

LESSION PLAN

Name Of The Faculty : Mrs. Parul Sharma

Discipline : Comp Engg./Food Tech.

Semester : 2nd

Subject : Applied Physics-II

Lesson Plan Duration : 15 weeks (from January,2018 to april, 2018)

Work Load (Lecture/Practical) per week (in hours) : Lecture – 04 , Practicals -02

Week	Theory		Practical	
	Lecture day	Topic (including assignment/test)	Practical day	Topic
1 st	1 st	<ul style="list-style-type: none"> Wave motion - Introduction 	1 st	simple pendulum-introduction
	2 nd	<ul style="list-style-type: none"> Terms - displacement, amplitude, time period,frequency,wavelength,wave velocity, 		
	3 rd	<ul style="list-style-type: none"> Transverse wave motion 	2 nd	Arrangement of apparatus & testing
	4 th	<ul style="list-style-type: none"> longitudinal wave motion 		
2 nd	5 th	<ul style="list-style-type: none"> Difference b/w Transverse & longitudinal wave motion 	3 rd	Taking readings – To find the time period of simple pendulum
	6 th	<ul style="list-style-type: none"> relationship among wave velocity, frequency and wave length . Simple Harmonic Motion (SHM): definition,examples 		
	7 th	<ul style="list-style-type: none"> Cantilever Vibrations & its types 	4 th	Cantilever – introduction
	8 th	<ul style="list-style-type: none"> Acoustics of buildings – reverberation reverberation time 		
3 rd	9 th	<ul style="list-style-type: none"> Echo, noise, coefficient of absorption of sound 	5 th	Cantilever – setting apparatus & perform

	10 th	<ul style="list-style-type: none"> • methods to control reverberation time. 		
	11	<ul style="list-style-type: none"> • Ultrasonics 	6 th	Taking readings - To determine and verify the time period of Cantilever
	12	<ul style="list-style-type: none"> • Engineering applications of Ultrasonics 		
4 th	13	<ul style="list-style-type: none"> • Optics – Introduction 	7 th	Introduction- To find the frequency of vibrations using mass-spring system
	14	<ul style="list-style-type: none"> • Reflection of Light • Refraction of Light 		
	15	<ul style="list-style-type: none"> • refractive index • Total internal reflection • Critical angle 	8 th	Setting up the system
	16	<ul style="list-style-type: none"> • Applications of TIR • conditions for TIR 		
5 th	17	<ul style="list-style-type: none"> • Lens formula • Microscope, telescope& their uses 	9 th	Perform the experiment to find the frequency of vibrations
	18	<ul style="list-style-type: none"> • Power of lens • Based numerical 		
	19	<ul style="list-style-type: none"> • Assignment – Ultrasonics 	10 th	Revision-To find the time period of simple pendulum
	20	<ul style="list-style-type: none"> • Test 		
6 th	21	<ul style="list-style-type: none"> • Electrostatics – Introduction 	11	Revision-To determine & verify the time period of cantilever
	22	<ul style="list-style-type: none"> • Coulombs law • Unit charge 		
	23	<ul style="list-style-type: none"> • Electric field • Electric lines of force,its properties 	12	Introduction - To verify law of reflection of light using mirror
	24	<ul style="list-style-type: none"> • Electric Intensity • Electric Flux 		
7 th	25	<ul style="list-style-type: none"> • Electric potential • Electric field intensity due to a point charge. 	13	Explain reflectionof light
	26	<ul style="list-style-type: none"> • Gauss law(Statement and derivation) 		
	27	<ul style="list-style-type: none"> • Capacitor • Capacitance 	14	Setting up the apparatus properly
	28	<ul style="list-style-type: none"> • Series combination of capacitors 		
8 th	29	<ul style="list-style-type: none"> • parallel combination of capacitors 	15	Performed the expt. & verified the law of reflection of light
	30	<ul style="list-style-type: none"> • Numerical based on Grouping of capacitors 		
	31	<ul style="list-style-type: none"> • Current Electricity – Introduction 	16	. Resistance-introduction & its function
	32	<ul style="list-style-type: none"> • Electric Current and its Unit • Direct and alternating current 		

9 th	33	<ul style="list-style-type: none"> Resistance and Specific Resistance Conductance 	17	Capacitor-Introduction & its function
	34	<ul style="list-style-type: none"> Series combination of Resistances 		
	35	<ul style="list-style-type: none"> Parallel combination of Resistances 	18	To identify different components like resistance, capacitor
	36	<ul style="list-style-type: none"> Ohm's law 		
10 th	37	<ul style="list-style-type: none"> Superconductivity 	19	Ohm's law – Introduction
	38	<ul style="list-style-type: none"> Electric energy Electric power 		
	39	<ul style="list-style-type: none"> Heating effect of current 	20	Adjustment of ohm kit, & taking readings
	40	<ul style="list-style-type: none"> Kirchhoff's laws 		
11	41	<ul style="list-style-type: none"> Test 	21	To verify ohm's laws by plotting a graph between voltage and current
	42	<ul style="list-style-type: none"> Introduction to magnetism 		
	43	<ul style="list-style-type: none"> Types of magnetic materials Dia materials with example 	22	Introduction - To verify laws of resistances in series combination
	44	<ul style="list-style-type: none"> para and ferromagnetic materials with examples 		
12	45	<ul style="list-style-type: none"> Magnetic field magnetic intensity 	23	Setting resistance in series apparatus & connecting the wires properly
	46	<ul style="list-style-type: none"> Magnetic lines of force 		
	47	<ul style="list-style-type: none"> magnetic flux Electromagnetic induction 	24	Taking readings-To verify laws of resistance in series combination
	48	<ul style="list-style-type: none"> Semiconductor physics – Introduction Energy bands 		
13	49	<ul style="list-style-type: none"> Types of materials (insulator, semi conductor, conductor) intrinsic and extrinsic semiconductors 	25	Introduction - To verify laws of resistances in parallel combination
	50	<ul style="list-style-type: none"> p-n junction diode its V-I characteristics 		
	51	<ul style="list-style-type: none"> Diode as rectifier – half wave Rectifier 	26	Setting resistance in parallel apparatus & connecting the wires properly
	52	<ul style="list-style-type: none"> Full wave rectifier 		
14	53	<ul style="list-style-type: none"> Semiconductor transistor; pnp and npn Assignment – Semiconductor Physics 	27	Taking readings-To verify laws of resistance in parallel combination
	54	<ul style="list-style-type: none"> Test 		
	55	<ul style="list-style-type: none"> Modern Physics - Introduction 	28	Revision- To verify Law of resistances in series combination.
	56	<ul style="list-style-type: none"> Lasers: full form Its characteristics 		
15	57	<ul style="list-style-type: none"> applications of Laser 	29	Diode-Introduction & its function
	58	<ul style="list-style-type: none"> Fibre optics Applications of Fibre optics 		
	59	<ul style="list-style-type: none"> Introduction to nanotechnology 	30	V-I characteristics using P-N Junction Diode.
	60	<ul style="list-style-type: none"> Applications of nanotechnology 		

