Name: _____ **Adm No:** _____**Class**: _____

Candidate's Signature: _____ **Date**: _____

CHEMISTRY

FORM ONE
END TERM 3 2024

TIME: 2 HOURS

Instructions to Candidates

Answer all the question in the space provided.

1. Define the term drug abuse? (1mk)

2. List two apparatus for measuring accurate volume of liquids (2mks)

3. Explain how to extract oil from nuts and seeds (3mks)

4. Use the information given below to answer the questions that follows:

Solution	G	H	I	J	K

PH	1.5	6.5	13.0	7.0	8.0

a) Which of the solutions would be used to relieve a stomach upset caused by indigestion (1mk)

b) Which solution is likely to be;

i) Dilute Sulphuric acid (1mk)

ii) Sodium hydroxide solution (1mk)

iii) Sodium chloride solution (1mk)

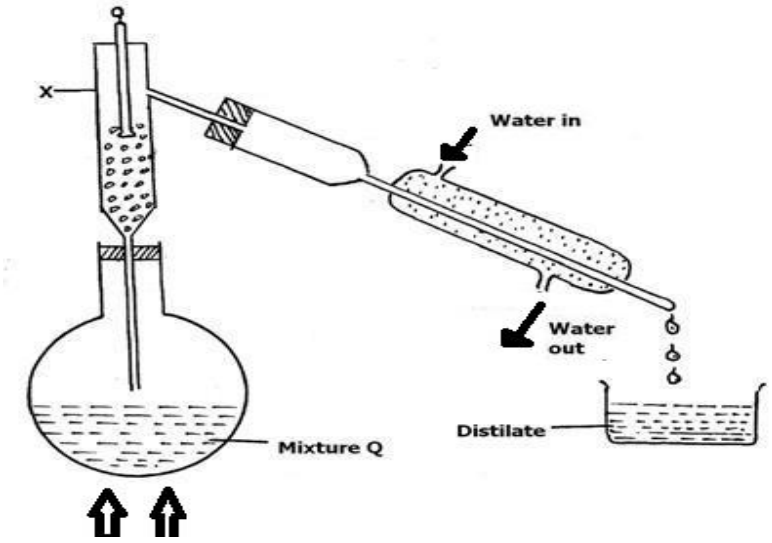
5. a) What is rust? (1mk)

b) Give two methods that can be used to prevent rusting (2mks)

6. Give two reasons why a luminous flame is not used for heating purposes (2mks)

7. State the criteria for determining the purity of a substance (1mks)

8. In an experiment to separate a mixture Q of two miscible liquids, Liquids N (B.P 56°C) and liquid M (B.P 118°C) a student set up the apparatus as shown.



a) What makes it possible to separate substances using this method? (1mark)

b) Name X (1mark)

c) What is the purpose of the apparatus labelled X? (1mark)

d) Identify one mistake in the set up (1mark)

e) Which liquid was collected in the beaker as the first distillate? (1mk)

f) Give any one industrial application of this method of separation of mixtures. (1mk)

9. A form one student mixes sodium chloride and water. Give the names of the following

(a) The solute (1mk)

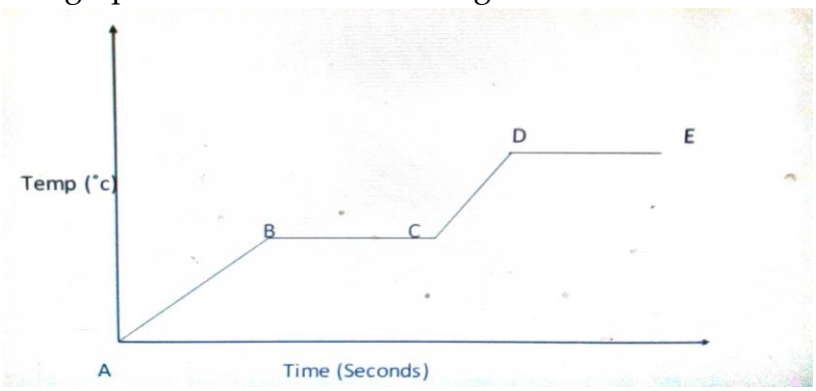
(b) The solvent (1mk)

(c) The solution (1mk)

10. A Bunsen burner produces two types of flames.
(a) Name the two types of flames. (2mk)

(b) Give any two differences between the two types of flames named in above (2mk)

11. The graph shown below is heating curve of solid substance. Use it to answer questions below



Using kinetic theory of matter explain what happens in the following regions

AB (2mk)

