



BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE
(AUTONOMOUS)
(Approved by AICTE, Permanently Affiliated to JNTUK, Kakinada, Accredited by NAAC with 'A' Grade)
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

BR23 B.TECH II YEAR SYLLABUS

II Year-I Semester					
23EC3L01	ELECTRONIC DEVICES AND CIRCUITS LAB	L	T	P	C
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Course Objectives:

- To analyse the modelling, characteristics and electrical parameters of Diode, BJT, and JFET.
- To illustrate the concepts of biasing in BJT, JFET.
- To illustrate the application of diode in rectifiers and regulated power supply.
- To analyze single stage amplifier circuits using equivalent circuits.


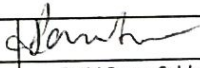
Note: The students are required to perform the experiment to obtain the V-I characteristics and to determine the relevant parameters from the obtained graphs.

List of Experiments :(Minimum of Ten Experiments has to be performed)

1. Clipper circuit using diode
2. Clamping circuit using diode
3. Rectifiers(without and with c-filter)
 - i. Part A: Half-wave Rectifier
 - ii. Part B: Full-wave Rectifier
4. BJT Characteristics(CE Configuration)
 - i. Part A: Input Characteristics
 - ii. Part B: Output Characteristics
5. FET Characteristics(CS Configuration)
 - i. Part A: Drain Characteristics
 - ii. Part B: Transfer Characteristics
6. SCR Characteristics
7. UJT Characteristics
8. Transistor Biasing
9. CRO Operation and its Measurements
10. BJT-CE Amplifier
11. Emitter Follower-CC Amplifier
12. FET-CS Amplifier

Equipment required:

1. Regulated Power supplies
2. Analog/Digital Storage Oscilloscopes

 Dr T S S Phani, Professor & Head of the Department, ECE, BVCITS, Battalipalem	 Dr. N V S Narasimha Sarma Professor, Dept of ECE, NIT, Warangal.	 Dr.M Rama Subba Reddy, Professor, Dept of Applied Mechanics, IIT Chennai.	 Dr. BT Krishna, Professor, Dept of ECE,UCEK,JNTUK, Kakinada,	 Dr. M Chakravarthy, Scientist 'F', Head of antenna Directorate, DRDL, DRDO, Hyderabad.	 Dr CH V Ravi Sankar Associate professor, Department of ECE, Aditya University, Surampalem.
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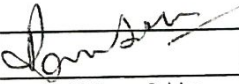
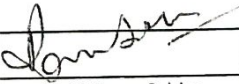
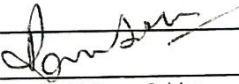
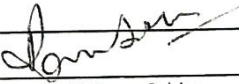
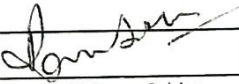
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3. Analog/Digital Function Generators
4. Digital Multi-meters
5. Decade Resistance Boxes/Rheostats
6. Decade Capacitance Boxes
7. Ammeters(Analog or Digital)
8. Voltmeters(Analog or Digital)
9. Active & Passive Electronic Components.

Note: Students supposed to do an Experiment beyond the Syllabus / Lab oriented mini-Project / Case Study and submit it for internal Evaluation.

Course Outcomes:

COs	Statements	BL
CO1	Apply the concept of different electronic devices to verify their characteristics and measure the important parameters.	BL2
CO2	Analyze the performance of rectifier circuits with and without filters.	BL3
CO3	Analyze the performance of BJT and FET amplifier circuits.	BL3
CO4	Design and verify clipping and clamping circuits operation.	BL4

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