TELANGANA BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN 2025-26

PHYSICS II YEAR

Month/NoofWorkingDays/noofperiods	Topicstobecovered	Periods Allotted forEachtopic
June (23)	CHAPTER – 1: WAVES 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	08
	CHAPTER– 2: RAY OPTICS AND OPTICAL INSTRUMENTS 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	10
	EAPSET Classes	04
	EAPSET TEST-1	01

JULY (25)	CHAPTER – 3: WAVE OPTICS 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	08
	CHAPTER – 4: ELECTRIC CHARGES AND FIELDS 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	10
	EAPSET Classes EAPSET TEST-**2** Unit test 1	05
	PRACTICAL: 1. Velocity of sound by Resonance apparatus 2.Determination of focal length of concave mirror	01 01

AUGUST (22)	CHAPTER – 5: ELECTROSTATIC POTENTIAL AND CAPACITANCE 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 CHAPTER – 6: CURRENT ELECTRICITY 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 LimitationsofOhms'sLaw 6.7 ResistivityofvariousMaterials 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 EAPSET Classes EAPSET TEST-3 Unit test **-2**	08 10 04

September(22)	Practicals: 3.DETERMINATION OF FOCAL LENGTH OF CONVEX LENS 4.REFRACTIVE INDEX OF PRISM	**01** **01**
	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	06
	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	05
	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	05
	EAPSET Classes EAPSET TEST-**4** DUSSEHRA Holidays: 28-09-2025 TO 05-10-2025 Date of Reopening: 06-10-2025	04

October (21)	UNIT TEST 3 PRACTICALS: 5.meterbridge CHAPTER – 10: ALTERNATING CURRENT : 10.1 Introduction 10.2 AC voltage applied to a Resistor 10.3 Representation of AC Current and Voltage by Rotating Vectors- Phasors 10.4 AC voltage applied to an Inductor 10.5 AC voltage applied to a Capacitor 10.6 AC voltage applied to a Series LCR Circuit 10.7 Power in AC Circuit: The Power Factor 10.8 LC Oscillations ,10.9Transformers EAMCET Class CHAPTER – 11: ELECTRO MAGNETIC WAVES 11.1 Introduction 11.2 Displacement Current 11.3 Electro Magnetic Waves 11.4 Electromagnetic Spectrum EAPSET Classes EAPSET TEST-5 PRACTICALS: 6.magnetic lines of force 7.ohms law	01 01 09 06 03 01
November (23)	CHAPTER–12:DUAL NATURE OF RADIATION AND MATTER 12.1 Introduction 12.2 Electron Emission 12.3 Photoelectric Effect 12.4 Experimental Study of Photoelectric Effect 12.5 Photoelectric Effect and Wave Theory of Light 12.6 Einstein's Photoelectric Equation: Energy Quantum of Radiation 12.7 Particle Nature of Light : The Photon 12.8 Wave Nature of Matter 12.9 Davisson and Germer Experiment HALF YEARLY EXAMINATIONS: 10-11-2025 TO 15-11-2025	08 06

	CHAPTER–13 :ATOMS 13.1 Introduction 13.2 Alpha-particle Scattering and Rutherford's Nuclear model of Atom13.3 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 EAPSET Classes	07 02
December (24)	**CHAPTER–14 :NUCLEI** 14.1 Introduction 14.2 Atomic Masses and Composition of Nucleus 14.3Size of the Nucleus 14.4 Mass- Energy and Nuclear Binding Energy 14.5Nuclear Force 14.6Radioactivity 14.7Nuclear Energy **CHAPTER–15:SEMICONDUCTOR ELECTRONICS: MATERIALS, DEVICES AND SIMPLE CIRCUITS** 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 CHAPTER– 16: COMMUNICATION SYSTEMS 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 EAPSET Classes EAPSET TEST–6 UNITTEST–4 PRACTICALS: 8.Tangent Galvanometer 9.P-N Junction diode 10.Transister Characteristics	06 08 03 05 01 01

January (29)	Theory Revision **EAPSET Classes** SANKRANTRI**HOLIDAYS FROM** **11-01-2026TO18-01-2026** **DATEOFREOPENING:19-01-2026** **PREFINALEXAMINATIONS:** **FROM19.01.2026 TO 24.01.2026**	09 04 06
February (24)	Theory Revision EAPSET Classes PRACTICALS Revision IPE PRACTICALS: First week of Feb 2026	24
March (23)	I.P. Examinations: Ist week of March 2026 Last working day: 31-03-2026 Summer Vacation: 01-04-2025 to 31-05-2026 Advance Supplementary Exams : Last week of May 2026 Date of Reopening after summer vacation: 01-06-2026	23

Prepared by:GONA VENUGOPAL,JL in Physics,
KPM Government Junior College for Boys , Nalgonda