Lesson Plan

Name	:	Dr.Wasim Javed
Discipline	:	Common for all branches
Semester	:	1 st
Subject	:	Applied Physics
Code	:	180013
Session	:	2022-23
Work Load	:	2 Lectures, and 1 practical per week

Day	Lecture	Practical
	Topic	Торіс
1.	Introduction about physics Physical quantities Units - fundamental and derived units	Familarisation of measurement instruments
2.	Physical quantities Units - fundamental and derived units FPS, CGS and SI units	and their parts, and taking a reading.
3.	Dimensions and dimensional formulae of physical quantities	To find the diameter of solid cylinder using vernier calliper
4.	Dimensional formulae Distance, area, volume, velocity, acceleration, momentum, force etc.	
5.	Dim. Formula of work, power, energy, surface tension, stress, strain, moment of inertia	Revision & Checked practical note book
6.	Principle of homogeneity of dimensions conversion from one system of units to other	
7.	Limitations of dimensional analysis	To find internal diameter and depth of a beaker using vernier caliper and hence
8.	Scalar and vector quantities – examples	find its volume.
9.	Addition of Vectors,	To find internal diameter and
10.	Triangle and Parallelogram law	depth of a beaker using vernier caliper and hence
11.	Vector Product,	find its volume.
12.	Definition of Distance ,Displacement, Speed, Velocity, Acceleration, Force	
13.	Newton's laws of motion and Conservation of linear momentum	Revision & Checked practical note book
14.	Force, Resolution of force	
15.	Impulse and its examples	To find the diameter of wire using screw gauge.
16.	Introduction to Circular motion	
17.	Angular displacement, angular velocity, angular Acceleration	
18.	Relation between linear and angular velocity.	

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19.	Centripetal and centrifugal forces	
20.	Banking of roads (application of centrifugal	Revision & Checked
	force)	practical note book
21.	Rotational motion with examples	
22.	Definition of torque and angular momentum and their example	To find the diameter of wire using screw gauge.
23.	Moment of inertia and its physical significance	To find the thickness of paper sheet using screw gauge.
24.	Work, its units and types with examples Transformation of energy	
25.	Energy and its units: Kinetic energy and potential energy	Revision & Checked practical note book
26.	Energy conservation law in case of freely falling body	To determine the thickness of glass strip using a
27.	Power (definition, formula and units),.	spherometer
28.	Simple numerical problem on power Energy and its units	
29.	Kinetic energy and potential energy	Revision & Checking of practical note books
30.	Energy conservation law in case of freely falling body	
31.	Power (definition, formula and units),.	To determine the thickness of glass strip using a spherometer
32.	Definition of deforming force restoring force, elastic body & plastic body	
33.	Stress and strain and their types	To determine radius of
34.	Hooke's law,	curvature of a given spherical surface by a spherometer

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35.	Different types of module of elasticity Pressure, Pascal's law	Revision & Checking of practical note books
36.	Surface tension: definition, its units, surface tension	
37.	Effect of temperature on Surface tension	
38.	Viscosity: definition, units and effect of temp.	
39.	Fluid motion, stream line and turbulent flow.	
40.	Definition of heat and temperature,	To verify parallelogram law of forces
41.	Difference between heat and temperature	
42.	Principles of measurement of temperature,	
43.	Different scales of temperature	To determine the atmospheric pressure at the place by using Fortin's Barometer
44.	Relationship between different temperature scales	
45.	Modes of transfer of heat Conduction	To find force constant of
46.	convection and radiation	spring using Hook's Law
47.	Properties of heat radiation	To measure room temperature using thermometer and converting it into different temperature scale.
48.	Principle and working of mercury thermometer	