Chemistry 141 Name

Dr. Cary Willard

Quiz 4.5 (20 points) October 17, 2012

1. (12 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. (4 points) Identify the following for the balanced chemical reaction below

4 NaOH(aq) + Ca(OH)2(aq) + C(S) + 4 ClO2(g)

🡪 4 NaClO2(aq) + CaCO3(s) + 3 H2O(l)

Element oxidized Oxidizing agent

Element reduced Reducing agent

1. (4 points) Balance the half reaction below in base.

ClO-1 🡪 Cl-1

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1. (12 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) + Cl-1(aq) 🡪 Cr+3 (aq) + Cl2(g)

Half reaction 1 - (oxidation or reduction)

Half reaction 2 - (oxidation or reduction)

Overall reaction balanced in acid

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

KMnO4(aq) + 8 HCl(aq) + 5 FeCl2(aq)

 🡪 MnCl2(aq) + 5 FeCl3(aq) + 4 H2O(l) + KCl(aq)

Element oxidized Oxidizing agent

Element reduced Reducing agent

1. (4 points) Balance the half reaction below in base.

Br2 🡪 BrO3-1