

**Topic 6 - Generators and Motors**

1. Any system or device that has moving parts is associated with this type of energy ...
  - A. **electrical**
  - B. **chemical**
  - C. **gravitational**
  - D. **mechanical**
  
2. Hans Christian Oersted found that an electric current created a magnetic field. When electrical energy passes over a compass, the compass needle ...
  - A. **spins**
  - B. **is deflected**
  - C. **rotates clockwise**
  - D. **rotates counterclockwise**
  
3. The amount of needle movement depended on how much electric current was flowing in the wire. When the current was reversed, the needle moved ...
  - A. **slower at first**
  - B. **faster than usual**
  - C. **In the opposite direction**
  - D. **back and forth**
  
4. A device that converts mechanical energy (energy of motion – windmills, turbines, nuclear power, falling water, or tides) into electrical energy is called an.
  - A. **electric turbine**
  - B. **electric generator**
  - C. **electrical supply**
  - D. **electrical device**
  
5. These reverse the direction of flow in the electromagnetic coil of a motor...
  - A. **power source and armature**
  - B. **armature and bushes**
  - C. **commutator and brushes**
  - D. **commutator and armature**
  
6. The strength of an electromagnet is affected by all of the following, **Except** ...
  - A. **type of wire**
  - B. **number of coils**
  - C. **strength of current**
  - D. **type and size of core**
  
7. Mr. Jones was trying to make an electromagnetic coil to demonstrate the power it has. His coil worked, but not very well. The most likely reason was because the ...
  - A. **coil was made of copper wire**
  - B. **battery was brand new**
  - C. **metal core was too thin**
  - D. **battery was dead**
  
8. Electric effects can be created using a magnet. In 1831 Michael Faraday (and Joseph Henry) discovered ...
  - A. **electrolysis**
  - B. **electric charges**
  - C. **electromagnetic radiation**
  - D. **electromagnetic induction**
  
9. A generator has a coil of wire rotating inside a stationary field magnet. The central axle has a loop of wire attached to two slip rings. The current is switched as the loops move up and down alternatively through the magnetic field. The slip rings conduct the current to the circuit through the brushes (the brush and ring assembly allows the whole loop to spin freely). The electricity produced by this type of generator is called ...
  - A. **direct current**
  - B. **alternating current**
  - C. **semi-conducting current**
  - D. **static electrical current**

10. A DC generator is much the same as a DC motor, and is often called a **dynamo**. The DC generator's pulsating electricity is produced ...
- A. back and forth
  - B. in one direction
  - C. across the circuit
  - D. In reversed directions
11. All electric motors operate on this principle – opposite poles ...
- A. attract and like poles repel.
  - B. repel and like poles attract
  - C. move away from each other
  - D. spin in opposite directions
12. The primary difference between direct and alternating current is that direct current ...
- A. flows in only one direction
  - B. flows back and forth 10 times per second
  - C. flows back and forth 30 times per second
  - D. flows back and forth 60 times per second
13. Instead of producing electricity, like a generator does, a motor ...
- A. uses it
  - B. makes it
  - C. moves it
  - D. rotates it
14. Michael Faraday's discovery of electromagnetic induction in 1831, led to this ...
- A. battery
  - B. transformer
  - C. generator
  - D. split ring comutator
15. AC motors have a rotating core, or rotor, surrounded by a stationary component called a ...
- A. stapor
  - B. stator
  - C. regulator
  - D. activator