TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN 2024-25

PHYSICS **I YEAR**

Month / No. of working days/no. of periods	Topics to be covered	Periods allotted for each topic
June (23)	**CHAPTER -I PHYSICAL WORLD** 1.1. What is Physics ? 1.2. Scope and excitement of physics 1.3. Physics, technology and society 1.4. Fundamental forces in nature 1.5. Nature of physical laws	**06**
	CHAPTER –II **UNITS AND MEASUREMENTS** 2.1 Introduction 2.2 The International system of units 2.3 Measurement of length 2.4 Measurement of mass 2.5 Measurement of time 2.6 Accuracy, precision of instruments and errors in measurement 2.7 Significant figures 2.8 Dimensions of physical quantities 2.9 Dimensional formulae and dimensional equations 2.10 Dimensional analysis and its applications	**12**
	EAPSET Classes	**04**
	EAPSET TEST–I	**01**

JULY (24)	**Chapter-III**: **MOTION IN A STRAIGHT LINE** 3.1 Introduction 3.2 Position, path length and displacement 3.3 Average velocity and average speed 3.4 Instantaneous velocity and speed 3.5 Acceleration 3.6 Kinematic equations for uniformly accelerated motion 3.7 Relative velocity **Chapter –IV: MOTION IN A PLANE** 4.1 Introduction 4.2 Scalars and vectors 4.3 Multiplication of vectors by real members 4.4 Addition and subtraction of vectors graphical method 4.5 Resolution of vectors 4.6 Vector addition Analytical method 4.7 Motion in a plane 4.8 Motion in a plane with constant acceleration 4.9 Relative velocity in two dimensions 4.10 Projectile motion 4.11 Uniform circular motion **EAPSET Classes** **EAPSET TEST –**2 **Unit test 1** **Practicals**: 1.Vernier callipers 2. Screw gauge	**08** **10** **04** **01** **01**
AUGUST (24)	**CHAPTER-V: LAWS OF MOTION** 5.1 Introduction 5.2 Aristotle's fallacy 5.3 The law of inertia 5.4 Newton's first law of motion 5.6 Newton's second law of motion 5.7 Newton's third law of motion 5.8 Conservation of momentum 5.9 Equilibrium of a particle 5.10 Common forces in mechanics, friction Circular motion 5.11 Solving problems in mechanics	**09**

	CHAPTER – VI: WORK, ENERGY AND POWER 6.1 Introduction 6.2 Notions of work and kinetic energy: The work energy theorem. 6.3 Work 6.4 Kinetic Energy 6.5 Work done by a variable force 6.6 The work-energy theorem for a variable force. 6.7 The concept of potential energy 6.8 The conservation of mechanical energy 6.9 The potential energy of a spring 6.10 Various forms of energy: the law of conservation of energy. 6.11 Power 6.12 Collisions **EAPSET Classes** **EAPSET TEST-3** **Unit test 2** **Practicals:** **3.** Physical balance **4.** CONCURENT FORCES	**09** **04** **01** **01**
SEPTEMBER (22)	**CHAPTER-VII** **SYSTEM OF PARTICLES AND ROTATIONAL MOTION** 7.1 Introduction 7.2 Centre of mass. Centre of gravity 7.3 Motion of Centre of mass 7.4 Linear momentum of a system of particles 7.5 Vector product of two vectors 7.6 Angular velocity and its relation with linear velocity, kinematics of rotational motion about a fixed axis. 7.7 Torque and angular momentum 7.8 Equilibrium of a rigid body 7.9 Moment of inertia 7.10 Theorems of perpendicular and parallel axis. 7.11 Dynamics of rotational motion about a fixed axis. 7.12 Angular momentum in case of rotations about a fixed axis. 7.13 Rolling motion	**09**

