

Name of the laboratory: Electronics Devices and Circuits

Course Objectives

- To identify various components and testing of active devices
- To study and operation of millimeters, function generators, regulated power supplies and CRO to know the characteristics of various active devices.
- To study frequency response amplifier

Course Outcomes:

- After Completion of the course the student is able to apply various devices to real time problems.
- Compute frequency response of various amplifiers.

List of the equipment:

1. Regulated Power supplies (RPS) : 0-30 V
2. CRO's: 0-20 MHz.
3. Function Generators: 0-1 MHz.
4. Multimeters
5. Decade Resistance Boxes/Rheostats
6. Decade Capacitance Boxes
7. Ammeters (Analog or Digital): 0-20 μ A, 0-50 μ A, 0-100 μ A, 0-200 μ A, 10 mA.
8. Voltmeters (Analog or Digital): 0-50V, 0-100V, 0-250V
9. Electronic Components: Resistors, Capacitors, BJTs, LCDs, SCRs, UJTs, FETs, LEDs, MOSFETs, Diodes-Ge & Si type, Transistors – NPN, PNP type.

List of experiments:

1. Forward and Reverse Bias V-I characteristics of PN junction Diode.
2. Zener diode V-I characteristics and Zener diode as voltage regulator.
3. Half Wave rectifier, with and without filter
4. Full wave rectifier with and without filters.
5. Input and output Characteristics of a BJT in CE configuration and calculation of h parameters.
6. Input and output Characteristics of a BJT in CB configuration and calculation of h- parameters.
7. FET characteristics in CS configuration.
8. Design of self bias circuit
9. Frequency response of CE Amplifier.
10. Frequency response of CC Amplifier.
11. Frequency response of CS FET Amplifier.
12. SCR characteristics.
13. UJT characteristics

