

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

1. What is pH? Why is it used for acids and bases?
2. Write the equation for the auto-ionization of water. Explain what the equation describes. Why is pH 7 considered to be neutral?
3. How is a weak acid different from a strong acid? Give an example of each.
4. How is the definition of acid different in the Arrhenius theory than the Bronstead-Lowery theory? How is the definition of a base different in each theory?
5. Fill in the following chart.

Name of Acid	Conjugate Acid	Conjugate Base
Sulfuric		
	HCl	
		$\text{C}_2\text{H}_3\text{O}_2^-$
	$\text{H}_3\text{PO}_4$	

**Chem 130: Chemistry for Funeral Services**  
**Problem Set 6: Due 3/7/06**

6. What is an amphoteric substance? Give an example.
7. Explain why a salt is produced in the reaction of acids with bases. How is hydrolysis related to acid/base reactions?
8. What is the difference between deliquescence and efflorescence? Give an example of each.
9. Write the chemical formulas, complete and balance the following equations. Give the names for all of the products. All of the reactions take place in aqueous solutions.

Sodium hydroxide + Phosphoric acid →

Ammonia + Water →

Plaster of Paris + Water →

10. Fill in the following chart.

Name	Formula
Sodium bicarbonate	
	H <sub>2</sub> SO <sub>4</sub>
Magnesium chloride	
	KOH
Hydrochloric Acid	
	HClO <sub>4</sub>
Calcium hydroxide	
	HNO <sub>2</sub>