Annual & Weekly Syllabus Split-Up - 2026-27

Class- XII

Subject-Physics

S.No	Month	No. of Working Days		No. of Days	Topic	Sub Topic	Teaching Aids/ Resources	Classroom Teaching Video Link	Activities	Art Integrated Project	Pedagogy Process/Teaching Strategy	Chapterwise Notes link	Assessment
1	APRIL	25	Week 1	4	Electric Charges and Fields	Electric charges, Conservation of charge, Coulomb's law-force between two- point charges, forces between multiple charges; Superposition principle and continuous charge distribution.Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field.	NCERT, Senses Board, You Tube videos, voltmeter, ammeter, rheostat, switch, battery elliminator	https://www.youtube.com/watch?v=2L0i56Ig-ds	To find resistance of a given wire / standard resistor using metre bridge.		Interactive, Conceptual, Practice	https://docs.google.com/document/d/1v099JRyHZgXnmJw5dBWD7YkuCLLU5AmC/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	
			Week 2	6	1. Electric Charges and Fields 2. Electrostatic Potential and Capacitance	Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside).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.	NCERT, Senses Board,You Tube videos, meter bridge, rheostat, switch, battery elliminator, resistance box	https://www.youtube.com/watch?v=jDWCzK6EOSg	To verify the laws of combination (series) of resistances using a metre bridge.		Interactive, Conceptual, Practice		Class Test
			Week 3	5	Electrostatic Potential and Capacitance	Conductors and insulators, free charges and bound 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 between the plates, energy stored in a capacitor (no derivation, formulae only).	NCERT, Senses Board,	https://www.youtube.com/watch?v=T2TfS8CnXwc			Interactive, Conceptual, Practice	https://docs.google.com/document/d/1E7VewYlw343An_b5IZ2EB3oJ9PHNIBDA/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	Class Test
			Week 4	6	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 resistanceInternal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's rules, Wheatstone bridge.	NCERT, Senses Board, moving coil galvanometer, resistance box ammeter, voltmeter	https://www.youtube.com/watch?v=vzH-SgtoQB8	To determine resistance of a galvanometer by half-deflection method and to find its Figure of merit		Interactive, Conceptual, Experimental, Practice	https://docs.google.com/document/d/14OIc_HH9HRAojCReG-cyhDFvD39xOytj/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	Class Test
			Week 5	4	Moving Charges and	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), force on a moving charge in uniform magnetic and electric fields.		https://www.youtube.com/watch?v=yr0RkoUHgf0			Interactive, Conceptual, Experimental, Practice	https://docs.google.com/document/d/1KZTn0bkEqA0zoXqDoHKVnyAK_8954ueX/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	
			Week 1	0									

2	JUNE	20	Week 2	6	Magnetism	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; Current loop as a magnetic dipole and its magnetic dipole moment, moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.	NCERT, Senses Board, bar magnet	https://www.youtube.com/watch?v=uxEB8xLrbCA	To convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same.		Interactive, Conceptual, Experimental, Practice		Class Test
			Week 3	6	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), torque on a magnetic dipole (bar magnet) in a uniform magnetic field qualitative treatment only), magnetic field lines.	NCERT, Senses Board,	https://www.youtube.com/watch?v=GBLpkuV0eg4	To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.		Interactive, Conceptual, Experimental, Practice		
			Week 4	6		Magnetic properties of materials- Para-, dia- and ferro - magnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties.	NCERT, Senses Board,	https://www.youtube.com/watch?v=AwCTDtknYWU	4. To assemble the components of a given electrical circuit.		Interactive, Conceptual, Experimental, Practice	https://docs.google.com/document/d/1y4SaCCLarJ5bdSDHvYsjvzPw2tBKr-ok/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	Class Test
			Week 5	2		Exercise Questions	NCERT, Senses Board,		Numericals		Practice		
			Week 1	4	Electromagnetic Induction	Electromagnetic induction; Faraday's laws, induced EMF and current;Lenz's Law, Self and mutual induction.	NCERT, Senses Board,	https://www.youtube.com/watch?v=yU--8Zk57-Y	Notes Preperation		Drill	https://docs.google.com/document/d/1Q1oMJeI7I9pjKVo84_K8W4QPcBrZrCy/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	Class Test
			Week 2	6	Alternating Current	Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LCR series circuit (phasors only), resonancepower in AC circuits, power factor, wattless current. AC generator, Transformer.	NCERT, Senses Board, transformer model	https://www.youtube.com/watch?v=t7dmb3RmKfg	6. To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.		Interactive, Conceptual, Experimental, Practice	https://docs.google.com/document/d/1s5YXB2vKQ3TXSkQzhkKHCfm8IKfzRyMz/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	Class Test

