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CHAPTER NOTES

NEET 2027 Physics Hot Topics - Chapter-Wise Weightage & Important Topics

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NEET 2027 Physics Hot Topics - Chapter-Wise Weightage & Important Topics

Put the weightage to work: revise **Current Electricity Class 12 notes (Chapter 3)** - one of the highest-weightage Physics chapters - then test yourself with the **free NEET 2027 full-syllabus mock test**.

NEET 2027 Physics - Hot Topics Analysis based on last 5 years (2021–2025) paper analysis. Physics carries **180 marks (45 questions)** in NEET 2027. About **70–75% of questions come from Class 12**, 25–30% from Class 11. Master these 20 high-weightage chapters to secure a strong Physics score.

NEET 2027 exam date: expected early May 2027. Total marks: 720. Negative marking: -1 per wrong answer.

Hot Topics Ranked by Weightage (2021–2025)

Current Electricity - 7.95% weightage (Class 12)

Key concepts: Ohm's law, Kirchhoff's laws, Wheatstone bridge, drift velocity, resistivity, cells in series/parallel

Question pattern: Numerical on equivalent resistance, meter bridge, potentiometer, internal resistance. 3-4 questions typically.

Electrostatic Potential and Capacitance - 6.28% weightage (Class 12)

Key concepts: Electric potential, equipotential surfaces, capacitors in series/parallel, dielectrics, energy stored

Question pattern: Capacitor combinations, potential due to dipole, energy density. 2-3 questions.

Ray Optics and Optical Instruments - 5.86% weightage (Class 12)

Key concepts: Refraction, lens formula, prism, microscope, telescope, total internal reflection

Question pattern: Lens-mirror combinations, magnifying power, refractive index. 2-3 questions.

Gravitation - 5.86% weightage (Class 11)

Key concepts: Kepler's laws, gravitational potential energy, escape velocity, orbital velocity, satellites

Question pattern: Variation of g with altitude/depth, geostationary satellite problems. 2 questions.

Semiconductor Electronics - 5.86% weightage (Class 12)

Key concepts: p-n junction, diode, rectifier, zener, transistor, logic gates

Question pattern: Output waveforms, truth tables, transistor as switch. 2-3 questions.

Moving Charges and Magnetism - 5.44% weightage (Class 12)

Key concepts: Biot-Savart law, Ampere's law, solenoid, cyclotron, force on current-carrying conductor

Question pattern: Magnetic field due to loops/solenoids, force between wires. 2-3 questions.

Oscillations - 5.44% weightage (Class 11)

Key concepts: SHM, spring-mass system, pendulum, energy in SHM, damped/forced oscillations

Question pattern: Time period, phase, energy conservation problems. 2 questions.

Alternating Current - 5.02% weightage (Class 12)

Key concepts: RMS values, LCR circuit, resonance, power factor, transformer

Question pattern: Impedance, Q-factor, phasor diagrams. 2-3 questions.

Units and Measurements - 5.02% weightage (Class 11)

Key concepts: Dimensional analysis, significant figures, errors in measurement

Question pattern: Dimensional formulae, error propagation. 2 questions.

Electromagnetic Waves - 3.77% weightage (Class 12)

Key concepts: EM spectrum, Maxwell's equations (concept), displacement current

Question pattern: Frequency/wavelength identification, properties of waves. 1-2 questions.

Work, Energy and Power - 3.77% weightage (Class 11)

Key concepts: Work-energy theorem, conservative forces, collisions, power

Question pattern: Elastic/inelastic collisions, vertical circular motion. 2 questions.

Thermodynamics - 3.35% weightage (Class 11)

Key concepts: First law, isothermal/adiabatic processes, Carnot engine, efficiency

Question pattern: PV diagrams, work done, efficiency calculations. 1-2 questions.

Motion in a Straight Line - 3.35% weightage (Class 11)

Key concepts: Kinematics equations, relative velocity, graphs

Question pattern: v-t and x-t graph interpretation. 1-2 questions.

Laws of Motion - 3.35% weightage (Class 11)

Key concepts: Newton's laws, friction, pulley systems, circular motion

Question pattern: Blocks on inclines, connected bodies. 1-2 questions.

Electromagnetic Induction - 3.2% weightage (Class 12)

Key concepts: Faraday's law, Lenz's law, self/mutual inductance, eddy currents

Question pattern: EMF in moving rods, inductors in circuits. 1-2 questions.

Wave Optics - 3.0% weightage (Class 12)

Key concepts: Huygens' principle, interference (YDSE), diffraction, polarisation

Question pattern: Fringe width, intensity, Brewster's law. 1-2 questions.

Dual Nature of Radiation and Matter - 2.9% weightage (Class 12)

Key concepts: Photoelectric effect, de Broglie wavelength, Einstein's equation

Question pattern: Threshold frequency, stopping potential, wavelength calculations. 1-2 questions.

Atoms and Nuclei - 2.9% weightage (Class 12)

Key concepts: Bohr model, hydrogen spectrum, radioactivity, mass-energy equivalence, binding energy

Question pattern: Energy levels, half-life, nuclear reactions. 1-2 questions.

System of Particles and Rotational Motion - 2.5% weightage (Class 11)

Key concepts: Centre of mass, torque, angular momentum, moment of inertia, rolling motion

Question pattern: I for rigid bodies, rolling down incline. 1-2 questions.

Waves - 2.5% weightage (Class 11)

Key concepts: Transverse/longitudinal waves, superposition, beats, Doppler effect, standing waves

Question pattern: Frequency of strings/pipes, Doppler shift. 1-2 questions.

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