

Chemistry 334

Examination #3

August 23, 2011

Professor Charonnat

Name: _____

Be certain that your examination has seven (7) 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.

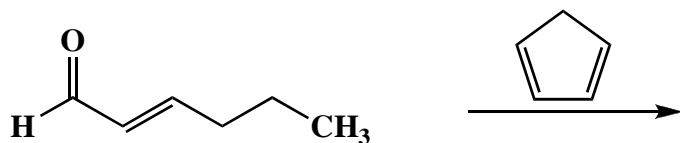
Molecular models are allowed for this examination. All electronic devices, including calculators, are unnecessary and are not allowed.

Name: _____

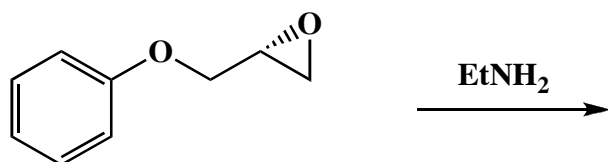
1. (25 points)

Draw the structure of the expected major organic product for each of the following five (5) questions. Specify stereochemistry clearly, if relevant.

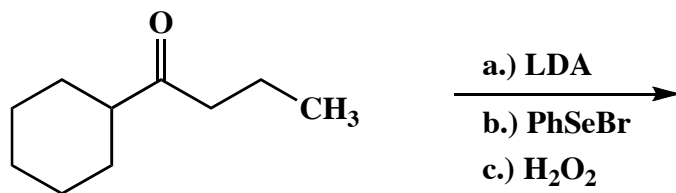
A.



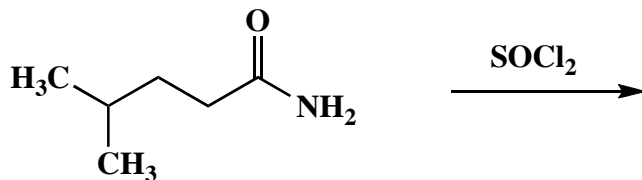
B.



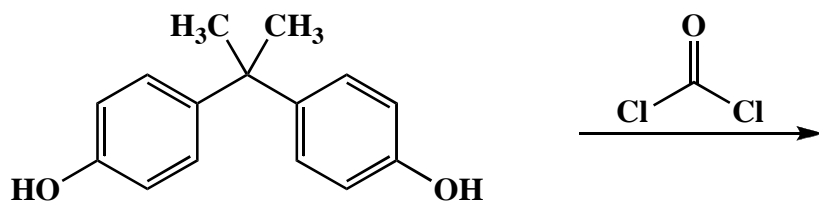
C.



D.



E.

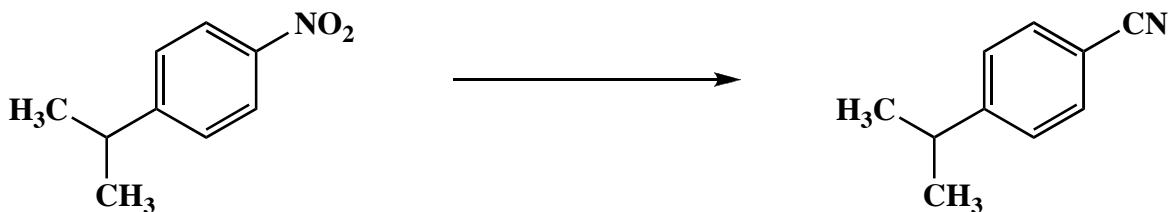


Name: _____

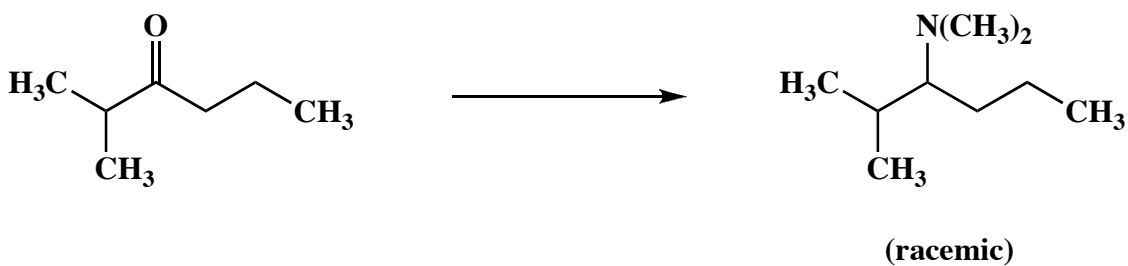
2. (35 points)

Draw the specific reagent(s) necessary to effect the following three (3) transformations. If more than one reaction is involved in an answer, be certain to distinguish the individual steps clearly.

