

## 19 Multiple choice questions



**A+**  
**100%**

1. a method which allows the direction of the force on a current-carrying wire to be determined
  - a. transformers
  - b. **CORRECT: right-hand palm rule**
  - c. magnetic flux
  - d. shield wire
  
2. a single wire attached to the top of transmission lines to protect against lightning strikes, also known as "overhead earth wire"
  - a. **CORRECT: shield wire**
  - b. torque
  - c. stators
  - d. slip rings
  
3. the ratio of the number of turns in the primary coil to the number of turns in the secondary coil; also equal to the ratio of the voltages and inversely to the ratio of the currents
  - a. rotors
  - b. slip rings
  - c. transformers
  - d. **CORRECT: turns ratio**
  
4. the number of flux lines through unit area perpendicular to the magnetic field
  - a. magnetic force
  - b. power transmission
  - c. magnetic flux
  - d. **CORRECT: magnetic flux density or magnetic induction**
  
5. a measure of the number of lines of force emerging from a given area
  - a. magnetic force
  - b. **CORRECT: magnetic flux**
  - c. shield wire
  - d. magnetism

6. electrical devices that allow voltages to be transferred from one circuit to another, generally with a change in voltage and current
  - a. turns ratio
  - b. stators
  - c. **CORRECT: transformers**
  - d. rotors
  
7. the property of certain materials that allows them to attract iron objects
  - a. rotors
  - b. magnetic force
  - c. **CORRECT: magnetism**
  - d. magnetic flux
  
8. conductors, often graphite, that allow the current to be taken from an AC generator or supplied to an AC motor
  - a. **CORRECT: slip rings**
  - b. rotors
  - c. shield wire
  - d. stators
  
9. the transfer of electricity from power stations to the consumer, done at high voltages to minimise heating loss
  - a. **CORRECT: power transmission**
  - b. step-up transformer
  - c. transformers
  - d. turns ratio
  
10. a transformer in which the voltage in the secondary coil is less than the voltage in the primary coil
  - a. transformers
  - b. **CORRECT: step-down transformer**
  - c. power transmission
  - d. step-up transformer

11. a transformer in which the voltage in the secondary coil is greater than the voltage in the primary coil
  - a. stators
  - b. step-down transformer
  - c. **CORRECT: step-up transformer**
  - d. transformers
  
12. a region of influence surrounding a magnet
  - a. magnetic flux
  - b. motor effect
  - c. magnetism
  - d. **CORRECT: magnetic force**
  
13. sensitive electric meters that use the torque on a current-carrying coil in a magnet field to measure the current or voltage
  - a. transformers
  - b. slip ring commutators
  - c. magnetic force
  - d. **CORRECT: moving coil galvanometers**
  
14. when a current-carrying conductor in a magnetic field experiences a force
  - a. torque
  - b. **CORRECT: motor effect**
  - c. magnetism
  - d. rotors
  
15. the turning effect of a force
  - a. **CORRECT: torque**
  - b. rotors
  - c. motor effect
  - d. stators

16. the stationary part of an electric motor or generator, in some cases carrying the induced current
- CORRECT: stators**
  - torque
  - slip rings
  - rotors
17. motor devices that reverse the direction of the current each half cycle; used in DC electric motors and generators
- slip rings
  - starting resistance
  - stators
  - CORRECT: slip ring commutators**
18. the rotating part in an electric motor or generator, consisting of a laminated soft-iron core and conducting coils
- CORRECT: rotors**
  - torque
  - slip rings
  - stators
19. placed in series with a motor when the back emf at start up is insufficient to limit the current to prevent burn-out
- stators
  - turns ratio
  - CORRECT: starting resistance**
  - slip rings