

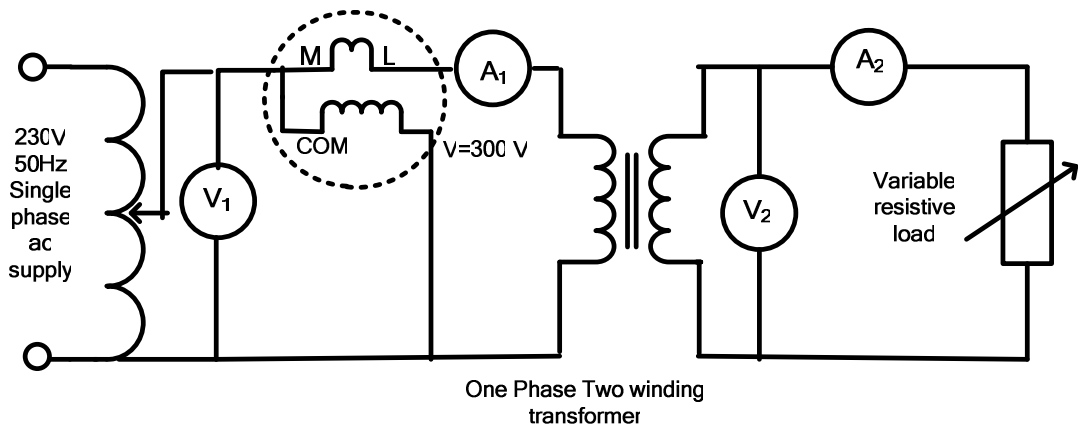
## Experiment no:1

### ELECTRICAL ENGINEERING

**OBJECT:** Load test on single phase transformer

**AIM :** To conduct a load test on single phase transformer and calculate the efficiency at different loads.

**CIRCUIT DIAGRAM :**



**APPARATUS REQUIRED:**

1. Single phase transformer under test of 2 KVA or 3KVA capacity.
2. Two voltmeters (0-300V) ac
3. Two ammeters (0-10 amp) ac
4. Single phase variable resistance load
5. Single phase auto transformer (the ranges of ammeter and voltmeters will have to be arrived on the basis of the name plate readings of transformer under test)
6. One wattmeter (0-300V, 10 Amp)

**PROCEDURE:** Connect as shown in the figure .Keep all the load switches open so that the transformer is on no load to start with. Adjust the output of auto-transformer, so that the voltmeter  $V_1$  reads the rated voltage of the transformer (primary side). Load the transformer in steps. Note  $V_1$ ,  $A_1$ ,  $V_2$ ,  $A_2$ . Go up to the rated current of the transformer.

**OBSERVATIONS**

Input		Output		Efficiency=Output/Input
V <sub>1</sub>	I <sub>1</sub>	V <sub>2</sub>	I <sub>2</sub>	

Verify that  $I_1/I_2$  is constant.

**RESULT:**

**PRECAUTIONS:**