**Name: Period: Seat#:**

**Worksheet #8**

**Answer the following questions:**

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| 1. What are the common exceptions to the octet rule? | 1. Which compound has the most ionic character? Explain why. (Think about what periodic trend causes a compound to be ionic in the first place.) LiCl vs. LiF | |
| 1. What kind of bond is likely to form if the atoms have very similar electronegativity differences? | 1. What type of bond is formed when electrons are delocalized and move throughout the substance? | 1. What is the formula for Mercury (I) Chloride? |
| 1. If an unknown compound XY has an electronegativity difference of 1.0, what type of bond is it? | 1. Using the information in Question #6 and the information below, what must the unknown compound XY be? N = 3.0; O = 3.4 C = 2.5; Cl = 3.2; H =2.2 | 1. Do atoms form bonds because they are moving towards higher or lower potential energy? |

**Provide the information asked for:**

|  |  |
| --- | --- |
| 1. Sodium Oxide   *Type of bond:*  *Formula:*  *Lewis Structure:* | 1. Iodine gas   *Type of bond:*  *Formula:*  *Lewis Structure:* |
| 1. Hydrogen cyanide   *Type of bond:*  *Formula:*  *Lewis Structure:* | 1. Iodine trifluoride   *Type of bond:*  *Formula:*  *Lewis Structure:* |
| 1. NH4+   *Type of bond:*  *Name:*  *Lewis Structure:* | 1. PCl5   *Type of bond:*  *Name:*  *Lewis Structure:* |
| 1. C2H2   *Type of bond:*  *Name:*  *Lewis Structure:* | 1. XeF4   *Type of bond:*  *Name:*  *Lewis Structure:* |
| 1. CH3OCH3   *Type of bond:*  *Name: Dimethyl ether*  *Lewis Structure:* | 1. CH3COCH3   *Type of bond:*  *Name: Acetone*  *Lewis Structure:* |
| 1. ClF2+   *Type of bond:*  *Name:*  *Lewis Structure:* | 1. CH3Cl   *Type of bond:*  *Name: Methyl chloride*  *Lewis Structure:* |