CHEMISTRY 101 FALL 2008

SKILLS SUMMARY

Chapter   Skills   Problems

8 Write electron configurations of ions, atoms   28, 30, 18
    Work with periodic properties; ionic radius, atomic radius,
    ionization energy, electron affinity   54, 38, 40, 42, 44

Note: Section 8.6 was not covered

9   Write Lewis structures for atoms, molecules, ions   4, 41 – 44
    Use resonance structures when needed   50, 52, 54
    Assign formal charges   76, 54
    Work with electronegativity, polar covalent, ionic bonds   34, 36, 38
    Do bond enthalpy calculation   68, 70, 84

 Note: Born-Haber cycles were not covered

10 Use the VSEPR model to predict shape   8, 10, 12
    Understand molecular dipole moments   18, 20 - 22
    Use valence bond theory for hybrid orbitals   32, 36, 38
    Draw double bonds   29, 30

Note: Section 10.6 was not covered

12 Work with the kinetic molecular model
    Calculate with heats of vaporization   72, 74
    Understand intermolecular attractive forces   1, 10, 12, 14, 16, 18, 20

Note: Section 12.6 was not covered

13 Work with solution concentrations by mass %   14
    Calculate molarity, molality   20, 16
    Predict solubilities   32, 34
    Calculate FP depression, BP elevation   72, 60, 62
    Calculate osmotic pressure   86, 78, 82