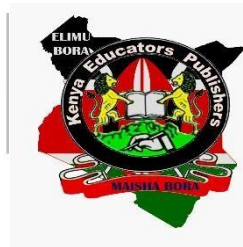


FORM 3 2023 ENDTERM 1

HOLIDAY ASSIGNMENT

ALL SUBJECTS



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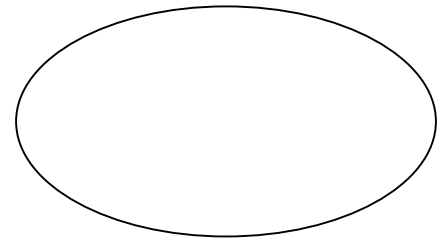
FORM 3 TERM 1 HOLIDAY ASSIGNMENT 2023

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GRAND TOTAL



AGRICULTURE
TIME: 2 HOURS
SECTION A: (30 MARKS)

1. Differentiate between selection and culling in animals. *(1mark)*

2. State **two** methods of stocking a beehive. *(1mark)*

3. What term is used to describe a case where during parturition the hind legs come out first? *(1mark)*

4. Give the **two** breeding system used in livestock improvement. *(1 mark)*

5. Name **two** breeds of sheep kept for dual purpose. *(1mark)*

6. Give any **four** advantages of artificial insemination. *(2marks)*

7. State **four** methods of identification in livestock. *(2marks)*

8. Give reasons why roughage is necessary in ruminant animals *(1mark).*

9. Define the following terms.
 - (i) Fishing *(1mark)*

 - (ii) Crutching *(1mark)*

 - (iii) Ringing *(1mark)*

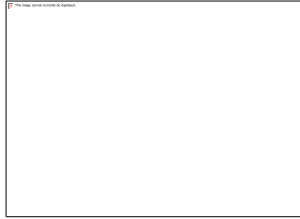
 - (iv) Raddling *(1mark)*

10. State three methods of dehorning . (1 ½ mark)
11. Give **four** desirable features of a rabbit hutch. (2marks)
12. Distinguish between inbreeding and out crossing in livestock production (2marks)
13. State **four** uses of a crush in livestock production. (2marks)
14. Define the term feed additives. (½ mark)
15. State **three** importance of feed additive. (1½marks)
16. State **four** functions of the worker bee in a bee colony. (2marks)
17. Give **three** methods of selection. (1½ marks)

SECTION B (20MARKS)

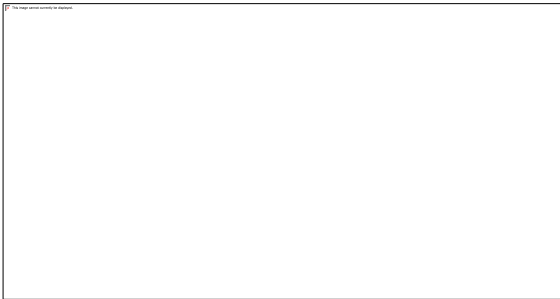
Answer all the question in this section in the spaces provided

18. The diagram below illustrates a breeding management practice.



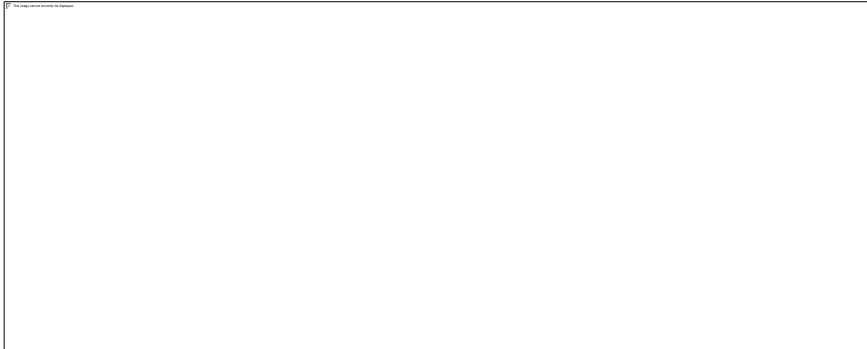
- a) Identify the practice. *(1mark)*
- b) Outline **three** reasons for carrying out this practice. *(3marks)*
- c) Give **three** causes of infertility in farm animals. *(3marks)*

19. Below is the diagram of a digestive system, use it to answer the question that follows.



- a) Which farm animal has a digestive system similar to the above system *(1mark)*
- b) Name the parts labeled **S**, **T** and **W**. *(3marks)*
- c) Explain the work of the parts **S** and **T**. *(2marks)*

20. Study the diagram below of a permanent foundation and answer the question that follows:



- a) Name the following parts labeled **A, B, C** and **D**. *(4 marks)*

- b) What is the mixing ratio used to make part **F**? *(1 mark)*

- c) State two uses of the damp proof course (PVC) *(2 marks)*

SECTION C (40MARKS)

Answer only two questions in this section

21. a) State five factors considered when selecting construction materials. (5marks)
b) Give five uses of a crush in a farm. (5 marks)
c) State and explain parts of a zero grazing unit. (10marks)
22. a) Describe five factors considered when selecting a breeding stock. (10marks)
b) Give the advantages of artificial insemination. (10 marks)
23. a) Name four method used in preservation of fish. (4 marks)
b) State six factors considered when culling a cow for breeding. (6 marks)
c) State and explain five qualities of a good store. (10 marks)

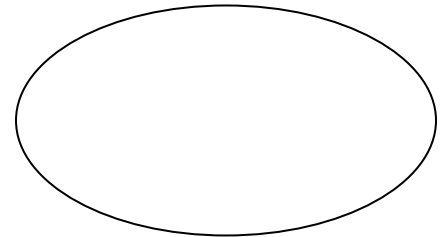
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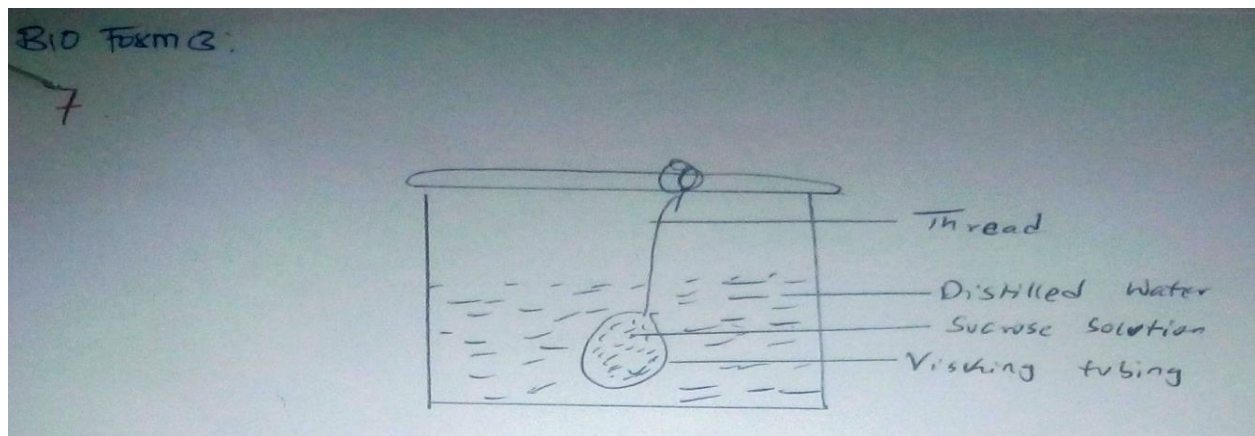


