

SYLLABUS

PHYSICS – I

FIRSY YEAR

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2	<u>CHAPTER-2 - UNITS AND MEASUREMENTS</u> 2.1 Introduction 2.2 The International System of Units 2.3 Measurement of Length 2.4 Measurement of Mass 2.5 Measurement of Time 2.6 Accuracy, precision of instruments and errors in Measurement 2.7 Significant Figures 2.8 Dimensions of Physical Quantities 2.9 Dimensional Formulae and dimensional equations 2.10 Dimensional Analysis and Its Applications
3	<u>CHAPTER-3 - MOTION IN A STRAIGHT LINE</u> 3.1 Introduction 3.2 Position, Path Length and Displacement 3.3 Average Velocity and Speed 3.4 Instantaneous Velocity and Speed 3.5 Acceleration 3.6 Kinematic equations for uniformly accelerated motion 3.7 Relative velocity
4	<u>CHAPTER-4 - MOTION IN A PLANE</u> 4.1 Introduction 4.2 Scalars and Vectors 4.3 Multiplication of Vectors by real numbers 4.4 Addition and Subtraction of Vectors-graphical method 4.5 Resolution of Vectors 4.6 Vector addition – analytical method 4.7 Motion in a plane 4.8 Motion in a plane with constant acceleration 4.9 Relative velocity in two dimensions 4.10 Projectile Motion 4.11 Uniform circular motion
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	6.5 Work done by a variable force 6.6 The work-energy theorem for a variable force 6.7 The concept of Potential Energy 6.8 The conservation of Mechanical Energy 6.9 The Potential Energy of a spring 6.10 Various forms of energy : the law of conservation of Energy 6.11 Power 6.12 Collisions
7	<u>CHAPTER-7 - SYSTEM OF PARTICLE AND ROTATIONAL MOTION</u> 7.1 Introduction 7.2 Centre of Mass 7.3 Motion of Centre of Mass 7.4 Linear Momentum of a System of particles 7.5 Vector product of Two Vectors 7.6 Angular Velocity and its relation with linear velocity 7.7 Torque and Angular Momentum 7.8 Equilibrium of a Rigid Body 7.9 Moment of Inertia 7.10 Theorems of perpendicular and parallel Axis 7.11 Dynamics of Rotational Motion about a Fixed Axis 7.12 Angular momentum in case of rotations about a fixed axis 7.13 Rolling Motion
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