Name _____ Class _____ Date _____

SECTION 2-3 REVIEW

SOLUTIONS

VOCABULARY REVIEW Define the following terms.

1. solvent _____

2. aqueous solution _____

3. hydroxide ion _____

4. base _____

5. buffer _____

MULTIPLE CHOICE Write the correct letter in the blank.

_____ 1. The concentration of a solution is the measurement of the amount of

a. acid dissolved in a fixed amount of base.
b. solvent dissolved in a fixed amount of the solution.
c. solute dissolved in a fixed amount of the solution.
d. solvent dissolved in a fixed amount of the solute.

_____ 2. When water dissociates, it forms

a. H^+ ions and H_2O.
b. H^+ ions and OH^- ions.
c. H^+ ions and H_3O^+ ions.
d. OH^+ ions and H_3O^- ions.

_____ 3. An acid is a solution with more

a. hydronium ions than hydroxide ions.
b. hydroxide ions than hydronium ions.
c. sodium ions than hydroxide ions.
d. hydroxide ions than sodium ions.

_____ 4. An example of a base is

a. pure water. **b.** vinegar. **c.** ammonia. **d.** urine.

_____ 5. A solution with a pH above 7 is

a. logarithmic. **b.** neutral. **c.** acidic. **d.** alkaline.

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SHORT ANSWER **Answer the questions in the space provided.**

1. What are solutions? _____

   What states of matter can solutions be composed of? _____

2. How much sugar is there in 100 mL of a 10 percent aqueous sugar solution? _____

   What is the solvent in this solution? _____

3. What are the relative numbers of H_3O^+ and OH^- ions in an acidic, an alkaline, and a neutral solution?

4. How many times more hydroxide ions are there in a solution with a pH of 9 than in a solution with a pH of 3? _____

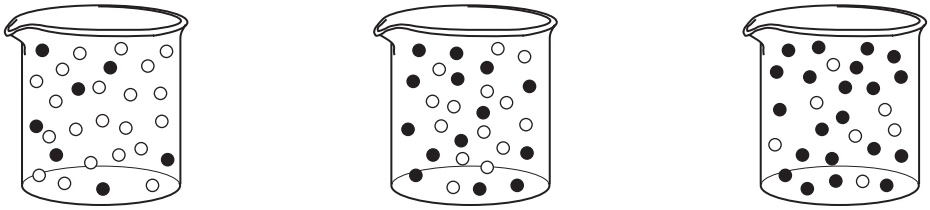
5. How are buffers important to the functioning of living systems? _____

6. **Critical Thinking** If a solution has a pH of 7.5, what would its new pH be if the concentration of H_3O^+ ions in the solution were increased by 100 times? Explain your reasoning. _____

STRUCTURES AND FUNCTIONS **In the space below each solution, indicate whether that solution is acidic, alkaline, or neutral.**

The diagrams below represent three solutions with different relative amounts of hydronium and hydroxide ions.

● Hydronium ion
○ Hydroxide ion



a _____ b _____ c _____

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