

Last Name	ANSWER	First Name	KEY	MI
Student ID Number:				Total Score
Circle the name of your TA: ROB MIKE				35
Discussion Section – Day:			Time:	/ 30

Chem 30A Winter 2005

QUIZ #3
(15 Min)

Weds Mar 16th

***INTERPRETATION OF THE QUESTIONS IS PART
OF THE EXAM – DO NOT ASK FOR THE
QUESTIONS TO BE EXPLAINED TO YOU***

******DO NOT OPEN THIS EXAM UNTIL INSTRUCTED TO DO SO******

*ONLY ONE QUESTION ON THIS EXAM WILL BE GRADED
BY PLACING AN 'X' IN THE APPROPRIATE BOX BELOW, INDICATE
WHICH QUESTION YOU WOULD LIKE US TO GRADE*

Q1	
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Q2	
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*(IF NO BOX IS MARKED, WE WILL GRADE Q1)
(IF BOTH BOXES ARE MARKED, WE WILL GRADE Q1)
(IF IT IS AMBIGUOUS WHICH BOX IS MARKED, WE WILL GRADE Q1)*

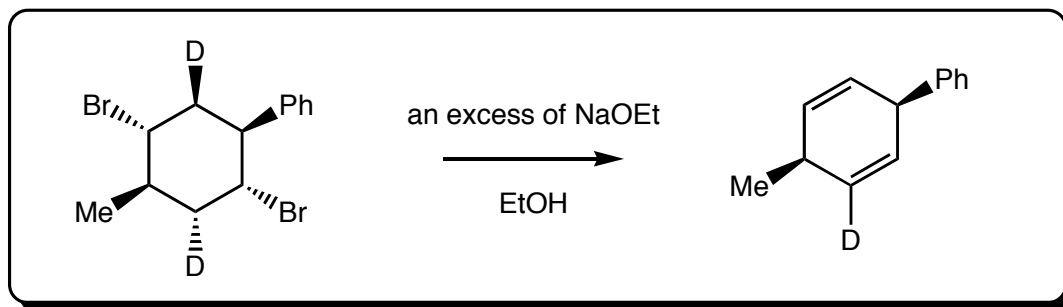
*I can't believe it! Reading and writing actually paid off!
- Homer Simpson*

Q1: Answer the questions below by circling either **True** or **False** (2 points each) –

- a. Tertiary alkyl halides never undergo nucleophilic substitution reactions. **False**
- b. An allylic radical is more stable than a vinylic radical. **True**
- c. E2 and S_N2 reactions share a common carbocation intermediate **False**
- d. Doubling the concentration of the base in an E2 reaction doubles the rate of the reaction. **True**
- e. Thiolate anions (RS⁻) are generally more nucleophilic than alkoxide anions (RO⁻). **True**
- f. The major monobromination product formed during the reaction of Br₂ with 2-methylpropane is 1-bromo-2-methylpropane. **False**
- g. Zaitsev elimination gives the more-substituted alkene as the major product. **True**
- h. *tert*-Butyl chloride undergoes S_N1 solvolysis in aqueous ethanol more rapidly than does *tert*-butyl bromide under the same conditions. **False**
- i. (*S*)-2-Chlorobutane reacts with sodium azide in DMSO to give (*R*)-2-azidobutane. **True**
- j. *n*-Propyl chloride (CH₃CH₂CH₂Cl) has a higher boiling point than *n*-propyl bromide (CH₃CH₂CH₂Br). **False**
- k. 2-Bromopropane reacts with sodium ethoxide in ethanol to give 2-ethoxypropane as the major product. **False**
- l. The Cope elimination observed with some *N*-oxide compounds proceeds with syn stereospecificity. **True**
- m. E1 reactions are often favored over S_N1 reactions at higher reaction temperatures. **True**
- n. Primary alkyl halides do not undergo elimination reactions. **False**
- o. S_N2 reactions of secondary alkyl bromides with NaCN proceed faster in methanol than in DMSO. **False**

BONUS QUESTION

Draw the major product of the E2 elimination reaction shown below (5 points) –



Q2: Answer the questions below by circling either **Rob** or **Mike** (3 points each) –
(Read the questions VERY carefully before you answer)

- a. Which TA has been married the longest? **Mike**
- b. Which TA is the oldest? **Rob**
- c. Which TA is a huge Lakers fan? **Rob**
- d. Which TA was born in Indiana? **Mike**
- e. Which TA has been a graduate student at UCLA the longest? **Mike**
- f. Which TA spent a year of his life in Nigeria when he was younger? **Rob**
- g. Which TA used to work for the professor who is teaching Chem 30B next quarter? **Mike**
- h. Which TA is crazy about anything that Apple makes, especially his iPod? **Rob**
- i. Which TA was almost arrested in downtown New Orleans for urinating on the steps of the police station? **Rob**
- j. Which TA was seen running naked down the beach on TV's 'Blind Date'? **Mike**

BONUS QUESTION

Tomorrow is St. Patrick's Day – and I'm sure that you all know that he is the Patron Saint of Ireland – but who is the Patron Saint of England? (5 points)?

St George