

CHEM 2000 Reading List

Silberberg 10th International Edition

Topic	Readings
1 Review: <ul style="list-style-type: none">• Atomic Orbital Shapes• Electron Configurations• Lewis Diagrams• VSEPR	Review: <ul style="list-style-type: none">• Chapter 7 (section 7.4)• Chapter 8 (section 8.2)• Chapter 10 (section 10.1)• Chapter 10 (section 10.2)
2 Molecular Orbitals of Homonuclear Diatomics	Chapter 11 (pp. 449 – 456)
3 Molecular Orbitals of Heteronuclear Diatomics	Chapter 11 (pp. 456 – 457) Chapter 9 (pp. 378 – 379 for IR spectroscopy)
4 Molecular Orbitals of Polyatomic Molecules	Chapter 11 (pp. 457 – 458)
5A Band Theory and Bonding in Metals	Chapter 12 (pp. 505 – 508)
5B Valence Bond Theory	Chapter 11 (sections 11.1 – 11.2)
6 Entropy and Free Energy	Chapter 6 (reviews prerequisite material: enthalpy) Chapter 20 (sections 20.1 – 20.3)
7 Free Energy and Equilibrium	Chapter 17 (sections 17.1 – 17.2, 17.4 – 17.6) Chapter 20 (section 20.4)
8 Effect of Temperature on Equilibrium	Chapter 11 (sections 12.3 – 13.3)
9 Redox Reactions and Electrochemistry	Chapter 21 (sections 21.1 – 21.5)
10 Organic Molecules – Functional Groups and Stereochemistry	Chapter 15 (sections 15.1 – 15.2*, 15.4)
11 Organic Reactions	Chapter 15 (section 15.3)
12 Organic Acids and Bases	Chapter 18 Chapter 19 (section 19.2)

* Naming organic compounds (nomenclature) will not be tested in CHEM 2000