

Note: Time allowed 2:45 hours

SECTION - B

Marks: 32

Q2: Answer any EIGHT parts. Each part carries equal marks.

- i. Differentiate between empirical formula and molecular formula with suitable examples.
- ii. What is the mass of 5 moles of ice (atomic masses: H = 1amu, O = 16amu)
- iii. What is electronic configuration? Give the electronic configuration of  $\text{Na}^{11}$ .
- iv. Isotopes have different physical properties but have the same chemical properties. Why?
- v. Differentiate between representative and transition elements with examples.
- vi. Discuss ionic bond. Support your answer with suitable example.
- vii. Hydrogen bonding is an intermolecular force. Explain this statement.
- viii. What is evaporation? Give three factors on which evaporation depends.
- ix. What is molarity?
- x. Why NaOH is a strong but  $\text{NH}_4\text{OH}$  is a weak electrolyte?
- xi. Give at least four uses of Calcium.

SECTION - C

Marks: 21

Note: Attempt any THREE of the following. All questions carry equal marks.

- Q3: a) What is Chemistry? Discuss contribution of Jabber-Ibn-Hayan in the field of Chemistry. (4)
- b) Discuss at least three main defects found in Rutherford's Atomic Model. (3)

- Q4: a) State electronegativity alongwith factors affecting electronegativity. (4)
- b) Differentiate between unsaturated, saturated and super saturated solution. (3)

- Q5: a) Explain Boyle's Law and verify this law experimentally. (4)
- b) What is Lewis structure? Draw the Lewis structure of  
(i)  $\text{CCl}_4$  (ii)  $\text{BF}_3$  (3)

- Q6: a) State electroplating and discuss at least three purposes of electroplating. (4)
- b) Give at least three comparisons of metals and non-metals. (3)