



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA**  
**KAKINADA – 533 003, Andhra Pradesh, India**  
**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**COURSE STRUCTURE-R19**

II Year – II SEMESTER		L	T	P	C
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ELECTRONIC DEVICES & CIRCUITS LABORATORY					

**Electronic Workshop Practice:**

1. Identification, Specifications, Testing of R, L, C Components (Colour Codes), Potentiometers, Coils, Gang condensers, Relays, Bread Boards.
2. Identification, Specifications and Testing of active devices, Diodes, BJTs, JFETs, LEDs, LCDs, SCR, UJT.
3. Soldering Practice- Simple circuits using active and passive components.
4. Study and operation of Ammeters, Voltmeters, Transformers, Analog and Digital Multimeter, Function
5. Generator, Regulated Power Supply and CRO..

**List of Experiments**

**Any 10 of the following experiments are to be conducted**

1. P.N Junction Diode Characteristics  
 Part A: Germanium Diode (Forward bias & Reverse bias)  
 Part B: Silicon Diode (Forward Bias only)
2. Zener Diode Characteristics  
 Part A: V-I Characteristic  
 Part B: Zener Diode as Voltage Regulator
3. Rectifiers (without and with c-filter)  
 Part A: Half-wave Rectifier  
 Part B : Full-wave Rectifier
4. BJT Characteristics (CE Configuration)  
 Part A: Input Characteristics  
 Part B: output Characteristics
5. FET Characteristics  
 Part A: Drain Characteristics  
 Part B: Transfer Characteristics
6. SCR Characteristics
7. UJT Characteristics
8. Transistor Biasing
9. CRO Operation and its Measurement
10. BJT-CE Amplifier
11. Emitter Follower –CC Amplifier



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**12.FET-CS Amplifier**

Note: The students are required to perform the experiment to obtain the V-I characteristics and to determine the relevant parameters from the obtained graphs.

**Equipment required:**

- 1.Regulated Power supplies
- 2.Analog/Digital Storage Oscilloscopes
- 3.Analog/Digital Function Generators
- 4.Digital Multimeters
- 5.Decade Résistance Boxes/Rheostats
- 6.Decade Capacitance Boxes
- 7.Ammeters (Analog or Digital)
- 8.Voltmeters (Analog or Digital)
- 9.Active & Passive Electronic Components