Exam 2 Study Guide

October 17, 2023

This is a checklist based on the lecture and textbook materials. It is not expected to be an all encompassing study guide and provides a guideline for your studies.

Chapter 5: Stoichiometry

- Chemical equations
- Mole ratios - converting from one compounds to another
- Meaning of mole ratios
- Limiting reagent problems
- Theoretical yield and percent yield
- Molarity (mols/L)
- Dilution problems ($M_1V_1 = M_2V_2$)
- Molarity of ions
- Stoichiometry with molarity

Chapter 6: Thermochemistry

- Kinetic energy vs potential energy
- Sign conventions (+/-)
- Internal energy - work and heat
- State function
- Endothermic, exothermic reactions and effects of catalysts
- Calculating heat ($q = mc\Delta T$) and thermal equilibrium
- Calorimetry calculations
- Standard enthalpy and enthalpy of reaction
- Hess' Law

Chapter 7: Gases

- Boyle's Law
- Charles' Law
- Avogadro's Law
- Assumptions of ideal gas law