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

**Solutions and Solubility Unit Test**

**Part 1: Multiple Choice (5 marks)**

**Instructions**: Circle the letter that best answers the following questions

1. **What is a Solution?**
2. It has several parts that don’t mix together
3. Is a mixture of two or more substances that, when mixed together, make a new substance
4. A Heterogenous mixture
5. A combination of 2 or more substances that keep their properties and can be easily separated

**2. The particles in a Suspension…**

1. Are microscopic (too small to be seen)
2. Remain suspended when left for a period of time
3. Dissolve over time
4. Will visibly settle when left over time

**3. The Solute is…**

1. The substance that gets dissolved
2. The substance that does the dissolving
3. A hand gesture you give to a commander in the army
4. Unable to dissolve and can easily be separated

**4. Crystallization occurs when…..**

1. There is more solute than solvent in a solution
2. There is so much solute in the solvent that it becomes unstable and crystals form
3. A hot, supersaturated solution is allowed to cool and rest over time
4. All of the above

**5. A Homogenous Solution…**

A) Is made of different parts and doesn’t mix together

B) Has parts that can be easily separated

C) Is made of 2 or more substances that mix evenly, creating one uniform mixture

D) Is hard to find in our everyday lives

**Part 2: Match The Definition (5 marks)**

**Instructions**: Match the word in the left column to the correct definition from the right column. Write the correct letter beside the term.

1. Colloid \_\_\_
2. Solubility \_\_\_
3. Heterogeneous Mixture \_\_\_
4. Saturation \_\_\_
5. Solvent \_\_\_

A) A mixture of two or more substances that have visibly separate parts, and can be separated (eg. Trail Mix, Sand and Water, Oil and Water)

B) The maximum amount of solute that can be dissolved without causing crystallization (eg. Hot Chocolate, Soda)

C) A mixture where microscopic particles remain suspended within another substance (eg. Mayonnaise, Butter, Slime).

D) The substance that dissolves other substances (eg. Water)

E) When a substance is able to dissolve, especially in water (eg. Salt, Sugar, Juice Crystals).

**Part 3: Fill in the Blank (5 marks)**

**Instructions**: Using the words below, fill in the blanks. Each term will be used only once.

Insoluable

Solvent

Homogenous

Solute

Dissolving

Solubility

Solutions

Water

Saturation

Heterogeneous

A solution is a type of mixture, that is \_\_\_\_\_\_\_\_\_\_\_.

It means that it's the same throughout, the same throughout.

Crystalliiiiiiization from \_\_\_\_\_\_\_ turns to solid,

To bond together to split up from the liquid

There’s another kind of mixture,

That is \_\_\_\_\_\_\_\_\_\_\_\_.

It means that it has different parts,

don’t mix together

\_\_\_\_\_\_\_\_\_\_\_are made up

of two or more substances.

\_\_\_\_\_\_\_\_\_\_..... The ability to be dissolved.

Especially in \_\_\_\_\_\_ .... Together they’re beyond compare.

Solutions the best mixed mixture!

The major por-tion of the solu-tion,

the thing that does the dissolving.

It bears a special name for its job, it’s called the \_\_\_\_\_\_\_\_\_.

The other part of the solu-tion,

the thing that gets dissolved.

It also bears a special name, it's the \_\_\_\_\_\_\_.

Don’t stop \_\_\_\_\_\_\_\_\_!

Until you’re fully saturated

Unless you’re …. \_\_\_\_\_\_\_\_

**Part 4: The Scientific Method (2.5 marks)**

**Instructions**: Using the words below, list the steps of the Scientific Method of Experimentation in the correct order. (Hint: How did we write out our experiments?)

Background Knowledge

Results

Hypothesis

Question

Testing Hypothesis

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 5: Long Answer (3.5 marks)**

**Instructions**: Select your favorite experiment from the list below and answer the following questions (100-word minimum):

* What is your favorite experiment? (0.5 marks)
* What did you like about this experiment? (1 mark)
* What did you learn from this experiment? (include terminology learned) (1 mark)
* What questions do you still have? (1 mark)

**List of Experiments**: Lemonade, Rock Candy, Lava Lamp, Dissolving, Slime, Salt Painting.

**NOTE**: “It was cool” is not an acceptable answer. Dig deeper.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_