Final Exam
[Chapters 1-10, 14 (Carey textbook)]

CHE201/CHE203A-C
Professor Diver and Dr. Clizbe

Dec 13, 2014
Fall 2014

Version A
(Exam duration: 3 h)

Last Name:	First Name:

circle one: Dr. Clizbe or Dr. Diver *and:* Section (A, B, C)

TA Name:_____ *or* CHE203

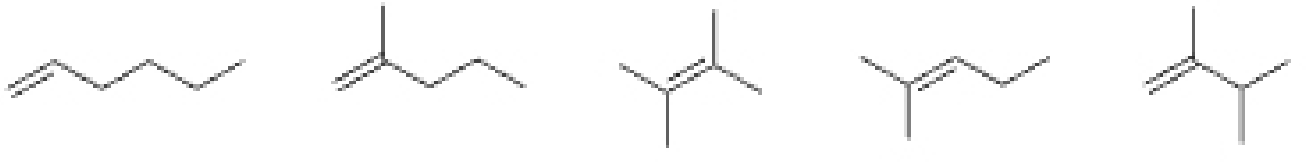
Page	Total Possible Points (Possible Points per page)	Points
2	30	
3	30	
4	30	
5	25 + 5 extra	
6	25 + 3 extra	
7	30	
8	30	
9	Periodic Table	

TOTAL POSSIBLE: 208 YOUR TOTAL:_____

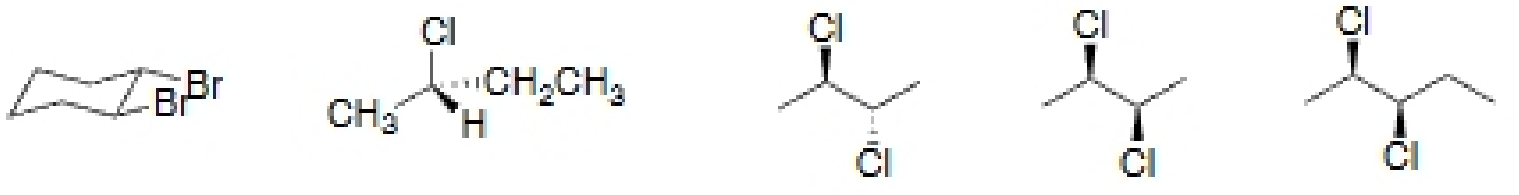
Molecular models are ALLOWED; calculators are NOT ALLOWED. No cell phones or extra paper will be provided. Fill out the exam in pen, use the back of the page if more room is needed.
CHECK THAT YOUR EXAM INCLUDES ALL 9 PAGES.

1. (60 pts) Provide the short answer or circle the molecule where appropriate. Circle the correct structure for each question. (12 x 5 pts each).

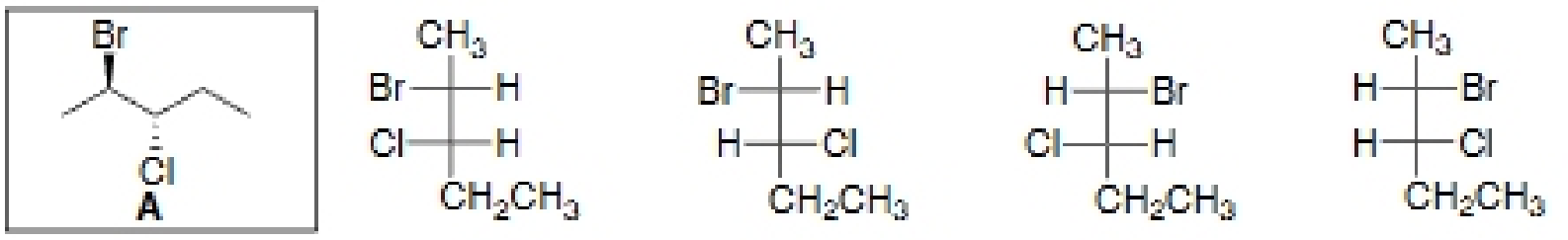
a. Circle the molecule with the *highest* heat of hydrogenation.



b. Circle the molecule that is *meso* (circle all that apply).



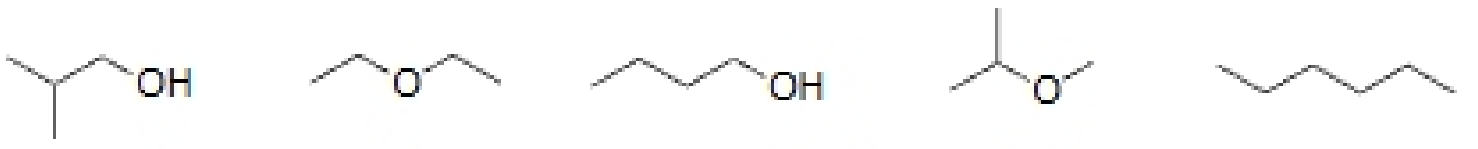
c. Circle the molecule that is identical to the molecule **A** drawn in the box



