II B.Tech – I Semester
(20EE3104) ANALOG ELECTRONICS LAB

Int. Marks	Ext. Marks	Total Marks	L	T	P	C
15	35	50	-	-	3	1.5

Pre-Requisites: ANALOG ELECTRONICS

Course Objectives:
- To plot the characteristics of PN Junction Diode, BJT, FET and UJT
- To observe the applications of PN Junction Diode as rectifiers
- To design and implement amplifier circuits and multi vibrators

List of Experiments:
1. P-N Junction Diode Characteristics
   Part A: Germanium Diode (Forward bias & Reverse bias)
   Part B: Silicon Diode (Forward Bias only)
2. Half-wave Rectifier (without and with C-filter)
3. Full-wave Rectifier (without and with C-filter)
4. BJTCE Characteristics
   Part A: Input Characteristics
   Part B: Output Characteristics
5. Transistor as a Switch
6. FET Characteristics
   Part A:Drain Characteristics
   Part B:Transfer Characteristics
7. UJT Characteristics
8. Common Emitter Amplifier
9. Common Collector Amplifier
10. Monostable Multivibrator
11. Astable Multivibrator
12. Schmitt Trigger

Equipment required:
1. Regulated Power supplies
2. Analog / Digital Storage Oscilloscopes
3. Analog / Digital Function Generators
4. Digital Multi-meters
5. Decade Resistance Boxes / Rheostats
6. Decade Capacitance Boxes
7. Ammeters (Analog or Digital)
8. Voltmeters (Analog or Digital)
9. Active & Passive Electronic Components

Course Outcomes:

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

S.No	Course Outcome	BTL
1.	Understand the characteristics of PN Junction Diode, BJT, FET and UJT and obtain their parameters	L2
2.	Describe the regulation process of Half and full wave rectifier	L2
3.	Plot the switching action of a BJ	L3
4.	Observe the frequency responses of CE and CS amplifier	L2
5.	Design and analyze the functionality of Multi vibrators	L6

Correlation of COs with POs& PSOs:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	1	2	-	-	2	-	-	-	3	-	-	-	3	1
CO2	2	2	1	-	3	-	-	-	3	-	-	-	3	1
CO3	1	2	2	-	3	-	-	-	3	-	-	-	3	1
CO4	2	2	2	1	3	-	-	-	3	-	-	-	3	2
CO5	2	3	3	2	3	-	-	-	3	-	-	-	3	2