

N.C. JINDAL PUBLIC SCHOOL					
PUNJABI BAGH, NEW DELHI					
ANNUAL CURRICULUM (2025-2026)					
Class : XII	Subject:-PHYSICS	Subject Teacher (Prepared By): NAVIN KUMAR TRIPATHI		Designation :P G T	
Academic Book	Chapter Name	Chapter Topic / Sub Topic	Start Date	End Date	No. of Periods
PHYSICS TEXT BOOK NCERT PART -1 and 2	Electric Charges and Fields	Electric charges, Conservation of charge, Coulomb's law-force between two-point charges, multiple charges,	1/4/2025	5/4/2024	5
		Superposition principle. continuous charge distribution.Electric field, electric field due to a point charge.electric field. Electric field lines.	7/4/2025	11/4/25	4
		Electric dipole,electric field due to a dipole, torque on a dipole in electric field,Electric flux, statement of Gauss's theorem and applications (sheet, wire and conducting pherical shell)	14/4/2025	19/4/2025	5
	Electrostatic Potential and capacitance	Applications Gauss's theorem(sheet, wire and conducting pherical shell)	21/4/2025	25/4/2025	5
		Electric potential, potential difference.electric potential due to a point charge.a dipole and system of charges; equipotential surfaces.electrical potential energy of a system of two-point charges.and of electric dipole in an electrostatic field.Conductors and insulators, free charges and bound	28/4/2025	3/5/2025	6
		charges inside a conductor.Dielectrics and electric polarization.capacitors and capacitance,combination of capacitors in series and in parallel .capacitance of a parallel plate capacitor with and without dielectric medium and energy stored	5/5/2025	9/5/2025	5
	Current Electricity	Electric current, flow of electric charges in a metallic conductor,drift velocity, mobility and their relation with electric current;Ohm's law, V-I characteristics (linear and non-linear),	13/5/2025	16/5/2025	4
		electrical energy and power.electrical resistivity and conductivity, temperature dependence of resistance,	1/7/2025	5/7/2025	5
		Internal resistance of a cell, potential difference and emf of a cell,combination of cells in series and in parallel, Kirchhoff's rules, Wheatstone bridge	7/7/2024	11/7/2024	5
	Moving Charges and Magnetism	Concept of magnetic field, Oersted's experiment.Biot - Savart law and its application to current carrying circular loop.Ampere's law and its applications to infinitely long straight wire.Straight solenoid (only qualitative treatment)	14/7/2025	19/7/2025	6
		force on a moving charge in uniform magnetic and electric fields.Force on a current-carrying conductor in a uniform magnetic field.force between two parallel current carrying conductors-definition of ampere,torque experienced by a current loop in uniform magnetic field,	21/7/2025	25/7/2025	4
		Current loop as a magnetic dipole and its magnetic dipole moment,moving coil galvanometer, its current sensitivity and conversion to ammeter and voltmeter	28/7/2025	31/7/2025	4

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PHYSICS TEXT BOOK NCERT PART -1 and 2	Magnetism and Matter	Bar magnet, bar magnet as an equivalent solenoid (qualitative treatment only), magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis (qualitative treatment only),	1/8/2025	2/8/2025	2
		torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines.	4/8/2025	8/8/2025	5
		with examples, Magnetization of materials, effect of temperature on magnetic properties.	11/8/2025	14/8/2025	4
	Electromagnetic Induction	Electromagnetic Induction, Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction.	18/8/2025	22/8/2025	5
	Alternating Current	Alternating currents, peak and RMS value of alternating current/voltage, reactance and impedance; LCR series circuit (phasors only)	25/8/2025	29/8/2025	5
		resonance, power in AC circuits, power factor, wattless current. AC generator, Transformer.	1/9/2025	6/9/2025	5
	Electromagnetic Waves	Basic idea of displacement current, Electromagnetic waves, their characteristics, their transverse nature (qualitative idea only). Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.	8/9/2025	11/9/2025	4

	Ray Optics and Optical Instruments	Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and optical fibers, refraction at spherical surfaces,	29/9/2025	9/10/2025	6
		lenses, thin lens formula, lens maker's formula, magnification, power of a lens, combination of thin lenses in contact, refraction of light through a prism.	13/10/2025	17/10/2025	5
		Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers	24/10/2025	31/10/2025	5
	Wave Optics	Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts.Proof of laws of reflection and refraction using Huygen's principle	3/11/2025	7/11/2025	3
		Interference,Young's double slit experiment,expression for fringe width coherent sources and sustained interference of light, diffraction due to a single slit, width of central maxima	10/11/2025	15/11/2025	5

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PHYSICS TEXT BOOK NCERT PART -1 and 2	Dual Nature of Radiation and Matter	Dual nature of radiation, Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light.Experimental study of photoelectric effect.Matter waves-wave nature of particles, de-Broglie relation	17/11/2025	19/11/2025	3
	Atoms	Alpha-particle scattering experiment; Rutherford's model of atom.Bohr model of hydrogen atom,Expression for radius of nth possible orbit, velocity and energy of electron in his orbit, of hydrogen line spectra (qualitative treatment only).	20/11/2025	25/11/2025	4
	Nuclei	Composition and size of nucleus, nuclear force.Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number.nuclear fission, nuclear fusion	26/11/2025	28/11/2025	3
	Semiconductor Electronics: Materials, Devices and Simple Circuits	Energy bands in conductors, semiconductors and insulators (qualitative ideas only).Intrinsic and extrinsic semiconductors- p and n type, p-n junction Semiconductor diode - I-V characteristics in forward and reverse bias, application of junction diode -diode as a rectifier.	1/12/2025	4/12/2025	4
		Revision	18/12/2025		

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Periodic Test/Half Yearly/Annual Marking Scheme : 2025-26			
Class :	XII	Subject : PHYSICS	
S.No.	PT/Half Yearly/Pre Board	Chapter / Topic	Max. Marks
1	PT-1	1 Electric Charges and Fields	20
2	PT-2	1.Current electricity 2.Moving charge and magnetism	20
3	HALF YEARLY	1 Electric Charges and Fields 2.Electrostatic Potential and Capacitance 3.Current electricity 4.Moving Charges and Magnetism 5.Magnetism and Matter 6.Electromagnetic Induction 7.Alternating Current	70
	PRACTICAL EXAM	Two experiments one from each section 7+7 Practical record (experiment and activities) 5 One activity from any section 3 Investigatory Project 3 Viva on experiments, activities and project 5	30
4	PT-3	1.Electromagnetic wave 2.Ray Optics and Optical Instruments	6+14
5	PREBOARD EXAM (Max Marks -70)	1. Electric Charges and Fields 2.Electrostatic Potential and Capacitance. 3. current and electricity.	16
		4. Moving Charges and Magnetism 5. Magnetism and matter 6.Electromagnetic induction 7.Alternating Current	17
		8.Electromagnetic wave 9.Ray Optics and Optical Instruments 10. wave optics	18
		11.Dual nature of radiation and matter. 12.Atoms. 13. Nuclei .	12
		14 Semiconductors Electronics : Materials, Devices and Simple Circuits	7