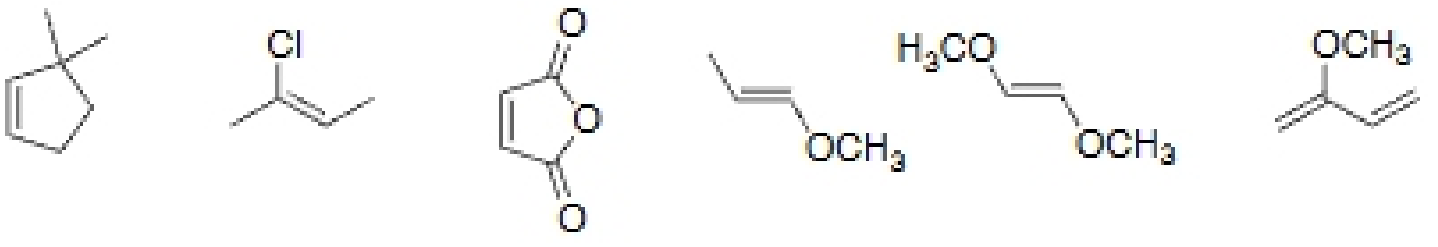
d. Provide an example of an allene:

e. Draw the *most stable* chair conformation of *trans*-1,2-dichlorocyclohexane:

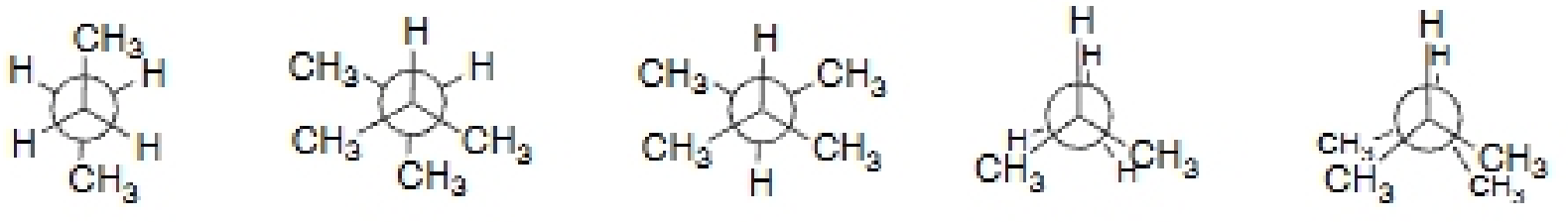
f. Circle the molecule with the highest boiling point (bp):



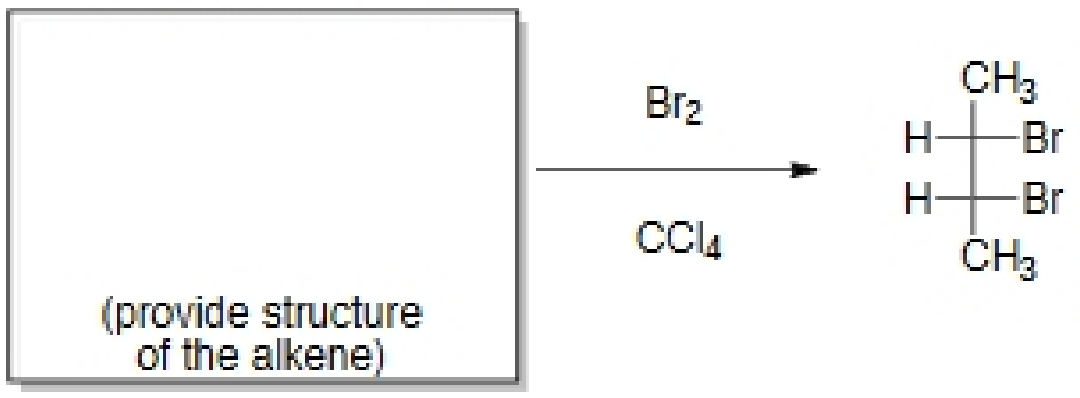
g. Circle the dienophile which is MOST REACTIVE in the Diels-Alder reaction:



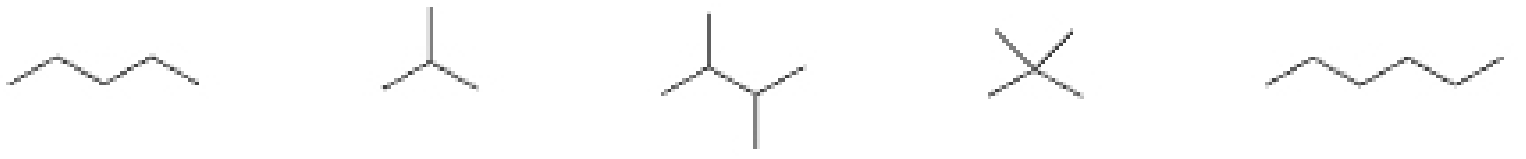
h. Circle the least stable *gauche* conformation:



i. Bromination (Br_2 in CCl_4) of an alkene gave a single diastereomer shown. What was the structure of the alkene?



j. Circle the alkane that will give a single monochlorination product (Cl_2, hv):



k. Circle the base capable of *completely* deprotonating propyne (CH_3CH_2CCH) (circle all that apply):

KOH KO*t*-Bu  $NaNH_2$ KF $Pd(PPh_3)_4$

pyridine

l. Circle the molecule with the *(2S, 3R)* configuration: