

NAME.....ADM.NO:.....SIGN.....

**CHEMISTRY**

**FORM ONE**

**TERM II YEAR 2021**

**TIME: 2 HOURS**

**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.

**FOR EXAMINERS USE ONLY**

Question	Maximum score	Candidates score
1-16	70	

1. (i).Define Chemistry. (1mk)  
  
(ii)State three roles of chemistry in the society. (3mks)
2. (i)What is a drug. (1mk)  
  
(ii)(a). Name three frequently abused drugs. (3mks)  
  
(b).State two long term effects of drug abuse. (2mks)
3. (a). State three apparatus used for measuring accurate volumes of liquids. (3mks)

(b). Give two reasons why most laboratory apparatus are made of glass. (2mks)

4. What is a flame? (1mk)

5. Putting off flames is one of the laboratory safety rules. State three other rules. (3mks)

6. (i) What is a mixture? (1mk)

(ii). State two physical means of separating a mixture. (2mks)

7. Otieno, a form one student at AnestarHigh School accidentally mixed sulphur and iron filings.

(a). Suggest an appropriate method of separation you would advice him to use to separate the mixture. (1mk)

(b). Give a reason for the choice of your answer. (2mk)

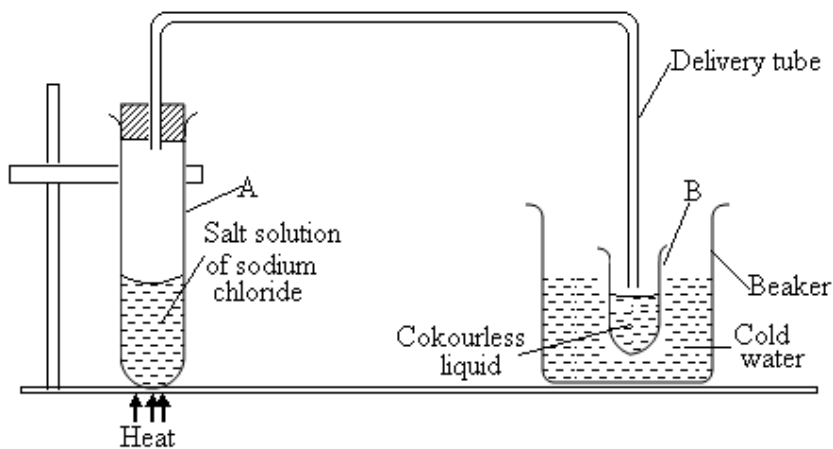
(c). Describe how he would use the method named in (a) above to separate the sulphur and iron filings. (3mks)

8. (a) Name two substances that sublime when heated.

(2mks)

(b). Give two reasons why dry ice (solid carbon (IV) oxide) is preferred to be used in cold boxes by ice cream vendors over ordinary ice. (2mks)

9. The set up below shows the apparatus used to demonstrate simple distillation process. Study it and answer the questions that follow.



(a) What is observed in the delivery tube as the solution boils?

(1 mk)

(b) What is the purpose of cold water in the beaker?

(1 mk)

(c) What is observed in the test tube A after all the solvent has evaporated?

(1 mk)

(d) Name the liquid you expect to collect in tube B.

(1 mk)

10. Differentiate between physical and chemical changes as follows:

(4 mks)

Chemical change	Physical change
(i)	
(ii)	
(iii)	
(iv)	

11. Write the chemical symbols of the following elements.

(5 mks)

(i) Copper –

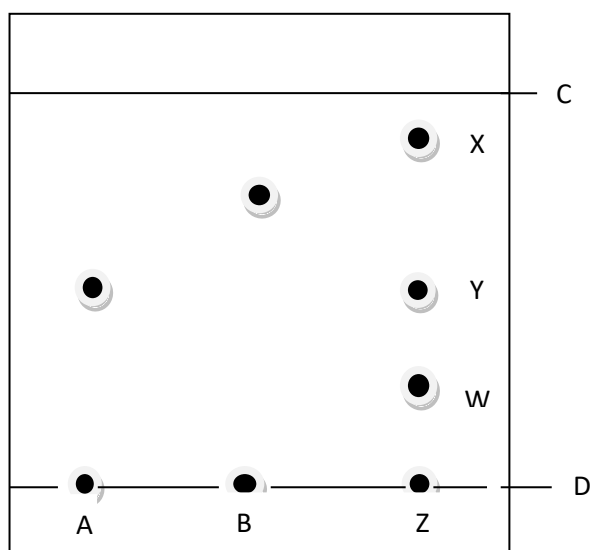
(ii) Sodium –

(iii) Potassium –

(iv) Lead–

(v) Calcium –

12. Spots of pure pigments A and B and a mixture Z were placed on a filter paper and allowed to dry. The paper was then dipped in a solvent. The results obtained were as on the paper chromatogram.



(a) Which line is the: (2mks)  
(i) base line –

(ii) Solvent front –

(b) Which of the pure pigments was a component of Z? Explain. (2 mks)

(c) (i) Name a solvent that is used in paper chromatography. (1 mk)

(ii) Why is water not a suitable solvent in paper chromatography? (1 mk)

(d) Write a word equation for the reactions between: (2 mks)  
(i) Carbon and oxygen -

12. (a). Define the following terms:

I. A saturated solution. (1mk)

II. Crystallization. (1mk)

(b). Give two industrial applications of crystallization as a method of separating soluble substances from their solutions. (2mks)

13 define the following terms. (3mks)

a. Atoms:.

b. Molecules.

c. Compound.

14. Name the elements present in the following compounds (3mks)

a. Sodium bromide:

b. Lead sulphate:

c. Potassium iodide:

15. State three observations made when a piece of sodium is placed on the surface of water. (3mks)

16. Give three applications of chromatography. (3mks)

17. Give one advantage of commercial indicators over flower extract indicators. (1mk)