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Prepared by Name _____

Subject Coordinator Name : _____

N.C. JINDAL PUBLIC SCHOOL					
PUNJABI BAGH, NEW DELHI					
ANNUAL CURRICULUM (2023-2024)					
Class : XII	Subject:-PHYSICS	Subject Teacher (Prepared By): NAVIN KUMAR TRIPATHI		Designation :	
Academic Book	Chapter Name	Chapter Topic / Sub Topic	Start Date	End Date	No. of Periods
PHYSICS TEXT BOOK	Electric Charges and Fields	Electric charges, Conservation of charge,	1/4/2023	6/4/2023	4
NCERT		Coulomb's law-force between two-point charges, multiple charges, superposition principle	10/4/2023	-	
PART -1		and continuous charge distribution.Electric field, electric field due to a point charge	-	15/4/2023	5
		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	17/4/2023	21/4/2023	5
		(sheet, wire and conducting pherical shell)	-	-	
	Electrostatic Potential and	Electric potential, potential difference.electric potential due to a point charge.a dipole and	24/4/2023		
	capacitance	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	- -	30/4/2023	5
		charges inside a conductor.Dielectrics and electric polarization.capacitors and capacitance,	1/5/2023	-	
		combination of capacitors in series and in parallel .capacitance of a parallel plate capacitor with and			
		without dielectric medium and energy stored		6/5/2023	5
	Current Electricity	Electric current, flow of electric charges in a metallic conductor,drift velocity, mobility	8/5/2023		
		and their relation with electric current;Ohm's law, V-I characteristics (linear and non-linear),		12/5/2023	4
		electrical energy and power.electrical resistivity and conductivity, temperature dependence of resistance,	15/5/2023	18/5/2023	3

		Internal resistance of a cell, potential difference and emf of a cell,	1/7/2023		
		combination of cells in series and in parallel, Kirchhoff's rules, Wheatstone bridge		7/7/2023	5
	Moving Charges and Magnetism	Concept of magnetic field, Oersted's experiment.Biot - Savart law and its application to current	10/7/2023		
		carrying circular loop.Ampere's law and its applications to infinitely long straight wire.Straight solenoid		15/7/23	6
		(only qualitative treatment),force on a moving charge in uniform magnetic and electric fields.	17/7/23		
		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		21/7/23	5
		Current loop as a magnetic dipole and its magnetic dipole moment,moving coil galvanometer	24/7/2023		
		its current sensitivity and conversion to ammeter and voltmeter		31/7/2023	6

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Academic Book	Chapter Name	Chapter Topic / Sub Topic	Start Date	End Date	No. of Periods
PHYSICS TEXT BOOK					
NCERT	Magnetism and Matter	treatment only)	1/8/2023	-	
PART -1		along its axis	-	-	
PART-2		on a magnetic dipole	-	5/8/2023	5
		(bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines.	7/8/2023	-	
		Magnetic properties of materials- Para-, dia- and ferro - magnetic substances with examples	-	-	
		properties.	-	18/8/2023	10
	Electromagnetic Induction	Electromagnetic Induction,Faraday's laws, induced EMF and current; Lenz's Law	21/8/2023		
		, 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,		31/8/2023	8
		power in AC circuits, power factor, wattless current.AC generator, Transformer.	1/9/2023	8/9/2023	6
	Electromagnetic Waves	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.	11/9/2023	13/9/2023	3
	Ray Optics and Optical Instruments	.Reflection of light, spherical mirrors, mirror formula, refraction of light,	3/10/2023	-	
		surfaces,	-	-	

		lenses, thin lens formula, lens maker's formula, magnification, power of a lens,	-	-	
		a prism.	-	-	
		Optical instruments: Microscopes and astronomical telescopes	-	-	
		(reflecting and refracting) and their magnifying powers	-	13/10/2023	9
	Wave Optics	Wave front and Huygen's principle, reflection and refraction of plane wave at a.	16/10/2023	-	
		refraction using	-	-	
		Huygen's principle. 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	-	31/10/2023	8

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Academic Book	Chapter Name	Chapter Topic / Sub Topic	Start Date	No. of End Date Periods
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	2/11/2023	4/11/202 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).	6/11/2023	8/11/2023 3
	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	9/11/2023	16/11/2023 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.	17/11/2022	21/11/2022 4
		Revision		

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N.C. JINDAL PUBLIC SCHOOL			
PUNJABI BAGH, NEW DELHI			
Periodic Test/Half Yearly/Annual Marking Scheme : 2023-24			
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	HALF YEARLY/ TERM -1		70
		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	
		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
	PRACTICAL EXAM		
3	PT-2	1.Current electricity	20
		2.Moving charge and magnetism	
4	PREBOARD EXAM -1	1. Electric Charges and Fields 2.Electrostatic Potential and Capacitance. 3. current and electricity.	18
		4. Moving Charges and Magnetism 5. Magnetism and matter 6.Electromagnetic induction 7.Alternating Current	19
		8.Electromagnetic wave 9.Ray Optics and Optical Instruments 10. wave optics	20
		11.Dual nature of radiation and matter. 12.Atoms. 13. Nuclei .	13

PREBOARD EXAM - 2	1. Electric Charges and Fields Potential and Capacitance. 2.Electrostatic 3. current and electricity.	16
	4. Moving Charges and Magnetism Magnetism and matter induction 5. 6.Electromagnetic 7.Alternating Current	17
	8.Electromagnetic wave Optics and Optical Instruments optics 9.Ray 10. wave	18
	11.Dual nature of radiation and matter. 13. Nuclei . 12.Atoms.	12
	14 Semiconductors Electronics : Materials, Devices and Simple Circuits	7