Maulana Abul Kalam Azad University of Technology, West Bengal

(Formerly West Bengal University of Technology)

Syllabus for B. Tech in Electronics & Communication Engineering

(Applicable from the academic session 2018-2019)

Course Code : EC 391	**Category :** Core Courses
Course Title : Electronic Devices Lab	**Semester** : Third
L-T-P : **0-0-2**	**Credit:1**
Pre-Requisites:	

Detailed contents:

1. identifying and study of different components like resistor, capacitors, diodes, LED, Transistors, FET(JFET & MOSFET) etc
2. Study of different instruments used in the laboratories like, power supply, Oscilloscope, Multi-meter etc.
3. CHARACTERISTICS OF PN JUNCTION DIODE
   a) To Plot the Volt Ampere Characteristics of PN Junction Diode under Forward and Reverse Bias Conditions.
   b) To find the Cut-in voltage, Static Resistance, Dynamic Resistance for Forward Bias & Reverse Bias
4. CHARACTERISTICS OF ZENER DIODE & LOAD REGULATION
   a) To Obtain the Forward Bias and Reverse Bias characteristics of a Zener diode.
   b) Find out the Zener Break down Voltage from the Characteristics.
   c) To Obtain the Load Regulation Characteristics.
5. COMMON BASE BIPOLAR TRANSISTOR CHARACTERISTICS
   a) To plot the Input and Output characteristics of a transistor connected in Common Base Configuration and to find the h – parameters from the characteristics.
6. COMMON EMITTER BIPOLAR TRANSISTOR CHARACTERISTICS
   a) To plot the Input and Output characteristics of a transistor connected in Common Emitter Configuration and to find the h – parameters from the characteristics
7. DESIGN SELF BIAS BJT CIRCUIT
8. JFET DRAIN & TRANSFER CHARACTERISTICS (COMMON SOURCE)
   a) Drain characteristics
   b) Transfer Characteristics.
   c) To find rd, gm, and μ from the characteristics.
9. Study Characteristics of Photo transistor
10. Study Characteristics of LED & LDR

Course Outcome:

a) An ability to verify the working of different diodes, transistors, CRO probes and measuring instruments. Identifying the procedure of doing the experiment.
b) Ability to understand the characteristics of BJT and FET and how to Determine different parameters for designing purpose..
c) Ability to understand properties of photoelectric devices
d) Ability to measure and record the experimental data, analyze the results, and prepare a formal laboratory report.