BIOLOGY

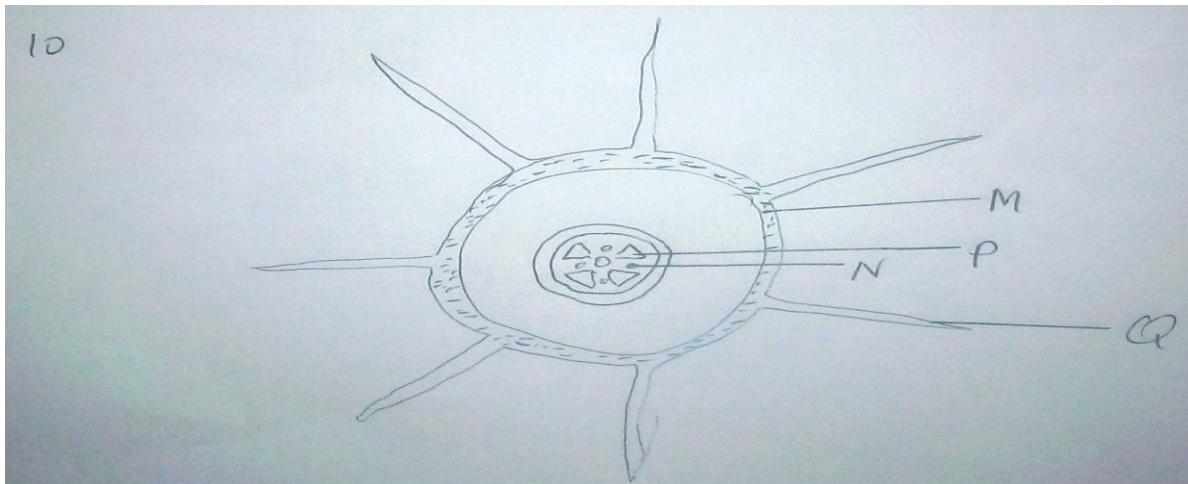
TIME: 2 HOURS

Answer all the questions in the spaces provided.

1. Name three tissues in plants that provide mechanical support. (3 mks)
2. State the mode of feeding of lion in the food web. (1 mk)
3. Name the fluid that is produced by sebaceous glands. (1 mk)
4. Name the end product of light stage in photosynthesis. (2 mks)
5. Name four ways in which respiratory surfaces are suited to their function. (4 mks)
6. Distinguish between diffusion and osmosis. (2 mks)
7. An experiment was set up as shown below. Study it and answer the questions that follow.



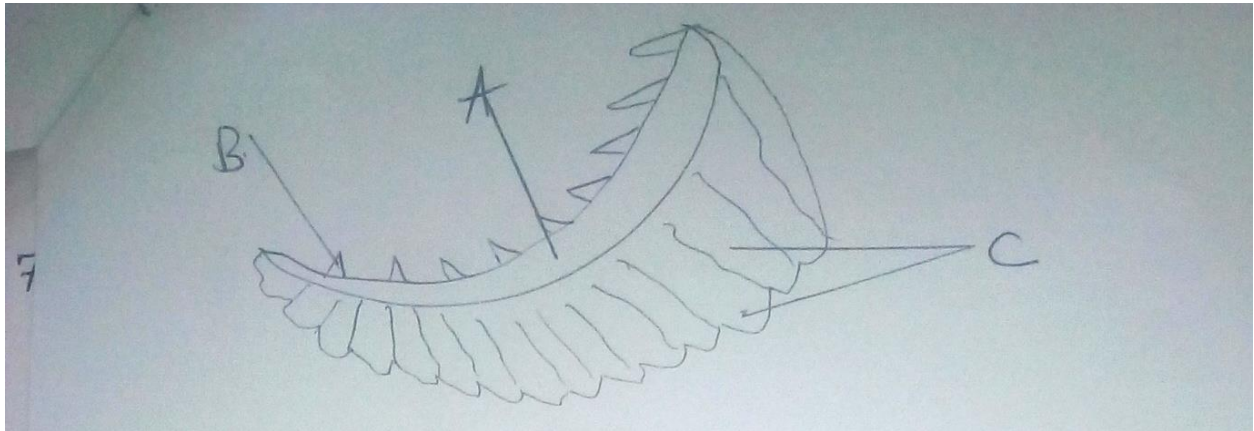
- (i) The set up was left for 20 minutes. State the expected results. (1 mk)
- (ii) Explain your answer in (i) above. (2 mks)
8. Give the function of the following cell organelle. (1 mk)
- (i) Ribosome -
- (ii) Lysosome - (2 mks)
9. Name the type of carbohydrates (polysaccharides) found in the following parts of living organisms.
- (i) In the exoskeleton of arthropods
- (ii) In the xylem vessels -
- (iii) In the animals blood -
10. The diagram below represents a transverse section through a plant organ. Study it and answer the questions that follow.



- (a) From which plant organ was the section obtained. (1 mk)
- (b) Name the parts labeled Q, N and P. (3 mks)
- Q -
- N -
- P -

11. How are leucocytes adapted to their functions? (2 mks)

12. The diagram below illustrates the structure of a gill from bony fish.



(a) Name the structures labeled A, B and C and give their functions. (3 mks)

A -

B -

C -

(b) In what ways are the structures labeled C adapted for their function? (3 mks)

13. (a) Which substance accumulates in the muscles when respiration occurs in absence of oxygen. (1 mk)

(b) Which physiological changes occur in the body that enable the body to break down the substance named in (a) above. (2 mks)

14. Name the product of anaerobic respiration in:

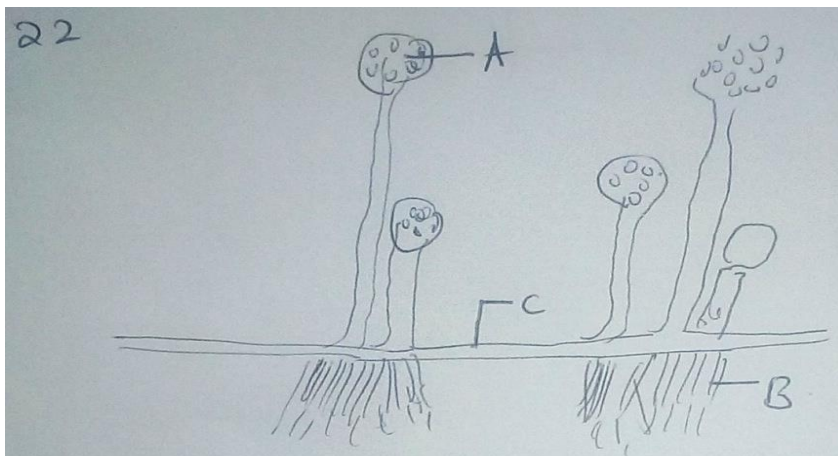
(i) Plants (2 mks)

(ii) Animals (2 mks)

(b) Explain the term Basal Metabolic Rate. (2 mks)

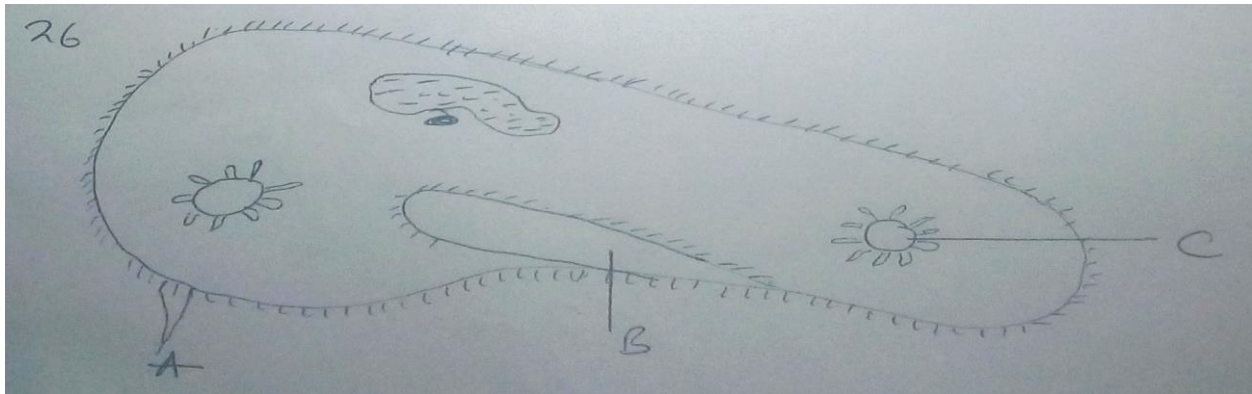
15. Name three organic waste products in plants. (3 mks)

16. Give the advantages of excreting nitrogenous waste products in the form of Uric acid as compared to urea. (2 mks)
17. What is homeostasis? (1 mk)
- (b) State the importance of ultrafiltration in the nephrone of human kidney. (2 mks)
18. (a) Name the hormone whose deficiency may lead to the excretion of glucose in urine. (1 mk)
- (b) Name the hormone that controls the reabsorption of sodium ions in the kidney tubules. (1 mk)
19. Name the only plant subdivision, which produces flowers. (1 mk)
20. Besides the abdomen, name the other body part of members of Arachnida. (1 mk)
21. Name the phylum whose members possess a notochord. (1 mk)
22. The diagram below shows a mould of the genus Rhizopus. Study it and answer the questions that follow.



- (a) Name the kingdom to which it belongs. (1 mk)
- (b) Name the structure labeled A, B and C.
- A -
- B -
- C -

23. Give three characteristics of kingdom montra. (2 mks)
24. State three characteristics of phylum chordate not found in other kingdom. (3 mks)
25. (a) Name the class to which centipede belongs. (1 mks)
- (b) Give one structural feature that can be used to differentiate crustaceans and arachnids. (1 mk)
26. State the organism shown below and answer the questions that follow.



- (a) Name the kingdom to which organism belong and give a reason for your answer. (2 mks)
- (b) Name the structures labeled A, B and C (3 mks)
- A -
- B -
- C -
- (c) Give the function of the structure labeled C. (1 mk)
27. In an investigation, the pancreatic duct of a rat was blocked by tying it with a string. Explain how this affected the following processes. (2 mks)
- (a) Digestion of food. (2 mks)
- (b) Regulation of blood glucose level. (2 mks)
28. Give three differences between class chilopoda and diplopoda. (3 mks)

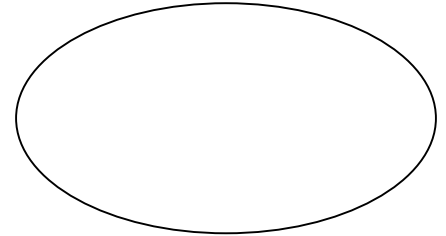
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BUSINESS STUDIES

TIME: 1 HOUR

1. Give four features of economic resources. (4mks)
2. Indicate with a tick (✓) in the appropriate column the business environment associated with each of the factors mentioned below. (4mks)

	FACTOR	INTERNAL	EXTERNAL
i.	Government policy		
ii.	Technological environment		
iii.	Financial resources		
iv.	Firm structure		

3. State four reasons why people engage in business activities. (4mks)
4. Highlight four factors that may be used to determine the size of a firm. (4mks)
5. Indicate by writing the word 'TRUE' or 'FALSE' against the statement describing characteristic for goods and services. (3mks)

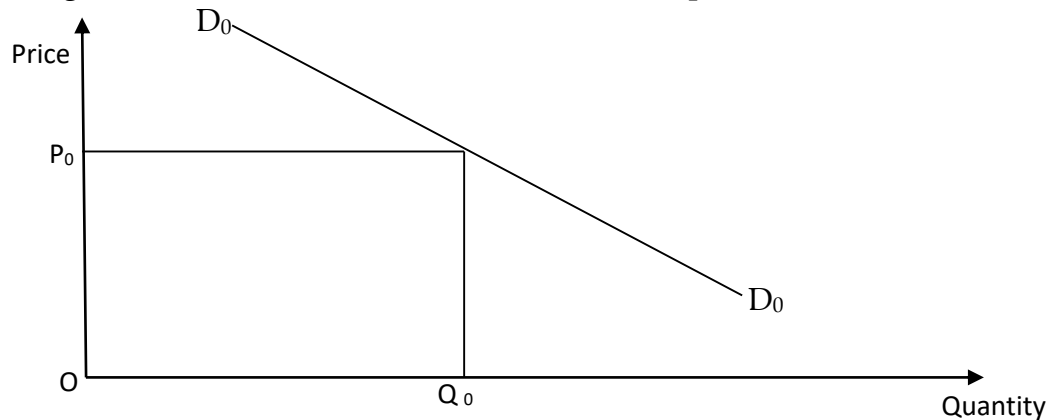
	STATEMENT	TRUE or FALSE
a.	Goods are inseparable from their producers	
b.	Services can be standardized in form of size, appearance or quality	
c.	Services are experienced not owned	
d.	Goods are not always perishable	
e.	Services are highly perishable	
f.	Goods can change in value overtime	

6. The following are types of advertising: product advertising, competitive advertising, informative advertising and institutional advertising. In the table below, match each type with its appropriate description. *(4mks)*

	TYPE OF ADVERTISING	DESCRIPTION
a)		Promotes the name of the manufacturer
b)		Persuades the consumers to buy a product
c)		Creates awareness about a product
d)		Promotes a particular brand of a product

7. Outline four barriers to written communication. *(4mks)*

8. The diagram below shows the current demands for petrol.



- a) What is the effect of an increase in the price of cars on demand for petrol? *(2mks)*
- b) Draw a new demand curve on the diagram above to show the effect of an increase in prices of cars. *(2mks)*
9. State four benefits that consumers get from small scale retailers. *(4mks)*
10. Outline four sources of a business idea. *(4mks)*

SECTION 2

ANSWER ANY ONE QUESTION.

11. Using a diagram, describe the effects of outward shift in supply curve on equilibrium price and quantity. *(10mks)*

12. Outline five circumstances under which a firm will be located near the market for its products. *(10mks)*

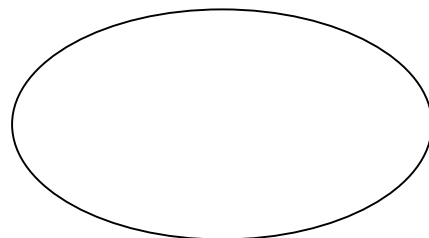
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233
FORM THREE
CHEMISTRY
TIME: 2 HOURS

Answer all the questions in the spaces provided.

1. What is the temperature on the Kelvin scale for each of the following? (3 marks)
- (a) 100°C -
- (b) -100°C -
- (c) 22°C -

2. State any three differences between luminous and non-luminous flame. (3 marks)

Luminous	Non-Luminous

3. The table below shows liquids that are miscible and those that are immiscible.

Liquid	L ₃	L ₄
L ₁	Miscible	Miscible
L ₂	Miscible	Immiscible

- (i) Name the method that can be used to separate L₁ and L₃ from a mixture of the two. (1 mk)

(ii) Describe how a mixture of L_2 and L_4 can be separated. (2 mks)

4. A gas occupies 450cm^3 of 27°C . What volume would the gas occupy at 177°C if its pressure remains constant? (3 mks)

5. The electron arrangement of ions X^{+3} and Y^{2-} are 2.8 and 2.8.8
(a) Write the electronic arrangement of the elements X and Y. (2 mks)

X -

Y -

(b) Write the formula of the compound that would be formed between X and Y. (1 mk)

