

Time: 2 Hours 40 Minutes

## SECTION-B

Marks: 32

1. Attempt any eight of the following. All carry equal marks.

- i. Differentiate between empirical formula and molecular formula.
- ii. Give four uses of isotopes.
- iii. Why is an atom considered as a neutral particle?
- iv. Discuss atomic size along with its trends in periodic table.
- v. How will you differentiate between representative and transition elements?
- vi. Give any four physical properties of ionic compounds.
- vii. What is electron-sea model of metallic bond?
- viii. What is allotropy? Give two reasons due to which allotropy occurs.
- ix. Differentiate between solution and colloids with examples.
- x. NaOH is strong but  $\text{NH}_4\text{OH}$  is weak electrolyte. Why?
- xi. Write down four uses of sodium.

## SECTION-C

Marks: 24

NOTE: Attempt any three of the following questions. All questions carry equal marks.

2. i. What is electronic configuration? Give electronic configuration of:  $\text{Na}^{11}$  &  $\text{Cl}^{17}$   
 ii. What is mass of 5 moles of ice?

3. i. What is electron affinity? Explain its trends in periodic table.  
 ii. Draw the Lewis structures of the following molecules:  $\text{HCl}$ ,  $\text{CCl}_4$ ,  $\text{NH}_3$

4. i. Discuss Charles law and verify it graphically.  
 ii. Explain molarity along with its unit.

5. i. What is corrosion? Explain rusting of iron as an example.  
 ii. Give the chemical reactions of "Na" with:  $\text{H}_2\text{O}$ ,  $\text{Cl}_2$ , S