UNIVERSITY OF WINDSOR

NAME OF STUDENT ..... MIDTERM #2

Student I.D. Number 59-331/333

Date of Test: ..... WINTER 2001

Book No. .....

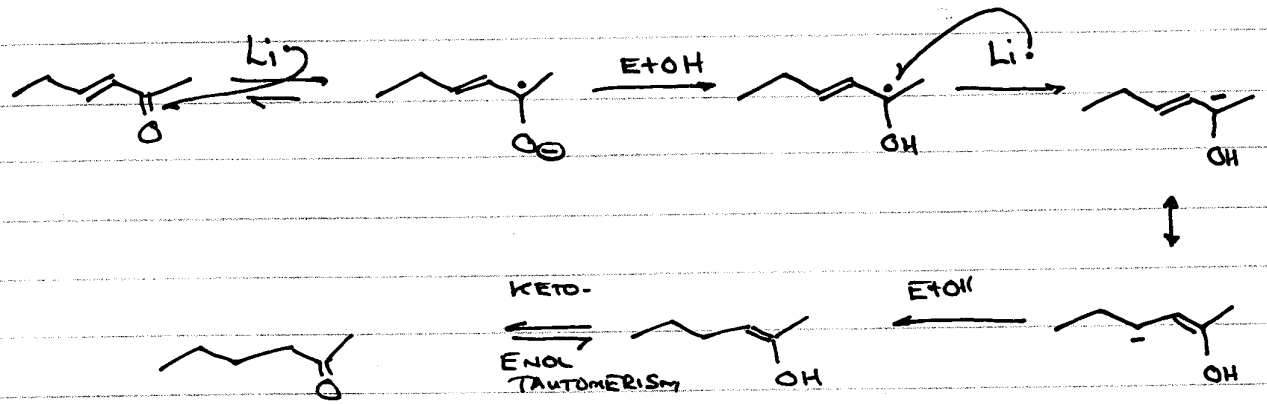
Total No. of Books .....

Course Name & Number .....

Course Section .....

NAME OF INSTRUCTOR .....

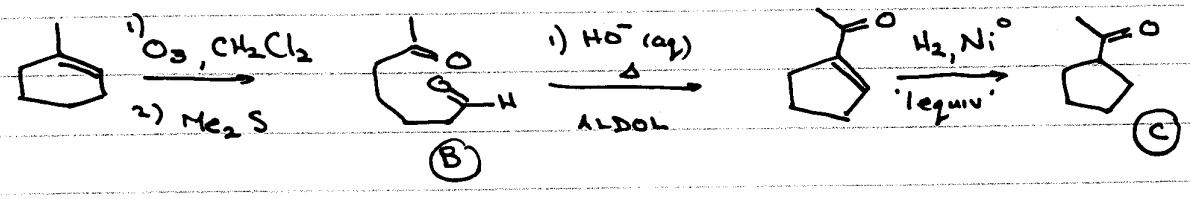
1.)



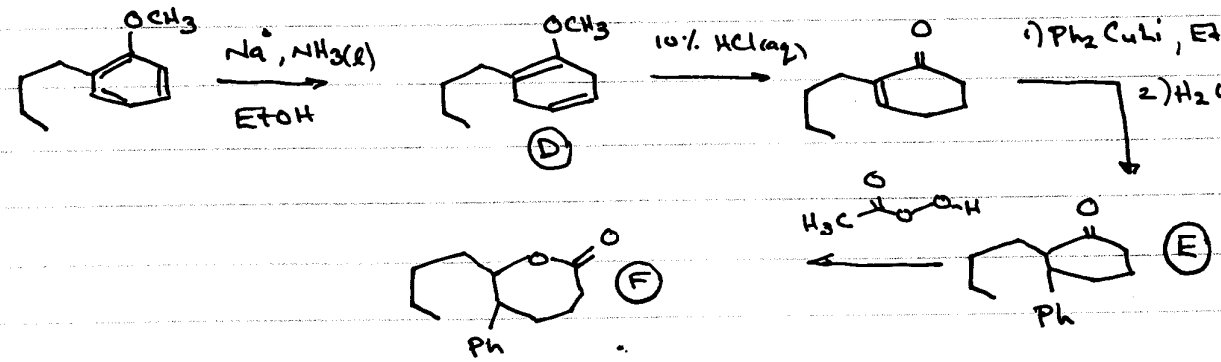
2. a) $BrCH_2CO_2Et$ $\xrightarrow[Et_2O]{Zn^0}$ $[BrZn\,CH_2CO_2Et]$ $\xrightarrow{}$ $\xrightarrow{}$ $\xrightarrow{H_2O}$ EtO_2C (A)

