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Conceptual Physics: _____
Date: _____

Unit IX
Electricity & Magnetism
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IX

Video: Measuring and Using Electricity

1. Electric current is a continuous flow of _____ through a wire.

2. It is the rate of _____ past a certain point

3. Amps are used to measure how much current goes past a point in a given amount of _____.

4. There are two types of current. One is called _____ current or AC for short.

5. Direct current is the kind of current that we get from _____.

6. Alternating current is the kind used in _____, businesses, and schools.

7. AC current is developed in a _____.

8. It's called alternating current because it is produced when magnets _____ in a coil of wire

9. When the magnet goes into the coil the needle moves one way and when the magnet is pulled out the needle moves the _____ way.

10. In the US the current alternates at a rate of _____ times per second or 60 complete cycles per second.

11. For a flow of electricity to occur we must have a complete _____ made up of three things a source of electrons, a path for the electrons to follow along, and a device to use the electrons.

12. We need a battery, some wire and a _____.

13. The current flows from the _____ terminal of the battery to the positive pole of the battery.

14. When the circuit is _____, and no gaps are present, the bulb lights up.

15. _____ are added to circuits to make it easier to control the flow of current.

16. Current must always flow in a complete _____ from the source of electrons through the electrical device and back to the source of electrons.

17. The outlet has a round hole for _____ the device that is being plugged in to protect the device from damage by short circuits.

18. The two prongs allow electricity to _____ the device and then back out of the device.

19. Copper is a good _____ of electricity because the atoms in copper have a weakly held electron in the outer shell.

20. The push behind the current is called _____ and is measured in volts.

21. The amount of electrical energy used in a certain amount of time is measured in what is called _____. Wattage is the measure of electrical use multiplied by time.

22. 1000 watts is one _____.

23. Electrical consumption is measured in _____ (kWh).

24. A circuit breaker is designed to allow a certain amount of _____ to build up in a circuit.

25. Wattage is a measure of how much electrical energy is needed to _____ an appliance.

26. The wire in the hair dryer and the wire in the light bulb _____ the flow of electrons.

27. Amperage is the measure of _____.

28. You can calculate amperage by dividing the _____ of the device by the _____ it requires.

29. You can find the _____ of most electrical appliances on the bottom of the device.

Quiz

1. Current is measured in _____.
a. volts
b. amperes
c. electrons
d. protons

2. The push behind current is called _____.
a. voltage
b. amperes
c. electrons
d. wattage

3. The amount of electrical energy used in a certain amount of time is called _____.
a. voltage
b. amperes
c. electrons
d. wattage

4. Materials that allow the flow of electricity are called _____.
a. insulators
b. conductors
c. wattage
d. voltage

5. A complete circuit is made up of what three things
a. voltage, wattage, and amperes
b. conductors, insulators, circuits
c. source of electrons, path, something to use the electrons
d. electrons, protons, and neutrons

6. A thousand watts is called one

a. circuit
b. 120 volts
c. 60 cycles
d. kilowatt

7. How do circuit breakers protect our homes?

8. If a household appliance has a wattage of 720 and it uses the standard 120 volts what would the amperage be for this device?

9. Why is copper such a good conductor of electricity?

10. What does it mean when the circuit is “open”?