

# SRI PRAKASH IIT ACADEMY, PEDDAPURAM

## CLASS 11 PHYSICS SYLLABI – LESSON WISE DETAILS

S.NO.	LESSON	Learning Objectives
1	PHYSICAL WORLD	Details <b>about Scientists</b> and fundamentals of physics and <b>fundamental forces</b>
2	Units and Measurements	Details about the system of units, <b>dimensions of physical quantities</b> , dimensional formulae and dimensional equations
3	Motions in a straight line	Details about a body in one dimensional motion, <b>average velocity</b> , average acceleration, relative velocity and motion under gravity
4	Motion in a plan	Details about a body in two dimensional motion, Scalar, Vector, <b>Projectile motion</b> and Uniform Circular Motion
5	Laws of motion	Details about the law of <b>inertia</b> , Newton's laws, Impulse – applications, equilibrium of forces, common forces in mechanics and <b>Friction</b>
6	Work, Energy and Power	Details about Work, KE, PE, <b>Conservation of energy, Collisions</b> ( one dimensional and two dimensional) and Power
7	System of particles and Rotatory Motion	Details about Center of mass, angular momentum, torque, <b>moment of Inertia</b> – theorems and Rolling motion

8	Gravitation	Details about Kepler's Laws, Newton's law of gravitation, acceleration due to gravity, KE, PE, Total energy, <b>orbital velocity and escape velocity</b>
9	Mechanical properties of Solids	Details about Elastic property of solids, <b>Young</b> , Bulk and Rigidity modulus
10	Mechanical properties of Solids	Details about the properties of Liquids – Pascal's Law, <b>Surface Tension, Viscosity, Bernoulli's theorem</b> – applications and angle of contact
11	Thermal properties of matter	Details about heat and radiation, Coefficients of expansion, <b>thermal conductivity and Newton's law of cooling</b>
12	Thermodynamics	Details about isothermal, adiabatic, isobaric and isochoric processes and <b>Carnot heat engine</b>
13	Kinetic theory of Gases	Details about <b>velocity gases</b> , Maxwell assumptions and different <b>specific heats</b> of gases
14	Oscillations	Details about <b>Simple Harmonic Motion</b> and basics of damped harmonic and forced harmonic motion
15	Waves	Details about longitudinal and transverse waves, <b>open pipe, closed pipe</b> , vibration in a stretched string and <b>Doppler effect</b> .