Name:
Date:
Class:

Lesson 7.7: Principles of Electricity

Know and Understand

Answer the following questions using the information provided in this lesson.

1. Electrical potential is measured in _____. (7.7.1)

A. amperes
B. current
C. ohms
D. volts

Answer:

2. *True or False?* Electric current is the flow of electrons along a designated pathway. (7.7.2)

Answer:

3. Which of the following uses direct current? (7.7.3)

A. Car battery
B. Electric clothes dryer
C. Electric lamp
D. Hot water heater

Answer:

4. The amount of electric current flowing through a given point in a circuit is measured in _____. (7.7.4)

A. amperes
B. current
C. ohms
D. volts

Answer:

5. *True or False?* Chemicals outside the battery produce an electrical charge when the ends of the battery are attached to conductors. (7.7.5)

   Answer:

6. *True or False?* The ground wire in an electric circuit is designed to prevent injury or damage due to a malfunction in the electrical system. (7.7.6) , , ,

   Answer:

7. *True or False?* Never assume that a wire is safe to touch, even if it appears to be well insulated (7.7.7) ,

   Answer:

8. *True or False?* The purpose of the NEC is to determine how much an electrician should charge the customer for services rendered. (7.7.8)

   Answer:

9. *True or False?* Electricians should use tools with insulated handles to prevent accidental electric shock. (7.7.9) ,

   Answer:

10. Electrical resistance is measured in _____. (7.7.10)

A. amperes

B. current

C. ohms

D. volts

   Answer:

11. How much electrical resistance, measured in ohms, is produced by an electrical load that uses 200 volts and 5 amps? (7.7.10)

A. 10 ohms

B. 20 ohms

C. 30 ohms

D. 40 ohms

Answer:

12. How much power does an electric motor using 100 volts and 10 amps produce (measured in watts)? (7.7.10)

A. 10

B. 100

C. 1,000

D. 10,000

Answer:

13. If 10 electric lamps use 15 watts of power over a full ten-day period (24 hours per day), how many kilowatt-hours of electricity do they use? (7.7.10)

A. 10

B. 15

C. 24

D. 36

Answer:

14. What does it take to become a licensed electrician? (7.7.10)

Answer:

15. How does a power grid prevent electrical power outages? (7.7.6)

Answer:

16. How did the REA improve living conditions in rural America? (7.7.6)

Answer:

17. What are the differences between AC and DC? (7.7.3)

Answer:

18. How would you define the differences between volts, amps, and ohms? (7.7.4, 7.7.10)

    Answer: