Engineering Physics Lab

Course Code	23BS1252	Year	I	Semester	II
Course Category	Basic Science	Branch	ECE	Course Type	Lab
Credits	1	L-T-P	0-0-2	Prerequisites	Nil
Continuous Internal Evaluation:	30	Semester End Evaluation:	70	Total Marks:	100

Course Outcomes	
Upon successful completion of the course, the student will be able to	
CO1	**Identify** the type of semiconductor using Hall effect and measure the thermal resistivity, energy band gap L3.
CO2	**Apply** resonance to estimate the frequency of a tuning fork and verify laws of a stretched string L3.
CO3	**Examine** the optical, elastic, and dielectric properties of the given materials. L4
CO4	**Assess** the intensity of the magnetic field of circular coil carrying current with distance and measure resistance using four probe method. L4

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3: High, 2: Medium, 1: Low)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3													1
CO2	3													1
CO3		3												1
CO4		3												1

Exp.no	Contents	Mapped CO
1	Determination of dielectric constant of the various solid samples	CO-3
2	Determination of wavelength of Laser light using diffraction grating.	CO-3
3	Determination of the resistivity of semiconductors by four probe methods	CO-4
4	Determination of energy gap of a semiconductor using p-n junction diode	CO-1
5	Magnetic field along the axis of a current carrying circular coil by Stewart Gee'sMethod	CO-4
6	Determination of Hall voltage and Hall coefficient of a given semiconductor using Hall effect	CO-1
7	Determination of temperature coefficients of a thermistor.	CO-1
8	Determination of rigidity modulus of the material of the given wire using Torsional pendulum	CO-3

9	To verify the laws of transverse vibrations of a string using Sonometer.	CO-2
10	Determination of Frequency of electrically maintained tuning fork by Melde'sexperiment	CO-2

Learning Resources

References:

- S.Balasubramanian, M.N.Srinivasan, S.ChandPublishers, 2017A Textbook of Practical Physics

Web Resources

- www.vlab.co.in
- https://phet.colorado.edu/en/simulations/filter?subjects=physics&type=html,prototype