grease solvents used in laundry. (1mk)

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20. Cleaning a **wooden table** with hot water is discouraged .Give two reasons for this (1mk)

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21. Give **two** uses of eggs in cookery. (1mk)

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22. Give any four factors that affect normal foetal development. (2mks)

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23. Differentiate between **sponging** and **spotting.** (1mk)

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24. State **two** ways of preventing hypertension. (1mk)

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25. Give **two** reasons for coating food. (1mk)

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26. Identify **two** points to observe when buying fish. (1mk)

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27. Give **four** reasons for including fruit salad in a meal. (2mks)

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28. Give **two** reasons for needles breaking during stitching. (1mk)

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29. Give **one** use of a bodkin (1mk)

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30. What is a **Bunion?** (½mk)

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31. Give **two** essential functions of phosphorous in the body. (1mk)

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32. Identify **two** ways of managing kwashiorkor. (1mk)

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33. State **two** factors that make electricity the preferred source of light. (1mk)

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34. Identify **two** points to bear in mind when mending garments. (1mk)

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35. Give **two** reasons why knots should not be used during stitching. (1mk)

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36. Give **two** importance of "basting" in cookery. (1mk)

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37. State **two** desirable qualities of a kitchen floor. (1mk)

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SECTION B (20MARKS)

38. Using the knowledge you have acquired in home science explain how to launder and clean the following items.
(a) A Nylon dress (7mks)

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(b). A neglected kitchen sink. (9mks)

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(c). A stained plastic cup. (4mks)

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SECTION C (40MARKS)

39. (a) Give **five** functions of the Kenya Bureau of Standards (5mks)

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(b) Explain **five** ways of caring for ironing board (5mks)

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(c). Explain the working of a **plain seam** with the aid of clearly labeled diagrams (6mks)

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(d) Identify any **four** conditions that easily destroy vitamin C (4mks)

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40. (a) Outline the steps followed when making a **budget.** (5mks)

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(b)Identify **five** points to consider when selecting a laundry soap (5mks)

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(c) Using well label diagrams, explain the working of a **French seam.** (6mks)

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(d) Give **four** ways in which we can conserve nutrients during food preparation. (4mks)

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41. (a) List **four** pieces of information obtained from a product. (4mks)

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(b) Identify **five** points to consider when serving an invalid (5mks)

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(c) Explain the working of a **machine fell seam** (6mks)

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(d) **Consumer education** is important. Give five reasons why this is so. (5mks)

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NAME: ……..

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

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

HOME SCIENCE

PAPER 2

CLOTHING CONSTRUCTION

PRACTICAL

2 ½ HOURS

A pattern of a pair of short is provided. You are advised to study the sketches, instructions and the layout carefully before you begin the test.

MATERIALS PROVIDED

1. Pattern pieces

A Short front

B Short back

C Front waistband

D Back waistband

2. Plain light weight cotton fabric 90cm wide by 50cm long.
3. Cotton thread to match the fabric
4. Zip 15cm
5. Press – stud
6. Elastic 28 cm
7. Bodkin or safety pin
8. One large A4 envelope

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THE TEST

Using the materials provided cut out and make the **LEFT LEG** of the shorts to show the following processes;

a) Making of the back dart
b) Working of the inner leg seam using double stitched seam
c) Working of the side seam using an open seam
d) Fixing the zip using semi-concealed method
e) Preparation and attachment of the waistband
f) Finishing the waistband using hemming stitches
g) Fixing the press- studs using buttonhole stitches
h) Preparation of the casing and inserting the elastic onto the lower edge of the short. **Do not seal the opening**

At the end of the examination, firmly sew your work, on a single fabric, a label bearing your name and index number. Remove the needle and pins from your work, then fold your work neatly and place it in the envelope provided. Do not put scraps of fabric in the envelope.

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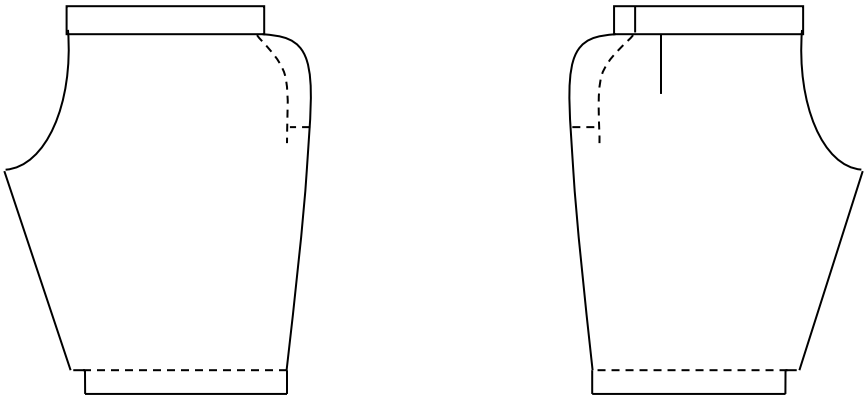
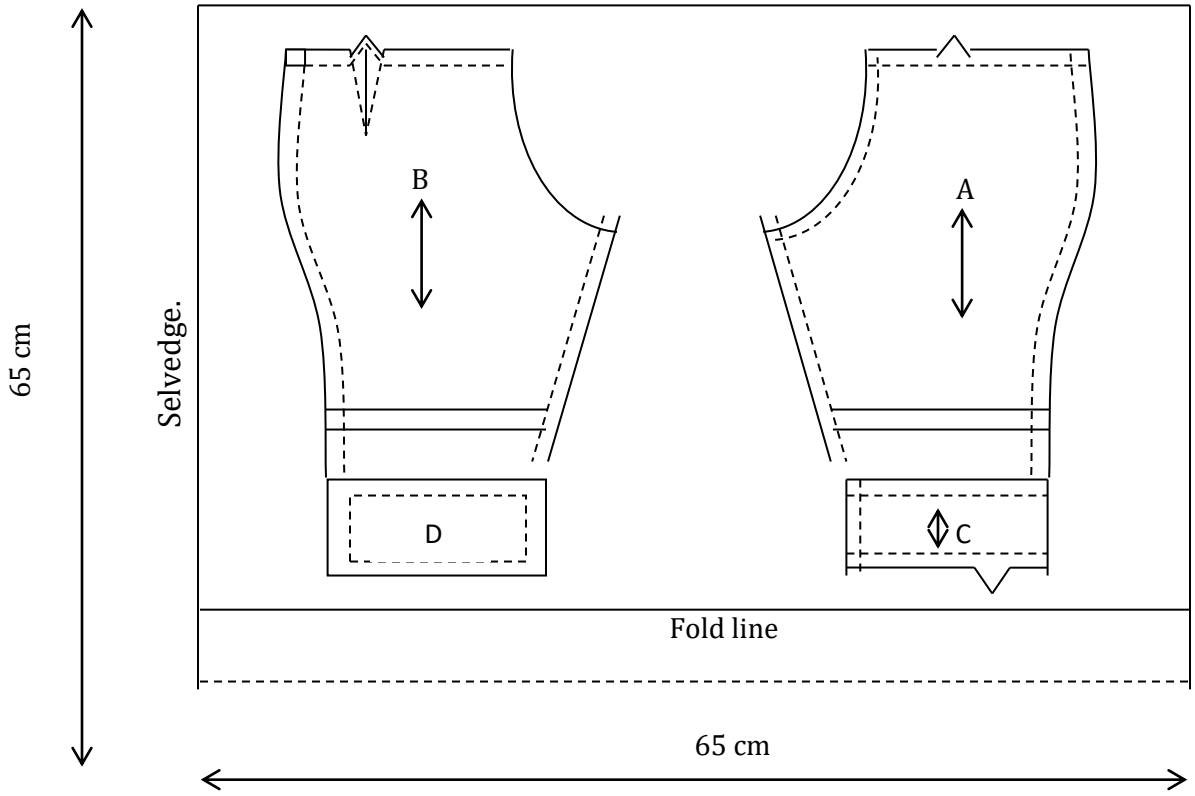
VIEW OF THE PAIR OF SHORTS

FRONT VIEW **BACK VIEW**



LAYOUT (NOT DRAWN TO SCALE



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NAME: ……..

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BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

441/3

FOODS AND NUTRITION

PRACTICAL

Paper 3

Time: 1 ¾ Hours

PLANNING SESSION : 30Minutes

PRACTICAL TEST SESSION : 1 ¼ Hours

INSTRUCTIONS TO CANDIDATES

1. Read the test carefully.
2. Write your name and index number on every sheet of paper used.
3. Text books and recipes may be used during the planning session as reference materials.
4. You will be expected to keep to your order of work during the practical session.
5. You are only allowed to take away your reference materials at the end of the planning session.
6. You are not allowed to bring additional notes to the practical session

This paper consists of 2 printed pages.Students should check the question paper to ensure that all pages are printed as indicated and no questions are missing

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

You are at home for your half- term holiday and your Uncle who is a manual worker pays a visit with a 2 ½ years old child. Using the ingredients listed below, prepare and serve a suitable mid- day meal to include a boiled item, fried item and a nutritious drink for the three of you.

Ingredients

- Beef / poultry.
- Green bananas/potatoes.
- Wheat flour/sifted maize flour.
- Green leafy vegetables.
- Fruit in season.
- Tomatoes
- Dhania
- Carrots
- Milk
- Sugar
- fat / oil
- Seasonings.

PLANNING SESSION: 30 MINUTES

Use separate sheets of paper for each task listed below and a carbon paper to make duplicate copies.

Then proceed as follows:-

1. Identify the dishes and write down their recipes.
2. Write down your order of work.
3. Make a list of the foodstuffs and equipment you will require.

END

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JINA: _____

SHULE: _____

NAMBARI YA USAJILI _____ **SAHIHI:** _____**TAREHE:**_____

102/1

KISWAHILI

Karatasi ya 1

INSHA

Muda : Saa 1 ¾

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

Maagizo

1. *Andika insha **mbili**. Insha ya kwanza ni ya **lazima.***
2. *Kisha chagua insha moja nyingine kutoka kwa hizo tatu zilizobakia.*
3. *Kila insha isipungue maneno 400*
4. *Kila insha ina alama 20*
5. ***Karatasi hii ina kurasa 2 zilizopigwa chapa.***
6. ***Watahiniwa ni lazima wahakikishe kwamba kurasa zote za karatasi hii zimepigwa chapa sawa sawa na kuwa maswali yote yamo***

1. ***Insha ya lazima***

Shirika la Utangazaji la Jicho Pevu limetangaza nafasi ya kazi ya mhariri mkuu wa kitengo cha habari za Kiswahili .Umealikwa kushiriki mahojiano. Andika tawasifu utakayowasilisha kwa jopo tathmini.

2. Fafanua changamoto zinazokumba muumano na mshikamano wa kitaifa.
3. Kuinamako ndiko kuinukako.
4. Andika insha itakayokamilikia maneno haya: Alipofika hapo alielewa fika kwamba ingebidi aukate mkono uliokuwa ukimlisha tangu hapo, mradi hakukubaliana naye katika njama hiyo.

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JINA: _____

SHULE: _____

NAMBARI YA USAJILI _____ **SAHIHI:** _____ **TAREHE:**_____

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

102/2
KISWAHILI
Karatasi ya 2
LUGHA
MUDA: Saa 2 1/2

Maagizo
1 Andika jina lako na namba yako katika nafasi ulizoachiwa hapo juu
2 Tia sahihi yako na tarehe ya mtihani katika nafasi ulizoachiwa hapo juu
3 Jibu maswali yote. Andika majibu yako katika nafasi zilizoachwa katika kijitabu hiki cha maswali

Kwa matumizi ya mtahiniwa pekee.

Swali	UPEO	ALAMA
1		
2		
3		
4		

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

UFAHAMU (Alama15)

Soma makala yafuatao kisha ujibu maswali yanayofuata.

Miaka 15 iliyopita, Umoja wa Mataifa uliitangaza August 12 kila mwaka, kuwa 'Siku ya Vijana Duniani' ambapo kauli mbiu ya mwaka huu inasema 'Vijana na Afya ya Akili'.

Kwa mujibu wa andiko kutoka Umoja wa Mataifa, asilimia 20 ya vijana duniani kote hupata tatizo linalohusiana na afya ya akili kila mwaka. Hatari zaidi hutokea katika kipindi cha kuhama kutoka utoto kuingia utu uzima.

