Class : XI	Subject :Physics	Subject Teacher (Prepared by):Navin KumarTripathi				
Preferred Text Book	**Chapter's Name**	**Chapter Topic / Sub Topic**	**Term**	**Start Date**	**End Date**	**No.of Periods**
N C E R T Text Book I			1			
	(ii) Units and measurement	Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. significant figures. Dimensions of physical quantities, dimensional analysis and its applications.		01-07-24	06-07-24	5
	(iii) Motion in a straight line	Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and non-uniform motion, and instantaneous velocity, uniformly accelerated motion, velocity - time and position-time graphs. Relations for uniformly accelerated motion (graphical treatment).		08-07-24	20-07-24	10
	(iV) Motion in plane	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 vectors. Motion in a plane, cases of uniform velocity and uniform acceleration-projectile motion, uniform circular motion.		22-07-24	31-07-24	8
	(v) Laws of moton	Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications.Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road).		01-08-24	17-08-24	13
	(vi) Work, energy and power	Work done by a constant force and a variable force; kinetic energy, work-energy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: non- conservative forces, motion in a vertical circle; elastic and inelastic collisions in one and two dimensions.		20-08-24	31-08-24	9
		Revision		02-09-24	11-09-24	

N C E R T Text Book II	(vII) System ofparticle and rotational motion	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. Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).		01-10-24	09-10-24	7
	(vIII) Gravitation	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 velocity, orbital velocity of a satellite.		14-10-24	19-10-24	5
	(ix) Mechanical properties of solids	Elasticity, Stress-strain relationship, Hooke's law, Young’s modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elastic energy		21-10-24	26-10-24	6
	(x) Mechanical properties of fluids	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 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, bubbles and capillary rise.		04-11-24	16-11-24	9
	(xi)Thermal properties of matter	Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; Cp, Cv - calorimetry; change of state - latent heat capacity. Heat transfer-conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law .		18-11-24	22-11-24	5

	(xii) Thermodynamics	Thermal 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, change of condition of gaseous state -isothermal, adiabatic, reversible, irreversible, and cyclic processes.		25-11-24	30-11-24	6
	(xiii) Kinetic theory	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 number.		02-12-24	07-12-24	6
	(xiv) Oscillations	Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their application. Simple harmonic motion (S.H.M) and its equations of motion; phase; oscillations 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.		09-12-24	27-12-24	15
	(xv) Waves	Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats.		30-12-24	31-01-25	14
		revision	01-02-25			

Prepared By : Name : Navin Kumar Tripathi

Subject Co-ordinator : Name MRS MENKA GARG

Class :	XI	Subject :physics	
Sl.No.		Chapter/Topic	Max. Marks
1	Periodic test -1	1.units and measurement	20
		2. Kinemetics (ONLY MOTION IN STRAIGHTLINE)	
2	Half yearly	1. units and measurement 2. Kinemetics 3. laws of motion 4. work and energy	70
3	Periodic test -3	1.Systems of particle and rotational motion 2. Gravitation	20
4	Annual Exam	1.units and measurement 2. Kinemetics 3. laws of motion 4. work and energy 5. Systems of particle and rotational motion 6. Gravitation 7.Properties of bulk matter 8. Thermodynamics 9.Behaviour of perfect gases and Kinetic Theory of gases 10. Oscillations and Waves	70
5	Practical Exam	Two experiments one from each section 7+7 Marks Practical record [experiments and activities] 5 Marks One activity from any section 3 Marks Investigatory Project 3 Marks Viva on experiments, activities and project 5 Marks	30
		Prepared by NAVIN KUMAR TRIPATHI	
		Subject Coordinator Name : MRS MENKA GARG	