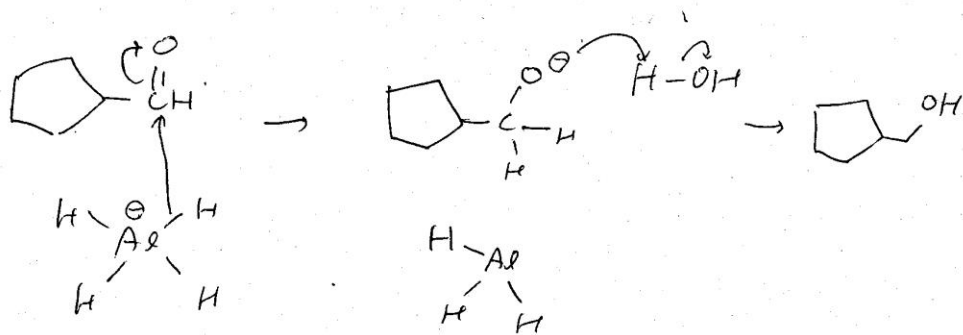
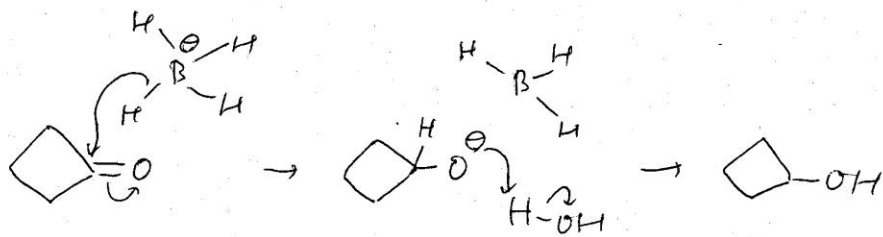


6
ANS

1.

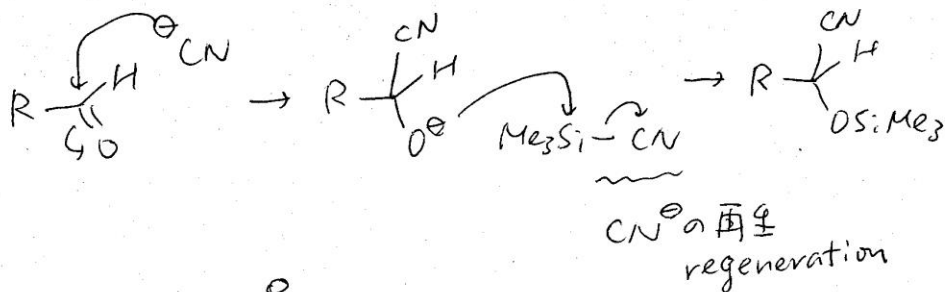


2.

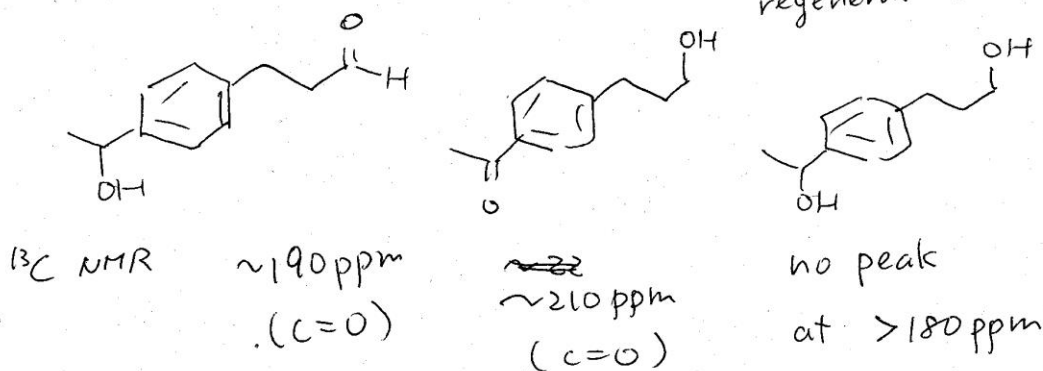
大三元の不安定な3員環は2次元のπ-軌道に不利

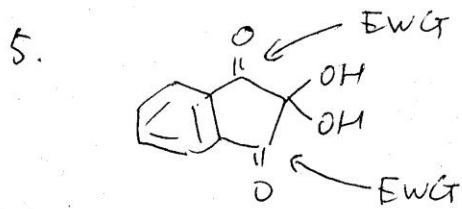
Three-membered ring has large ring strain, so favors open form.

