KENYA'S TOP EXAMINERS' 2020

MOCK EXAMS SERIES 1



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Kenya's Top Examiners' 2020 Mock Exams SERIES 1

WhatsApp/Sms/Call Sir Obiero Amos @ 0706 851 439 For the Marking schemes

SUBJECTES TESTED: Eng, Kisw, Maths, Chem, Bio, Phy, Geog, Hist, CRE, Agric, Bussiness Studies, Computer & Home Science.

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By Sir Obiero Amos Resources

&

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NAME…… INDEX NO…….

CAND. SIGN……

DATE……..

443/1 AGRICULTURE

MAY/JUNE 2020 2 HOURS

AGRICULTURE PAPER 1

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2020 TOP EXAMINERS' MOCK SERIES 1

INSTRUCTIONS TO CANDIDATES

[a] Write your name and index number in the spaces provided above.
[b] Sign and write the date of examination in the spaces provided above.
[c] This paper consists of three sections A, B, and C.
[d] Answer all the questions in sections A and B.
[e] Answer any two questions in section C.
[f] The answers should be written in the spaces provided.

FOR EXAMINERS USE ONLY

SECTION	QUESTIONS	MAX. SCORE	CAND. SCORE
A	1---17	30	
B	18---21	20	
C	22 ,23 ,24	20	
	22 ,23 ,24	20	
TOTAL SCORE		90	

SECTION A [30 MARKS]

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

1. Give ***four*** methods of applying fertilizers to crops. [2marks]

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2. State ***four*** beneficial biotic factors that influence agriculture. [2marks]

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3. Give ***four*** branches of Agriculture. [2marks]

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4. State ***four*** advantages of co-operative land tenure system. [2marks]

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…….

5. State ***four*** benefits of organic mulch in crop production. [2marks]

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6. State ***four*** conditions under which shifting cultivation is practiced. [2marks]

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7. Give ***four*** effects of mass wasting. [2marks]

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8. Give ***four*** factors that affect the rooting of cuttings. [2marks]

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9. Name ***four*** details that are included in a farm marketing record. [2marks]

……
……
……

10. Give ***four*** examples of product-product relationship in the management of agricultural enterprises. [2marks]

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……
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……

11. State ***three*** benefits of tissue culture in crop propagation. [1.5 marks]

……
……
……

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12. Give ***two*** reasons for cutting back pyrethrum. [1 mark]

……
……

13. State ***three*** methods of classifying herbicides. [1.5 marks]

……
……
……

14. State ***four*** symptoms of viral diseases in crops. [2 marks]

……
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……
……

15. Give ***four*** reasons for draining land as part of land reclamation. [2 marks]

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16. State ***two*** reasons for topping a pasture. [1 mark]

……
……

17. State ***two*** advantages of metal pipes over plastic pipes in piping water in the farm. [1 mark]

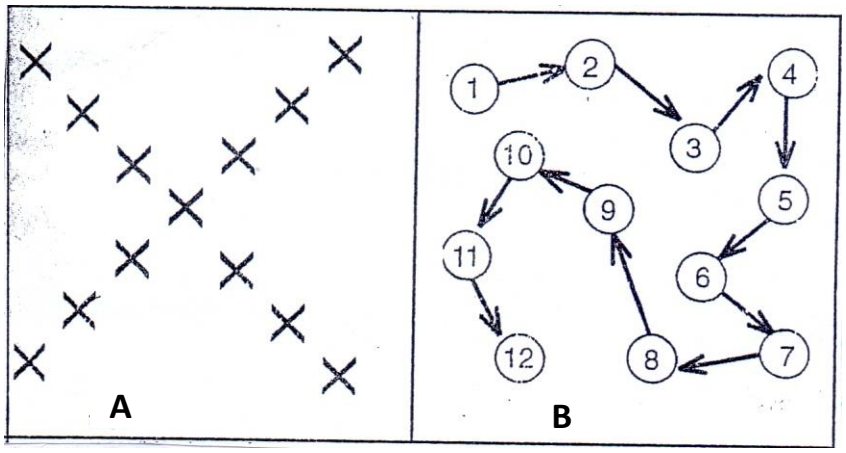
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SECTION B [20 MARKS]

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

18. The following diagrams illustrate two methods of soil sampling .Study them and answer questions that follow .



[a] What do diagrams A and B represent? [2 marks]

A……

B……

[b] Describe the procedure of soil sampling. [3 marks.]

……

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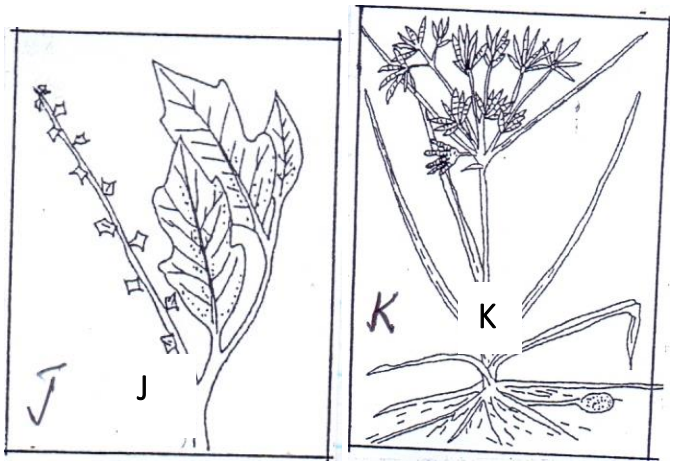
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……[0.5 x 6 = 3 marks]

19. Study the following weeds and answer questions that follow .

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[a] Give the identity of weeds J and K [2 marks]

J……

K…….

[b] What makes weed K difficult to control. [1 mark]

……

……

[c] Give the economic importance of weed J [1 mark]

……

……

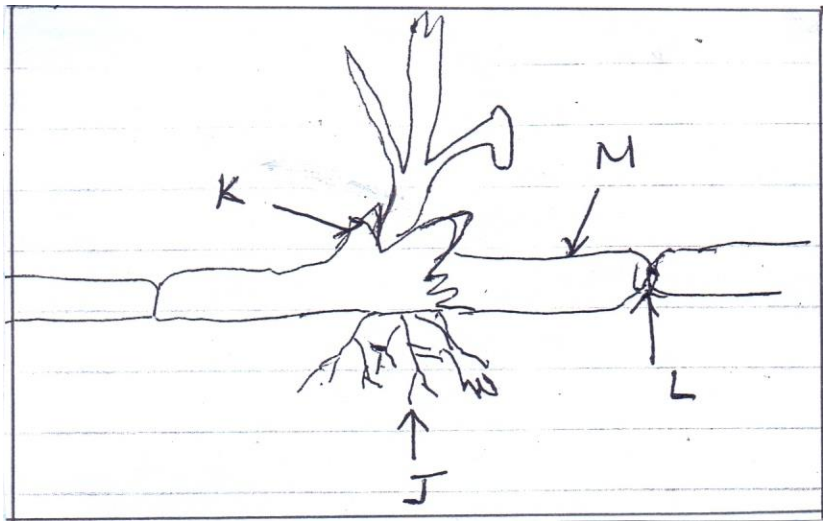
[d] State ***one*** reason that makes weeds excellently adapted to various environments. [1 mark]

……

……

20. Study the diagram below of a planting material of sugar cane and answer questions that follow .

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[a] Identify the parts **J , K , L** and **M**. [2 marks]

J…… K……

L …… M……

[0.5 X 4 = 2 Marks.]

[b] State the functions of the parts labeled **J, K** and **L** . [3 marks]

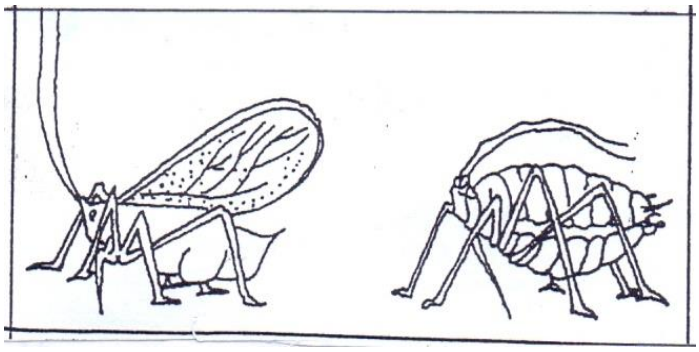
J ……..

K ……..

L ……..

21. Study the crop pest below and answer questions that follow.

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[a] Give the identity of the pest above. [1 mark]

……

……

[b] State ***two*** effects that are caused by the above pest to crops. [2 marks]

……

……

……

[c] Give ***two*** control measures of the pest. [2 marks]

……

……

SECTION C [40MARKS]

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

22. [a] Describe the growing of dry bean seeds under the following sub headings .

- Selection and preparation of planting materials. [3 marks]
- Planting. [4 marks]
- Weeding. [3 marks]

[b] Describe the environmental conditions that may lead to low crop yields [10 marks]

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23. [a] Explain seven ways in which farmers adjust to risks and uncertainties in farming . [7 marks]

[b] Explain five qualities of a good farm manager. [5 marks]

[c] The following are expenses of Pioneer Farm in the year 2014.

Concentrates shillings 5500

Seeds shillings 4500

Fertilizer shillings 7000

Fuel shillings 2000

Disc harrow 175000

The farmer sold wheat to millers for shillings 120000

Sold cabbages to the market for shillings 40000

Sold milk to school for shillings 30000

Sold poles to a saw mill for shillings 25000

The opening valuation was shillings 150000

The closing valuation was shillings 250000

- Prepare a profit and loss account for Pioneer farm for the year ending 2014 [7 marks]

- Did the farm make a profit or a loss and of how much? [1 mark]

24. [a] Describe seven cultural or biological methods of soil and water conservation. [7 marks]

[b] Describe agro forestry under its importance to the country. [7 marks]

[c] Explain six objectives of the million acre scheme of land settlements. [6 marks.]

……

……

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Name: …….. Index no ……..

Candidate's sign ……..

Date: ……

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2020 TOP EXAMINERS' MOCK SERIES 1

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

Agriculture

Paper 2

2 hours

INSTRUCTIONS TO CANDIDATES:

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

(b) *Sign and write the date in the spaces provided above.*

(c) *This paper consists of three sections* ***A, B*** *and* ***C.***

(d) *Answer all questions in section* ***A, B*** *and any* ***two*** *questions from section* ***C***

(e) *Answers should be written in the spaces provided.*

For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-20	30	
B	21-23	20	
C		20	
		20	
	TOTAL SCORE	90	

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

SECTION A (30 Marks)

Answer all the questions in this section in the spaces provided

1. Name **two** bloodless methods of castration in lambs. (1 mark

……

……

2. Name the strokes in a four stroke cycle engine. (2 marks)

……

……

……

3. Give the appropriate term that refers to each of the following:

(a) castrated chicken (½ mark)

……

(b) young one of a rabbit (½ mark)

……

4. Distinguish between the following terms as sued in livestock health:

(a) isolation and quarantine; (1 marks)

……

……

(b) curative drug and prophylactic drug (1 marks)

……

……

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5. State four practices that immediately come after complete milking in a milking shade

(2marks)

……

……

……

6. Name two practices that are carried out when preparing ewes for mating (1mark)

……

……

7. State **three** factors that would determine the amount of concentrate fed to dairy cattle.

(1 ½ mks)

……

……

……

8. Give **three** reasons why calves should be housed in individual pens. (1 ½ marks)

……

……

9. Name **two** plumbing tools. (1mk)

……

……

10. State three advantages of embryo transplant in dairy cattle (1 ½ mks)

……

……

11. Name the breed of sheep which has lambing percentage of 125 – 140 (½ mk)

……

12. Give three signs that would indicate a cow has died of anthrax. (1½ mks)

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……

……

13. Give three reasons for feeding bees (1½ marks)

……

……

14. Give two reasons why identification of farm animals is important (1 marks)

……

……

15. Name two larval stages in the life cycle of a liver fluke (1 mark)

……

……

16. Outline four types of fence that can be used in mixed farm (2marks)

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17. Name three methods of out breeding in livestock production (1 ½ marks)

……

……

18.(a) Give **four** methods of administering vaccines in poultry. (2marks)

……

……

……

(b) State three characteristics of an effective acaricide (1 ½ mks)

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19. Give **four** reasons for treating timber used in construction of farm store. (2 marks)

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20.State **two** factors that influence the daily water intake in a dairy cow (1 marks)

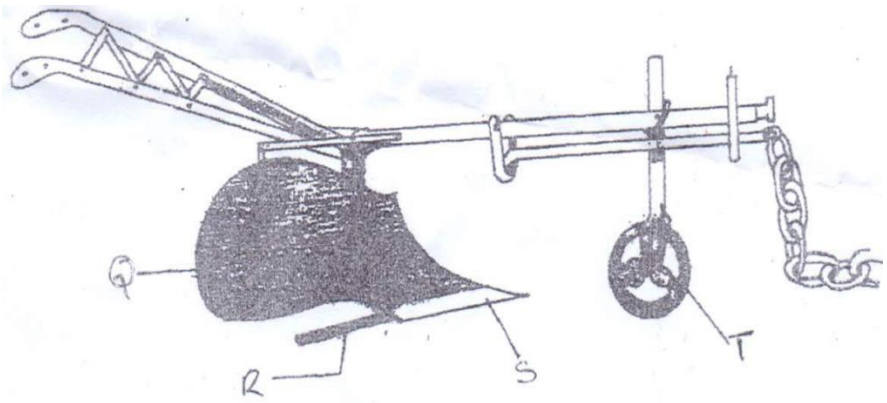
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SECTION B (20Marks)

Answer all the questions in this section in the spaces provided

21. The diagram below shows a farm implement. Study it and answer questions that follow



(a) Identify the farm implement illustrated above. (1mk)

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……

(b) (i) Name the parts labeled **Q , R , S** and **T**

Q……(½ mk)

R……(½ mk)

S……(½ mk)

T……(½ mk)

(ii) Give the function of the part labeled **R**. (1mk)

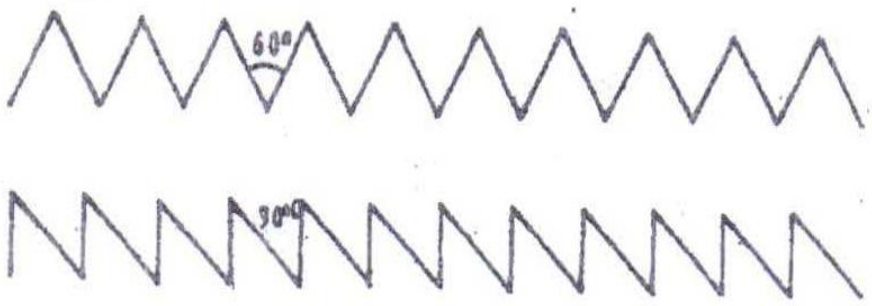
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(c) Give two functions of the implement illustrated above. (2mks)

……

……

22. (a) The diagram labeled **A** illustrated show the teeth arrangement of a hand workshop saw. Study it and answer questions that follow.



(a) Name the type of saw represented by the teeth arrangement **A** and **B**. (1mk)

A……

B……

(ii)Give the functional difference between tools **A** and **B** represented above. (2mk)

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

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(b) Give two maintenance practices for the tools represented by the teeth illustrated above. (2mks)

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23. (a) Below is an illustration of an activity carried out in poultry management. Study it and answer questions that follow.



(i) Identify the practice illustrated above . (1mk)

……

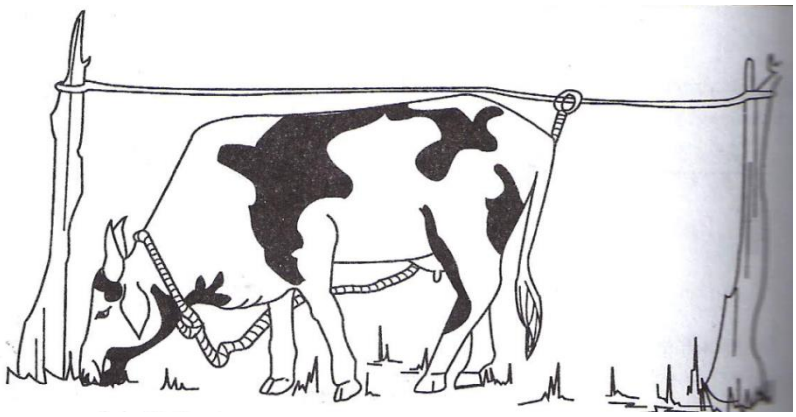
(ii) Give two reasons for carrying out the practice illustrated above. (2mks)

……

……

b) Study the illustration showing a method of grazing

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes



(i) Identify the method of grazing illustrated above. (1mk)

……

(ii) Give three disadvantages of the method named in (i) above. (3mks)

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(C) Give two reasons for raddling in sheep management. (2mks)

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SECTION C (40 MKS)

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

24.(a) (i) State the factors that determine the choice of a poultry rearing system by farmer

(6mks)

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……

(ii) Outline the factors to consider in sorting and grading eggs (4mks)

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(b) (i) Describe five practices that would ensure clean milk production (5mks)

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……

(c Describe the processing of honey using heat method. (5mks)

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……

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25.(a) Discuss milk fever disease under the following subheadings

(i) Cause (1mk)

……

(ii) Livestock attacked (2mks)

……

……

(iii) Symptoms (5mks)

……

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(iv) Control measures (2mks)

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(b) State the major difference in the digestion of food between ruminants and non- ruminants in the following parts of the digestive systems.

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(i) Mouth (3mks)

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(ii) Caecum (2mks)

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(c) Describe five methods of controlling cannibalism in a flock of layers (5mks)

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26.(a) State five non – chemical methods of controlling ticks in cattle (5mks)

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(b) Explain five construction features necessary in a fish pond (5mks)

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(c) (i)State five maintenance practices of a tractor battery (5mks)

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(ii) Explain five possible causes of overheating in an engine (5mks)

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231/3

BIOLOGY

PAPER 3

PRACTICAL

Kenya Certificate of Secondary Education

CONFIDENTIAL

Each candidate should be supplied with the following;

- 2 test tubes in a test tube rack
- 10 ml of white wheat flour suspension in a 50ml beaker labeled **M**.
- 10 ml of groundnut solution in a 50 ml beaker labeled **N**.
- 10% Sodium hydroxide solution in a beaker labeled **U**
- Benedict's solution labeled **V**
- 1% copper sulphate solution in a beaker labeled X
- Droppers
- 2 filter papers
- A means of heating
- A test tube holder.

NB:

a) T**O PREPARE GROUND NUT SOLUTION**

Peel off the raw testa; then grind the cotyledons and embryo using mortar and pestle into a powder; then dissolve the powder in water in a beaker.

For every 20 candidates dissolve 10gms of ground nut powder in 100 ml of water.

b) TO PREPARE WHEAT SOLUTION

Dissolve 10gms of wheat flour in 100 ml of water for every 20 candidates.

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NAME……..INDEX NO…….

ADM NO……CLASS……DATE……..SIGNATURE…….

231/3

BIOLOGY

PAPER 3

PRACTICAL

MAY/JUNE 2020

TIME: 1¾ HOURS

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education

Instructions to Candidates

1. Write your name, Index number and your other details in the spaces provided above.
2. Spent the first 15 minutes of the time allocated to read through the question paper.
3. Answer all the questions in the spaces provided only.
4. Wrong spelling especially of biological terms will be penalized.

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	14	
2	13	
3	13	
TOTAL	**40**	

This paper consists of 7 printed pages Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

1. a) You are provided with substances labeled **M, N, V, U** and **X** and a filter paper. **M** and **N** are food substances, while **V** is Benedict's solution, **U** is 10% Sodium Hydroxide solution and **X** is 1% Copper Sulphate solution. Using the reagents provided, carry out tests determine the food substance(s) in **M** and **N** (10 marks)

Substance	Food Substance Being Tested For	Procedure	Observation	Conclusion
M				
N				

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a).State the functions of the food substances found in both **M** and **N**. (4marks)

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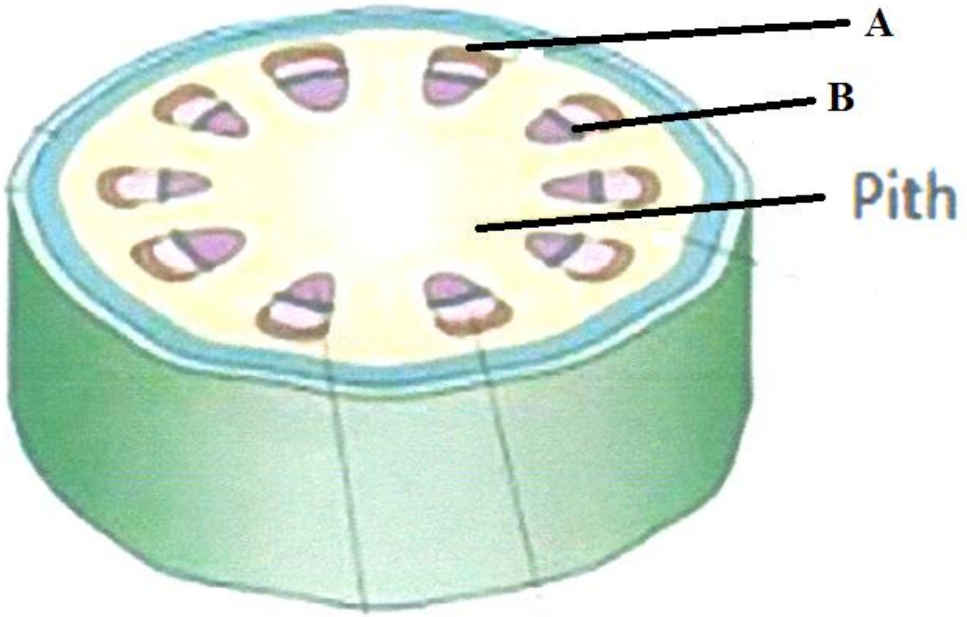
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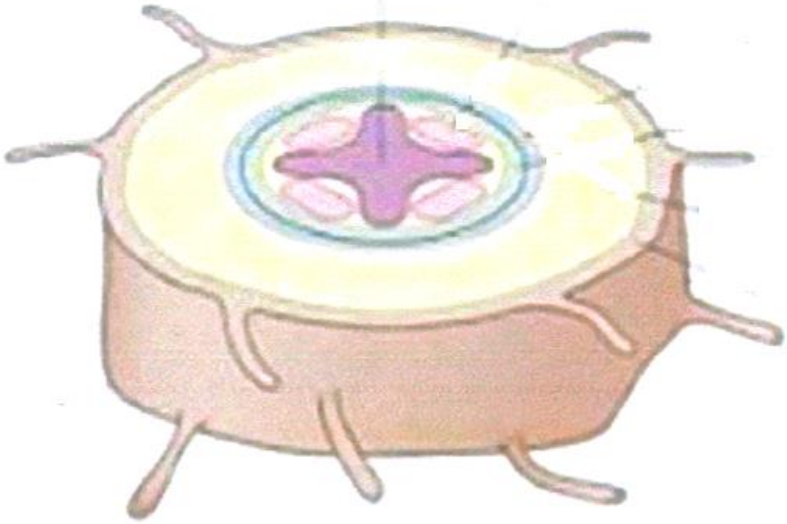
Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

2. Below are sections of a dicotyledonous plant organs labeled **X** and **Y**.

X



Y



(a) Give **three** observable differences between the sections. (3 marks)

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……

……

……

……

(b) On the diagram, label any **three** parts of section Y. (3 marks)

(c) Identify and state the functions of the parts labeled **A** and **B**. (4 marks)

A ……

Function……

……

B ……

Function……

……

(d) How would section **X** compare with that of a monocotyledonous plant? (3 marks)

……

……

……

……

3. Below is a diagram showing a type of metamorphosis exhibited by a butterfly

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a) (i) Give the name of the type of metamorphosis in the diagram above. (1mark)

……

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

……

……

b) Name stages **Q** and **R** (2mks)

Q……

R……

(c) Differentiate the biological activities in the development stages **R** and **S**. (4marks)

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(d) Name the **two** major hormones that are associated with metamorphosis in insects. (2marks)

……

……

(e) (i) Name the class to which the organisms in the diagram above belongs. (1mark)

……

(ii) Give **two** reasons for your answer in (e) (i) above. (2marks)

……

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……..

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Name……Index……Class…… Adm No……

231/1 Biology PP1

SIGN…… DATE……

FORM FOUR MAY/JUNE 2020

2 hours

AMOBI SOFT COPY PUBLISHERS

2020 TOP EXAMINERS' MOCK SERIES 1

(Kenya Certificate of Secondary Education)

BIOLOGY THEORY

Instructions

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

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1-30	80	

This paper consists of 12 printed pages. Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing.

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

1. (a) List **two** professional occupations that require the study of biology. (2mks)

(b). Other than observation, name **one** other scientific skill developed by studying biology. (1mk)

2.(a)Give an example of a sex linked trait in human beings that is linked to the; (2mks)

Y chromosome. …….

X chromosome……..

(b) Write the types of gene mutation represented by the following analogues.

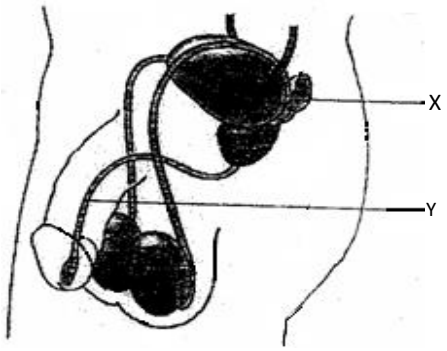
(i) Intended message **BRING THERMOS ON OUTING**
Actual message **BRING MOTHERS ON OUTING**

Type …… (1mk)

(ii) Intended message **PLEASE SAY WHERE YOU ARE**
Actual message **PLEASE STAY WHERE YOU ARE**

Type …… (1mk)

3. The diagram shown below represents a male reproductive system.



(a) Name the structure labelled **X**. (1mk)

(b)Name **one** substances that pass through structure labelled **Y**. (1mk)

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4.(a)State the circulatory system found in members of the class Insecta. (1mk)

(b) Name the blood vessels that transport blood from: (2mks)

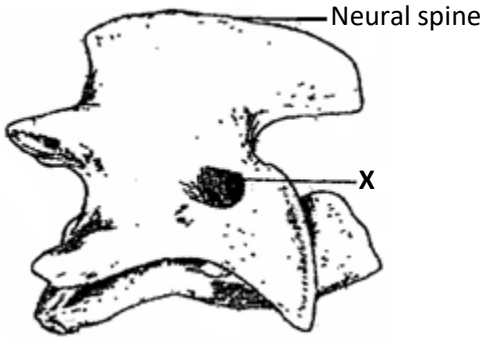
(i)Small intestine to the liver.

(ii)Lungs to the heart.

5.Name **one** enzyme that is secreted in its precursor form. (1mk)

---

6. The diagram below represents a type of bone in the mammalian skeleton.



(a)Identify the bone illustrated in the diagram. (1mk)

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

---

7. (a)The diameter of the field of view of a light microscopic is 6.5mm. Plant cells lying across the diameter are 12.

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(i)Determine the size of one cell in micrometers. (1mk)

(ii) Explain how drooping of leaves on a hot sunny day is advantageous to a plant. (1mk)

(b). A strip of peeled potato whose cell sap concentration was 30 % was placed in a petridish containing 10 % sugar solution.

Account for the observation made after minutes. (1mk)

.....

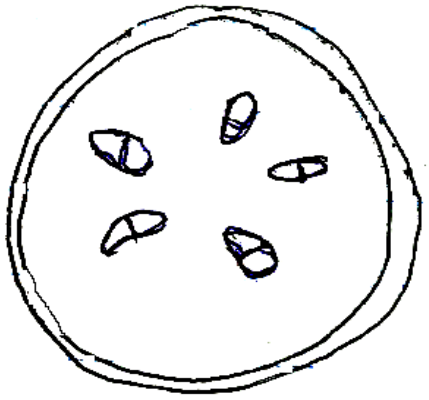
.....

8. (i) Distinguish between a community and a population
(1mk)

(ii) State **one** measure that can be taken to control infection of man by protozoan parasites. (1mk)

---

9. The diagram below shows a section through plant organ.



(i) Name the class of the plant from which the section was obtained. (1mk)

(ii) Give **one** reason for your answer in (a) above (1 mk)

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---

(b)What is the role of vascular bundles in plant nutrition? (2mks)

---

10. (a) State **one** substance that is taken up by active transport by roots and transported to the rest of the plant parts. (1mk)

(b) Identify **one** product of photosynthesis that is transported to the rest of the parts of the plant. (1mk)

---

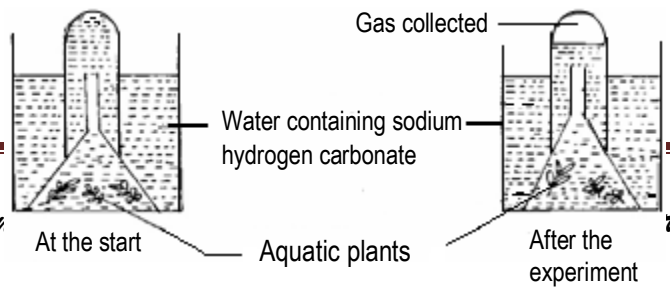
11. (a) Explain why specimens are collected and preserved in specimen bottles. (1mk)

(b) What is binomial nomenclature as used in the naming of living organisms? (1mk)

(c) Give a reason why scientific names are given in Latin. (1mk)

12.(a)Name **two** raw materials for the dark stage process of photosynthesis. (2mks)

(b)The set up shows an experiment to investigate photosynthesis.



Prefer Calli r the Marking Schemes

(i) What gas was collected in the test tube? (1mk)

(ii)What was the role of sodium hydrogen carbonate in the experiment? (1mk)

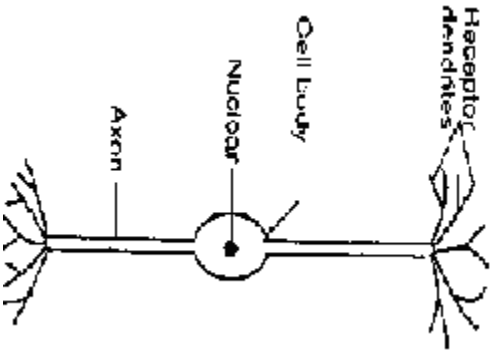
---

13. (a) What is meant by the term gaseous exchange? (1mk)

(b) Explain why respiratory surfaces are moist. (1mk)

---

14. The diagram below shows a specialized human cell.



(a) Name the cell (1mk)

……

(b) **On** the diagram, use an arrow to indicate the direction of impulse transmission (1mk)

15.(a) What is the meaning of the terms (2mks)

(i) Homeostasis

……

(ii) Osmoregulation

……

b) Name the hormones involved in regulation of glucose level in the blood (2mks)

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……

……

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

RNA	DNA
(i)	
(ii)	

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

Umbilical vein	**Umbilical artery**

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

$C_6H_{12}O_6 \longrightarrow 2C_3H_6O_3 + \text{Energy}$

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

……

(b) Suggest **one** industrial application of the process named in (a) above. (1mk)

……

(c) Give the **one** end product of anaerobic respiration in plants. (1mk)

……

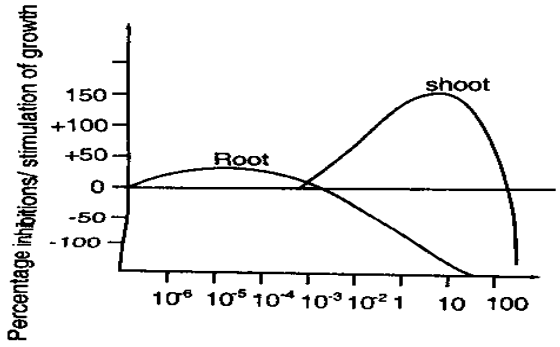
……..

19. Name any **one** physiological process in plants that may be affected by dust as a pollutant. (1mk)

……

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

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Auxin concentration (ppm)

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

……

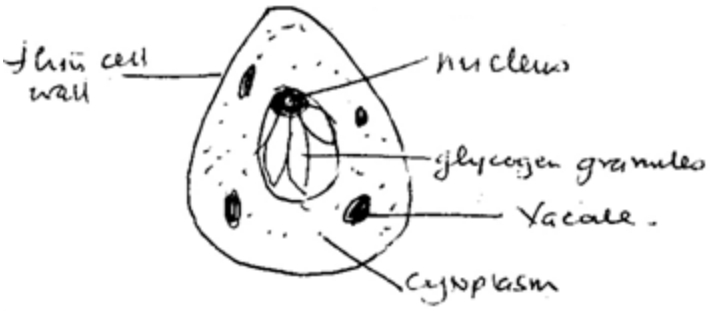
……

……

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

……

21. The figure below shows one of the many moulds known



(a) State the mode of nutrition exhibited by the organism (1mk)

……

(b) Name the kingdom to which it belongs (1mk)

……

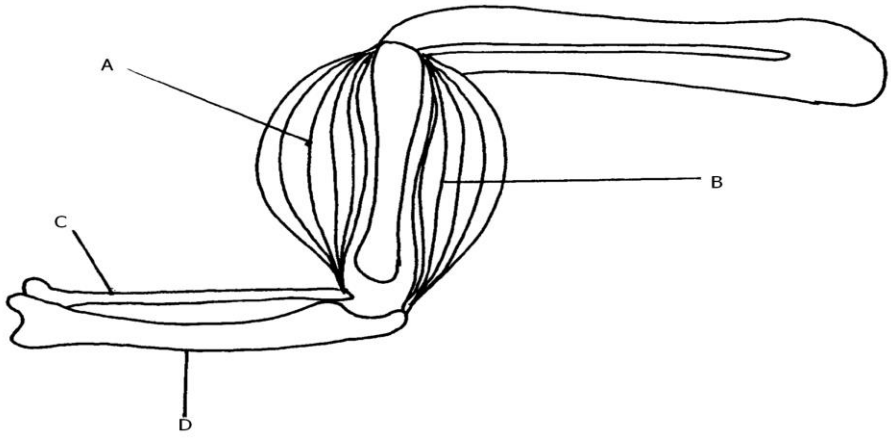
(c) State one feature common to members of the kingdom named in (b) above (1mk)

……

……

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22. Study the diagram below and then answer the questions that follow:-



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

C……

D……

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

23.(a)What is meant by non-disjunction? (1mk)

(b)Give **one** example of a genetic disorder arising from non-disjunction. (1mk)

24.(a)What is seed dormancy? (1mk)

(b)Name a growth inhibitor in seeds (1mk)

……

(c)Differentiate between hypogeal and epigeal germination in seeds (1mk)

……

……

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……

……

25. (a) Name **one** photochemical cell in the retina of the human eye that detects low light intensity. (1mk)

……

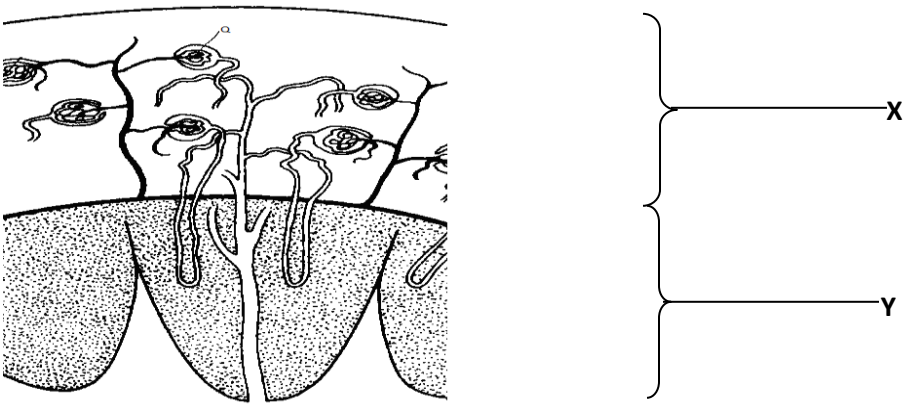
……

(b) Name **one** chemical substance involved in nerve impulse transmission in mammals (1mk)

……

……

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



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

X…… (1mk)

Y…… (1mk)

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

……

……

27.(a)What is meant by the term Genetically Modified Organism(**GMO**)? (1mk)

……

……

……

(b)Name **one** area in Medicine where knowledge of Genetic Engineering has been successfully applied. (1mk)

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28. (a) State the view of the theory of organic evolution. (1mk)

……

……

(b) State the weakness in Lamarck's theory of evolution. (1mk)

……

……

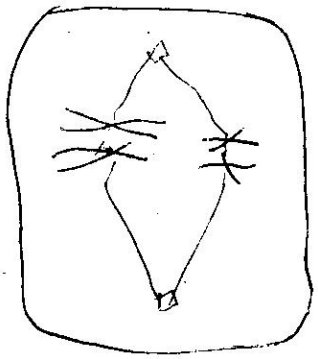
(c) What is adaptive radiation? (1mk)

……

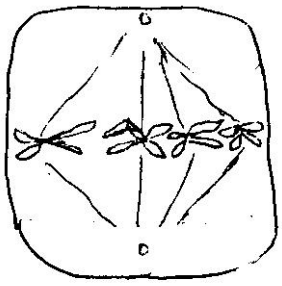
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……

29. Study the diagrams below and then answer the questions that follow.



A



B

(a) Name the stages **A** and **B** (2mks)

A……..

