NAME_____ DATE_____ CLASS_____

STUDY GUIDE Chapter 7

Electric Current

In the blank at the left, write the letter of the term that best completes each statement.

_____ 1. Voltage is a measure of the _____ between two places.
a. resistance potential b. potential difference

_____ 2. A closed path through which electrons can flow is _____ .
a. voltage b. a circuit

_____ 3. Potential difference is measured in _____ .
a. volts b. amperes

_____ 4. The flow of electrons through a wire or any conductor is called _____ .
a. current b. a circuit

_____ 5. Because it has a potential difference between the positive and negative terminals, a _____ can act as an electron pump.
a. voltmeter b. dry cell

_____ 6. A car battery is an example of a _____ .
a. wet cell b. dry cell

_____ 7. The tendency for a material to oppose the flow of electrons is called _____ .
a. voltage b. resistance

_____ 8. Resistance is measured in units called _____ .
a. volts b. ohms

_____ 9. Current is measured in _____ .
a. volts b. amperes

_____ 10. The equation I = V/R mathematically expresses _____ .
a. Ohm's law b. current law

_____ 11. The symbol Ω means ____ .
a. ohm b. ampere

_____ 12. In the equation I = V/R, I stands for ____ .
a. potential difference b. current

_____ 13. In the equation I = V/R, V stands for ____ .
a. potential difference b. current

_____ 14. Thin wires have a _____ resistance to electron flow than do thicker wires.
a. greater b. lesser

_____ 15. Potential difference is measured with _____ .
a. an electroscope b. a voltmeter

NAME_____ DATE_____ CLASS_____

REINFORCEMENT Chapter 7

Electric Current

Circle the term in parentheses that makes each statement true.

1. A negatively charged object has electrons with (more, less) potential energy to move and do work than an object that is neutral.
2. Electrons flow from areas of (higher, lower) potential energy to areas of (higher, lower) potential energy.
3. Potential difference is measured in (amperes, volts) .
4. Electrons passing through a lamp (gain, lose) some potential energy as they light the lamp.
5. Electrical potential (varies, is the same) in all parts of a circuit.
6. The rate of flow of electrons in a circuit is measured in (volts, amperes) .
7. Current is measured with (an ammeter, a voltmeter) .
8. When a dry cell is connected in a series, the flow of electrons moves from the (positive, negative) terminal to the (positive, negative) terminal.
9. In a dry cell, the carbon rod releases electrons and becomes the (positive, negative) terminal.
10. The potential difference between the two holes in a wall socket is (12 volts, 120 volts).
11. A car battery is an example of a (dry, wet) cell.
12. Resistance is measured in (ohms, volts).
13. Copper has a (higher, lower) resistance to electron flow than aluminum.
14. According to Ohm's law, (I= V/R, V= I/R).
15. The symbol for ohm is (Ω, π) .
16. In the equation I= V/R, I is expressed in (ohms, amperes) .
17. In the equation I= V/R, V is expressed in (volts, ohms) .
18. The (+, —) terminal of a dry cell identifies the location of the carbon rod.
19. A wire with a resistance of 3Ω has a (greater, lesser) resistance to electron flow than a wire with a resistance of 5Ω .
20. A coulomb is the charge carried by 6.24 (billion, billion billion) electrons.