Chemistry 141 Name

Dr Cary Willard

Quiz 5 (20 points) March 6, 2012

1. (10 points) Balance the following redox reaction in acid. Show the two half reactions and tell which is an oxidation and which is a reduction.

Cr2O7-2(aq) + Zn(aq) 🡪 Zn+2(aq) + Cr+3(g)

Half reaction 1 - (oxidation or reduction)

Half reaction 2 - (oxidation or reduction)

Overall reaction balanced in acid

1. (10 points) Balance the following redox reaction in base. Show the two half reactions and tell which is an oxidation and which is a reduction.

MnO4-1 + CN-1 🡪 MnO2 + CNO-1

Half reaction 1 - (oxidation or reduction)

Half reaction 2 - (oxidation or reduction)

Overall reaction balanced in acid (optional)

Overall reaction balanced in base

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1. (10 points) Balance the following redox reaction in acid. Show the two half reactions and tell which is an oxidation and which is a reduction.

MnO4-1(aq) + C2O4-2(aq) 🡪 Mn+2(aq) + CO2(g)

Half reaction 1 - (oxidation or reduction)

Half reaction 2 - (oxidation or reduction)

Overall reaction balanced in acid

1. (10 points) Balance the following redox reaction in base. Show the two half reactions and tell which is an oxidation and which is a reduction.

MnO4-1 + I-1 🡪 MnO2 + IO3-1

Half reaction 1 - (oxidation or reduction)

Half reaction 2 - (oxidation or reduction)

Overall reaction balanced in acid (optional)

Overall reaction balanced in base