

## **Semester Final Study Guide (Chapter 6 through section 6.4)**

**\*Note that these concepts are also listed in your Ch. 6 Learning Reflection Packet. Use that packet as a tool to assess your preparedness for this test and to identify appropriate study materials for each concept. Use the information below as a study checklist.**

### **Chapter 6 Study Guide – FINAL IS WENDESDAY 1/22**

#### **6.1**

- \_\_\_\_\_ Define chemical bond.
- \_\_\_\_\_ Explain why most atoms form chemical bonds.
- \_\_\_\_\_ Describe ionic and covalent bonding.
- \_\_\_\_\_ Classify bonding type according to electronegativity differences.

#### **6.2**

- \_\_\_\_\_ Define molecule and molecular formula.
- \_\_\_\_\_ Explain the relationships between potential energy, distance between approaching atoms, bond length, and bond energy.
- \_\_\_\_\_ State the octet rule.
- \_\_\_\_\_ Be able to draw Lewis structures
- \_\_\_\_\_ Explain how to determine Lewis structures for molecules containing single bonds, multiple bonds, or both.
- \_\_\_\_\_ Explain why scientists use resonance structures to represent some molecules.
- \_\_\_\_\_ Write the Lewis structure for a polyatomic ion given the identity of the atoms combined and other appropriate information.

#### **6.3**

- \_\_\_\_\_ Compare and contrast a chemical formula for a molecular compound with one for an ionic compound.
- \_\_\_\_\_ Discuss the arrangements of ions in crystals (i.e. describe what a crystal lattice is).
- \_\_\_\_\_ Explain lattice energy.
- \_\_\_\_\_ List and compare the distinctive properties of ionic and molecular compounds.

#### **6.4**

- \_\_\_\_\_ Describe the electron-sea model of metallic bonding
- \_\_\_\_\_ Explain why metals are good electrical conductors.
- \_\_\_\_\_ Explain why metals are malleable and ductile but ionic-crystalline compounds are not.

**Look for any words in bold or in italics. Know the definitions.**

### **YOUR REVIEW ASSIGNMENT IS THE FOLLOWING BOOK PROBLEMS:**

**(pages 197-198) # 50, 52, 53, 54, 55ab, 56, 58, 59, 63, 64, 66, 67**

**DUE TUESDAY 1/21 BY THE END OF CLASS (you will have the chance to check your answers Tuesday in class)**

**\*\*If you want additional Lewis structure practice, also try # 39, 41, 42 on page 197 (these are not required problems)**