3.

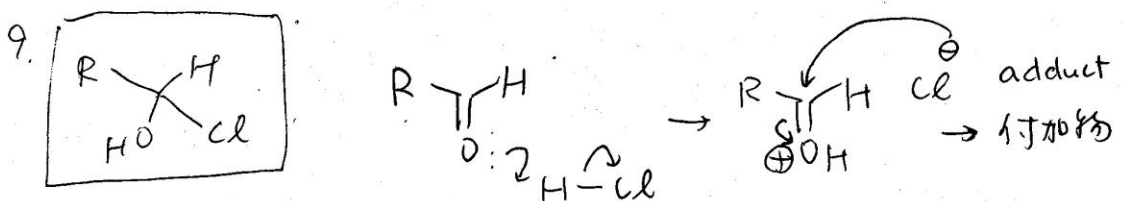
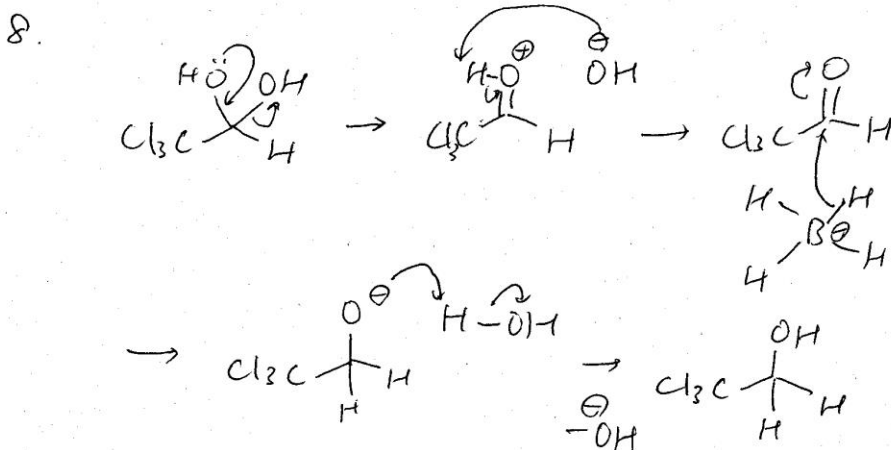
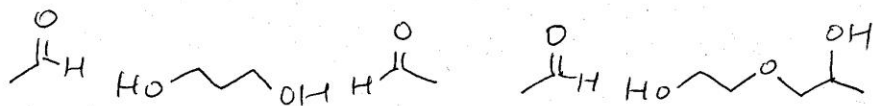
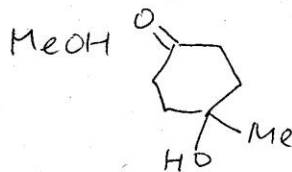
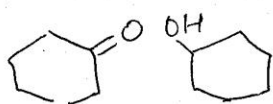
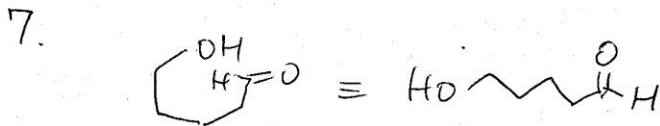
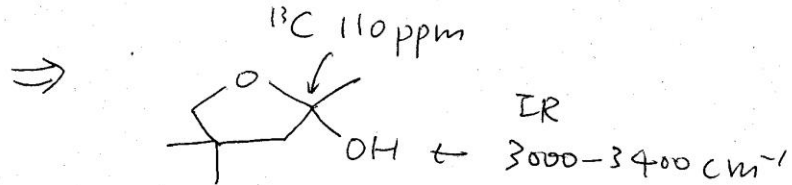


4.





