Exam Help

We assume you have already learned the material up through chapter 4 well – stoichiometry and solutions. You have completed a couple of classroom assignments on those.

You were ALSO assigned two thermo assignments, and it looks like most of you haven’t done them. Those are very good prep for the exam!

On Thermquiz, don’t worry about questions 6,7,14,15,17,18,20 or 23. They are not on this exam.

On Firsttherm, 6,7,12,13, and 14 can be ignored.

There are several questions from those two quizzes that are exactly the same on tomorrow’s exam!

The exam is 29 multiple choice questions. Here is how they break down:

% of an element by mass in a compound

Solution stoichiometry.

∆H from heats of formation, and heat of formation from ∆H. ( 3 examples)

Mol stoichiometry (veryeasy!) Mol to gram stoich.

Balancing an equation

∆H per gram from ∆H per mol

Mass ratio in a compound (very easy!)

Titration problem

Finding empirical formula from combustion data. (2) 4 moles CO2, 8 4C 8 moles H2O. 16 H.

Empirical formula from masses of the components CHO, is analyzed and is found to contain 24. g of C 6.0 grams of H and 32 grams of O.

Heat transfer between a metal and water

Hess’s Law

Heat transfer

% yield

chemical vs. physical change

Data analysis. (explaining results of a mass experiment)

Moles from grams.

Calorimetry. ( predicting final temperature using mc∆t)

Limiting factor problem – what mass remains…

Grams from number of molecules. (using 6.02 x 1023)

Net ionic equation (2)

Number of atoms within a formula, given moles. 6.0 NH3

Number of atoms within a formula, given mass. 51 g NH3

Mol ratios in a balanced equation.

C3H8 + 5 O2 = 3 CO2 + 4 H2O

The number of moles of CO2 produced is

A) 3 x the number of oxygen moles consumed

B) 5/3 the number of oxygen moles consumed

C) ¾ the number of moles of water produced

D) 1.3 the number of moles of C3 H8