Chemistry 2202 – Review Quiz Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Instructions: Complete the questions on the sheets provided. Show any workings where necessary.*

1. Draw an energy level diagram for each of the following:
	1. Magnesium 2pts
	2. Oxide ion, O2- 2pts

Magnesium: Oxide ion:



* 1. How many how many electrons are in the valence shell of the O2- ion? 1pt

 *8 electrons (the electrons in the outermost shell are the valence electrons*

1. Determine the names of the following compounds: 3pts
	1. C3H6

*Tricarbon Hexahydride*

* 1. PCl5

 *Phosphorous Pentachloride*

* 1. N2O4

 *Dinitrogen Tetraoxide*

1. Write the formulas for the following compounds: 2pts
	1. Nitrogen Trichloride *NCl3*
	2. Tetraphosphorous Pentaiodide *P4I5*
2. Determine the names of the following compounds: 5 pts
	1. CaBr2 *Calcium Bromide*
	2. Li2O *Lithium Oxide*
	3. Hg(I)Cl *Mercury(I) Chloride*
	4. Zn(MnO4)2 *Zinc Permanganate*
	5. Cr(II)Cr2O7 *Chromium(II) Dichromate*
3. Determine the formulas of the following compounds: 5 pts
	1. Cesium Oxide *Cs2O*
	2. Barium Sulfide *BaS*
	3. Vanadium(IV) Sulfate *V(IV)(SO4)2*
	4. Sodium Cyanide *NaCN*
	5. Copper(I)Oxalate *Cu(I)2OOCCOO*
4. Balance the following equations by placing the proper coefficients in the blanks before each product and reactant.
	1. 3 Hg + 1 Fe2O3 🡪 3HgO + 2 Fe 2 pts
	2. \_\_\_ C8H16 + 12O2 🡪 8 CO2 + 8 H2O 3 pts
5. Perform the following calculations, leaving the correct number of significant digits in your answer: 5pts
	1. 3.448 + 1.9002 = 5.348
	2. 0.004 – 45.34 = -45.34
	3. 77.11 x 3.8 = 290
	4. 89.475 / 23.7 = 3.78
	5. 2.1 x 108 – 3.7 x 107 = 1.7 X 108