

CHEMISTRY 123-01

Exercise #6

December 05, 2007

LEWIS STRUCTURES, MOLECULAR GEOMETRIES AND HYBRIDIZATION:

1. Xenon Tetraoxide, **XeO₄**. Draw complete Lewis structure; determine electron-pair and molecular geometry, and hybridization of ALL non-hydrogen atoms.
2. The pentachlorostannate anion, **SnCl₅⁻**. Draw complete Lewis structure; determine electron-pair and molecular geometry, and hybridization of ALL non-hydrogen atoms.
3. Urea, **CH₄N₂O** (*Hint*: Carbon is central and double bonded to oxygen). Draw complete Lewis structure; determine hybridization of ALL non-hydrogen atoms.
4. Chlorous acid, **HClO₂** (*Hint*: Chlorine is central and is not connected to hydrogen). Draw complete Lewis structure; determine electron-pair and molecular geometry, and hybridization of ALL non-hydrogen atoms.
5. Allene, **C₃H₄** (*Hint*: It is not a cyclic structure and one of the carbon atoms is not bonded to any hydrogens). Draw complete Lewis structure; determine molecular geometry and hybridization of ALL non-hydrogen atoms.

