


Regulation GRBT-20	Godavari Institute of Engineering & Technology (Autonomous)	I B.Tech			
Course Code	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING LABORATORY (Common for Mech, CE, AME, PET, MM, ECE, EEE)				
Teaching	Total contact hours - 30	L	T	P	C
Prerequisite(s): Basics of Physics		0	0	3	1.5


Course Objectives:


1. To verify the Kirchhoff's laws & Ohm's law
2. To calculate the efficiencies of transformers, DC motors, Three-phase Induction Motor
3. To plot the characteristics of PN junction diode & operational amplifier
4. To plot the characteristics of Transistor

Course Outcomes:

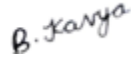
On Completion of the course, the students will be able to-	
CO1:	Analyze the various electrical networks
CO2:	Understand the operation or DC machines, 3-point starter and conduct the Swinburne's Test.
CO3:	Analyze the performance of transformer, operation of 3-phase alternator and 3-phase induction motors.
CO4:	Analyze the operation of half Wave, full wave rectifiers, op-amps.
CO5:	Explain the single stage CE amplifier and concept of feedback amplifier.



University Nominee
(Dr. Y. Srinivasa Kishore Babu)


Subject Expert
(Dr. N. Viswanathan)


Subject Expert
(Dr. B. Ravi Kumar)


Internal Member
(Mr. T. Amar Kiran)


Internal Member
(Mrs. B. Kavya Santhoshi)


Internal Member
(Mr. V. Suresh)


Chairman-BOS
(Dr. D. Ravi Kishore)


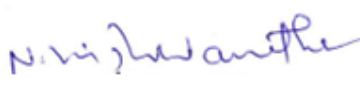


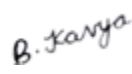


List of Experiments:

1. Verification of Kirchhoff's laws
2. Verification of Ohm's laws
3. Study of various wiring components (wires, switches, fuses, sockets, plugs, Lamp holders, lamps etc. their uses and ratings)
4. Measurement of current, voltage, power in R-L-C series circuit excited by single phase supply
5. Verification of voltage & current relations in Star & delta connections
6. Swinburne's test on a DC shunt machine.
7. Transistor common base characteristics
8. Speed control of D.C. Shunt motor by Armature Voltage control and Field flux control method
9. Efficiency and regulation of a single phase transformer by direct loading method.
10. Brake test on a three phase induction motor
11. PN junction Diode characteristics a). Forward bias b).Reverse bias. (Cut in voltage & Resistance calculations)
12. Zener diode characteristics
13. Half wave rectifier
14. Full wave Rectifier
15. Transistor common emitter characteristics.

CO-PO Mapping:

(1: Slight [Low]; 2: Moderate[Medium]; 3: Substantial[High], '-' : No Correlation)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	2	1	3	-		2		1		1
CO2	2	3			3			2	3			1
CO3	2	3	-		3			2	3			1
CO4	2	1	2		3			2	2			1
CO5	2	1			3			2		1		1

 University Nominee (Dr.Y.Srinivasa Kishore Babu)	 Subject Expert (Dr.N.Viswanathan)	 Subject Expert (Dr.B.Ravi Kumar)
 Internal Member (Mr.T.Amar Kiran)	 Internal Member (Mrs B Kavya Santhoshi)	 Internal Member (Mr V Suresh)
 Chairman-BOS (Dr.D.Ravi Kishore)		