ESTERS INERT, ALKENES INERT

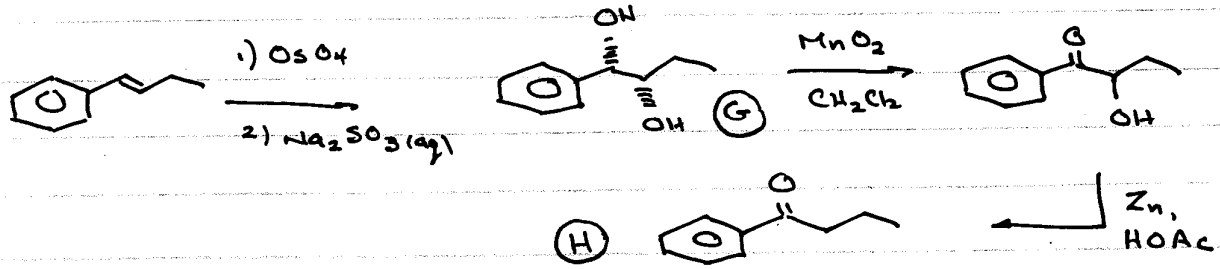
b)



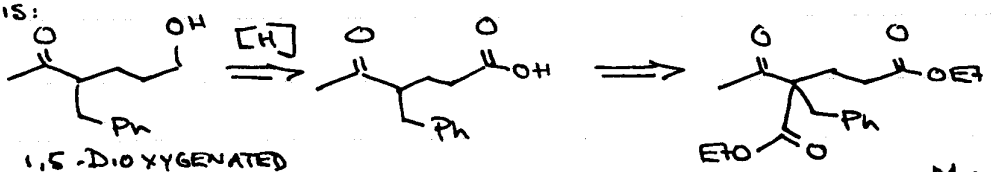
c)



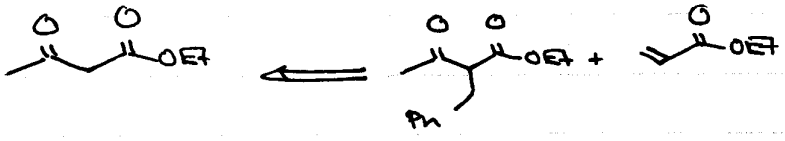
d)



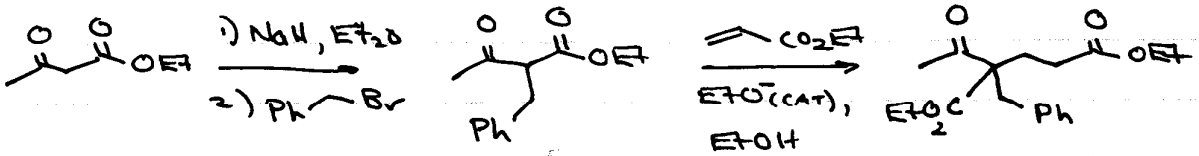
3a) ANALYSIS:

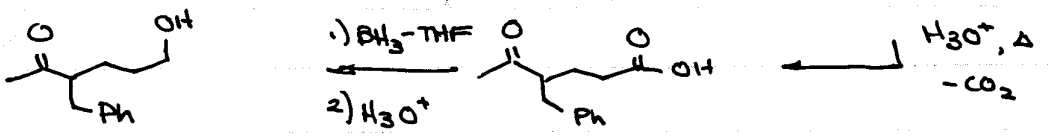


1,5-DIOXYGENATED
∴ PROBABLY MICHAEL RXN.



