**Topics: Things To Know For The Acid-Base Quiz**

The following things will be important for the quiz. If you understand each of these topics, you should be A-OK on the quiz!

1. The formulas of acids start with a hydrogen atom (i.e. HF, HNO3) and acids give off H+ ions when you put them in water. They have a pH less than 7.
2. The formulas of bases end with the OH- ion, called the hydroxide ion (i.e. NaOH) abd bases give off OH- ions when you put them in water. They have a pH greater than 7.
3. Neutral compounds contain neither H nor OH ions. They have a pH of exactly 7.
4. pH for acids is equal to the -log of the concentration of the acid. For example, a 0.1 M HBr solution will have a pH of -log(0.1) = 1.
5. pH for bases is calculated by taking the -log of the concentration of the base, and then subtracting this from 14. As an example, a 0.1 M NaOH solution will have a pH of 14 – (-log 0.1) = 13.
6. Indicators are chemicals that turn different colors in acids and bases. For example, litmus is red in an acid and blue in a base.
7. Titrations use neutralization reactions to determine the concentration of acids or bases. The equation that’s used is **MaVa = MbVb**, ­where Ma­ is the concentration of the acid, Va is the volume of the acid, Mb is the concentration of the base, and Vb is the volume of the base. You will always know three of these four values when doing a titration.
8. Titrations stop when the indicator changes color, indicating that the unknown acid or base has been neutralized.