

# LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
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## Ist B. Tech. 2022-2023 APPLIED PHYSICS LESSON PLAN [CSD] SEM-II

PERIOD	DATE {Tentative}	TOPIC	UNIT No	TEACHING METHODOLOGY	REMARKS
		<b>UNIT I - Interference</b>		Lectures, PPT Demonstration Animations, Group Discussion	
1		The Basic differences between Intermediate and Professional College Education - Course Regulations <b>Superposition principle.</b>	--	--	
2		<b>Thin film Interference due to reflected light</b>	I	"	
3		<b>Thin film Interference due to reflected light</b>	I	"	
4		Young's Double Experiment Conditions for the Interference Newton's Rings under Reflected System	I	"	
5		Newton's Rings under Reflected System Fringe width	I	"	
6		Fraunhofer Diffraction at Single Slit	I	"	
7		Fraunhofer Diffraction at Single Slit continued... Effect of Slit Width Maximum Number of Orders Difference Between the Interference and Diffraction	I	"	
8		Fraunhofer Diffraction at Single Slit continued... Effect of Slit Width Maximum Number of Orders	I	"	
		<b>UNIT II - LASERS</b>		Lectures, PPT Demonstration Animations, Group Discussion	
9		Introduction	II		
10		Characteristics of lasers	II		
11		Principle of lasers	II		
12		Three processes	II	"	
13		Einstein coefficients	II	"	

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14		Population inversion optical resonator	II	„
			II	
15		Ruby laser	II	Lectures, PPT Demonstration Animations, Group Discussion
16		HE-NE laser and applications	II	„
		<b>UNIT III – Fiber Optics</b>		Lectures, PPT Demonstration Animations, Group Discussion
17		Introduction to Fiber Optics	III	„
18		Total internal reflection	III	„
19		critical reflection <b>Construction of ofc</b>	III	„
20		Acceptance Angle	III	„
21		Numerical Aperture	III	„
22		Types of Optical Fibers and Refractive Index Profiles, Step Index and Graded Index Fibers	III	„
23		Single Mode Fibers Multimode Fibers Graded index Optical Fibers	III	„
24		Advantages of Optical Fiber Communication	III	„
		<b>UNIT IV Preliminary Quantum Mechanics</b>		Lectures, PPT Demonstration Animations, Group Discussion
25		Introduction	IV	
26		De-Broglie's Wave Length – Physical Significance and Properties of Matter Waves	IV	„
27		Heisenberg's Uncertainty Principle and its Applications	IV	„
28		Physical Significance and Properties of Matter Waves	IV	„



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29		Schrodinger's Time Independent Equation	IV	"
30		Schrodinger's Time Independent Equation	IV	"
31		Particle in One Dimensional Potential Box - The Relevant Plots	IV	"
32		Particle in One Dimensional Potential Box - The Relevant Plots	IV	"
		<b>UNIT V</b>		Lectures, PPT Demonstration Animations, Group Discussion
33		Concept of electric field Concept of magnetic field Point charge in electric field	V	"
34		Gauss law of electro statics	V	"
35		Gauss law applications	V	"
36		Gauss law of magneto statics	V	"
37		Gauss law applications	V	"
38		Magnetic field on current carrying coil	V	"
39		Amperes law Biot savart law Faraday law Lentzs law	V	"
40		Maxwells Equation	V	"
		<b>UNIT VI</b> Semiconductors		Lectures, PPT Demonstration Animations, Group Discussion
41		<b>Introduction of</b> Semiconductors	VI	"
42		Intrinsic Semiconductors		
43		Extrinsic Semiconductors	VI	"
44		Intrinsic Semiconductors, Carriers Concentration	VI	"
45		Extrinsic Semiconductors, Carriers Concentration	VI	"
46		Hall Effect AND APPLICATIONS	VI	"
47		MOBILITY SIGN OF CHARGE CARRIERS	VI	"
48		CONDUCTIVITY RESISTIVITY	VI	"