

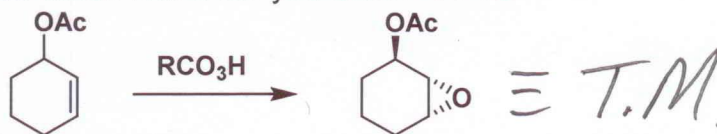
THE UNIVERSITY OF  
**TOLEDO**  
1872

Quiz #4 of 5

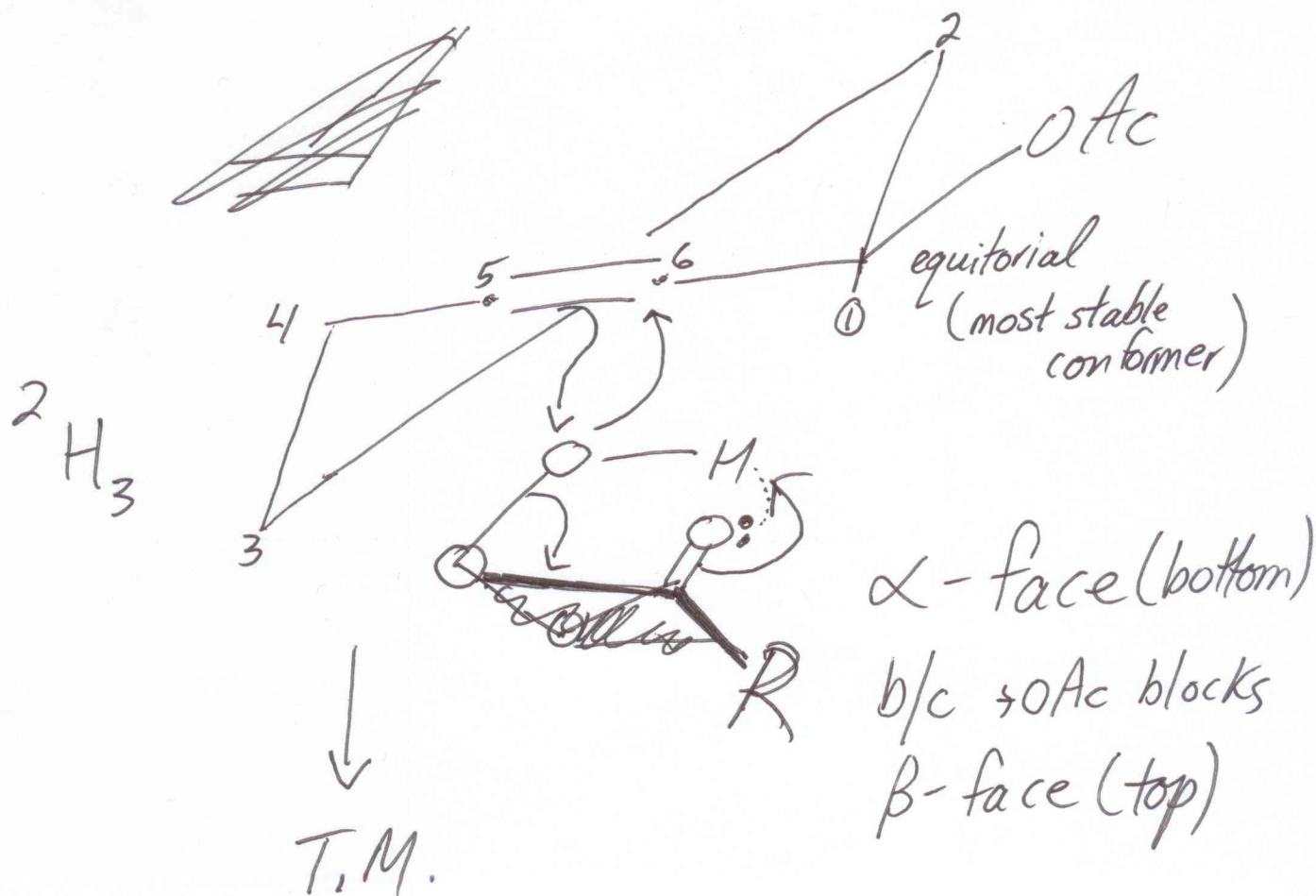
10 PTS

**ANSWERS**Instructor: Prof. Andrea  
Room #: BO 2059Your Name: \_\_\_\_\_  
Student Number: \_\_\_\_\_

1) The following transformation is actually quite well-known. Show the mechanism in its entirety. Also rationalize, using an intermediate structure, the major diastereoselective outcome. What you should do is put the starting material in a half-chair, which will help explain the outcome. Please use the proper "formula" to denote which half-chair you draw. **4 PTS**

