## **Chapter 5 Problem Set**

## **CHM 161**

1.	Propose Lewis Structures for the following formulas.	Use lines to indicate covalent bonds and
	show all lone pairs of electrons.	

- a)  $C_2H_2O_2$
- b) HONO
- c) C<sub>2</sub>Cl<sub>4</sub>
- d) CH<sub>3</sub>NO

## 2. Predict the geometry around the central element in the following:

- a) CH<sub>4</sub>
- b) OF<sub>2</sub>
- c) NCl<sub>3</sub>
- d) BH<sub>3</sub>
- e) CO<sub>2</sub>

- a) PCI<sub>5</sub>
- b) BF<sub>3</sub>
- c) Al<sub>2</sub>Br<sub>6</sub>
- d) P<sub>3</sub>Se<sub>4</sub>
- e) Xel<sub>4</sub>

a)  $C_3H_6O$ 

H C C H
H C H

b) CHNCl<sub>2</sub>

N H N C Cl Cl

c)  $C_3H_6O$ 

## 5. What is the

- a) C-C-C bond angle in 4a)?
- b) H-N-C bond angle in 4b)?
- c) C-O-C bond angle in 4c)?