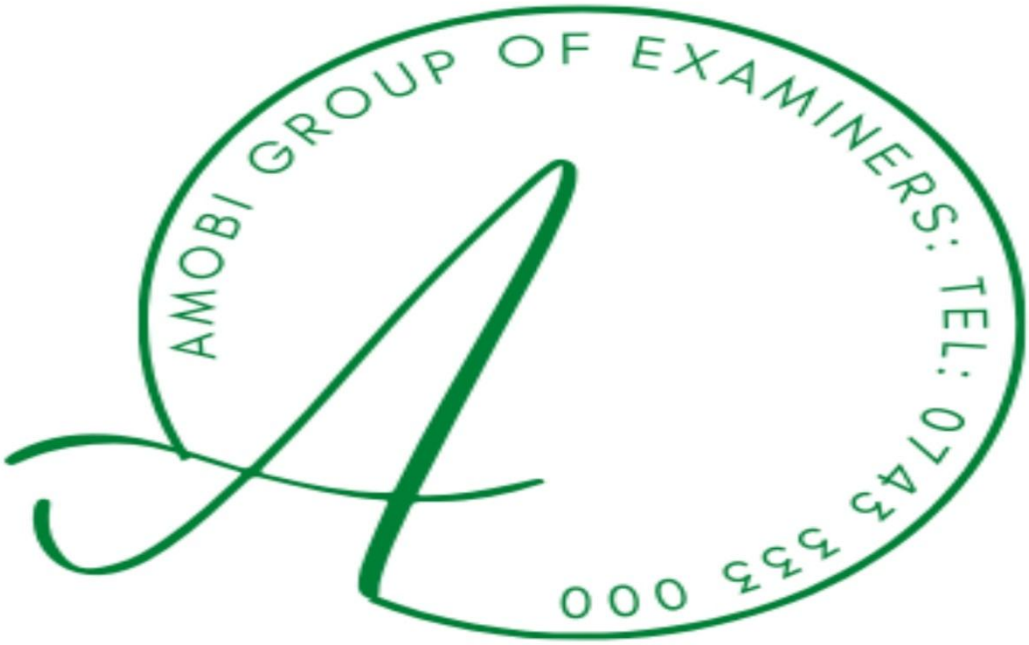
BRILLIANT STUDENTS FORM 3 END TERM 3 SERIES 1 EXAMS *(17 SUBJECTS TESTED)*



BRILLIANT STUDENTS FORM 3 END TERM 3 SERIES 1 EXAMS

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For Marking Schemes

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

by Amobi Group of Examiners.

ORDER OF THE 17 SUBJECTS TESTED

(ALPHABETICALLY ARRANGED)

1. AGRICULTURE
2. ART AND DESIGN
3. BIOLOGY
4. BUSINESS STUDIES
5. CHEMISTRY
6. COMPUTER
7. C.R.E
8. DRAWING AND DESIGN
9. ENGLISH
10. FRENCH
11. GEOGRAPHY
12. HISTORY
13. HOMESCIENCE
14. I.R.E
15. KISWAHILI
16. MATHS
17. PHYSCIS

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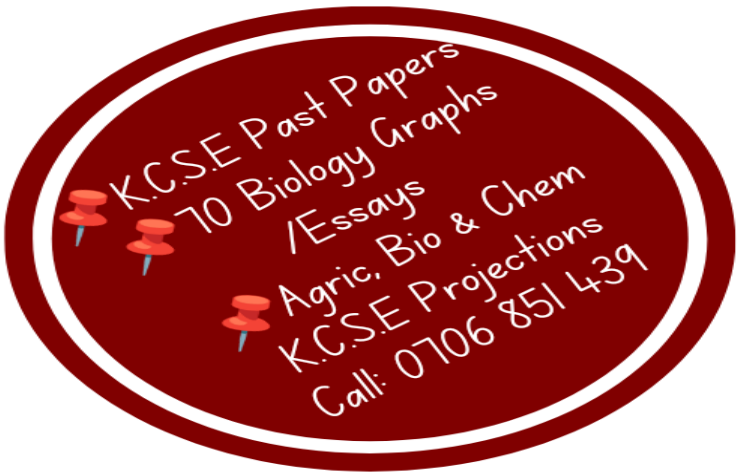
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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

ADM NO: …… **SIGN:** …… **DATE:** ……...

AGRICULTURE (QUESTION PAPER)
FORM THREE
TIME 2 HOURS
PAPER 1
INSTRUCTIONS TO CANDIDATES:

- *Write your **name** and **index number** in the spaces provided.*
- *Sign and write the date of the examination in the spaces provided above.*
- *This paper consists of three section **A,B** and **C***
- *Answer **all** the questions in section **A** and **B***
- *Answer any **two** questions in section **C.***
- *Answers should be written in the spaces provided in this booklet.*

For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-19	30	
B	20-23	20	
C		20	
		20	
	TOTAL	**90**	

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SECTION A (30 MARKS)

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

1.State **two** ways by which agriculture promotes growth of industries. **(1mk)**

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2.Give **two** reasons for carrying out secondary cultivation. **(1mk)**

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3.State **two** reasons for discouraging the use of fire in seedbed preparation. **(1mk)**

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4.State **four** importance of drainage. **(2mks)**

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5.Give **two** reasons why organic manures are not used in carrot production. **(1mks)**

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6.State **four** symptoms of potassium deficiency in crops. **(2mks)**

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7.State **four** advantages of land consolidation. **(2mks)**

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8.Give **four** requirements of a successful settlement scheme. **(2mks)**

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9.List **four** factors that influence the depth of planting. **(2 mks)**

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10. Differentiate between oversowing and undersowing. **(1 mk)**

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11. Name **four** contents of a title deed. **(2mks)**

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12. Name **three** reasons for early cultivation of land. **(2mks)**

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13. Give the use of the following farm records

(a) Muster roll **(1mk)**

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(b) Labour utilization analysis **(1mk)**

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14. List **four** ways of harvesting water in the farm. **(2 mks)**

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15. State **two** roles of additives in silage making. **(1 mk)**

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16. Highlight **four** importance of farm records. **(2 mks)**

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17. State **TWO** disadvantages of tissue culture. **(1 mks)**

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18. Name **four** disadvantages of using seeds as planting material. **(2 mks)**

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19. List **two** proper storage practices used in pest control. **(1 mk)**

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SECTION B (20 MARKS)

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

20. (i) A farmer was advised to apply 100 kg/ha of a compound fertilizer 20-15-10. How much potassium Pentoxide will he apply in 0.5ha farm. **(3 mks)**

(ii) What do the numbers 20 and 15 stand for in the fertilizer? **(2mks)**

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(iii) Describe the procedure of preparation of green manure? **(3mks)**

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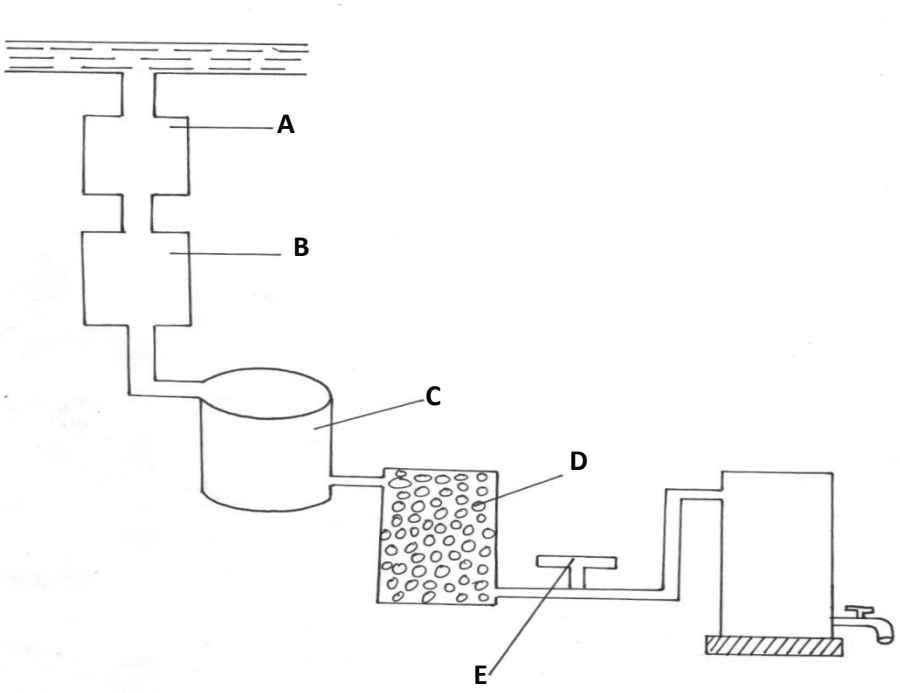
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21. Below is a diagram of a water treatment system.



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(a)(i) Identify parts labeled

A: …….. **(1mks)**

B: …… **(1 mks)**

C: …… **(1 mks)**

D: …… **(1 mks)**

(ii) Name the chemicals added in part B. **(1mk)**

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(iii) State **one** use of each chemical named in (II) above. **(1mk)**

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(iv) State **one** role of the part labeled E. **(1mrk)**

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22. A student carried out an experiment using two soil samples, labeled F and G. The samples were put in different Petri-dishes and some drops of water added to each sample until they were moist. The student rubbed the moist soil samples between the fingers one at a time noting the feel. The results were recorded as shown in the table below.

Soil sample	**Description of feel**
F	**Smooth and sticky**
G	**Rough and course**

(a)From the results, identify the types of soil represented by sample F. **(1 mk)**

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(b)Which of the two soil samples would be best suited for growing rice. Give a reason for your answer. **(2 mks)**

Type of soil: .....

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Reason: .....

Identify the likely soil structure of soil F and G

F .....

G .....

SECTION C (40 MARKS)

Answer any two questions from this section in the spaces provided after question 26.

24. (a) Describe the procedure used in soil sampling. **(6mks)**

(b) Describe **five** factors that influence crop rotation. **(10mks)**

(c) State **four** advantages of earthing up in crop production. **(4mks)**

25. (a Describe the procedure of pruning tomatoes **(4mks)**

(b) Describe **six** field management practices carried out in the field when growing maize **(6 mks)**

(c) State four precautions observed when harvesting `pyrethrum **(4mks)**

(d) Explain three reasons for deep cultivation **(6 mks)**

26. State and explain:

(a) **Eight** factors that encourage soil erosion **(8 mks)**

(b) **Seven** nursery practices carried out in a tomato nursery bed. **(7 mks)**

(c) **Five** factors that determines crop growth in an area **(5mks)**

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FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……..……

SCHOOL: ……..

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

AGRICULTURE (QUESTION PAPER)
FORM THREE
TIME 2 HOURS
PAPER 2

INSTRUCTIONS TO CANDIDATES:

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

For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-17	30	
B	18-21	20	
C	22	20	
	23	20	
	24		
	TOTAL	**90**	

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SECTION A (30 MARKS)

Answer all the questions in this section

1.State **two** ways in which digestion of food in pigs differs from that in ruminants. **(2mks)**

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2.State **two** observable differences on the head between the large white and landrace pig breeds **(2mks)**

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3.Name **four** diseases transmitted by ticks. **(2mks)**

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4.What is nuptial flight? **(1mk)**

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5.Name the breed of rabbit with the following characteristics:

(i)White body and red eyes. **(½mk)**

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(ii)White body with one or more of the following parts black: ears, nose, paws and tail. **(½mk)**

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6.Mention **four** pre-disposing factors of scours in calves. **(2mks)**

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7.State **four** advantages of a spray race over a plunge dip. (2mks)

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8. (a) State the use of an oil stone. **(½mk)**

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(b) Name the appropriate saw used to carry out each of the following operations.

(i) Cutting timber across grains. **(½mk)**

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(ii) Cutting timber along grains. **(½mk)**

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(iii) Cutting unwanted branches from fruit tree. **(½mk)**

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9.State any **two** disadvantages that may arise from inbreeding. **(2mks)**

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10. State **two** advantages of natural mating. **(1mks)**

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11. State **two** reasons for debeaking chicken **(1.mks)**

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12. Mention **two** reasons for flushing ewes. **(1mks)**

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13. Give **two** ideal conformation features of beef cattle. **(2mks)**

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14. State **two** reasons for culling breeding sows. **(2mks)**

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15. Mention **four** qualities of colostrum that makes it most ideal for newborn calves. **(2mks)**

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16. State **four** factors to consider when choosing feedstuff to use in the farm. **(2mks)**

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17. Mention **two** importance of keeping livestock healthy. **(2mks)**

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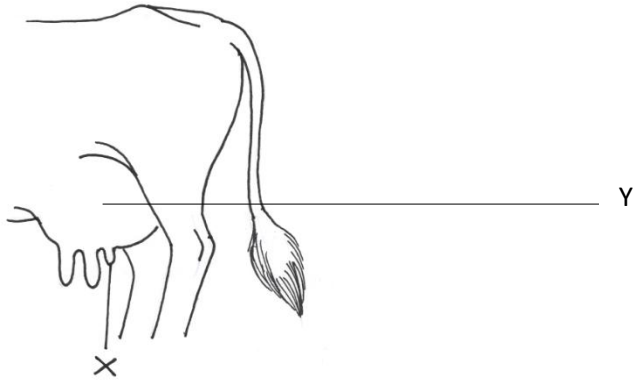
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SECTION B (20 MARKS)

Answer all the questions in this section.

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



(i)Identify the operation that should have been carried out on the teat labeled **X**. **(½mk)**

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(ii)Name **two** tools/equipment used in the above operation. **(1mk)**

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(a) State **two** advantages of carrying out the above operation. **(2mks)**

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(b) Mention any **three** predisposing factors of the disease that affects the part labeled Y. **(1½ mks)**

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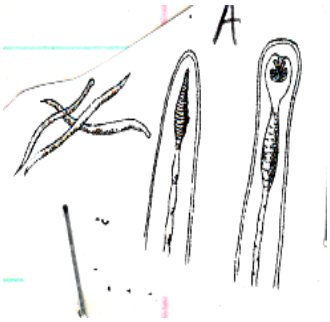
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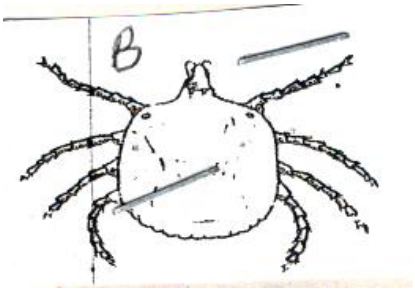
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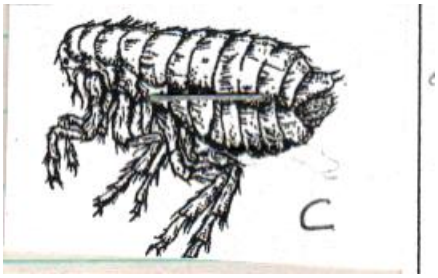
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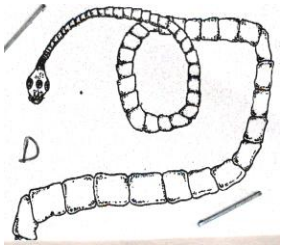
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19. Below are livestock parasites A, B, C and D. Use them to answer the questions that follow.









(i)Identify the parasite stating where they are found. **(2mks)**

Identity	**Where found in animals**
A	
B	
C	
D	

(ii)State **two** methods of controlling parasite B. **(1mk)**

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(iii) State **four** effects of parasite A in livestock. **(2mks)**

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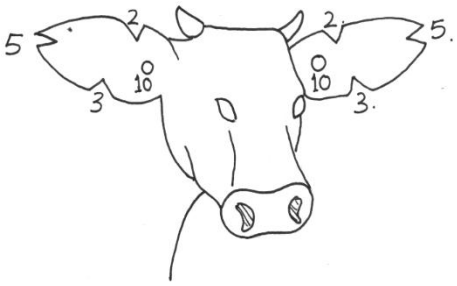
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20. A ration containing 20% DCP is to be prepared using ground maize and fish meal. Given that ground maize contains 7% DCP and fish meal contains 62% DCP, calculate the amount in kilograms of each feedstuff required to prepare 100 kg of the feed. **(5mks)**

21. The diagram below illustrates a method of identification in livestock production. Use it to answer the questions that follow.



i. Name the type of identification illustrated above. **(1mk)**

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ii. Give the identification number of the animal illustrated in the diagram above. **(1mk)**

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iii. Using diagrams, illustrate how you can identify animal number 24 and 36 using the above method. **(2mks)**

(b) If a sow was successfully served on 27th September 2021, state the date she is likely to have farrowed. **(1mk)**

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SECTION C (40 marks)

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

22. (a) Give **four** differences between a crosscut saw and tenon saw **(4 mks)**

(b) State **six** maintenance practices for wheelbarrow. **(6 mks)**

(c) State **ten** advantages of artificial insemination **(10mks)**

23. (a) Describe fish farming under the following sub-headings:

(i) Siting a fish pond. **(2mks)**

(ii) Harvesting. **(2mks)**

(iii)Methods of preservation for fish. **(3mks)**

(iv) Importance of liming the pond. **(3mks)**

(b) Describe bee keeping under the following sub-headings.

(i) Siting the apiary. **(3mks)**

(ii) List of pests and Diseases. **(4mks)**

(iii) Factors affecting quality of honey. **(3 mks)**

24.(a) Describe **six** factors considered in choosing materials for constructing farm structures**.(6mks)**

(b)Describe **seven** factors considered in siting farm structures. **(14mks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……

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

442-ART AND DESIGN
PAPER ONE
FORM THREE
TIME 2 HOURS

Instructions to candidates

- *Write your Name, ADM No, Class and Date in the spaces provided above.*
- *This paper consists of three sections **A, B and C***
- *Answer **all the questions** in sections A and B, but only one question in section C.*
- *All answers should be written in the **spaces provided***
- *Where drawings and diagrams are appropriate, they should be included **within the text of your answer.***
- ***Candidate should answer the questions in English**.*

FOR EXAMINER'S USE ONLY

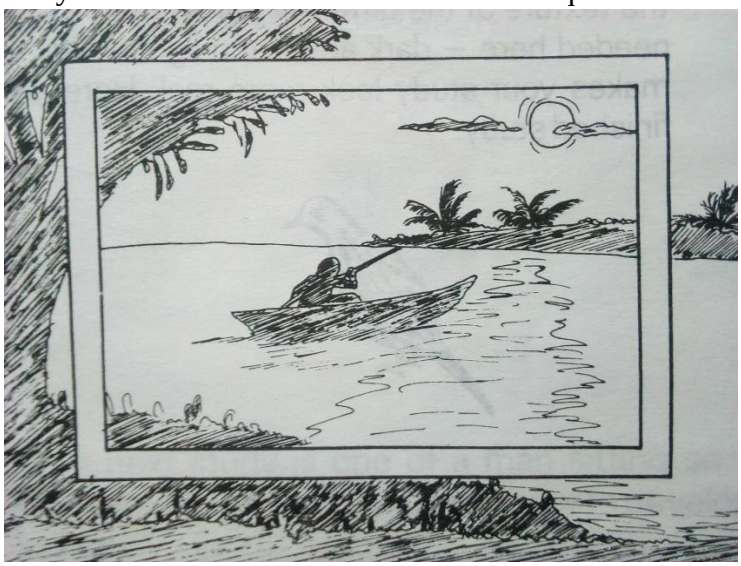
SECTION	QUESTION	MAXIMUM MARKS	STUDENT'S SCORE
A	1	20	
B	2	08	
	3	04	
	4	05	
	5	03	
	6	05	
C	7/8/9	15	
	TOTAL	**60**	

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Section A: 20mks

Answer all the questions in the questions in this section.

1. a) Study the illustration below and answer the questions that follow.



i) Identify the device in rectangular shape above and give its function **2*mk*s.**

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(ii)What name is given to the line crossing/cutting the middle left half in the picture above? **(1mk)**

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b) Explain ***hue*** as a property of colour. ***1mk***

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c)What do you understand by the term ***serigraphy*** as a printing technique? ***1mk***

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d) The illustration shows a hand building technique of a pottery vessel.



i) Name the technique. ***1mk***

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ii) Why would you fire a clay articles while completely dry? Give any two reasons. ***2mks***

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e) Identify the fabric decoration technique shown below and give any three techniques under the same method mentioned above in fabric design. ***4mks***



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f) Differentiate between ***serif*** and ***san serifs*** in lettering. Use illustration ***3mks***

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g) State any two properties of clay. ***2mk***

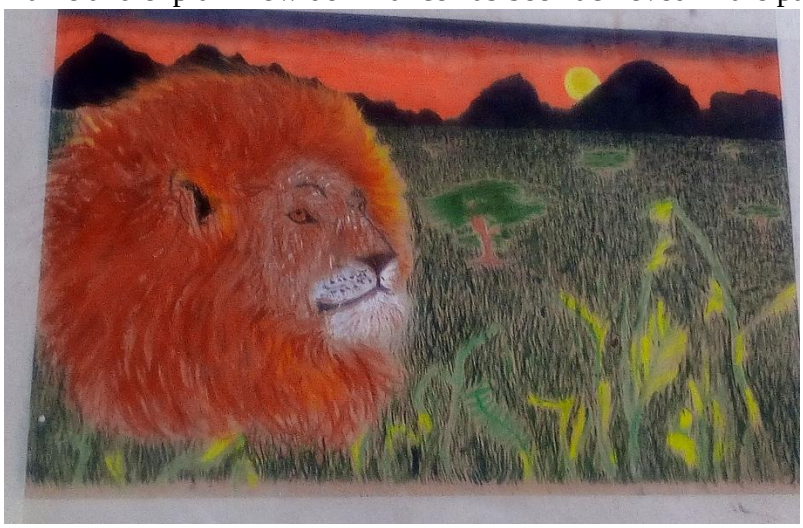
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Name and explain how dominance has been achieved in the painting below. ***2mks***



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a) Explain the asymmetrical type of balance. ***1mk***

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Section B: 25mks

Answer all the questions in the questions in this section.

2. Study the illustration given below and answer questions under the following:



a)Identify any two jewelries and two ornaments present on the above illustration. ***4mks.***

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b) Give four factors to consider when designing ornaments ***4mks***

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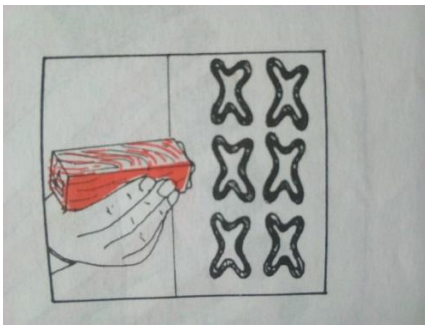
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3 Show, on the illustration, the following parts of a letter *4mks*

(i) descender ii) base line iii) xh. (iv) ½ xh.



4). A B





a)Identify and define the techniques of fabric decoration illustrated in A and B above. **2 *mks***

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(ii) Name the tools being used in A and B **(2mks)**

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b) Explain two advantages of technique B over the other techniques. ***2mks***

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5) Using arrows, Identify three elements of sculpture on the artwork bellow ***3 mks***

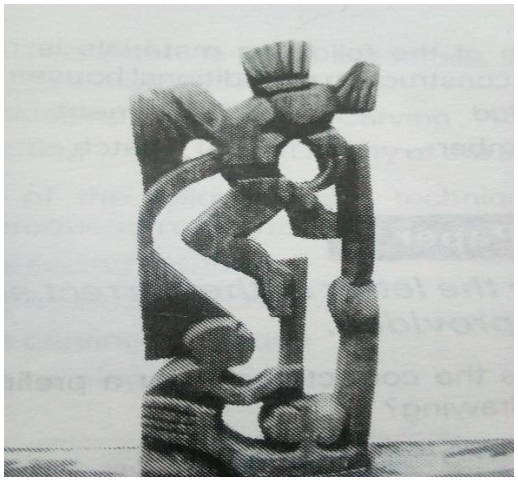
(i) Voids

ii) Planes

(iii) Contours

(iv) Texture

(v) Solids



6)a) Name the following Identification symbols A and B ***2mks***



A



B

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b) Give any three Cooperate Identities. ***3mks***

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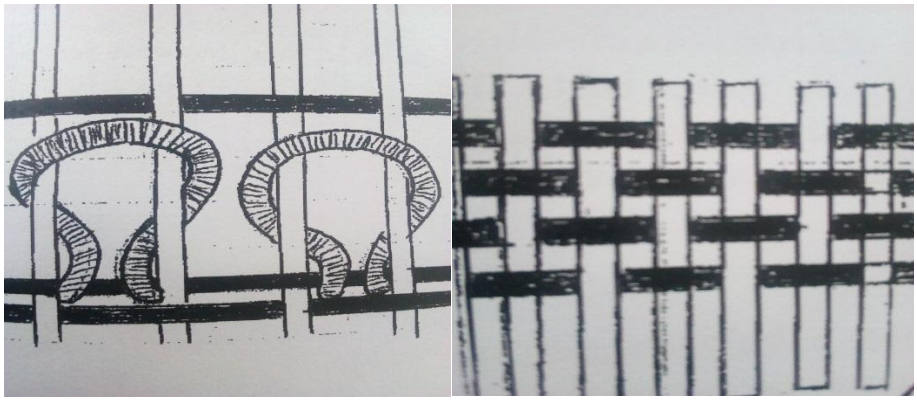
Section C: 15mks

Answer ONLY ONE question from this section.

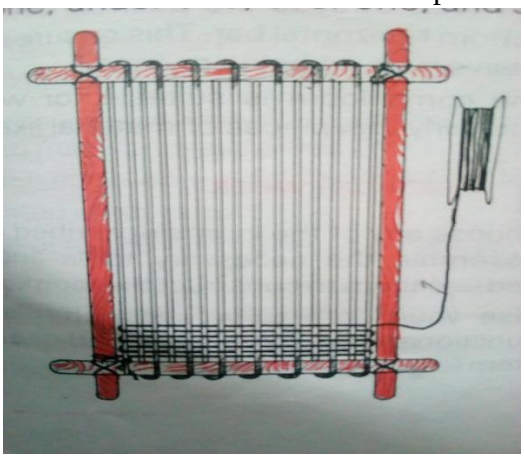
7. The illustration below shows weaving techniques:

a)Identify the weave structure/techniques labeled A and B **2mks**

A B



b) Differentiate between warp faced and weft faced fabrics (3mks)



Y

c) Describe the process of weaving above **(8mks)**

(ii) Name the tool **Y** and its function **(2mks)**

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8.

(a) Explain how the following beads are made. ***8mks***

(i)Papier mache

(ii)Glossy paper beads

(b) What is an ornament? [1mk]

[i] Differentiate between the following **(6mks)**

(ii) Ornamentry and Jewellery

(iii) Strung knotted and strung netted beadwor

9.

a) Explain the uses of a squeegee and roller as used in printing. ***2mks***

b) Explain any two guidelines/measures to be taken during the block printing technique. ***3mks***

c) Describe the process of coming up with a decorated fabric, using a stencil ***[10mks]***

Answer sheet for Section C only

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

442/2-ART AND DESIGN PAPER 2
FORM THREE
TIME 3 HOURS

Instructions to candidates

- This paper consists of **two alternatives**; A and B. Each alternative has two questions, choose only one question from any one alternative.
- You are reminded that emphasis should be laid on the quality of imagination rather than literal interpretation of the question.
- The use of **geometrical instruments** and **tracing paper** is **forbidden** in Alternative **A** but is **allowed** in alternative **B.**
- The use of computers, colored pencils, crayons, luminous pens or marker pens is **not allowed** in any alternative.
- Clearly write your **Name, Index Number, alternative, number of option** chosen, **signature** and **date in the spaces provided in the A2 sheets of paper.**
- At the end of the examination, for wet media, let your work completely dry then pass it to the supervisor **without rolling** or **folding** it.
- This paper is marked out of **100 marks.**

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ALTERNATIVE A: DRAWING /PAINTING.

*You are instructed that the use of rulers and other mechanical devices is **forbidden** in this alternative.*

EITHER

DRAWING

1. In pencil, produce a composition based on "a shop keeper inside a kiosk attending to a customer

Work on an area of 35cm by 45cm.

OR

PAINTING

2. In colour, produce a composition depicting the theme'**Stampeede**".

Work on an area of 35cm by 45cm.

ALTERNATIVE B: GRAPHICS

*You are instructed that the use of rulers and other mechanical means as well as tracing paper **is allowed** in this alternative.*

The color of the working surface (paper) will not be considered as one of the colors required in any question.

EITHER

4. A new company "global communications Network "requires an identification symbol to brand their business, Produce either a logo or a trademark for the business in not more than three colours in an area of 15cm by 20cm.

OR

3. A company, "Voyage Royale, dealing in transport services requires a poster to advertise their services. Produce the work in three colours, and include the name of the company, an appropriate illustration and a slogan "*Ride you safely*".

Working area should be 30cm by 23cm.

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……..…….

SCHOOL: ……..

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

BIOLOGY (QUESTION PAPER)
FORM THREE (3)
Time: 2 HOURS.
PAPER 1

INSTRUCTIONS:

- All Questions are Compulsory
- Give Neat and precise answers
- Wrong Spellings Will be Penalised

For examiner's use only

Question	Maximum score	Candidates score
1-30	80	

1.a) State a function of the Red Blood Cells **(2mks)**

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b) Name the enzyme important in the transport role of the Erythrocytes **(1mk)**

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2.Give **two** ways atmospheric Nitrogen is converted into Nitrates **(2mks)**

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3.Explain why primary productivity declines in aquatic ecosystems **(1mk)**

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4.A student was viewing a slide preparation of an onion cell under high power of a microscope. The features of the cell were blurred (not clear).

i) Which part of the microscope should be used to obtain a sharper image? **(1mrk)**

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ii) Give the formula used to calculate magnification in a light microscope. **(1mrk)**

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5.State two ways by which White Blood Cells undertake defence of the body against infections **(2mks)**

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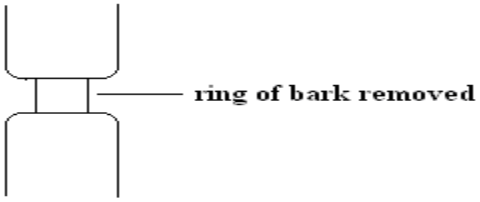
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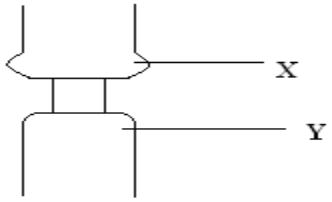
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6.The diagram below illustrates an experiment carried out on a growing plant.



Beginning of experiment



End of experiment

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

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(b). Explain the results at part labelled X. **(2 marks)**

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7.A certain plant was found to have the following features:- parallel venation in leaves, sheath like petiole and flower parts in multiples of three.

i) Name the class to which the plant belongs. **(1mark)**

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ii) Suggest the expected arrangement of vascular bundles in its stem. **(1mark)**

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8.Identify the mode of nutrition in fungi with the following structures **(2mks)**

i) Rhizoids: ……..

ii) Haustoria: ……

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9.Sugar was detected in the urine of a patient during a laboratory test.

a) Name the test reagent used in the above test. **(1mark)**

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(b)Which hormone was likely to have been deficient? **(1mark)**

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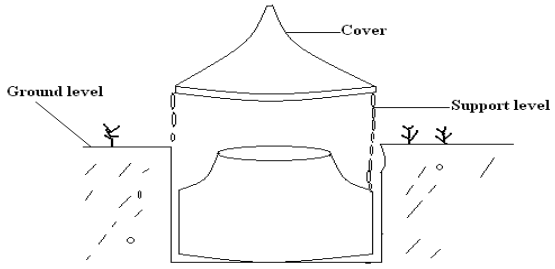
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(c)What name is given to the above condition? **(1mark)**

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……..

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



i) What is the name given to the apparatus shown above. **(1mark)**

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ii) What is its use in Biological studies. **(1mark)**

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……..

11. Name **two** physiological adaptations that enable homoiotherms to adjust body temperature on a cold day. **(2 marks)**

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12. Explain why the carrying capacity of wild animals is higher than that for cattle in a given piece of land. **(2mks)**

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13. Give **two** reasons why accumulation of lactic acid during vigorous exercise leads to an increase in heat beat**.(2 mrks)**

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14. How does hot water of about 35^{o}c act as a pollutant when it is discharged from industries into rivers? **(2mks)**

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15. a) what the advantages of desert animals excreting their nitrogenous waste in form of urea and not ammonia **(2mks)**

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b) Explain **two** modifications on the kidney nephron of desert mammals **(2mks)**

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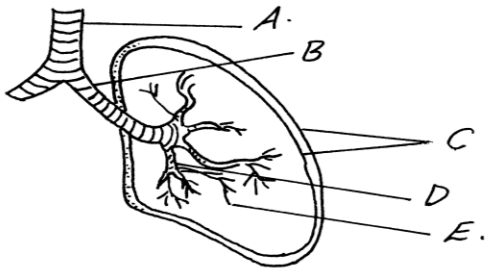
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16. Study the diagram below



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a) Identify parts: **(2mks)**

B: ……

E: ……

b) Give a function of the fluid within part labelled C **(1mk)**

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c) State **two** adaptations of part labelled A **(2mks)**

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17. Describe the events that occur in the stroma of a chloroplast. **(2mks)**

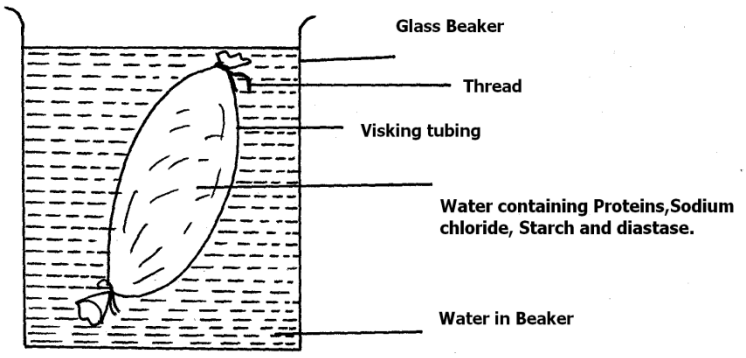
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18. Study the following diagram which was maintained at 37^{o}C



Explain the results that would occur in the experiment after 30 minutes **(3mks)**

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19. State **two** features of the ileum that increases its surface to its function **(2mks)**

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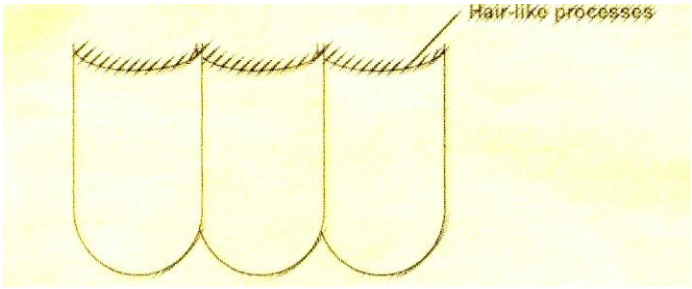
20. State the most suitable biological tool for collecting a moth from a coffee farm. **(1mk)**

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21. A student observed an organelle using an electron microscope at magnification of X6000. It had a diameter of 2 millimeters .Calculate the actual diameter of the organelle in micrometers. **(2mks)**

1.The diagram below shows a type of epithelial tissue.



a) State the possible function of the hair-like processes on the tissue **(1mark)**

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b) Name **two** mammalian organs where this type of epithelium is found. **(2marks)**

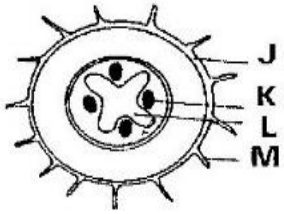
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22. The diagram below represents a transverse section of a plant organ. Study it and answer the question that follows.



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a) Name the parts labelled **(2mks)**

K ……

M ……

b) Give a function of part L **(1mk)**

……

……..

c) With a reason identify the organ from which the above section was obtained

Organ: **…….**

Reason **(2mks)**

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……..