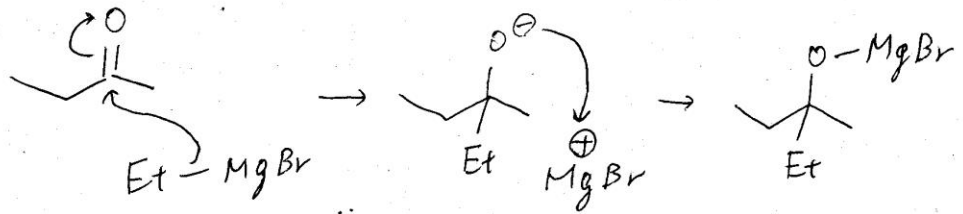
6. No C=O group (both from ^{13}C , IR)



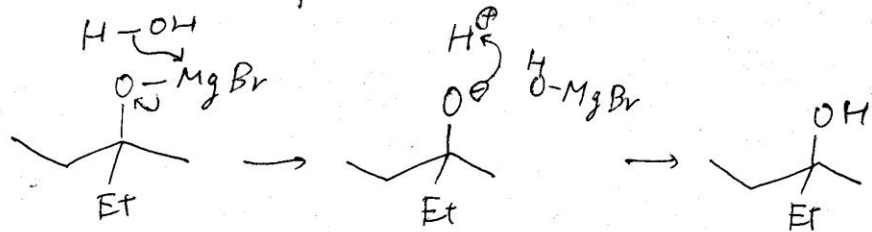
综合上述分析 - 可以推断出反应机理 - 7分/题, 共9分/题。
 付加反应是亲核性的 $\Delta S < 0$ 的。这个付加是亲核性的

The heat of reaction estimated from bond dissociation ~~energies~~ ^{energies} is -7 kJ/mol , which means this reaction is endothermic. Obviously ΔS value for addition reaction is negative. Hence, this reaction does not proceed spontaneously.

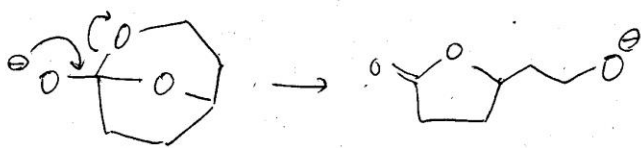
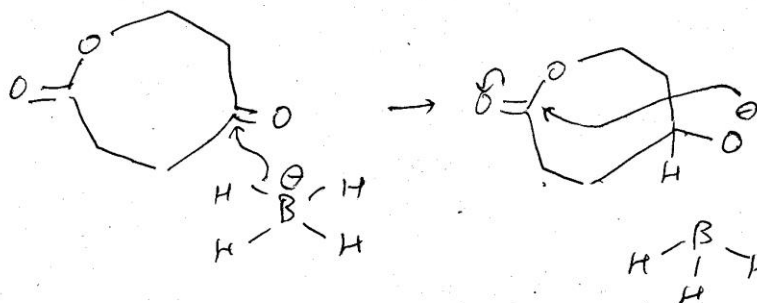
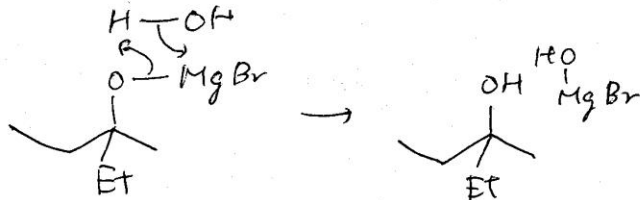
10.



水 work up 的 & work up 的 &



每度每度 全同的 环的 2 个 1,5-二氧杂环. 以下 2 个 OK.



马区动力... 5 页 12 个 1,5-二氧杂环