

PART - I**Q.2** Write short answers to any FIVE (5) questions: 10

- i Differentiate free radical and molecular ion.
- ii Soft drink is a mixture and water is a compound. Justify.
- iii What are the defects of Rutherford's atomic model?
- iv Write down any two properties of cathode rays.
- v Define electronegativity. Which element has the highest value of electronegativity?
- vi Why are the elements called S and P block elements?
- vii Why does the size of atoms decrease in a period?
- viii What is meant by effective nuclear charge?

Q.3 Write short answers to any FIVE (5) questions: 10

- i Write the importance of electronic configuration of noble gases.
- ii What is the effect of intermolecular forces on boiling point?
- iii Write the electronegativity values of H and Cl atoms.
- iv Differentiate diffusion and effusion.
- v How boiling point is related to vapour pressure of liquid?
- vi Define molarity. Write its formula.

vii Define endothermic reaction.

viii Why does colloids show tyndall effect?

Q.4 Write short answers to any FIVE (5) questions: 10

- i Define reducing agent with an example.
- ii Calculate oxidation state of nitrogen in $\text{Cu}(\text{NO}_3)_2$
- iii What is the advantage of galvanizing?
- iv Justify the given reaction is a redox reaction:
$$2\text{Na} + \text{C}_2 \longrightarrow 2\text{NaC}$$
- v Write down any two uses of magnesium.
- vi Why is gold not used in pure form?
- vii Write down the name of any four halogens.
- viii How does methane react with chlorine in bright sunlight?

PART - II**Note:** Attempt any TWO questions.**Q.5(a)** Write the five differences between compound and mixture. 5**(b)** How coordinate covalent bond is formed? Explain it with the help of two examples. 4**Q.6(a)** What are isotopes? Describe isotopes of carbon, hydrogen and chlorine. 5**(b)** Write down any four typical properties of gases. 4**Q.7(a)** Explain the construction and working of Daniel Cell, draw diagram also. 5**(b)** Discuss the effect of temperature on solubility. 4