CHEM 1032 – Week 9 Questions

1. Which of the below is a strong acid?
    a. HF
    b. HBr

2. What is the concentration of H_3O^+ in a 0.100 M acetic acid solution? Ka $1.75x10^{-5}$

3. What is the pH of the solution in Q2?

4. What is the concentration of H_3O^+ in pure water at 25 ^oC?

5. What is the concentration of OH- in the solution in Q2?

6. What is true or an acid?
    a. $[H_3O^+] < [OH^-]$
    b. $[H_3O^+] = [OH^-]$
    c. $[H_3O^+] > [OH^-]$

7. What is true or an acid?
    a. pH < pOH
    b. pH = pOH
    c. pH > pOH

8. What is the pOH of a 0.100 M HCH_2O solution? Ka $1.8x10^{-4}$

9. Which of the below is a weak base?
    a. NaOH
    b. NH3

10. What is the pH of a 0.100 M NH_3 solution? Kb $1.8x10^{-5}$

11. Determine the formula of the conjugate acid of NH_3. Then write the reaction of it with water. Finally solver for the pH of the solution.