

"Section-B"

Marks: 32

Q.2. Write short answers to any eight (8) of the following parts. All parts carry equal marks.

- (i) Differentiate between organic and inorganic chemistry.
- (ii) Calculate the number of electron, protons, neutrons and mass number in  ${}_{26}\text{Fe}^{56}$  and  ${}_{18}\text{Ar}^{40}$ ?
- (iii) Draw the structures of carbon isotopes and write the numbers of proton, electron and neutron.
- (iv) Pure gold is not used for ornaments, why?
- (v) Differentiate between transition and representative elements.
- (vi) Define dipole-dipole attraction.
- (vii) Describe Boyle's Law with the help of equations.
- (viii) Why we stir paints thoroughly before using it?
- (ix) Define reducing agent with examples.
- (x) State any four physical properties of metals.
- (xi) Define formula unit with at least two examples.

"Section-C"

Marks: 21

Note:- Answer any three (3) questions. All questions carry equal marks.

- Q.3. (a) Compare and contrast a mixture and compound with examples. (3)
- (b) What are the defects in Rutherford's atomic model? (4)
- Q.4. (a) Describe the octet rule in terms of noble gas configurations and stability. (3)
- (b) Explain the formation of ionic bond in NaCl. (4)
- Q.5. (a) If 0.1 mol of NaCl is dissolved in 500 cm<sup>3</sup> solution? Determine the molarity. (3)
- (b) Describe the factors affecting vapour pressure. (4)
- Q.6. (a) Define shielding effect and its trends in the periodic table. (3)
- (b) What is the oxidation number of Carbon in CO and Sulphur in  $\text{SO}_3^{-2}$ ? (4)