**Syllabus for Foundation course in Physics- (For PhD candidates registering under Department of Physics)**

Physical quantities, measurements and vectors, Kinematics: Description of Motion, The Laws of Motion, Work and Energy, Linear momentum and collisions, Rigid bodies and Angular momentum, Universal Gravitation, Simple harmonic motion, Waves, Fluid mechanics,


Light and the Laws of Geometric Optics, Image Formation, Interference of Light Waves, Diffraction and Polarization

Black body radiation, Photo electric and Compton effect, Elements of Quantum Mechanics, One dimensional potential well, One dimensional Quantum mechanical Tunneling.


**Reference Books:**

1. Serway and Jewitt, Physics for Scientists and Engineers (7th Edition)
2. Young and Friedman, University Physics (12th Edition)
4. Harris Benson , University Physics, Revised Edition
5. D J Griffiths, Introduction to Electrodynamics
8. Ralph Baierlein; Thermal Physics
9. D J Griffiths, Introduction to Quantum Mechanics
10. Eugene Hecht : Optics

**Note:** The syllabus is only indicative. This is for self study and objective is to have a very good foundation in Physics which enables the candidate to undertake a research career.