

Department of Technical Education

Diploma Programme

SECOND SEMESTER**SUBJECT : SEMICONDUCTOR DEVICES LAB***Common to E&C & EI&C***Contact Hrs / Week - 6****Contact Hrs / Semester: 96****GENERAL OBJECTIVES:**

On completion of the Lab course the Student will be able to

- 1 Identify the active components
- 2 Understand the behavioural characteristics of Basic Semiconductor Devices

GRADED EXERCISES:

- 1 Forward Characteristics of Junction diode (Both Silicon and Germanium)
- 2 Reverse Characteristics of Zener diode (Zener Voltage Regulator)
- 3 Input characteristics of NPN Transistor in CB configuration
- 4 Output characteristics of NPN Transistor in CE configuration
- 5 Determination of ' α ' and ' β ' of a transistor
- 6 Reverse characteristics of a Photodiode
- 7 Output characteristics of Photo Transistor
- 8 Drain characteristics of JFET
- 9 Transfer characteristics of JFET
- 10 Semiconductor diode as half wave Rectifier
- 11 Transistor as a Switch (use LED's for switch action)
- 12 V-I Characteristics of UJT
- 13 V-I Characteristics of SCR.
- 14 V-I Characteristics of DIAC
- 15 V-I Characteristics of TRIAC
- 18 Mini Project - To Collect data like base configurations, operational characteristics, applications and critical factors etc.on all the semiconductor devices studied in theory and compile a Project Report through out and submit at the end of the semester.
To Assemble & test simple circuits using above components
Tests

REFERENCES:

- 1 Basic Electronics lab Manual -Paul. B. Zbar

SCHEME OF VALUATION		
1	Record	5
2	Writing two circuits, Tabular column, Ideal graph, formulae 15*2	30
3	Construction and Conduction of one	30
4	Result	15
5	Viva-Voce	20
Total		100