DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Name of the Lab   :ELECTRINICS LAB

OBJECTIVES:

- To provide exposure to the students with hands on experience on various basic engineering practices in Electronics Engineering.

- To learn the characteristics of basic electronic devices such as Diode, BJT,FET, SCR and the working of RL,RC and RLC circuits and gain hand on experience in Thevinin & Norton theorem, KVL & KCL, and Super Position Theorems

- To gain hands on experience in designing electronic circuits and learn simulation software used in circuit design

- To differentiate feedback amplifiers, oscillators and operation of various multivibrators.

- To understand the various basic logic gates, design and implement combinational circuits using MSI devices and sequential circuits

- To understand the basics of linear integrated circuits and available ICs

- To apply operational amplifiers in linear and nonlinear applications

OUTCOMES:

- Verify Thevinin & Norton theorem KVL & KCL, and Super Position Theorems and Design RL and RC circuits

- Design amplifiers, oscillators, D-A converters using operational amplifiers.

- Analyze the performance of filters, multivibrators, A/D converter and analog multiplier using SPICE.

- Design filters using op-amp and performs an experiment on frequency response. And Analyze the working of PLL and describe its application as a frequency multiplier.

- Analyze various types of feedback amplifiers

- Implement simplified combinational circuits using basic logic gates and Implement combinational circuits using MSI devices

- Implement sequential circuits like registers and counters and Simulate combinational and sequential circuits using HDL