

**N.C. JINDAL PUBLIC SCHOOL**

**PUNJABI BAGH, NEW DELHI**

**ANNUAL CURRICULUM (2024-2025)**

<b>Class :</b> <b>XII</b>	<b>Subject:-PHYSICS</b>	<b>Subject Teacher (Prepared By): NAVIN KUMAR TRIPATHI</b>			<b>Designation : P G T</b>	
<b>Academic</b>	<b>Chapter Name</b>	<b>Chapter Topic / Sub Topic</b>	<b>Start Date</b>	<b>End Date</b>	<b>No. of Periods</b>	
PHYSICS	Electric Charges and Fields	Electric charges, Conservation of charge,	1/4/2024	6/4/2024	4	
NCERT		Coulomb's law-force between two-point charges, multiple charges, superposition principle	8/4/2024	-		
PART -1		and continuous charge distribution.Electric field, electric field due to a point charge	-	#####	4	
		electric field. Electric field lines. Electric dipole,electric field due to a dipole, torque on a dipole in electric field,Electric flux, statement of Gauss's theorem and applications	15/4/2024	20/4/2024	4	
		(sheet, wire and conducting pherical shell)	-	-		
	Electrostatic Potential and capacitance	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	22/4/2024	-		
		and of electric dipole in an electrostatic field.Conductors and insulators, free charges and bound charges inside a conductor.Dielectrics and electric polarization.capacitors and capacitance,	- -	26/4/2024	5	
		combination of capacitors in series and in parallel .capacitance of a parallel plate capacitor with and without dielectric medium and energy stored				
				3/5/2024	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), electrical energy and power.electrical resistivity and conductivity, temperature dependence of resistance,	6/5/2024		5	
		Internal resistance of a cell, potential difference and emf of a cell,	13/5/2024	17/5/2024	5	
		combination of cells in series and in parallel, Kirchhoff's rules, Wheatstone bridge	1/7/2024			
				6/7/2024	6	
	Moving Charges and Magnete	Concept of magnetic field, Oersted's experiment.Biot - Savart law and its application to current	8/7/2024			
		carrying circular loop.Ampere's law and its applications to infinitely long straight wire.Straight solenoid (only qualitative treatment),force on a moving charge in uniform magnetic and electric fields.		#####	5	
		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	15/7/24			
				20/7/24	5	
		Current loop as a magnetic dipole and its magnetic dipole moment,moving coil galvanometer	22/7/2024			
		its current sensitivity and conversion to ammeter and voltmeter		31/7/2024	8	

**NAVIN KUMAR TRIPATHI**

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Class : XII	Subject:-PHYSICS	Subject Teacher (Prepared By): NAVIN KUMAR TRIPATHI			Designation : P G	
Academic Book	Chapter Name	Chapter Topic / Sub Topic	Start Date	End Date	No. of Periods	
PHYSICS TEXT BOOK						
NCERT	Magnetism and Matter	Bar magnet, bar magnet as an equivalent solenoid (qualitative treatment only)	1/8/2024	-		
PART -1		magnetic field intensity due to a magnetic dipole (bar magnet) along its axis	-	-		
PART-2		and perpendicular to its axis (qualitative treatment only), torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines.	5/8/2024	-	3	
		Magnetic properties of materials- Para-, dia- and ferro - magnetic substances with examples	-	-		
		Magnetization of materials, effect of temperature on magnetic properties.	-	9/8/2024	5	
	Electromagnetic Induction	Electromagnetic Induction, Faraday's laws, induced EMF and current; Lenz's Law	13/8/2024		10	
		, Self and mutual induction.				
	Alternating Current	Alternating currents, peak and RMS value of alternating current/voltage, reactance and impedance; LCR series circuit (phasors only), resonance, power in AC circuits, power factor, wattless current. AC generator, Transformer.		23/8/2024	8	
			27/8/2024	31/8/2024	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.	2/9/2024			
	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,		7/9/2024	5	
		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.	9/9/2024	11/9/2024	3	
		Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers	30/9/2024	-		
			-	-		
	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. Interference, Young's double slit experiment, expression for fringe width	14/10/2024	-		
		coherent sources and sustained interference of light,	-	-		
		diffraction due to a single slit, width of central maxima	-	22/10/2024	7	

Prepared by Name NAVINKUMAR TRIPATHI

Subject Coordinator Name : \_\_\_\_\_



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Periodic Test/Half Yearly/Annual Marking Scheme : 2024-25			
Class :	_____	Subject : PHYSICS	
S.No.	PT/Half Yearly/Pre Board	Chapter / Topic	Max. Marks
1	PT-1	1 Electric Charges and Fields	20
		2.Electrostatic Potential and Capacitance	
2	PT-2	1.Current electricity	20
		2.Moving charge and magnetism	
3	HALF YEARLY/PT-3		40
		4.Moving Charges and Magnetism	
		5.Magnetism and Matter	
		6.Electromagnetic Induction	
		7.Alternating Current	
4	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
5	PREBOARD EXAM -1 and 2	1. Electric Charges and Fields Potential and Capacitance. 2.Electrostatic 3. current and electricity.	16
		4. Moving Charges and Magnetism Magnetism and matter 5. 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. Nuclei . 13.	12
		14 Semiconductors Electronics : Materials, Devices and Simple Circuits	7