

Model Paper
CHEMISTRY (New)
Inter Part-I
(Fresh/Reappear)

Note: Time allowed for Section – B and Section – C is 2 Hours and 40 minutes.

Section – B

Marks: 40

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

1. Calculate the percentage composition of each element in H_3PO_4
2. Explain the Aufbau principle.
3. State Moseley's law.
4. Sigma bond is stronger than π bond. Why?
5. Write the faulty postulates of KMT of gases.
6. Explain the difference in B.P° of water at sea level and at high mountains.
7. Explain why amorphous solids are also called as "super cooled" liquids?
8. Write a note on leveling effect of acids.
9. Show that $K_p = K_x \left(\frac{RT}{V} \right)^{\Delta n}$
10. Give the assumptions of collision theory of reaction rate.
11. Define solubility. Just name the factors which affect solubility of a solute in a solvent.
12. What is a state function? Give its characteristics.
13. What are electrochemical cells? Give their types.

Section – C

Marks: 27

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

- Q-III (a) Discuss the deviation of gases from ideal behaviour.
(b) Calculate the wave number and wavelength of a photon when electron jumps from $n_2 = 4$ to $n_1 = 1$
- Q-IV (a) Show the conjugate acid base pair for the given species.
i. CH_3COOH ii. NH_3 iii. H_2O
(b) Balance the given redox equations by the half-reaction method.
i. $\text{Zn} + \text{Cr}_2\text{O}_7^{2-} + \text{H}^+ \rightarrow \text{Zn}^{2+} + \text{Cr}^{3+} + \text{H}_2\text{O}$
ii. $\text{H}_2\text{O}_2 + \text{MnO}_4^- + \text{H}^+ \rightarrow \text{Mn}^{2+} + \text{O}_2 + \text{H}_2\text{O}$
- Q-V (a) Explain vacuum distillation.
(b) Explain the effect of change in P on the equilibrium position of a reversible reaction.
- Q-VI (a) Give the postulates of VSEPR theory.
(b) Compare the rates of reactions of ionic and covalent compounds with reasons.