

Chemistry 172Q
March 30, 2006

Exam 3

1 _____/35

2 _____/15

3 _____/40

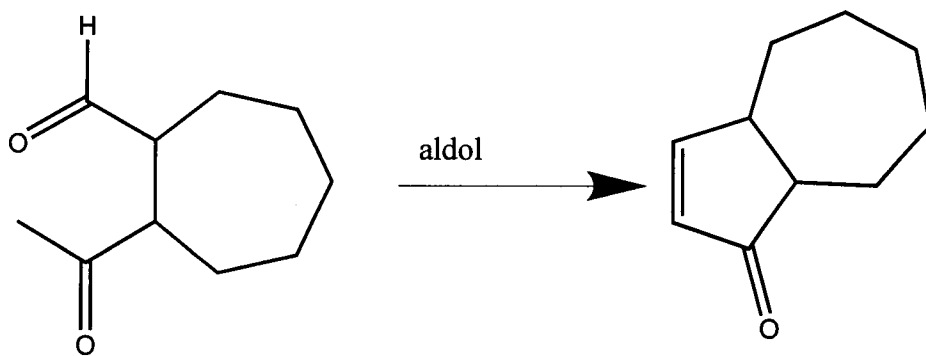
4 _____/35

Total _____/125

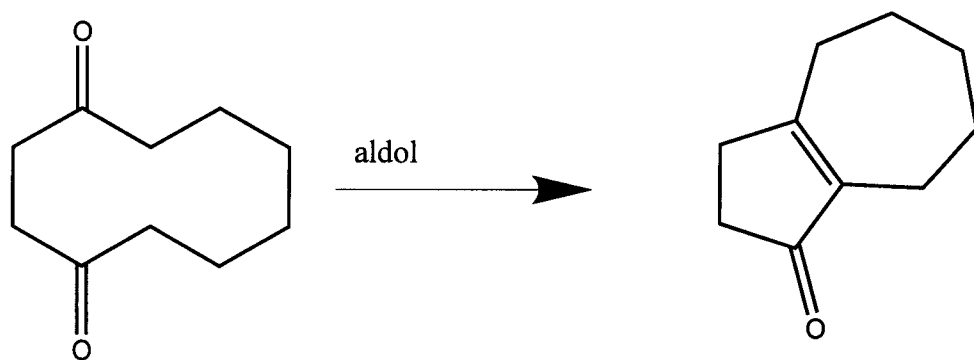
NAME

Answer Key

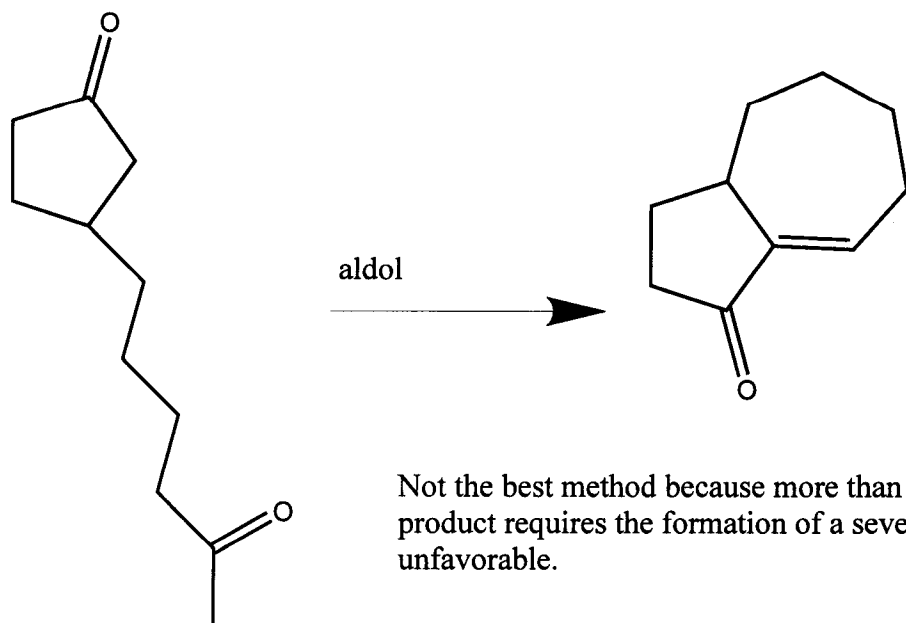
1.



This method will work the best. It involves a ketone attacking an aldehyde which is preferred to over a ketone attacking a ketone. A five membered ring is also formed which is favorable.

