Chem 634 Professor Fox Exam 1 Fall 2006 3 hours

Your Name_____

1. Show the products of the following transformations. Mechanistic details are not required, but be sure to indicate relative stereochemistry where necessary (four parts; 4 points each)



Your Name_____

1. (continued)





2. The reactions below would not proceed as indicated. Provide a brief but detailed explanation, and indicate the structure of the product(s) that would be formed instead of (or in addition to) the product that is drawn (4 points each).





Your Name_____

2. (continued).





Your Name_____

3. Propose a reasonable mechanism.(10 pts)



Your Name_____

4a. Propose a mechanism for formation of **B** (10 points)



4b. Propose a structure for intermediate **A**. Be sure to indicate the double bond geometry (E or Z) and provide a rationale for the stereochemical assignment (9 points)

Your Name_____

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> 6. Propose a multistep synthesis starting with any materials that contain 6 carbons or less. Reagents that contain more than 6 carbons but do not get incorporated into the product (e.g. PPh3) may also be used.(20 pts)

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