Lesson plan

Name of faculty - Mohit Yadav
Discipline - Common for all branches

Semester - 1st sem.

Subject - Applied Physics

Lesson plan duration - 45 days

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

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

	derivation		
24.	Potential energy –definition , examples, formula and its derivation	11	To verify parallelogram law of forces
25.	Law of conservation of mechanical energy for freely falling bodies		
26.	Simple numerical problem based on formula of power and energy	12	Revision and checked practical note book
27.	Elasticity and plasticity , deforming force, restoring force, examples of elastic and plastic bodies		
28.	Definition of stress and strain , hooke's law modulus of elasticity	13	To determine atmospheric pressure at a place using fortin's barometer
29.	Pressure , atmospheric pressure, pascal's law gauge pressure		
30.	Surface tension, application of surface tension,	14	Revision and checked practical note book
31.	effect of temperature on surface tension		
32.	Viscosity – definition , examples, effect of temperature on viscosity		
33.	Definition of heat and temperature	15	To determine force constant of spring using hook's law
34.	Difference between heat and temperature		
35.	Principle and working of mercury thermometer	16	To measure the room temperature with the help of thermometer and its conversion in different scales
36.	Mode of transfer of heat conduction and convection and radiation with examples		
37.	Properties of hear radiation	17	Revision and checked practical note book
38.	Different scales of temperature and their relation ship		
39.	Revision		
40.	Revision		
41.	Revision		
42.	Revision		
43.	Revision		
44.	Revision		
45.	Revision		
46.	Revision		
47.	Revision		
48.	Revision		
49.	Revision		
50.	Revision		