Lesson Plan

Name of the Associate Professor- Ms. Tanya saini
Subject- Physics

Lesson Plan- 17 Weeks (January-April 2018)

Week	Date	Class B.Sc.-III YEAR (Sec-F) Solid State Physics	Class B.Sc.-II (Sec-A) wave and optics -2
1.	1-Jan-18	Crystalline and glassy forms	
	2-Jan-18	liquid crystals, crystal structure	
	3-Jan-18	Periodicity, lattice and basis, crystal translational vectors and axes	
	4-Jan-18		Polarization: Polarisation by reflection, refraction
	5-Jan-18	Holiday	
	6-Jan-18		Scattering, Malus Law
	7-Jan-18	Sunday	
2.	8-Jan-18	Unit cell and Primitive Cell	
	9-Jan-18	Unit cell and Primitive Cell	
	10-Jan-18	Winger Seitz, primitive Cell,Symmetry operations for a two dimensional crystal	
	11-Jan-18		Phenomenon of double refraction
	12-Jan-18		Huygen's wave theory of double refraction (Normal and oblique incidence)
	13-Jan-18		Analysis of polarized Light. Nicol prism
	14-Jan-18	Sunday	
3.	15-Jan-18	Bravis lattices in two and three dimensions	
	16-Jan-18	Crystal planes and Miller indices	
	17-Jan-18	Interplaner spacing	
	18-Jan-18		Quarter wave plate and half wave plate
	19-Jan-18		Production and detection of (i) Plane polarized light (ii) Circularly polarized light
	20-Jan-18		Production and detection of (iii) Elliptically polarized light. Optical activity
	21-Jan-18	Sunday	
4.	22-Jan-18	Vasant Panchami	
	23-Jan-18	Crystal structures of Zinc Sulphide	
	24-Jan-18	Sir Chotu Ram Jayanti	
	25-Jan-18		Fresnel's theory of optical rotation Specific rotation, Polarimeters (half shade and Biquartz)

	26-Jan-18	Republic Day	
	27-Jan-18		Assignment on Analysis of polarized Light. Nicol prism
	28-Jan-18	Sunday	
5.	29-Jan-18	Sodium Chloride and Diamond	
	30-Jan-18	X-ray diffraction	
	31-Jan-18	Guru Ravi Das Birthday	
	1-Feb-18		Assignment on Analysis of polarized Light. Nicol prism
	2-Feb-18		Evaluation of Fourier coefficient
	3-Feb-18		Importance and limitations of Fourier theorem, even and odd functions
	4-Feb-18	Sunday	
6.	5-Feb-18	Bragg's Law	
	6-Feb-18	Experimental X-ray diffraction methods	
	7-Feb-18	K-space and reciprocal lattice and its physical significance	
	8-Feb-18		Fourier series of functions f(x) between (i) 0 to 2pi
	9-Feb-18		Fourier series of functions f(x) between (ii) –pi to pi and (iii) 0 to pi
	10-Feb-18	Maharishi Dayanand Saraswati Jayanti	
	11-Feb-18	Sunday	
7.	12-Feb-18	Reciprocal lattice vectors	
	13-Feb-18	Maha Shivratri	
	14-Feb-18	Reciprocal lattice to a simple cubic lattice	
	15-Feb-18		Fourier series of functions f(x) between (iv) –L to L
	16-Feb-18		Complex form of Fourier series
	17-Feb-18		Application of fourier theorm for analysis of complex waves: solution of triangular rectangular waves.
	18-Feb-18	Sunday	
8.	19-Feb-18	Reciprocal lattice to a simple cubic lattice	
	20-Feb-18	Reciprocal lattice to a, b.c.c. and f.c.c	
	21-Feb-18	Unit test-2	
	22-Feb-18		Application of fourier theorm for analysis of complex waves : solution of triangular rectangular waves.
	23-Feb-18		Half and full wave rectifier outputs
	24-Feb-18		Parseval identity for Fourier Series, Fourier integrals
	25-Feb-18	Sunday	
9.	26-Feb-18	Historical introduction, Survey of superconductivity	
	27-Feb-18	Super conducting systems	

