II B.Tech – II Semester
(17EC411) ELECTRONIC CIRCUIT ANALYSIS LAB

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

Pre-Requisites: Electronic Devices & Circuits

Course Objectives:

The students are required to design the circuit and perform the simulation using Spice Simulator/Equivalent Industrial Standard Licensed simulation software tool**.** Further they are required to verify the result using necessary hardware equipment.

List of Experiments:

1. Determination of f_T of a given transistor.
2. Voltage-Series Feedback Amplifier
3. Current-Shunt Feedback Amplifier
4. RC Phase Shift/Wien Bridge Oscillator
5. Hartley/Colpitt's Oscillator
6. Two Stage RC Coupled Amplifier
7. Darlington Pair Amplifier
8. Bootstrapped Emitter Follower
9. Class A Series-fed Power Amplifier
10. Transformer-coupled Class A Power Amplifier
11. Class B Push-Pull Power Amplifier
12. Complementary Symmetry Class B Push-Pull Power Amplifier
13. Single Tuned Voltage Amplifier
14. Double Tuned Voltage Amplifier

Equipment & Software required:

Software:

1. Spice Simulator/ Equivalent Industrial Standard Licensed simulation software tool.
2. Computer Systems with required specifications

Equipment:

1. Regulated Power supplies
2. Analog/Digital Storage Oscilloscopes
3. Analog/Digital Function Generators
4. Digital Multimeters
5. Decade Résistance 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 can be able to:

S.No	Course Outcome	BTL
1.	Comprehend the fundamental concepts in feedback amplifier circuits.	L2
2.	Analyze the oscillators design, frequency response calculations with the help of mathematical expressions.	L4
3.	Describe various cascade amplifier circuits using BJT and FET models.	L2
4.	Perform the experimental characteristics of power amplifier circuits.	L2
5.	Interpret the tuned amplifiers and tuned cascaded networks functionality	L5
6.	Analyze the circuit design, testing and utilization of the circuits in various levels.	L4

Correlation of COs with POs & PSOs:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	2	3	3	2	-	-	-	3	3	2	-	3	3
CO 2	2	2	3	3	2	-	-	-	3	3	2	-	3	3
CO 3	2	2	3	3	2	-	-	-	3	3	2	-	3	3
CO 4	2	2	3	3	2	-	-	-	3	3	1	1	2	2
CO 5	2	2	3	3	2	-	-	-	3	3	1	1	2	2
CO 6	3	3	3	3	2	-	-	-	3	3	3	1	3	3