

### **Answer on Question #49198-Physics-Electromagnetism**

Write a paragraph describing the differences and similarities between a motor and a generator.

#### **Answer**

The similarities between electric motor and electric generator:

- 1) they work on the same principles of Electro Magnetic Field theory;
- 2) they both have the armatures to rotate the loop.

The differences between electric motor and electric generator:

- 1) a generator converts electrical energy to mechanical energy, while a motor converts mechanical energy to electrical energy;
- 2) in a generator, a shaft attached to the rotor is driven by a mechanical force and electric current is produced in the armature windings, while the shaft of a motor is driven by the magnetic forces developed between the armature and field; current has to be supplied to the armature winding;
- 3) motors (generally a moving charge in a magnetic field) obey the Fleming`s Left Hand Rule, while the generator obeys Fleming`s Right Hand Rule.