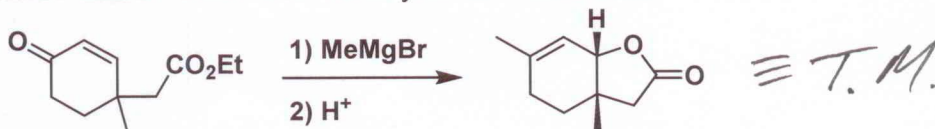


Answer:



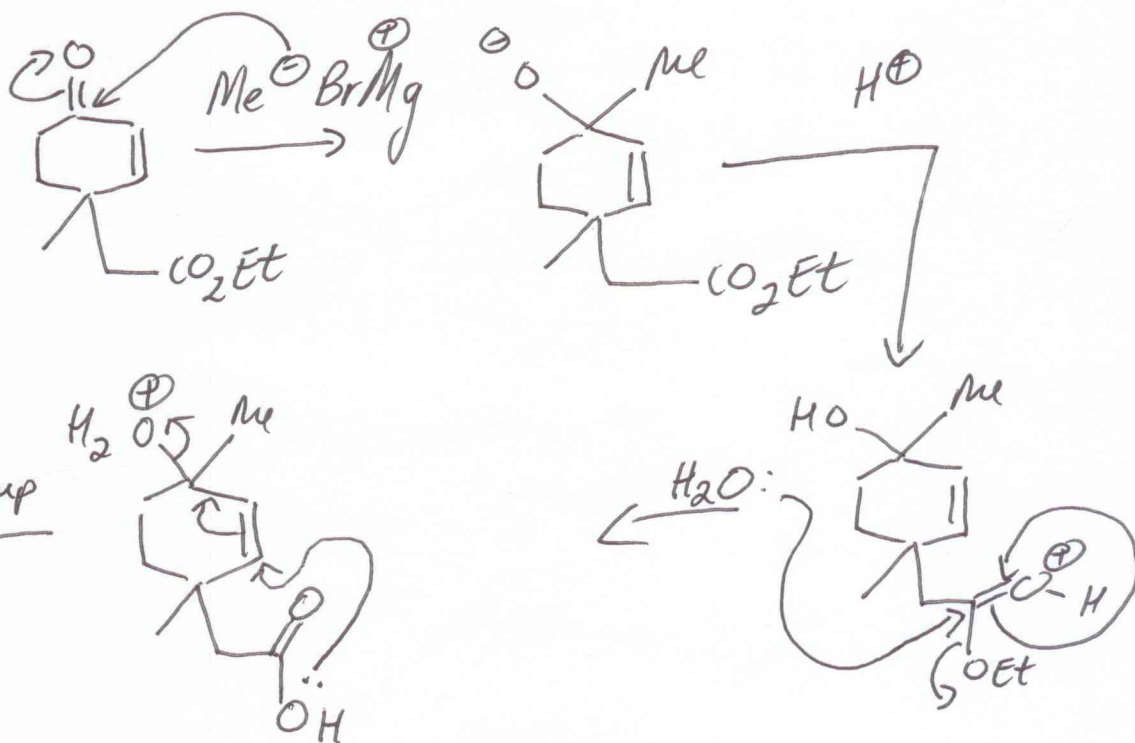


2) What controls the stereochemistry of this product? You are advised to draw a mechanism first and then consider the stereochemistry. Use knowledge gained in Question 1 to answer this question. You should be able to draw the half-chair to convince yourself of the noted stereochemical outcome. Label which half-chair you will have drawn. **4 PTS**



Answer:

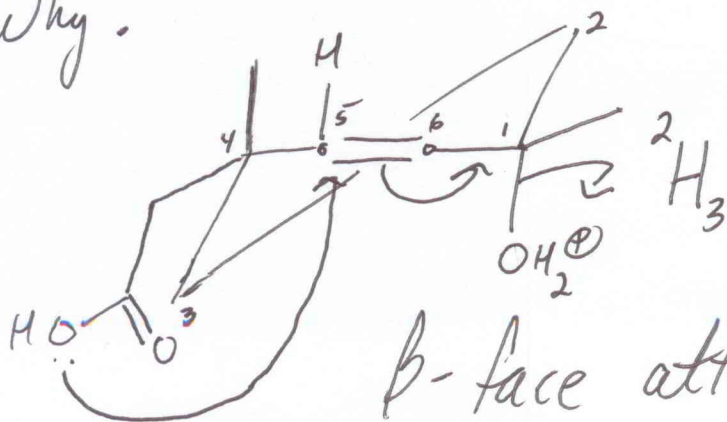
Mech:



T.M.

w. up

Why?