B……..

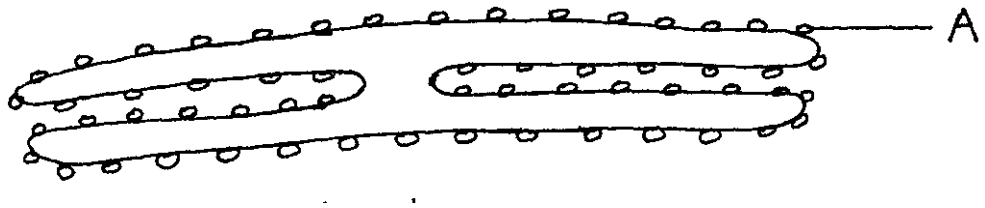
(b)Give a reason for your answer for **B**. (1mk)

……

……

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30. The diagram below shows one of the cell organelles.



(a)Identify the organelle (1mk)

……

(b)Give the function of the part of the organelle marked **A**. (1mk)

……

(c)State **one** structural feature of the cell membrane that gives it strength. (1mk)

……

……

……

THIS IS THE LAST PRINTED PAGE

Name:…… **Adm No.:** ……

Candidate's Signature: ……

Date: ……...

231/2
BIOLOGY

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

Paper 2
(THEORY)
MAY/JUNE 2020
Time: 2 hours

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education

231/2
Paper 2
BIOLOGY

Instructions to candidates

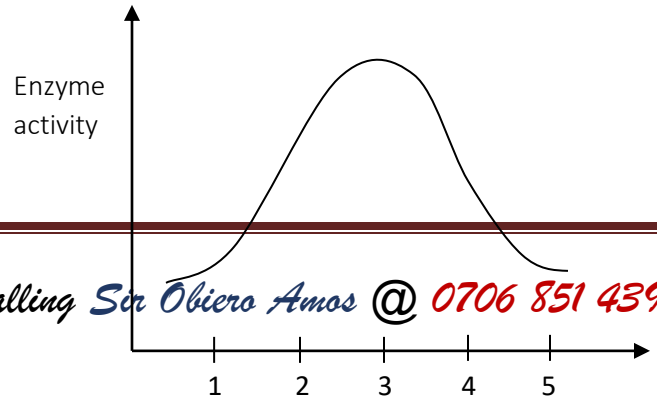
(a) *Write your name and index number in the spaces provided above.*
(b) *Sign and write the date of the examination in the spaces provided above.*
(c) *This paper consists of **two** sections; **A** and **B**.*
(d) *Answer all the questions in section **A** in the spaces provided.*
(e) *In section B answer question **6 (compulsory)** and either question 7 or 8 in the spaces provided after question 8.*
(f) *This paper consists of 10 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.*
(h) *Candidates should answer the questions in English.*

For Examiner's Use only

Section	Question	Maximum Score	Candidate's Score
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7	20	
	8	20	
Total score		80	

SECTION A

1. (a) The figure below shows the effect of pH on an enzyme catalysed reaction.



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pH

(i) State the pH at which the enzyme is most active. (1 mark)

.....

(ii) Name ***one*** enzyme likely to be the one in the figure above and suggest the part of the alimentary canal where it is found. (2 marks)

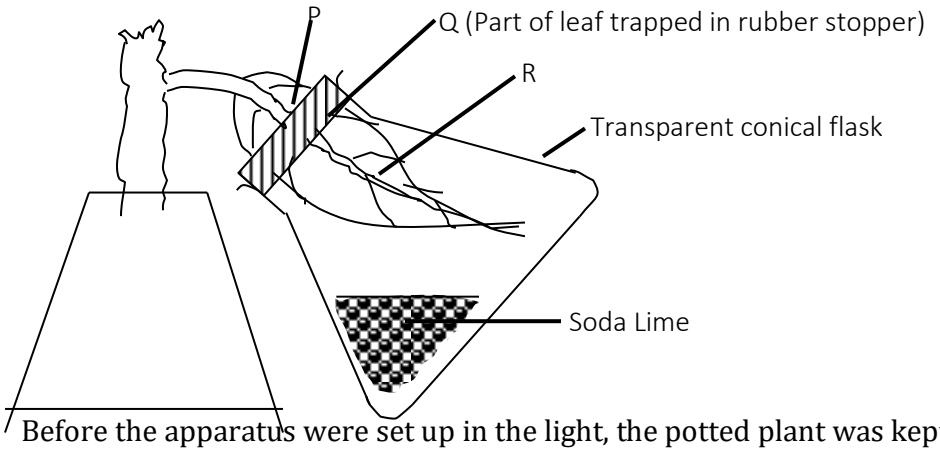
Name - .....

Location in the alimentary canal .....

(iii) Name the digestive juice that contains the enzyme. (1 mark)

.....

(b) A lass set up the experiment below to investigate some factors necessary for photosynthesis. Study the set up and answer the question that follow.



Before the apparatus were set up in the light, the potted plant was kept in a total darkness for 48 hours.

(i) What was the purpose of keeping in darkness? (1 mark)

.....

(ii) State the colours obtained at the end of the experiment after the leaf was tested for starch. (3 marks)

P - .....

Q - .....

R - .....

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2. (a) In an investigation, Snapdragon plants with broad leaves (B) were crossed with plants with narrow leaves (N). The F_1 progeny had intermediate leag breadth.

(i) Give a reason for intermediate leaf breadth in F_1 generation. (1 mark)

……

(ii) If the plants in the F_1 generation were selfed state the genotypic and phenotypic ratio of the F_2 generation. Use a punnet square to do your working. (5 marks)

(b) State the function of Deoxyribonucleic acid (DNA) molecule. (2 marks)

…… ……

…… ……

3. (a) Define the following terms related to evolution and give examples of each. (4 marks)

(i) Homologous structures

……

……

……

Examples

……

……

(ii) Analogous structures……

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……

……

Examples

……

……..

(b) Explain:

(i) Why an underdose insecticide spraying of mosquitoes may cause a serious problem on this mode of killing mosquitoes using the same spray in future. (2 marks)

……

……..

……

(ii) Why soot on barks of trees due to industrial revolution caused emergence of black melanic moths in a region that originally had white speckled types. (2 marks)

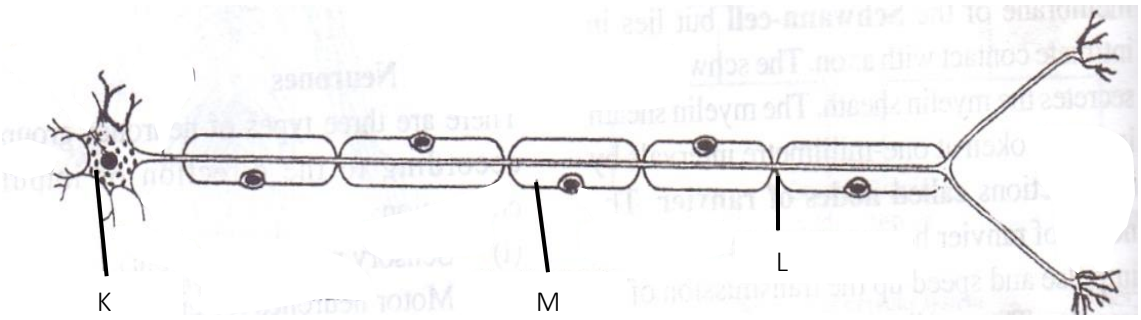
……

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……

4. The diagram below shows a neurone.

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(a) Giving a reason, identify the neurone. (2 marks)

Identify-

.....

Reason -

.....

(b) Name the parts labeled **K, L** and **M**. (3 marks)

K -

.....

L -

.....

M -

.....

(c) State the function of **L**. (1 mark)

.....

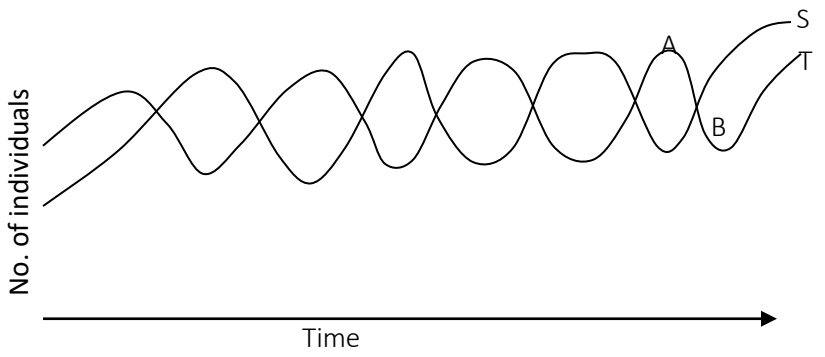
.....

(d) What happens to the muscle on arrival of the impulse. (1 mark)

.....

5. The graph below shows the relationship between the number of herbivores and carnivores in a park.

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(a) Identify the curve representing herbivores. Give reasons for your answer. (2 marks)

Identify-

.....

Reason -

.....

.....

(b) Suggest a reason for the slope of curve S and T between A and B. (2 marks)

.....

(c) (i) Name the relationship between the two types of organisms as portrayed by the graph. (1 mark)

.....

(ii) State the significance of the relationship you have stated in (i) above. (1 mark)

.....

(d) Describe the long-term effect on the park's ecosystem if the species of the carnivores were to become extinct. (2 marks)

.....

.....

SECTION B.

Answer question 6 (COMPULSORY) and either question 7 or 8 in the spaces provided.

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6. An experiment was done to determine the concentration in the blood of two hormones **X** and **Y** produced in the ovaries of a healthy woman aged 30 years within a period of 28 days. The results obtained are shown in the table below.

Time (days)	Concentration of hormone X (arbitrary units)	Concentration of hormone Y (arbitrary units)
2	5	4
4	12	4
6	18	4
8	28	4
10	40	4
12	56	4
14	24	4
16	20	9
18	24	20
20	24	36
22	22	48
24	16	32
26	8	24
28	3	4

(a) Using same axes, plot a graph of the concentration of hormones **X** and **Y** against time. (7 marks)

(b) Suggest the identity of the hormones **X** and **Y.** (2 marks)

X -

.....

Y -

.....

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(c) When was the concentration of hormones X and Y equal? (1 mark)

X -

.....

Y -

.....

(d) Explain the role played by the hormones X and Y during menstrual cycle. (4 marks)

X -

.....

.....

Y -

.....

.....

(e) Briefly describe ***three*** features and mechanisms that hinder self-pollination and self fertilization in plants. (6 marks)

.....

.....

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.....

.....

.....

7. Describe the adaptation of finned fish such as Tilapia to locomotion. (20 marks)

8. (a) State ***two*** functions of the mammalian skin. (2 marks)

(b) Describe the structure and function of the mammalian skin. (18 marks)

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BUSINESS STUDIES

PAPER 1

MAY/JUNE 2020

TIME 2Hrs

AMOBI SOFT COPY PUBLISHERS

2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education

565/1

BUSINESS STUDIES

PAPER 1

MAY/JUNE 2020

INSTRUCTIONS TO CANDIDATES

*Answer **all** questions in the spaces provided in the question paper*

Show all your workings in the question paper.

FOR EXAMINER'S USE ONLY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Marks																		

19	20	21	22	23	24	25

TOTAL MARKS

1. Outline five disciplines incorporated in the business studies course (5mks)

a)……

b)……

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c)……

d)……

e)……

2. State four characteristics of departmental stores (4mks)

a)……

b)……

c)……

d)……

e)……

3. List four types of partners in a partnership formed by professionals (4mks)

a)……

b)……

c)……

d)……

4. Highlight four factors that may cause a shift in supply curve to the left (4mks)

a)……

b)……

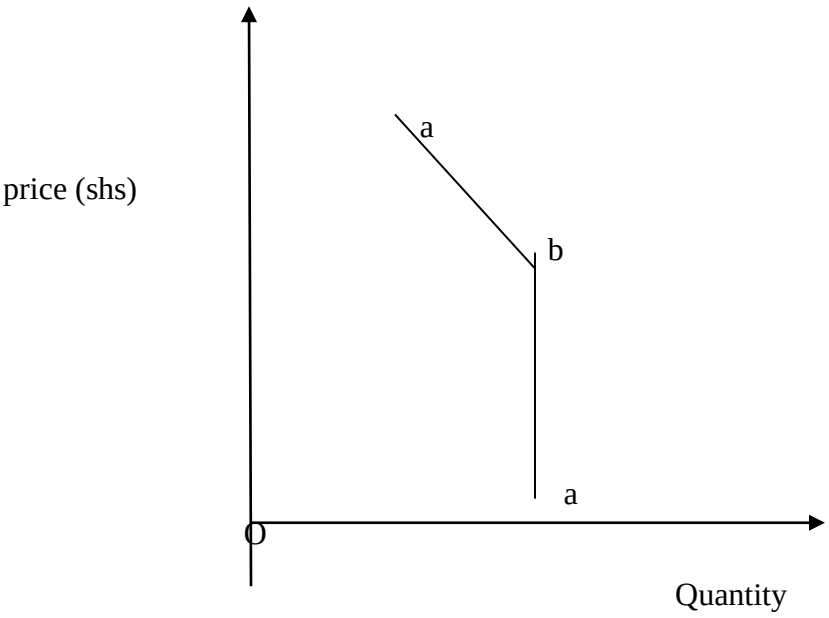
c)……

d)……

e)……

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



a) Identify the market structure to which the diagram belong (1mk)

……

b) Name the parts labelled (2mks)

i)'a'……..

ii)'b'……..

c) State one reason why the price in the above diagram is rigid (1mk)

……..

6. Outline three motives for liquidity preference (3mks)

a)……

b)…….

c)…….

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7.State four consequences of poor arrangement of goods in a warehouse (4mks)

a)……

b)……

c)……

d)……

8. Complete the following table by filling in the blank spaces (4mks)

PROFIT	DRAWINGS	INITIAL CAPITAL	ENDING CAPITAL
SHS	SHS	SHS	SHS
a)_____	5000	200,000	250,000
b) 40,000	_____	350,000	380,000
c) 50,000	15,000	_____	400,000
d)60,000	10,000	500,000	_____

9. The following cash book was prepared by unqualified book-keeper. Identify four errors made in it. (4mks)

DR **CASH BOOK** **CR**

Date	Details	LF	Amount (shs)	Date	Details	LF	Amount (shs)
2014				2014			
Jan 1	Bal b/d		100,000	Jan. 2	Sales		50,000
Jan. 4	Wages		5,000	" 7	Purchases		4,000
" 5	sales		25,000	" 10	Salaries		7,000
				"12	Rent received		8,000
				" 12	Bal c/d		61,000
			130,000				**130,000**
Jane. 12	Bal. b/d		**61,000**				

a)……

b)……

c)……

d)……

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10. State four reasons why taxation is desirable in a country (4mks)

a)……

b)……

c)……

d)……

e)……

11. Basing your knowledge on financial ratios, complete the following table (4mks)

Opening stock	Closing stock	Net purchases	Cost of goods sold	Net sales	Gross profit	Average stock	R.O.S.T.O
a)	50,000	170,000	240,000	b)	300,000	c)	d)

……

……

……

……

……

12. Highlight four reasons why human wants may not be fully satisfied (4mks)

a)……

b)……

c)……

d)……

13.State four reasons that may make a firm to use competitive advertising (4mks)

a)……

b)……

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c)……

d)……

14.Outline four circumstances under which a commodity may be distributed directly to the consumers (4mks)

a)……

b)……

c)……

d)……

15.State four challenges that a country with a young population experiences (4mks)

a)……

b)……

c)……

d)……

16. Identify the rewards of the following factors of production (4mks)

FACTOR	**REWARD**
a)Limestone	_____
b)Doctor	_____
c) Tractor	_____
d)Landlord	_____

17. State four methods that the government of Kenya may use to protect its infant industries (4mks)

a)……

b)……

c)……

d)……

18.State four circumstances under which a firm would be located near the source of raw materials (4mks)

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a)……

b)……

c)……

d)……

19.A car and a garage was insured for shs. 1,500,000 instead of shs. 2000,000. Later the property was destroyed and a loss of shs. 1000,000 was suffered. Determine the amount of claim, giving a reason for your answer. (4mks)

……

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20. Outline four features of a transport means that can be described as efficient (4mks)

a)……

b)……

c)……

d)……

21. Classify the following staff as under: Senior, Junior, or Subordinate (4mks)

STAFF	**CATEGORY**
a)Clerk	_____
b)Accountant	_____
c)Personal Secretary	_____
d)Messenger	_____

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22. Outline four roles of Kenya Bureua of standards in Consumer protection (4mks)

a)……

b)……

c)……

d)……

23. State four advantages of books of original entry (prime books) to a business (4mks)

a)……

b)……

c)……

d)……

e)……

24. Highlight four problems encountered when a development plan is to be implemented (4mks)

a)……

b)……

c)……

d)……

25. Give the long forms of the following abbreviations as used in National Income (4mks)

a). NNP……..

b). NDP…….

c) GNP…….

d)GDP……

Name……Index No……/…….

Candidate's Signature……

565/2 **Date……..**

BUSINESS STUDIES

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

May/June 2020

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2020 TOP EXAMINERS' MOCK SERIES 1

Instructions to candidates

- *This paper consists of **six** questions.*
- *Answer any **five** questions.*
- *All questions carry equal marks.*
- ***This paper consists of 3 printed pages.***
- ***Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.***
- ***Candidates should answer the questions in English.***

For Examiner's Use Only

Question	Maximum score	Candidate's Score
	20	
	20	
	20	
	20	
	20	
	Total Score	

1. (a). Explain **five** external factors that an entrepreneur need to consider when evaluating a business opportunity. (10 marks)

   b). Explain **five** ways of controlling cost push inflation. (10 marks)

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

2. a). Outline **five** differences between a partnership and a cooperative forms of business units. (10 marks)

b). Explain **five** positive implications of overpopulation to a country. (10 marks)

3. a).Describe **four** documents that are sent to the seller by the buyer in home trade. (8 marks)

b). The following balances were extracted from the books of Tree Top Enterprises as at 30th June, 2016.

		Shs
Sales		400,000
Stock (1st July, 2015)		5,000
Stock (30th June, 2016)		8,000
Discount received		13,000
Discount allowed		6,000
Insurance premium		4,000
Premises		300,000
Fixtures and fittings		200,000
Carriage inwards		7,000
Carriage outwards		3,000
Bank loan		23,000
Bank overdraft		50,000
Creditors		30,000
Cash in hand		10,000
Debtors	12,000	
Drawings		14,000
Capital		340,000
Gross profit margin		25%

Prepare;

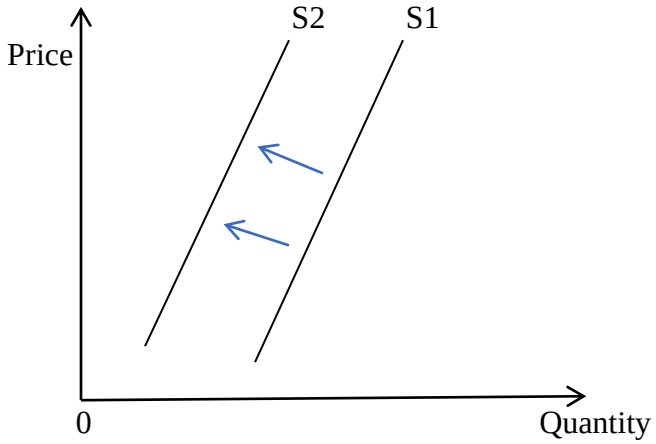
i) Tree top Enterprises profit and loss account for the year ended 30th June 2016. (4 marks)

ii) Tree Top Enterprises Balance sheet as at 30th June 2016. (8 marks)

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4. a). Outline **five** benefits to a businessman who operates a bank current account. (10 marks)

   b). The diagram given below shows changes in the supply curve. (10 marks)



   Explain **five** factors that may have led to the change from S1S1 to S2S2. (10 marks)

5. a).Explain **five** limitations of using billboards as medium of advertising. (10 marks)

   b). Outline **five** advantages that may accrue to a firm as a result of increase in its output. (10 marks)

6. a). Explain **five** trends in international trade. (10 marks)

   b).Sironik traders started business on 1st July 2015withSh 50,000 cash and sh 40,000 in the bank. During the month the following transactions took place.

   2015.

   July 2: Bought stock for Sh50,000 by cheque.

   8: Sold goods for Sh 15,000 cash
   15: Took goods worth Shs 5,000 for his son's birthday party
   22: Bought an office computer on credit from Munene Tech for Shs 69,000.
   30: Paid wages Sh 10,000 cash.

   Required.

   Record the above information in the relevant ledger accounts, balance them off and extract a trial balance as at 31st July, 2015. (10 marks)

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NAME_____**CLASS**_____**ADM NO**_____

School_____ **Date**_____ **Index** _____**Sign**_____

233/1

CHEMISTRY

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PAPER 1

MAY/JUNE 2020

TIME: 2 HOURS

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate to Secondary Education

INSTRUCTIONS TO CANDIDATES

- *Write your **name, admission number, date, index number** and school in the spaces provided*
- *Answer **all** the questions in the spaces provided*
- *All working **MUST BE** clearly shown where necessary*
- *Scientific calculators may be used*
- *Candidates should answer the questions in English*

FOR EXAMINER'S USE ONLY

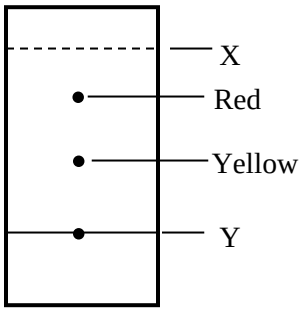
Questions	***Maximum score***	***Candidate's score***
1 – 30	80	

1. (i) What is a fume chamber. (1mk)

   (ii) State 2 uses of fume chamber in a school laboratory (2mks)

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2. The chromatogram below shows the constituents of a flower extract. Study it and answer the questions.

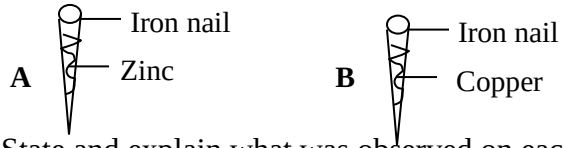


(a) Give a reason to explain the different positions of red and yellow pigments.
(2mks)

(b) What does the line labeled X represent? (1mk)

3. (a) State the chemical name of rust (1mk)

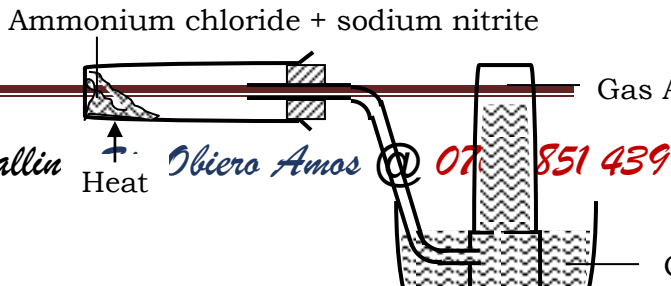
(b) Two iron nails were coated with zinc and copper as shown below



State and explain what was observed on each nail. (2mks)

4. After a meal, bacteria in the mouth break down some food to produce organic acids, such as acetic acid and lactic acids. Therefore one is advised to brush his/her teeth using tooth paste containing fluoride compounds. Give a reason why. (2mks)

5. A mixture of ammonium chloride and sodium nitrite was heated as shown in the set up below



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(i) Identify gas A (1mk)

(ii) State and explain the precaution that should be taken before heating is stopped. (2mks)

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

(The letters are not the actual symbols of the elements)

Element	B	C	D	E	F
Atomic number	18	5	3	5	20
Mass number	40	10	7	11	40

(i) Which two letters represent the same elements? Give reason (2mks)

(ii) Give the number of neutrons in an atom of element D. (Show your working) (1mk)

7. Explain why red hot iron reacts with chlorine to form iron (III) chloride, but red hot iron reacts with iodine to form iron (II) iodine. (1mk)

8. Explain the following trends in the periodic table

(i) Reactivity of alkali metals increases down the group. (1mk)

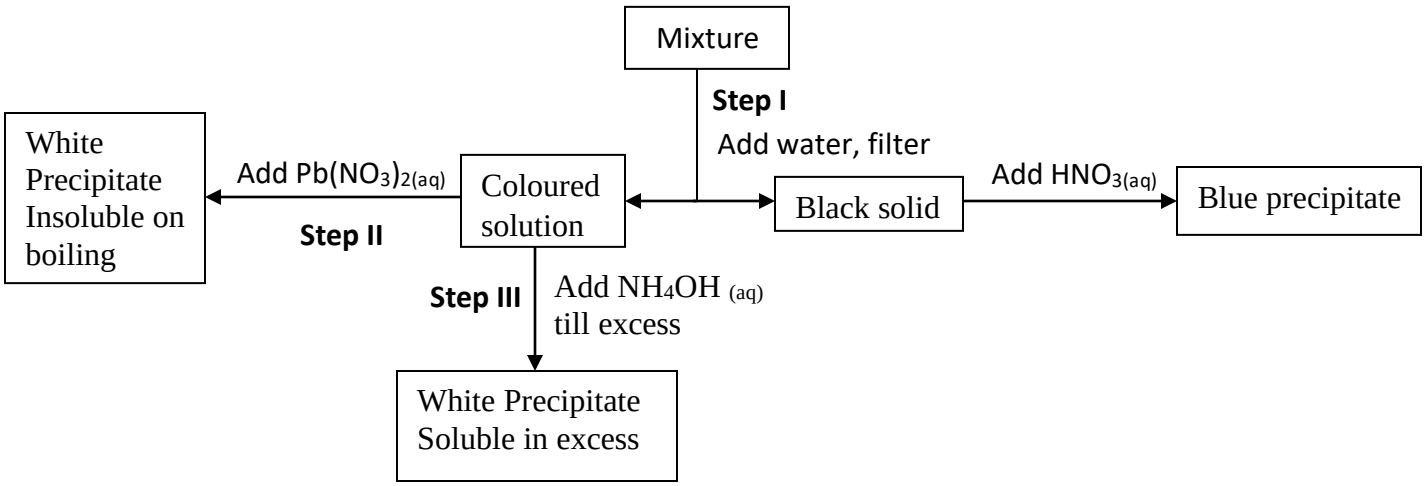
(ii) The atomic radius of elements decreases across a period (1mk)

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9. Using dot(.) and cross(x) draw a diagram to represent carbon (II) oxide (2mks)

10. When aluminium chloride is dissolved in water, an acidic solution is formed. Write the chemical equations to represent the observation made. (2mks)

11. Study the flow chart below and answer the questionss



(i) Name cations present in the mixture (1mk)

(ii) Anions present in the mixture (1mk)

(iii) Write an equation to show reaction taking place at step 3 . (1mk)

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12. State two gases found in water gas formed when carbon at about 1200˚C reduces steam (1mk)

13. (a) Explain why potassium carbonate cannot be manufactured by Solvay process. (1mk)

(b) Write an equation for the reaction that takes place in the carbonator or Solvay tower. (1mk)

(c) State one commercial use of soda ash. (1mk)

14. (a) State the Gay Lussac's law . (1mk)

(b) In an experiment 436cm^3 of hydrogen sulphide was exploded in 363cm^3 of oxygen and reacted as per the following equations

$$2H_2S_{(g)} + 3O_{2(g)} \longrightarrow 2SO_{3(g)} + 2H_2O_{(g)}$$

Determine the volume of the residue gas (2mks)

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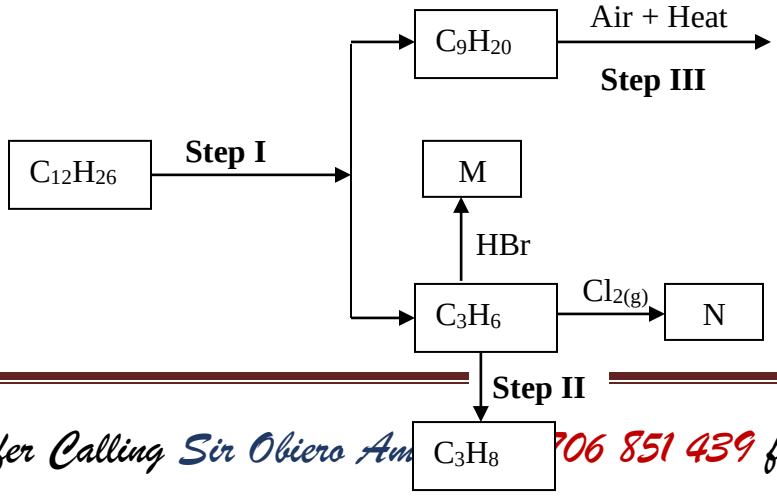
15. **5.34g** of a salt of formula M_2SO_4 was dissolved in water. The sulphate was precipitated by adding excess barium chloride solution. The mass of the precipitate formed was **4.6g**.

(Ba=56, S=32, O=16)

(i) Determine the moles of sulphate ions present. (1mk)

(ii) Calculate the relative atomic mass of M in M_2SO_4 . (2mks)

16. Study the flow chart below and answer questions that follow:



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(a) Name the process labeled in steps above

Step I (½mk)

Step II (½mk)

(b) State the physical condition required for step I to occur. (1mk)

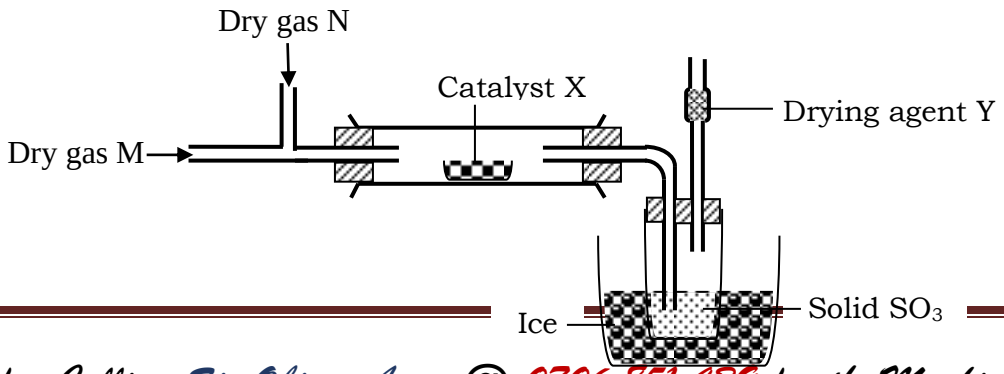
(c) Name the reagent and state the conditions required for step 2 to occur. (1mk)

17. State one use of sulphur which is associated with.

(a) Medicine (1mk)

(b) Agriculture (1mk)

18. The set up of apparatus below used to prepare sulphur (VI) oxide :



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(i) Name

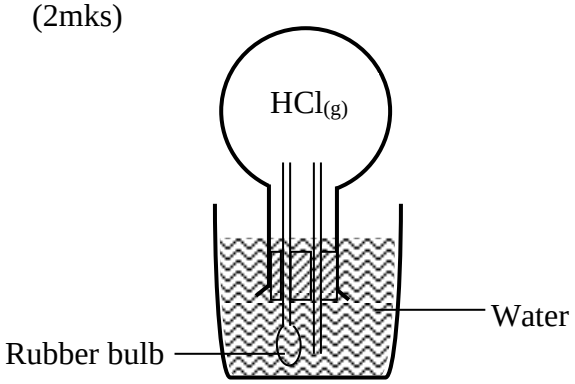
Gas N (½mk)

Gas M (½mk)

Catalyst X (1mk)

(ii) Why is it necessary to use drying agent Y? (1mk)

19. Consider the apparatus shown below when a small amount of water is introduced into the flask by squeezing the bulb of the medicinal dropper, water is squirted upward out of the long glass tubing. Explain this observation.
(2mks)



20. A certain detergent was found to contain a molecule represented by the formula $C_{17}H_{35}COONa$. When this detergent was added to a sample of water a white precipitate was formed.

