

**1/4 B.Tech. SCOND SEMESTER  
ELECTRONIC DEVICES AND CIRCUITS LAB**

**CS 2L2**

**Required**

**Credits: 2**

**Lecture: --**

**Internal assessment: 25 marks**

**Lab: 3 period /week**

**Semester end examination: 50 marks**

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**Course context and Overview:** This Lab provides the students to get an electrical model for various semiconductor devices. Students can find and plot V\_I characteristics of all semiconductor devices. Student learns the practical applications of the devices. They can learn and implement the concept of the feedback and frequency response of the small signal amplifier

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**Prerequisites: NIL**

**Objectives:**

1. To study basic electronic components.
2. To observe characteristics of electronic devices.

**Learning Outcomes:**

The student will be able

1. To apply the concepts and analytical principles to analyze electronic (diodes, transistors) circuits.
2. To Understanding of the operation diodes and transistors in order to build circuits.
3. To learn to the characteristics of Transistor.
4. To learn the basics of Amplifiers.

**Exercises:**

1. The identification & Testing of Electronic component like R,L,C, Diodes, Transistors etc.
2. Study of CRO.
  - I. Diode Characteristics(Ge, Si) a) Forward Bias b) Reverse Bias
  - II. Zener Diode Characteristics
  - III. Half Wave rectifier with & without filter
  - IV. Full Wave rectifier with & without filter
  - V. Transistor CB Characteristics(I/P & O/P)
  - VI. Transistor CE Characteristics(I/P & O/P)
  - VII. CB Amplifier
  - VIII. CC Amplifier
  - IX. CE Amplifier
  - X. Voltage Divider bias
  - XI. FET Characteristics
  - XII. SCR Characteristics

**Learning Resources**

**REFERENCE BOOKS:**

1. Electronic devices & circuits by Kumar , Jain EEE publications

2. Electronic devices & circuits by B.L.Theraja,R.S.Sedha,S.Chand publications  
Electronic devices & circuits by Robert L.Boylested