

SYLLABUS PLAN FOR YEAR 2010-11

Subject:- PhysicsStd:-XII A/B

Sl No	Name of Chapters	Topics	No. of periods required Chapters
01.	Electrostatics	• Electric charges and Fields coulombs law	06
		Force bet multiple charges; superposition principle .	
		• Electric field , electric dipole , electric field due to a dipole , torque on a dipole.	06
		• Electric Potential and Capacitance	05
		Electric Potential potential difference dipole , Equipotential surfaces , potential energy .	
		• Conductor and Insulator , Dielectric and Polarization , capacitors and capacitance.	03
		Combinations of capacitance , plate capacitor	
		Energy of stored in a capacitor van-de graph generator.	05
02.	Current Electricity	• Electric current , Driff velocity , nobility	03
		• Ohm's law Persistence, V-I graph	02
		• Electric energy and power , resistivity and conducting.	02
		• Carbon resistors , Combination of resistors .	03
		• Internal resistance of a cell p.d & a.m.f combination of cells.	05
		• Kirchhoff's law , wheatstone bridge	04
		Meter bridge	
		• Potentiometer and uses.	03
03.	Magnetic effects	• Moving charges and Magnetism	
	Of Current &	• Concept of magnetic field	02
	Mechanism	• Bio savart law and its applications	03
		• Force on a moving charge in uniform mag. field Cyclotron	04
			03
		• Galvanometer.	03
		• Magnetism and Matter	05
		• Magnetic dipole and its dipole moment	

		• Mag field intensity & Torque due to mag	05
		Dipole.	
		• Bar Mag as solenoid	
		• Earth 's mag field and mag elements	05
		• Para ,dia & feero –mag substance	
		• Electromagnetic , Permanent magnet	
04.	Electromagnetic	• Electromagnetic Induction:	
	Induction & A.C	• E.M.I , Faraday's law	02
		• Lenz's law , baddy Currents	02
		• Self and Mutual Induction , transformer	04
		• Alternative Current	
		• A.C current , peak and r.m.s value	04
		reactance and impedance	02
		• L.C oscillations , LCR – circuit	06
		• Resonance , Power in A.C Circuit	06
		• Wattlen cuurent, AC generator & transfermer	
05.	Electromagnetic	• Electromagnetic Waves and properties	04
	Waves	• Transverse nature of e.m waves	
		• Electromagnetic Spectrum and uses	
06.	Optics	• Ray optics and optical Instrument	
		• Reflection of light , Spherical Mirrors ,	03
		Mirrors formula	
		• Refraction of light , total interflecion ,	03
		Optical fibres	
		• Refraction at sph lenses len-makers formula .	03
		Mag-power , Combination of lenses	
		• Ref through Prism	03
		• Scattering of light	
		• Optical Instruments : Human eye ,	03
		Microscopes , telescope	
		• Wave – Optics	
		• Wave front and Huygen's Principle .	
		• Proof of law of reflection and refraction	06
		using Huygen's Principle	
		• Interference , Young's d.s Exp	06
		• Diffraction due to a single slit	
		Resolving power of microscope	
		• Polarization , Brautsfer's law	03
07.	Dual Nature	• Dual nature of radiation	03
	of Matter &	• Photoelectric effect	

	Radiations	• Einstein's Photoelectric eq.	
		• Matter Waves –wave nature of particles	03
		• De-Broglie relation	
		• Danssor Germer experiment	02
08.	Atomic & Nuclei	• ∞ - particle Scattering exp.	
		• Rutherford's model of atom	06
		• Bohr model , Energy levels	
		• Hydrogen Spectrum	
		• Comparison and Size of nucleus.	06
		• Isotopes , isobers , isotones	
		• Radio activity, ∞ - β - γ decay decay law	
		• Mans energy relation , man defect and binding	06
		Energy	
		• Nuclear fission & fusion	
09.	Electronic Devices	• Semi conductors , diode – I.V charant rishes in	06
		forward and reverse bias.	
		• Rectifier , Lbd , Photodiode , Solar cell	02
		• Zener diode – Zener diode as voltage regulator	02
		• Junction transistors, Characteristics of a	04
		Transistors	
		• Transistor as an amplifier , Oscillation	
		• Logic gates (OR-AND) , NOT, NAND,NOR	04
		• Transistor as a switch	
10.	Communication	• Elements of a communication sys	04
	System	(Boolean diagram only)	
		• Band-width of transmission medium	
		• Propagation of e.m waves in the atom sphere	03
		• sky and space wave propagation	
		• Need for modulation . Production & diction	03
		Of an amplitude – modulated wave.	