

PHYSICS

Distribution of Marks:

Part-I (Class-XI)

Theory Marks: 85

Part-II (Class-XII)

Theory Marks: 85

Practical: 30

Total : 200

Marks: 85	PART –I (CLASS-XI)	Time: 3:00 Hours
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CHAPTER:1 Measurements

- 1.1 Physical Quantities and Their Units
- 1.2 International System of Units
- 1.3 Uncertainty In Measurement
- 1.4 Use of Significant Figures
- 1.5 Precision And Accuracy
- 1.6 Assessment of Total Uncertainty In The Final Result
- 1.7 Dimensions of Physical Quantities

CHAPTER:2 Force and Motion

- 2.1 Scalars
- 2.2 Vectors
- 2.3 Product of Two Vectors
- 2.4 Equations of Motions
- 2.5 Motion Under Gravity
- 2.6 Projectile Motion
- 2.7 Momentum
- 2.8 Elastic And Inelastic Collisions
- 2.9 Inelastic Collision in One Dimension
- 2.10 Elastic Collision In Two Dimensions
- 2.11 Inelastic Collision in Two Dimensions
- 2.12 Rocket Propulsion

CHAPTER:3 Circular and Rotational Motion

- 3.1 Angular Measurements
- 3.2 Centripetal Force
- 3.3 Artificial Satellites
- 3.4 Moment of Inertia
- 3.5 Angular Momentum
- 3.6 Law of Conservation of Angular Momentum

CHAPTER:4 WORK , ENERGY and Power

- 4.1 Work Done By a Constant Force
- 4.2 Work Done By a Variable Force
- 4.3 Conservative And NON-Conservative Forces
- 4.4 Power
- 4.5 Energy
- 4.6 Escape Velocity
- 4.7 Work-Energy Theorem
- 4.8 Interconversion Of Potential Energy And Kinetic Energy

CHAPTER:5 Solids and Fluid Dynamics

- 5.1 Classification Of Solids
- 5.2 Mechanical Properties Of Solids
- 5.3 Stress, Strain And Young's Modulus
- 5.4 Determination Of Young's Modulus Of a Wire
- 5.5 Elastic Deformation, Plastic Deformation And Elastic Limit
- 5.6 Strain Energy In Deformed Materials
- 5.7 Archimedes' Principle And Floatation
- 5.8 Steady, Non-Viscous And Ideal Fluid
- 5.9 Equation Of Continuity
- 5.10 Increase in Flow Velocity
- 5.11 Bernoulli's Equation

- 5.12 Uses Of Bernoulli's Equation
- 5.13 Visous Drag And Stokes' Law
- 5.14 Terminal Velocity
- 5.15 Real Fluids Are Visous Fluids
- 5.16 Superfluids
- CHAPTER:6 Heat and Thermodynamics**
- 6.1 Assumptions Of The Kinetic Theory Of Gases
- 6.2 Internal Energy
- 6.3 Heat And Work
- 6.4 First Law Of Thermodynamics
- 6.5 Reversible and Irreversible Processes
- 6.6 Heat Engine
- 6.7 Second Law of Thermodynamics
- 6.8 Carnot Engine And Carnot's Theorem
- 6.9 Referigerator
- 6.10 Entropy
- CHAPTER:7 Waves and Vibrations**
- 7.1 Waves
- 7.2 Principle of Superposition of Waves
- 7.3 Interfernce and Its Types
- 7.4 Stationary Waves & Their Formation
- 7.5 Stationary Waves On a Stretched String
- 7.6 Stationary Waves In Air Columns
- 7.7 Experiment Demonstrating Stationary Waves Using Microwaves
- 7.8 Diffraction of Waves
- 7.9 Beats
- 7.10 Intensity (I) Of A Wave
- 7.11 Doppler Effect
- 7.12 Applications Of Doppler Effect
- CHAPTER:8 Physical Optics And Gravitational Waves**
- 8.1 Polarization of Light
- 8.2 Types Of Polarization
- 8.3 Production and Detection Of Plane Polarized Lights
- 8.4 Polarization Of Light ByThe Method Of Reflection
- 8.5 Malus's Law
- 8.6 Gravitational Waves (GWs)
- 8.7 Interferometer
- CHAPTER:9 Electrostatics and Current Electricity**
- 9.1 Coulomb's law
- 9.2 Electric Field Strength
- 9.3 Electric Flux
- 9.4 Gauss's Law
- 9.5 Electric Potential
- 9.6 Electron Volt
- 9.7 Motion Of Charged Particles In a Uniform Electric Field
- 9.8 Path Of a Charged Particle
- 9.9 Shielding From External Electric Field
- 9.10 Electric Current
- 9.11 Current Through A Conductor
- 9.12 OHM's Law
- 9.13 Resistivity And Its Dependence Upon Temperature
- 9.14 Electrical Power
- 9.15 Electromotive Force (EMF) And Potential Difference
- 9.16 KIRCHHOFF'S Rules
- 9.17 Wheatstone Bridge
- 9.18 Potentiometer
- 9.19 Use of A Galvanometer
- 9.20 Thermistors

- 9.21 Light Dependent Resistor
- CHAPTER:10 Electromagnetism**
- 10.1 Force On a Current-Carrying Conductor In a Uniform Magnetic Field
- 10.2 Magnetic Flux And Flux Density
- 10.3 Magnetic Flux Linkage
- 10.4 Motion Of a Charged Particle In a Magnetic Field
- 10.5 Velocity Selector
- 10.6 Induced EMF And FARADAY's Law
- 10.7 LENZ'S Law And Direction Of Induced EMF
- 10.8 Factors Affecting EMF
- 10.9 Ferrofluids
- 10.10 A Seismometer
- CHAPTER:11 Special Theory Of Relativity**
- 11.1 Relative Motion
- 11.2 Frames Of Reference
- 11.3 Special Theory Of Relativity
- 11.4 The Equivalence Between Mass and Energy
- 11.5 Space-Time In Relativity
- CHAPTER:12 Nuclear and Particle Physics**
- 12.1 Structure And Properties Of The Nucleus
- 12.2 Fundamental Forces Of Nature
- 12.3 Matter And Anti-Matter
- 12.4 Radioactivity
- 12.5 Fundamental Particles
- 12.6 Quarks
- 12.7 Higgs Boson
- 12.8 Conservation Laws
- 12.9 The Asymmetry Of Matter And Anti-Matter In The Universe
- 12.10 Most of The Matter in The Observable Universe Is Plasma
- 12.11 The Theories About The Forces Between The Masses Of Particles
- 12.12 The Standard Model

Recommended Book: Physics Part-I

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