

CHM 1311.003

Important Topics for Exam I

I. Atoms and Elements

A. Scientific Method

B. Materials

C. Properties of Materials

i. Physical

ii. Extensive vs. intensive properties

iii. Chemical

iv. Changes

D. Elements and Atoms

i. Evidence for atoms and for their properties

ii. Subatomic particles

iii. Isotopes

E. Chemical Periodicity and the Periodic Table

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Important Topics for Exam I

II. Compounds and Reactions

- A. Compounds: Combination of Elements
- B. Chemical Equations and chemical formulas
- C. Energy
- D. Molecules: molecular compounds
- E. Ionic compounds
- F. Naming and chemical formulas
 - i. Ionic compounds
 - ii. Molecular Compounds
- G. Properties of Ionic and Molecular Compounds

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Important Topics for Exam I

III. Measurement

A. Units

B. Uncertainty

i. Accuracy

ii. Precision

C. Calculations

i. Significant figures

ii. Scientific notation

iii. Factor-label method (dimensional analysis)

iv. Conversion of units, esp. by the factor-label method

D. Density and specific gravity