

Chemistry 333

Third Hour Examination

November 14, 1997

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.

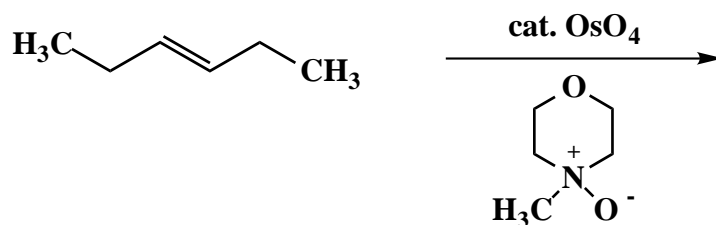
By putting your name on this examination booklet you agree to abide by California State University, Northridge policies of academic honesty and integrity.

Name: _____

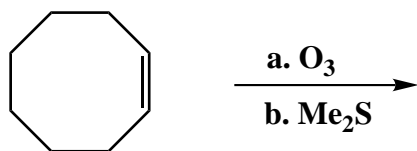
1. (30 points)

For each of the following six (6) questions specify the expected major organic product. If relevant, **clearly** specify the relative and/or absolute stereochemistry of the product.

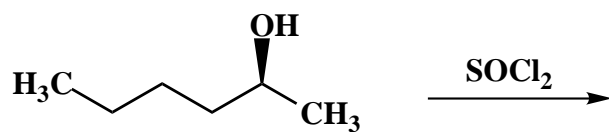
A.



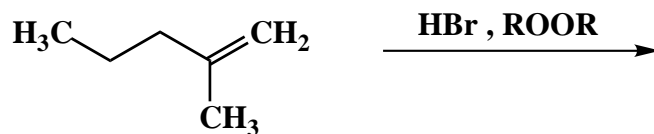
B.



C.



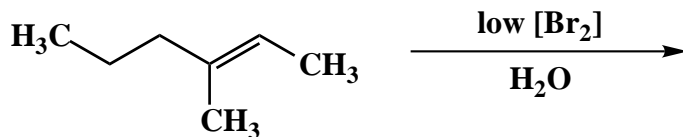
D.



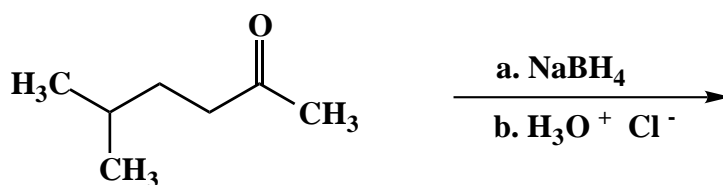
Name: _____

1. (continued)

E.

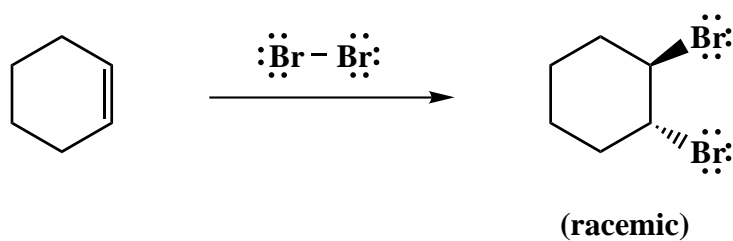


F.



2. (20 points)

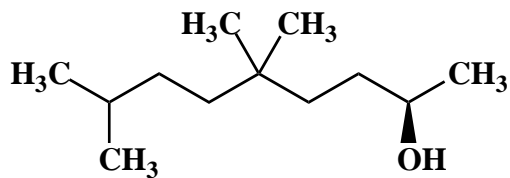
Draw the mechanism of the following reaction, using the curved-arrow notation to indicate the reorganization of electron density. Show **all** intermediates, lone pairs and formal charges. Depict clearly why a racemic mixture is formed, but the diastereomeric *cis*-1,2-dibromide is not. Finally, classify the transformation as a substitution, elimination or addition reaction.



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3. (10 points)

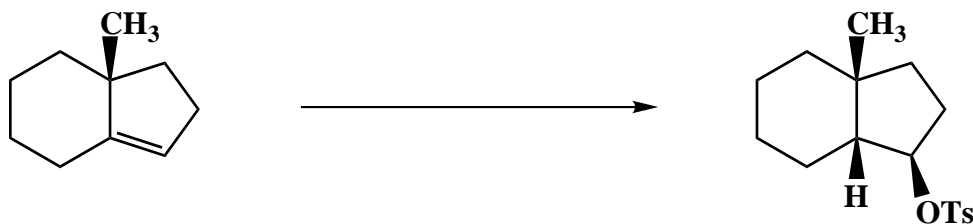
Use IUPAC nomenclature to write the systematic name of the following alcohol.



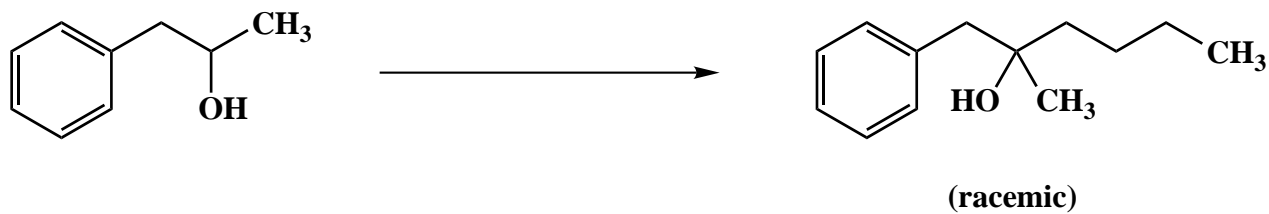
4. (20 points)

Show how one could accomplish each of the following two (2) transformations in good overall yield. More than one step is required for each conversion.

A.



B.

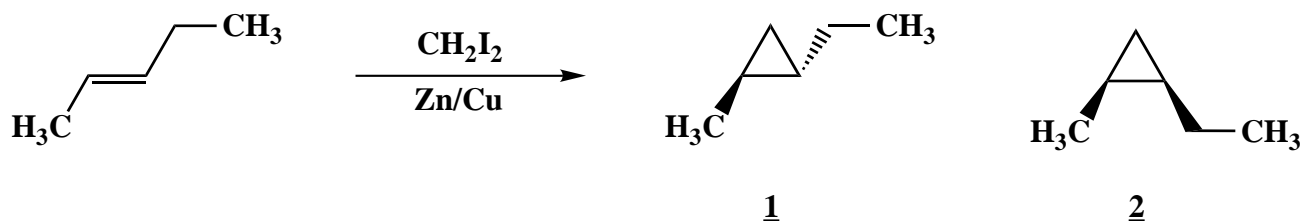


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5. (20 points)

Answer the following two (2) questions precisely, succinctly and with correct grammar.
Draw appropriate structures to illustrate each answer.

A. Why does the following Simmons-Smith reaction yield a racemic mixture of the cyclopropane 1 and none of the diastereomer 2?



B. Why are tertiary alcohols inert to oxidation with Jones reagent?

Congratulations!

1	/30
2	/20
3	/10
4	/20
5	/20
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Total:	/100