

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Study Guide - 8th grade Chapter 9 Test: Mixtures, Solubility, Acid/Base Solutions

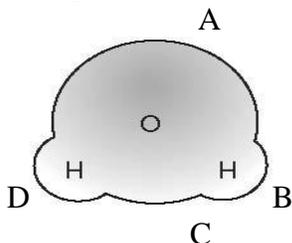
### Terms to Know:

1. Vocabulary from Chapter 9 (see notes for full list).

- |                   |                                 |                              |
|-------------------|---------------------------------|------------------------------|
| - acid            | - mixtures                      | - base                       |
| - solution        | - indicator                     | - substances                 |
| - solute          | - solvent                       | - dilute                     |
| - OH <sup>-</sup> | - H <sub>3</sub> O <sup>+</sup> | - concentrated/concentration |
| - saturated       | - unsaturated                   | - pH                         |

2. High solubility in substances means that \_\_\_\_\_ of that substance can dissolve in a given solvent (the substance that does the dissolving).

3. Study this diagram of a water molecule.



Water is a \_\_\_\_\_ molecule. It has a slightly negative end near the \_\_\_\_\_ end and a slightly positive end near the \_\_\_\_\_ end.

4. The concentration of a substance can be calculated by dividing the mass of the solute by \_\_\_\_\_?

- |                               |                             |
|-------------------------------|-----------------------------|
| a. the mass of the solution   | c. the mass of the solute   |
| b. the volume of the solution | d. the volume of the solute |

5. Identify the three methods used to measure pH.

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

6. pH \_\_\_\_\_ as hydronium (H<sub>3</sub>O<sup>+</sup>) concentrations increase.

7. How can you increase the solubility of sugar in water? \_\_\_\_\_

8. When acids and \_\_\_\_\_ react, they form neutral solutions.

9. Considering the rule in chemistry that says “like dissolves like,” polar substances like water are more likely to dissolve other polar substances. Water is least likely to dissolve \_\_\_\_\_ p \_\_\_\_\_ substances like oil.

10. How does a solution with a pH of 2 compare to a solution with a pH of 1?

- The pH 1 solution is ten times more acidic than that with a pH of 2.
- The pH 2 solution is ten times more acidic than that with a pH of 1.
- The pH 2 solution is two times more acidic than that with a pH of 1.
- The pH 1 solution is two times more basic than that with a pH of 2.