1. (1) Give the two products of the following acid-base reaction:
(You should be able to figure this out without your list of polyatomic ions)

\[ \text{HClO}_4 + \text{H}_2\text{O} \rightarrow \text{ClO}_4^- + \text{H}_3\text{O}^+ \]

2. (2) Provide these labels for the reactants/products in the reaction above (in #1): acid, base, conjugate acid, conjugate base

3. (1) If I have a solution where \([\text{H}_3\text{O}^+] = 5.3\times10^{-10}\), what is the pH of the solution?

\[ \text{pH} = -\log [\text{H}_3\text{O}^+] = -\log (5.3 \times 10^{-10}) = 9.3 \]

4. (1) Is the solution above (in #3) acidic, neutral, or basic?

\[ \text{basic (pH > 7)} \]