

CHEMISTRY - FINAL REVIEW

Ch 1-3 (useful info)

Chapter 1:

- *alkali and alkaline earth metals, non-metals, halogens, transition metals metalloids and noble gases in the PT*

Chapter 2:

- *difference between a law and a theory*
- *definition of hypothesis*
- *formula of density and common units*
- *significant figure and scientific notation rules*
- *precision and accuracy*

Chapter 3:

- *know the 3 main subatomic particles and how to determine their quantity for any element*
- *mass and atomic numbers and their meaning*
- *What is a mole? how many atoms are in a mole*
- *What is molar mass?*
- *What is avogadro's number*
- *Be able to calculate the average atomic mass*
- *Be able to calculate # of atoms in a sample with given mass.*

Chapter 5:

- Know PT trends in electron configuration
- Valence Electrons
- Predict common ionic charges from PT
- Understand electronegativity & ionization energy
- Write electron configurations for outer shell

Chapter 6:

- Bonds: ionic, covalent, chemical, metallic
- molecule and molecular formula
- PE, bond length and bond energy
- octet rule, lewis structure. resonance structures
- ionic compound vs. molecular compound
- VESPR Teory, molecule shapes & polarity

Chapter 7:

- ionic compound formula from two ions and name
- binary molecules
- rules for oxidation numbers
- formula mass & molar mass
- percent composition
- empirical & molecular formulas
- molar conversion

Chapter 8:

- balancing formulas
- types of chemical reactions
- product prediction
- activity series

Chapter 9:

- stoichiometry: mol-mol, g-mol, mol-g, g-g
- Limiting & Excess Reactant
- Percent Yield, Actual Yield, Theoretical Yield

Chapter 10:

- Kinetic Molecular Theory
- Ideal Gas vs Real Gas
- Combined Gas Law
- Partial and Vapor Pressure

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Chapter 11:

- Coming Soon