**NAME :\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ADM NO:\_\_\_\_\_\_\_CLASS\_\_\_\_\_\_**

**DATE : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SIGN\_\_\_\_\_\_\_\_\_\_\_**

MARKS HERE

**CHEMISTRY FORM 1**

**TERM 3, 2023**

**INSTRUCTIONS: Answer All Questions TIME: 1Hr 30 Mins**

1.a) Explain why most chemistry apparatus are made of glass (2Mks)

b) State two major causes of accidents in the laboratory (2Mks)

2. a) What is a flame (1Mk

b) Which of the flames produced by the Bunsen burner is preferred for heating? Give two reasons (3Mks)

c)Give 2 differences between the two types of flames (2Mks)

3. Give two examples of :

I. Temporary Physical change (1Mk)

II. Temporary Chemical change (1Mk)

4. State the effect of impurities on the melting and boiling point of a substance (2Mks)

5. Name the elements present in the following compounds.

I. Magnesium Nitride (1Mk)

II. Sodium Carbonate (1½Mks)

6. From the following list of compounds ; zinc oxide, solid carbon (IV) oxide, sodium carbonate, nitric (v) acid and iron (III) chloride,

I. Identify two that sublimes (1Mk)

II. Identify two that react to form salt and water only (1Mk)

III. Write a balanced chemical equation for the reaction between sodium carbonate and dilute nitric (v) acid (2Mks)

7. Dilute sulphuric ( VI) acid was added to a compound of magnesium P. The solid reacted with the acid to form a colorless solution Q and a colorless gas R which formed a white precipitate when bubbled through lime water.

a) Name:

I. Compound P (½Mk)

II. Solution Q (½Mk)

III. Colorless gas R (½Mk)

b) Write a balanced chemical equation for the reaction that took place (2Mks)

8. Explain why a mixture of copper (II) oxide and magnesium reacts when heated while there is no reaction when a mixture of copper and magnesium oxide is heated (2Mks).

9. a) Is air a mixture or a compound. Explain (2Mks)

b) Explain why cars in the coastal city of Mombasa rusts faster than cars in Kisumu city (2Mks)

10. a) Name the products formed when kerosene is burned in air (2Mks)

b) State two observations when a small piece of sodium is placed in water (2mks)

11. Distinguish between the following terms:

a) Atomic number and Mass number (2Mks)

b) Valency and Radicals (2Mks)

12. An atom is said to be electrically neutral. Explain (1Mk)

13. An element Y has an electron arrangement of 2.8.5.

I. State the period and group which the element belongs (2Mks)

II. Write the formula of the most stable ion formed when the element Y ionizes (1Mk)

14. An isotope Q has 18 neutrons and a mass number of 34.

a) Draw the atomic structure of A (2Mks)

b) Write it's electron configuration (1Mks)

c)How does Q form it's ion? Explain (2Mks)

15. a) What is the test for hydrogen gas (1Mk)

b) State two uses of hydrogen gas (2Mks)