

Q.2 Attempt any 8 questions of the following:

- i. Differentiate between homogenous and heterogeneous mixture with examples.
- ii. What is atomic number of an atom? How it differs from the mass number?
- iii. Give four defects in Rutherford atomic model.
- iv. How many electrons can be accommodated in K.L.M.N shells?
- v. What is shielding effect? Give trends of shielding effect in periodic table.
- vi. Differentiate between polar and non-polar interaction.
- vii. What are crystalline solids support your answer with examples.
- viii. Which element of group IA is not an alkali and why?
- ix. It takes longer time to cook at high altitude, why?
- x. What is the difference between concentrated and dilute solution. Give example of each.
- xi. How to prevent corrosion? Enlist only three methods.

SECTION - C

Marks: 24

Note: Attempt any 3 questions: Each carry 8 marks.

- Q.3: a. Calculate the moles in 60 grams of CO_2 (atomic wt, C=12, O=16).
- b. State the postulates which Bohr suggested to overcome the shortcomings of the Rutherford's atomic model.
- Q.4: a. What is electro negativity? Discuss its trends in periodic table.
- b. Discuss three types of covalent bond.
- Q.5: a. What is Boyle's law? Verify this law experimentally.
- b. Calculate the molarity of solution containing 7.50 g of CaCO_3 in enough water to make it 1.50dm^3 solution.
- Q.6: a. What is electroplating? Support your answer with its procedure.
- b. Write at least three noble metals with their symbols.