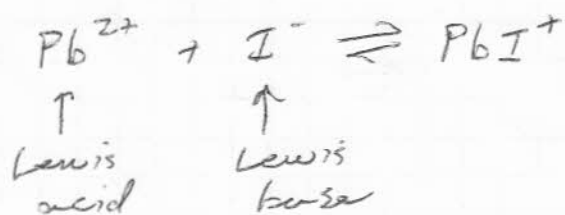


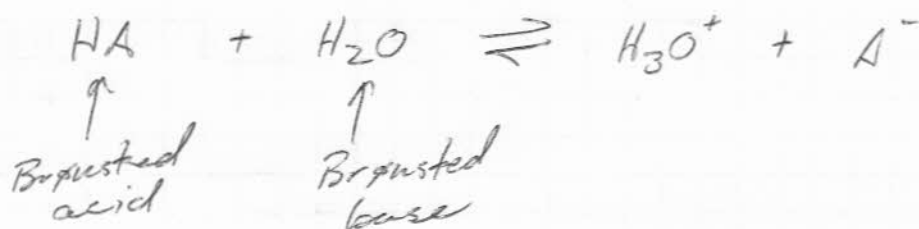
Chapter 6

Lewis acids and bases are electron pair acceptors and donors

(28)

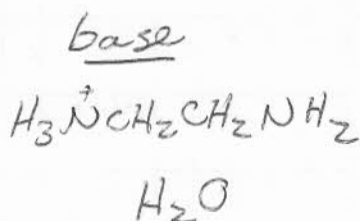
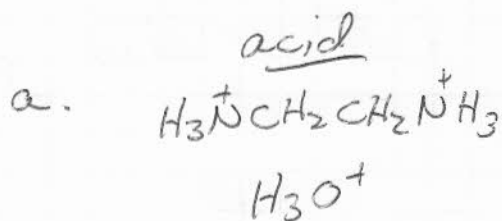


Brønsted-Lowry acids and base are proton donors and acceptors



a. HI

(33) b. H₂O



(35)

b. benzoic acid
pyridinium

benzoate
pyridine

a. $\text{pH} = -\log 0.010 = \boxed{2}$

(36)

b. $\text{pH} = 14 - (-\log 0.035) = \boxed{12.54}$

c. $\text{pH} = -\log 0.030 = \boxed{1.52}$

d. $\text{pH} = -\log 3.0 = \boxed{-0.48}$

e. $\text{pH} = 14 - (-\log 0.010) = \boxed{12}$

strong acids

41

HCl
HBr
HI
H₂SO₄
HNO₃
HClO₄

strong bases

LiOH
NaOH
KOH
RbOH
CsOH
R₄NOH



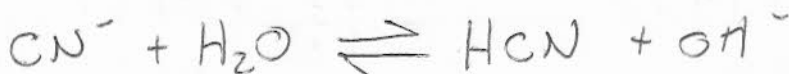
45



a

47

c



48

$$K_a K_b = 10^{-14}$$

$$K_b = \frac{10^{-14}}{6.2 \times 10^{-10}} = \boxed{1.6 \times 10^{-5}}$$