23. State **two** digestive enzymes secreted in their inactive forms. **(2mks)**

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24. The table below represents certain aspect of the circulatory system in certain animals. Fill in the missing spaces.

(3 marks)

Heart	No. of atrium	No. of ventricle	Type of circulation
A	2	2	
B	2	11	
C	1	1	

25. Name the tissue that carry out the following function in mammals.

a.Binds and supports various organs in the body **(1 mark)**

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b. Transport oxygen throughout the body **(1 mark)**

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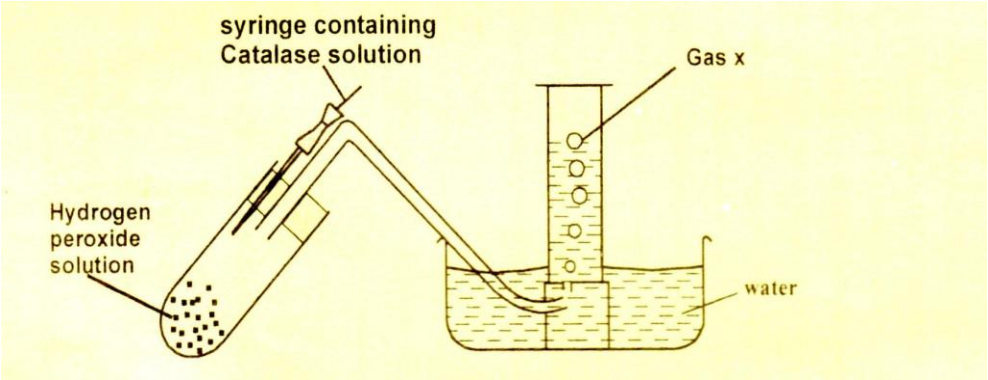
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c. Contract and relax to bring about movement **(1 mark)**

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26. The apparatus shown below was set up by form two students in a certain school.



a) Name the gas X **(1 mark)**

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b) Write a word equation for the reaction which produces the gas. **(I mark)**

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c) Where in the body does this type of reaction occur **(1 mark)**

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d) Describe how to confirm the identity of gas X in the laboratory **(1mk)**

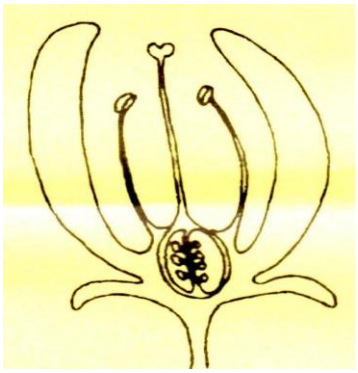
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27. Below is a simplified diagram of a flower



i. Suggest its agent of pollination **(1 mark)**

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ii. Name the type of ovary shown above **(1 mark)**

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……..

iii.Explain the observable mechanism that will hinder self-pollination and fertilization in the above flower **(1 mark)**

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28. Name the **three** processes that takes place in the liver to bring about difference in composition of blood in hepatic portal vein and hepatic vein. **(3 marks)**

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29. The scientific name of human beings is HOMO Sapiens.

(a) State the mistakes in the scientific name. **(2 marks)**

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(b) Write the name in the correct manner following the principals of binomial nomenclature. **(1 mark)**

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30. In an experiment to estimate the population size of mosquitoes in Shikotu village, Kenya Medical Researchers caught 400 mosquitoes which they marked and released. After 24 hours, 200 mosquitoes were caught out of which 40 had no marks.

(a) (i) Suggest the possible instrument that was used for capturing the insects **(1 mk)**

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(ii) Estimate the population size of mosquitoes in the village **(2 marks)**

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(b) What is the role of light to a lion in the ecosystem**?** **(1mk)**

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FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……..…….

SCHOOL: ……..

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

BIOLOGY (QUESTION PAPER)
FORM THREE (3)
Time: 2 Hours
PAPER 2
INSTRUCTIONS

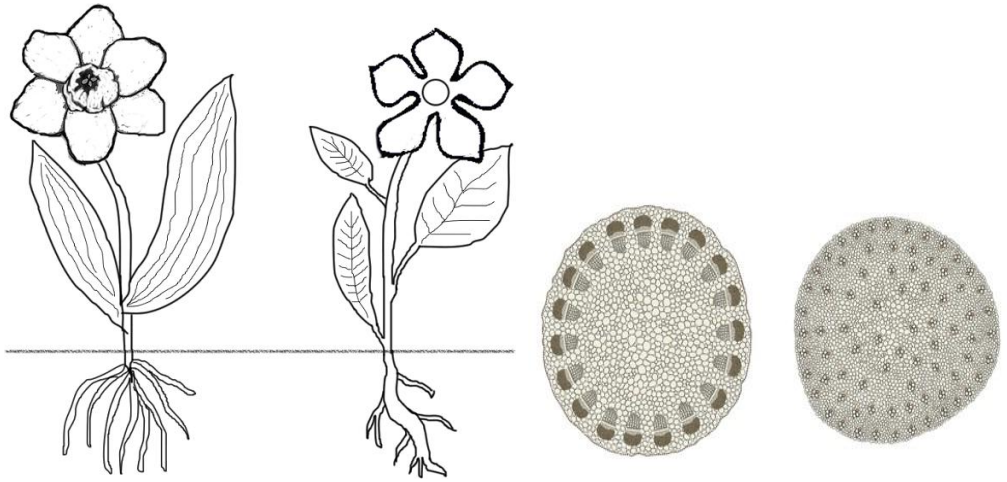
1.This paper has **TWO** sections: **A** and **B**
2.**All** Questions in Section **A** are **Compulsory**
3.Question **6** is Compulsory
4.Choose Either Question 7 **or** 8
5.Write your Answers in the Spaces Provided
6.Wrong Spelling of Technical Terms shall be **Penalized**

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

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SECTION A (40 MARKS)

1.The diagrams shown below represent two different plants and sections of tissues obtained from them



Plant **A** Plant **B** Section **X** Section **Y**

a) Giving reasons based on the floral parts only, name the classes to which the plants **(4mks)**

Plant	Class	Reason
A		
B		

b) i) From which organ of the plant were the sections **X** and **Y** obtained? **(1mk)**

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ii) Fill in the table below to match the sections and the plants represented above from which the sections were obtained (2mks)

Section	Plant
X	
Y	

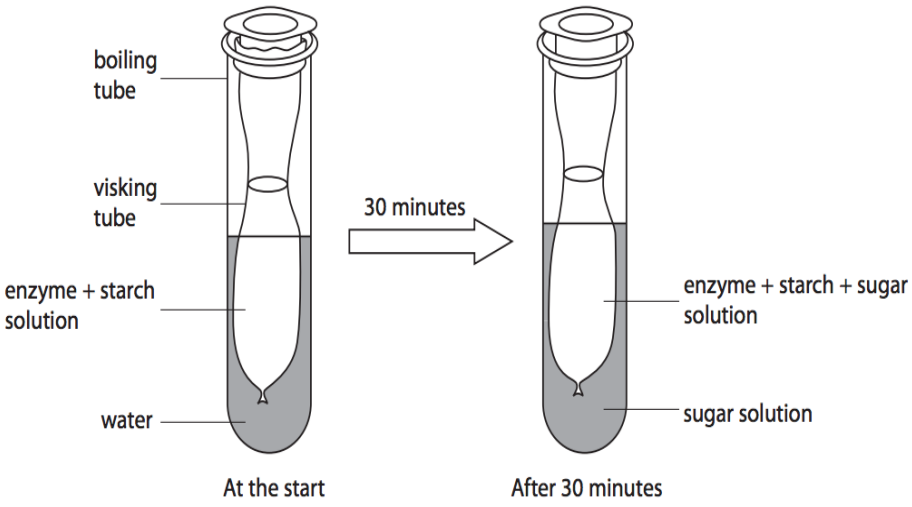
c) Which feature shows that the above plants belong to the Sub-division Angiospermaphyta **(1mk)**

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2.The following experimental set up was maintained at 30^{o} for 30 minutes in a water bath for a biology study by Form ones in Kilimo High School.



a) i) Why was the set up maintained at 30^{o} temperature? **(1mk)**

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ii) Suggest an identity of the enzyme used in the experiment **(1mk)**

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b) i) Account for the observation made after 30 minutes **(3mks)**

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ii) Suggest a control experiment for the experiment above **(1mk)**

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c) Give **TWO** ways of increasing the rate of reaction in the visking tubing in order to have results of the experiment in less than 10 minutes **(2mks)**

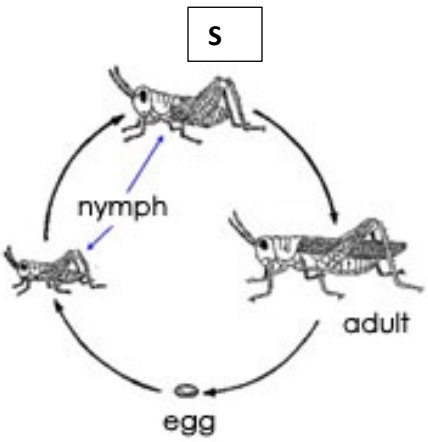
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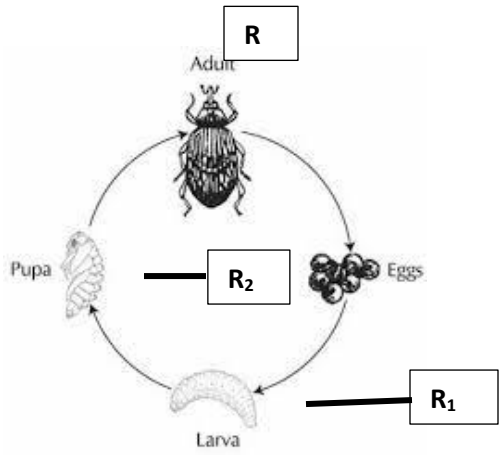
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3.Different types of life cycle of insects are shown below





a) i) Identify the type of lifecycle represented by **S** **(1mk)**

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

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b) Explain the advantage life cycle **R** has over life cycle **S** **(2mks)**

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c) State the importance of stage **R_2** in the development cycle **R** **(1mk)**

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d) i) Explain how development is affected by removal of the prothoracic gland during stage **R_1** of life cycle **R (2mks)**

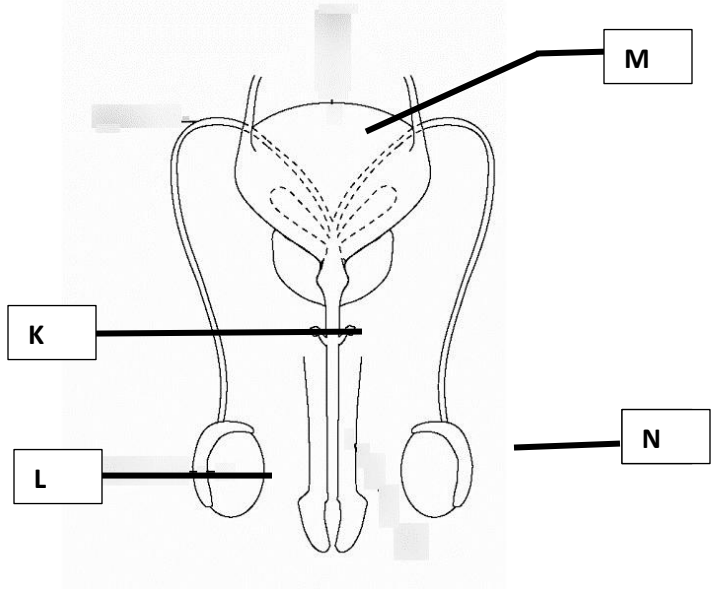
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4.The human male reproductive system and associated glands is shown below



a) State the function of the part labelled **M** **(1mk)**

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b) i) Name the part labelled **N** **(1mk)**

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……..

ii) How is **N** adapted to its function **(1mk)**

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c) What is the significance of part **L** hanging outside the male body? **(2mks)**

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d) State the function of secretions from the accessory gland labelled **K** **(1mk)**

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e) Explain the role of Luteinizing hormone in organ labelled **L** **(2mks)**

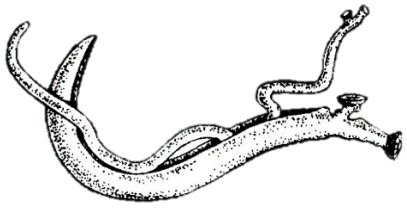
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5. The diagrams shown below are of two organisms associated with human diseases



P



Q

a) i) Name the vector of parasite labelled **P** **(1mk)**

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ii) What is the survival advantage of the close association of the male and female of parasite **P** as shown in the diagram above? **(1mk)**

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iii) List **TWO** symptoms of the disease caused by **P** **(2mks)**

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b) i) Name the parasite transmitted by the organism labelled **Q** **(1mk)**

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……..

ii) Explain why only the female of organism **Q** transmit human diseases **(1mk)**

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c) Small fish can be used to control spread of human disease associated with **Q**. Explain **(2mks)**

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SECTION B (40 MARKS)

Answer **Question 6** which is **Compulsory;** then Choose either Question **7** or **8**

6.The table below shows data collected from an experiment on photosynthesis

Concentration of Carbon (IV) Oxide (%)	Rate of Photosynthesis (Arbitrary Units)	
	Low Light Intensity	High Light Intensity
0.00	0	0
0.02	20	20
0.04	29	36
0.06	35	51
0.08	39	68
0.10	42	84
0.12	45	89
0.14	46	90
0.16	46	90
0.18	46	90

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

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ii) State **TWO** factors that should be controlled for the outcome of the experiment above to be reliable **(2mks)**

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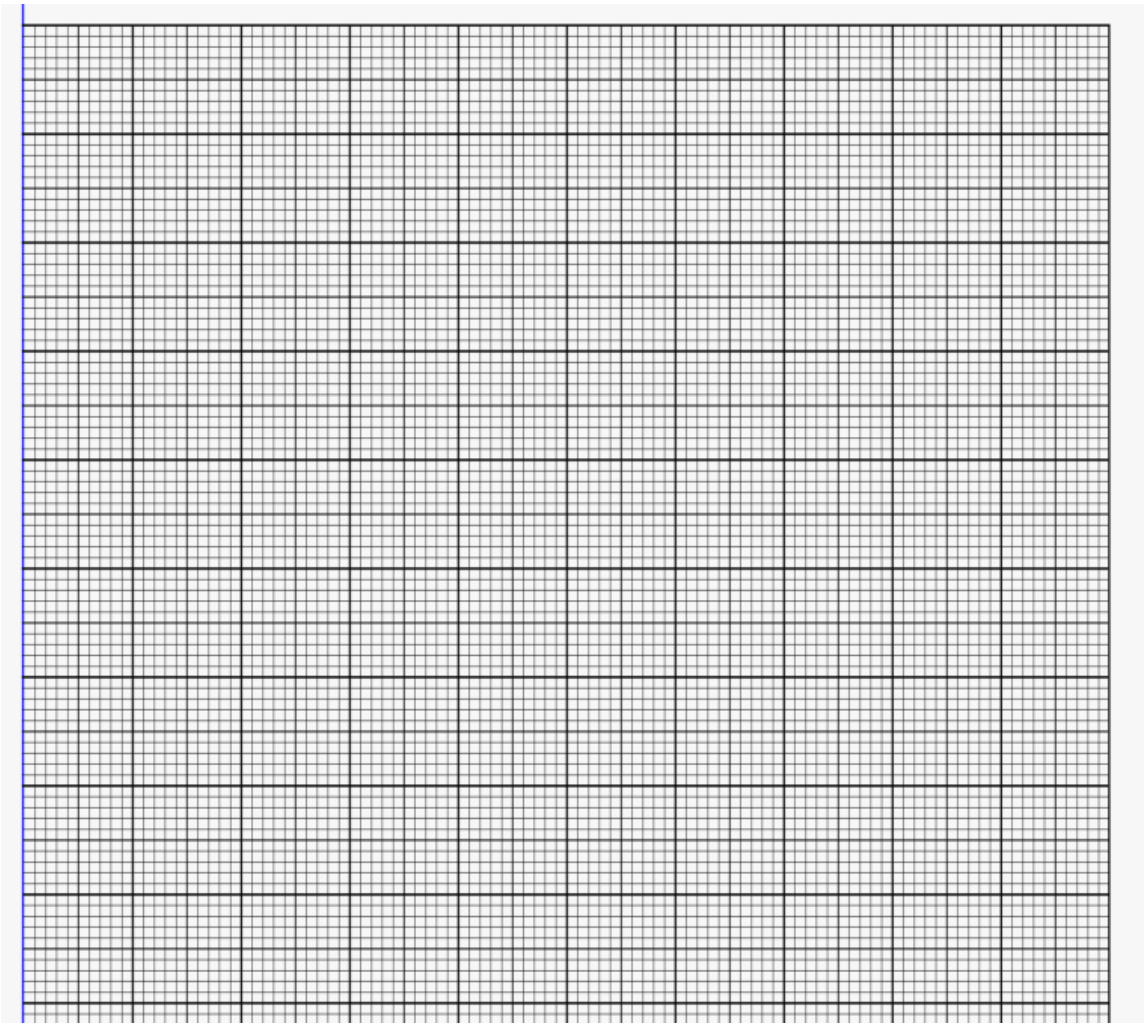
b) Give **TWO** roles of light during the process of photosynthesis in plants. **(2mks)**

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c) On the same axes, plot a graph of rate of photosynthesis against the concentration of Carbon (IV) Oxide **(8mks)**



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d) Account for the rate of photosynthesis at the following concentration of Carbon (IV) Oxide:

i) 0.00% **(2mks)**

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ii) O.14% to 0.18% **(2mks)**

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e) From the graph drawn, determine the optimum concentration of Carbon (IV) Oxide **(1mk)**

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f) Give **TWO** ways in which photosynthesis is important to human beings **(2mks)**

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7.a) Describe the mechanism of gaseous exchange in a bony fish **(12mks)**

b) Describe the adaptations of proximal convoluted tubules to its functions **(8mks)**

8.a) Explain how the mammals maintain optimum osmotic pressure of blood. **(12mks)**

b) i) Give **TWO** ways in which seed dormancy is important to a seed **(2mks)**

ii) Explain how water, oxygen and enzymes are important during seed germination **(6mks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: …….

SCHOOL: ……..……..

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

BIOLOGY (QUESTION PAPER)
FORM THREE (3)
Time: 1 ¾ Hrs.
PAPER 3

INSTRUCTIONS TO CANDIDATES

1. Answer all the questions.

2. Spend the first 15 minutes of the 1 ¾ hours allowed for this paperreading the whole paper carefully before commencing your work.

3. Answers MUST be written in the spaces provided in the QUESTIONPAPER ONLY.

FOR EXAMINERS USE ONLY

QUESTION	Max Score	Candidate Score
1	11	
2	17	
3	12	
TOTAL SCORE	40	

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1.You are provided with olive oil, liquids labeled L_1 and L_2, and an Irish potato. Label test tubesA and B. Place $2cm^3$ of water into each test tube. Add 8 drops of olive oil into each test tube. To test tube A, add 8 drops of liquid L_1. Shake both test tubes. Allow to stand for 2 minutes.

(a) (i) Record your observations ***(2 marks)***

Test Tube A

……

……

Test Tube B

……

……

(ii) Name the process that has taken place in test tube A ***(1 mark)***

……

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(iii) State the significance of the process named in (a) above ***(1 mark)***

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(iv) Name the digestive juice in humans that has the same effect on oil as liquid L_1 ***(1 mark)***

……

……

(v) Name the region of the alimentary canal into which the juice is secreted ***(1 mark)***

……

……

(b)

(i) Place $2cm^3$ of liquid L_2 into a test tube. Add a drop of iodine solution . Record your observation. ***(1 mark)***

……

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(ii) Suggest the identity of L_2 ***(1 mark)***

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(c) Cut two equal cubes of whose sides are about 1cm from irish potato. Place one of the cubes into a boiling tube labelled **C.** Crush the other cube using pestle and mortar. Place the crushed material in another boiling tube

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labelled **D**.

To each boiling tube add 4ml of hydrogen peroxide.

(i) Record your observation. **(1mk)**

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(ii) Account for the result in (c) (i) above. **(1mk)**

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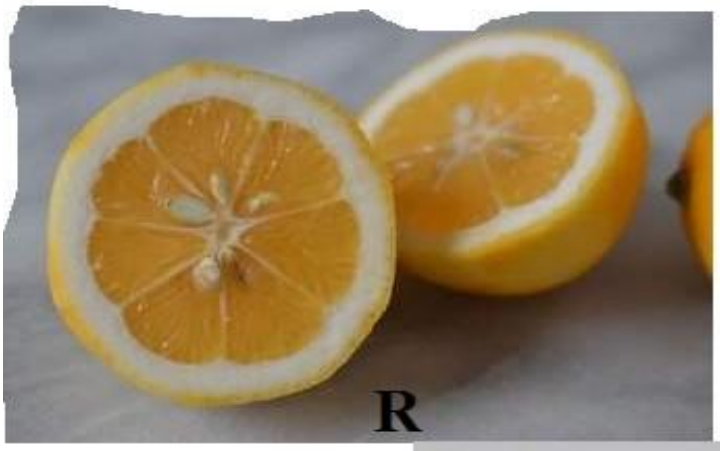
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(iii) Write an equation for the breakdown of hydrogen peroxide. **(1mk)**

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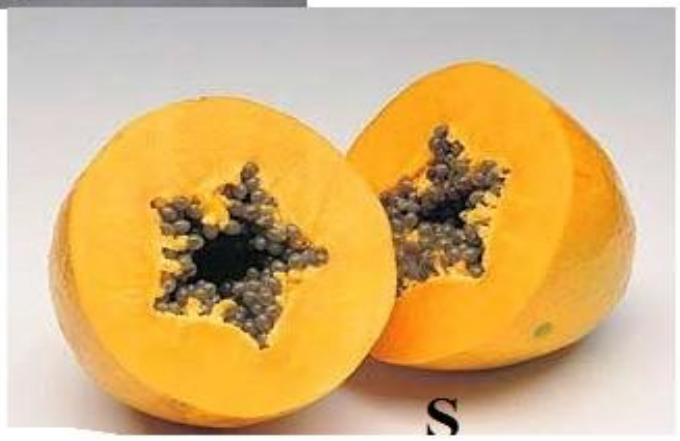
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2. The photographs labelled **R, Q** and **S** are sections of some plant parts.





Q



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(a)(i) Name the type of placentation in the specimens shown in photographs **R, Q** and **S** **(3 marks)**

R: ……

Q: ……

S: ……

(ii) Giving a reason in each case, name the mode of dispersal of the specimen in photograph **Q** and **S** **(4marks)**

Q

Mode**……..……**

Reason

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S

Mode**……..……**

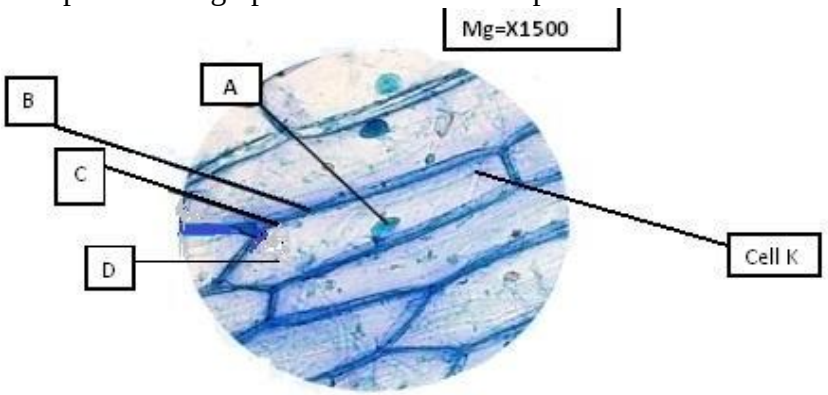
Reason

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(iii) Label any one part on photograph R **(1mk)**

(b) You are provided with the photomicrograph of an onion outer epidermis as seen underlight microscope



(i) On the photograph, name parts labelled A, C and D. **(3marks)**

A: ……

C: ……

D: ……

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(ii)Explain how the part **labelled B** is adapted to its function. **(1mark)**

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(iii) Calculate the actual size of the cell **marked K**, give your answer in micrometres. **(2mks)**

(iv) The differences between the cells in the photograph and those obtained from an animal epithelial cell. **(2marks)**

Onion epidermal cells	Animal epithelial cells

(v) State the process that make the structures in the cell above appear more distinct. **(1mk)**

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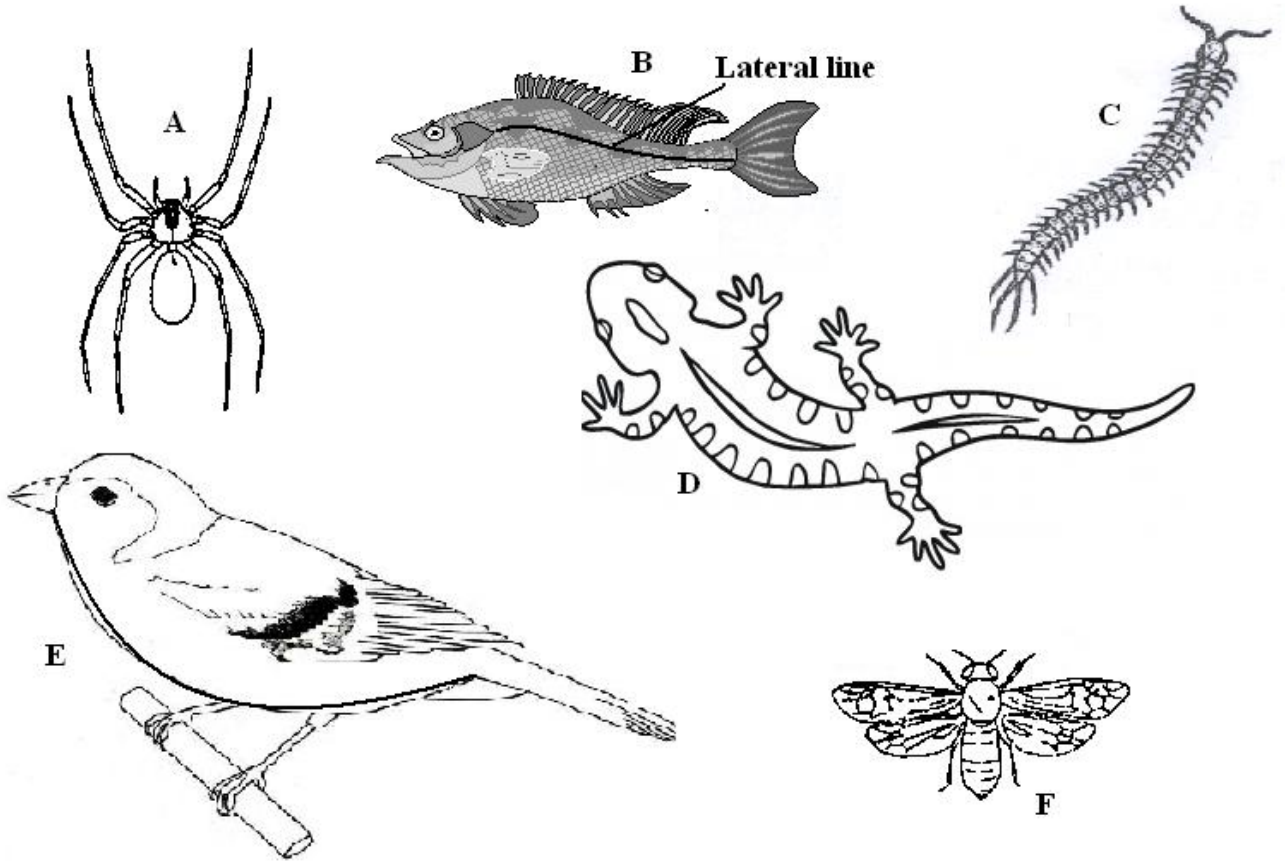
(vi) In microscopic procedure in 2(b)(v) above, name what was used to achieve the process. **(1mk)**

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3. Study the organisms drawn below and answer the questions that follow.



(a) Using the organisms provided above, complete the construction of the dichotomous key by filling the blank space**.** **(3 mks)**

1. (a) Phylum Chordata …… go to 2
   (b) Phylum Arthropoda …… go to 3
2. (a) Has scales on the body …… go to 4
   (b) _____ ……..…….. Mammalia
3. (a) Has cephalothorax ……..……. Arachnida
   (b) Has no cephalothorax ……. go to 5
4. (a) Has fins …… _____
   (b) Has no fins ……... go to 7
5. (a) Has three pairs of legs ……. Insecta
   (b) Has more than three pairs of legs …… go to 6

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6 (a) Two pairs of legs per segment …… Diplopoda

(b) _____..... Chilopoda

7. (a) Has feathers ……Aves

(b) Has no feathers …… go to 8

8. (a) Has a tail …….. Reptilia

(b) Has no tail …….. Amphibia

(b)Use the completed dichotomous key above to identify the class the organisms belong to. **(6mks)**

Specimen	Step followed	Identity
A		
B		
C		
D		
E		
F		

(c) Name the **site** for gaseous exchange in organisms B, E and F. **(3mks)**

B…….

E…….

F……

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..……..

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

BUSINESS STUDIES (QUESTION PAPER)
FORM THREE
TIME 2½ HOURS
PAPER 1

INSTRUCTIONS

- Write your **NAME, SCHOOL** and **INDEX NUMBER** in the spaces provided.
- Answer **ALL** questions provided in the spaces provided.

1.State four importance of teaching Business Studies in secondary schools to the learner **(4 marks)**

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2.Name **four** types of business resources. **(4 marks)**

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3.Indicate the form of external environmental factor described by the statement below. (4 marks)

Description	External environmental factor
Introduction of Mutotho law to curb excessive beer taking.	
Religions sect that is against medicine	
Construction of the superhighway.	
Price wars between safaricom and Telkom mobile companies.	

4.State **four** benefits of indirect production to a country. **(4 marks)**

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5.Highlight four characteristics of economic resources. **(4 marks)**

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6.The following information was extracted from Maili Kumi traders for the year ended 31st December 2020

Machinery 460,000

Cash in hand 80,000

Debtors 130,000

Creditors 60,000

Prepaid salaries 20,000

4 year loan 280,000

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Accrued rent 30,000

Required: Prepare a balance sheet of Maili Kumi traders as at 31st December, 2020

7.Highlight **four** features that distinguish co-operative societies from other forms of business units **(4 marks)**

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8.State four factors that may encourage entrepreneurial growth in Kenya **(4 Marks)**

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9.QQ Enterprises would like to partition its office. Outline **four** benefits the firm may get if it uses the enclosed office plan. **(4 marks)**

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10. Give **four** reasons why railway transport is not competitive in Kenya. **(4 marks)**

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11. Funny Traders, had the following assets and liabilities as at 1st January, 2020

Furniture + equipment	350,000
Debtors	45,000
Cash	7,000
Creditor	48,000

For the year ended 31st December, 2015 there was:

(i) Additional capital introduced amounting to sh 34,000.

(ii) Drawings made during the year amounting to sh 20,000.

(iii) Net profit amounting to sh 34,000.

Determine the capital of the business as at 31st December, 2020. **(4mks)**

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12. State **four** positive implications of a large population in a country **(4marks)**

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13. State **four** factors that may cause the supply curve to shift to the left. **(4 Marks)**

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14. Outline **four** circumstances under which an Insurance company may re- Insure. **(4 marks)**

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15. Using the following transactions, state the name of the account to be debited and the account to be credited.(4 marks)

Transaction	A/c debited	A/c Credited
Made cash sales of sh 2,000		
Purchased machine by cheque		
Paid a creditor sh3,000 cash		
Withdrew sh10,000 for business Use		

16. Highlight four circumstances under which face to face oral communication may not be effective **(4 marks)**

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17. State **four** measures that Kenya government may take to attract firms to an area. **(4 marks)**

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18. State four services that retailers render to consumers. **(4 marks)**

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19. Outline **four** requirements meant to enable a warehouse operate efficiently**.** **(4 Marks)**

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20. Outline **four** measures the Kenyan government may take to solve unemployment in the country **(4 Marks)**

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21. State circumstances that may lead to the creation of an oligopoly**.** **(4 Marks)**

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22. State four leakages in a four sector economy **(4 Marks)**

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23. Identify the legislation meant to protect consumers that each of the following description refers to**. (4mks)**

(a) Ensures that traders or producers do not cheat consumers by giving false descriptions of goods.

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(b) Prohibits traders and manufacturers from including substance that might harm consumers in a product.

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(c) Ensures that all weighing equipments are correct and accurate

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(d) Ensures that the landlord‘s do not overcharge their tenants.

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24. Describe four channels of distribution that may be used for distributing imported goods **(4Marks)**

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25. Identify four types of advertising **(4 marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..……..

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

BUSINESS STUDIES (QUESTION PAPER)
FORM THREE
TIME 2½ HOURS
PAPER 2

Instructions to candidates;

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

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

c) *This paper consists of **six** questions.*

d) *Answer any **five** questions in the spaces provided after question six.*

e) *All questions carry equal marks*

For Examiners use only.

Question	Maximum score	Candidate's score
	20	
	20	
	20	
	20	
	20	

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1.a) Explain five principles that is used by Britam Insurance company that is responsible for their success and efficiency in operations. **(10 marks)**

(b) Explain **five** features of a good filing system. **(10 marks)**

2.(a) Describe **five** documents required to register a public limited company. **(10 marks)**

b) Explain five benefits that could accrue to a customer who buys goods from a departmental store. **(10marks)**

3.a) Businesses are currently employing new product promotional strategies as a way of boosting their sales volumes. Identify and explain four such strategies. **(8marks)**

(b) The following information relates to the business of Kazuri Enterprises for the week ended 29th March 2016.

March 24th Started business with Kshs 24,000 in the bank.
March 25th Bought goods worth Kshs 18,000 by cheque.
March 26th Sold goods for cash Kshs 10,000
March 28th Sold goods on credit to Mrembo worth Kshs 5,625
March 29th Bought Furniture from Seremala Ventures worth Kshs 20,000 paying Kshs 5,000 by cash and the rest to be paid later.

Required

Prepared ledger accounts and balance them off. (12 marks)

4.a) Explain five documents sent by the buyer to the seller in Home trade. (10marks)

b) Using a diagram illustrate the effects of a positive shift of a demand curve on the equilibrium point, price and quantity **(10mks)**

5.a) Describe four channels followed in exporting agricultural product. **(8 mks)**

b)On 1st March 2020, Swara Limited had cash in hand shs. 7,800 and a bank overdraft of 23,400. During the month of the following transaction took place.

March 3: Cash sales sh. 6500 paid directly into the bank.
March 4: Bought goods for sh. 15,000 by cheque.
March 6: cash sales sh. 50,000
March 9: Received a cheque for sh. 18,000 from Amolo in full settlement of his account of sh. 20,000.
March 13: Paid insurance premiums sh. 16,000 in cash.
March 14: Paid Kimotho by cheque sh. 9,700 in full settlement of his debt of sh. 10,000.
March 17: Cash sales sh. 150,000 paid directly into the bank.
March 21: Withdrew shs. 30,000 from bank for office use.
March 23: Received a cheque of sh. 23,750 from Rotich after having deducted 5% cash discount.
March 25: Paid wages shs. 20,000 in cash.
March 30: Banked all cash except sh. 3,000.

Required: Prepare a three column cashbook duly balanced. (12marks)

6.a) Highlight five circumstances under which a consumer may need government protection. **(10 marks)**

b)Highlight five factors which an entrepreneur should consider when evaluating a viable business opportunity**(10 marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

CHEMISTRY (QUESTION PAPER)
FORM THREE (3)
Time: 2 Hours
PAPER 1

INSTRUCTIONS TO CANDIDATES

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

For Examiner's Use Only

Question	Maximum score	ate's score
1-29	80	

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1. A certain indicator was added to a solution .The pH value on the scale that was used with this indicator was read as 6.5

a) Name the indicator **(1mk)**

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……

b) State the nature of the solution **(1mk)**

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c) Why is the above indicator a better indicator than other common indicators used in the laboratories? **(1mk)**

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2. Study the information below and answer the questions that follow.

