

Physics
Lab Details

Sl. No	Name of the Physical Lab	Area (in sq.mt)	Cost (in lacs)
1	Engineering Physics/Applied Physics Lab	90.78 sq. m	5,08,594/-

Individual Lab

Name of the Lab: Applied/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 the scientific method.
- To teach how to make careful experimental observations and draw conclusions from such data.



Sections Handled: 9

Major Equipment Details:

S. No	Name of the Equipment	Quantity	Cost
1	Band gap semiconductor	3	29,027
2	B-H Curve kit	2	11,448
3	Compound pendulum	6	2,496
4	CRO	2	55,080
5	Coupled Oscillator	2	3,780
6	Dielectric constant	2	18,684
7	Fly wheel	2	7,982
8	Function generator	5	22,977
9	Hall-effect Apparatus	2	78,727
10	He-Ne laser	1	24,300
11	L-C-R Circuit	5	10,115
12	Melde's apparatus	3	15,334
13	Microscopes	6	20,250
14	Optical Fiber	2	16,030
15	PN junction diode	3	9,214
16	Solar cell	2	11,215

17	Sonometer	4	8,015
18	Spectrometers	6	28,156
19	Stewart & Gee apparatus	5	12,898
20	Susceptibility by Gouy's method	1	86,400
21	Thermistor	3	9,584
22	Torsion pendulum	7	12,809
23	Volume resonator apparatus	2	1,586
24	Zener diode	4	12,487
		Total	5,08,594

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. K A Sasikala, M.Sc,M.Phil,(Ph.D)

3. M.Silpa, M.Sc, (Ph.D)

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

Experiment list as per curriculum:

Engineering/Applied Physics Lab

1. Magnetic field along the axis of a current carrying coil – Stewart and Gee's apparatus.
2. Determination of dielectric constant by charging and discharging method.
3. Study the variation of B versus H by magnetizing the magnetic material (B-H curve).

Engineering Physics Lab

4. Determination of Rigidity modulus of a material- Torsional Pendulum.
5. Determination of Acceleration due to Gravity and Radius of Gyration - Compound Pendulum.
6. Determination of Velocity of sound –Volume Resonator.
7. Verification of laws of vibrations in stretched strings – Sonometer.
8. Determination of wavelength of Laser by diffraction grating.
9. Determination of spring constant of springs using coupled oscillators.
10. Determination of Moment of Inertia of a Fly Wheel.

Applied Physics Lab

4. Determination of wavelength of a source-Diffraction Grating-Normal incidence.
5. Newton's rings – Radius of Curvature of Plano - Convex Lens.
6. Determination of thickness of a spacer using wedge film and parallel interference fringes.
7. Energy Band gap of a Semiconductor p - n junction.
8. Characteristics of Thermistor – Temperature Coefficients
9. Measurement of magnetic susceptibility by Gouy's method.
10. Determination of Hall voltage and Hall coefficients of a given semiconductor using Hall Effect.

Experiment list beyond the curriculum

1. 1. Transverse and Longitudinal modes-Melde's experiment
2. V-I characteristics of Solar Cell.
3. Determination of Numerical Aperture of the given Fiber Cable.