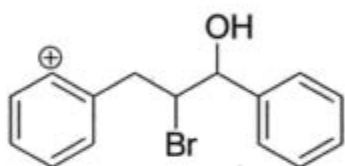


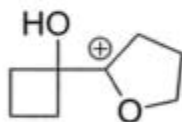
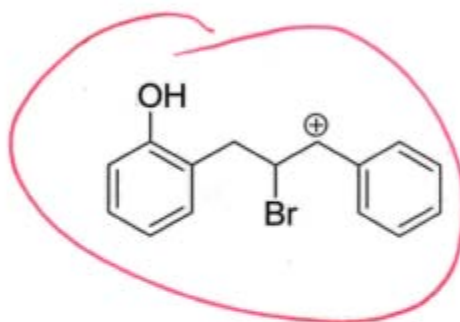
1) List the four things that can happen to a carbocation. (2pts)

- React with leaving group \rightarrow Starting Material
- React with nucleophile \rightarrow SN1 product
- React with base, lose a H^+ \rightarrow E1 product
- Rearrange

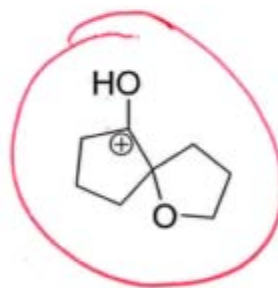
2) Circle the more stable carbocation in each pair (3pts)



