

Koyana Education Society's
Balasaheb Desai College, Patan
Department of Physics
Monthly Teaching Plan-Year-2023-2024
December- 2023

Name of the Teacher-Mr.M.D.Jadhav

Dates	Unit	Sub unit	Teaching Method Aids
B.Sc.-I Electricity and Magnetism			
02/12/2023	1 A.C. Circuits	Complex numbers and their application in solving a. c. series LCR circuit using J	Lecture
07/12/2023		LCR series circuit	Lecture
9/12/2023		operator and phasor diagram, Resonance in, Sharpness of resonance (qualitative treatment only),	Lecture
15/12/2023		Resonance in LCR Parallel circuit,	Lecture
16/12/2023		complex Impedance, Reactance, Admittance, and Susceptance	Lecture
21/12/2023		Examples of series and parallel resonance,	Lecture
23/12/2023		A.C.Bridge - Owen's Bridge Q-factor (definition only).	Lecture
30/12/2023	2 Magnetism	Introduction to magnetization and intensity of Magnetization,	Lecture
B.Sc.-II Waves And Optics II			
4/12/2023	1. Cardinal Points	Cardinal points of an optical system (definitions only),	Lecture(7 hrs)
5/12/2023		graphical construction of image using cardinal points,	Lecture-
11/12/2023		Newton's formula,	Lecture-
12/12/2023		relation between lateral, axial and angular magnifications.	Lecture-
14/12/2023		Relation between focal length and R. I.	Lecture-
18/12/2023	2. Resolving Power of Optical Instruments	Resolution, resolving power (RP) of optical instruments, Rayleigh's criterion for the limit of resolution,	Lecture
19/12/2023		Modified Rayleigh's criterion, comparison between magnification and resolution,	Lecture-
26/12/2023		RP of plane diffraction grating,	Lecture Demo
27/12/2023		R.P. Of Prism	Lecture- Memo
B.Sc.III PHYSICS Paper-XV Atomic and Molecular Physics and Astrophysics			
4-5/12/2023	1. Atomic Spectra:	Introduction of atomic structure and spectra, Spectral notations and optical spectral series for doublet structure,	Lecture-Chart
7/12/2023		Spectrum of sodium and its doublet fine structure,	Lecture-
9/12/2023		Electron spin-orbit interaction,	Lecture-

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11-12/12/2023	1. Atomic Spectra:	Normal Zeeman effect (qualitative explanation)	Lecture
14-16/12/2023		Anomalous Zeeman effect and their explanation from vector atom model,	Lecture-
18/12/2023		Lande's g factor	Lecture
19/12/2023		Selection and intensity rules for fine structure doublets,	Lecture
21/12/2023		Observed hydrogen fine structure	Lecture
23/12/2023		Normal order of fine structure doublets	Lecture
26/12/2023	2. Molecular Spectra: Rotational spectra, Vibrational energy levels, Vibrational spectra, Vibration – rotation spectra, Electronic spectra of diatomic molecules.	Molecular bond, Electron sharing, H ₂ +	Lecture
28/12/2023		molecular ion, the hydrogen molecule,	Lecture
30/12/2023		Rotational energy levels,	Lecture


PRINCIPAL
Balasaheb Desai Collage
Patan, Dist: Satara