Kutengwa pamoja na aibu mara nyingi huongeza zaidi tatizo kwa kuwa vijana wengine hushindwa kutafuta msaada wanaouhitaji. Hivyo mwaka huu, Umoja wa Mataifa umeazimia kuitumia siku hii kukuza uelewa kuhusu afya ya akili kwa vijana.

"Wakati tunaadhimisha Siku ya Vijana Duniani 2014, tuwawezeshe vijana wenye matatizo ya afya ya akili kubaini umuhimu wao, na tuoneshe kuwa afya ya akili inatuhusu sote," amesema Katibu Mkuu wa Umoja wa Maitafa, Ban Ki Moon kwenye maelezo yake.

Miongoni mwa sababu kubwa zinazochangia tatizo la afya ya akili ni umaskini unaochangiwa kwa kiasi kikubwa na ukosefu wa ajira. Asimilia kubwa ya vijana walio chini ya miaka 25 au wale wanaohitimu masomo yao nchini hawana ajira.

Wanachuo wengi wameendelea kuzunguka huku na kule kuomba kazi bila mafanikio. Wengi wamekaa zaidi ya miaka mitatu nyumbani tangu wamalize masomo yao bila kuwa na ajira inayowaingizia kipato.

Na pia wachache wanaopata kazi, wamekuwa wakilipwa ujira mdogo na hivyo kuendelea kuishi maisha magumu. Ukosefu wa ajira na kukosa fedha za kujikimu, umewafanya vijana wengi kuwa na msongo wa mawazo, tatizo kubwa linalohusiana na afya ya akili.

Tatizo ni kubwa zaidi pale ambapo takwimu zinaonesha kuwa kwa wastani soko la ajira nchini lina uwezo wa kuzalisha ajira zipatazo 300,000 kwa mwaka katika sekta rasmi ukilinganisha na wastani wa wahitimu 600,000 hadi 800,000 wanaoingia katika soko la ajira nchini.

Kwa kijana ambaye hana mahali pa kuishi, hajui atakula nini kesho, hana fedha za kununua nguo, kukata tamaa na kuamua kufanya lolote si kitu anachoweza kukifikiria mara mbili.

Kwa vijana wa kiume wapo wanaoamua kuwa wezi au matapeli huku wengine wakijikuta wakiwa walevi wa kutupwa au kuvuta unga kama njia ya kupunguza msongo wa mawazo unaotokana na maisha magumu.Utumiaji wa vilevi hivyo, umechangia kwa kiasi kikubwa kuongeza tatizo la afya ya akili kwa vijana wengine.

Kwa wasichana, ukosefu wa ajira, huwaingiza wengi katika wimbi la kutumia miili yao kujipatia kipato kutoka kwa wanaume. Wengine hujikuta wakiolewa mapema na hivyo kupoteza ndoto za kujiendeleza kielimu ili kujitegemea.

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Mbaya zaidi katika maeneo ya vijijini kwakuwa wasichana wadogo huzalishwa katika umri mdogo na wengine kukumbana na unyanyasaji wa nyumbani kutoka kwa waume zao.Katika maeneo ya vijijini ambako shughuli kubwa ya kiuchumi ni kilimo, ufugaji au uvuvi, baadhi ya wasichana waliolewa, hujikuta wakiachiwa familia zao kwa muda mrefu na waume zao wanaoenda kutafuta maisha. Baadhi ya wanaume hao huondoka kimoja na kuwaachia wake mzigo wa ulezi wa familia.

Hivyo, tatizo kubwa la ajira kwa vijana lipo kwa wale ambao hawana elimu ya kutosha kustahili kuajiriwa katika ajira rasmi. Kwa mujibu wa survey iliyofanywa na Restless Development, Tanzania ina takriban watu milioni 25 walio chini ya miaka 25 nchini. Hiyo ina maana kuwa karibu nusu ya watu wote nchini ni vijana.

Dunia nzima, vijana wamekuwa wakitambulika kwa kuwa na mchango mkubwa kuanzia katika upatikanaji wa uhuru enzi za ukoloni hadi katika kuvumbua teknolojia mpya na kugundua njia mpya za sanaa na muziki. Vijana ndio wanaolisukuma zaidi gurudumu la maendeleo kwa uchapakazi wao kutokana na miili na akili zao kuwa na uchangamfu zaidi.

Hata hivyo Tanzania ni nchi iliyo na matabaka yanayotokana na umri na jinsia huku vijana wakioneana kutopewa fursa katika mchakato wa maamuzi katika hatua za kijamii na hata katika serikali.

Ili kuwapa nafasi zaidi vijana katika nafasi za juu za maamuzi, vijana wanapaswa kutambua kuwa huu ndio wakati wao na sio kesho. Vijana wanatakiwa kwanza kujiamini wao wenyewe kuwa hakuna nafasi ya baadaye kwakuwa huu ndio wakati unaowaruhusu kuwa wabunifu zaidi kushawishi maendeleo.

Mawazo yao mapya na njia zao tofauti za kukabiliana na mambo, yataleta utofauti mkubwa wa sera, maamuzi na muelekeo wa serikali au taasisi mbalimbali.

“Uongozi wa kizazi kipya upo tayari kushika hatamu za uongozi na kuijenga Tanzania mpya, kwa fikra mpya na maarifa mapya. Mabadiliko, kokote yalikotokea, yalidaiwa na kuongozwa na vijana. Vijana wa Tanzania washike usukani wa kuleta mabadiliko wanayoyataka. Ukiona kijana anamwambia kijana mwenzake hana uzoefu, basi kazi ya kuleta mabadiliko ni kubwa zaidi. Kutokuwa na uzoefu ni sifa ya kijana. Tusi kubwa kwa Obama mwaka 2008 lilikuwa ni kukosa uzoefu, kukosa rekodi. Tusi hilo lilikuwa muziki kwa wapiga kura wa Marekani. Tanzania mpya inahitaji viongozi wapya, mazoea mapya, fikra mpya na maarifa mapya. Inahitaji kuthubutu mambo makubwa sio kulinda uzoefu wa nyuma. Tunaweza,” aliandika January Makamba kwenye mtandao wa Facebook.

Ni kweli muda wa vijana ni sasa na sio kesho tena.

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Maswali

(a) Ipe makala hii anwani mwafaka. (alama 1)

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……

(b) Ni wakati gani ambapo vijana huwa hatarini sana kukumbwa na tatizo la afya ya akilini. (alama 1)

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……

c) Ni nini lengo la Umoja wa Mataifa mwaka huu kuhusu vijana? (alama 1)

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……

d) Taja changamoto zinazowakumba vijana wenye matatizo ya afya ya akili. (alama 2)

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e) Eleza mambo ambayo huchangia matatizo ya afya ya akili miongoni mwa vijana.(alama 4)

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f) Taja mambo ambayo huchangia kutamauka kwa vijana. (alama 3)

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g) Ukosefu wa ajira umechangia uozo upi miongoni mwa vijana? (alama 3)

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2. UFUPISHO

Soma taarifa ifuatayo kisha jibu maswali yanayofuata kulingana na maagizo.

Utoaji wa Huduma ya Kwanza.

Inaaminika kuwa majeruhi wengi katika mikasa ya ajali huaga au huathirika vibaya zaidi kutokana na hali mbaya ya uokoaji. Watu wengi ambao hujitolea kuokoa majeruhi baada ya ajali kama za barabarani, maporomoko ya ardhi au nyumba huwa hawang'amui hata chembe jinsi ya kukabiliana na uokoaji. Hatima ya juhudi zao ambazo hulenga kutenda mema ni kuathirika zaidi kwa majeruhi.

Hali ya ukoaji inaweza kurekebishwa kwa kutoa elimu ya huduma ya kwanza kwa umma. Elimu hii yahitajika na kila Mkenya kwani mikasa ya ajali za barabarani na nyinginezo inaendelea kutokea kila siku.Ajali zinapotokea, si ajabu kuona makundi ya waokoaji yakibeba majeruhi hobelahobela bila kuzingatia madhara yanayoweza kuwaongezea kutokana na ubebaji wao. Kutojua namna ya kumbeba majeruhi kunaweza kumhatarisha na hata kusababisha kifo.

Kuna mambo mbalimbali ambayo makundi ya waokoaji yanatakiwa kuzingatia wakati yanatoa huduma ya kuokoa. Kwanza, ni muhimu kuchunguza kama kuna hatari yoyote inayoweza ikatokea na kuwatia majeruhi na waokoaji hatarini zaidi. Makundi ya waokoaji yameweza kuhatarisha majeruhi kwa kuliingilia eneo la ajali mbumbumbu kama mzungu wa reli.

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Hatua ya pili ni kutafuta idadi ya majeruhi. Pana uwezekano wa majeruhi kutupwa mbali na eneo la ajali. Vivyo hivyo, kuna majeruhi ambao huweweseka baada ya ajali na kuanza kutembea wasijue wanakoelekea. Wengi wao huanguka karibu na eneo la ajali au wakaenda mbali.

Hatua ya tatu ni kuchunguza kama majeruhi amezimia, moyo unapiga na jinsi anavyopumua. Ili kuhakikisha kuwa majeruhi anapumua, mwokoaji atazame kama kifua kinapanda na kushuka. Halikadhalika, mwokoaji anaweza kusikiliza au kuguza kifua na kuona kama kuna ishara za kupumua. Iwapo majeruhi anapumua, mwokoaji amweke katika hali ambayo itaimarisha kupumua kwake. Anaweza akamlaza chali au kumgeuza kwa pamoja na kichwa chake ili kufungua mkondo wa hewa. Pia, mwokoaji ahakikishe hamna chochote kinywani kinachoweza kumsakama. Ikiwa hapumui, mwokoaji anaweza kujaribu kumfanya apumue kwa kupuliza hewa mdomoni mwake. Fauka ya hayo, upulizaji wa hewa utahakikisha kuwa damu inazunguka mwilini vizuri.

Hatua nyingine ni kuchunguza vile amejeruhiwa. Chunguza kama majeraha ni vidonda tu au kuna kuvunjika kwa mifupa na kubainisha ni mfupa upi. Haya yatamwezesha mwokoaji kujua jinsi ya kumbeba majeruhi. Pakiwa na kuvunjika kwa mfupa, ni muhimu kutotumia kiungo kilichovunjika anapobebwa.

Pia, kuchunguza vile majeruhi amejeruhiwa, humwezesha mwokoaji kujua huduma ya dharura atakayotumia. Majeruhi akiwa anavuja damu sana, ni muhimu kuzuia uvujaji huu. Iwapo ni kidonda kidogo, kinahitaji kufungwa ili kuzuia uambukizaji. Mwokoaji anaweza kutumia kifaa chochote kilicho karibu kutolea huduma hizi. Kwa mfano, anaweza kupasua nguo ya majeruhi ili apate kitambaa cha kusaidia kuzuia kuvuja kwa damu au kumfunga kidonda.

Hatua inayofuata ni kumhamisha majeruhi kutoka eneo Ia ajali hadi hospitalini. Mwokoaji anaweza kuwatumia watu wengine kutafuta msaada. Wanaweza kupiga simu wakitumia nambari za simu za dharura kama zile za polisi, wazimamoto au makundi ya wataalamu wa shughuli za uokoaji. Nambari hii ya simu huwa 999 popote na huwa haina malipo. Wanaopiga simu ni vyema kutoa maelezo ya mahali ambapo ajali imetokea, aina ya ajali na huduma za dharura zinazohitajika pamoja na idadi ya majeruhi. Iwapo makundi haya ya uokoaji yameahidi kufika, ni bora kuyasubiri.

Ikiwa makundi ya wataalamu wa uokoaji hayakupatikana, ni jukumu Ia mwokoaji kuhakikisha majeruhi wamehamishwa na kupelekwa hospitalini. Majeruhi wakiwa wengi. ni bora kuanza na wale waliozimia au wenye matatizo ya kupumua kisha kuwaendea wanaovuja damu sana. Baadaye, mwokoaji awasaidie waliovunjika mifupa huku akimalizia na wenye majeraha yasiyohatarisha maisha. Ni muhimu kuwabeba majeruhi kwa kutumia machela. Hii hupunguza kuathirika zaidi kwa majeruhi. Iwapo hamna machela karibu, mwokoaji anaweza kuunda moja kwa kutumia vipande viwili vya mbao, blanketi. shuka au makoti. Ujuzi wa huduma ya kwanza ni mojawapo ya mambo muhimu ambavo kila mtu anapaswa kuwa nayo.

