

To be successful on exam 3, if do the following (in addition to the objectives for exam 1 & II):

CHEMICAL EQUATIONS & RXN STOICHIOMETRY-- CHAPTER.SECTION**Unit 8, Sections 2-4**

1. Identify the evidences of a chemical reaction
2. Write formulas (including diatomics) and balance equations (also know parts).
3. Find the moles of the product(s), given the moles of a reactant. (vv)
4. Find the grams of the product(s), given the moles of a reactant. (vv)
5. Find the grams of the product(s), given the grams of a reactant. (vv)
6. Calculate the percentage yield of a rxn. (% yield = actual yield/ theoretical yield x 100)
7. Determine the limiting reagent in a rxn.
8. Use the limiting reagent to calculate the grams and moles (stoichiometry) in a rxn.

Unit 9, Sections 1-5

9. Define ion, conductivity, and electrolyte
10. Describe dissolving at the particle level and the characteristics of solutions
11. Calculate M, mol, or L of a solution given 2 of the 3 or calculate M given density.
12. Calculate the concentration of a solution made by dilution.
13. Solve stoichiometry problems that use solutions.
14. Predict precipitates using a solubility table
15. Write molecular, complete ionic and net ionic equations
16. Distinguish between strong & weak acids or bases & between strong & weak electrolytes
17. Give operational AND theoretical definitions of acids and bases
18. Write products of acid-base rxns
19. Predict the products of gas-forming reactions
20. Use the relative activity of metals to predict rxn products
21. I.D. oxidation numbers in formulas
22. I.D. reducing and oxidizing agents

THERMOCHEMISTRY**CHAPTER.SECTION****Unit10, Sections 1-6**

1. I.D. endothermic & exothermic rxns
2. Define calorie, Calorie, joule. Convert between these units
3. Use 3 of these to calculate the 4th (Q, m, s, ΔT)
4. Describe the differences between heat and temperature
5. Predict and calculate changes in internal energy, work, heat
6. Predict ΔH_{rxn} in processes (+, - or ≈ 0)
7. Recognize standard state, standard conditions and state functions
8. Calculate ΔH_{rxn} using:
 - Heating/cooling curves,
 - calorimetry,
 - ΔH_f° ,
 - by combining known ΔH_{rxn} values,
 - by using bond energies
 - by proportionality