More Review

1. Define the following terms
2. Solution
3. Solvent
4. Solute
5. Aqueous solution
6. Soluble
7. Insoluble
8. Miscible
9. Immiscible
10. Saturated solution
11. Concentration
12. Strength
13. Dilution
14. Amphoteric
15. Ionization
16. Dissociation
17. Strong acid
18. Weak acid
19. pH
20. spectator ion
21. Give examples of each of the following solutions:

|  |  |  |
| --- | --- | --- |
| Solute | Solvent | Example |
| Solid | Liquid |  |
| Liquid | Liquid |  |
| Gas | Liquid |  |
| Liquid | Solid |  |
| Solid | Solid |  |

1. What happens to the solubility of a solid, liquid and gas solute when the temperature rises?
2. What is so special about water?
3. What does the quality of water depend on? (HINT: 7 factors)
4. How is sewage treated?
5. List and explain two ways that we may get fresh water from salt water.
6. What would be the ideal way to treat drinking water and why?
7. What are some common pollutants of water? What is a MAC? (other than a sweet computer….)
8. What is the molar concentration of a 500 mL solution of 10g of sodium hydroxide?
9. What is the percent concentration W/V for the above solution?
10. Differentiate between ppm and ppb concentrations.
11. If you were given a 0.75 nik/L solution of sulfuric acid, how much of it would you need to make 250 mL of sulfuric acid with a concentration of 0.03 mol/L?
12. What are Bronsted-Lowry acids and bases?
13. Label the acid, base, and conjugates for the following reactions:
14. Nitric acid in water
15. Sulfuric acid in water
16. Carbonic acid and ammonia
17. Hydrogen carbonate ion and water
18. Complete the following chart:

|  |  |  |  |
| --- | --- | --- | --- |
| **Acid Concentration M** | **pH** | **Base Concentration M** | **pOH** |
|  |  | 0.015 |  |
| 0.0065 |  |  |  |
|  | 5.6 |  |  |
|  |  |  | 10.8 |
|  | 10.8 |  |  |
|  |  | 0.000059 |  |
| 0.0015 |  |  |  |
|  |  |  | 3.2 |
|  | 4.1 |  |  |

1. Give the three types of acid-forming pollutants that cause acid rain. Show why they create acid rain using an equation.
2. How is acid rain neutralized naturally and by human intervention?
3. Give three ways of reducing acid rain.
4. Give the balanced chemical, total and net ionic equations for each of the following reactions… As if you didn’t get enough practice with your lab lol…. Circle the spectator ions. Don’t forget to label the states….
5. Potassium carbonate and calcium chloride

1. Zinc and copper(II) sulfate
2. Silver nitrate and sodium bromide
3. Determine the concentration of lithium hydroxide that would be produced when 36g of lithium reacts with 1.0 L of water.