

SUBJECT NO-CY41009, SUBJECT NAME- Introduction to Quantum Chemistry &
Spectroscopy

LTP- 3-1-0,CRD- 4

SYLLABUS :-

Prerequisite : Nil

Review of quantum mechanics: Schrödinger wave equation, Eigenfunction, eigenvalues and operators, Interpretation of wavefunctions, Free particle, Particle-in-a-box, Rigid rotor, Harmonic oscillator, Hydrogen atom; Introduction to Self Consistent Field Theories; Valence Bond and Molecular Orbital theories; Introduction to Molecular spectroscopy: absorption, emission and resonance.

Books: Methods of Molecular Quantum Mechanics by P.W. Atkins

Physical Chemistry: A Molecular Approach by D.A.McQuarrie and J.D. Simon

Molecular Spectroscopy by I. N. Levine