

PH10017 – Physics – LECTURE PLAN

Subject Code	Subject Nomenclature	Contact Hrs			Maximum Marks				Credits		
		L	T	P	CW	End	SW	End	T	P	Tot
PH10017	Physics	2	1	0	30	70			3	0	3

L/T. No.	Topic	Date
L1	Principle of superposition. Conditions for sustained interference.	
L2	Division of wavefront and amplitude, Newton's rings.	
T1	Interference	
L3	class of diffraction, N (grating) slits	
L4	Rayleigh's criteria and resolving power.	
L5	Diffraction & resolving power	
T2	Diffraction	
L6	Absorption, emission processes, components of lasers, optical resonator.	
L7	Einstein's A & B coefficients. Population inversion,	
L8	He-Ne lasers, applications.	
T3	Lasers	
L9	Classification, acceptance angle, numerical aperture, V-number	
L10	Losses, FO-Sensors, FO communication	
T4	Fiber Optics	
L11	Postulates of STR and Lorentz transformation equation	
L12	time dilation length contraction, twin paradox	
L13	Relativistic velocity	
T5	Basics of Relativity theory	
L14	Relativistic mass	
L15	mass-energy relation.	
T6	Special Theory of Relativity	
L16	Planck's radiation formula, Ultraviolet catastrophe.	
L17	Compton's effect.	
L18	de Broglie's concept of matter waves, Heisenberg's uncertainty relations.	
T7	Foundations of QM	
L19	Schrodinger's wave equation, Physical interpretation of wave function.	
L20	Particle in a one-dimensional potential well.	
T8	Wavefunction and Schrodinger's eqn	
L21	Introduction to thermodynamics properties and process	
L22	Heat and Work, Zeroth law of TD	
L23	First law of TD	
T9	Fundamentals of TD	
L24	Steady flow energy eq., Second law	
L25	Second law of TD continued	
T10	Thermodynamics	
SIGNATURE OF TEACHER		