

PREP4IISER

IISER / IAT 2025
IMPORTANT CHAPTER



Chapters Name	2025	2024	2023	2022	2021
Some Basic Concepts of Chemistry					
Structure of atom		✓	✓	✓	✓
Classification of Elements and Periodicity		✓			
Chemical Bonding and Molecular Structure		✓✓	✓		
States of matter			✓	✓	
Thermodynamics			✓		
Equilibrium				✓	✓✓
Redox Reactions					
Hydrogen			✓		
S- Block elements					
P- block elements				✓ ✓	✓✓ ✓
Organic Chemistry – Some Basic Principles and Techniques		✓	✓	✓ ✓	✓
Hydrocarbons		✓ (Isomerism)			✓
The solid state					
Solutions		✓	✓	✓	
Electrochemistry		✓		✓	✓

PREP4IISER

IISER / IAT 2025
IMPORTANT CHAPTER



Chemical Kinetics		✓✓			✓
Surface Chemistry			✓		
General Principles and Processes of Isolation of Elements			✓✓		
The P- Block Elements (Class 12)			✓	✓	
D and F block elements					
Coordination Compounds		✓✓		✓ ✓	✓✓
Haloalkanes and Haloarenes		✓	✓✓	✓ ✓ ✓	✓
Alcohols, Phenols and Ethers				✓	✓
Aldehydes, Ketones and Carboxylic Acids		✓	✓	✓	✓✓
Amines			✓	✓ ✓	
Biomolecules		✓	✓		

List of important chapters in Chemistry:

Class 11 –

1. Structure of atom
2. Chemical Bonding and Molecular Structure
3. P- block elements
4. Equilibrium

IISER / IAT 2025

IMPORTANT CHAPTER

5. Organic Chemistry – Some Basic Principles and Techniques
6. Hydrocarbons

Class 12 –

1. Haloalkanes and Haloarenes
2. Aldehydes, Ketones and Carboxylic Acids
3. Amines
4. Coordination Compounds
5. Solutions
6. Electrochemistry
7. Chemical Kinetics

BIOLOGY

Chapters	2025	2024	2023	2022	2021
The Living World					
Biological Classification				✓	
Plant Kingdom					
Animal Kingdom		✓		✓	
Morphology of Flowering Plants					✓
Anatomy of Flowering Plants		✓			
Structural			✓		✓

PREP4IISER

IISER / IAT 2025

IMPORTANT CHAPTER

Organisation in Animals					
Cell: The unit of Life					
Biomolecules			✓✓		
Cell cycle and Cell division		✓	✓	✓	✓
Transport in plants				✓	
Mineral Nutrition					✓
Photosynthesis in Higher Plants		✓	✓	✓	✓✓
Respiration in Plants		✓	✓	✓	

Plant Growth and Development					
Digestion and absorption			✓		
Breathing and Exchange of Gases					
Body Fluids and Circulation		✓		✓✓	

PREP4IISER

IISER / IAT 2025
IMPORTANT CHAPTER



Excretory Products and their Elimination		✓			✓
Locomotion and Movement		✓✓			
Neural Control and Coordination				✓	
Chemical Coordination and Integration		✓			
Reproduction					
Sexual Reproduction in Flowering Plants		✓✓	✓	✓	✓
Human Reproduction			✓		
Reproductive Health					
Principles of Inheritance and Variation		✓✓	✓✓ ✓	✓✓ ✓	
Molecular Basis of Inheritance		✓			✓✓
Evolution				✓	✓

PREP4IISER



IISER / IAT 2025

IMPORTANT CHAPTER

Human health and diseases		✓✓	✓		✓
Microbes in Human Welfare					
Biotechnology- Principles and Processes		✓			✓
Biotechnology and its application		✓✓	✓	✓	
Organisms and populations		✓	✓	✓	✓✓
Ecosystem					
Biodiversity and its Conservation					
Environmental Issues					

List of important chapters in Biology:

