Chemistry 334

Third Hour Examination

November 20, 1995

Professor Charonnat

Name: _____

Be certain that your examination has four (4) pages including this one.

Put your name on **each** page of this examination booklet.

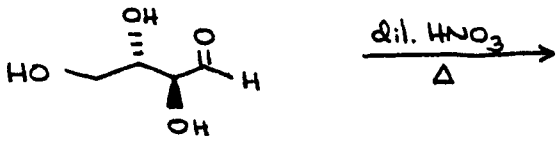
By putting your name on this examination booklet you agree to abide by California State University, Northridge policies of academic honesty and integrity.

Name:_____

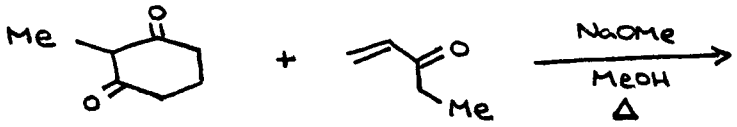
1. (25 points)

For each of the following five (5) questions draw the expected major organic product. If relevant, **clearly** specify the relative and/or absolute stereochemistry of the product.

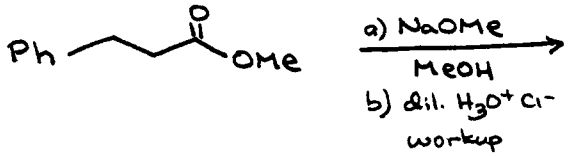
A.



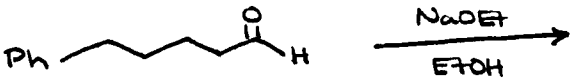
B.



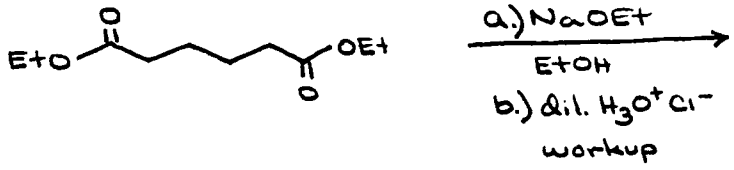
C.



D.



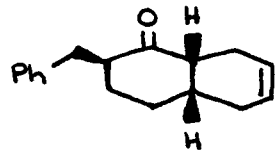
E.



Name:_____

2. (25 points)

Design a synthesis of a racemic mixture of the ketone **1** from cyclohexanone and benzyl bromide. Use any inorganic and organic reagents that you deem necessary. Draw clearly **all** reagents and isolable synthetic intermediate compounds. (**N.B.** Do **not** draw mechanisms for each synthetic transformation!)

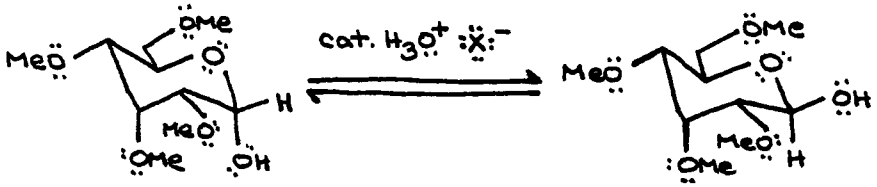


1

from  and

3. (25 points)

Draw the mechanism of the equilibrium of the following D-allose derivative, using the curved-arrow notation to indicate the reorganization of electron density. Show **all** intermediates and denote **all** lone pairs, formal charges and countercharges. State the stereochemical relationship between **2** and **3**.



2 **3**

Name:_____

4. (25 points)

Answer the following two (2) questions precisely, succinctly and with correct grammar.

A. What chemical criteria are required for a polymer to be a useful fiber?

B. How does a copolymer differ from a homopolymer? Draw a specific example of each class.

Congratulations! Happy Thanksgiving!

1	/25
2	/25
3	/25
4	/25
Total:	/100