For Answers

Contact Mr. Oriosa

Tell: 074324106 4

(Notes, schemes of work, knec past papers & ans, topical questions & ans)

NAME ……..

ADM NO: …….

DATE:……

SIGNATURE:…….....

AGRICULTURE

FORM ONE (1)

TIME: 2 HOURS

ENTRANCE EXAMINATION TERM 1 YEAR 2022

KENYA CERTIFICATE OF SECONDARY EDUCATION.

INSTRUCTIONS TO ALL CANDIDATES

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

b) **Answer all questions in sections A, B and C.**

c) **All answer must be written in the spaces provided.**

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE SCORE
A	1-14	50	
B	15-18	20	
C	19-20	30	
TOTAL		100	

SECTION A (50 MARKS)
ANSWER ALL QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED

1. Give four factors which characterize small scale farming. 4mks

2. Give four reasons why farmers are encouraged to practice organic farming. 4mks

3. List three physical weathering agents in the soil formation process. 3mks

4. State two effects of HIV/AIDS on agricultural production. 2mks

5. Distinguish between soil structure and soil texture. 2mks

6. Outline four ways in which high temparatures affects agricultural production in Kenya. 4mks

7. State four importance of primary cultivation. 4mks

8. a) Define the term sub soiling. 2mks

b) State two importance of sub soiling. 2mks

9. Give four reasons for treating water in the farm 4mks

10. Explain four importance of irrigation in crop production 4mks

11. Name three sources of underground water. 3mks

12. Give four reasons for keeping livestock health records in the farm. 4mks

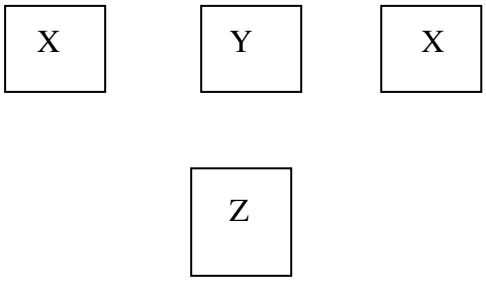
13. Name four farm records that should be kept y poultry farmer. 4mks

14. Name four entries that can be made on cattle breeding record. 4mks

SECTION B (20 MARKS)

Answer all question in the spaces provided

15. The diagram below illustrates a method of preparing compost manure.



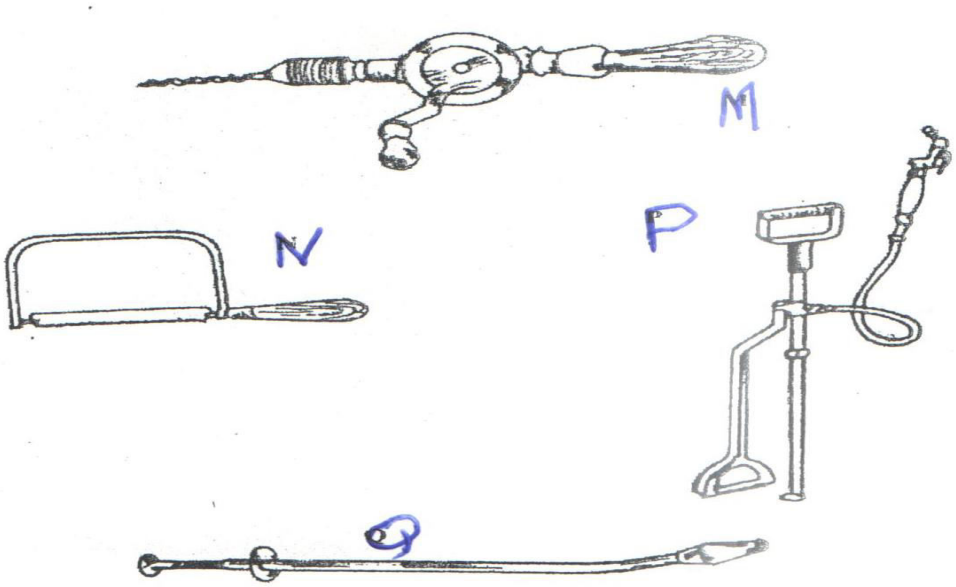
a) Identify the method 1mk

b) Complete the diagram using arrows to show the direction of flow of materials.1mk

c) How long should materials take in each pit? 1mk

d) List two materials used in the preparation of the above type of manure. 1mk

16. The diagrams below represent farm tools and equipment. Study them and answer the questions that follow.



a) Name the tool laelled N and P. 1mk

N

P

b) State one use of each of the tools labeled M and Q.

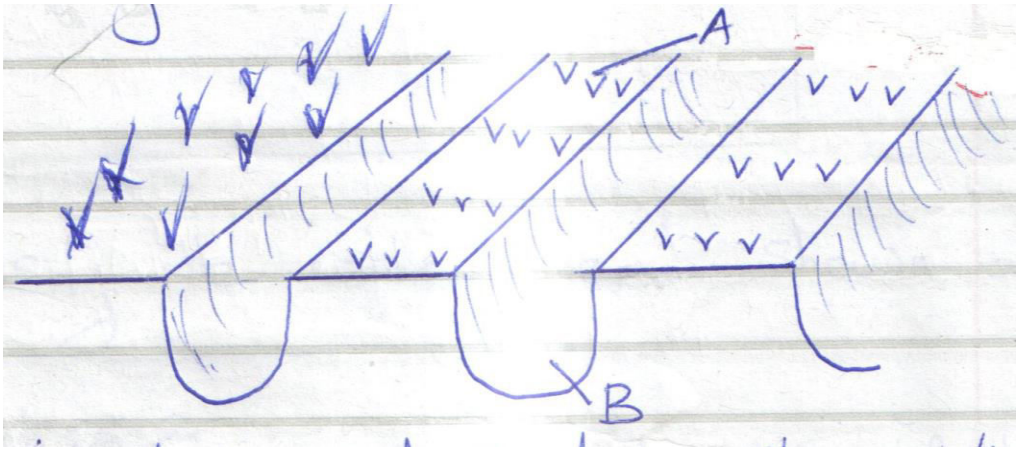
M

Q

c) Explain two maintenance practice carried out on the equipment labeled P

2mks

17. The diagram below shows a method of drainage.

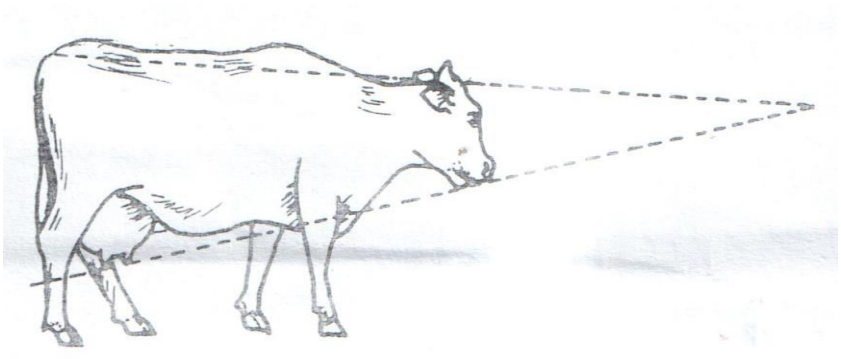


a) Identify the method of drainage shown in the diagram. 1mk

b) Name the parts A and B. 1mk

c) State any two other methods of drainage that farmers can use. 2mks

18. The figure below represents a cattle breed. Study it and answer the questions that follow.



a) Classify the cattle breed shown above. 1mk

b) Give three physical characteristics o f the breed shown above. 3mks

c) Name three dairy cattle breeds that a Kenyan farmer can keep. 3mks

SECTION C (30 MARKS)
ANSWER ALL THE QUESTIONS IN THE SPACES PROVIDED

19. a) Explain five ways in which water pollution can be controlled in the farm. 5mks

b) Describe how water is treated to remove solid impurities. 5mks

c) State and explain two methods of farming used in Agricultural production. 4mks

d) Define the term minimum tillage as used in Agricultural production. 1mk

20. a) Explain four reasons for maintaining farm tools and equipments. 4mks

b) Explain five ways that can lead to loss of soil fertility. 5mks

c) Give 6 uses of farm records in the farm. 6mks

NAME_____ ADMISSION NO._____

CLASS_____

DATE:_____

231

BIOLOGY (Theory)

APRIL/MAY 2022

2 Hours

KENYA CERTIFICATE OF SECONDARY EDUCATION

FORM ONE BIOLOGY PAPER

Instructions to Candidates

- Write your Name and admission Number in the Spaces Provided.
- Sign and write date of examination in the spaces provided.
- This paper consists of two sections A and B.
- Answer all the questions in Sections A in the spaces provided.
- You should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A

Answer all the questions in Sections A in the spaces provided.

1. Name the three major branches of biology. (3mks)

2. Explain why the following processes are important during the preparation of temporary slides:-

(a) Staining (1mk)

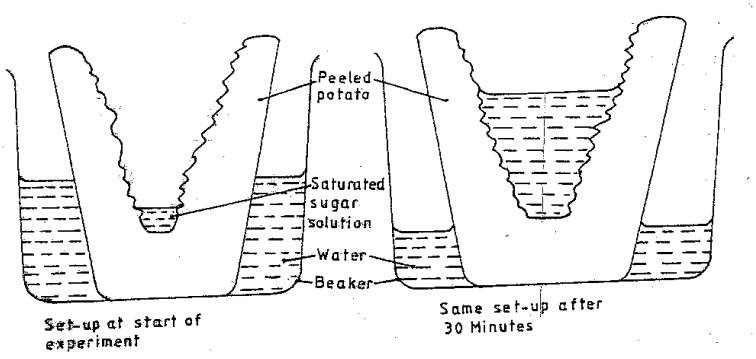
(b) Use of a sharp cutting blade (1mk

3. Distinguish between the following terms :-

a) Magnification and resolution of a microscope (2mks)

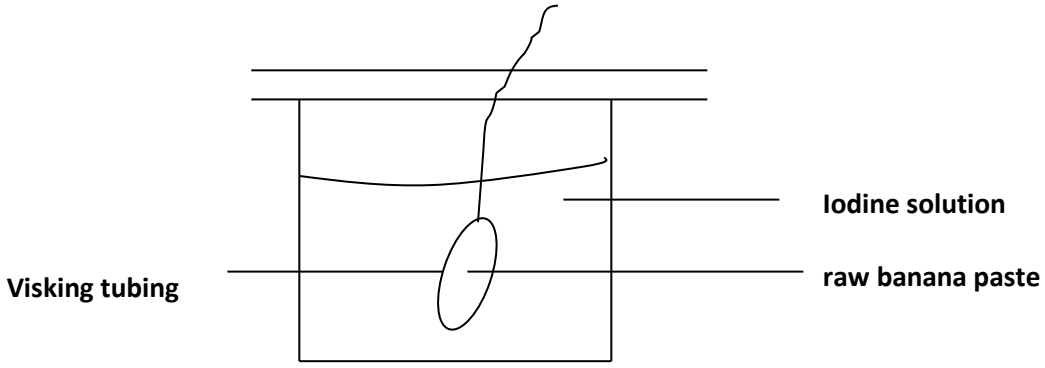
b) Mounting and staining of a specimen (2mks)

4. The diagrams below show an experiment set up to investigate a certain process in a plant tissue.



Explain the results obtained after 30 min. (3mks)

5.A student mashed a piece of raw banana and made it into paste by adding water, placed the paste in a visking tubing and suspended it in a beaker containing iodine solution as shown below. The set- up was left for 40 minutes.



a)State the physiological process under investigation. (1 mark)

(a) Account for the result obtained in the table. (2 marks)

6. Arrange the following from the largest to the smallest:

Tissue,cell,organism,organelle,organ system,organ, (1mk)

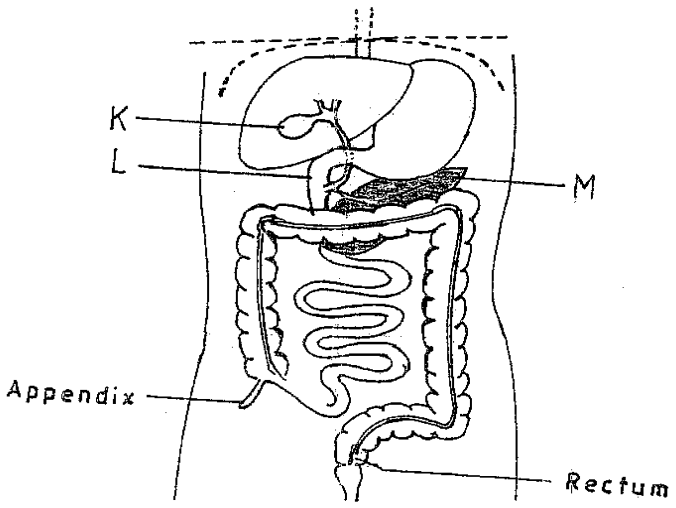
7.(a) State two factors that affect enzymatic activities (2 marks)

8.Name the sites where light and dark reactions of photosynthesis take place. (2 mks)

Light reaction

Dark reaction

9.The diagram represents part of the human digestive system.



