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 NH_3?
a. NH_3
b. NH_2^+
c. NH_3^+
d. NH_4^+
e. NH_4OH

ANSWER: D
POINTS: 0 / 1

___ 2. The conjugate base of HSO_4^- is _____.
a. OH^-
b. H_2SO_4
c. SO_4^{2-}
d. HSO_4^+
e. $H_3SO_4^+$

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 NH_3. The K_b of NH_3 is 1.77×10^{-5}.
a. 8.95
b. 11.47