EC-353	CIRCUIT SIMULATION LAB	L	T	P	C
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COURSE OBJECTIVES:

1. To build circuit construction skills using circuit simulation software tool.
2. To simulate rectifiers and amplifier circuits.
3. To simulate LC oscillators, RC oscillator and analog modulation techniques.

COURSE OUTCOMES:

After successful completion of the course, the students are able to

1. design and verify the operations of RL,RC,RLC circuits and Half Wave Rectifier &Full Wave Rectifiers.
2. design electronic circuits such as CS,CE,Class A power Amplifiers and Oscillators and obtain their frequency responses.
3. simulate the operations of Integrator,Differentiator, Clippers , Campers and Filters.
4. solve the problems pertaining to electronic circuit design.

List of Experiments:

1. Simulate step response of a RL, RC, and RLC circuits.
2. Design and verify the operating point for a self bias circuit.
3. Determine ripple factor and efficiency of a half wave rectifier and full wave rectifier.
4. Obtain the frequency response of a CS amplifier.
5. Obtain the frequency response of enhancement MOSFET amplifier with series-shunt feedback amplifier.
6. Obtain the frequency response of a single stage and two stage CE amplifier and compare the bandwidths.
7. Design and simulate Class A power Amplifier.
8. Simulate Hartley/ Colpitts Oscillator using BJT.
9. Verify the characteristics of Clippers and Clampers.
10. Simulate a differentiator and integrator using OPAMP.
11. Simulate a low pass and high pass filter using OPAMP.
12. Simulate a RC phase shift Oscillator using OPAMP.
13. Simulate a wein bridge Oscillator using OPAMP.
14. Simulate an Amplitude Modulator and Demodulator.
15. Simulate a Frequency Modulator and Demodulator.

Note: A minimum of 10(Ten) experiments have to be Performed and recorded by the candidate to attain eligibility for Semester End Practical Examination.