(i) State a possible reason for formation of the white precipitate . (1mk)

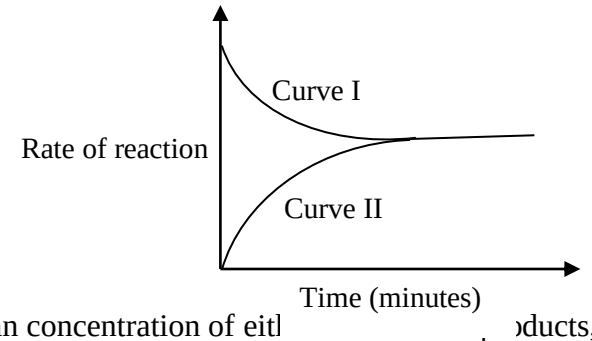
(ii) Write down one possible formula of the white precipitate formed . (1mk)

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21. The solubility of salt X in water at 75^0C is 82g /100g of water, while that of salt Y is 37g/100g of water. Describe how a sample of salt Y can be obtained from their solid mixture. (2mks)

22. The figure below shows the variation in rates of the following reaction,

$2NO_{(g)} + O_{2(g)} \rightleftharpoons 2NO_{2(g)} \quad \Delta H = +Ve$



Other than concentration of eitl ducts, identify two other factors that can affect the rate of reaction above. Explain your answer. (2mks)

23. In the industrial production of aluminium a current of 300,000A is passed through molten aluminium oxide for 24 hours. Calculate the mass of aluminium produced at the cathode.

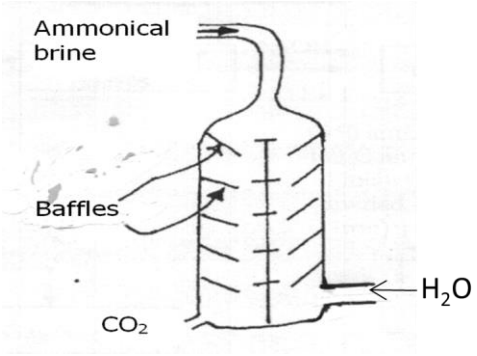
(Al =27, 1F=96500C) (3mks)

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24. (a) Radioactive materials pollutes the environment with great effects. State two ways of controlling the effects of radioactive material to the environment (2mks)

(b)In a sample, there are $5.12x10^{20}$ atoms of Krypton 92 initially. If half-life of Krypton is 3.0 seconds, determine the number of atoms that will have decayed after 6 seconds. (2mks)

25. Study the Solvay tower diagram shown below and answer the questions that follow:



(a) Give reasons why the baffles are used in the Solvay . (2mks)

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(b) A factory produces 63.6 tonnes of anhydrous sodium carbonate on a certain day by this process. Calculate the number of tonnes of sodium chloride used upon on this particular day. Assume the plant is working 100% efficient (C=12 , H=1, Cl=35.5, Na =23) (2mks)

26. When reacting sulphur (IV) oxide and hydrogen sulphide gases, some traces of water vapour is required for the reaction to occur.

(i) State the role of water vapour (1mk)

(ii) Write the equation for the reaction that occurs . (1mk)

(iii) Identify the reducing agent in the reaction in (b) above. (1mk)

27. (a) Give the IUPAC names of the compounds listed below (2mks)

(i) $CH_2Br\ CHBrCH_2CH_3$

(ii) $CH_2= CH =CH\ CH_3$

(b) Draw the structural formula of 2, 3- dimethylbutane (1mk)

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28. (a) The terms malleability and ductility are commonly used in chemistry. What is meant by the

terms:

(i) Malleability (1mk)

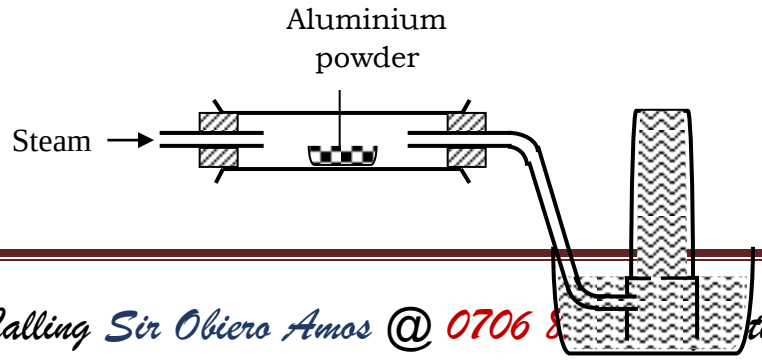
(ii) Ductility (1mk)

(c) Name and write chemical formula for the slag formed during extraction of the following metals.

(i) Copper (1mk)

(ii) Iron (1mk)

29. Study the diagram below used to investigate the property of steam on aluminium



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(a) Explain why no gas was collected in the set up above. (1mk)

(b) Explain why the reaction between aluminium and steam stops after a short time (2mk)

30. (a) State Hess law. (1mk)

(b) Study the bond energies below and answer the questions that follow

Bond	Bond Energy kJ/mole
H− H	436
N− H	388
N≡N	944

Calculate heat of formation of one mole of ammonia gas from the equation below

$N_{2(g)} + 3H_{2(g)} \longrightarrow 2NH_{3(g)}$ (3mks)

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Name…….. Index No……..

Signature…….

Date……..

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CHEMISTRY

Paper 2

(THEORY)

MAY/JUNE 2020

2 hours

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2020 TOP EXAMINERS' MOCK SERIES 1

Instructions

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- ✓ *Write your name and index number in the spaces provided above.*
- ✓ *Sign and write the date of examination in the spaces provided above.*
- ✓ *Answer **all** the questions in the spaces provided*
- ✓ *Silent electronic calculators may be used.*
- ✓ *All working **must** be clearly shown where necessary.*
- ✓ ***This paper consists of 12 printed pages.***
- ✓ ***Candidates should check the question paper to ensure that all the pages are printed as indicated and that no questions are missing.***

For Examiner's use only

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

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

			A			B	C	D
E	F							
							G	
H								

(a) Give the name of the family to which element F belongs. (1mk)

(b) Identify an element which forms a stable divalent anion (1mk)

(c) Give the formula of:

(i) The compound formed between A and B (½mk)

(ii) The sulphate of H (½mk)

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(d) Using dot(.) and cross(x) diagram, show the bonding in the compound formed between E and C. (2mks)

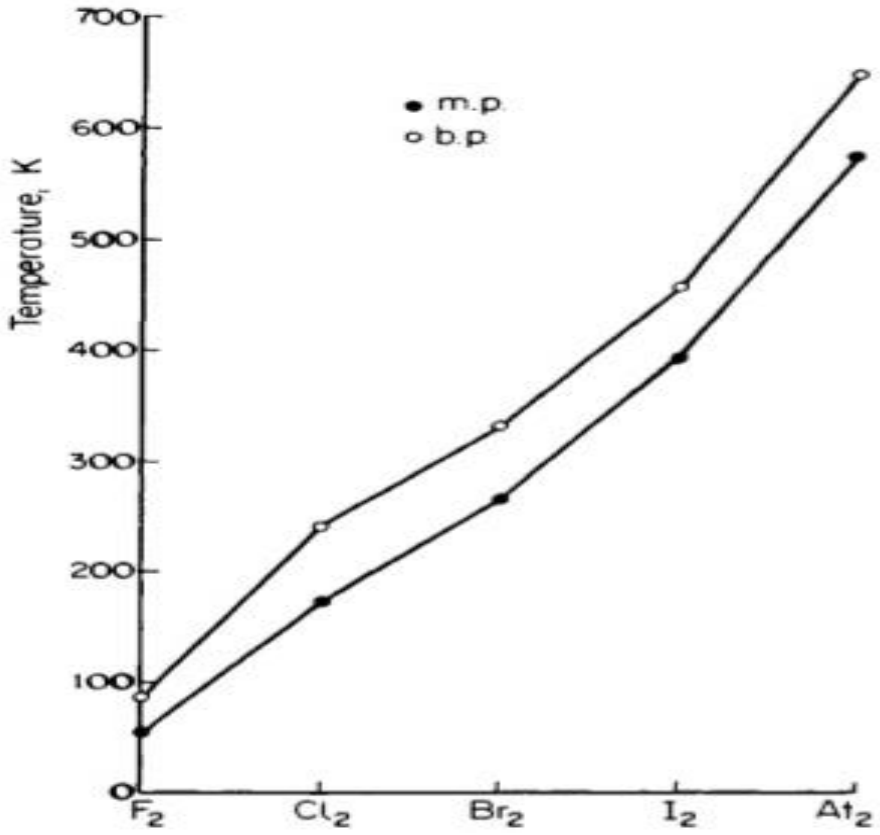
(e) Compare the atomic radii of elements C and D. Explain. (2mks)

(f) Select the element that has the lowest ionization energy. Explain. (1mk)

(g) 0.081g of element A reacts with $20cm^3$ of dilute hydrochloric acid. Calculate the molarity of the hydrochloric acid. (R.A.M = 27)
(3mks)

(h) The graph below shows the trend of the melting points and the boiling points of the family to which element G belongs. Explain the trend in the melting points.
(2mks)

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

(ii) Calculate the heating value of propane, C_3H_8, given that its molar enthalpy of combustion is 2200 kJ mol^{-1}. . (2 mks)

(C=12, H=1)

(b) (i) Define molar enthalpy of combustion. (1 mk)

(ii) Use the information provided by the thermochemical equations below to calculate the molar enthalpy of combustion of ethyne. (3 mks)

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

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$H_2(g) + ½O_2(g) \longrightarrow H_2O(g)$ $\Delta H = -286$ kJ mol^{-1}

$2C(s) + H_2(g) \longrightarrow C_2H_2(g)$ $\Delta H = +226$ kJ mol^{-1}

(c) Study the data given below and answer the questions that follow.

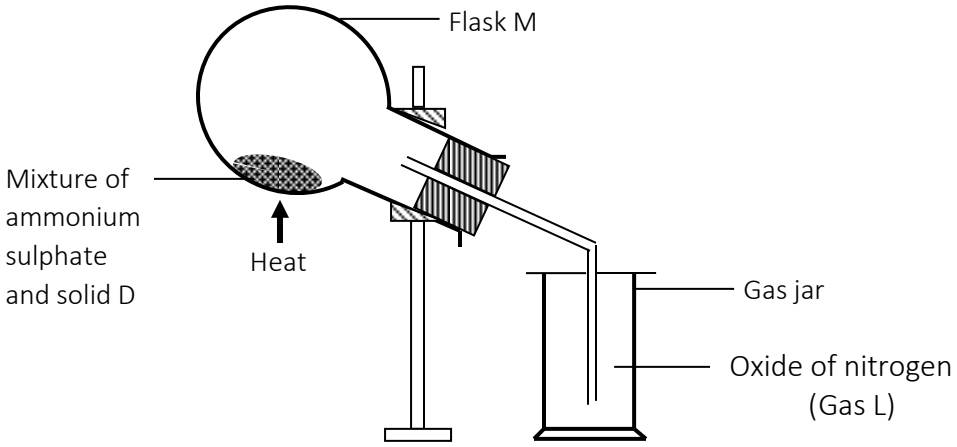
Substance/ion	Enthalpy change
$CaCl_2(s)$	Lattice energy = -2237 kJ mol^{-1}
$Ca^{2+}(g)$	Hydration energy = -1650 kJ mol^{-1}
$Cl^-(g)$	Hydration energy = -364 kJ mol^{-1}

(i) Determine the molar enthalpy of solution of calcium chloride in water. (2 mks)

(ii) Draw an energy level diagram for the dissolution of calcium chloride in water. (3 mks)

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2. (a) The diagram below shows the preparation of an oxide of nitrogen. Study the diagram and answer the questions that follow.



(i) Name the solid D. (1mk)

(ii) Write the equation for the reaction in the flask M (1mk)

(iii) Burning magnesium ribbon was lowered into the gas jar containing gas L. State and explain the observations made. (2mks)

(iv) Write the two equations for the reactions taking place in (iii) above. (2mks)

I.

II.

(v) A drop of water was added to the product formed in (iii) above. A colourless gas **K** with a choking smell was produced. Write the chemical equation for the production of gas **K**
(1mk)

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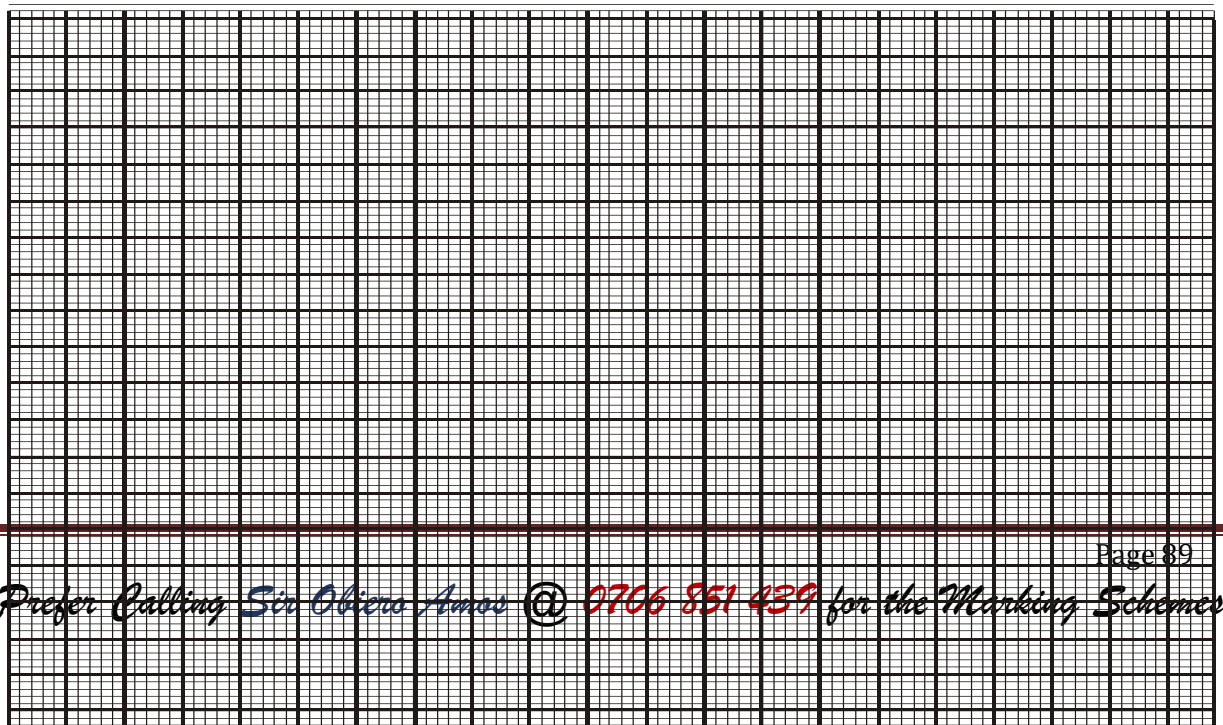
(b) (i) Give **two** uses for nitric (V) acid.
(2mks)

(ii) A factory uses nitric (V) acid and ammonia gas as the only reactants for the preparation of ammonium nitrate. If the daily production of the ammonium nitrate is 4800kg, calculate the mass of ammonia gas used daily in kg. (N=14.0, O = 16.0 H= 1.0) (3 mks)

4. A group of form four students of Cockelbet Secondary School carried out an experiment to determine the solubility of potassium chlorate. The table below shows the results obtained.

Total volume of water added(cm^3)	10.0	20.0	30.0	40.0	50.0
Mass of $KClO_3$(g)	5.0	5.0	5.0	5.0	5.0
Temperature at which crystals appear(^0C)	80.0	65.0	55.0	45.0	30.0
Solubility of $KClO_3$(g/100gH_2O)					

(a) Complete the table to show the solubility of $KClO_3$ at different temperatures. (3mks)
(b) Plot a graph of mass of $KClO_3$ per 100g water against temperature at which crystals form. (3mks)



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(c) From the graph, determine ;

(i) The solubility of $KClO_3$ at 40^oC. (1mk)

(ii) The temperature at which the solubility of $KClO_3$ is 35g/100g water. (1mk)

(d) Explain the shape of the graph. (1mk)

(e) State **one** application of solubility and solubility curves. (1mk)

5. (a) Use the standard reduction potentials for elements P, Q, R, S and T given below to answer the questions that follow. (The letters do not represent the actual symbols of the elements).

			E^{θ} (Volts)
P^{2+} (aq) + 2e	$\rightleftharpoons$	P (s)	- 2.90
Q^{2+}(aq) + 2e	$\rightleftharpoons$	Q (s)	-2.36
R^{+} (aq) + e	$\rightleftharpoons$	½R_2 (g)	0.00
S^{2+} (aq) + 2e	$\rightleftharpoons$	S (s)	+ 0.33
½ T_2 (g) + e	$\rightleftharpoons$	T^{-} (aq)	+2.86

(i) Which element is likely to be hydrogen? Give a reason for your answer. (1½mks)

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(ii) What is the $\mathbf{E^{\theta}}$ value of the strongest reducing agent? (1mk)

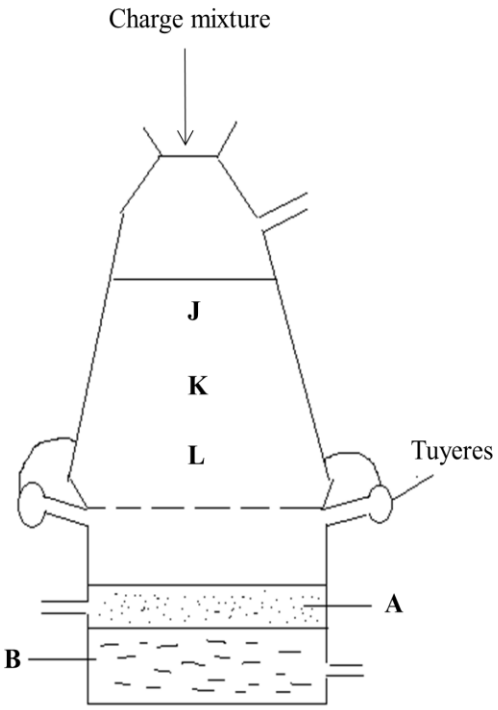
(iii) A form four student chose $S^{2+}_{(aq)} / S_{(s)}$ as the reference half-cell. Use the space at the right side of **E^{θ} Volts)** to rewrite the **E^{θ}** values of the above half-cells. (2½mks)

(iv) In the space provided below draw a labeled diagram of the electrochemical cell that would be obtained when half-cells of elements Q and S are combined. (3mks)

(b) An iron spoon is placed in an electrochemical cell with $AuCl_3$ solution to be gold plated. How long must the spoon be in the electrolytic cell if the spoon is to be plated with 0.293 g of Au and the current of the cell is 1.03A. (RAM of Au =197; 1F = *96,485 C*). (3mks)

6 The diagram below represents a blast furnace used for the extraction of iron.

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(a) Name three substances contained in the charge mixture.
(1½mks)

(b) Name the substances labeled A and B.
(2mks)

A…….

B…….

(c) Arrange regions J, K and L in order of decreasing temperature. (1mk)

(d) Write an equation for the reaction that occurs in region L. (1mk)

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(e) What is the function of the tuyeres? (1mk)

(f) Distinguish between cast iron and wrought iron. (1mk)

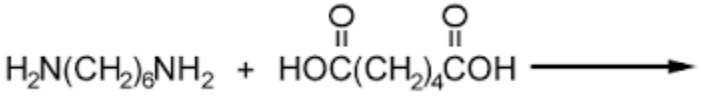
(g) Write an equation for the reaction between heated iron and chlorine. (1mk)

(h) Iron-60 is a radioisotope of iron (half-life 2.6 x 10^6 years). Its ultimate decay product is nickel-60. Write a nuclear equation for this process.
(Atomic numbers: Fe= 26, Ni= 28) (1mk)

(i) State one use of stainless steel.
(½mks)

7. (a) Draw and name all the isomers of C_4H_6 (2mks)

(b) The following monomers react to form a polymer:



Draw and name the structure of the polymer (2mks)

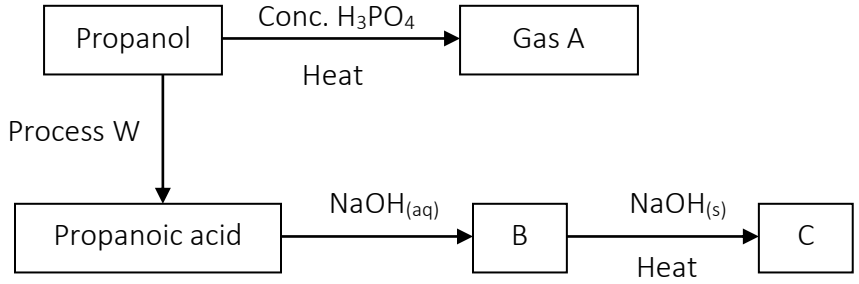
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(c) Chlorofluorocarbons have a wide range of uses. However they have been linked to depletion of ozone.

(i) Explain the problem caused by depletion of ozone layer. (1mk)

(ii) Give one other environmental problem caused by chlorofluorocarbons. (1mk)

(d) Study the flow chart below and use it to answer the questions that follow.



(i) Name:

I: Process W (½mk)

II: Substances A, B and C (1½mks)

A:

B:

C:

(ii) Write an equation for the combustion of substance C (1mk)

(iii) Give one use of gas A (1mk)

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(e) Explain how a sample of propan-1-ol could be distinguished from a sample of propanoic acid by means of a chemical reaction

(2mks)

THIS IS THE LAST PAGE PRINTED.

233/3

CHEMISTRY

PAPER 3

(PRACTICALS)

JULY/AUGUST

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2020 TOP EXAMINERS' MOCK SERIES 1

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

INSTRUCTIONS TO SCHOOLS

The information in this paper is to enable the Head of the school and the teacher in charge of chemistry to make adequate preparations for this year's chemistry practical examination.

Great care MUST be taken to ensure that the information here in does not reach the candidates either directly or indirectly. The teacher in charge of chemistry should **NOT** perform any of the experiments in the same room as the candidates nor make results of the experiments available to the candidates or give any other information related to the experiments to the candidates. Teachers to perform experiments to complete tables I and II to provide readings for their centre to be enclosed with the candidates' scripts to central marking centre.

In addition to the fittings and apparatus found in a chemistry laboratory, each candidate will require the following:

A.

1. One burette 0 – 50 ml
2. One pipette 25.0 ml and a pipette filler
3. Two clean and dry conical flasks (250ml)
4. Six clean and dry test-tubes

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5. pH chart (Full range)

6 One boiling tube

7. About 500cm^3 of distilled water supplied in a wash bottle

8. One 250ml volumetric flask supplied with a stopper.

9. One 10ml measuring cylinder

10. One 50ml measuring cylinder

11. About 60cm^3 of solution A

12. About 100cm^3 of solution B

13. About 100cm^3 of solution C

14. 100ml glass beaker

15. White piece of plain paper marked with **a cross** on it with a blue print

16. Thermometer

17. Stop watch/stop clock

18. One sticker / label

19. About 0.5 of solid sodium carbonate

20. About 2g of solid R

21. About 0.5g of solid V

B Access to:

1. Universal indicator solution (full range)

2. Phenolphthalein indicator

3. Bunsen burner, tripod stand and wire gauze

4. 2.0M sodium hydroxide solution supplied with a dropper

5. Acidified potassium manganate (VII) supplied with a dropper

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6. 0.5M aqueous lead (II) nitrate solution supplied with a dropper
7. 2.0M ammonia solution supplied with a dropper.
8. 2.0M barium chloride solution
9. 2.0M lead nitrate solution
10. Bromine water
11. Potassium iodide solution

Note:

1. Solid R is a mixture of lead (II) carbonate and sodium sulphite in the ratio of 1:1
2. Solid V is oxalic acid
3. Solution A is prepared by dissolving 172cm^3 of Conc. Hydrochloric Acid (Density 1.18g/cm^3) in 400cm^3 of distilled water and diluting with distilled water to make one litre solution.
4. Solution B is prepared by dissolving 15.8g of sodium thiosulphate ($Na_2S_2O_3$) in 600cm^3 of distilled water and diluting with distilled water to make one litre solution.
5. Solution C is prepared by dissolving 4g of sodium hydroxide pellets in 600cm^3 of distilled and diluting with distilled water to one litre.
6. Acidified potassium manganate (VII) is prepared by dissolving 3.0g of potassium manganate (VII) in 400cm^3 of 2.0M H_2SO_4 and diluting with distilled water to one litre.

NAME:…… INDEX NO:……

SCHOOL:……ADM.NO…….. DATE:…….

SIGN:……..

233/3

CHEMISTRY

PAPER 3

(PRACTICALS)

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

MAY/JUNE 2020

TIME: 2 ¼ HOURS

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya National Examination Council (K.C.S.E)

INSTRUCTIONS TO CANDIDATES

(a) Write your name and Index number in the spaces provided in the question paper.

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

(c) Answer ALL questions in the spaces provided on the question paper

(d) You are NOT allowed to start working with the apparatus for the first 15 minutes of the 2 ¼ hours allowed for this paper. This time is to enable you to read the question paper and make sure you have all the apparatus and chemicals that you may need.

(e) All working MUST be clearly shown where necessary

(f) Mathematical tables and silent non-programmed electronic calculators may be used.

FOR EXAMINERS USE ONLY.

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1	22	
2	11	
3	07	
Total Score	40	

This paper consists of 7printed pages.

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

1. You are provided with:

   i) Solution A which is 2.0M hydrochloric Acid (HCl)

   ii) Solution B, which is 0.1 M sodium thiosulphate ($Na_2S_2O_3$)

   iii) Solution C which is alkali of 0.1 M concentration

   You are required to:

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i) Find the effect of change of temperature on the rate of reaction between sodium thiosulphate, solution B, and hydrochloric Acid, solution A.

ii) Prepare a dilute solution of hydrochloric acid, solution A

iii) Write an ionic equation for the reaction between hydrochloric acid, solution A, and the alkali solution C.

Procedure I

Using a measuring cylinder measure 10 cm^3 of solution B into a clean 100cm^3 glass beaker. Place it together with its contents on a white piece of paper marked with a **cross (X**) on it with bold blue print. Measure the temperature of the solution and record it as shown in the table below.

Using a clean measuring cylinder, measure 5cm^3 of solution A. add it to the contents of the beaker containing solution B and immediately start the stop watch. Record the time it will take for the cross (X) to become invisible when viewed above the reaction mixture in the beaker.

Wash the glass beaker used and repeat the experiment at the temperature indicated in the table below by warming sodium thiosulphate solution B to the stated temperature before adding hydrochloric Acid, solution A.

Table I

Experiment number	1	2	3	4	5	6	7	8
Volume of hydrochloric Acid, solution A (1 cm^3)	5	5	5	5	5	5	5	5
Volume of sodium thiosulphate solution B(cm^3)	10	10	10	10	10	10	10	10

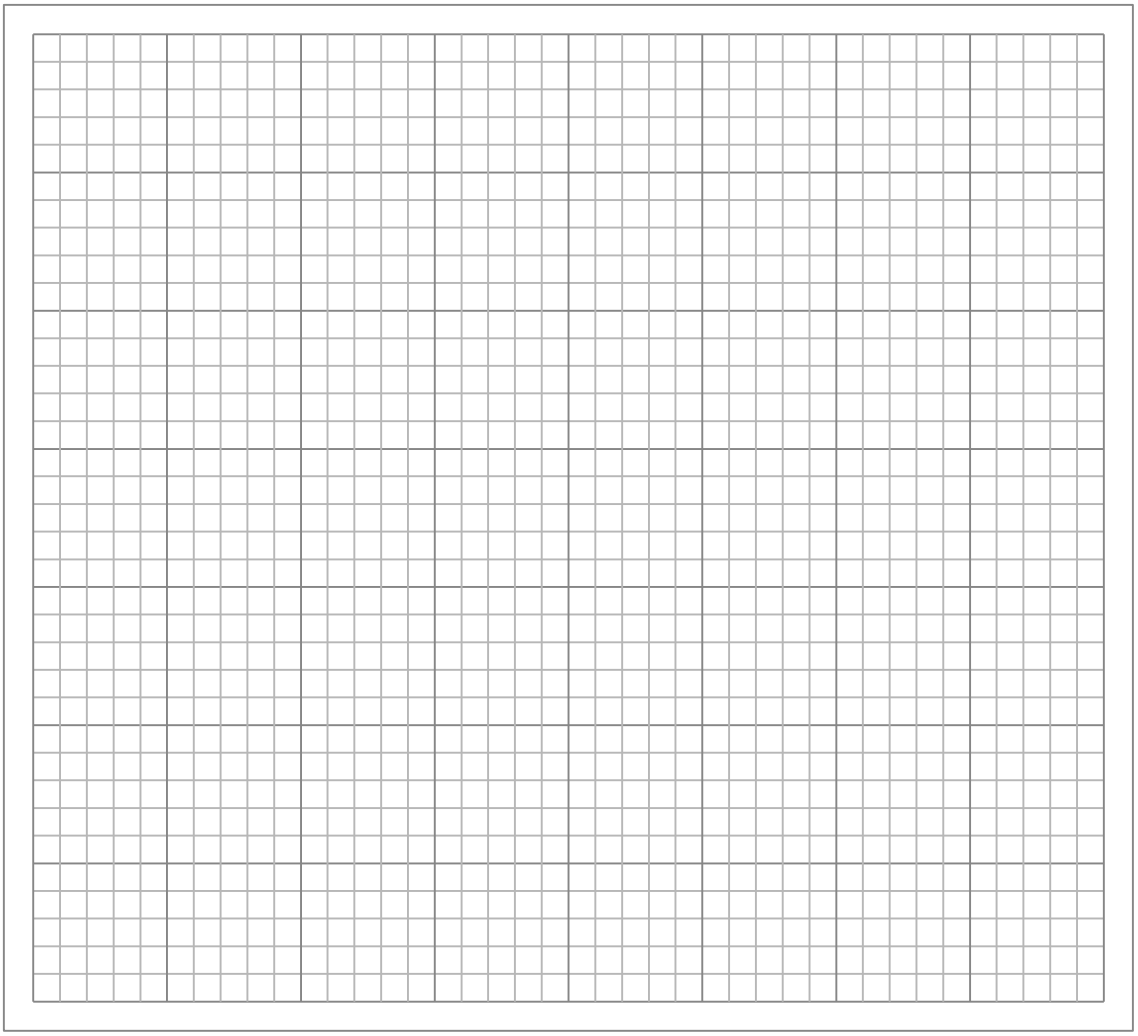
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Temperatuiure (^{0}C) of sodium thiosulphate, solution B	Room temp.	30	35	40	45	50	55	60
Time in seconds								
Reciprocal of time $\left(\frac{1}{t}\right)$ per seconds,S^{-1}								

(6 marks)

a) On the grid provided, plot a graph of reciprocal of time $\left(\frac{1}{t}\right)$ against temperature **(3 marks)**

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b) Comment on the effect of change in temperature on the reaction between sodium thiosulphate, solution B and hydrochloric acid, solution A. (1mark)

……

……

……

c) Use your graph to determine:

i) The time taken by the reaction when the temperature is 58^0C.

(1mark)

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ii) The temperature at which the rate of the reaction is 0.045 sec^{-1}.

(1mark)

Procedure II

Using a clean measuring cylinder, place **12.5 cm^3** of solution A in a 250ml volumetric flask. Add 200 cm^3 of distilled water and shake. Add distilled water upto the mark. **Label this solution D**. Fill a burette with solution D. Using a pipette and pipette filler, place 25.0 cm^3 of solution C into a 250 ml conical flask. Add two drops of phenolphthalein indicator and titrate with solution D until the pink colour disappears.

Record your results in table II. Repeat the titration two more times and complete the table.

Table II

	I	II	III
Final Burette Reading(cm^3)			
Initial Burette Reading(cm^3)			
Volume of solution D (cm^3)			

(5 marks)

d) Calculate:

i) The average volume of solution D used.
(1 mark)

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ii) Moles of hydrochloric Acid, solution D used. (1 mark)

iii) Moles of Alkali solution C used. (1mark)

iv) Determine the reacting mole ratio between the hydrochloric acid, solution D, and the alkali, solution C. (1 mark)

v) Write ionic equation for the reaction between hydrochloric acid, solution A and alkali, solution C. (1mark)

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2. Place all **solid R** provided into a clean boiling tube then add about **10cm^3** of distilled water. Shake
the contents thoroughly then filter. Retain both the filtrate and residue. Divide the filtrate into four

equal portions.

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

Observation	**Inference**
(½ mark)	(½ mark)

(b) To the second portion, add about 2cm^3 of Barium Chloride Solution.

Observation	**Inference**

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(1 mark)	(1 mark)

(c) To the third portion, add 3 drops of lead (ii) nitrate solution provided followed by about $2cm^3$ of 2M nitric (V) acid and shake the mixture.

Observation	**Inference**
(1 mark)	(1mark)

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(d) To the fourth portion, add 3 drops of acidified potassium manganate (Vii).

Observation	**Inference**
(1 mark)	(1 mark)

(e) Transfer all the residue into a clean boiling tube, then add about $2cm^3$ of 2M nitric acid and add about $3cm^3$ of distilled water when all the solid has dissolved. Divide the resulting product into three equal portions.

(i) To the 1st portion add sodium hydroxide solution drop wise until in excess.

Observation	**Inference**
(½ mark)	(½ mark)

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(ii) To the second portion, add ammonia solution drop wise until in excess.

Observation	**Inference**
(½ mark)	(½ mark)

(iii) To the third portion, add a few drops of potassium iodide solution.

Observation	**Inference**
(½ mark)	(½ mark)

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3. You are provided with solid V. You are required to carry out the tests indicated below.
Place a spatulaful of solid V in a boiling tube. Add about 6 cm^3 of distilled water and shake well.

Divide the mixture into four equal portions in test tubes.

a) To the first portion, add two drops of potassium manganate (VII) solution.

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

b) To the second portion, add three drops of bromine water.

Observations	**Inferences**
(I mark)	(I mark)

(c) To the third portion, add all the sodium carbonate.

Observations	**Inferences**

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(l mark)	(l mark)

(d) Test the pH of the solution using universal indicator solution provided.

Observations	**Inferences**
(½ mark)	(½ mark)

NAME……

INDEX NO. ……..……ADM NO……

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CANDIDATES'S SIGNATURE ……CLASS ……

451/1

COMPUTER STUDIES

PAPER 1

MAY/JUNE 2020

2 ½ HOURS

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education (KCSE)

Instructions to Candidates

- Write your Name, Index number and Admission number in spaces provided above.
- This paper consists **TWO** sections.
- Answer **ALL** questions in section **A**.
- Answer Question 16 and any other **THREE** Questions from Section **B**
- All answers MUST be written in the spaces provided on this question paper.

