LESSON PLAN (2025-2026)

NAME: Mr. Rajesh Uppal
DEPTT: APPLIED SCIENCE
SEMESTER: FIRST
SUBJECT: APPLIED PHYSICS I

		THEORY	PRACTICAL	
week	day	Topic	week	experiment
1	1	Definition of Physics, physical quantities- fundamental and derivedUnits: fundamental and derived	1	INTRODUCTION
	2	Dimension, dimensional formulae and SI units of physical quantities-distance,displacement, area, volume, density, velocity, acceleration, linear momentum, force,impulse,work,power,energy,pressure,surface tension,stress,strain		Familiarization of intruments and their parts(vernier calliper,screw gauge
2	3	Dimensional equations, principle of homogeneity of dimensional equation	2	
	4	Application of dimensional analysis: checking the correctness of physical equation,		familiarization of intruments and their parts(spherometer,travelling microscope)
3	5	conversion of system of unit (force, work, acceleration)	3	To find the diameter of solid cylinder using vernier calliper
	6	revision of unit 1.Assignment/Quiz		
4	7	Scalar and vector quantities– definition and examples, representation of vector, types of vectors	4	
	8	Vector algebra- addition of vectors, Triangle & Parallelogram law		to find the internal diameter and depth of a beaker using vernier calliper and hence find its volume
5	9	Scalar and vector product.Force and its units, resolution of force	5	To find diameter of wire using screw gauge
	10	Newton's laws of motion		
6	11	Linear momentum, Law of conservation of linear momentum.Impulse.Circular motion:imp definitions	6	To find thickness of paper using screw gauge
	12	Relation between linear and angular velocity,centripetal and centrifugal forces		
7	13	Rotational motion: definition with examples	7	To determine the thickness of glass strip using a spherometer
	14	Definition of torque, angular momentum, moment of inertia and its physical significance.quiz/assignment		
8	15	Work- definition, symbol, formula and SI unit, types of work	8	completing readings of experiments missed out
	16	Friction– definition and its simple daily life applicationsPower- definition, formula and units		

9	17	Energy- definition and its SI unit, examples of transformation of energy.potential and kinetic energy	9	completing readings of experiments missed out
	18	Law of conservation of mechanical energy for freely falling bodies (with derivation)Simple numerical problems based on formula of Power and Energy QUIZ		
10	19	Elasticity and plasticity- definition, deforming force, restoring force,	10	To verify parallelogram law of force
	20	Definition of stress and strain, Hooke's law, modulus of elasticity		
11	21	Pressure- definition, atmospheric pressure, gauge pressure, absolute pressure, Pascal's law	11	To determine the atmospheric pressure using Fortin's Barometer
	22	Surface tension- definition, SI unit, applications of surface tension, effect of temperature		
12	23	Viscosity: definition, unit, examples, effect of temperature on viscosity QUIZ/ASSIGNMENT	12	To determine force constant of spring using Hooke's law
	24	Definition of heat and temperature (on the basis of kinetic theory)Difference between heat and temperature		
13	25	Principle and working of mercury thermometerModes of tr	13	Measuring room temperature and conversion in different scales
	26	Properties of heat radiation		
14	27	Different scales of temperature and their relationship	14	REVISION
	28	QUIZ/ASSIGNMENT		
15	29	revision	15	REVISION
	30	revision		
16	31	revision	16	REVISION
	32	revision		