

# Electric Machines Lab

## **Description**

Introduction to Electric Machines lab equipment, lab safety rules.

Voltage Regulation of 1-phase Transformer

To find equivalent circuit and efficiency of 1-phase Transformer by Open Circuit and Short Circuit Test

Magnetic Characteristics of a D.C. Shunt Generator

Magnetic Characteristics of a D.C. Separately Excited Generator

Load Characteristics of a D.C. Shunt Generator

Load Characteristics of a D.C. Series Generator

Load Characteristics of a 3phase induction Motor

Load Characteristics of a 1phase capacitive start  
Motor

Sr.	Apparatus Name
1	Synchroscope (Local Synchroscope With Dark And Bright Lamp Method)

2	Switches Star/Delta Switch ,Three Phase Mounting Plate, Starting.
3	AC Power Energy Meter
4	Motor Generator Set AC-AC Coupled(Synchronous)
5	Motor Connecting Bed
6	3Phase Rotation Tester
7	Motor Generator Set-DC Coupled
8	Power Board
9	Safety Leads and Power Cables Required For the Setup (Varying Colors)
10	Motor Generator Set-AC-AC Coupled (Induction)
11	Shunt Rheostat
12	Transformer (01Each)Single Phase and three Phase Voltage Regulation Must be less than 5%
13	Power Pack AC/DC, Variable Power Supply ,Compatible With Motor Generator Set
14	DC Measuring Unit
15	Tachometer
16	Loads (3-Phase) Variable Resistive(Resistive Load,3-Phase, 400V/Y,Variable,0.2*5A/Phase)
17	Loads (3-Phase) Variable Inductive (Inductive Load,3-Phase, 400V/Y,Variable,0.2*5A/Phase)
18	Loads (3-Phase) Variable Capacitive(Capacitive Load,3-Phase, 400V/Y,Variable,0.2*5A/Phase)
19	24 Slot Motors M80B(Made by Italy)
20	Three Phase Transformer 3kva

21	Single Phase Transformer 3kva
22	Single Phase Transformer 1.5kva
23	Experiment Table with Power unit Y-0036-001
24	Y-0036-002 3 Phase Portable Unit
25	Y-0036-003 Rail Engine Stand