

You should be successful on exam 2, if you can do the following (in addition to the objectives for exam 1).

Write formulas for compounds, given their name (vv)

- oxyanion compounds
- acids----

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Chapter 3, section 7

CHEMICAL EQUATIONS & RXN STOICHIOMETRY--**CHAPTER.SECTION****Chapter 3, Sections 1-2**

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. ($\% \text{ yield} = \text{actual yield} / \text{theoretical yield} \times 100$)
7. Determine the limiting reagent in a rxn.
8. Use the limiting reagent to calculate the grams and moles (stoichiometry) in a rxn.

Chapter 4, Sections 1-3

Chapter 3, Sections 4,5

9. Define ion, conductivity, and electrolyte
10. Describe dissolving at the particle level and the characteristics of solutions

Chapter 4, Sections 5-7

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.

Chapter 3, Sections 6, 8-10

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 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

ATOMS AND MOLECULES PART 2**CHAPTER.SECTION****Chapter 7, Section 5**

1. ID trends in electron affinity & electronegativity
2. Explain orbital, electron density, & probability
3. Give the shape and number of each type of orbitals
4. Predict similarity of properties by location in the periodic chart.

Chapter 6, Sections 4, 6-7

5. Write the ground state electron configurations for atoms & ions
6. Write orbital diagrams for atoms & ions; ID paramagnetic and diamagnetic

Chapter 7, Sections 1-4, 6