

B.Sc. Semester - 4 (CBCS) Examination
March/April-2025 [NEW COURSE]
Chemistry-C401(Core)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

-
- Que-1 (A) Answer the following question. (04)
1. Give classification of organometallic compounds based on nature of M-C bond.
- Que-1 (B) Answer the following questions. (Any two) (10)
1. Discuss the roll of hemoglobin in biological system.
2. Explain geometrical isomerism in coordination number-4.
3. Discuss; i) Ionization isomerism ii) Linkage isomerism
- Que-2 (A) Answer the following question. (04)
1. Give synthesis of Ethyl acetoacetate.
- Que-2 (B) Answer the following questions. (Any two) (10)
1. Discuss Cannizaro reaction with mechanism.
2. Explain preparation methods of mono carboxylic acids.
3. Explain Wolff-Kishner Reduction with mechanism.
- Que-3 (A) Answer the following question. (04)
1. Write note on Drop Weight Method.
- Que-3 (B) Answer the following questions. (Any two) (10)
1. Discuss application of dipole moment.
2. Write note on Joule Thomson Effect.
3. Derive the equation $C_p - C_v = R$
- Que-4 (A) Answer the following question. (04)
1. Define ligand. Give classification of ligands based on denticity.
- Que-4 (B) Answer the following questions. (Any two) (10)
1. Discuss bonding and structure of Zeise's salt.
2. Explain Beckmann rearrangement with mechanism.
3. Discuss Ostwald's Viscometer.
- Que-5 (A) Answer the following question. (04)
1. Explain First law of thermodynamic.
- Que-5 (B) Answer the following questions. (Any two) (10)
1. Explain toxicity of Mercury and Lead.
2. Explain Aldol Condensation with mechanism.
3. Discuss different types of process in thermodynamics.