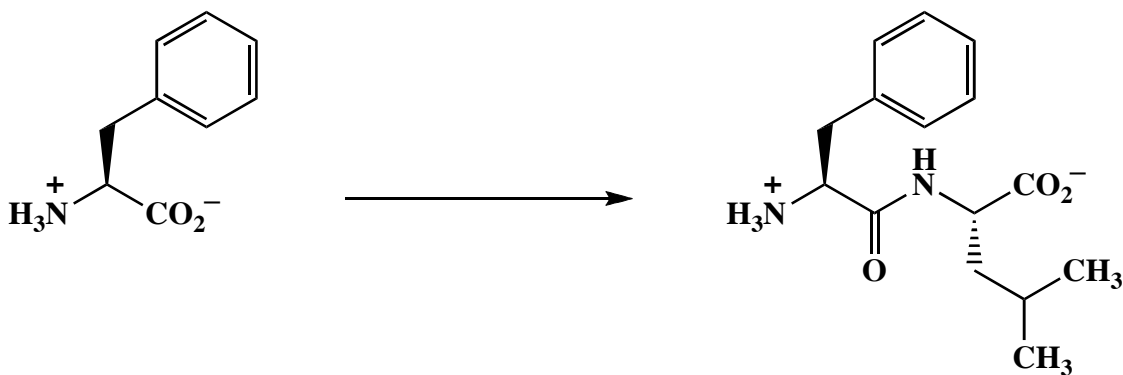
A.



B.



C.



Name: _____

3. (50 points)

Circle the letter that corresponds to the correct answer for each of the following ten (10) questions.

This question is not available due to copyright considerations.

Name: _____

3. (continued)

Name: _____

4. (25 points)

Draw the structure of a specific example for each of the following twelve (12) categories.

A. any naturally-occurring, essential α -amino acid:

B. any naturally-occurring, acidic α -amino acid:

C. any diterpene:

D. any steroid:

E. any thioester:

F. any prostaglandin:

G. any L-aldopentose (drawn as a Fischer projection):

H. any disaccharide with an α -1,4' glycosidic bond:

I. any condensation polymer:

J. any addition polymer:

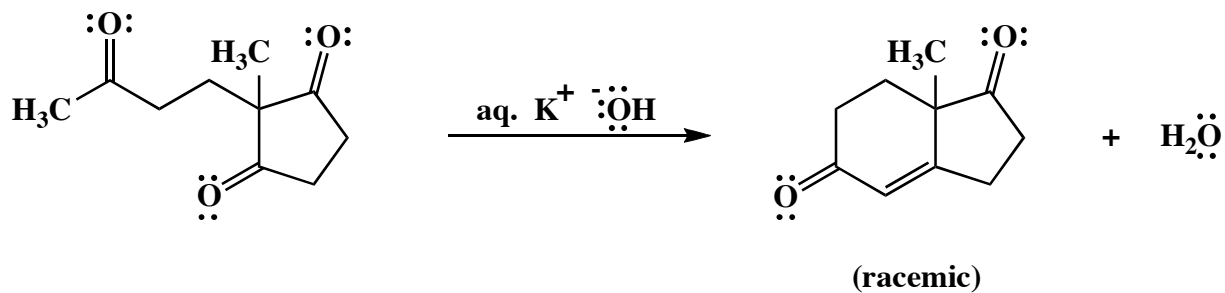
K. any unnatural unsaturated fatty acid:

L. any naturally-occurring glycerophospholipid:

Name: _____

5. (15 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 unshared electrons, nonzero formal charges, and countercharges where appropriate.



Congratulations!

1	/25
2	/35
3	/50
4	/25
5	/15
Total:	/150