

As Per Latest CBSE Syllabus 2022-23
Issued on 21 April, 2022...



arihant

All in one[®]

COMPLETE STUDY | COMPLETE PRACTICE | COMPLETE ASSESSMENT

Physics

CBSE Class 11

- Complete Theory in Easy to Understand Manner
- All Types of Questions; Including MCQs & Case Based

**Included
Sample
Papers**

CONTENTS

Physics Class 11

1. Units and Measurements 1-35

- Physical Quantities
- Physical Unit
- The International System of Units
- Significant Figures
- Rounding Off
- Dimensional Formulae and Dimensional Equations
- Dimensional Analysis and Its Applications
- Summary
- Chapter Practice

2. Motion in a Straight Line 36-68

- Rest
- Motion
- Position, Path Length and Displacement
- Uniform Motion in a Straight Line
- Non-uniform Motion
- Speed and Velocity
- Instantaneous Speed and Instantaneous Velocity
- Acceleration
- Non-uniformly Accelerated Motion
- Galileo's Law of Odd Numbers
- Summary
- Chapter Practice

3. Motion in a Plane 69-118

- Scalar Quantity
- Vector Quantity
- Position and Displacement Vectors
- Resultant Vector
- Addition of Vectors (Graphical Method)
- Subtraction of Two Vectors (Graphical Method)
- Resolution of Vectors in Plane (In Two Dimensions)
- Resolution of a Space Vector (In Three Dimensions)
- Addition of Vectors (Analytical Method)
- Subtraction of Vectors (Analytical Method)
- Dot Product or Scalar Product

- Vector Product or Cross Product
- Position, Displacement and Velocity Vectors
- Projectile Motion
- Uniform Circular Motion
- Summary
- Chapter Practice

4. Laws of Motion 119-167

- Force
- Aristotle's Fallacy and Galileo Galilei
- Law of Inertia
- Inertia
- Newton's Laws of Motion
- Momentum
- Newton's Second Law of Motion
- Impulse
- Newton's Third Law of Motion
- Common Forces in Mechanics
- Friction
- Dynamics of Uniform Circular Motion
- Summary
- Chapter Practice

5. Work, Energy and Power 168-211

- Definition of Work
- Work Done by a Variable Force
- Conservative Force
- Non-conservative Force
- Kinetic Energy
- Work-Energy Theorem or Work Energy Principle
- Potential Energy
- Power
- Collisions
- Summary
- Chapter Practice

6. System of Particles and Rotational Motion

212-254

Rigid Body
 Centre of Mass
 Linear Momentum of a System of Particles
 Torque and Angular Momentum
 Equilibrium of a Rigid Body
 Centre of Gravity
 Moment of Inertia
 Dynamics of Rotational Motion about a Fixed Axis
 Rolling Motion
 Summary
 Chapter Practice

7. Gravitation

255-298

Kepler's Laws of Planetary Motion
 Universal Law of Gravitation
 Principle of Superposition
 Gravitational Constant (Cavendish's Experiment)
 Acceleration due to Gravity of Earth
 Gravitational Potential
 Gravitational Potential Energy
 Escape Speed
 Earth Satellites
 Energy of an Orbiting Satellite
 Weightlessness
 Summary
 Chapter Practice

8. Mechanical Properties of Solids

299-331

Elastic Body and Elasticity
 Plastic Body and Plasticity
 Elastic Behaviour of Solids
 Stress
 Strain
 Hooke's Law
 Stress-Strain Curve

Elastic Modulus
 Energy Stored in a Deformed Body
 Summary
 Chapter Practice

9. Mechanical Properties of Fluids

332-380

Thrust
 Pressure
 Pascal's Law
 Buoyancy
 Archimedes' Principle
 Surface Tension
 Surface Energy
 Angle of Contact
 Capillarity
 Streamline, Laminar and Turbulent Flow
 Bernoulli's Theorem
 Viscosity
 Critical Velocity
 Stoke's Law
 Terminal Velocity
 Reynold's Number
 Summary
 Chapter Practice

10. Thermal Properties of Matter **381-419**

Temperature and Heat
 Measurement of Temperature
 Ideal Gas Equation and Absolute Temperature
 Thermal Expansion
 Thermal Strain and Thermal Stress
 Heat Capacity
 Calorimetry
 Change of State
 Heat Transfer
 Summary
 Chapter Practice

Physics Class 11

11. Thermodynamics	420-453	13. Oscillations	489-523
Thermodynamic System, Surroundings and Boundary		Periodic and Oscillatory Motions	
Zeroth Law of Thermodynamics		Simple Harmonic Motion	
Heat, Internal Energy and Work		Simple Harmonic Motion and Uniform Circular Motion (Geometrical Interpretation of SHM)	
First Law of Thermodynamics as Energy Balance		Energy in Simple Harmonic Motion	
Thermodynamic State Variables and Equation of State		Some Systems Executing Simple Harmonic Motion	
Thermodynamic Processes		Undamped and Damped Oscillations	
Second Law of Thermodynamics		Summary	
Reversible and Irreversible Processes		Chapter Practice	
Carnot Engine			
Summary			
Chapter Practice			
12. Kinetic Theory	454-488	14. Waves	524-557
Molecular Nature of Matter		Transverse Wave	
Behaviour of Gases		Longitudinal Wave	
Kinetic Theory of Ideal Gas		Principle of Superposition of Waves	
Degree of Freedom		Reflection of Waves	
Law of Equipartition of Energy		Standing Waves and Normal Modes	
Specific Heat Capacity		Vibrations of Air Column	
Mean Free Path		Beats	
Brownian Motion		Summary	
Summary		Chapter Practice	
Chapter Practice			
		5 Sample Question Papers	558-595

Allinone®

COMPLETE STUDY | COMPLETE PRACTICE | COMPLETE ASSESSMENT

Physics

CBSE Class 11



Allinone Physics for Class 11th has been prepared specially for students studying in Class 11th with CBSE Curriculum. This book is written by an experienced examiner, which provides all the explanation and guidance, you need to study efficiently and succeed in the exam.

The whole syllabus has been divided into chapters as per CBSE Curriculum. To make the students understand the chapter completely, each chapter has been divided into Individual Topics and each such topic has been treated as a separate chapter. Each topic has Detailed Theory, supported by Examples, Tables, Diagrams etc., followed by the questions arranged as CBSE Examination Pattern. These questions cover NCERT, NCERT Exemplar's and other Important Questions from examination point of view. To facilitate the easy learning and practice, explanations to all the questions have been given.

- To check their understanding of the chapter, a Chapter Practice has been given for the students.
- Chapterwise study is not the only feature of this book, after the chapterwise study it has a supplement of 5 Sample Question Papers.

At last, it can be said that this book will serve as True Companion & Guide in your way of studying in Class XI & will finally take you to the place where you will find yourself achieving the highest grade.

Books of the Series

Physics | Chemistry | Mathematics | Biology | Accountancy
Business Studies | Economics | Informatics Practices | Computer Science
English Core | Sociology | Psychology | History | Geography
Political Science | Physical Education | Home Science | Fine Arts
हिंदी ऐच्छिक | हिंदी केंद्रिक | इतिहास | भूगोल | राजनीति विज्ञान

 **arihant**

Arihant Prakashan (School Division Series)

Published by ARIHANT PUBLICATIONS (INDIA) LIMITED

Follow us on    



Code : F958 ₹ 600.00

