

Govt. College, Alewa (Jind)

Session: 2023-2024 (B.Sc 1stYear)

Lesson Plan (Odd Sem)

Name of the Teacher: Dr MANJEET SINGH , ASSISTANT PROFESSOR

Subject: PHYSICS (Theory)

Class: B. Sc. 1st Sem.

Physics Paper: Mechanics

Paper's Code: CC/MCC (B23-PHY-101)

Max. Marks: 70(External Assessment: 50 Marks, Internal Assessment: 20 Marks)

Contact Hours Per Week: 3

Sr. No.	Week	Topic
1	24-07-2023 to 29-07-2023	Rotation of rigid body, Moment of inertial, Radius of Gyration,
2	31-07-2023 to 05-08-2023	Theorem of perpendicular and parallel axes (with proof), Moment of inertia of ring, disc, Annular disc,
3	07-08-2023 to 12-08-2023	Moment of inertia of solid sphere, hollow sphere, solid cylinder, hollow cylinder Moment of inertia of rectangular plate, Square Plate, Triangular Plate, Solid cone,
4	14-08-2023 to 19-08-2023	Torque, angular momentum ,Rotational Kinetic Energy, Law of conservation of Angular Momentum, Rolling Motion, Condition for pure rolling,
5	21-08-2023 to 26-08-2023	Acceleration of a body rolling down on an inclined plane, Fly wheel, Moment of inertia of an irregular body, Class Test
6	28-08-2023 to 02-09-2023	Deforming Fore, Elastic Limit, Elasticity, Stress and Strain and their types
7	04-09-2023 to 09-09-2023	Hook's law, Modulus of elasticity, Relation between shear angle and angle of twist, Elastic energy stored/volume of elastic body
8	11-09-2023 to 16-09-2023	Elongation produced in heavy rod due to its own weight, Elastic potential energy stored in it, Poisson's ratio and its limiting value, Relation between Young's Modulus, Bulk Modulus and Poisson ratio.
9	18-09-2023 to 23-09-2023	Relations between Young's Modulus, Bulk Modulus and Modulus of rigidity,
10	25-09-2023 to 30-09-2023	Torque required for twisting cylinder, Bending of beam, Bending moment and its magnitude, Bending of Cantilever with weight loaded at its free end, weight of cantilever distributed over its entire length
11	02-10-2023 to 07-10-2023	Dispersion of Centrally loaded beam supported at its ends, Elastic constants for the material of the wire by Searle's method. Class Test
12	09-10-2023 to 14-10-2023	Michelson- Morley's experiment and its outcomes, Postulates of special Theory of relativity, concept of Einstein's relativity,

13		Lorentz transformation, Simultaneity and order of event, Lorentz contraction
14	16-10-2023 to 21-10-2023	Length Contraction, Time Dilation, Relativistic Transformation of Velocity
15	23-10-2023 to 28-10-2023	Relativistic addition of velocities, Velocity addition theorem, Variation of mass with velocity,
16	30-10-2023 to 04-11-2023	Mass energy equivalence, Relativistic Doppler effect Class Test
17	06-11-2023 to 09-11-2023	Law of gravitation, Potential Field due to spherical shell and solid sphere
18	10-11-2023 to 16-11-2023	University Vacations (Diwali)
19	17-11-2023 to 18-11-2023	Motion of Particle under centre force field, Two body problem and its reduction to one body problem and its solution
20	20-11-2023 to 25-11-2023	Determination of g by bar pendulum, Normal Coordinates and Normal modes, Normal modes of vibration of given spring-mass system
21	27-11-2023 to 02-12-2023	Possible angular frequencies of oscillations of two identical simple pendulum length (l) and mass (m) joined together with spring of spring constant (k) Class Test
22	04-12-2023 to 09-12-2023	Revision