BSc First Year Experiment List

- **Determination of the mechanical equivalent of heat by Callendar& Barnes's method**
- **Determination of efficiency of electrical Kettle with variable voltages**
- **Determination of thermal conductivity of a bad conductor by Lee's disc method**
- **Verification of Newton's law of cooling**
- **Determination of specific heat of a liquid with the help of Newton's law of cooling**
- **Study of statistical distribution and determination of standard3 deviation with the help of black and white dice**
- **Determination of the temperature coefficient of a resistance with the help of Carey-Foster bridge4**
- **Determination of Young's modulus, modulus of rigidity and Poisson's ratio of material of a wire using Searle's method**
- **Determination of Young's modulus of material of a metallic bar by bending of beam method**

BSc First Year Experiment List

- **Determination of acceleration due to gravity (g) using Bar1 pendulum**
- **Determination of acceleration due to gravity (g) using Kater's reversible pendulum**
- **Determination of modulus of rigidity of a rod with the help of Barton's apparatus**
- **Determination of the moment of inertia of a given body (irregular body) with the help of inertia table**

- **Verification of laws of the parallel/perpendicular axes of moment of inertia**
- **Determination of Young's Modulus of a material of a rod using Cantilever method**
- **Determination of surface tension of a liquid by Jaeger's method**

BSc second year Experiment List

- To study of elliptically polarized light by means of Babinet's compensator
- Measurement of capacitance by Schering bridge
- To Compare the capacitances of two condensers by De-sauty's Bridge
- Measurement of inductance by Hay's bridge
- Measurement of capacitance by Owen's bridge
- Study of frequency response curve of a series LCR circuit and determination of resonant frequency, Quality factor and band width
- To study of frequency response curve of a parallel LCR circuit and determination of anti-resonant frequency and1 band width
- To draw the B-H curve and determination of Hysteresis loss
- Determination of voltage, frequency and phase difference using CRO
- Study of sensitivity of CRO
- Measurement of self inductance using Maxwell's bridge

BSc second year Experiment List

- Measurement of unknown inductance using Anderson's bridge
- To study the charging and discharging of a condenser through a resistor
- To Determination of impedance and power factor using LCR circuit
- To study Lissajous Figures with the help of CRO
- To determine the Refractive index of the material of a given prism by spectrometer
- To determine the Dispersive Power of the Material of a given prism using Mercury Light
- To determine wavelength of sodium light using Fresnel's Biprism
- To determine the radius of curvature of a plano-convex lens by Newton's rings
- To determine the refractive index of a liquid using Newton's rings
- To determine wavelength of Sodium light (D1 and D2 lines) using plane diffraction Grating

BSc second year Experiment List

- Determination of Resolving Power of a Plane Diffraction Grating
- To determine the Specific Rotation of Sugar Solution by polarimeter
- Determination of resolving power of a telescope by diffraction method
- Determination of thickness of a thin wire by diffraction method
- Study of interference straight edge
- To determine the wavelength of sodium source using plane transmission grating
- Verification of Brewster's law with the help of spectrophotometer
- To determine the wavelength of laser light with the help of diffraction grating
- Calculation of e/m of an electron with the help of e/m tube

BSc third year Experiment List

- To determine the resistivity and energy band gap of a semiconductor using four probe method.
- Identification of charge of carriers in n-type semiconductor using Hall effect.
- Study of V-I characteristic curve of SCR and their use as relaxation oscillator.
- Study of V-I characteristic curve of UJT.
- Study of V-I characteristic curve of Gunn diode.
- Draw V-I characteristics curve of MOSFET.
- To study of characteristics curve of Tunnel diode and determine its gain.
- To design an inverting and non-inverting Op-Amp using IC 741.
- To design an integrator and differentiator using Op-Amp.
- To study of leveling and scaling using Op-Amp.

BSc third year Experiment List

- To calculate the wavelength of a mercury and sodium spectrum by constant deviation spectrometer and calibration of spectroscope
- To study the absorption spectrum of iodine vapour.
- To draw the characteristic curve of a PN junction diode and determine stopping potential.
- To study characteristics curve of a Photo cell.
- To study characteristics curve of a Light emitting diode (LED).
- To study characteristics curve of a Zener diode
- To study characteristics curve of a transistor in common emitter mode configuration.
- To study characteristics curve of PNP NPN transistor in common base mode configuration.
- To study characteristics curve of junction field effect transistor in common source configuration.
- To study single stage RC amplifier.
- To study the characteristics curve of pentode.
- To study characteristics curve of solar cell
- To study Wien bridge oscillator.
- To study characteristics curve of photodiode.

BSc Fourth year Experiment List

- Determination of e/m of electron by normal Zeeman effect using Fabry Perot Etalon.
- Verification of Bohr's postulates using Frank-Hertz experiment.
- Determination of wavelengths difference of sodium source using Michelson Interferometer.
- Determination of e/m by Helical/magnetron method.
- To determine Young's modulus and Poisson's ratio of a glass plate using Cornu's method of interference.
- Determination wavelength of He-Ne laser beam using plane transmission grating.
- Determination of Young Modulus of metallic rod by Newton's rings.
- Study the characteristics curves of thermistor.
- Determination of magnetic Susceptibility of paramagnetic solution by Quincke's method.

BSc Fourth year Experiment List

- Determination of Lande's 'g' factor of paramagnetic materials using electron spin resonance method.
- To study characteristics curve of a Zener diode
- To study characteristics curve of a transistor in common emitter mode configuration.
- To study characteristics curve of PNP NPN transistor in common base mode configuration.
- To study characteristics curve of junction field effect transistor in common source configuration.