Lesson plan(2025-26)

Name of faculty - Sanjula Yadav

Discipline - Common for all branches

Semester - 1st sem.(220013)

Subject - Applied Physics-1

Code - 220013

Lesson plan duration - 04-08-2025 to 26-11-2025

Work load (lecture/practical) per week (in hours) lectures – 02, practical - 02

Lecture No.	Theory(Topic)	Practical day	Practical
1.	Introduction about Physics		
2.	Definition of physics , physical quantities, fundamental and derived quantities, Units and its type, fundamental and derived units	1	Familiarization of measurement instruments and their parts
3.	Dimension, dimensional formulae, SI unit of physical quantities, System of units, CGS,MKS,FPS,SI system		
4.	Dimensional equation, principle of homogeneity	2	To find internal diameter and depth of beaker using a Vernier calliper and find its volume
5.	Application of dimensional analysis, checking the correctness of physical equation,		
6.	Conversion of system of unit		
7.	Scalar and vector quantities, unit vector, position vector,	3	To find the diameter of wire using screw gauge
8.	Collinear vector, co-planar vector, co-initial vector		
9.	Addition of vector, triangle and parallelogram law		
10.	Scalar and vector product	4	Revision and checked practical note book
11.	Force and its units resolution of force		
12.	Newton's law of motion and its example	5	To find thickness of paper using screw gauge
13.	Linear momentum, law of conservation of linear momentum, impulse		
14.	Circular motion, definition of angular displacement, angular velocity. Angular acceleration	6	Revision and checked practical note book
15.	Frequency, time period, application of centripetal force in banking of road , rotational motion		
16.	Definition of torque, angular momentum, moment of inertia	7	To determine the thickness of glass strip using spherometer
17.	Work, type of work and its examples		
18.	Friction – definition and its applications with examples	8	Revision and checked practical note book
19.	Power and its unit and formula		
20.	Energy – definition and its unit , examples of transformation of energy ,Kinetic energy	9	To determine radius of curvature of a given

	–definition , formula and its derivation		spherical surface by a spherometer
21.	Potential energy –definition , examples, formula and its derivation	10	To verify parallelogram law of forces
22.	Law of conservation of mechanical energy for freely falling bodies		
23.	Simple numerical problem based on formula of power and energy	11	Revision and checked practical note book
24.	Elasticity and plasticity , deforming force, restoring force, examples of elastic and plastic bodies		
25.	Definition of stress and strain , Hooke's law modulus of elasticity	12	Revision and checked practical note book
26.	Pressure , atmospheric pressure, Pascal's law gauge pressure Surface tension, application of surface tension,		
27.	Effect of temperature on surface tension Viscosity – definition , examples, effect of temperature on viscosity		
28.	Definition of heat and temperature, Difference between heat and temperature	13	To determine force constant of spring using hook's law
29.	Principle and working of mercury thermometer , Different scales of temperature and their relation ship	14	To measure the room temperature with the help of thermometer and its conversion in different scales
30.	Mode of transfer of heat conduction and convection and radiation with examples Properties of hear radiation		

Note: There will be Class Test, Assignment work and ~~Assessment~~ Sessional Exam , Quizzes etc will be given as per Academic Calender.

Sanjula Yadav

Lecturer in Physics

28/7/25

PAC Committee

Member-1

Sh. Narender Rana

28/7/25

PAC Committee

Member-2

Smt.Sonia

28/7/25

PAC Committee

Member-3

Dr. Jyoti Gupta