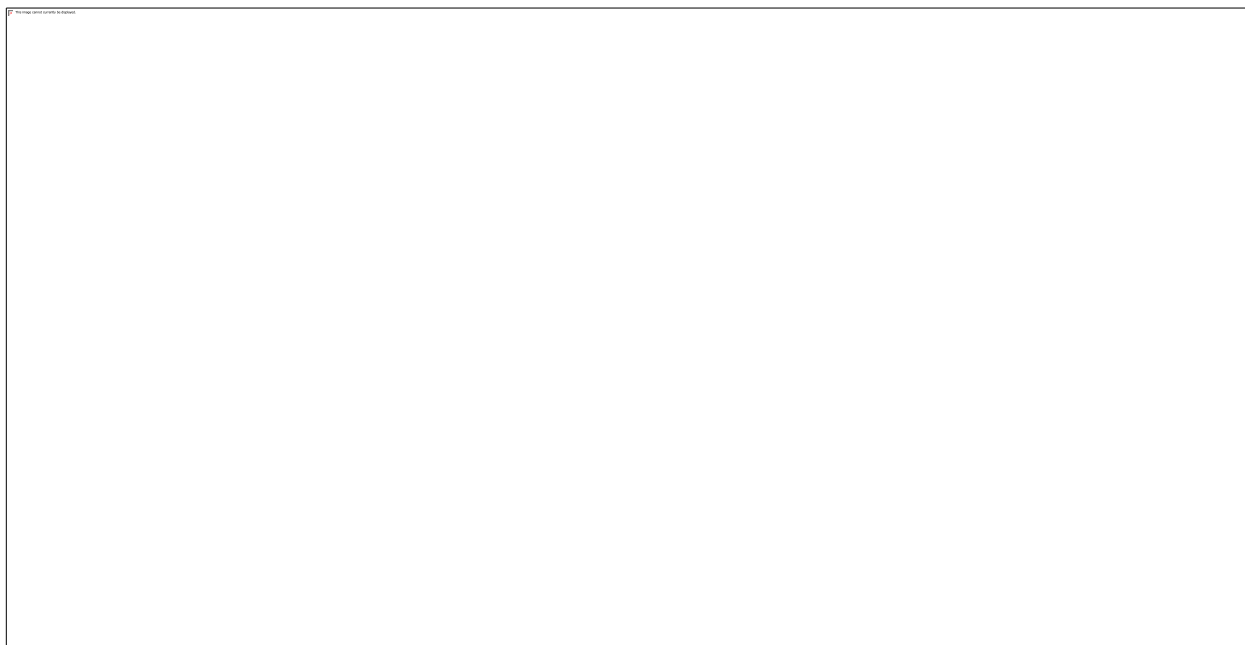
6. Explain why there is general increase in the first ionization energies of the elements in period 3 of the periodic table from left to right. (2 mks)

7. How would you obtain a sample of pure iodine from a mixture of iodine and lead sulphate?

8. (a) State Gay Lussacs law. (1 mk)

- (b) 10cm^3 of a gaseous hydrocarbon (C_2H_x) required 30cm^3 of oxygen for complete combustion. If 20cm^3 steam and 20cm^3 of carbon (iv) oxide were produced, what is the value of X. (3 mks)

9. Explain how conduction of electricity take place in the following: (2 mks)
- (a) Iron metal –
- (b) Molten lead (II) iodide –
10. Study the set up below and answer the questions that follow.

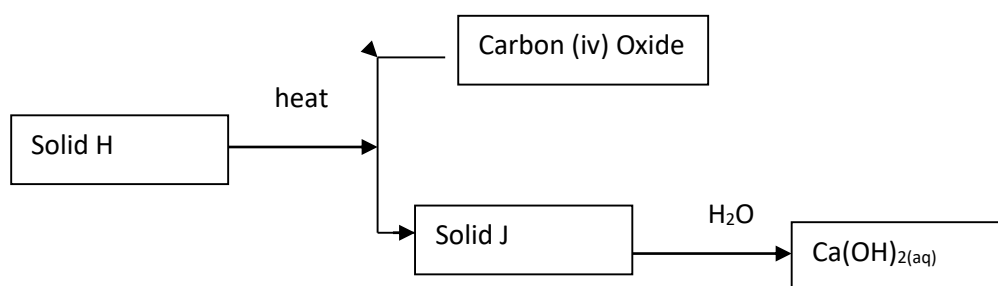


- (a) What observation would be made in the tube? (1 mk)
- (b) Indicate with a cross (x) on the diagram the likely position where observations stated in (a) above would be made. (1 mk)

11. An organic compound had the following composition 37.21% carbon, 7.75% hydrogen and the rest chlorine. Determine the molecular formula of the compound given that the molecular mass of the compound is 65 ($C = 12$, $H = 1$), $Cl = 35.5$) (5 mks)

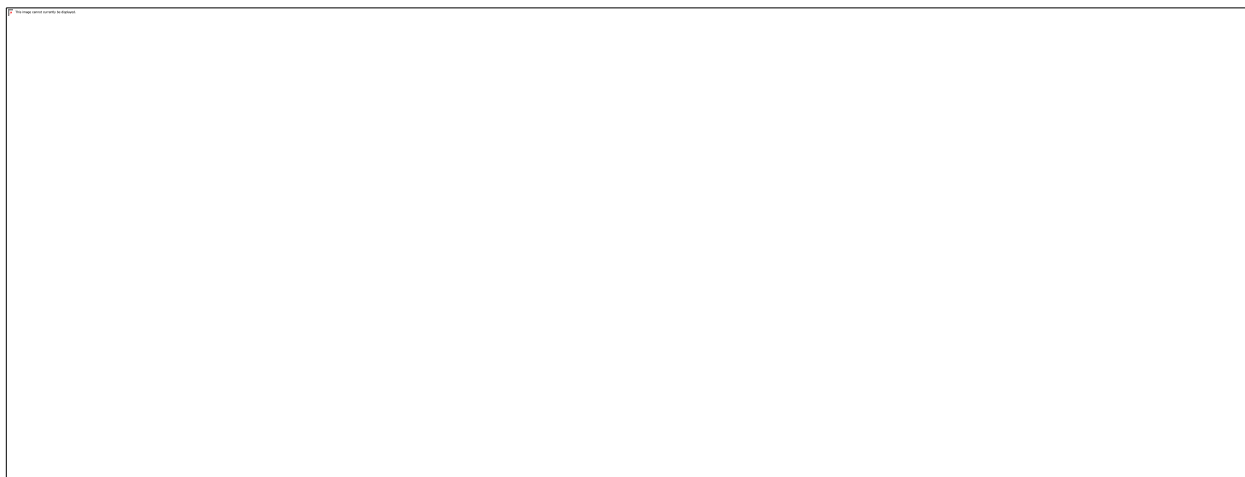
12. Write an ionic equation for the reaction between an aqueous solution of Sodium hydroxide and dilute hydrochloric acid. (3 mks)

13. Use the scheme below to answer the questions that follow.



- (a) Identify the solids H and J. (2 mks)
H -
J -
- (b) State one commercial use of solid J. (1 mk)

14. The diagram below shows a 'Jiko' when in use. Study it and answer the questions that follow.



(a) Identify the gas formed at region A. (1 mk)

(b) State and explain the observation made at region B. (2 mks)

15. (a) Diamond and graphite are allotropes of carbon. What is meant by an allotrope?

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

16. (a) Distinguish between a covalent bond and co-ordinate bond. (2 mks)

(b) Draw a diagram to show bonding in ammonium ion (N = 7, H = 1) (2 mks)

17. Study the information given in the table below and answer the questions that follow. The letters do not represent the actual symbols of the elements.

Element	Atomic number	Boiling point(k)
S	3	1603
T	13	2743
U	16	718
V	18	87
W	19	1047

(a) Select the elements which belong to the same;
(i) Group - (1 mk)

(ii) Period - (1 mk)

(b) Which element;
(i) Is in gaseous state at room temperature? Explain. (1 mk)

(ii) does not form an oxide. (1 mk)

(c) Write the;
(i) formula of the nitrate of element T. (1 mk)

(ii) equation for the reaction between element S and U.

