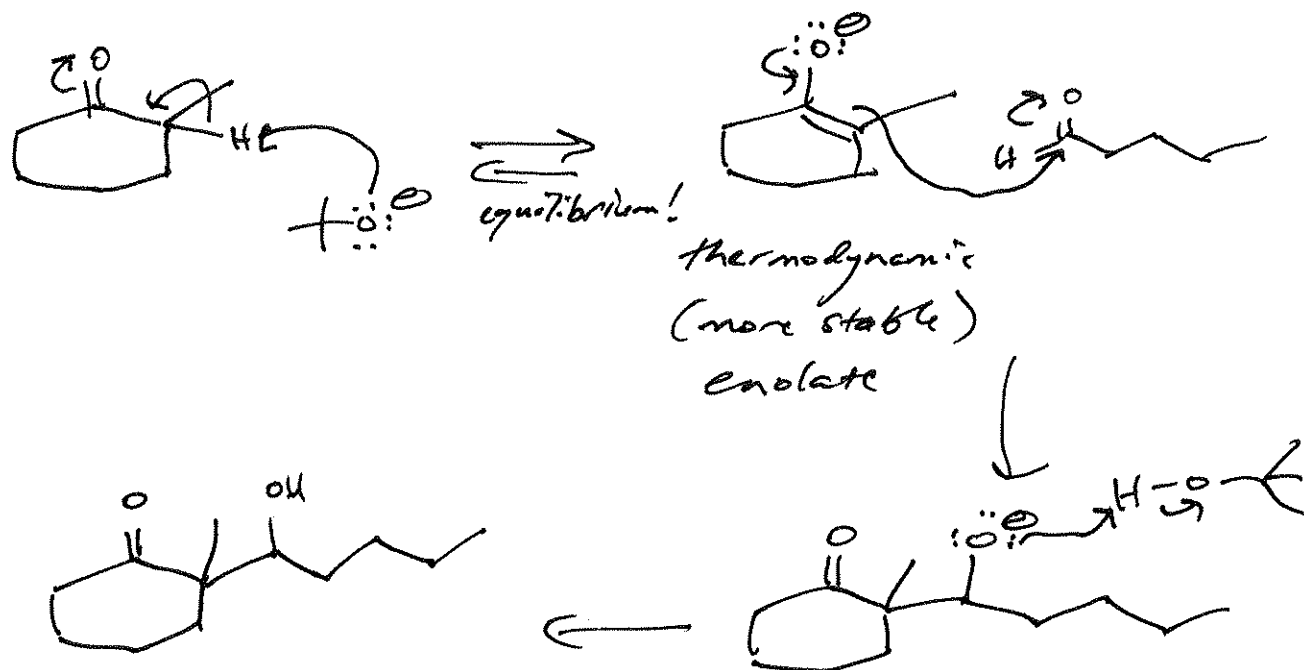
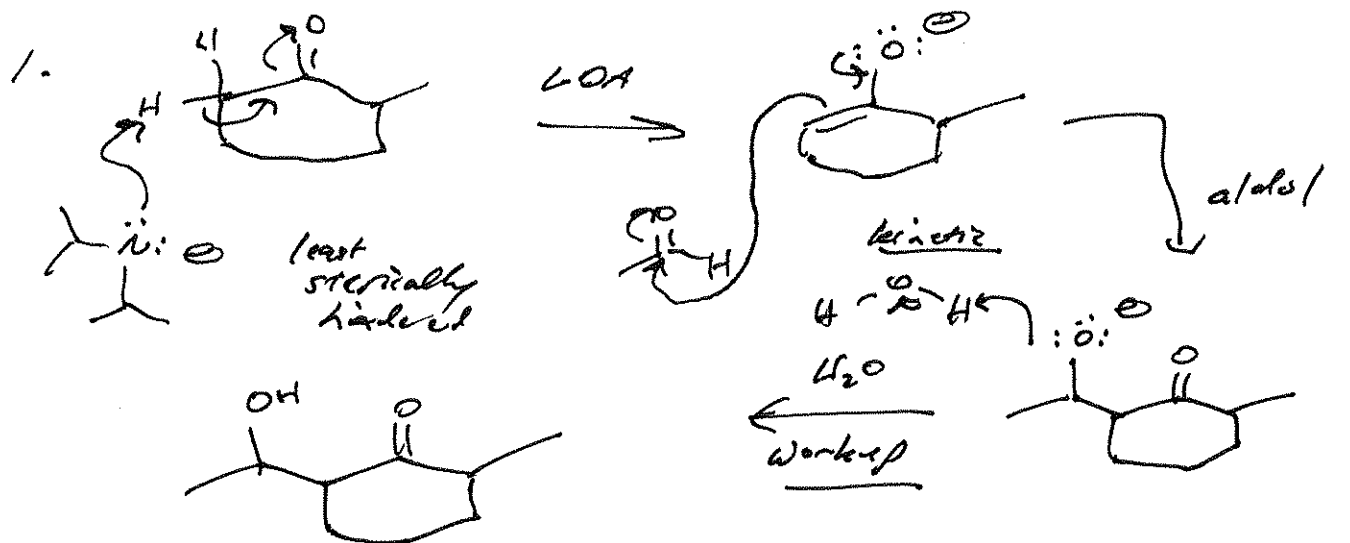
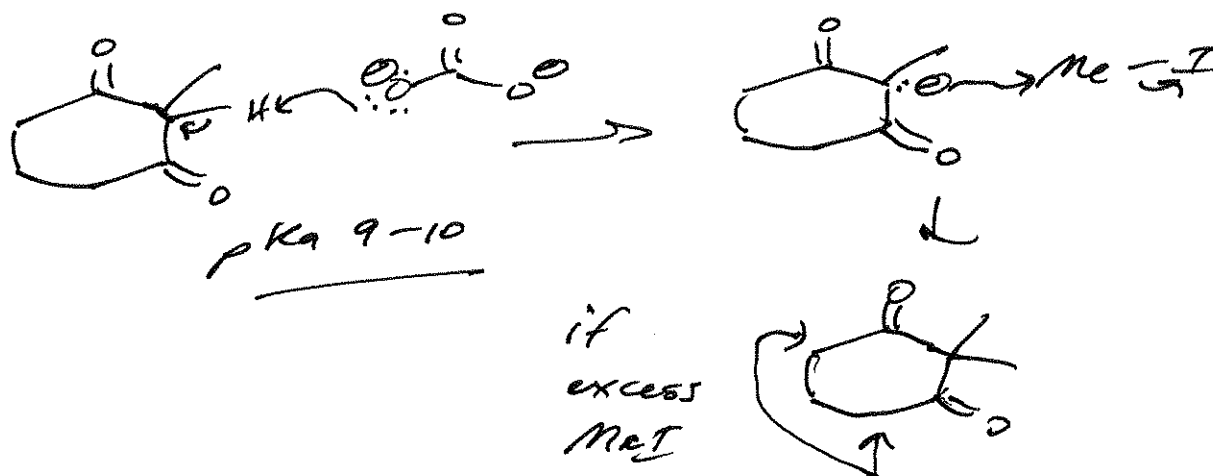
