IBT: 101
Course Title: Chemistry

Unit-I (7 hrs.)
Chemical Bonding: Ionic bond, energy change, lattice energy, Born Haber cycle, covalent bond energy changes and its characteristics, potential energy curve for H₂ molecule, Werner’s theory, atomic weight and numbers, isomerism, Van der Walls forces Electron repulsion theory (VSEPR), structure of H₂O, NH₃, SiF₄, structure of nuclear diatomic like H₂, N₂, O₂ and F₂

Unit-II (7 hrs.)
Thermo-chemistry: Hess’s Law, heat of reaction, effects of temp on heat reaction at constant pressure, Heat of dilution, hydration and combustion

Unit-III (7 hrs.)

Unit-IV (7 hrs.)
Catalysis: Criteria for catalysis, Homogenous, acid-base and enzymatic catalysis and concept of promoters, inhibitors and poisoning. Theories of catalysis.

Unit-V (7 hrs.)
Polymers: Basic concepts and terminology. Industrial application of polymers types such as Thermoplastic, Thermosets, linear, branched and cross linked polymers. Solubility of polymers and determination of intrinsic viscosity.

Unit-VI (7 hrs.)

Reference book :
1. Inorganic chemistry by J.D.Lee
2. Physical chemistry by Lewis