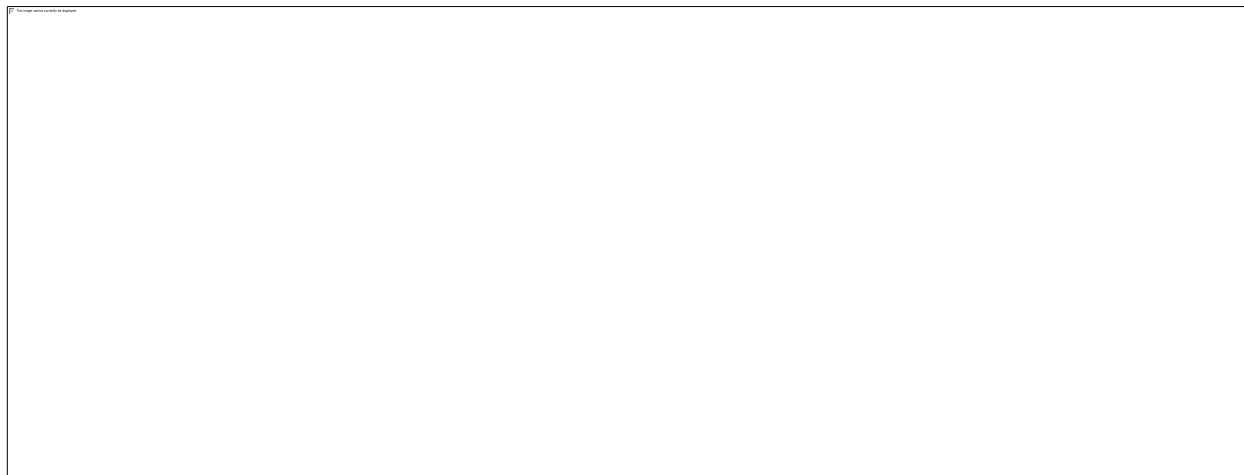
(d) What type of bond would exist in the compound formed when U and T react? Give a reason for your answer. (2 mks)

18. The table below shows the relative atomic masses and the percentage abundances of the isotopes L₁ and L₂ of element L.

	Relative atomic mass	% abundance
L ₁	62.93	69.09
L ₂	64.93	30.91

Calculate the relative atomic mass of element L. (3 mks)

19. When magnesium metal is burnt in air, it reacts with both oxygen and nitrogen gases giving a white ash. Write two equations for the reactions taking place. (2 mks)
20. The chromatogram below was obtained from a contaminated food sample P. Contaminants Q, R, S and T are suspected to be in P. Use it to answer the following questions.



- (a) Identify the contaminant in mixture P. (1 mk)
- (b) Which is the most soluble contaminant in P? (1 mk)

21. Classify the following processes as either chemical or physical. (3 mks)

Process	Type of change
(a) Heating copper (II) sulphate crystals	
(b) Obtaining kerosene from crude oil	
(c) Souring of milk	

22. Name two amphoteric oxides. (2 mks)

23. (a) What is the chemical name for rust. (1 mk)

(b) State one condition that accelerates rusting. (1 mk)

24. (a) State Charles law. (1 mk)

(b) Draw a sketch graph to illustrate Charles law. (2 mks)

25. (a) Define the term molar solution. (1 mk)

(b) In a class of 30 students, each student requires 100cm³ of 0.1M sodium hydroxide solution for a titration experiment. Calculate

(i) The total volume of sodium hydroxide required for the class.
(K = 39, O = 16, H = 1) (2 mks)

(ii) The total mass of sodium hydroxide required to prepare the total volume of solution for the class. (3 mks)

26. The table below shows the values of solutions A, B, C and D.

Solution	A	B	C	D
pH value	2	7	12	14

(a) Which solution is likely to be that of magnesium hydroxide? (1 mk)

(b) Select the solution that reacts with calcium carbonate powder. Give a reason. (1 mk)

27. Determine the volume of 2.0M NaOH which when diluted to 250cm³ would produce a 0.8M NaOH solution. (2 mks)

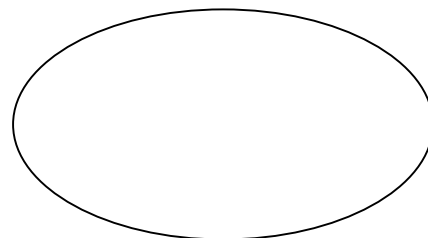
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C.R.E

TIME: 1 HR 30 MIN

ATTEMPT TO ALL THE QUESTIONS.

1. Give five teachings of peter concerning the people of God (1peter 2:9-10) (5mks)
2. Explain how peters life was transformed on the day of Pentecost (5mks)
3. Give examples of relationship- based on false love in Kenya today (5mks)
4. Describe the unity of believers as expressed in the concept of the church (8mks)
5. Explain similarities between the traditional African and old testament prophets(6mks)
6. Explain three categories of true prophets in the old testament (6mks)
7. Give five reasons why Jesus used bread and wine during the last supper (5mks)
8. State five signs of the end times as taught by Jesus according to (Luke 21:5-38) (5mks)
9. Give ways in which Christians can assist victims of disasters (5mks)

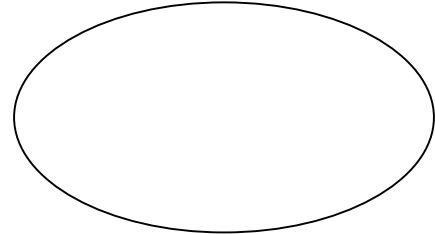
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ENGLISH

Time: 2 Hour

INSTRUCTIONS TO STUDENTS

1. Answer all questions in this question paper.
2. All your answers must be written in the spaces provided in this question paper

1. FUNCTIONAL WRITING

In not more than 250 words,

Write a letter of apology to the head teacher of your school giving reasons as to why you did not attend the school's academic day. *(10mks)*

2. CLOZE TEST (10MKS)

Fill in the blank spaces with the most appropriate word.

'I am done! I am done!' my voice echoed in the forest. I wept aimlessly. I did 1 _____ know whether I was weeping because my friend was dying 2 _____ because I had very little hope of 3 _____ the next sunrise. 4 _____ fell like a heavy 5 _____ covering the whole country around us. A hyena, which was apparently watching 6 _____ helplessness, made a noise which sounded like a hoarse laughter. 7 _____ frightened me so much that I could hear my own 8 _____ beating. I shouted as 9 _____ as my empty stomach would allow me and the 10 _____ ran to the forest. From that day to this, when I am telling this story, I have never been confronted by such a problem.

3. ORAL SKILLS (30MKS)

Read the poem below and answer the questions that follow.

I had a dream last night. I dreamed
I had to pick a mother out.
I had to pick a father too
At first, I wondered what to do,
There were so many there, is seemed,
Short and tall and thin and stout,
But just before I sprang awake,
I knew what parents I would take.

And this surprised and made me glad;
They were the ones I always had!

Questions

i) Explain how the poet achieves rhythm in the poem (3mks)

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

ii) Which words would you stress in line 7 of this poem and why? (2mks)

.....
.....

iii) How would you say the last line of this poem? (1mk)

.....
.....

iv) You are performing this poem to your classmates. How would you know that they are not concentrating? (4mks)

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2. Identify the shortcomings in Nyasuguta’s telephone skills in the following conversation.

Nyasuguta: (Dialing a number) Is that Turbo wholesalers?
Voice 1: Sorry, wrong number
Nyasuguta: (Tries several other numbers unsuccessfully and eventually gets it right) Is that Turbo wholesalers?
Voice2: Yes it is. Can I help you?
Nyasuguta: I want to order Maize flour.
Voice 2: How many bales, Madam?
Nyasuguta: Just a minute (turns from the phone and asks her husband how many bags they need). Ten bales.
Voice 2: Any preference in the brand?
Nyasuguta: of course! Everybody goes for pembe brand.
Voice 2: Anything else, Madam?
Nyasuguta: No. But I want them delivered
Voice 2: When and what address?
Nyasuguta: Before too long to shop number eight, Musembe shopping centre.
Voice 2: Pardon, what was the number again?
Nyasuguta: (Impatiently and shouting) 8-9-5
Voice 2: We will deliver them in an hour time. Thank you Madam. It has been a pleasure doing business with you.

a) Shortcomings (5mks)

- i).....
- ii).....
- iii).....
- iv).....
- v).....

b) Identify instances of *etiquette* as used by voice 1 and 2 (4mks)

- i).....
- ii).....
- iii).....
- iv).....

