

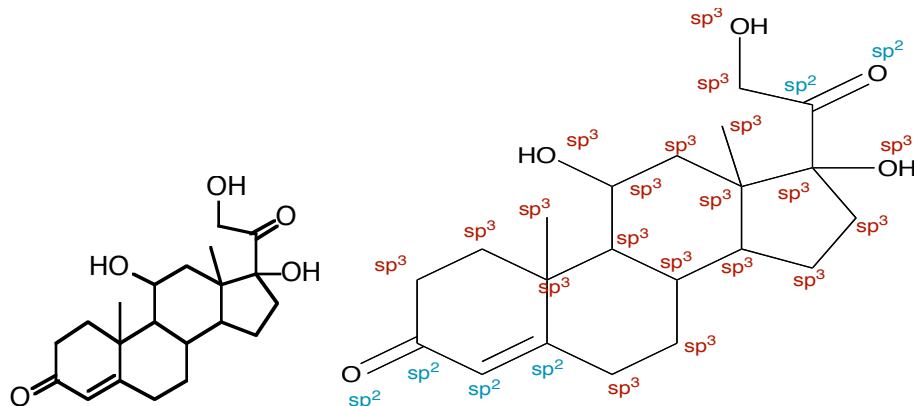


# Chem 341 • Organic Chemistry I

Solutions to additional problems • Chapter 01

## Additional Practice Problems

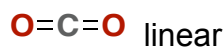
1. In the following molecule, Identify the hybridization of all carbons and oxygens. How many sigma and pi bonds are present? (Don't forget about atoms not explicitly written)



There are 59 sigma bonds (don't forget all the H's and one each in the pi-bonds)  
There are 3 pi bonds.

2. Draw a Kekulé structure for the following compounds showing the geometry (linear or bent).

a)  $\text{CO}_2$



b)  $\text{H}_2\text{S}$



c)  $\text{HCN}$



d)  $\text{HCCH}$  (acetylene)