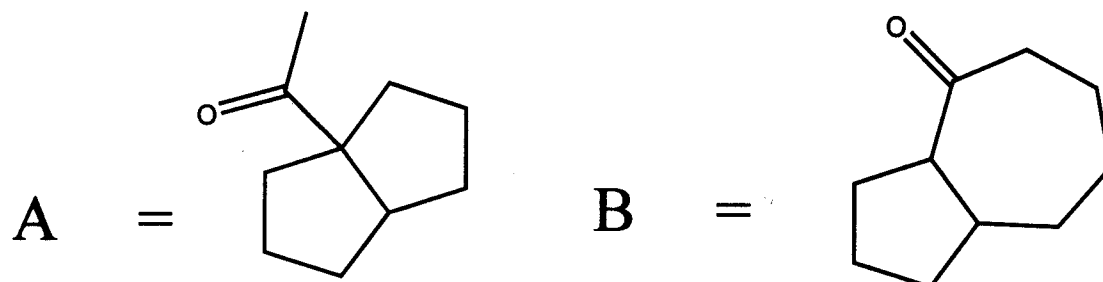


Not the best method as it requires the need for the synthesis of a macrocycle and involves the attack of a ketone by another ketone.



Not the best method because more than one product is possible and that product requires the formation of a seven membered ring which is unfavorable.

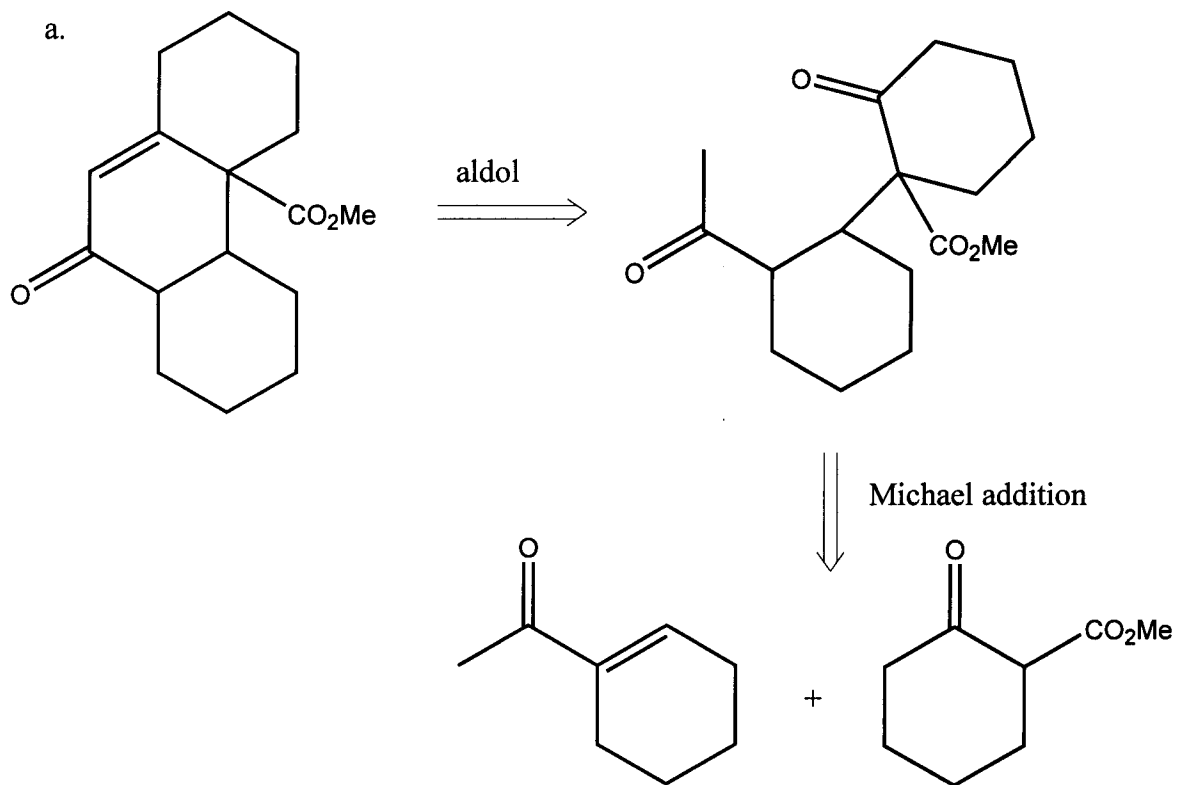
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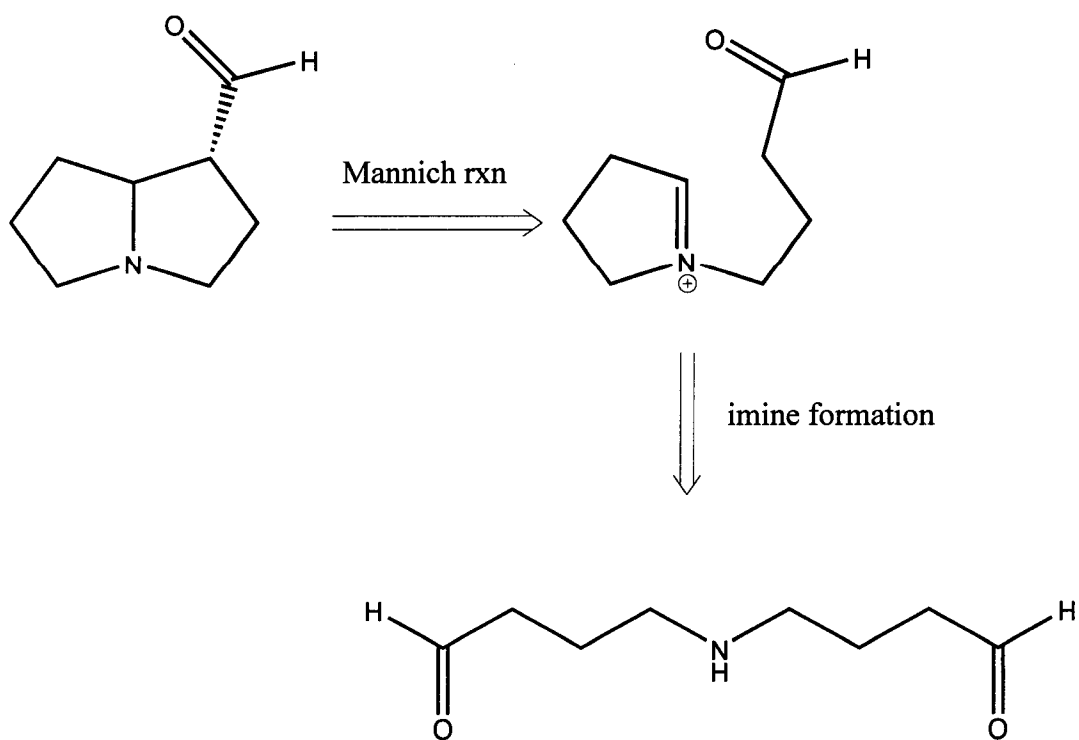
The t-butoxide is less bulky than the LDA and as a result will deprotonate the more hindered position yielding A. LDA being more bulky will yield B.