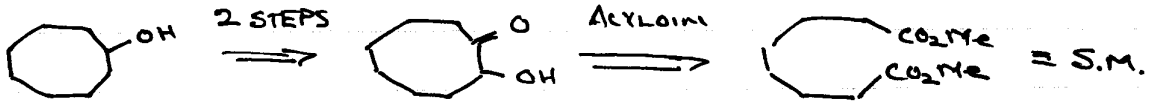
∴ SOLUTION



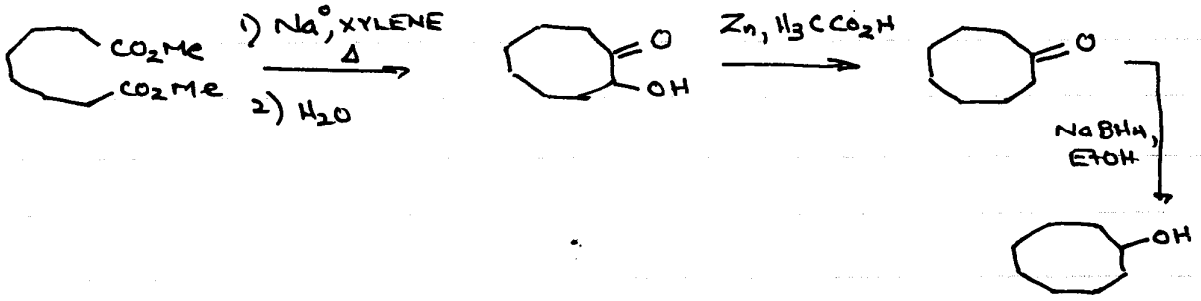


REDUCES ACIDS FASTEST

b) ANALYSIS - I MENTION THAT ACYLOINS GAVE LARGE RING SIZES WELL, SO LET'S TRY TO FORCE AN ACYLOIN INTO THIS ROUTE

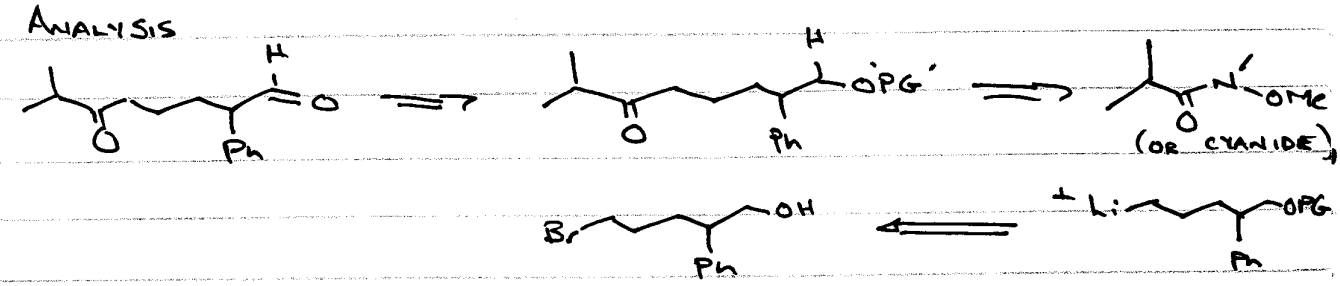


SYNTHESIS.



c) ANAYSIS: THERE ARE SEVERAL WAYS TO DO THIS, BUT ONE OF THE CRITICAL FEATURES IS THAT THERE MUST BE A PROTECTING GROUP INVOLVED. IT COULD BE ON THE ALCOHOL OR ALDEHYDE, DEPENDING ON WHEN YOU WANT TO DO THE OXIDATION. THIS IS ONE OF SEVERAL POSSIBILITIES...