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Maswali :

(a) Fupisha aya mbili za kwanza kwa maneno **55 – 65**. (alama 6, 1 utiririko)

Nakala chafu

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Nakala safi

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(b) Eleza kwa kutumia maneno 90-100, hatua zinazotakiwa kufuatwa wakati wa uokoaji. (alama 8, utiririko 1)

Nakala chafu

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……
……
……
……

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Nakala safi

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SARUFI

(a) Eleza maana ya neno changamano huku ukitolea mfano. (alama 2)

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(b) Andika sentensi ifuatayo katika kauli iliyo mabanoni. (alama 2)
Paka analamba mchuzi (kutendwa)

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……

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……

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(c) Akifika sentensi ifuatayo kwa kutumia alama ya kibainishi kisha eleza matumizi yake. (alama 2)
Ntakwenda Unguja mwezi wa Disemba

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……

(d) Bainisha aina ya neno lililopigiwa mstari katika sentensi ifuatayo. (alama 1)
<u>Kuimba</u> kwa Yusufu kunaudhi

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……

(e) Andika sentensi ifuatayo katika umoja. (alama 2)
Manukato haya yananukia vizuri

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(f) Eleza matumizi ya <u>ku</u> katika jozi zifuatazo za sentensi. (alama 3)

(i) Kuchora kwao kulikuwa kwa uangalifu mkubwa
(ii) Nilikuita lakini hukuitika

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(g) Maneno yafuatayo yako katika ngeli gani. (alama 2)

Kero……..

Nywele …….

(h) Tambua viambishi awali na tamati katika neno ajaye (alama 3)

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(i) Ikarabati sentensi hii: (alama 2)
Mpira yangu amepotea

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(j) Tambua aina ya chagizo katika sentensi ifuatayo. (alama 2)
Walimu wataenda Mombasa Ijumaa ijayo.

……

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……

(k) Tambua na ueleze aina za vivumishi katika sentensi zifuatazo. (alama 2)
(i) Viatu vyangu vimepotea

……

……

(ii) Viatu vyenyewe vinapendeza

……

……

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(l) Badilisha sentensi iwe katika hali ya kuamuru. (alama 1)
Rutto fagia chumba.

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(m) Andika sentensi ifuatayo kulingana na maagizo. (alama 1)
Mwanasiasa huyu alishinda kura. (Tumia kiashiria kisistizi)

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(n) Onyesha hali katika sentensi zifuatazo. (alama 2)
(i) Huenda mvua isinyeshe msimu huu.

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(ii) Waislamu huenda msikitini kuomba kila Ijumaa.

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(o) Changanua sentensi ifuatayo kwa njia ya matawi. (alama 4)
Aliyetujengea nyumba ni Omari

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(p) Andika kwa usemi wa taarifa. (alama 2)
"Nitakuja kwenu kesho," Mwalimu alisema.

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(q) Tambua na ueleze virai katika sentensi hii. (alama 2)
Kisichana kile kimejirembesha kwa manukato mazuri ajabu

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(r) Eleza tofuati baina ya sentensi hizi; (alama 2)
(i) Ningekuwa na pesa ningesafiri kwenda Pwani.

……

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……

……

(ii) Ningalikuwa na pesa ningalisafiri kwenda Pwani.

……

……

……

……

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(s) Tunga sentensi moja iliyo na shamirisho kitondo, kipozi na ala. (alama 3)

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……

ISIMU JAMII

a) **…**ya leo ni kuwapa pole wanaofuata na kuenzi makala ya Burudani,toleo la kila Ijumaa.Mwanamziki huyu aliteka nyoyo za wapenzi wa mtindo huu wa mziki.Kwa kweli ya Muumba hufumbwa tu!Mnapoyasoma wakumbukeni jamaa na wapenzi wa nyimbo zake.

i.Tambua sajili hii na utoe Ushahidi. (alama 2)

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ii.Fafanua sifa zozote za sajili hii. (alama 4)

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b) Taja mambo yoyote manne yanayofanywa na Serikali yetu kuimarisha lugha ya Kiswahili.(alama 4)

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JINA: _____

SHULE: _____

NAMBARI YA USAJILI _____ **SAHIHI:** _____ **TAREHE:**_____

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

KISWAHILI

KARATASI YA 3

SAA: $2^1/_2$

MAAGIZO:

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

KWA MATUMIZI YA MTAHINI

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

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SEHEMU YA A: FASIHI SIMULIZI

1.

a) Taja mifano minane ya vipera vya utanzu wa semi katika fasihi simulizi. **(alama4)**

b) Fafanua sifa zozote tatu za mawaidha katika fasihi simulizi **(alama3)**

c) Eleza umuhimu tatu wa ngomezi. **(alama3)**

d) Eleza istilahi hizi za fasihi simulizi. **(alama3)**

i) Maghani

ii) Mapisi

iii) Misimu/simo

e) Fafanua sifa zozote tatu ambazo mtambaji wa hadithi anastahili kuwa nazo. **(alama3)**

f) Taja methali zozote mbili zilizo na dhana ya tashibihi. **(alama2)**

g) Eleza sifa zozote mbili za nyimbo. **(alama2)**

SEHEMU YA B: USHAIRI

2.Soma shairi lifuatalo kisha ujibu maswali yanayofuata

Mkata ni mkatika,harithi hatoridhiwa
Sina ninalolishika,wala ninalochukuwa
Mlimwengu kanipoka, hata tone la muruwa!
Mrithi nini wanangu?

Sina ngo'mbe sina mbuzi,sina konde sina buwa
Sina hata makaazi,mupasayo kuyajuwa
Sina mazuri makuzi,jinsi nilivyoachwa
Mrithi nini wanangu?

Sina kazi sina bazi ila wingi wa shakawa
Sina chembe ya majazi mno ni kukamuliwa
Nakwa'cheni upagazi,ngumu kwenu ku'tuwa
Mrithi nini wanangu?

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Sina sikuachi jina,mkata hatasifiwa
Hata nifanye la mana,mno mi kulaumiwa
Poleni wangu sana,sana kwenu cha kutowa
Mrithi nini wanangu?

Sina leo sina jana,sina kesho kutwaliwa
Sina zizi sina shina,wala tawi kuchipuwa
Sina wanangu mi sina,sana la kuacha kuraduwa
Mrithi nini wanangu?

Sina utu sina haki,mila yangu meuliwa
Nyuma yangu ili dhiki,na mbele imakaliwa
N'na wana na milik,hadi nitakapofukiwa
Mrithi nini wanangu?

Sina ila kesho kwenu,wenyewe kulongowa
Muwane kwa nyinyi mbinu,mwende pasi kupumuwa
Leo siyo kesho yenu,kama mutajikamuwa
Mrithi nini wananngu?

MASWALI

a) Taja mambo yoyote mawili ambayo mtunzi angewarithisha wanawe. **(alama2)**

b) Eleza sababu ya mtunzi kutoweza kuwarithisha wanawe. **(alama3)**

c) Andika ubeti wa nne kwa lugha nathari. **(alama4)**

d) Dondoa mifano miwili miwili ya: **(alama2)**

i. Inkisari

ii. Tabdila

i. Chambua shairi hili kwa upande wa:

Dhamira **(alama2)**

Muundo **(alama4)**

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e) Eleza maana ya vifungu vifuatavyo kama vilivyotumiwa katika shairi. **(alama3)**

i. Mlimwengu kanipoka

ii. Sina konde sina buwa.

iii. Wingi wa shakawa.

SEHEMU YA: C HADITHI FUPI

Mapambazuko Ya Machweo

3. NDOA ni taasisi iliyokuzwa katika hadithi **fadhila za punda.** Fafanua **(alm20)**

4. "...iwapo penzi hili litatia doa, basi nirudishie mfuko huu kama ishara ya kulitupa penzi langu kama)ongoo na mti wake...

a) Eleza muktadha wa dondoo hili. **(alm4)**

b) Fafanua mbinu mbili ambazo zimetumika katika dondoo hili. **(alm4)**

c) Eleza sifa sita za msemaji wa maneno haya. **(alm6)**

d) EIeza umuhimu wa msemewa wa hadithi hii katika kujenga ploti. **(alm6)**

SEHEMU YA D:

Nguu za Jadi

8."Unasaba umechochea jamii kutopiga hatua kimaendeleo". Jadili kurejelea riwaya ya

Nguu za Jadi. **(al.20)**

9. Fafanua dhana zifuatazo zinavyojitokeza katika riwaya ya Nguu za Jadi .

(i) Ubaguzi. **(al.8)**

(ii) Mapendeleo. **(al.4)**

SEHEMU YA E: TAMTHILIA

7.Fafanua jalada la tamthilia bembea ya maisha **(alm20)**

8."Lakini nilivyosema, Mungu hamwachi mja wake.."

a) Eleza mutadha wa dondoo hili **(alm4)**

b) Tambua sifa tatu za msemewa **(alm3)**

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c) Eleza umuhimu wa msemaji wa maneno haya katika kukuza vipengele vifuatavyo:

i. Ploti **(alm2)**

ii. Maudhui **(alm4)**

d)Kwa kurejelea tamthilia nzima eleza ukweli wa kauli "Mungu hamwaachi mja wake."

(alm7)

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SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

121/1
MATHEMATICS
PAPER I
2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

1. Write your name, admission number, class and index number.
2. The paper contains two sections: Section I and II
3. Answer ALL questions in section I and ANY FIVE questions from section II.
4. All working and answers must be written on the question paper in the spaces provided below each question.
5. Marks may be awarded for correct working even if the answer is wrong.
6. Negligent and untidy work will be penalized.
7. Non-programmable silent electronic calculators and four figure mathematical tables are allowed for use.
8. This paper consists of printed pages. Candidates should check the question paper to ensure that all the pages are printed indicated and no questions are missing.

FOR EXAMINER'S USE ONLY

SECTION 1

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

GRAND TOTAL

SECTION II

17	18	19	20	21	22	23	24	TOTAL

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SECTION A 50 MARKS

1. Evaluate $\dfrac{\frac{3}{4}+1\frac{5}{7}\div\frac{4}{7}of\,2\frac{1}{3}}{\left(1\frac{3}{7}-\frac{5}{8}\right)x\frac{2}{3}}$ (3marks)

2. Solve for x in $\sin(x-15)-\cos(x+5)=0$ (2marks)

3. The LCM of two numbers is 328,600 and the GCD is 20. If one of the numbers is 1240, use prime factorization method, find the other number. (3 marks)

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4. A sperical solid lead of diameter 12cm weighs 6.4kg. How much would a similar solid of a diameter 10cm weigh? (3marks)

5. Without using a calculator or mathematical tables evaluate,

$$\frac{\left(\frac{1}{81}\right)^{\frac{1}{4}} \times (256)^{\frac{1}{2}} \times 3^5}{(729)^{-\frac{1}{3}} \times 72^2}$$

(3marks)

6. On arrival to Kenya a Canadian tourist exchanged his Canadian dollars for Ksh 199 690. Given that the currency exchange rate was 1 Canadian dollar = Ksh 52.55 and that the bank charged him 5% commission, find the number of dollars he exchanged. (3 marks)

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7. By using completing square method, solve for *x in* $4x^2 - 3x - 6 = 0$ (3marks)

8. Simplify the following. (3 Marks)

$$\frac{2x-4}{12-3x^2} - \frac{1}{3x+6}$$

9. The matrix $\begin{bmatrix} x & 1 \\ x+5 & x+5 \end{bmatrix}$ maps a triangle ABC onto a straight line. Determine the possible values of x. (3 marks)

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10. Using the tables of squares, square roots and reciprocal 3.0452 x $\frac{6}{\sqrt{49.24}}$(4marks)

11. Find the percentage error in the quotient in $9.16cm \div 2.0cm$ (4marks)

12. The position vectors **a** = $\begin{pmatrix} -1 \\ 5 \\ 2 \end{pmatrix}$**b** = $\begin{pmatrix} 2 \\ 1 \\ -3 \end{pmatrix}$ and **c** =$\begin{pmatrix} -8 \\ 7 \\ 13 \end{pmatrix}$. Find the scalars S and T such that S**a** + T**b** = **c** (3 marks)

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13. The following data represents the enrolment of students in 12 colleges

4	3	6	4	3	3
7	6	3	4	1	9

Calculate the quartile deviation (3 marks)

14. The density of a sphere of diameter p cm is 2.68 g/cm^3 and that of another sphere is diameter Q cm is 14.23 g/cm^3. Determine the volume of sphere Q that would have the same mass as 80cm^3. (3marks)

15. Solve and represent the integral values of the linear inequalities given below on a number line.

$\frac{4}{3} - \frac{x-2}{x} \geq 1$, $-2 - {}^{2}/_{3}\, x < x + 8$ (3marks)

16. Find the equation of the normal to the curve $y = x^3 - 2x^2 + 3x - 1$ at the point (2,5) (3marks)

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SECTION B (50 MARKS)

17. A straight line L_1 has its x-intercept and y-intercept as -6 and 4 respectively.

a) Write its equation in the form ax +by +c =0 where a, b, and c are integers (3marks)

b) Another line L_2 which is parallel to L_1 in (a) above passes through (2,3k) and (-k,8). Find the value of k. (2marks)

c) Find the equation of the perpendicular bisector to the line L_1 (3marks)

d) Calculate the angle which L_1 makes with the x-axis (2marks)

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18. A man spent $\frac{1}{9}$ of his salary on food and $\frac{1}{4}$ of the remainder n electricity and water bills. He paid fees with 20% of his salary and invested 16% of what was left into a business. After taking a game drive on which he spent Ksh 2000, he saved Ksh 5350. Calculate:

(a) His total monthly earnings. (4 marks)

(b) How much he spent on fees. (2 marks)

(c) How much he invested. (2 marks)

(d) The percentage of the salary saved. (2 marks)

19. Every Sunday Alex drives a distance of 80km on a bearing of 074^0 to pick up his brother John to go to church. The church is 75km from John's house on a bearing of **S**50^0**E**. After church they drive a distance of 100km on a bearing of 260^0 to check on their father before Alex drives to John's home to drop him off then proceeds to his house.

