

ANNUAL ACADEMIC PLAN 2024-25

PHYSICS

II YEAR

Month/No of Working Days/ no of periods	Topics to be covered	Periods Allotted for Each topic
<p>June (23)</p>	<p align="center">CHAPTER – 1: WAVES</p> <p>1.1 Introduction 1.2 Transverse and Longitudinal waves 1.3 Displacement relation in a progressive wave 1.4 Speed of a Travelling Wave 1.5 The principle of superposition of waves, 1.6 Reflection of waves 1.7 Beats 1.8 Doppler Effect</p> <p align="center">CHAPTER– 2: RAY OPTICS AND OPTICAL INSTRUMENTS</p> <p>2.1 Introduction 2.2 Reflection of light by Spherical Mirrors 2.3 Refraction 2.4 Total Internal Reflection 2.5 Refraction at Spherical Surfaces and by Lenses. 2.6 Refraction through a prism 2.7 Dispersion by a Prism 2.8 Some Natural phenomena due to Sunlight 2.9 Optical Instruments</p> <p>EAPSET Classes EAPSET TEST-1</p>	<p align="center">08</p> <p align="center">10</p> <p align="center">04 01</p>

<p>JULY (24)</p>	<p style="text-align: center;">CHAPTER – 3: WAVE OPTICS</p> <p>3.1 Introduction 3.2 Huygens Principle 3.3 Refraction and Reflection of plane waves using Huygens Principle 3.4 Coherent and Incoherent Addition of waves 3.5 Interference of Light waves and Young’s Experiment 3.6 Diffraction 3.7 Polarisation</p> <p style="text-align: center;">CHAPTER – 4: ELECTRIC CHARGES AND FIELDS</p> <p>4.1 Introduction 4.2 Electric Charges 4.3 Conductors and Insulators 4.4 Charging by Induction 4.5 Basic Properties of Electric Charge 4.6 Coulomb’s Law 4.7 Forces between Multiple charges 4.8 Electric Field 4.9 Electric Field Lines 4.10 Electric Flux 4.11 Electric Dipole 4.12 Dipole in a uniform external field 4.13 Continuous Charge Distribution 4.14 Gauss’s Law 4.15 Application of Gauss’ Law</p> <p>EAPSET Classes EAPSET TEST-2 Unit test 1</p> <p>PRACTICAL: 1. Velocity of sound by Resonance apparatus 2. Determination of focal length of concave mirror</p>	<p style="text-align: center;">08</p> <p style="text-align: center;">10</p> <p style="text-align: center;">04 01 01</p>
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<p>AUGUST (24)</p>	<p style="text-align: center;">CHAPTER – 5: ELECTROSTATIC POTENTIAL AND CAPACITANCE</p> <p>5.1 Introduction 5.2 Electrostatic Potential 5.3 Potential due to a point charge 5.4 Potential due to an Electric Dipole 5.5 Potential due to a System of Charges 5.6 Equipotential Surfaces 5.7 Potential Energy of a System of Charges 5.8 Potential Energy in an External field 5.9 Electrostatics of Conductors 5.10 Dielectrics and Polarisation 5.11 Capacitors and Capacitance 5.12 The Parallel Plate Capacitor 5.13 Effect of Dielectric on Capacitance 5.14 Combination of Capacitors 5.15 Energy Stored in a Capacitor 5.16 Van de Graaff Generator</p> <p style="text-align: center;">CHAPTER – 6: CURRENT ELECTRICITY</p> <p>6.1 Introduction 6.2 Electric current 6.3 Electric current in conductors 6.4 Ohm’s Law 6.5 Drift Electrons and Origin of Resistivity 6.6 Limitations of Ohm’s Law 6.7 Resistivity of various Materials 6.8 Temperature Dependence of Resistivity 6.9 Electric Energy, Power 6.10 Combination of Resistors – Series and Parallel 6.11 Cells, emf, Internal Resistance 6.12 Cells in Series and in Parallel 6.13 Kirchhoff’s Laws 6.14 Wheatstone Bridge 6.15 Meter Bridge 6.16 Potentiometer</p> <p>EAPSET Classes EAPSET TEST-3 Unit test -2 Practicals: 3.DETERMINATION OF FOCAL LENGTH OF CONVEX LENS 4.REFRACTIVE INDEX OF PRISM</p>	<p style="text-align: center;">08</p> <p style="text-align: center;">10</p> <p style="text-align: center;">04 01 01</p>
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September (22)	CHAPTER – 7: MOVING CHARGES AND MAGNETISM	
	7.1 Introduction	
	7.2 Magnetic Force	
	7.3 Motion in a Magnetic field	
	7.4 Motion in combined Electric and Magnetic Fields	
	7.5 Magnetic Field due to a Current Element, Biot-Savart Law	
	7.6 Magnetic Field on the Axis of a Circular Current Loop	
	7.7 Ampere's Circuital Law	
	7.8 The Solenoid and the Toroid	
	7.9 Force between two Parallel Currents, The Ampere(Unit)	
	7.10 Torque on Current Loop, Magnetic Dipole	
7.11 The Moving Coil Galvanometer		
	CHAPTER – 8 MAGNETISM AND MATTER	
	8.1 Introduction	
	8.2 The Bar Magnet	
	8.3 Magnetism and Gauss's Law	
	8.4 The Earth's Magnetism	
	8.5 Magnetisation and Magnetic Intensity	
	8.6 Magnetic Properties of Materials	
	8.7 Magnets and Electromagnets	
	CHAPTER – 9: ELECTROMAGNETIC INDUCTION	
	9.1 Introduction	
	9.2 The experiments of Faraday and Henry	
	9.3 Magnetic Flux	
	9.4 Faraday's Law of Induction	
	9.4 Faraday's Law of Induction	
	9.5 Lenz's Law and Conservation of Energy	
	9.6 Motional Electromotive Force	
	9.7 Energy consideration : A Quantitative Study	
	9.8 Eddy Currents	
	9.9 Inductance	
	9.10 AC Generator	
	EAPSET Classes	04
	EAPSET TEST- 4	01
	UNIT TEST 3	01
	PRACTICALS:	
	5.meterbridge	

