Exam #2 Objectives

CHEM 1090 General Chemistry I

Text Reading

Chapter 2: sections 1-8

Homework Assignment

McGraw-Hill LearnSmart and Connect online assignments.

Online Tutorial(s)

Periodic Table, Inorganic Nomenclature

Concepts

1. Describe the law of conservation of mass and the law of definite proportions.
2. Recognize the different points of Dalton's atomic theory.
3. Define the three basic subatomic particles and where they can be found in an atom.
4. Describe Rutherford's scattering experiment.
5. Define the carbon-12 mass scale.
6. Write proper isotopic symbols.
7. Discuss how matter may be classified according to mixtures, substances, elements, and compounds.
8. Discuss the basic organization of Mendeleev's periodic table, the modern periodic table, their similarities, and their differences.
9. Given a blank periodic table, diagram the areas that correspond to the representative, transition metal, metal, nonmetal, alkali metal, alkaline earth metal, noble gas, halogen, and chalcogen elements.
10. Using the periodic table, identify the elements that are solids, liquids, and gases at room temperature and standard atmospheric pressure.
11. Identify the elements that exist as diatomics in their natural state.
12. List the basic properties of metals and nonmetals.
13. When given a chemical formula, distinguish between a molecular compound and an ionic compound.
14. Know the ten greek prefixes used for molecular compounds: mono, di, tri, tetra, penta, hexa, hepta, octa, nona, deca.
15. Describe the difference between an atom and an ion.
16. Write proper chemical formulas when given the IUPAC names of molecular compounds and ionic compounds.
17. Write proper IUPAC names when given the chemical formulas for molecular compounds and ionic compounds.

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18. Demonstrate a working vocabulary of the following terms:

alkali metal	Dalton's atomic theory	monatomic
alkaline earth metal	diatomic	nucleus
anion	group	neutron
atom	halogen	noble gas
atomic mass	heterogeneous	nonmetal
atomic number	homogeneous	period
Avogadro's number	inner transition element	periodic table
binary	inorganic nomenclature	polyatomic
cation	ion	proton
chalcogen	isotope	representative elements
chemical formula	isotopic symbol	Stock system
compound	mass number	substance
electron	metal	transition element
element	mixture	