

PART-A

Marks-50

INORGANIC CHEMISTRY: Periodic properties of s&p-block elements, compounds of noble gases, bonding in metals, Coordination compounds, Inorganic reaction mechanisms, HSAB.

ORGANIC CHEMISTRY: Structure of organic molecules, Reactivity of organic molecules, Nomenclature of organic compounds, Effect of structure on physical properties, Alkanes, Cycloalkanes, Alkenes, Arenes, Halogen compounds, Hydroxy compounds, Optical isomerism, Carbohydrates,

PHYSICAL CHEMISTRY:

1. Atomic structure,
2. Chemical Equilibrium,
3. Colloids,
4. Gaseous state,
5. Thermodynamics,
6. Macromolecules
7. Colligative properties

PART-B

Marks-50

INORGANIC CHEMISTRY

Allots, d block elements, f block elements, Organometallic compounds metal ions in biological systems, Non azeotropic Solvents.

ORGANIC CHEMISTRY

Ethers, carbonyl compounds, Monocarboxylic acids and Their derivatives Organic synthesis based on Carbanions, Nitrogen Compounds, Amino acids, Heterocyclic Compounds, Structural elucidation of organic compound

PHYSICAL CHEMISTRY

Adsorption, liquids, solids, solutions, phase Rule, Electro Chemistry Chemical kinetics, Molecular Spectroscopy

MODEL QUESTION PAPER

Time: 90 Minutes

Max. Marks: 100

The question paper consists of 100 questions in multiple choice covering the entire syllabus.

1. The number of possible stereo isomers for a complex having the molecular formula $[\text{Co}(\text{NH}_3)_4 \text{Cl}_2]^+$
a) one b) two c) three d) four

ELIGIBILITY CRITERIA

M.Sc. (Chemistry): Candidates must have passed Degree Examination conducted by Kakatiya University or an examination recognized as equivalent by the Kakatiya University **with the subject** the candidate is intending to appear for the Entrance Test and they must have secured at least 45% marks in the subject concerned (40% for SC/ST).