

Electricity and Magnetism Review

1. What two factors affect electric charge?
2. What is electric field and what are two factors that affect an electric field?
3. Give 3 different ways that static electricity can be transferred. Give an example of each type.
4. What is electric current?
5. What is resistance? List 3 aspects that affect the resistance of a wire.
6. Write down the 3 separate equations for Ohm's Law.
7. What is the current in a series circuit with a resistance of $15\ \Omega$ and a potential difference of 240 volts?

8. What is the voltage in a series circuit with a resistance of $20\ \Omega$ and a current of 45 Amps?

9. What is the resistance that a wire has if it has 15.0 amps going through it at 45 volts?

10. What is the power a device uses if it uses 100 V and draw 5 A?

11. What is an electrical conductor? Give an example.

12. What is an electrical insulator? What is unique about the spacing of electrons in an insulator? Give an example.

13. Describe the two types of currents that we talked about. Give an example of each.

14. Describe the two types of circuits that we talked about. Give an example of each.

15. Describe the different electrical safety equipment.

16. What is the fundamental rule/law of magnets. *Hint complete this sentence*

Like poles _____ and opposite poles _____.

17. As two opposite ends of a magnet move closer to each other, what happens to the strength of the magnetic force?

18. What happens if I were to split a bar magnet in half?

19. Describe (in your own words) how an electric generator works?

20. How much will it cost to run your 60.0 watt laptop if it is on for 8.00 hours and a kilowatt-hour costs \$0.25.

Use the following equation to find energy. $E = \text{Power} * \text{time}$