Chemistry 141 Name

Dr. Cary Willard

Quiz 3A (20 points) February 19, 2008

1. (4 points) Identify the following for the balanced chemical reaction below

Cd(s) + H2O(l) + Ni2O3(s) 🡪 Cd(OH)2(s) + 2NiO(s)

Element oxidized Oxidizing agent

Element reduced Reducing agent

1. (8 points) Balance the following half reactions
   1. (acidic) Cr2O7-2(aq) 🡪 Cr+3(aq)
   2. (basic) Bi3+(aq) 🡪 BiO3-1
2. (8 points) Balance the following redox reaction in acid. Show the two half reactions.

Zn(s) + VO2+(aq) 🡪 Zn2+(aq) + V3+

Half reaction 1 -

Half reaction 2 -

Overall reaction balanced in acid

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Quiz 2B (20 points) February 19, 2008

1. (4 points) Identify the following for the balanced chemical reaction below

4Ag(s) + 8CN-1(aq) + O2(g) + 2H2O(l) 🡪 4Ag(CN)2-1(aq) + 4OH-1(aq)

Element oxidized Oxidizing agent

Element reduced Reducing agent

1. (8 points) Balance the following half reactions
   1. (acidic) NO3-1 🡪 NO2
   2. (basic) Br2 🡪 BrO3-1
2. (8 points) Balance the following redox reaction in acid. Show the two half reactions.

Mg(s) + VO43-(aq) 🡪 Mg2+(aq) + V2+(aq)

Half reaction 1 -

Half reaction 2 -

Overall reaction balanced in acid