ANALYSIS



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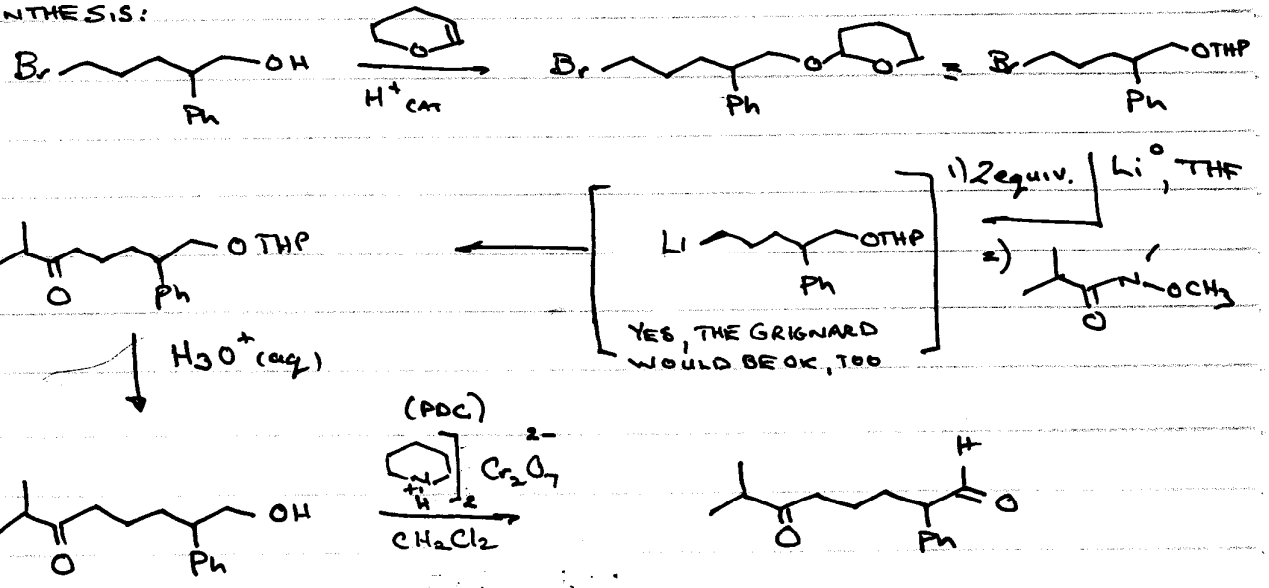

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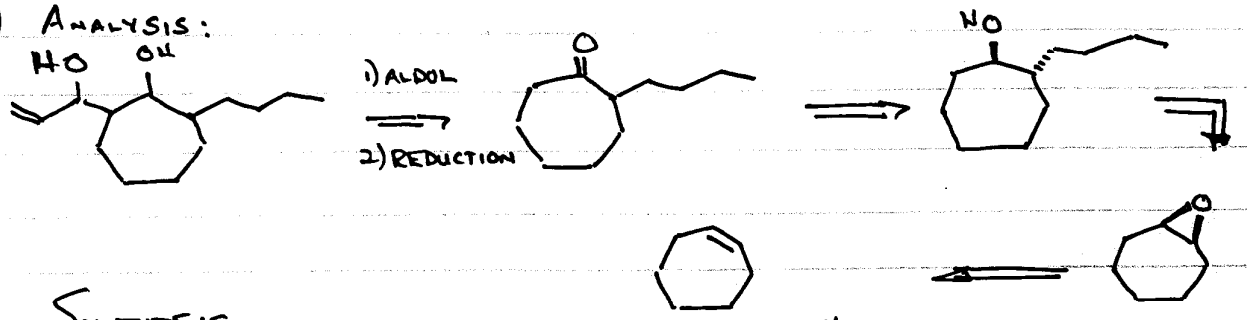

SYNTHESIS