For Examiner's Use Only

Questions	Maximum Score	Actual Score
1-15	40	
16	15	
17	15	
18	15	
19	15	
20	15	
TOTAL		

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Section A (40 Marks)

Answer ALL Questions from this section

SECTION A (40mks)

1. Due to constant errors duringkeying in of voluminous data, the school secretary has been advised to use document readers instead of keyboard entry.

(a) What is a document reader? (1 mark)

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.....

b) Name two examples of documents readers and citing example of areas where each one of them is used. (2 marks)

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.....

2. State two advantages of output displayed on the screen over the printed output on paper. (2 marks)

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.....

3. Peter checked his Laptop specification and noted that it is stated as Duo-Core CPU.

(a) What is the meaning of the term Duo Core? (1 mark)

.....

.....

b) State the characteristics and possible content of the categories of Read Only Memories (ROM) listed below. (2 marks)

(i) PROM

.....

.....

ii) EEPROM

.....

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4.Explain the meaning of solid state storage media giving **TWO** examples of it.(2 marks)

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5. (a) Give reason for accepting the terms of End User License during installation of Software.
(1 mark)

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b) Distinguish between copying and installation of a program (2 marks)

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6. Recent development in computing has seen parallel and serial ports getting replaced by USB ports. Mention **TWO** benefits computer users enjoy from this development. (2 marks)

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7.Give four differences between present day's computers and the older generation of computers
(2 marks)

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8. Give **THREE** reasons why dust is the main threat to computer safety in the laboratory.
(3 marks)

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9. Explain the meaning of Drag and drop skill as applied when using a mouse. (2 marks)

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10. Study section of word processing document below and identify any six formatting features used.



Information Communication Technology (ICT) Sector In Baringo County. 1st Of Its Kind.

Information Communication technology (ICT), plays a significant role in the development of Baringo County and contributes to over 60% of the Kenya's Economy. In this digital era, Baringo County prides itself of a number of globally competitive ICT firms and local startup computer institutions.

The ICT sector is in the process of developing integrated systems to run all the County's affairs, which include and not limited to; fleet management, Revenue collection, e-staff management-records management, among others. This will help fast track daily operations for quick decision making. The County's website *www.baringo.go.ke* is up and running.

All departments are giving information on their current developments to be posted on the website. The ICT center which has been set up at kabarnet with the support of World Best Friends(WBF) and Korean International Cooperation

Flagship[1] Projects in the ICT sector.

- ✓ Networking of Baringo County Government offices (structured cabling)
- ✓ Installation of CCTV cameras/security systems

1. Command to expand the territory

i. .....

ii. .....

iii. .....

iv. .....

v. .....

vi. .....

(4 marks)

11. (a) Explain the term query as used in database (2 marks)

.....

.....

.....

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.....

b) Name and state the function of any **THREE**action queries (3 marks)

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12. **E**xplain the use of computers in health care (3 marks)

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13. Explain four ways in which computers have impacted on production of goods and services.
(2 marks)

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14. Give reasons why vehicle manufacturing industries have adopted the use of computer simulation in design and operation of cars and trucks assembly plants. (2 marks)

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15. You have been appointed to a role of Database Administrator at County Government office in Kabarnet. Outline two responsibilities you are expected to discharge. (2 marks)

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SECTION B (60mks) question 16 compulsory and other three

16 (a) There are several stages taken during program development. State the stage of in which**:** (4 marks)

(i) The likely input, processing activities and the expected output is determined

.....

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(ii)The programmer would check whether the program does as required.

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(iii) The newly developed programis delivered and installed for the user to start using it.

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(iv) The requirements specifications would be written

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b) List **FOUR** functions of a compiler (2 marks)

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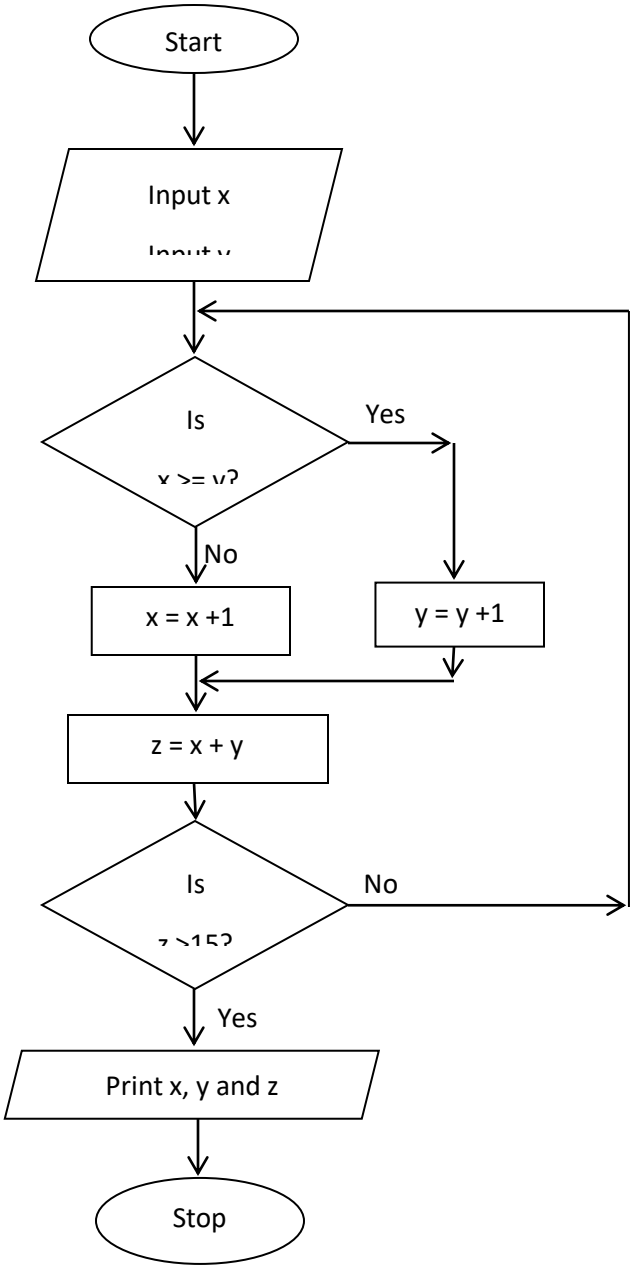
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c) Study the flowchart below and answer questions which follow



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c) What is the output expected if the values of x and y are input as x = 1 y = 2
(3 marks)

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d) Design a pseudo code for the program flowchart above (6 marks)

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17. i) Give THREE reasons why binary system is used in computers (3 marks)

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ii) Convert each of the following number systems: (4 marks)

a) 26.625_{10} to binary

b) $A3B_{16}$ to Octal

iii) Perform the following operations: (2 marks)

$111.11_2 + 111.1_2 - 111.11_2$

iv) Using twos complement, perform the following binary arithmetic leaving your answer in decimal notation $35_{10} - 17_{10}$ (6 marks)

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18. a) List four attributes considered when designing a file in system development

(2 marks)

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b) Baringo county wants to computerize their services. Explain three factors that made them develop an information system (3 marks)

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c) State any three roles of an information system analyst (3 marks)

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d) i) Define the term system implementation (1 mark)

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ii) Differentiate between the parallel change over giving one advantage and one disadvantage (3 marks)

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iii) Outline any three areas to be addressed during system implementation(3 marks)

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19. a) Define the term Data communication (1 mark)

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b) Describe the following items as used in data communication (3 marks)

i) Data signal

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ii) Multiplexing

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iii) Attenuation

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c) Outline any three advantages of Networking (3 marks)

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d) State two advantages of twisted pair cabling (2 marks)

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e) i) With examples, differentiate between physical and logical topology

(3 marks)

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ii) The core principles of data/information security are; confidentiality, Integrity and availability. Explain (3 marks)

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20. (a) Mutai wants to format his laptop so as to install a new operating system.

(i) Which precautions must Mutai take before beginning the format process (2 marks)

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ii) State **THREE** factors which he should consider when selecting an operating system for his laptop. (3 marks)

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iii) Briefly explain how operating system manages the computer Memory (2 marks)

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(b). Why is a desktop publisher preferred in designing documents than a word processor?

(2 marks)

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c) (i) What is a Master page and what is its purpose in Desktop publishing? (2 marks)

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ii) Explain how you would insert header on Desktop Publication. (2 marks)

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d) Explain the DTP terms below (2 marks)

i) Fill

.....

.....

ii) Stroke

.....

.....

NAME……

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INDEX NO. ……ADM NO……

CANDIDATES'S SIGNATURE ……CLASS ……

451/2

COMPUTER STUDIES

PAPER 2

MAY/JUNE 2020

2 ½ HOURS

AMOBI SOFT COPY PUBLISHERS

2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education (KCSE)

Instructions to candidates:

- This paper has **TWO** questions.
- Answer all the questions.
- Type your name and index number at the right-hand corner of each printout.
- Write your name and index number on the CD – ROM provided.
- Write the Name and version of software used in each question attempted in the answer sheet.
- Passwords **should not be used** while saving your work.
- Make a printout of the answers on the answer sheets provided.
- Arrange your print outs and stable them together.
- Hand in all the **printouts** and the CD – ROM provided.
- This paper consists of **4** printed pages.
- Candidates should check the question paper to ascertain that all pages are printed and no questions are missing

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1.(a) Create and enter the data as in the following spreadsheet for form3N students in Bright Star

	A	B	C	D	E	F	G	H	I
1	**Name**	**English**	**kiswahili**	**maths**	**Biology**	**pyhsics**	**C/Studies**	**Total**	**Average**
2	Sally	60	76	42	76	66	77		
3	Jane	56	45	53	65	45	72		
4	Philip	65	58	47	64	65	46		
5	George	56	66	30	85	48	60		
6	Mary	74	68	59	83	36	57		
7	James	80	72	45	74	54	70		
8	Tina	78	55	37	71	63	56		
9	Subject average								

School in Baringo County and save it as BSSBC.(14marks)

Using the above information,

(b)Enter appropriate formulas to compute the Average mark in each subject
(3 marks)

(c)Enter the total marks for each student (3 marks)

(d)Enter the Average marks for each student
(3 marks)

(e) Format the table as follows:

. Set the direction of the labels to 45 degrees
(2marks)

.Centre vertically all the records (2 marks)

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(f)Create an embedded bar chart for average mark per subject (8 marks)

(g) Add a column of marks for Chemistry and enter the following data for each student :78,56,67,81,72,68,53 starting from Sally down to Tina (4 marks)

(h)Filter the data using the Biology column and display only those rows with marks less than 80 (6 marks)

(i) Rank the students starting from those with the highest total mark (3 marks)

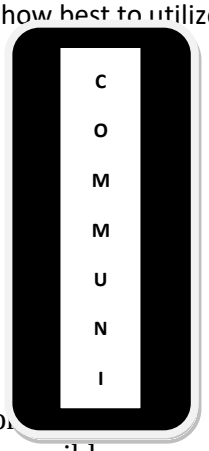
(j) Print the worksheet, and the graph (2 marks)

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2. **(A)** Type the following passage using a word processing package and save as Network software. Answer the questions that follow.
(26 marks)

NETWORK SOFTWARE

A Computer netwok is a group of computers and other devices connected together by a suitable media. The computer networks have evolved from simple linking of computers on a common transmission media to highly managed and optimized data and information transfer systems. This means that apart from data comunications, the focus is now squarely on how best to utilize network resources.



Network software can be classified into two main groups namely:

1. Network operating systems
2. Network protocol

Advantages of computer Networks

- Multiple users can communicate, exchange and share information
- Resource sharing including program, data base, hardware etc. is possible

By definition comunications refers to the transfer of information from one place to another between two individuals using agreed symbols, signs or even human behavior such as nodding. Exchange of information relies on a communication system to convert, amplify and send signal through a common medium. Message, Sender, Medium and Receiver are the essential components of communication systems.

If a system is extended by cascading more communication systems, it is called networked systems.

In case communication involves the sending of information over a significant distance, it must use telecommunications as an aid. By definition, telecommunications refers to the transmission of information between distant locations by some electromagnetic means.

Data communications is defined as the interchange and processing of encorded (digital that is, 1s and 0s) information between distant locations using telecommunications.

Data communications is regarded as the collection and distribution of the electronic representation of information which can be text, voice, graphics or image, from and to remote computing facilities. As information can only be carried to the remote site provided that the information carrier supports that particular type of data transmission, information may undergo

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data conversion processes if the nature of data signal is incompatible with the characteristics of the signal carrier.

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PROTOCOLS

This are set of rules and procedures that govern communication between two different device or people . In computer networking, protocols refer to the rules and technical procedures that govern communication between different computers.

How protocol work

The data transmission process over network has to be broken down into discrete systematic steps. At each step certain action takes place and each steps has its own procedures as defined by network protocol. The co-ordination of protocols must be co-ordinated so that there are no conflicts.

COMPARISON AMONG DIFFERENT TOPOLOGIES

Below are the advantages and disadvantages of various LAN topologies.

Type	Advantage	Disadvantage
Star Topology	Simple and easy to identify fault	Failure of central node causes disaster
Mesh Topology	Immunity to bottleneck and failure problems	Expensive to provide an alternative routing
Bus Topology	Simple to control traffic flow	Only a single communications channel is required to service all the nodes
Ring Topology	Simple to implement	One channel is required to service all

(B) :

i. Centre and double underline the title Computer Software (2 marks)

ii. Convert the paragraphs beginning with "By definition communications….." to the end Into hanging indent. (4 marks)

iii. Move the paragraph under protocols and paste after the table (2 marks)

iv. Insert and center your name, index number and the name of your school as a footer so as to appear ***© name ,index number, and the name of your school***. (4 marks)

v. Find and telecommunications and replace with Telephones. (3marks)

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vi. Insert a picture of a computer and wrap the picture behind the table
(4 marks)

vii. Spell check your data for grammatical errors (1 mark)

viii. Save the data as computer communication
(2 mks)

ix. Print the document network software and computer communication (2marks)

313/2

C.R.E

PAPER 2

MAY/JUNE 2020

TIME: 2½ hours

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education

CHRISTIAN RELIGIOUS EDUCATION

Paper 2

Instructions to Candidates

*(a) Answer **Any five** questions.*

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1. (a) Outline Nathan's prophecy concerning the messiah. (6Marks)
   (b) Describe ***seven*** activities that took place the night Jesus was born (7Marks)
   (c) Identify ***seven*** ways in which Christians celebrate the birth of a child (7Marks)

2. (a) Give ***seven*** aspects of John the Baptist that Jesus praised (7Marks)
   (b) Identify the challenges that John the Baptist faced in his ministry (7Marks)
   (c) Give ***six*** reasons why Christians find it difficult to apply the teachings of John the Baptist in their lives (6Marks)

3. (a) Describe the incident when Jesus was questioned about marriage and resurrection in Luke 20:27-38 (7Marks)
   (b) Outline the incident when Jesus went to pray with his disciples at Mt.Olives (7Marks)
   (c) State ***six*** ways in which Christians prepare for the coming of the Kingdom of God (6Marks)
4. (a) Explain the unity of believers as illustrated in the image of the church (5Marks)
   (b) Give ***Eight*** ways in which the Holy Spirit is manifested in the Church today (8Marks)
   (c) Identify **seven** ways of promoting unity with Christian community in Kenya today (7Marks
5. (a) Give ***five*** importance of Christian Ethics (5Marks)
   (b) State Christian virtues that enhance the promotion of a just society (7Marks)
   (c) Outline ***Eight*** causes of domestic violence in Christian families (8Marks)

6. (a) State ***seven*** practices that promote law, order and Justice in traditional African society (7Marks)
   (b) Give ***seven*** causes of social disorder in Kenya today (7Marks)
   (c) Explain how criminals can be rehabilitated by the Church (6Marks)

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2020 TOP EXAMINERS' MOCK SERIES 1

CHRISTIAN RELIGIOUS EDUCATION

PAPER ONE

2 ½ HOURS

C.R.E 313/1

INSTRUCTIONS TO CANDIDATES

- **ANSWER ANY FIVE QUESTIONS IN THE ANSWER SHEET PROVIDED.**

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

1. a) Describe the fall of man in Genesis chapter 3.
(7Mks)
b) Explain the differences between the Biblical and the Traditional African concept of Evil.
(7Mks)
c) State six ways in which Christians can avoid God's punishment.
(6Mks)

2. a) Describe the sealing of the Sinaic Covenant in Exodus 24: 1 – 8
(8Mks)
b) Explain the Israelites new understanding of God as taught to them by Moses
(7Mks)
c) State five ways in which Christian leaders demonstrate their obedience to God
(5Mks)

3. a) Explain four ways in which Prophet Elijah fought against moral corruption among the people of Israel. I Kings 21.
(7Mks)
b) Outline seven reasons why Elijah faced danger and hostility as a prophet of God in Israel.
(7Mks)
c) State six reasons why it has been difficult to fight the evil of Bribery and corruption in Kenya today.
(6Mks)

4. a) Explain the role of prophets in the Old Testament.
(7Mks)
b) State the teachings of Prophet Amos about the Day of the Lord.
(7Mks)
c) Identify six forms of hypocrisy in the church in Kenya.
(6Mks)

5. a) Outline the contents of Jeremiah's letter to the exiles in Jeremiah 29.1 – 14
(7Mks)
b) Explain four factors that led Nehemiah to engage in prayer.
(8Mks)

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c) Identify six ways in which Christians can help the suffering in the society.
(6Mks)

6. a) Explain Eight rituals connected with marriage in the Traditional African Society.
(8Mks)

b) State five changes that have taken place in the Traditional African understanding of widows.
(5Mks)

c) Identify seven factors that have affected the role of Religious specialists in African Communities.
(7Mks)

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GEOGRAPHY
Paper 2
MAY/JUNE 2020
Time: 2¾ hours

AMOBI SOFT COPY PUBLISHERS

2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education
312/2
Paper 2
GEOGRAPHY

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.*

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

SECTION A

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

1. (a) Name ***two*** mining methods used in extracting Gold in South Africa. (2 marks)

   (b) Describe how dredging method of mining is used in Lake Magadi. (3 marks)

2. (a) State ***three*** reasons why it is important to introduce drought resistant crops as a method of land reclamation in Kenya. (3 marks)

   (b) Give ***two*** benefits of Zuider Zee project. (2 marks)

3. (a) State ***three*** physical factors which favour fishing in the North West pacific fishing grounds. (3 marks)

   (b) Name ***two*** methods used in demersal fishing. (2 marks)

4. (a) Name ***two*** navigable rivers in Africa. (2 marks)

   (b) State ***three*** recent developments that have been taken by the Kenyan government to improve communication. (3 marks)

5. (a) Give ***two*** types of environmental hazards. (2 marks)

   (b) State ***three*** significance of conserving the environment. (3 marks)

SECTION B

*Answer question **6** and any other **TWO** questions from this section.*

6. Study the photograph below and use it to answer question (a).

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(a) (i) Name the type of photograph shown above. (1 mark)

(ii) Identify ***one*** community in West Africa that practice nomadic pastoralism. (1 mark)

(iii) What time of the day was the photograph taken? (1 mark)

(iv) Describe the characteristics of the vegetation shown on the photograph. (4marks)

(v) Draw a rectangle measuring 15cm and 10cm to represent the area covered by the photograph. On it, sketch and label ***five*** features shown on the photograph. (6 marks)

(b) (i) Distinguish between nomadic pastoralism and transhumance. (2 marks)

(ii) State ***four*** characteristics of nomadic pastoralism. (4 marks)

(c) Explain ***three*** ways that the county government of Turkana can improve livestock farming. (6 marks)

7. (a) (i) Name ***three*** indigenous hardwood trees in Kenya. (2 marks)

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(ii) Give ***two*** forest reserves found in the coastal region of Kenya. (2 marks)

(iii) State ***three*** ways in which the clearing of forests has affected the natural environment in Kenya. (3 marks)

(b) Describe ***five*** challenges experienced in the exploitation of tropical hardwood forests in Africa. (5 marks)

(c) Compare softwood forests in Kenya and Canada under the following sub-headings:

- Harvesting period. (2 marks)
- Transportation. (2 marks)
- Distribution of the forests. (2 marks)
- Marketing of forestry products. (2 marks)

(d) State **five** difficulties that African countries face in the conservation and management of forests? (5 marks)

8. (a) (i) Distinguish between renewable and non-renewable sources of energy. (2 marks)

(ii) State ***three*** advantages of biomass as a source of energy. (2 marks)

(b) (i) Apart from the HEP projects in Kenya and Uganda, name ***three*** other HEP projects in Africa. (3 marks)

(ii) State ***three*** factors that have favoured the establishment of HEP projects in Kenya. (3 marks)

(c) (i) What is energy crisis? (2 marks)

(ii) State ***four*** ways in which energy crisis has impacted on developing countries. (4 marks)

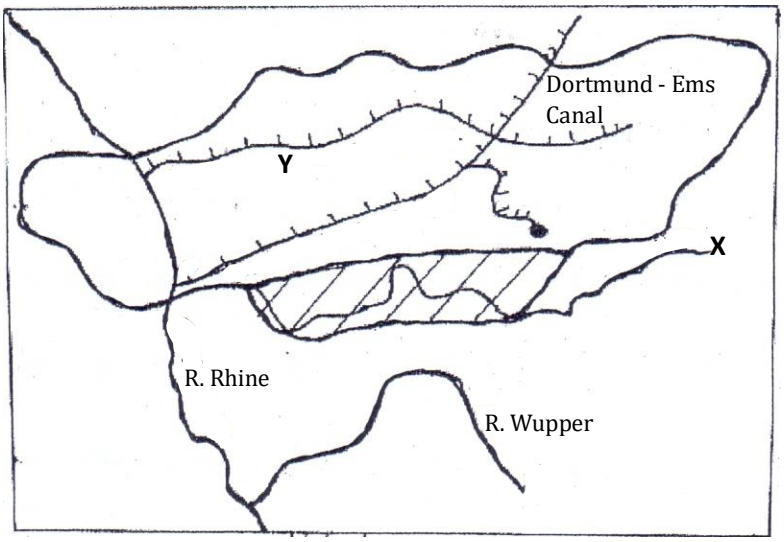
(d) Explain ***four*** measures the Kenya Government has taken to manage and conserve the energy. (8 marks)

9. (a) (i) What are Agricultural food processing industries? (2 marks)

(ii) Name ***three*** Agricultural non-food processing industries. (3 marks)

(b) Study the map of the Ruhr industrial region and use it to answer the questions that follow.

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes



(i) Name the River marked **X**. (1 mark)

(ii) Name the Canal marked **Y**. (1 mark)

(iii) Apart from iron and steel industries, name ***three*** other industries in the Ruhr region. (3 marks)

(iv) Explain ***four*** physical factors which led to the growth of the Iron and Steel industry in the Ruhr region. (8 marks)

(c) You intend to carry out a field study on vehicle assembly in Thika Town.

(i) Apart from content analysis, give ***two*** other methods of data collection. (2 marks)

(ii) State ***two*** advantages of library research in data collection. (2 marks)

(iii) State ***three*** follow-up activities after the field work. (3 marks)

10. (a) (i) Name ***two*** types of settlements patterns. (2 marks)

(ii) Apart from CBD (Central Business District), give ***three*** other functional zones of a town. (3 marks)

(iii) State ***four*** characteristics of the Central Business District (CBD) of a town. (4 marks)

(b) Explain ***four*** factors which have contributed to the growth of Thika as an industrial centre. (8 marks)

(c) (i) Identify ***two*** similarities between the city of Nairobi and Newyork. (4 marks)

(ii) Give ***four*** negative effects of urbanization. (4 marks)

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

312/1
GEOGRAPHY
Paper 1
MAY/JUNE 2020
Time: 2¾ hours

AMOBI SOFT COPY PUBLISHERS

2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education
312/1
Paper 1
GEOGRAPHY

INSTRUCTIONS TO STUDENTS

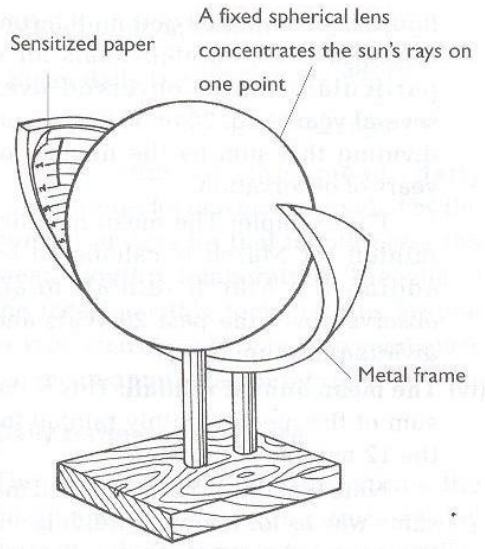
- *This paper has **two** sections **A** and **B***
- *Answer **ALL** the questions in section **A**. In section **B** answer questions **6** and any other **TWO** questions.*

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

SECTION A

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

1. The diagram below shows a weather instrument. Use it to answer the question below.



(a) Identify the weather instrument shown above. (1 mark)

(b) Describe how the instrument is used to measure the weather conditions of the day. (4 marks)

2. (a) What are hypabyssal rocks? (2 marks)

(b) State ***three*** characteristics of sedimentary rocks. (3 marks)

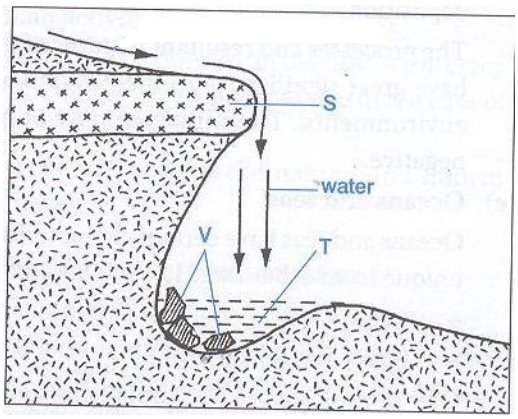
3. (a) Give ***two*** examples of features resulting from fissure eruption. (2 marks)

(b) With aid of a diagram, describe how a basic lava dome is formed. (3 marks)

4. (a) State ***three*** conditions necessary for a river capture to occur. (3 marks)

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

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Name the parts labeled E and F. (2 marks)

5. (a) Differentiate between a soil profile and a soil catena. (2 marks)

(b) Give ***three*** ways in which soil is degenerated. (3 marks)

SECTION B

*Answer question **6** and any other **TWO** questions from this section.*

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

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

(ii) Give the height of Burende Hill on grid square 3135. (2 marks)

(iii) Identify ***two*** man made features on grid square 2431. (2 marks)

(iv) Measure the distance of the All Weather loose surface road from the junction at Odiado southwards to Ukwala. (Give your answer in kilometers).

(b) (i) Draw a cross section from grid reference 260330 to 340330. Use a vertical scale of 1cm to represent 40m. On it mark and name; (8 marks)

- Odiodo Hill.
- All weather road loose surface
- A river

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

(ii) Are the two points intervisible? Give a reason. (2 marks)

(c) Citing evidence from the map, explain ***three*** factors that have influenced the distribution of settlement in the area covered by the map. (6 marks)

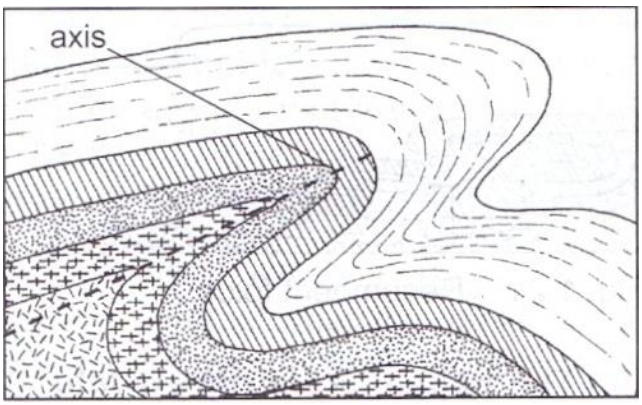
7. (a) (i) What is folding? (2 marks)

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(ii) Name ***three*** fold mountains formed during the Alpine Oregeny. (3 marks)

(b) State ***four*** characteristics of a folded landscape. (4 marks)

(c) The diagram below shows a type of fold.



(i) Name the type of fold. (1 mark)

(ii) Describe how the above type of fold is formed. (7 marks)

(d) Explain ***four*** effects of fold mountains on human activities. (8 marks)

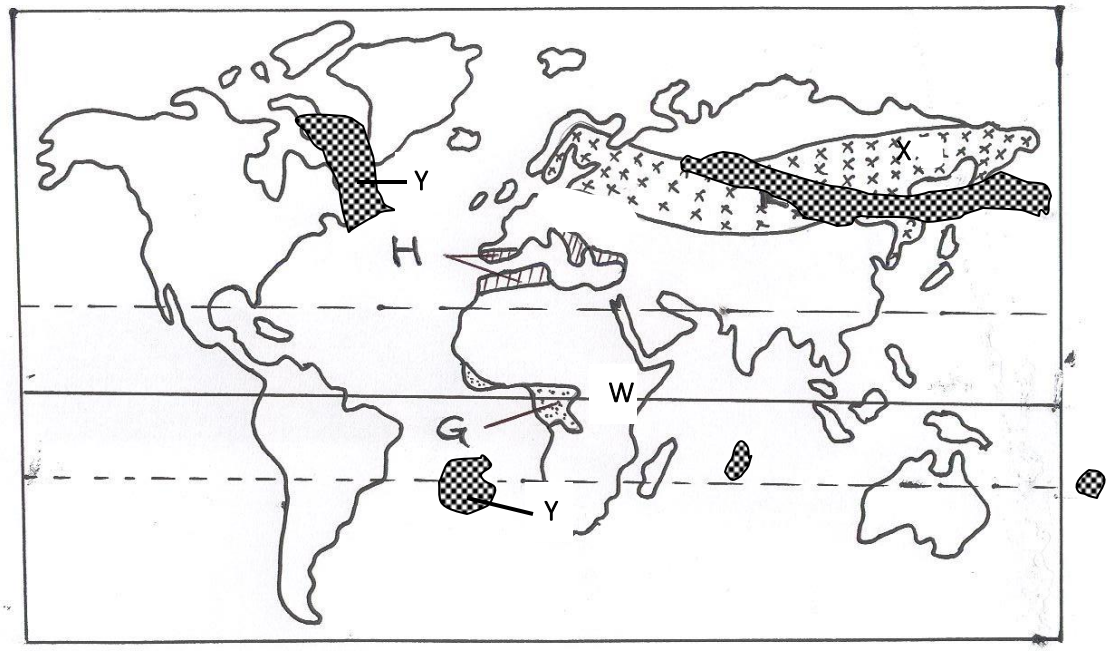
8. (a) (i) What is vegetation? (2 marks)

(ii) Describe the variation of vegetation types along a mountain slope from the bottom to the top. (5 marks)

(b) Explain ***two*** ways in which relief influences the distribution of vegetation. (4 marks)

(c) Study the world map below and answer the questions that follow:

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(i) Name the vegetation types labeled **W, X** and **Y.** (3 marks)

(ii) Explain ***three*** ways in which desert vegetation has adapted to the climatic conditions of the region it is found. (6 marks)

(d) Students are planning to undertake a field study in a forest near their school. They are required to prepare a working schedule.

(i) What is a working schedule? (2 marks)

(ii) Why is it important for the students to prepare a working schedule? (3 marks)

9. (a) (i) Apart from rainfall, list ***two*** other forms of precipitation. (2 marks)

(ii) State ***three*** factors that influence the occurrence of surface run off. (3 marks)

(b) (i) What is a lake? (2 marks)

(ii) Give ***five*** reasons why some lakes have fresh water. (5 marks)

(iii) State ***three*** characteristics of lakes formed due to faulting. (3 marks)

(c) (i) Describe how lake Victoria influence the weather of the surrounding lands. (4 marks)

(d) Give ***two*** factors which determine the size of a lake. (2 marks)

10. (a) (i) Give ***two*** sources of mineral salts in Ocean water. (2 marks)

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(ii) Describe ***three*** processes involved in marine erosion. (6 marks)

(b) Using well labeled diagrams, describe how a stack is formed. (6 marks)

(c) Describe ***three*** ways in which Islands are formed. (6 marks)

(d) State ***five*** ways in which Kenya benefits from her coastal features. (5 marks)

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311/1

HISTORY AND GOVERNMENT

PAPER 1

MAY/JUNE 2020

TIME: 2½ hours

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education

HISTORY AND GOVERNMENT

Paper 1

Instructions to Candidates

*(b) This paper consists of **three** sections **A, B** and **C.***

*(c) Answer **all** questions in section **A, three** from Section **B** and **two** from Section **C.***

(d) Answers to all the questions must be written legibly in the answer booklet provided.