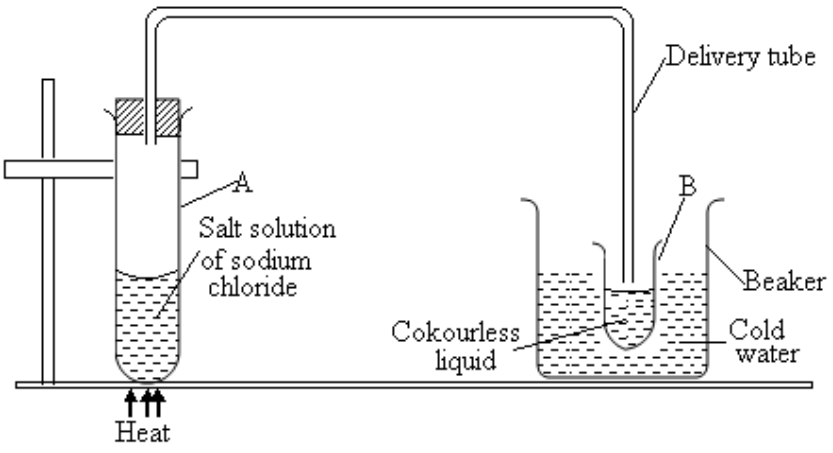
BC (2mks)

CD (2mks)

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? (1mk)

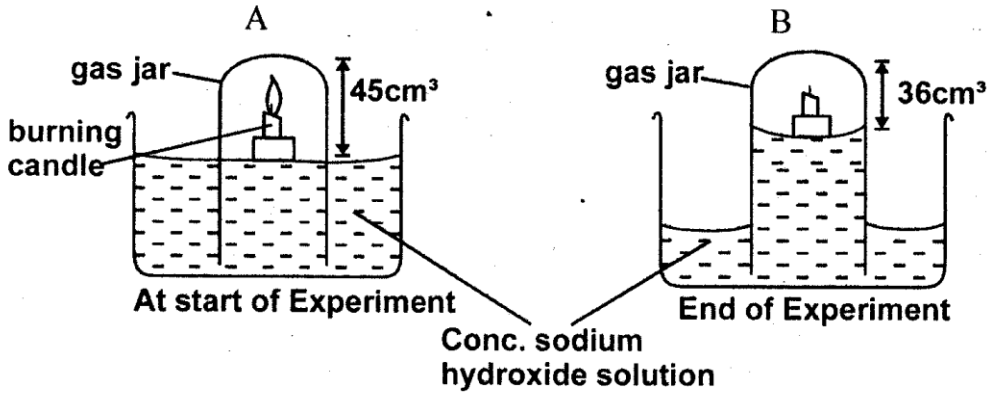
(b) What is the purpose of cold water in the beaker? (1mk)

(c) What is observed in the test tube A after all the solvent has evaporated? (1mk)

(d) Name the liquid you expect to collect in tube B. (1mk)

10. Differentiate between temporary physical and permanent chemical changes. (3mks)

12. A form 1 student set up the following apparatus to investigate the percentage of oxygen in air

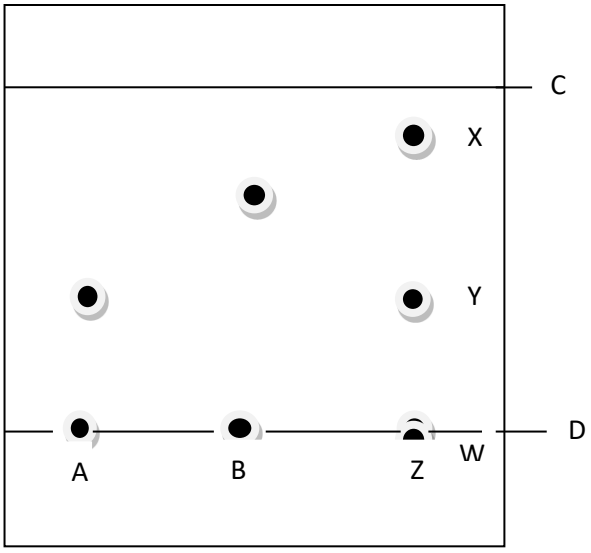


The volume of air in the gas jar was originally 45cm3 and at the end of the experiment was 36cm3.

a) Determine the percentage of air that is used in combustion (2mks)

b) The percentage of air used in combustion as calculated in (a) above is different from the theoretical value 20.9%. Explain (2mks)

12. Sports 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. (2mks)

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

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

(d) Write a word equation for the reactions between
(i) Carbon and oxygen - (1mks)

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. (2mks)

a. Atoms:.

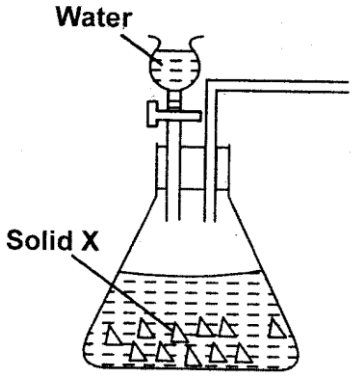
b. Molecules

14. Name the elements present in the following compounds (2mks)

a. Sodium bromide:

b. Lead sulphate:

15. The set up below was used to prepare a sample of oxygen gas. Study it and answer the questions that follow.



a) Complete the diagram to show how oxygen is collected (2mks)

b) Identify solid x (1mks)

c) Write a word equation for the reaction between solid x and water (1mks)

d) State another substance that can be decomposed to form oxygen gas (1mk)