

Second Semester Physical Science Quiz 2

Matching: either write the letter or the word that best answers the statement on the blank or write the letter in the blank that is in front of the word.

- |                        |                       |
|------------------------|-----------------------|
| A. Electric current    | B. open circuit       |
| C. Alternating current | D. closed circuit     |
| E. Direct current      | F. short circuit      |
| G. circuit             | H. integrated circuit |
| I. series circuit      | J. fuses              |
| K. parallel circuit    | L. circuit breakers   |
| M. voltage             | N. power              |
| O. amperage            | P. resistance         |

1. I. series circuit is a path of multiple circuits where there is only one path for the electricity to flow through.
2. A path of the flow of electrons that has a break in it is called this: F. short circuit or B. open circuit.
3. J. fuses or L. circuit breakers are used to accommodate excess voltage or additional or unexpected charges; they release the excess charges in a safe manner, by switching off and cutting off the power supply.
4. An electrical current that is measured mostly by using a mathematical equation (Ohm's Law) is O. amperage.
5. The flow of electricity from one spot on an electric path to another A. Electric current.
6. An unbroken 'loop' of electricity that flows through a conductor to perform a function is called a G. circuit or D. closed circuit.
7. A microscopic electrical circuit, complete with transistors and resistors is called: H. integrated circuit.
8. M. voltage is a measure of the intensity or strength of an electrical supply.

Short answer:

9. Which type of current is most advantageous for power companies to use and why?  
**Alternating current because its voltage can be easily changed and it can travel over long distances.**
10. What does a switch do in a circuit?  
**The switch, when in the 'off' position, causes the circuit to be an open circuit. When it is in the 'on' position, it completes the circuit making it a closed circuit.**

11. What is a 'short circuit'?

**A short circuit is a break in an unintended electrical circuit, causing the electricity to flow on a different path.**

12. What are the units for electric power?

**Watts**

13. What are the units for voltage?

**Volts**

14. What makes something a good conductor?

**A good conductor offers very little resistance to the flow of electricity: the electricity can flow quickly and easily.**

15. Give one example of a good conductor and a good insulator.

**Good conductors:**

**gold, silver, copper, iron, aluminum, brass, bronze, steel, graphite, mercury, and dirty water**

**Good insulator:**

**glass, fiberglass, air, oil, ceramic, porcelain, and cotton, dry wood, dry paper, and pure water**

Bonus:

- What are the units for ampere's? **amp A**
- What are the units for resistance? **Ohm**
- What is a superconductor? **A superconductor is a conductor of electricity that has absolutely NO resistance**