

Chemistry 334

Examination #2

October 25, 2004

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.

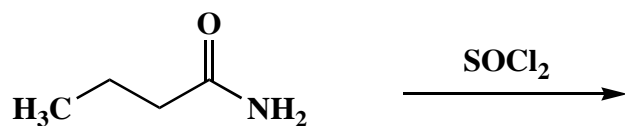
Molecular models are allowed for this examination. All electronic devices, including calculators, are unnecessary and are not allowed.

Name: _____

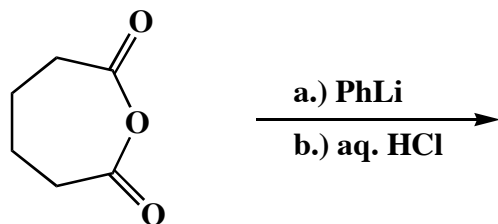
1. (25 points)

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

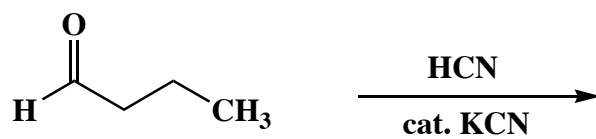
A.



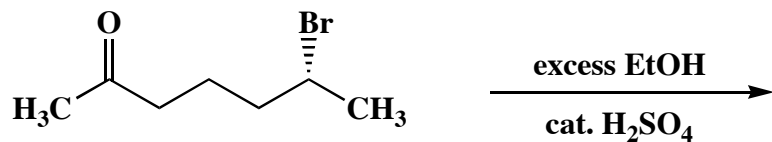
B.



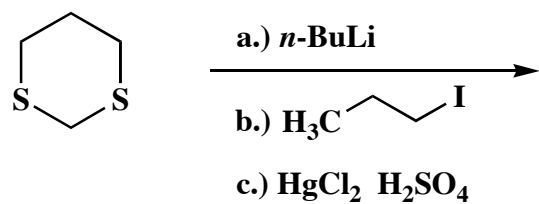
C.



D.



E.

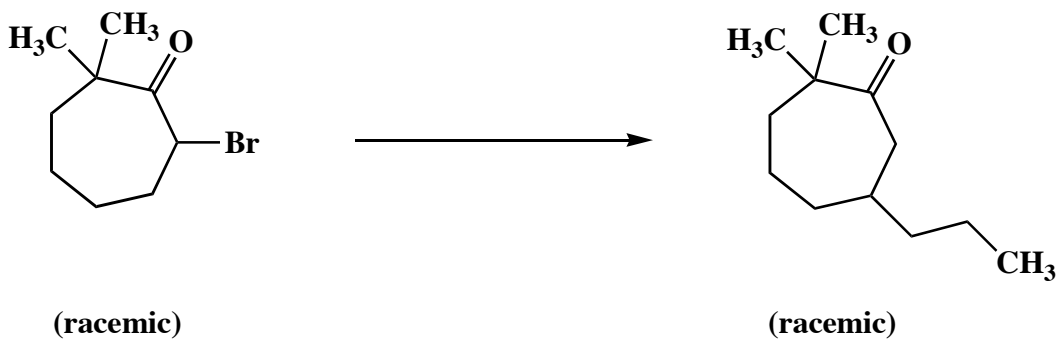


Name: _____

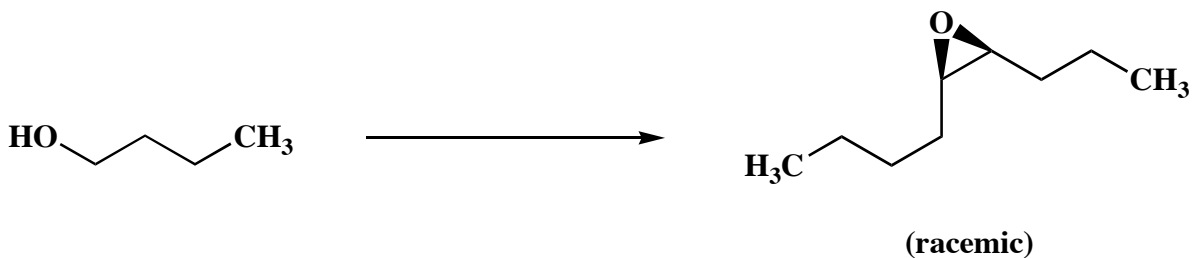
2. (25 points)

Draw the specific reagent(s) necessary to effect the following two (2) transformations. If more than one reaction is involved in an answer, be certain to distinguish the individual steps clearly.

A.



B.



3. (20 points)

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

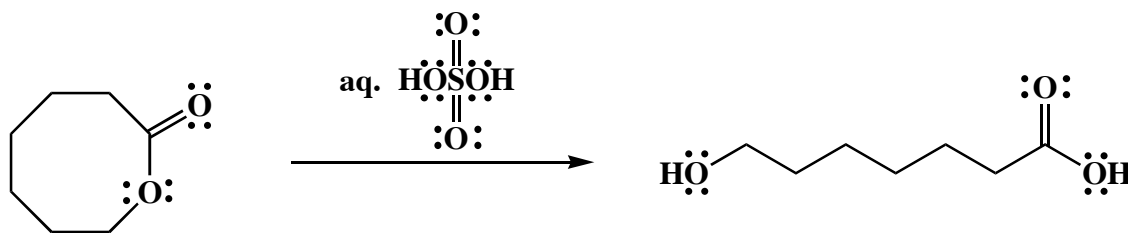
A. Explain why trifluoroacetic acid is more acidic than difluoroacetic acid.

B. Explain why nucleophiles, not electrophiles, bond to the carbonyl carbon of aldehydes and ketones.

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4. (30 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	/30
Total:	/100