SI Session 14

March 11, 2014

1. Name the 2 ways the pH of a buffer can be calculated?

2. A buffer was prepared with 500ml of .5M H2PO4 and .5M HPO4-. Calculate the pH of the solution initially (pKa = 7.2). Calculate the pH when .8mol NaOH is added.

b. Is the buffer capacity exceeded when .8mol NaOH was added?

3. A buffer was prepared with .25ml of acetic acid and acetate ion. If pKa is equal to 4.74, what would the resultant pH be is 5ml of a 8M HCl solution was added.

4. What is the purpose of a titration? What is the equivalent point?

5. 40ml of a 5 M HCl solution is titrated with 1 M NaOH. What is the pH of the solution after 35ml of NaOH is added?

b. The titration of a strong acid with a strong base gives what pH at the equivalent point?

6. A 100ml 5 M Acetic acid/acetate ion buffer is titrated with 5 M NaOH. Calculate the pH when 100ml of NaOH. Ka of acetic acid is 1.8E-5.