(a) Name the organs labeled L and M. (2mks)

L

M

(b) (i) Name the juice secreted by K. (1mk)

ii) State the function of the juice named in (b) (i) above (3mks)

(c) Name one enzyme secreted by M (1mks)

10.a)Name two salivary glands found in human mouth (2mks)

b)state two functions of saliva (2mks)

11.i) State two ways in which the guard cells differ from other adjacent epidermal cells 2mks)

ii) Apart from guard cells name other two cells that carryout photosynthesis in a leaf.(2mk)

12. Give the importance of leaf mosaic in the process of photosynthesis. (1mk)

13. State the functions of the following cell organelles. (2 mks

a)Golgi apparatus

b)Ribosomes

14.The table below shows the concentration of important plant nutrients

ion	Concentration in pond water(ppm)	Concentration in cell sap(ppm)
Potassium	200	50
chloride	0.5	20

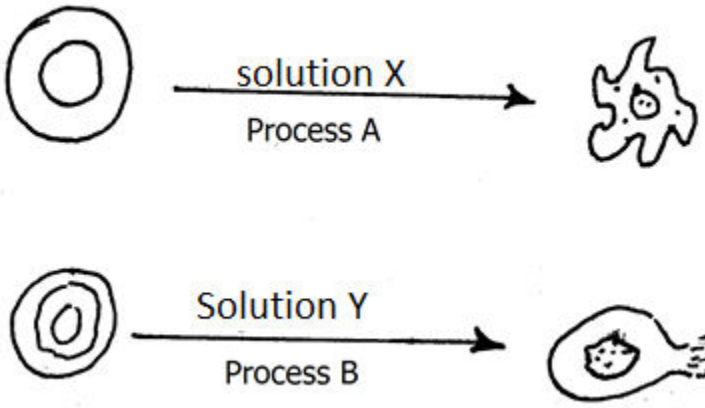
a) Name the process by which the above ions could have been taken up by the plants.(2mks)
   i. Potassium

   ii. Chloride

15. State two properties of monosaccharide. (2mks)

SECTION B

16.The diagram below illustrates the behaviour of red blood cells when placed into two different solutions X and Y.



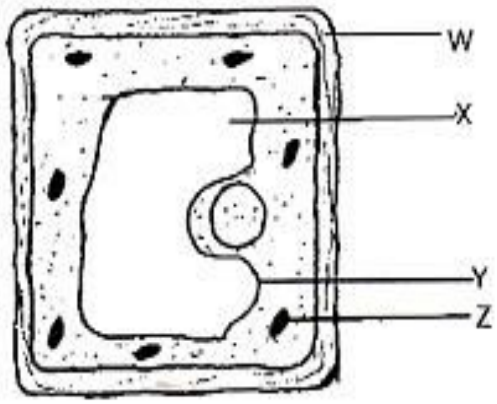
a) i)Suggest the nature of solution X and Y (2mks)

ii) Name the process represented by each of the letters A and B (2mks)

c) Explain the observation made at the end of process B above. (3mks)

d) A plant cell was placed in solution Y, and it did not burst. State the structure in the plant cell that prevented it from bursting.(1mk)

17.The figure below shows a diagram of a cell as seen under a light microscope. Study it and answer the questions that follow.



a)Name three structures that show that it is a plant cell and not a animal cell 3mks

b) Name the photosynthetic pigment that is found in the structure labelled Z and state its function. 2mks

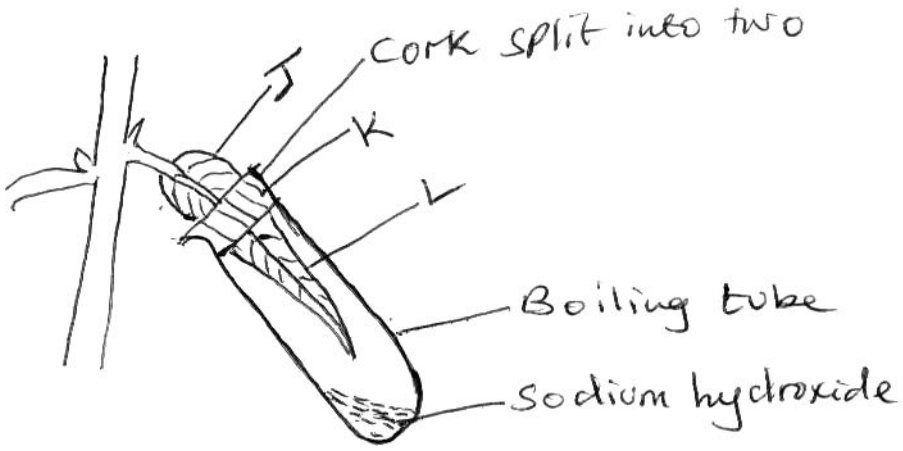
c) State the name and function of the fluid found in X 2mks

Name

Function

d) On the diagram label the structure that contains the DNA 1mk

18. A potted plant with healthy leaves was kept in the dark for 48 hours. One of the leaf was then partly enclosed in a wide boiling test tube containing sodium hydroxide solution. The whole set up was then kept in sunlight for six hours. The diagram is shown below.



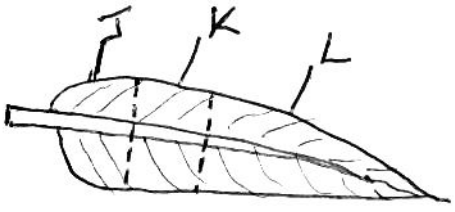
a) Suggest the aim of the experiment. (1mk)

b) Why was the set up kept in the dark for 48 hours? (1mk)

c) Why was the set up kept in the sunlight for six hours? (1mk)

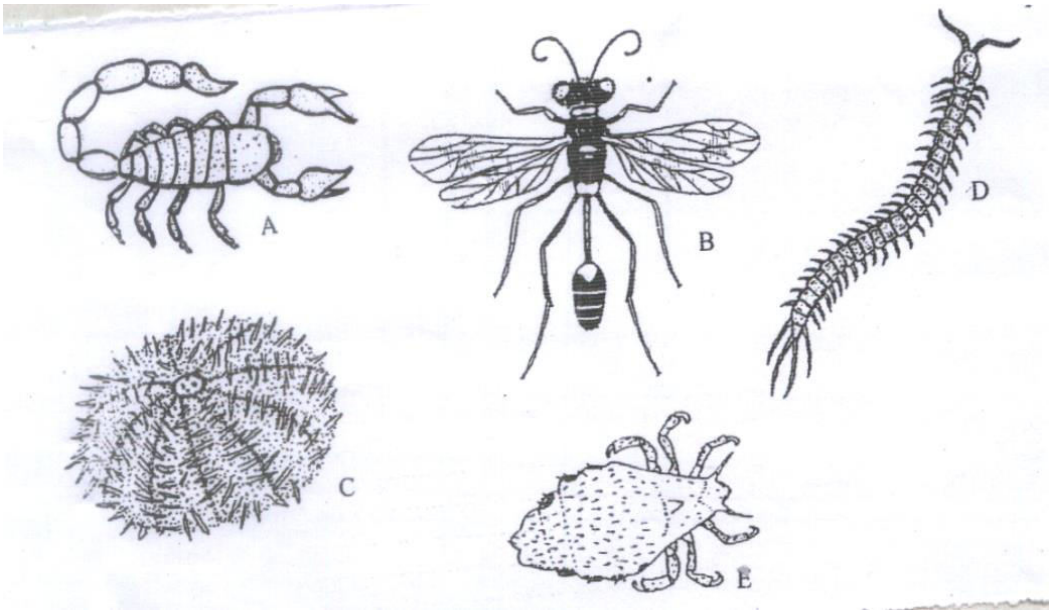
d) What is the importance of sodium hydroxide solution in the set up? (1mk)

e) State the colours observed on each part when the leaf was tested for starch (3mks)



f)State the form in which carbohydrates are stored in the liver. (1mk)

19.The organisms below were collected from a certain habitat. Study them and answer the questions that follow.`



a) In which kingdom do the organisms belong (1mk)

b) State two external features that are found in organism B. 2mks

c) State the method used to collect:

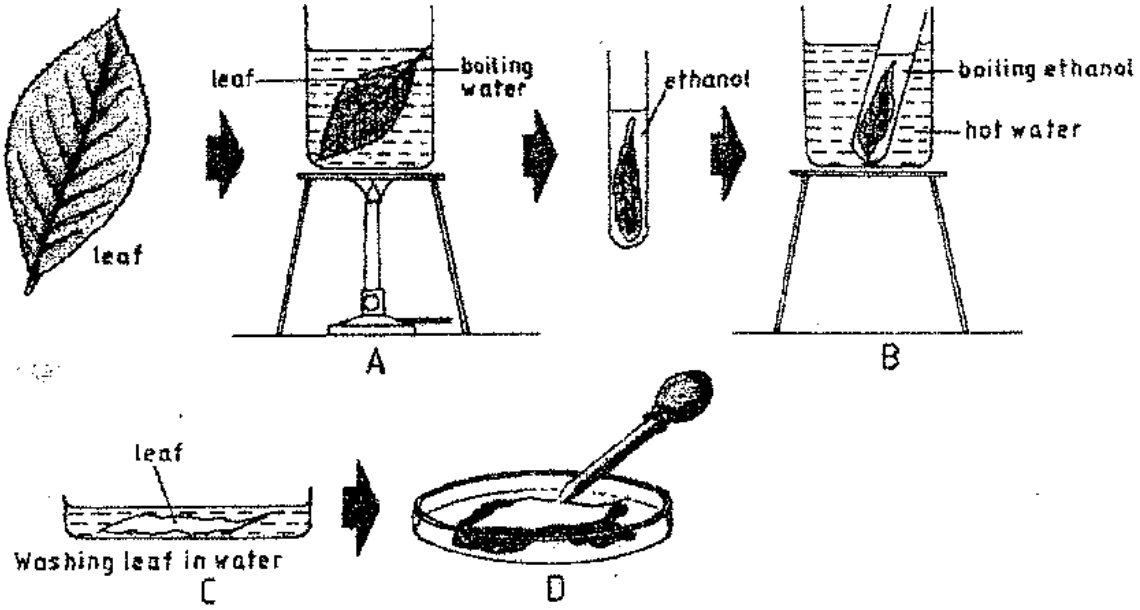
i) Organism B 1mk

ii) Organism D 1mk

d) State one precaution that should be taken when collecting organism A 1mk

e) Identify two modes of locomotion in specimen B (2mks)

20.The set-up below illustrates a procedure that was carried out in the laboratory with a leaf plucked from a green plant that had been growing in sunlight.



(i) What was the purpose of the above procedure? (1mark)

(ii) Give reasons for carrying out step A,B and C in this procedure. 3marks)

(iii) Name the reagent that was used at the step labeled D . (1mark)

(iv) State the expected result on the leaf after adding the reagent named in (iii) above.(1mark)

21.Describe the adaptations of the ileum to its function 20 marks

NAME:_____ADM No:_____ CLASS:____

DATE:_____SIGN:_____

565

BUSINESS STUDIES

APRIL 2022

FORM 1

2 HOURS

ENTRANCE EXAMINATION TERM 1 YEAR 2022

QUESTION PAPER

INSTRUCTIONS TO CANDIDATES

Answer all questions in the spaces provided.