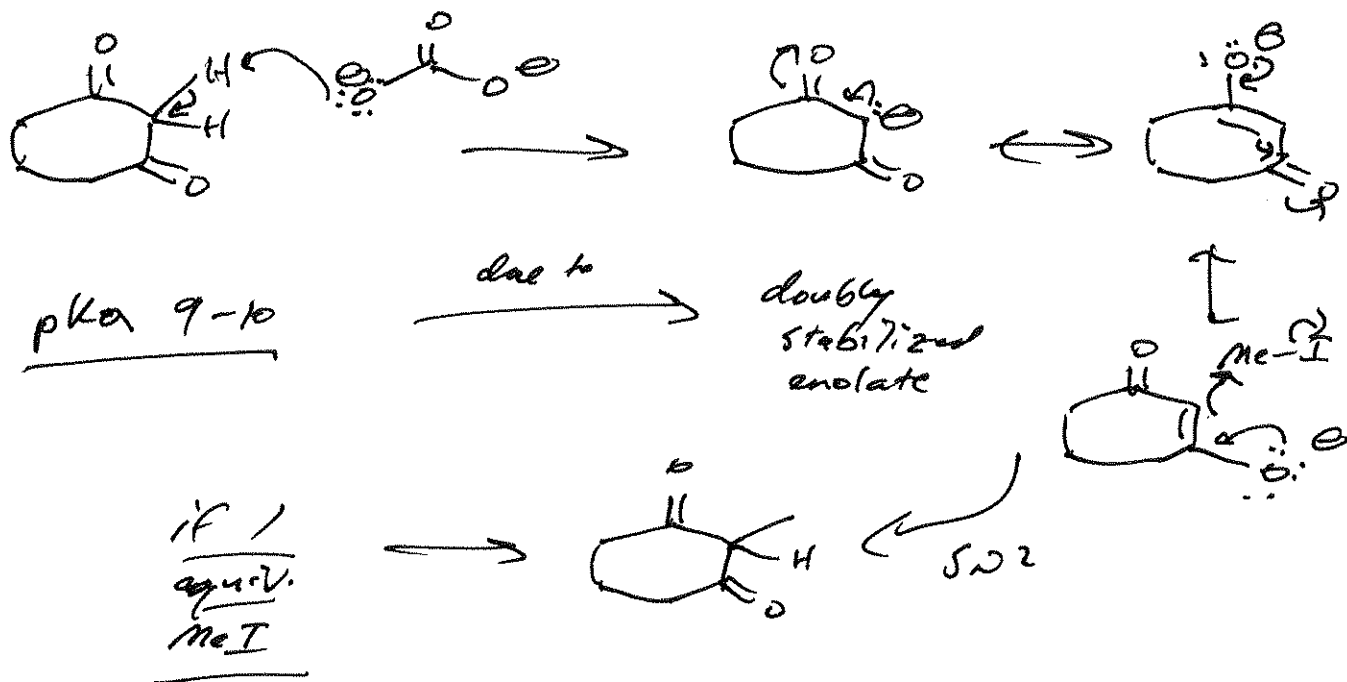


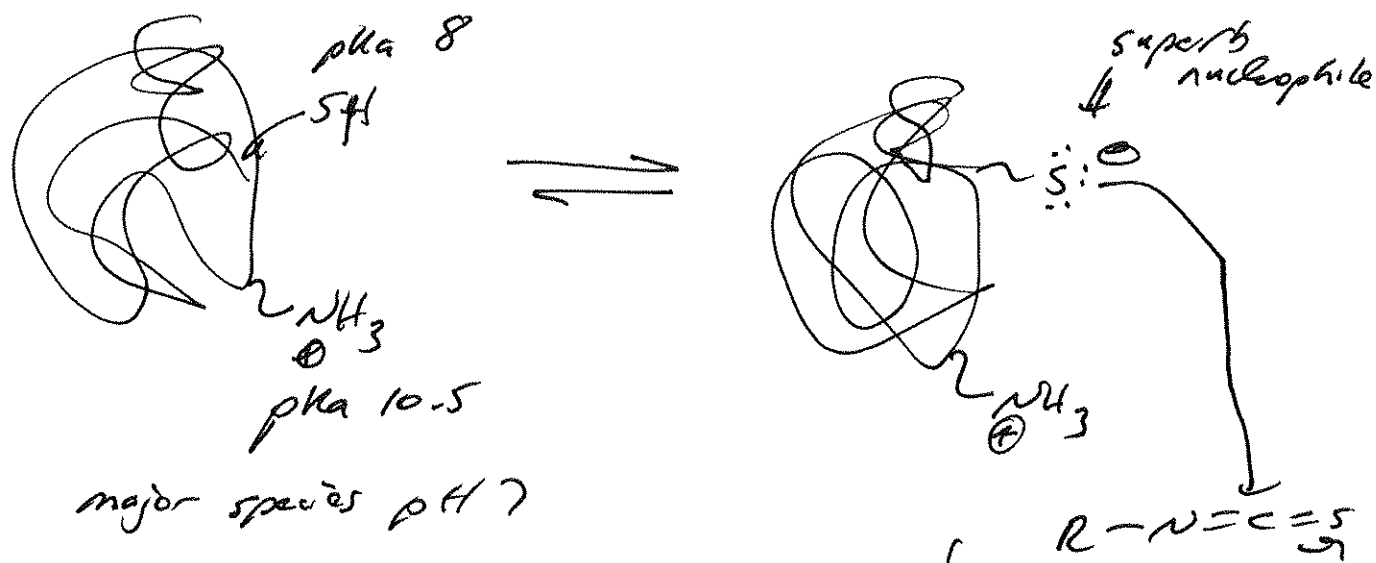
Problem set 8 - Answers



