

Please print:

Last name: _____

First name: _____

Chem 2061 Exam 1

Fall 2005

Andy Aspaas, Instructor

Wednesday, September 14, 2005

Instructions:

Time: You have 55 minutes to complete this exam.

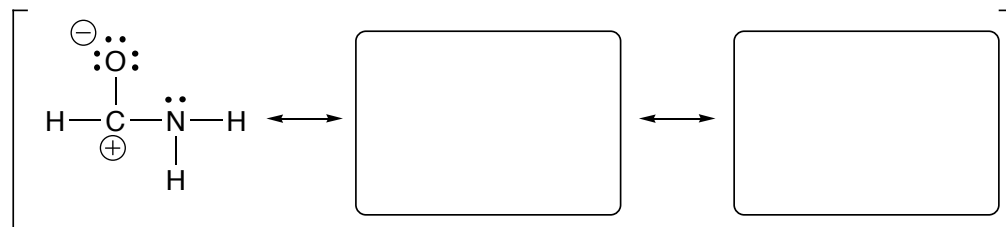
You may use a model kit for this exam.

I, _____ have read and understand the directions given above, and pledge that I will follow all regulations with regard to Academic Dishonesty as outlined by this college when taking this exam.

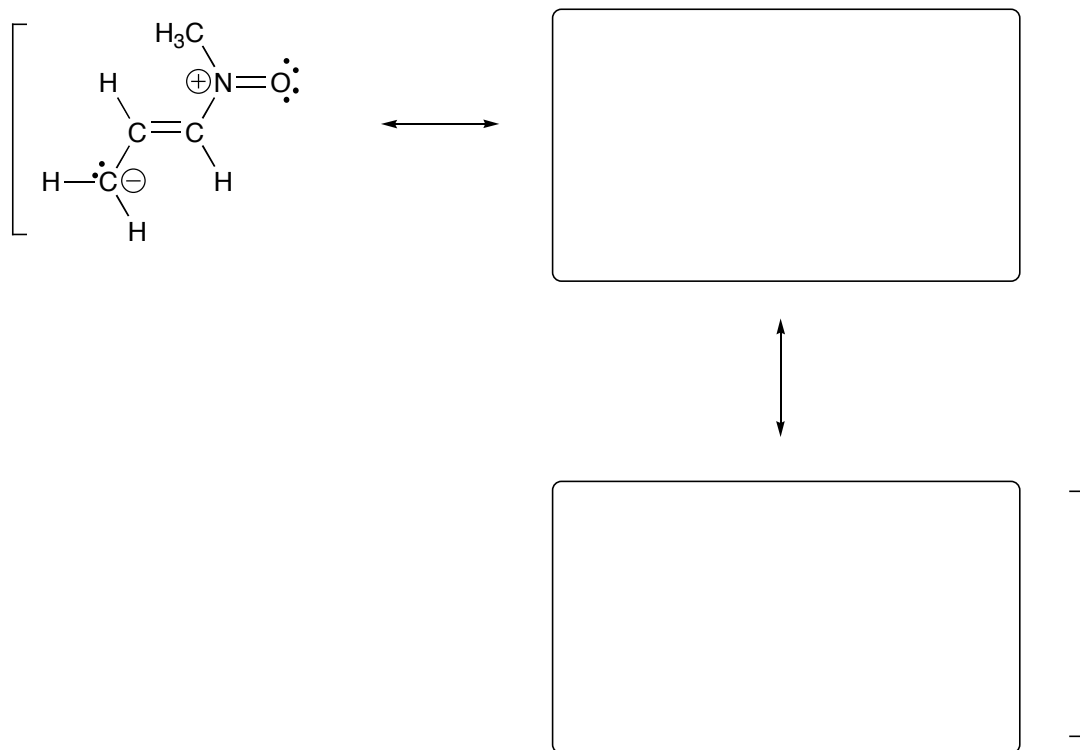
Signature _____ Date and Time _____

3. For each of the given structures, draw two other resonance structures, and use curved arrows to indicate the motion of the electrons from one structure to the next. Indicate the major contributor(s) and briefly explain why.