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(a) Using a scale of 1cm to represent 10km, show the relative positions of these places.
(4 marks)

(b) Use your diagram to determine:

(i) the true bearing of Alex's home from their father's house. (1 mark)

(ii) the compass bearing of the father's home from John's home. (1 mark)

(iii) the distance between John's home and the father's home. (2 marks)

(iv) the total distance Alex travels every Sunday. (2 marks)

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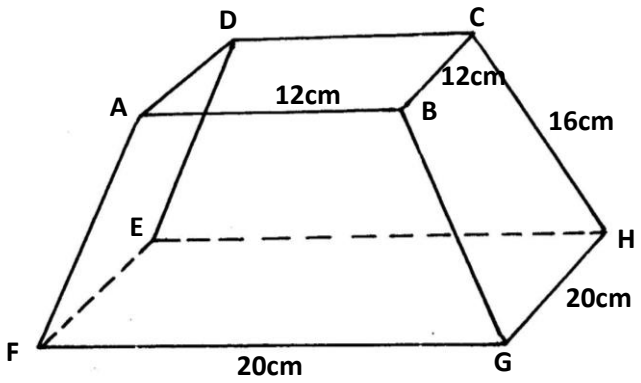
20. The figure below shows solid frustum of a pyramid with a square top of side 12cm and a square base of side 20cm. The slant edge of the frustum is 16cm.



a) Calculate the total surface area of the frustum (4marks)

b) Calculate the volume of the solid frustum. (4marks)

c) Calculate the angle between the planes **BCHG** and the base **EFGH**. (2marks)

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21. (a) A radio station tower was built in two sections. From a point 870m from the base of the tower, the angle of elevation of the top of the first section is 25^0 and the angle of elevation of the top of the second section is 40^0. What is the height of the top section of the tower? (5marks)

(b)Two vertical poles on horizontal ground are 60m apart. The shorter pole is 3m high. The angle of depression of the top of the shorter pole from the top of the longer pole is 20^0. Using scale drawing, find the length of the longer pole. (5 marks)

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22. Coast bus left Nairobi at 8.00a.m. and traveled towards Mombasa at an average speed of 80km/hr. at 8.30am, Lamu bus left Mombasa towards Nairobi at an average speed of 120km/h. Given that the distance between Nairobi and Mombasa is 400km; determine:

(i) The time Lamu Bus arrived in Nairobi. (2marks)

(ii) The time the two buses met. (4marks)

(iii) The distance from Nairobi to the point where the buses met. (2marks)

(iv) How far Coast Bus is from Mombasa when Lamu bus arrives in Nairobi. (2marks)

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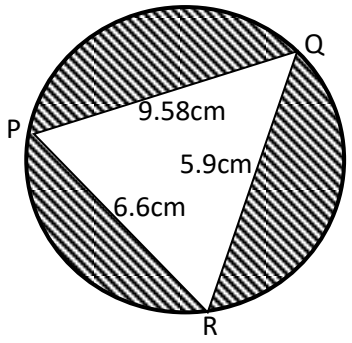
23.Triangle PQR is inscribed in the circle. PQ = 7.8cm, PR = 6.6cm and QR = 5.9cm.



Find;

(a) size of angle QPR (3 Marks)

(b) the radius of the circle. (3 Marks)

(c) the area of the shaded region. (4Marks)

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24. (a) Find the stationary points of the curve to (1 d.p) (6 marks)

$$y = \frac{(x+2)(x-1)}{(x-4)^{-1}}$$

(b) Find the x and y intercepts of the curve above. (2 marks)

(c) Sketch the curve. (2 marks)

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

121/2
MATHEMATICS
PAPER 2
2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

1. Write your name, Admission Number, Class and Index Number.
2. The paper contains two sections: Section I and II
3. Answer ALL questions in section I and ANY FIVE questions from section II.
4. All working and answers must be written on the question paper in the spaces provided below each question.
5. Marks may be awarded for correct working even if the answer is wrong.
6. Negligent and untidy work will be penalized.
7. Non-programmable silent electronic calculators and four figure mathematical tables are allowed for use.
8. This paper consists of printed pages. Candidates should check the question paper to ensure that all the pages are printed indicated and no questions are missing.

FOR EXAMINER'S USE ONLY

SECTION 1

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

SECTION II

17	18	19	20	21	22	23	24	TOTAL

GRAND TOTAL

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SECTION A 50 MARKS

1. Use logarithm tables to evaluate; $\sqrt[3]{\frac{648\times 0.0079}{(968-94)\div 0.0046}}$ (3mks)

2. The middle digit of a number between 100 and 1000 is zero, and the sum of the other digits is 11. If the digits are reversed the number so formed exceeds the original by 495. Find the number. (3 mks)

3. Without using mathematical tables or a calculator evaluate

$$\sqrt{\frac{0.3-0.098 \div (0.84-0.14)}{(0.28+0.12)\div 0.8\, x\, 0.5}}$$

Leaving the answer as a decimal (3 marks)

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4. Expand $(0.07)^5$ using binomial theorem giving your answer to four significant figures (3marks)

5. Solve for θ in the equation Sin $(3\theta + 120^0) = \frac{\sqrt{3}}{2}$ in the range $0 \leq \theta \leq 180^{0.}$ (3 mks)

6. Rationalize the denominator leaving your answer in the form **a** + **b**$\sqrt{\boldsymbol{c}}$ where**a, b** and **c** are constants

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

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7. A farmer bought a machine at a current price of Ksh 224,000. If the depreciation rate is 5% in every 3 months. Calculate the sum of its value in 3 years ago and 3 years' time. (3mks)

8. Without using logarithm table or calculators, find the value of p in the equation.
$\text{Log } n^3 + \log 4n = 10 \log 2 - \log (^2/_8)$ (3mks)

9. Using mid-ordinates rules, estimate the area under the curve $y = \frac{1}{2} x^2 - 2$, using six strips between x=2 and x=8 and x-axis (3mks)

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10. (a) Using a pair of compass and a ruler only Construct a triangle PQR in which PQ=QR=4cm and angle QPR= 30^0. (2mks)

(b) A point T is always on the same side of PQ as R and angle PRQ=angle PTQ. Construct the locus of T and describe it. (2mks)

11. R is partly constant and partly varies as the square of q. when R = 5, q = q and R = 21, when q = 3. Find the value of R when q = 5. (3mks)

12. The first, the third and the seventh term of an increasing arithmetic progression are three consecutive terms of a geometric progression. If the first term of the arithmetic progression is 10, find the common difference of the arithmetic progression (3mks)

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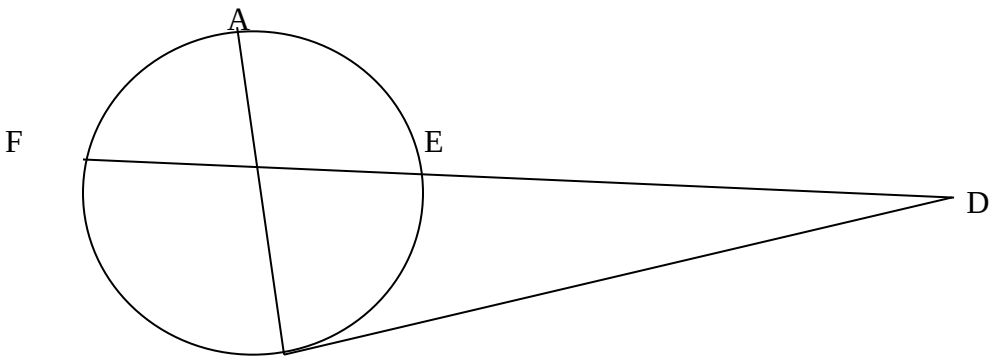
13. The equation of a circle is $x^2 - 8x + y^2 + 12y + 16 = 0$

Determine the coordinates of the Centre of the circle and its radius. (3 Marks)

14.



In the diagram above CD is a tangent to the circle at C. AC and FD intersect at B. FED is a straight line. Given that CD = 10 cm, AB = 2 cm AC = 8 cm, FB = 3 cm. Find the length ED.

4mks

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15. The cost of 2 brands of coffee A and B per kilogram are 59.40 and Sh.72 respectively. The two brands are mixed in the ratio x:y and sold at a profit o9f 20% above the cost. If the selling price per kilogram mixture is Ksh.72. find the value of x and y (3mks)

16. Evaluate $\int_{-1}^{3} \frac{2x^3 - 3x^2 - 8x + 12}{x^2 - 4} dx$ (3mks)

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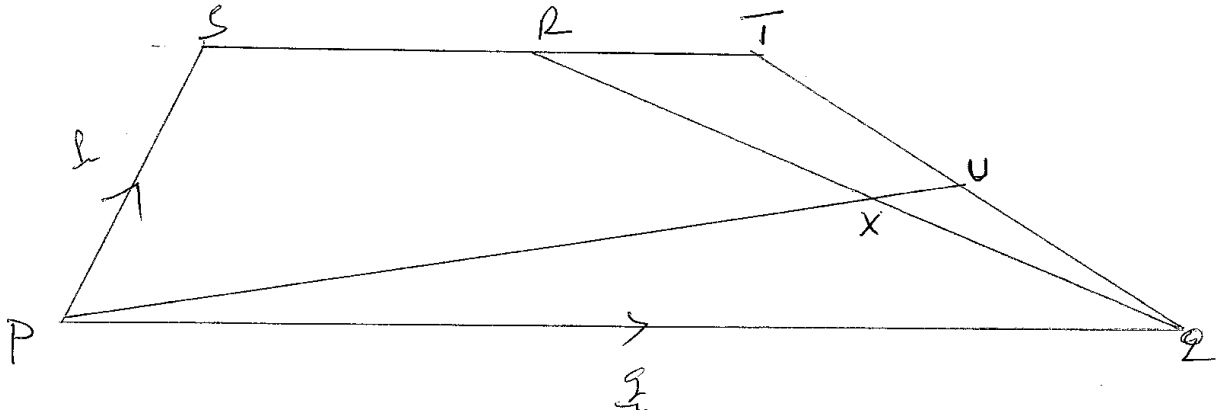
SECTION B 50 MARKS

17. In the trapezium shown below $\overrightarrow{PQ} = 3\overrightarrow{ST}$. T divides SR in the ratio 4 :1 and U is the midpoint of **QT. PU** and QR intersect at X. **PX = hPU** and **QX = kQR.**



Given that PQ = **q** and PS = **p**

(a) Express QR in terms of **P** and **q** (1mk)
(b) Express PX in terms of **P, q** and h. (2mks)
(c) Express PX in terms of **P, q** and k. (3mks)
(d) Hence; obtains the values of h ad k. (3mks)
(e) Determine the ratio in which X divides QR. (1mk)

