

17 Multiple choice questions

1. motors that convert electrical energy into mechanical energy, consisting of a rotor, field structure, commutator and brushes
 - a. DC electrical motors
 - b. electrical field
 - c. generators
 - d. field structure

2. the laminated soft-iron core around which conducting coils are wrapped in an electrical motor or generator
 - a. generators
 - b. armature
 - c. brushes
 - d. back emf

3. the conversion of mechanical energy into electrical energy
 - a. DC electrical motors
 - b. alternating current
 - c. electromagnetic induction
 - d. electrical field

4. conductors used to provide electrical contact to the moving parts of an electrical motor or generator, usually made of graphite
 - a. back emf
 - b. generators
 - c. armature
 - d. brushes

5. the induced emf that opposes the applied emf in an electrical circuit such as a motor
 - a. back emf
 - b. brushes
 - c. armature
 - d. generators

6. circular currents that are induced in a solid conductor (such as a metal sheet) when it is placed in a region of changing magnetic flux
 - a. direct current
 - b. induced current
 - c. eddy currents
 - d. armature

7. a law stating that the direction of the induced emf is such that the current it produces creates a magnetic field opposing the change that produced this emf
 - a. Lenz's law
 - b. generators
 - c. lines of force
 - d. Faraday's law

8. the magnetic field of motors and generators; can be made from permanent magnets or electromagnets
 - a. generators
 - b. field structure
 - c. armature
 - d. induced current

9. the region in which a charge experiences an electrical force
 - a. field structure
 - b. DC electrical motors
 - c. electrical field
 - d. direct current

10. machines that convert electrical energy into mechanical energy, consisting of a rotor, field structure, slip rings and brushes
 - a. galvanometers
 - b. armature
 - c. brushes
 - d. generators

11. sensitive current measuring devices that use the motor effect in their operation
 - a. galvanometers
 - b. armature
 - c. generators
 - d. back emf

12. a type of modern cook-top that uses current-carrying coils placed under metal saucepans to induce eddy currents to heat metal pans for cooking
 - a. galvanometers
 - b. direct current
 - c. induced current
 - d. induction heater

13. lines drawn to represent the direction and strength of electric, gravitational or magnetic fields
 - a. induced current
 - b. lines of force
 - c. generators
 - d. direct current

14. a current that flows in one direction only
 - a. induced current
 - b. eddy currents
 - c. alternating current
 - d. direct current

15. a type of current produced by the phenomenon of electromagnetic induction
 - a. induction heater
 - b. eddy currents
 - c. induced current
 - d. direct current

16. a law stating that the induced emf is proportional to the rate of change of magnetic flux through the circuit
 - a. Faraday's law
 - b. galvanometers
 - c. armature
 - d. Lenz's law

17. electrical current that reverses direction periodically
 - a. induced current
 - b. eddy currents
 - c. direct current
 - d. alternating current