3. **Underline** the silent letter in each of the following words.

(6mks)

- i) Fracas -
- ii) Bomb -
- iii) Feign-
- iv) Psychology-
- v) Wrap -
- vi) Juice-

4. In the following sets of words identify the odd one out.

(5mks)

- i) Choir chord chore chain
- ii) Gas germinate grace guise
- iii) cynic cycle census chat
- iv) Chef chain chores charge
- v) Ambush Amass Amoeba Amaze

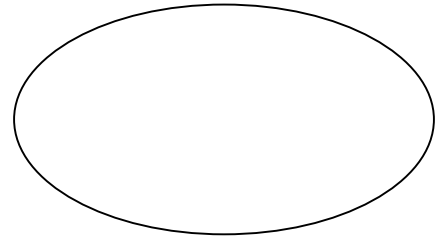
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GEOGRAPHY

INSTRUCTIONS: ANSWER ALL QUESTIONS

1. State four effects of effects of revolution of the earth. (4mks)
2. Apart from recumbent fold name four other types of folds. (4mks)
3. State four natural causes of earthquakes (4mks)
4. Explain four differences of forestry between Kenya and Canada. (8mks)
5. Using of a well labeled diagrams describe land and sea breeze (10mks)

6. The table below shows the approximate sugarcane production (in tones) of four sub-counties in Kenya. Use it to answer question 6.

Sub country	Production in tones
Mumias	33,065
Muhoroni	17,641
Chemilil	20,029
Kamisi	1,554

- (i) Using horizontal scale of 10cm represent the data by drawing a simple divided rectangle (8mks)
- (ii) Give three reasons why this method is suitable for presenting statistics (3mks)
7. (a) What is an escarpment? (2mks)
(b) Draw a sketch of contours showing an escarpment and a subsequent cross section of the escarpment showing the following: (10mks)
- Dip- slope
 - Scarp slope
 - Highest point
8. (a) Differentiate between a river and a river system. (2mks)
(b) Explain five significance of hydrological cycle (10mks)
9. (a) Name four agents of weathering (4mks)
(b) Explain four factors that influence weathering (8mks)
10. What does the following feature Vegetation indicate on a map of a given area? Give three in each. (12mks)
- (a) Forests:-
 - (b) Thickets and shrubs
 - (c) Permanent river
 - (d) Disappearing rivers.
11. (a) What is a settlement? (2mks)
(b) Explain three types of settlements patterns (6mks)

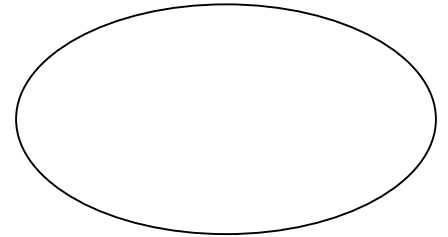
FORM 3 TERM 1 HOLIDAY ASSIGNMENT 2023

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HISTORY AND GOVERNMENT 3/11

TIME 2 ½ HOURS

SECTION A (25MKRS)

ANSWER ALL THE QUESTIONS IN THESE SECTION

1. Give the reasons for Lewanika collaboration (2mks)
2. Identify two cultural practices introduced by the Cushites in Kenya (2mks)
3. Identify two types of democracy (2mks)
4. What was the basis of political organization of Kenyan communities before the colonial rule (1mk)
5. Identify the main reasons why Mijikenda lived in kayas (1mk)
6. State the disadvantages of unwritten constitution (2mks)
7. State the early urban centers in Europe (2mks)
8. Identify the methods of irrigation used by early Egyptian farmers (2mks)
9. Name two communities in Kenya that resisted the British rule (2mks)
10. State two reasons why Ndebele were defeated by the British during the Ndebele war of 1883 (2mks)
11. State the terms of the Berlin Conference of 1884-1885 (2mks)
12. State the African communities that collaborated with the Europeans (2mks)
13. State two advantages of the land enclosure system (2mks)
14. State the main sectors of Brazilian industrialization (1mk)

SECTION B (45mks)

Answer any three question from these section

- 15a) State five methods used by the Europeans to administer colonies in Africa (5mks)
- b) Describe the structure of central government in colonial Kenya (10mks)
- 16a) Why did Seyyid transfer his capital from Muscat to Zanzibar in 1840 (5mks)
- b) Explain the effects of the long distance trade on the people of East Africa (15mks)
- 17 a) Explain 5 terms of Anglo-German agreement of 1886 (3mks)
- b) Explain reasons that made the British East African company (IBEAC) to surrender its charter to Britain in 1894 (12mks)
- 18 a) Identify 3 features of direct rule in southern Rhodesia (3mks)
- b) Explain the impact of direct rule in Zimbabwe (12mks)

SECTION C(30mks)s

Answer any two questions from this section

- 19 a) State 3 factors that led to growth of Johannesburg (3mks)
- b) Identify 6 problems facing industrialization in South Africa (12mks)
- 20a) Give the role of mekatilili among the Agiriama (3mks)
- b) Explain the causes of Nandi rebellion against the British (12mks)
- 21a) State the terms of Rudd concession of 1888 (5mks)
- b) Explain the social factors that led to scramble for colonies in Africa (10mks)

JINA: NAMBARI: KIDATO:
KISWAHILI KIDATO CHA TATU
KAZI YA LIKIZO MUHULA WA KWANZA 2023
MUDA: SAA 2 ½

Jibu maswali yote kwenye nafasi ulizoachiwa wazi baada ya kila swali.
SEHEMU YA A: UFAHAMU (ALAMA 15)
Soma taarifa ifuatayo kisha ujibu maswali yanayofuatia.

Mtopanga ni miongoni mwa vitongoji vinavyopatikana katika nyanda za janibu yetu. Kitongoji hiki kina sifa zilizosambaa karibu na mbali, na kukifanya kutukuka sana. Asili ya utukufu wake ni mandhari yake, labda jambo hili ndilo raghba ya hapa. Maskani haya yana majumba ya watu wa matabaka yote. Kuna makazi ya madongoporomoka na vile vile majumba ya wakwasi. Ajabu ya kitongoji hiki ni ile ya kutokuwepo kwa mipaka baina ya wachochole na wale walioinukia kiuchumi, na kama ilitokea ilikuwa ni nadra sana. Mapaa ya majumba yao yanashikana kama safu ya meno ya msumeno. Unawajibika kuinama unapopita katika kijiji hiki. Walioinuka kiuchumi hujizatiti kwa vyovyote kuwasaidia na kukirimu wale wengine ili maisha yao nao yapate ahueni. Hili limefanya hali ya maisha yawe rahisi na kustahimilika na kila mahuluki.

Maskani ya watu wa nchi yamejengwa vizuri lakini yameinama chini na kusongamana kama safu ya milima ya Everest. Jambo hili limezusha jina la lakabu “vibyongo?”. Lakini lingine linalowakumba wanakitongoji hawa ni maradhi.

Dhiki ya maradhi inashughulikiwa na wataalamu walio mahiri na kutaalamika katika taaluma mbalimbali za uganguzi. Ushindi wao unategemea juhudi za wataalamu hawa. Ujinga ni jambo lililo gumu kuondoa na kila mwanakijiji analishughulikia jambo hili. Kisomo cha watu wazima huendelezwa ili kuwaelimisha wote juu ya mpango wa kusoma.

Kitongoji hiki kina ziwa kuu kwa upande wa machweo. Ziwa hili hutoa mvuke ulio fufutende ambao hufanya mavundevunde. Mto Hari ulio katika kitongoji hiki humwaga maji yake hapa. Mto huu hauna samaki na maji yake hutokota kwa kipimo kikubwa cha joto. Wenyeji wa hapa aghalabu hutumia maji ya mto huu kupikia viazi, mayai na hata kuchemsha samaki. Labda huu ndio mto unaoongezea mastakimu haya umaarufu wake. Mto mwingine ulio hapa ni Mto Salama, ambao hupita kando ya ziwa hili.

