



CBSE

CLASS 11

SCIENCE

Class 11 Physics

Fundamental senior secondary physics covering mathematical physics, kinematics, Newtonian dynamics, rotational mechanics, universal gravitation, properties of matter, thermodynamics, and simple harmonic oscillations.

GOVERNING BOARD
CBSE

THEORY EXAMINATION
70 Marks

INTERNAL / PRACTICAL
30 Marks (Practical)

EXAM DURATION
3 Hours

UNIT-WISE SYLLABUS & MARKS BREAKDOWN

UNIT	CHAPTERS & PRESCRIBED TOPICS	MARKS
Unit I & II	Physical World, Units & Kinematics SI units, dimensional analysis; Motion in straight line & plane, vectors, projectile motion, circular motion	15
Unit III	Laws of Motion Newton's laws, impulse, conservation of linear momentum, friction, dynamics of uniform circular motion	10
Unit IV & V	Work, Energy & System of Particles Work-energy theorem, potential energy, elastic collisions; Centre of mass, torque, angular momentum, moment of inertia	12
Unit VI	Gravitation Kepler's laws, universal law of gravitation, gravitational potential, escape velocity, orbital motion of satellites	06
Unit VII	Properties of Bulk Matter Elasticity, stress-strain relationship, Hooke's law; Fluid pressure, Pascal's law, Archimedes' principle, surface tension, viscosity, Bernoulli's theorem	12
Unit VIII & IX	Thermodynamics & Kinetic Theory Thermal equilibrium, Zeroth, First and Second laws of thermodynamics, Carnot cycle; Kinetic theory of gases, degrees of freedom, equipartition of energy	08
Unit X	Oscillations and Waves Simple Harmonic Motion, spring-mass system, simple pendulum; Wave motion, longitudinal & transverse waves, sound velocity, Doppler effect	07

INTERNAL / PRACTICAL ASSESSMENT SCHEME (30 MARKS (PRACTICAL))

EVALUATION COMPONENT	MARKS WEIGHTAGE
Lab Experiments (2) One experiment from each section A and B	14 Marks
Practical Record & Project Lab journal and approved investigatory project	08 Marks
Viva Voce	08 Marks

EVALUATION COMPONENT	MARKS WEIGHTAGE
Oral examination on theory and experiments	

RECOMMENDED REFERENCE LITERATURE

Prescribed Textbooks: NCERT Physics Class 11 (Vols I & II), SL Arora, HC Verma, Excellence Analytical Drill Sets

THE EXCELLENCE TUITION EDGE

Every unit in this curriculum is taught with structured conceptual lectures, followed by weekly speed-testing, detailed mistake analysis, and dedicated 1:1 doubt-clearing sessions to build board exam confidence.

Excellence Tuition Centres: Sarsuna (Opp. High School) · Joka · Chatterjee Para (Behala)

Admissions & Inquiries: +91 89022 70803 · excellence-tuition.vercel.app