

Chemistry 334

Examination #3

November 22, 1999

Professor Charonnat

Name: _____

Be certain that your examination has five (5) pages including this one.

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

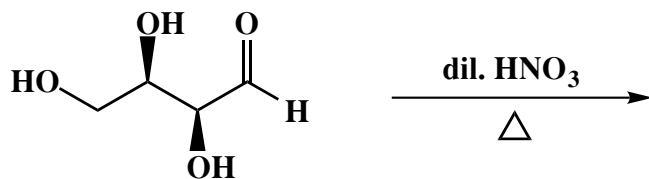
By putting your name on this examination booklet you agree to abide by California State University, Northridge policies of academic honesty and integrity.

Name: _____

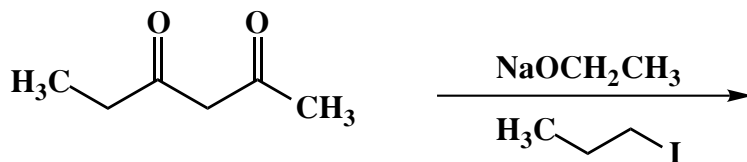
1. (25 points)

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

A.



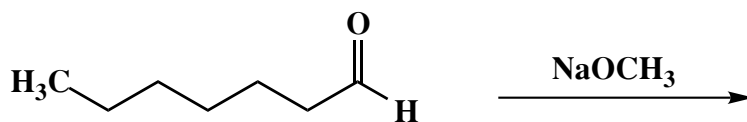
B.



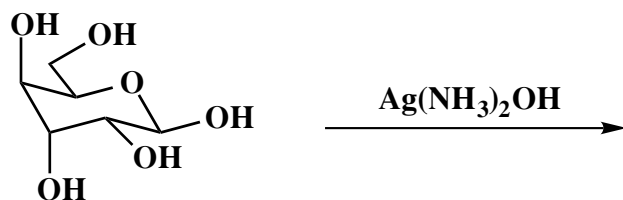
C.



D.



E.

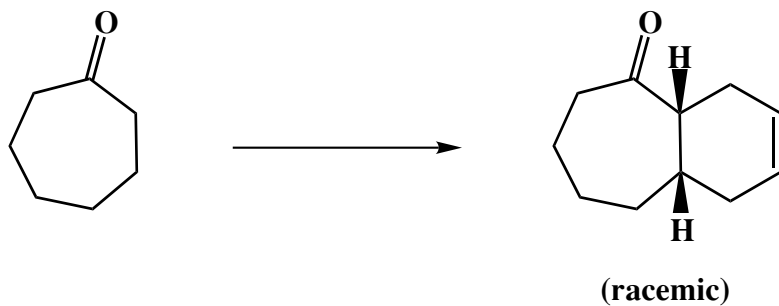


Name: _____

2. (25 points)

For each of the following five (5) questions, draw the specific reagent(s) necessary to effect the transformation shown. If more than one reaction is involved in an answer, be certain to distinguish the individual steps clearly.

A.



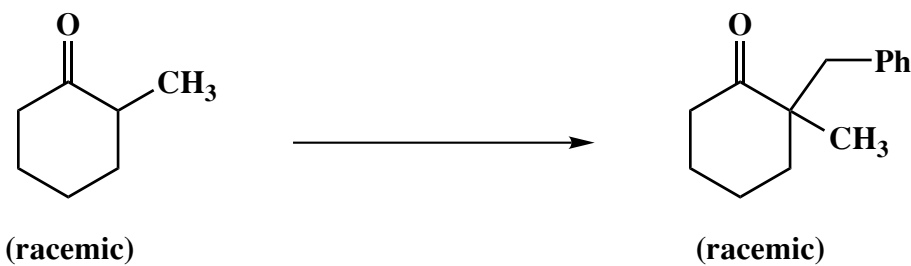
B.



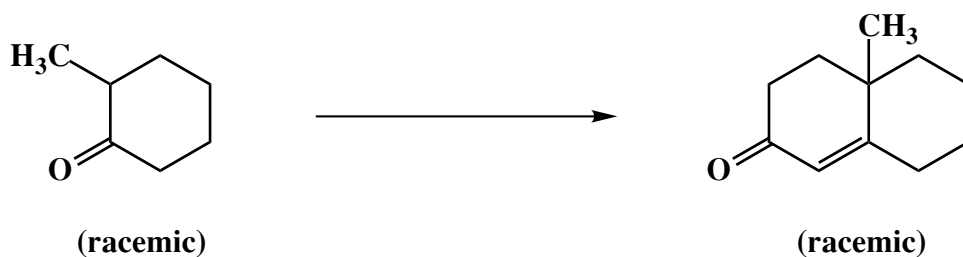
C.



D.



E.



Name: _____

3. (20 points)

For each of the following five (5) questions, circle the number that corresponds to the correct answer.

A. The first primary mechanistic step in a Dieckmann condensation is:

1. elimination of an alkoxide anion
2. addition of an enolate to an ester carbonyl group
3. deprotonation alpha to an ester carbonyl group

B. Furanoses are carbohydrates that contain:

1. a five-membered ring
2. a six-membered ring
3. a seven-membered ring

C. Maltose and lactose are related to each other as:

1. enantiomers
2. diastereomers
3. anomers

D. Dacron is a:

1. step-growth copolymer
2. chain-growth copolymer
3. chain-growth homopolymer

E. Isotactic polypropene is synthesized industrially via:

1. radical conditions
2. Ziegler-Natta conditions
3. cationic conditions

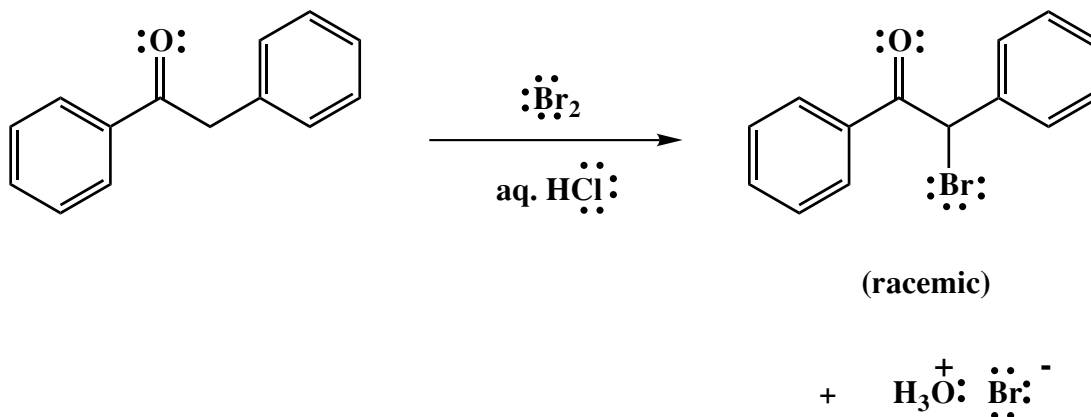
4. (10 points)

Compare and contrast the structural features of amylopectin and glycogen.

Name: _____

5. (20 points)

Draw the mechanism of the following reaction, using the curved-arrow notation to indicate the reorganization of electron density. Show all intermediates and denote all lone pair electrons, formal charges and countercharges where appropriate.



Congratulations!

1	/25
2	/25
3	/20
4	/10
5	/20
Total:	/100