

ENGINEERING PHYSICS LAB

I Year B.Tech I Semester (MECH & CIVIL)

Course: Engineering Physics Lab

Course Code: A11082

Course Outcomes

CO 1: Understand the practical concept of stationary waves using Melde's apparatus.

CO 2: Study the mechanical properties of materials using Torsional pendulum.

CO 3: Visualize the fundamental optical phenomenon like Interference, diffraction and Dispersion.

CO 4: Study the basic Electrical characteristics of LED, RC circuits.

CO 5: Identify the variation of magnetic field by Stewart and Gee's apparatus experimentally.

List of Experiments

1. Torsional pendulum Experiment - Determination of rigidity modulus of material of a wire.
2. Melde's experiment.
3. Newton's Rings.
4. Dispersive power of the material of a prism using spectrometer.
5. Stewart & Gee's experiment.
6. LED characteristics.
7. Diffraction Grating – Determination of wavelength of laser.
8. RC circuit – Decay of charge.

I Year B.Tech I Semester (ECE, CSE, EEE & IT)

Course: Engineering Physics and Chemistry Lab

Course Code: A11083

Course Outcomes

CO 1: Understand the practical concept of stationary waves using Melde's apparatus and study the mechanical properties of materials using Torsional pendulum.

CO 2: Visualize the fundamental optical phenomenon like Interference, diffraction and Dispersion.

CO 3: Study the basic Electrical characteristics of LED, RC circuits.

List of Experiments

Any Five experiments from the following

1. Torsional pendulum Experiment - Determination of rigidity modulus of material of a wire.
2. Melde's experiment.
3. Newton's Rings.
4. Dispersive power of the material of a prism using spectrometer.
5. Stewart & Gee's experiment.
6. LED characteristics.
7. Diffraction Grating – Determination of wavelength of laser.
8. RC circuit – Decay of charge.

I Year B.Tech II Semester (ECE & EEE)

Course: Engineering Physics Lab

Course Code: A12088

Course Outcomes

CO 1: Estimate the numerical aperture of optical fibers.

CO 2: Visualize the fundamental optical phenomenon like Interference and diffraction.

CO 3: Study the basic Electrical characteristics of LCR circuit

CO 4: Calculate the moment of inertia of Fly wheel and frequency of AC source using sonometer.

CO 5: Study the characteristics of photodiode and calculate band gap of a given semiconductor diode.

List of Experiments

1. Numerical aperture of an optical fiber.
2. Single slit diffraction - Measurement of wavelength of monochromatic light
3. To determine the diameter of a thin wire by interference in a Wedge shape air film.
4. Moment of inertia of fly Wheel.
5. Frequency of A.C mains using sonometer.
6. Characteristics of photodiode.
7. LCR circuit – series and parallel resonance.
8. Energy gap of Semiconductor.

I Year B.Tech II Semester (MECH & CIVIL)

Course: Engineering Physics and Chemistry Lab

Course Code: A12086

Course Outcomes

CO 1: Calculate the moment of inertia of Fly wheel and frequency of AC source using sonometer.

CO 2: Visualize the fundamental optical phenomenon like Interference and diffraction.

CO 3: Study the characteristics of photodiode and calculate the band gap of a given semiconductor diode.

List of Experiments

Any Five experiments from the following

1. Numerical aperture of an optical fiber.
2. Single slit diffraction - Measurement of wavelength of monochromatic light
3. To determine the diameter of a thin wire by interference in a Wedge shape air film.
4. Moment of inertia of fly Wheel.
5. Frequency of A.C mains using sonometer.
6. Characteristics of photodiode.
7. LCR circuit – series and parallel resonance.
8. Energy gap of Semiconductor.

