

BASIC ELECTRICAL ENGG LAB

Equipment Details:

S. No	Name of the Equipment usage	No Of Units required
1	Verification of Superposition and Thevenin's theorem: RPS -1 No., Bread Board-1 No, Multi metre-1 No, Resistors -4 No	1
2	Verification of maximum power transfer theorem: RPS -1 No., Bread Board-1 No, Multi metre-1 No, Resistors -4 No, DRB - 1 No.	1
3	O.C&S.C Tests on Single Phase Transformer Transformer 1-phase, 2KVA, 230/115V, 50Hz Auto transformer single phase 20A, 0-270V,50Hz -1No AC Voltmeter 0-150/300 V-1 No A.C Voltmeter 0-15/30 V - 1 No AC Ammeter 0-2A-1 No AC Ammeter 0-15/30 A-1No L.P.F Wattmeter 2.5/5 A, 75/150/300 V, 40 W-1 NO U.P.F Wattmeter 75/150/300 V, 10/20 A,0-750 W-1 No	1
4	Brake test on three phase Induction motor squirrel cage Induction motor - 3-Phase ,5 HP,3.7 KW ,400 V 50Hz with mechanical arrangement Wattmeter UPF 600 V, 10/20 A -2 No's AC Voltmeter.0-150/300/600V -1 No AC Ammeter 0-5/10 A-1No Tacho meter-1 No	1
5	Speed control of DC shunt motor DC compound motor 3HP, 2.2 KW DC Ammeter 0-1.5A MC-1 Rheostat 185Ω/2.5 A - 1 No DC Voltmeter 0-300 V MC-1 Tacho meter	1

	Rheostat 450Ω/1.8A - 1 No	
6	Brake Test on DC shunt Motor DC compound Motor 3HP 2.2 KW DC voltmeter (0-300V)MC -1 No DC Ammeter (0-30A)MC -1 No Rheostat -185Ω/2.3A-1 No , Tacho meter	1
7	Regulation of alternator by Synchronous Impedance method DC motor 3.7 KW ,230 V Coupled with 3-phase 3 KVA,400V,50 Hz, Alternator DC Ammeter 0-1.5/3 A Rheostats 185Ω/2.3 A - 1 No AC Voltmeter 0-600 V AC Ammeter 0-5/10 A Tacho meter DC Exciter 220V/2A	1

List of experiments :

1. OC & SC tests on Single – Phase transformer (Predetermination of efficiency and regulation at given power factors).
2. Brake test on 3-phase induction motor (performance characteristics).
3. Speed control of DC shunt motor by
 - a) Armature Voltage Control
 - b) Field flux control method.
4. Brake test on DC shunt motor.
5. Swinburn’s test on DC shunt machine.
6. Verification of Thevenin’s Theorem