



# Standardized Test Prep

Answer the following items on a separate piece of paper.

## MULTIPLE CHOICE

1. Magnesium reacts with hydrochloric acid to produce magnesium chloride and hydrogen gas. The reactants in this reaction are
  - A. magnesium and magnesium chloride.
  - B. hydrochloric acid and hydrogen gas.
  - C. magnesium and hydrochloric acid.
  - D. magnesium chloride and hydrogen gas.
2. Matter that has a definite shape and a definite volume is
  - A. a liquid.
  - B. an element.
  - C. a solid.
  - D. a gas.
3. We know that air is a mixture and not a compound because
  - A. it can be heated to a higher temperature.
  - B. it can be compressed to a smaller volume.
  - C. it is colorless.
  - D. its composition can vary.
4. Matter can be defined as anything that
  - A. has weight.
  - B. has mass and volume.
  - C. is uniform throughout.
  - D. exhibits both chemical and physical properties.
5. Which of the following is best classified as a homogeneous mixture?
  - A. pizza
  - B. blood
  - C. hot tea
  - D. copper wire
6. A compound differs from a mixture in that a compound
  - A. contains only one element.
  - B. varies in chemical composition depending on the sample size.
  - C. has a definite composition by mass of the elements that the compound contains.
  - D. can be classified as either heterogeneous or homogeneous.
7. Which of the following is *not* a physical state of matter?
  - A. solid
  - B. gas
  - C. element
  - D. liquid

8. Three of the following must contain two or more kinds of atoms. Which one does *not* contain two or more kinds of atoms?
  - A. element
  - B. compound
  - C. homogeneous mixture
  - D. heterogeneous mixture
9. Which of the following symbols does *not* match the element name given?
  - A. Al, aluminum
  - B. Co, copper
  - C. K, potassium
  - D. P, phosphorus

## SHORT ANSWER

10. Give three examples of mixtures, and tell whether each one is homogeneous or heterogeneous. Give three examples of compounds.
11. In trying to identify a sample of a pure substance, we observe the following properties. Tell whether each one is a chemical property or a physical property.
  - A. Its mass is 124.3 g.
  - B. It is a shiny solid at room temperature.
  - C. It is easily etched by nitric acid.
  - D. It melts when heated to 670°C.
  - E. It is 31.7 centimeters long.
  - F. It is a good heat conductor.
  - G. It burns in air.
  - H. It is a good conductor of electrical energy.

## EXTENDED RESPONSE

12. Describe the difference between a chemical change and a physical change. Give one example of each kind of change.
13. Describe general properties of metals, nonmetals, and metalloids.

### Test TIP

Remember that if you can eliminate two of the four answer choices, your chances of choosing the correct answer choice will double.