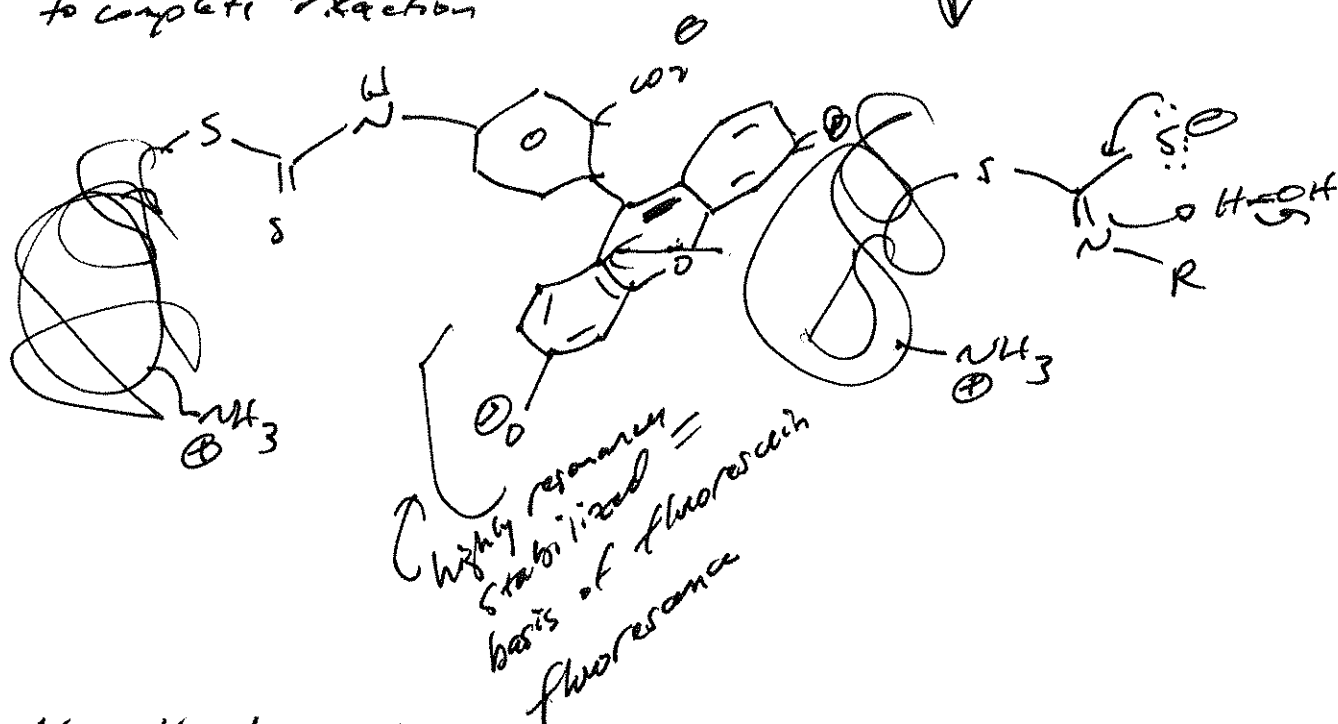


(could get additional methylation)

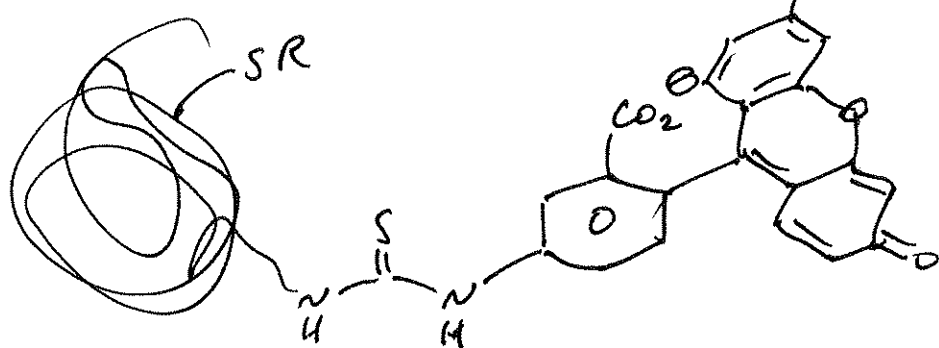
