Weak Bases and Salts

Practice

1. What is the pH of a 2.00 M solution of ammonia? The Kb for ammonia is 1.8 x 10-5.

2. A 1.0 M solution of methylamine has a pH of 12.32. What is the Kb for methyl amine?

3. Hydrazoic acid (HN3) has a Ka of 1.9 x 10-5. What is the pH of a 0.100 M solution of NaN3?

Multiple Choice

1. HSO4- can act as a weak base. Which reaction below demonstrates this?

A) HSO4- + H2O 🡨🡪 H2SO4 + H3O+  
B) HSO4- + H2O 🡨🡪 H2SO4 + OH-  
C) HSO4- + H2O 🡨🡪 SO42- + H3O+  
D) HSO4- + H2O 🡨🡪 SO42- + OH-

2. Propanoic acid has a pKa of 4.85. What is the pKb for propanoate?

A) 5.15 B)9.15 C)2.1 x 10-15 D)2.9

3. The Ka for formic acid is 1.8 x 10-4. What is the pH of a 0.400M solution of sodium formate?

A) 5.3  
B) 8.7  
C) 2.1  
D)11.9

4. Which of the following would produce an acidic solution when dissolved in water?

A) NaC2H3O2  
B) NaF  
C)NH4Cl  
D) KCl

5. Which of the following would produce a neutral solution when dissolved in water?

A) NaNO3  
B) NaC2H3O2  
C) KF  
D) KCl