Ions	Electronic arrangement	Ionic radius
Na^+	2.8	0.095
K^+	2.8.8	0.133
Mg^{2+}	2.8	0.065

Explain why the ionic radius of:

a) K^+ is greater than that of N^+. **(1mk)**

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b) Mg^+ is smaller than that of Na^+ **(1mks)**

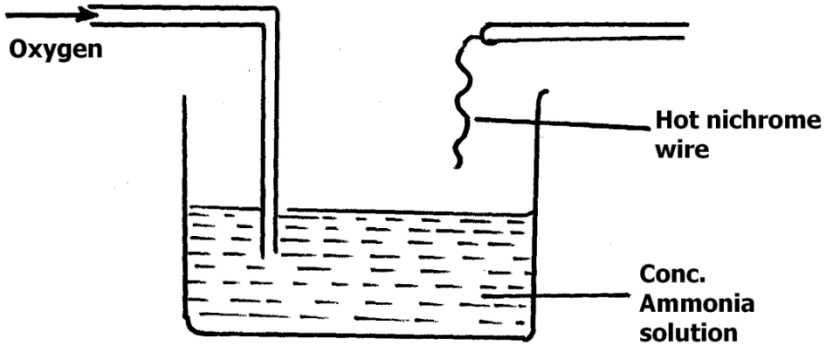
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3. A fixed mass of a gas occupies $200cm^3$ at a temperature of 296 k and 740mmHg pressure. Determine the volume this gas would occupy at S.T.P. (2mks)

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4. The apparatus below was set – up to show the catalytic oxidation of ammonia. Study the diagram and answer the questions that follow.



a) State what would be observed in the experiment above. Explain. **(1mk)**

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b) Write the equation for the reaction that takes place during oxidation of ammonia. **(1mk)**

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……

5. A heavy metal **X** was dissolved in dilute nitric acid to form a solution of compound **X(**$NO_3)_2$.
Portions of the resulting solution were treated as follows:

a. To the first portion a solution of dilute hydrochloric acid is added, where a white precipitate **(S)** is formed, which dissolves on warming.

b. The second portion is treated with two drops of 2M Sodium hydroxide solution where a white precipitate **T** is formed. The white precipitate dissolved in excess sodium hydroxide to form a colourless solution.

c. A solution of potassium iodide is added to the third portion where a yellow precipitate **(U)** is formed.

d. When the resulting solution is evaporated to dryness and heated strongly a yellow solid **(V)** is formed and a brown gas (**W)** and a colourless gas **(X)** are formed.

i. Identify the substances X, S, T, U, V, W **(3 marks)**

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ii. Write an ionic equation of the reaction that occurs in part (c) **(1 mark)**

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6a) Both sodium and aluminium are metals in period 3, yet sodium has a much lower melting point than aluminium. Explain **(2mks)**

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b) Explain why electrical conductivity of metals decrease with increase in temperature. **(2mks)**

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7). You are provided with water and the usual laboratory apparatus. Describe how you would fully separate solid lead (II) carbonate from a mixture of lead (II) Carbonate, iron fillings and sodium carbonate. **(3mks)**

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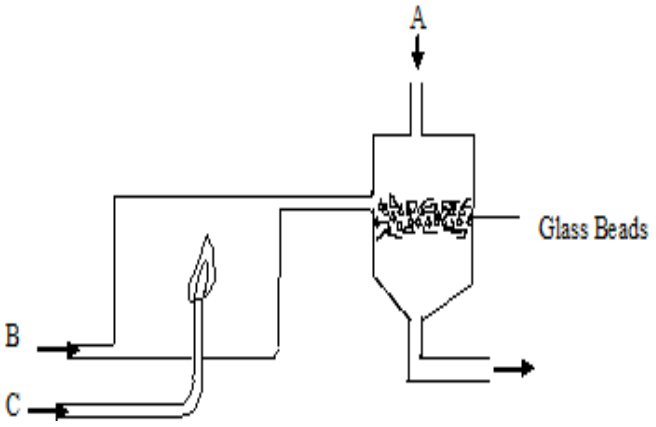
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8). The diagram below shows industrial manufacture of hydrochloric acid.



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a) Name the substance: **(3mks)**

A: .....

B: .....

C: .....

b) State the function of the glass beads in the above process. **(1mk)**

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

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(b) An initial volume of 100cm^3 of a mixture of propane (C_3H_8) gas and excess oxygen was ignited in an experiment. The final volume was cooled to room temperature and bubbled through aqueous sodium hydroxide. The final volume was reduced by 45cm^3.

(i)Write the equation of the reaction taking place when propane is burnt in excess oxygen **(1mk)**

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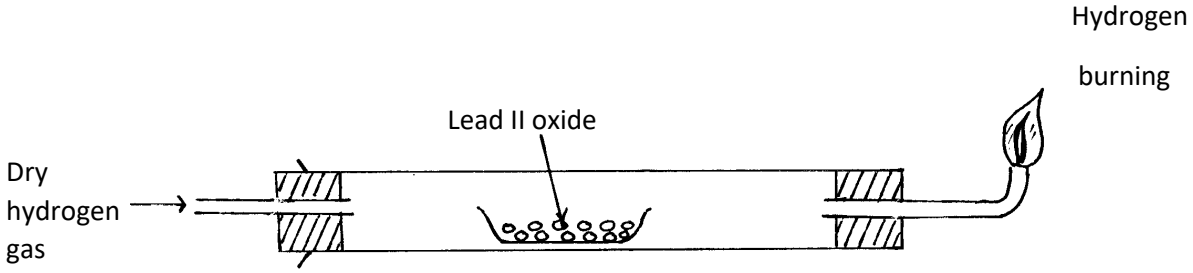
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(ii) Determine the composition of the initial mixture **($1\frac{1}{2}$mk)**

(iii) Determine the volume of the residue gas **($1\frac{1}{2}$mk)**

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10). Use the set-up below to answer the questions that follows.



a) Why is excess hydrogen burnt at the end of the tube. **(1mk)**

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b) What type of reaction is occurring in the combustion tube? **(1mk)**

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c) State one use of hydrogen gas. **(1mk)**

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11). A green solid D was heated until there was no further change. The following observations were made.

(i) A colourless liquid condensed on the cooler parts of the test tube

(ii) A colourless gas which turns acidified potassium dichromate (VI) green was formed

(iii) Red-brown residue S was left

(a) Give the identity of solid D **(1mk)**

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(b) How can you identify the colourless liquid **(1mk)**

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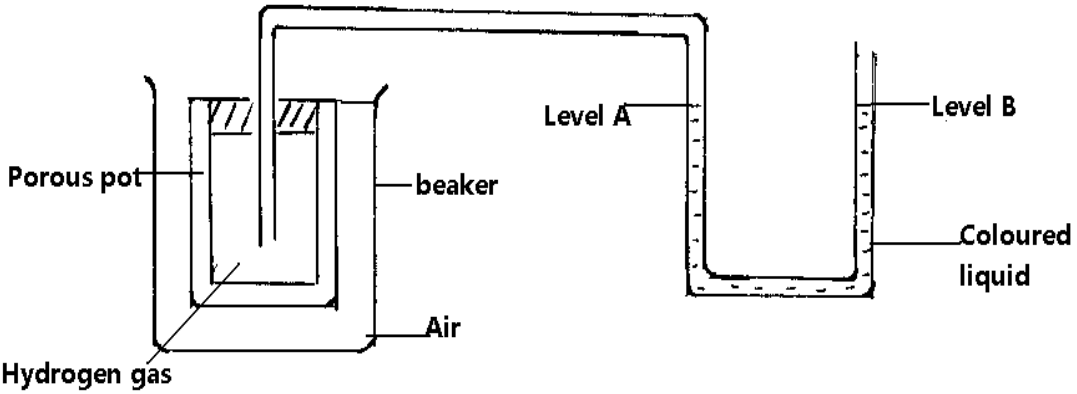
(c) Name the residue S (1mk)

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12). The set-up below was used to investigate the rate of diffusion of different gases.



(a) Explain why a coloured liquid is used in this experiment **(1mk)**

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(b) State and explain the observation made after 20 minutes **(2mks)**

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13). Element A has atomic mass 23 and element B has atomic mass 7 and also have 12 neutrons and 4 neutrons respectively.

(a) Write the electron arrangement of A and B **(1mk)**

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(b)Which element has higher ionization energy? Explain **(2mks)**

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14) .Element X is found in period 3 and group (IV) of the periodic table. It consists of two isotopes ^{28}X and ^{Q}X. A sample of X was found to consist of 90% of ^{28}X. If the relative

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atomic mass of X is 28.3, work out the number of neutrons in ^{Q}X. **(3mks)**

15). Starting with copper metal, describe how a solid sample of copper (II) carbonate can be prepared. **(3mks)**

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16). Both anhydrous calcium chloride and copper (II) sulphate are put on separate petri dishes in the laboratory and left over night. Calcium chloride formed a solution while copper (II) sulphate became wet and did not form a solution.

i) Name the change undergone by

Anhydrous calcium chloride **(1mk)**

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Anhydrous copper (II) sulphate **(1mk)**

……

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Name two other compounds that would undergo the same change as anhydrous calcium chloride. **(1mk)**

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17). Write down the property of concentrated sulphuric (VI) acid shown in the following reactions. **(2mks)**

(a) $H_2C_2O_4.2H_2O_{(S)} \xrightarrow{H_2SO_{4(l)}} 2H_2O_{(l)} + CO_{2(g)} + CO_{(g)}$

Property **……**

(b) $C_{(S)} + 2H_2SO_{4(l)} \rightarrow CO_{2(g)} + 2H_2O_{(l)} + 2SO_{2(g)}$

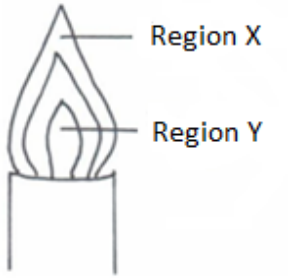
Property **……**

18). When a hydrated sample of calcium sulphate $CaSO_4.xH_2O$ was heated until all the water was lost, the following data was recorded.

Mass of crucible = 30.296g
Mass of crucible + hydrated salt = 33.111g
Mass of crucible + anhydrous salt = 32.781g

Determine the empirical formula of the hydrated salt. **(3mks)**
(Ca = 40, S = 32, O = 16, H = 1)

19). The diagram below shows a non-luminous flame. Use it to answer the questions that follow:



Two wooden splints were placed across regions **X** and **Y** respectively. Draw labelled diagrams to show the effects observed on the wooden splint placed across each region.

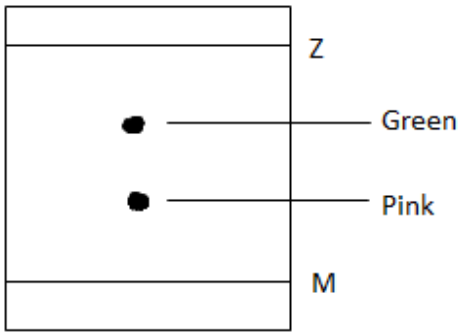
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(i) Region **X**. **(1½mks)**

(ii) Region **Y**. **(1½mks)**

20) Calculate the number of aluminium ions in a 400 cm^3 of 0.4M aluminium sulphate solution.
(L = 6.023 x 10^{23}) **(3mks)**

21). The chromatogram below shows the constituents of a flower extract. Study it and answer the questions that follow.



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a) Give a reason to explain the different positions of green and pink pigments. **(2mks)**

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b) What do the lines labeled Z and M represent? **(1mk)**

Z: ……

M: ……

22). Describe how you can distinguish a solution of sodium sulphite from a solution of sodium sulphate in the laboratory. **(2mks)**

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23). An aqueous ammonia was added to a solution of copper (II) sulphate dropwise until in excess. State the observations made when

(a) A few drops of aqueous ammonia were added. **(1mk)**

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(b) Excess aqueous ammonia was added. **(1mk)**

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(c) Write the formula of the substance formed in (b) above **(1mk)**

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24). During decomposition of hydrogen peroxide to form oxygen gas in the laboratory a catalyst is found necessary

(i) Name the catalyst used **(1mk)**

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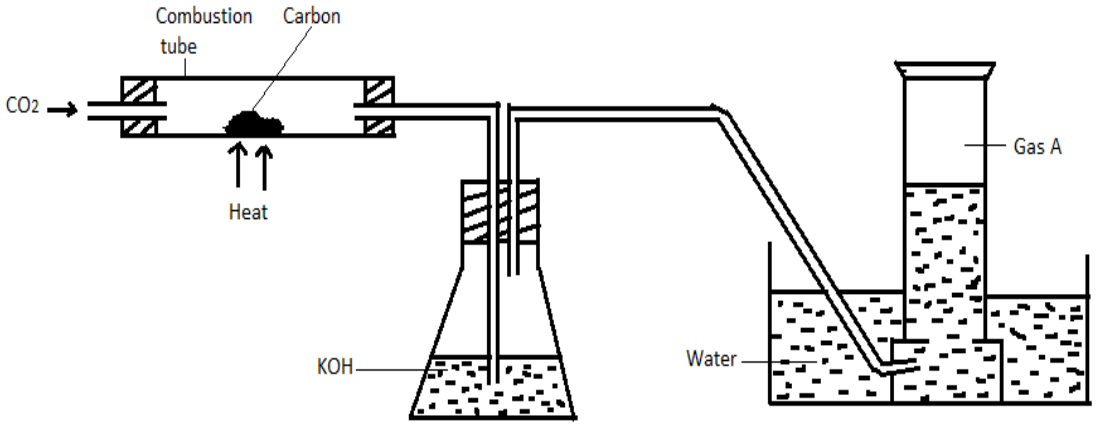
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(ii) Write a balanced chemical equation for the changes that takes place **(1mk)**

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25). Carbon (IV) oxide was passed over heated charcoal and the resultant gas collected as in the Above



a) Name gas A **(1mk)**

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b) Write an equation for the reaction taking place in the combustion tube **(1mk)**

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c) What is the purpose of potassium hydroxide solution **(1mk)**

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26). When a piece of sodium metal is added to water a vigorous reaction takes place and a colourless gas is given off

a) Name the colourless gas (**1mk)**

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b) State and explain the observations made when both red and blue litmus papers are dropped into the water after the reaction **(2mks)**

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27). Apiece of burning magnesium was inserted in a gas jar of carbon (IV) oxide

(a) State the observations made **(1mk)**

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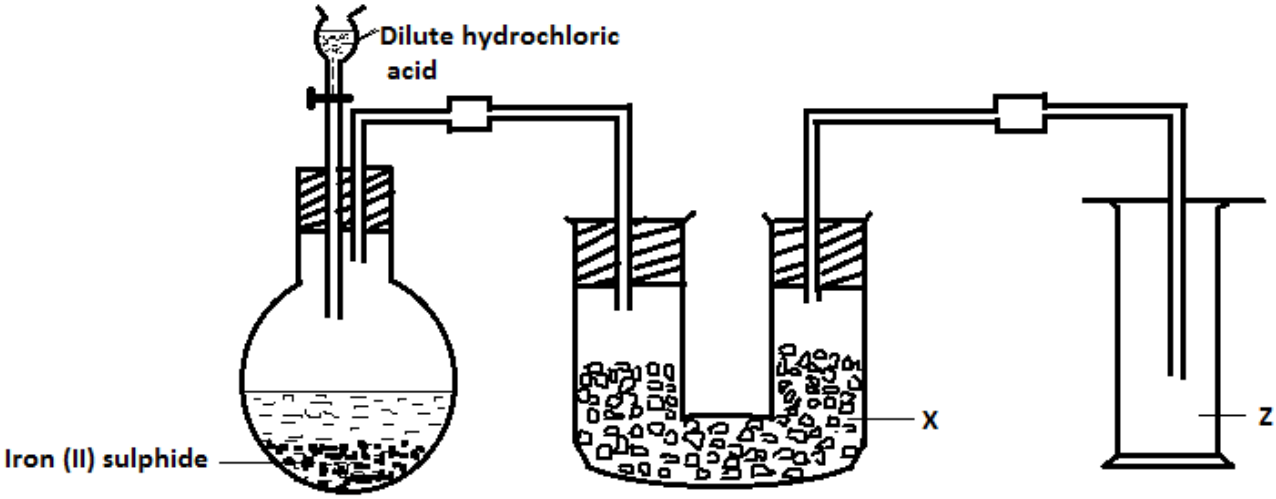
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(b) Write an equation for the reaction in (a) above **(1mk)**

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28. The diagram below shows a set up used for the preparation of gas Z.



(a) Write an equation for the reaction between iron (II) sulphide and dilute hydrochloric acid**.** **(1mk)**

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(b) What is the purpose of substance X **(1mk)**

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(c) Explain the method used to collect gas Z **(1mk)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

CHEMISTRY (QUESTION PAPER)
FORM THREE (3)
Time: 2 Hours
PAPER 2

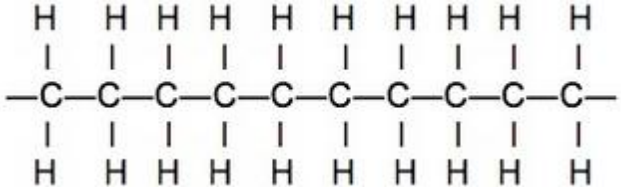
INSTRUCTIONS TO CANDIDATES

- Write your name, school 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.
- Mathematical tables and silent electronic calculators may be used.
- All workings **MUST** be clearly shown where necessary.

Questions	Maximum Score	Candidate's Score
1	14	
2	14	
3	11	
4	14	
5	16	
6	11	
TOTAL	80	

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1.The following represents a section of a polymer.



(a) Draw the structure of the monomer and name it. **(2 marks)**

……

……

(b) The molecular formula of the polymer is 42,000. Find the number of monomers that form the polymer molecule. **(2 marks)**

(c) Explain the following:

i. Alkanes are insoluble in water. **(2 marks)**

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ii. Ethyne is a gas at room temperature while hex-2-yne is a liquid at room temperature. **(2 marks)**

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(d) What do you understand by the terms used in organic chemistry:

i. Catalytic cracking **(1 mark)**

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ii. Thermal cracking **(1 mark)**

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……

(e) Draw the **structures** and write the **molecular formula** of the following organic compounds.

i. 2- methylpropane **(2 marks)**

ii. 2,3- dibromopentane **(2 marks)**

2. The table below shows the elements in period 3 of the periodic table. Study it and answer the questions that follow.

Element	Na	Mg	Al	Si	P	S	Cl	Ar

(a) Write the formulae of two oxides for each of the following: **(2 marks)**

(i) Sodium: Oxide I **……** Oxide II **……..**

(ii) Sulphur: Oxide I **……** Oxide II **……..**

(b) The products of the reaction between phosphorus and chlorine depend on the conditions used. Write the equation for the reaction when phosphorus reacts with limited phosphorus. **(1 mark)**

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……

(c) Identify the most electronegative element. Give a reason. **(2 marks)**

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(d) State and explain the differences in the boiling points of:

(i) Magnesium oxide and sulphur (IV) oxide. **(2 marks)**

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(ii) Sulphur and phosphorus. **(2 marks)**

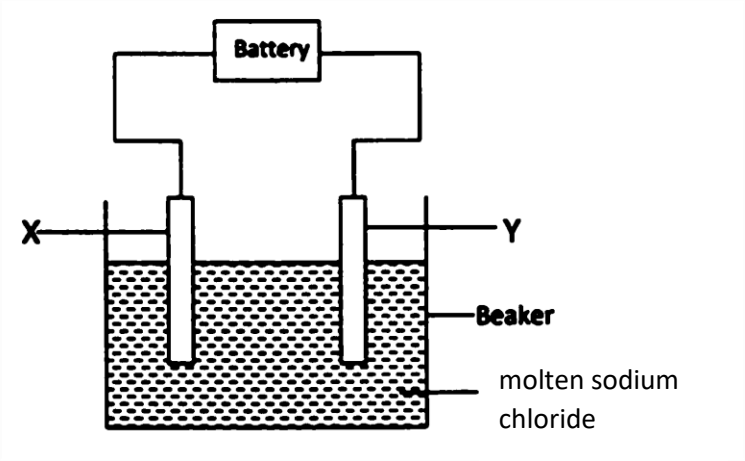
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(e) The diagram below shows the electrolysis of the chloride of sodium.



(a) On the diagram, indicate the missing condition. **(1 mark)**

(b) During the electrolysis, chlorine gas was formed at electrode Y. Identify the:

(i) Anode……. **(1 mark)**

(ii) Cathode…….. **(1 mark)**

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(c) Write the half equation for the reaction taking place at the:

(i) Anode. **(1 mark)**

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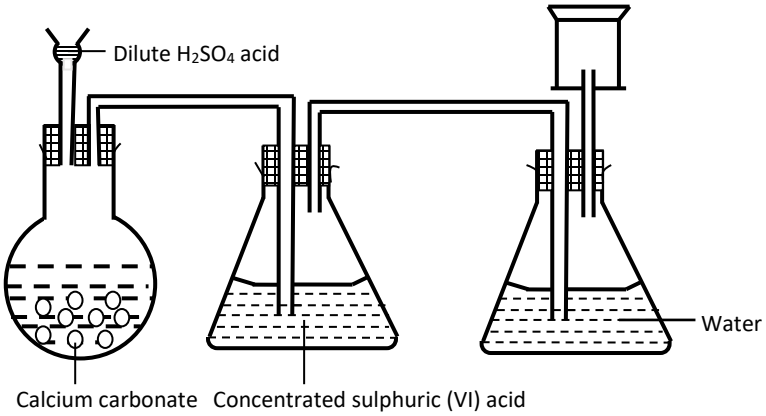
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(ii) Cathode. **(1 mark)**

……

……

3.A student set up the apparatus shown below to prepare and collect dry carbon (IV) oxide gas.



(a) State a correction for three mistakes in the set up above **(3 marks)**

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(b) Give two reasons why carbon (IV) oxide is used as a fire extinguisher **(1 mark)**

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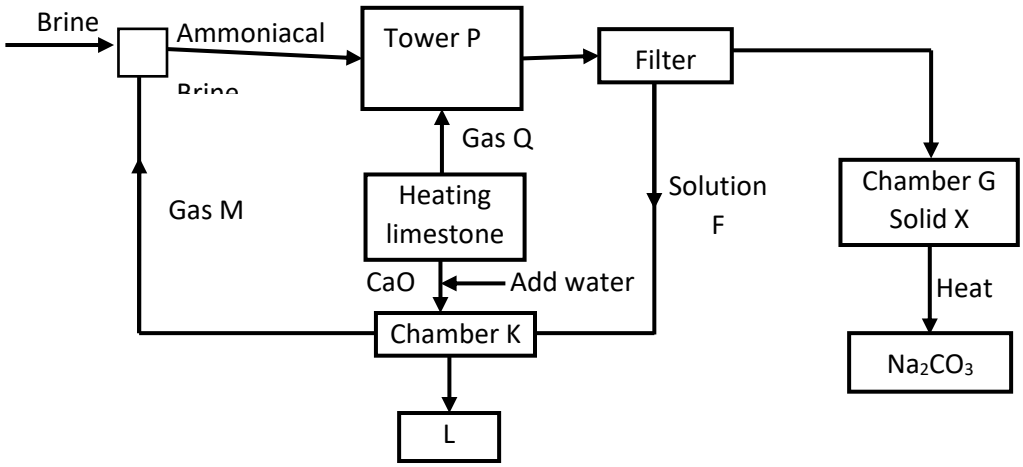
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(c) The flow chart below is for the manufacture of sodium carbonate by the Solvay process. Use it to answer the questions that follow.



(i) Name:

Gas **M** …… Gas **Q** …….. **(1 mark)**

Solution **F** …… Solid **X** …….. **(1 mark)**

(ii) Name the product L formed and give one of its uses. **(2 marks)**

Name: ……

Use: ……

(iii) Write equations of the reactions in: **(2 marks)**

Tower P (Overall equation)

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……

Chamber K

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……

(v) Name the two raw materials required in the manufacture of sodium carbonate **(1 mark)**

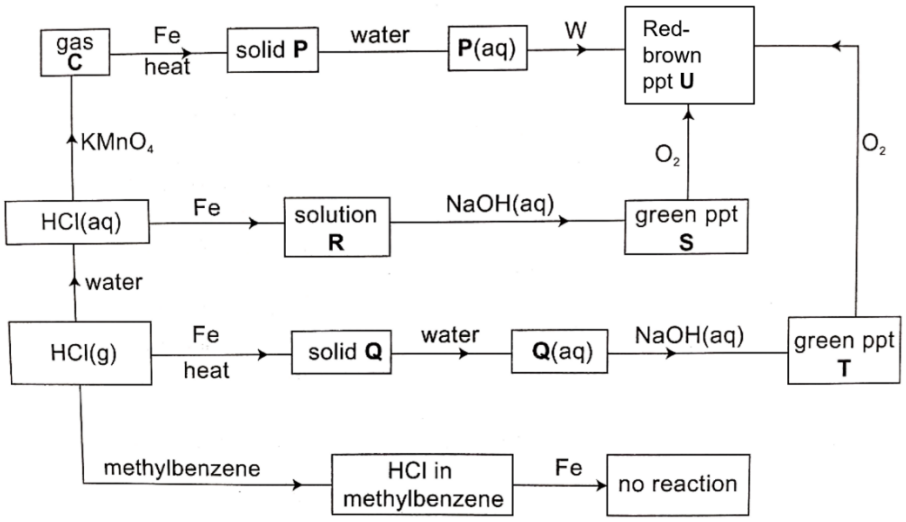
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4.Study the flow chart below and answer the questions that follow.



(a) Identify:

(i) Gas **C** …… **(½ mark)**

(ii) Solid **Q** …….. **(½ mark)**

(iii) Solid **P** …… **(½ mark)**

(b) From the flow chart, give two solutions that contain the same metallic ions. **(1 mark)**

……

……

……

(c) Give two precipitates in the flow chart that are the same and name them. **(3 marks)**

Precipitates: ……

Name: ……

(d) Explain the difference between HCl (g) in water and in methylbenzene as shown in the flow chart. **(2 marks)**

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(e) Name reagent W. **(½ mark)**

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……

(f) Write the equations for:

(i) The formation of solid P. **(1 mark)**

……

……

(ii) The formation of solid Q. **(1 mark)**

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……

(g) In the preparation of a bleaching agent (sodium hypochlorite), excess chlorine gas was bubbled into 15 litres of cold 2M sodium hydroxide.

(i) Write the equation for the reaction between chlorine gas and cold dilute sodium hydroxide. **(1 mark)**

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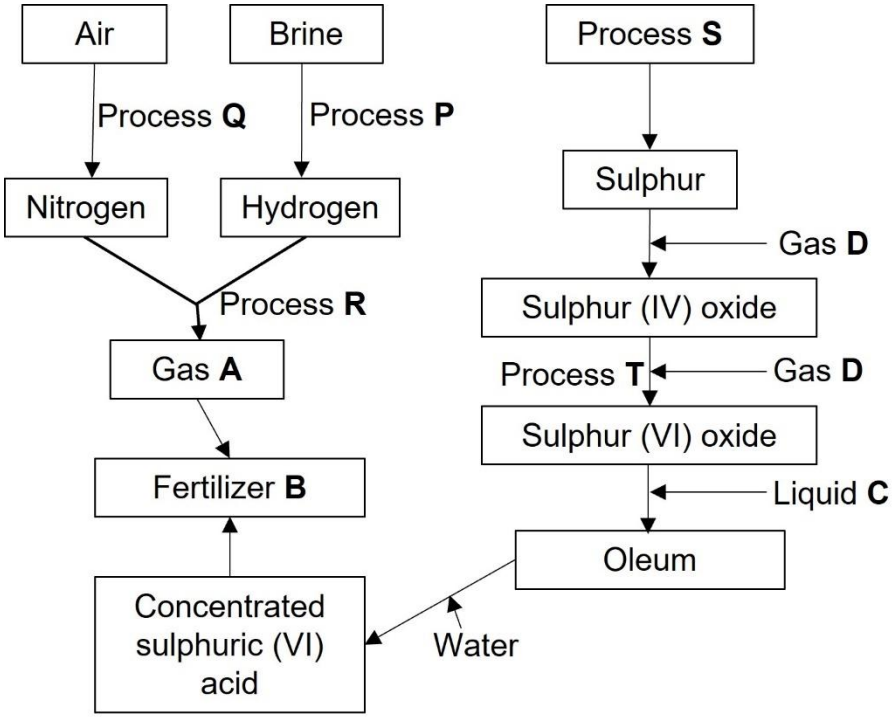
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(ii) Calculate the mass in **kilograms** of sodium hypochlorite produced. (Na = 23.0, Cl = 35.5, O = 16.0) **(3 marks)**

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



(a) Name the following: **(3 marks)**

(i) Process **Q** ……

(ii) Process **R** ……..

(iii) Process **S** ……..

(iv) Process **T** ……..

(v) Gas **A** ……

(vi) Fertilizer **B** ……

(b) Why is liquid C used instead of water? **(1 mark)**

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……

(c) Write the formula of oleum. (1 mark)

……

……

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(d) Write the equation for the formation of:

(i) fertilizer **B**. **(1 mark)**

……

……

(ii) gas **A**. **(1 mark)**

……

……

(e) Name the **catalyst** and give the **conditions** for:

(i) Process **R**. **(3 marks)**

Catalyst ……

Conditions ……..

……

(ii) Process **T**. **(3 marks)**

Catalyst ……

Conditions ……..

……..

(h) Explain how nitrogen is obtained from air using process **Q**. **(3 marks)**

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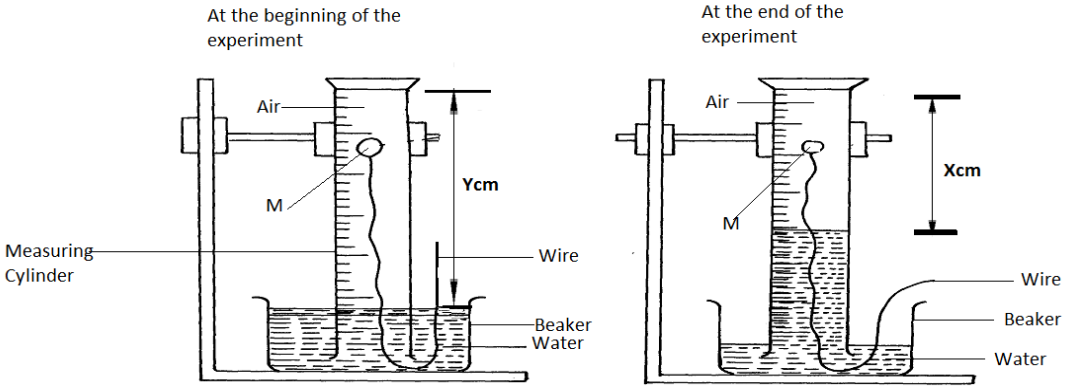
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6.A form one class carried out an experiment to determine the active part of air. The diagram below shows the set-up of the experiment and also the observation made.



I.

(a) Identify substance M …… **(1mark)**

(b) State two reasons for the suitability of substance M for this experiment **(2marks)**

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(c) Write the equation for the reaction of substance **M** and the active part of air **(1mark)**

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II. The table below shows the pH values of solutions J to N

Solution	J	K	L	M	N
pH	5	13	2	10	7

(a) Which two solutions are likely to react and give a solution with a pH of 7? **(1 mark)**

……

……

……

(b) Which solution is likely to be a solution of acetic acid? ..... **(1mark)**

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III. Magnesium was burnt in air forming a white residue T. When put in a boiling tube with water effervescence was noticed and colourless gas D with a characteristic pungent smell was evolved. The gas turned a wet red litmus paper blue.

(a) Identify

(i) Residue **T** **…….** **(1mark)**

(ii) Gas D**……** **(1mark)**

(b) **Write** an equation for liberation of gas D. **(1mark)**

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IV. Explain why the bleaching action of chlorine is permanent while bleaching by sulphur (IV) oxide is temporary.
(2 marks)

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……..……

SCHOOL: ……..

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

CHEMISTRY (PRACTICAL QUESTION PAPER)

FORM THREE (3)

Time: 2¼ Hours

INSTRUCTIONS TO CANDIDATES

- ✓ *Write your **name**, **stream** and **other details** in the spaces provided above.*
- ✓ *Answer all the questions in the spaces provided.*
- ✓ *Mathematical tables and electronic calculators may be used.*
- ✓ *All working must be clearly shown where necessary.*
- ✓ *In the first 15 minutes read through the questions and ensure that you have all the apparatus and other substances you need.*
- ✓ *This paper has **6** printed pages. Check to confirm this.*

FOR EXAMINER'S USE ONLY

Questions	**Maximum score**	**Candidate's Score**
1	21	
2	11	
3	08	
Total	**40**	

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1.You are provide with
- **Solution A**, Hydrochloric acid
- **Solution B**, containing 8.0g per litre of sodium hydroxide
- 0.4g of an impure carbonate **solid C (M_2CO_3)**

Procedure I.

(i) Fill the burette with sodium hydroxide, **Solution B**
(ii) Pipette 25cm^3 of hydrochloric acid, **Solution A** into a conical flask
(iii) Add 2-3 drops of phenolphthalein indicator and titrate until a permanent pink colour appears
(iv) Repeat the titration two more times and complete the table

Table 1 **(4mks)**

Experiment	**I**	**II**	**III**
Final burrete reading (cm^3)			
Initial burette reading (cm^3)			
Volume of **solution B**(cm^3)			

(a) Find the average volume of **solution B** used? **(1mk)**

(b) Determine the

(i) Concentration of **solution B** in moles per litre (Na=23.0, O=16.0, H=1.0) **(1mk)**

(ii) Concentration of **solution A** in moles per litre **(2mks)**

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Procedure II

(i) Using a measuring cylinder, measure out 100cm^3 of **Solution A** into a 250cm^3 beaker
(ii) Add all of solid C into the beaker containing **Solution A**
(iii) Transfer all the solution into a 250ml volumetric flask and top up to the mark using distilled water. Label this as solution D
(iv) Fill the burette with sodium hydroxide solution, B
(v) Pipette 25cm^3 of solution D into a conical flask
(vi) Add 2-3 drops of phenolphthalein indicator and titrate until a permanent pink colour appears
(vii) Record your results in table II below
(viii) Repeat the titration two more times and complete

Table II **(4mks)**

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

(a) Find the average volume of solution B used? **(1mk)**

(b) Calculate the;
(i) moles of hydrochloric acid in 25.0cm^3 of solution D **(2mks)**

(ii) Moles of hydrochloric acid in 250cm^3 of solution D **(1mk)**

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(iii) Moles of hydrochloric acid in $100cm^3$ of the original hydrochloric acid **Solution A** **(1mk)**

(iv) Moles of hydrochloric acid that were used up in the reaction with **solid C** **(1mk)**

(v) Moles of the carbonate (M_2CO_3) that reacted with hydrochloric acid **(1mk)**

(c) Given that the relative formula mass of the carbonate is 106, calculate the;

(i) mass of the carbonate that reacted **(1mk)**

(ii) percentage purity of the carbonate, solid C **(1mk)**

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2. You are provided with **solid E**. Carry out the following tests and write your observations and inferences.

(a) Describe the appearance of **solid E**. **(1 mark)**

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(b) Place a spatulaful of **solid E** in a boiling tube and add about 8 cm^3 distilled water. Shake well and divide the resulting mixture into four portions for tests (i) to (iv) that follow.

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

(i) To the first portion, add aqueous sodium hydroxide dropwise until in excess.

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

(ii) To the second portion, add aqueous ammonia dropwise until in excess.

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

(iii) To the third portion, add a 4 drops of sodium chloride solution.

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

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(iv) To the last portion, add 4 drops of aqueous barium nitrate followed by dilute nitric (V)acid.

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

3. You are provided with:

- Solid J
- Litmus papers (red/blue)
- Lead (II)nitrate solution

(a) Describe the appearance of **solid J**. **(1 mark)**

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(b) Place a spatulaful of solid J in a boiling tube and add distilled water to fill about half the tube. Shake well and divide the resulting mixture into two 2 cm^3 portions for tests (I) and (II) that follow.

(c) To the first portion, add drops of sodium hydroxide solution and warm. Test the gas evolved with moist red and blue litmus papers.

Effect gas on	
Red litmus paper	**Blue litmus paper**
(1 mk)	**(1 mk)**

I. Identify the gas evolved. **(1 mk)**

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II. Identify the cation (positive ion) in solid J. **(1 mk)**

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(ii) To the second portion, add drops of lead (II)nitrate solution and warm.

Observations: **(2 mks)**

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(iii) Identify the anion (negative ion) present in the solution of J. **(1 mk)**

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BRILLIANT STUDENTS

FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……..……

SCHOOL: ……..

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

COMPUTER STUDIES 451/1
PAPER 1
FORM THREE (3)
TIME 2½ HOURS

INSTRUCTION TO CANDIDATES

- *Write your name and admission number in the spaces provided above*
- *This paper consists of **Two** sections **A** and **B***
- *Answer **ALL** questions in section **A***
- *Answer question16 and any other **THREE** questions from section **B***
- *All answers should be written in the spaces provided on the question paper*

FOR EXAMINER'S USE ONLY

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

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

1.

(a) State two emerging issues that affect email technology **(2marks)**

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(b) Describe three advantages of using computers in banking **(3marks)**

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2. Describe why a programmer might prefer to read the instructions in hexadecimal rather than in binary **(2marks)**

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3.Mention four things that are likely to cause strain- in the computer room **(2marks)**

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4.Describe two types of programming errors **(2marks)**

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5.Describe how binary search technique is used in sequential file organization to access records **(2marks)**

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6.James is a system analyst for Jami Bora group of companies. The company management automated their operations to have a competitive advantage over other companies in the same field, after one year of operation James received a memo from the CEO requesting him to consider changing the current computer based system. State three things that might have necessitate this **(3marks)**

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7.Explain the function of a master page as used in desktop publishing software **(2marks)**

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8.Give two reasons to justify why most programmers prefer using compilers instead of interpreters **(2marks)**

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9.With an aid of a diagram, state the difference between While ..... Do and Repeat.... Until **(3marks)**

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10.

(a) State three causes of data loss in computing **(3marks)**

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(b) List three precaution taken against crashing of hard disk **(2marks)**

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11. What is mnemonics in computer programming **(1mark)**

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12. Explain the following terms in relation to database **(2marks)**

(i) Tuple

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(ii) Dynaset

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13. State main functions of the graphic adapters **(2marks)**

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14.

(i) Write the equivalent R1C1 reference for F17 **(2marks)**

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(ii) The formula **=$A1+C2** is initially typed in cell D1. What will it be when copied to cell E1 **(2marks)**

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15. Briefly describe three ways in which a financial institution like Kenya Commercial Bank can minimize threat to its data integrity **(3marks)**

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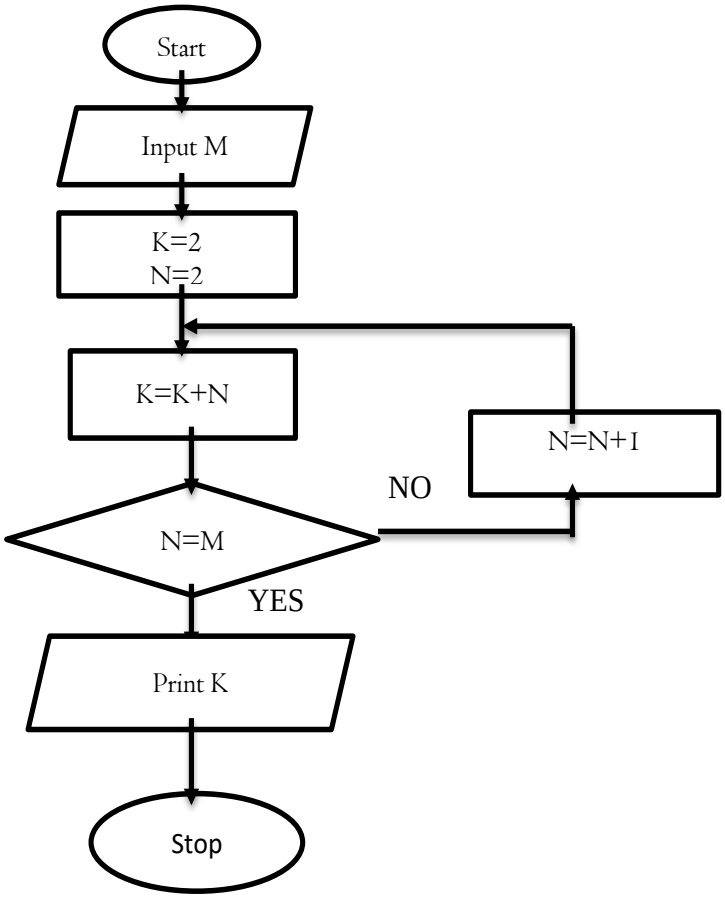
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SECTION B (60 MARKS)

Answer Question 16 (Compulsory) and Any other THREE in this Section

16. Study the flowchart below answer the questions that follow



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(a) What would be the output if the value of M at input was

(i) 4 **(2marks)**

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(ii) 8 **(2marks)**

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(b) Write a pseudo code for the flowchart **(7marks)**

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(c) Modify the flowchart to sum up all the values of K calculated **(4marks)**

17.

(a) If ASCII-7 represent letter B as 1000010 suggest how letter P will be represented **(3marks)**

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(b) Convert **57.125_{10}** to its Binary equivalent **(3marks)**

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(c) Determine the value of X in this equation **(3marks)**

$X_2 + 1101_2 = 16_8$

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(d) Convert **7AH** to a decimal number **(3marks)**

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(e) Use twos compliment to subtract 15_{10} from 7_{10} **(3marks)**

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18.

(a) Use the diagrams below to explain the types of relationships depicted by each in a database design (**2marks)**



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(2marks)

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(b) Describe the following data types as used in Ms-Access **(3marks)**

(a) Calculated

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(b) Text

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(c) Attachment

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(c) Mention three functions of Database Management Software (DBMS) **(3marks)**

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(d) Explain any three types of database models **(3marks)**

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(a) Explain the term proofreading as used in word processing **(2marks)**

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19.

(a)Highlight three qualities that a system analyst must have to enable him/her develop a reliable computer based system **(3marks)**

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(b) Describe three factors that cause system entropy **(3marks)**

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(c) Outline three factors that should be considered when sourcing for hardware and software resources required for a new system **(3marks)**

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(d) Name three circumstances in which it is better to use a Questionnaire than an Interview for gathering information **(3marks)**

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(e) State three reasons why users may resist the introduction of an information system in their place of work **(3marks)**

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20.

(a)Describe each of the following computer cable

(i) Parallel cables **(2marks)**

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(ii) USB cable **(2marks)**

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(b) Mention three ways of acquiring a computer software **(3marks)**

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(c) Describe three ways in which spread of computer virus may be controlled **(3marks)**

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(d) Describe three ways in a which a computer based system can be maintained **(3marks)**

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(e) State the difference between uploading and downloading **(2marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

COMPUTER STUDIES (QUESTION PAPER)
FORM THREE (3)
TIME: 2½ HOURS
PAPER 2

Instructions to candidates

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

b) Write your name and index number on the CD-RW provided.

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

d) Answer all the questions

e) All questions carry equal marks.

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

g) All answers must be saved in your CD-RW provided.

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

i) Arrange your printouts and staple them together.

j) Hand in all the printouts and the CD-RW used.

k) This paper consists of 5 printed pages.

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

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1. (a) Type and format the following document as it appears using a Word processor. Save it as **TELE1** **(24 marks)**

TELE AND VIDEO CONFERENCING

The advent of the information and communications technology has brought with it several advantages that need to be made use of by both the public and private sector. Not only are those technologies convenient but some are also cost effective.

Even though most of the communications technologies are currently widely in use - mobile telephones and internet - one area that needs seriously to be explored and utilised by both government institutions and private sector is tele and video conferencing.

Governments and the private sector need to take advantage of the facilities offered by tele and video conferencing

During the February 1 launch of the 'Just Like Home' seamless network by the region's three main mobile phone providers, Safaricom, MTN Uganda and Vodacom Tanzania, the celebrations were held in the three different countries at different times of the same day.

Nothing wrong with that only that the chief executives of the three firms were meant to be present at all the functions. I say 'were meant to' because I only attended the Nairobi launch.

After the Kenya launch, held at Nairobi's Serena hotel over breakfast from 7 am, the three CEOs, (Safaricom's Bob Collymore, MTN's Noel Meier and Vodacom Tanzania's Romeo Kumalo) were to proceed to the other two launches. These were first the Tanzania launch at lunch time and finally, the Uganda dinner launch in Kampala.

Imagine all the traveling involved and the resultant fatigue for the officials of the three firms, plus others who were part of the retinue. Even though one would argue that the traveling to all the three countries was necessary as there were papers to be signed, reliable sources tell me that what was happening on February 1 was just a formal exercise. Everything else, including the paperwork and memoranda of understanding had already been signed.

The second instance when holding a video conferencing would have been more ideal was recently when Ethiopia's premier Meles Zenawi made a few hours visit to Nairobi to discuss the Somalia crisis with the former President Kibaki

(b) Copy the entire page to a new document and apply the following changes.

i) Remove all the formatting features and the text box**.** **(2mks)**

ii) Character space the first paragraph to condensed at 24pts. **(2mks)**

iii) Increase the font size to 35. **(1mk)**

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iv) Double stroke through the text. **(1mk)**

(c) On the last paragraph:

i) Apply in margin drop cap positioned to the right of the page **(2mks)**

ii) Apply multiple line spacing at 3.5pts. **(2mks)**

iii) Apply hanging indentation on the last paragraph at 1.2. (**2mks)**

v) Insert the current date on the right header of the page. **(2mks)**

v) Save the document as **Tele 2.** **(1mk)**

(c) The following table shows the percentage growth of the three mobile phone providers in two periods of six months in the years 2011, 2012 and 2013. Include it exactly and save the changes. Create a formula to calculate the total percentage growth over the three years for each period. (7marks)

(d)

Years	Safaricom		MTN		Vodacom	
	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2
2011	10	7	12	6	5	8
2012	20	9	20	3	28	67
2013	10	9	7	39	17	1
TOTALS						

(d) Print **TELE1**, **Tele 2** **(1mk)**

2. Digital Computer Services is a company with numerous branches in East Africa. In order to monitor the performance of the branches and that of the cities in which the branches are located, a database to organize the information is required.

(a) Create a database file and name it **DIGITAL SERVICES**. **(2 marks)**

(b) (i) Create a table containing the following fields: **(4 marks)**

Field Name	**Field Type**
STORE-ID	Number/Numeric

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BRANCH	Text/Character
CITY	Text/Character
STAFF-SIZE	Number/Numeric

(ii) Make the field STORE-ID the primary key and save the table as **STORE**. **(2marks)**

(c) (i) Create a form from the STORE table and save it as **STORES-FORM**. **(2 marks)**

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

STORE-ID	**BRANCH**	**CITY**	**STAFF-SIZE**
1	Tudor	Mombasa	15
2	Bongo	Dar-es-salam	14
3	Sunset	Nairobi	21
4	Lakeview	Kampala	15
5	King'orani	Mombasa	9
6	Beach Town	Kisumu	16
7	ABC	Nairobi	89
8	Crane Ltd.	Kampala	7
9	Wheat Land	Nakuru	12
10	Ocean View	Dar-es-salam	6

(d) (i) Modify the STORE table to include an additional field with the heading SALES (SHS). **(2 marks)**

(ii) Enter the information below for each of the stores. **(2 marks)**

STORE-NO	**SALES (SHS)**
1	789,300
2	685,400
3	376,958
4	355,420
5	457,800
6	682,458
7	541,000
8	235,420
9	352,415
10	433,443

(iii) In the STORES table, swap the fields CITY with BRANCH. **(2 marks)**

(e) (i) Create a query from the STORES table to display the fields BRANCH, CITY, STAFF-SIZE and SALES (SHS) for stores whose sales are less than 400,000. Save it as **STORES QUERY** **(4 marks)**

(ii) The sales increased by 10%. Using a query create a column named NEW SALES that will calculate the changed sales values. Save it as **NEW SALES**.

(3 marks)

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(f) (i) Create a tabular report with landscape orientation from the STORES table to display the fields in the following order.

STORE-NO, BRANCH, SALES (SHS) **(3 marks)**

(ii) Sort records in the report in alphabetical order of the BRANCH field. **(1 mark)**

(iii) Compute the total sales and place it below the SALES (SHS) column and change its font size to 14. Label as TOTAL SALES. **(6 marks)**

(iv) Place two straight lines cutting across the page, one above and one below the sales total. **(2 marks)**

(g) (i) Insert a header *DIGITAL COMPUTER SERVICES PERFOMANCE* in the report having font size 16 and center it across the page. **(3 marks)**

(ii) Remove the report pagination and insert your name and index number in its place and save the report as **PERFOMANCE**. **(2 marks)**

(h) Print **STORES**, **NEW SALES query** and **PERFOMANCE report**. **(3 marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..……..

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

CRE (PAPER ONE)

FORM THREE (3)

TIME: 2 HOURS

Instructions to candidates:

- Write your name and index number in the spaces provided above.
- This paper consists of **SIX** questions.
- Answer any five questions on the foolscaps provided.
- Each question carries 20 marks.

For Examiner's Use Only

Questions	**1**	**2**	**3**	**4**	**5**	**6**	**TOTAL**
Score							

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1 a) Explain how the study of CRE contributes to National development **(7mks)**

b) Giving examples identify seven literary forms used in writing the Bible. (**7 mks**)

c) State **six** similarities found in both Biblical and traditional views on creation. **(6mks)**

2a) Describe the covenant ceremony between God and Abraham in Genesis 15:1 **(7mks)**

b) What were the reasons for the call of Abraham? **(7mks)**

c) Give the relevance of God's promises to Abraham to Christians today. **(6mks)**

3 a) Give **six** ways which show that King Solomon turned away from the covenant way of life. **(7mks**)

b) Identify **seven** ways in which king Jeroboam contributed to religious schism between Judah and Israel. **(7mks)**

(c) Give **six** reasons why a leader may be rejected in the society today. **(6 mks)**

4 a) Outline **six** characteristics of true prophets in the Old Testament **(6mks)**

(b) Explain the teachings of Amos on the day of the Lord. **(8mks)**

c) Give ways in which Christians practice hypocritical religion **(6mks**

5 a) Describe personal life of prophet Jeremiah. **(7mks)**

b) Explain **four** reasons why Nehemiah introduced the policy of separation of Jews from foreigners **(8 mks**)

c) State the role of the church during the COVID-19 pandemic. **(5mks)**

6a) Identify **Six** factors that promote harmony and social responsibility in traditional African Communitiess **(6mks)**

b) What efforts is the Kenyan government making to conserve African cultural heritage. **(7mks**)

. **c)** In which ways do traditional African communities seek reconciliation with God **(7mk)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

CRE (PAPER TWO)

FORM THREE (3)

TIME: 2 HOURS

Instructions to candidates:

- Write your name and index number in the spaces provided above.
- This paper consists of **FIVE** questions.
- Answer ALL five questions on the foolscaps provided.
- Each question carries 20 marks.

For Examiner's Use Only

Questions	1	2	3	4	5	6	TOTAL
Score							

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1 a) Outline Micah's prophecy concerning the Messiah (Micah 5:2-5) **(6mks)**

b) Ooutline the role of John the Baptist as the fore runner of the Messiah. **(7mks)**

c) Give seven ways in which parents develop their children's spiritual life. **(7mks)**

2a) Narrate the parable of the Good Samaritan in Luke's Gospel. **(8mks)**

b) Highlight five characteristics of a committed followers of Jesus. **(5mks)**

c) Give ways in which people reacted to the miracles of Jesus. **(7mks)**

3 a) Describe the prayer on mount Olive. Luke 22:39-46. **(7mks)**

b) Outline six signs of the end times as taught by Jesus in (Luke 21:5-38) **(6mks)**

c) Give seven ways in which Christians are preparing themselves for the second coming of Jesus Christ **(7mks)**

4a) In what way are the people of God described by Peter according to 1 Peter 2:9-10. **(8mks)**

b) Give seven reasons why Jesus sent the Holy Spirit to the disciples after His Ascension. **(7mks**)

c) State five factors that hinder effective cooperation among Christians in Kenya today. **(5mks)**

5(a) Outline seven Christian teaching on male/female relationship. **(7mks)**

(b)Explain similarities between the Christian and traditional African view on marriage. (**6mks)**

(c)Give **seven** reasons why Christians in Kenya condemn homosexuality. (**7mks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

DRAWING AND DESIGN (QUESTION PAPER)
FORM THREE
TIME 2½ HOURS
PAPER 1

FOR EXAMINERS USE ONLY

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

INSTRUCTIONS TO CANDIDATES.

You should have the following for this examination:

- Drawing instruments
- 3 sheet of drawing paper size A3

This paper consists of THREE sections A, B and C.
Answer ALL the questions in section A and B and any TWO questions from section C.
Questions in section A must be answered on the answer sheets provided.
Questions in section B and C should be answered on the A3 drawing papers provided.
All dimensions are in millimetres unless otherwise stated.
Candidates may be penalized for not following the instructions given in this paper.

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SECTION A (50 marks)

Answer ALL the questions in this section.

1. (a). briefly explain what the following terms means in design process **(4marks)**

i. Function

……

……

ii. Aesthetics

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iii. Ergonomics

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iv. Design Brief

(b).state six way of communicating design ideas **(3 marks)**

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2.State one use of the following computer components. **(2 marks)**

(i). keyboard

(ii) Hard drive

(iii) Mouse

(iv) Cpu

3.(a) Name the two universal methods of presenting technical drawing **(2 marks)**

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(b) List three roles of a draughtsman in the engineering field. **(3 marks)**

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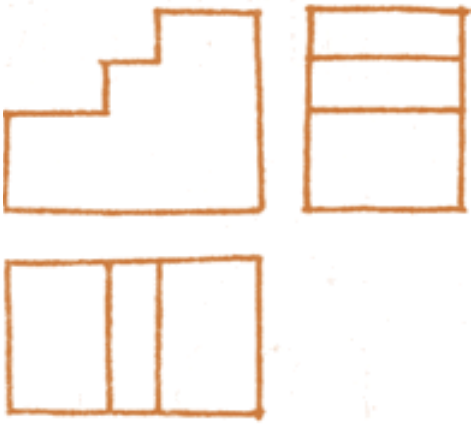
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4.Sketch the orthographic given in Fig 1 in two point perspective. **(5 marks)**



5.On the same base of 25mm, construct a regular octagon and a pentagon. **(5 marks)**

6.Construct a triangle of perimeter 185mm whose sides are in a ratio of 3:5:6 and convert to a square of the area. **(6 marks)**

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7.Construct a scale of 10:9 and draw figure 2 using the scale. **(8 marks)**

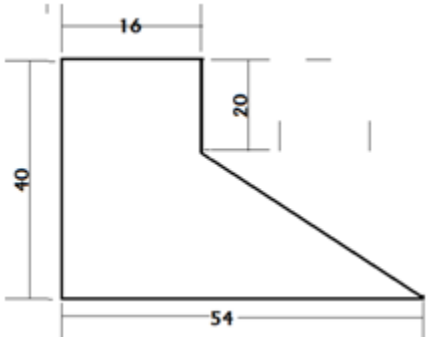


FIG 2

8.Sketch the auxiliary view of the triangular based pyramid truncated by the cutting plane X-X and a complete plan

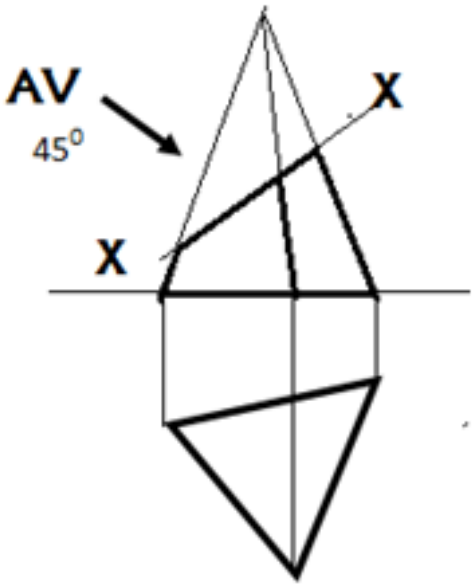


FIG 3

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9.Sketch the sectional elevation Y-Y of the figure 3

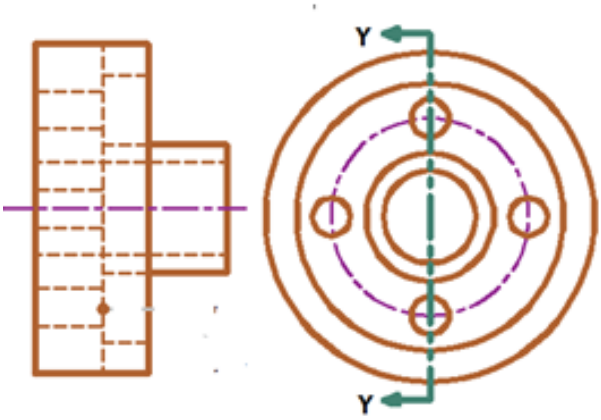
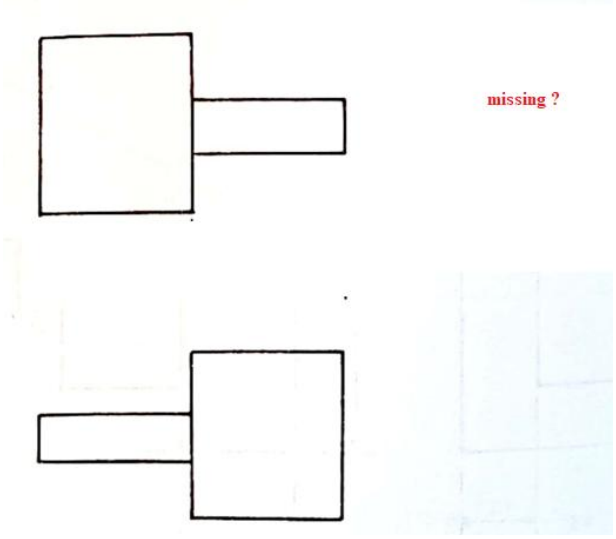


FIG 3

10. Sketch the missing view of the orthographic projections.



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Section B (20 marks)

*This question is **compulsory**.*

Students are advice not to spend more than one answering this question.

11. Figure 5 shows detailed drawings of a scribing block drawn in 3rd angle projection. Assemble the parts and draw **(15 marks)**

(a) Sectional elevation along the cutting plane S-S

(b) The plan.

(c) Insert six leading dimensions.

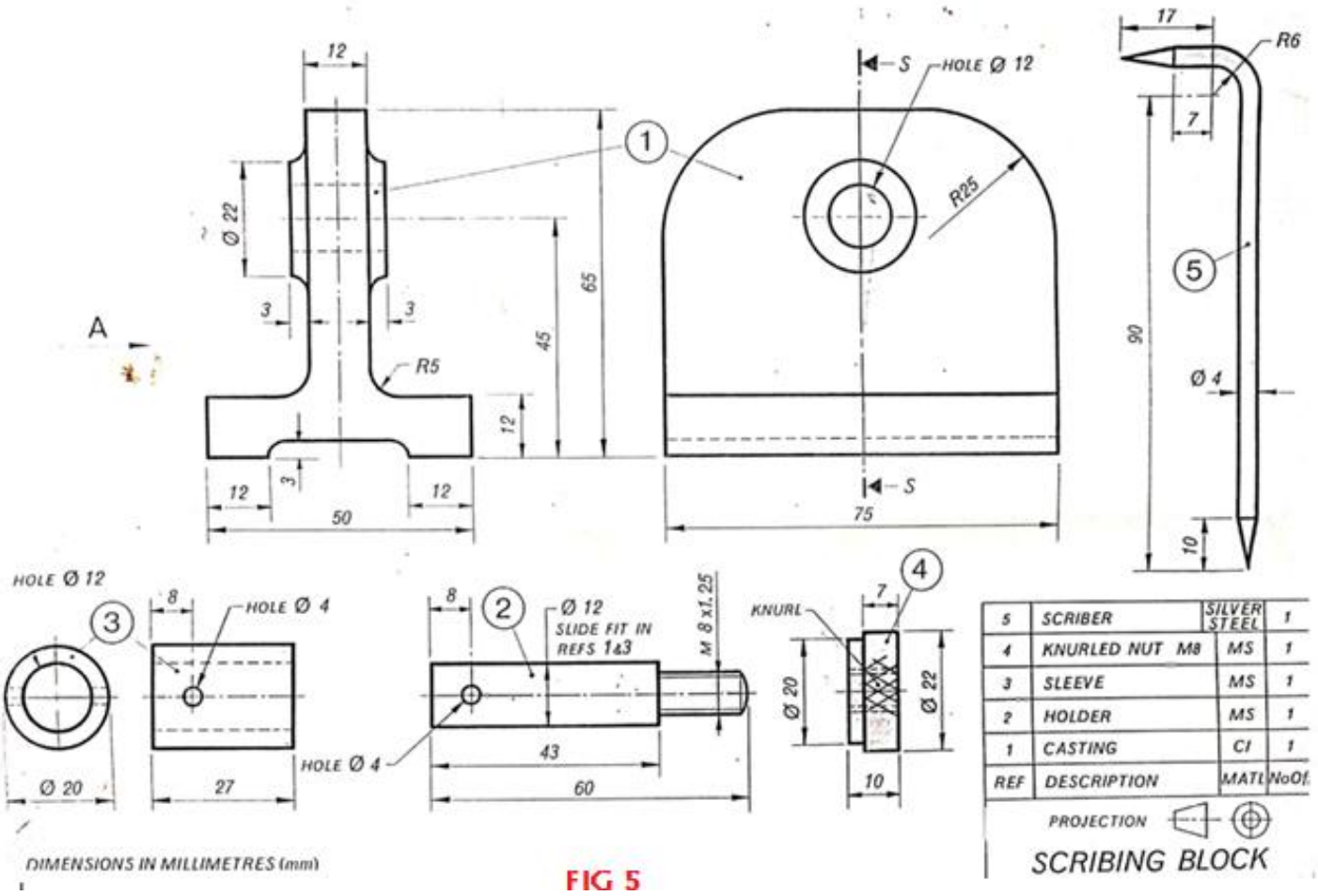


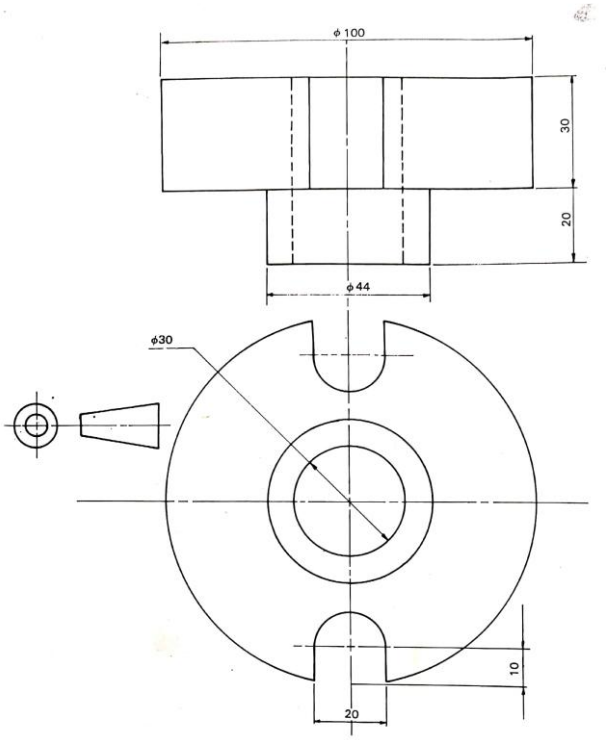
FIG 5

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Section C (30 marks)

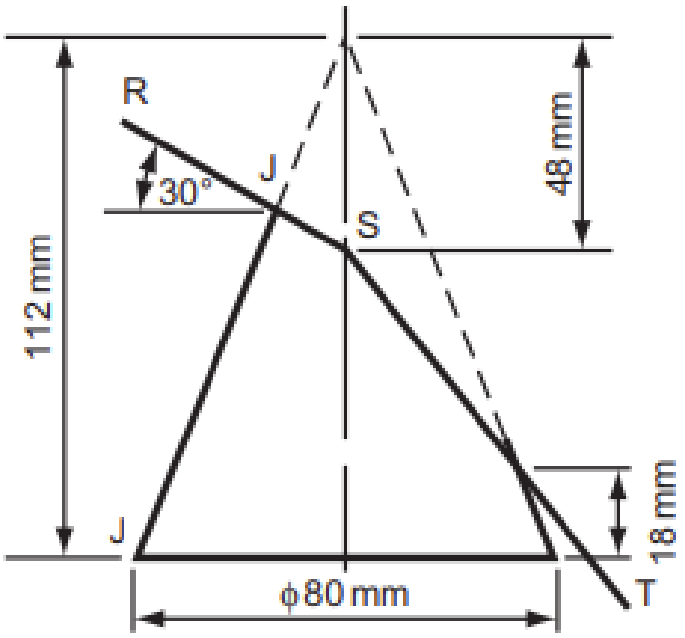
Answer any two questions from this section.

12. Two views of a block are shown in fig 6 below. Draw full size the figure in oblique. **(15 marks)**



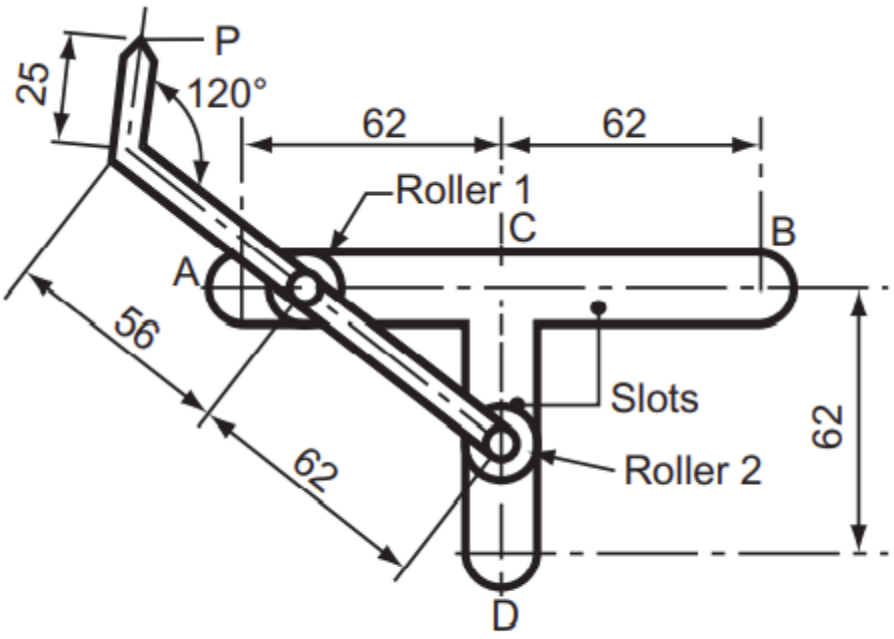
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13. Figure 7 below shows a cone truncated by the cutting planes RST.
Copy the given view and draw.
(a) Complete plan.
(b) Surface development



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14. In Fig. 8, rollers 1 and 2 are attached to the angled rod. Roller 1 slides along slot AB while roller 2 slides along CD and back. Draw, full size, the locus of P, the end of the rod, for the complete movement of roller 1 from A to B. (15 Marks)



Dimensions in mm

FIG 8

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

DRAWING AND DESIGN (QUESTION PAPER)
FORM THREE
TIME 2½ HOURS
PAPER 2

FOR EXAMINERS USE ONLY

a	b	c	d	e	TOTAL

Instructions to Candidates
You should have the following materials for this examination:

4 sheets of drawing paper size A3
Drawing instruments.

*This paper has **ONE COMPULSORY** question.*
*This paper is to be issued to the candidates **30 minutes** before the examination starts.*
*The candidates are advised to spend this time **understanding the design problem** and **planing the work** on one of the drawing papers provided.*

This paper consists of 2 printed pages.

Candidates should check the question paper to ascertain that both pages are printed as indicated and no questions are missing.

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DESIGN PROBLEM

Due to increase enrollment in secondary schools, there is need to use all available rooms in schools including drawing and design rooms

Design a drawing table that can be used as both reading table and drawing board.

Considerations

1.It should be easily moved from one position to another.

2.It should be adjustable to comfortable heights .

3.Should have a provision for storing drawing instruments and books.

4.The table top shoud have mechanism for tilting between 0^0 to 30^0 .

REQUIREMENTS

a) Make free-hand sketches of two possible solutions for your design. **(6 marks)**

b) Select one of the designs in (a) above and make a refined pictorial sketch**.(13mks)**

c) Make detailed sketches of the mechanism to allow for each of the considerations 1-4above **(16 marks)**

d) List two materials to be used and state one reason for the choice of each. **(2 marks)**

e) State three methods of joining the parts and state a reason for the choice **(3 marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

ENGLISH (QUESTION PAPER)
FORM THREE (3)
PAPER 1
TIME: 2½ HOURS

Instructions to candidates:
a) Write your name, school and index number in the spaces provided.
b) Sign and write the date of exam in the spaces provided.
c) Answer **all** the questions in this paper.
d) All your answers must be written in the spaces provided.

For Examiner's Use Only:

SN	Question	Maximum Score	Candidate's Score
1	Functional Writing	20	
2	Cloze Test	10	
3	Oral Skills	30	
	Total Score	**60**	

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1 FUNCTIONAL WRITING **20 MARKS**

For the past three year, the academic performance in Wema School has been drastically declining. This prompted the principal to commission a committee of six members to investigate the root causes of this decline and give possible solutions. The report is to be handed in to the principal in two weeks time. As the secretary of the committee, write the report. **20 marks**

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CLOZE TEST **10 MARKS**

Cabinet Secretary for Interior Fred Matiang'i has put social media users on notice ahead of the next General Election. The Interior CS said the social media users are (1) _____ the internet with vulgar language and insults while spinning fake news. He (2)_____ social media users that as much as Kenya is a democratic country, people should exercise caution on how they exercise their freedoms. "The consequences of exceeding this freedom will be met with equal force," Matiang'i said. Further, the Interior Cs said that the country is ready to(3)_____the polls and is even more prepared than before having learnt from (4)_____ elections. Matiang'i said he is looking (5)_____ to an election where no(6)_____ will be fired, and no citizen will displaced or property destroyed. "This forthcoming election will be a monumental one (7)_____ there will be a transition."

"We shall have the biggest number of youth taking part in this elections (8)_____ we must remain peaceful," Matiang'i cautioned. At the same time, the CS said one of the biggest (9) _____ facing the country at the moment is Corona virus pandemic which has continued to (10)_____ havoc in the country.

(Adopted from The Standard Newspaper-August 26th 2021.)

