

<i>Topic</i>	<i>Text Reference</i>
CHAPTER 8	
<ul style="list-style-type: none"> • Know the values of the electron spin quantum number and the Pauli exclusion principle • Assign the four quantum numbers for an electron in an atom • Know what a degenerate orbital is and how its energy is different from one that is not degenerate • Explain the effect of Coulomb's law, shielding and penetration of the orbitals on the sublevel splitting of multielectron atoms • Use the Aufbau principle to write electron configuration for any atom in the first 3 periods • Use Hund's rule to write orbital diagrams for valence electrons in the p, d, and f orbitals • Use the periodic table to rank energy of various orbitals in an atom • Write condensed electron configurations for any atom in the periodic table. • Know the exceptions in electron configuration of the transition elements • Predict and explain the trends for the atomic radii of all atoms • Determine the paramagnetic and diamagnetic properties of atoms based on their orbital diagrams and number of unpaired electrons • Predict and explain the trends in the ionic radii of cations and anions • Predict and explain the trends for the ionization energy of atoms (including the exceptions) • Define electron affinity for an atom and know its general trends and exceptions • Predict and explain the trends for the metallic character of atoms • Relate the metallic character of an element to its properties 	<p>8.3</p> <p>8.3</p> <p>8.3</p> <p>8.3</p> <p>8.3</p> <p>8.3</p> <p>8.4</p> <p>8.4</p> <p>Notes</p> <p>8.6</p> <p>8.7</p> <p>8.7</p> <p>8.7</p> <p>8.8</p> <p>8.8</p> <p>Notes</p>