Module 2.1 Homework

H. Ryott Glayzer

23rd February 2024

Notice of ADA Accommodation and Methods

I have an ADA accommodation to do my assignment on paper. This document is a utilization of that accommodation. This assignment will utilize questions from the textbook, *Chemistry: Atoms First, 2e*, to practice the skills and learning objectives for this class.

Learning Objectives for Module 2.1

Recognize the different types of chemical transformations: acid-base, precipitation, combination, decomposition, single-replacement, oxidation-reduction, double replacement, and combustion. (Chapter 4,5)

1. Describe the basic properties of solutions (11.1)
2. Distinguish electrolyte and nonelectrolyte solutions (chapter 11.1, 11.2)
3. Identify common acids and bases (chapter 7.2)
4. Derive chemical equations from narrative descriptions of chemical reactions.(chapter 7.1)
5. Write and balance chemical equations in molecular, total ionic, and net ionic formats. (7.1)
6. Define three common types of chemical reactions (precipitation, acid-base, and oxidation reduction) (chapter 7.2)
7. Classify chemical reactions as one of these three types given appropriate descriptions or chemical equations (7.2)
8. Predict the solubility of common inorganic compounds by using solubility rules. (chapter 7.2)
9. Define oxidation, reduction, oxidizing agents, reducing agents, and oxidation numbers (chapter 7.2)
10. Balance equations for oxidation-reduction reactions in acidic or basic solutions (chapter 7.2)
11. Describe the reaction with oxygen of organic compounds, metals, and nonmetals (?)
12. Explain the activity series of metals and use it to predict the product of a redox reactions involving a metal

11.1: The Dissolution Process

11.2: Electrolytes

7.1: Writing and Balancing Chemical Reactions

7.2: Classifying Chemical Reactions