1. Highlight **four** ways in which business studies is useful to the community. (4 marks)

(i)

(ii)

(iii)

(iv)

2. Outline **four** characteristics of direct production. (4 marks)

(i)

(ii)

(iii)

(iv)

3. Name **four** documents that originate from the seller in home trade. (4 marks)

(i)

(ii)

(iii)

(iv)

4. Outline **four** features of basic human wants. (4 marks)

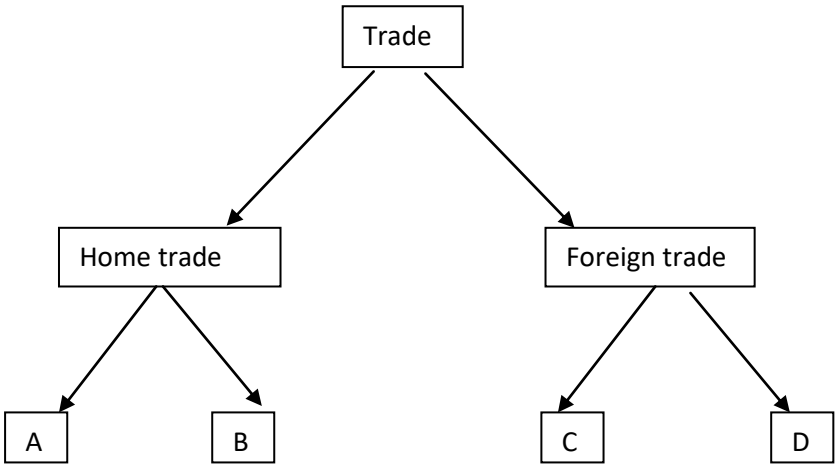
(i)

(ii)

(iii)

(iv)

5. Fill the relevant branches of trade in the diagram given below. (4 marks)



A _____

B _____

C _____

D _____

6. Name any **three** equipment that are used in document reproduction. (3 marks)

(i)

(ii)

(iii)

7. List down **four** benefits of entrepreneurship in the society. (4 marks)

(i)

(ii)

(iii)

(iv)

8. Identify the types of wholesalers described by the following statements. (4 marks)

(a) Wholesalers who trade in rice only

_____

(b) Wholesalers who buy maize from farmers in the rural areas and sells the same to other wholesalers in Kakamega town

_____

(c) Wholesalers who operate on self selection basis

_____

(d) Wholesalers who supplies his goods all over the country

_____

9. Mention **four** factors in the external environment that influence the success of the business. (4 marks)

(i)

(ii)

(iii)

(iv)

10. State **four** disadvantages of using a cheque. (4 marks)

(i)

(ii)

(iii)

(iv)

11. Outline **four** features of land as a factor of production. (4 marks)

(i)

(ii)

(iii)

(iv)

12. Outline **four** factors that should be considered when buying an office machine. (4 marks)

(i)

(ii)

(iii)

(iv)

13. Outline **four** circumstances under which cash with order maybe used. (4 marks)

(i)

(ii)

(iii)

(iv)

14. Outline **five** characteristics of a good. (5 marks)

(i)

(ii)

(iii)

(iv)

(v)

15. State **four** advantages of using a computer in a school. (4 marks)

(i)

(ii)

(iii)

(iv)

16. State **four** features of a supermarket. (4 marks)

(i)

(ii)

(iii)

(iv)

17. Business plan is an important tool that all entrepreneurs are encouraged to have. Highlight **four** benefits of a business plan. (4 marks)

(i)

(ii)

(iii)

(iv)

18. Identify the type of goods described by the following statements given in the table. (4 marks)

Statement	Type of good
(a) Used to create other goods.	
(b) Requires further processing in order to have quality.	
(c) Government is obliged to provide them to her citizens.	
(d) Goods that are bought more frequently by consumers to satisfy common wants.	

19. State **four** occupations that a person may engage in the secondary level of production. (4 marks)

(i)

(ii)

(iii)

(iv)

20. Name **four** sources of business ideas. (4 marks)

(i)

(ii)

(iii)

(iv)

21. Name **four** types of business activities an entrepreneur may invest in. (4 marks)

(i)

(ii)

(iii)

(iv)

22. Highlight **four** factors to consider before a trader offers credit to a customer. (4 marks)

(i)

(ii)

(iii)

(iv)

23. Fill the relevant characteristics of an entrepreneur to the description given. (4 marks)

Description	Characteristics
(a) Struggles with determination to solve problems.	
(b) Aggressive in implementing ideas.	
(c) Starts his own business and operates it on his own.	
(d) Has a strong belief in himself in his own abilities.	

24. Identify the utilities created following the performing of the following activities. (4 marks)

Activity	Utility
(i) Storage of kerosene in a shop.	
(ii) Delivery of text books to the students.	
Activity	**Utility**
(iii) Buying millet flour to prepare porridge.	
(iv) Making of shoes from leather.	

25. Highlight **four** factors to consider in evaluating a business opportunity. (4 marks)

(i)

(ii)

(iii)

(iv)

FORM I ENTRANCE EXAMINATION TERM 1 YEAR 2022

CHEMISTRY EXAMINATION

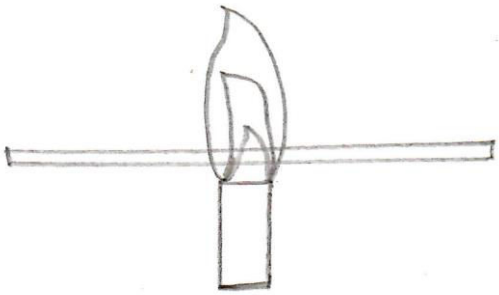
Students Name: …… Adm. No……. Class: ……

Date: ……. Time **2 hrs.**

INSTRUCTIONS TO CANDIDATES

i) Write your name and admission number.
ii) Answer all the questions in the spaces provided after every question.
iii) All working for numerical questions must be clearly shown.

1. (a) A form one girl slipped a wooden splint at the innermost part of non-luminous flame as shown.



(i) Using a well labeled diagram, explain the observations made when the wooden splint is removed. (2mks)

(b) Name another type of flame produced by Bunsen burner. (1mk)

(c) State three differences between the two types of flames (3mks)

2. (a) What is drug abuse? (1mk)

(b) State two effects of drug abuse in the society

(c) What are over the counter drugs? State two such drugs (2mks)

3. State four safety precautions or safety rules in the laboratory to control accidents (4mks)

4. Four solutions A,B,C and D had their pH values measured and recorded as follows:

solution	PH value
A	8.5
B	1.5
C	6.0
D	13.0

(a) Identify from the list the solution which is:

(i) Strong acid (1mk)

(ii) Weak base (1mk)

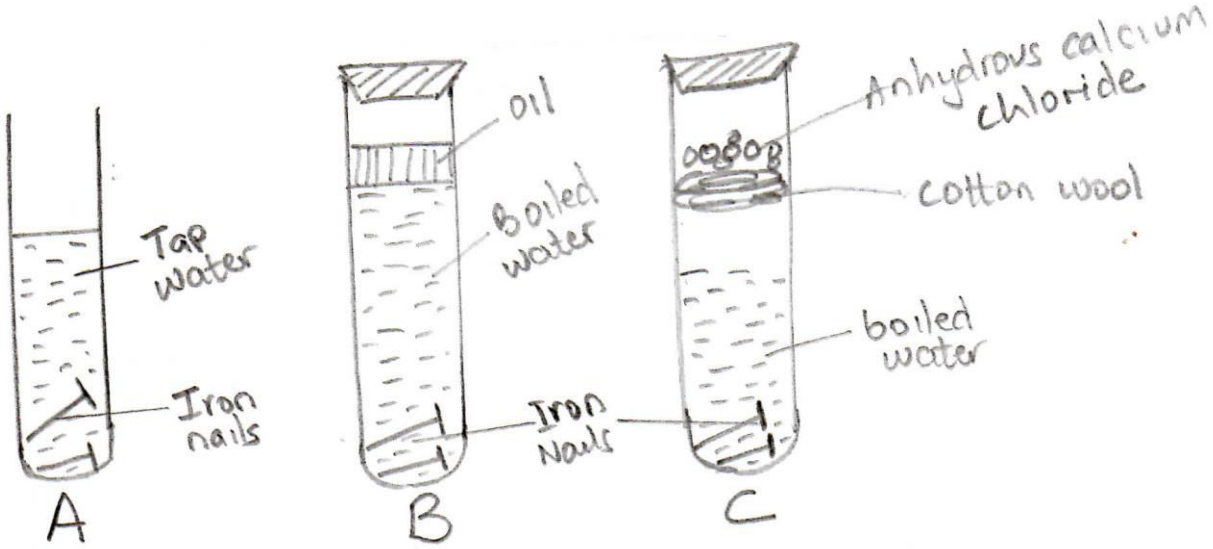
(iii) Strong base (1mk)

(b) Which solution can react readily with magnesium ribbon to produce hydrogen gas (1mk)

(c) Which solution could be the solution of lemon juice? (1mk)

5. State two advantages of non- luminous flame over the luminous flame (2mks)

6. The following set-up of three test tubes was used to investigate rusting of iron nails. Study it and answer the questions that follows:

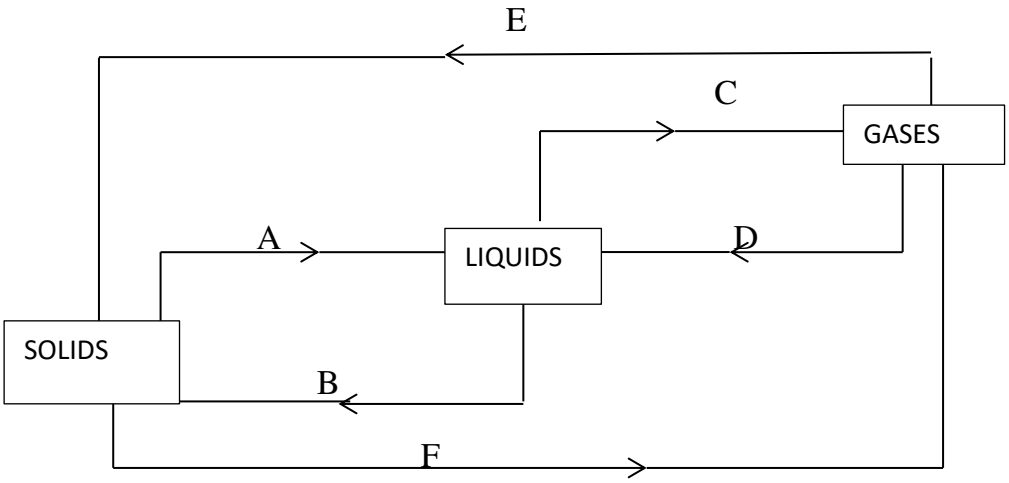


(a) State the set-up in which rusting did not occur. Explain (2mks)

(b) State one disadvantage of rusting (1mk)

(c) State two factors or conditions which accelerate rusting (2mks)

7. The following diagram shows the effects of heat on the physical states of substances



(a) Identify the processes represented by the letters A,B,C,D,E and F. (3mks)

(b) Name two substances that undergo the process labeled E and F (2mks)

(c) Name the best method that can be used to separate the following

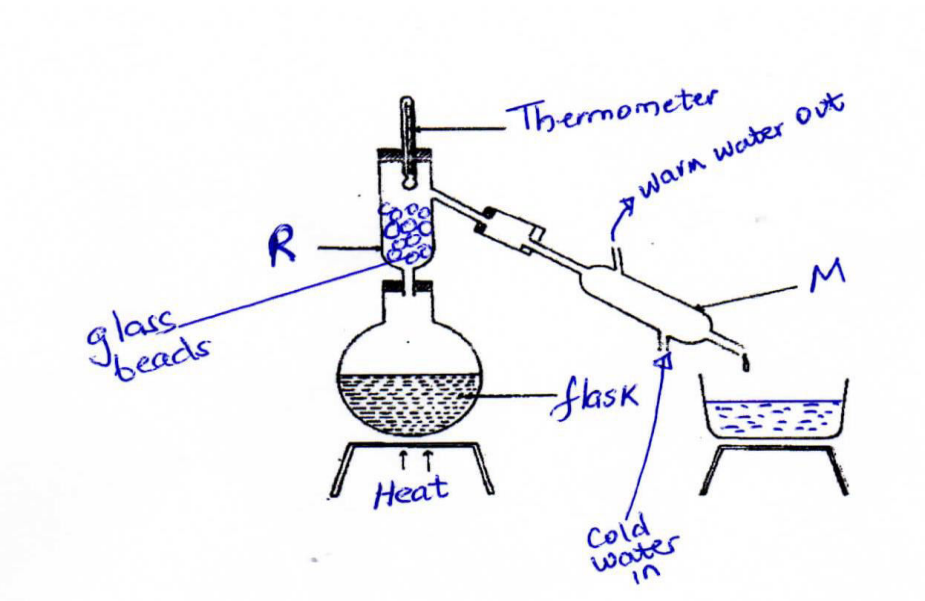
(i) common salt from salt solution (1mk)

(ii) paraffin from crude oil (1mk)

(iii) iron filings in sulphur powder (1mk)

8. Describe two different experiments which can be used to show the presence of moisture in the atmosphere (4mks)

9. A student separated liquid P (Bpt= 78^0C) and liquid Q (Bpt= 100^0C) using the apparatus below



(i) Name the apparatus labeled (2mks)

(a) M –

(b) R –

(ii) State one function of the glass beads in apparatus labeled R. (1mk)

(iii) What is the reading on the thermometer when the first drops of the distillate appeared in the beaker (1mk)

(iv) Which of the solutions remains in the flask? (1mk)

10. (a) What would be observed when the following substances are heated and cooled in a crucible

(i) Wax (1mk)

(ii) Zinc oxide (1mk)

(b) Give the name for the type of change that takes place (1mk)

(c) State two characteristics of this type of change (2mks)

(d) State what is observed when copper (II) nitrate crystals are heated (2mks)

11. Complete the following table(4mks)

Element	Symbol	Element	Symbol
Silver			Cu
	K	Mercury	
Sodium		Iron	
	Sn		Co

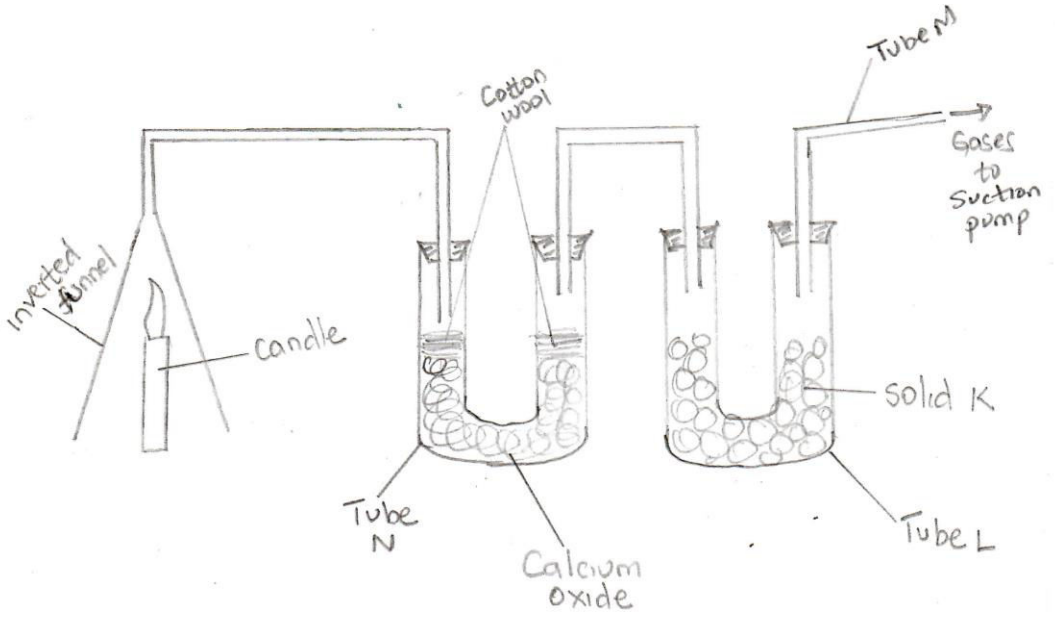
12. Write word equations for the following reactions between hydrochloric acid and the following
    a) Zinc (1mk)

    b) Magnesium oxide (1mk)

    c) Calcium carbonate (1mk)

13. (a) Candle wax is a compound consisting of two elements. Name the two elements (2mks)

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



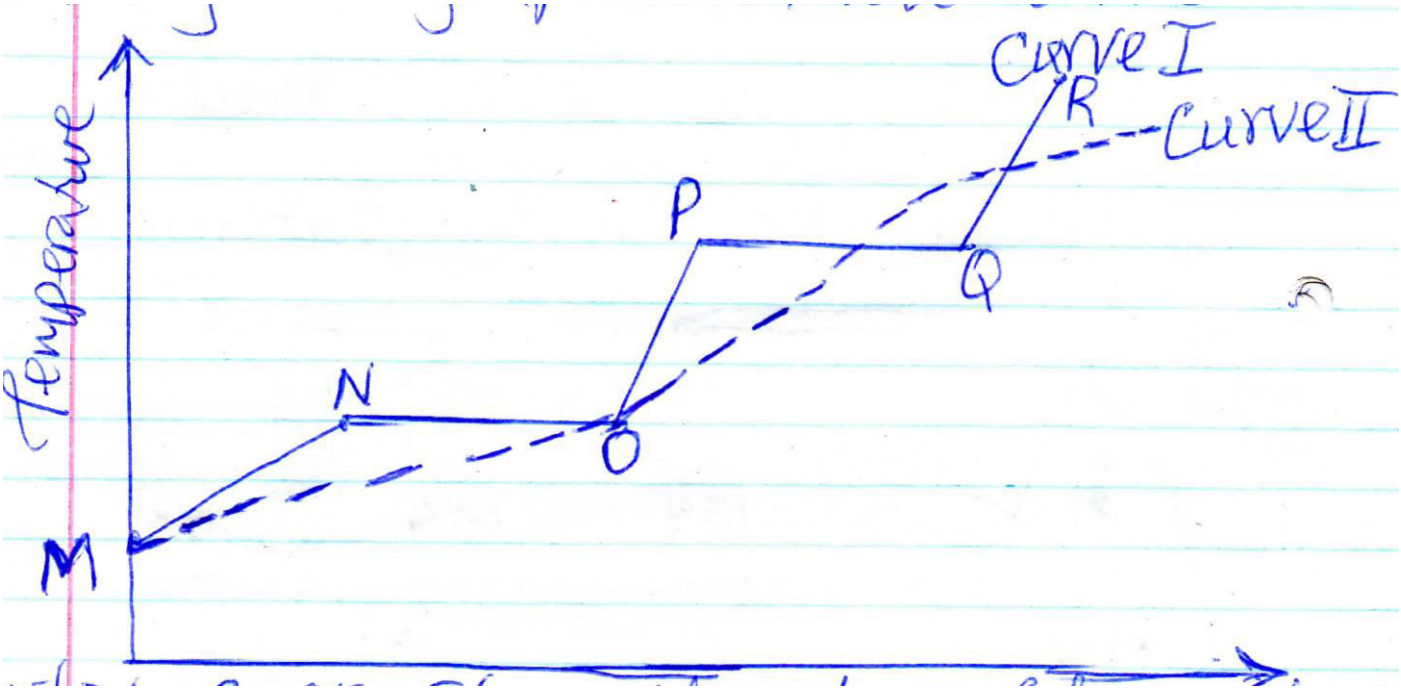
(i) What would happen to the candle if the pump was turned off? (2mks)

(ii) State and explain the changes in mass that are likely to take place in tube N by the end of the experiment (2mks)

(iii) Name two gases that comes out through tube M. (1mk)

(iv) State two industrial uses of oxygen (2mks)

14. Study the graph on heat curves shown below



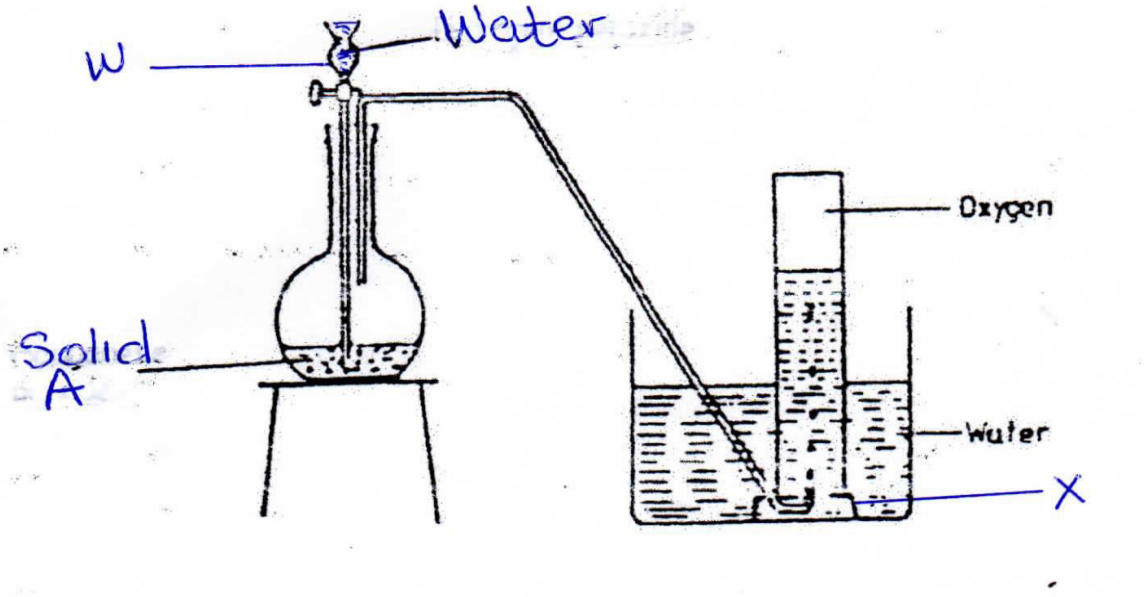
(a) Which curve shows variation of temperature for a pure sample of solid? Explain (2mks)

(b) Explain in terms of kinetic energy what happens at the following regions during heating

(i) MN

(ii) NO (3mks)

15. Study the diagram below used to prepare oxygen gas



(a) Name the apparatus labeled (2mks)

W –

X –

(b) Name solid A (1mk)

(c) Write a word equation for the reaction in the flask (2mks)

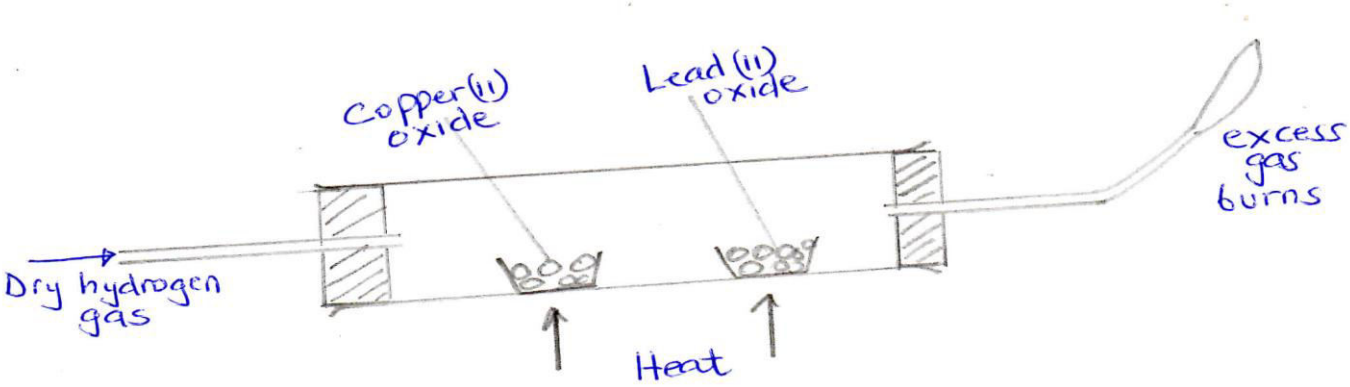
(d) State the test for oxygen gas (1mk)

16. (a) List down two sources of water (1mk)

(b) State three uses of water other than domestic use like cooking (3mks)

(c) List down three causes of water pollution (3mks)

17. Study the diagram below and use it to answer the question that follows:



(a) State the property of hydrogen gas tested in the experiment (1mk)

(b) State and explain what would happen to the copper(II) oxide in the experiment (2mks)

(c) Write word equation for the reaction in the combustion tube (2mks)

(d) State the test of hydrogen gas (1mk)

(e) State two uses of hydrogen gas (2mks)

18. (a) Define the term indicators as used in chemistry (1mk)

(b) Explain briefly how one can make simple flowers indicator in the laboratory (3mks)

19. A student was stung by bee in the laboratory. The laboratory technician used a certain solution X to wash the student. Name the solution X used to bring relief (1mk)

20. Sodium chloride (common salt) is contaminated with copper (II) oxide. Explain how pure sodium chloride can be obtained from the mixture (2mks)

FORM I ENTRANCE EXAMINATION TERM 1 YEAR 2022

COMPUTER EXAMINATION

Students Name: …… Adm. No.……. Class: ……

Date: ……. Time **2 hrs.**

INSTRUCTIONS TO CANDIDATES

i) Write your name and admission number.
ii) Answer all the questions in the spaces provided after every question.

1. i) Define the following terms as used in computing.
   a) Hardware [2mks]

_____

_____

   b) Software [2mks]

_____

_____

   c) Liveware [2mks]

_____

_____

   ii) State three factors used to classify computers. [3mks]

_____

_____

   iii) List two ways of classifying computer software. [2mks]

_____

_____

2. a) What is the CPU? [1mk]

_____

_____

   b) List three main functional elements of the CPU. [3mks]

_____

_____

_____

c) List four types of ROM. [2mks]

3. Differentiate between the following terms
i) Softcopy and hardcopy [2mks]

ii) Input device and output device [2mks]

4. List four types of non-impact printers. [2mks]

5. i) Differentiate between main memory and secondary storage media. [4mk]

ii) Give two examples of main memory and four secondary storage devices. [3mks]

iii) State five factors to consider when choosing a storage device for backup. [5mks]

6. What is a computer bus? Describe three examples of computer buses. [8mks]

7. i) Differentiate between system software and application software. [4mks]

ii) List four ways of classifying system software. [4mks]

iii) Utility software refers to programs that are concerned with routine activities or housekeeping tasks in a computer system. List four examples of utility programs.[4mks]

8. List four hardware and four software factors one needs to consider before acquiring a computer system. [8mks]

Hardware considerations

Software considerations

9. i) Define the term system unit. [2mks]

ii) Name two types of system units. [2mks]

iii) List 4 devices that are found under the cover of the system unit. [4mks]

10. a) Define the term operating system. [2mks]

b) List five resources that are managed and controlled by an operating system.[5mks]

c) State five functions of an operating system. [5mks]

d) Name three examples or common types of operating systems used on microcomputers. [3mks]

11. a) Define the term booting. [2mks]

b) Describe two types of booting [2mks]

c) Describe three mouse techniques applied when using the mouse. [6mks]

_____

_____

_____

_____

12. Differentiate between a file and a folder. [2mks]

_____

_____

13. a) Write USB in full. [1mk]

_____

_____

b) Name two devices that use the USB port. [1mk]

_____

_____

NAME:…….. ADM:…… CLASS:….

