Electricity Pre/Post Test  **http://www.ohioenergy.org/wp-content/uploads/2012/10/logo-small.png**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Choose correct answer.

\_\_\_\_\_ 1. Which of the following is a *Secondary Energy* source?

1. Coal c. Natural Gas
2. Solar d. Electricity

\_\_\_\_\_ 2. At a coal fueled electricity generation plant, the purpose of burning coal is to:

1. To heat water to steam that turns a turbine.
2. Apply heat to the conducting wires.
3. To heat the conductor creating a magnetic field.
4. Provide a source of electrons.

\_\_\_\_\_3. Current is measured in units called:

1. volts c. coulombs
2. amperes d. ohms

\_\_\_\_4. Which of the following is considered a “load” in a circuit?

1. lamp c. motor
2. speaker d. all are loads

\_\_\_\_ 5. To turn a switch “on”, you \_\_\_\_\_\_\_\_\_\_\_\_\_\_ it.

1. voltage c. pressurize
2. close d. open

\_\_\_\_ 6. You have a flashlight with two 1.5 volt batteries wired in series. What is the electrical pressure?

1. 1.5 volts c. 3 volts
2. 3 amps d. 1.5 ohms

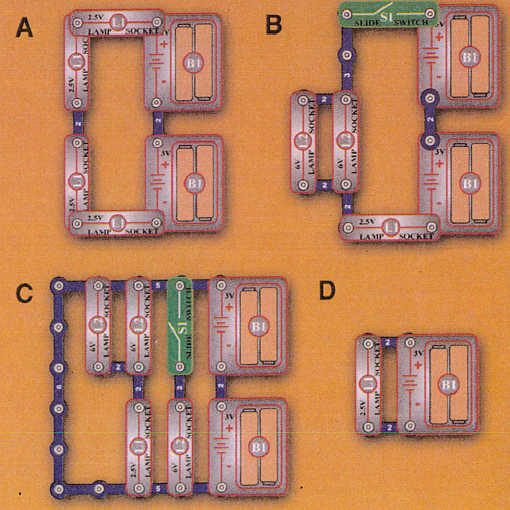
\_\_\_\_\_7. Which of the following would all be connected in parallel?

1. A lamp and a switch on the wall controlling it.
2. The streetlamps in your neighborhood.
3. A string of holiday lights that all go out if one is loose.
4. None of these are connected in parallel.

\_\_\_\_8. If there is more than one continuous path for the electrons to flow, that circuit is wired in:

1. parallel circuit c. short circuit
2. series circuit d. long circuit

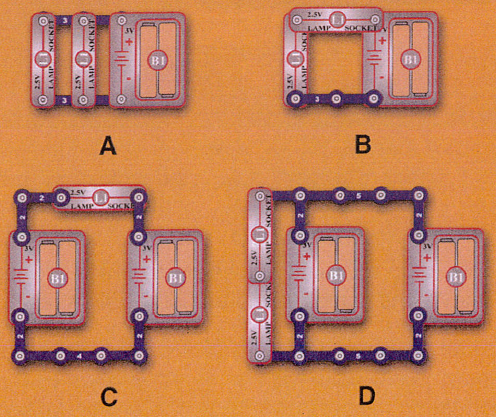
\_\_\_\_ 9. Which of these is a short circuit?



\_\_\_\_ 10. Explain what happens when you reverse the polarity in a motor.

1. The fan speeds up. c. The fan slows down.
2. The fan shuts down. d. The fan changes direction.

\_\_\_\_ 11. Which of the following circuits would have the brightest bulb?



\_\_\_\_\_ 12.  **If there is a 1.5V battery and a bulb on a simple series circuit and the battery is changed to**

**3V, what happens to the bulb?**

1. gets brighter c. gets dimmer
2. gets hotter d. a short circuit occurs

\_\_\_\_ 13. Which of the following are sources of voltage?

1. generator c. solar panel
2. battery d. all of the above

\_\_\_\_ 14. Which of the following is true about LED’s?

1. They block current flow in one direction.
2. LED stands for Low Electron Diode.
3. They do not require a resistor in a circuit to work.
4. They can only produce white light.

\_\_\_\_\_ 15. One of the causes of electrical pressure that causes a current to flow is:

1. The negative charges of the electrons cause them to repel each other.
2. The positive charges in the conductor repels the electrons.
3. The conductive material in the wire attracts protons.
4. The insulating material blocks the flow of electrons.

\_\_\_\_\_ 16. What happens when you cover a photoresistor?

1. Increase voltage and decrease pressure.
2. Increase resistance and increase wattage.
3. Decrease current and decrease resistance.
4. Increase resistance and decrease current.

\_\_\_\_\_ 17. In a circuit that has a light dimmer, it most likely is wired with which piece of electronic equipment?

1. capacitor c. transistor
2. variable resistor d. photoresistor

\_\_\_\_\_ 18. Placing resistors in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ increases the total resistance while placing them in

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ decreases total resistance.

1. parallel; series c. series; parallel
2. watt; amperes d. series; ohm

\_\_\_\_\_ 19. A circuit uses batteries to run a motor with a fan. How could you reduce the speed of the

motor?

1. Use more batteries to increase voltage
2. Place a lamp in series with the motor to reduce voltage to it
3. Remove the fan from the motor
4. None of the above

\_\_\_\_\_\_ 20. Nearly all electricity eventually becomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:

1. information b. wasted c. chemical energy d. thermal energy