2 ORAL SKILLS **30 MARKS**

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

CROSS

My old man's white old man-
And my old mother's black
If I ever cursed my old white old man
I take my curses back
If I ever curse my black old mother
And wished she were in hell
I am sorry for that evil wish
And now I wish her well
My old man died in affine big house
My ma died in shack
I wonder where I'm going to die
Being neither white nor black

Questions

i. Describe the rhyme scheme of the poem above. **3 marks**

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……

……

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ii. Apart from rhyme, how has rhythm been achieved in the above poem. **4 marks**

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……

……

iii. Identify the words you would stress in the third line of the poem and explain why. **3 marks**

……

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……

……

2.Which intonation would you use in the following sentences? **4 marks**

a.What does the word schizophrenia mean?

……

……

b.Do you like football?

……

……

c.They arrived yesterday.

……

……

d.What a classy machine!

……

……

3.Give another word that is pronounced the same as the following. **3 marks**

i. Lichen-

ii. Baron-

iii.Juice

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4.Identify the silent letter in the following words. **3 marks**

a. Tourism

b. Chamois

c. Pursuit

5. Your friend has just graduated and he has invited you to be the guest speaker during the ceremony. What would you do to deal with fear and anxiety that can be associated with such public speaking? **6marks**

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6. You have met a visitor along the highway in your school who would like to be shown the Principal's office. Complete the following conversation appropriately. **4marks**

You:

……

……

Visitor: Good morning too. Thank you very much. May you please give me the direction to the Principal's office?

You:

……

……

Visitor: I am sorry but I didn't get you clearly. Would you kindly pardon?

You:

……

……

Visitor: Thank you very much. I have heard your clearly now.

You:

……

……

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

ENGLISH (QUESTION PAPER)
FORM THREE (3)
PAPER 2
TIME: 2½ HOURS

INSTRUCTIONS TO CANDIDATES

- The exam has ***FOUR sections***.
- All the sections are ***compulsory.***
- Write your answers in space provided.
- The exam carries ***80 marks.***

FOR EXAMINER'S USE ONLY

S/NO	SECTION	MAXIMUM MARKS	STUDENTS SCORE
1	COMPREHENSION PASSAGE	20	
2	EXCERPT	25	
3	ORAL NARRATIVE	20	
4	GRAMMAR	15	
Grand Total		**80 marks**	

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1.COMPREHENSION PASSAGE **20 MARKS**

Read the passage below and answer the questions that follow.

Developers' bulldozers have been leveling thousands of acres of rain forest every day in recent years to make way for human habitation. As a result, one plant or animal species a day is added to the list of those that have become extinct on this planet. This destruction must stop. Rain forests must be protected because they offer the human race many irreplaceable resources.

Rain forests are a special category of forests found only in the tropical regions of the world, usually close to the equator. True to their name, rain averages 80 inches a year in these forests. This rain, coupled with the warm tropical temperatures, creates dense lush vegetation. Little light gets through to the ground, but on the canopy and immediately below on the trees, plant and insect life abounds and is rich with benefits for humanity.

One major use of rain forests is biomedical. The plants and animals found there are a source of many rare compounds used by pharmaceutical companies. It is the product of such companies that sufferers of Parkinson's disease and certain mental conditions have to thank. And the discoveries have just begun. Scientists say that rain forests contain over a thousand plants that have great anticancer potential. To destroy life forms in these forests is to deprive the human race of further medical advance.

Another reason for saving rain forests is the crucial role they play in maintaining the global natural balance. Living organisms exist with each other, meaning that when one is eliminated, another can over-multiply to the detriment of the environment. For example, when developers clear forested areas to make way for "civilization", birds lose their nesting sites and no longer eat the insects there. These insects flourish and attack farm crops. The subsequent destruction of agriculture causes a serious food shortage and as we know, a hungry nation cannot develop.

Most important, rain forests must be protected because their trees regulate the planet's oxygen supply. They help to balance atmospheric conditions by manufacturing oxygen and absorbing carbon dioxide. Carbon dioxide creates what is called the "greenhouse" effect, a process that is responsible for global warming which in turn could lead to the sub-merging of coastal regions and islands. Can you imagine waking up one morning to the announcement that Mombasa, Malindi, Lamu and Rusinga Islands are no more?

Also, rain forests regulate the climate. If they are destroyed, the greenhouse effect could change rainfall patterns so that areas formally used for agriculture become deserts. We may not be there yet, but are we not already contending with uncharacteristic long dry spells that bring about famine?

In future, the pressure on rain forests will become worse, not better, given that the human population keeps growing. The pessimist believes nothing can be done. The optimist, on the other hand, strongly believes that people can work together to slow, even reverse, the pace of destruction. Stand up to be counted.

Questions

(a) Referring to the first paragraph, say why the destruction of the rain forests must be stopped. **(2marks)**

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(b) Why are the forests described in the passage called rain forests? **(2 marks)**

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(c) Rewrite the following sentence beginning "So close ...."

'The huge evergreen trees are so close together that their branches overlap and form an enormous towering canopy. **(1 mark)**

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(d) How will medical advance be affected by the destruction of rain forests? **(3 marks)**

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(e) Explain why the author has put the word "civilization" between quotation marks. **(2 marks)**

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(f) In not more than 40 words, summarize the effects of the greenhouse effect. **(4 marks)**

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Fair copy

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(g)What kind of pressure do you think the author is talking about in the last paragraph? **(2 marks)**

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(h) Explain the meaning of the following expressions as used in the passage **(4 marks)**

(i)Deprive

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(ii) Detriment

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(iii)Contending with

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(iv)Stand up to be counted

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2.EXCERPT 25 MARKS

Read the Fathers of Nations excerpt below and answer questions that follow(25 mks)

"I'm leaving" she said. The bed creaked.

"What do you mean you are leaving? "Professor Kimani asked. He knew the answer: She didnot want to stay with him anymore. He pressed her. "What's going on, Asiya?"

"Newbom has asked me to marry him," she said.

This part he did not know. "Newborn Walomu?" he asked. Then he sat up in his half of thebed.

"Yes, Newborn Walomu. I'm leaving tomorrow."

"But why, Siya?" He did not wait for her answer. "Ah! It is his money, isn't it?"

"How dare you, Karanja!" she shouted. Then she also sat up in her half of the bed and turneda bedside lamp on and glowered at him. "For you, I've done without money for over thirty years. Repeat: thirty years! And now you have the gall to say money is the reason I want to leave?"

"Well, isn't it?" he retorted. "Look, Siya, money doesn't guarantee happiness."

"Ha!' she scoffed. Then she slid back into bed, turned to her other side, and wiggled away from him. The bed roared. "You talk of happiness. You! Have you no shame? You couldn'ttell what happiness was if it fell on your lap and cried out its name." She wiggled farther away. "Then you say money doesn't guarantee happiness. Never having had it, how would you know that it doesn't?"

"All I'm saying, Siya, is..." He slid back into bed as well. The bed protested. " trouble. Plus,more trouble from their wealth."

"Ha! If their wealth were a problem, why don't they simply give it away?"

He tried a different approach-Tuni. "In any case, is this a good time for us to part, so soonafter the death of our daughter?"

"Leave Tuni out of this!" she shouted. "She would still be alive if you had a real car," That really hurt.

"Tuni didn't die in our car, Siya,"he said limply in self-defence. Then hetried another angle-age.

"What happened to couples aging together gracefully anyway? Sixty is no age to part, surely,is it?"

"You mean I should have left earlier, before I turned sixty? Well, 'l did not' does not mean 'lshould not', nor does I did' mean 'l will'. That is why if I did not leave before, now I should.And it is why if I did stay then, now I will not."

She left the following morning.

EXCERPT QUESTIONS

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

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b) Describe the cause of Tuni's death. **(4mks)**

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c) Discuss one thematic concern evident in the excerpt. **(2mks)**

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d) Who is Newborn Walomu? **(2mks)**

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e) Identify and illustrate three styles used in the excerpt. **(6mks)**

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f) t) How has Asiya been portrayed in this excerpt**?** **(4mks)**

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g) "Money doesn't guarantee happiness." Why is this statement ironical coming fromKaranja? **(2mks)**

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h) Provide a question tag. **(1mk)**

He knew the answer**,… .....?**

3.ORAL POETRY **20 MARKS**

Read the oral poem below and answer the questions that follow

When the cock crows
The lazy man smacks his lips and says:
So it is day light again, is it?
And before he turns over heavily,
Before he even stretches himself,
Before he even yawns
The father has reached the farm,
The water carriers arrived at the river,
The spinners are spinning their cotton,
The weaver works on his cloth,
And the fire blazes in the blacksmith's hut

The lazy one knows where the soup is sweet
He goes from house to house
If there is no sacrifice today,
His breastone will stick out!
But when he sees free yam,
He starts to unbutton his shirt,
He moves close to the celebrant.

Yet his troubles are not few,
When his wives reach puberty,
Rich men will help his marry them.

(Miruka Okumba, *Studying Oral Literature*)

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Questions

a. Classify the above oral poem. **2 marks**

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b. Identify, illustrate and state the effectiveness of two styles used in the poem above. **6 marks**

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c. State and illustrate any two economic activities carried out in the community in which the above song is drawn. **4 marks**

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d. Give two functions of the oral poem above. **2 marks**

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e. What aspect of culture is conveyed in the song from its source community**?** **2 marks**

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f. Explain the meaning of the following lines as used in the poem. **4 marks**

i. And before he turns over heavily,
Before he even stretches himself,
Before he even yawns
The father has reached the farm,
The water carriers arrived at the river,

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ii. Yet his troubles are not few,
When his wives reach puberty,
Rich men will help his marry the

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4.GRAMMAR **15 MARKS**

a.Rewrite each of the following sentences according to the instructions given after each. Do not change the meaning. **3 marks**

i. I thought that you would like to hear what happened. (Rewrite using "occurred" in place of "thought")

……

……

……

ii. They would not let him enter. (Rewrite to end with…"to enter"

……

……

iii. I shall be saved a lot of trouble by that. (Begin: That…)

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b. Complete the following sentences with the most appropriate word(s). 3 marks

i. If we had gone to bed early last night, we _____ rested enough.

ii. If I _____ the recruiting officer, I would not take bribes.

iii. Every one of the students now _____ a role to play in keeping the school.

c. Complete the following sentences with the appropriate preposition. 3marks

(i) _____ popular belief, lightning can strike twice in the same place.

(ii) I have never worried _____ passing exams.

(iii) The children were so frightened that they never stopped clinging _____their father.

d.**Use the correct order of adjectives to fill in the gaps. 4 marks**

i. Kaari is a _____(Kenyan ,basketball, brilliant, short) player.

ii. My _____laptop is very efficient (small, ugly old, grey)

iii. My aunt bought a _____(leather, blue, nice) sweater.

Iv.Every student has a _____(long, Kenyan, beautiful, rectangular, red) geometrical set.

e.**Replace each of the underline word with a phrasal verb. 2 marks**

(i) He used **falsified** documents to access their bank accounts

……

……

(ii) The criminals **disappeared** into the dark Boni forest.

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……..……

SCHOOL: ……..

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

ENGLISH (QUESTION PAPER)
FORM THREE (3)
PAPER 3
TIME: 2½ HOURS

INSTRUCTIONS TO CANDIDATES

- Write your name, the name of your school, your index number and stream in the spaces provided at the top of the page.
- Answer **three questions only**.
- Questions **one** and **two** are **compulsory**
- In question **three**, choose only **one** of the optional texts you have prepared on.
- Where a candidate presents work on more than **one** optional text, the first one to appear will be marked.
- Each of your essays must **not** exceed **450** words.

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 illustrate the proverb 'Never count your chicks before they hatch'

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

'Greed is dehumanizing." Using the play, The Samaritan, by John Lara for references, write a composition justifying this statement. **(20marks)**

3.Optional Set Texts

Answer one question only

Either

a) The Short Story: A Silent Songs

Write an essay showing how war ruins communities making reference to Boyi by Gloria Mwaniga **(20mks)**

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

The author has been able to effectively employ irony 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 STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

501/1 FRENCH QUESTION PAPER
(PAPER ONE)
FORM THREE (3)
Time 2 ¼ hrs

INSTRUCTIONS TO CANDIDATES

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

c) This paper has **THREE** sections.

d) Section **I** contains Listening Comprehension passages.

e) Section **II** contains the Dictation

f) Section **III** contains the Composition.

f) Answer all the questions in the spaces provided.

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Section	Question	Maximum Score	Student's Score
A	1- 20	40	
B	21	20	
C		20	
		20	
TOTAL SCORE		100	

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SECTION I

Listening Comprehension

Write answers to questions 1- 5 in the spaces provided

Passage I

a) Ce passage s'agit de_____ **(½ mk)**

b) Comment s'appelle le concours _____ **(½ mk)**

c) Le prix sera _____ et on va utiliser ce (1pt)

prix pour _____

d) Combien de participant y aura-t-il par groupe ?_____ **(½ mk)**

e) Comment s'inscrivons-nous ? _____

_____ **(½ mk)**

Passage II

a) Qu'est-ce qu'il veut envoyer ? _____ **(½ mk)**

b) Il faut le poser sur la _____ pour peser. **(½ mk)**

c) Il lui faudrait combien de l'envoyer ? _____ **(½mk)**

d) Qu'est-ce qu'il faut faire avant de payer ? _____ **(1mk)**

e) La dame qui parle est le _____ **(½ mk)**

Passage III

a) Quel moyen de transport est-ce qu'ils utilisent ? _____**(½ mk)**

b) A combien de personne parle-t-on ? _____**(½ mk)**

c) Où vont-ils ?

A _____ en_____ **(1mk)**

d) Ils doivent apporter **(1mk)**

a. _____

b. _____

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Passage IV

a) Les chefs d'états on eu un _____ **(½ mk)**

b) C'était _____ passé. **(½ mk)**

c) Les organisateurs de rencontre étaient : **(1mk)**

a._____

b. _____

d) Quelles sont les langues mentionnes dans le passage **(1mk)**

a._____

b. _____

c._____

d. _____

Passage V

a) L'association cherche une_____ **(½mk)**

b) Cette opportunité est ouverte aux _____ **(½ mk)**

c) Mentionnez les cours qu'on peut suivre pour être considéré. **(1mk)**

a._____

b. _____

d) Les candidats suivront une formation pendant _____ **(½ mk)**

e) Quelles connaissances sont exigées ? **(½ mk)**

a._____

b. _____

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SECTION II

Dictation (5 marks)

Write the Dictation Passage in the space provided

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SECTION III: WRITING.

A. Write in French a composition of about **150-180** words on : [**15 points**]

Either

a. Begin as follows :

Ce soir-là, à ma grande surprise, quand je suis arrivé(e) chez moi, la porte était fermée …

Or

b. Begin as follows :

C'était la dernière journée de l'année et mes parents étaient allés à la campagne…

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FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……..……

SCHOOL: ……..

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

501 FRENCH (QUESTION PAPER)

FORM THREE (3)

PAPER 2

TIME: 2 HOURS

Attempt all the questions on this paper

Reading comprehension passages

Passage one

Pâques est une fête catholique célébrée le 21 avril.Elle commémore la résurrection de Jésus. Mais fête aussi le printemps .Tandis que les jondilles fleurissent, les parents dissimulent du chocolat dans le jardin afin de célèbrer pâques.

Petits comme grands peuvent ainsi *partir à* la chasse d ‘ oeuf.Traditionnellement les chocolats sont sous forms d ‘ oeuf mais aussi d ‘ animaux comme des poussins,lapins,moutons…Certains familles décorent les ouefs durs en poignant leurs coquilles avec des tentes vertes ou rouges.

questions

1:Que commémore les pâques ? **(1 pt)**

……

……

(2): Comment certainines familles décorent –elles les œufs ? **(1 pt)**

……

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3: Ecrives less infinitifs des verbes suivants **(2 pts)**

Ex ;célebrée…….célebrer

A) Fleurissent …….

B) Dissimulent …….

C) Peuvent …….

D) Sont……

4) Donnez un titre approprie' a' ce texte **(1 pt)**

Passage 2

Je viens d'emménager dans ma nouvelle maison. Elle est plus jolie que celle que j'avais avant. Ma nouvelle maison est blanche avec des volets bleus et fleurs rogues

J'ai un garage pour ma voiture et pour mon vélo .A l'intérieur de ma maison , il y a un grand salon avec une table et quatre chaises pour accueillir mes amis.

Mon chat adore se blottir sur le canapé devant la télévision .La cuisine est la pièce préférée de ma maison .C'est ici je cuisine des gâteaux et des pâtisseries.

Pour aller dans ma chambre, je dois monter un escalier .Elle se situe au bout du couloir, à droite. J'ai décidé' de peindre les murs en jaune et d'y installer mon piano .A gauche, c'est ma salle de bain, avec vue sur mon jardin .Je me sens très bien dans ma nouvelle maison !

Questions

1 : Quelle pièce se trouve au fond de couloir gauche ?**.....** **(0.5pts)**

2 : Quelle est ma pièce préférée ?**.....** **(0.5 pts)**

3 :Est-ce que la narrateur sait conduire ?**.....**et cycler**.....…?** **(1 pt)**

Justifiez vos réponses **……** **(1 pt**)

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4 : Selon vous, donnez deux loisirs du narrateur .Expliquez . **(2 pts)**

5: il n'aime pas de casse-croûtes sucrés **.(1 pt)**

Vrai ☐ faux ☐

Justifiez----------

6: Comment va-t-elle dans sa chambre ? **(1 pt.)**

SECTION (II)

GRAMMAR

Beginning as indicated rewriting the following sentences, making all appropriate changes, unnecessary repetition should be avoided (10 points)

Exemple : Qui a pris mon ballon?

C'est moi qui L 'a pris .

a)François , maman, chaque fois Suzanne nage ,elle crie ?

Maman :Oui, maintenant aussi ,en

……... **(1 pt)**

b)Neddy: Monique ,tu veux des frites?

Monique : Non ,je

…… **(1 pt)**

(C) D'abord ,paul a passé son examen ,puis il est sorti de la salle .

Avant de**……** **(1 pt)**

(d) Les enfants ont mangé les gâteaux.

-les gâteaux ---------- **(1pt)**

(E)Donnez –nous les papiers

Nous vous demandons ---------- **(1 pt)**

F:Aujourd'hui je suis allée voir mes grands-parents

Demain aussi, je ---------- **(1 pt)**

(g) Papa : Maintenant ,je ne joue pas au foot .

Fils :Et quand tu étais jeune , papa?

Papa : Bien sûr ,quand j'étais jeune ---------- **(1 pt)**

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h)Je ne vais pas au marché alors je n' achète pas des fruits .

-Si j' allais au marché

…….. **(2 pt)**

i)Wairimu habite à Kayole

…….. **(2 pt)**

-Wairimu et son frère

…….. **(1pt)**

h)Maman : <<Pourquoi es –tu en retard ,Juliette?>>

Josephine :<<Quoi maman qu'est –ce que tu demandes à ma Sœur?>>

Maman :<<Je lui demande ……>> **(1 pt)**

C . Match the following questions in column 'A' with the answers in column 'B'

A	**B**
Vous écrivez quel que chose?	Très tot le matin.
Qui travaille chez Total?	Elle est arrivée en retard .
Quand part l 'avion?	On peut y aller par le train .
Pourquoi est –ce que Daniel arrive en retard	Bien sûr ,nous sommes dix .
Comment faites vous pour aller à Mombasa	Il ne s'set pas réveilée de bonne heure .
famille est nombreuse , n' est –ce pas?	dix .
	Oui ,une histoire .
	Chez les amis
	ean Paul.

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SECTION (III)

Funtional writing

Write your composition in the space provided .

Indicate clearly whether your choice is a or b in 120 to 150 words write in french on either : (10 MKS)

a)Vous êtes arrivé très tard à l' école . votre directeur /directrice n'st pas content (e).Ecrivez un dialogue entre lui et vous –même.

OR

b) Vous êtes malade et vous décidez d' aller chez le docteur.Ecrivez un dialogue entre vous –même et lui.

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

312 GEOGRAPHY (PAPER 1)

FORM THREE (3)

TIME: 2 3/4 HOURS

Instructions to candidates

- ***(a)*** *Write your name, admission number and class in the spaces provided above.*
- ***(b)*** *This paper has **two** sections: **A** and **B***
- ***(c)*** *Answer **all** the questions in section **A***
- ***(d)*** *Answer **question 6** and any other **two** questions from section **B***
- ***(e)*** *All answers must be written in the spaces provided after Question 10.*
- ***(f)*** ***This paper consists of 12 printed pages.***
- ***(g)*** ***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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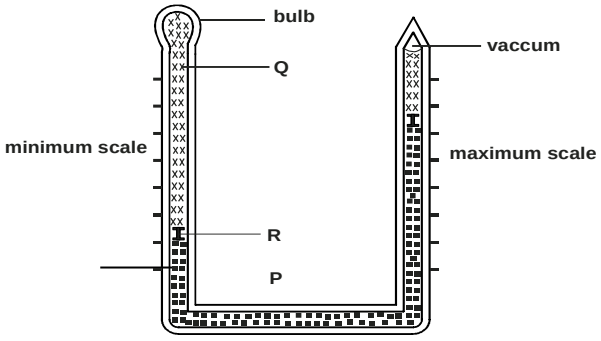
Section	Questions	Candidate's Score	Maximum Score
A	1 – 5		25
B	6		25
			25
			25
	Total Score		100

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SECTION A

Answer ALL questions in this section.

1.(a) The diagram below shows a six's thermometer.



Name the parts marked **P**, **Q** and **R**. **(3 marks)**

(b) The table below represents the rainfall and temperatures data of station **X**.

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp °C	28.9	29.7	30.3	29.9	29.7	29.2	28.4	28.7	29.6	30.1	29.2	28.7
Rainfall mm	9.0	8.0	21.0	49.0	25.0	9.0	20.0	10.0	4.0	10.0	17.0	11.0

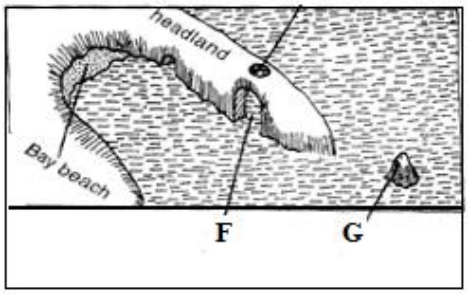
(i) What is the annual range of temperature? **(1 mark)**

(ii) Calculate the total rainfall of the station. **(1 mark)**

2.(a) What is rock metamorphism? **(2 marks)**

(b) Give **three** examples of chemically formed sedimentary rocks. **(3 marks)**

3.The diagram below shows erosional features of the waves at the coast. Use it to answer question (a)



(a) Identify the features marked **F** and **G**. **(2 marks)**

(b) Give **three** submerged upland coasts **(3 marks)**

4. (a) Describe how lava-dammed lake is formed. **(3 marks)**

(b) State **two** ways in which lakes influence the climate of the surrounding areas. **(2 marks)**

5. (a) Distinguish between soil profile and soil catena **(2 marks)**

(b) Give **three** soil forming processes. **(3 marks)**

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SECTION B
Answer question 6 and any other two questions from this section

6.Study the map of Kijabe (Sheet 134/3, 1:50,000) provided and answer the following questions

(a) i) Give the longitudinal extent of the map **(2 marks)**

ii) Identify **two** human-made features found in grid square 2801 **(2 marks)**

(b) i) Citing evidence from the map give **two** social functions carried out in the area covered by the map **(2 marks)**

ii) Measure the distance of the road B3 from the junction in grid square 3191 to the south west edge of the map. Give your answer in kilometres. **(2 marks)**

(c) State **two** evidences that show the area covered by the map receives high rainfall. **(2 marks)**

(d) Using a scale of 1cm to represent 100m draw a cross-section from Easting 30 to 38 along Northing 91 **(4 marks)**

i) On it mark and name the following

- River Ewaso Kedong **(1 mark)**
- Thicket **(1 mark)**
- Dry weather road (E 443) **(1 mark)**

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

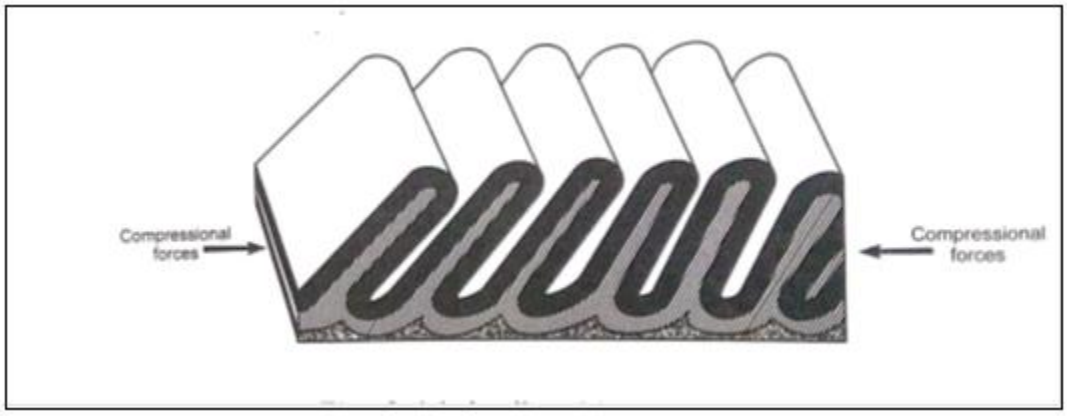
(e) Explain **three** factors that have influenced the distribution of settlement in the area covered by the map **(6 marks)**

7.(a) i) What is folding? **(2 marks)**

ii) Name **three** fold mountains formed during Caledonian Orogeny. **(3 marks)**

(b) State **four** characteristics of folded landscape. **(4 marks)**

(c) The diagram below shows a type of fold.



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i) A part from the above fold, give **three** other types of folds. **(3 marks)**

ii) Describe how the above type of fold is formed. **(5 marks)**

(d) Explain **four** effects of fold mountains on human activities. **(8 marks)**

8.(a) i) Identify **two** types of desert surfaces **(2 marks)**

ii) Describe **two** wind erosion processes on desert surfaces. **(4 marks)**

(b) i) Give **four** factors influencing wind transportation in the desert **(4 marks)**

ii) Name **three** features resulting from wind deposition in the desert areas. **(3 marks)**

(c) With the aid of well labelled diagrams, describe how a yardang is formed. **(6 marks)**

(d) Students from your class conducted a field study in Chalbi desert

i) State **three** preparations they made for the study **(3 marks)**

ii) Outline **three** problems they are likely to encounter during the field study **(3 marks)**

9.(a) i) What is a glacier? **(2 marks)**

ii) Describe how glacier is formed. **(4 marks)**

(b) Describe **two** processes through which ice moves. **(6 marks)**

(c) i) Apart from crag and tail, name **two** other features formed by ice erosion in lowlands. **(2 marks)**

ii) Describe how a crag and tail is formed. **(5 marks)**

(d) Explain **three** positive effects of glaciation in the lowland areas. **(6 marks)**

10. (a) (i) What is an artesian basin? **(2 marks)**

(ii) Explain **three** factors which influence the formation of features in limestone areas. **(6 marks)**

(b) (i) A part from stalagmites, name **two** other underground features in limestone areas. **(2 marks)**

(ii) With the aid of a diagram, describe how a stalagmite is formed. **(8 marks)**

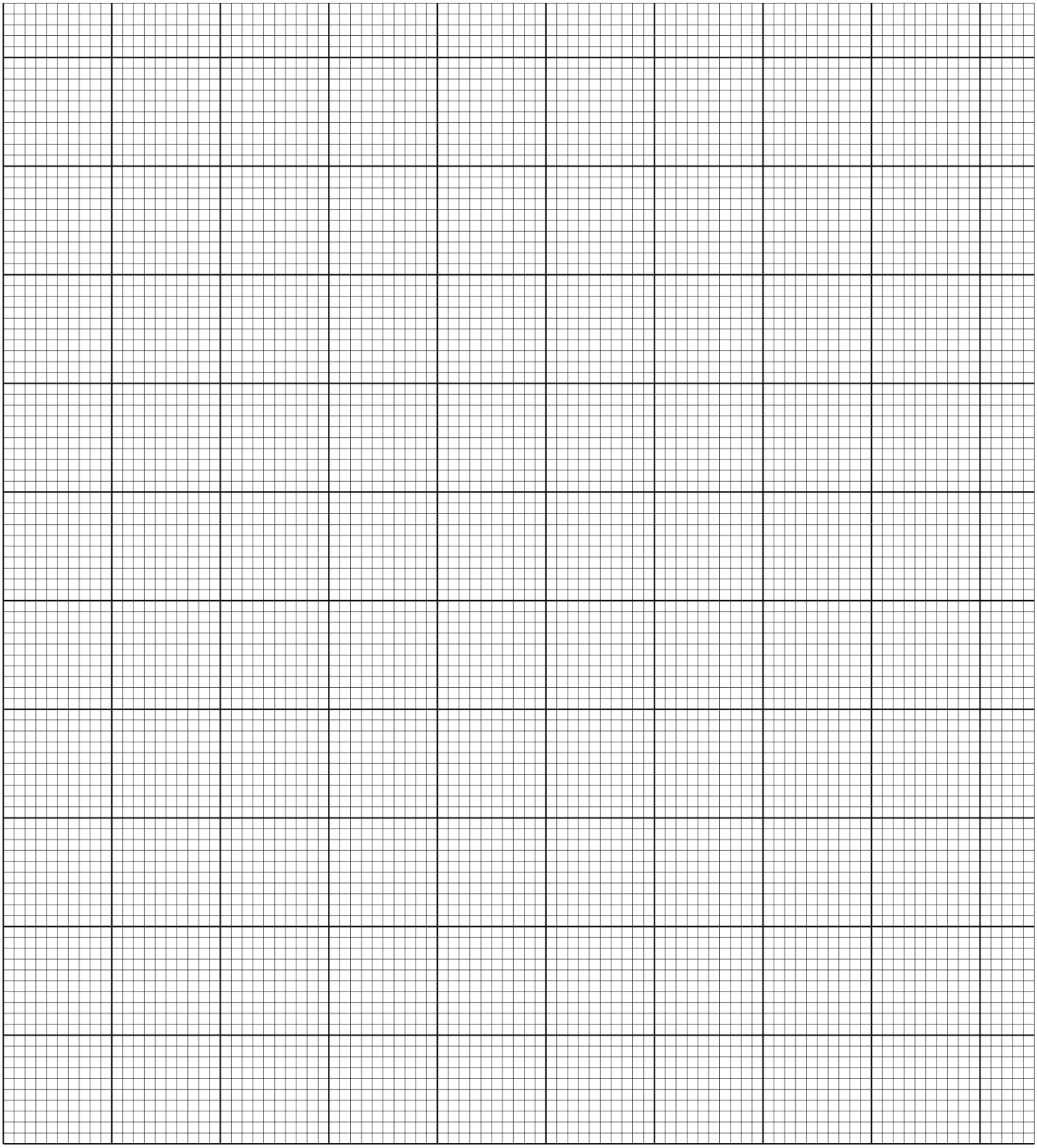
(c) Your supposed to carry out a field study on limestone region.

i) Give **two** reasons why you would need a map of the area of study. **(2 marks)**

ii) Identify **two** methods you would use to record data during the study. **(2 marks)**

iii) State **three** reasons why you are likely to find few interviewees during the study. **(3 marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……..…….

SCHOOL: ……..

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

GEOGRAPHY (PAPER 2)
FORM THREE (3)
TIME: 2 ¾ 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
Answer all questions in this section.

1.(a) Define the term environment. **(2 marks)**

(b) State two types of environments. **(2 marks)**

2.(a) Name two areas in Kenya where oil has been prospected. **(2 marks)**

(b) State two advantages of having petroleum mining in Kenya. **(2 marks)**

(c) State two conditions necessary for the formation of petroleum. **(2 marks)**

3.(a) Name three physical conditions that favour sugarcane growing in Kenya. **(3marks)**

(b) State three problems experienced by sugarcane farmers in Kenya. **(3 marks)**

4.(a) List two exotic breeds of beef cattle reared in commercial ranches in Kenya. **(2marks)**

(b) State three environmental conditions favouring commercial beef farming in Kenya. **(3 marks)**

5.(a) State two climatic conditions that favor the growing of oil palm in Nigeria. **(2 marks)**

(b) Give two problems experienced in the marketing of palm oil in Nigeria. **(2 marks)**

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SECTION B:
ANSWER QUESTION 6 AND ANY OTHER 2 QUESTIONS FROM THIS SECTION.

6. The data given shows world cocoa production from West African countries.

Country	Percentage
Ghana	26.1
Nigeria	24.9
Cameroon	18.2
Cote d'Ivoire	11.6
Others	19.2

a) Draw a pie chart to represent the data. Show your calculations. **(6 marks)**

b) List two advantages of using a pie chart to represent data. **(2 marks)**

c) i) Name two ports through which Ghana exports its cocoa. **(2 marks)**

ii) State three physical conditions that favour the production of cocoa in Ghana. **(3 marks)**

d)i)Describe the growing of cocoa under the following sub headings.

Cultivation. **(3 marks)**

Harvesting and processing. **(4 marks)**

ii) Give five problems facing cocoa growing in Ghana **(5 marks)**

7. a (i). Define plantation farming. **(2marks)**

(ii). Name **two** crops grown in plantations in Kenya highlands East of Rift Valley **(2marks)**

(iii). Outline **four** characteristics of plantation farming **(4marks)**

b. Explain t**hree** benefits of plantation farming in Kenya **(6marks)**

c). Students from a school in Nairobi carried out a field study on a flower farm near their school.

(i). Give **three** farm activities they may have identified **(3marks)**

(ii). State **three** reasons why they needed a working schedule **(3marks)**

d(i). Apart from flowers name **two** other crops grown in horticultural farming **(2marks)**

(ii). State **three** benefits of growing flowers in a green house. **(3marks)**

8. (a)(i) What is forestry (**2 marks)**

(ii) Define Agro-forestry **(2 marks)**

(b) Explain how the following factors influence the distribution of natural forest

(i) Climate **(4 marks)**

(ii) Altitude **(2 marks)**

(iii) Soil **(2 marks)**

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(c) Give:

(i) State **three** characteristics of soft wood in Kenya. **(3 marks)**

(ii) State **four** characteristics of soft wood in Canada. **(4 marks)**

(d) Explain **three** positive significances of forest and forests products in Kenya. **(6 marks)**

9.

a) i) Name the main area where gold is mined in South Africa. **(1mark)**

ii) State four forms in which diamond exists in S. Africa. **(4marks)**

b) Explain how Trona is Processed in Lake Magadi. **(6 marks)**

c) Explain four factors hindering mining in Lake Magadi **(8 marks)**

d) A field study was conducted on mining of oil

i) Name four countries in Africa where the study would have been conducted. **(4marks)**

ii) Identify 2 methods of mining the students would have found during the study. **(2marks)**

10. (a) Name three types of dairy cattle kept in Kenya. **(3marks)**

(b) (i) State four conditions that favour dairy farming in Kenya highlands**.** **(4marks)**

(ii) Explain three problems facing dairy farmers in Kenya. **(6marks)**

(c) (i) State three measures the government of Kenya is taking to improve dairy farming. **(3marks)**

(ii) Compare dairy farming in Kenya and Denmark. **(4marks)**

(d) You intend to carry out a field study in a dairy farm.

(i) Give three methods you would use to collect information. **(3marks)**

(ii) State two follow up activities you would carry out after the field study. **(2marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……..…….

SCHOOL: ……..

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

HISTORY AND GOVERNMENT (QUESTION PAPER)
FORM THREE (3)
PAPER 1
TIME: 2½ HOURS

INSTRUCTIONS TO CANDIDATES

- This paper has **three** sections: A , B and C
- Answer **ALL** questions in section A; three questions from **Section B** answer and two questions from section C .
- All answers **MUST** be written in the Foolscap papers provided.

