

ELECTRONIC DEVICES AND CIRCUITS LAB

Course Code: 22EC11D4

L	T	P	C
0	0	3	1.5

Course Outcomes: At the end of the course the student will be able to

- CO 1** determine the characteristics of various diodes (L3)
- CO 2** understand the performance of rectifiers with and without filters (L2)
- CO 3** summarize the characteristics of BJT and compute the h-parameters (L2)
- CO 4** determine the characteristics of FETs (L3)
- CO 5** understand the performance of amplifier circuits (L2)

(Any TWELVE experiments shall be conducted)

List of Experiments

1. PN Junction Diode Characteristics - Cut-in voltage, static resistance, dynamic resistance calculations.
2. Zener Diode Characteristics & Voltage Regulator using Zener Diode - Breakdown voltage, % regulation calculation.
3. Rectifiers without Filters (Full wave & Half wave) - ripple factor, % regulation, load regulation calculation.
4. Rectifiers with Filters (Full wave & Half wave) - ripple factor, % regulation, load regulation calculation.
5. Bipolar Junction Transistor- CB Characteristics - current gain calculation, h- parameter calculation.
6. Bipolar Junction Transistor- CE Characteristics - current gain calculation, h- parameter calculation.
7. Transistor as a switch – Turn ON or OFF a load (LED) placed in Collector branch, identify the saturation region of the BJT characteristic curve.
8. JFET Characteristics – Transfer and Drain characteristics & determine the r_d , g_m , I_{DSS} , V_P and amplification gain. Half wave Rectifier with Filters- ripple factor, % regulation, load regulation calculation.
9. MOSFET Characteristics - Transfer and Drain characteristics & determine trans-conductance parameters.
10. SCR Characteristics - V-I characteristics and find the break over voltage and holding current.
11. CE Amplifier – Bandwidth, input impedance, output impedance calculations.
12. CC Amplifier – Bandwidth, input impedance, output impedance calculations.
13. FET amplifier (Common Source) – Frequency response, bandwidth and voltage gain calculations.
14. UJT characteristics – Negative resistance curve & determine its intrinsic standoff Ratio.