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18. The table below shows the distribution of marks of 40 candidates in a test

Marks	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
Frequency	2	2	3	x	12	5	2	3	1	1

(a)(i) Find the value of x (1mk)

(ii) State the modal class (1mk)

(iii) Calculate the median (4mks)

(iv) Calculate the mean. (4marks)

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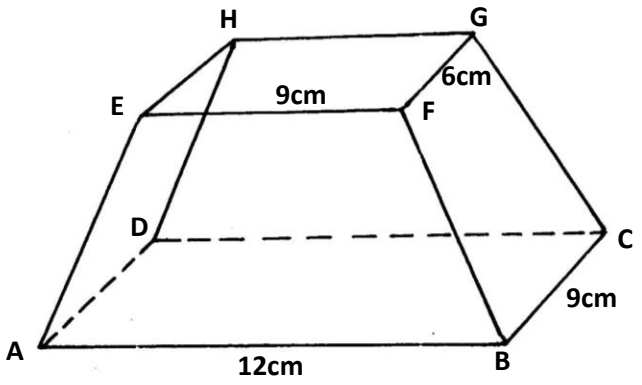
19. The figure below is a frustum of a rectangular pyramid with AB=12CM, EF=8CM,BC=9CM and height of 6 CM



Calculate:

a) the full height of the pyramid 2 marks
b) angle that the plane ABFE makes with the base ABCD 2marks
c) angle that AG makes with the base ABCD 3marks
d) angle that AC makes with line AE 1mark
e) angle that plane BCGF makes with the base ABCD 2marks

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20. (a) A point a (35^0 N, 40^0W) and b (40^0S, 40^0W), Calculate the distance between A and B in Kilometers. Take earth radius o be 6370 km. answer to 1 d.p. (3mks)

(b) A and B are points on latitude 70^0C. Their longitudes are 62^0W and 118^0 E respectively. Find the distance from A to B along a parallel of latitude. (4mks)

(c) Peter was in Mombasa 39^0E and Mary was in Banju 17^0W. Calculate the time difference between the two. (3mks)

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21. ABCD is a quadrilateral with vertices as follows: **A** (3, 1), **B** (2, 4) **C** (4, 3) and **D** (5, 1)
(a) (i) On the grid provided draw the quadrilateral **ABCD** and the image **A'B'C'D'** under a transformation
With matrix $\begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix}$. Find the co-ordinates of **A'B'C'D'** (3mks)

Describe the transformation that maps **ABCD** onto **A'B'C'D'** fully (1mk)

(b) A transformation represented by the matrix $\begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}$ maps **A'B'C'D'** onto **A''B''C''D''** find the co-ordinates of **A''B''C''D''.** Plot **A''B''C''D''** on the same grid. (3mks)

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(c) Determine a single transformation that maps **A''B''C''D''** onto **ABCD**. Describe this transformation fully. (3mks)

22. The table below shows the income tax rates in Kenya.

Income in K£ per month	Rate in Ksh / K£
1 - 325	2
326 - 975	3
976 - 1300	5
1301 - 1625	6
Over 1625	7.5

(a) Mr. Sigei is a public servant who lives in a government house and pays a nominal rent of Ksh. 1220 per month. He earns a basic salary of Ksh. 24,800 and taxable allowances of Ksh. 13,380 per month. He is entitled to a monthly tax relief of Ksh. 1120. Calculate his monthly

i) Taxable income in K£. (2mks)

ii) Gross tax. (3mks)

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iii) Tax due (2mks)

(b) Apart from income tax, the following monthly deductions are made from his salary.
i) HELB loan repayment Ksh. 2400
ii) NHIF Ksh 320
iii) 2% basic salary as union dues.
Calculate Mr. Sigei's monthly net salary. (3mks)

23. An airline has to fly 1000 passengers and 35000 kg of luggage from Nairobi to Kampala. Two types of aircrafts are available. Type A takes 100 passengers and 2000 kg of luggage. Type B takes 60 passengers and 3000 kg of luggage. The airline must not use more than 16 aircrafts altogether.
(a) if the airline hires x type A aircrafts and y type B aircrafts, write down 3 inequalities to represent the information above. (3mks)

(b) Draw the inequalities on a grid. (3mks)

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(c) Find the minimum number of aircrafts the airline could use. (1mk)

(d) If the cost of hiring charges for each aircraft is sh 100,000 and sh 120,000 for type A and b respectively, find:

(i) The number of planes of each type that should minimize the cost (2mks)

(ii) Minimum cost (1mk

24. In a mathematics test, the probability of 3 students, Kamau, Otieno and Mwala passing are

⅔, ¾ and ⅚ respectively

(a) Draw a tree diagram to represent this information (3 marks)

(b) Use the tree diagram to find the probability that:

(i) All the three students will fail (2 marks)

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(ii) At least two students will pass. (3 marks)

(iii) Only one student will pass (2 marks)

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SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

232/1
PHYSICS
PAPER 1

Instructions to candidates

- This paper consists of two sections A and B.
- Answer **ALL** the questions in sections A and B in the spaces provided.
- **ALL** working **MUST** be clearly shown.
- Mathematical tables and silent electronic calculators may be used.
- Take: Acceleration due to gravity $g = 10\ ms^{-2}$.
- Atmospheric pressure = 76 cmHg
- Density of mercury ≡13600 kg/m^3

For examiners use only

SECTION	QUESTION	MAX MARKS	CANDIDATE'S SCORE
A	**1 – 11**	**25**	
B	**12 – 17**	**55**	
TOTAL			

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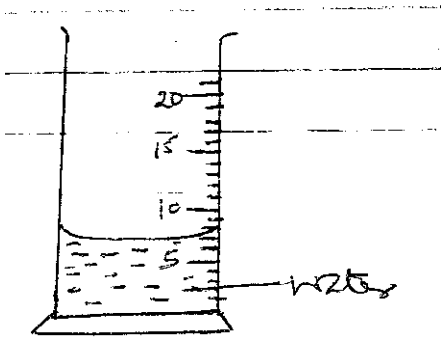
SECTION A (25 MARKS)

Attempt all the questions in this section.

1. The figure below shows a measuring cylinder with some water in it.



A metal cube of mass 18g is submerged in it. Given that the density of the metal is 4.167 g/cm^3, indicate the new level of the liquid. (2 mks)

2. Explain how temperature affects surface tension. (2 mks)

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3. A drop of blue ink is introduced at the bottom of a beaker containing water. It is observed that after sometime, all the water in the beaker turns blue. Name the process that takes place. (1 mk)

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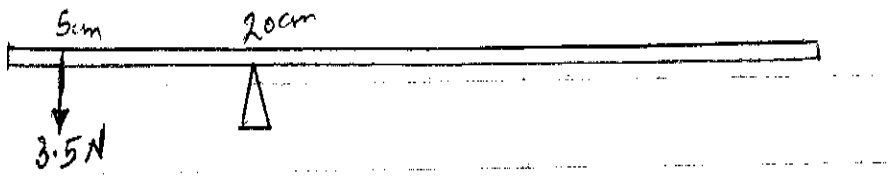
4. The figure below shows a uniform metre rule pivoted at the 20cm mark. It is balanced by a weight of 3.5N suspended at the 5cm mark.

5.



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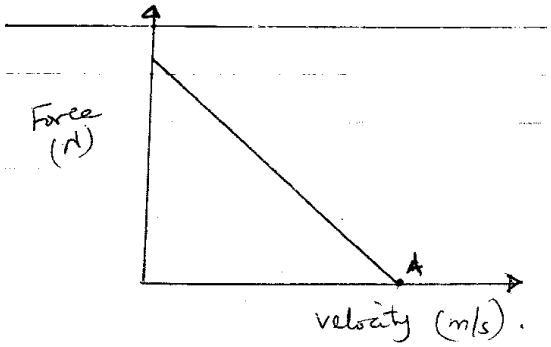
Determine the weight of the metre rule. (3 mks)

6. The diagram below shows a sketch graph of resultant force against velocity for a body falling through air.



(a) Give the name given to the velocity of the body at point a. (1 mk)

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(b) Explain why the resultant force is equal to zero for the velocity given in (a) above.(2 mks)

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7. A student dipped a mercury thermometer into a very hot liquid.

(a) State what is observed. (1 mk)

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(b) Explain observation in (a) above. (1 mk)

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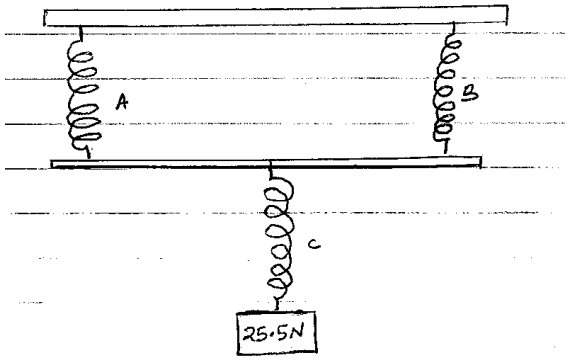
8. Three identical springs A, B and C are used to support 25.5N weights as shown below.



If the weight of the horizontal bar is 2.5N, determine the extension of each spring given that 6N causes an extension of 2 cm. (3 mks)

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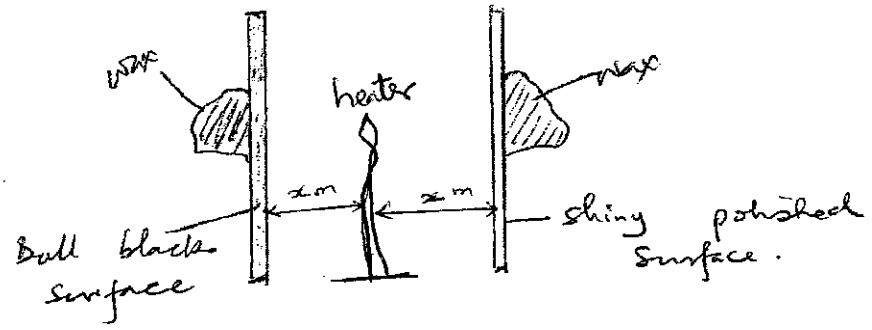
9. The diagram below shows the effect of heat from the heater on two surfaces …… surface.



(i) How does the heat from the heat reach the surface? (1 mk)

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……

(ii) State what is observed from the set up after a few minutes. (1 mk)

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10. Trees planted along or near the road seem to bend towards the road. State and explain the observation. (2 mks)

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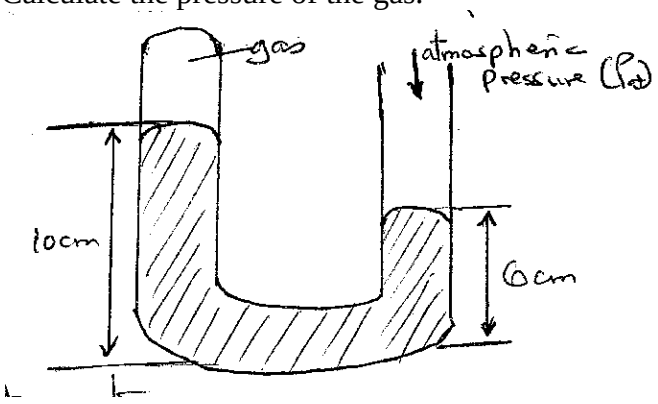
11. Figure below shows a u-tube upon which a gas has been enclosed on one end with mercury in it. Calculate the pressure of the gas.



12. State two sources of errors in an oil drop experiment. (2 mks)

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SECTION B (55 MARKS)

Attempt all the questions in this section.

13. (a) (i) Define the term angular velocity (ω). (1 mk)

……

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(ii) A body in a circular path is said to be accelerating and yet it moves in a constant speed. Explain. (1 mk)

……

……

……

(c) A stone of mass 500g is attached to a string of length 50cm which can break when the tension exceeds 20N. The stone is whirled by a student until the string breaks at a point 100 cm above the ground. (Take g, as 10 m/s^2).