ENTRANCE EXAMINATION TERM 1 YEAR 2022

FORM 1 CRE

TIME: $2^{1}/_{2}$ HRS

INSTRUCTION TO CANDIDATES:

- **This paper has five questions**
- **Answer all the questions**
- **All answers should be in English.**

1. a) Mention the activities that God carried out in the first creation account in the order they occurred . (7mks)

b) State six responsibilities given to man after creation. (6mks)

c) In what ways do Christians continue with God's work of creation? (7mks)

2. (a) Explain how God prepared Israelites for the making of Sinai covenant (7mks)

b) State the commandments given to the Israelites to teach them on how to relate to one another (6mks)

c) Give examples of covenants in modern society. (6mks)

3a) What were the roles of Judges in Israel? (7mks)

(b) Describe the events that took place during the Mount Carmel contest. (8mks)

(c) State lessons Christians learn from the failures of King Saul. (5mks)

4.a)Explain the reasons that led to the worship of idols by Israelites. (6mks)

b) What were the characteristics of the local Canaanite religion? (7mks)

c) Give lessons that Christians learn from Elijah's prophetic ministry (7mks)

5 a) State seven ways in which traditional Africans showed respect to the unborn child (7mks)

b) What is the importance of rituals related to birth in the traditional African community?(6MKS)

c) Give moral values acquired during marriage in traditional African societies (7mks)

NOM …….

NUMERO ……

CLASSE ……

ENTRANCE EXAMINATION TERM 1 YEAR 2022

FRENCH FORM ONE

TIME: 2HRS

Instructions to candidates

- *Attempt all the questions.*
- *Answer all the questions in the spaces provided.*
- *Answer all questions in French.*
- **This paper consist of 6 printed pages Candidates should check the question paper to ensure that both pages are printed as indicated and no questions are missing.**

SECTION	MAXIMUM SCORE	SCORE
1	12	
2	78	
3	10	
TOTAL SCORE		

SECTION I: COMPREHENSION ECRITE

I. Read the passage below and answer the questions that follow.

Bonjour, je m'appelle Stephan. J'habite à Marseille, dans le sud de la France. Je suis marié ; ma femme s'appelle Mme Janette Stephan. Elle est réceptionniste; elle travaille à la Banque Barclays. Elle n'aime pas le tennis ; elle préfère regarder la télévision ou aller au cinéma. J'ai deux enfants : une fille qui s'appelle Hélène, elle est à école primaire et un garçon qui s'appelle Christophe, il est au collège. Je suis médecin généraliste. Je travaille à l'hôpital Métropolitain. Le weekend, le samedi je fais le tennis avec mes enfants. Le dimanche matin, nous allons à l'église et l 'après-midi, on va à la forêt avec notre chien, Bernard. A l'école Helene joue au basketball et au pingpong. Christophe pratique le handball et le hockey à l'école.

(i) Questions. **10pts**

1. Où habite Stephan ? _____
2. Nom de sa femme _____
3. Nombres d'enfants _____
4. Profession de Stephan _____
5. Profession de Madame Stephan. _____
6. Noms des enfants _____ et _____
7. Qui aime le hockey ? _____
8. Qui fait le football a l'école ? _____
9. Où travaille Madame Stephan ? _____
10. Stéphan travaille ou ? _____

(ii) Underline Vrai [true] or Faux [false] where appropriate. **2pts**

1. Monsieur Stephan est célibataire. [Vrai Faux]
2. Helene est étudiante. [Vrai Faux]
3. Madame Stephan joue au tennis. [Vrai Faux]
4. Bernard est le bébé de madame Stephan. [Vrai Faux]

SECTION II : GRAMMAIRE

(II) Put in the correct subject pronoun (je,tu,il/elle,nous,vous,ils/elles) **4pts**

1. ..... m'appelle Daniel et toi ..... t'appelles Marie.
2. ..... s'appelle Anne et lui, ... s'appelle Jacques.
3. Nous ..... appelons Guillaume et Pierre et eux ..... s'appellent Rose et Jean
4. ..... s'appellent Janet et Christine et vous ..... appelez comment?

(III) Fill the blank with one word only. **7pts**

[quel, qui, quoi, va, c'est, a , de]

1. Elle ..... quinze ans.
2. C'est ..... ton nom?
3. ..... est-ce?
4. ..... âge as-tu

(IV) Write in word or figure **4pts**

1) ..... quatre-vingt-seize.
2) 1000 .....
3) ..... mille neuf cent quatre-vingt-cinq
4) 700 .....

(V) Conjugate the given verbe correctly **15pts**

1. Je ..... à Mombasa. (aller)
2. Vous ..... dans cet appartement? (habiter)
3. Ils ..... à la banque KCB. (travailler)
4. Kamau ..... trois bonbon. (acheter)
5. Tu ..... très belle. (être)
6. Rose ..... français et anglais couramment. (parler)
7. Ils ..... la télévision. (regarder)
8. Elles ..... de la maison (partir)
9. Ils ..... deux voitures. (avoir)
10. Je ..... Kirikou. (s'appeler)
11. Vous _____ francais? (être)
12. Ils _____ (jouer) au football au terrain de sports.
13. Jane et Anne _____ à neuf heures (voyager).
14. Vous ne _____ pas la radio française (écouter).
15. Vous _____ un gâteau à votre amie (donner).

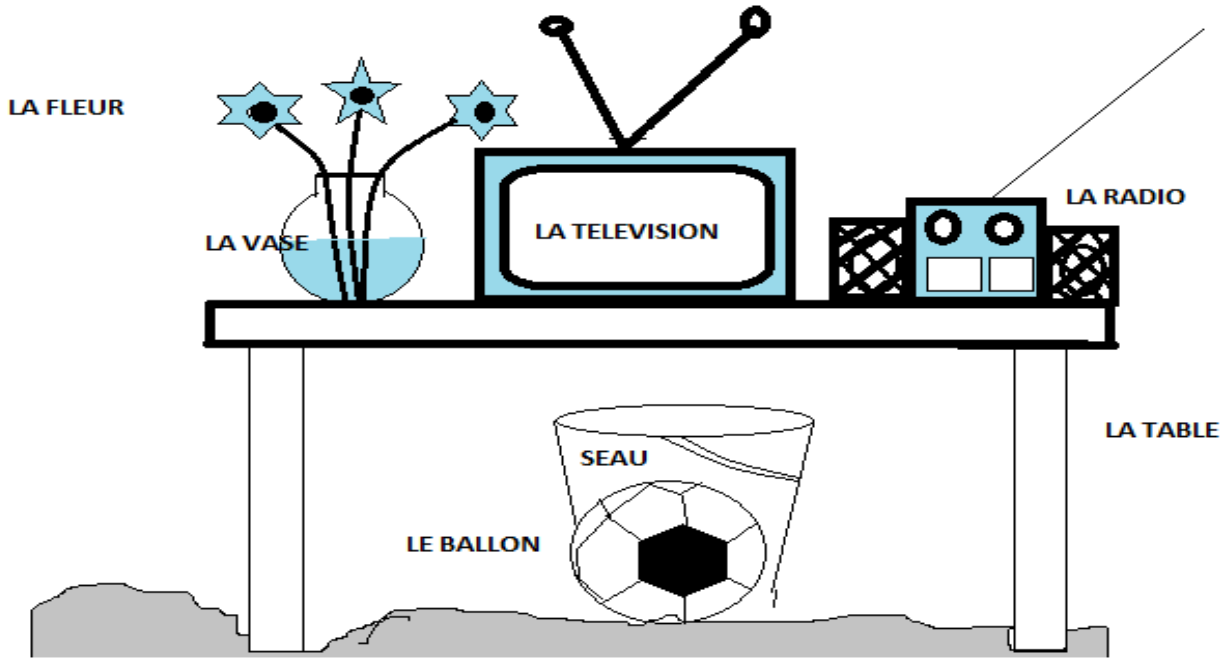
(VI) Match each of the questions in column A with its appropriate response in B. **5pts**

A	B	Ans
1. C'est quoi ton nom?	a) Quatre et une sœur	1. …….
2. Comment vas-tu?	b) À Masinga.	2. …….
3. Comment s'appelle le professeur de français?	c) Je suis David Musoma.	3. …….
	d) Non, forme trois.	4. …….
4. Le bus arrive à quelle heure ?	e) Très bien, merci.	5. …….
5. Tu es en forme 1 ?	f) Non, je préfère les oranges.	6. …….
6. Quelle est la profession de ton		7. …….

oncle ? 7. Combien de frères as-tu? 8. Est-ce que tu parles allemand? 9. Où habite ta famille? 10. Est-ce que tu aimes les ananas?	g) Monsieur Obwocha h) À dix-neuf heures et quart. i) Il est commerçant. j) Oui, et un peu anglais.	8. ……. 9. ……. 10. …….

(VII) Using correct sentences, relate the objects as in the example. 10pts

[**sur, sous, devant, derrière, à cote de, dans, entre]**



Exemple : La télévision vs la table

La télévision ***est sur*** la table.

1. Le seau vs la table. ……
2. La fleur vs la vase. ……
3. La radio vs la télévision. ……
4. Le ballon vs le seau. ……
5. Le seau vs le ballon. ……

(VIII) Formulate questions from the statements below as in the example 5pts

Exemple : Tu es étudiant.
Est-ce que tu es étudiant?

1. Vous êtes Marocaines. ……
2. Je suis rwandaise. ……
3. Ils sont soudanais. ……
4. Nous sommes kenyans. ……

(IX) Donnez l'adjectif du pays donne comme dans l'exemple **5pts**

Ex. Nancy est ..... (le Japon) - Nancy est japonaise.
1) Nous sommes ..... (Allemagne)
2) Paul et Marie sont ..... (la France)
3) Vous êtes ..... ? (l' Etats-Unis)
4) Je suis……(le congo)
5) Tu es …… (seychelles)

(X) Fill in the missing word **5pts**

_____, mars,_____, _____juin,
_____, _____ septembre,

(XI) Choose the right article (le, la, les, l') **6pts**

1. _____ livre
2. _____ hôtel
3 _____ fenêtre
4._____ élève
5. _____ pupitre
6 _____ règles

(XII) Write in the negative **6pts**

1. Tu t'appelles Owino.
   ……
2. Mes parents parlent Kiswahili.
   ……
3. Son frère est journaliste.
   ……
4. J'aime le badminton.
   ……
5. Les étudiants dansent très bien.
   ……
6. Nous regardons un film.
   ……

(XIII) Quelle heure est-il ? **6 pts**
(Indicate what time it is in FRENCH)

i. 00.50 ……
ii. 9.55 ……
iii. 3.15 ……
iv. 7.30 ……
v. 16.00 ……
vi. 23.45 ……

SECTION III : COMPOSITION

Write **ONE** composition in French in the spaces provided on;

Either

(i) Mon école **10 pts**

Or

(ii) Mon ami(e) **10 pts**

NAME……ADM. NO……

312

GEOGRAPHY

FORM ONE

TIME: 2HOURS

INSTRUCTION

1. Answer **all** the question in the spaces provided.
2. Check the question paper to ensure **al**l the question are available and none is missing.
3. Answer all the question in English.

1. Define the following terms
   a. Habitat (2mks)

   b. Geography (2mks)

2. Identify the term that describe the following statements (4mks)

Statement	Terms
i. Study of the rock material	
ii. Study of weather and climate	
iii. Study of soils	
iv. Study of population	

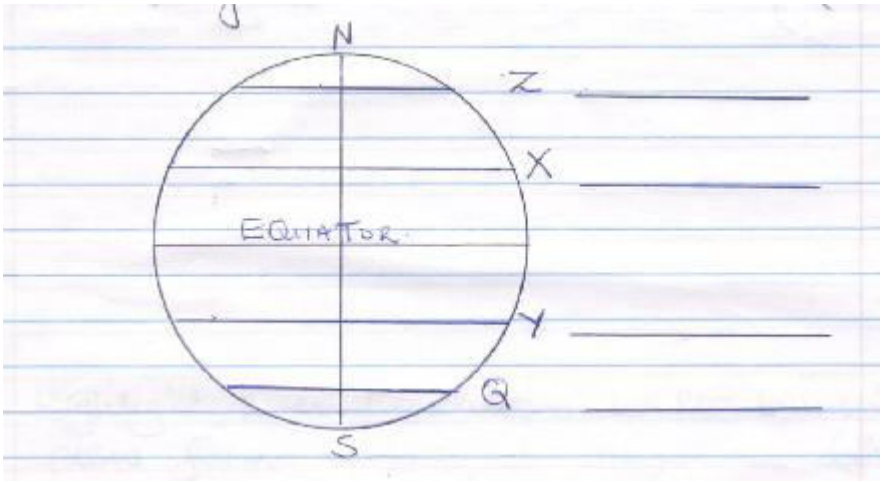
3. Identify **three** ways a form one student would benefit from studying Geography. (3mks)

4. Identify names of planets associated with the following phrases (4mks)

Phrase	Names of planet
i. God of war	
ii. God of sea	
iii. God of the underworld	
iv. God of agriculture	

5. Give **four** effects of rotation of earth (4mks)

6. Name the imaginary lines marked **Z,X,Y** and **Q** in the diagram below (4mks)



7. State **four** characteristics of the mantle (4mks)

8. Give **three** reason why the interior of the earth has high temperature (4mks)

9. Outline **four** factors that determine the amount of solar radiation reaching the earth surface (4mks)

10. Highlight **three** conditions under which dew form (3mks)

11. Give **four** types of fog (4mks)

12. Give **four** characteristics of convectional Rainfall (4mks)

13. Classify the following clouds as either High ,Middle or Low clouds (using tick

Types of clouds	High	Middle	Low
i. Cumulus			
ii. Cirro Stratus			

iii. Stratus			

14. Name **four** instruments kept in a Stevenson screen (4mks)

15. The following table shows rainfall and temperature of Town Q .Using the figures given .Find

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp^{o}C	23	24	26	28	29	28	26	26	26	30	28	25
Rainfall	3	0	3	1	18	500	700	408	300	70	15	0

i. Total Annual Rainfall

ii. Mean Monthly Rainfall

iii. Wettest month

iv. Annual range of Temperature

16. (a) Differentiate between discrete data and continuous data (2mks)

(b) Identify **four** factors that should be considered when preparing a questionnaire (4mks)

17. State **four** methods of recording statistical data (4mks)

18. (a)Define the term Map (2mks

(b)Name **three** types of maps(3mks)

(c) Give **four** informations found on the margin of a map sheet (4mks)

19. Convert the following statement scales into representative fraction (R.F) scale
    i. 1 cm rep 1km (2mks)

ii. 1 cm rep 200m (2mks)

iii. 1 cm rep 0.05 km (2mks)

20. Outline **three** ways used to measure distance on a curved line (3mks)

21. Give **four** reasons why preparing a working schedule is important before carrying out a field study (4mks)

22. Classify the following rocks as either Igneous , Sedimentary or Metamorphic rocks. (4mks)

Rocks	Classification
i. Slate	
ii. Sandstone	
iii. Coal	
iv. Gabbro	

23. Give **four** physical characteristics of minerals (4mks)

24. Name the places where the following menarals are found in Kenya (4mks)

Minerals	Places
Soda ash	
Fluorspar	
Crude oil	
Diatomite	

NAME: _____ADM NO_____

CLASS: _____ SIGN_____

HISTORY AND GOVERNMENT

TERM 1 2022

FORM I

TIME: 2 HOURS

INSTRUCTION TO CANDIDATES

1) Answer All Questions in the Spaces provided
2) All Answers Must be written in English.

SECTION A (25 MARKS)

Answer All the questions in this section

1) Give the meaning of the term History (1mk)

   i).....

2) State two examples of oral traditions (2mks)

   i).....

   ii).....

3) Name two pre-historic sites in Kenya (2mks)

   i).....

   ii).....

4) Mention two ways in which the early man obtained food (2mks)

   i).....

   ii).....

5) Identify two Arab families that ruled the Kenyan coast on behalf of Oman Arabs (2mks)

   i).....

   ii).....

6) Give two treaties signed to end slave trade in East Africa (2mks)

   i).....

   ii).....

7) Name the source of water for irrigation during early Agriculture in Egypt (1mk)

   i).....

8) Who invented the seed drill (1mk)

   i).....

9) Name two communities in Kenya that comprise the Mt. Kenya Bantu (2mks)

   i).....

   ii).....

10) Give two benefits of domesticating the dog to the early man (2mks)

i).....

ii).....

11) State two disadvantages of the open field system in Britain (2mks)

i).....

ii).....

12) Name the method used to plant cereals before the Agrarian revolution (1mk)

i).....

13) Name one arm of the Kenyan government (1mk)

i).....

14) Define National Integration (1mk)

i).....

15) Identify one way of becoming a Kenyan citizen (1mk)

i).....

16) Mention one symbol of national unity in Kenya (1mk)

i).....

17) Name the type of government found in Kenya (1mk)

i).....

SECTION B (45 MARKS)

Answer all questions in this section

18)a) State three migratory groups of the Luo into Kenya (3mks)

i).....

ii).....

iii).....

b) Describe the social organization of the Maasai in the 19th century (12mks)

i).....

.....

ii).....

.....

iii).....

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iv).....

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v).....

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vi).....

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19)a) Identify five sources of information about contacts between East African Coast and the outside world (5mks)

i).....

ii).....

iii).....

v).....

vi).....

b) Explain five reasons why Seyyid Said transferred his capital from Muscat to Zanzibar (10mks)

i).....

.....

ii).....

.....

iii).....

.....

iv).....

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v).....

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20)a) Outline five causes of food shortage in Kenya (5mks)

i).....

ii).....

iii).....

v).....

vi).....

b) Explain five solutions to food shortage in Kenya (10mks)

i).....

.....

ii).....

.....

iii).....

.....

iv).....

.....

v).....

.....

SECTION C (30 MARKS)

Answer all questions in this section

21)a) Outline five rights of a Kenyan citizen (5mks)

i).....

ii).....

iii).....

iv).....

v).....

b) Explain five solution to food shortage in Kenya (10mks)

i)……

……

ii)……

……

iii)……

……

iv)……

……

v)……

……

SECTION C (30 MARKS)

Answer all questions in this section

21)a) Outline five rights of a Kenyan citizen (5mks)

i)……

ii)……

iii)……

iv)……

v)……

b) Explain five economic responsibilities of a Kenyan citizen (10mks)

i)……

……

ii)……

……

iii)……

……

iv)……

……

v)……

……

22)a) State three political causes of conflicts (3mks)

i)……

ii)……

iii)……

b) Explain six factors that foster national unity in Kenya (6mks)

i)……

ii)……

iii)……

iv).....

v).....

vi).....

NAME_____ADMNO_____CLASS__

HOME SCIENCE
ENTRANCE EXAM APRIL 2022
FORM ONE
TIME: TWO HOURS

Instruction.

a. Write your name and admission number in the space provided above.
b. Ensure that all pages are printed as indicated and that no question is missing.

1. State two advantages of steaming as cooking method. 2mks

……

……

……

……

2. Name three points to consider when choosing cosmetics. 3mks

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3. State two causes of suffocation 2mks

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4.. Give three undesirable qualities of wool 3mks

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5. Give three precautions to take when cleaning plain wooden surfaces 2mks

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……

6. Highlight two advantages of filing down finger nails as opposed to cutting with a razor blade. 2mks

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……

7. State two ways of controlling and preventing ringworms. 2mks

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……

8. Give two undesirable properties of silk that make it unsuitable for underwear 2mks.

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……

9. Identify two activities to be carried out in the special cleaning of a bedroom. 2mks

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10. List down two uses of temporary stitches 2mks

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……

11. State four examples of decorative or embroidery stitches. 2mks

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12. Suggest two qualities of a good cutting shears. 2mks

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13. Paint out three ways of ensuring healthy feet. 3mks

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14. Mention at least three factors to bear in mind when selecting kitchen equipment. 3mks

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15. Highlight three points that determine the choice of a cooking method. 3mks

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16. Which two ways would one follow in caring for a broom. 2mks

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17. State any four disadvantages of renting a house for shelter . 4mks

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……

18. Give two uses of mineral fibres in clothing 2mks

……

……

……

19.Point out three qualities of good tape measure 3mks

……

……

……

……

……

20 Give two ways for each of the following

Misusing medicine 2mks

……

……

……

……

Abusing medicine 2mks

……

……

……

……

21.Which two reasons would you give for making the corners of beddings to be mitred. 2mks

……

……

……

……

22. Highlight two physical changes in boys at adolescent stage and two for the girls 4mks

BOYS

……

……

……

……

……

GIRLS

……

……

……

……

……

……

23. Give the correct meaning for each of the following

i.Grease solvents

……

……

……

ii.Grease absorbents

……

……

……

24.State two reasons for lining dust bins 2mks

……

……

……

……

25. Give the reason for cleaning a glass window on the outside first and then the inside. 2mks

……

……

……

……

……

26. List down three safety precautions to observe when handling kitchen equipment . 3mks

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27.Give two causes two prevententions of food spoilage. 4mks

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28. State four governing rules to be observed in deep fat frying . 4mks

……

……

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……

29. four methods of physical identification of textile fibres include. 4mks

……

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……

30. list down four different types of commonly used cotton fabrics. 4mks

……

……

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……

……

31. Name five parts of a sewing and state their functions . 5mks

……

……

……

……

32. Suggest four tools that are used to transfer pattern markings on a fabric . 4mks

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33. Highlight on five points to consider when selecting and working out permanent stitches. 5mks

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……

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……

……

34. Give four import steps to undertake when caring for canvas shoes. 4mks

JINA:----------NAMBARI YAKO:----------

SHULE:---------- SAHIHI:----------TAREHE:----------

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KISWAHILI

APRILI 2022

MUDA: 2 ½

KIDATO CHA 2022

MAAGIZO

(i) Andika jina lako na nambari yako katika nafasi ulizoachiwa hapo juu.

(ii) Jibu maswali yote katika karatasi hii.

(iii) Majibu yote yaandikwe kwa lugha ya Kiswahili.

Kwa matumizi ya mtahini pekee

	Swali	Upeo	Alama
1	Insha	20	
2	Ufahamu	15	
3	Matumizi ya lugha	40	
4	Isimujamii	10	
5	Fasihi Simulizi	15	
	Jumla	100	

Swali 1: INSHA (alama 20)

Umekutana na rafiki yako ambaye mlisoma pamoja katika shule ya msingi. Andika mazungumzo kati yenu kuhusu mambo yanayochangia utovu wa nidhamu shuleni.

Swali 2: Ufahamu (alama 15)

Soma Kifungu kifuatacho kisha ujibu maswali.

Maisha ni mseto wa mambo mduara. Ni kama safari, ambayo huwa na vilima, mabonde na miteremko. Na katika kazi za fasihi ambazo zimekuwa zikiandikwa kwa miaka mingi, ni chache sana ambazo zimejitokeza kuyaangazia maisha kwa uhalisia ufaao.

Nyingi zimekuwa zikijita katika maudhui machache tu, hata bila kuyapa undani ufaao.

Hata hivyo, diwani ya hadithi fupi 'Kiti cha Moyoni' ni ya aina yake, kwani waandishi Said Ahmed Mohammed na Prof ken Walibora wameyatii masuala mbalimbali ya kimaisha katika mkusanyiko wa hadithi 20.

Katika hadithi 'Kiti Cha Moyoni' inayotanguliza mkusanyo huo, Prof Ahmed anaangazia kitendawili cha 'mzuka' unaowasumbua wanandoa Faki na Sara, na jinsi kinatishia kuisambaratisha ndoa hii changa.

Aidha, mzuka unaorejelewa ni wa mhusika Eddi, ambaye alikuwa mume wa kwanza wa sara, kabla ya kufariki kwake.

Inavyodhihirika, sara alikuwa akimpenda sana Eddi, kwa kiasi cha kutolisahau penzi lake, ambalo linaonekana kumteka ambapo anapandwa na jazba kiasi cha kujisahau.

Hata hivyo, Sara anafanikiwa kuondoa 'usumbufu' wa Eddi, pale anapompa chakula kwa njia maalum. Hatua hiyo inafanikiwa kuondoa mahangaiko ambayo yalikuwa yameiandama ndoa yao, iliyokuwa imedumu kwa miaka 18.

Hata hivyo, kilicho wazi hapa ni kuwa, sara anaonekana kuwa na mapenzi ya dhati kwa marehemu mumewe.

Katika hadithi 'Atanasi na Kismati' Prof Walibora anarejelea baadhi ya kasumba ambazo huandamana maisha ya wanafunzi shuleni.

Katika simulizi hii yenye ucheshi wa aina yake, wanafunzi wa Shule ya Upili ya kinyoro waliamini kwamba ikiwa mwenzao, Atanasi, angefanikiwa kuingia darasani akiwa wa kwanza, basi wangeepuka mikosi ambayo huwakumba wanafunzi shuleni, kama vile kuchapwa na walimu.