3.

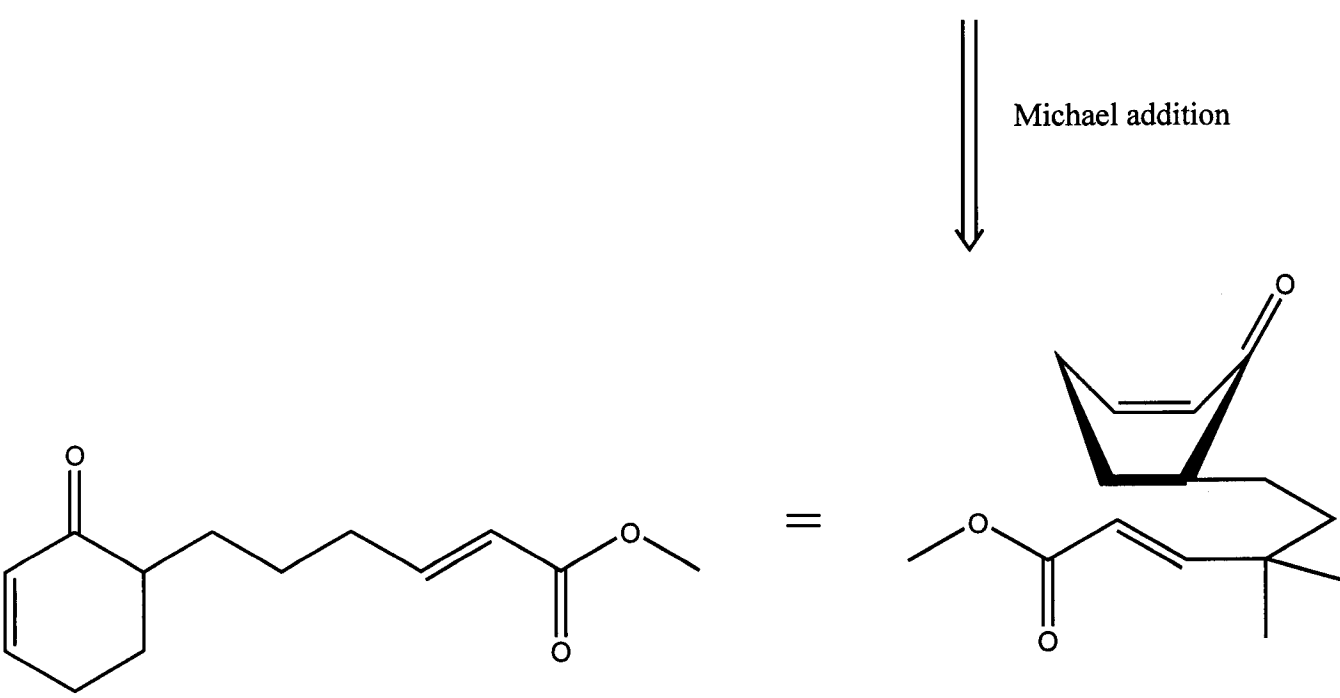
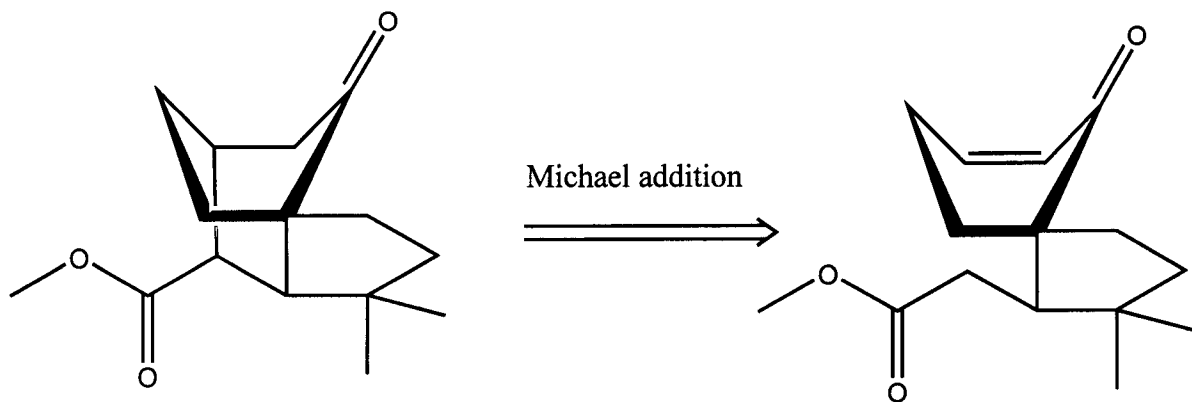
a.