3	JULY	27	Week 3	6	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.	NCERT, Senses Board, Electromagnetic spectrum chart		Notes Preperation		Visual	https://docs.google.com/document/d/1s5YXB2vKQ3TXSkQzhkKHCfm8IKfzRyMz/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	
			Week 4	6	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, lenses, thin lens formula	NCERT, Senses Board, convex and concave mirrors		To find the value of v for different values of u in case of a concave mirror and to find the focal length.		Interactive, Conceptual, Experimental, Practice	https://docs.google.com/document/d/1mrLUFtYjUDFHNmiNwjX2iN5m21BnleRD/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	
			Week 5	5		lens maker's formula, magnification, power of a lens, combination of thin lenses in contact, refraction of light through a prism.Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.	NCERT, Senses Board, convex and concave lense straveling microscope	https://www.youtube.com/watch?v=fQLIyeoM5uw	To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.		Interactive, Conceptual, Experimental, Practice		Class Test
4	AUGUST	24	Week 1	1	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 and expression for fringe width (No derivation final expression only)	NCERT, Senses Board, You Tube videos	https://www.youtube.com/watch?v=CAe3lkYNKt8	Notes Preperation		Interactive	https://docs.google.com/document/d/1g8-pZhl2pO1zbMM3_e2PQDlBI48hsK-O/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	Class Test
			Week 2	6		coherent sources and sustained interference of light, diffraction due to a single slit, width of central maxima (qualitative treatment only).	NCERT, Senses Board,		Notes Preperation		Conceptual		
			Week 3	5	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.	NCERT, Senses Board,	https://www.youtube.com/watch?v=H-FyOpURPXI	To determine refractive index of a glass slab using a travelling microscope.		Interactive, Conceptual, Experimental, Practice		Class Test
			Week 4	6		Experimental study of photoelectric effect Matter waves-wave nature of particles, de-Broglie relation.	NCERT, Senses Board,		To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.		Interactive, Conceptual, Experimental, Practice	https://docs.google.com/document/d/15Ho-sj66SIeKmEDJ-NOQrREqzuSCXm0j/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	
			Week 5	5+1	Revision	Revision	NCERT, Senses Board,				Interactive		
			Week 1	5	Term 1	Term 1	Term 1		Term 1				
			Week 2	6	Term 1	Term 1	Term 1		Term 1				
			Week 3	5	Atoms	Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model of hydrogen atom,	NCERT, Senses Board,				Concept, Explain, Discussion, Example		Class Test

5	SEPTEMBER	23	Week 4	5	Atoms	Expression for radius of nth possible orbit, velocity and energy of electron in nth orbit, hydrogen line spectra (qualitative treatment only).	NCERT, Senses Board,	https://www.youtube.com/watch?v=S1LDJUu4nko	To study the nature and size of the image formed by a (i) convex lens, or (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).		Interactive, Conceptual, Experimental, Practice	https://docs.google.com/document/d/1gwr83mzjKRXqfLNAad2w3PHfrrUq208I/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	
			Week 5	3	Nuclei	Composition and size of nucleus, nuclear force Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number;	NCERT, Senses Board, You Tube videos	https://www.youtube.com/watch?v=kVqCLiRmom4	To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.		Explain, Discussion, Example	https://docs.google.com/document/d/1gwr83mzjKRXqfLNAad2w3PHfrrUq208I/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	
6	OCTOBER	25	Week 1	2	Nuclei	nuclear fission, nuclear fusion.	NCERT, Senses Board, You Tube videos		Notes Preperation		Explain, Discussion, Example		Class Test
			Week 2	6	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	NCERT, Senses Board,		To draw the I-V characteristic curve for a p-n junction diode in forward andreverse bias.		Interactive, Conceptual, Experimental, Practice	https://docs.google.com/document/d/1bh8VrGOAPJAKYcATvnXTIwzO5S2D5G1p/edit?usp=sharing&ouid=108594730467470335879&rtpof=true&sd=true	
			Week 3	6		Semiconductor diode - I-V characteristics in forward and reverse bias, application of junction diode -diode as a rectifier.	NCERT, Senses Board,	http://youtube.com/watch?v=JRf2VuwBVvs&t=472s	Notes Preperation		Interactive, Conceptual, Experimental, Practice		Class Test
			Week 4	5	Revision	Revision	Revision				Interactive		
			Week 5	5	Revision	Revision	Revision				Interactive		
7	NOVEMBER	12	Week 1	0									
			Week 2	0									
			Week 3	0									
			Week 4	6	PB-1								
			Week 5	5+1	PB-1								
8	DECEMBER	24	Week 1	5	Revision	Revision	NCERT, Senses Board, Sample Papers						
			Week 2	6	PB-2								
			Week 3	6	PB-2								
			Week 4	4	Practice Test-1								
			Week 5	3	Practice Test-1								
9	JANUARY	22	Week 1	0									
			Week 2	6	PB-3								
			Week 3	5	PB-3								
			Week 4	6	PB-3								
			Week 5	5	Board Practic	Board Practical							
10	FEBRUARY	23	Week 1	6	Board Practic	Board Practical							
			Week 2	6	Board Practic	Board Practical							
			Week 3	5									
			Week 4	6									
			Week 5	0									

11	MARCH	17	Week 1	5					
			Week 2	6					
			Week 3	5					
			Week 4	5					
			Week 5	3					