

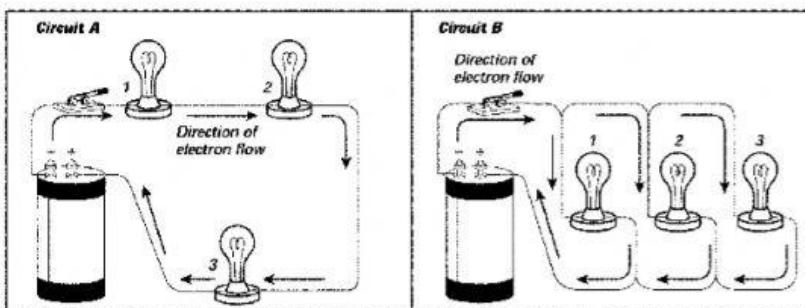
Electricity & Magnetism Unit Test

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- ___ 1. You can increase the strength of an electromagnet's field by
 - a. using a stronger ferromagnetic material for the core.
 - b. increasing the thickness of the insulation on the wire.
 - c. decreasing the number of loops in the wire.
 - d. decreasing the current in the wire.
- ___ 2. An electric current will always follow
 - a. from high voltage to low voltage.
 - b. from low voltage to high voltage.
 - c. a path toward the north pole.
 - d. a path toward the south pole.
- ___ 3. The buildup of charges on an object is called
 - a. positive charge.
 - b. negative charge.
 - c. static electricity.
 - d. static discharge.
- ___ 4. Every magnet, regardless of its shape, has two
 - a. magnetic fields.
 - b. magnetic domains.
 - c. magnetic charges.
 - d. magnetic poles.
- ___ 5. What happens if you break a magnet in half?
 - a. Neither half will have a pole.
 - b. Neither half will be able to attract or repel.
 - c. One half will have a north pole only and one half will have a south pole only.
 - d. Each half will be a new magnet, with both a north and a south pole.
- ___ 6. In a parallel circuit with three bulbs,
 - a. there is only one path for the current to take.
 - b. the bulbs must all be located on the same branch.
 - c. current from each bulb has its own path through the circuit.
 - d. the overall resistance decreases if a new branch is added.
- ___ 7. A circuit that has two or more separate branches for current is a(n)
 - a. circuit diagram
 - b. electron circuit
 - c. parallel circuit
 - d. series circuit
- ___ 8. The function of a lightning rod is to
 - a. produce lightning.
 - b. prevent short circuits in a building's wiring.
 - c. protect a building from damage due to lightning.
 - d. make an object lighter.

Series and Parallel Circuits



- ___ 9. What would happen if the switch in circuit B was opened?
 - a. only bulb 1 would go out
 - b. only bulb 3 would go out
 - c. only bulb 2 would go out
 - d. all of the bulbs would go out
- ___ 10. In circuit A, which bulb(s) would be the brightest?
 - a. 1 would be the brightest
 - b. All would be the same
 - c. 2 would be the brightest
 - d. 1 and 3 would be brightest