Class 11 – FOR PCM

1. Cell cycle and Cell division
2. Photosynthesis in Higher Plants
3. Respiration in Plants
4. Body Fluids and Circulation
5. Locomotion and Movement
6. Morphology of Flowering Plants
7. Anatomy of Flowering Plants

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IISER / IAT 2025
IMPORTANT CHAPTER



Class 12 – FOR PCM

1. Sexual Reproduction in Flowering Plants
2. Principles of Inheritance and Variation
3. Molecular Basis of Inheritance
4. Human health and diseases Solutions
5. Biotechnology-Principles and Processes
6. Organisms and populations



PHYSICS

Chapters	2025	2024	2023	2022	2021
Units and Measurements			✓		
Kinematics		✓✓	✓		
Laws of motion		✓			

PREP4IISER



IISER / IAT 2025

IMPORTANT CHAPTER

Work, Energy and power		✓ (Circular Motion)			
System of Particles and Rotational motion		✓ (COM)	✓		
Gravitation					
Mechanical Properties of Solids					
Mechanical Properties of Fluids		✓	✓		
Thermal properties of matter					
Thermodynamics		✓✓	✓		
Kinetic Theory		✓			
Oscillations		✓✓ (SHM)			
Waves					
Electric Charges and Fields		✓✓	✓✓		
Electrostatic Potential and Capacitance					
Current Electricity		✓	✓✓		
Moving charges and Magnetism		✓	✓		

Magnetism and Matter					
Electromagnetic Induction					
Alternating Current					
Electromagnetic Waves			✓		
Ray Optics and Optical Instruments		✓	✓		
Wave Optics					
Dual Nature of Radiation and Matter					
Atoms		✓	✓		
Nuclei		✓	✓		
Semiconductors			✓✓		

List of important chapters in Physics:

Class 11

1. Kinematics
2. Laws of motion
3. Work, Energy and power
4. COM
5. Mechanical Properties of Fluids
6. Thermodynamics
7. Kinetic Theory of Gases
8. SHM

IISER / IAT 2025

IMPORTANT CHAPTER

Class 12

1. Electrostatics
2. Current Electricity
3. Moving charges and Magnetism
4. Ray Optics
5. Dual Nature of Radiation and Matter
6. Atoms
7. Nuclei



Chapters	2025	2024	2023	2022	2021
Sets		✓✓			
Relations and Functions		✓✓ ✓✓			
Trigonometric Functions					
Complex numbers and Quadratic Equations		✓			
Linear Inequalities					

PREP4IISER



IISER / IAT 2025

IMPORTANT CHAPTER

Permutations and Combinations			✓	✓	
Binomial Theorem		✓			
Sequence and series		✓✓			
Straight Lines		✓✓ ✓✓	✓		
Conic Sections		✓✓	✓	✓	
3-D Geometry		✓	✓		
Limits and Derivatives					
Statistics			✓		
Probability		✓	✓	✓	
Inverse Trigonometric Functions					
Matrices		✓	✓	✓✓	
Determinants			✓	✓	
Continuity and Differentiability					
Application of Derivatives		✓✓	✓✓	✓✓ ✓✓	
Integrals		✓		✓✓	
Application of Integrals		✓	✓		
Differential Equations		✓	✓✓	✓	
Vector Algebra		✓		✓✓	

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IISER / IAT 2025

IMPORTANT CHAPTER

Linear Programming			✓		
Quadratic Eq			✓		
Set, Relation & Fun				✓	

List of important chapters in Maths:

Class 11 [PCB]

1. Sets
2. Relations and Functions
3. Straight Lines
4. Coordinate System
5. Conic Sections
6. Probability
7. Statistics



Class 12 FOR [PCB]

1. Application of Derivatives & AOD
2. Differential Equations
3. Integrals
4. Vector & 3D
5. Matrices and Determinants
6. [URL](#)
7. Visit our website link [PREP4IISER.IN](https://prep4iiser.in)
8. Telegram group <https://t.me/IISERa2025>
9. Email ID :- support@prep4iiser.in