(i) In what position does the string break. (1 mk)

……

……

(ii) Calculate the angular velocity at which the string breaks. (3 mks)

(iii) Time taken by the stone to reach the ground. (3 mks)

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(iv) Distance from the feet of the student to the point the stone strokes the ground. (2 mks)

14. (a) A hydraulic lift is used to raise a load of 100 kg through a height of 2.0 m. the radius of the effort piston is 1.6cm while the load piston has a radius of 8.0cm. If the machine is 75% efficient; calculate:

(i) the velocity ratio. (2 mks)

(ii) mechanical advantage (1 mk)

(iii) effort required (1 mk)

(iv) energy wasted in using the machine (2 mks)

(b) A block and tackle pulley system is used to lift a mass of 200 kg. If the machine has a velocity ratio of 5, and efficiency of 80%;

(i) Sketch in the space provided below the possible arrangement of the system. (2 mks)

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(ii) Determine the effort required to lift the load. (2 mks)

15. (a) State Newton's first law of motion. (1 mk)

……

……

……

(b) A wooden block resting on a horizontal bench is given an initial velocity, U, so that it slides on the coach surface for a distance, d, before coming to a stop. The values of, d, were measured and recorded for values of initial velocity. The figure below shows a graph of U^2 against d.

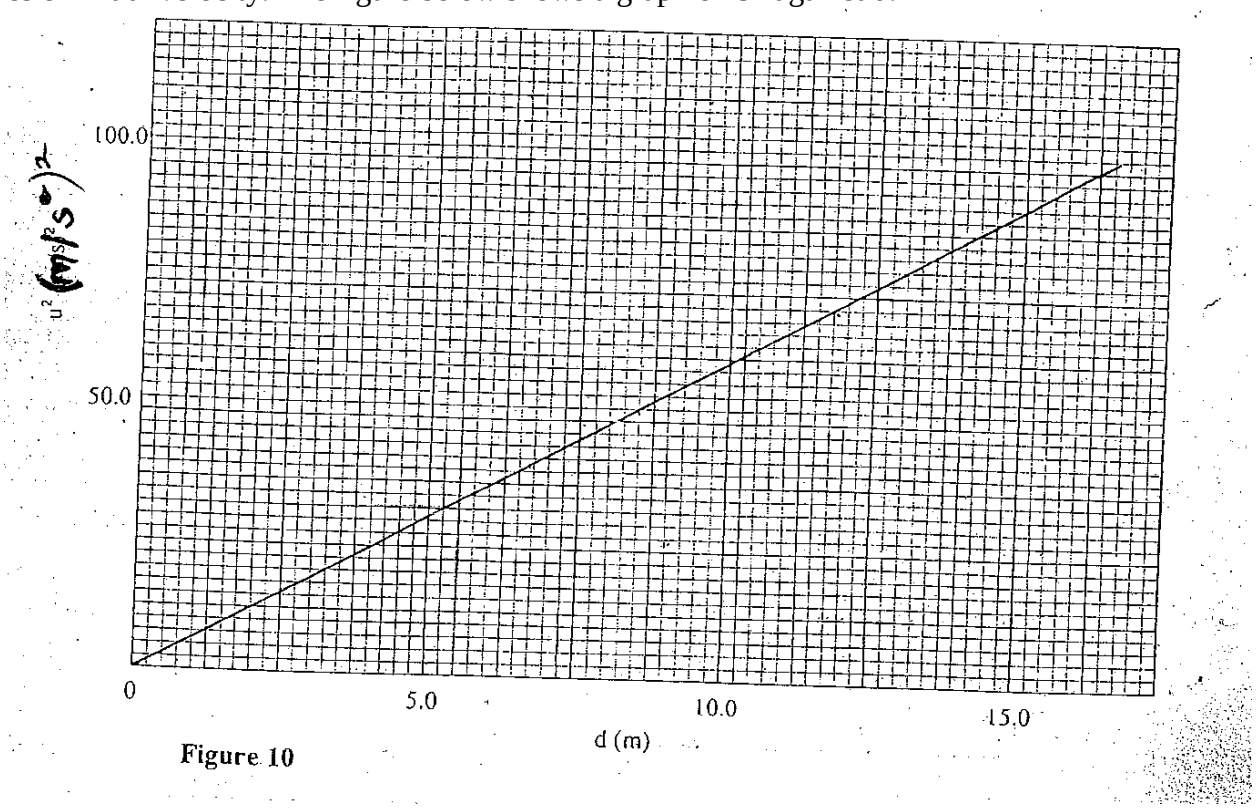

Figure 10

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(i) Determine the slope of the graph. (3 mks)

(ii) Given that $U^2 = 20$ kd, where K is a constant for the bench surface, determine the value of K from the graph. (3 mks)

(iii)State how the value of K would be affected by a change in the roughness of the bench surface.(2 mks)

(c) A car of mass 800 kg starts from rest and accelerates at 1.2 ms^{-2}. Determine its momentum after it has moved 400m from the starting point. (4 mks)

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16. 300g of ice at 0^0c is dropped into a copper calorimeter containing warm water of mass 60g at 60^0c. it's observed that only 80% of ice melted.
(Take: Specific heat capacity of water = 4200 $Jkg^{-1}k^{-1}$
Heat capacity of copper = 400 JK^{-1})

(a) Determine the final temperature of the mixture. (1 mk)

(b) Determine the heat lost by calorimeter. (2 mks)

(c) Determine the heat lost by warm water. (2 mks)

(d) Determine the specific latent heat of fusion of ice. (3 mks)

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(e) It's observed that if the temperature if warm water used was 80^0c, then all the ice could have melted. What would be the final temperature of the mixture? Use the value of specific latent heat of fusion obtained in (d) above. (3 mks)

17. (a) A concrete block of value, V, is totally immersed in sea water of density, S. Write an expression for the upthrust on the block. (1 mk)

……..

……..

(b) A certain solid of volume 50 cm^3 displaces 10 cm^3 of kerosene (density 800 kg/m^3). When floating. Determine the density of the solid. (4 mks)

(c) State the condition necessary for a body to float in a fluid. (1 mk)

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18. (a) A mercury thread 200 mm long traps a gas in a long glass tube. The length of the gas column is 100 cm when the tube if held horizontally. The atmospheric pressure is 750 mmHg. Calculate the length of the gas column when the tube is held vertically with the open end facing downwards. (3 mks)

(b) State Boyle's law. (1 mk)

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……

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(c) 250 cm^3 of a gas is collected at a pressure of 900 mmHg and 27^0c temperature. Determine the volume of this gas if the pressure is reduced to 500 mmHg and temperature 19^0c. (2 mks)

This is the last printed page.

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

232/2
PHYSICS
PAPER 2
TIME: 2 HOURS

INSTRUCTIONS TO THE CANDIDATES:

- Write your **name** and **index number** in the spaces provided above
- This paper consists of **two** sections **A** and **B.**
- Answer **all** questions in section **A** and **B** in the spaces provided.
- All working **must** be clearly shown in the spaces provided.
- Mathematical tables and electronic calculators may be used.
- Take'g' l0m/s 2

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SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 - 14	25	
B	15	15	
	16	14	
	17	14	
	18	12	
TOTAL		**80**	

This paper consists of 12 Printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.

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SECTION A

1 . What property of light is suggested by the formation of shadows? (1 mks)

……

……

……

2. You are provided with the following; A cell and holder, a switch, a rheostat, an Ammeter, a voltmeter and connecting wires. Draw a diagram for a circuit that could be used to investigate the variation of the potential difference across the cell with the current drawn from the cell. (2mks)

3. An un-magnetized steel rod is clamped facing North-South direction and then hammered repeatedly for some time. When tested, it is found to be magnetized. Explain this observation.(2mks)

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4. A lady holds a large concave mirror of focal length 1 m, 80 cm from her face, state two characteristics of her image in the mirror. (2 mks)

……

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5. A girl brought a positively charged rod close to the cap of a gold leaf electroscope; she observed that the gold leaf diverged further. Explain this observation. (2mks)

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6. In an experiment using a ripple tank the frequency, f, of the electric pulse generator was reduced to one third of its value. How does the new wavelength compare with the initial wavelength? (3

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7. Figure 1 shows a ray of light incident on the face of a water prism

FIG.1

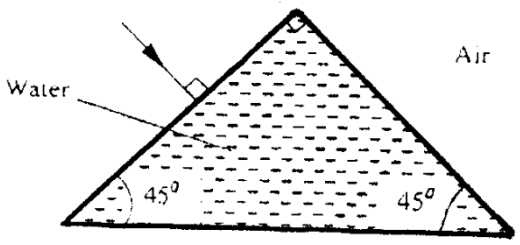

FIG.1

Sketch the path of the ray as it passes though the prism. Critical angle for water is 49^0 (1mk)

8. A heating coil is rated 100W, 240V. At what rate would it dissipate energy if it is connected to a 220V supply? (3mk)

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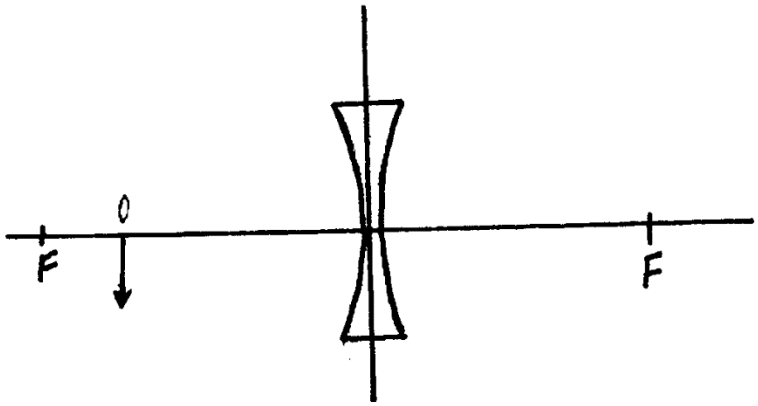
9. Figure 2 shows an object 0 placed in front of a concave lens with principal foci F and F Construct a ray diagram to locate the position of the image (1mk)



10. State the difference between X-rays and Gamma rays in the way in which they are produced.(1mk)

……

……

……

11. A 60W bulb is used continuously for 36 hours. Determine the energy consumed. Give your answer in kilowatt hour (kwh). (2mks)

12 A narrow beam of electrons in a cathode ray oscilloscope (CR0) strike the screen producing a spot. State what is observed on the screen if a low frequency a.c source is connected across the y- input of the CRO (1mk)

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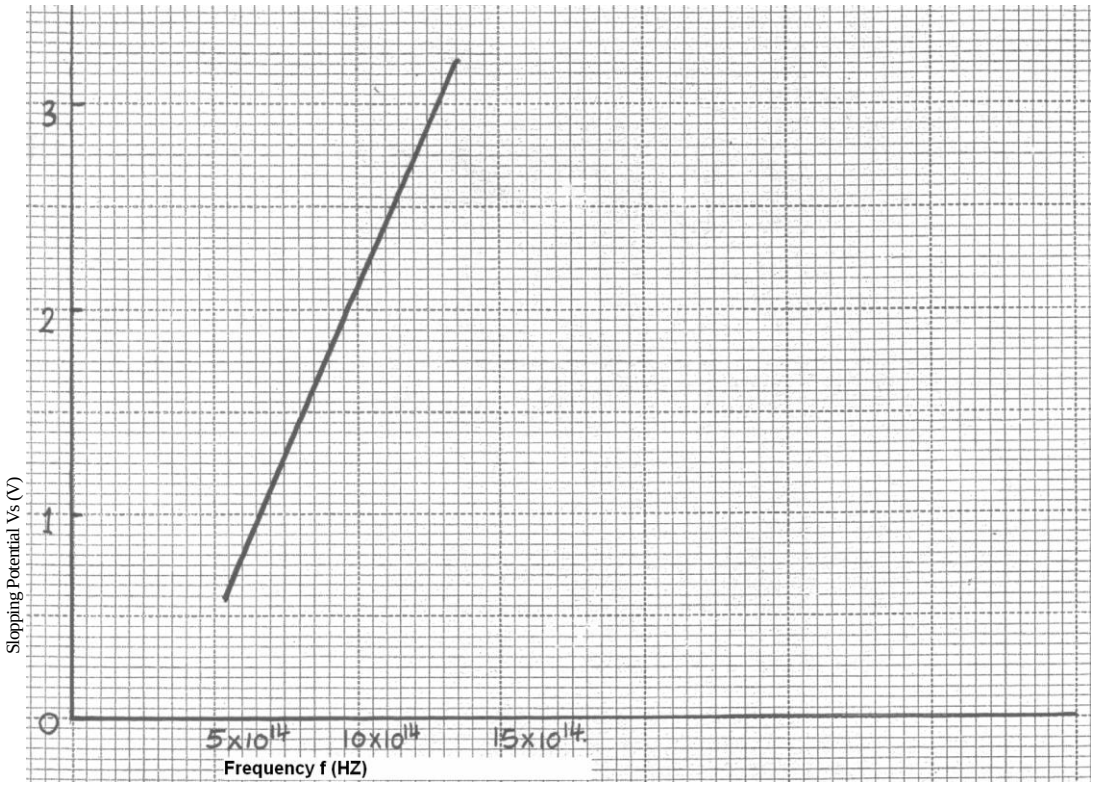
In an experiment on photo- electricity using metal X, the graph shown in figure 3 was obtained Use the graph to answer questions 13.



