



**NAME:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**SECTION:** \_\_\_\_\_

**QUESTIONS:**

1. What is the difference between a **strong** and a **weak** acid?

2. How do you determine the **concentration** of an acid solution?

3. What is the **equilibrium constant** for a weak acid?

4. How do you calculate the **pH** of a weak acid solution?

5. What is the **buffer capacity** of a solution?

**ANSWERS:**

1. A strong acid is one that is **completely ionized** in water, while a weak acid is one that is **partially ionized**.

2. The concentration of an acid solution can be determined by **titration** with a known volume of a base of known concentration.

3. The equilibrium constant for a weak acid is the **acid dissociation constant**,  $K_a$ .

4. The pH of a weak acid solution can be calculated using the **acid dissociation constant**,  $K_a$ , and the **initial concentration** of the acid.

5. The buffer capacity of a solution is the **amount of acid or base** that can be added to a solution without causing a **significant change in pH**.