*(d) **This paper consists of three printed pages***

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

(f) Candidates should answer the questions in English

SECTION A (25 MARKS)

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

Answer all questions in this section in the answer booklet provided

1. Identify **one** source of Kenyan history. (1 mark)
2. State the basic political unit of the Kenyan societies during the pre-colonial period. (1 mark)
3. Name the cradle land of the Eastern Cushites. (1 mark)
4. Identify **two** religious functions of the Orkoiyot among the Nandi. (2 marks)
5. Give **two** roles of the Portuguese captains at the coast. (2 marks)
6. Identify **two** importance of the Kenyan constitution. (2 marks)
7. Name the treaty signed by the British to colonize Kenya. (1 mark)
8. State **one** oath administered during the Agiriama resistance. (1 mark)
9. Give **two** reasons why the British made limited attacks on the Somali. (2 marks)
10. Give **two** grievances of the Asians that led to the Devonshire White paper. (2 marks)
11. State the **major** result of the Lyttelton constitution of 1954 in Kenya. (1 mark)
12. Identify **two** reasons why the Africans were denied equal educational opportunities with other races during the colonial period. (2 marks)
13. Give **one** reason why the Africans were banned from growing cash crops before 1954. (1 mark)
14. State **two** roles of African elected members organization (AEMO) in the struggle for independence. (2 marks)
15. Give the **main** role of opposition parties in Kenya. (1 mark)
16. Which national philosophy was adopted at independence to promote social justice in Kenya? (1 mark)
17. In what **two** ways has the Kenyan government attempted to promote cultural heritage? (2 marks)

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

SECTION B (45 marks)

Answer any three questions from this section in the answer booklet provided

18. (a) Identify **five** economic activities of the Maasai during the pre-colonial period. (5 marks)

(b) Describe the political organization of the Agikuyu during the pre-colonial period. (10 marks)

19. (a) State **five** reasons why the Oman Arabs were interested in establishing their rule on the Kenyan coast. (5 marks)

(b) Explain **five** effects of slave trade on the African communities in Kenya. (10 marks)

20. (a) State **five** demands made by the Taita Hills Association (THA) to the British colonial government in Kenya. (5 marks)

(b) Explain **five** roles played by women in the struggle for independence in Kenya. (10 marks)

21. (a) Identify **five** categories of public land in Kenya. (5 marks)

(b) Discuss **five** factors which have undermined the provision of health services by the Government of Kenya. (10 marks)

SECTION C (30 marks)

Answer any two questions from this section in the answer booklet provided

22. (a) State **three** rights of minorities and marginalized groups in Kenya. (3 marks)

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

(b) Describe **six** factors that tend to limit national unity in Kenya. (12 marks)

23. (a) Give the composition of the Senate in Kenya. (3 marks)

(b) Explain **six** functions that the Constitution of Kenya gives to the President. (12 marks)

24. (a) Identify **three** factors that are addressed in the National Budget in Kenya. (3 marks)

(b) Explain **six** ways in which the County Governments in Kenya controls the use of public finance. (12 marks)

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

PAPER 2

MAY/JUNE 2020

TIME 2 ½ HOURS

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya certificate of secondary Education (K.C.S.E)

HISTORY AND GOVERNMENT

PAPER 2

Instructions to candidates

- ***a)*** *This paper consists of* ***three*** *sections:* ***A, B*** *and* ***C.***
- ***b)*** *Answer* ***all*** *the questions in section A,* ***three*** *questions from section* ***B*** *and* ***two*** *questions from section* ***C.***
- ***c)*** *Answers to* ***all*** *questions must be written in the answer booklet provided.*
- ***d)*** ***This paper consist of three printed pages***
- ***e)*** ***Candidates should check the question paper to ensure that all pages are printed as indicated and that no questions are missing..***
- ***f)*** ***Candidates should answer the questions in English***

SECTION A (25 marks)

Answer all the questions in this section in the answer booklet provided.

1. Give **two** unwritten sources of information on History and Government. (2 marks)

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2. Give **two** factors which led to the growth of urban centers in Greece. (2 marks)

3. Identify the **main** reason for the development of early agriculture in Egypt in the 19th century. (2 marks)

4. Identify the **greatest** contribution of Michael Faraday in the field of science. (1 mark)

5. Mention **two** political effects of the Industrial Revolution in Europe. (2 marks)

6. State **two** roles played by missionaries in the process of colonization. (2 marks)

7. Who was the first president of the FRELIMO Movement? (1 mark)

8. Give **one** function of the trusteeship council of the United Nations Organization. (1 mark)

9. Name **one** legislative house in the United States of America. (1 mark)

10. Identify **two** urban centers that developed during the Trans-Atlantic slave trade in West Africa. (2 marks)

11. Give **two** reasons why there was a military stalemate on the Western Front during the First World War. (2 marks)

12. Identify **one** political effect of the development of iron technology in Africa. (1 mark)

13. Mention **two** Mwari cults of the Shona society. (2 marks)

14. Give the **main** reason why the British did not support Samori Toure during the Franco-Mandika War. (1 mark)

15. Identify **one** place in Africa where the cold war was witnessed. (1 mark)

16. State **one** condition that a country should fulfill in order to become a member of the Non-aligned Movement. (1 mark)

17. Identify **one** parliamentary duty of the Monarch in Britain. (1 mark)

SECTION B (45 marks)

*Answer any **three** questions from this section*

18. (a) State **five** reasons why hunting of wild animals was mainly a group activity

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during the stone age period. (5 marks)

(b) Explain the impacts of early agriculture in Mesopotamia. (10 marks)

19. (a) Identify **three** uses of coal during industrialization revolution. (3 marks)

(b) Explain **six** obstacles to industrialization in Brazil. (12 marks)

20. (a) Identify **three** uses of coal during industrialization revolution. (3 marks)

(b) Explain **six** obstacles to industrialization in Brazil. (12 marks)

21. (a) State **five** roles played by religion in the maji maji uprising of 1905-1907. (5 marks)

(b) Explain **five** reasons why Samori Toure was finally defeated by the French in the Mandika resistance. (10 marks)

SECTION C (30 marks)

*Answer **two** questions from this section*

22. (a) State **three** economic activities of the Baganda during the pre-colonial period (3 marks)

(b) Describe the political organization of the Asante during pre-colonial period (12 marks)

23. (a) Name **three** agencies of the United Nation organization which are Concerned with world economic development (3 marks)

(b) Explain **six** political results of the second world war (12 marks)

24. (a) State **five** aims of Pan-Africanism. (5 marks)

(b) Explain **five** reasons why Pan-African Movement had not established itself on the African continent before 1945. (10 marks)

441/3
HOME SCIENCE
FOODS AND NUTRITION
Paper 3

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

(PRACTICAL)
MAY/JUNE 2020
$1^{3}/_{4}$ Hours.

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education.

PLANNING SESSION : 30 Minutes

PRACTICAL TEST SESSION : 1 $^{1}/_{4}$ Hours.

INSTRUCTIONS TO CANDIDATES.

- Read the test carefully.
- Write your name and index number on every sheet of paper used.
- Textbooks and recipes may be used during the planning session as reference
- materials.
- You will be expected to keep to your order of work during the practical session.
- You are allowed to take away **ONLY** your reference materials at the end of the planning
- Session
- You are not allowed to bring additional notes to the practical session.

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

This paper consists of 2 printed pages.
Candidates should check the question paper to ascertain that all the pages are printed as
indicated and no questions are missing.

Turn Over.

THE TEST.

You are left with your cousin who has been discharged from hospital. Using all the ingredients provided below, prepare, cook and present a two course lunch for both of you

Ingredients.

Liver/Chicken/Minced beef.
Rice/Green bananas/Irish potatoes.
Green leafy vegetables.
Sugar
Green Pepper.
Onions
Tomatoes
Carrots
Cooking fat/oil
Salt
Fruits in season

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

Use separate sheets of paper for each task listed below and a carbon paper to make duplicate copies. Then proceed as follows:-

(i) Identify the food items and write down their recipes.

(ii) Write down-your order of work.

(iii) Make a list of food stuffs, materials and equipments you will require.

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PAPER 2

PRACTICAL

CONFIDENTIAL

MAY/JUNE 2020

Each school is to provide the following to each candidate to facilitate the practicals.

1. **Light weight cotton material 75cm long by 90cm wide.**
2. **Thread to match the fabric.**
3. **1cm diameter flat button.**

HOMESCIENCE PAPER 2

NAME : …….. INDEX NO ……. CLASS ……

STUDENT'S SIGNATURE: ……..

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

DATE: ……..

441/2

Clothing construction

July/August 2016

Time $2^1/_2$ Hours

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2020 TOP EXAMINERS' MOCK SERIES 1

ASSESSMENT EXAMINATIONS

KENYA CERTIFICATE OF SECONDARY EDUCATION

CLOTHING CONSTRUCTION

PAPER 2

PRACTICAL

$2^1/_2$ HOURS

This paper consists of 4 printed pages Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

Turn over

A pattern of child's dress bodice is provided. You are advised to study the sketches, the question paper and the layout before you begin the test.

1. Materials provided

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A Front bodice

B Sleeve

D Midriff

E Front neck facing

F Back neck facing

G Sleeve opening facing

H Sleeve binding

I Collar

2. Light –weight plain cotton fabric 75cm long by 90cm wide.
3. 1cm diameter flat button
4. Sewing thread to match the fabric.

The test

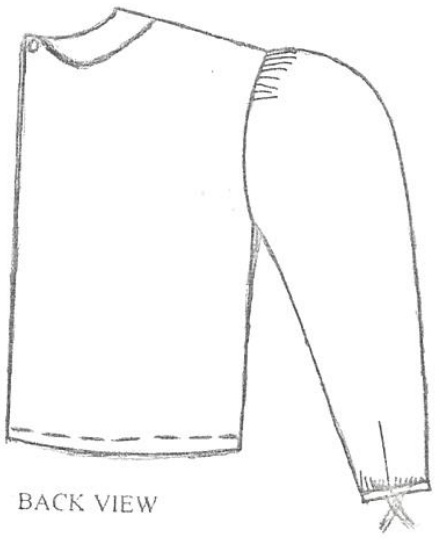
Using the materials provided, cut out and make the right half of a child's dress bodice as shown in the sketch below to show the following.

a) The making of the inverted pleat on the front bodice.
b) The attachment of the lined, interfaced midriff to the front bodice.
c) The working of a shoulder seam using double stitched seam.
d) The neatening of the back opening facing.
e) The joining of the front and back neck facings at the shoulder.
f) Preparation of the two piece collar.
g) Attachment of collar using the facings.
h) The making of the side seam using French seam.
i) The preparation of the faced sleeve opening.
j) The making of French seam at the underarm.
k) The binding of the lower edge of the sleeve leaving the binding to extend on both ends.
l) Attachment of the sleeve to the bodice. DO NOT TRIM THE ARM HOLE SEAM.
m) Attaching the flat button at the back bodice opening.

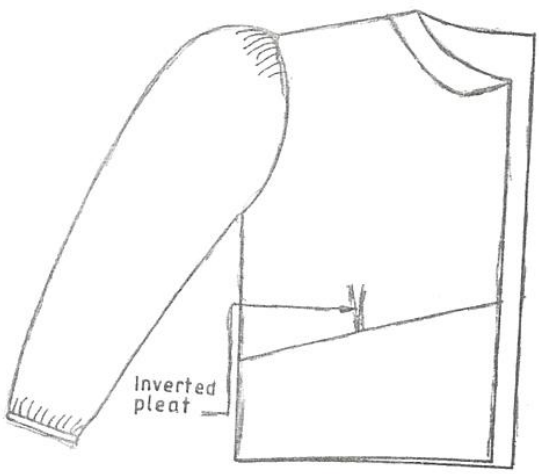
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n) Working of the solid hem at the lower edge of the dress. Neaten the back side with even tacking and the front with slip hemming.

At the end of the examination, firmly sew onto your work, on a single fabric, a label bearing your name and Index number. Remove the needle and pins from your work, then fold your work carefully and place it in the envelope provided. Do not put scraps of materials in the envelope.



BACK VIEW



FRONT VIEW

CHILD'S DRESS BODICE

Name……Index No. ……/…….

School …….. Sign……Date…….

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441/1
HOMESCIENCE
PAPER 1
(THEORY)
MAY/JUNE 2020
2 ½ HOURS

AMOBI SOFT COPY PUBLISHERS

2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education (K.C.S.E)
HOMESCIENCE
PAPER 1
(THEORY)
2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

- Write your name, index number, school and date in the spaces provided above.
- This paper consists of 3 sections: A, B and C.
- Answer all the questions in section A and B and any two questions from section C.
- Answers to all questions MUST be written in the spaces provided in this booklet.
- Candidates may be penalized for not following the instructions given in this paper.
- Candidates 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	Question	Maximum score	Candidate's score
A		40	
B		20	
C		20	
		20	
	Total score	100	

SECTION A (40 MARKS)

1. State **two** ways in which a cook can infect food with germs.
(2marks)

_____

_____

_____

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_____

_____

2. Give **three** precautionary measures to take when carrying out household chores to avoid straining the back
   (2marks)

_____

_____

_____

_____

_____

3. Give **two** symptoms of tapeworms
   (1mark)

_____

_____

_____

_____

_____

4. Identify **two** areas of a garment where topstitching is done
   (2marks)

_____

_____

_____

_____

_____

5. Give **three** precautionary measure an expectant woman should observe to avoid low birth weight of a baby
   (3marks)

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_____

_____

_____

_____

_____

6. Give **six** agencies that deal with consumer protection in Kenya
(3marks)

_____

_____

_____

_____

_____

7. Distinguish between a raglan and Kimono sleeves.
(1mark)

_____

_____

_____

_____

_____

8. State **four** precautions to take to prevent bedsores when taking care of a sick person at home.
(2marks)

_____

_____

_____

_____

_____

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9. Give **three** ways of avoiding impulse buying.
(3marks)

_____

_____

_____

_____

_____

10. State **two** ways to store dressmaker's pins.
(1mark)

_____

_____

_____

_____

_____

11. Name **two** suitable fastenings to fix on edge to edge opening
(1mark)

_____

_____

_____

_____

_____

12. What is the cause of wear and tear in garments
(2marks)

_____

_____

_____

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_____

_____

13. Differentiate between alarca'te and table de hort menus
(2marks)

_____

_____

_____

_____

_____

14. Write the following abbreviations in full
(2marks)

(i) OPV_____
_____

(ii) HIV_____
_____

(iii) BCG_____
_____

(iv) TBA_____
_____

15. Give **two** uses of scrape materials in needlework
(2marks)

_____

_____

_____

_____

_____

16. Give **two** reasons for storing fish away from milk and dairy products.
(2marks)

_____

_____

_____

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_____

_____

17. Give **two** reasons for using wax polish
(2marks)

_____

_____

_____

_____

_____

18. State **three** qualities of baking flour
(3marks)

_____

_____

_____

_____

_____

19. Highlight **four** causes of decreased breast milk in nursing mothers
(2marks)

_____

_____

_____

_____

_____

20. Give **two** advantages of food preservation.
(2marks)

_____

_____

_____

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_____

_____

21. Give **two** reasons for removing stains on clothes / house hold articles before washing.

(2marks)

_____

_____

_____

_____

_____

SECTION C (20 MARKS)

This is a compulsory question.

22. Your mother is away and has asked you to do a few jobs in the house as well as take care of your 6month old brother. Describe how to:
    (i) Wash a soiled baby Napkin
    (9marks)
    (ii) Thorough clean a neglected hurricane lamp
    (7marks)

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(iii) Clean a discolored plastic baby bottle
(4marks)

SECTION C (40 MARKS)
Choose any two questions from this section.

23. (a) Colour is very important in Home Economics especially in clothing, food and Home decoration. Give three reasons why this is so.
(6marks)
(b) With the aid of well labeled diagram, explain how to work out a machine fell seam (7marks) (c) Outline four ways of managing fainting
(4marks)
(d) Highlight three advantages of using credit cards
(3marks)

24. (a)(i) Explain briefly the value of checking for the following in the blood during antenatal clinic
(3marks)
(a) Complete blood count
(b) Blood group and Rh typing
(c) Hepatitis B screen

(ii) Explain any two causes of malnutrition during weaning
(4marks)

(b) Give the preparations done on the following during clothing construction.
(6marks)

(i) Drafted paper patterns

(ii) Fabric before cutting

(c) Outline seven practices necessary for maintaining a healthy scalp.
(7marks)

25. (a) Using diagrams, describe the preparation and attaching of a round bottom patch pocket in readiness for attachment.
(7marks)

(b) Explain three effects of adding sodium bicarbonate on a plain cake mixture (6marks)

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(c) Outline six ways of ensuring a child gets satisfaction from playing
(3marks)

(d) Highlight any four guidelines a consumer should follow in order to get the best value for his/her money from goods and services.
(4marks)

102/1
KISWAHILI
Karatasi ya 1
INSHA
MAY/JUNE 2020
Muda: Saa 1 ¾

Hati ya Kuhitimu Kisomo cha Sekondari
KISWAHILI
Karatasi ya 1
INSHA
Saa 1 ¾

Maagizo

*a) Andika insha **mbili.** Insha ya kwanza ni ya **lazima**.*
b) Kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.
*c) Kila insha isipungue maneno **400.***
d) Kila insha ina alama 20.
*e) Kila insha **lazima** iandikwe kwa lugha ya Kiswahili.*
*f) **Karatasi hii ina kurasa 2 zilizopigwa chapa**.*
*g) **Watahiniwa lazima wahakikishe kwamba kurasa zote za karatasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo**.*

Geuza ukurasa

1. **Lazima**

   Wewe ni miongoni mwa wanahabari wanaomhoji Inspekta Jenerali wa Polisi katika ofisi yake. Andika mahojiano yenu juu ya hatua ambazo zimechukuliwa kuimarisha viwango vya usalama nchini.

2. Mfumo wa ugatuzi nchini umekuwa na ufanisi na changamoto zake. Jadili.

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3. Andika kisa kinachodhihirisha maana ya methali: Mti mkuu ukigwa wana wa ndege huyumba.
4. Andika kisa kitakachomalizikia kwa maneno haya: ... ilinichukua muda mrefu mno kayaamini yaliyonifika.

HUU NDIO UKURASA WA MWISHO ULIOPIGWA CHAPA.

Jina……Nambari ya mtahiniwa……

Tarehe……Sahihi……...

102/2

KISWAHILI

KARATASI YA 2

LUGHA

SAA 2 ½

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2020 TOP EXAMINERS' MOCK SERIES 1

Cheti cha Kuhitimu Kisomo cha Sekondari (K.C.S.E)

KISWAHILI

Karatasi ya 2

Lugha

Saa: 2 ½

Maagizo

Jibu maswali yote.

Majibu yote yaandikwe katika nafasi zilizoachwa katika kijitabu hiki cha maswali.

Kwa matumizi ya mtahini pekee.

Swali	Upeo	Alama
1	15	
2	15	
3	40	
4	10	
Jumla	80	

1.UFAHAMU (Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali.

Miaka mingi ya kutaliwa na wakoloni iliwafanya wananchi wengi kupuuza umaarufu na uadilifu wa lugha ya Kiswahili kama lugha ya taifa kwa manufaa ya kuarifiana habari mbalimbali kwa ufasaha na kuelewana vyema.

Wakoloni pia waliwashawishi wananchi waone, kwamba lugha ya Kiswahili ni kwa ajili ya watu wale wasiokuwa na elimu na kwa wale ambao hawajastaarabika. Kwa wale wenye 'elimu ya wastaarabu,' wakoloni waliwashawishi kuamini kwamba lugha ya kigeni, yaani Kiingereza, ndiyo hasa lugha inayofaa kwa kujieleza na kufahamishana habari.

Kutokana na vikwazo hivi si ajabu kuona hadi hivi sasa, mwananchi halisi akijitwaza kwamba hawezi kujieleza kwa ufasaha au kumpasha mwenzie habari kwa ukamilifu mpaka atumie lugha ya Kiingereza. Hata katika maofisi mengi ya serikali, hadi hii leo, japo imeshapitishwa kwamba Kiswahili ndiyo lugha ya taifa bado utawaona wananchi wengine wanapendelea kuzungumza Kiingereza wao kwa wao, ili wajulikane kwamba wana kisomo na wamestaarabika.

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Vikwazo vya namna hii vimewalemea wananchi vile vile kwa upande wa magazeti. Utaona mwananchi ambaye anafahamu Kiingereza kidogo sana, akijinunulia gazeti kubwa la Kiingereza na kuanza kuzurura nalo kutwa nzima bila kuambulia mengi ndani yake. Pia utawasikia wananchi wengi wakijidai kwamba hawataki kusoma magazeti ya Kiswahili kwa sababu inakuwa vigumu kwao kuelewa mambo yaliyomo kama vile ambavyo wangelielewa katika gazeti la Kiingereza.

Mabeberu wameshagundua kwamba tunao upotovu wa aina hiyo, ndipo utaona mara nyingi wanawaletea wananchi magazeti mengi ya Kiingereza, mengine yakiwa na nia ya kuwapotosha wakijua kwamba watayasoma tu, mradi yameandikwa kwa lugha ya Kiingereza.

Mara nyingi taifa fulani la kibeberu likitaka tuchukiane na taifa jingine ambalo ni adui yake kisiasa au kiuchumi, taifa hilo la kibeberu linaandika habari za uchochezi kwenye magazeti yao kwa lugha ya Kiingereza, mambo kuhusu taifa lile adui yake (ambalo si adui yetu).

Magazeti hayo huandikwa kwa lugha nadhifu ya Kiingereza na kuletewa wananchi hapa nchini. Maskini wananchi wengine waliotopea kwa kudhani Kiingereza ndicho lugha nzuri ya Kigazeti , wanayanunua mara moja na kuanza kuyasoma magazeti hayo, na pia kuwapa watoto wao wayasome. Matokeo yake ni kwamba, bila kujitambua, wanajikuta wanayafanya yale mabeberu waliyotarajia wayafanye, yaani wanaanza kuchukiana bure na taifa lile ambalo ni adui wa mabeberu hao, lakini si adui zetu. Madhumuni ya kuandika habari kwenye magazeti, ni kutaka kuwafahamisha wasomaji mambo yaliyotokea au yatakayotokea siku hata siku, kwa lugha inayofahamika na kueleweka kwa urahisi bila kumtatiza msomaji. Ikiwa basi ndiyo madhumuni, kuna haja gani kutumia lugha ya kigeni ili kuwaelezea wasomaji wako jambo wangaliweza kuelezwa kwa lugha yao wenyewe ambayo wanaielewa vyema.

Mtu aelezeapo jambo kwa maandishi akitumia lugha yake mwenyewe anaielewa vyema na ambayo pia wasomaji wake wataielewa kwa ukamilifu. Kwa ujumla jambo ambalo mwandishi huyo ataliandika kwa lugha ambayo ni ya asili yake ambayo anaielewa vyema, halitamtatiza msomaji wake ambaye pia anaielewa vyema lugha hiyo.

Maswali

a) Eleza mbinu zinazotumiwa na wakoloni kuwafanya wananchi kuidunisha lugha ya Kiswahili (al 3)

……

……

……

b) Thibitisha kuwepo kwa ukoloni mamboleo katika habari uliyosoma (al 4)

……

……

……
……

c) Eleza jinsi wabeberu wanaweza kuzua vurugu katika mataifa mbalimbali (al 2)

……

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……

4. Taja sababu ambayo imewafanya wananchi wengi kupuuza lugha ya Kiswahili (al 1)

……

……

5. Wakoloni wana mtazamo gani kuhusu lugha ya Kiswahili? (al 2)

……

……

……

6. Eleza maana ya maneno yafuatayo kama yalivyotumiwa katika taarifa (al 3)

a)Uadilifu……..

b)Akijitwaza……

c)Waliotopea ……..

2. UFUPISHO: (Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali.

Mtazamo hasi ni kukata tamaa, kuhusu hali, mtu au jambo fulani. Ni hisia ya kutotaka kushiriki wala kuhusishwa na jambo au hali fulani. Mtazamo huu ndio huwafanya wanafunzi wengi kuchukia au hata kudunisha baadhi ya masomo na walimu wanaoyafundisha. Licha ya wengi kuwa na mtazamo huu, kwa kweli huwa hawatambui. Asilimia kubwa ya wanaotambua hutatizika kujikwamua kutoka katika hali hii.

Inakadiriwa kwamba mtu wa wastani huwa na takribani mawazo elfu sitini ya kibinafsi kwa kila saa 24. Asilimia 95 ya fikra hizi huwa sawa na za siku iliyotangulia na asilimia 80 ya fikra hizi zilizorudiwa huwa hasi. Isitoshe, fikra hizi nyingi hutokea bila mtu mwenyewe kutambua na huwa mazoea. Hii ina maana kwamba watu wengi hawana ufahamu wa athari za fikra hizi maishani mwao. Kuna vyanzo kadha wa kadha vya mitazamo hii. Mwanzo kabisa ni imani potovu. Hiki ndicho chanzo kikuu cha mtazamo hasi. Kushikilia imani potovu kuhusu maisha pamoja na matukio fulani maishani hujenga mtazamo hasi. Unayaona maisha kwa macho ya imani zako na iwapo imani hizo ni potovu, basi hutayathamini maisha yako. Ili kukabiliana na hali hii, sharti kwanza ubadili imani yako.

Uamini kwamba mabadiliko yanaweza kutokea na uchukue hatua ya kuanzisha mabadiliko hayo maishani mwako. Unahitaji kuepuka fikra hasi zinazoambatana na maisha yako ya awali na kulitathmini kila tukio maishani kama tukio huru, lisilo na uhusiano na yaliyowahi kukutamausha.

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Kujikwamua kutoka katika imani duni unahitaji kuibuka na idadi kubwa ya imani chanya kuliko hasi kuhusu hali mahsusi. Baada ya hilo, zikabili imani zako potovu moja baada ya nyingine huku ukijiuliza endapo imani hizo ni kweli na endapo zina mashiko. Tumia dakika tano hivi kila siku kushadidia fikra chanya inayokinzana na ile inayokudidimiza. Ukifanya hivi kwa takribani siku thelathini, imani yako itaanza kuchukua mkondo unaofaa. Familia au rafiki anaweza kuwa kikwazo. Pasipo kufahamu, familia yako na rafiki unaoandamana nao huathiri pakubwa hisia zako. Wakiwa na mtazamo hasi huweza kukushawishi ukaanza kuhisi wanavyohisi na kuyaona mambo kwa mtazamo wao. Kukabiliana na hali hii wapaswa kudhibiti hisia zako.

Tawala namna unavyohisi na kukabiliana na hali mbalimbali bila kuathiriwa na wandani hawa. Epuka wandani wa aina hii kadri inavyowezekana, ikiwezekana jitenge nao ili ujifunze kuwa na uhuru wa kufanya maamuzi yako binafsi bila kuathiriwa nao. Unapaswa kupunguza ushirika hata na jamaa zako wanaokuingiza katika hali ya kutamauka. Punguza muda wa kukaa nao hasa wanapogeukia mkondo huu wa kukatiza tamaa.

Mazingira hasi ni kizingiti kingine. Pengine huoni ukuruba baina ya maisha yako na mazingira unamokulia au unamokaa. Ukweli ni kwamba, huenda umedumu katika mazingira hayo na kuyazoea hata ukafikiri huwezi kuyabadilisha. Kadri unavyohisi huna uwezo wa kuyabadilisha ndivyo unajizamisha zaidi katika mtazamo hasi. Ili kukabiliana na hali hii, unahitaji kuelewa kwamba fikra zako au za watangulizi wako ndizo zilikuingiza katika mazingira haya.

Kwa hivyo, unapaswa kubadili mkondo wa fikra zako na kuanza kujaribu mazoezi ambayo umekuwa ukiyaona kama usiyoyaweza. Hatua kwa hatua utagundua panapo jitihada na uelekezi unaofaa kwamba mazoezi hayo yamekuwa mepesi na hivyo kukuhakikishia kuyabadilisha mazingira yako.

Hali zisizoridhisha huweza pia kuchangia mtazamo wako. Unapojikuta ukilalamika jinsi ulivyokerwa na hali fulani, hii ndiyo sababu hasa ya kuwa na mtazamo hasi kuhusu hali hizo. Inaweza kukuwia vigumu kulikubali hili lakini kadri utakavyolikubali mapema ndivyo utayaboresha maisha yako mapema. Kulalamika tu kutakudumisha katika hali zisizokuridhisha. Kwa hivyo, ili uyabadilishe maisha yako sharti ukome kulalamika na kuanza kujikwamua kutoka kwenye hali hizi. Katika kufanikisha jambo lolote jema sharti viwepo vizingiti njiani. Mtendaji wa jambo lolote jema liwalo ana jukumu la kuibuka na mikakati mwafaka ya kuvikabili vizingiti hivi ili afanikishe ndoto yake. Hii ndiyo sababu unapaswa kuchukua hatua kutokea sasa ili kupanga na kutekeleza mikakati itakayoupindua mtazamo wako hasi uwe chanya. Kwa jinsi hii utayabadilisha maisha yako yawe ya kuridhisha zaidi na kuwa kielelezo kwa wengi waliotamaushwa na mitazamo hasi.

Maswali.

a) Kwa kurejelea kifungu hiki, eleza njia za kukabiliana na mtazamo hasi.

Maneno 100-110 (alama 9, 1 utiririko)

Matayarisho

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Nakala Safi

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(b) Kwa kurejelea taarifa hii, eleza vyanzo vya mtazamo hasi kwa maneno 45

(alama 5, 1 mtiririko)

Matayarisho

……
……
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Nakala Safi

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3. MATUMIZI YA LUGHA: (Alama 40)

(a) Zilinganishe sauti /p/ na /b/ (alama 2)
……
……

(b) Bainisha majukumu ya viambishi tamati katika neno: **viliwavyo.** (alama 3)
……
……
……

(c) Tunga sentensi moja ukitumia nomino ambatano na nomino milikishi. (alama 2)
……
……

(d) Fafanua miundo yoyote miwili ya ngeli ya U-ZI (alama 2)
……
……

(e) Ainisha viwakilishi katika utungo huu. (alama 2)
Sote tutagawana na wale ambacho nyinyi mtapata.
……
……

(f) Kanusha. (alama 2)
Mwanasiasa aliyeshindwa alitoka na kuacha kura zikiendelea kuhesabiwa
……
……

(g) Tunga sentensi moja kutofautisha vitate hivi. (alama 2)
Pasa
……
Pasha
……

(h) Andika utungo huu upya bila kutumia vitenzi visaidizi. (alama 2
Wao huenda wakawa wanaweza kutuzwa na rais alasiri ya leo.
……
……..

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(i) Andika katika usemi wa taarifa. (alama 3)
"Wageni wetu mliotutembelea hapa, mko huru kujionea maendeleo ya kaunti yetu," gavana akatamka.
……
……
……

(j) Kistari kifupi (-) hutumiwa kuendeleza sauti katika vihisishi. Onyesha matumizi mengine mawili ya akifishi hii. (alama 2)
……
……
……

(k) Eleza maana mbili zinazoweza kujitokeza katika sentensi hii. (alama 2)

Menjo alileteawa ng'ombe na watoto wake.

……
……
……

(l) Andika katika udogo hali ya wingi. (alama 2)
Aligongwa katika kichwa kwa nyundo alipotoroka kuumwa na nyoka.
……
……

(m) Tumia neno 'maskini' kudhihirisha dhana hizi. (alama 2)
i) Kivumishi
……
ii) Kihisishi
……

(n) Pambanua kwa jedwali. (alama 4)
Waliochelewa waliadhibiwa vikali na mwalimu wao.
……
……
……
……

Tunga sentensi kudhihirisha chagizo ya namna ya nomino ifuatayo: unyama. (alama 2)
……
……..

(o) Fafanua miundo yoyote miwili ya kiima. (alama 2)
……
……

(p) Andika upya sentensi ifuatayo ukianza kwa yambwa tendewa (alama 2)
Farida aliwapikia wageni chai kwa jiko.

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……

(q) Tunga sentensi moja kubainisha kishazi huru na kishazi tegemezi. (alama 2)

……
……

(r) Eleza uamilifu wa kiambishi ‘ji’ katika sentensi hii. (alama 2)

Mtoto aliyejikata kijidole alipelekwa zahanatini kutibiwa.

……
……

(s) Andika methali inayoafiki maelezo yafuatayo. (alama 1)

Viongozi wanapogombana raia/watu wadogo ndio wanaoumia.

……

(t) Kamilisha:

Kutia kitumbua mchanga ni……(alama 1)

4. ISIMU JAMII (alama 10)

(a) Eleza maana ya lugha ya Taifa. Alama 2

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(b) Fafanua michango minane ya lugha ya Kiswahili katika kufanikisha ruwaza ya 2030

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2020 TOP EXAMINERS' MOCK SERIES

JINA: ..... NAMBANI YAKO:.....

SAHIHI:..... TAREHE:.....

JARIBIO LA PILI 2020

MUDA: SAA 2½

KARATASI LA 3

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MAAGIZO

- ✓ Jibumaswalimanne.
- ✓ Swali la kwanza ni la lazima
- ✓ Chaguamaswalimenginematatukutokakwasehemuzilizosalia:
  Riwaya, Tamthilia, HadithifupinaUshairi.
- ✓ Usijibumaswalimawilikutokasehemumoja.

SEHEMUYA A

1. SWALI LA LAZIMA

a) i) Semi nini? (alama 1)

ii) Fafanuasifannezamisimu (alama4)

b) Soma wimboufuataokishaujibumaswali

Ewe kilizi

Ulozoweakujificha

Nyumaya mama kujikinga, dhidiyamilio

Yanadiilojuumbinguni

Juakeshonisikuyasiku

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Sikuyakujuambivunambichi

Kutofautishajogoonavipora

Naribatakaposhika, chakekisu

Ndipoutakapojuabayana

Ukoowetusiwakunguru

ikiwahutayari

kisukukidhihaki

sithubutukamwe, wanjanikuingia

sijekuniaibishamiye, amiyonaakrabanzima!

Maswali

i) Huuwimbohuitwaje?

(alama1)

ii) Elezamajukumuyoyotemanneyanayotekelezwanawimbohuukatikajamii (alama4)

c) i) Mivighaninini? (alama2)

ii) Elezasifatatuzamivigha (alama 3)

d) Fafanuamatatizomatanoambayoyanaikumbwafasihisimuliziduniani (alama5)

SEHEMU YA B

RIWARA: CHOZI LA HERI: ASUMPTA MATEI

2. "…haifaikuchezanauwezowavijana, waonikamananga. Huwezikuzamishanakuiongeamerikebu."

a) Elezamuktadhawadondoohili (alama4)

b) Bainishatamathalimbilizausemizilizotumikakatikadondoo (alama 4)

c) Kwakurejeleariwayahii, onyeshajinsivijanawamezamishamerikebuyawahafidhina

(alama12)

3. Baadayadhikifaraja. Onyesha vile ukweliwamethalihiiunavyodhihirikakwenyeriwaya

(alama20)

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SEHEMU YA C

TAMTHILIA: KIGOGO: PAULINE KEA

4. “Sitakikuaibishwanamwanamkemimi, siwezi.”
   a) Yawekemanenohayakatikamuktadha wake. (alama 4)
   b) Fafanuakwahojananekuwamsemajiwamanenohayaanafaakuaibishwa (alama16)
5. a) JadilijinsikumiambazokwazomaudhuiyaukatiliyanajitokezakatikatamthiliayaKigogo (alama10)
   b) ElezamifanomitatoyamatumiziyakinayakatikatamthiliayaKigogo (alama10)

SEHEMU YA D : HADITHI FUPI

TUMBO LISILOSHIBA NA HADITHI NYINGINE

6. Elezanafasiyavijanakatikajamiiukerejeleahadithifupizifuatazo.
   a) Mapenziyakifaurongo (alama 5)
   b) Shogake Dada anaDevu (alama 5)
   c) MameBakari (alama10)
7. Ndotoyamashaka: Ali Abdalla Ali

   “Sasanimechokamja.Nimechokahatanaraduakufakulikokuishi.Hadilinihayamashakayakutengenezwa?Mashakayamashaka!
   a) Elezamuktadhawadondoohili (alama 4)
   b) Tambuambinumbilizalughazilizotumika (alama 4)
   c) Fafanua mambositayanayomfanyamrejelewaaraduekufa. (alama12)

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8. SEHEMU YA E: USHAIRI

Soma shairilifuatalokishaujibumaswali

Barabarabadonindefu

Namitayarinimechokatiki

Natamanikuketi

Ni'nyooshemisuli

Nitulizeakili

Lakini

Azmayanisukuma

Mbeleikinihimizakuendelea

Baadayamiinukonakuruba

Sasanaonaunyoofu wake

Unyoofuambaounatishazaidi

Pundenatumbukiakatikashimo

Nahitajisihazaidiilikupandatena

Ghaflanakumbukailivyosema

Ile sautizamanikidogo

"Kuwatayarikupandanakushuka".

