

## TEST 3 STUDY GUIDE

<i>Topic</i>	<i>Text Ref.</i>
<b>CHAPTER 6</b>	
<ul style="list-style-type: none"> <li>• Know what an ion is and differentiate between a cation and an anion</li> <li>• Predict charge of ions formed from any main-group element using a periodic table</li> <li>• Characterize properties of ionic bonds</li> <li>• Name and write formulas for binary ionic compounds (Types I)</li> <li>• Name and write formulas for binary ionic compounds (Type II)</li> <li>• Name and write formulas for polyatomic ionic compounds</li> <li>• Name and write formulas for binary molecular compounds</li> <li>• Name and write formulas for acids discussed in class</li> <li>• Write Lewis structure for atoms and ions</li> <li>• Write Lewis structure for simple molecules and those with multiple bonds</li> <li>• Know the concept of electronegativity and its relationship to bond polarity</li> <li>• Classify bonds as ionic, polar and non-polar covalent based on <math>\Delta EN</math></li> <li>• Predict geometry of molecules using VSEPR model</li> <li>• Classify molecules as polar or non-polar</li> </ul>	<p>6.1</p> <p>6.1</p> <p>6.2</p> <p>6.3</p> <p>6.3</p> <p>6.4</p> <p>6.5</p> <p>Notes</p> <p>6.6</p> <p>6.6</p> <p>6.7</p> <p>6.7</p> <p>6.8</p> <p>6.8</p>
<b>CHAPTER 7</b>	
<ul style="list-style-type: none"> <li>• Know what a chemical reaction represents</li> <li>• Write a chemical equation from the word equation</li> <li>• Identify reactants and products in a chemical equation</li> <li>• Balance chemical equations</li> <li>• Classify chemical equations into one of 5 types</li> <li>• Distinguish between oxidation and reduction reactions</li> <li>• Identify oxidized and reduced substances in a redox reaction</li> <li>• Identify oxidation and reduction reactions in biological systems</li> <li>• Understand the concept of mole and Avogadro's number in chemistry</li> <li>• Convert moles of a substance to number of particles and vice versa</li> <li>• Calculate the number of moles of an element in a compound from its chemical formula</li> <li>• Calculate molar mass of a compound from its atomic masses</li> <li>• Convert mass of a substance to moles and vice versa</li> <li>• Determine the molar ratios of reactants and products in a balanced equation</li> <li>• Calculate the moles of a substance from moles of another in a chemical reaction</li> <li>• Calculate the mass of a substance from mass of another in a chemical reaction</li> <li>• Determine the limiting reactant from given masses of reactants in a chemical reaction</li> <li>• Calculate the theoretical and percent yield in a chemical reaction</li> <li>• Know the units of energy and conversions between them</li> <li>• Distinguish between endothermic and exothermic reactions</li> <li>• Calculate amount of heat in reactions from <math>\Delta H</math> values given for a chemical reaction</li> </ul>	<p>7.1</p> <p>7.1</p> <p>7.1</p> <p>7.1</p> <p>7.2</p> <p>7.3</p> <p>7.3</p> <p>7.3</p> <p>7.4</p> <p>7.4</p> <p>7.4</p> <p>7.5</p> <p>7.6</p> <p>7.7</p> <p>7.7</p> <p>7.8</p> <p>7.9</p> <p>7.9</p> <p>7.10</p> <p>7.10</p> <p>7.10</p>