Quiz 11A

Question 1. Write the formula for the following (2 points):

1. The conjugate base of H3PO4 \_\_\_\_H2PO4-\_\_\_\_\_\_\_\_\_\_
2. The conjugate acid of C2H3O2- \_\_\_\_HC2H3O2\_\_\_\_\_\_\_\_\_

Question 2. A 25.00 mL sample of sulfuric acid, H2SO4, solution required 12.06 mL of 0.2675 M sodium hydroxide, NaOH, solution for complete neutralization (8 points).

1. Write the balanced neutralization reaction.

H2SO4 (aq) + 2 NaOH (aq) 🡪 2 H2O (l) + Na2SO4 (aq)

1. What is the molarity of the sulfuric acid?

Question 3. Answer the following questions about black coffee, 5.7 x 10-5 M H+ (6 points).

1. What is the pH?
2. What is the pOH?

1. What is the hydroxide ion, OH-, concentration?

or

1. Is the coffee acidic, basic, or neutral? \_\_\_\_acidic\_\_\_\_\_\_\_\_

Question 4. Is this week’s lab a wet lab or a dry lab (1 point)? \_\_\_dry lab\_\_\_\_\_

Question 5. Which is more acidic 1 M HCl or 2 M HCl? Explain your answer (3 points).

2 M HCl is more acidic because it will yield 2 M H+ concentration.

Quiz 11B

Question 1. Which is more acidic 2 M HBr or 1 M HBr? Explain your answer (3 points).

2 M HBr is more acidic because it will yield 2 M H+ concentration.

Question 2. Answer the following questions about limewater, 3.6 x 10-11 M H+ (6 points).

1. What is the pH?
2. What is the pOH?

1. What is the hydroxide ion, OH-, concentration?

or

1. Is the coffee acidic, basic, or neutral? \_\_\_basic\_\_\_\_\_\_\_\_

Question 3. Write the formula for the following (2 points):

1. The conjugate base of H2C2O4 \_\_\_HC2O4- \_\_\_\_\_\_\_\_\_\_
2. The conjugate acid of HSO4- \_\_\_\_\_H2SO4\_\_\_\_\_\_\_\_\_\_

Question 4. A 25.00 mL sample of sulfuric acid, H2SO4, solution required 35.08 mL of 0.1874 M sodium hydroxide, NaOH, solution for complete neutralization (8 points).

1. Write the balanced neutralization reaction.

H2SO4 (aq) + 2 NaOH (aq) 🡪 2 H2O (l) + Na2SO4 (aq)

1. What is the molarity of the sulfuric acid?

Question 5. Is this week’s lab a wet lab or a dry lab (1 point)? \_\_\_dry lab\_\_\_\_\_