

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

- i Define Avogadro's Number.
- ii What is meant by mole?
- iii Differentiate between shell and subshell.
- iv Write electronic configuration of argon (Ar=18)
- v Write the trend of shielding effect in period and group.
- vi Define electronegativity.
- vii Why atomic number is a more fundamental property than atomic mass?
- viii Write names of elements of first period.

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

- i Why do atoms react?
- ii Define chemical bond.
- iii Write name of different types of chemical bond.
- iv What is diffusion? Explain with an example.
- v Define standard atmospheric pressure. What are its units?

vi What is difference between dilute solution and concentrated solution?

vii Define unsaturated solution.

viii Give an example for "Gas in Solid" solution.

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

- i Write difference between spontaneous and non-spontaneous reactions.
- ii Define non-electrolytes and give example.
- iii Define corrosion.
- iv What do you mean by galvanizing? Write its advantages.
- v Write two physical properties of metals.
- vi What is the trend of electropositivity in group?
- vii Why platinum is used by jewellery making?
- viii Write reaction of fluorine with water.

PART - II**Note:** Attempt any TWO questions.**Q.5(a)** Calculate the number of moles and number of molecules present in 6 grams of water.**(b)** Write any two results of Rutherford's experiment and two defects of Rutherford's atomic model.**Q.6(a)** What is an ionic bond? Discuss the formation of ionic bond between sodium and chlorine atom.**(b)** Differentiate between crystalline and amorphous cells.**Q.7(a)** What is galvanic cell? Write four differences between electrolytic and galvanic cell.**(b)** Define solubility. Describe effect of temperature on solubility.