Academic Honesty Policy. Academic honesty is strictly enforced on quizzes, exams, and other aspects of this course. Academic dishonesty will result in a failing grade in the class and a letter in the student's file. Activities constituting academic dishonesty include:

Cheating
• Copying from others during an examination.
• Communicating exam answers with other students during an examination.
• Offering another person's work as one's own.
• Taking an examination for another student or having someone take an examination for oneself.
• Tampering with an examination after it has been corrected, then returning it for more credit.
• Using unauthorized materials, prepared answers, written notes, or concealed information during an examination.

Dishonest Conduct
• Stealing or attempting to steal an examination or answer key from the instructor.
• Allowing another student to copy off of one's own work during a test.

Collusion
• Any student who knowingly or intentionally helps another student perform any of the above acts is subject to discipline for academic dishonesty.

I understand and will abide by this academic honesty policy: ____________________________ (signature) Seat: _______

1. (5 pts)
a. Draw the Lewis structure of methyl isocyanate (CH₃NCO). Make sure to show all formal charges and lone pairs of electrons.

b. What is the hybridization of the carbon atom in the isocyanate (NCO) functional group? _________

   What is the hybridization of the nitrogen atom? _________

c. What is the approximate C–N–C bond angle? __________

2. Use the symbols δ⁺ and δ⁻ to indicate the polarity of the labeled bonds. (Smith 1.73ad, 2 pts)

   Br
   Cl

   Li

3. Assign formal charges to each carbon atom in the given species. All lone pairs have been drawn in. (Smith 1.37ad, 2 pts)

   \( \text{CH}_2=\text{CH} \)

   \( \text{H}--\text{C}--\text{C}--\text{H} \)

4. Draw a second resonance structure for the following ion (Smith 1.47c, 1 pt)

   \( \text{O}^\cdot\text{C} \)