**ECL2501 Semiconductor Devices and Circuits Lab**  **L-T-P: 0-0-3; Cr: 01**

**PREREQUISITE**

(i)Elements of Electronics Engineering Lab ii) Semiconductor Devices and Circuits

**COURSE OBJECTIVE**

This course indented to give a basis to implement and verify the operation of semiconductor devices and circuits. This course brings together the semiconductor device physics and circuit operations.

**COURSE OUTCOME**

Upon successful completion of this course, students should be able to:

CO1: Verify different fundamental principles of semiconductor devices

C02: Implement different amplifier circuits.

C03: Verify the working of power devices.

**List of Experiments for Semiconductor Devices Lab**

Experiment No. 01: Study of Hall Effect.

Experiment No. 02: Assembly of RC coupled amplifier.

(a) To measure gain & bandwidth of degenerate amplifier.

(b) To measure gain & bandwidth of emitter bypass capacitor amplifier.

Experiment No. 03: Characteristics of n-channel MOSFET.

Experiment No. 04: Study of common source MOSFET amplifier.

Experiment No. 05: Resistivity measurement of a semiconductor using four probe methods.

Experiment No. 06: Study of complementary symmetry amplifier.

Experiment No. 07: Study of class B push-pull amplifier.

Experiment No. 08: Study of class C amplifier.

Experiment No. 09: Study of SCR.

Experiment No. 10: Study of component testing of various Surface Mounting Device (SMD).

Experiment No. 11: Study of ohmic and non-ohmic contacts (through software).

Experiment No. 12: Any innovative experiment based on the syllabus of Semiconductor Devices and Circuits.