

JENPAS(UG) Physics Analysis Report (2022–2024)

✓ Physics Question Summary: 2022–2024

Year	Total Physics Qs	Category-1 (1 mark)	Category-2 (2 marks)	Total Marks
2022	20	15	5	25
2023	20	15	5	25
2024	20	15	5	25
Total	60	45	15	75

- **Uniform Pattern:** 15 Category-1 (MCQ, 1 mark) + 5 Category-2 (multi-correct, 2 marks)
Consistent Distribution Each Year

Chapter-wise Trends (Based on NCERT Class 11 & 12)

Class 11 Physics Chapter-wise Distribution

Chapter Name	2022	2023	2024	Total
Motion in a Straight Line	1	0	1	2
Laws of Motion	1	1	1	3
Work, Energy & Power	1	1	1	3
Gravitation	1	0	1	2
Thermodynamics	1	1	1	3
Mechanical Properties of Solids	1	1	1	3
Mechanical Properties of Fluids	1	0	1	2
Kinetic Theory of Gases	1	0	0	1
Oscillations	0	1	1	2

Waves	1	1	1	3
Class 11 Total	9	6	9	24

Class 12 Physics Chapter-wise Distribution

Chapter Name	2022	2023	2024	Total
Electrostatics	1	1	1	3
Current Electricity	1	1	1	3
Magnetic Effects of Current	1	1	1	3
Electromagnetic Induction	1	1	1	3
Alternating Current	1	0	1	2
Ray Optics	1	1	1	3
Wave Optics	0	1	1	2
Dual Nature of Radiation	1	1	1	3
Atoms & Nuclei	1	1	1	3
Semiconductor Devices	2	2	2	6
Communication Systems	1	1	0	2
Class 12 Total	11	11	11	33

Top Repeated Chapters (2022–2024)

Rank	Chapter Name	Total Questions
1	Semiconductors (Class 12)	6
2	Thermodynamics (Class 11)	3
3	Waves (Class 11)	3
4	Optics (Ray + Wave)	5
5	Magnetism & EMI (Class 12)	6

Predictive Blueprint for JENPAS(UG) 2025 – Physics

1. Paper Pattern Forecast

Parameter	2025 Prediction
Total Questions	20
Marks Allocation	$15 \times 1 + 5 \times 2 = 25$ marks
Class 12 Weightage	~11–12 Qs
Class 11 Weightage	~8–9 Qs
Core Focus	Application-based, NCERT-conceptual, moderate numericals

2. High-Priority Chapters for 2025 (Very Likely)

Chapter	Why it's Likely in 2025
Semiconductors & Electronics	Repeated every year (2 Qs consistently)
Electrostatics + Magnetism	Easy to frame conceptual + numerical MCQs
Thermodynamics	Highly conceptual + real-world links
Ray + Wave Optics	Always featured – MCQs based on sign convention, lenses, interference
Modern Physics	Nuclei, Dual Nature, Atom = Always 2–3 questions

🎯 Undervalued Chapters (May Reappear Heavily in 2025)

Chapter	Why It Might Return
Oscillations	Only light coverage so far

Kinetic Theory of Gases	Conceptual; ripe for MCQs
Communication Systems	Present in 2022–23, skipped in 2024
Motion + Graphs (1D Motion)	Easy distractors, graph-based
Work & Power	Often paired with application logic

🧠 Paper Design Philosophy – Examiner’s Approach

Design Priority	Implication
NCERT-Aligned Logic	Questions always traceable to theory/examples/diagrams
Numerical + Conceptual Mix	Expects students to apply formulas with understanding
Diagram-Based Questions	Circuits, ray diagrams, wavefronts are frequent
Cross-Chapter Thinking	Mix of heat + motion, or electricity + magnetism

How to Prepare Smarter for Physics in 2025

🎓 For Students

Strategy	Why it Works
10 MCQs daily from different chapters	Ensures retention and diverse exposure
Practice all NCERT solved examples	Paper closely mimics NCERT style & values
Focus on formulas with unit awareness	At least 2–3 questions test units/dimensions
Diagram redraw practice	Especially for ray optics, circuits
