4/6/2016 C16 Practice Exam

Name:

Score: 0 / 20 points (0%) [1 open-ended question not graded]

C16 Practice Exam

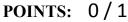
Multiple Choice

Identify the choice that best completes the statement or answers the question.



- 1. What is the conjugate acid of NH₃?
 - a. NH₃
 - b. NH₂⁺
 - c. NH₃⁺
 - d. NH_4^+
 - e. NH₄OH

ANSWER: D





- 2. The conjugate base of HSO₄ is _____.
 - a. OH-
 - b. H₂SO₄
 - c. SO_4^{2-}
 - d. HSO_4^+
 - e. H₃SO₄⁺

ANSWER: C

POINTS: 0/1



- 3. What is the pH of an aqueous solution at 25.0 °C in which [H⁺] is 0.0025 M?
 - a. 3.40
 - b. 2.60
 - c. -2.60
 - d. -3.40
 - e. 2.25

ANSWER: B

POINTS: 0/1

- 4. What is the concentration (in M) of hydroxide ions in a solution at 25.0 °C with pH = 4.282?
 - a. 4.28

- b. 9.72
- c. 1.91×10^{-10}
- d. 5.22×10^{-5}
- e. 1.66×10^4

ANSWER: C

POINTS: 0/1



- 5. An aqueous solution contains 0.100 M NaOH at 25.0°C. The pH of the solution is
 - a. 0.100
 - b. 1.00
 - c. 13.00
 - d. 7.00
 - e. -1.00

ANSWER: C

POINTS: 0/1



- 6. HZ is a weak acid. An aqueous solution of HZ is prepared by dissolving 0.020 mol of HZ in sufficient water to yield 1.0 L of solution. The pH of the solution was 4.93 at 25.0°C. The K_a of HZ is
 - a. 1.2×10^{-5}
 - b. 6.9×10^{-9}
 - c. 1.4×10^{-10}
 - d. 9.9×10^{-2}
 - e. 2.8×10^{-12}

ANSWER: B

POINTS: 0/1



- 7. The pH of a 0.10 M solution of a weak base is 9.82. What is the K_b for this base?
 - a. 2.1×10^{-4}
 - b. 4.4×10^{-8}
 - c. 8.8×10^{-8}
 - d. 6.6×10^{-4}
 - e. 2.0×10^{-5}

ANSWER: B

POINTS: 0/1



- 8. Calculate the pH of a 0.500 M aqueous solution of NH₃. The K_b of NH₃ is 1.77×10^{-5} .
 - a. 8.95
 - b. 11.47