

Name _____ Period _____

Study Guide for Electricity

Chapter 19

1. The charged parts in an atom are the _____ with a _____ charge and the _____ with a _____ charge.
2. _____ charges attract while _____ charges repel.
3. What kind of charge will be repelled from a negative charge? _____
4. The attraction or repulsion of charges is affected by the **distance** between the charges. You get more attraction/repulsion when the charges are _____.
5. Charges that are on a surface but do not move are called _____ charges.
6. A neutral object becomes charged when it either gains or loses _____.

Methods of charging (**explain each**):

7. Friction
8. Conduction
9. Induction
10. What is a conductor? (explain and gives some examples)
11. What is an insulator? (explain and gives some examples)
12. What is an electric discharge?
13. Make a diagram/drawing of what happens when there is a lightning strike. Include charges.



14. The amount of potential difference is called _____ and the units are the _____
15. Explain what a battery is.
16. What is a wet cell battery?
17. The first widely known wet cell battery was called a _____.

18. What is a Thermocouple and where might one be used?

19. What is a photocell and where would one be used?

20. Many batteries come in different sizes but have the same voltage of 1.5 volts. What are the advantages **and** disadvantages of having **small batteries** such as the AAA batteries?

Advantages –

Disadvantages -

21. The movement of charges is called _____. A complete path for these charges is called _____.

22. Resistance is the _____ to the flow of electrons. The symbol is _____ and the units are _____.

23. Materials with low resistance are said to be good _____. When electricity flows through a material with high resistance, the material can get very _____.

24. Light bulbs – finish drawing the light bulb and label the parts.



25. What are the parts of a simple circuit? _____, _____, _____, _____.

26. What is the purpose of a switch?

Draw the symbol for the following electrical items:

27. Bulb

28. Fuse

29. Resistor

30. Switch

31. Battery

32. Electrons flow from the _____ end of the battery through the circuit to the _____ end.

33. A simple _____ circuit only has one path for the electrons. All of the electrons flow through _____ part of the circuit.

34. What happens if one part of a series circuit is cut or broken?

35. What do we call a circuit with a break? _____

36. A _____ circuit has several paths in it for electrons. If we have three bulbs in this kind of circuit and one bulb breaks, what happens to the other two bulbs?

37. Draw a diagram of a circuit that uses three bulbs and one battery and a switch that turns everything off at once. Make sure that the three bulbs are in **parallel**. Use proper symbols
38. What is a short circuit?
39. Describe Grounding
40. What kind of circuits do you find in your home, and why?
41. What is electric power?
42. A refrigerator uses 540 watts for about 6 hours each day. If electricity costs 13 cents per kWh, how much does it cost to run the fridge for 30 days?
43. Your house electric meter reading on May 1st was 64628 kWh. If your May electric bill was \$153.68, and the cost of electricity is 11 cents per kWh, what was the reading on your electric meter at the end of May?