

| B.SC Ist | | Semester first | |
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| Subject: Physics | | Paper 1 : PH-101, Classical Mechanics and theory of Relativity | |
| S.No | Course Outcomes | | |
| CO1 | Basic Concepts of Classical Mechanics: Students learnt concepts of mechanics of single and n particles, conservation laws for linear momentum, angular momentum and energy. Centre of mass and constrained motion were studied. | | |
| CO2 | Generalized Notations: Students learnt concepts of generalized coordinates, velocity, momentum, acceleration, force and potential. Hamilton's Variational Principle, Lagrange's Equation of motion and its applications were studied. | | |
| CO3 | Theory of Relativity: Students learnt concepts of inertial and non inertial frames, Rotational frames. Effect of centrifugal and coriolis force due to earth's rotation and Michelson Morley Experiment were studied. | | |
| CO4 | Applications of Theory of Relativity: Lorentz Transformation equation was derived. Students learnt Length contraction, time dilaton, twin paradox, velocity addition theorem. Mass energy equivalence was established. | | |
| PAPER: PH: 102 ELECRICITY,MAGNETISM AND ELECTROMAGNETIC THEORY | | | |
| CO1 | Vector background and electric field Students learnt about Scalar and vector fields, curl and divergence of a vector field and their physical significance, Poisson's and Laplace equation. | | |
| CO2 | Magnetism Students learnt properties of B, Paramagnetic, diamagnetic and ferromagnetic theories and magnetic hysteresis curve. | | |
| CO3 | Electromagnetism Students learnt to derive Maxwell's equation of motion, boundary condition and pointing theorem. | | |
| CO4 | A.C. Analysis Students learnt analysis of a.c. circuit using J-operator, series and parallel resonant circuits, Quality factor. | | |

| B.Sc. Ist Subject: Physics | | Semester: Second Paper1,: PH-201, Properties of matter and Kinetic theory of Gases | |
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| S.No. | Course Outcomes | | |
| CO1 | Moment of Inertia: Concepts of Rotation of rigid body, Moment of Inertia were learnt by students, moment of inertia of solid and hollow sphere, spherical shell, solid and hollow cylinder and solid rectangular bar were derived. | | |
| CO2 | Elasticity: Students learnt about various Elastic Constants and their relations. Torsion of Cylinder and twisting couple, bending of beam, cantilever and centrally loaded beam was studied. | | |
| CO3 | Kinetic Theory of Gases I : Students understood about various assumptions of kinetic theory of gases, pressure of an ideal gas, kinetic interpretation of temperature. Degree of freedom, law of equipartition of energy and its application for specific heat of gases, Brownian motion were studied, Vander waal's equation was derived. | | |
| CO4 | Kinetic theory of Gases II: Maxwell Boltzmann speed and velocity distribution of molecules were derived. Most probable speed, average and r.m.s. speed and mean free path were studied. Students learned about transport of momentum, transport of energy and transport of mass. | | |
| Class: B.Sc. Ist Subject: physics | | Semester: Second Paper: PH-202; Electronics Devices | |
| CO 1 | Semiconductors Students learned about semiconductors, their types & characteristics. Various application of semiconductors like photodiode, solar cell, half – full wave rectifier, zener diode as voltage regulator were explained. Various types of filter (series inductor, shunt capacitance, choke, R.C filter) | | |
| CO 2 | Transistors Students learned about Classifications of Transistors, their configuration & characteristics, D.C load line & Transistors biasing. | | |
| CO 3 | Transistors Amplifiers The Classifications of Amplifiers, coupling in Amplifiers & feed back in Amplifiers was studied. | | |
| CO 4 | Oscillators Students learn about Oscillators Condition, principle and working of various Oscillators (tuned collector common emitter, Hartley Oscillators) & C.R.O. | | |