

V.V. SANGHA'S
Smt. A.S.M. COLLEGE FOR WOMEN, BALLARI
DEPARTMENT OF PHYSICS
TEACHING PLAN

Academic Year: 2023-2024

Semester: I

Course: Mechanics & Properties of Matter

Name of the Faculty: Smt. H. Ratna

Unit No.	Title of the Chapter& Description	Period/ Month	No. of Hours Allotted	Hours Taken/ Conducted	Teaching Pedagogy/ Methodology used
III	Elasticity: Hooke's law - Stress-strain diagram, elastic moduli-relation between elastic constants, Poisson's Ratio-expression for Poisson's ratio in terms of elastic constants. Work done in stretching and work done in twisting a wire-Twisting couple on a cylinder. Beams, bending of beams, expression for bending moment, theory of single cantilever. Torsional pendulum, expression for time-period of torsional oscillations, determination of rigidity modulus (static and dynamic methods) and moment of inertia, determination of q , η and σ by Searle's double bar with necessary theory.	October to December	14	18	Black Board

Signature of the Faculty

Signature of the HOD

HEAD
Dept. of Physics
Smt. A.S.M. College for Women,
BALLARI.

PRINCIPAL

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Smt. Allum Sumangamma Collier
for Women, BELLARY.

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Academic Year: 2023-2024

Semester: III

Course: Wave Motion and Optics

Name of the Faculty: Smt. H. Ratna

Sl. No.	Title of the Chapter& Description	Period/ Month	No. of Hours Allotted	Hours Taken/ Conducted	Teaching Pedagogy/ Methodology used
II	<u>Nature of light</u> : To Determine wavelength of light, distances and shapes using Michelson interferometer. The corpuscular model of light-The wave model - Maxwells electromagnetic wavesWave Particle Duality	November to December	02	03	Black Board
	<u>Interference of light by division of wave front:</u> Huygen's theory-Concept of wave-front-Interference pattern produced on the surface of water-Coherence-Interference of light waves by division of wavefront- Young's double slit experiment- derivation of expression for fringe width-Fresnel BiprismInterference with white light	December To January	04	08	Black Board
	<u>Interference of light by division of amplitude:</u> Interference by division of amplitude-Interference by a plane parallel film illuminated by a plane wave-Interference by a film with two non-parallel reflecting surfaces- color of thin films—Newton's rings-(Reflected light)-Michelson InterferometerDetermination of wavelength of light	January to February	05	09	Black Board
	Polarization: Introduction-Production of polarized light- The wire Grid polarizer and Polaroid Superposition of two disturbances-Phenomenon of double refraction-Quarter wave plates and half wave plates- Analysis of polarized light-optical activity.	January February To March	04	06	Black Board

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