MULTIPLE CHOICE

1) An element is a pure substance in which there are one kind of atom.

2) When two or more elements join together chemically, a compound is formed.

3) Filtering will not break down compounds.

4) Elements join to form compounds in a specific mass ratio.

5) The properties of a compound and the elements that make up the compound are different.

6) Dissolving is the process in which particles of substances separate and spread evenly throughout a mixture.

7) A compound be broken down only by chemical changes.

8) In a solution particles of two or more substances so evenly mixed that they appear to be a single substance.

9) Flammability is a chemical property.

10) Elements cannot be broken down into simpler substances.
11) A solution can be a solid, liquid or a gas.

12) A compound is different from a mixture because each substance in a compound loses its characteristic properties.

13) The particles in a solution cannot scatter light.

14) When elements or compounds combine to form mixtures, they keep their original properties.

15) In a chemical reaction the atoms of two or more elements join together to form compounds.

16) Solutions can be described as being concentrated or dilute.

17) A mixture of liquids can be separated by distillation.

18) All nonmetals are poor conductors of heat and electric current.

19) Elements join in a specific mass ratio to form a compound.

20) The amount of a particular substance in a given quantity of a mixture, solution, or ore is known as the concentration.

21) A pure substance made of two or more elements that are chemically combined is called a(n) compound.

22) Solid solutions of metals or nonmetals dissolved in metals are called alloy.
23) An element is a(n) pure substance in which there is only one kind of atom.

24) A measure of the amount of solute dissolved in a given amount of solvent is referred to as concentration.

25) The best mixed mixture is called a solution.

**SHORT ANSWER**

26) Why can both an element and a compound be considered a pure substance?

   They are both made of only one type of particle; in an element all atoms are identical, in a compound all molecules are identical.

27) How are chemical changes different from physical changes?

   In a chemical change, the properties change, but in a physical change, the properties remain the same.

28) How are lead and iodine similar? How are they different?

   **Same** = Both lead and iodine are elements and cannot be broken down.

   **Different** = Lead is a metal. It is shiny, a good conductor of heat and electricity, and is malleable and ductile. Iodine is a nonmetal, it is dull, brittle and a poor conductor of heat and electricity.
29) If sugar is added to coffee, which is the solute and which is the solvent?

Coffee is the solvent and sugar is the solute.

**FILL IN:**

30) Label each letter as yes or no:

<table>
<thead>
<tr>
<th></th>
<th>elements</th>
<th>compounds</th>
<th>mixtures</th>
<th>solution</th>
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<td>homogenous</td>
<td></td>
<td></td>
<td>O</td>
<td>D</td>
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<tr>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>can be broken down</td>
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<td></td>
<td>E</td>
<td>F</td>
<td>G</td>
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<td>J</td>
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