

# **M.Sc. (PHYSICS) Programme Structure**

## **Programme Code: MSCPHY-20**

### **First Semester**

**COURSE – 4 Quantum Mechanics**

**Credits -3**

**Paper code: MPHY504**

**Total Marks: 50(Assignment 10 + Theory Exam 40)**

#### **BLOCK – IV SCHRÖDINGER EQUATIONS AND ANGULAR MOMENTUM THEORY**

Unit –14 : Schrodinger wave equation

Unit –15 : Application of Schrodinger's Equation to One-Dimensional Problem

Unit –16 : Angular Momentum

Unit –17 : Application of Schrodinger's Equation to Three-Dimensional Problems

Unit –18 : Hydrogen Atom

Unit –19 : Spin Angular Momentum

Unit –20 : Addition Angular Momentum

#### **BLOCK – V APPROXIMATION METHODS**

Unit –21 : Time Independent Perturbation Theory

Unit –22 : Variation Method

Unit –23 : Time Dependent Perturbation Theory

#### **BLOCK – VI RELATIVISTIC QUANTUM MECHANICS**

Unit –24 : Klein Gordon relativistic equation and applications

Unit –25 : Dirac's relativistic equation and applications