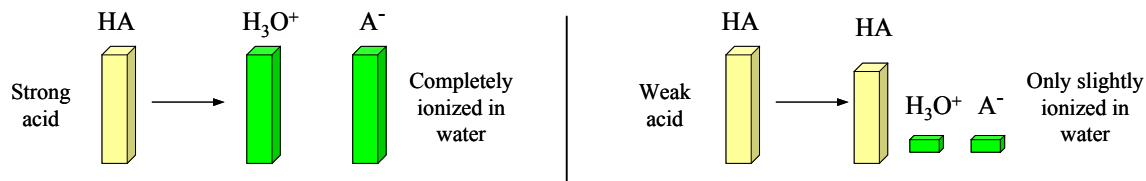


Name _____ Period _____ Date _____



1) Explain the bar graphs above _____

2) Hydroxide compounds of which elements always make strong bases? _____

3) Name

a) three strong acids _____

b) three weak acids _____

c) three strong bases _____

d) three weak bases _____

4) Are most acids and bases weak or strong? _____

5). A strong acid, compared to a weak acid, _____

a. has a stronger taste

b. contains only acidic hydrogens

c. ionizes completely

d. contains only two elements

6) The fraction of acetic acid molecules ionized in solution is about

a. 1%

b. 25%

c. 50%

d. 100%

7) Which two acids are most commonly found in soft drinks? _____

8) The acids and bases found in DNA and proteins are _____

a. weak acids and weak bases

c. strong acids and weak bases

b. weak acids and strong bases

d. strong acids and strong bases

9) Explain the difference between the strength and the concentration of an acid _____

10) Can a solution of a weak acid be concentrated? _____

11) Write the formula for the following hydrogen containing ions:

proton _____ hydronium _____ hydroxide _____

12) What is the difference between hydrogen ion concentration $[H^+]$ and pH? _____

13) When the hydrogen ion concentration (acidity) increases, the pH value _____.

14) pH of neutral water: _____, acidic solutions _____, basic solutions _____

15) When you slowly add NaOH to an acid, the pH of the acidic solution will _____.

16) Complete the table (*remember 14 is the magic number*)

Hydrogen ion Concentration [H ⁺]	Hydroxide ion Concentration [OH ⁻]	pH value	pOH value	Acidic, basic or neutral?
1×10^{-7}				
1×10^{-2}				
	1×10^{-3}			
		5		

17. The pH represents the negative power of 10, therefore in going from pH 4 to pH 5, the concentration of hydrogen ions

- a. increases by a factor of 10 b. decreases by a factor of 10 c. doubles d. is cut in half

18) All acid-base indicators _____

- a. change color at different pH values c. change from pink to blue or blue to pink
b. have more than two colors d. are made from natural products

19) What is more precise, a pH meter or an indicator? _____

20) a) The reaction of an acid with a base is called _____.

b) When a strong acid reacts with a strong base the solution and or salt will be _____.

c) When a strong acid reacts with a weak base the solution and or salt will be _____.

b) When a weak acid reacts with a strong base the solution and or salt will be _____.

c) When a weak acid reacts with a weak base the outcome is _____.

d) Solutions that resist changes in pH if small amounts of acids or bases are added are _____.

21) What is a natural “neutralizer” for acid rain in the ground? _____

22) Name the two groups of antacids _____

23) Why would you not drink NaOH as an antacid? _____

24) Why do caves often form in limestone? _____
