

**ELECTRONIC DEVICES AND CIRCUITS LAB**  
**II Year B.Tech. EEE II-Sem.**

**Course Outcomes:**

<b>A14484</b>	<b>ELECTRONIC DEVICES AND CIRCUITS LAB</b>
C228.1	Understand internal physical behavior of PN junction diode, resistor and capacitor
C228.2	Understand the breakdown mechanisms in semiconductors so as to construct Zener voltage regulator used in regulated power supplies.
C228.3	Analyze various rectifiers and filter circuits used in regulated power supplies.
C228.4	Understand the construction, operation and characteristics of Bipolar Junction Transistor, which can be used in the design of amplifiers
C228.5	Analyze the characteristics of FET And UJT

**LIST OF EXPERIMENTS**

**PART-A:**

**Electronic Workshop Practice (In 3 Lab Sessions):**

1. Identification, Specifications, Testing of R, L, C Components (Color Codes), potentiometers, Switches (SPDT, DPDT, and DIP), Coils, Gang Condensers, Relays, Bread Boards, PCB's
2. Identification, Specifications and Testing of Active Devices, Diodes, BJT's, Low power JFET's, MOSFET's, Power Transistors, LED's, LCD's, SCR, UJT.
3. Study and operation of
  - a) Multimeters (Analog and Digital).
  - b) Function Generator.
  - c) Regulated Power Supplies.
  - d) CRO.

**PART B: Minimum of 10 experiments**

1. Forward & Reverse Bias Characteristics of PN Junction Diode.
2. Zener diode characteristics and Zener as voltage Regulator.
3. Half Wave Rectifier with & without filters.
4. Full Wave Rectifier with & without filters.
5. Input & Output Characteristics of Transistor in CB Configuration and h-parameter calculations.
6. Input & Output Characteristics of Transistor in CE Configuration and h-parameter calculations.
7. FET characteristics.
8. Lissajous patterns using CRO.
9. Frequency Response of CC Amplifier.

10. Frequency Response of CE Amplifier.
11. Frequency Response of Common Source FET amplifier.
12. SCR characteristics.
13. UJT Characteristics.