Ingawanimechoka

Jambomojadhahiri

Lazimahufuatebarabara

Ingawamachweoyaingia

Nizamenakuibuka

Nipandenakushuka

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Jambomojanakumbuka; Mungu

Je nimwombetena?Hadilini?

Labdaamechoshwanaombaombazangu

Nashangaatena!

Kitukimojanakiamini

Lazimaniendeleekujitahidikwakilahatuampya

Nijikokotekuiandamahiibarabarayenyeukungu

Nikinaswanakujinasua

Yumkininitafikamwisho wake

Ikiwawangumwishohaitauwahikabla.

Maswali

a) Tajanauelezeainayashairihili (alama 2)

b) Elezatoniyashairihili (alama 2)

c) Hukuukitoamifanomwafakaelezatamathalitatuzausemiambazozinajitokezakatikashairi (alama 3)

d) Mshairiametumiauhuruwake wautunzi. Elezamifanomitatuhukuukitoleamifano. (alama 3)

e) Fafanuadhamirayamtunziwashairihili (alama 2)

f) Andikakifungu cha mwishokatikalughayanathari. (alama 4)

g) Elezamaanayamsamiatiufuataokamaulivyotumikakatikashairi (alama 4)

   i) Kuruba

   ii) Siha

   iii) Machweo

   iv) Kujinasua

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Name: ..... **Adm No**: .....**Class**:.....

Candidate's Signature:.....**Index no**……..

121/1
MATHEMATICS ALT A
Paper 1

MAY/JUNE 2020
2½ hours

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2020 TOP EXAMINERS' MOCK SERIES 1

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

Instructions to candidates

(a) Write your name, admission number, class and index number in the spaces provided above.
*(b) This paper consists of **TWO** sections: **Section I** and **Section II**.*

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*(c) Answer **ALL** the questions in **Section I** and only five from **Section II**.*

(d) All answers and working must be written on the question paper in the spaces provided below each question.

*(e) **Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.***

(f) Marks may be given for correct working even if the answer is wrong.

*(g) **Non – programmable** silent electronic calculators **and** KNEC Mathematical tables may be used except where stated otherwise.*

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

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

SECTION I (50 MARKS)

Answer all the questions in this section.

1. Without using mathematical tables or calculator, evaluate; (3marks)

-12÷ (-3) x 4-(-15)

- 5 x 6 ÷ 2 + (-5)

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2. Three sirens wail at intervals of thirty minutes, fifty minutes and thirty five minutes. If they wail together at 7.18 a.m. on Monday, what time and day will they wail together again? (3 marks)

3. Simplify the following expression. (3 marks)

$$\frac{4x^2 - 81}{2ax - 6x - 9a + 27}$$

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4. Without using a calculator evaluate $\frac{\frac{5}{8}-\frac{1}{3}of\frac{27}{20}\div 2}{1+\left(5\frac{2}{5}\div\frac{9}{25}\right)}$ leaving your answer as a mixed fraction.

(3 marks)

5. Given that $1.\dot{0}\dot{5} = 1\frac{a}{b}$,. Find the values of **a** and**b**.
(3marks)

6. A cylindrical column of oil has radius 4.25cm and has height of 20cm.Calculate the mass of the oil if the column has density of 3.524g/cm^3.
(3marks)

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7. A straight line passing through the point C (1, 3) and D (x, -5) is perpendicular to the line whose equation is $4y - 3x + 5 = 0$. Determine the value of x and the equation of the line CD. (3marks)

8. Solve the equation given below. (4marks)

$2xy - x^2 = -15$

$y - x = 4$.

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9. Three angles of a polygon are 125°, 140° and 160°. The remaining angles are 145° each. Calculate the sum of the interior angles of the polygon. (3 marks)

10. The exchange rate during a certain day of February was as shown below.

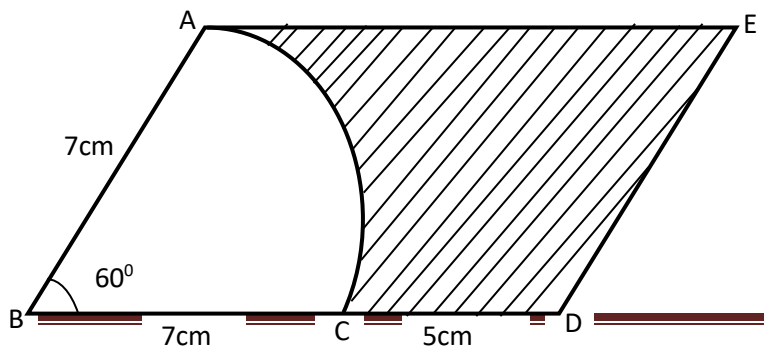
	Buying	Selling
1 US dollar	Ksh106.32	Kshs 107.01
100 Japanese Yen	Ksh 98.05	Kshs 98.87

A tourist landed in Kenya and converted 5500 US dollars to Kshs. While in Kenya he spent Kshs 186,000. He then converted the money back to Japanese Yen before travelling to Japan. Calculate the amount of Japanese Yen he had to the nearest Yen. (4 marks)

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11. The gradient of the curve whose equation is given by $y= ax^3 — 20x^2 +10x$ at the point where x=2 is 410. Find the value of a.
(3 marks)

12. In the figure below, AC is an arc of a circle centre B, angle ABD = 60^0, AB =BC=7cm and CD=5cm.
If AE is parallel to BD and AB is parallel to ED.
Calculate the area of the shaded region. (3 marks)



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13. A bus left Nairobi and travelled towards Busia at an average speed of 90km/hr. After $2^2/_9$ hours, a car left Nairobi and travelled along the same road at an average speed of 170km/hr. If the distance between Nairobi and Busia is 800km, Determine the distance the car travelled to catch up with the bus (3 marks)

14. Two alloys Y and Z are each made up of zinc, tin and copper. In alloy Y, the ratio of zinc to tin is 2:5 and the ratio of copper to tin is 4:3. Determine the ratio, copper: zinc: tin in alloy Y. (2 marks)

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15. From a point P the angle of elevation of the top of a tree is 25^0. From another point Q on the same side which is 10 metres from the base of the tree, the angle of elevation of the top of the tree is 36.5^0C. Giving your answer to one decimal place, determine the height of the tree hence calculate the distance between P and Q. (4 marks)

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16. Solvefork in the following equation:

$125^{k+1} + 5^{3k} = 630$

(3marks)

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SECTION 11 (50 MARKS)

Answer only FIVE questions from this section.

17. A trader purchases four 25kg bags of sugar and packages the sugar in 2kg, 1kg and 0.5kg packs to be sold in retail. The trader does the packaging in a ratio of 3:2:5 respectively. He makes a profit of Kshs 10 for every 2kg pack, Kshs 8 for the 1kg pack and Kshs 6 for the 0.5kg pack.

(a) Determine;

(i) The number of packets the trader made for each type of package. (3 marks)

(ii) The profit he will make if the wholesale price of a 25kg bag of sugar is Kshs 2000 (2 marks)

(iii) The selling price of each type of package. (2 marks)

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(b) Determine his percentage profit. (3 marks)

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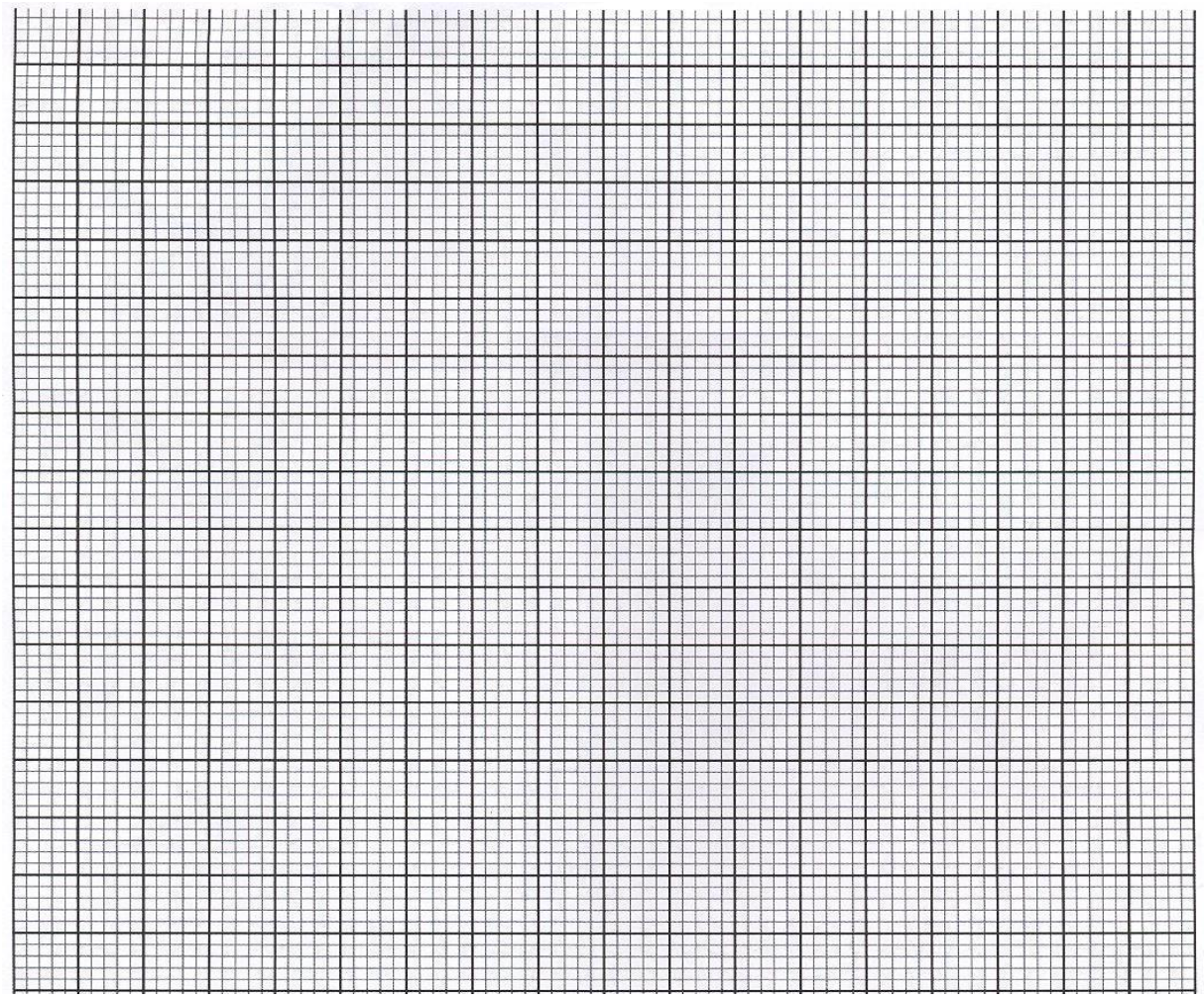
18.. (a)Complete the table below for the function $y=7+2x-2x^2$ for the range $-3 \leq x \leq 4$.(2 marks)

X	-3	-2	-1	0	1	2	3	4
$-2x^2$		-8	-2	0		-8	-18	
2x	-6	-4		0		4	6	
7	7	7	7	7	7	7	7	7
Y		-5		7		3	-5	

(b) (i) On the grid provided draw the graph of $y=7+2x-2x^2$. (3 marks)

Take the scale:2 cm to represent 1 unit on x- axis

1 cm to represent 1 unit on y- axis



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(ii) Use your graph to estimate the roots of $7 + 2x - 2x^2 = 0$.
(1 mark)

(c) (i) By drawing a suitable line on the same axes in (b) above solve the equation

$9 + 5x - 2x^2 = 0$
(3marks)

(ii) State the co-ordinates of the turning point
.(1 mark)

19. Income rates for income earned were charged as follows.

Income in sh. per month	Rate in Ksh. per sh.20
1—8,400	2
8401—18,000	3
18001—30,000	4
30,001—36,000	5
36,001—48,000	6
48, 001 and above	7

A civil servant earns a monthly salary of ksh.19, 200. His house allowance is ksh.12, 000 per month. Other allowances per month are transport ksh.13, 000 and medical allowance ksh.2, 300. He is entitled to a personal relief of ksh.1,240 per month. Determine

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(a) (i) His taxable income per month (2 marks)

(ii) Net tax

(5marks)

(b) In addition, the following deductions were made.

NHIF sh.230, Service charge ksh.100, Loan repayment ksh.4, 000, Cooperative shares of ksh.1,200. Calculate his net salary per month (3 marks)

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20. Three warships P, Q and R leave port X at 9:00am, ship P sails at a steady speed on a bearing of 070^0, 100km from port X, while ship Q sails on a bearing of 320^0, 80km from X. Ship R is on a bearing of 150^0 from port X and due south of ship P.

a) Using a ruler and compasses only construct a scale drawing to show the position of P,Q,R and X
(4marks)

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b) Use the scale drawing to determine

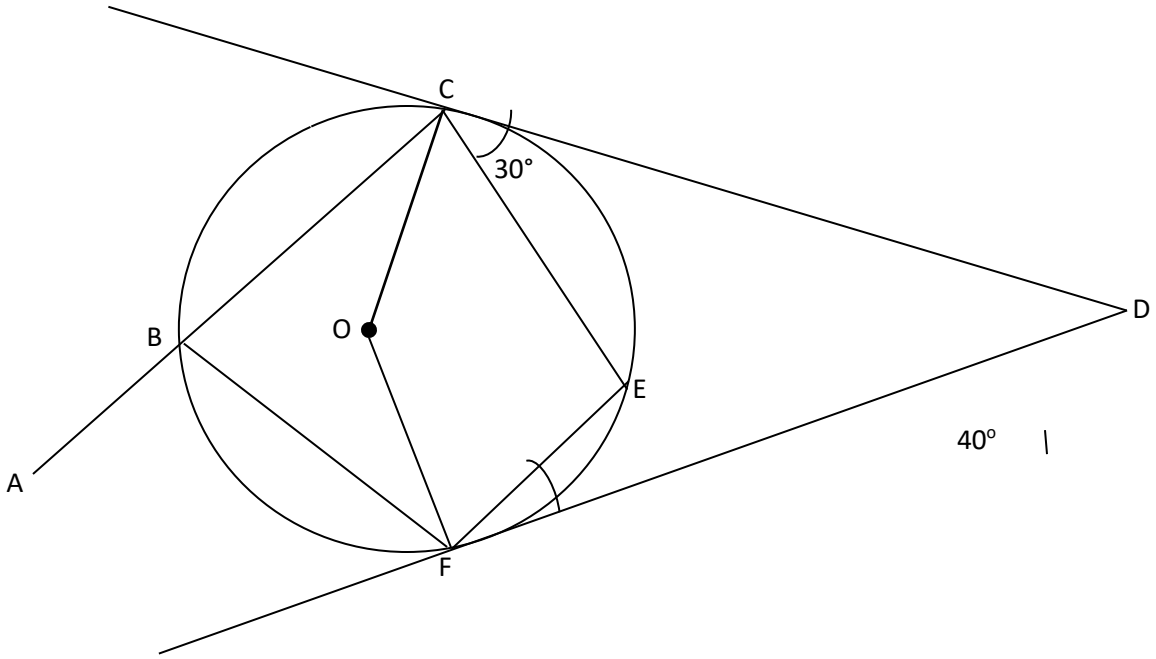
i) the distance and bearing of ship P from ship Q (2marks)

ii) the distance of ship R from port X (2marks)

iii) the distance of ship R from ship P (2marks)

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21. In the figure below, O is the centre of the circle. CD and FD are tangents to the circle at C and F respectively. Angle DCE = 30° and angle CDF = 40°. ABC is a straight line and BC=BF.



Find giving reasons the angles

(a) FCE. (2 marks)

(b) CBF. (2 marks)

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(c) EFD. (2 marks)

(d) BCO. (2 marks)

(e) Reflex FOC. (2 marks)

22. A rectangular tank whose internal dimensions are 2.04m by 1.68m by 26.4 m is seven – eighth full of milk

a) If the tank is made of metal of thickness 3mm. Calculate the external volume of the tank in m^3 when closed. (3 marks)

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b) Calculate the volume of milk in the tank in cubic metres. (2 marks)

c) The milk is to he packed in small packets. Each packet is in the shape of a right

- Pyramid on an equilateral triangular base of side 19.2cm. The height of each packet is 13.6 cm. Full packets obtained are sold at kshs. 35 per packet. Calculate;

i) The volume of milk, in cubic centimeters contained in each packet to 4 significance figures. Hence find the number of full packets. (3 marks)

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ii) The exact amount that will he realized from the sale of all the packets of milk.

(2 marks)

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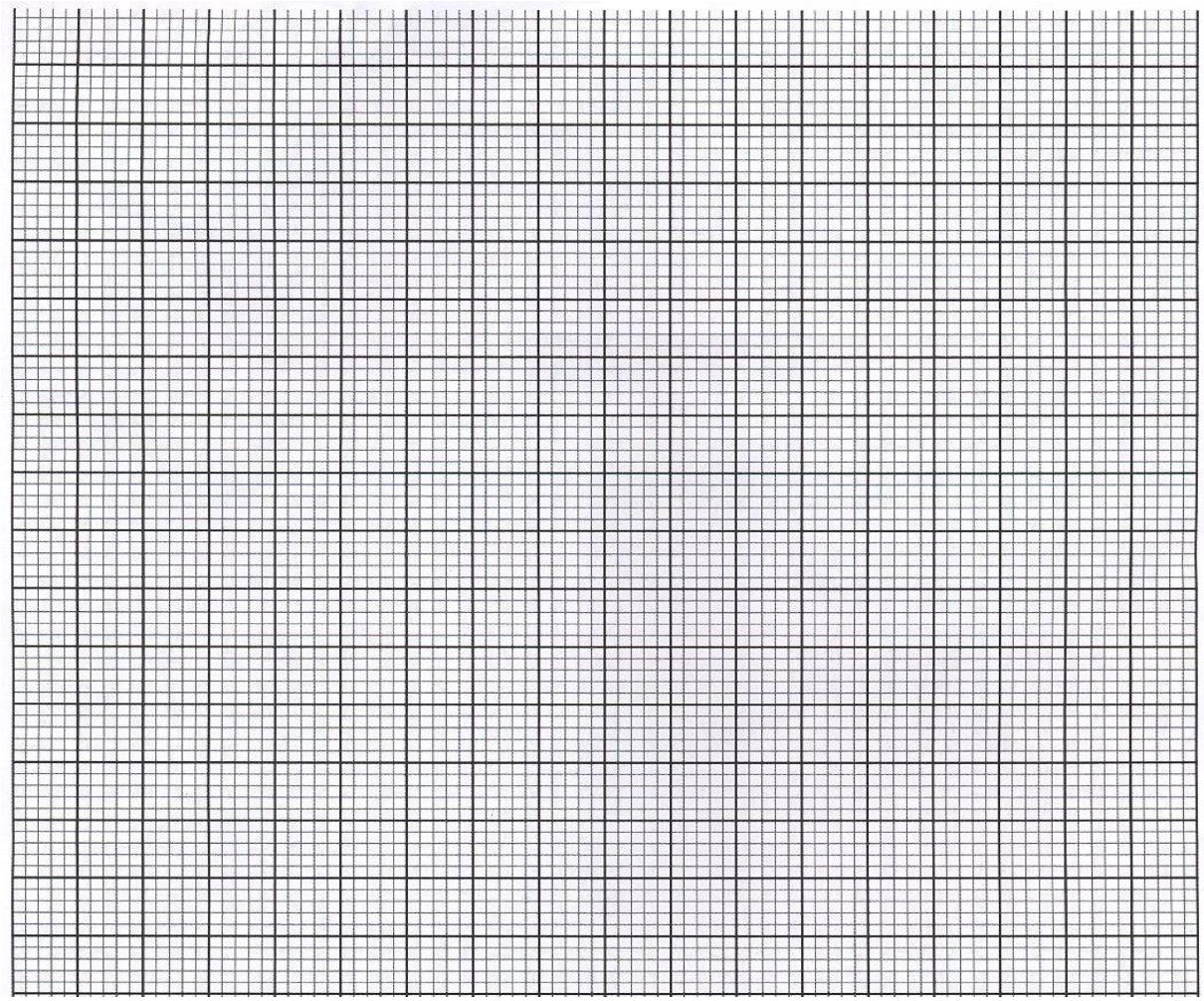
23. Two variables A and B are connected by the equation.

$A = kB^n$ where k and n are constants.
The table below gives values of A and B.

A	1.5	1.95	2.51	3.20	4.50
B	1.59	2.51	3.98	6.31	11.5

(a) Find a linear equation connecting A and B (2 marks)

(b) On square paper draw a suitable straight line graph to represent the relation in (a) above. Use(scale 1cm to represent 0.1 units on both axis) (5 marks)



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(c) Use your graph to estimate the values of k and n in to one decimal place. (3 marks)

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24. A particle moves with a speed $v= -5+3t^2$ m/s through a point O, S = 10 m when t = 0 s. Determine;

a) An expression for its displacement S after t seconds. (3 marks)

b) Its displacement after 2s from point O. (2 marks)

c) An expression for its acceleration a after t seconds. (2 marks)

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d) Its acceleration after 10s. (1 mark)

e) Time t when its speed v = 0 to 3 decimal places. (2 marks)

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Candidate's Signature:.....**Index no**……..

121/2
MATHEMATICS ALT A
Paper 2

MAY/JUNE 2020
2½ hours

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education (KCSE)
MATHEMATICS
PAPER 2
TIME: 2½ HOURS

INSTRUCTIONS TO CANDIDATES

a) Write your Name and Index Number in the spaces provided at the top of this page.
b) Sign and write the date of examination in the spaces provided above.
c) This paper contains TWO sections: section I and section II
d) Answer all the questions in Section I and strictly any FIVE questions in section II.
e) All answers and working must be written on the question paper in the spaces provided below each question.
f) Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.
g) Marks may be given for correct working even if the answer is wrong.
h) Non-programmable silent electronic calculators and KNEC mathematical tables may be used except where 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

SECTION 1: (50 MARKS)

Answer ALL the Questions in this section in the spaces provided.

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1. Evaluate using logarithms.
(4 marks)

$$\sqrt[4]{\frac{723.9 \times \log 8.765}{3400 + 23.4}}$$

2. Given the expression $9.7 \div 3.7$, find to four significant figures the percentage error in its quotient.
(3 marks)

3. Solve for Θ given that $2\sin\Theta = \tan\Theta$ for $0^0 \leq \Theta \leq 360^0$.
(3 marks)

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4. Simplify $\frac{3\sqrt{2}}{\sqrt{5}-\sqrt{2}}$, leaving the answer in the form a + b$\sqrt{c}$, where a, b and c are rational numbers

(3 marks)

5. (i) Find the inverse of the matrix $\begin{pmatrix} -3 & 4 \\ 2 & 5 \end{pmatrix}$

(2 marks)

(ii) Hence solve the simultaneous equations;
(2 marks)

$$4y - 3x = 6$$
$$2x + 5y = 19$$

6. The cost of maize flour and millet flour is Kshs 44 and Kshs 56 respectively. Calculate the ratio in which they were mixed if a profit of 20% was made by selling the mixture at Kshs. 54. (3marks)

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7. The equation of a circle is given by $4x^2 + 4y^2 + 12x - 16y - 11 = 0$. Determine the radius and the co-ordinates of the centre of the circle.
(3 marks)

8. Solve the following linear inequalities and list the integral values of x.
(3 marks)

$$\frac{1}{3}x + 7 \geq -2x$$
$$0.5x + 4 > 1.5x$$

9. The cash price of a music system is kshs. 30,000. It can be bought under hire purchase terms by paying a deposit of kshs. 10,000 and twelve monthly installments of Kshs. 3,200 per month. Determine the percentage rate of interest per month.
(3 marks)

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10. Evaluate $\int_0^1 (3x^2 - 6x + 3)dx$

(3 marks)

11. Make h the subject of the formula $n = \sqrt[3]{\frac{yx^2h}{m-h}}$

(3 marks)

12. Solve for x in $\log(2x+4) - \log(x-1) = 3\log 2$.

(3 marks)

13. The average of the first and fourth terms of a GP is 185. Given that the first term is 27, find the common ratio.

(3 marks)

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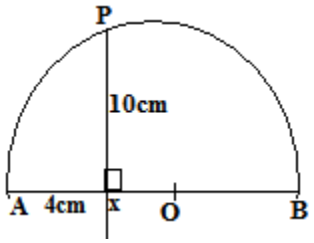
14. The equation $3x^2 - 8px + 12 = 0$ has real roots. Find the value of P.
(3 marks)

15. (a) Expand $(2 - x)^7$ up to the fifth term.
(2 marks)

(b) Use your expansion in (a) above to evaluate 1.98^7 to four significant figures.
(2 marks)

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16. In the figure below O is the centre of the circle diameter AB. <AXP = 90^{O}, AX = 4cm and PX = 10cm. Calculate the radius of the semi-circle.
(3 marks)



SECTION II (50 MARKS)

(Answer any five questions in this section)

17. The table below shows the distribution of ages in years of 50 adults who attended a clinic:-

Age	21-30	31-40	41-50	51-60	61-70	71-80
Frequency	15	11	17	4	2	1

(a) State the median class

(1 mark)

(b) Using a working mean of 45.5, calculate:-

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(i) The mean age

(3 marks)

(ii) The standard deviation

(3 marks)

(iii) Calculate the 6^{th} decile.

(3 marks)

18. (a) Complete the table given below by filling the blank spaces.
(2 marks)

x	0º	15º	30º	45º	60º	75º	90º	105º	120º	135º	150º	165º	180º
2sin(2x+30)º	1.00	1.73	2.00	1.73		0	-1.00	-1.73				0	1.00
4cos2x	4.00		2.00	0	-2.00		-4.00	-3.46		0	2.00		4.00

(b) On the grid provided draw on the same axes, the graph of $y = 4\cos 2x$ and $y = 2\sin(2x + 30^0)$ for $0^0 \le x \le 180^0$.
(5 marks)

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(c) From your graph

(i) State the amplitude of $y = 4\cos 2x$

(1 mark)

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(ii) Find the period of $y = 2\sin(2x + 30^0)$
(1 mark)

(d) Use your graph to solve $4\cos 2x - 2\sin(2x + 30^0) = 0$
(1 mark)

19. OPQ is a triangle in which $OP = p$ *and* $OQ = q$. X is a point on OP such that OP: XP = 5: 2 and Y is another point on PQ such that PY: YQ = 1: 2. Lines OY and XQ intersect at T.

(a) Express the following vectors in terms of $\underset{\sim}{p}$ *and* $\underset{\sim}{q}$.

(i) $\underset{\sim}{PQ}$
(1 mark)

(ii) $\underset{\sim}{QY}$
(1 mark)

(iii)$\underset{\sim}{QX}$
(1 mark)

(b) If $\underset{\sim}{QT} = k\,\underset{\sim}{QY}$ and $\underset{\sim}{QT} = h\,\underset{\sim}{QX}$ express $\underset{\sim}{QT}$ in two different ways. Hence or otherwise find the values of h and k.
(6 marks)

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(c) Determine the ratio OT: TY.
(1 mark)

20. Using a ruler and a pair of compass only;
    a) Construct a triangle PQR such that PR=7.5cm, PQ=3.0cm and <QPR=60°
    (3 marks)

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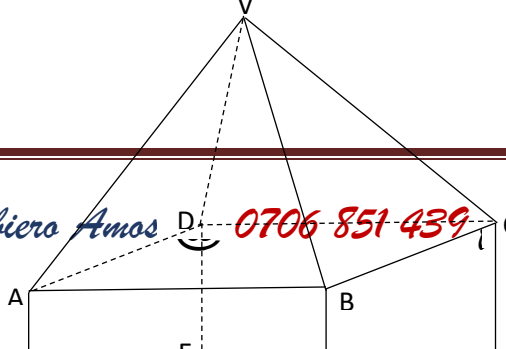
b) Construct the locus T of points which are equidistant from a point L and passes through the vertices P, Q and R.
(2 marks)

c) Locate the locus S on T such that it is equidistant from sides PQ and QR of the triangle. (2 marks)

d) Locate the locus of points G enclosed by PQ and QS such that QG <2cm.
(2marks)

e) Measure SL.
(1 mark)

21. The figure shows a right pyramid mounted onto a rectangular block. The length AB=8cm, BC = 6cm, CH = 3cm and ⁻ ⁻ ⁻ = 15cm



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Given that M is the centre of the plane ABCD and P is a point on MV such that MP = $\frac{1}{5}$ MV, Calculate:-

(a) The length of EG.
(1 mark)

(b) The height MV of the pyramidal section to 2 decimal places.
(2 marks)

(c) The angle between the plane BPC and the pyramidal base ABCD.
(3 marks)

(d) The angle between the line GV and the plane EFGH.
(2 marks)

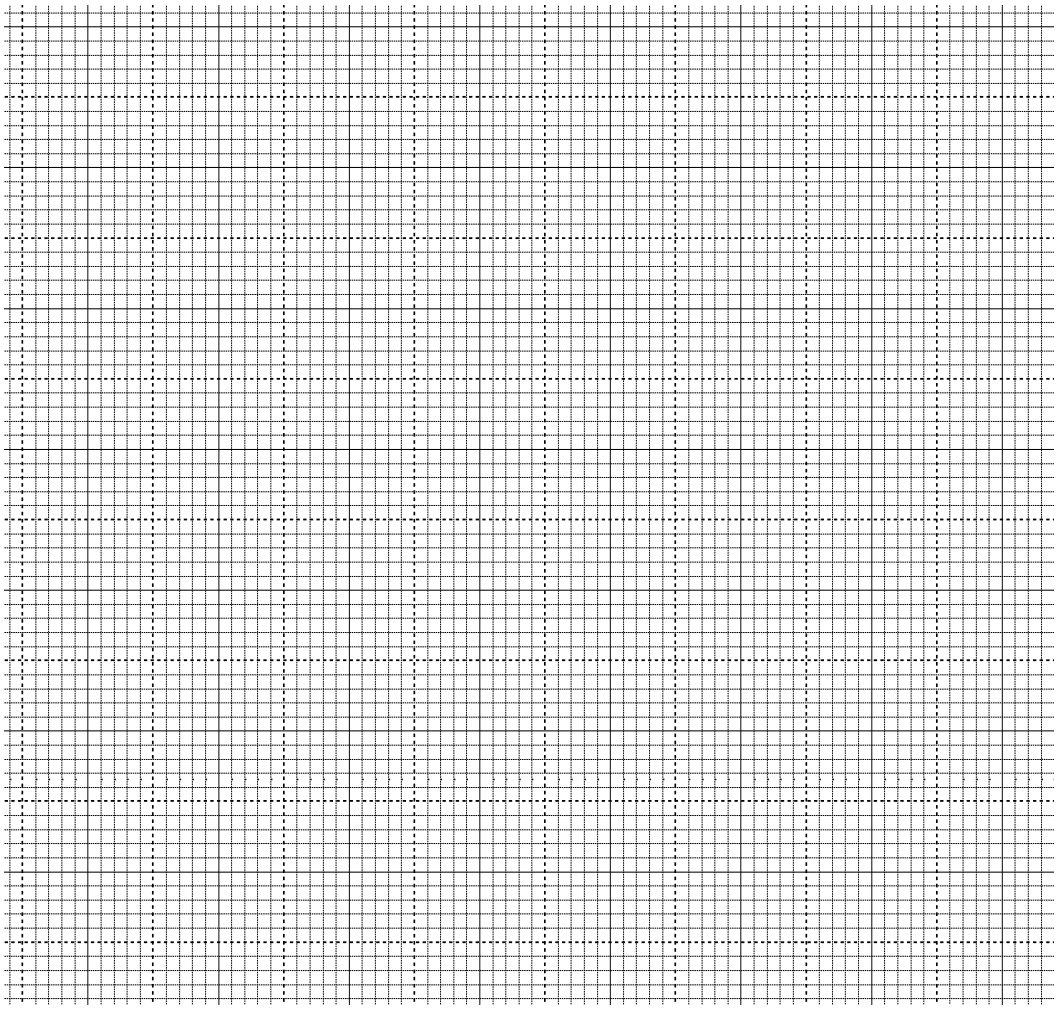
(e) The volume of the solid to four significant figures.
(2 marks)

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22. Triangle ABC is such that A(-5, 1), B(-1, 1) and C(-3, 4). Triangle A′B′C′.is the image of ΔABC under transformation $T = \begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix}$

a) Determine the co-ordinates of Δ A′B′C′.
(2 marks)

b) On the grid provided draw ΔABC and Δ A′B′C′.
(2 marks)



c) Describe the transformation T fully.
(1 mark)

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d) Δ A″B″C″ is a reflection of the Δ A′B′C′ on the line y = -x. Construct Δ A″B″C″.
(3 marks)

e) Determine a single matrix that maps Δ A″B″C″ onto ΔABC.
(2 marks)

23. Every evening before the end of preps, Eunice either reads a novel or solves a mathematical problem. The probability that she reads a novel is $\frac{4}{5}$. If she read a novel, there is a probability of $\frac{3}{4}$ that she will fall asleep. If he solves a mathematical problem, there is a probability of $\frac{1}{4}$ that she will fall asleep. Sometimes the teacher on duty enters Eunice's classroom. When Eunice is asked whether she had been asleep, there is a probability of only $\frac{1}{5}$ that she will admit that she had been asleep and a probability of $\frac{3}{5}$ that she will claim to have been asleep when she had not been asleep.

a) Draw a tree diagram to represent this information.
(2 marks)

b) Use the tree diagram to find the probability that;

I. She sleeps and admits
(2 marks)

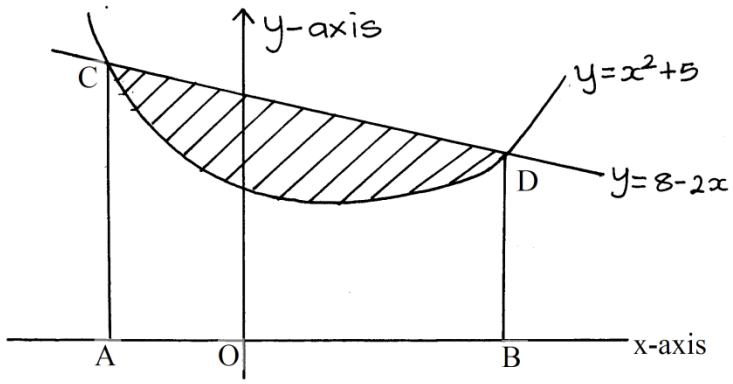
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II. She sleeps and does not admit
(2 marks)

III. She does not sleep and says that she has not been asleep
(2 marks)

IV. She does not sleep but claims that she had been asleep
(2 marks)

24. The diagram below, not drawn to scale shows part of the curve $y = x^2 + 5$ and the line y = 8-2x. The line intersects the curve at points C and D. Lines AC and BD are parallel to the y-axis.



(a) Determine the coordinates of C and D.

(4 marks)

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(b) Use integration to calculate the area bounded by the curve and the x-axis between the points C and D.
(3 marks)

(c) Calculate the area enclosed by the lines CD, CA, BD and the x-axis.
(3 marks)

(d) Hence determine the area of the shaded region.
(1 mark)

232/3 PHYSICS PRACTICAL

CONFIDENTIAL

PROVIDE THE FOLLOWING APPARATUS TO THE CANDIDATES.

QUESTION ONE

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- A voltmeter (0-3v or 0-5v)
- An ammeter
- Two new dry cells
- Cell holder
- A resistance wire labeled W (teacher to provide a 30cm SWG 32 (0.28mm diameter) wire)
- A resistance wire mounted on a mm scale (SWG 28)
- A micrometer screw gauge (to be shared)
- Six connecting wires with crocodile clips
- A switch

QUESTION TWO

- A spiral spring with a pointer (4.6cm long and 1.23cm in diameter)
- A metre rule
- A complete stand
- Three 100g masses and one 50g mass
- A stop watch

Name: ……..……Index Number: …..……..CLASS:…..

Candidate's signature: ……....

Date: ……

232/2
PHYSICS
Paper 2
(Theory)

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education

232/2
PHYSICS
Paper 2
(Theory)
2 HRS

INSTRUCTIONS

1. Write your name and your Index number in the spaces provided.
2. This paper consists of **two** sections, Section **A** and **B.**
3. Answer **ALL** the questions in both section in the spaces provided in this paper.
4. **ALL** working must be clearly shown.
5. Mathematical tables and electronic calculators **may be** used.

Take: Planck's constant $=6.6\times10^{-34}$ Js

FOR EXAMINER'S USE ONLY:

SECTION	QUESTION	MAXIMUM SCORE	STUDENTS SCORE
A	1-12	25	
B	13	11	
	14	10	
	15	11	
	16	10	
	17	13	
	TOTAL	**80**	

This paper consists of 15 printed pages
Candidates should check to ensure that all pages are printed as indicated and no questions are missing

SECTION A (25 MARKS)

Answer ALL the questions in this section in the spaces provided

1. The **figure1**below shows two mirrors M_1 and M_2 placed at an angle of 80^0. A ray of light incident to the mirror makes an angle of 45^0 with the mirror M_1

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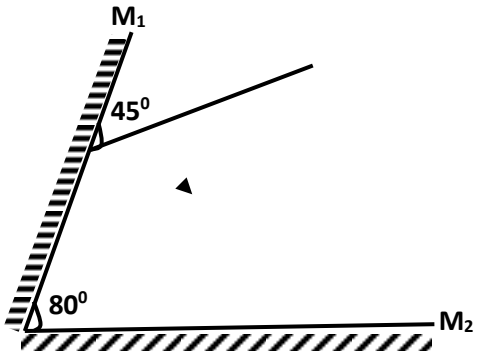


Fig 1

Find the angle the ray turns after reflection in the two mirrors (3marks)

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2. A dry cloth is used to dust a glass table. It is observed that as the glass is wiped the dust is retained on it explain. (2marks)

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3. State what is meant by polarization in a simple cell (1mark)

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4. The diagram below shows an iron ring between two opposite magnetic poles

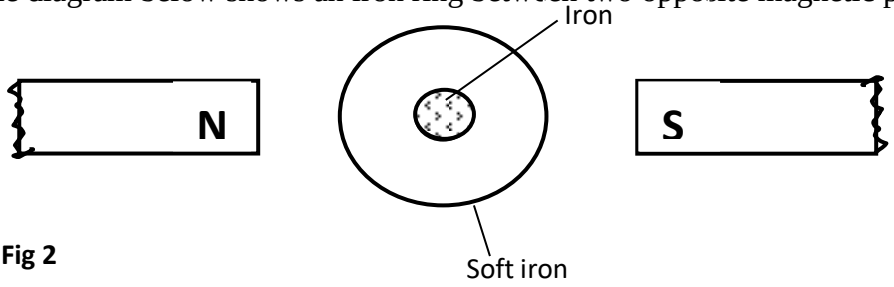


Fig 2

Explain what happens to the iron fillings. (2marks)

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5.

a) The half life of radioactive strontium 90 is 28 years. Determine the active mass left of a sample of 1.0 milligrams of strontium after 140 years (1 mark)

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b) A leaf electroscope can also be used as a detector of radiation. State **two** advantages of the diffusion cloud chamber over the leaf electroscope as a detector. (2marks)

……

……

……

6. The following are electromagnetic waves and some of their characteristics.

A - Have high penetrating power

-Used to sterilize medical equipments

- Used to detect flaws in metals in industry

B - Causes heating effect

-Used in cooking, heating and drying

-Used in heat seeking missiles

C -High penetrating power

-Used to locate bone fractures

- Used to control germs and pests

a) Identify the waves (2marks)

B- ……

C- ……

b) Arrange the waves in order of increasing frequency (1mark)

……

……

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7. An object of height 1cm is placed 120cm from a screen. A converging lens placed 35cm from the object forms a magnified image on the screen. Calculate the focal length of the lens. (3marks)

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8. The figure shows two ways of biasing a p-n junction diode

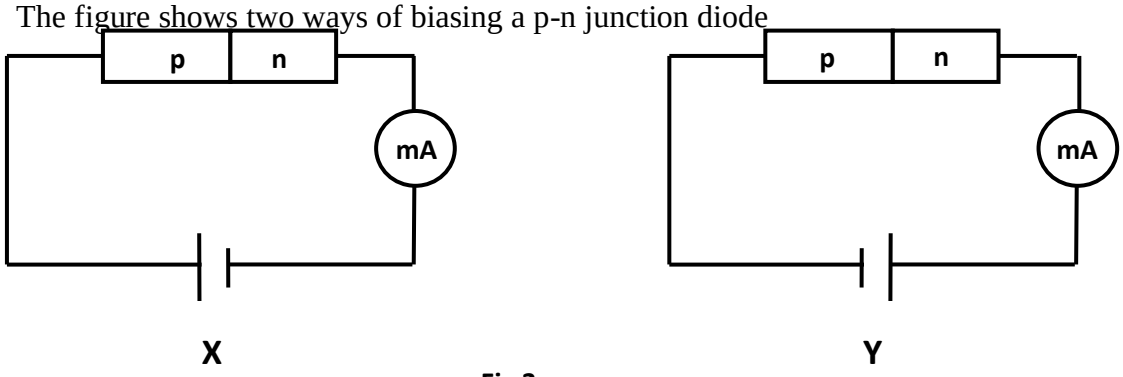


Fig 3

In which circuit will current flow? Explain this. (2marks)

……

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……

9. What determines the quality of X-rays produced in an X-ray tube (1mark)

……

……

10. A pinhole camera forms an image of size 10cm. The object is 5m tall and 20m away from the pinhole. Find the length of the pinhole camera. (2marks)

……

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11. Sketch the resultant field pattern around the following current carrying conductors and show the direction of the forces acting on the conductor (2marks)



12. State how eddy currents are reduced in a transformer. (1mark)

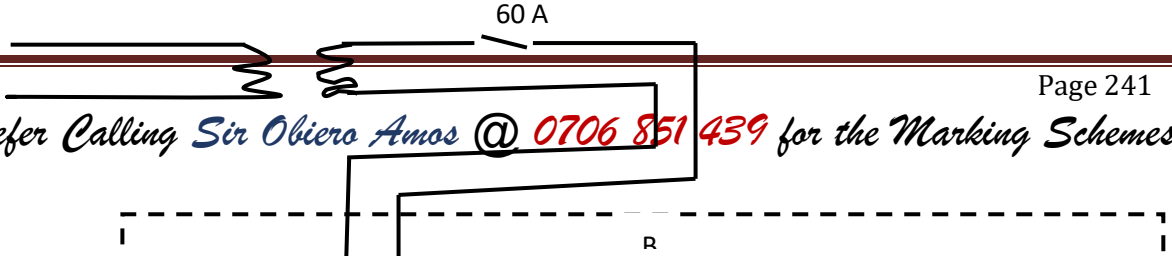
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SECTION B (55 MARKS)

Answer ALL the questions in this section in the spaces provided

13. a) The diagram below shows a consumers fuse box



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Identify the parts (2 marks)

A-……

B-……

C-…….

D-…….

b) Give two advantages of circuit breakers over fuses in domestic wiring (2 marks)

……

……

……

c) What is the cost of using a 3KW electric fire and 60W bulb for six hours each every day for one week. The cost of electricity is ksh 9.50 per unit and a standing charge of ksh. 150.00 is charged. (2marks).

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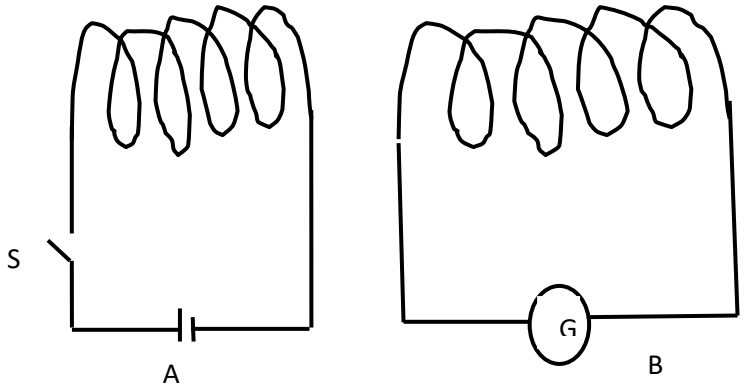
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d) The figure below shows two circuits close to each other



When the switch is closed the galvanometer shows a reading and then returns to zero.When the switch is then opened, the galvanometer shows a reading in the opposite direction then returns to zero. Explain these observations. (2marks)

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……

e) A transformer is designed to supply a current of 12A at a p.d of 80V. The inlet cable is to be connected to a.c mains of 240V. The efficiency of this transformer is 80%. Calculate

i. The power supplied to the transformer (1mark)

……

……

ii. current in the primary coil of transformer (2marks)

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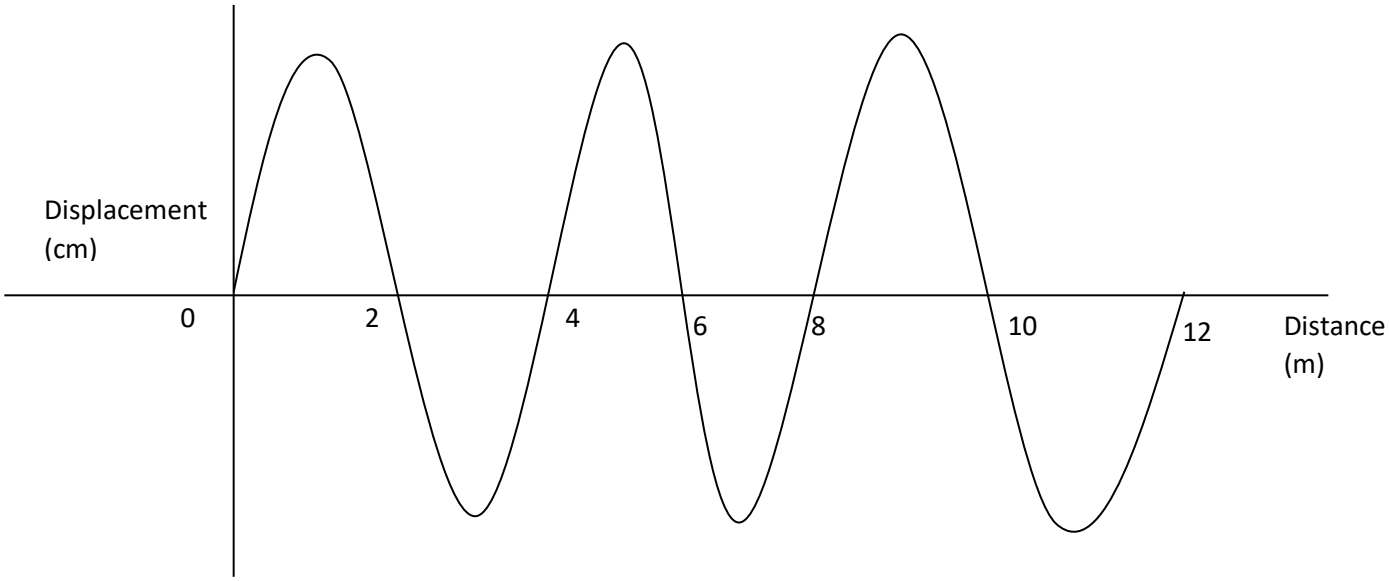
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14. a) The diagrams below shows the same wave form

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a)

Displacement (cm)



Determine the;

i) Period (1mark)

……

ii)The frequency (1 marks)

……

……

iii) The speed (1 mark)

……

……

b) Sound waves cannot travel through a vacuum explain (1 marks)

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……

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c) A man standing between two walls claps his hands once and two echoes are heard; one after 1.0 seconds and another 1.8 seconds later. If the nearer wall is 170 m away from the man, calculate the distance between the two walls (3 marks)

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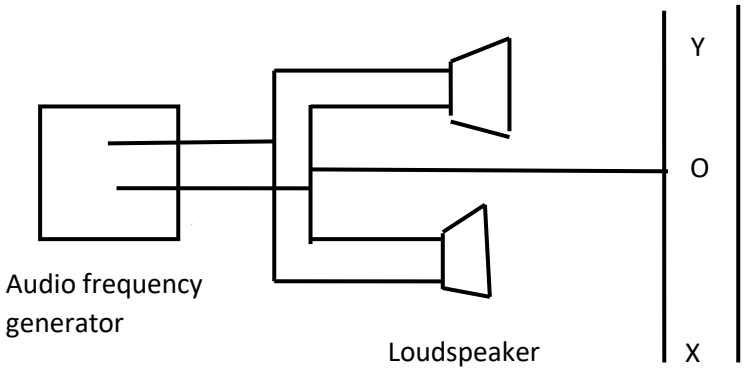
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d) Fig. below shows two speakers connected to an audio- frequency generator



i. State and explain the observation made by an observer moving along the path XY (2marks)

……

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……

ii. State the observation made if the frequency of the signal generator was increased

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(1mark)

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15. a) Explain why a cathode ray tube is evacuated (1 mark)

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b) State four properties of cathode rays (2 marks)

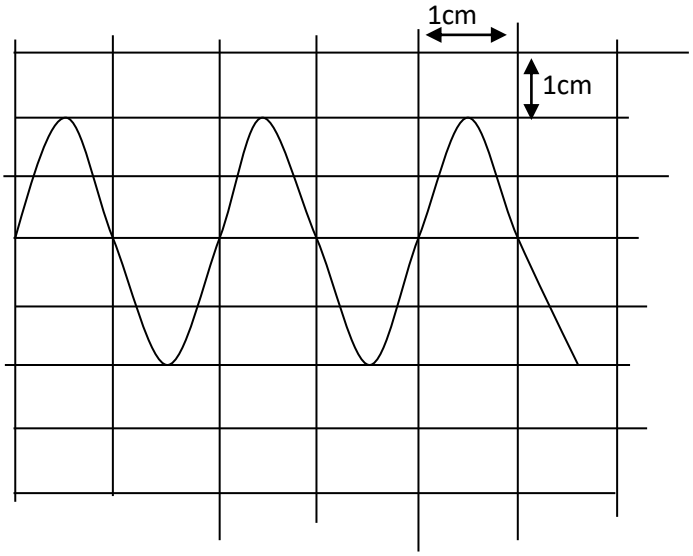
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c) The figure shows the waveform displayed on the cathode ray oscilloscope screen when an alternating voltage is applied on the Y-input. The time- base is set at 1ms/cm and the Y-gain at 10v/cm



Calculate;

i. The amplitude of the ac input voltage (2marks)

……

……

……

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ii. The frequency of the ac input voltage signal (2 marks)

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d) The threshold frequency of sodium is $5.6x10^{14}$Hz .Find

i. Work function of sodium (2marks)

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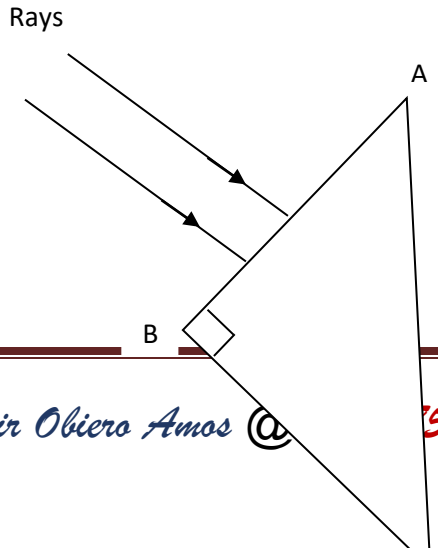
ii. The kinetic energy of the ejected electrons when sodium is shone with light of frequency $8.6x10^{14}$ Hz (2 marks)

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16. a) A 45^0 right –angled prism, made of glass of n=1.5 is used to turn light through 90^0



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C

i) Continue the paths of the two rays until they emerge into air again. (1 mark)

ii) Why does no light emerge from face AC? (1 mark)

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iii) Why are the rays which leave face CB slightly fainter than those which enter face AB (1mark)

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b) You are provided with the following apparatus. A white screen, a metre rule and a convex lens . Using the apparatus describe an appropriate method of determining the focal length of the lens (3 marks)

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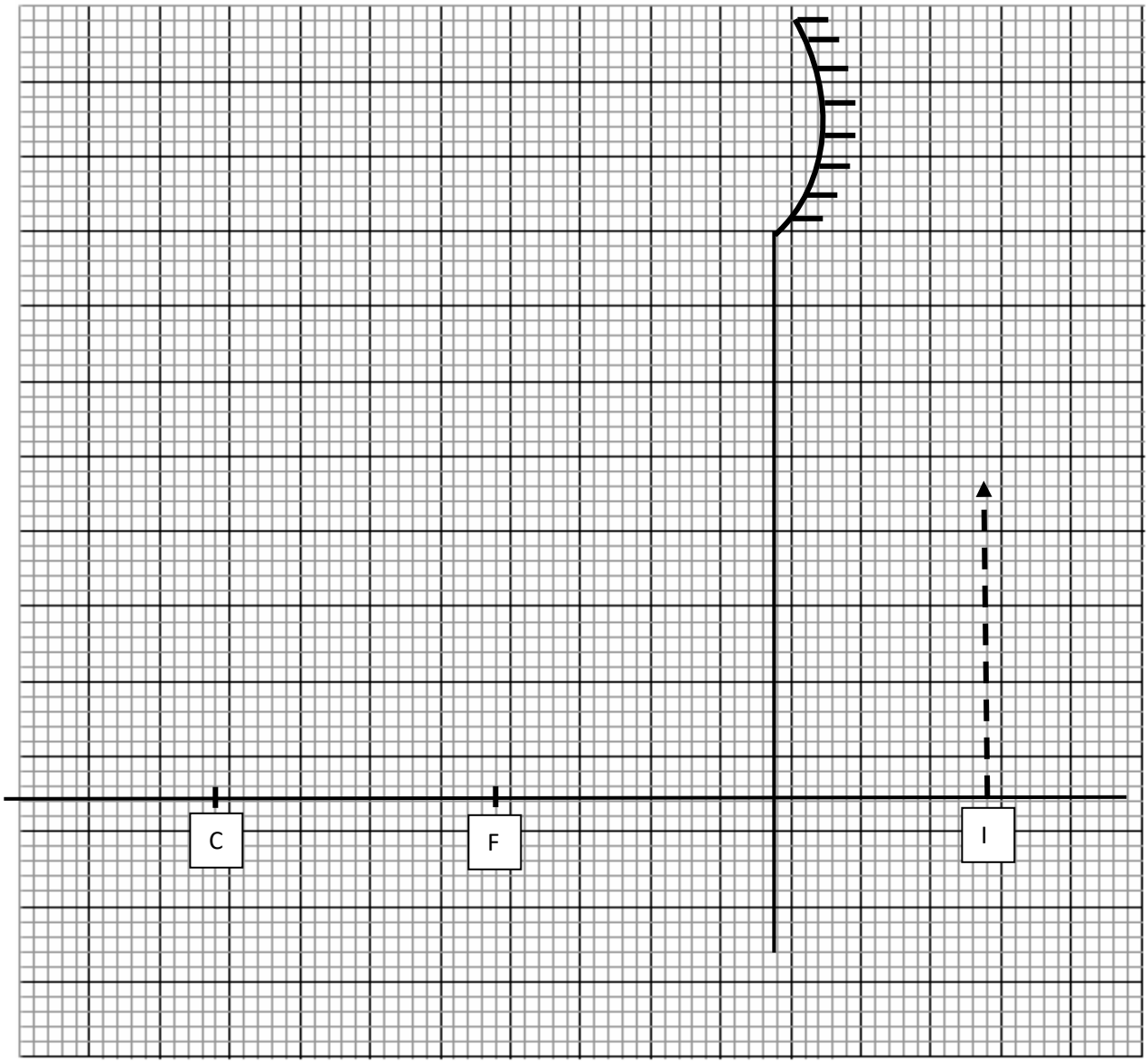
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c) The diagram below (drawn to scale) shows an image formed by a concave mirror

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By using ray diagrams determine;



i. The focal length of the mirror (1mark)

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ii. Locate the object (2marks)

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iii. Determine the magnification (1mark)

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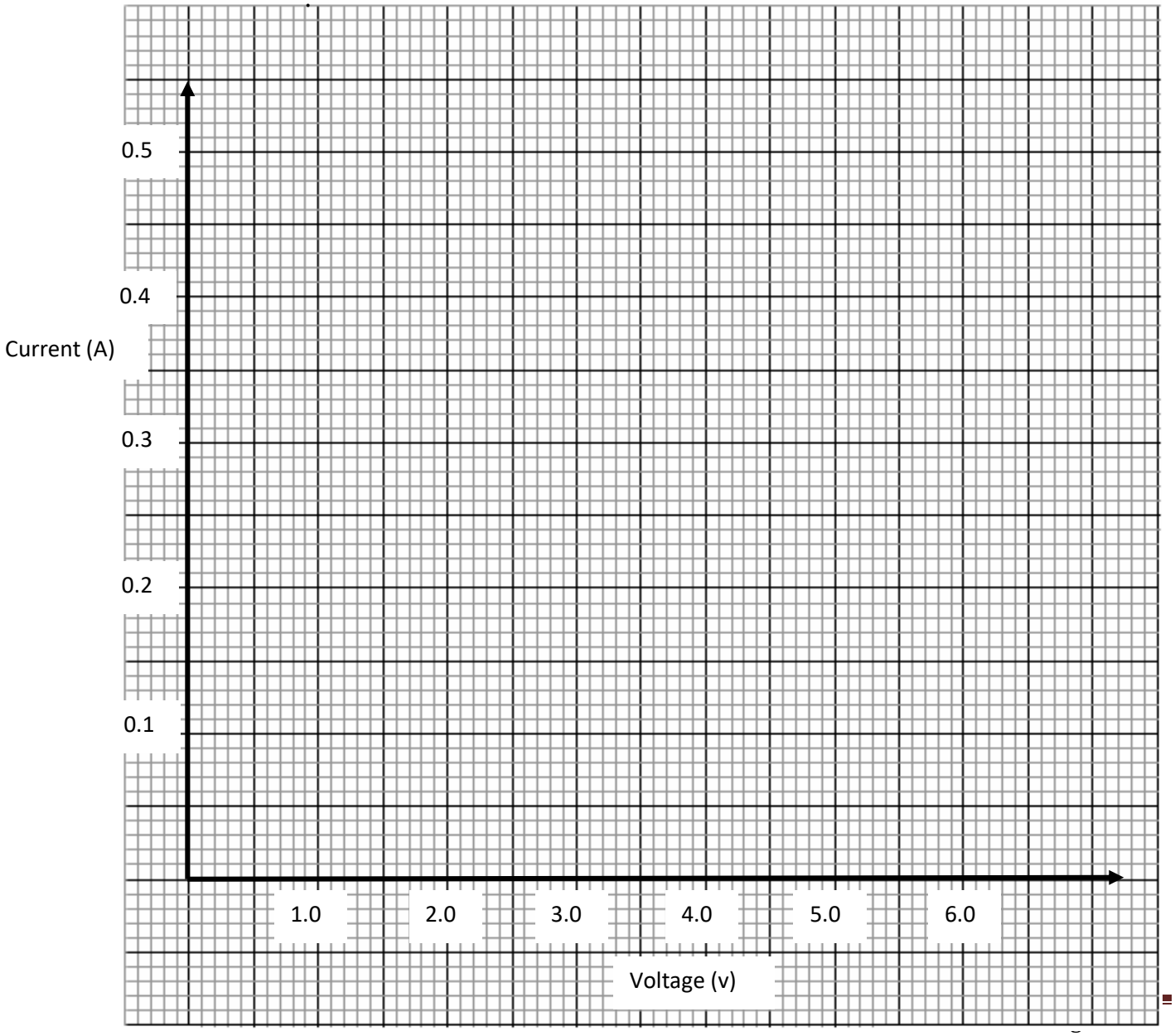
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17. a) State Ohm's law (1mark)

……

……

c) The graph below was obtained from an experiment to determine the effective resistance of two resistors connected in parallel. The value of one resistor is 50Ω



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Determine the value of the other resistor (3marks)

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c) A dry cell can deliver 0.5A when connected to a 2.5Ω resistor.When connected to another 3.0Ω which is connected in series with the first (2.5Ω), the cell can deliver 0.25A to the combination. Use this information to calculate:

i. The internal resistance of the cell. (2marks)

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ii. The e.m.f of the cell (1mark)

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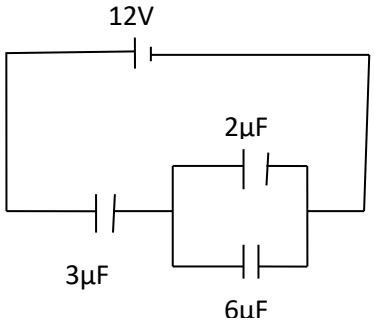
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d).) Explain briefly how a dielectric material affects the capacitance of parallel plate capacitor. (1mark)

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e) The figure below shows three capacitors of capacitance 3μF,2μF,6μF and 12V supply connected in a circuit



Calculate:

i) The total capacitance of the circuit. (2marks)

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ii)The charge stored in the circuit. (1mark)

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iii) The potential difference across the 2μF capacitors. (2marks)

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NAME: ……..……INDEX NO: ……CLASS..…..

ADM. NO. …… SIGNATURE: …… DATE: ……

232 / 3
PHYSICS
PAPER 3
(PRACTICAL)
MAY/JUNE 2020
TIME: 2 ½ hours

Prefer Calling Sir Obiero Amos @ 0706 851 439 for the Marking Schemes

(Kenya Certificate of Secondary Education (KCSE))

INSTRUCTIONS TO CANDIDATES

(a) Write your Name, Index Number and Admission number in the spaces provided above.
(b) Sign and write the date of Examination in the spaces provided above.
(c) Answer all questions in the spaces provided.
(d) You are supposed to spend the first 15 minutes of the 2½ hours allowed for this paper reading the whole paper carefully before commencing your work.
(e) Marks will be given for clear records of observations actually made, their suitability, accuracy and the use made of them.
(f) Candidates are advised to record their observations as soon as they are made.
(g) All working must be clearly shown where necessary.
(h) Mathematical tables and silent electronic calculators may be used.
(i) This paper consists of 8 printed pages. Candidates are advised to check that all pages are printed as indicated and no questions are missing.

FOR EXAMINER'S USE ONLY

Question 1	**a**	**b (i)**	**b (ii)**	**c (i)**	**c (ii)**	**c (iii)**	**e**	**f (i)**	**f (ii)**	**g**	**h**	**TOTAL**
Max. Score	**2**	**1**	**1**	**1**	**1**	**1**	**3**	**5**	**1**	**2**	**2**	**20**
Candidate's Score												

Question 2		**d**	**e (i)**	**e (ii)**	**e (iii) (I)**	**e (iii) (II)**	**e (iii) (III)**	**TOTAL**
Max. Score	**1**	**6**	**5**	**3**	**2**	**1**	**2**	**20**
Candidate's Score								

GRAND TOTAL

Question one

You are provided with the following apparatus,

- A voltmeter
- An ammeter
- A resistance wire labeled W
- A wire mounted on a mm scale and labeled T
- A micrometer screw gauge (to be shared)
- Six connecting wire with crocodile clips

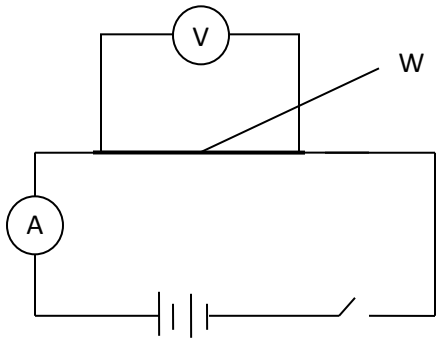
Proceed as follows:

a) Using the micrometer screw gauge provided measure the diameter of the wire labeled T
d ……. mm (1mk)
Determine the radius r of the wire

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r = …… m (1mk)

b) Set up the apparatus as shown below



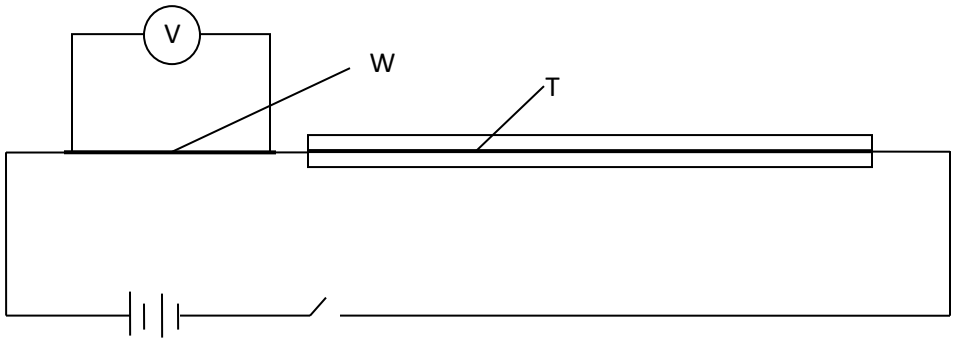
i) Record the voltmeter (V) and ammeter (I) readings

V …… V ($\frac{1}{2}$ mk)

I …….. A ($\frac{1}{2}$ mk)

ii) Determine the resistance R_w of the wire W (1mk)

c) Set up your apparatus as shown below



i) Use the voltmeter provided to measure the p.d V_w across W and V_T across T when the switch is closed.

V_w = …… V ($\frac{1}{2}$ mk)

V_T = …… V ($\frac{1}{2}$ mk)

Open the switch.

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ii) Use the value of R_w calculated in b (ii) and the value of V_w to calculate the current I flowing through W when the switch was closed.

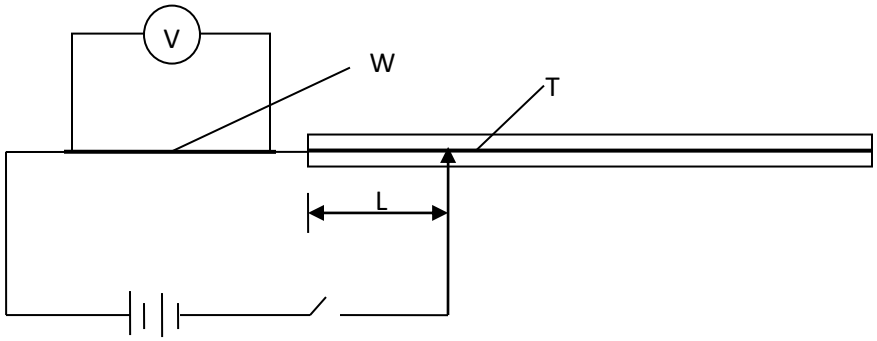
I = …….. (1 mk)

iii) Determine the constant K and its units given that,

(1mk)

$$K = \frac{R_W \ .I}{V_T}$$

d) Connect the voltmeter across R as shown below,



Adjust the position of the crocodile clip on the wire T to a point where L is 5cm. close the switch.

Read and record in the table the value of p.d across W. open the switch.

e) Repeat the procedure in (d) above for other values of L as shown in the table. (3mks)

Distance L (cm)	10	20	40	60	80	100
p.d across W (v)						

f) i) on the grid provided plot a graph of V (y-axis) against L (5mks)

ii) From the graph, determine L_1, the value of $\frac{V_o}{2}$ where V_o is the p.d when $L_1 = 0$ (1mk)

g) determine the constant M for the wire given that,

$$M = \frac{R\ X\ 300}{L1\ X\ V_o}$$ (2mks)

h) Determine the constant N given that, (2mks)

$$N = \frac{\pi r^2}{2}(M + K)$$

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Question 2

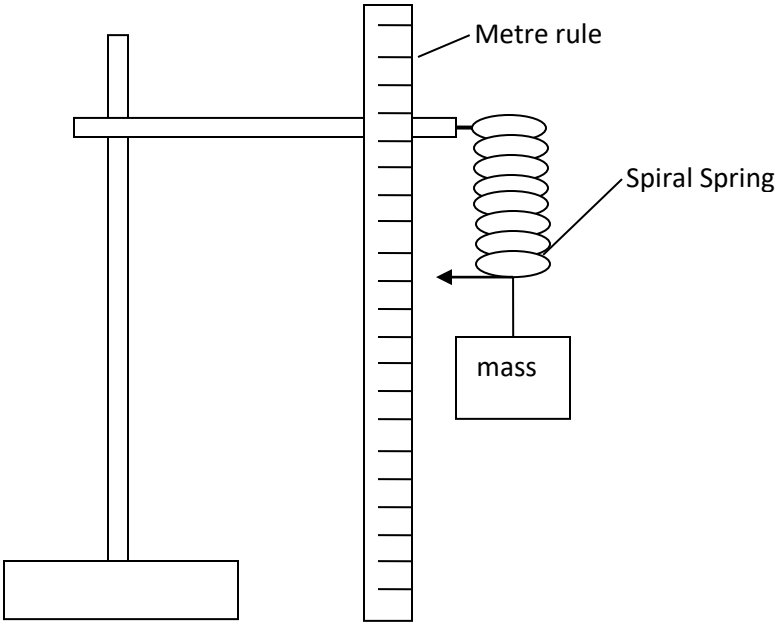
You are provided with the following apparatus;

- A spiral spring with a pointer
- A metre rule
- Clamp
- Stand
- A boss
- Three 100g masses and one 50g mass
- A stop watch

Proceed as follows;

a) Set up the apparatus as shown in the figure below.

