

SECTION
2**Study Guide****Electric Current****Chapter****13**

Directions: Circle the term in parentheses that makes each statement true.

1. A negatively charged object has (more, fewer) electrons than an object that is neutral.
2. Electrons flow from areas of (higher, lower) voltage to areas of (higher, lower) voltage.
3. Voltage difference is measured in (amperes, volts).
4. Electrons passing through a lamp (gain, lose) some voltage as they light the lamp.
5. Voltage (varies, is the same) in all parts of a series circuit.
6. The current in a circuit is measured in (volts, amperes).
7. Current is almost always the flow of (electrons, protons).
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 voltage 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 tungsten.
14. According to Ohm's law, ($I = V/R$, $V = I/R$).
15. The symbol for ohm is (Ω , $^{\circ}$).
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. If two copper wires are the same length, but different thicknesses, the (thinner, thicker) wire has greater resistance.

SECTION
3

Study Guide

Electrical Energy

Chapter
13

Directions: Use the terms and statements below to complete the table.

rate at which electrical energy is converted to another form of energy

The current has only one loop to flow through.

kilowatt

parallel circuit

series circuit

watt

insulation to melt

a fire

The current has more than one branch.

kW

fuses

circuit breakers

W

Power = current \times voltage difference

$P = I \times V$

Important Facts About Electric Circuits

1. There are two types of electric circuits.

Two types of circuits:

- a.
b.

Definitions of these circuits:

- c.
d.

2. A household circuit can contain many appliances.

Too many appliances can cause:

- a.
b.

For protection, household circuits contain:

- c.
d.

3. The electrical power of a circuit can be measured.

Definition of electrical power:

- a.

Unit of electrical power:

- b. Name:
c. Abbreviation:
d. Term for 1,000 units:
e. Abbreviation for 1,000 units:

Determining the electrical power of a circuit:

- f. Expression:
g. Formula: