

Note: Section I is compulsory. Attempt any TWO (2) questions from Section II.

SECTION - I

Q.2 Write short answers to any FIVE (5) questions: 10

- i Define a substance with an example.
- ii Write down the symbol and valency Arsenic.
- iii Write down two defects of Rutherford's Atomic Model.
- iv How can U-235 be used for power generation?
- v Define Dobriner's Triads and give an example.
- vi Why are noble gases not reactive?
- vii Give the trend of Electron Affinity in a group with reason.
- viii Define Electronegativity.

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

- i Ionic compounds are solids. Explain.
- ii What types of Covalent Bonds are formed in Oxygen molecule and Hydrogen molecule?
- iii Why is BF₃ electron deficient?
- iv Define crystalline solids. Also give examples.
- v Define condensation.
- vi What is meant by % concentration unit?
- vii What is Tyndall effect?
- viii Write down two examples of "Liquid in Gas" solution.

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

- i Define Non-Electrolytes. Give an example.
- ii What is 'Salt Bridge'? Write down its function in a Galvanic Cell.
- iii What is 'Alloying'? Give one example.
- iv Define Oxidation Number with an example.
- v What is the difference between 'Alkali' and 'Alkaline Earth Metals'?
- vi Write down any two uses of Calcium metal.
- vii Why are silver and gold least reactive metals?
- viii Write down chemical reactions of Mg with O₂ and Na₂

SECTION-II

Q.5(a) Write down a note on any five types of molecules. 5

(b) Write down general properties of Covalent Compound 4

Q.6(a) Write down any five results of Rutherford's experiment 5

(b) Define vapour pressure. Describe various factors affecting it. 4

Q.7(a) Describe the process of "Rusting of Iron". 5

(b) Give four characteristics of colloids. 4