

LESSON PLAN FOR ODD SEMESTER(01 Sept, 2022- 25 Dec. 2022)

Name of Faculty : Ms. SHIWANI SARAN

Designation : Assistant Professor

Department of Physics, S.D. College (Lahore), Ambala Cantt.

Week	Date	THEORY (10 PERIODS/ WEEK)			PRACTICAL (12 PERIODS/WEEK)	
		M. Sc.– I(1 st SEM) Paper-II (Wed.-Sat.) Applied Mathematics [04 PERIODS/WEEK]	M.Sc. – II(3 rd Sem) Paper-II (Wed.-Sat.) Microwave devices [04 PERIODS/WEEK]	M.Sc.-II (3 rd SEM) Paper-I (Mon.-Tue.) Material Science-I [02 PER./WEEK]	M.Sc.-I (1 st Sem) Practical (6 Lectures.) (Tue&fri.) [06PER./WEEK]	M.Sc.-II(3 rd Sem.) Practical (6 Lectures.) (Mon) [06 PER./WEEK]
1	01.09.2022	UNIT-I Introduction to Bessel's function of First kind.	UNIT-I Introduction to electromagnetic waves			
	02.09.2022	Solution of Bessel's differential equation.	Wave equation and boundary conditions			
	03.09.2022	Generating function of Bessel's function	Plane monochromatic wave in non conducting media			
	04.09.2022	Sunday				
	05.09.2022			UNIT-I Introduction to solid state physics		Exp: DIAC & TRIAC (group-I&II)
	06.09.2022			Crystal structure and mechanical properties	Exp: Solid State Nuclear Track Detector (SSNTD) (group-I)	
	07.09.2022	Recurrence relation of Bessel's function	Reflection and refraction at the boundary of two non conducting media			

2	08.09.2022	Expansion of $J_n(x)$ when n is half and odd integer.	Oblique incidence			
	09.09.2022	Orthogonality of $J_n(x)$	Reflection from conducting plate		Exp: To find the refractive index of glass plate using Brewster's angle. [polarisation Experiment] (group-II)	
	10.09.2022	Numerical based on Bessel's function	Total internal reflection			
	11.09.2022	Sunday				
3	12.09.2022			Diffraction theory and intensities		Exp: Electron spin Resonance (ESR) (group-III&IV)
	13.09.2022			Continue to diffraction theory	Exp: SSNTD (group-III)	
	14.09.2022	. Introduction to Legendre Polynomial	Propagation between parallel conducting plane			
	15.09.2022	Solution of Legendre Differential equation	UNIT-II Introduction to wave guides			
	16.09.2022	Generating function for $P_n(x)$ ($n > 0$)	Principle of waveguide		Exp: Polarization experiment (group-IV)	
	17.09.2022	Recurrence relations for $P_n(x)$	Rectangular waveguide			
	18.09.2022	Sunday				
	19.09.2022			Unit cell content		Exp: DIAC & TRIAC (group V-VI)
	20.09.2022			Determination of atomic arrays	Exp: SSNTD (group-V)	
	21.09.2022	Special properties of Legendre polynomial	Coaxial waveguide			

4	22.09.2022	Rodrigues formula	Resonant cavities			
	23.09.2022	Sahidi Diwas				
	24.09.2022	Orthogonality of $P_n(x)$	Q of cavity resonator			
	25.09.2022	Sunday				
5	26.09.2022	Maharaja Aggarsain Jayanti				
	27.09.2022			Reciprocal lattice	Exp: Polarization Experiment (group-VI)	
	28.09.2022	Associated Legendre polynomials	Introduction to transmission lines			
	29.09.2022	Numericals based on Legendre polynomials	Transmission line equation and solution			
	30.09.2022	UNIT-II Introductin to Laguerre Polynomials	Quarter and half wavelength lines		Exp: SSNTD (group-VII)	
	01.10.2022	Talent Show				
	02.10.2022	Sunday				
	03.10.2022			Introduction to diffraction methods		Exp: Electron Spin Resonance (group-VII&VIII)
	04.10.2022			The powder method of diffraction	Exp: Polarization Experiment (group-I)	
	05.10.2022	Dussehra				
	06.10.2022	Generating function of Laguerre polynomials	Impedence matching using smithchart			
07.10.2022	Recurrence relation of Laguerre polynomial	UNIT-III Klystron operation				

	08.10.2022	Introduction to Hermite polynomial	Velocity modulation		Exp: Polarization Experiment (group-III)	
	09.10.2022	Sunday				
	10.10.2022			Single crystal method of diffraction		Exp: DIAC & TRIAC (group-IX) & Seminar on Cahode Ray Oscilloscope
6	11.10.2022			Introduction to crystal imperfection	Exp: Polarization experiment (group-V)	
	12.10.2022	Generating function for Hermite polynomial	Bunching			
	13.10.2022	Karva Chouth				
	14.10.2022	Recurrence relation for $H_n(x)$	Output power		Exp: Polarization Experiment (group-VII)	
	15.10.2022	Orthogonality of $H_n(x)$	Beam loading			
	16.10.2022	Sunday				
	17.10.2022			Point defects		Exp: Electron Spin Resonance (group-I&II)
	18.10.2022			Frankel and Schottky defects	Exp: SSNTD (group-II)	
	19.10.2022	Introduction to Complex variables	Reflex Klystron operation			Semiar on Filters
	20.10.2022	Function of complex variables	Velocity modulation of			

7			reflex klystron			
	21.10.2022	Inter-zonal youth Festival				
	22.10.2022 to 26.10.2022	Diwali Holidays				
8	27.10.2022	Bhaiya Dooj (Local Holiday)				
	28.10.2022	Analytic function	Power output of reflex klystron		Exp: SSNTD (group-IV)	
	29.10.2022	Cauchy-Riemann conditions for the function to be analytic	Travelling wave tubes			
	30.10.2022	Sunday				
	31.10.2022			Line defects		Exp: DIAC & TRIAC (group-III&IV) & Seminar on G.M. Counter
	01.11.2022	Haryana Day				
	02.11.2022	Cauchy's integral theorem	Backward wave amplifier			
	03.11.2022	Cauchy's integral formula	Backward wave oscillator			
	04.11.2022	Taylor's series	Microwave switching device-krytron		Exp: SSNTD (group-VI)	
	05.11.2022	Laurent's series	UNIT-IV Introduction to transferred electron devices			

	06.11.2022	Sunday				
9	07.11.2022			Slip plane and slip directions		Exp: DIAC& TRIAC (group-VII&VIII)
	08.11.2022	,		Edge and Screw dislocations	Viva-Voice	
	09.11.2022	Definite Integrals	Gunn effect diode operation			Seminar on High Pass ,Low Pass RC Circuit
	10.11.2022	Jordan's Lemma	Mode of operation of Gunn effect diode			
	11.11.2022	Numericals based on Her mite and Laguerre polynomial	Microwave generation		Viva-Voice	
	12.11.2022	Numerical based on complex variables	Microwave amplification			
	13.11.2022	Sunday				
10	14.11.2022			Burger's vector		Exp:Electron Spin Resonance (group-V&VI)
	15.11.2022			Cross-ship	Viva- Voice	
	16.11.2022	UNIT-III Introduction to Laplace Transform	LSA Diode			
	17.11.2022	Properties of Laplace Transformation	Inp diode			Seminar on DIAC-TRIAC
	18.11.2022	Inverse Laplace Transformation	CdTe Diode		Viva-Voice	
	19.11.2022	Properties of inverse Laplace transformation	Avalanche Transit time devices (ATD)			
	20.11.2022	Sunday				
	21.11.2022			Slide and climb		Exp: Electron Spin Resonance (group-IX)
	22.11.2022			Jogs	Viva-Voice	

11	23.11.2022	Numericals based on Laplace Transformation	READ Diode			
	24.11.2022	Introduction to Error analysis	IMPATT diode			
	25.11.2022	Types of experimental errors	TRAPATT diode		Viva-Voice	Seminar on Electron Spin Resonance (ESR)
	26.11.2022	Statistical analysis of random errors	BARITT diode			
	27.11.2022	Sunday				
12	28.11.2022			Dislocation energy		Viva- Voice
	29.11.2022			Planar defects	Viva-Voice	
	30.11.2022	Normal or Gaussian law of errors	Detector diode			
	01.12.2022	Propagation of errors	Detector mounts			
	02.12.2022	Method of Least Squares	Measurements of wavelengths		Viva-Voice & Seminar on Optical fiber	Seminar on Hysteresis
	03.12.2022	Application of method of least squares solution of linear equations	Measurements of frequency			
	04.12.2022	Sunday				
	05.12.2022			UNIT-II Introduction to mechanical properties Assignment on Creep	Seminar on Planck's constant	Viva-Voice
	06.12.2022			Stress-strain curve true	Viva-Voice	

13				stress and true strain		
	07.12.2022	Curve Fitting	Measurements of impedance			
	08.12.2022	UNIT-IV Introduction to group theory.	Power scattering parameters		Seminar on G.M. Counter (efficiency)	
	09.12.2022	Definition of a group With illustrative examples	Theory and properties of scattering parameters		Viva-Voice	Seminar on Gamma Ray Spectrometer
	10.12.2022	Group multiplication table	Directional Couplers			
	11.12.2022	Sunday				
14	12.12.2022			Atomic Mechanism of elastic deformation	Seminar on diffraction	Viva-Voice
	13.12.2022			Anelastic, Viscous and plastic deformation	Viva-Voice	
	14.12.2022	Rearrangement Theorem	Faraday rotation in ferrites			
	15.12.2022	Cyclic Group	Doubts of UNIT-I		Seminar on G.M. Counter (Mass & linear attenuation)	
	16.12.2022	Subgroup and cosets	Doubts of UNIT-II		Viva-Voice	
	17.12.2022	Conjugate elements and class structure	Doubts of UNIT-III			
	18.12.2022	Sunday				
	19.12.2022			Stress to move a dislocation and effect of temp.	Seminar on polarization	Viva-Voice

15	20.12.2022			Work-hardening ,strengthening from grain boundaries	Viva-Voice	Viva-Voice
	21.12.2022	Class multiplication , group representation, reducible and irreducible representation	Doubts of UNIT-IV			
	22.12.2022	The great orthogonality theorem and geometrical interpretation.			Seminar on Michelson Interferrometer	
	23.12.2022	Character of a representation	Discussion on NET related numericals		Viva- voice	
	24.12.2022	Costruction of a Character table with example of symmetry of equilateral triangle, rectangle and square	Discussion on GATE related numericals			
	25.12.2022	Sunday				