

Physics Practice Test


Name:

Date:

Block:

This practice test is designed to help you determine what concepts you DO know and more importantly what concepts you DO NOT know!

Go through the practice test THREE times:
(1) On your own (2) With your notes (3) With another student



Each time, if you cannot answer a question, draw a circle around it to identify that you should review this concept when preparing for the test.

True or False: Identify the following statements as true or false. If FALSE, rewrite the ENTIRE sentence with the correction (1 mark each)

1. _____ Electrical potential difference is often called voltage and measured in volts

2. _____ Electrons flow from the cathode (positive terminal) to the anode (negative terminal)

3. _____ A charged material has an equal distribution of positive and negative charges

4. _____ A copper wire is an example of an insulator

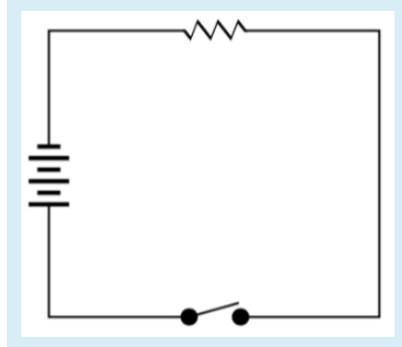
5. _____ Water, geothermal sources, and wind are examples of renewable energy sources

Multiple Choice: Choose the BEST answer (1 mark each)

- _____ 6. The part of a complete circuit that converts electricity into other forms of energy is known as the
- a. Control
 - b. Resistor
 - c. Load
 - d. source

- _____ 7. Which of the following is NOT a requirement for an electric circuit?
- A continuous pathway
 - A grounder
 - A conductor
 - A source

- _____ 8. In the following circuit diagram, the battery has a charge of 9V and the resistor has a resistance of $6\ \Omega$. What is the current through the circuit?



- 0.67 A
 - 3 A
 - 1.5 A
 - 72 A
- _____ 9. A parallel circuit has three 5 V loads. What is the total voltage across each of the loads in the circuit?
- 5 V
 - 15 V
 - 1.67 V
 - 0.6 V
- _____ 10. Which of the following materials has the lowest conductivity?
- Plastic
 - Copper
 - Rubber
 - Glass
- _____ 11. Which of the following best describes the movement of electrons around a series circuit?
- The electrons take one of several possible paths
 - The electrons give up equal amounts of energy as they pass through each branch of the circuit
 - The current is higher near the power source than anywhere else in the circuit
 - The electrons follow the same path around the circuit
- _____ 12. If you used a 4000 W dish washer for 0.75 hours, how many kilowatt-hours of electrical energy would you have used?
- 2.5 kWh
 - 3.0 kWh
 - 4.5 kWh
 - 5.0 kWh

Completion

1. An arrangement of electrical components through which electrons follow an unbroken path is known as a _____
2. You can start and stop the current around a circuit by inserting a _____ into the circuit
3. The _____ of a material is the property that determines how difficult it is to force an electric current through the material
4. When electrons have only one possible route and can follow only one path, the circuit is called a _____ circuit
5. When additional resistors are added to a parallel circuit, the total resistance of the circuit becomes _____ than it was before
6. Electrical devices convert electrical energy into other forms of energy, such as _____ and _____

Short Answers

1. Explain the relationship between negative charges, positive charges, electrons, and protons. Describe what sometimes happens in terms of charges when you rub two different types of materials together
2. What is a purpose of a load?
3. Why is it important to wire a home with a circuit where all loads are connected in parallel?

