Chemistry 141 Name

Dr. Cary Willard

Quiz 3a February 16, 2010

1. (6 points) Balance the following reaction in acid.

Ag(s) + NO3-1(aq) 🡪 Ag+1(aq) + NO(g)

1. (4 points) Balance the following half reaction in basic solution.

Cl2(g) 🡪 ClO2-1(aq)

1. (5 points) Predict the products of the following double displacement reaction. Write the equation for complete balanced reaction, the total ionic equation, and the net ionic equation.

KHCO3 + H3PO4 🡪

Total ionic equation

Net ionic equation

1. (5 points) Given the following equation, determine how many grams of aluminum oxide could be produced from the reaction of 150.0 grams of aluminum and 75.00 grams of oxygen gas. Use an I Δ E diagram and give the amount of any excess reagents remaining at the end of the reaction.

4 Al(s) + 3 O2(g) 🡪 2 Al2O3(s)

Mass Al2O3 produced g

Excess reagent

mass remaining g

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Quiz 3b February 16, 2010

1. (6 points) Balance the following reaction in acid.

Cu(s) + NO3-1(aq) 🡪 Cu+2(aq) + NO(g)

1. (4 points) Balance the following half reaction in basic solution.

Cl2(g) 🡪 ClO3-1(aq)

1. (5 points) Predict the products of the following double displacement reaction. Write the equation for complete balanced reaction, the total ionic equation, and the net ionic equation.

NaHCO3 + H3PO4 🡪

Total ionic equation

Net ionic equation

1. (5 points) Given the following equation, determine how many grams of aluminum oxide could be produced from the reaction of 120.0 grams of aluminum and 60.00 grams of oxygen gas. Use an I Δ E diagram and give the amount of any excess reagents remaining at the end of the reaction.

4 Al(s) + 3 O2(g) 🡪 2 Al2O3(s)

Mass Al2O3 produced g

Excess reagent

mass remaining g