

Engineering Physics Lab

Course Code	19BS1153	Year	I	Semester	I
Course Category	Basic Sciences	Branch	IT	Course Type	Lab
Credits	1.5	L-T-P	0-0-3	Prerequisites	Nil
Continuous Internal Evaluation:	25	Semester End Evaluation:	50	Total Marks:	75

Course Outcomes

Upon successful completion of the course, the student will be able to

CO1	Assess the intensity of the magnetic field of circular coil carrying current with varying distance and utilize four probe set up to measure resistance.
CO2	Evaluate the acceptance angle of an optical fiber and numerical aperture and loss.
CO3	Demonstrate the importance of dielectric material and measure magnetic parameters.
CO4	Identify the type of semiconductor using hall effect and determine the band gap of a semiconductor.
CO5	Understand the characteristics of photodiode, p-n junction diode and solar cell. Type equation here.

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (H:High, M: Medium, L:Low)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	H		H											
CO2	H		H											
CO3	H		H											
CO4	H		H											
CO5	H		H											

Syllabus

Expt. No.	Contents	Mapped CO
I	To Determine The Magnetic Field Along The Axis Of A Circular Coil Carrying Current	CO1
II	To Determine The Magnetic Susceptibility By Gouy's Method	
III	To Determine The Numerical Aperture Of A Given Optical Fibre And Hence To Find Its Acceptance Angle	CO2
IV	To Determine The Dielectric Constant Of A Substance By Resonance Method	CO3
V	To Determine The Resistivity Of Semiconductor By Four Probe Method	CO4
VI	To Determine The Hall Coefficient Using Hall Effect Experiment.	
VII	To Determine The Energy Gap Of A Semiconductor	
VIII	To Study The Characteristics Of Photo Diode	CO5
IX	To Study The Characteristics Of PN Diode	
X	To Study The Characteristics Of Solar Cell	

Learning Resources

Text Books

RamaraoSri,ChoudaryNityanand and Prasad Daruka, "Lab Manual of Engineering Physics"., Vth ed., Excell Books, 2010

Reference Books

Semiconductor Devices & Physics, S.M.Sze,Wiley,2008.
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e- Resources & other digital material
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https://www.niser.ac.in/sps/teaching-laboratories
