

Chemistry 334

Hour Examination #1

March 2, 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.

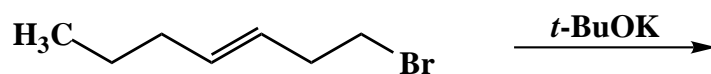
By putting your name on this examination booklet you agree to abide by California State University, Northridge policies of academic honesty and integrity.

Name: _____

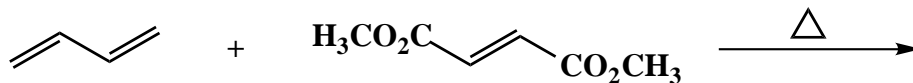
1. (25 points)

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.

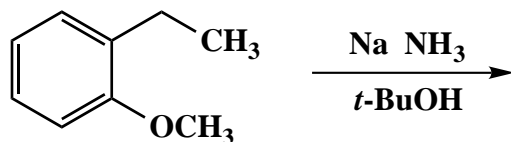
A.



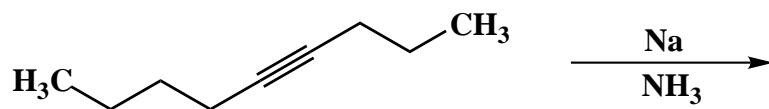
B.



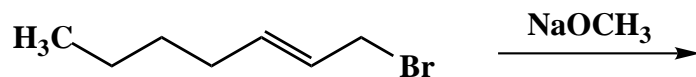
C.



D.



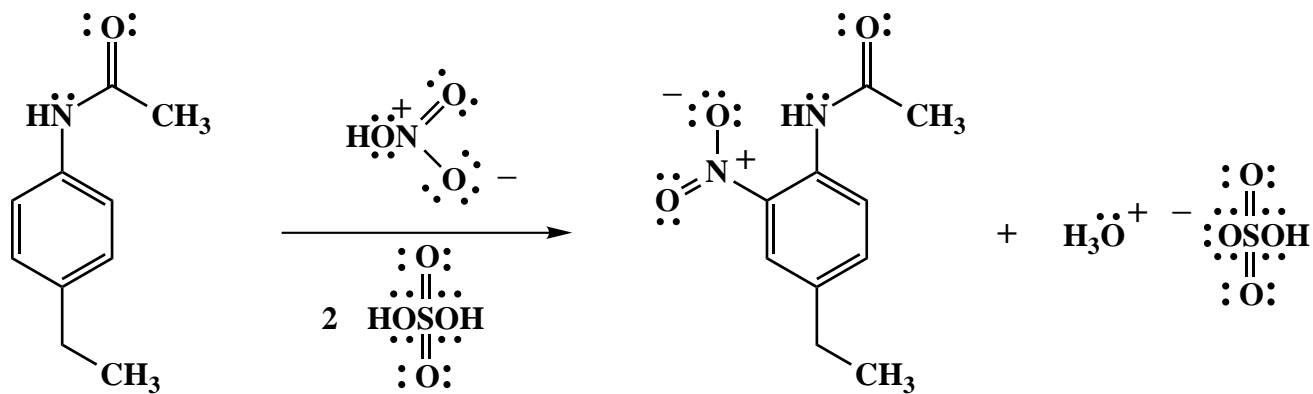
E.



Name: _____

2. (25 points)

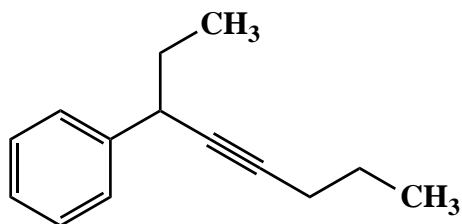
Draw the mechanism of the following reaction, using the curved-arrow notation to indicate the reorganization of electron density. Show **all** intermediates and denote **all** lone pair electrons, formal charges and countercharges where appropriate. Draw important resonance structures for intermediates. Explain concisely the observed regiochemical control.



Name: _____

3. (25 points)

Design a synthesis of the racemic alkyne **1** from benzene and acetylene. Use any inorganic and organic reagents that are necessary. Show all reagents and stable synthetic intermediate compounds. (N.B. Do not draw mechanisms for each synthetic transformation!)



1

Name: _____

4. (25 points)

Define the terms, "aromatic" and "antiaromatic". Draw a specific example of an aromatic compound, an antiaromatic compound, and a compound that is neither aromatic nor antiaromatic.

Congratulations!

1	/25
2	/25
3	/25
4	/25
<hr/>	
Total:	/100