and



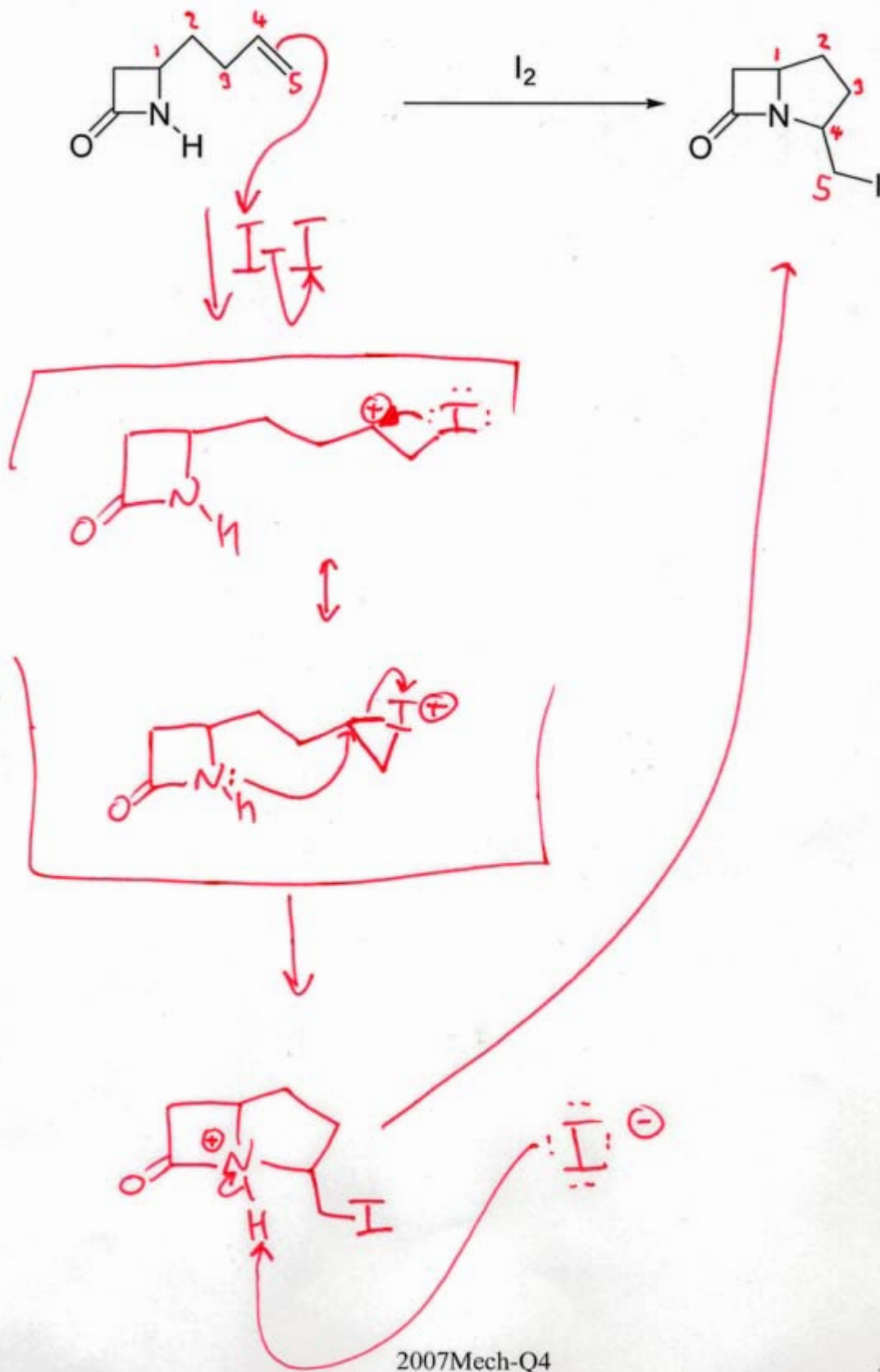
and



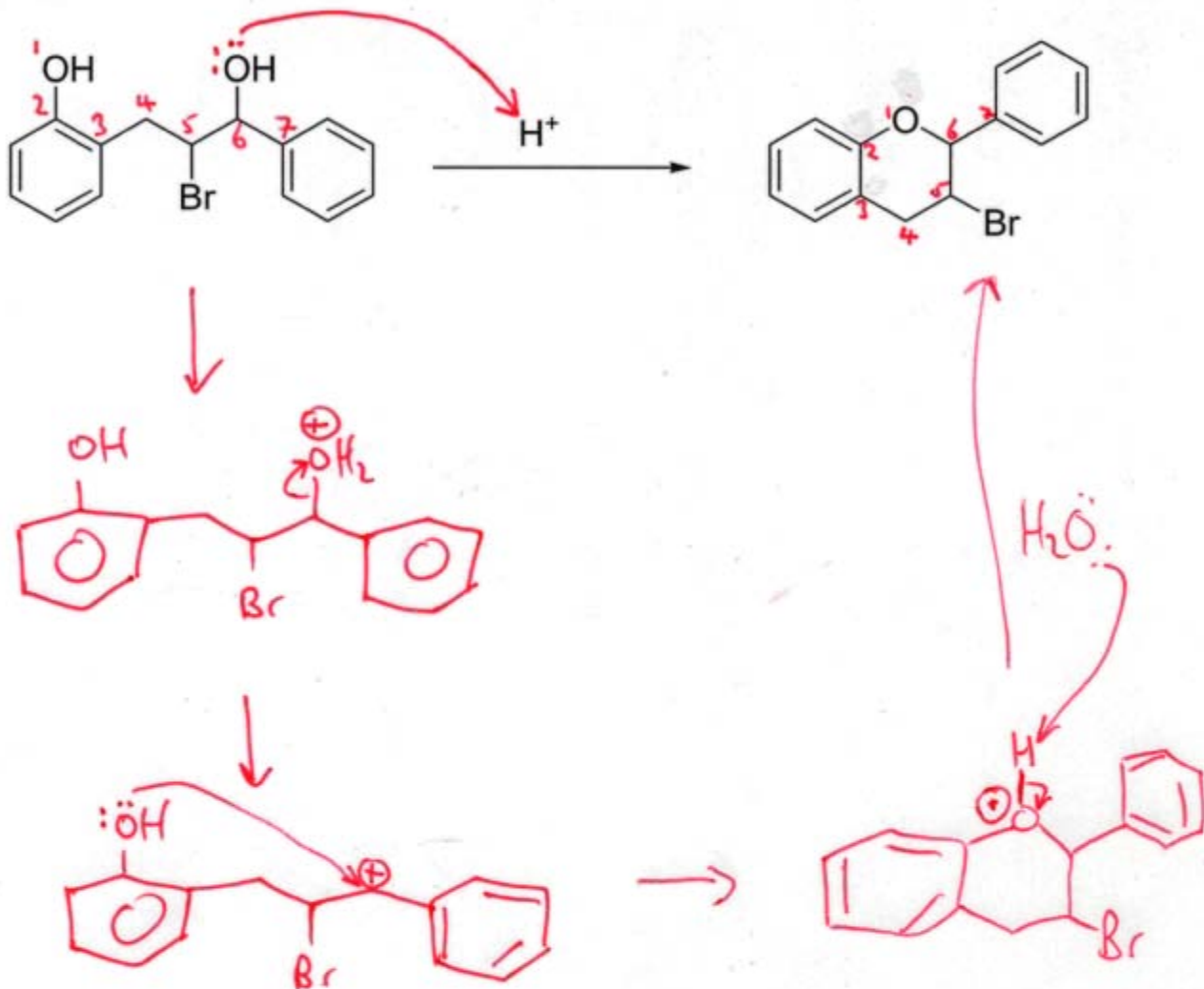
Answer 3 of the following 4 mechanism questions, each worth 5 points.

