

Study Guide for CHM 103 Final Exam

Chapter: Topics you should focus on - # of questions (60 total)

Ch1: Scientific method; significant figures; dimensional analysis (canceling out units); density – 5

Ch2: States of matter; classification of matter; temperature calculations; specific heat; heat of fusion/vaporization – 6

Ch3: Types of elements; history of subatomic particles; isotopes/counting numbers of protons, neutrons and electrons; electronic configurations – 6

Ch4: Balancing nuclear equations; half-life calculations – 2

Ch5: Types of bonding; ionic nomenclature/formulae (balancing ionic charges) – 7

Ch 6: Lewis structures; resonance; VSEPR theory; polarity; intermolecular forces - 6

Ch7: Balancing equations; types of reactions; redox (oxidation numbers, identifying agents) – 3

Ch 8: Molar conversions (mass, moles, particles); reaction stoichiometry; limiting reactants; endo/exothermic processes - 7

Ch9: Gas laws; Dalton's law of partial pressures – 3

Ch10: Net ionic equations; concentration (% m/v); molarity; solution stoichiometry; dilution; colligative properties; isotonic/hypotonic/hypertonic solutions – 8

Ch11: Factors affecting reaction rates; LeChatelier's principle – 2

Ch12: Strong/weak acids/bases; conjugate acids/bases; pH calculations – 5