For help with these problems
www.tutor-homework.com
Be sure to mention the filename:
Chemistry_Questions_0063

www.tutor-homework.com (for tutoring, homework help, or help with online classes)

1. **016 Chapter #001**

What is the name of a proton donor in a reaction?

Student Response
a. Arrhenius acid
b. Arrhenius base
c. Brønsted-Lowry acid
d. Brønsted-Lowry base
e. Lewis base

2. **016 Chapter #056**

A solution is prepared by adding 0.10 mol of iron(III) nitrate, $Fe(NO_3)_3$, to 1.00 L of water. Which statement about the solution is correct?

Student Response
a. The solution is basic.
b. The solution is neutral.
c. The solution is acidic.
d. The value of K_a for the species in solution must be known before a prediction can be made.
e. The value of K_b for the species in solution must be known before a prediction can be made.

3. **016 Chapter #050**

What is the value of K_b for the formate anion, $HCOO^-$? $K_a(HCOOH) = 2.1 \times 10^{-4}$

Student Response
a. -2.1×10^{-4}
b. 2.1×10^{-4}
c. 6.9×10^{-6}
d. 4.8×10^{-11}
e. 2.1×10^{-18}

4. **016 Chapter #030**

Which one of these responses is true with regard to a 0.1 M solution of a weak acid HA?

Student Response
a. $[H^+] > [A^-]$
b. pH = 1.0
c. $[H^+] < [A^-]$
d. pH > 1.0
e. $[OH^-] > [H^+]$

5. **016 Chapter #040**

Find the pH of a 0.135 M aqueous solution of periodic acid (HIO_4), for which $K_a = 2.3 \times 10^{-2}$.

Student Response
a. 1.25
b. 3.28
c. 1.17
d. 1.34
e. 1.64

6. **016 Chapter #020**

What is the pOH of a 0.0250 M HI solution?

Student Response
a. 0.94
b. 1.60
c. 12.4
d. 13.1
e. None of these choices is correct.

7. **016 Chapter #066**

Calculate the pH of a 0.021 M NaCN solution. [K_a(HCN) = 4.9×10^{-10}]

	Student Response
a.	1.68
b.	3.18
c.	5.49
d.	7.00
e.	10.82

8. **016 Chapter #081**

The ammonium ion, NH_4^+, is a weak acid.

	Student Response
a.	TRUE
b.	FALSE

9. **016 Chapter #010**

In the reaction $HSO_4^-(aq) + OH^-(aq) \rightleftharpoons SO_4^{2-}(aq) + H_2O(l)$, the conjugate acid-base pairs are:

	Student Response
a.	pair 1: HSO_4^- and SO_4^{2-}; pair 2: H_2O and OH^-.
b.	pair 1: HSO_4^- and H_3O^+; pair 2: SO_4^{2-} and OH^-.
c.	pair 1: HSO_4^- and OH^-; pair 2: SO_4^{2-} and H_2O.
d.	pair 1: HSO_4^- and H_2O; pair 2: OH^- and SO_4^{2-}.
e.	pair 1: HSO_4^- and OH^-; pair 2: SO_4^{2-} and H_3O^+.

10. **016 Chapter #072**

Calcium oxide, CaO, also known as quick lime, will react with carbon dioxide to form calcium

carbonate, $CaCO_3$. Which species, if any, acts as a Lewis acid in the reaction?

	Student Response
a.	Ca^{2+}
b.	O^{2-}
c.	CO_2
d.	$CaCO_3$
e.	None of the species acts as a Lewis acid in this reaction.