

## ENGINEERING PHYSICS LAB

(Common to CE,ME,IT,CSE-AIML,CSE-DS)

<b>Course Code</b>	23BS1152	<b>Year</b>	I	<b>Semester</b>	I
<b>Course Category</b>	Basic Science	<b>Branch</b>	CSE (DS)	<b>Course Type</b>	Lab
<b>Credits</b>	1	<b>L-T-P</b>	0-0-2	<b>Prerequisites</b>	Nil
<b>Continuous Internal Evaluation:</b>	<b>30</b>	<b>Semester End Evaluation:</b>	<b>70</b>	<b>Total Marks:</b>	<b>100</b>

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

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

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

**Learning Resources****References:**

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

**WebResources**

[www.vlab.co.in](http://www.vlab.co.in)

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