	28-Feb-18	Holiday	
	1-Mar-18	Holiday	
	2-Mar-18	Holiday(HOLI)	
	3-Mar-18	Holiday	
	4-Mar-18	Sunday	
10.	5-Mar-18	High Tc Super conductors, Isotopic Effect	
	6-Mar-18	Critical Magnetic Field, Meissner Effect ,London Theory and Pippards' equation	
	7-Mar-18	Classification of Superconductors (type I and Type II), BCS Theory of Superconductivity	
	8-Mar-18		Fourier transforms and its properties
	9-Mar-18		Application of Fourier transform (i) for evaluation of integrals
	10-Mar-18		Application of Fourier transform (ii) for solution of ordinary differential equations
	11-Mar-18	Sunday	
11.	12-Mar-18	Flux quantization, Josephson Effect (AC and DC)	
	13-Mar-18	Practical Applications of superconductivity and their limitations	
	14-Mar-18	Power application of superconductors	
	15-Mar-18		Application of Fourier transform (iii) to the following functions: f(x)= e- x2/2 i. f(x)=|X|<a ii f(x) =|X |>a
	16-Mar-18		Matrix methods in paraxial optics
	17-Mar-18		Effects of translation and refraction
	18-Mar-18	Sunday	
12.	19-Mar-18	Unit test-3	
	20-Mar-18	Definition and length scale, Introduction to nano-scale and technology	
	21-Mar-18	History of Nanotechnology, Benefits and challenges in molecular manufacturing	
	22-Mar-18		Effects of translation and refraction
	23-Mar-18	Shaheedi Diwas	
	24-Mar-18		Effects of translation and refraction
	25-Mar-18	Sunday	
13.	26-Mar-18	Molecular assembler concept,Understanding advanced capabilities	
	27-Mar-18	Vision and objective of Nano-	

		technology	
	28-Mar-18	Nanotechnology in different field, Automobile, Electronics	
	29-Mar-18	Mahavir Jayanti	
	30-Mar-18		Chromatic, spherical, coma, Astigmatism and distortion aberrations and their remedies
	31-Mar-18		Astigmatism and distortion aberrations and their remedies
	1-Apr-18	Sunday	
14.	2-Apr-18	Nanotechnology in different field, Automobile, Electronics	
	3-Apr-18	Nano-biotechnology, Materials, Medicine	
	4-Apr-18	Nano-biotechnology, Materials, Medicine	
	5-Apr-18		Optical fiber
	6-Apr-18		Critical angle of propagation
	7-Apr-18		DISCUSSION OF PROBLEMS
	8-Apr-18	Sunday	
15.	9-Apr-18	Group discussion on nano	
	10-Apr-18	Vision and objective of Nano-technology	
	11-Apr-18	Unit test-4	
	12-Apr-18		Mode of Propagation, Acceptance angle
	13-Apr-18		Fractional refractive index change, Numerical aperture
	14-Apr-18	Dr. Ambedkar Jayanti / Vaisakhi	
	15-Apr-18	Sunday	
16.	16-Apr-18	Revision of unit-1	
	17-Apr-18	Oral test of unit-1	
	18-Apr-18	Parashurama Jayanti	
	19-Apr-18		Types of optics fiber, Normalized frequency
	20-Apr-18		Pulse dispersion, Attenuation, Applications
	21-Apr-18		Fiber optic Communication, Advantages
	22-Apr-18	Sunday	
17.	23-Apr-18	Revision of unit-2	
	24-Apr-18	Revision of unit-3	
	25-Apr-18	Revision of unit-4	
	26-Apr-18		Unit- IV Test
	27-Apr-18		Revision of previous year question
	28-Apr-18		Revision of previous year question
	29-Apr-18	Sunday	