

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Chemistry** ~ Ms. Hart

**Class:** Anions or Cations



### **8.1 Introduction to Solutions**

- In the formula for water,  $H_2O$ , the number 2 refers to the number of
  - Hydrogens and oxygens
  - Waters
  - Hydrogens only
  - Oxygens only
- The number of atoms in  $Cu_3PO_4$  is
  - 8
  - 4
  - 5
  - 19.
- A compound consists of
  - one element
  - two or more substances.
  - two or more elements *NOT* chemically combined
  - two or more elements chemically combined
- A bottle of green food coloring, which was left standing on a shelf for a long time, separated into distinct blue and yellow layers. The food coloring was most likely
  - an element
  - a compound
  - a mixture
  - changing phase
- Which of the following is a mixture?
  - salt
  - silver
  - soup
  - sugar
- A solution of  $AgNO_3$  is considered a
  - heterogeneous mixture
  - homogeneous mixture
  - heterogeneous compound
  - homogeneous compound

7. Identify the solute and the solvent

<b>Solution</b>	<b>Solute</b>	<b>Solvent</b>
$CuSO_4$ (aq)		
NaCl is dissolved in methanol		
Solution of green food coloring in water		

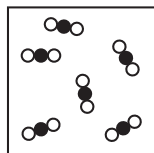
- Which of these terms refers to matter that could be heterogeneous?
  - Element
  - Compound
  - mixture
  - solution
- Bronze contains 90 to 95 percent copper and 5 to 10 percent tin. Because these percentages can vary, bronze is classified as
  - A compound
  - A substance
  - A mixture
  - An element
- Which sample of  $CO_2$  has a definite shape and a definite volume?
  - $CO_2(aq)$
  - $CO_2(g)$
  - $CO_2(l)$
  - $CO_2(s)$

11.

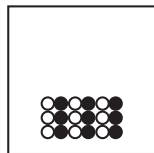
Given the key:

Key	
○	= Atom of oxygen
●	= Atom of carbon

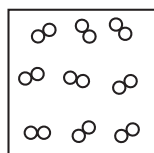
Which particle diagram represents a sample containing the compound CO(g)?



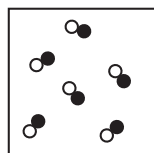
( 1 )



( 3 )



( 2 )



( 4 )

12. Matter that is composed of two or more different elements chemically combined in a fixed proportion is classified as:

- (1) A compound
- (2) A mixture
- (3) An isotope
- (4) A solution

13. Which of the following is NOT a property of an element?

- (1) It is found on the Periodic table.
- (2) It is a pure substance.
- (3) It can be broken apart chemically.
- (4) It cannot be broken apart physically.

14. Which formula represents a compound?

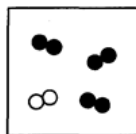
- (1) Ca
- (2) Cr
- (3) CO
- (4) Co

15. Identify each of the following items as an element (A) or compound (B).

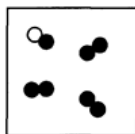
- (1) Titanium
- (2) Steel
- (3) Ice
- (4) Gold

16. Which two particles represent mixtures of diatomic elements?

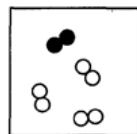
Key	
○	= atom of one element
●	= atom of another element



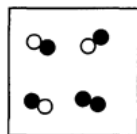
A



B



C



D