ANALOG AND DIGITAL CIRCUITS LAB

(Common to CSE, IT)

Course Code: 13EC1143

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Pre requisites:

Electronic Devices &Circuits, Digital Logic Design

Course Educational Objectives :

- To impart the practical knowledge in semiconductor diodes characteristics and applications of diodes as regulators, rectifiers.
- To measure the V-I characteristics of various devices that are used in the electronic equipment.
- Practical & functional verification through V-I characteristics of active devices like BJT, JFET, MOSFETS and applications.
- To have an idea of Digital Circuits

Course Outcomes :

- Student comprehends the depth of semiconductor devices like diodes, transistor, JFET characteristics are verified. Student gains hands on experience in handling electronic components and devices.
- Student gets the knowledge about PN junction diodes, zener & transistor configurations, and v-I characteristics.
- To impart the practical knowledge in various amplifiers design &verification ofimpedances, and band width calculations.
- Design different combinational and Sequential circuits

Note: Any FIVE experiments from PART –A and FIVE experiments from Part- B are to be conducted.

LIST OF EXPERIMENTS:

Part- A

1. PN Junction diode characteristics.
2. Zener Diode Characteristics.
3. Rectifiers without filters (Full wave & half wave).
4. Transistor CE characteristics.
5. FET Characteristics.
6. CE Amplifier.
7. FET Amplifier.
8. RC Phase shift oscillator.

Part –B

1. Study of Logic Gates using Discrete Components.
2. Half Adder and Full Adder.
3. Encoder and Decoder.
4. Multiplexer and Demultiplexer.
5. Flip-flops.
6. Asynchronous Counter.
7. Synchronous Counter.
8. Shift Registers.