	<p style="text-align: center;">CHAPTER–13 :ATOMS</p> <p>13.1 Introduction 13.2 Alpha-particle Scattering and Rutherford’s Nuclear model of Atom 13.3 Atomic Spectra 13.4 Bohr Model of the Hydrogen Atom 13.5 The Line Spectra of the Hydrogen Atom 13.6 De Broglie’s Explanation of Bohr’s Second Postulate of Quantisation</p> <p style="text-align: center;">EAPSET Classes</p> <p style="text-align: center;">HALF YEARLY EXAMINATIONS:18-11-2024 TO 23-11-2024</p>	<p style="text-align: right;">07</p> <p style="text-align: right;">03</p> <p style="text-align: right;">06</p>
December (23)	<p style="text-align: center;">CHAPTER–14 :NUCLEI</p> <p>14.1 Introduction 14.2 Atomic Masses and Composition of Nucleus 14.3 Size of the Nucleus 14.4 Mass- Energy and Nuclear Binding Energy 14.5 Nuclear Force 14.6 Radioactivity 14.7 Nuclear Energy</p> <p style="text-align: center;">CHAPTER–15:SEMICONDUCTOR ELECTRONICS: MATERIALS, DEVICES AND SIMPLE CIRCUITS</p> <p>15.1 Introduction 15.2 Classification of Metals, Conductors and Semiconductors 15.3 Intrinsic Semiconductor 15.4 Extrinsic Semiconductor 15.5 p – n junction 15.6 Semi conductor diode 15.7 Application of Junction Diode as a Rectifier 15.8 Special Purpose p-n Junction Diodes 15.9 Junction Transistor 15.10 Digital Electronics and Logic Gates 15.11 Integrated Circuits</p> <p style="text-align: center;">CHAPTER– 16: COMMUNICATION SYSTEMS</p> <p>16.1 Introduction 16.2 Elements of communication system 16.3 Basic Terminology used in Electronic Communication Systems 16.4 Bandwidth of Signals 16.5 Bandwidth of Transmission Medium 16.6 Propagation of Electromagnetic Waves 16.7 Modulation and its Necessity 16.8 Amplitude Modulation 16.9 Production of Amplitude Modulated Wave 16.10 Detection of Amplitude Modulated Wave</p> <p style="text-align: center;">EAPSET Classes</p> <p style="text-align: center;">EAPSET TEST–6</p> <p style="text-align: center;">UNITTEST–4</p> <p style="text-align: center;">PRACTICALS: 8.Tangent Galvanometer 9.P-N Junction diode 10.Transister Characteristics</p>	<p style="text-align: right;">06</p> <p style="text-align: right;">08</p> <p style="text-align: right;">03</p> <p style="text-align: right;">04</p> <p style="text-align: right;">01</p> <p style="text-align: right;">01</p>

January (22)	Theory Revision EAPSET Classes SANKRANTRI HOLIDAYS FROM 11-01-2025 TO 16-01-2025 DATE OF REOPENING: 17-01-2025 PRE-FINAL EXAMINATIONS : FROM 20.01.2025 TO 25.01.2025	12 04 06
February (23)	PRACTICALS Revision IPE PRACTICALS: First week of Feb 2024	23
March (23)	I.P. Examinations: 1st week of March 2025 Last working day: 29-03-2025 Summer Vacation: 30-03-2025 to 31-05-2025 Advance Supplementary Exams : Last week of May 2025 Date of Reopening after summer vacation: 01-06-2025	23

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