13. Determine the minimum frequency Fo below which no photoelectric emission occurs. (1mk)

14 . You are provided with 12V a. c source, four diodes and resistor. Draw a circuit diagram for a full wave rectifier and show the points at which the output is taken. (2mk)

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15. (a) Given a bar magnet, an iron bar and a string

(i) Describe a simple experiment to distinguish between the magnet and the iron bar

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(ii) State with reasons the observation that would be made in the experiment. (2mks)

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(b) In an experiment to magnetize two substances P and Q using electric current, two curves (graphs) were obtained as shown in figure 4

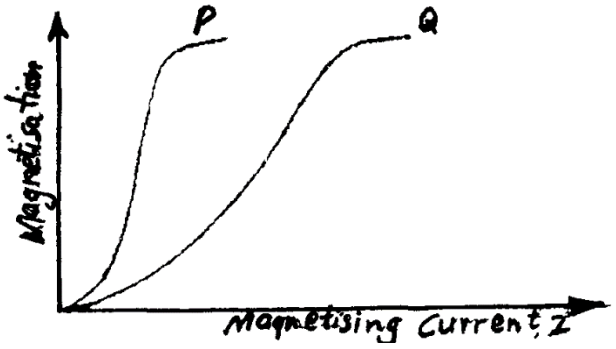

FIG.4

Using the information in fig. 4 explain the differences between substances P and Q with references to the domain theory (6mks)

……

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(c) In the set up in figure 5, the suspended metre rule is in equilibrium balanced by the magnet and the weight shown. The iron core is fixed to the bench.

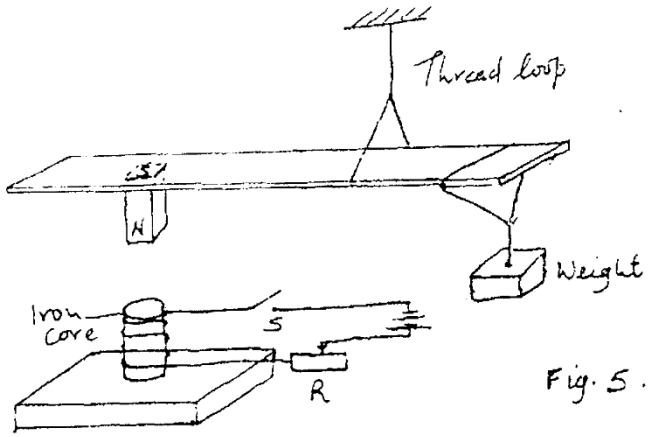

Fig. 5.

(i) State the effect on metre rule when the switch S is closed. (1mk)

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(ii) What would be the effect of reversing the battery terminals? (1mk)

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(iii) Suggest how the set up in figure 5 can be adapted to measure the current flowing in the current circuit. (3mk)

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16. (a) (i) What is the difference between longitudinal and transverse waves? (1mk)

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(ii) State two distinctions between the way sound waves and electromagnetic waves are transmitted (2mk)

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(b) A mineworker stands between two vertical cliffs 400m from the nearest cliff. The cliffs are X distance apart. Every time he strikes the rock once, he hears two echoes, the first one after 2.55 , while the second follows 2s later. From this information; calculation:

(i) The speed of the sound in air (2mk)

(ii) The value of X (3mk)

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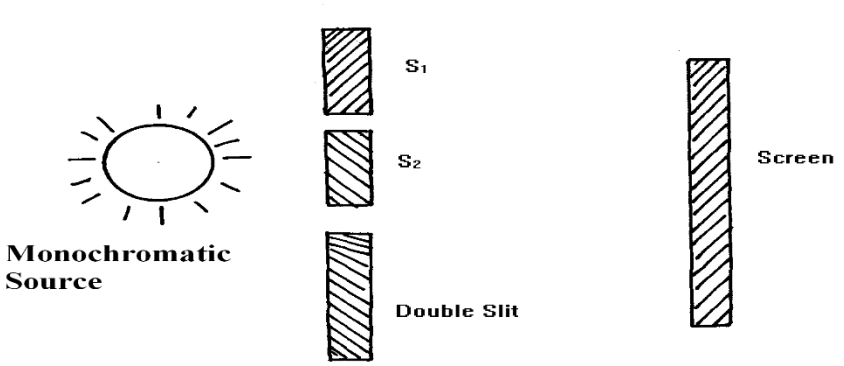
(c) In an experiment to observe interference of light waves a double slit is placed close to the source. See figure 5



(i) State the function of the double slit (1mk)

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(ii) Describe what is observed on the screen (2 mks)

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……
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(iii) State what is observed on the screen when

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i). The slit separation S1S2 is reduced (1mk)

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ii) White light source is used in place of monochromatic source (1mk)

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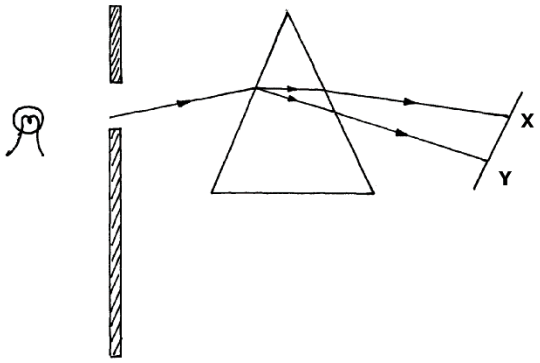
17. a) The diagram in figure 6 below shows a narrow beam of white light onto a glass Prism.



(i) What is the name of the phenomenon represented in the diagram? (1mks)

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(ii) Name the colour at x and Y. (2mk)

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(iii) Give a reason for your answer in part (ii) above. (1mk)

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(iv) What is the purpose of the slit? (1mk)

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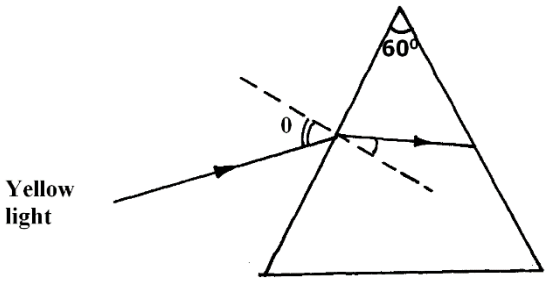
b) Figure 7 below shows the path of ray of yellow light through a glass prism. The speed of yellow light in the prism is 1.8×10^8 m/s.



i) Determine the refractive index of the prism material (Speed of light in vacuum, C $= 3.0 \times 10^8$ m/s) (3mks)

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(ii) Show on the same diagram, the critical angle c and hence determine its value. (3mks)

(iii) Given that r = 31.2^0, determine the angle 0. (3mks)

18. (a) X- rays are used for detecting cracks inside meta' beams

(i)State the type of the X- rays used.

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……

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

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(b) Figure 1 shows the features of an X- ray tube

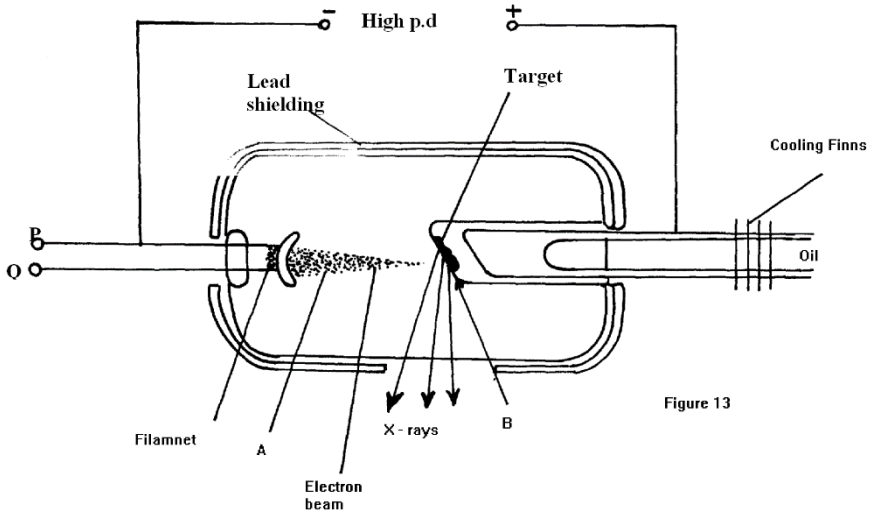

Figure 13

i) Name the parts labelled A and B. (2mks)

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(ii) Explain how a change in the potential across P changes the intensity of the X-rays produced in the tube. (2 mks)

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(iii) During the operation of the tube, the target becomes very hot. Explain how this heat is caused. (2 mks)

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(iv) What property of lead makes it suitable for use as shielding material? (1mk)

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(c) ln a certain X- ray tube, the electrons are accelerated by a Pd of 12000V. Assuming all the energy goes to produce X- rays, determine the frequency of the X- rays produced. (Plank's constant h= 6.62×10^{-34} is and charge on an electron, e = 1.6×10^{-19}C). (3mks)

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NAME: ……..

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

SCHOOL: ……..

BRILLIANT STUDENT PRE-MOCK 2 EXAMS

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

232/3

PHYSICS

Paper 3 **(PRACTICAL)**

TIME: 2 ½ hours

Instructions

- *Write your name and index number in the spaces provided above.*
- *Sign and write the date of examination in the spaces provided above.*
- *Answer ALL questions in the spaces provided in the question paper.*
- *You are supposed to spend the first 15 minutes of the 2 ½ hrs allowed for this paper reading the whole paper carefully before commencing your work.*
- *Marks are given for a clear record of the observations actually made, their suitability, accuracy and the use made of them.*
- *Candidates are advised to record their observations as soon as they are made.*
- *Non-programmable silent electronic calculators and KNEC mathematical tables may be used except where stated otherwise.*
- *This paper consists of 9 printed pages.*
- *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*

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Question 1	b	d	e	f	g	h (i)	(ii) I	I	**TOTAL**	
Maximum Score	1	4	1	5	3	2	2	2	**20**	
Candidate's Score										
Question 2	**Part A**	a	b	c	d	**Part B**	c	g (i)	g (ii)	**TOTAL**
Maximum Score		1	2	5	2		3	5	2	**20**
Candidate's Score										

GRAND TOTAL

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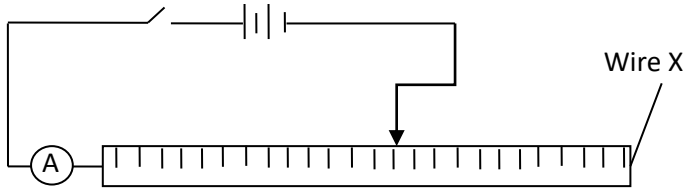
Question one

You are provided with the following:

- 2 new dry cells size D
- A cell holder
- A switch
- An ammeter
- A voltmeter
- 6 connecting wires at least three with crocodile clips
- Nichrome wire mounted on the metre rule labeld X
- A micrometer screw gauge (to be shared)

Proceed as follows

a. Connect the circuit as shown in the figure below



b. Measure the voltage, E of the dry cell before closing the switch
E=…… V (1mark)

c. Adjust the length L of the wire 0.2m, close the switch S and read the value of current and record in the table below.

