

BASIC ELECTRONICS LAB (EE-201 L)

Pre-requisite: None

Credit Hours: 01

Contact Hours: 48

RECOMMENDED BOOK(S)

Electronic Devices by Floyd, 9 th Edition

REFERENCE BOOK(S)

Micro-Electronic Circuits by Sedra / Smith, 5 Thedition

COURSE OBJECTIVES

The objective of this lab is to verify the working principles, and to implement the basic concepts of different electronics components in practical form including transistors, diodes, Gates and rectifiers. How to use basic level concepts of electronic devices in practical life.

S. No.	CLO/PLOS MAPPING	DOMAIN	PLO
1	Execute sensing techniques of basic electronic components.	P4	01
2	Operate electronic components using transistor.	P3	02
3	Present a complete electronic system by using different electronic concepts.	A2	09

COURSE CONTENTS

Operation of all gates:

To check the operation of AND, OR, NAND, XOR, NOR, NOT Gates according to Truth Tables.

Combinations of different gates:

Implement NOR gate as an AND gate by gate diagram given and make its truth table.

Diode's types and their working principle:

To become familiar with the characteristics of a Silicon & Germanium diode.

Behavior of diodes in series and parallel connection:

To develop the ability to analyze networks with diodes in a series configuration.

To develop the ability to analyze networks with diodes in a parallel configuration.

AC to DC conversion by using rectifiers:

To analyze the half-wave rectifier.

To analyze the Full-wave rectifier.

Concepts of transistor and its implementation in circuit:

To test the transistors, find there EBC pins and to find either NPN Or PNP, by using DMM & construct transistor biasing circuit & plot its IC vs VCE curve.

To use transistor as switch.

Basic circuit designing using Proteous software:

Draw all the circuits of course by using Proteous software.