

28 Multiple choice questions

- the energy used by a 1 kilowatt appliance operating for 1 hour
 - voltmeter
 - motor
 - watt (W)
 - kilowatt-hour
- a meter used to measure the potential difference between two points
 - voltage (V)
 - voltmeter
 - volt (V)
 - motor
- the ratio of the applied voltage across a conductor to the current through it is a constant; $R=V/I$
 - Ohm
 - Ohm's law
 - magnetism
 - power (P)
- a measure of the work done per unit charge as a charge is moved between two points in an electric field
 - voltage (V)
 - potential energy
 - potential difference (V)
 - positive charge
- a device that changes electrical energy into mechanical (kinetic) energy
 - motor
 - Ohm
 - neutral
 - voltmeter
- a region around a magnet where a magnetic force would be felt
 - magnetic poles
 - magnetism
 - magnetic field
 - line of force

7. the sum of the currents into any point in a circuit is equal to the sum of the currents out of that point
 - a. Kirchoff's second (voltage) law
 - b. Ohm's law
 - c. Kirchoff's first (current) law
 - d. Oersted's experiment

8. an electric circuit which has only one pathway
 - a. series circuit
 - b. resistance
 - c. parallel circuit
 - d. solenoid

9. the property of certain materials that allows them to attract iron objects
 - a. magnetism
 - b. magnetic poles
 - c. neutral
 - d. magnetic field

10. the property of a material that makes it difficult for electric charge to flow; $R=V/I$
 - a. resistance
 - b. neutral
 - c. volt (V)
 - d. voltmeter

11. energy due to position or configuration; stored energy
 - a. positive charge
 - b. voltmeter
 - c. potential energy
 - d. potential difference (V)

12. the state of no overall electric charge
 - a. Ohm
 - b. neutral
 - c. motor
 - d. volt (V)

13. fuses, circuit breakers, earth-leakage devices that protect users from electrocution
 - a. voltmeter
 - b. safety devices
 - c. solenoid
 - d. magnetic poles

14. a circuit containing more than one pathway for the current
 - a. static electricity
 - b. power (P)
 - c. parallel circuit
 - d. series circuit

15. the time ratio of doing work; $P=VI$
 - a. solenoid
 - b. watt (W)
 - c. volt (V)
 - d. power (P)

16. a line drawn tangential to the direction of the force on a charge (or mass or magnet) at each point
 - a. magnetic field
 - b. line of force
 - c. neutral
 - d. motor

17. where the magnetism is concentrated in a magnet; always come in pairs
 - a. magnetic field
 - b. magnetism
 - c. magnetic poles
 - d. line of force

18. one watt is the power developed when 1 joule of energy is transformed in 1 second
 - a. volt (V)
 - b. voltage (V)
 - c. watt (W)
 - d. power (P)

19. the SI unit of electrical resistance; equal to that resistance which will allow a current of one ampere to flow when there is a potential difference of one volt
- motor
 - solenoid
 - neutral
 - Ohm
20. the SI unit of potential difference; the potential difference between two points is one volt if one joule of work is done to move one coulomb of charge between the two points
- voltage (V)
 - watt (W)
 - power (P)
 - volt (V)
21. another name for potential difference
- watt (W)
 - volt (V)
 - voltage (V)
 - voltmeter
22. when the thumb of the right hand points in the direction of conventional current, the fingers curl in the direction of the magnetic field
- line of force
 - right-hand grip rule
 - negative charge
 - magnetic poles
23. a coil of wire that acts like a bar magnet when current flows through it
- volt (V)
 - motor
 - power (P)
 - solenoid
24. electric charges at rest
- static electricity
 - parallel circuit
 - safety devices
 - series circuit

25. the sum of the potential drops around a circuit is equal to the sum of the emfs
- Oersted's experiment
 - Kirchoff's second (voltage) law
 - Ohm's law
 - Kirchoff's first (current) law
26. charge that will repel an electron
- positive charge
 - potential energy
 - resistance
 - negative charge
27. charge that will attract a negative charge; the type of charge found on protons
- potential energy
 - positive charge
 - voltmeter
 - negative charge
28. an experiment that showed that a current carrying conductor produces a magnetic field around it
- Oersted's experiment
 - potential energy
 - Ohm's law
 - series circuit