| Name: | | Date: |
|---|---|---|
| Points: | Score: | |

## I. RELATE BOTH COLUMNS. (6 Points)

a) Can be used to separate a mixture of iron and sand.

b) This method separates a mixture using gravity.

c) This method can be used if one of the components has a bigger size than the other.

d) This method consists of forming solute crystals.

e) With this method we can separate colors from a marker.

f) We can separate alcohol from water.

( ) Decantation

( ) Distillation

( ) Magnetization

( ) Chromatography

( ) Crystallization

( ) Filtration

## II. UNDERLINE THE CORRECT ANSWER. (5 Pts)

1. Through observation we know if a substance is contaminated.
   a) True          b) False

2. The concentrations of these pollutants are monitored in Mexico City.
   a) Ozone, nitrogen dioxide and carbon monoxide.
   b) Methane, sulfur and ozone.
   c) Nitrogen monoxide, methane and carbon dioxide.

3. It is the unit of measure in which we measure these pollutants and is equivalent to microgram /liter.
   a) Ppm.          b) IMECA.          c) Percentage.

4. They are the main components of the air.
   a) Oxygen and carbon dioxide.          b) Nitrogen and oxygen.          c) Nitrogen and neon.

5. Is the Scientist considered the father of chemistry, that stated the Law of conservation of mass.
   a) Henry Cavendish.    b) Joseph Priestley.          c) Antoine-Laurent de Lavoisier.

## III. UNDERLINE THE CORRECT ANSWER. (9 Pts)

1. When is it said to be a pure substance?
   a) When it is formed by atoms or molecules of various compounds.
   b) When it is formed by atoms and molecules of the same type.
   c) When it is formed by molecules of the same size.

2. When is it said to be a mixture?
   a) When it is formed by atoms or molecules of various compounds.
   b) When it is formed by atoms or molecules of the same type.
   c) When it is formed by molecules of the same size.

**LIVEWORKSHEETS**

3. The atmosphere is a pure substance.
    a) False.                b) True.

4. Seawater is a mixture of different substances.
    a) False.                b) True.

5. Sodium chloride is an example of:
    a) an element.         b) a compound.         c) a mixture.

6. Oxygen is
    a) an element.         b) a compound.         c) a mixture.

7. The hydrogen peroxide is
    a) an element.         b) a compound.         c) a mixture.

8. The gold of a ingot is
    a) an element.         b) a compound.         c) a mixture.

9. A substance that has 75% gold and 25% other substances is
    a) an element.         b) a compound.         c) a mixture.

## IV. SOLVE THE FOLLOWING CONCENTRATION PROBLEMS. (6 Pts)

| 7ppm | .3ppm | 13ppm | .1375ppm | .007ppm | .0003ppm |
|---|---|---|---|---|---|

1. There is a sample of 1 Lt of water from the river that contains .007 mg of mercury. What is the concentration in ppm?.

2. Calculate the ppm on a blood sample that contains .00003% of Lead (Pb).

3. Calculate the ppm of a 125 IMECA of Ozone (using as reference 100 IMECA equals to .11 ppm)

## V. WRITE IF THE MIXTURE IS HOMOGENEOUS OR HETEROGENEOUS. (7 points)

1. Cereal with milk.                _____

2. Its properties are the same in all points  ._____

3. Milk.                        _____

4. Water with alcohol.            _____

5. Water with oil.               _____

6. Its composition is not constant at all points .  _____

7. It has a uniform appearance.       _____