

## Quiz #4 over 3.1 and 3.2 reading

- Matter that has a uniform and unchanging composition is a:
  - Substance
  - Solid
  - Vapor
  - Mixture
  - Element
- Seawater (salt water) is *NOT* a pure substance because it:
  - is salty.
  - has a composition that may be different from sample to sample.
  - is a liquid.
  - has hydrogen as part of its composition.
  - can be found in the ocean.
- A characteristic that can be observed or measured *without* changing the sample's composition is called a \_\_\_\_\_ property?
  - Chemical
  - Physical
  - Gaseous
  - Crystalline
  - Solid-state
- Which of the following is a *physical* change?
  - water freezing
  - iron rusting
  - wood burning
  - placing magnesium in hydrochloric acid and producing hydrogen gas
  - baking a cake
- Which of the following properties is *not* dependent on the amount of the substance present and is useful for identifying substances?
  - extensive
  - pensive
  - intensive
  - chemical
  - external
- Which of the following has a *fixed* volume and *fixed* shape?
  - Solid
  - Liquid
  - Gas
  - Plasma

7. The statement, "matter can neither be created nor destroyed" is the:
- A. Law of gravity
  - B. Law of multiple proportions
  - C. Law of conservation of mass
  - D. Law of theoretical chemistry
  - E. Law of conservation of energy
8. In a chemical reaction, 10 grams of substance A reacts completely with 14 grams of substance B. Substances C and D are produced. There are 9 grams of substance C produced. How much substance D is produced?
- A. 9 grams
  - B. 10 grams
  - C. 12 grams
  - D. 15 grams
  - E. 24 grams
9. Which of the following is a *chemical property*?
- A. iron and oxygen can form rust
  - B. mercury melts at  $-39^{\circ}\text{C}$
  - C. oil and water do not mix
  - D. lead is more dense than aluminum
  - E. ice can build up on the freezing coils in your freezer
10. Which of the following is *not* one of the four indicators of a chemical change?
- A. formation of a gas
  - B. color change
  - C. temperature (energy) change
  - D. change in smell
  - E. change in texture or shape