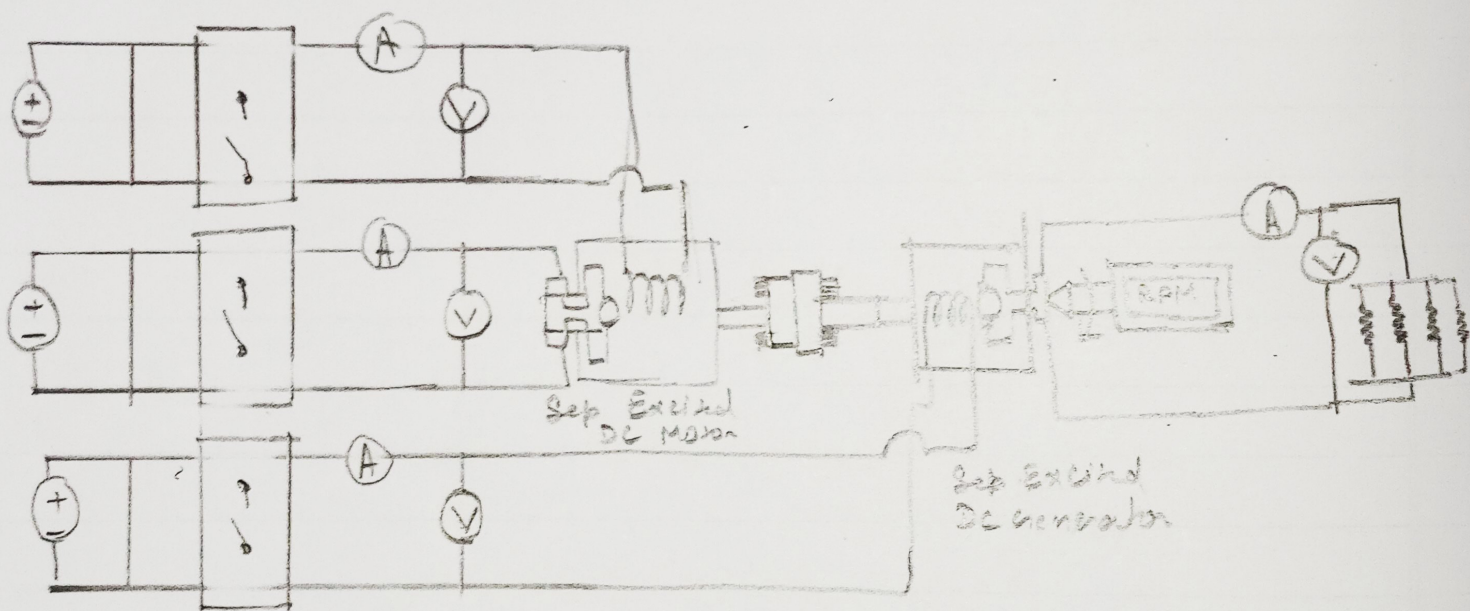




Aim: To study load Test on separately excited DC motor.

Apparatus:

- Separately Excited DC motor
- DPST Switch
- Variable Voltage device
- Voltmeter
- Ammeter
- Wattmeter
- Digital tachometer
- Separately excited DC generator
- Load Bank
- Connecting wires

Theory

Separately excited DC motors are widely used in industrial applications due to their high speed, moderate torque, and low construction cost. They are preferred over AC motors for their simpler control and lower manufacturing ~~system~~ costs.

Construction & working

Main Parts: Field winding, Armature winding, Yoke, Commutator and brushes.

Operation: DC supply is given to both field and armature windings.

Torque Generation: Current in armature reacts with

field flux, producing rotational force

Commutation & Brushes: Ensure continuous and unidirectional torque

Induced EMF: Generated as the armature rotates, ~~opposing~~ opposing the applied voltage