

B.Sc. Semester - 2 (CBCS) Examination
March/April – 2026 (New Course)
CHEMISTRY (CORE)

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

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

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- Que.1(A) Answer the following question. (04)
(1) Write a note on Inter halogen compounds.
- Que.1(B) Answer any two questions out of three. (10)
(1) Discuss VBT and VSEPR approach of XeF_2 .
(2) Discuss structure and Lewis acidity of Boron halide.
(3) Explain Born Haber cycle with example of NaCl.
- Que.2(A) Answer the following question. (04)
(1) Explain 1,2 and 1,4 addition reaction in conjugated diene.
- Que.2(B) Answer any two questions out of three. (10)
(1) Write ring opening reaction of small ring cycloalkane
(2) Write condition for a compound to be Aromatic and Anti aromatic compounds giving one example of each.
(3) Write short note on Bayer strain theory and discuss its limitation.
- Que.3(A) Answer the following question. (04)
(1) Explain ionic product of water.
- Que.3(B) Answer any two questions out of three. (10)
(1) Give the definition and types of buffer solutions.
(2) Write a note on Bragg's law.
(3) Explain solubility and solubility product of sparingly soluble salts.
- Que.4(A) Answer the following question. (04)
(1) Give the difference between activating and deactivating group.
- Que.4(B) Answer any two questions out of three. (10)
(1) Derive the r^+/r^- ratio in square planar crystal lattice.
(2) write products of hydration, hydrohalogenation and hydroboration of alkyne.
(3) Discuss the internal structure of KCl by X-ray diffraction data.
- Que.5(A) Answer the following question. (04)
(1) Give difference between crystalline and amorphous solid.
- Que.5(B) Answer any two questions out of three. (10)
(1) Discuss the oxoacid of phosphorus.
(2) Explain conformation of butane with energy level diagram.
(3) Explain degree of hydrolysis and pH of solution of salts of Weak acid and strong base.