Sadfa ya kasumba hii ni kuwa, matukio yote yalitendeka kama walivyoamini. Hata hivyo, kinaya ni kuwa Atanasi mwenyewe hakuwa mwepesi wa kuelewa masomo, michezo au hata mashindano ya uigizaji.

Upeo wa usimulizi huu ni pale timu ya kandanda ya shule hiyo inapotingwa mabao 4 – 0 na shule jirani ya Mabonde, tukio linaloaminika kuchangiwa na 'kutokuwapo' kwa Atanasi katika mechi hiyo.
Kioja pia kinatokea wakati wanafunzi wanakataa kufanya mtihani wa Hisabati, kwa kisingizio kwamba Atanasi hakuwa amefika. Makabiliano yanazuka kati ya mwalimu na wanafunzi, kiasi cha baadhi yao kulazwa hospitalini.

Upekee wa hadithi hii ni kwamba inasawiri matukio ya kawaida ambayo hujiri katika maisha ya wanafunzi shuleni pamoja na vile wanatangamana na walimu wao.

Maswali

1. Kwa nini maisha yanaelezwa kuwa ni kama safari? (al. 1)

---

2. Ni kwa njia gani diwani ya hadithi fupi iliyotajwa kwenye kifungu ni ya aina yake? (al. 2)

---

3. Mhusika Eddi ana uhusiano gani na Sara? (al. 2)

---

4. Thibitisha ya kwamba sara alikuwa na mapenzi ya dhati kwa marehemu mumewe. (al. 2)

---

5. Eleza sababu iliyowafanya wanafunzi kupendelea Atanasi awe mwenzao kuingia darasani?(al. 2)

---

6. Kwa nini imani ya wanafunzi inaelezwa kuwa kuingia kwenye kifungu?(al. 2)

---

7. Taja matukio mawili yanayodhihirisha kuwa kutokuwepo kwa Atanasi kuliathiri shughuli za wanafunzi shuleni. (al. 2)

---

8. Eleza maana ya maneno haya kama yalivyotumika. (al. 2)

(i) mzuka

(ii) inapotingwa

MATUMIZI YA LUGHA (ALAMA 40)

1. Toa sifa bainifu za sauti /o/ (al. 2)

---

2. Nomino zifuatazo zimo katika ngeli gani. (al. 2)

(i) Nyasi

(ii) Huzuni

---

3. Andika katika hali yakinishi. 9al. 2)

Mama hajaenda sokoni

---

4. Huku ukitoa mfano eleza maana ya sauti mwambatano. (al. 2)

---

5. Mzizi wa neno ni nini? (al. 1)

---

6. Andika kwenye nyakati au hali kwenye mabano. (alama 2)

(i) Baba alitembelea mbuga la wanyama. (wakati ujao)

(ii) Sisi tumesoma vizuri.(hali ya mazoea)

---

7. Onyesha viambishi awali na tamati katika fungutenzi. (ala. 2)

Anamsomea

---

8. Andika neno lililo na silabi za muundo wa irabu pekee. (al. 1)

---

9. Weka shadda kwenye maneno yafuatayo.
(i) Kitabu:

(ii) mtu:

---
10. Onyesha vivumishi katika sentensi. (al. 2)

(i) Baba alijenga chumba kidogo.

(ii) Mama mzazi alituzwa zawadi.

---
11. Eleza matumizi mawili ya alama ifuatayo ya uakifishaji. (al. 2)
Nukta pacha

---
12. Kamilisha jedwali. (alama 2)

kutenda	kutendea	kutendewa
omba		
		jengewa

13. Andika katika udogo wingi. (al. 2)
Mtoto mkaidi aliiba kitabu.

---
14. Onyesha vihusishi katika sentensi. (al. 2)
(i) Aliingia darasani kabla ya mwalimu.

(ii) Watoto walifanyia kazi yao katika nyumba.

---
15. Andika sentensi ifuatayo upya bila kutumia ‘amba’
Dereva ambaye alimgonga kijana ametiwa mbaroni.

---

16. Taja mfano mmoja mmoja wa sauti zifuatazo. (al. 2)

(i) Kiyeyusho

(ii) Kitambaza

---

17. Onyesha miundo miwili inayojitokeza katika ngeli ya A – WA (al. 2)

---

18. Bainisha maneno katika sentensi. (al. 4)
Yeye amenunua kitabu kipya.

---

19. Sahihisha kwa njia tatu. (al. 3)
Huku ndimo alimoingia.

---

20. Onyesha kikundi nomino na kikundi tenzi katika sentensi ifuatayo. (al. 1)
Wavulana wachache wanasoma darasani.

ISIMU JAMII (ALAMA 10)

Mhusika I: Hi, niaje msupaa?
Mhusika II: Poa. So mathee yako alikushow naweza come?
Mhusika I: Ha! Masa hana noma si unajua nita……
Mhusika II: Unataka aniletee problem?
Mhusika I: Mimi ni boy wa maplans. Ngoja nifikirie venye tutamshow.
Mhusika II: Na by the way, kwani umejipaka mafuta ya manzi?

Maswali

1. Hii ni sajili ya aina gani? (al. 2)

---

2. Dondoa matumizi mawili ya sheng katika kifungu hiki na kasha uyaandike kwa Kiswahili sanifu. (al. 2)

---

3. taja sifa nne za sajili uliyoitaja hapo juu. (al. 4)

---

4. Taja kaida mbili za matumizi ya lugha. (al. 2)

FASIHI SIMULIZI (ALAMA 15)

1. Fafanua aina zifuatazo za nyimbo. (al. 3)

(i) Mbolezi

(ii) Nyiso

(iii) bembelezi

---

2. Eleza aina zifuatazo za hadithi. (al. 2)

(i) Hurafa

(ii) hekaya:

---

3. Taja vipera vitatu vya semi. (al. 3)

---

4. Eleza maana ya: (alama 2)

(i) hadhira

(ii) Fanani

---

5. Eleza umuhimu wa vitendawili (ala. 3)

---

6. Kamilisha methali hizi. (al. 2)

(i) Tamu ikizidi tamu:----------

(ii) Wagombanao----------

NAME ……..…… ADM NO……..… DATE ……..……

SCHOOL……..…… SIGNATURE ……..…….

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MATHEMATICS

FORM 1

APRIL 2022

TIME: 2 ½ HOURS

END OF YEAR EXAMINATION

Kenya Certificate of Secondary Education 2022

INSTRUCTIONS TO CANDIDATES

1. *Write your name and admission number in the spaces provided at the top of this page.*
2. *This paper consists of two sections:* ***Section I and Section II.***
3. *Answer* ***all*** *questions in* ***section I*** *and* ***Section II.***
4. *Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.*
5. *Marks may be given for correct working even if the answer is wrong.*
6. *Non- programmable silent electronic calculators* ***and KNEC*** *Mathematical tables may be used.*

For Examiner's Use Only

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

17	18	19	20	21	Total

Grand Total

SECTION I (50 MARKS)

1. Without using a calculator, evaluate; (3 marks)

$$\frac{-2(5+3)-9\div3+5}{-3\times5+-2\times4}$$

2. Evaluate ; (3 marks)

$$3..9 \div \sqrt{0.0676}$$

3. Express the numbers 1470 and 7056, each as a product of its prime factors hence evaluate;

$$\frac{1470^2}{\sqrt{7056}}$$

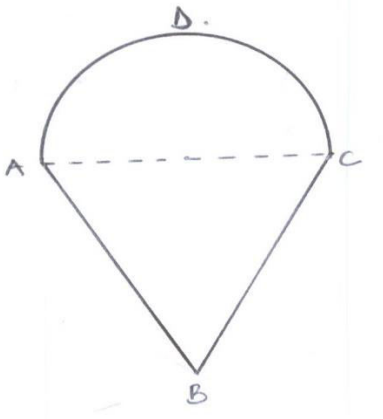
leaving your answer in prime factor form. (3 marks)

4. Find the difference between the GCD and LCM of 12, 18 and 36. (3 marks)

5. Evaluate the following; (3 marks)

$$\frac{\left(8\frac{1}{2}-6\frac{2}{3}\right)\div\frac{4}{9}}{\frac{2}{5}\text{ of }6\frac{1}{4}+1\frac{1}{4}}$$

6. In the figure below, ABC is an equilateral triangle of sides 7 cm.



If ADC is a semi circle, calculate the perimeter of the figure. (3 marks)

7. Using a ruler and a pair of compass only, construct a triangle PQR in which $\angle PQR = 75°$, $\angle QRP = 60°$ and QR = 6 cm. Measure PQ and line PR. (4 marks)

8. A trader makes a profit of 20% when he sells a carpet for Ksh. 36 000. In a trade fair he sold one such carpet for Ksh. 33 600. Calculate the percentage profit made on the sale of the carpet during the trade fair. (3 marks)

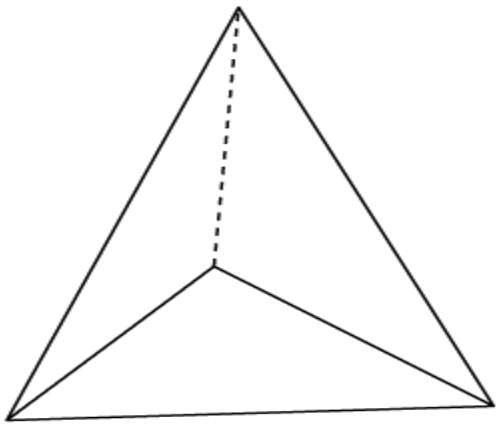
9. The internal and external diameters of a circular ring are 6 cm and 8 cm respectively. Find the volume of the ring if its thickness is 2 millimetres. (3 marks)

10. Without using mathematical tables, evaluate; (3 marks)

$$\sqrt{\frac{15.3\times0.18}{0.34\times1.6}}$$

11. A rectangle is $\frac{3x}{5}$ cm long and $\frac{2x}{3}$ cm wide. Find its perimeter. (3 marks)

12. The figure below shows a solid regular tetra pack of sides 6 cm.



Draw a net of the solid. (3 marks)

13. Solve for x; (3 marks)

$$\frac{2x-1}{3} - \frac{1-x}{4} = 1\frac{3}{7}$$

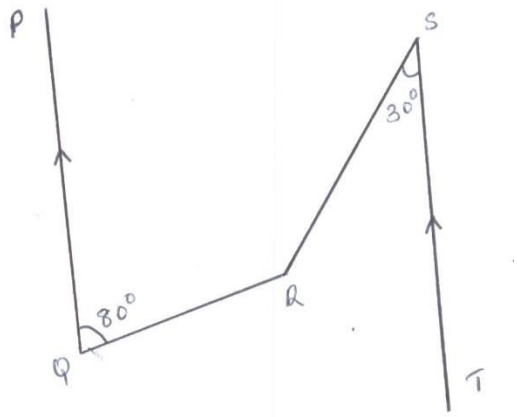
14. A matatu left Mau summit at 8:00 a.m. It arrived in Nakuru 35 minutes later and stopped for 5 minutes. It then took $\frac{3}{4}$ hours to get to Naivasha from Nakuru.

    a) How long did the whole journey take? (1 mark)

    b) Given that the distance between Mau Summit and Naivasha is 170 km, calculate the speed for the whole journey. (2 marks)

15. A square brass plate is 2 mm thick and has a mass of 1.05 kg. The density of the brass is 8.4 g/cm^3. Calculate the length of the plate in centimetres. (4 marks)

16. In the figure below, PQ is parallel to ST, $\angle PQR = 80°$ and $\angle RST = 30°$.



Find $\angle QRS$ obtuse. (3 marks)

SECTION II (50 MARKS)

17. The table below shows the volume of a gas at various temperatures when heated from $0°C$.

Temperature $0°C$	20	40	60	80	100
Volume (litres)	1.82	1.95	2.07	2.20	2.35

a) Using a suitable scale, draw a graph of volume against temperature. (4 marks)

b) Use your graph to find,

i. The initial volume of the gas. (1 mark)

ii. The volume of the gas when the temperature is $44°C$ and $70°C$ (2 marks)

iii. The temperature of the gas when the volume is 1.8 litres, 2.1 litres and 2.3 litres. (3 marks)

18. The route of a rally has five sections AB, BC, CD, DE and EA. B is 200 km on a bearing of 060° from A. C is 500 km from B. The bearing of B from C is 300°. D is 400 km on a bearing of 230° from C. E is 250 km on a bearing of 335° from D. Use the scale of 1 cm for 50 km to;

    a) Draw the diagram representing the route. (4 marks)

    b) Find the distance in km of A from E. (2 marks)

    c) Find the bearing of E from A. (1 mark)

    d) Find the bearing of A from C. (1 mark)

    e) Find the distance in km of A from D. (2 marks)

19. Mr. Kinyua bought three cars A, B and C for a total of Ksh. 1 500 000. The amount he paid for those cars were in the ratio 3: 5: 7.

a) Calculate the amount he paid for each car. (3 marks)

b) When he sold all the cars, he made a profit of 12%. Calculate the profit he made on the sale of cars. (1 mark)

c) When he sold the cars, he made a profit of 25% on car A and a loss of 10% on B. calculate;

i. The profit he made on car A. (1 mark)

ii. The percentage profit he made on car C. (5 marks)

20. (a) The length of a hollow cylindrical pipe is 6 metres. Its external diameter is 11 cm and has a thickness of 1 cm. calculate the volume, in cm^3 of the material used to make the pipe. Use $\pi = 3.142$. (3 marks)

(b) The walls of a room measuring 6 metres long, 5.5 metres wide and 2.8 metres high are to be painted. Each wall has two windows each measuring 1.8 metres by 1.2 metres.

i. Find the area to be painted. (3 marks)

ii. If one tin of paint covers 3.1 m^2 how many such tins need to be bought. (2 marks)

iii. If one tin costs Sh. 250, calculate the total amount required to paint the walls. (2 marks)

21. (a) Stella spent Sh. 166 on the purchase of 5 pens and 3 rulers. James bought four of the pens and two of the rulers for Sh. 124. Find the cost of each item. (4 marks)

(b) Two lines whose equations are $ax + 2y = 10$ and $6x + by = 6$ intersect at point $A\ (-1, 4)$. Find the value of $\boldsymbol{a}$ and . (4 marks)

(c) Draw a graph showing the two lines. (2 marks)

FORM 1 ENTRANCE EXAMINATION TERM 1 YEAR 2022

PHYSICS EXAMINATION

Students Name: …… Adm. No……. Class: ……

Date: ……. Time **2 hrs.**

INSTRUCTIONS TO CANDIDATES

i) Write your name and admission number.
ii) Answer all the questions in the spaces provided after every question.
iii) All working for numerical questions must be clearly shown.

