MNS University of Aggriculture
Multan.

Course: Applied physics (Phy-305)

Topic:

(1) Genesater:
(2) A-C Genesater:
(3) D-C Genesater:

SUBMITTED BY: MUZAMIL-KHALIQ

SUBMITTED To: Mr. SALMAN AYUB

Section:

BSIT (C)

Generator:

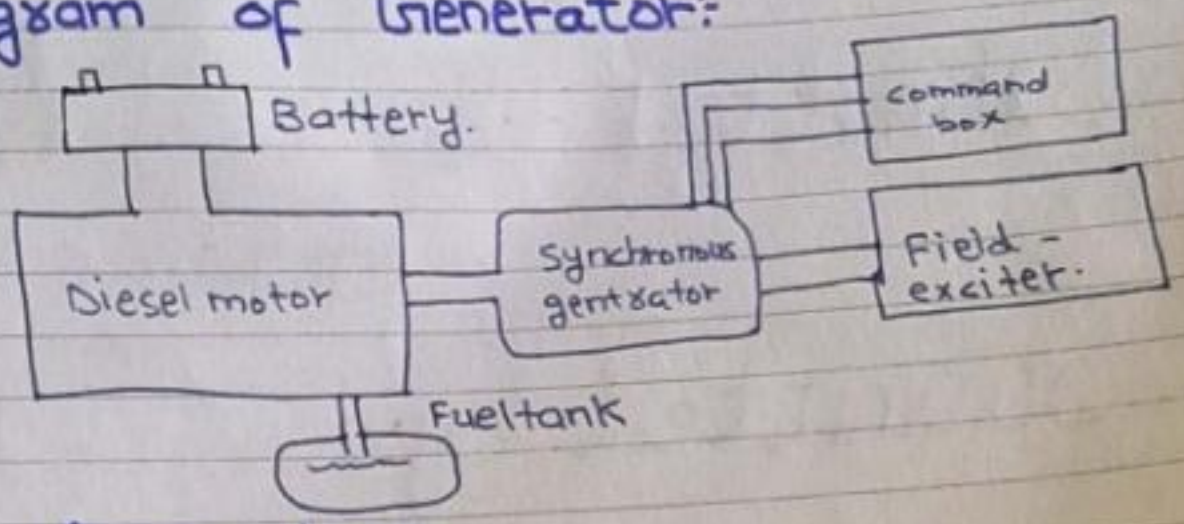
Generator is a device that Convext mechanical energy into electxic energy.

Types of Generator:

There are two types of generator.

- A.C Generator
- D.C Generator

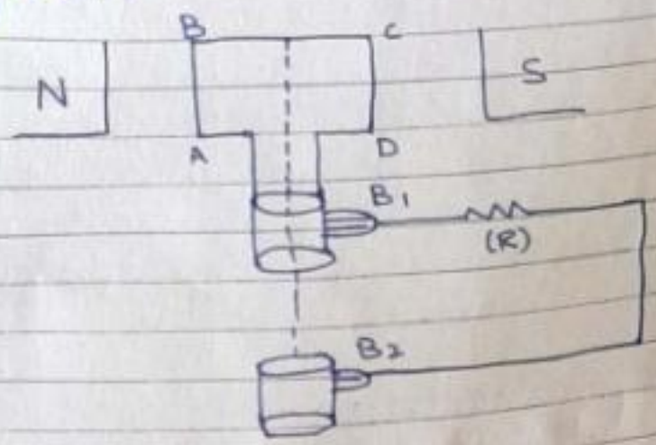
Diagram of Generator:



A.C Generator:

AC stand for Alternating Current. AC generator is a machine that convext mechanical energy into electxical energy. The AC generator input supply is mechanical energy supplied by stxeam tuxbines, gas tuxbines. The output is alternating electxic powet in the form of alternating voltage and current.

Diagram:



Working Principal:

A.C generator work on the principal of Faraday's law of electromagnetic induction.

Explaination:

When the armature rotate between the magnets poles upon an axis prependicular to the magnetic field the flux linkage of the armature changes continously. Due to this an emf induced armature.

Applications of A.C Generator.

.C generator are widely used in e world there are some application A.C genrator.

Marines Alternators:-

It is a application of A.C generator. Marines alternator are designed specifically to work in a marine environment because they are waterproof and use no moving parts.

Brushless alternator:-

A brushless alternator uses rotors instead of carbon brushes to create electricity. A brushless alternator has no brushes and fewer moving parts to repair or fix.

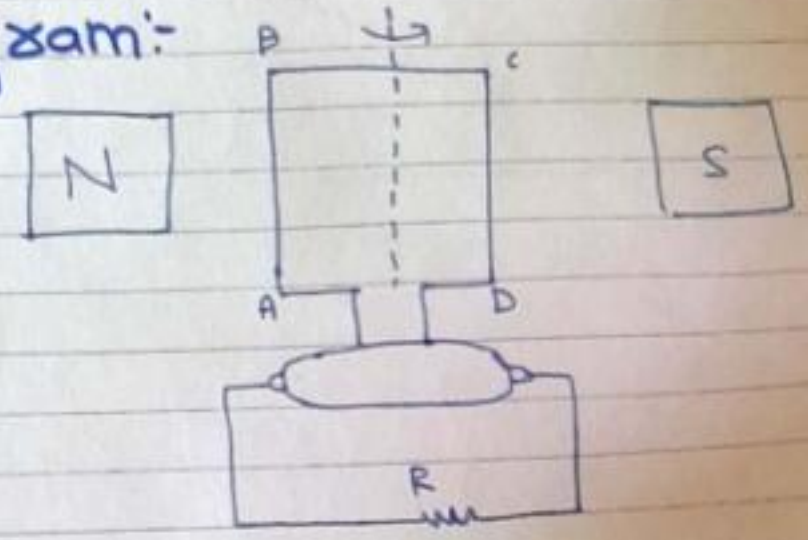
Examples:-

Hydropower, Fossil Fuel - based power, Nuclear energy, and solar thermal power plant among other. Almost major power plants genrate alternating current as do diesel generator.

DC. Generator:-

It is a electrical machine whose main function is to convert mechanical energy into electrical energy directly.

Diagram:-



Working Principal:

DC generator also work on Faraday's law of electromagnetic induction.

Application of DC Generator:

There are some application.

These are used to charge the batteries. provide lightening and provide execitation to alternates

- These are used to provide field execution current for regenerative braking in DC locomotive.
- They are used in D.C motor where speed control are necessary.
- They are used as portable generator where low power supply is required.