

<b>Last Name</b>	<b>First Name</b>	<b>MI</b>
<b>Student ID Number:</b>		<b>Total Score</b>
<b>Circle the name of your TA:      ROB      MIKE</b>		
<b>Discussion Section – Day:</b>	<b>Time:</b>	

## 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*

<b>Q1</b>	
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<b>Q2</b>	
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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!*

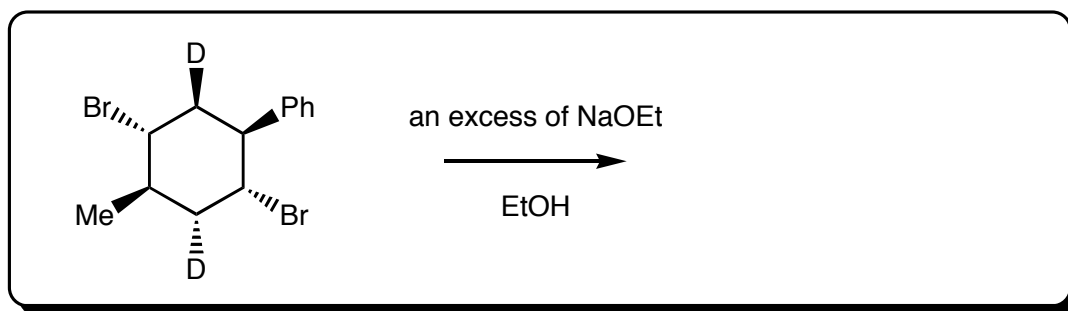
*- Homer Simpson*

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

- |  |             |              |
|--|-------------|--------------|
| a. Tertiary alkyl halides never undergo nucleophilic substitution reactions.   | <b>True</b> | <b>False</b> |
| b. An allylic radical is more stable than a vinylic radical.   | <b>True</b> | <b>False</b> |
| c. E2 and S <sub>N</sub> 2 reactions share a common carbocation intermediate   | <b>True</b> | <b>False</b> |
| d. Doubling the concentration of the base in an E2 reaction doubles the rate of the reaction.  | <b>True</b> | <b>False</b> |
| e. Thiolate anions (RS <sup>-</sup> ) are generally more nucleophilic than alkoxide anions (RO <sup>-</sup> ).   | <b>True</b> | <b>False</b> |
| f. The major monobromination product formed during the reaction of Br <sub>2</sub> with 2-methylpropane is 1-bromo-2-methylpropane.  | <b>True</b> | <b>False</b> |
| g. Zaitsev elimination gives the more-substituted alkene as the major product.   | <b>True</b> | <b>False</b> |
| h. <i>tert</i> -Butyl chloride undergoes S <sub>N</sub> 1 solvolysis in aqueous ethanol more rapidly than does <i>tert</i> -butyl bromide under the same conditions.                             | <b>True</b> | <b>False</b> |
| i. ( <i>S</i> )-2-Chlorobutane reacts with sodium azide in DMSO to give ( <i>R</i> )-2-azidobutane.  | <b>True</b> | <b>False</b> |
| j. <i>n</i> -Propyl chloride (CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> Cl) has a higher boiling point than <i>n</i> -propyl bromide (CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> Br). | <b>True</b> | <b>False</b> |
| k. 2-Bromopropane reacts with sodium ethoxide in ethanol to give 2-ethoxypropane as the major product.   | <b>True</b> | <b>False</b> |
| l. The Cope elimination observed with some <i>N</i> -oxide compounds proceeds with syn stereospecificity.  | <b>True</b> | <b>False</b> |
| m. E1 reactions are often favored over S <sub>N</sub> 1 reactions at higher reaction temperatures.   | <b>True</b> | <b>False</b> |
| n. Primary alkyl halides do not undergo elimination reactions.   | <b>True</b> | <b>False</b> |
| o. S <sub>N</sub> 2 reactions of secondary alkyl bromides with NaCN proceed faster in methanol than in DMSO.   | <b>True</b> | <b>False</b> |

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

### 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)?