Section A	Question	Maximum score	Candidates Score
	1- 17		
Section B	18		
	19		
	20		
	21		
Section C	22		
	23		
	24		

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SECTION A (25 MARKS)

1.Identify the branch in History which deals with the way of livelihood of man **(1 mark)**

2.Give two pre-historic sites in Kenya where the remains of Homo Erectus has been found **(2 marks)**

3.State one way in which the Abagussi and Kipsigis interacted during the pre colonial. **(1 mark)**

4.Give one religious function of the Oloibon among the Maasai in the 19th Century. **(1 mark)**

5.State two factors that led to the decline of kilwa by 1490 AD. **(1 mark)**

6.Give one evidence that shows that Chinese Traders reached the Kenyan Coast before 1500 AD. **(1 mark)**

7.State two reasons which led to the decline of the long distance trade. **(2 mark)**

8.What is dual citizenship? **(1 mark)**

9.Give the main reason why the Colonial Government introduced pool tax in Kenya. **(1 mark)**

10. State the main role of the Executive arm of the government in Kenya. **(1 mark)**

11. Give two reasons that can lead to the revocation of Kenyan citizenship acquired through registration**.(2 marks)**

12. State two principles of democracy. **(2 marks)**

13. Identify one category of members of the senate in Kenya. **(1 mark)**

14. Give two ways in which parliamentary supremacy is undermined in Kenya. **(2 marks)**

15. State two functions of the director of public prosecution in Kenya. **(2 marks)**

16. Give two reasons that can lead to cancellation of a presidential election **(2 marks)**

17. State two issues handled by the magistrate's courts in Kenya. **(2 marks)**

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SECTION B (45 MARKS)

ANSWER ANY THREE QUESTIONS FROM THIS SECTION

18. (a) State three reasons for the migration of the highland Nilotes into Kenya during the pre-colonial period. **(3marks)**

(b) Describe the social organization of the Borana during the pre-colonial period. **(12 marks)**

19. a) Give three reasons for Portuguese interests in the East Africa Coast**.** **(3 marks)**

b) Explain six reasons why the Portuguese easily conquered the East African Coast. **(12 marks)**

20. a) State three positive impacts of British colonial rule in Kenya. (**3 marks)**

b) Explain six reasons why the Wanga, a section of the Abaluhya collaborated with the Europeans during the process of establishment of colonial rule in Kenya. **(12 marks)**

21. a) Give three challenges faced by independent churches and schools during the colonial period. **(5 marks)**

(b) Describe the role played by Ronald Ngala in the struggle for independence in Kenya. (**10 marks)**

SECTION C (30 MARKS)

ANSWER ANY TWO QUESTIONS FROM THIS SECTION

22. a) State five main causes of disunity in Kenya today. **(5 marks)**

b) Explain five factors which promote national integration in Kenya. **(10 marks)**

23. a) Identify five principles of the Electoral system in Kenya as spelt out in the constitution **(5 marks)**

b) Explain five factors that are likely to interfere with free and fair elections in Kenya **(10 marks)**

24. (a) Give five factors which may undermine the effectiveness of the traffic police in Kenya. **(5 marks)**

(b) Explain five functions of the Kenya Defense Forces. (**10 marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……..…….

SCHOOL: ……..

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

HISTORY AND GOVERNMENT (QUESTION PAPER)
FORM THREE (3)
TIME: 2½ HOURS
PAPER 2

INSTRUCTIONS TO CANDIDATES

A) This paper consists of three sections: **A, B** and C
B) Answer **ALL THE QUESTIONS** from section **A** in the spaces provided, THREE QUESTIONS from section B and **TWO QUESTION** from section **C** in the foolscaps provided.
C) Students should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

FOR EXAMINER'S USE ONLY

SECTION A 1-17	SECTION B				SECTION C			
	18	19	20	21	22	23	24	

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SECTION A (25MRKS)-Answer all questions in this section

1.Define the term pre-history **(1mk)**

2.State two features of microlith tools during the Late Stone Age **(2mks)**

3.Identify two negative effects of land enclosure system in Britain during the 18th Century **(2mks)**

4.Give two inventions that led to the Agrarian Revolution in Britain **(2mks)**

5.Name the main form of transport that was used in the Trans-Saharan trade **(1mk)**

6.Identify two groups of people that were involved in the Trans-Atlantic trade **(2mks)**

7.State two negative effects of the development of motor vehicle transport **(2mks)**

8.Give one disadvantage of using a messenger to pass on information **(1mk)**

9.Identify the main source of energy used in the early stages of industrial revolution **(1mk)**

10. Highlight two factors that led to the growth of Meroe as an urban center **(2mks)**

11. Give one symbol of unity in the Shona kingdom during the pre-colonial period **(1mk)**

12. Name the chartered company that was used to administer Tanganyika during the process of colonization **(1mk)**

13. Identify two ways in which the Ndebele benefited after the British Ndebele war of 1893 to 1896 **(2mks)**

14. Identify one commune that were established by the French in Senegal during the colonial period **(1mk)**

15. Outline two methods used to recruit African labour in the British and French colonies in Africa **(2mks)**

16. Name one political party that fought for independence in Ghana **(1mk)**

17. Identify one political reform introduced by President Fredrick de Klerk that led to the achievement of black majority rule in South Africa **(1mk)**

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SECTION B (45 MKS)-Answer any THREE questions in this section

18 a) Give three disadvantages of hunting as a source of economic activity by early man **(3mks)**

b) Explain six effects of Agrarian Revolution in the United States of America **(12mks)**

19 a) Identify three roles played by the Tuaregs during Trans-Sharan trade **(3mks)**

b) Explain six challenges faced by Trans-Saharan traders **(12mks)**

20 a) Give three uses of electricity in Europe during the 19th Century **(3mks)**

b) Describe six results of iron working on African communities before 19th century **(12mks)**

21 a) Identify three methods used by Europeans to acquire colonies in Africa **(3mks)**

b) Explain six results of Buganda collaboration with the British **(12mks)**

SECTION C (30MKS) - Answer any two questions in this section

22 a) State five economic activities of the Asante during the 19th century **(5mks)**

b) Describe the political organization of the Shona during pre-colonial period **(10mks)**

23 a) State five characteristics of Direct Rule in Zimbabwe as applied by the British **(5mks)**

b) Explain five effects of the British Indirect Rule in Northern Nigeria **(10mks)**

24 a) Give five reasons that encouraged nationalists in Mozambique to use armed struggle to attain independence **(5mks)**

b) Explain five challenges faced by nationalists in Mozambique **(10mks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

HOME SCIENCE (QUESTION PAPER)
FORM THREE
TIME 2 ½ HOURS
PAPER 1

Instructions to students

a) *Write your name, admission number and class in the spaces provided*

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

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

d) *Answer **all** the questions in sections **A** and **B** and any **two** questions from section **C***

e) *Answers to all the questions must be written in the spaces provided in the paper*

f) This paper consists of 16 printed pages

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

h) Students should answer the questions in English

For examiner's use only

Section	Question	Maximum Score	Student's Score
A	2- 20	40	
B	21	20	
C		20	
		20	
TOTAL SCORE		100	

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SECTION A: (40 marks)

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

1.Mention **two** advantages of making a shopping list. **(2 marks)**

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2.List **two** methods of managing fullness on a little girl's dress. **(1 mark)**

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3.Give **two** reasons for giving vitamin A supplements to children under five years. **(2 marks)**

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4.Suggest **three** reasons why stainless steel is not suitable for making cooking pans. **(3 marks)**

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5.Mention **two** reasons for each of the following processes in laundry work. **(3 marks)**

Boiling

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Fabric conditioning

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Starching

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6.Identify **two** steps to ensure that an open seam is flat at the curves. **(2 marks)**

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7.Suggest **two** reasons why formica is commonly used in finishing kitchen surfaces. **(1 mark)**

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8.Identify **two** important things a child learns during social development. **(2 marks)**

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9.Suggest **three** advantages of using credit cards. **(3 marks)**

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10. Give **one** danger of low iodine intake in a pregnant woman. **(1 mark)**

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11. Mention **three** precautions to observe when handling a burn. **(3 marks)**

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12. Sate **two** ways of detecting fever in a four month old baby. **(2 marks)**

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13. Give **two** possible causes of uneven rising in a cake. **(2 marks)**

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14. Mention **four** infections that can be passed through sharing a towel. **(2 marks)**

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15. State **two** ways of preventing mosquito bites. **(2 marks)**

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16. Suggest **two** uses of scrap pieces of left over after sewing. **(2 marks)**

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17. Give **two** reasons why clothes should be classified before storage. **(2 marks)**

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18. Mention **two** points to consider when buying a cooker. **(2 marks)**

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19. Suggest **two** meanings of the word trimming in sewing. **(2 marks)**

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20. Give **two** reasons for greasing and lining a cake tin when baking. **(2 marks)**

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SECTION B: (20 marks)

COMPULSORY

Answer question 21 in the spaces provided.

21. You are planning to carry out a few household tasks to assist your mother over the weekend.

a) Outline the steps you would follow to thoroughly clean your mother's dressing mirror. **(8 marks)**

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b) Describe the procedure you would follow to special clean a long handled broom used to sweep the house.**(6 mrks)**

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c) Outline the procedure for laundering a loosed coloured P.E T-shirt **(6 marks)**

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SECTION C: (40 marks)

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

22.

a) Mention **four** benefits of attending pre-natal clinics in pregnancy. **(4 marks)**

b) Mention **five** signs of a healthy six month old baby. **(5 marks)**

c) Explain **three** points to observe when caring and storing for a 3-year old child. **(6 marks)**

d) Giving reasons, state **five** properties of cotton which makes it suitable for hospital linen. **(5 marks)**

23.

a) Suggest **four** preparations a mother should make before delivery. **(4 marks)**

b) Highlight **four** characteristics of a well-made dart. **(4 marks)**

c) Outline **six** rights a consumer is entitled to. **(6 marks)**

d) Explain **three** ways of ensuring that a sewing machine gives good service for a long time. **(6 marks)**

24.

a) Describe the effects of the following practices when laundering wool. **(8 marks)**

- Using cold water
- Using friction method
- Soaking
- Drying under direct sunlight

b) Explain three points to take into account when buying baking tins to ensure you get good quality ones **(6 marks)**

c) Explain three qualities suitable for a night wear fabric. **(6 marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

441/2

HOMESCIENCE

Paper 2

(PRACTICAL)

CLOTHING CONSTRUCTION

2 ½ hours

Instructions to candidates

a) *This paper consists of 3 printed pages*

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

c) *Candidates **MUST** use machine stitches appropriately in the construction of the garment.*

*Hand stitches used **INSTEAD** of machine stitches will not be marked.*

d) *Hand stitches will only be allowed where specified*

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Girl's pair of shorts

A pattern of a girl's pair of shorts is provided. You are advised to study the sketches, instructions and layout carefully before you begin the test. **Materials provided**

1. Pattern pieces

A- Short front

B- Short back

C- Front waist facing

D- Back waist facing

E- Pocket

2. Plain light weight cotton fabric **60 cm long and 90 cm wide**

3. Sewing thread to match the fabric.

4. One large envelope

THE TEST

Using the materials provided, cut out and make the LEFT LEG of the short to show the following processes:

(a) Cutting out **(12marks)**

(b) Making of the back dart **(8 marks)**

(c) Making knife pleats at the short front **(9 marks)**

(d) Preparation and attaching of the patch pocket **(17 marks)**

(e) Joining the side seam of the short using a French seam **(10 marks)**

(f) Joining the inner leg using a machine fell seam **(8marks)**

(g) Preparation of facings and attaching them to the waistline **(7 marks)**

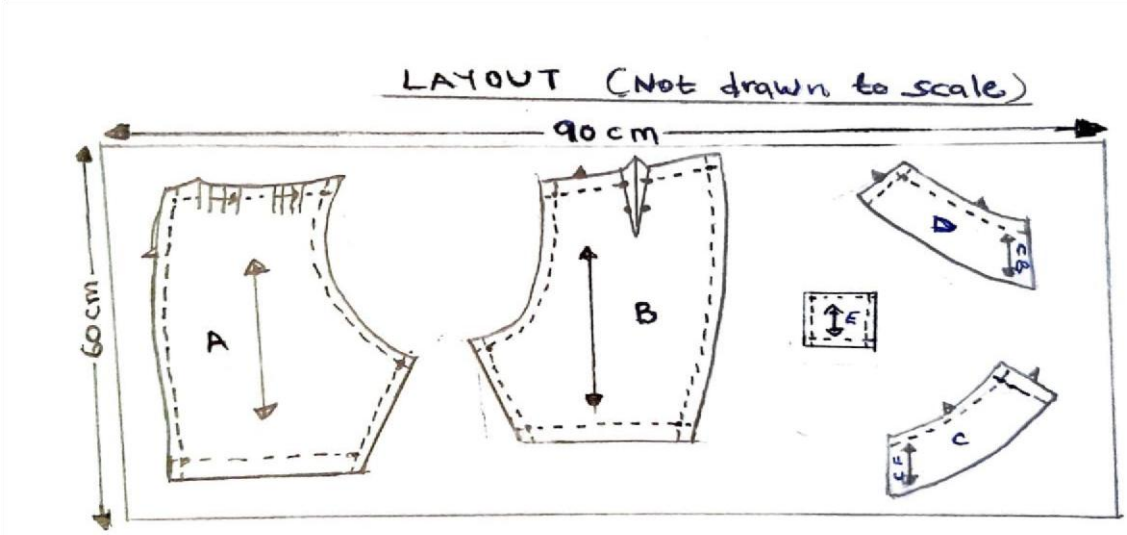
(h) Finishing the lower edge by slip hemming the front half and holding the back hem using even tacking stitches. **(12 marks)**

(i) Overall presentation **(7marks)**

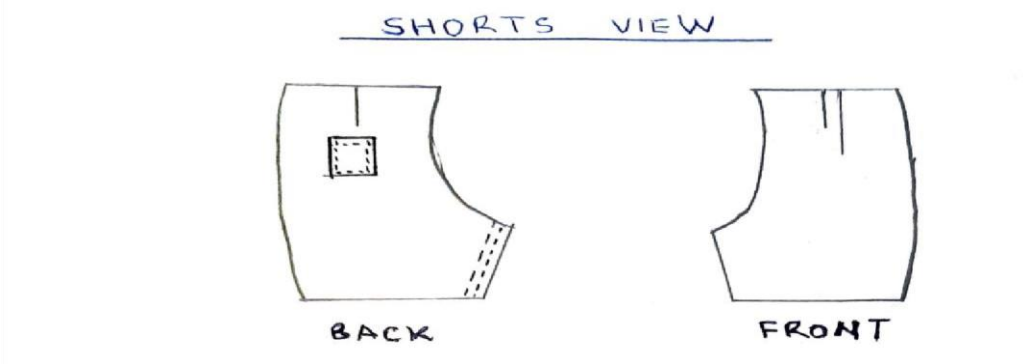
At the end of the examination, trim all hanging thread, press your work, and firmly sew onto your work, on single fabric, a label bearing your name and index number. Remove needles and pins from your work, fold your work neatly and place it in the envelope provided. Do not put scraps of fabric in the envelope, however any piece cut and not stitched should be included in the envelope.

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THE LAYOUT (NOT DRAWN TO SCALE)



SHORT
FRONT AND BACK VIEW



THIS IS THE LAST PRINTED PAGE

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

HOME SCIENCE (QUESTION PAPER)
FORM THREE
TIME 1¼ HOURS
PAPER 3

PLANNING; 30 MINUTES

INSTRUCTION TO CANDIDATES

1.Read the test carefully

2.Write your name and admission number on every sheet of paper used

3.Textbooks and recipes may be used during the planning session as reference materials

4.You will be expected to keep to your order of work during the practical session

5.You are allowed to take away ONLY your reference materials at the end of the planning session

6.You are not allowed to bring additional noted to the practical session.

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THE TEST

Your aunt is a lactating/ nursing mother and has requested you to assist her with her six-month old baby. Using the ingredients listed below, prepare, cook and present one breakfast item and a beverage for your aunt and yourself. In addition, prepare and serve a weaning dish for the baby.

INGREDIENTS

Irish potatoes/pumpkin
Milk
Eggs
Tea leaves
Pumpkin
Tomatoes
Sugar
Salt
Bread
Margarine
Carrots

PLANNING SESSION- 30 MINUTES

Use separate sheets of paper for each tasks listed below and a carbon paper to make duplicate copies. Then proceed as follows:

1.Identify the food items and write down their recipes.
2.Write down your order of work
3.Make a list of foodstuff, materials and equipment you will require.

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

ISLAMIC RELIGIOUS EDUCATION PAPER 1
FORM THREE
TIME 2 HOURS
INSTRUCTIONS TO CANDIDATES

*Answer **FIVE** questions only in the spaces provided.*

*All workings **must** be clearly shown where necessary.*

1.a) Outline ten moral teachings of Surah AN-Nur. **(10mks)**

b) Describe the process of compilation of the holy Qur'an. **(5mks)**

c) Explain why Qur'an was revealed in portions. **(5mks)**

2.a) State seven ways in which the Holy Qur'an was preserved during the time of the prophet. **(7mks)**

b) Discuss the need for the revelation of the Qur'an. **(8mks)**

c) Mention the attributes of Allah found in Ayatul Kursy. **(5mks)**

3.a) What are the principles laid down by scholars to detect a fabricated Hadith. **(7mks)**

b) List the methods used by Imam Bukhari in the compilation of Sahih Bukhari. **(7mks)**

c) The prophet said "seeking knowledge is an obligation upon every Muslim" state the significance of the above Hadith in eradicating illiteracy. **(6mks)**

4.a) Discuss the development of Fiqh from the time of the prophet to the early dynasties. **(9mks)**

b) What are the conditions to be fulfilled for one to be mujtahid? **(7mks)**

c) State the contributions of Imam Abu Hanifa to the development of Fiqh. **(4mks)**

5.a) Differentiate between Zakat and tax. **(10mks)**

b) What are the conditions for application of Uma? **(4mks)**

c) Explain the three types of Hajj. **(6mks)**

6.a) State duties of an Imam in the Muslim society. **(7mks)**

b) What are the characteristics of the revealed books? **(8mks)**

c) Give the qualities of the prophets of Allah. **(5mks)**

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ISLAMIC RELIGIOUS EDUCATION (QUESTION PAPER)
FORM THREE
TIME 2½ HOURS
PAPER 2

INSTRUCTIONS:
1. This paper contains six (6) questions.
2. Answer any FIVE questions
3. Write your answers in the answer sheet provided.
4. All answers must be in English.

1 a) State any **five** deeds that lead to piety and righteousness **(5 marks)**
b) Explain the effects of *zinaa* in the society. **(6 Marks)**
c) State the Islamic manners of dressing. **((8marks)**

2. (a) Identify the rights of the extended family members. **(5 Marks)**
(b) Explain five valid reasons that may force a Muslim wife to ask for *'Talaq'*. **(5 Marks)**
(c) Identify five prohibited foods/drinks in Islam and give reasons why each has been prohibited. **(10 Marks)**

3. a) Sate the significance of wasiya in Islam **(6marks)**
b) Explain the Islamic teachings on the acquisition of wealth and property **(7marks)**
c) Give reasons for the prohibition of hoarding in Islam **(5marks)**

4. a) Describe five forms of persecution the early Muslims were subjected to in Makkah . **(5marks)**
b) Identify five the roles played by *Nabongo Mumia* in the spread of Islam in Western Kenya. **(5 Marks)**
c) Discuss the immediate challenges faced by Abubakar As-Siddiq when he became a Caliph. **(10mks)**

5. (a) Give the contribution *of* Abdul Malik bin Marwan of the *Umayyad Dynasty*. **(7 Marks)**
(b) Identify the features of the Umayyad administration . **(6 Marks)**
(c) Explain the effects of the first contact of Arab Muslims with East African coast **. (8 Marks)**

6. a) What were the contributions of Sheilh Al-Amin Mazrui in the development of Islam in Kenya? **(10mks)**
b) State Imam Ghazali's views on education **(10 marks)**

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KISWAHILI (QUESTION PAPER)
FORM THREE
TIME 1 ¾ HOURS
PAPER 1

MAAGIZO KWA MTAHINIWA:

1) Andika jina lako, nambari ya mtihani na tarehe katika karatasi ya majibu.

2) Karatasi hii ina maswali manne.

3) Jibu maswali mawili pekee.Kila swali lina alama 20.

4) Swali la kwanza ni la lazima. kisha chagua swali la pili kutoka miongoni mwa matatu yaliyosalia.

5) Majibu yote yaandikwe katika lugha ya Kiswahili.

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

Maswali

1.Wewe ni mwandishi wa habari wa shirika la Amani nchini. Kumekuwa na visa vya ukosefu wa usalama unaosababishwa na magenge yaliyojihami nchini kwa muda wa miezi kadhaa sasa. Andika mahojiano yako na waziri wa Usalama wa ndani kuhusu namna ya kukabiliana na hali hii.

2.Uhifadhi wa mazingira una manufaa mengi kwa binadamu. Fafanua.

3.Dua la kuku halimpati mwewe. Tunga kisa kinachothibitisha ukweli wa methali hii.

4.Andika insha itakayoanza kwa maneno yafuatayo: “Sauti hiyo ilikuwa ya kutisha**…..**”

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KISWAHILI (QUESTION PAPER)

FORM THREE

TIME 2 ½ HOURS

PAPER 2

UFAHAMU	
UFUPISHO	
LUGHA	
ISIMU JAMII	
JUMLA	

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SEHEMU YA A.

UFAHAMU

Soma kifungu kifuatacho kisha ujibu maswali.

Ulimwengu unatakiwa kuzua mbinu za kulitatua tatizo la ufukara ambao ni kikwazo kikuu cha juhudi za maendeleo. Ufukara unayakabili mataifa mengi yanayoendelea na kuyatosa kwenye shida nyingi huku mataifa ya magharibi yakizidi kupiga hatua kubwa za kimaendeleo. Tofauti iliyopo kati ya mataifa yanayoendelea na yaliyoendelea inaendelea kuongezeka kila siku.

Miongoni mwa sababu zinazochangia katika ufukara huu ni pamoja na ufisadi, uongozi mbaya, turathi za kikoloni na uchumi unaotegemea kilimo ambacho hutegemea mvua isiyoweza kutabirika. Vile vile mataifa yanayoendelea yana idadi kubwa ya watu inayoupiku uwezo wa mataifa husika. Pamoja na haya, mataifa haya hayana uwezo wa kuwakomboa raia wake kutoka katika lindi la umaskini huu unaokithiri. Ukosefu wa elimu na nafasi adimu za kazi huchangia pia katika tatizo hili. Ni wazi kuwa ufukara una athari hasi kote ulimwenguni. Aghalabu, ufukara huchipuza matendo mabaya. Ni rahisi kuwashawishi wananchi maskini kushiriki katika uhalifu ili kujinasua kutoka kwenye lindi la kimaskini. Udhaifu huu huweza kuzaa mbegu ya kuatika maovu ya kila aina ukiwemo ugaidi.

Mataifa yaliyoendelea yanatakiwa kuyaburai madeni yanayoyadai mataifa yanayoendelea kama njia moja ya kupambana na ufukara. Mataifa haya maskini hutumia asilimia kubwa ya mapato ya kitaifa kuyalipia madeni haya. Hali hii imefanya mataifa haya kushindwa kujikwamua kutoka kwenye minyororo ya ufukara. Njia nyingine ya kuyasaidia mataifa haya ni kukubali kutoa ruzuku za kimaendeleo badala ya mikopo kwa nchi husika.

Mataifa yanayoendelea nayo yanatakiwa kuchukua hatua katika kuwanusuru raia wake kutoka kwenye dhiki hii. Ni sharti yaibuke na mikakati kabambe ya kupambana na ufukara. Itakuwa na faida kubwa iwapo mataifa haya yataunda sera zinazotambua ufukara kama tatizo hili. Pamoja na mikakati hii ni kuzalisha nafasi za kazi , kuimarisha miundo msingi, kuendeleza elimu inayolenga kutatua matatizo maalumu katika jamii na kupanua viwanda. Kuna pia haja ya viongozi kuwa waangalifu ili mfumo wa soko huru ambao unaendelezwa na mataifa yalioendelea usiishie kuwa chanzo cha kufa kwa viwanda asilia . Maamuzi yote ya sera za kiuchumi sharti yauzingatie uhalisia wa maisha ya raia wa mataifa haya.

Maswali

a) Eleza athari za madeni kwa nchi zinazoendelea. **(alama 2)**

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b) Kwa nini umaskini unatawala mataifa yanayoendelea? **(alama 4)**

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c) Mwandishi anatoa mapendekezo yapi kwa mataifa yanayoendelea katika kutatua tatizo la ufukara? **(alama 4)**

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d) Mfumo wa soko huru una madhara gani kwa mataifa yanayoendelea? **[alama 2]**

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e) Taja visawe vya maneno yafuatayo kama yalivyotumika katika kifungu. **(alama 3)**

i. Turathi za kikoloni

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ii. Kuatika

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iii. Kuyaburai

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SEHEMU YA B

MUKTASARI

Soma kifungu kifuatacho kisha ujibu maswali.

Taifa huundwa na watu wanaoishi katika nchi moja na wanaojitambua kisiasa kama watu walio na mwelekeo, maono na hatima sawa. Utaifa hujengwa kwenye misingi ya mapenzi kwa nchi, utambuzi wa cheo,eneo, hadhi, rangi na hata makabila wanakotoka raia wa taifa moja si chanzo cha kuwatanganisha. Nchi moja huweza kuundwa na watu walio na tofauti chungu nzima zikiwemo tofauti za kikabila, kitabaka na kimawazo. Hata hivyo, watu hao huwa na falsafa na imani sawa kama taifa inayoashiriwa hasa na wimbo wa taifa. Hata hivyo haya yote hayawezi kuwafikia katika kiwango cha kuunda taifa. Uzalendo ndio mhimili mkuu wa utaifa. Uzalendo ni mapenzi aliyo nayo mtu kwa nchi yake. Mapenzi haya humwongoza mtu katika mawazo yake, itikadi yake, matendo yake,

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matamanio yake na mkabala wake kuhusu nchi na hatima ya nchi yake. Mzalendo hawezi kushiriki katika matendo yanayoweza kuiletea nchi yake maangamizo kwa vyovyote vile.Mzalendo hawezi kushirirki kwenye shuguli zozote zinazohujumu mshikamano wa kitaifa. Mzalendo huongozwa na wema. Yeye hatawaliwi na ubinafsi wa kutaka kufaidi nafsi yake na ya jamii yake finyu. Matendo yake yote huongozwa na ari ya kuiboresha nchi yake. Anayeipenda nchi yake hujiepusha na ulafi wa kujilimbikizia mali. Yuko radhi kuhasirika mradi taifa laje linufaike. Utaifa ni mche aali unaopaliliwa kwa uzalendo, kuepuka uchu wa nafsi na taasubi hasi zikuwepo za kikabila na ubinasfi. Hali hii inapofikiwa, hatima ya taifa na mustakabali wa raia wake wenye matumaini makubwa.

Maswali

a) Kwa meneno 40 – 50 dondoa sifa kuu za utaifa **(alama 6, 1 ya mtiririko)**

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b) Ni nini misingi ya kutathmini mzalendo? (meneno 60- 70) **(alama 9, 1 ya mtiririko)**

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c) Tunga sentensi hii upya kwa kutafuta maagizo: wasichana wanaingia darasani kwa haraka(andika kinyume chake) **(alama 2)**

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d) Tambua kiambishi awali na tamati kati ya neno : Alalaye **(alama 2)**

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e) Ainisha vivumishi katika sentensi hii: mzee mwenyewe ni mkongwe na napewa zawadi kwa kuwa shamba lake lilitoa mazao mengi. **(alama 4)**

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f) Askari wasipopiga doria wala kushirikiana na raia hawatakuwa wametuhakikishia usalama. (yakinisha sentensi hii) **(alama 2)**

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a) '' Shughuli yetu itakamilika kesho'', mama alimwambia mwanaye Juma. (Andika katika usemi wa taarifa) **(alama 2)**

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b) Changanua sentensi ifuatayo kwa kielelezo cha matawi. Mpria ulichezwa tulikuwa tukipika. **(alama 3)**

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c) Dhihirisha matumizi matatu tofauti ya kimaana yatakayotokea kitenzi ‘’ ona’’ kikinyambuliwa katika kirai hiki ‘’ona ndoto’’. **(alama 3)**

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d) Eleza matumizi ya hali ya‘’hu’’ na ‘ka’ katika sentensi zifuatazo:

i. Balozi huja hapa kila mara. **(alama 1)**

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ii. Mpishi alipika, akapakuwa na akagawa chakula. **(alama 1)**

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e) Eleza maana mbili zinazojitokeza katika sentensi: Tuliitwa na baba**.** **(alama 2)**

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f) Akifisha : Shangazi alimwambia mwanawe njoo nikupeleke kwenu jioni mtoto aliuliza kwetu ni wapi **(alama 4)**

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g) Eleza mmatumizi mawili ya kiambishi –ji- **(alama 2)**

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h) Tunga sentensi hii upya kwa kutumia visawe vya maneno yaliopigwa mstari. **Kiambaza** kilimuumiza **ghulamu** alipokuwa akipanda. **(alama 3)**

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i) Tumia kitenzi ‘’Fa’’ katika sentensi kuonyesha mazoea. **(alama 2)**

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j) Ainisha vihusishi katika sentensi ifuatayo : Babu alifika mapema kuliko wote halafu akaondoka. **(alama 2)**

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k) Tumia kitenzi ‘’ tafakaru’’ kama nomino katika sentensi. **(alama 1)**

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l) Andika upya sentensi ifuatayo kwa kutumia viwakilishi badala ya nomino zilizopigwa mstari. Mwanamziki atatembelea mji. **(alama 1).**

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SEHEMU D.

ISIMU JAMII

Ndugu wapenzi waumini wenzangu, mbazi hii haionyeshi huruma ya Mwenyezi Mungu kwetu wakosefu tu, bali pia inatufunza umuhimu wa unyeyekevu na msamaha.

a) Bainisha sifa tatu za sajili kwa kurejelea waumini katika Makala haya. **(alama 3)**

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b) Fafanua vipegele vingibe saba vya kimtindo ambvyo mhubiri huyu angetumia kufanikisha mazungumzo yake. **(alama 7).**

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NAMBARIYA USAJILI: ……..… SAHIHI: ……..…… TAREHE: ……..…

KISWAHILI (QUESTION PAPER)
FORM THREE
TIME 2 ½ HOURS
PAPER 3

SHAIRI	
TAMTHILIA	
RIWAYA	
TUMBO LISILOSHIBA NA HADITHI NYINGINE	
FASIHI SIMULIZI	

SEHEMU YA A. USHAIRI
1.Soma shairi hili kisha ujibu maswali yanayofuata.

Jukwani naingia, huku hapa pasokota,
Kwa uchungu ninalia, hii tumbo nitaikata,
Msiba mejiletea,nimekila kiso takata,
We tumbo nitakupani, uwe umetosheka?

Wazee hata vijana, wote umewasumbua,
Huruma nao hauna, heshima kawakosea,
Ukambani na Sagana, hata mbwa wararua,
We tumbo nitakupani, uwe umetosheka?

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Wahasibu ofisini, kibwebwe mejifunga,
Miaka mingi vitabuni, ili wasikose unga,
Nadhari wanadhamini, hesabu wanazirenga,
We tumbo nitakupani, uwe umetosheka?

Wapenzi wa kiholela, pia wanakuogopa,
Baada yao kulala, wana wao wanatupa,
Wakihitaji chakula, wanachokora mapipa,
We tumbo nitakupani, uwe umetosheka?

Wafugaji hata nao, kama dawa wakwamini,
Hawajali jiranio, wamesusia amani,
Wanaiba ng'ombe wao, na kuzua kisirani,
We tumbo nitakupani, uwe umetosheka?

Nayo mizozo ya maji, kaonekana kwa mara,
Hiyo nayo ni dibaji, sababu sio harara,
Njaa wahepe wenyenji , huo ndio mkarara,
We tumbo nitakupani, uwe umetosheka?

Ningeweza kukuuza, ingekuwa siku njema,
Tena kwa bei ya meza, sokoni nimesimama,
Wala tena singewaza, kuhusu wali na sima,
We tumbo nitakupani, uwe umetosheka?

Hatima umefikika, naenda zangu nikale,
Mate yanidondoka, kwa mnukio wa wale,
Naomba kwenda kukaa, wala sio nikalale,
We tumbo nitakupani, uwe umetosheka?

Maswali

i. Lipe shairi hili anwani. **(alama 1)**
ii. Shairi hili ni la aina gani? Toa sababu. **(alama 2)**
iii. Fafanua muundo wa shairi hili. **(alama 4)**
iv. Ni sheria gani za utunzi wa mashairi zilizotumiwa katika shairi hili. **(alama 2)**
v. Andika ubeti wa nne kwa lugha ya nathari. **(alama 4)**
vi. Taja nafsi neni. **(alama 1)**
vii. Kulingana na ushairi, tumbo husababisha shida gani? **(alama 4)**
viii. Eleza maana ya maneno yafuatayo. **(alama 2)**

a) Kiholela
b) Kisirani

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SEHEMU YA B.

TAMTHILIA YA BEMBEA.

2. Eleza namna wahusika mbalimbali wanakabiliana na changamoto zinazowakumba katika tamthilia ya Bembea ya Maisha **(alm20)**

3. Maji yangekuwa yamewafika Shingo basi wangeshindwa kuishi pamoja. Ndoa ni bembea. Kuna wakati itakuwa iuu na wakati itakuwa chini. Hizo juu — chini chini —juu ndizo utamu wake. Ni kama maisha kwa jumla. Yanapandashuka ndiyo lakini pandashuka hizo ndizo hutupa kuridhika hatimaye tunapozishinda.Maisha yangekuwaje bila hali kubadilika?

(a) Weka dondoo hili katika muktadha wake. **(alm4)**

(b) Tambua mbinu za kimtindo zilizotumika katika dondoo. **(alm4)**

(c) Tambua maudhui mawili yanayojitokeza katika kifungu hiki. **(alm2)**

(d) Fafanua maudhui moja katika swali la (c) kwa kurejelea tamthilia nzima. **(alm4)**

(e) Jadli dhana iliyopigiwa mstari inavyojitokeza katika maisha ya msemaji **(alm6)**

SEHEMU YA C.

MPAMBAZUKO YA MAISHA NA HADITHI NYINGINE

Jibu swali la 4 au 5.

4. ..iwapo penzi hili litatia doa, basi nirudishie mfuko huu kama ishara ya kulitupa penzi langu kama jongoo 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) Eleza umuhimu wa msemewa wa hadithi hii katika kujenga ploti. **(alm6)**

5. Wafanyikazi katika nchi nyingi zinazoendelea wanakumbwa na changamoto nyingi sana. Thibitisha hali hii kwa kurejelea hadithi ya " harubu ya Maisha **(alm20)**

SEHEMU YA E.

FASIHI SIMULIZI

6. a) Eleza sifa tano bainifu za fasihi simulizi. **(alm5)**

b) Taja njia mbili za kisasa za kuhifadhi fasihi simulizi **(alm2)**

c) Ni nini umuhimu wa fasihi simulizi katika jamii. **(alm13)**

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FORM 3 END TERM 3 SERIES 1 EXAMS

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SCHOOL: ……..

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

MATHEMATICS (QUESTION PAPER)
FORM 3
TIME 2½ HOURS
PAPER 1

INSTRUCTIONS:

1.Write your name, Index number in the space provided at the top of the page.
2.Write the date of examination and sign in the spaces provided above.
3.This paper consists of **two** sections: I and II.
4.Answer all the questions in section I and any **five** questions from section II
5.All answers and working must be written on the question paper in the spaces provided below each question.
6.Show all the steps in your calculation, giving your answers at each stage in the space provided.
7.Marks may be given for correct working even if the answer is wrong.
8.Non programmable silent electronic calculator and KNEC Mathematical table may be used, except when stated otherwise.