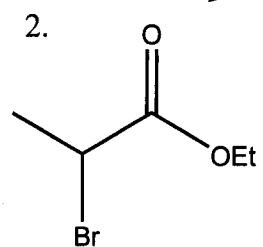
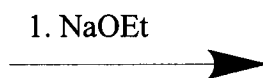
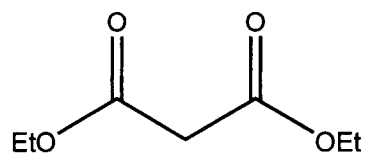
b.



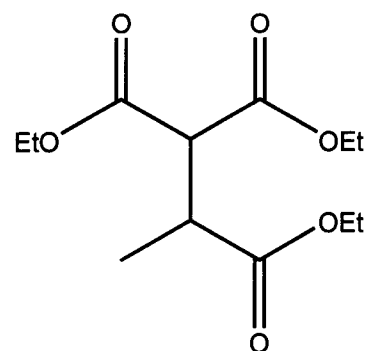
c.



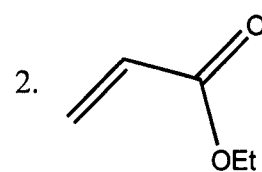
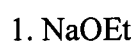
4.



S_N2 rxn

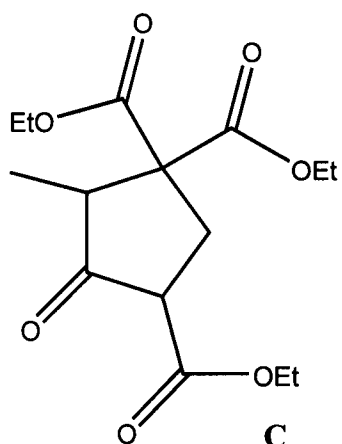


A



B

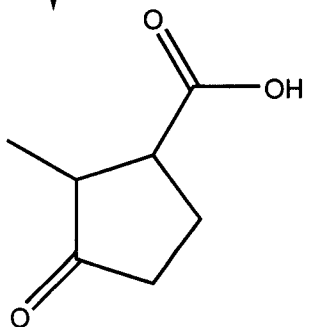
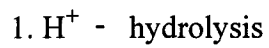
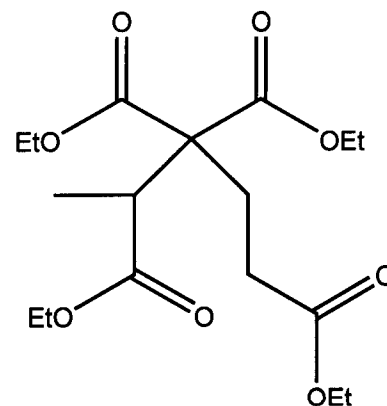
Michael addition



C



Claisen condensation



D

