

Note: Time allowed for Section - B and Section - C is 2 Hours and 45 minutes.

Marks: 32

Section - B

Q-II Answer any EIGHT parts. Each part carries FOUR marks.

1. Describe the contributions of Jabber Ibn Haiyan in the field of Chemistry.
2. Write electronic configuration for $^{28}_{14}\text{Si}$ and $^{40}_{18}\text{Ar}$.
3. Define atomic radius and explain its trends in periodic table.
4. Why do atoms form chemical bond?
5. Differentiate between diffusion and effusion.
6. Why NaOH is a strong but NH_4OH is a weak electrolyte?
7. Calculate the molarity of 50.0 cm^3 of solution containing 7.50 grams of CaCl_2 .
8. Write down the chemical reaction of chlorine with Ca(OH)_2 and NH_3 .
9. Differentiate between polar and non-polar covalent bond.
10. Write any four physical properties of Halogens.
11. What is Galvanic Cell?

Section - C

Marks: 21

Note : Attempt any THREE questions. All questions carry equal marks.

- Q-III (a) State and explain with example empirical formula and molecular formula of a compound. (4)
- (b) Write the chemical formula for: (i) Methane (ii) Ammonia (iii) Sulphuric Acid (3)
- Q-IV (a) Explain the Bohr's atomic theory. (4)
- (b) Describe the fundamental particles of an atom. (3)
- Q-V (a) What is vapour pressure? What are the factors which affect vapour pressure? (5)
- (b) Why evaporation causes cooling effect? (2)
- Q-VI (a) What do you mean by percentage composition? Write its types. (5)
- (b) Differentiate between saturated and unsaturated solutions. (2)