Chemistry 141 - 4080 Name .

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Quiz 6B (20 points) October 4, 2007

1. (7 points) Calculate Hrxn for the following reaction:.

N2O(g) + NO2(g) 🡪 3 NO(g)

Use the following reactions and given H’s

N2(g) + O2(g) 🡪 2 NO(g) H = +180.7 kJ

2 NO(g) + O2(g) 🡪 2 NO2(g) H = −113.1 kJ

2 N2O(g) 🡪 2 N2(g) + O2(g) H = −163.2 kJ

1. (7 points) Complete combustion of 1 mole of acetone (C3H6O) liberates 1790 kJ of energy:

C3H6O(l) + 4 O2 🡪 3 CO2(g) + 3 H2O(l) H = -1790 kJ

Calculate the standard enthalpy of formation (Hof) for acetone.

(Hof , CO2,g = -393.5kJ)

(Hof , H2O,g =-241.8kJ)

(Hof ,H2O,l =-285.8kJ)

1. (6 points) Calculate the energy of the following reaction based on bond energies



