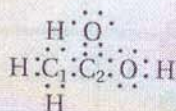


- ~~6.~~ Predict the shape of the  $\text{CH}_2\text{CF}_2$  molecule. What hybridization is involved in the carbon-carbon bonds?
- ~~7.~~ How many sigma and pi bonds are used by each of the carbon atoms in the following compound?



## SECTION 8.4 POLAR BONDS AND MOLECULES

- What type of bond—nonpolar covalent, polar covalent, or ionic—will form between each pair of atoms?
  - Na and O
  - O and O
  - P and O
- Explain why most chemical bonds would be classified as either polar covalent or ionic.
- Would you expect carbon monoxide and carbon dioxide to be polar or nonpolar molecules?
- Draw the structural formulas for each molecule and identify polar covalent bonds by assigning the slightly positive ( $\delta+$ ) and slightly negative ( $\delta-$ ) symbols to the appropriate atoms.
  - $\text{NH}_3$
  - $\text{CF}_3$
- Which would you expect to have the higher melting point,  $\text{CaO}$  or  $\text{CS}_2$ ?