Unit 1 06/08/2013

Chapter 1 Problems:

1.3, 1.13, 1.15, 1.17, 1.37, 1.44, 1.51, 1.58, 1.66, 1.69, 1.71, 1.75, 1.78,

1.79, 1.84

Extensive vs. intensive properties

Scientific notation

Metric System

System International

Dimensional analysis

Significant figures

Temperature

Density

Matter: pure substance vs. mixture, element vs. compound, atom vs.

subatomic particle, homogenous vs. heterogeneous, separation methods:

filtration, distillation, evaporation

Chemical vs. physical change

States of matter

Qualitative vs. quantitative observation

Energy

Periodic table organization

Elements by name/symbol (first 36 and Ba, Sr, I, U, Sn, Pb, Au, Ag, Pt, Hg)

Atomic theory (number of protons, neutrons, and electrons)

Elements vs. isotopes vs. ions vs. isoelectronic

Calculation of average atomic mass

Model of the atom

Polyatomic ions

Forming compounds of ions

Empirical vs. molecular formula

Nuclear particles and reactions

Periodic trends of reactive vs. non-reactive species, metallic vs. nonmetallic

character, charge states for ions, etc.

Naming molecular compounds

Naming acids and bases

Naming ionic compounds

Scientific Laws (e.g., Law of Conservation of Matter, Law of Constant

Composition, Law of Definite Proportions, etc.)

Chemical vs. nuclear reaction