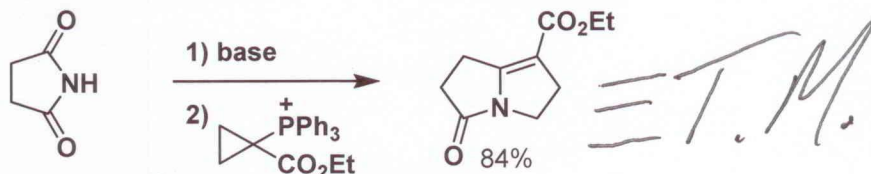
why? b/c big, bulky

+ CHO group

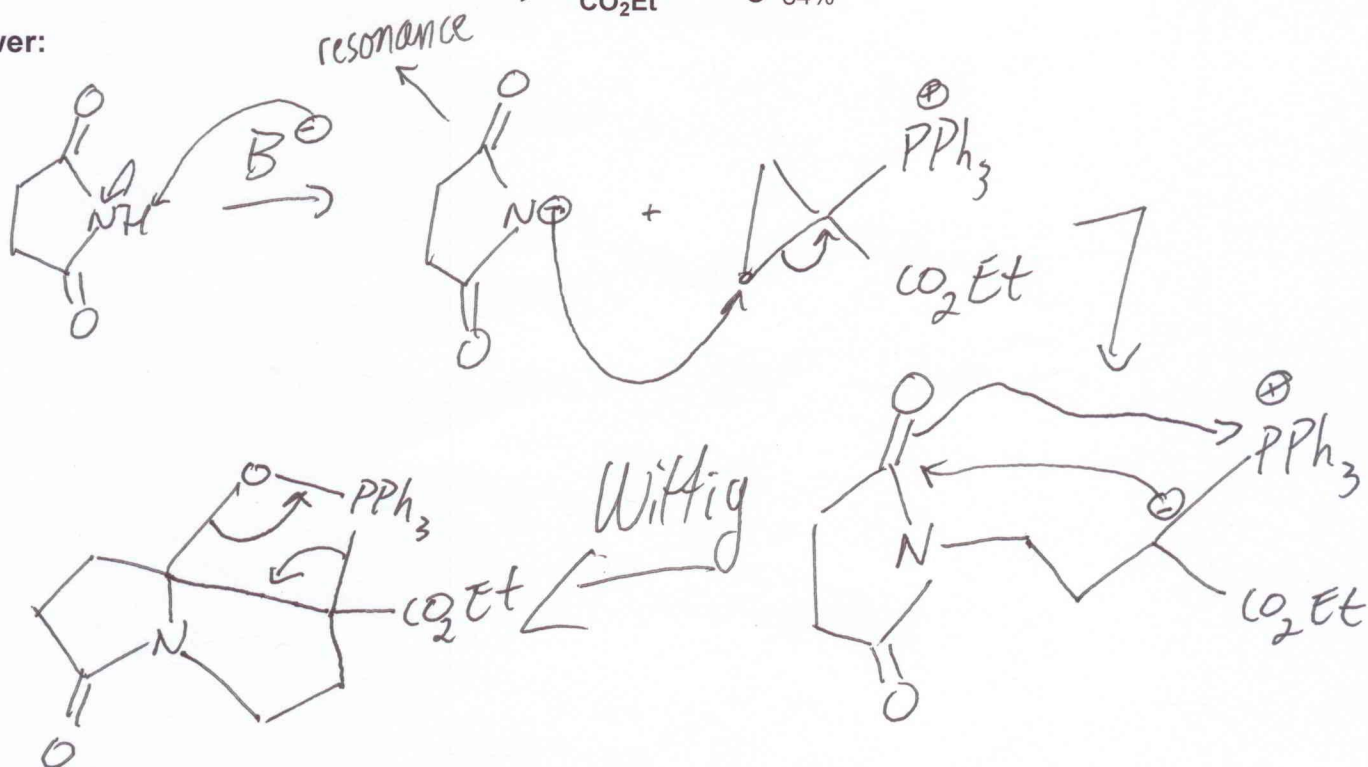
$\beta$ -face attack prefers equatorial



3) Draw a mechanism for the illustrated reaction transformation. **2 PTS**



Answer:



T.M.