

Chemistry 333

Hour Examination #2

March 30, 1998

Professor Charonnat

Name: _____

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

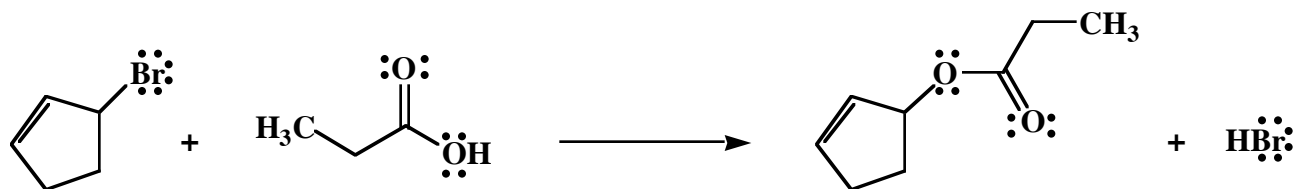
Put your name on **each** page of this examination booklet.

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

Name: _____

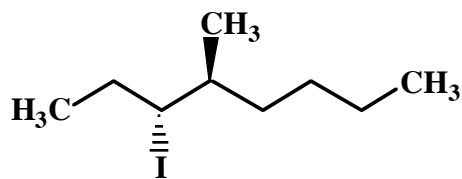
1. (15 points)

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, formal charges and countercharges where appropriate. Clearly denote reversibility or irreversibility for each primary mechanistic step.



2. (10 points)

Use IUPAC nomenclature to write the systematic name for the following haloalkane.



Name: _____

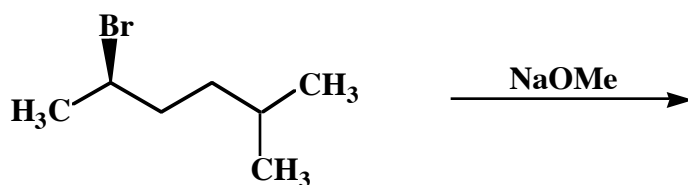
3. (25 points)

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.

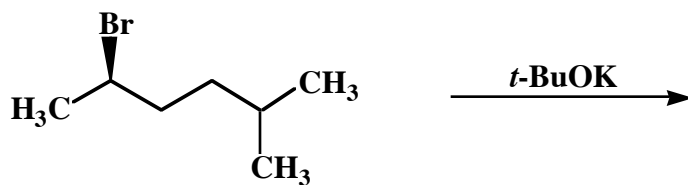
A.



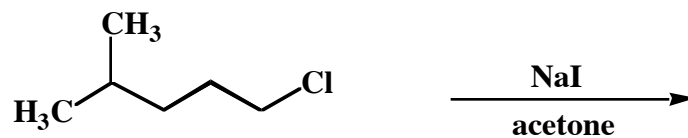
B.



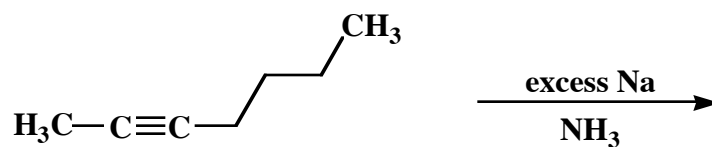
C.



D.



E.



Name: _____

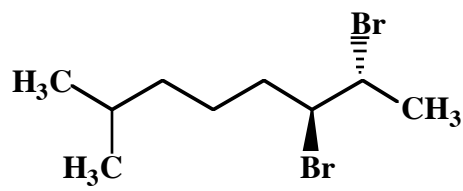
4. (20 points)

Draw a specific example of each of the following:

A. an enantioselective reaction

B. a *meso* compound

C. the enantiomer of the dibromide 1



1

D. a diastereomer of the dibromide 1

Name: _____

5. (30 points)

Answer the following three (3) questions precisely, succinctly and with correct grammar.

A. What three-dimensional relationship must exist for an E2 elimination to occur?
What is the basis for this requirement?

B. Why does variation of the base concentration not affect the observed rate for an E1 elimination?

C. Why are polar aprotic solvents, not polar protic solvents, preferred for S_N2 reactions?

Congratulations!

1	/15
2	/10
3	/25
4	/20
5	/30
<hr/> Total:	<hr/> /100