II B.Tech – I Semester
(17EC311) ELECTRONIC DEVICES AND CIRCUITS LAB

Int. Marks	Ext. Marks	Total Marks	L	T	P	C
60	40	100	-	-	3	2

Pre-Requisites: Physics

Course Objectives:

This lab course is intended to know the usage of various electronic equipment and to study the characteristics of different electronic devices.

List of Experiments:

1. P-N Junction Diode Characteristics.
   Part A: Germanium Diode (Forward bias & Reverse bias).
   Part B: Silicon Diode (Forward bias & Reverse bias).
2. Zener Diode Characteristics.
   Part A: V-I Characteristics.
   Part B: As a Voltage Regulator.
3. V-I Characteristics of LED
4. Half-wave Rectifier (without and with filter).
5. Full-wave Rectifier (without and with filter).
6. Switching characteristics of BJT
7. BJT Characteristics (CE Configuration).
   Part A: Input Characteristics.
   Part B: Output Characteristics.
8. BJT Characteristics (CB Configuration).
   Part A: Input Characteristics.
   Part B: Output Characteristics.
9. BJT Characteristics (CC Configuration).
   Part A: Input Characteristics.
   Part B: Output Characteristics.
10. FET Characteristics (CS Configuration).
    Part A: Drain Characteristics.
    Part B: Transfer Characteristics.
11. SCR Characteristics.
12. UJT Characteristics.

Course Outcomes:

After successful completion of the course, the students can be able to:

S.No	Course Outcome	BTL
1.	An ability to verify the working of different diodes, transistors, CRO probes and measuring instruments	L2
2.	Understand the functions of equipment such as digital multimetre.	L2
3.	Evaluate the characteristics of various electronics components and devices.	L3
4.	Ability to measure and record the experimental data, analyze the results, and prepare a formal laboratory report.	L3
5.	Describe the ability to analyze electronic circuits using discrete components.	L2
6.	Implementation of small electronic circuits by using discrete components.	L2

Correlation of COs with POs & PSOs:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
CO 1	3	2	1	-	-	-	-	-	3	-	-	2	3	2
CO 2	3	1	1	-	-	-	-	-	3	-	-	2	3	2
CO 3	3	3	1	-	-	-	-	2	3	-	-	2	3	2
CO 4	1	3	1	-	-	-	-	3	3	-	-	2	2	3
CO 5	1	3	2	-	-	-	-	-	3	-	-	2	2	3
CO 6	2	3	3	-	-	-	-	-	3	-	-	2	2	3