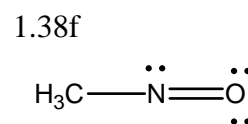
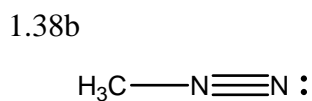
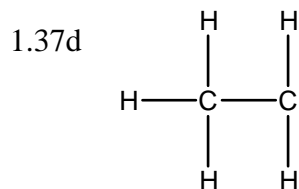
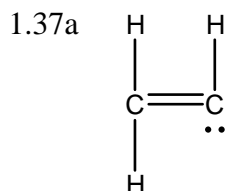


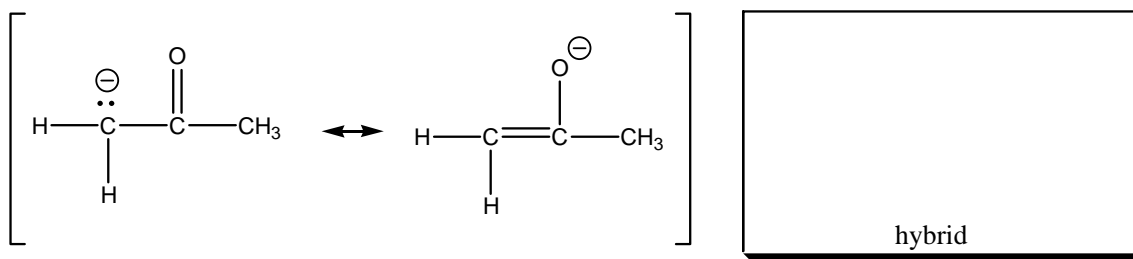
Discussion Problem Set 1:  
Lewis Dot, Formal charge, Resonance

1. Assign formal charges to each carbon, nitrogen, and oxygen atom in the following species. All lone pairs have been drawn in. (problems 1.37-1.38)

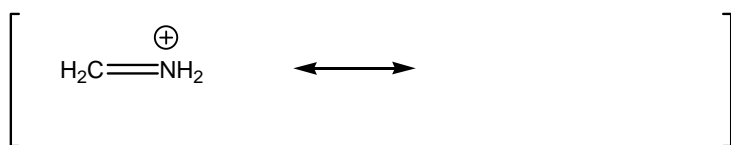
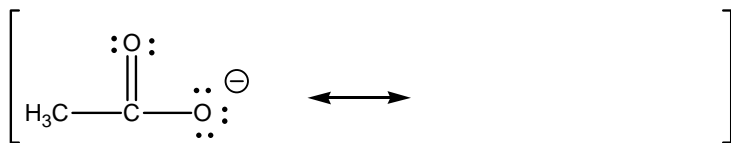


2. Draw three isomers with the molecular formula  $\text{C}_2\text{H}_4\text{O}$ . (problem 1.41b)

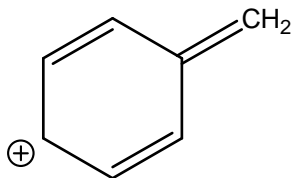
3. Draw a hybrid for these resonance structures. (problem 1.14)



4. Draw a second resonance structure for each of these ions (problem 1.47)



5. Draw all significant resonance structures for the following cation and draw a hybrid structure. (Problem 1.50)



6. Draw two different three-dimensional representations for  $\text{CH}_2\text{Cl}_2$  using wedges and dashes. (problem 1.16)

7. Draw the following compounds in three dimensions, using solid lines, wedges, and dashes to illustrate the position of atoms. (problem 1.56)

