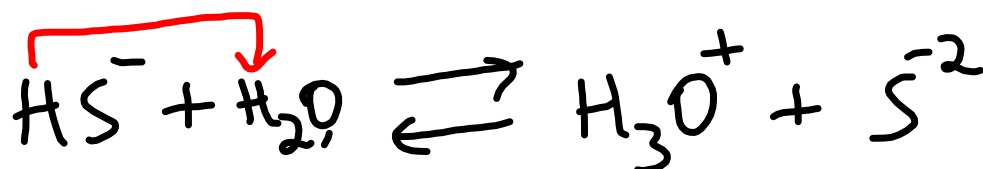
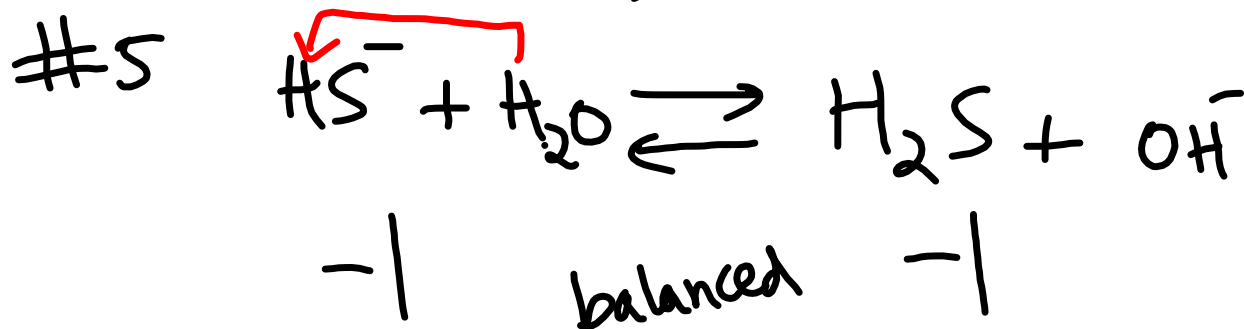


Acid-Base Questions

P. 557 #3

Ion	Conjugate base
HCl	Cl^-
HCO_3^-	CO_3^{2-}

# 4 Ion	conjugate acid
NO_3^-	HNO_3
HCO_3^-	H_2CO_3
H_2O	H_3O^+



Strong -Weak Acids/Bases

Water	Not very conductive
HCl	Good conductor
CH ₃ COOH	Poor conductor
NaOH	Good conductor
NaCl	Good conductor

To conduct electricity, there must be

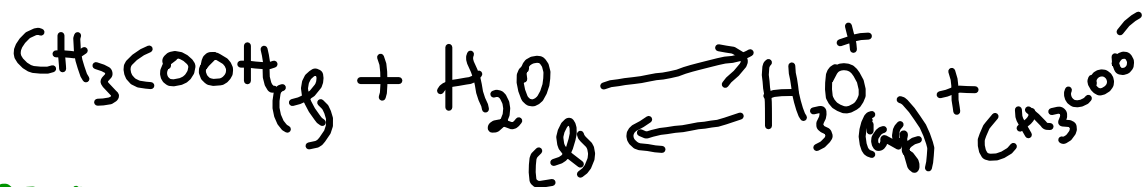
- ions (charges) or electrons

- movement

Read text p. 560-563
See website - links

Represented in Equation Form

1. Strong acid $\text{HCl} + \text{H}_2\text{O} \rightarrow \text{H}_3\text{O}^+ + \text{Cl}^-$
2. Strong base $\text{NaOH}_{(s)} \rightarrow \text{Na}^+_{(aq)} + \text{OH}^-_{(aq)}$
3. Weak acid

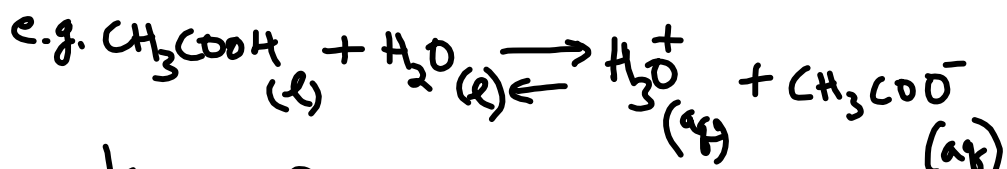


See p.563 - list

Ionization Constants

Text - p. 587

1. Derive ionization constant express.



$$K_{eq} = \frac{[\text{H}_3\text{O}^+][\text{CH}_3\text{COO}^-]}{[\text{CH}_3\text{COOH}][\text{H}_2\text{O}]}$$

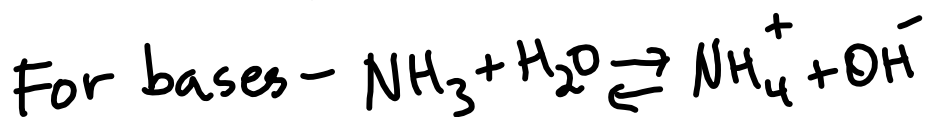
constant

$$K_{eq} \times [\text{H}_2\text{O}] = \frac{[\text{H}_3\text{O}^+][\text{CH}_3\text{COO}^-]}{[\text{CH}_3\text{COOH}]}$$

new constant

$$K_a = \frac{[\text{H}_3\text{O}^+][\text{CH}_3\text{COO}^-]}{[\text{CH}_3\text{COOH}]}$$

at equilibrium



$$K_b = \frac{[\text{NH}_4^+][\text{OH}^-]}{[\text{NH}_3]}$$