

Name:

Class:

Date:

Lesson 7.7: Principles of Electricity

Lesson Review

Carefully study the lesson and then answer the following questions.

1. How many kilowatt-hours per year does the average US home use? (7.7.0)

- A. 5,000 kilowatt-hours
- B. 11,000 kilowatt-hours
- C. 20,000 kilowatt-hours
- D. 86,000 kilowatt-hours

Answer:

2. Very small particles called _____ make up all matter. (7.7.1)

Answer:

Match the parts of an atom to the description.

- A. Electrons
- B. Neutrons
- C. Nucleus
- D. Protons

3. Particles in the center of an atom that carry a positive charge (7.7.1)

Answer:

4. Particles that orbit the center of an atom that carry a negative charge (7.7.1)

Answer:

5. The central portion of an atom (7.7.1)

Answer:

6. Particles in the center of an atom that carry no charge (7.7.1)

Answer:

7. *True or False?* An atom with a negative charge is called a cation. (7.7.1)

Answer:

8. Which of the following is another term for electrical potential? (7.7.1)

A. Resistance

B. Circuit

C. Anion

D. Voltage

Answer:

9. Define *electrical current*. (7.7.2)

Answer:

10. Describe the difference between *conductors* and *insulators*. (7.7.2)

Answer:

11. *True or False?* Direct current is an electrical current flowing in only one direction. (7.7.3)

Answer:

12. *True or False?* Alternating current is rarely generated by an electric generator. (7.7.3)

Answer:

13. List three different elements of electricity that can be measured. (7.7.4)

Answer:

14. Chemicals inside the battery produce an electrical _____ when the positive and negative ends are attached to conductors. (7.7.5)

- A. charge
- B. circuit
- C. ampere
- D. watt

Answer:

15. What is the complex system of lines and substations that connects power plants to homes and businesses called? (7.7.6)

- A. Electromagnetic induction
- B. Ampere
- C. Grid
- D. Transformer

Answer:

16. What device increases or decreases the voltage in a power line? (7.7.6)

- A. Electromagnetic induction
- B. Ampere
- C. Grid
- D. Transformer

Answer:

17. *True or False?* Wrap the wire counterclockwise around the screw when fastening conductors to a switch or receptacle. (7.7.6)

Answer:

Match the components to the correct term.

18. Cable

Answer:

19. Light switch

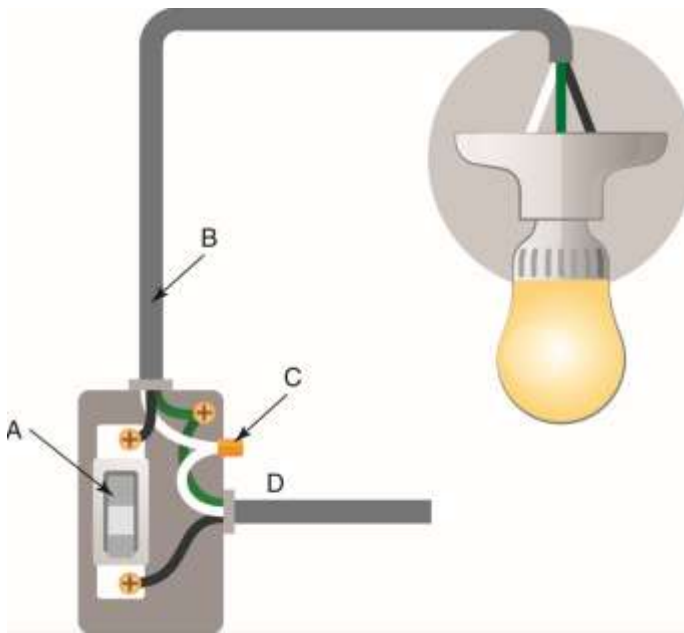
Answer:

20. Power source

Answer:

21. Wire nut

Answer:



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22. List four safety precautions to take when working with electricity. (7.7.7)

Answer:

23. List seven basic hand tools used by electricians. (7.7.9)

Answer:

Match each term with the corresponding description.

- A. Electrical potential
- B. Volumetric efficiency
- C. Resistance

D. Electrical power output

24. Measured in volts (7.7.10)

Answer:

25. Measured in watts (7.7.10)

Answer:

26. Measured in ohms (7.7.10)

Answer:

27. Measured in amperes (7.7.10)

Answer:

Critical Thinking

1. Why is it important to use a licensed electrician? What could go wrong if an unlicensed person performed the electrical repairs or installation? (7.7.0)

Answer: