

Physics Lab Details

S. No	Name of the Physical Lab	Area (in sq. mt)	Cost (in lakhs)
1	Engineering Physics/Applied Physics Lab	90.78 sq. m	6,26,795/-

Individual Lab

Name of the Lab: Engineering Physics lab

Objective: The objective of the Physics laboratory is

- To introduce new concepts and techniques which have wide applications in experimental science.
- To familiarize the students with experimental apparatus and scientific method.
- To teach how to make careful experimental observations and draw conclusions from such data.



Major Equipment Details:

S. No.	Name of the Equipment	Quantity	Cost
1	Band Gap of Semiconductor	4	38,939
2	B-H Curve Apparatus	2	11,448
3	C. R Circuit Board	4	8,104
4	Compound Bar Pendulum	6	2,495
5	Coupled Oscillator apparatus	2	3,780
6	CRO	2	55,080
7	Dielectric Constant	2	18,684
8	Fly Wheel apparatus	2	7,981
9	Function Generator 102 ML	5	22,977
10	G.M. Counter App.	1	41,625
11	Hall Effect Experiment	2	78,728
12	He-Ne laser	1	24,300
13	L.C. R Circuit Kit	5	10,115
14	Melde's Experiment Apparatus	4	23,121
15	Newton Ring Microscope	6	20,250
16	Optical Fiber Kit	2	16,030

17	Photo Tube Characteristics Apparatus	2	17,775
18	P-N Junction Characteristics	3	9,214
19	Solar Cell Characteristic Apparatus	2	11,215
20	Sonometer	4	7,068
21	Spectrometer	6	28,155
22	Stewart and Gee's App.	5	12,898
23	Susceptibility by Gouy's method	1	86,400
24	Thermistor Characteristics	4	13,949
25	Torsion Pendulum	7	12,809
26	Travelling Microscope	2	31,166
27	Zener diode Characteristics	4	12,487
		Total	6,26,795/-

Lab In charge with qualification: K A Sasikala, M. Sc, M. Phil, (Ph. D)

Faculty In charge with qualification: 1. Dr. M. Nagarjuna, M. Sc, M. Phil, Ph. D
2. Dr. N. Abhiram, M. Sc., Ph. D
3. Dr. P. Jayaprada, M. Sc., Ph. D
4. Ms. K A Sasikala, M. Sc, M. Phil, (Ph. D)

Lab Technician name with qualification: Mr. M. Sunil Prakash Babu, ITI

**Engineering Physics Lab
Experiments (D23)**

1. Determination of radius of curvature of given plano-convex lens by Newton's rings.
2. Determination of wavelengths of different spectral lines in mercury spectrum using diffraction grating in normal incidence configuration.
3. Determination of acceleration due to gravity and radius of gyration by using compound pendulum.
4. Determination of rigidity modulus of the material of the given wire using Torsional pendulum.
5. Determination of frequency of electrically maintained tuning fork by Melde's experiment.
6. Determination of dielectric constant using charging and discharging method.
7. Study the variation of B versus H by magnetizing the magnetic material (B-H curve).
8. Magnetic field along the axis of a current carrying circular coil by Stewart Gee's Method.
9. Determination of energy gap of a semiconductor using p-n junction diode

10. Determination of Hall voltage and Hall coefficient of a given semiconductor using Hall effect.

Additional Experiments beyond Curriculum:

11. Frequency response of a L C R series resonance circuit.
12. V-I characteristics of P-N junction diode.