An example from the Spring 1998 Examination #1:

2. (25 points)

Draw the mechanism of the following reaction, using the curved-arrow notation to indicate the reorganization of electron density. Show all intermediates and denote all lone pair electrons, formal charges and countercharges where appropriate. Draw important resonance structures for intermediates. Explain concisely the observed regiochemical control.

An example from the Summer 1998 Examination #1:

5. (25 points)

Draw the mechanism of the following reaction, using the curved-arrow notation to indicate the reorganization of electron density. Show all intermediates and denote all lone pair electrons, formal charges and countercharges where appropriate.