

## Lesson Plan

**Name of the Faculty: Dr. PARMJEET KAUR**

**Discipline: APPLIED SCIENCE AND HUMANITIES**

**Semester: 1<sup>ST</sup>**

**Subject: APPLIED PHYSICS-I**

**Work Load (Lecture/Practical) per week (in hours): Lectures -4 , Practicals- 2**

Week	Theory		Practical	
	Lecture day	Topic (including assignment/test)	Practical day	Topic
1 <sup>st</sup>	1 <sup>st</sup>	Interference and its condition	1 <sup>st</sup>	To find the wavelength of monochromatic light by Newton's ring experiment
	2 <sup>nd</sup>	Superposition principle		
	3 <sup>rd</sup>	Fresnel's Bi-prism & applications		
	4 <sup>th</sup>	Fresnel's Bi-prism & applications		
2 <sup>nd</sup>	5 <sup>th</sup>	wedge shaped film	2 <sup>nd</sup>	To find the wavelength of monochromatic light by Newton's ring experiment
	6 <sup>th</sup>	Newton's ring & applications		
	7 <sup>th</sup>	Newton's ring & applications		
	8 <sup>th</sup>	Newton's ring & applications		
3 <sup>rd</sup>	9 <sup>th</sup>	Michelson's Interferometer & applications	3 <sup>rd</sup>	To find the wavelength of various colours of white light with the help of plane transmission diffraction grating.
	10 <sup>th</sup>	Michelson's Interferometer & applications		
	11 <sup>th</sup>	REVISION		
	12 <sup>th</sup>	REVISION		
4 <sup>th</sup>	13 <sup>th</sup>	Diff. of light and its types, Fraunhofer Diff. at a single slit	4 <sup>th</sup>	To find the wavelength of various colours of white light with the help of plane transmission diffraction grating.
	14 <sup>th</sup>	Diff. grating and its dispersive power		
	15 <sup>th</sup>	Resolving power		
	16 <sup>th</sup>	Secondary maxima & minima, absent spectra		
5 <sup>th</sup>	17 <sup>th</sup>	Secondary maxima & minima, absent spectra	5 <sup>th</sup>	To verify Newton's formula and hence to find the focal length of the given convex lens
	18 <sup>th</sup>	Overlapping of spectral lines, determination of wavelength		
	19 <sup>th</sup>	Overlapping of spectral lines, determination of wavelength		
	20 <sup>th</sup>	REVISION		
6 <sup>th</sup>	21 <sup>st</sup>	Polarization of transverse waves, plane of polarization	6 <sup>th</sup>	1. To find the frequency of A.C. mains by using Sonometer and horse shoe magnet.
	22 <sup>nd</sup>	Polarization by reflection		
	23 <sup>rd</sup>	double refraction		
	24 <sup>th</sup>	Nicol prism		
7 <sup>th</sup>	25 <sup>th</sup>	Quarter & half wave plate	7 <sup>th</sup>	To find low resistance by Carrey-Foster bridge.
	26 <sup>th</sup>	Specific rotation		

	27 <sup>th</sup>	Polarimeters		
	28 <sup>th</sup>	<b>REVISION</b>		
8 <sup>th</sup>	29 <sup>th</sup>	Laser action, Spont. and Stimu. Emis.	8 <sup>th</sup>	To find the resistance of a galvanometer by post office box.
	30 <sup>th</sup>	Einstein's Coeff.		
	31 <sup>st</sup>	Pumping		
	32 <sup>nd</sup>	characteristics of Laser		
9 <sup>th</sup>	33 <sup>rd</sup>	APPLICATIONS OF LASER	9 <sup>th</sup>	To find the value of high resistance by substitution method
	34 <sup>th</sup>	He-Ne Laser		
	35 <sup>th</sup>	Semiconductor laser		
	36 <sup>th</sup>	<b>REVISION</b>		
10 <sup>th</sup>	37 <sup>th</sup>	Optical fiber, Prop. of light in fibers	10 <sup>th</sup>	To convert a galvanometer into an ammeter of desired range and verify the same
	38 <sup>th</sup>	advant. & app.		
	39 <sup>th</sup>	Num. Aperat. & Accept. Angle		
	40 <sup>th</sup>	Types of fibers		
11 <sup>th</sup>	41 <sup>st</sup>	V-Number & fibre optics communication system	11 <sup>th</sup>	To compare the capacitances of two capacitors by de-sauty's bridge and hence to find the dielectric constant of a medium.
	42 <sup>nd</sup>	<b>REVISION</b>		
	43 <sup>rd</sup>	Ultrasonic waves & its properties		
	44 <sup>th</sup>	Production of ultrasonic waves i.e methods		
12 <sup>th</sup>	45 <sup>th</sup>	Detection & measurement of ultrasonic waves & applications	12 <sup>th</sup>	To find the resolving power of telescope
	46 <sup>th</sup>	Detection & measurement of ultrasonic waves & applications		
	47 <sup>th</sup>	<b>REVISION</b>		
	48 <sup>th</sup>	<b>REVISION</b>		
13 <sup>th</sup>	49 <sup>th</sup>	Michelson-Morely Experiment	13 <sup>th</sup>	<b>REVISION</b>
	50 <sup>th</sup>	Lorentz Transf., Galilean transformation		
	51 <sup>st</sup>	Length contraction, time dilation, concept of ether		
	52 <sup>nd</sup>	velocity transformation		
14 <sup>th</sup>	53 <sup>rd</sup>	Variation of mass with velocity	14 <sup>th</sup>	<b>REVISION</b>
	54 <sup>th</sup>	mass energy equi., relation between momentum and energy		
	55 <sup>th</sup>	<b>REVISION</b>		
	56 <sup>th</sup>	Classification of Nuclear radiations		
15 <sup>th</sup>	57 <sup>th</sup>	Interaction of charged particle & gamma radiation with matter	15 <sup>th</sup>	<b>REVISION</b>
	58 <sup>th</sup>	Proportional counter, semiconductor detector		
	59 <sup>th</sup>	Ionization Chamber, Solid state detect,		
	60 <sup>th</sup>	Scint.counter, G.M. Counter		