

Science & Safety of Electricity & Natural Gas

Pre/Post Test

Directions: Circle the correct answer.

1. What is an electron?
a) the center of an atom b) a particle that orbits the atom's nucleus c) an insulator
2. True or false: If you contact the electricity in an appliance, electrical cord, or power line, you will be seriously injured or killed.
a) true b) false
3. In order to flow, electricity must travel on a continuous path or loop. What is this path called?
a) a circle b) a circuitous route c) a circus d) a circuit
4. Why is it important to call your local utility before digging in the ground near your home?
a) to avoid hitting underground utilities c) to ask what shovel to use
b) to find out what to do with the dirt d) to get a treasure map from them
5. When you work or play outdoors, be sure to keep yourself and your tools at least _____ feet away from all overhead power lines.
a) 2 b) 10 c) 4 d) 50
6. If you see a power line that has fallen, what should you do?
a) ignore it c) keep it a secret
b) move it to the side of the road d) stay away and report it to your local electric utility and 911
7. Because electricity travels easily through water, what kinds of radios are safe to use near the bathtub or swimming pool?
a) small radios b) ham radios c) battery-powered radios d) no radios
8. How does a ground fault circuit interrupter (GFCI) protect people?
a) when another caller is waiting on the line, the GFCI interrupts your phone call
b) when there is trouble, the GFCI automatically calls the utility company
c) to prevent serious shock, the GFCI quickly opens the circuit to cut power
9. What does a natural gas leak smell like?
a) fresh paint b) old shoes c) rotten eggs d) fresh grass

10. If you smell a natural gas leak, get everyone out of the house. Don't use a light switch, candle, flashlight, or telephone because a spark might cause the gas to
- a) ignite
 - b) shock you
 - c) smell worse
 - d) poison you
11. What is a kilowatt-hour (kWh)?
- a) the number of cubic feet of natural gas used
 - b) 1,000 watts of electricity used for one hour
 - c) the amount of electricity it takes to blow a fuse
 - d) 1 watt of electricity used for one hour
12. Which of these is not a hazard?
- a) worn or frayed power cords
 - b) flammable liquids stored near gas appliances
 - c) overloaded outlets
 - d) an appliance used near water with a GFCI
13. If you see lightning or hear thunder and can't get indoors, you are safest
- a) under a tree
 - b) in a hardtop car with the windows shut
 - c) swimming in a lake
14. Which of the follow is not a sign of an outdoor gas leak?
- a) a hissing sound
 - b) a smell of rotten eggs
 - c) a blue stain in the road
 - d) plants that seem to be dying for no reason

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Pre/Post Test Answer Key

Information that relates to each question can be found on the pages listed below.

1. b) a particle that orbits the atom's nucleus. Page 4
2. a) true. Page 5
3. d) a circuit. Page 6
4. a) to avoid hitting underground utilities. Page 7
5. b) 10. Page 7
6. d) stay away and report it to your local electric utility and 911. Page 7
7. c) battery-powered radios. Page 9
8. c) if electricity is leaving a circuit, the GFCI quickly shuts off the power. Page 9
9. c) rotten eggs. Page 10
10. a) ignite. Page 11
11. b) 1,000 watts of electricity used for one hour. Page 12
12. d) an appliance used near water with a GFCI. Page 13
13. b) in a hardtop car with the windows shut. Page 14
14. c) a blue stain in the road. Page 11