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Suspend the spring and mount the metre rule vertically. Measure the length of the spring L_o.

L_o = …… (1mk)

b) Load the spring with a mass of 50g and measure the length of the spring. Record the value in table 2 below.

c) Give the spring a small vertical displacement and record the time for 20 oscillations t

d) Repeat for masses of 100g, 150g, 200g, 250g and 300g and record the corresponding length of the spring and time t for 20 oscillations. (6mks)

Mass (g)	**Length of spring L(m) x 10 $^{-2}$**	**Time for 20 oscillations t (s)**	**Period T (s)**	**T^2 (s^2)**
50				
100				
150				
200				
250				
300				

Table 2

e) i) On the grid provided plot a graph of $T^2(s^2)$ (y-axis) against the length of the spring L (5mks)

ii) Determine the slope of the graph (3mks)

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iii) Given that the equation of the graph is;

$T^2 = KL - R$ where K and R are constants,

I) Determine the value of m given that;

$$\frac{4\pi^2}{m} = K$$ (2mks)

II) Use your graph to determine X_0, the value of L when $T^2 = 0$ (1mk)

III) The value of Q given that ;

$$K.Q = -X_0$$ (2mks)

Name……Index Number……/……Class…….
232/1
PHYSICS **Candidate's Signature…..……**
Paper 1
(THEORY)
Date……

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MAY/JUNE 2020
2 hours

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2020 TOP EXAMINERS' MOCK SERIES 1

Kenya Certificate of Secondary Education
PHYSICS
Paper 1
(THEORY)
2 hours

Instructions to candidates

- *Write your name and index number in the spaces provided above.*
- *Sign and write the date of examination in the spaces provided above.*
- *This paper consists of **two** sections; **A** and **B**.*
- *Answer **all** the questions in sections **A** and **B** in the spaces provided.*
- ***All** working **must** be clearly shown.*
- *Silent non programmable electronic calculators and KNEC mathematical tables may be used.*
- ***Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing**.*
- ***Candidate should answer the questions in English**.*

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1 –10	25	
B	11	10	
	12	11	
	13	11	
	14	12	
	15	11	
	Total Score	80	

SECTION A (25 marks)

Turn over

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

1. In an experiment to determine the density of a liquid the readings shown in **Figure 1(a)** and **1(b)** were noted.



Figure 1(a)



1(b)

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Calculate the density of the liquid. (3 marks)

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2. The weight of an object on earth is 20 N. If the object weighs 18 N on another planet, determine the gravitational field strength at the planet. (Take g = 10 Nkg^{-1}) (2 marks)

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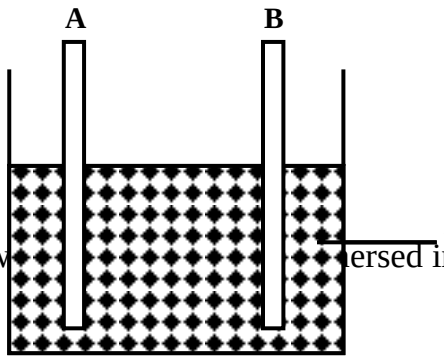
3. Explain using the kinetic theory of matter, one difference between solids and gases. (1 mark)

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……**Figure 2**……

4. **Figure 2** shows rods **A** and **B** immersed in a beaker containing ice cubes.

Rod **A** is made of glass and **B** is made of copper. A boy holds the two rods with his hands.

(a) What observation is made by the boy? (1 mark)

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(b) Explain the observation in (a) above. (2 marks)

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5. A particle on the edge of a wheel is to be released so as to fly when the wheel is revolving at a rate of 2 revolutions per second. If the wheel has a radius of 1.2 m, determine its linear velocity. (3 marks)

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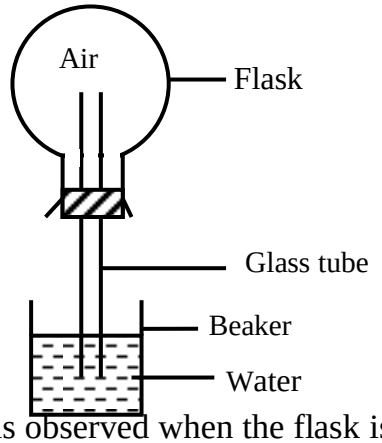
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6. **Figure 3** shows a flask containing air connected to a long glass tube and inverted into a beaker of water**.**

Figure 3



State and explain what is observed when the flask is gently warmed and then allowed to cool.

(3 marks)

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7. A girl dropped a stone from a tower 45 m tall and a boy projected another stone vertically upwards at 25 ms^{-1} at the same time from the base of the tower. Determine the time taken for the two stones to meet.

(3 marks)

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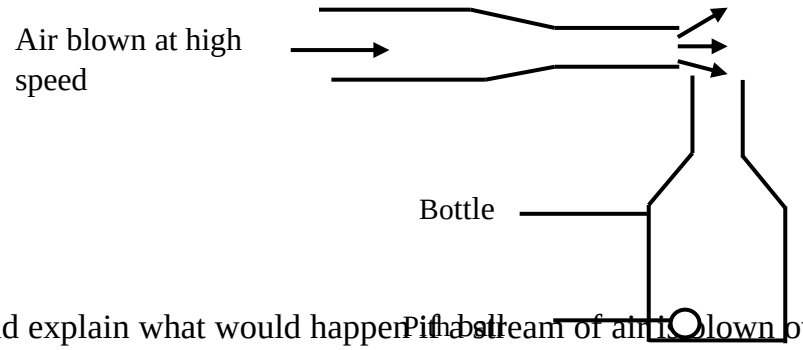
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8. **Figure 4** shows a light pith ball at the bottom of a bottle container.

Figure 4



State and explain what would happen if a stream of air is blown over the mouth of the bottle container at high speed. (3 marks)

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9. A bus that carries goods in the under seats carrier is more stable than one that carries goods in the carrier at its top. Explain why this is so.
(1 mark)

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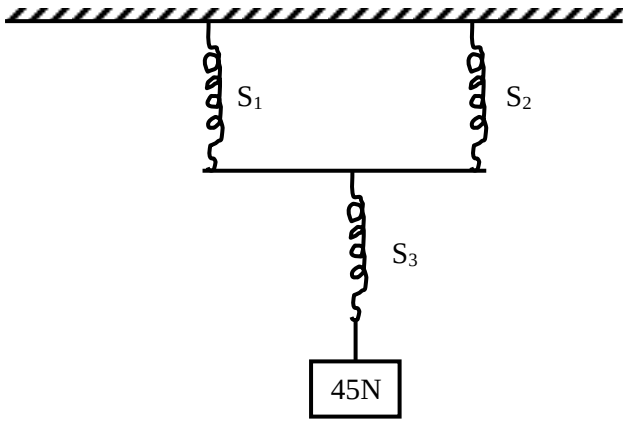
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10. Three identical and light springs of spring constant $40Nm^{-1}$ are set as shown in **Figure 5**.

Figure 5



Determine the total extension of the system when a 45 N weight is hung on it. (3 marks)

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Section B (55 marks)

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

11. (a) State the law of flotation. (1 mark)

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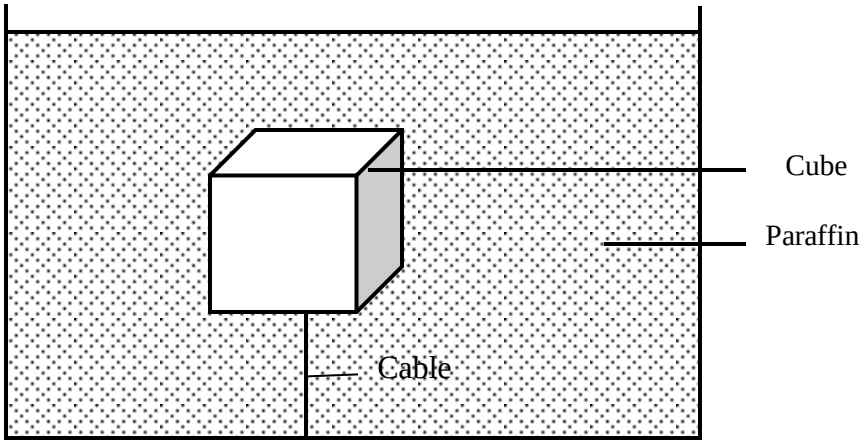
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(b) **Figure 6** shows a cube of side 2m block and of mass 4,800 kg attached to the base of a tank containing paraffin of density 800 kgm^{-3} by means of an inextensible and light weight cable.

Figure 6



Determine:

(i) The density of the block.
(2marks)

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(ii) The upthrust acting on the block. (3 marks)

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(iii) The tension in the cable. (2 marks)

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(iv) The cable is then released, and the block rises to the surface where it subsequently floats. Determine the fraction of the block which is beneath the surface of the paraffin. (2 marks)

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12. (a) An elastic band with elastic constant of 40 Nm^{-1} is stretched by 0.10 m. It is then released to project a stone of mass 0.025 kg. Calculate:

(i) The energy stored in the stretched spring. (2 marks)

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(ii) The kinetic energy of the stone when released. (1 mark)

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(iii) The velocity of the stone on projection. (2 marks)

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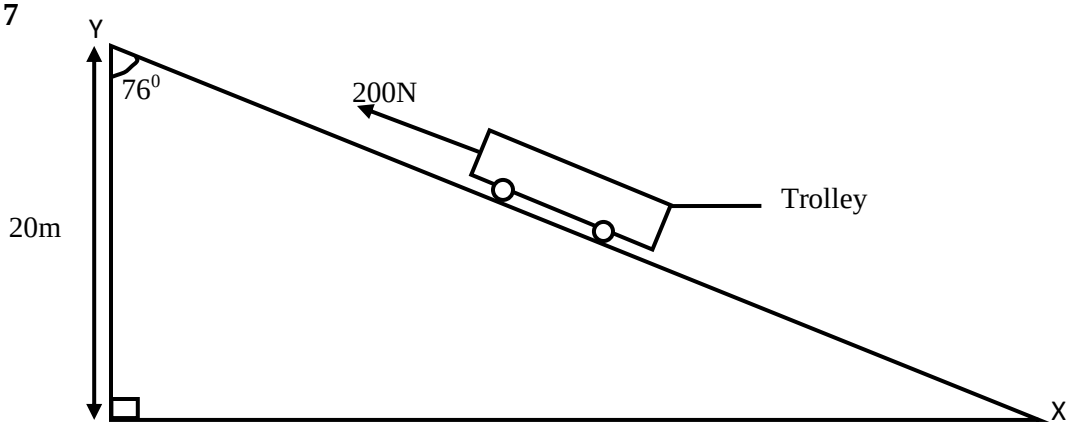
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(b) **Figure 7** below shows a trolley of mass 60 kg resting on an inclined plane. It is then pulled up the slope by a force of 200 N from X to Y at a constant speed.

Figure 7



Determine,

(i) The work output of the system. (2 marks)

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(ii) The work input of the system. (2 marks)

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(iii) The efficiency of the system. (2 marks)

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13. (a) When a force of 10 N is applied to a block of mass 2 kg placed on a rough horizontal table, it moves along with a constant velocity.

(i) What is the coefficient of friction between the block and the table? (2 marks)

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(ii) When the force is increased to 15 N, what is the acceleration produced? (3 marks)

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(b) An air bubble expands as it rises to the surface of water in a deep pond. State the cause of this given that the temperature remains constant.
(2marks)

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(c) Explain in terms of molecular theory, how the increase in volume of a fixed mass of a gas at a constant temperature results in a reduction in pressure.
(2 marks)

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(d) A gas occupying 1200 cm^3 at a pressure of 760 mmHg is compressed at a constant temperature to a volume of 500 cm^3. Calculate the final pressure of the gas.
(2 marks)

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14. (a) State **two** factors that affect the boiling point of a liquid. (2 marks)

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(b) A lagged copper calorimeter of mass 0.8 kg contains 0.6 kg of water at 22.0^0 C. A metal nut of mass 0.4 kg is transferred quickly from an oven at 300^0 C to the calorimeter and a steady temperature of 52^0 C is reached by the water after stirring. Given that the specific heat capacity of copper is 400 $Jkg^{-1}K^{-1}$ and that of water is 4200 $Jkg^{-1}K^{-1}$, calculate:

(i) Heat gained by the calorimeter and water. (3 marks)

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(ii) Energy supplied (lost) by the metal nut. (1 mark)

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(iii) The specific heat capacity of the material making the nut. (3 marks)

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(c) An electric kettle is rated 120 V, 60 W. If the heater is used to melt 20 g of ice at 0^0C to water at 0^0C in 112 seconds, calculate the specific latent heat of fusion of ice.

(3 marks)

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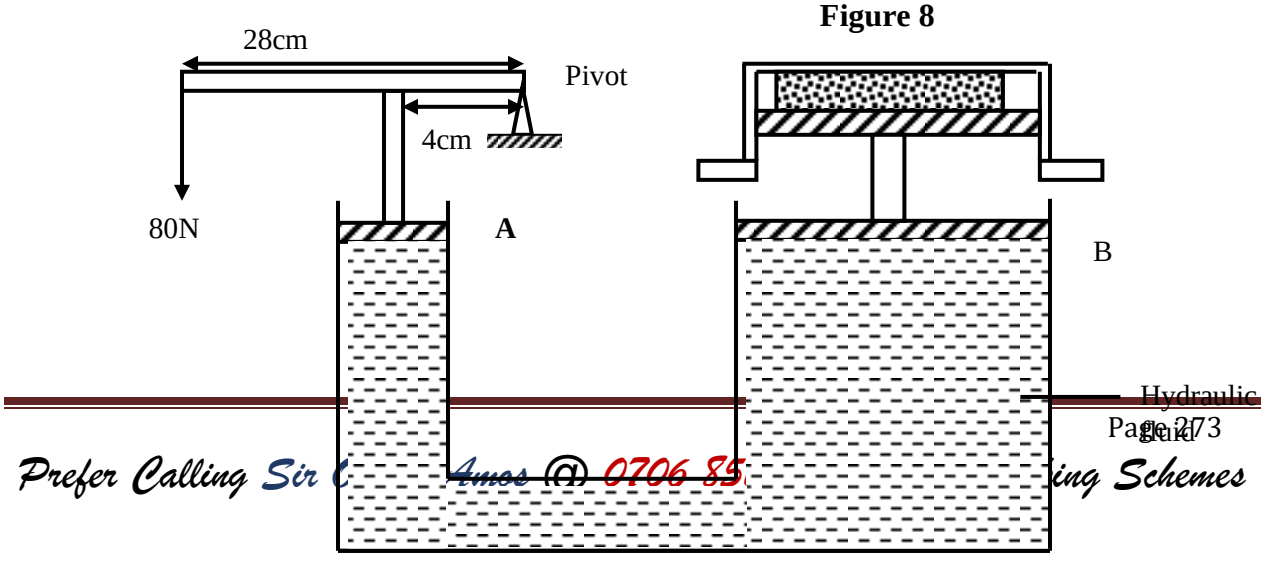
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15. **Figure 8** shows a hydraulic press that is used for compression by applying a force of 80 N at the other end, the plunger being 4 cm from the pivot. The area of the piston A is 20 cm^2 and that of piston B is 100 cm^2.

Figure 8



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Calculate

(i) The force exerted on piston A. (2 marks)

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(ii) The force exerted on piston B. (2 marks)

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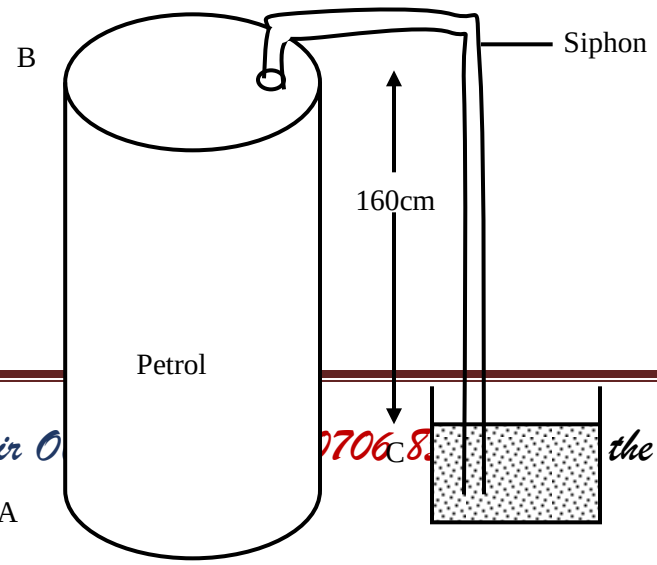
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(b) **Figure 9** shows a siphon that can be used to drain petrol from a tank.

Figure 9



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(i) State **one** condition that must be met for the petrol to be drained. (1 mark)

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(ii) Determine the effective pressure that causes the petrol to flow out of the tank given that the density of petrol is 800 kgm^{-3} and g = 10 Nkg^{-1}.

(2 marks)

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(iii) List **two** reasons why the maximum possible height of water that can be raised by the lift pump is less than 10 m in practice.

(2 marks)

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(iv) Explain how one is able to drink soda in a bottle using a drinking straw.(2 marks)

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2020 TOP EXAMINERS' MOCK SERIES

101/1 ENGLISH

PAPER ONE

TIME: 2HRS

INSTRUCTIONS TO CANDIDATES

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1. Write your details in the spaces provided above.
2. Answer all the questions in this paper.
3. Answer the questions in English

EXAMINER'S USE ONLY

QUESTION	MARKS	CANDIDATE'S SCORE
1	20	
2	10	
3	30	
TOTAL	60	

1. Students in your school have raised concerns about poor hygiene in the school. In a bid to address these concerns, the principal appoints a four member committee to investigate the health situation and give recommendations. You are the secretary of the committee, write down the report you will present to your principal.
   (20mks)

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2. CLOZE TEST (10MKS)

Fill in the blank spaces with the most appropriate words.

A new research title "Underage drinking in Kenya", has ……1…….that nearly one third of form four students aged below 18 years take alcohol ……2……. As our society ponders this sad ……3……., the urgent message to children who are taking alcohol ……4……. do not drink another sip. Advice to those children is to strongly say "no". ……5……irresponsible behaviour, to alcoholism, there are many……6……effects of alcohol. It is wrong and illegal for children to drinkalcohol. This report also states that 46 percent of the children received ……7…….first pint from friends and ……8……. Do you offer alcohol to a child? As a parent or guardian, do you nurture ……9…….? How much time do you spend with them?Notably, ……10……of guidance and supervision are stimuli to underage drinking.

3. ORAL SKILLS (30MKS)

Read the poem below and answer the questions that follow

Make me a grave where'er you will,
In a lowly plain, or a lofty hill;
Make it among earth's humblest graves,
But not in a land where men are slaves.

I could not rest if around my grave
I heard the steps of a trembling slave;

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His shadow above my silent tomb
Would make it a place of fearful gloom

I could not rest if I heard the tread
Of a coffle going to the shambles led,
And the mother's shriek of wild despair
Rise like a curse on the trembling air
(by Frances Ellen Watkins Harper)

Questions

a) Describe the rhyme scheme of the poem above. (2mks)

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b) Apart from rhyme, mention two other ways they have achieved rhythm? (4mks)

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c) Mention two ways in which you would know that your audience is fully participating during the recitation of the poem above. (2mks)

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d) How would you say the last line of the poem? (2mks)

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e) Indicate whether the following items have a falling or a rising intonation. (4mks)

i) Get out now! ……

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ii) The man was accused of theft. ……

iii) How did you find the English exam? ……

iv) Could he have left? ……..

f) Underline the silent letters in the following words. (4mks)

i) Corps

ii) Parliament

iii) Leopard

iv) Fracas

g) Provide a homophone for each of the following words. (4mks)

i) Bury ……..

ii) Claws ……..

iii) Guest ……

iv) Male ……..

h) The underlining indicates the stressed word in the sentences below. Briefly explain what each sentence mean (3mks)

i) The <u>lady</u> in a red dress lost her purse

……

ii) The lady in a <u>red</u> dress lost her purses

……

iii) The lady in a red dress lost her <u>purse.</u>

……..

i) Identify the odd word out according to the pronunciation of the underlined sound. (2mks)

i) S<u>a</u>id H<u>ea</u>d G<u>a</u>te L<u>e</u>d

……

ii) <u>F</u>ace <u>Ph</u>rase She<u>ph</u>erd <u>Ph</u>ase

j) Below is a dialogue between Muthomi and James who are candidates. Read it and answer the questions that follow.

Muthomi: James, I'm worried about my performance in English. It's not encouraging.

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James: Ah! I'm happy with mine in Biology. I got an A in the last exam.

Muthomi: I really don't know what to do about English, maybe…

James: I don't like History and P.E teacher. He thinks he is the only one who can a pick-up truck. My mum told me she would be buying one soon.

Muthomi: (Trying to bring him back to the topic) Tell me James, how do yourevise English?

James: Oh! Is that Betty? She promised to bring me a movie. (Calling out) Betty! Betty!

(The runs after her)

a) Identify the shortcomings in the dialogue above (3mks)

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Kenya Certificate of Secondary Education

101/2 ENGLISH

PAPER ONE

TIME: 2HRS

INSTRUCTIONS TO CANDIDATES

4. Write your details in the spaces provided above.
5. Answer all the questions in this paper.
6. Answer the questions in English

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EXAMINER'S USE ONLY

QUESTION	MARKS	CANDIDATE'S SCORE
1	20	
2	25	
3	20	
4	20	
5	15	
TOTAL	100	

4. COMPREHENSION

Read the passage below and answer the questions that follow

The process of developing social skills among children at an early age is important. Researchers have cited rejection by peers as the greatest challenge children face in their quest to build meaningful social skills. It has been reported that children who get bullied and snubbed by peers are more likely to have problems in relating with others. In recent times, researchers have found at least three factors in a child's behaviour that can lead to social rejection. The factors involve a child's inability to pick up on and respond to nonverbal cues from their pals. In the United states 10 to 13 percent of school-going children experience some form of rejection by their peers. In addition to causing mental health problems, bullying and social isolation can increase the likelihood of a child getting poor grades, dropping out of school,, or developing substance abuse problems.

It is reported that the social skills that children gain on the playground or elsewhere could show up later in life, according to Richard Lavoie, an expert in child social behaviour. He says that children experiment with the relationship styles they will have as adults during unstructured playtime-when children interact without the guidance of an **authority figure.** Researchers say that the number-one need of any human is to be liked by other humans. However, researchers have expressed concern that our children are like strangers in their own land. They don't understand the basic rules of social behaviour and their mistakes are usually unintentional.

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Children who face rejection may have problems in at least one of three different areas of nonverbal communication, which is the reason they are rejected. These are reading nonverbal cues; understanding their social meaning; and coming up with options for resolving a social conflict. A child, for example, simply my not notice a person's scowl of impatience or understand what a tapped foot means. In another situation, a child may have trouble reconciling the desires of a friend with her own. Anyone trying to help children on their social skills should try to pinpoint the weaknesses a child has and then build those up.

When children have prolonged struggles with socializing, "a vicious cycle begins," children who are shunned by others have few opportunities to practice social skills whereas popular children have more than enough opportunities to perfect theirs. However, having just one or two friends can be enough to give a child the social practice he or she need.

Parents, teachers and other adults in a child's life can help, too. Instead of reacting with anger or embarrassment to a child who, say, asks Aunt Vera if her new hairdo was a mistake, parents should teach social skills with the same tone they use for teaching numeracy skills or proper hygiene.If presented as a learning opportunity, rather than a punishment, children usually appreciate the lesson. It is important to note that most children are so desperate to have friends that they just jump on board.

To teach social skills, Lavoie advises a five-step approach in his book. The process works for children with or without learning disabilities and is best conducted immediately after a wrongdoing has been made. First, ask the child what happened and listen without judgment. Second, ask the child to identify their mistake. Often children only know that someone got upset, but don't understand their own role in the outcome. Third, help the child identify the cue they missed or mistake they made, by asking something like: "How would you feel if Emma was hogging the tyre swing?" Instead of lecturing with the word "should," offer options the child "could" have taken in the moment, such as "You could have asked Emma to join you or told her you would give her the swing after your turn. "Fourth, you can create an imaginary but similar scenario where the child can make the right choice. For example, you could say, "If you were playing with a shovel in the sand box and Aiden wanted to use it, what would you do?" Lastly, give the child" social

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homework" by asking him to practice this new skill, saying: "Now that you know the importance of sharing, I want to hear about something you share tomorrow."

(Adapted from livescience.com-Tue Feb 2, 2010)

Questions

a) In one sentence, explain what this passage is talking about? (2mks)

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b) What is the number one need of any human being? (1mk)

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c) What are cited as the causes for social rejection according to the passage (2mks)

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d) What is social rejection likely to lead to (2mks)

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e) What vicious cycle is referred to in this passage (2mks)

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f) How can a parent make children appreciate the lesson on social skills? (2mks)

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g) "How would you feel if Emma was hogging the tyre swing?" Re-write in reported speech. (1mk)

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h) Make notes on the five-step approach to teach children social skills (5mks)

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

i. Authority figure

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ii. Shunned

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iii. Jump on board

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5. <u>Read the excerpt below and answer the questions that follow</u> (25mks)

A Doll's House:

Krogstad: (Controlling himself) Listen to me, Mrs. Helmer. If necessary, I am prepared to fight for my small post in the Bank as if I were fighting for my life.

Nora: So it seems

Krogstad: It is not only for the sake of the money; indeed, that weighs least with me in the matter. There is another reason-well, I may we well tell you. My position is this. I daresay you know, like everybody else, that once, many years ago, I was guilty of an indiscretion.

Nora: I think I have heard something of the kind.

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Krogstad: The matter never came into court; but every way seemed to be closed to me after that. So I took to the business that you know of. I had to do something; and, honestly, I don't think I've been one of the worst. But now I must cut myself free from all that. My sons are growing up; for their sake I must try and win back as much respect as I can in the town. This post in the Bank was like the first step up for me – and now your husband is going to kick me downstairs again into the mud.

Nora: But you must believe me, Mr. Krogstad; it is not in my power to help you at all.

Krogstad: Then it is because you haven't the will; but I have means to compel you.

Nora: You don't mean that you will tell my husband that I owe you money?

Krogstad: Hm! – suppose I were to tell him?

Nora: I would be perfectly infamous of you. *(Sobbing)* To think of his learning my secret, which has been my joy and pride, in such an ugly, clumsy way – that he should learn it from you! And it would out me in a horribly disagreeable position-

Krogstad: Only disagreeable?

Nora: *(Impetuously)* well, do it, then! – and it will be the worse for you. My husband will see for himself what a blackguard you are, and you certainly won't keep your post them.

Krogstad: I asked you if it was only a disagreeable scene at home that you were afraid of?

Nora: If my husband does get to know of it, of course he will at once pay you what is still owing, and we shall have nothing more to do with you.

Krogstad: *(Coming a step nearer)*Listen to me, MrsHelmwe. Either you have a very bad memory or you know very little of business. I shall be obliged to remind you of a few details.

Questions

a) What happens just before this excerpt? (2mks)

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b) Identify and illustrate any two themes evident in the excerpt. (4mks)

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c) Using about fifty words, summarise why Krogstad is prepared to fight for the small post in the bank (5mks)

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d) Identify and illustrate any two character traits of; (4mks)

i. Krogstad

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ii. Nora

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e) Identify and illustrate any two stylistic devices used in the excerpt. (4mks)

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f) Explain the meaning of the following words as used in the extract (2mks)

i. Compel

……

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ii. Blackguard

……..

g) "I shall be obliged to remind you of a few details". Which are those details? (4mks)

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6. Read the following narrative then answer the questions that follow (20mks)

Once upon a time Hare and Hyena were very good friends. They visited each other every day and herded their cows together.

There came a time when the cows started dying one after the other. The two friends wanted to find out why the cows were dying. Hare said, 'Let us go and kill our mothers and take out their livers. We shall then cook and taste these livers. The bitter liver will show whose mother was making the cows die. At once Hyena went and killed his mother. He took out the liver and cooked it. Hare went and hid his mother in the garden in bushy banana plants. He then went and killed an antelope, took out its liver and cooked it.

The two friends met to eat their livers. "My liver is very bitter", said the Hyena. "Mine is very sweet," said Hare, "So it was your mother who was making the cows die." Hyena kept quiet and went home feeling sad. He moved from the old house to a smaller one because now he had no mother. Hare did the same

After a short time, there was great famine in the land. The two friends decided that each of them was to look for food on alternate days sharing, on an equal basis what was available. When it was Hyena's turn, he went and found only honeycombs without any honey. When Hyenabrought these, Hare refused this because he had secretly gone to his mother who had given him some bananas. This went on for many days, and Hyena grew thinner and thinner. Then he started wondering. "How does my friend remain fat and he doesn't eat anything. I will find out."

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One day he followed Hare. Hare went to his mother as usual. 'Mother, mother, I have come' and the mother dropped some bananas which Hare ate quickly. He then looked for some honeycombs and took them to the friend. "This is all I could find my friend." The Hyena kept quiet. The next day he went to the banana plant and called. His voice however was very deep and no bananas were dropped for him.

There was an old hyenawho was staying at the end of the forest and used to give advice to people. So Hare's friend went to her and told her his problem. "Go and put your tongue on the path of black ants," He was told, "Let them bite your tongue until it hurts. That's how your voice will be soft."

Hyena went and did as he was told. When he went to Hare's mother his voice was as soft as Hare's. "Mother, mother I have come." And Hare's mother dropped bananas for his him. Then he told her to come and greet him. When she came down and saw it was Hyena she screamed but there was nobody near to help. Hyena killed her immediately.

Hyena went and met Hare as usual saying nothing about Hare's mother. The following day it was Hare's. "Mother, mother I have come.' And Hare's mother dropped bananas for his him. Then he told her to come and greet him. When she came down and saw it was Hyena she screamed but there was nobody near to help. Hyena killed her immediately.

Hyena went and met Hare as usual saying nothing about Hare's mother. The following day it was Hare's turn. He went to his usual place. "Mother" he called again. He climbed up. There was nobody. Having seen some blood on the ground, Hare knew what had happened to his mother.

When Hare got back to Hyena's house, he said nothing. At night, Hare took all cows including Hyena's and went away to live in another part of the country. That ended the Hare and Hyena's friendship. And that is the end of my story to you.

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Questions

a) With illustrations, classify the above narrative (2mks)

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b) Identify three features of narratives (3mks)

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c) Identify three features in this story that are characteristics of oral narratives (3mks)

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d) Briefly explain the character traits of the following (4mks)

i. Hare

……

ii. Hyena

……

e) What moral lesson do you learn from this story? (2mks)

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f) Identify two socio-economic activities from the community in which the narrative is taken from. (2mks)

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g) You have been selected for a fieldwork research to collect the above item.

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i. Briefly explain two ways in which you would collect information on the item. (2mks)

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ii. Identify two challenges you might encounter during the field work and state how you would solve them. (2mks)

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h) Then he started wondering "How does my friend remain fat and he doesn't eat anything. I will find out". (Re-write into indirect speech) (1mk)

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……

i) Describe the irony in the fifth paragraph (2mks)

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7. <u>GRAMMAR (15MKS)</u>

a) Rewrite the following sentences according to the instructions given (3mks)

i. He will not be given a driving license. He passes the road test (Rewrite as one using 'unless')

……

……

ii. The woman left the child with a neighbor and went to the market. (Begin: leaving….)

……

……

iii. The boys went to play in the field (underline the adverbial)

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b) Supply the correct preposition to complete the sentences given. (3mks)

i. Property worth millions of shillings went up ……flames.

ii. The three boys shared the bread ……..themselves.

iii. We should strive to live ……our means.

c) Use the correct form of the word in brackets to fill in the blank spaces in the sentences below. (3mks)

i. The audience was offended by the ……(sense) of the speaker.

ii. The ……(acquire) of a university degree is a great milestone to a student.

iii. Everyone should obey the law ……of their position in the society.

d) Use the correct alternative to complete the sentences below (4mks)

i. Teaching ……(practice/practice) is not an easy job for teacher-trainees.

ii. The prophet's ……(prophesy/prophecy) was misleading to his audience.

iii. He ……((insured/ensured) his car with Madison.

iv. Mwita ……..(hanged/hung) the chart on the wall.

e) Write the following sentences in indirect speech (1mk)

"These are juicy mangoes," Ken said.

……

……

f) You do not require to cheat to pass (1mk)

(Supply a suitable question tag).

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2020 TOP EXAMINERS' MOCK SERIES

101/3 ENGLISH

PAPER 3

TRIAL 2, 2020

TIME: 2½HRS

INSTRUCTIONS TO CANDIDATES

7. Write your details in the spaces provided above.
8. Answer three questions only
9. Questions one and two are compulsory
10. In question three choose only one of the optional texts you have prepared on.
11. Where a candidate presents work on more than one optional text, only the first one to appear will be marked.
12. Each of your essays must not exceed 450 words.
13. Candidates should check to ascertain that no questions are missing.

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8. IMAGINATIVE COMPOSITION (20MKS)

a) Write a composition ending with the following statement.

……a final look at her made me realize that choices have consequences.

OR

b) Write a composition to illustrate the proverb, “once beaten twice shy”.

9. COMPULSORY TEXT BLOSSOMS OF THE SAVANNAH H.R OLE KULET (20MKS)

Parenting should build an environment of trust and peace in a family. Write an essay that explores how this statement applies to the Ole Kaelo family in Blossoms of the Savannah

10. OPTIONAL SET BOOKS

a) Drama: David Mulwa: The Inheritance

Inheriting a top seat without merit only invites ridicule from subjects. Write an essay showing how satire has been used in The Inheritance by David Mulwa.

b) Short stories: Moran (ED) memories we lost.

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Discuss the major issues highlighted by the writer in the story window seat by Benjamin Branoff.

c) John Steinbeck. The Pearl

The Pearl potrays humans as beings inherently greedy. Show the validity of this statement with reference to The Pearl.

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