Chemistry Take-Home Exam

Answer Sheet

Matching / Multiple Choice

Name _____

Block _____

1. ____ **21.** ____

2. ____ **22.** ____

3. ____ **23.** ____

4. ____ **24.** ____

5. ____ **25.** ____

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16. ____ **36.** ____

17. ____ **37.** ____

18. ____ **38.** ____

19. ____ **39.** ____

20. ____ **40.** ____

***Completion*:** Answer the questions below. (5pts ea)

Remember to SHOW all work and CIRCLE your answer !!

1. What is the *molarity* of a solution if 255 g $AgNO_3$ is dissolved in 1500 mL of solution?

2. How much concentrated 12 M hydrochloric acid is needed to prepare 500 mL of a 1.0 M solution?

3. What is the new boiling point of water if you add 188 grams of magnesium chloride to 1250 g of water? ($K_b = 0.512C/m$)

4. Classify each solution as acidic, basic or neutral.

a. $[H^+] = 6.0 \times 10^{-10}\ M$ _____

b. $[OH^-] = 3.0 \times 10^{-2}\ M$ _____

c. $[H^+] = 2.0 \times 10^{-7}\ M$ _____

d. $[OH^-] = 1.0 \times 10^{-7}\ M$ _____

d. $[H^+] = 1.0 \times 10^{-13}\ M$ _____

5. For each question, identify the Bronsted-Lowry Acid and Base. Then, label the conjugate acid-base pairs in each equation.

a.) $HNO_3 + H_2O \rightarrow H_3O^+ + NO_3^-$

b.) $NH_3 + H_2O \rightarrow NH_4^+ + OH^-$