

Practical Experiments

Year	Name of Practical	Instrument used
2020-23	Construction of full wave a) Centre tapped and b) Bridge rectifiers	Multimeter
2020-23	Resolving power of grating	Laser
2020-23	Characteristics of Zener diode and construction of Voltage regulator.	Multimeter
2020-23	Verification of Thevenin's theorem and maximum power transfer theorem	Multimeter
2020-23	Single slit diffraction using LASER	Laser
2020-23	Thermo emf measurement using digital multimeters - study of Seebeck effect	Multimeter
2020-23	Transistor input, output & transfer characteristics in Common Base Configuration and calculation of current gain	Multimeter
2020-23	Transistor input, output & transfer characteristics in Common emitter Configuration and calculation of current gain	Multimeter
2020-23	CE Transistor Amplifier-Frequency response.(Design the circuit for a given collector current I_C)	Multimeter, IC tester kit
2020-23	Negative feedback amplifier	CRO, Multimeter
2020-23	Half adder using NAND gates	
2020-23	Full adder using NAND gates-construction & verification	Multimeter, IC tester kit
2020-23	LC Oscillator (Hartley or Colpitt's)	CRO, Multimeter
2020-23	Phase shift oscillator	CRO, Multimeter
2020-23	Operational Amplifier –inverting, non inverting, Voltage follower	CRO, Multimeter, IC tester kit
2020-23	LCR circuits-Resonance using CRO	CRO, multimeter
2020-23	Voltage multiplier (doubler, Tripler) (Connections to be realized through soldering. The desoldering has to be carried out at the end of the experiment.)	Multimeter
2020-23	Characteristics of Diode and Zener diode	Multimeter
2020-23	OP AMP- adder, subtractor	Multimeter, IC tester kit
2020-23	Photo diode V-I characteristics. Determine quantum efficiency and responsivity of the	Multimeter

	PD Study the characteristics of LED (3 colours) and LDR.	
2020-23	Verification of De-Morgan's Theorem using basic gates.	IC tester kit, IC trainer kit
2020-23	Flip-Flop circuits –RS and JK using IC's	IC tester kit, IC trainer kit
2020-23	Multivibrator using transistors.	Multimeter
2020-23	Construction of basic gates using diodes (AND, OR) & transistors (NOT), verification by measuring voltages	Multimeter
2020-23	BG Absolute Capacity	Multimeter
2020-23	Conversion of Galvanometer to ammeter and calibrating using Potentiometer.	Multimeter
2020-23	Potentiometer-Calibration of low range voltmeter	Multimeter
2020-23	Surface Tension-Capillary rise method - Radius by microscope.	Beaker
2020-23	Carey Foster's bridge- Resistivity of the material of wire	Multimeter
2020-23	Logic gates – Verification of truth table	IC tester kit, IC trainer kit
2020-23	Viscosity of liquid- Capillary flow- Variable pressure head method (Mass determination by equal oscillation method / digital balance)	Beaker
2020-23	Potentiometer- Conversion of Galvanometer in to voltmeter –calibration by standard voltmeter	Multimeter
2020-23	Half wave rectifier and Full wave rectifier	Multimeter
2020-23	Potentiometer-Measurement of resistance	Multimeter
2020-23	Solution of equations by bisection and Newton-Raphson methods	Computer
2020-23	Least square fitting – straight line fitting.	Computer
2020-23	Numerical differentiation using difference table.	Computer
2020-23	Numerical Integration – Trapezoidal and Simpson's 1/3 rd rule.	Computer
2020-23	Taylor series - Sin θ , Cos θ 26. Solution of 1st order differential equation Runge-Kutta method	Computer
2020-23	Simulation of a freely falling body. Tabulation of position, velocity and acceleration, as function of time.	Computer
2020-23	Simulation of projectile – Tabulation of position, velocity and acceleration as a function of time – Plot trajectory in graph	Computer

	paper from tabulated values.	
2020-23	Conversion of Galvanometer to voltmeter and calibrating using Potentiometer. (Plot using software)	Multimeter
2020-23	BG-High resistance by leakage method	Multimeter

New Practicals added

Year	Name of Practical	Instrument used
2020-21	Laser-wavelength using transmission grating	Laser
2021-22	Colpitts oscillator	CRO, Multimeter
2022-23	Single slit diffraction using LASER	Laser
2022-23	Lissajous figures – Measurement of frequency and phase shift of sinusoidal signals using CRO	CRO
2022-23	Wave shaping R-C circuits - integrator and differentiator	CRO, Mutimeter
2022-23	Numerical aperture of an optical fiber by semiconductor laser	Laser