**ANDHRA UNIVERSITY**

**I M.Sc. CHEMISTRY SYLLABUS**

**PAPER-I\_GENERAL CHEMISTRY-II**

**Unit-I:**

Variation method, principle and application to Harmonic oscillator and Perturbation method, time independent perturbation method, application to He atom, probability density in various orbital's radial and angular probability distribution functions.

**Unit-II:**

Concept of directed valance-hybridization VB approach calculation of covalent bonN d ionic bond contribution in MOT-LCAO approximation- H2 molecule and H2+, electronic transai hydrogen molecule

**Unit-II:**

Basic concepts of Symmetry and group theory- Symmetry elements, Symmetrj/ operations. Symmetry and group theory: Similarity transformation and classes-Representations, Reducible and Irreducible representations- Mulliken symbols. Orthogonality theorem and mplications. Character table and its anatomy.

**Unit-IV:**

IW, Fw.d, Ew.d and Gw.d format specifications, conditional an onditional statements-Logical IF, Block IF and GO TO statements. DO statements syntax aril Applications to chemical problems.

**Text Books:**

1. Quantum Chemistry – A.K.Chandra
2. Quantum Chemistry and Spectroscopy- R.K.Prasad
3. Quantum Chemistry – K.L.Kappor

**Reference text books:**

1. Quantum Chemistry – I.N.Levine