Mto huu hutoa maji yaliyo baridi sana. Wanakitongoji huyachukulia maji haya kama mafuta ya tunu. Hali kadhalika huamini kwamba mtu yeyote anayejisinga kwa maji ya mto huu, ngozi yake hung'ara kama theluji. Mbali na manufaa hayo yote, si rahisi kuogelea au kuvuka mto huu kwa usalama. Wakazi wa hapa hungoja wakati mto huu umekauka na kwenda kujisinga katika vidimbwi vya maji yaliyosalia.

Mashariki mwa kitongoji hiki ni sehemu iliyotengwa mahsusi kwa pareto, mawele, wimbi na mtama. Katika kupalilia wao hutumia viserema. Kulima sesa ni jambo lisiloachwa nyuma. Miti ya kijiji hiki ilipandwa kwa miche hamsa wa mia na imeendelea kunawiri na kukua zaidi mithiri ya makonde yaliyonyunyiziwa marashi ya miwaridi. Ukipita hapa utafikiri unaambiwa ‘shikamoo’. Matawi ya miti hii inanong'onezana na ardhi iliyo vuguvugu kwa unyevu wa matawi yanayotoa chemchemi za maji kutoka ardhi ili kurashia hewa inayozizima na kufanya mahali hapa jambo la shani. Wao huona

kuwa haya ni maumbile ya kawaida yasiyohitaji kuajabiwa. Miti mingi huwa na kimo cha chini ya mita tano. Nyanda za chini za kijiji hiki, miti yenye kimo cha mita mbili hupatikana na mibirimbi hukua hadi kimo mkono wa tembo. Hata hivyo ni nadra sana kuipata miti hii ambayo matunda yake hutumiwa sana na wenyeji kama kiungo cha mchuzi.

Njia za miguuu zimejengwa kwa mawe yaliyotoka katika milima ya volcano na kusakafiwa kwa saruji. Barabara za magari ni pana na si rahisi kwa magari kusababisha ajali. Huduma za usafiri zimeimarika katika kijiji hiki.

MASWALI:

(a) Taja sifa tatu za kijiji hiki *(alama 3)*

(b) Eleza vile watu wa kijiji hiki cha Mtopanga wanavyojaribu kusawazisha hali yao ya maisha. *(alama 3)*

(c) Mto salama huwasaidiaje wenyeji wa hapa. *(alama 2)*

(d) Eleza maana ya vifungu hivi vya maneno. *(alama 4)*

(i) Miti inasema “Shikamoo” –

(ii) Kunong’onezana na ardhi –

(iii) Hamsa wa mia –

(e) Eleza maana ya msamiati huu kama ulivyotumiwa katika kifungu. *(alama 3)*

(a) Janibu –

(b) Mahuluki –

(c) Mastakimu

SEHEMU YA B: MATUMIZI YA LUGHA (ALAMA 40)

1. (a) Taja vigezo vitatu vya kuainisha irabu za Kiswahili. (alama 3)
- (b) Andika sauti zenye sifa zifuatazo: (alama 2)
- (i) Kipasuo ghuna cha midomoni
- (ii) Nazali ya ufizi
2. (a) Tofautisha kati ya silabi funge na wazi, huku ukitolea mfano mmoja mmoja. (alama 2)
- (b) Andika neno lenye muundo ufuatao: (alama 2)
- Nafsi ya tatu, wakati uliopita, mzizi, kiishio.
3. (a) Bainisha vielezi katika sentensi ifuatayo. (alama 3)
- Watoto wale walipochezea barabarani waliadhibiwa baadaye
- (b) Onyesha taofauti katika sentensi hizi (alama 2)
- Ningalikuwa mwalimu ningalishiriki mgomo
Ningekuwa mwalimu ningeshiriki mgomo
4. (a) Onyesha matumizi ya ni katika sentensi hii. (alama 2)
- Niliyemsaidia ni huyu lakini sasa simameni muende uwanjani.

(b) Andika usemi wa taarifa. (alama 3)
“Maria! Maria! Njoo hapa,” mama akamwita. Kesho nitaenda Nairobi, kesho kutwa Kisumu na sasa ninaenda huko sokoni”

5. (a) Kanusha. (alama 2)
Alilia na kulaani.

(b) Tunga sentensi mbili tofauti kuonyesha matumizi ya vitenzi vifuatavyo katika hali ya kutendwa. (alama 2)

Cha

(i)

(ii)

Oa

(i)

(ii)

6. (a) Badilisha kitenzi kilichopigiwa mstari kiwe kivumishi. (alama 2)
Alioga kwa maji baridi

(b) Eleza maana ya mzizi wa neno huku ukionyesha mzizi katika vitenzi fivuatavyo. (alama 4)

(ii) Watakuja

(iii) Wataandika

7. (a) Onyesha taofauti kati ya sentensi hizi (alama 2)
Kuku yeyote atachinjwa
Sukari yote itauzwa

(b) Andika sentensi ifuatayo katika hali ya ukubwa (alama 3)
Nguo ambazo zinazwa kwenye duka hilo zinavutia.

8. (a) Tunga sentensi yenye muundo ufuatao. (alama 2)
U + T + E + T + N

(b) Huku ukitolea mfano katika sentensi, onyesha kiwakiloishi nafsi huru na nafsi ngeli. (alama 2)

SEHEMU YA C: ISIMU JAMII (ALAMA 15)

9. “Bwana mdogo,” alisema kwa sauti ya kite.

“Naam, Doctor,” nikajibu

“Leo wasikiaji?”

“Nafeel poa”

(a) Tambua sajili. Thibitisha. (alama 3)

(b) Eleza sifa sita zinazojibainisha katika sajili husika. (alama 12)

SEHEMU YA D: TAMTHILIA

PAULINE KEA: KIGOGO (ALAMA 20)

Thibitisha kwa kina ufaafu wa anwani Kigogo (alama 20)

SEHEMU YA E: FASIHI SIMULIZI (ALAMA 10)

1. (a) Eleza maana ya Ulumbi. (alama 2)

(b) Fafanua sifa zozote nne za Ulumbi. (alama 8)

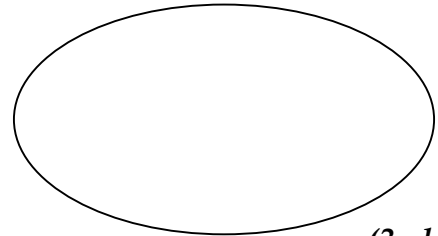
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MATHEMATICS FORM 3

TIME: 2 HOURS 30 MINUTES

Section 1: Answer all questions in this section

1. Solve for x: $2^{x-3} \times 8^{x+2} = 128$

(3mks)

2. Five shirts and four pairs of trousers cost a total of sh 6160. Three similar shirts and a pair of trousers cost sh 2800. Find the cost of four shirts and a pair of trousers. *(4mks)*

3. Solve the equation $6x^2 - 13x + 6 = 0$. Using the completing the square method. *(3mks)*

4. The length of an arc of a circle is $\frac{1}{5}$ of its circumference. If the area of the circle is 346.5cm^2 . find the:
- (a) The angle subtended by the arc at the centre of the circle. (2mks)

(b) Area of the sector enclosed by this arc. (2mks)

5. Use logarithms to evaluate $\sqrt[3]{\frac{1.23 \times 0.0468}{0.7782}}$ (4mks)

(4mks)

6. A perpendicular line is drawn from a point (1,2) to the line $3y+2x+1=0$. Find the equation of the perpendicular in the form $ay+bx+c=0$ (3mks)

7. Solve the equation of $0^\circ \leq x \leq 360^\circ$
 $\sin(2x) = 0.8860$

(3mks)

8. The sum of the ages of three sisters Rhoda, Tabitha and Sally is 39. Years. Sally is twice as old as Tabitha and one and half times as old as Rhoda. Determine their ages. (3mks)