FOR EXAMINER'S USE ONLY

SECTION I

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

SECTION II

17	18	19	20	21	22	23	24	Total

GRAND TOTAL

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SECTION I (50 Marks)

Answer ***all*** the questions in this section

1.Anthony spent one-quarter of his net January salary on school fees. He spent 25% of the remainder on bills and one-ninth of what was left on transport. If he finally had Kshs. 15,800, calculate Anthony's net January salary. **(3 marks)**

2.Find the values of x and y in $2^{\frac{3}{2}x} \times 3^{2y} = 5184$ **(3 marks)**

3.A straight line is such that P(4, -3) and Q (2, 5), find the equation of the perpendicular bisector of PQ in the form $ax + by = c$, where a, b and c are integral values. **(3 marks)**

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4.Without using a calculator or mathematical tables, simplify **(3 marks)**

$$\frac{\frac{1}{2}\log 625 + \frac{1}{2}\log 100}{\log 100 - \frac{1}{2}\log 16}$$

5.Simplify the algebraic expression **(3 marks)**

$$\frac{9p^2 - q^2}{3p^2 - 4pq + q^2}$$

6.Determine all the integral values of x that satisfy the inequalities **(3 marks)**

$$3x - 5 < 7 - x \leq x + 13$$

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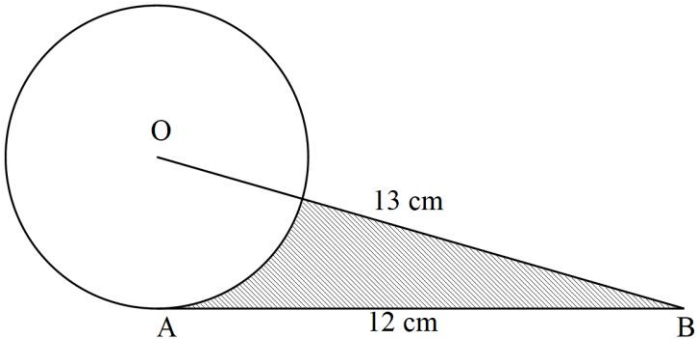
7. Simplify the expression below without using a mathematical table or a calculator, giving the answer as $p + q\sqrt{r}$, where p, q and r are constants. **(3 marks)**

$$\frac{\sqrt{7}+3}{\sqrt{7}-2}$$

8. Solve for x in the equation below for $0^0 \leq x \leq 90^0$ **(3 marks)**

$$\sin(2x - 30^0) = \frac{\sqrt{3}}{2}$$

9. In the figure below, O is the centre of the circle, OA=13 cm, AB=12 cm and AB is a tangent to the circle at A. Use π=3.142 to calculate the shaded area correct to 2 decimal places



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10. A Kenyan company received US dollars that it converted into Kenya Shillings in Bureau de Change that buys and sells foreign currencies at the rates shown below.

	Buying (Kshs)	Selling (Kshs)
1 Sterling Pound	125.78	126.64
1 US Dollar	75.66	75.86

(a) If the company received Kshs. 15,132,000, calculate the amount it received in US dollars. **(1 mark)**

(b) The company exchanged the amount in (a) into Sterling pounds and bought a car. Calculate the cost of the car to the nearest sterling pound. **(2 marks)**

11. 5men can erect 2 cottages in 21 days, how many more men, working at the same rate, will be needed to construct 6 cottages in the same period. **(2 marks)**

12. Two trains M and N are travelling in opposite directions along parallel railway lines. Train M is moving at a speed of 72 km/h and is 20 m long. Train N travels at a speed of 54 km/h. Find the length of train N if it took the two trains 9 seconds to completely pass each other **(3 marks)**

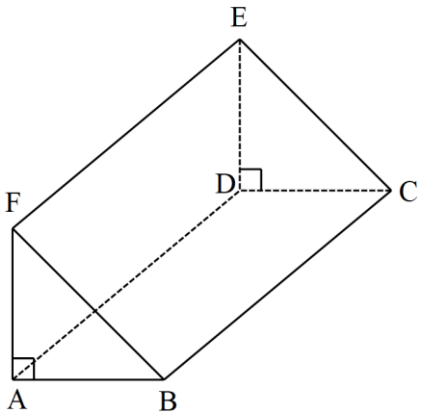
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13. Find the values of c and d if $0.4\dot{9}\dot{7}$ is equivalent to $\frac{c}{d}$, where c and d are integers. **(3 marks)**

14. A mother is 42 years old and her daughter is 25 years younger than her. After how many years will the daughter's age be half the mother's? **(2 marks)**

15. The exterior angle of a regular polygon equals one-third of its interior angle. Calculate the number of sides of the polygon. **(3 marks)**

16. The figure below shows a solid triangular prism ABCDEF. Sketch the net of the solid. **(2 marks)**



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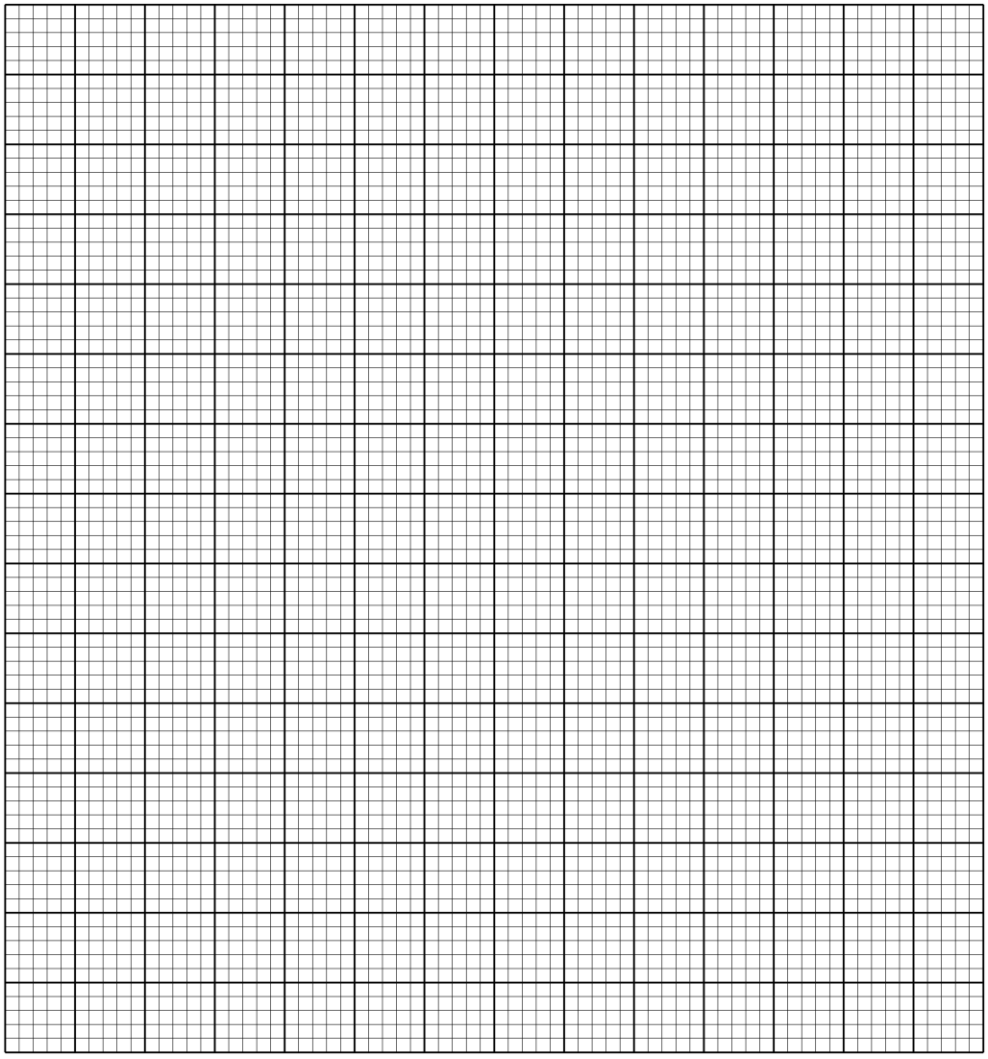
SECTION II (50 Marks)

Answer ***any*** five questions in this section

17. (a) Complete the table below for the function $y = 2x^2 - 3x - 5$ for $-2 \leq x \leq 3$ **(2 marks)**

x	-2	-1.5	-1	-0.5	0	0.5	1	1.5	2	2.5	3
y					-5						

(b) On the grid provided, draw the graph of $y = 2x^2 - 3x - 5$ for $-2 \leq x \leq 3$ **(3 marks)**



(c) Use your graph to find the roots of the equation $2x^2 - 3x - 5 = 0$ **(1 mark)**

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(d) (i) On the same axes, draw the graph of $y = -2x - 2$ **(1 mark)**

(ii) From your graphs, find the values of x that satisfy the simultaneous equations $y = 2x^2 - 3x - 5$ and $y = -2x - 2$ **(1 mark)**

(iii) Hence write the quadratic equation in the form $ax^2 + bx + c = 0$ satisfied by the values of x where the two graphs intersect, where a, b and c are integers. **(2 marks)**

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18. Leakey, a salesman, earns a basic salary of Kshs. 20,000 per month and a commission of 8% on sales up to Kshs. 100,000 and a further commission of $2\frac{1}{2}$% on sales above Kshs. 100,000. In January 2021, he earned a total of Kshs. 48,000 in salaries and commissions.

(a) Determine the amount of sales he made in January. **(4 marks)**

(b) In the month of February, the total sales increased by 18%. Calculate his commission in the month of February. **(3 marks)**

(c) In March, the total sales decreased by 25%, calculate his total earnings in March. **(3 marks)**

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19. Using a ruler a pair of compasses only,

(a) Construct triangle ABC in which AB=5.3 cm, BC=7.4 cm and AC=8.5 cm **(3 marks)**

(b) Construct an escribed circle opposite angle ACB **(3 marks)**

(i) Measure the radius of the circle **(1 mark)**

(ii) Measure the acute angle subtended at the centre of the circle by chord AB **(1 mark)**

(c) Calculate the area of triangle OBA with O as the centre of the circle **(2 marks)**

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20. Kisumu Concrete Products owns three lorries A, B and C. Lorry A has a capacity of 7 tonnes and uses one litre of fuel for every 10 km. Lorry B has a capacity of 5 tonnes and uses one litre of fuel for every 12 km, and lorry C has a capacity of 2 tonnes consuming a litre of fuel for every 15 km. the company plans to transport materials with the lorries making 3, 7 and 9 trips respectively.

(a) Calculate the quantity of materials transported by each lorry. **(1 mark)**

(b) The materials are to be transported to a site 30 km from their yard. Calculate the amount of fuel consumed by each lorry. **(4 marks)**

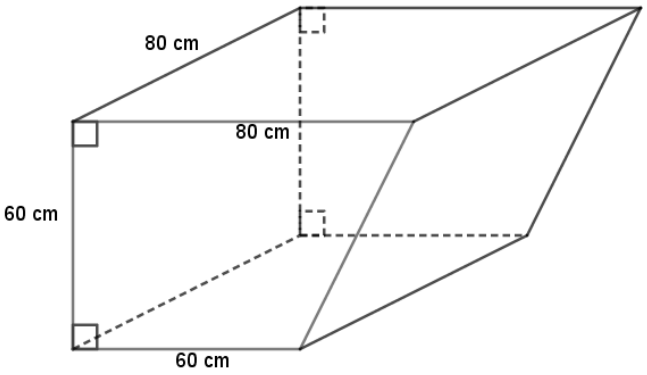
(c) The company's expenses are as follows; fuel at Kshs 112 per litre, wages Kshs. 20,100 and tear and ware at Kshs. 105,000

(i) Calculate the total fuel cost **(1 mark)**

(ii) If the lorries are hired at Kshs. 25,000, Kshs. 15,000 and Kshs. 10,000 per trip respectively, calculate the company's profit. **(3 marks)**

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21. The figure below shows the internal dimensions of a laundry sink whose cross-section is a trapezium



(a) Calculate the capacity of water that the sink can hold when full. **(4 marks)**

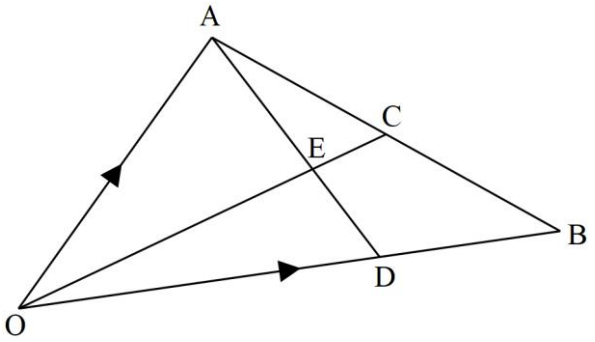
(b) The sink is filled with water using a cylindrical pipe of radius 10.5 cm at a rate of 10 cm per minute.

(i) Calculate the time to the nearest minutes it takes to fill the tank. Use $\pi = \frac{22}{7}$ **(3 marks)**

(ii) Water in the full sink is then drained into cylindrical containers of diameter 28 cm and height 30 cm. How many cylinders are required to completely drain the sink? **(3 marks)**

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22. In the figure below, C is the midpoint of **AB** and D is a point on $\boldsymbol{OB}$ such that **OD**: **DB** $= 3:2$. **OC** and **AD** intersect at E.



Given that $\boldsymbol{OA} = \boldsymbol{a}$ and $\boldsymbol{OB} = \boldsymbol{b}$

(a) Express the following in terms of $\boldsymbol{a}$ and $\boldsymbol{b}$ only:

(i) **AD** **(1 mark)**

(ii) OC **(2 marks)**

(b) Given further that $\boldsymbol{AE} = s\boldsymbol{AD}$ and $\boldsymbol{OE} = t\boldsymbol{OC}$. Express $\boldsymbol{OE}$ in terms of:

(i) $\boldsymbol{a}$, $\boldsymbol{b}$ and s **(2 marks)**

(ii) $\boldsymbol{a}$, $\boldsymbol{b}$ and t **(1 mark)**

(c) hence find the values of s and t **(3 marks)**

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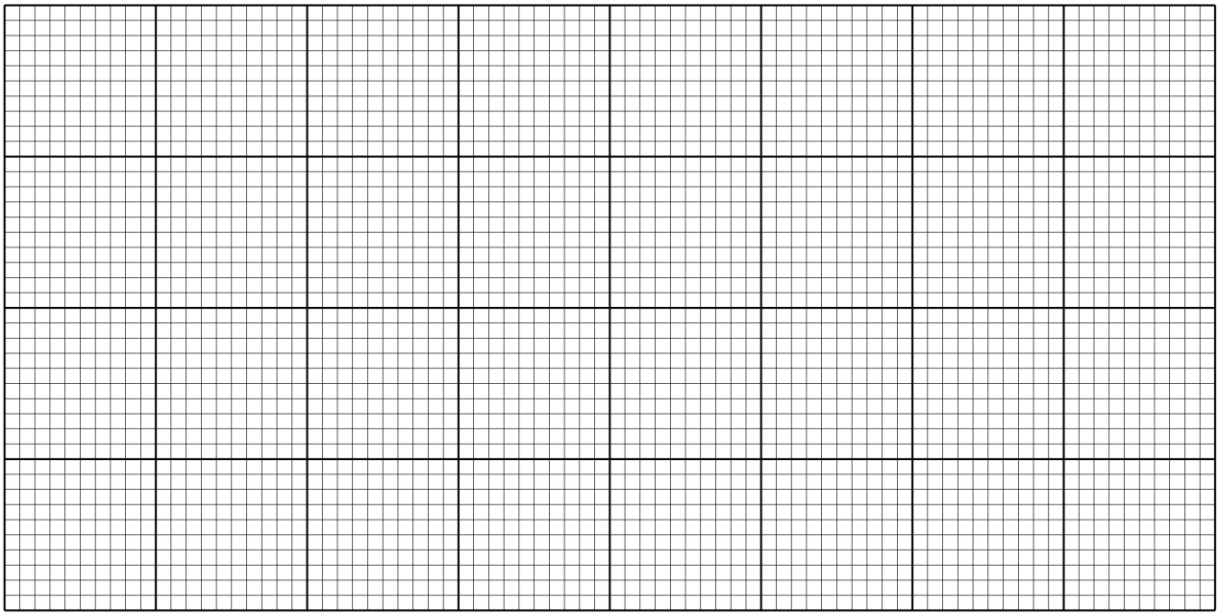
(d) State the ratio in which E divides $\boldsymbol{AD}$ **(1 mark)**

23. The table below shows the age groups and number of people tested of Covid-19 in a health care facility

Age Group	10 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60 – 69	70 - 79
Number of patients	7	12	16	25	15	22	4

(a) Calculate the mean age of the patients tested **(4 marks)**

(b) On the grid provided, draw a histogram to represent the information above **(3 marks)**



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(c) On the histogram in (b) above, draw a straight line to show where the median age lies. **(3 marks)**

24. (a) In 2011, the total cost of manufacturing an article was Kshs.3,750 and this was divided between the cost of material, labour and transport in the ratio 14: 8: 3. In 2014 the cost of the material was doubled, labour cost increased by 30% and transport costs increased by 20%.
Calculate the cost of manufacturing the article in 2014. **(6 marks)**

(b) For the same article in (a) above, the cost of manufacturing in 2015 was Kshs. 6,672 as a result of increase in labour costs only. Find the percentage increase in labour cost of 2015. **(4 marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

MATHEMATICS (QUESTION PAPER)
FORM 3
TIME 2½ HOURS
PAPER 2

INSTRUCTIONS TO CANDIDATES

- Write your name and Admission number in the spaces provided at the top of this page.
- This paper consists of two sections: Section I and Section II.
- Answer ***ALL*** questions from section I and ***ANY FIVE*** from section II
- All answers and workings must be written on the question paper in the spaces provided below each question.
- Show all the steps in your calculation, giving your answer at each stage in the spaces below each question.
- Non – Programmable silent electronic calculators and KNEC mathematical tables may be used, except where stated otherwise.

FOR EXAMINERS USE ONLY
SECTION I

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

SECTION II

17	18	19	20	21	22	23	24	TOTAL

GRAND TOTAL

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SECTION I (50 Marks)
(Answer ALL the questions in this section)

1. Find the value of k if the expression $9x^2 + 30x + k$ is a perfect square. **(2 marks)**

2. Cynthia and Ariell can do a piece of work together in 15 days. Ariell working alone can do the same piece of work in 20 days. How long will Cynthia working alone take to do the same work? **(3 marks)**

3. Make y the subject of the formula in $q = m\sqrt{\frac{r^2 - y^2}{y^2 - 3}}$ **(3 marks)**

4. Solve for x given M= $\begin{pmatrix} -2 & 5 - 3x \\ x & 6 \end{pmatrix}$ is a singular matrix hence state the possible matrices **(3 marks)**

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5.Find the value for x in the following equation $log\ (3x + 27) = 1 + \frac{1}{4}\log 81 + \log x$ **(3 marks)**

6.The length and width of a rectangle are 4.8m and 3.2m respectively. If there is an error of 5% in the length and 7% in the width, find the percentage error in the perimeter of the rectangle. **(4 marks)**

7.Emmanuel bought a new computer on hire purchase. The cash value of the computer was Kshs. 56,000. He paid a deposit of Kshs. 14,000 followed by monthly instalments of Kshs. 3,500 each for 18 months. Calculate the rate per annum at which the compound interest was charged. **(3 marks)**

8.For a lifting machine the effort E required to lift a load L in partly constant and partly varies as L. When L = 2, E = 5 ½, and when L = 6, E = 6 ½. Determine the value of L when E = 10 ½. **(4 marks)**

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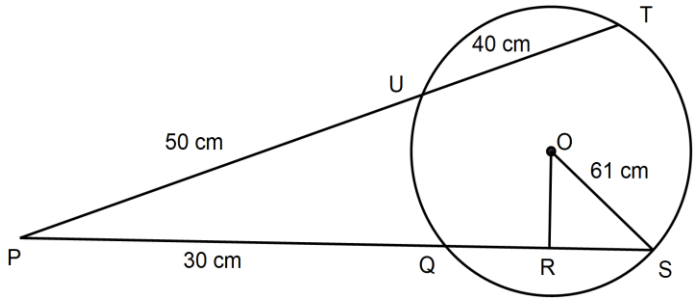
9.(a) Expand $(1 + {}^{3}/_{x})^{5}$ **(1 mark)**

(b) Use your expansion to the fourth term to evaluate $(2.5)^{5}$ to 3 decimal places. **(3 marks)**

10. An arc length of 15 cm subtends an of angle of 1.5^{c}at the centre of the circle. Find the diameter of the circle to one decimal place. **(4 marks)**

11. Solve for α in the equation $3\text{Cos } 5\alpha^{0} = -\frac{3\sqrt{2}}{2}$ where $0^{0} \leq \alpha \leq 180^{0}$ **(3 marks)**

12. In the figure below OS is the radius of a circle centre O. Chords SQ and TU are extended to meet at P and OR is perpendicular to QS at R. OS = 61 cm, PU = 50 **c**m, UT = 40 and PQ = 30 cm.



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Calculate the length of

a) QS **(2 marks)**

b) ORto 2 decimal places **(1 mark)**

13. Given that $\frac{5}{\sqrt{7}+3}-\frac{10}{\sqrt{7}-3}=\frac{a\sqrt{7}+c}{b}$ and that a, b and c are constants. Find the values of a, b and c. **(3 marks)**

14. The position vectors of A and T are -i + j - k and 3i + 4j respectively. T is the midpoint of a straight line AB. Find the position vector of B in terms of i, j and k. **(2 marks)**

15. Without using a calculator or mathematical table evaluate $\frac{2tan60^0}{sin45^0-cos30^0}$ leaving your answer in simplified form. **(3 marks)**

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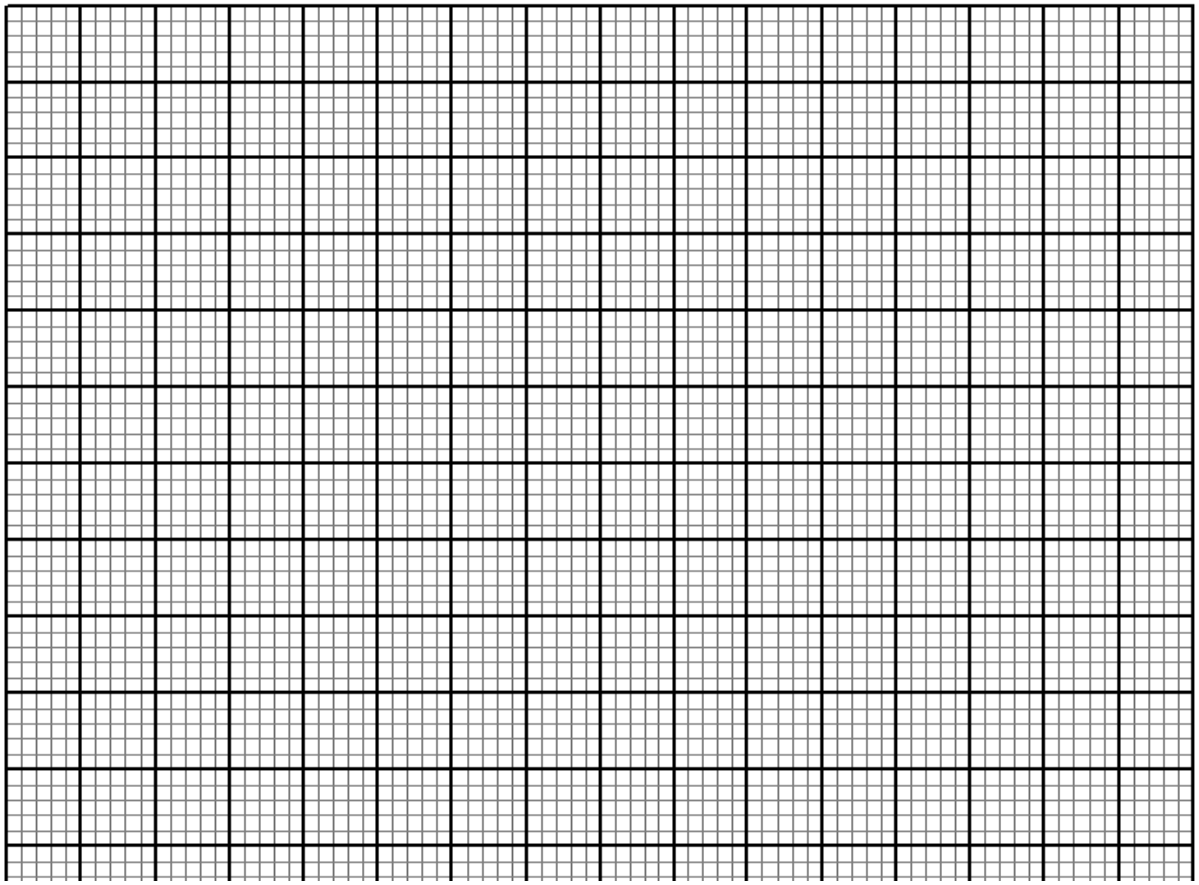
16. The equation of a circle is $x^2 + y^2 + 6x - 10y - 2 = 0$. Determine the co-ordinates of the centre and the area of the circle in terms of π **(3 marks)**

SECTION II (50 marks)
(Answer ONLY 5 questions in this section)

17. (a). Complete the table below for the function $y = (x + 3)(x + 1)(x - 2)$ (2 marks)

x	–	–	–	–	0	1	2	3
0 y					–			

(b). Using the values obtained in the table above draw the graph of $y = (x + 3)(x + 1)(x - 2)$. **(3 marks)**



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(a) Using your graph in (b) above, solve the following equations.

i. $x^3 + 2x^2 - 5x - 6 = 0$ **(2 marks)**

ii. $x(x^2 + 2x - 4) = 8$ **(3 marks)**

18. If $(x - 2\frac{1}{8})$, $(x - \frac{1}{4})$ and $(x + 3\frac{13}{2})$ are the first three consecutive terms of geometric progression.

(a) Determine the value of x and the common ratio. **(4 marks)**

(b) Calculate the sum of the first 6 terms of this progression. **(3 marks)**

(c) Another sequence has the terms – 13, -16, -16, -19, _ _, _310. Find the sum of this sequence. **(3 marks)**

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19. Construct triangle ABC in which $AB = 5.4\ cm$, $BC = 7.4\ cm$ and $AC = 8.4\ cm$. Construct an escribed circle opposite angle ACB **(5 marks)**

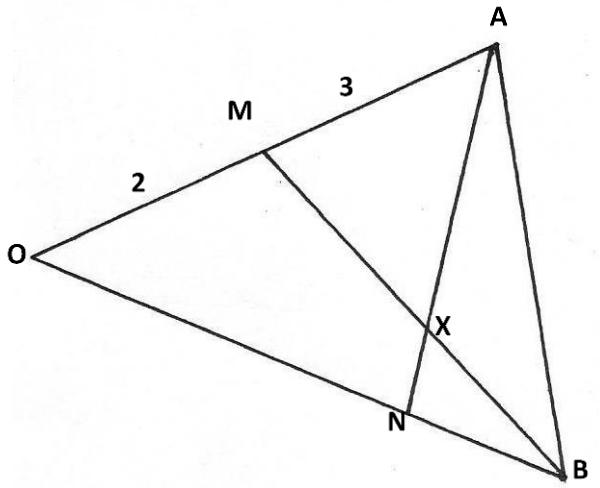
(a) Measure the radius of the circle **(1 mark)**

(b) Measure the acute angle subtended at the centre of the circle by AB **(1 mark)**

(c). Calculate the area of triangle OBA with O as the centre of the circle **(3 marks)**

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20. The figure below shows triangle OAB in which M divides OA in the ratio 2:3 and N divides OB in the ratio 4:1



(a) Given that **OA**= **a** and **OB** =**b**, express in terms of **a** and **b**

(i) **AN** **(1 mark)**

(ii) **BM** **(1 mark)**

(b) Express **OX** in terms of **a**, **b**, t and s given that **AX**= s**AN** and **BX** = t**BM** where t and s are constants. **(2 marks)**

(c)Find the value of s and t hence write **OX** in terms of **a** and **b.** **(6 marks)**

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21. A firm planned to buy x plastic chairs for a total cost of Kshs.16,200. The supplier agreed to offer a discount of Kshs. 60 per chair. The firm was then able to get three extra chairs for the same amount of money.

(a) Write an expression in terms of x, for the:

(i) original price of each chair **(1 mark)**

(ii) Price of each chair after the discount. **(1 mark)**

(b) Form an equation in x and hence determine the number of chairs the firm bought. **(5 marks)**

(c) Calculate the discount offered to the school as a percentage. **(3 marks)**

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22. The probability that our school will host soccer and hockey tournament this term is 0.8. If we host, the probability of wining soccer is 0.7. If we don't host, the probability of wining soccer is 0.4. If we win soccer, the probability of winning hockey is 0.8, otherwise if we lose the probability of winning hockey is 0.3.

a) Draw a tree diagram to represent this information. **(2 marks)**

b) Use your tree diagram to find

i) the probability that we will lose both games. **(3 marks)**

ii) the probability that we will win only one game. **(3 marks)**

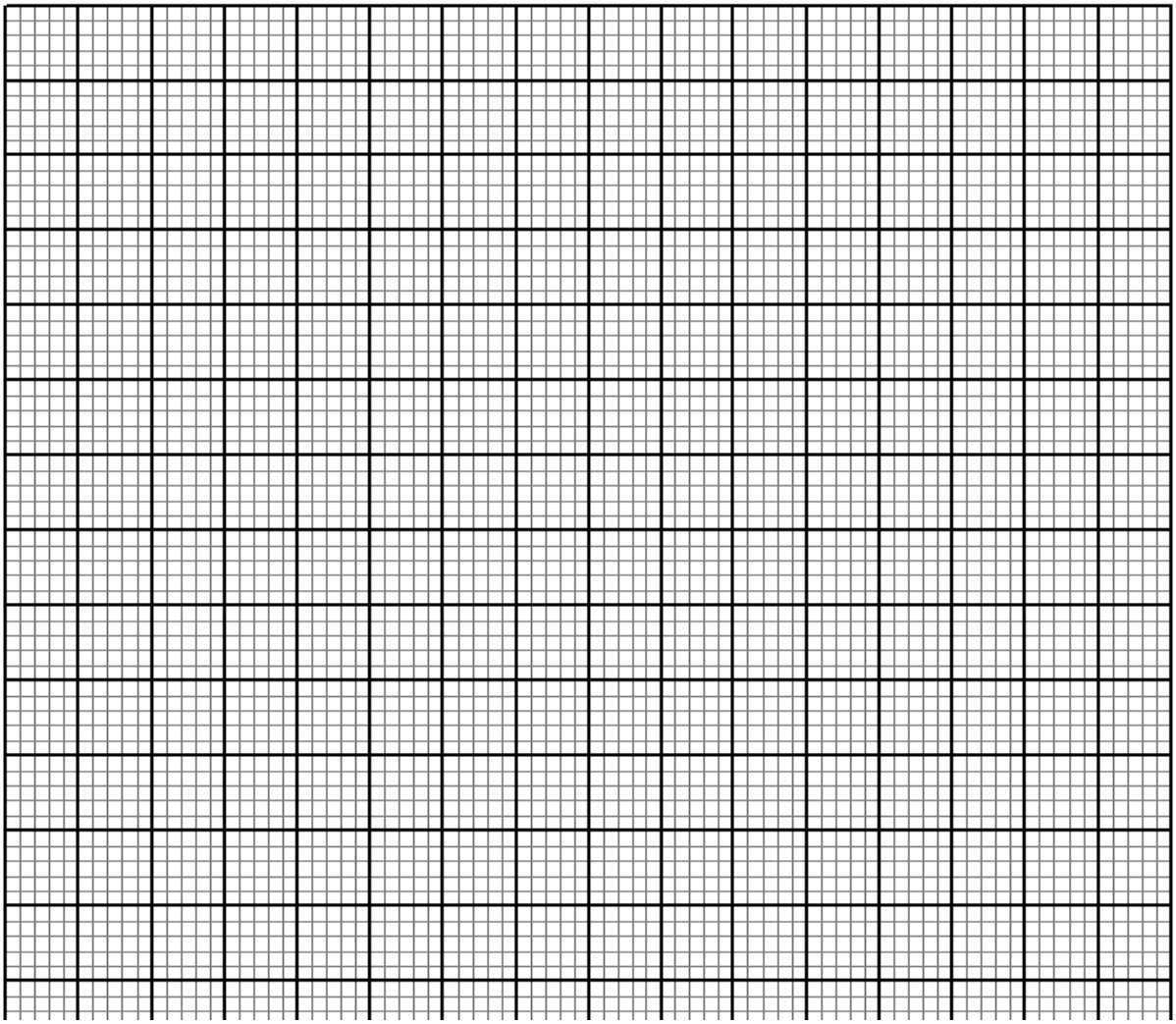
iii) the probability that we will host and lose both games. (2 marks)

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23. a) Complete the table below by filling in the blame boxes to 1 decimal place. **(4 marks)**

x	0^0	30^0	60^0	90^0	120^0	150^0	180^0	210^0
$3 \sin x^0 - 1$	-1.0	0.5						
$\cos x^0$	1.0							

b) On the same axis draw the graphs $y = 3 \sin x^0 - 1$ and $y = \cos x^0$ using a scale of y= axis 1cm to represent 1 unit the x – axis 1cm represent 15^0. **(4 marks)**



(i) Use your graph to solve the equation $3 \sin x^0 - \cos x^0 = 1$ **(2 marks)**

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24. The table below shows the taxation rates for income earned.

Income in KShs. Per month	Tax rates (%)
Under 9681	10
From 9681 but under 18801	15
From 18801 but under 27921	20
From 27921 but under 37041	25
37041 and above	30

In that year, Mr. Hamisi paid a net tax of KSh. 5,512 per month. He gets a house allowance of KShs. 10,000, medical allowance of KShs. 2400 and acting allowance of KShs. 2820 per month. He was entitled to a monthly personal relief of KShs. 162. He has a life insurance policy for which he pays a monthly premium of KSh. 1,500 and claims a relief at a rate of 10% of the premium paid per month. The following deductions also made every month.

(i) N.H.I.F. KSh. 320
(ii) Co-operative society shares KSh. 6000
(iii) Union dues KSh. 200

(a) Calculate Mr. Hamisi's monthly basic salary in KSh. **(7 marks)**

(b) Calculate his net monthly salary. **(3 marks)**

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BRILLIANT STUDENTS
FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..……..

