ENGINEERING PHYSICS LAB

Course Code	23BS1252	Year	I	Semester	II
Course Category	Basic Science	**Branch**	EEE	**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, energyband 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 andmeasure 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	**CO3**
2	Determination of wavelength of Laser light using diffraction grating.	**CO3**
3	Determination of the resistivity of semiconductors by four probe methods	**CO4**
4	Determination of energy gap of a semiconductor using p-n junction diode	**CO1**
5	Magnetic field along the axis of a current carrying circular coil by Stewart Gee's Method	**CO4**
6	Determination of Hall voltage and Hall coefficient of a given semiconductor using Hall effect.	**CO1**
7	Determination of temperature coefficients of a thermistor.	**CO1**
8	Determination of rigidity modulus of the material of the given wire using Torsional pendulum	**CO3**
9	To verify the laws of transverse vibrations of a string using Sonometer.	**CO2**
10	Determination of Frequency of electrically maintained tuning fork by Melde's experiment	**CO2**

Learning Resources

References:

1. A Textbook of Practical Physics-S.Balasubramanian, M.N.Srinivasan,S.Chand Publishers, 2017

Web Resources:

1. www.vlab.co.in

2. https://phet.colorado.edu/en/simulations/filter?subjects=physics&type=html,prototype