

Chem 2061 Fall 2005
Ch 1-2 Assignment
Due Monday, September 12

Name _____

1. Below is an insignificant resonance structure for a nitroamine. Draw two significant resonance structures, and draw curved arrows to show how the electrons move from one resonance structure to the next. Briefly explain why your two resonance structures are more important than the first one.



2. Draw the Lewis structure for allene, H_2CCCH_2 , indicating the hybridization of each carbon atom, and the quantity of sigma and pi bonds present between each of the atoms. Then, draw a 3-dimensional orbital diagram showing all the sigma and pi bonds.
3. For each of the series below, circle the molecule which has the *highest* boiling point, and briefly indicate why.
- CHF_3 , CHCl_3 , CHBr_3 , CHI_3
 - CH_3CH_3 , $\text{CH}_3\text{CH}_2\text{CH}_3$, $\text{CH}_3(\text{CH}_2)_2\text{CH}_3$, $\text{CH}_3(\text{CH}_2)_3\text{CH}_3$
 - $\text{CH}_3\text{CH}_2\text{F}$, $\text{CH}_3\text{CH}_2\text{OH}$, CH_3NHCH_3 , CH_3OCH_3