

Third Midterm Exam
[Chapters 8-10 (Carey textbook)]

CHE201A-C
Professor Diver and Dr. Clizbe

Nov. 21, 2014
Fall 2014

Version B
(Exam duration: 1 h 30 min)

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	25	
3	20	
4	15	
5	30	
6	30	
7	20	
8	15	
9	Periodic Table	

TOTAL POSSIBLE: 150 YOUR TOTAL: _____

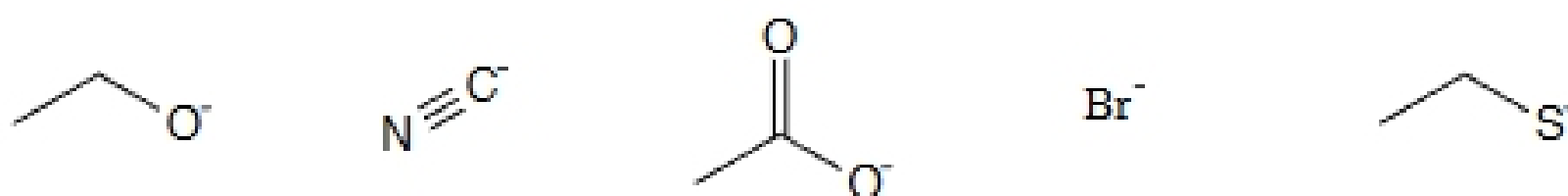
Molecular models are ALLOWED; calculators are NOT ALLOWED. No cell phones or extra paper will be provided. Fill out the exam in pen, use the back of the page if more room is needed. **CHECK THAT ALL YOUR EXAM INCLUDES ALL 9 PAGES.**

1. (30 pts) Circle the correct structure for each question. (5 points each).

(a) Which of the following dienes will not react in the Diels-Alder reaction?



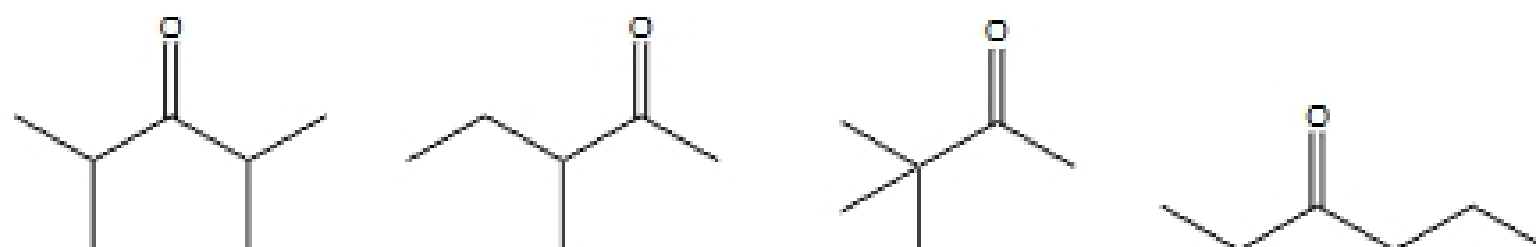
(b) Which of the following nucleophiles is the strongest?



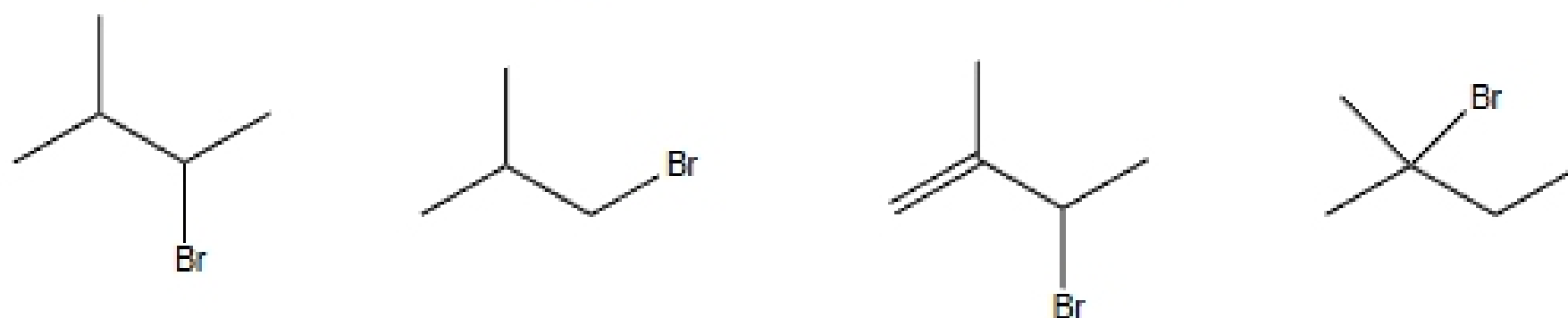
(c) Which is the most reactive dienophile?



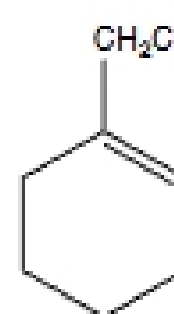
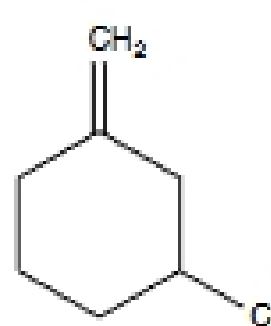
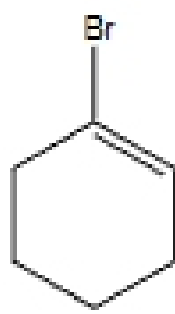
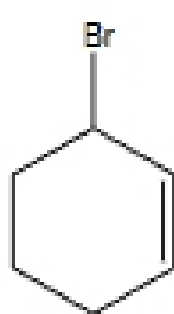
(d) Which of the following molecules cannot be made by acid-catalyzed hydration of an alkyne?



(e) Which of the following will have the fastest rate in an S_N2 reaction?



(f) Which of the following molecules represent an allylic halide? (circle all that apply)



2. In the following hydration of butyne, compound A is initially formed, but was not isolated. Draw the final isolated product (compound B) and use the arrow formalism to show electron movement to provide a detailed mechanism showing each individual step going from compound A to compound B (15 points).

