

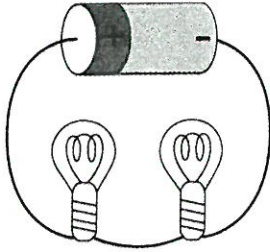
Chapter 13 Review

Name: Key

Date: _____

Section: _____

1) The following is what type of circuit?



- A. Parallel Circuit
- B. Static Circuit
- C. Series Circuit
- D. Motion Circuit

2) What produces a spark of electricity when you run across a carpet and touch a metal doorknob?

- a. Moving charges remain in balance
- b. Moving charges generate electricity
- c. They become neutral
- d. They become static *electricity*

3) Which two objects will repel, or push away, each other?

- a. a negatively charged balloon and a positively charged balloon
- b. a positively charged balloon and a negatively charged piece of paper
- c. a neutral balloon and a neutral piece of paper
- d. a negatively charged balloon and a negatively charged balloon

4) A red balloon and a positively charged blue balloon move toward each other. What causes the balloons to move toward each other?

- a. The red balloon has a positive charge that repels the blue balloon.
- b. The red balloon has a negative charge that repels the blue balloon.
- c. The red balloon has a positive charge that attracts the blue balloon.
- d. The red balloon has a negative charge that attracts the blue balloon.

5) What is everything made of?

- a. Blocks
- b. neutral charges
- c. negative charges
- d. atoms

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6) What is an electric charge in motion?

- a. static current
- b. static electricity
- c. electric current
- d. motion electricity

7) Why are plastic and rubber used to cover electric wires?

- a. They allow electric charges in one wire to come in contact with other wires more easily.
- b. They speed up the flow of electric charges in wires.
- c. They are good conductors of electric charges.
- d. They are good insulators and prevent electric charges from coming in contact with other wires.

8) Juan is putting up a string of 100 holiday lights. One bulb is out. Why can Juan go ahead and put up the string of lights anyway and still have light?

- a. In a parallel circuit, a burnt-out bulb does not open the circuit.
- b. The energy source for a parallel circuit is a battery.
- c. A break in one part of a parallel circuit affects the rest of the circuit.
- d. Each bulb receives the same amount of energy in a parallel circuit.

9) What is characteristic of an electric current?

- a. It stays in one place.
- b. It travels slowly.
- c. It is in motion.
- d. It can be seen.

10) What happens when a switch is open in an electric circuit?

- a. The electric charges flow through the loop.
- b. The electric charges stop flowing.
- c. A resistor in the loop heats up or gives off light.
- d. Charges from the energy source flow through the loop.

11) Blowing wind and falling water are sources of energy for which of the following?

- a. generators
- b. solar power plants
- c. nuclear motors
- d. geothermal energy plants

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12) Which of the following is an important electrical safety precaution everyone should follow?

- a. Wrap worn or cracked electrical cords with tape.
- b. Read the instructions on electrical products before using them.
- c. Move appliance cords into pathways so people can see them.
- d. Fix electrical problems on your own as soon as you notice them.

13) What is an important part of every generator?

- a. a magnet
- b. a source of falling water
- c. chemical energy
- d. solar energy

14) Which device is used to convert mechanical energy into electrical energy?

- ~~a. Generator~~
- ~~b. Electromagnet~~
- ~~c. Resistor~~
- ~~d. Electric motor~~

15) What happens when the number of coils in an electromagnet is increased?

- a. The electromagnet becomes stronger.
- b. The electromagnet becomes weaker.
- c. The core of the electromagnet becomes larger.
- d. The core of the electromagnet becomes smaller.

16) A scientist builds two electromagnets that are identical, except for the number of coils wrapped around the iron core. Electromagnet A has 15 coils and electromagnet B has 30 coils. Which statement is true about the electromagnets?

- a. Electromagnet A is stronger than electromagnet B.
- b. Electromagnet B is stronger than electromagnet A.
- c. Electromagnet B will last longer than electromagnet A.
- d. Electromagnet A will last longer than electromagnet B.

17) What is true about an electromagnet?

- a. It is a compass through which an electric current passes.
- b. It is a coil of wire with many loops through which an electric current passes.
- c. It is another name for a compass.
- d. It is a visible force around a magnet.

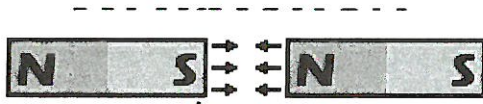
18) Where is the magnetic field strongest on a magnet?

- a. at the north pole of the magnet
- b. at the south pole of the magnet
- c. at both poles of the magnet
- d. at the center of the magnet

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19) What will the following magnet do?



- a. Attract
- b. Repel
- c. Stay in the same place
- d. Turn around in circle

20) What force acts on moving electric charges near a magnet?

- a. chemical force
- b. magnetism
- c. electric current
- d. resistance

21) Which of the following surrounds Earth?

- a. electric field
- b. magnetic field
- c. electric current
- d. magnetic current

22) Where is, the magnetic field located for all magnets?

- a. The magnetic field is only located around a magnet's poles.
- b. The magnetic field is only located around a magnet's center.
- c. The magnetic field goes out in all directions around a magnet.
- d. The magnetic field goes out in one direction from a magnet.

True/False: Write True if the statement is true and False if the statement is false.

- 23) False A south-seeking pole attracts only another ^{North} south-seeking pole.
- 24) False All atoms have a positive charge. ^{neg + neutral}
- 25) False A electric field gets ^{stronger} weaker the closer you get to the charged object.
- 26) False Compasses work best when they are ^{far} close to magnets.
- 27) True There is more than one way to increase the strength of an electromagnet.
- 28) True Michael Faraday and Joseph Henry experimented with electricity.
- 29) True Making the core of an electromagnet larger makes the electromagnet stronger as well.
- 30) November 8 was election day for Canada.