$3 \times 5 = 15$ points

3) Write the mechanism for the following addition reaction.



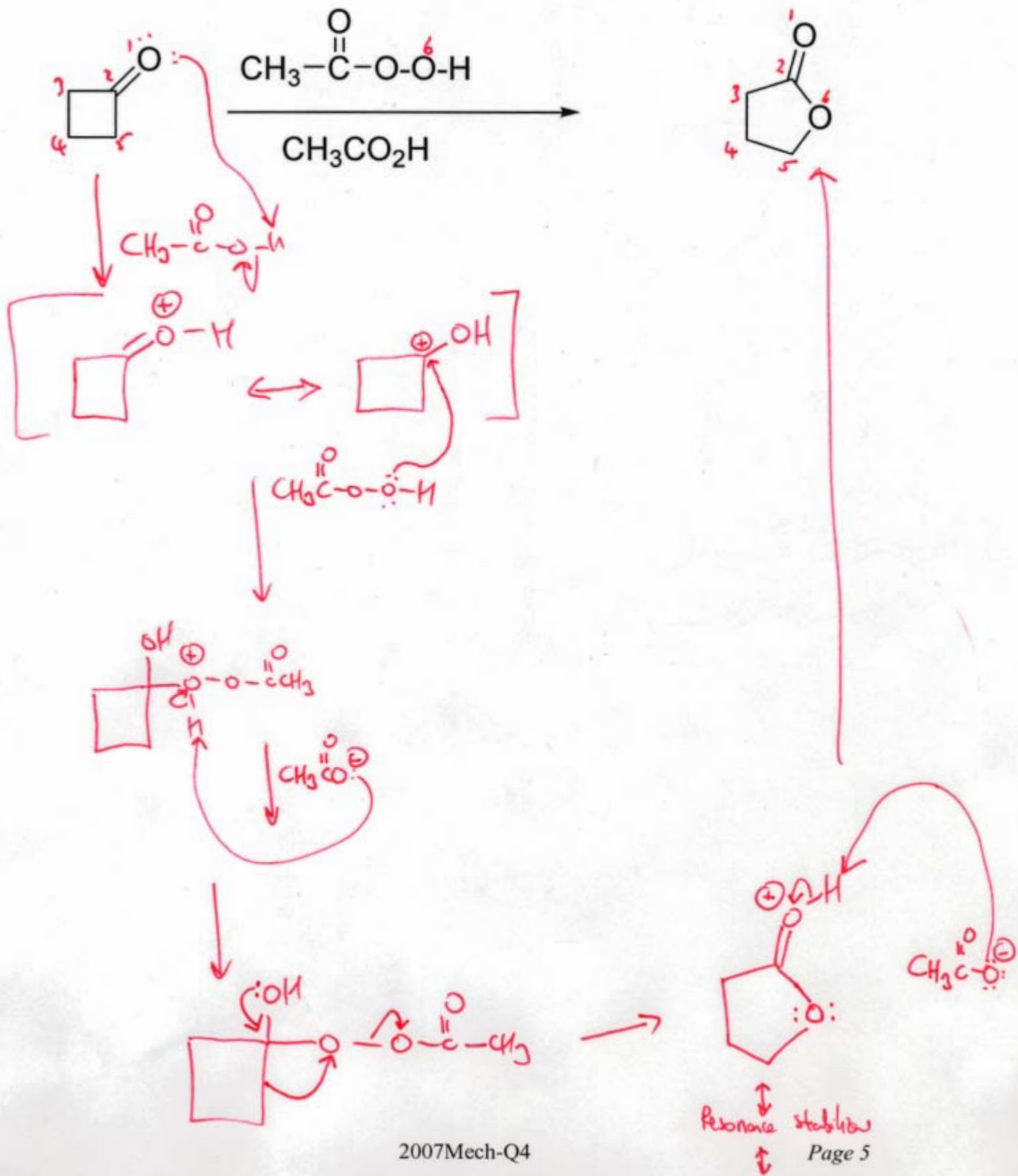
4) Write the mechanism for this reaction.



Benzylic Resonance Stabilized cation



5) Write the mechanism for this Baeyer Villiger oxidation.



6) Write the mechanism for this ring expansion.

