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Updated CBSE Class 11 Physics Syllabus Released for 2025-26 – Download Latest Syllabus, Marking Scheme, and Study Tips!!! The CBSE Class 11 Physics syllabus for the academic year 2025-26 has been updated to focus on competency-based questions and a revised weightage system that emphasizes conceptual learning over rote memorization. The new syllabus includes chapter-wise details, marking scheme, and study tips to help students prepare for board exams and competitive exams like JEE, NEET, CUET, etc. The Physics course structure consists of 10 units, covering topics such as physical world and measurement, kinematics, laws of motion, work, energy, and power, motion of systems of particles and rigid bodies, gravitation, properties of bulk matter, thermodynamics, behavior of perfect gases and kinetic theory, oscillations, waves, and more. The updated syllabus includes new chapters on topics like dimensionality, measurement units, motion in a straight line, motion in a plane, work, energy, and power, system of particles and rotational motion, gravitation, properties of bulk matter, thermodynamics, behavior of perfect gases, oscillations, waves, and others. Students can download the official PDF of the updated CBSE Class 11 Physics syllabus for 2025-26 at the end of this article. Physics Chapter Outlines for Class 11: - **Chapter 1:** Moment of Inertia and Radius of Gyration - Definition and key values for simple shapes - Kepler’s Laws of Planetary Motion and Newton’s Law of Gravitation - Universal gravitation constant (G), acceleration due to gravity, and gravitational potential energy - **Chapter 2:** Mechanical Properties of Solids - Elasticity: Stress-strain curve, Hooke’s Law, elastic moduli (Young’s modulus, bulk modulus, shear modulus) - Poisson’s ratio and applications of elastic behavior - **Chapter 3:** Mechanical Properties of Fluids - Pressure in fluids: pressure due to a fluid column and Pascal’s Law - Applications (hydraulic lift, brakes) and effect of gravity on fluid pressure - Fluid dynamics: viscosity, Stokes’ Law, terminal velocity, streamline vs. turbulent flow - **Chapter 4:** Thermal Properties of Matter - Heat and temperature: thermal expansion, specific heat capacity - Latent heat and phase changes; heat transfer (conduction, convection, radiation) - **Chapter 5:** Thermodynamics - Basic concepts: thermal equilibrium, internal energy, work, Laws of Thermodynamics - Entropy, irreversibility, thermodynamic processes, and equation of state for gases - **Chapter 6:** Kinetic Theory of Gases - Perfect Gas Equation (PV=nRT), kinetic theory assumptions, pressure and temperature interpretation - Energy distribution: degrees of freedom, equipartition theorem, specific heats of gases - **Chapter 7:** Oscillations - Periodic motion: time period, frequency, displacement-time relations; Simple Harmonic Motion - Equations, phase, energy (kinetic energy and potential energy) in SHM and spring-mass system - **Chapter 8:** Waves - Wave types (transverse and longitudinal), wave characteristics (wave speed and displacement relation) - Superposition principle, reflection, standing waves; beats formation and applications - **Assessment Criteria:** - Record of experiments with a minimum of 8 experiments from each section - Activities record with a minimum of 6 activities from each section - Project report for the investigatory project - Viva Voce on experiments, activities, and project; NCERT textbooks are crucial for exam preparation Practice numerical problems daily from NCERT and reference books like HC Verma to improve calculation skills. Focus on units like Kinematics, Laws of Motion, and Work-Energy. Visualize concepts using diagrams and flowcharts, such as Bernoulli's Theorem and Thermodynamic Processes. Revise with previous years' papers and identify repeated questions to improve speed. The First Law of Thermodynamics is used to solve numerical problems involving heat and work. In a problem where 6 kJ of work is done on the system, and the internal energy changes by 24 kJ, we can calculate the heat transfer (Q) using the equation: Q = ΔU + W. Since work is done on the system, we use a negative sign for W. In another example, a foam cup with hot water loses 150 kJ of heat while being stirred by a paddlewheel that does 25 kJ of work on the water. The initial internal energy of the water is 200 kJ. We can calculate the change in internal energy (ΔU) and the final internal energy (Ui) using the First Law of Thermodynamics: Q = ΔU + W, where Q is negative because heat is lost. Key derivations to learn include the Work-Energy Theorem, Time period of Simple Pendulum, and Bernoulli's Equation. Reference books like HC Verma are recommended for theory, while DC Pandey or Pradeep's are suggested for numericals. Practical work should follow the procedures in the NCERT Lab Manual. Q equals Delta U minus work done on the system equals one, therefore Delta U equals negative Q plus work done by the system equals two. a) Calculating Delta U: Delta U equals negative Q plus work done by the system equals one hundred fifty kJ. The change in internal energy of water is negative one hundred twenty-five kJ. It means that the water has lost one hundred twenty-five kJ. b) Calculating initial state energy U sub f, equals to Delta U plus initial state energy U sub i: U sub f equals Delta U plus U sub i, which is equal to minus one hundred twenty-five plus two hundred kJ. The final internal energy of the water is seventy-five kJ.

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