Length L(m)	0.2	0.3	0.4	0.5	0.6	0.7
Current , I(A)						
$\frac{1}{I}$ **(A^{-1})**						

d. Repeat the procedure in (c) above for the value of lengths given in the table
(3mks)

e. Calculate the values of $\frac{1}{I}$ and record in the table above. (1mk)

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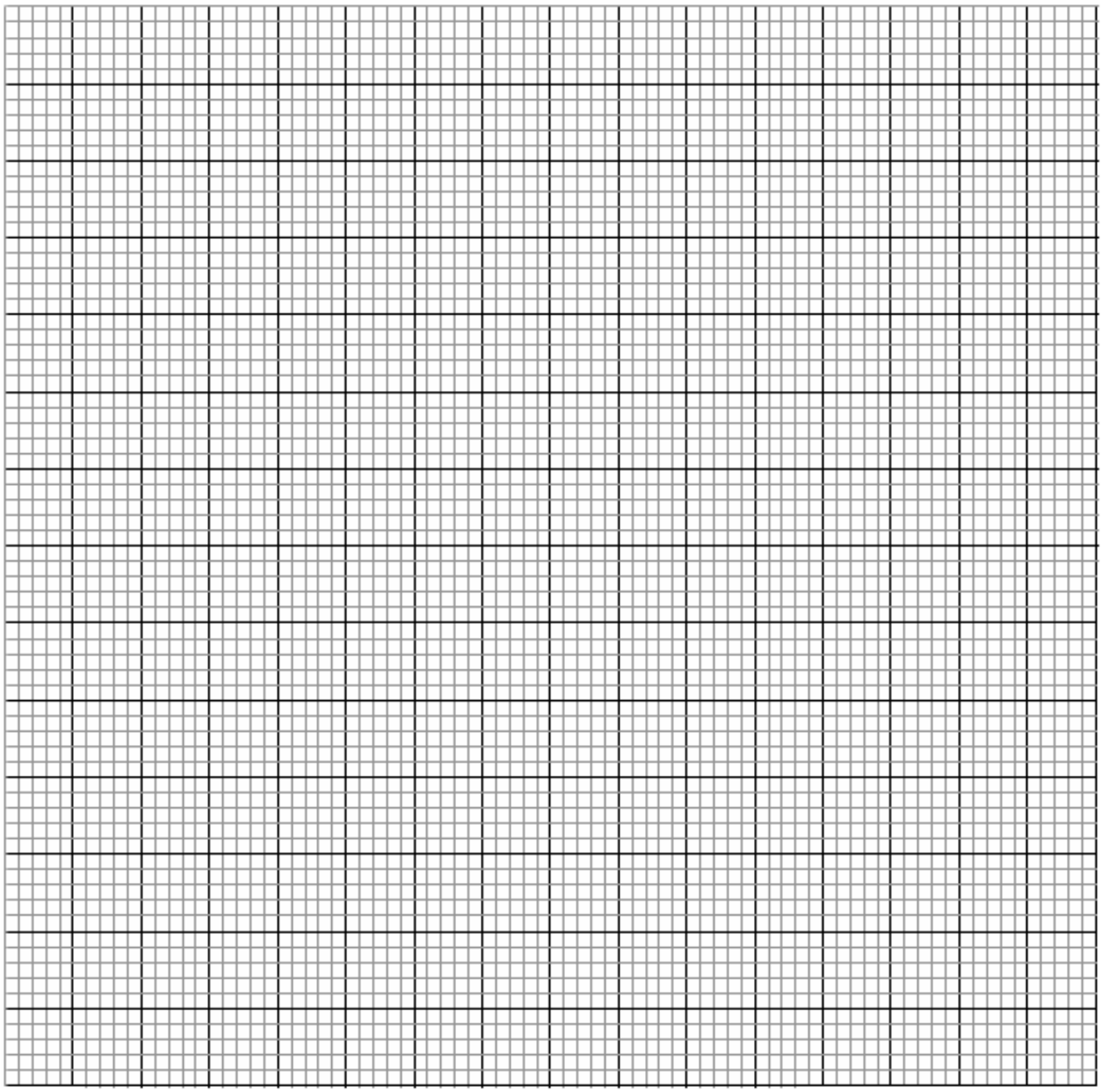
f. On the grid provided plot a graph of $\frac{1}{I}$ (y axis) against L (5mks)



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g. Determine the gradient of a graph (3mks)

h. (i) Measure the diameter dof the wire in three points used and find the average diameter.

d_1=……

d_2 =……

d_3…… mm (1mk)

Average d=……m (1mk)

(ii) Determine the cross section area, A of the wire (2mks)

Form the equation

$\frac{1}{I} = \frac{kl}{AE} + \frac{Q}{E}$: determine

i) The value of k (2mks)

ii) The value Q (2mks)

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Question 2
Part A
You are provided with the following

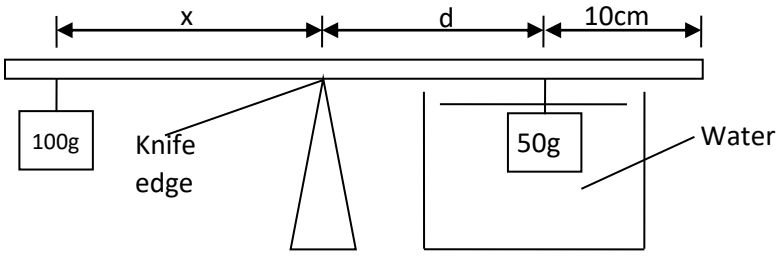
- A metre rule
- Knife edge raising 20cm above bench
- One 50g mass and one 100g mass
- Some thread
- Some water in a beaker
- Liquid L in a beaker
- Tissue paper

Proceed as follows:

a) Balance the meter rule on the knife edge and record the reading at this point.

Balance point = **……**m (1mk)

For the rest of this experiment the knife edge must be placed at this position.
b) Set up the apparatus as shown in figure below. Use the thread provided to hang the masses such that the positions of support can be adjusted.



The balance is attained by adjusting the position of the 100g mass. Note that the distance x and d are measured from the knife edge and the 50 mass is fully submerged in the water. Record the values of x and d.

i) x_1 = **……**.cm (1mk)

d = **……**..cm (1mk)

ii) Determine W_1 (weight of the object in water) (2mks)

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iii) Determine the upthrust U_w in water of the 50g in water (1mk)

c) Now balance the metre rule when the 50g mass is fully submerged in the liquid L.

x_2 =……cm (1mk)

Apply the principle of moments to determine the weight W_2 of 50g mass in the liquid L and hence determine the upthrust U_L in the liquid.

W_2 (2mks)

U_L (1mk)

d) Determine the relative density R.D of the liquid L, given that

R.D = $\frac{U_L}{U_w}$ (1mk)

Part B

You are provided with the following

- A rectangular glass block
- Four optical pins
- A piece of soft board
- A plain sheet of paper
- Cellotape

You are also required to have your complete mathematical set.

Proceed as follows:

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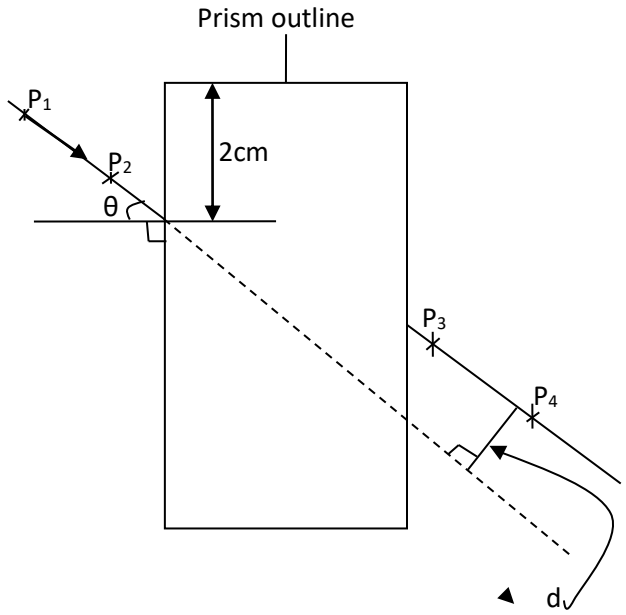
a) Place the plain sheet of paper on the soft board and fix it using the cellotape provided. Place the glass block at the centre of the sheet, and draw its outline. Remove the glass block. See the figure below



Draw a normal at a point 2cm from the end of the longer side of the block outline. This normal line will be used for the rest of the experiment.

b) By viewing through the glass from the opposite side stick two other pins P_3 and P_4 vertically such that they are in line with the images of the first two pins. Draw a line through the marks made by P_3 and P_4 to touch the outline. Measure and record in the table below the perpendicular distance **d** between the extended line and the line, P_3P_4. See figure above.

c) Record this value in the table below and repeat the process for other angles shown in the table.

NB: The sheet of paper with the drawing must be handed in together with this question paper. Ensure you write your name and index on the sheet paper.

(3mks)

Θ(deg)	25	35	40	45	55	60	65
d(cm)							

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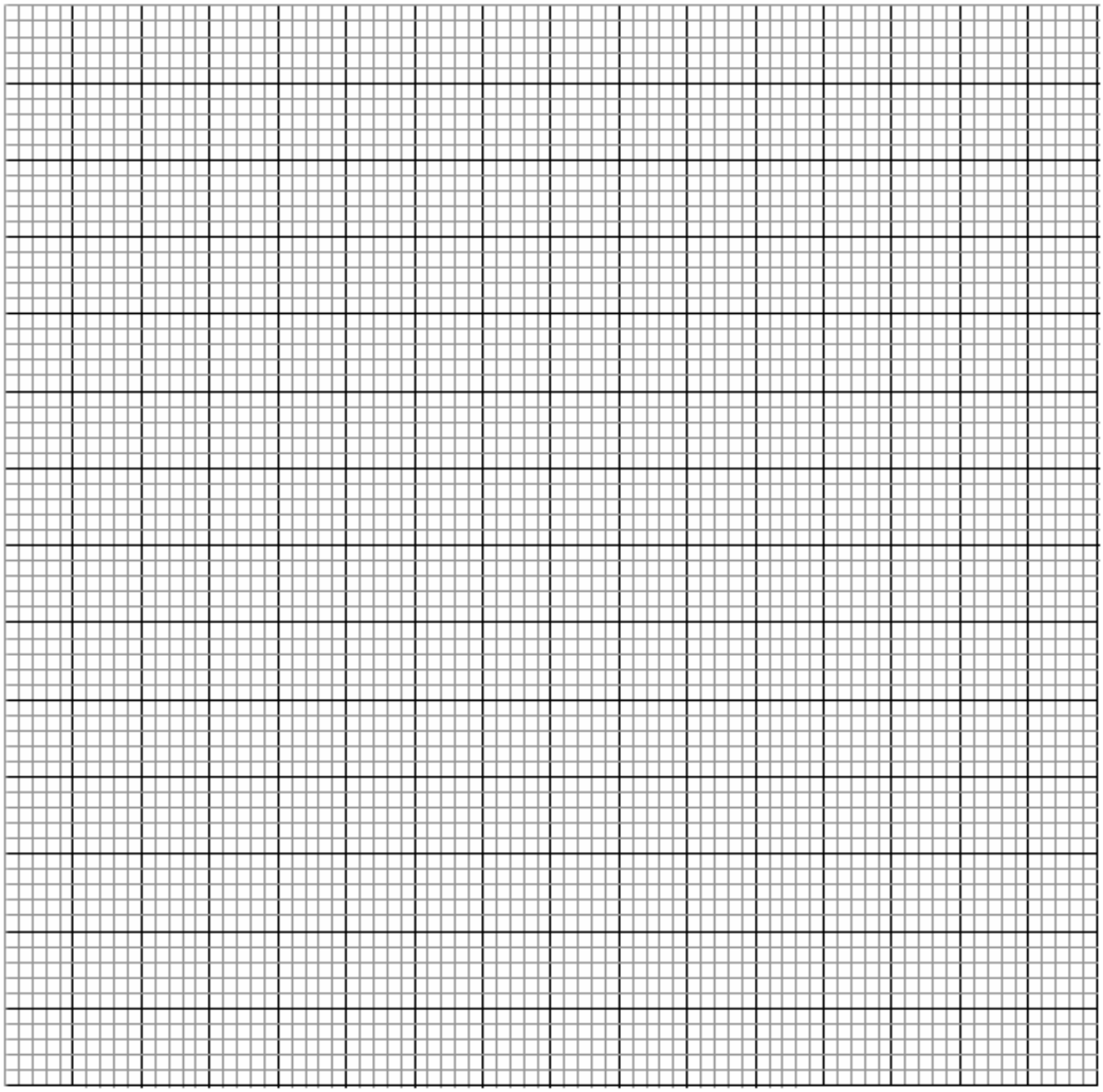
f(i) On the grid provided, plot a graph of d (y –axis) against Θ (5mks)



(ii) Using the graph, estimate the value of d when $\Theta = 0^{o}$ (2mks)

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