

Exam 1 Study Guide

Chapter 1

- Define distance, mass and volume.
 - Express these properties as a metric measurement
- Report a measured value to the correct number of digits
 - Interpret uncertainty in a measurement
 - Distinguish between precision and accuracy
- Convert distance, volume and mass measurements from one metric unit to another
- Convert measurement from one unit to another (feet to meters for instance)
- Use multiple conversion factors to carry out unit conversions
- Use compound units in calculations (density, dosages)
- Interconvert temperatures between Celsius, Kelvin and Fahrenheit scales

Chapter 2

- Intensive vs extensive properties
- Classification of matter
 - Pure – element and compound
 - Mixture – homogeneous and heterogeneous
- Structure of atoms; electrons, protons and neutrons; nucleus
 - Atomic number, mass number
- Electron arrangement in atoms
- Organization of the periodic table - metals, nonmetals and metalloids
 - Groups and periods
 - Representative elements, group # and valence electrons
- Isotopes of given elements and atomic mass
- Relationship between # of particles (atoms or molecules), mole and mass
 - Relationship between atoms in a chemical formula through subscripts
 - Molar mass

Chapter 3

- Draw Lewis structure of elements and ions
- Nomenclature of binary covalent compounds
- Names of some common ions and their formulas (you will need this for exam 2)
- Distinguish between ionic and covalent compounds based on their components (metal – nonmetal for ionic compounds)
- Write formulas for ionic compounds so that they are electrically neutral