9. The length and breadth of a rectangular card were measured to the nearest millimeter and found to be 14.5cm and 10.6cm respectively. Find the percentage error in its area. (3mks)

10. Evaluate without using tables.
 $\log(3x+8) - 3 \log 2 = \log(x-4)$

(3mks)

11. Given that $\sin x = 0.8$ and x is an acute angle. Find $\tan x$ without using mathematical tables or a calculator. *(3mks)*

12. The size of an interior angle of a regular polygon is $3x^\circ$ while the exterior angle is $(x-20)^\circ$. Find the number of sides of the polygon. *(3mks)*

13. Wanjiru, Atieno and Jeptoo shared the profits of their business in the ratio 3:7:9 respectively. If Atieno received sh 60,000. Find how much the business realized. *(3mks)*

14. The volumes of two similar solid cylinders are 4752cm^3 and 1408cm^3 . If the area of the curved surface of the smaller cylinder is 352cm^2 . Find the curved surface area of the larger cylinder. (3mks)

15. A classroom measures $(x+2)\text{m}$ by $(x-5)\text{m}$. If the area of the classroom is 60m^2 . Find its dimensions. (3mks)

16. Find the value of m and n given that (2mks)

$$M \begin{pmatrix} -1 & -2 \\ 1 & 1 \end{pmatrix} = \begin{pmatrix} 3 \\ n \end{pmatrix} \quad \begin{pmatrix} \\ \end{pmatrix}$$

Section 2

Answer all questions in this section

17. Three solids, a cylinder, a sphere and a cone, are such that their radii are equal. It is also given that their surface areas are the equal. If the volume of the sphere is 904.9cm^3 . Find the volume of;(Give your answers to 4 s.f)

a) The cylinder

(6mks)

b) The cone.

(4mks)

18. (a) A small field was surveyed and the measurements recorded in the surveyor's field book as in the table below. (AF=100M)

		F	
E	30	65	
		50	40 D
C	20	30	
		20	25 B
		A	

(i) Using a scale of 1cm to 10m , make an accurate drawing of the map of the field. (4mks)

(ii) Find the area of the field. (3mks)

b) Assuming that the baseline used in (a) runs in a northerly direction, give the position of D, relative to A, using bearing and distance. (3mks)

19. The heights of trees seedlings in a nursery were measured and recorded as in the table below.

Height x cm	0-5	6-15	16-25	26-45	46-75
No of seedlings	7	46	71	64	11

(a) Calculate the mean height. (5mks)

(b) Using a scale of 1cm to represent 5 units along the horizontal axis, and a scale of 2cm to represent 5 units along the vertical axis, draw a histogram to represent the distribution. (5mks)

20. (a) Complete the table below for the equation $y=x^2+3x-6$ given $-6 \leq x \leq 4$

X	-6	-5	-4	-3	-2	-1	0	1	2	3	4
Y	12			-6			-6				22

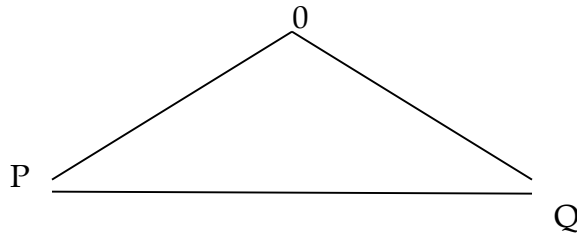
(b) using a scale of 1cm to represent 2 units in both axes draw the graph of $y=x^2+3x-6$

(c) Use the graph to solve the quadratic equations.

(i) $X^2+3x-6=0$ (2mks)

(ii) $X^2+3x-2=0$ (3mks)

21. (a) In the figure below O is the centre of the circle whose radius is 6cm and PQ is 9cm.



Calculate the area of major segment.

(7mks)

(c) Find the area of a triangle ABC with sides 7cm, 9cm and 11cm long.

(3mks)

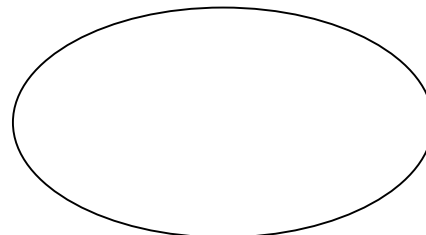
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**PHYSICS FORM 3
TIME: 2 HOURS**

Attempt all the questions in the spaces provided.

1. State the reason why electricity transmission cables are left sagging between the pylons. *(1 mk)*

2. The air pressure at the base of the mountain is 75.0cm of mercury while at the top it is 60.0cm. given that the average density of air is 1.25kgm^{-3} and the density of mercury is 13600kg/m^3 . calculate the height of the mountain. *(3mks)*

3. State two factors that would raise the boiling point of water. *(2 mks)*

4. The level of water in a burette is 2.5cm^3 . 40 drops each of volume 0.05cm^3 are added to the Burette. What would be its new reading? *(2 mks)*

5. Explain how the efficiency of a vacuum flask is affected if the double-walled glass surface is replaced with a double walled metal surface. (2 mks)

6. A body moving at 50m/s decelerates uniformly at $2/\text{ms}^2$ until it comes to rest. What distance does it cover from the time it starts to decelerate to the time it comes to rest. (3 mks)

7. Sketch a graph of displacement vs time for a body moving with variable velocity (3 mks)

8. Three identical springs A, B and C are used to support 25.5N weight as shown below.

The weight of the horizontal bar is 2.5N, determine the extension on each spring given that 6N causes an extension of 2cm. (2 mks)

9. State the two laws of refraction (2 mks)

10. Define the following terms:-

(a) Displacement - (1 mk)

(b) Speed - (1 mk)

(c) Distance - (1 mk)

(d) Velocity (1 mk)

11. State two factors that affect surface tension of a liquid. (2 mks)

SECTION B: (55 MARKS)

Answer all the questions from this section.

12. A stone is projected vertically upwards with a velocity of 30ms^{-1} from the ground.

Calculate:-

(a) The time it takes to reach the maximum height. (2 mks)

(b) the time of flight. (2 mks)

(c) The maximum height reached. (2 mks)

(d) The velocity with which it lands on the ground (Take $g = 10\text{ms}^{-1}$) (2 mks)

13. Define the following terms:-

a(i) Critical angle

(1 mk)

(ii) Refractive index

(1 mk)

b(i) Calculate the critical angle of a metal given that its refractive index is 2.42

(ii) If the critical angle for a liquid is 48.6° . Calculate the refractive index of the liquid.
(2 mks)

(ii) Determine the critical angle for glass-water interface (refractive indices of glass and water are $3/2$ and $4/3$ respectively)
(3 mks)

14. (a) State the Newton's second law of motion. (2 mks)
- (b) Determine the change in momentum produced when a force of 3.5×10^3 acts on a body which is at rest for 0.02 seconds. (2 mks)
- (c) What velocity will be given to the body if it has a mass of 20kg. (3 mks)
15. (a) State any three laws of friction. (3 mks)
- (b) A wooden box of mass 60kg rests on a rough floor. The coefficient of friction between the floor and the box is 0.6.
- (i) Determine the force required to just move the box. (3 mks)
- (ii) If a force of 400N is applied to the box, with what acceleration will it move?
(Take $g = 10\text{m/s}$) (3 mks)

16. (a) Define the term mass. (1 mk)

(b) The density of mercury is 13.6gcm^{-3} . Find the volume of 2720g of mercury in m^3 . (3 mks)

17. How does temperature affect Brownian motion? (2 mks)

18. An object of height 5m is placed 10m away from a pinhole camera. Calculate:
(a) The size of the image if its magnification is 0.01 (3 mks)

(b) The length of the pinhole camera. (3 mks)

19. State four methods of magnetizing a magnetic material. (2 mks)

20. (a) State the principle of moments.

(2 mks)

(b) A uniform metre rule pivoted at the centre is balanced by a force of 4.8N at 20cm mark and other two forces F and 2.0N at the 66cm and 90cm marks respectively. Calculate the force F . (4 mks)