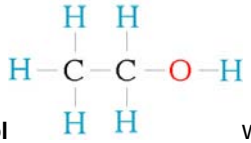
Topic 6 - Chemical Compounds

1. When any of the 112 elements combine into groups of 2 or more they form compounds. If atoms of elements are shared, this type of compound is formed.
   - **A. ionic**
   - **B. atomic**
   - **C. aqueous**
   - **D. molecular**

2. The chemical formula uses symbols and numerals to identify which elements and how many atoms of each element are present in the compound.

   The chemical formula for **ethanol** would be written as …
   - **A. $C_2 H_6 O$**
   - **B. $H_3CH_2 COH$**
   - **C. $C_2 3H_2 O$**
   - **D. $H_2 HC_2 OH H_2$**

3. Guyton de Morveau in France developed a standardized chemical naming system in 1787 to determine a chemical name. The type of element that is always first is the …
   - **A. acid**
   - **B. base**
   - **C. metal**
   - **D. Non-metal**

4. If a compound is formed and it contains a metal the compound is.
   - **A. ionic**
   - **B. acidic**
   - **C. basic**
   - **D. molecular**

5. The only compound that contains three elements is …
   - **A. $H_2O_{(l)}$ Water**
   - **B. $C_6H_{12}O_{6(s)}$ Glucose**
   - **C. $CO_{2(g)}$ Carbon dioxide**
   - **D. $NO_{2(g)}$ Nitrogen dioxide**

6. Substances dissolved in water use a symbol following the chemical formula ti identify it as a water-based solution ...
   - **A. liquefied**
   - **B. dissolved**
   - **C. distilled**
   - **D. aqueous**

7. A molecule is the smallest independent unit of a pure substance. **Diatomic** molecules are molecules made up of.
   - **A. 2 atoms of the same element**
   - **B. more than 2 atoms of an element**
   - **C. 1 atom from 2 different elements**
   - **D. 2 atoms from 2 different elements**

8. In molecular pure substances the bonding between atoms is strong, but the attraction between the molecules is weak. They are good insulators, poor conductors and have a distinct crystal shape. This type of molecular compound is produced when …
   - **A. metals combine**
   - **B. *non-metals* combine**
   - **C. gases and solids combine**
   - **D. non-metals and metals combine**

9. Some molecular compounds are better known by their common names rather than their chemical names, example: water H_2O is actually
   - **A. hydroxide**
   - **B. dihydroxide**
   - **C. hydrogen dioxide**
   - **D. dihydrogen oxide**

10. When dissolved in water, the metal (**Na**) loses an electron and the nonmetal (**Cl_2**) gains an electron forming an aqueous solution of ions like these …
   - **A. (Na)+ (Cl_2) +**
   - **B. (Na)- (Cl_2) +**
   - **C. (Na)+ (Cl_2) -**
   - **D. (Na)- (Cl_2) -**

11. Some ions can also form when certain atoms of elements combine. These ions are called **polyatomic** ions (*poly* meaning "*many*"). Polyatomic atoms are a group of atoms acting as one. The compound that contains a polyatomic ion is …
   - **A. $H_2O_{(l)}$**
   - **B. $NaCl_{(s)}$**
   - **C. $C_6H_{12}O_{6(s)}$**
   - **D. $CaCO_{3(s)}$**

12. Some compounds of copper such as Copper II Sulfate used use a roman numeral in its chemical name. **$Cu(II)SO_4$** The roman numeral is used to show …
   - **A. which ion is used**
   - **B. how the ion is used**
   - **C. the order of ions used**
   - **D. how many ions are used**

13. A compound made from two elements is called a.
   - **A. dual compound**
   - **B. binary compound**
   - **C. double compound**
   - **D. secondary compound**

14. Generally when looking at patterns in the periodic table this can be said about elements in a group …
   - **A. They all have the same density**
   - **B. They react very violently**
   - **C. They all have the same ion charge**
   - **D. They all have different ion charges**

15. The formula for carbon tetrachloride is …

# of Atoms	Prefix
1	mono
2	di
3	tri
4	tetra
5	penta

   - **A. C_4Cl**
   - **B. CCl_4**
   - **C. C_4Cl_4**
   - **D. Cl_4C**