BAGARIA BAL VIDYA NIKETAN

LAXMANGARH-SIKAR

SYLLABUS & LESSON PLANNER-2025-26

Class:-	XI
Subject:-	PHYSICS
Teacher Name:-	SUMIT SAINI

SYLLABUS

Ch.No	Name of Chapter	working day	Period	Topic	Month	Week
unit 1 and 2	chap-1,2 units and measurements kinematics	23	38	Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. significant figures. Dimensions of physical	APRIL	1,2,3,4
				Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and nonuniform motion, and instantaneous velocity, uniformly accelerated motion, velocity – time and position-time graphs. Relations for uniformly accelerated motion (graphical treatment).		
unit-2 and 3	chap-3,4 motion in a plane and laws of motion	13	21	Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of	MAY	1,2

				product of vectors.		
unit-4 and 5	Chapter–6: Work, Energy and Power Chapter–7: System of Particles and Rotational Motion	11	18	Centre of mass of a two-particle system, momentum conservation and Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod.Work done by a constant force and a variable force; kinetic energy, workenergy theorem, power.	JUNE	1,2,3,4
unit 6	chapter 8 gravtation	27	45	Kepler's laws of planetary motion, universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential, escape speed	JULY	1,2,3
unit -7	Chapter–9: Mechanical Properties of Solids Chapter–10: Mechanical Properties of FluidsChapter–11: Thermal Properties of Matter	24	40	elasticity, stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elastic energy.Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical	AUGUST	1,2,3,4
		22	36	velocity, Bernoulli's theorem and its simple applications. Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops,	SEPTEMBER	1,2,3,4
				Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their applications. Simple harmonic motion (S.H.M) and its equations of motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in		

| UNIT-8,9,10 | Chapter–12: Thermodynamics
Chapter–13: Kinetic Theory
Chapter–14: Oscillations: Waves | 24 | 40 | of a loaded spring-restoring force and force constant, energy in S.H.M.
Kinetic and potential energies; simple pendulum derivation of expression for its
time period.
Equation of state of a perfect gas, work done in compressing a gas.
Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of
freedom, law of equi-partition of energy (statement only) and application to
specific heat capacities of gases; concept of mean free path, Avogadro's
numberThermal equilibrium and definition of temperature, zeroth law of
thermodynamics, heat, work and internal energy. First law of thermodynamics,
Second law of thermodynamics: gaseous state of matter, | NOVEMBER | 1,2,3,4 |