ENGINEERING PHYSICS LAB

Course Code	23BS1152	Year	I	Semester	I
Course Category	Basic Science	Branch	CSE (AIML)	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 s the intensity of the magnetic field of circular coil carrying current with distance and measure resistance using four probe method **[L4]**
CO5	Summarize and tabulate the experimental observations and output.

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:High, 2: Medium, 1:Low)														
	PO1	PO 2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO11	PO12	PSO1	PSO2
CO1	3			3								3		
CO2	3			3								3		
CO3	3			3								3		
CO4	3			3								3		
CO5									3	3		3		

Exp. No.	Contents	Mapped CO
1	Determination of dielectric constant of the various solid samples	**CO3,CO5**
2	Determination of wavelength of Laser light using diffraction grating.	**CO3,CO5**
3	Determination of the resistivity of semiconductors by four probe methods	**CO4,CO5**
4	Determination of energy gap of a semiconductor using p-n junction diode	**CO1,CO5**
5	Magnetic field along the axis of a current carrying circular coil by StewartGee's Method	**CO4,CO5**
6	Determination of Hall voltage and Hall coefficient of a given semiconductor	**CO1,CO5**
	using Hall effect	
7	Determination of temperature coefficients of a thermistor.	**CO1,CO5**
8	Determination of rigidity modulus of the material of the given wire using Torsional pendulum	**CO3,CO5**
9	To verify the laws of transverse vibrations of a string using Sonometer.	**CO2,CO5**

10	Determination of Frequency of electrically maintained tuning fork by Melde's experiment	**CO2,CO5**

Learning Resources
References: A Textbook of Practical Physics-S.Balasubramanian, M.N.Srinivasan,S.Chand Publishers, 2017
WebResources www.vlab.co.in https://phet.colorado.edu/en/simulations/filter?subjects=physics&type=html,prototype