CY-210 PHYSICAL CHEMISTRY II

Chemical Equilibrium: Spontaneous chemical reactions and equilibrium, Properties of equilibrium state, Le Chatelier's Principle, the reaction quotient, Response of equilibria to the conditions such as concentration, pressure, temperature, Relationship between K~c~ and K~p~, Heterogeneous equilibria, Nature of solubility equilibria, Distribution law and its validity, Application of the distribution law to the selected systems like solvent extraction, Extraction of metals from their ore, Investigation of complex ions,

Thermochemistry: Enthalpy, Entropy, Standard states, Hess's Law. Bond energies

The Properties Of Surfaces: Properties of liquid surfaces, Surfactants,Experimental study of surface films, physical properties of monolayer, Langmuir-Blodgett film, Adsorption of liquid on surface, physisorption, chemisorption, Adsorption isotherm: The Langmuir isotherm, The BET isotherm, Fruendlich isotherm.

Colloidal systems: Introduction, properties of colloids, Classification, Preparation and purification of colloids, Emulsion, Emulsifiers

Macromolecules: Natural and synthetic polymers, conducting and non-conducting polymers, Their applications and reactivity.