Name_____Date_____

Elements, Compounds & Mixtures Worksheet

Part 1: Read the following information on elements, compounds and mixtures. Fill in the blanks where necessary.

Elements (pure substances):

1. A pure substance containing only one kind of _____.
2. An element is always uniform all the way through (homogeneous).
3. An element _____ be separated into simpler materials (except during nuclear reactions).
4. Over 118 existing elements are listed and classified on the _____.

Compounds (pure substances):

5. A pure substance containing two or more kinds of _____.
6. The atoms are _____ combined in some way. Often times (but not always) they come together to form groups of atoms called molecules.
7. A compound is always homogeneous (uniform).
8. Compounds _____ be separated by physical means. Separating a compound requires a chemical reaction.
9. The properties of a compound are usually different than the properties of the elements it contains.

Mixtures:

10. Two or more _____ or _____ NOT chemically combined.
11. No reaction between substances.
12. Mixtures can be uniform (called _____) and are known as solutions.
13. Mixtures can also be non-uniform (called _____).
14. Mixtures can be separated into their components by chemical or physical means.
15. The properties of a mixture are similar to the properties of its components.

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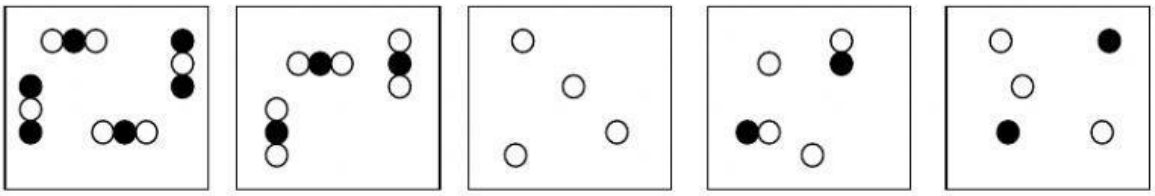
Part 2: Classify each of the following as elements (E), compounds (C) or Mixtures (M). Write the letter X if it is none of these.

___Diamond (C)	___Sugar ($C_6H_{12}O_6$)	___Milk	___Iron (Fe)
___Air	___Sulfuric Acid (H_2SO_4)	___Gasoline	___Electricity
___Krypton (K)	___Bismuth (Bi)	___Uranium (U)	___Popcorn
___Water (H_2O)	___Alcohol (CH_3OH)	___Pail of Garbage	___A dog
___Ammonia (NH_3)	___Salt (NaCl)	___Energy	___Gold (Au)
___Wood	___Bronze	___Ink	___Pizza
___Dry Ice (CO_2)	___Baking Soda ($NaHCO_3$)	___Titanium (Ti)	___Concrete

Part 3: Match each diagram with its correct description. Diagrams will be used once.



A **B** **C** **D** **E**

___1. Pure Element – only one type of atom present.

___2. Mixture of two elements – two types of uncombined atoms present.

___3. Pure compound – only one type of compound present.

___4. Mixture of two compounds – two types of compounds present.

___5. Mixture of a compound and an element.

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