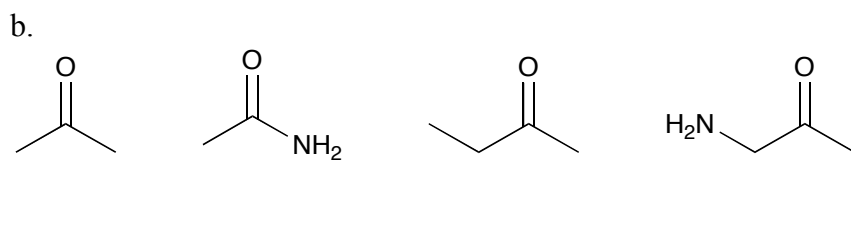
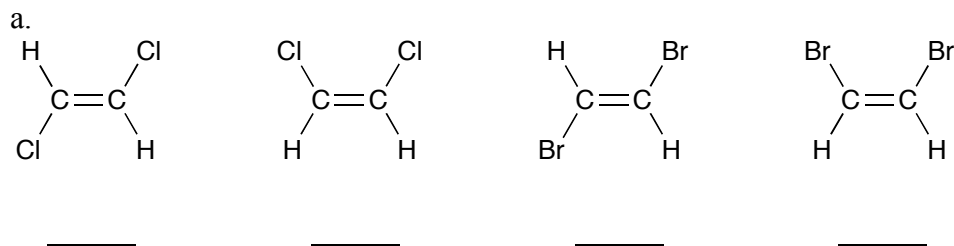
a.



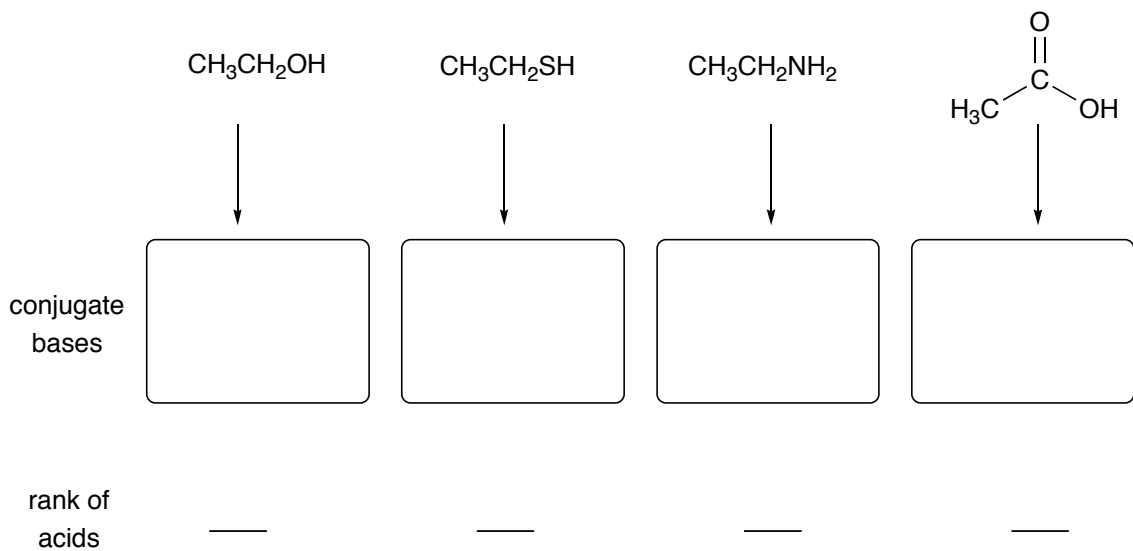
b.



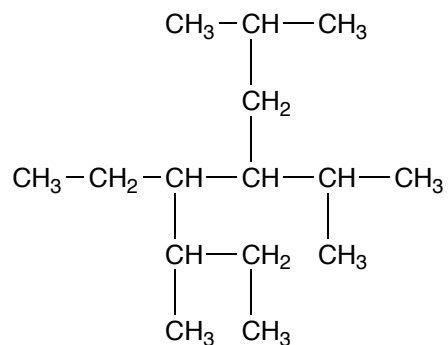
4. Rank the following in order of increasing boiling point, with 1 being the lowest and 4 being the highest, and briefly indicate how the intermolecular forces are influencing the ranks.



5. Draw the conjugate bases for each of the following acids. Rank the acids in order of increasing acidity, where 1 is the most acidic and 4 is the least. Briefly indicate the rationale for your ranking.



6. Name the following molecule, using common names for substituents.



Name:

7. Draw a 3-dimensional structure and a Newman projection for the totally-eclipsed conformation of butane. Indicate graphically in the 3-dimensional drawing and the Newman projection exactly why this conformation is so energetically unfavorable.