

## Chapter 7 Quiz

### Part A: Multiple Choice

Circle the letter beside the answer that best answers the question.

- The chemical formula for glucose, a sugar, is  $C_6H_{12}O_6$ . Which of the following is true about glucose?
  - Glucose is an ionic compound.
  - There are 6 atoms in one molecule of glucose.
  - The formula for glucose can also be written as  $CH_2O$ .
  - There are 6 atoms of carbon in a molecule of glucose.
- $CO_3^{2-}$  is an example of which of the following?
  - polyatomic ion
  - ionic compound
  - covalent compound
  - multivalent element
- What is the charge on Cu in copper(I) chloride?

A. +1	C. 0
B. -1	D. 2
- Which of the following is true about compounds?
  - They are not pure substances.
  - They have properties similar to the elements that make them up.
  - They can be physically separated into the elements that make them up.
  - They are made by chemically combining two or more elements in fixed proportions.
- Which of the following statements is true about ionic and covalent bonds?
  - Both types of bonds involve the transfer of electrons.
  - Ionic bonds form compounds that have low melting points.
  - Ionic bonds involve the transfer of electrons but covalent bonds involve sharing electrons.
  - Ionic bonds are formed between two non-metals and covalent bonds are formed between two metals.
- What particles in an atom are responsible for bonding?

A. protons	C. neutrons
B. nucleus	D. electrons

## Chapter 7 Quiz (continued)

### Part B: Chemical Formulas and Naming

7. Determine if the following compounds are binary ionic, ionic with multivalent elements, ionic with polyatomic ions, or molecular. Then, write the chemical name.
- A.  $\text{KNO}_3$  \_\_\_\_\_
- B.  $\text{CaBr}_2$  \_\_\_\_\_
- C.  $\text{CuCl}_2$  \_\_\_\_\_
- D.  $\text{Si}_3\text{N}_4$  \_\_\_\_\_
- E.  $\text{Pb}(\text{CrO}_4)_2$  \_\_\_\_\_
8. Determine if the following compounds are binary ionic, ionic with multivalent elements, ionic with polyatomic ions, or molecular. Then, write the chemical formula.
- A. dichlorine heptoxide \_\_\_\_\_
- B. iron(II) oxide \_\_\_\_\_
- C. aluminum iodide \_\_\_\_\_
- D. lead(II) nitrate \_\_\_\_\_
- E. carbon dioxide \_\_\_\_\_

### Part C: Short Answer

9. You test an unknown compound and find out it conducts electricity when dissolved in water.
- a. What type of compound is it?
- \_\_\_\_\_
- b. What are two other properties you would expect this compound to exhibit? Why?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
10. Both  $\text{CaCl}_2$  and  $\text{NaCl}$  contain chloride ions. Explain why two chloride ions are needed to make the compound  $\text{CaCl}_2$ , while only one chloride ion is needed to make the compound  $\text{NaCl}$ .
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_