CH162	BASIC ELECTRICAL AND ELECTRONICS ENGINEERING LAB	L	T	P	C	Int	Ext
		-	-	3	1.5	30	70

Semester II [First Year]

COURSE OBJECTIVES:

1. To conduct experiments on electrical circuits and machines.
2. To learn Diode characteristics and it's application like rectifier.
3. To learn BJT characteristics and applications.

COURSE OUTCOMES:

After the successful completion of the course, students are able to

1. Identify & test various electrical and electronic components and measuring instruments.
2. Verify fundamental laws and determination of parameters of electrical systems.
3. Determine the performance of electrical machines.
4. Plot and discuss the characteristics of various electronics devices.

EXPERIMENTS:

1. Basic safety precautions. Introduction and use of measuring instruments- voltmeter, ammeter, wattmeter, multi-meter, oscilloscope, Power Supplies, Familiarization of Electrical Installations and Electrical Testing Equipment: Fuses, Types of Wires, Wire Gauges, continuity test.
2. Familiarization/Identification of components (Resistors, Capacitors, Inductors, Diodes, transistors, Bread board etc.) - Functionality, type, size, colour coding package, symbols.
3. Verification of KVL& KCL.
4. Determination of choke coil parameters.
5. Loading of a transformer: measurement of primary and secondary voltages and currents, and power.
6. Demonstration of cut-out sections of machines: dc machine (commutator-brush arrangement), induction machine (squirrel cage rotor), synchronous machine (field winging - slip ring arrangement) and single-phase induction machine.
7. Speed control of DC motor.
8. Torque-Slip Characteristics of 3-phase induction motor.
9. Brake test on 3-phase induction motor.
10. Characteristics of Silicon and Germanium diodes.
11. Characteristics of Zener diode.
12. Half Wave Rectifier and Full Wave Rectifier.
13. Transistor Characteristics in CE configuration.
14. Transistor Characteristics in CB configuration.
15. Transistor as an electronic switch

Note:**

A minimum of 10(Ten) experiments have to be Performed and recorded by the candidate to attain eligibility for Semester End Practical Examination.