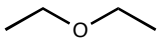
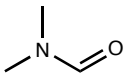
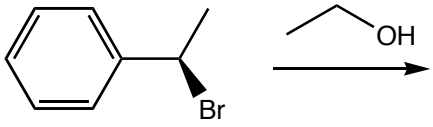
Name _____ Test 2

PHYS 0203 (Organic II) Spring 2005

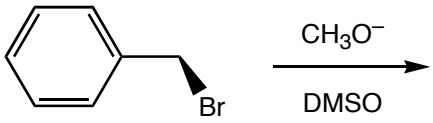
THF =  Et_2O =  DMSO =  DMF =  acetone = 

1. (a) (2 pts. ea.) Identify whether the following reactions will occur via an S_N1 or an S_N2 mechanism and (b) (5 pts. ea.) predict the products of the following substitution reactions. Remember to consider stereochemistry where appropriate.

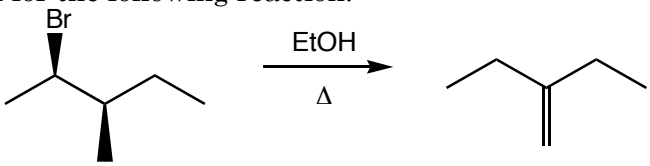
i.



ii.



2. Draw a mechanism for the following reaction.



3. (8 pts.) Draw the product(s) of an E2 reaction on the following molecule.

1. _____

2. _____

3. _____

4. _____

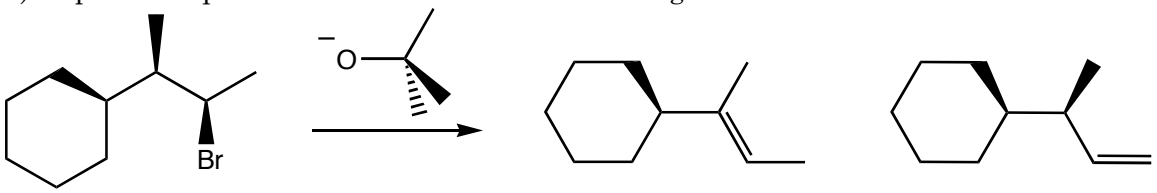
5. _____

6. _____

7. _____

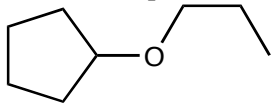
8. _____

4. (8 pts.) Explain the product distribution in the following reaction.

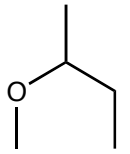


5. (10 pts.) Using any alkyl halide and any alkoxide make the following molecules. If more than one route is possible, full credit will be awarded to the better route.

a.

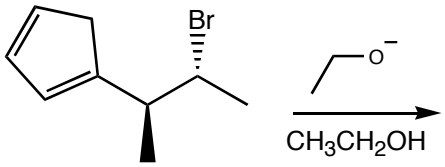


b.

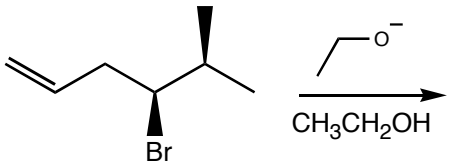


6. a. (6 pts. ea.) Predict the product(s) for the following E2 reactions.
b. (2 pts. ea) Identify the major product in each reaction.

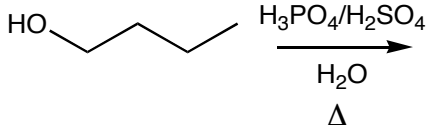
i.

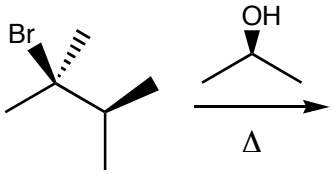


ii.

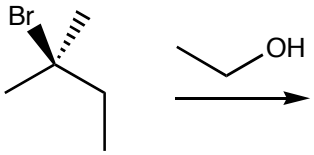


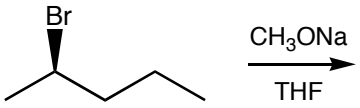
7. a. (6 pts. ea.) Predict the product(s) for the following E1 reactions.
   b. (2 pts. ea.) Identify the major product in each reaction.

i. 

ii. 

8. a. (2 pts. ea.) Identify the reaction type, and
   b. (4 pts. ea.) predict the product(s) in each of the following reactions.

i. 

ii. 

iii.