Lesson Plan Format 2019-2020 (Even semester)

Name of Assistant Professor: Dr. Samiksha Verma

Class: B.SC II (Sem-IV) Computer Science (4-6)

Subject: Physics,   Paper II (Wave and Optics PH-402)

Week	Date	Topic
1	2 Jan 2020	*Holiday* (Guru Govind Singh Jayanti)
	3 Jan 2020	**Unit-I (Wave and Optics, PH-402)** **Chapter I:** Introduction: Polarization
	4 Jan 2020	Polarization by reflection,
2	9 Jan 2020	Polarization by refraction and scattering
	10 Jan 2020	Malus law, phenomenon of double refraction
	11 Jan 2020	Calcite Crystal, Analysis of polarized light,
3	16 Jan 2020	Nicol prism
	17 Jan 2020	Huygen's wave theory of double refraction (Normal)
	18 Jan 2020	Huygen's wave theory of double refraction (oblique incidence)
4	23 Jan 2020	Quarter wave plate and half wave plate Production
	24 Jan 2020	Production and detection of plane polarized light
	25 Jan 2020	Production and detection of circularly polarized light
5	30 Jan 2020	*Holiday (Vasant Panchami)*
	31 Jan 2020	Production and detection of elliptical polarized light
	1 Feb 2020	Revision & Numerical Problems
6	6 Feb 2020	**Class Test Unit I Chapter I (PH-402)**
	7 Feb 2020	**Chapter II:** Introduction: Polarimetry
	8 Feb 2020	Optical rotation, Fresnel's theory of optical rotation
7	13 Feb 2020	Fresnel's theory of optical rotation, Specific rotation
	14 Feb 2020	Half shade polarimeter
	15 Feb 2020	Biquartz Polarimeter
8	20 Feb 2020	I[st] Assignment, Revision & Numerical Problems
	21 Feb 2020	*HOLIDAY (Maha Shivaratri)*
	22 Feb 2020	**Unit-III (PH-402)** Chapter II: Geometrical optics I : Matrix methods in paraxial optics,
9	27 Feb 2020	Effects of translation and refraction
	28 Feb 2020	Derivation of thin lens and thick lens formulae,
	29 Feb 2020	Unit plane, nodal plane, System of thin lenses
10	5 March 2020	**Unit-IV (PH-402)** Chapter I: Geometrical optics II : Chromatic, spherical, coma,
	6 March 2020	Astigmatism and distortion aberrations and their remedies
	7 March 2020	**Class test of Geometrical Optics**
11	12 March 2020	*HOLIDAYS*
	13 March 2020	
	14 March 2020	

12	19 March 2020	**Unit-IV (PH-402)** Chapter II: Introduction: Optical fiber, Critical angle of propagation, Mode of propagation, Acceptance angle Fractional refractive index change
	20 March 2020	Numerical aperture, Types of optical fiber, Normalized frequency,
	21 March 2020	Pulse dispersion, Attenuation, Applications, fiber optic communication, advantages
13	26 March 2020	**Class Test Unit IV Chapter II (PH-402)**
	27 March 2020	**Unit-II (PH-402)** Fourier theorem and Fourier series, Evaluation of fourier coefficients,
	28 March 2020	importance and limitations of Fourier theorem, Even and odd functions,
14	2 April 2020	*Holiday (Ram Navami)*
	3 April 2020	Fourier series of functions f(x) between (i) 0 to two pie (ii) pie to pie
	4 April 2020	Fourier series of functions f(x) between (iii)0 to pie (iv)-L to L, Complex form of fourier series,
15	9 April 2020	Application of fourier theorem for analysis of complex waves for triangular waves,
	10 April 2020	Application of fourier theorem for analysis of complex waves for rectangular waves
	11 April 2020	Half and full wave rectifier outputs, Parseval identity for fourier series, fourier integrals
16	16 April 2020	**Class Test Unit II (PH-402)**
	17 April 2020	**Unit-III (PH-402)** Chapter I: Fourier transforms and properties**,**
	18 April 2020	Application of Fourier transform (i) for evaluation of integrals
17	23 April 2020	Application of Fourier transform (ii) for solution of ordinary differential equations
	24 April 2020	Application of Fourier transform (i) for evaluation of functions f(x), X < a
	25 April 2020	(ii) for evaluation of functions f(x), X > a, Revision & Numerical Problems
18	30 April 2020	**Class test Unit-III (PH-402) Chapter I,** Revision

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