

Physical Chemistry (CHE-503)

Block – I QUANTUM CHEMISTRY

Unit: 1 Basic quantum chemistry

Unit: 2 Wave Mechanics of some simple systems with Constant potential energy

Unit: 3 Hydrogen – like atoms

Unit: 4 Approximation Methods and Interaction of Radiation And Matter

Unit: 5 Theories of Chemical Bonding – Diatomic Molecules

BLOCK – II THERMODYNAMICS

Unit: 6 Concept of Thermodynamic Law – First law of Thermodynamics

Unit: 7 The Second law of thermodynamics

Unit: 8 Spontaneity and Equilibrium

Unit: 9 Ideal and Non-ideal solutions and activity coefficients

Unit: 10 Nernst Heat Theorem and Third law of Thermodynamics

BLOCK – III ELECTRO CHEMISTRY

Unit: 11 Electrochemical Cells First law of thermodynamics

Unit: 12 Polarizations

Unit: 13 Electro Analytical Techniques

Unit: 14 Activities

Unit: 15 Corrosion

BLOCK IV CHEMICAL KINETICS AND PHOTO CHEMISTRY

Unit: 16 Theories of Reaction rates

Unit: 17 Kinetics of Complex Reactions

Unit: 18 Reactions in Solutions

Unit: 19 Photochemistry

Unit: 20 Photochemical Reaction Mechanisms