OCTOBER (19)	**Chapter VIII**: **OSCILLATIONS** 8.1 Introduction 8.2 Periodic and oscillatory motions 8.3 Simple Harmonic motions 8.4 Simple Harmonic motion and uniform circular motion 8.5 Velocity and acceleration in simple harmonic motion 8.6 Velocity and acceleration in simple harmonic motion 8.7 Force law for simple harmonic motion 8.8 Energy in simple harmonic motion 8.9 Some systems executing simple harmonic motion 8.10 Damped simple harmonic motion 8.13 Forced oscillations and resonance **EAPSET Classes** **EAPSET TEST –4** **UNIT TEST – 3** **Practicals**: 5. SIMPLE PENDULUM 6. FORCE CONSTANT OF SPRING **CHAPTER –IX**: **GRAVITATION** 9.1 Introduction 9.2 Kepler's laws 9.3 Universal law of gravitation 9.4 The gravitational constant 9.5 Acceleration due to gravity of the earth 9.6 Acceleration due to gravity below and above the surface of earth. 9.7 Gravitational potential energy 9.8 Escape speed 9.9 Earth satellite 9.10 Energy of an orbiting satellite 9.11 Geostationary and polar satellites 9.12 weightlessness **CHAPTER –X** **MECHANICAL PROPERTIES OF SOLIDS** 10.1 Introduction 10.2 Elastic behaviour of solids 10.3 Stress and strain 10.4 Hook's law 10.5 Stress – strain curve 10.6 Elastic moduli 10.7 Applications of elastic behaviour of materials **EAPSET Classes** **EAPSET TEST- 5** **DUSSEHRA Holidays: 06-10-2024 TO 13-10-2024** **Date of Reopening: 14-10-2024**	**07** **04** **01** **01** **08** **07** **03** **01**

November (24)	**CHAPTER – XI** **MECHANICAL PROPERTIES OF FLUIDS** 11.1 Introduction 11.2 Pressure 11.3 Streamline flow 11.4 Bernoulli's principle 11.5 Viscosity 11.6 Reynolds number 11.7 Surface tension **CHAPTER – XII** **THERMAL PROPERTIES OF MATTER** 12.1 Introduction 12.2 Temperature and Heat 12.3 Measurement of temperature 12.4 Ideal – gas equation and absolute temperature 12.5 Thermal expansion 12.6 Specific Heat capacity 12.7 Calorimetry 12.8 Charge of state 12.9 Heat transfer 12.10 Newton's law of cooling. **EAPSET Classes** **Practicals:** 7. Determination of surface tension of a liquid liquid 8. Apparent expansion of a liquid **HALF YEARLY EXAMINATIONS:** **18-11-2024 TO 23-11-2024**	**06** **09** **03** **06**
DECEMBER (23)	**CHAPTER –XIII**: **THERMODYNAMICS** 13.1 Introduction 13.2 Thermal equilibrium 13.3 Zeroth law of thermodynamics 13.4 Heat, internal energy and work 13.5 First law of thermodynamics 13.6 Specific heat capacity 13.7 Thermodynamic state variables and equation of state 13.8 Thermodynamic processes 13.9 Heat engines 13.10 Refrigerators and heat pumps 13.11 Second law of thermodynamics 13.12 Reversible and irreversible processes 13.13 Carrot engine, Carnot's theorem.	**10**

	CHAPTER – XIV: **KINETIC THEORY** 14.1 Introduction 14.2 Molecular nature of matter 14.3 Behaviour of gases 14.4 Kinetic theory of an ideal gas 14.5 Laws of equipartition of energy 14.6 Specific heat capacity 14.7 Mean free path **EAPSET Classes** **EAPSET TEST – 6** **UNIT TEST – 4** **Practicals**: 9. Boyle's law 10.Specific heat of a solids	**07** **04** **01** **01**
January (22)	**Theory Revision** EAPSET Classes **SANKRANTRI HOLIDAYS FROM 11-01-2025 TO 16-01-2025** **DATEOFREOPENING:17-01-2025** **PREFINAL EXAMINATIONS : FROM 20.01.2025 TO 25.01.2025**	**12** **04** **06**
February (23)	**Theory Revision** **EAPSET Classes**	**19** **04**
March (23)	**I.P. Examinations: Ist 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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