Quiz 16.1 - Acid/Base Reactions

Question 1

Give the conjugate acid for each of these bases:

$$NO_2^-$$

$$NO_2^ ClO_4^ HPO_4^{2-}$$

Question 2

Give the conjugate base for each of these acids:

HCO,

 H_2SO_4

HSO₄

HBr H_3PO_4 H_2PO_4

HIO,

H504 5042 Br H2PO4 HPO42 PO43 IO3

Question 3

Predict the products for each acid/base reaction below:

HNO₃ with H₂O

NaOH with HCl

ClO-with HNO2

Question 4

For each reaction, identify the conjugate acid/base pairs

$$H_2O(l) + H_2O(l) \longrightarrow H_3O^+(aq) + OH^-(aq)$$
 $U(il) \quad buse \quad acid \quad base$
 $HN_3(aq) + H_2O(l) \longrightarrow NH_4^+(aq) + OH^-(aq)$
 $U(il) \quad base \quad acid \quad acid \quad base$

Question 5

HNO₂ is a stronger acid than HF is. What can you say about the relative base strengths of NO₂ and F⁻?

F is a stronger base than NO2