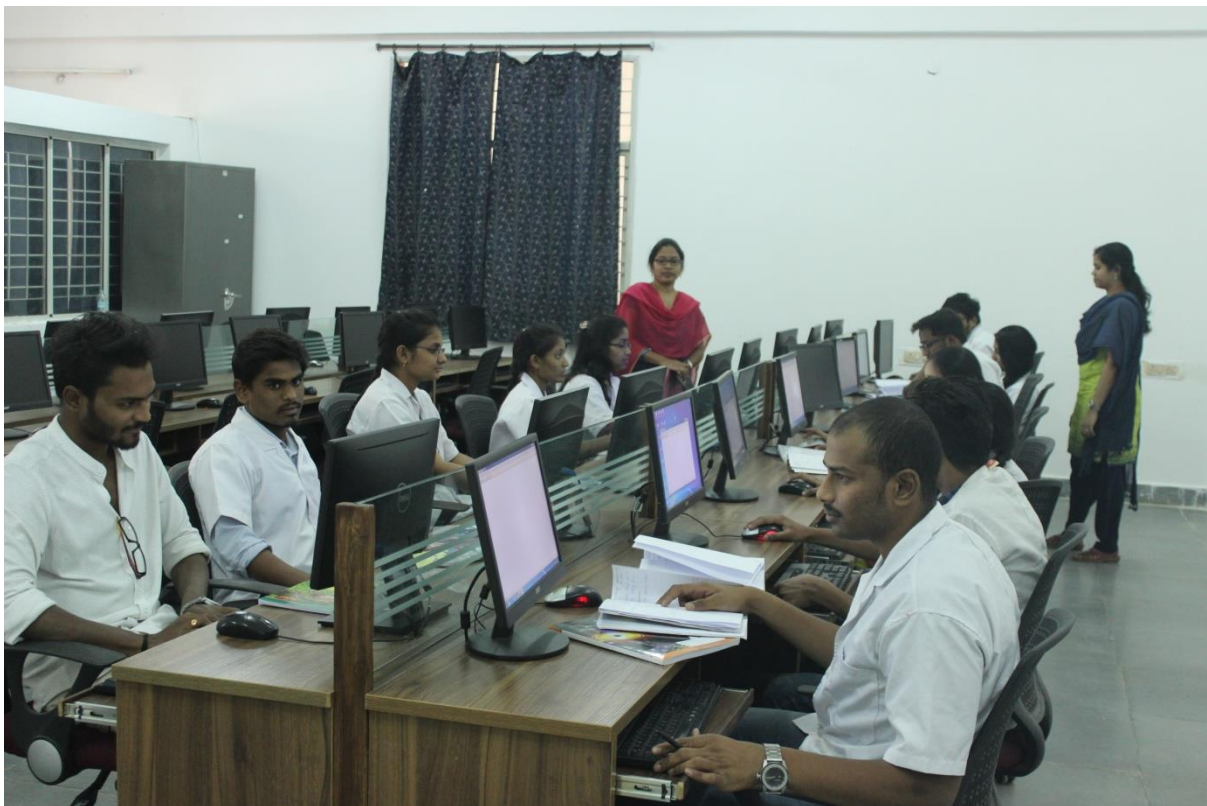


BASIC SIMULATION TOOLS LAB

II Year B.Tech. EEE I-Sem.

Course Outcomes:

A13281	BASIC SIMULATION TOOLS LAB
C217.1	Understand the basic commands & operators of MATLAB & PSPICE
C217.2	Develop the program for matrix multiplication & inversion in MATLAB
C217.3	Analyze the series RL,RC & RLC circuits using Simulink for dc & ac excitation using MATLAB .
C217.4	Develop the program for DC network and single phase half wave & full wave rectifier using PSPICE.
C217.5	Analyze the transient response of series RL,RC,RLC circuits for DC & AC excitation using PSPICE.



LIST OF EXPERIMENTS

Any Ten experiments should be conducted

Demo of basic commands & operators of MATLAB & Study of PSPICE.

Using MATLAB Software

1. Development of MATLAB Program for Matrix multiplication and inversion
2. Mesh and nodal analysis of circuit excited by DC Source.
3. Analysis of RL series circuit using simulink model on DC and AC Excitation.
4. Analysis of RC series circuit using simulink model on DC and AC Excitation.
5. Analysis of RLC series circuit using simulink model on DC and AC Excitation.
6. Simulink model of diode.
7. Simulink model of SCR.
8. Determination of band width and quality factor of a Series RLC circuit.

Using PSPICE Software

1. Development of PSPICE program to determine the Thevenin's voltage of given network.
2. Development of PSPICE program of 1- half wave rectifier.
3. Development of PSPICE program of 1- full wave rectifier.
4. Transient response of RL series circuit excited by DC and AC Source.
5. Transient response of RC series circuit excited by DC and AC Source DC Source.
6. Transient response of RLC series circuit excited by DC and AC Source DC Source.