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

232 PHYSICS PAPER 1

FORM THREE (3)

TIME: 2 HOURS

Instruction to candidates

- Write your name, Admission number in the spaces provided.
- This paper consists of TWO sections: A and B
- Answer ALL questions in section A and B in the spaces provided.
- ALL workings MUST be clearly shown.
- Mathematical tables and electronic calculators may be used.
- You may use gravitational pull as '10N/kg'

For examiner's use only:

Section	Question	Maximum score	Candidate's score
A	1 – 12	25	
B	13 14 15 16 17	13 12 12 09 09	
	Total	80	

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SECTION A (25 MARKS)

1.

a) Define 'least count' as used in the operation of vernier calipers **(1 mark)**

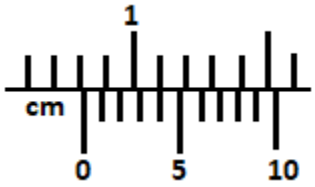
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b) The figure below shows the scale of vernier calipers used for determining the diameter of a cylindrical metal rod of length 100 mm. The vernier scale has a negative zero-error of -0.16 cm. determine the volume of the metal rod. **(3 marks)**

Figure 1



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2.Define 'moment of force' and state its SI unit **(2 marks)**

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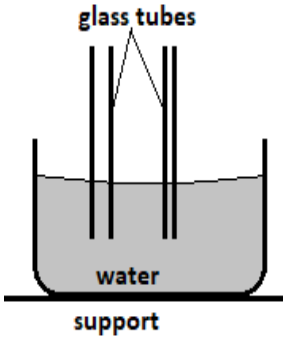
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3.Two glass tubes are dipped into a beaker of water as shown below:

Figure 2



a) Indicate on the diagram, the level of water in the glass tubes **(1 mark)**

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b) Explain your answer in (3,a) above **(2 marks)**

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4.Distinguish between 'velocity' and 'speed' **(1 mark)**

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5.A body is vertically projected upwards from the ground at a velocity of 5m/s. Draw a velocity-time graph of the body for its entire duration of flight **(2 marks)**

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6.Motor vehicles such as tractors which work on swampy areas have wide tyres fitted on them. Explain **(1 mark)**

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7.A spring of length 6 cm is stretched to a length of 8.5 cm by a force of 5 N. Calculate the energy stored by the spring. **(3 marks)**

8.The diagram below shows a model of fire alarm which was made by a form one student. The compound bar is made of brass and iron. Explain how it works **(3 marks)**

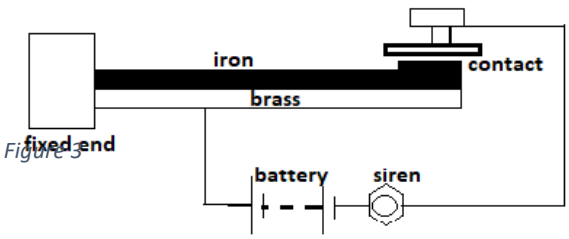


Figure 3

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9. The rate of flow of water in a tube is $0.001m^3/s$. If the cross section area of the tube is 5 cm^2, determine the speed of flow of the water. **(2 marks)**

10. In the determination of size of an oil molecule, lycopodium powder is sprinkled on the water surface before oil drop is introduced onto the surface of the water. Give reason for this. **(1 mark)**

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11. In a vacuum flask the walls enclosing the vacuum are silvered on the inside. State how the silvered wall is able to achieve its function **(2 marks)**

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12. Alcohol and mercury are the two most used thermometric liquids. Give a reason why one would prefer alcohol to mercury for a particular measurement of temperature **(1 mark)**

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13.

a) State what is meant by an ideal gas. (1mark)

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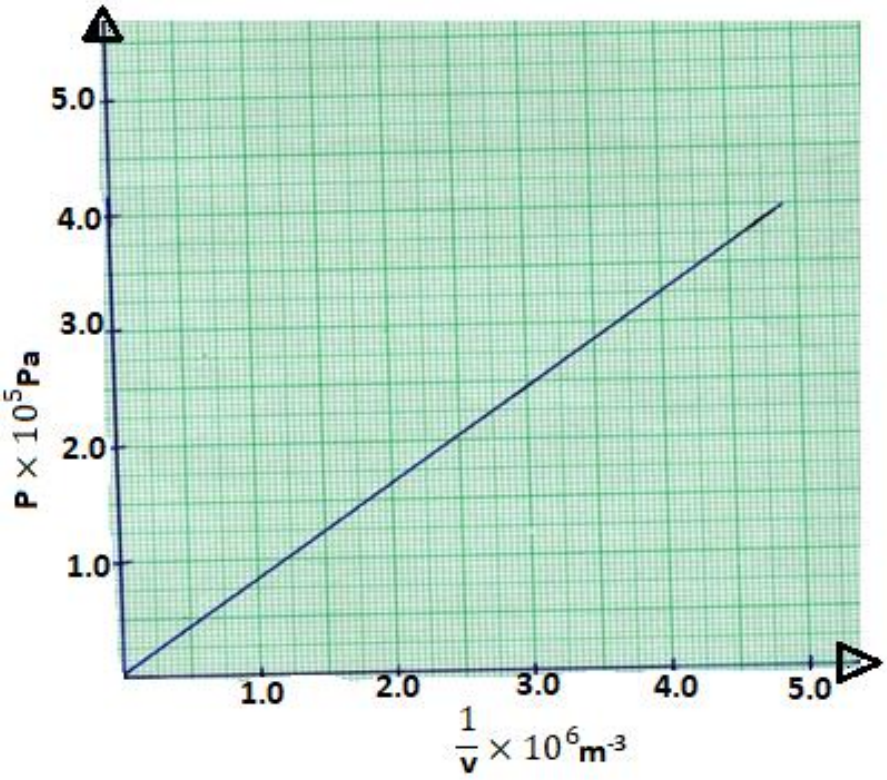
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b) The pressure acting on a gas in a container was changed steadily while the temperature of the gas was maintained constant. The value of volume (v) of gas was measured for various value of pressure (p). The graph in the figure below shows the relationship between the pressure (p) and the reciprocal of volume (v).

Figure 4



i. Draw a well labelled diagram of the set-up from which the above data was obtained **(4 marks)**

ii. Suggest how the temperature of the gas could be kept constant. **(1 mark)**

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iii. Given that the relationship between pressure (p) and volume (v) of the gas is given by: PV = k, whereby k is a constant, use the graph to determine the value of k. **(3 marks)**

c) State one precaution you would take when performing such an experiment. **(1mark)**

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d) A gas occupies a volume of 4000 litres at a temperature of 37^0c and normal atmospheric pressure. Determine the new volume of the gas if it is heated at a constant pressure to a temperature of 67^0C.
(Normal atmospheric pressure = 1.01×10^5pa) **(3 marks)**

14.

a) Define 'specific heat capacity' **(1 mark)**

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b) A liquid at 80^0C in a cup was allowed to cool for 20 minutes. State two factors that determine the final temperature. **(2 marks)**

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c) What is meant by specific latent heat of vaporization? **(1 mark)**

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d) In an experiment to determine the specific latent heat of vaporization of water, steam at 100^0c was passed into water contained in a well logged copper calorimeter. The following measurements were made:
Mass of calorimeter = 80g
Initial mass of water = 70g
Initial temperature of water $=5^0$c
Final mass of calorimeter + water + condensed steam=156g.
Final temperature of mixture = 30^0c.
Specific heat capacity of water = 4200J/kgK and specific heat capacity for copper = $390Jkg^{-1}k^{-1}$.

Determine:

i. Mass of condensed steam. **(1 mark)**

ii. Heat gained by the calorimeter and water. **(2 marks)**

iii. Given heat L is the specific latent heat of vaporization of steam. Write an expression for the heat given out by steam. **(2 marks)**

iv. Determine the value of L. **(2marks)**

15. A pulley system having a velocity of 5 is used to raise a load of 800N through a height of 0.6m at a constant speed using an effort of 200N in a time of 15 seconds.

a) Draw a diagram in the spaces provided below to show the pulley system and on it mark the direction of tension on all the string sections; **(2marks)**

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b) Calculate the mechanical advantage of the pulley system; **(2marks)**

c) Find the efficiency of the pulley system; **(3marks)**

d) Calculate the power developed by the effort. **(3 marks)**

e) Give two reasons why the efficiency of the pulley system is less than 100% **(2 marks)**

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16.

a) What is diffusion? **(1mark)**

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b) A smoke cell contains a mixture of trapped air and smoke. The cell is brightly lit and viewed through a microscope. State and explain what is observed. **(2marks)**

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c) A beaker is filled completely with water. A spoon full of common salt is added slowly. The salt dissolves and the water does not overflow.

i) Why is salt added slowly? **(1mark)**

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……

ii) State the reason why water does not overflow. **(1mark)**

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d) The figure 5 below shows a pipe of varying cross- section. Three vertical tubes X, Y and Z of same diameter are fixed to the section A, B and C of the pipe respectively as shown below.

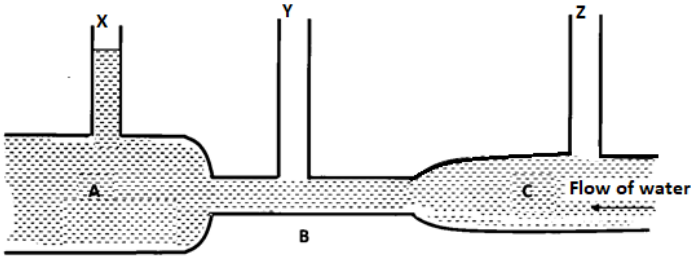


Figure 5

i. Given that the water flows in the direction shown by the arrow, indicate on the diagram the relative levels of water in Y and Z. (1mark)

ii. The diagram below shows a Bunsen burner. Explain how it works using Bernoulli's principle **(3 marks)**

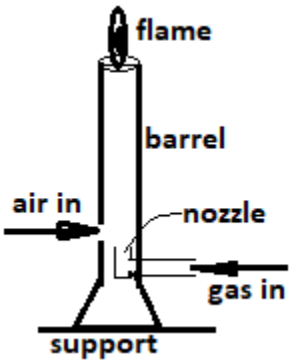


Figure 6

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17. The figure below shows a hydraulic brake system.

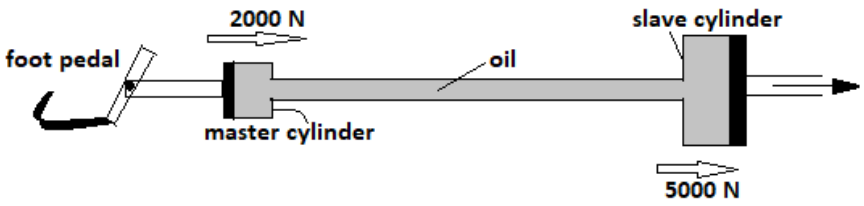


Figure 7

A force of 2000 N is applied on the foot pedal connected to a piston of area $0.005m^2$. This causes a stopping force of 5000N on one wheel. Calculate.

a) Pressure in the master cylinder **(2 marks)**

b) Area of the slave piston. **(2 marks)**

c) Velocity ratio of the system. **(3marks)**

d) Give two reasons why oil is used in the hydraulic brake system. (2marks)

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FORM 3 END TERM 3 SERIES 1 EXAMS

NAME: ……

SCHOOL: ……..

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

232 PHYSICS PAPER 2

FORM THREE (3)

TIME: 2 HOURS

Instructions to candidates

- *Write your name, index number, admission number and sign in the spaces provided above.*
- *This paper consists of **two** sections **A** and **B**.*
- *Answer **all** the questions in sections **A** and **B** in the spaces provided.*
- *All workings **must** be clearly shown where applicable.*
- *All numerical answers must be expressed in decimal form*
- *Non-programmable silent electronic calculators and KNEC Mathematical tables may be used where applicable.*

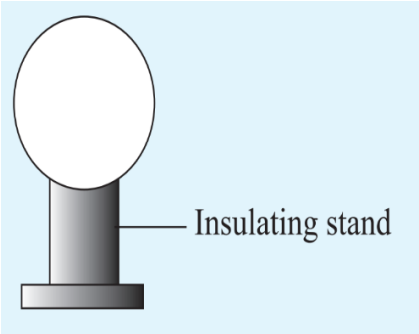
For Examiner's use only

Section	Questions	Maximum Score	Candidate's Score
A	1 – 11	25	
B	12	12	
	13	11	
	14	08	
	15	13	
	16	11	
	TOTAL	80	

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SECTION A: 25 MARKS

1.The figure1 shows positively charged conductors mounted on insulating stands. Indicate the charge distribution on the conductors: **(2 marks)**



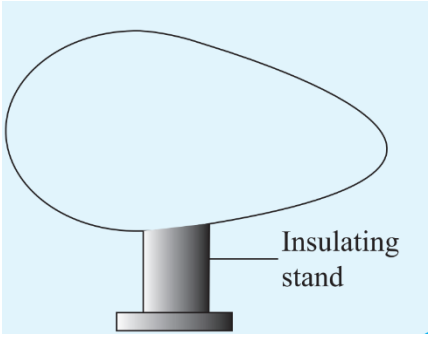


Figure 8

2.What property of light is suggested by the formation of shadows? **(1 mark)**

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3.The diagram shows how displacement varies with time as a wave passes a fixed point.

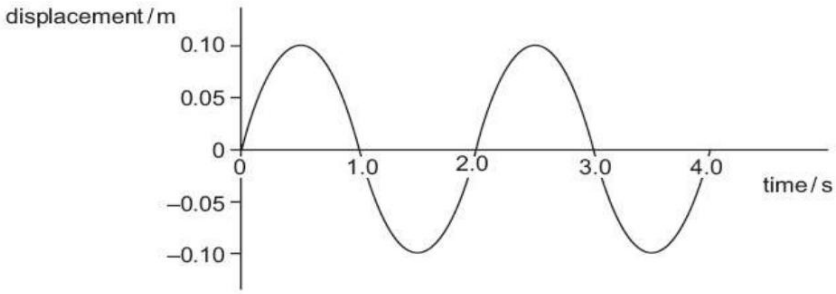


Figure 9

What is the frequency of this wave**?** **(2marks).**

4.Distinguish between hard and soft magnetic materials. **(2 marks)**

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5. Name the conditions necessary for total internal reflection to occur **(2 marks)**

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6.Determine the ammeter reading when the potential difference of 3.0 volts is supplied across PQ in figure 3. **(3mks)**

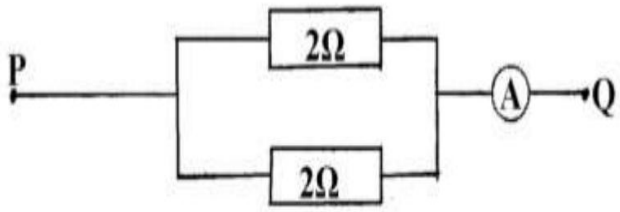


Figure 10

7.A boy stands 190m from high wall and claps his hand, if he hears an echo 1.3 seconds later. Calculate the speed of sound in air. **(2 marks)**

8.State any two ways in which the strength of this electromagnet can be increased (2marks)

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9.An object of height 4 cm is placed 15 cm before a concave mirror, focal length10cm. Determine:

(i) the image position**.** **(2 marks)**

(ii) the magnification **(2 marks)**

10. State two defects of a simple cell and explain how each can be reduced. **(2marks)**

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11. The following figure 4 shows the features of a gold-leaf electroscope

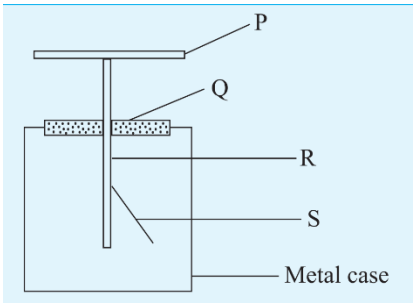


Figure 11

(i) Name the parts P and S. **(2 marks)**

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(ii) Explain the purpose of the metal case. **(1 mark)**

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SECTION B: 55 MARKS

12. (a) A spoon partly submerged in a glass of water appears bent. Explain. **(1 mark)**

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(b) I. What do you understand by the term total internal reflection and critical angle**?** **(2 marks)**

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II. Show that refractive index $\cap = \frac{1}{\sin c}$ where c is the critical angle. **(3 marks)**

III. Diamond has refractive index of 2.4. Calculate critical angle. **(2 mark)**

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(c) The figure 5 below shows a point at the bottom of a pond. Complete the ray diagram to illustrate how it appears to an observer O. (2 marks)

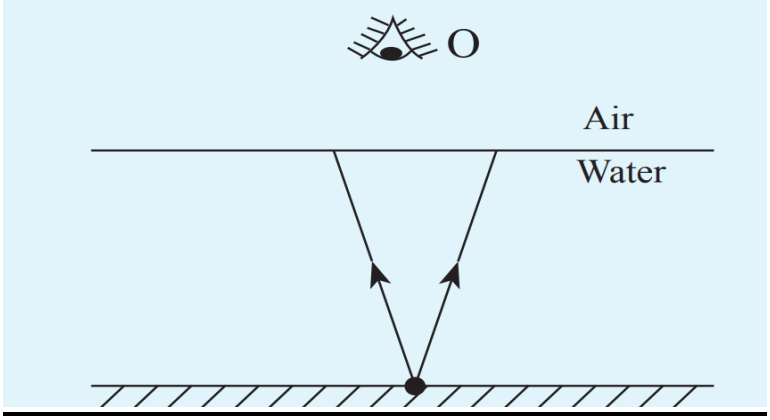


Figure 12

(d) Determine the speed of light in water given that the speed of light in air is $3 \times 10^8 \text{m}s^{-1}$ and the refractive index of water is 1.33 **(2 marks)**

13. (a) State Ohm's law **(1 mark)**

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(b) Explain why ammeters are always connected in series and voltmeters in parallel with the components in electrical circuits. **(1 mark)**

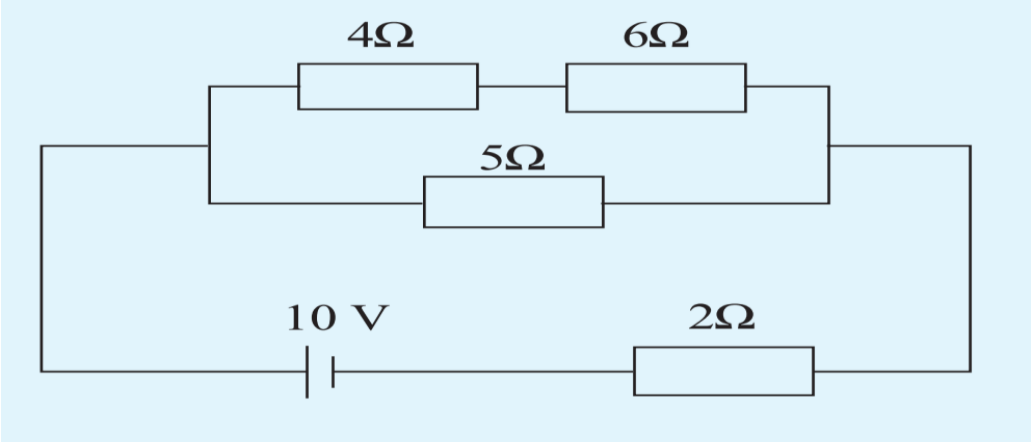
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(c) The diagram below shows four resistors connected to a 10 V power supply:



Determine the:

(I) total resistance. **(3marks)**

(II) total current. **(3 marks)**

(III) Voltage across the 2 Ω resistors. **(3 marks)**

14. (a) State two factors that affect the extent of diffraction **(2 marks)**

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(b) In an experiment to study interference in sound waves, two identical loudspeakers are connected to an audio frequency generator so that they act as coherent sources S1 and S2 as shown in the figure 6 below.



Figure 13

An observer walking several meters ahead and along a line parallel to S1 S2 identifies points A and A1 as the first positions of loud sound on either side after the loud sound at the middle position O between the two sources.

(I) what is meant by the term coherent sources? **(1 mark)**

……

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(II) Name the type of interference occurring at points O, A and A1 **(1 mark)**

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(III) What name is given to the interference that occurs at point P exactly midway between O and A **(1mark)**

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(c) The diagram below(figure 7) shows plane waves moving from shallow to deep end of a pond

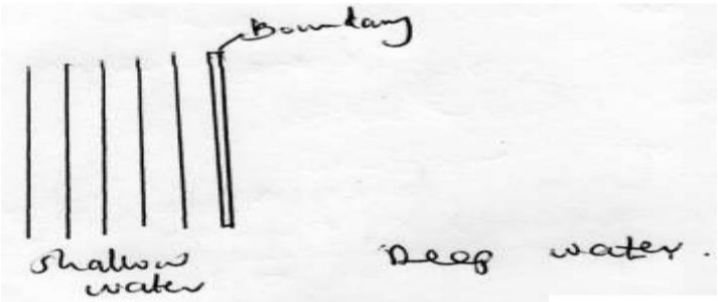


Figure 14

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(I) Complete the diagram to show the waves on the deep end **(l mark)**

(II) State what happens to the velocity and frequency of the wave as it moves from shallow to deep end **(2 marks)**

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15. (a) Define capacitance of a capacitor and state its SI unit**.** **(2 marks)**

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(b) A potential difference of 4 V charges a capacitor to store charge of 30 C. Calculate the capacitance of the capacitor. **(3 marks)**

(c) In the arrangement shown in figure 8 below, when the switch is closed, the candle is blown away from the tip of the nail.

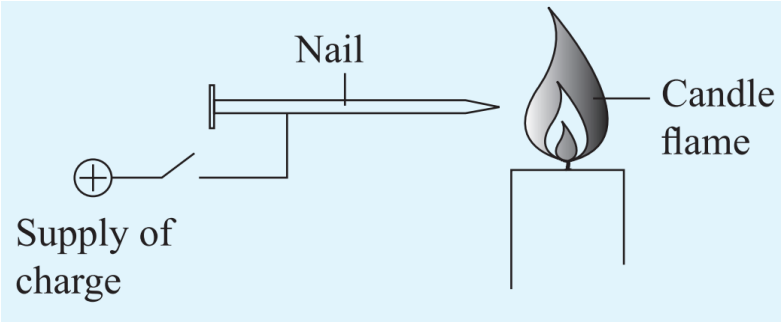


Figure 15

Explain**;** **(2 marks)**

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(d)In the circuit, determine:

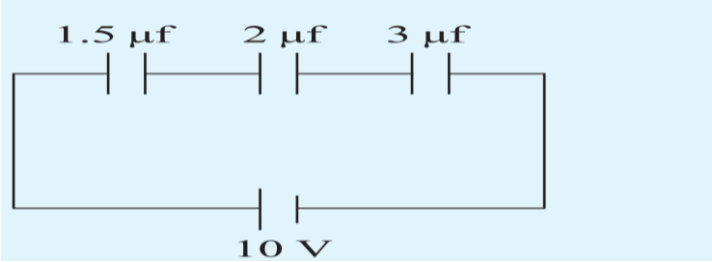


Figure 16

(i) total capacitance**.** **(2 marks)**

(ii) Voltage across the 2F capacitor**.** **(2 marks)**

(iii) energy stored by the 3F capacitor **(2 marks)**

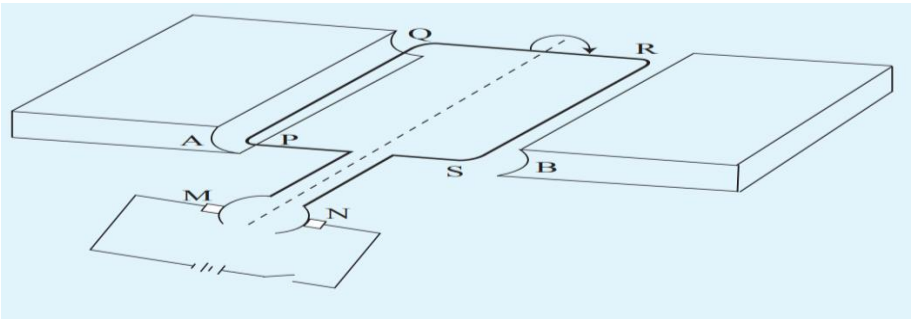
16. (a) State Fleming's left hand rule **(1 mark)**

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(b) The figure below shows a coil PQRS lying between two unlike magnetic pole of pieces A and B of an electric motor.



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(I) Identify the parts:

M **(1 mark)**

……

……

N **(1 mark)**

……

……

(II) Given that PQRS rotates in a clockwise direction, state the polarity of A. **(1 mark)**

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(II) State how you would increase the speed of rotation of the coil. **(2 marks)**

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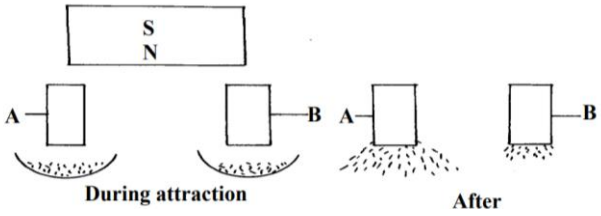
(c) State two ways in which the force between the conductors can be increased **(2 marks)**

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(d) Figure below shows a simple experiment using a permanent magnet and two metal bars A and B Put close to the iron filings.



I. State with a reason which bar is made from a soft magnetic material. **(2mks)**

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……

II. Identify which bar can be used to make permanent magnets **(1 mark)**

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SCHOOL: ……..

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

232 PHYSICS (PRACTICAL)
PAPER 3
FORM THREE (3)
TIME: 2 1/2 HOURS

Instruction to candidates:

- Write your name and admission number in the spaces provided above
- Answer all questions in the spaces provided in the question paper
- 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
- This paper consists of 7 printed pages
- Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.
- All questions MUST be answered in English
- Scientific calculators may be used where necessary

FOR EXAMINERS USE ONLY

QUESTION	TOTAL SCORE	CANDIDATES' SCORE
1	20	
2	20	
TOTAL		

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QUESTION ONE

You are provided with the following
– Two dry cells
– An ammeter
– One voltmeter
– A variable resistor
– A bulb
– A switch
– 8 connecting wires 4 with crocodile clips
– A meter rule or half metre rule
– One stop watch, one stand, clamp and boss
– One spring
– Two pieces of wood
– A beam balance or electronic balance (to be shared)
– A mass labelled, M

Proceed as follows:

a) Set up the apparatus provided as in the diagram (figure, 1) below.

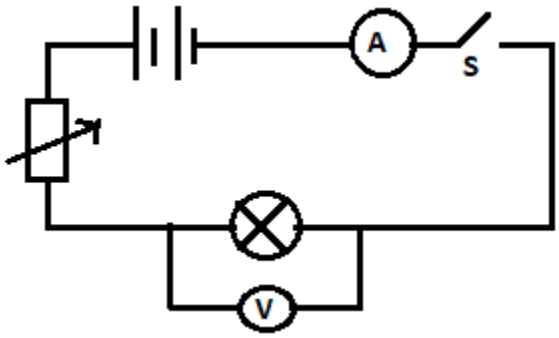


Figure 17

b) Close the switch and adjust the variable resistor until the voltmeter reads 0.9V. Record this value of voltage V and the corresponding value of current I in the table below.

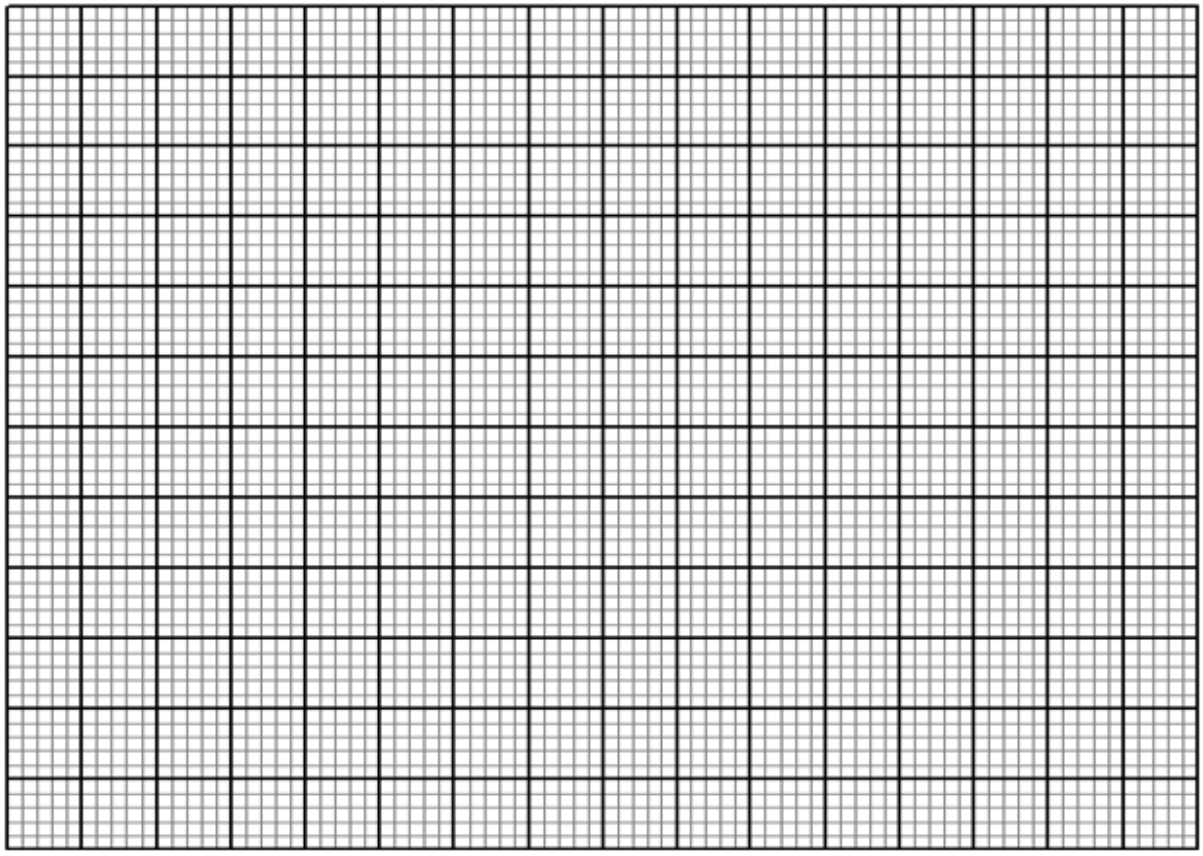
Voltage (V)	0.9	0.6	0.3	0.1
Current (A)				

Table 1

c) Repeat procedure (b) above for the other values of V and complete the table 1 above. **(4 marks)**

d) Plot a graph of current (y-axis) against voltage (x-axis) **(5marks)**

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e) Determine the gradient of your graph when $v = 0.25V$ **(2 marks)**

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SECTION B

Proceed as follows:

f) Hang the spring vertically by clamping one end as shown in figure 2 (the small pieces of wood to clamp the spring)

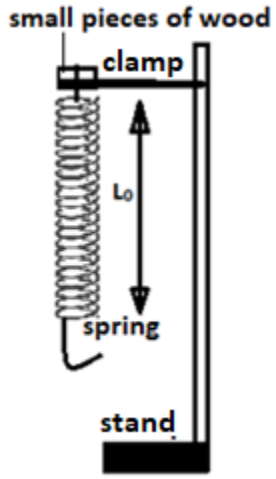


Figure 18

g) Measure the length L_0, of the unloaded spring and record below.

L_0 = **……**..mm **(1mark)**

h) Hang the mass M given from the lower end of the spring. Measure the length, L_1 of the loaded spring

L_1 = ……..mm **(1 mark)**

i) Find the value of (L_1- L_0) = **……..cm** **(1mark)**

j)

i. Using the balance given find the mass of the object M

Mass of M= **……..**g **(1mark)**

ii. Determine k such that: $k = \frac{W}{(L_1 - L_0)}$, where W is the weight of the object **(2 marks)**

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k) Hang the mass M from the lower end of the spring. Displace it by small vertical distance and release so that the spring makes vertical oscillations. Record the time taken for the given number of oscillations **(3 marks)**

Table 2

Number of Oscillations (N)	10	15	20
Time in seconds			

QUESTION TWO

You are provided with the following apparatus:

- A rectangular glass block (about 10cm by 6.5cm by 2 cm)
- 4 optical pins
- A soft board
- A plain paper.
- 30 cm ruler (to be provided by the candidate)
- A 250 ml glass beaker
- A Bunsen burner
- A thermometer
- A stop watch
- A tripod stand
- Measuring cylinder

PAR

Proc

a) Place the glass block on a sheet of paper fixed on the soft board with one of its longest face uppermost. Mark the outline ABCD as shown below.

Remove the glass block and draw a line EF to represent a ray of light making an angle of incidence I = 30^o with the longest side BC of the block.

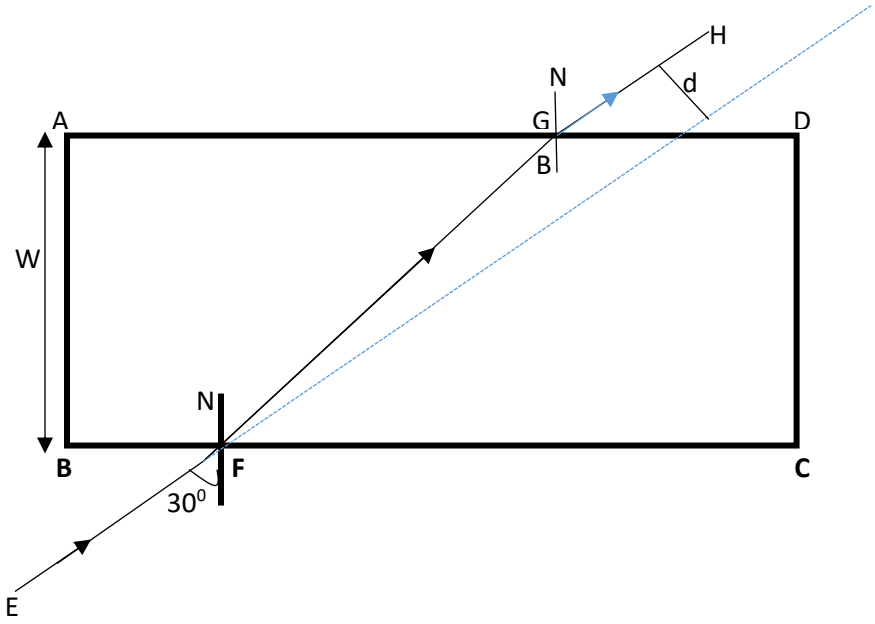
b) Fix pins P1 and P2 on the line EF. Replace the glass block and mark the emergent ray GH by viewing from side AD. Place pins P3 and P4 in line with images of P1 and P2.

Remove the glass block and the pins and draw the ray EFGH.

c) Draw the normal at G.

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Figure 19



d)

i. Measure angle B and the width, W of the glass block

B = ……. W = ……. (2 marks)

ii. Measure the lateral displacement d.

d = …… cm **(1 mark)**

e) Repeat the above procedure for the following angles of incidence: 35^0, 40^0, $50^0$and complete the table, 3 below: **(3 marks)**

Table 3

$angle, i^0$	35	40	50	60
Lateral displacement (cm)				

(Collect the plane paper together with the question paper as proof of having done the experiment) **(1 mark)**

f) Given that: $k = \frac{\sin 30^0}{\sin B}$, calculate the value of k **(2 marks)**

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g) What quantity does k represent**?** **(1 mark)**

h)

i. Given that: $Z = \frac{W(Sin\ 30-B)}{\cos B}$, determine the value of Z **(3 marks)**

ii. State the significance of Z **(1 mark)**

PART B

Now set up the apparatus as shown in the figure, 4 below:

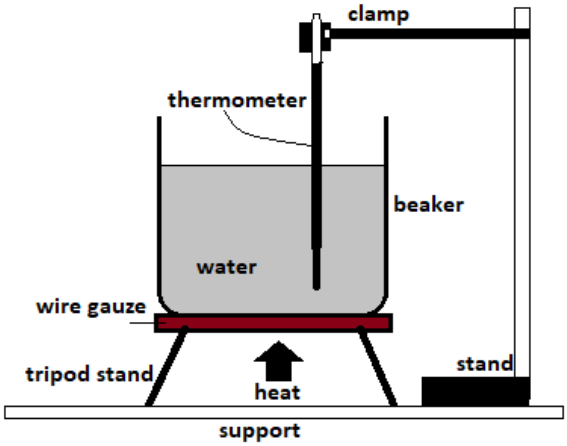


Figure 20

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i) Measure 100 ml of water and pour it into the beaker. Take the initial temperature, T_0 of the water.

T_0 = …….^{0}C **(1 mark)**

j) Now heat the water to a temperature, T_1 of 80^0C. Switch off the heat and insert the thermometer into the beaker and start the stop-watch when the temperature is 65^0C. Record the temperature, T_2 of the water after 1 minute.

T_2 = ……..K (1 mark)

k)

i. Given that: $\gamma = \frac{mc(338-T_2)}{60}$ where; m is the mass of the water used and $specific\ heat\ capacity, c\ of\ water = 4.2\ J/gK$ (density of water is 1000kg/m^3).
Determine the value of γ **(3 marks)**

ii. State the significance of γ **(1 mark)**

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