SECTION A (42MKS)

1. a) Mention 2 branches of physics (2mks)

   b) State the relationship between Physics and Biology (1mks)

2. a) What do you understand by S.I units? (1mk)

   b) Differentiate between derived physical quantities and basic physical quantities giving an example of each. (4mks)

   c) Complete the table below

Basic Quantities	SI unit	Symbol
Mass		Kg
Electric current	Ampère	
Temperature		
Amount of substance		Mol
Length		m

   Each ½ mark total = 3 marks

3. a) Define force, stating its SI unit. (2mks)

   b) State two (2) effect that a force can have when it acts on a body in a particular direction (2mks)

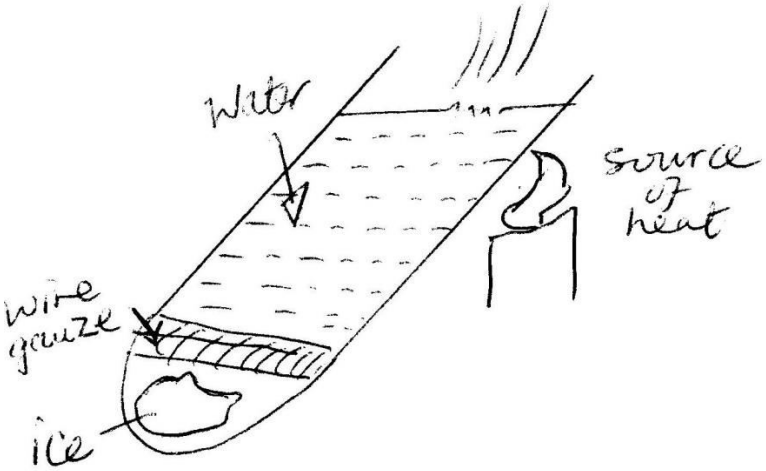
4. a) Define pressure and state its S.I. unit of measurement.

b) A block of copper of density 8900 kg/m^3 measures 0.05m x 0.03m x 0.02m. Given that the gravitational field strength, g is 10N/kg, determine the minimum pressure that it can exert on a horizontal surface.

5. a) Some amount of water is heated and its temperature rises from 0^oC to15^oC. Sketch a graph of volume against temperature (2mks)

b) State two disadvantages of anomalous expansion of water.

c) In an experiment, the set up shown below was used. The ice remained in the solid state for several minutes while the water on the upper part of the boiling tube boiled.



i) What is the purpose of the wire gauze? (1mk)

ii) Why did ice take that long to melt? (1mk)

d) Explain the following.

i) The feet feels colder when a person stands on cemented flour than when standing on a wooden floor. (1mk)

ii) Ventilation for a room is put nearer the roof of the room and not near the floor. (1mk)

6. a) Define the following terms;

i) A ray of light

ii) A beam of light (1mk)

b) Two plane mirrors are placed at an angle to each other. Calculate the angle between the two mirrors if 5 images are formed when an object is placed in front of the mirrors. (3mks)

a) What is electrostatics? (1mk)

b) State the basic law of electrostatic charges. (1mks)

c) Explain why a glass window soon becomes dusty after it has been wiped with a dry piece of cloth. (1mk)

d) State three (3) uses of an electroscope. (3mks)

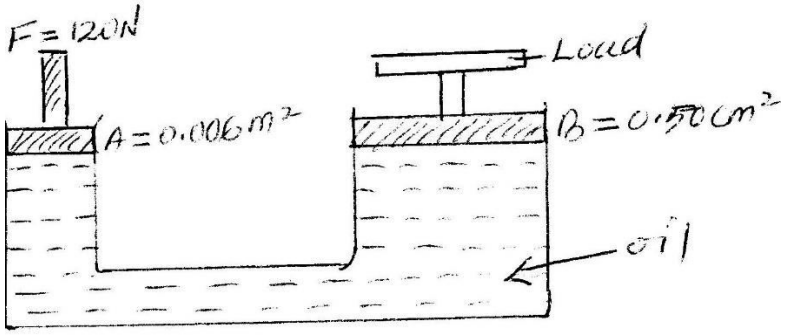
7. a) Define an electric current, stating its SI unit (2mks)

b) Calculate the amount of current flowing through a bulb if 150 coulombs of charge flows through it in 1.25 minutes. (3mks)

SECTION B (58MKS)

8. a) State Pascal's Principle

b) The figure below shows a simple hydraulic machine used to raise heavy loads.



Calculate;

i) The pressure exerted on the oil by the force applied at A. (3mks)

ii) The load raised at B. (3mks)

iii) Give two properties which make the oil suitable for use in this machine. (3mks)

c) What will be the effect of making cross- sectional areas A and B equal (1mk)

9. a) Name two type of forces that determine the shape of liquid drop on a solid surface. (2mks)

b) State two factors that affect the surface tension of a liquid (2mks)

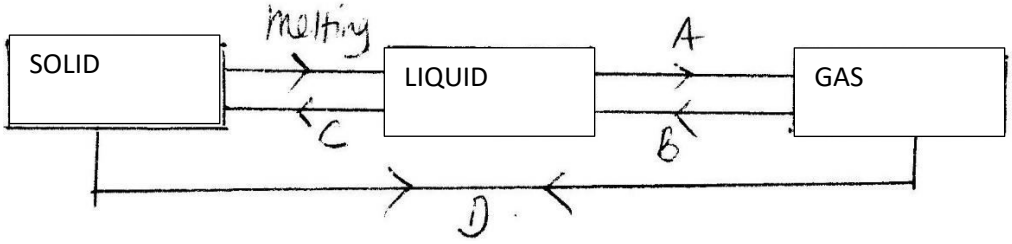
c) State three differences between mass and weight (3mks)

d) A man has a mass of 70kg. Calculate his weight on earth where gravitational field strength is 10 N/kg.

10. a) Name three (3) states of matter. (3mks)

b) Distinguish the three states of matter in term of arrangement of particles in each of state. (3mks)

c) The figure below shows various changes of state marked with letters A, B, C, D, E and F. Name each change of state. (2mks)



e) Matter can exist in three states, solid, liquid or gas. Complete the table below by filling in the state best described by each molecular property listed. (2mk)

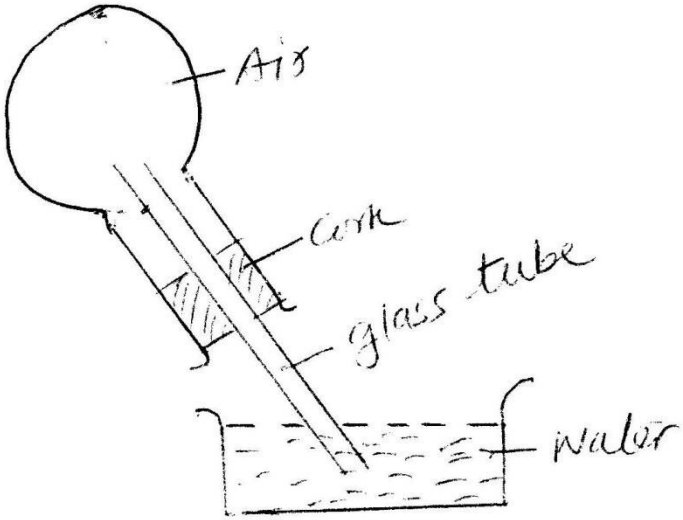
	Molecular properties	State
a	Closely packed	
b	Spacing very large	
c	Moving independently	
d	Very strong force of attraction	

11. a) The figure below shows a bimetallic strip at room temperature. Brass expands more than invar when heated equally



Sketch the bimetallic strip after being cooled several degrees below room temperature. (2mks)

b) The figure shows a flask with a glass tube dipped into a beaker containing water at room temperature. The cork fixing the glass tube to the flask is airtight.



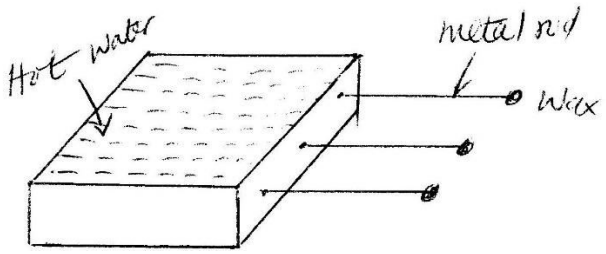
Use the information to answer question below
State what is observed when ice –cold water is poured on flask. (1mk)

c) Give a reason for the observation above. (2mks)

d) State two advantages of mercury over alcohol as a thermal liquid. (2mks)

e) State two factors that must be controlled in an experiment for comparing thermal conductivities of different metal rods. (2mks)

f) The figure below shows a hot water bath with metal rods inserted through one of its end. Some wax is fixed at the end of each rod.



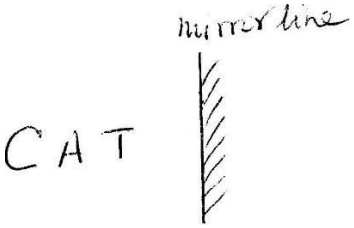
i) What property of metals could be tested using this set-up? (1mk)

ii) Besides the length of the rods that is kept what else should be kept constant when comparing the property for the different metal rods. (1mk)

13. a) What property of light is suggested by the formation of shadows. (1mk)

b) What is a virtual image? (1mk)

c) The figure below shows letters infront of a mirror. Draw the images of the letters behind the mirror. (2mks)



d) State the law of reflection. (2mks)

e) The figure below shows a ray of light being reflected from a plane mirror

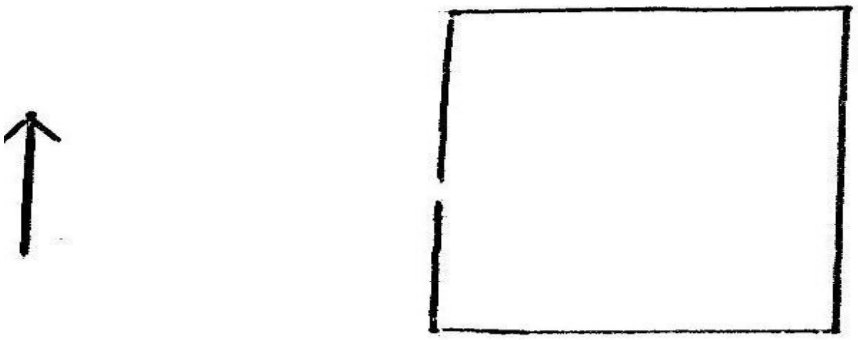


The mirror is rotated clockwise through 20^{o} keeping the incident ray fixed. What is new angle of reflection? (3mks)

f) Calculate to angle between two mirrors such that the number images formed are 5. (2mks)

14. i) Define the term magnification as used in pin-hole camera. (1mk)

ii) The figure below shows a pin-hole camera.



Sketch the rays show how the image is formed on the screen. (2mks)

iii) A Pinhole camera is placed 10m away from tree of height 5m. Calculate.

i) The size of the image if the camera is magnification is 0.02. (2mks)

ii) The distance between the screen of the camera and the pinhole. (2mks)