at these places, but much slower,
 much less acidic, only after double
 methylation at ~~the~~ carbon α to
 both carbonyls

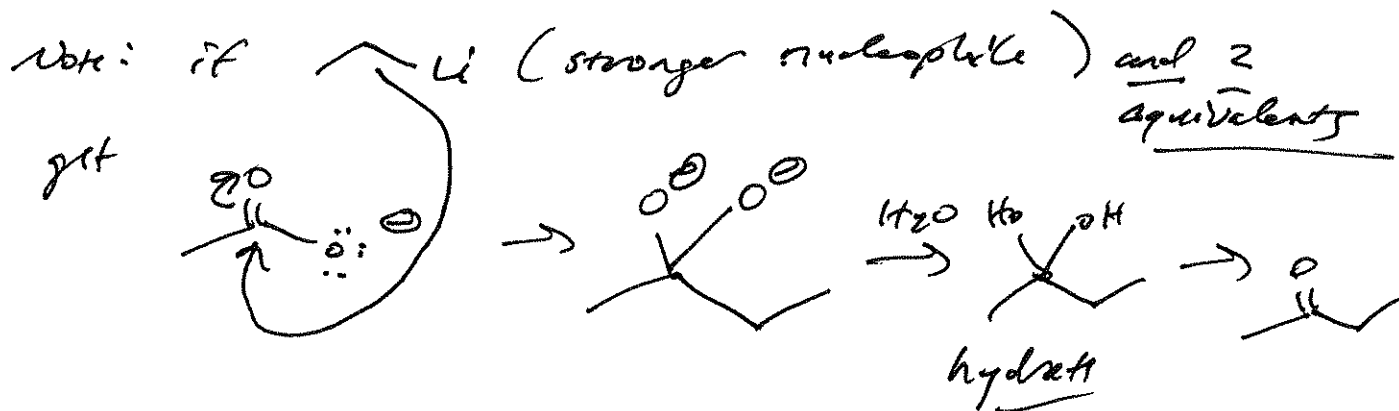
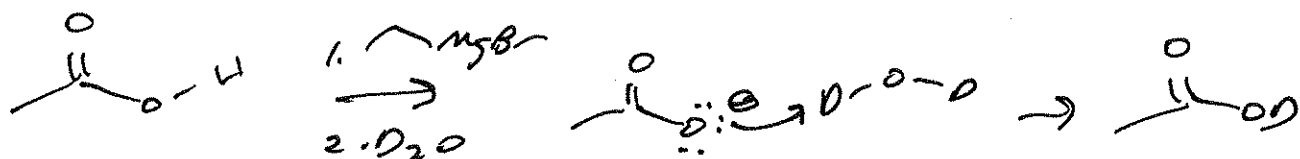
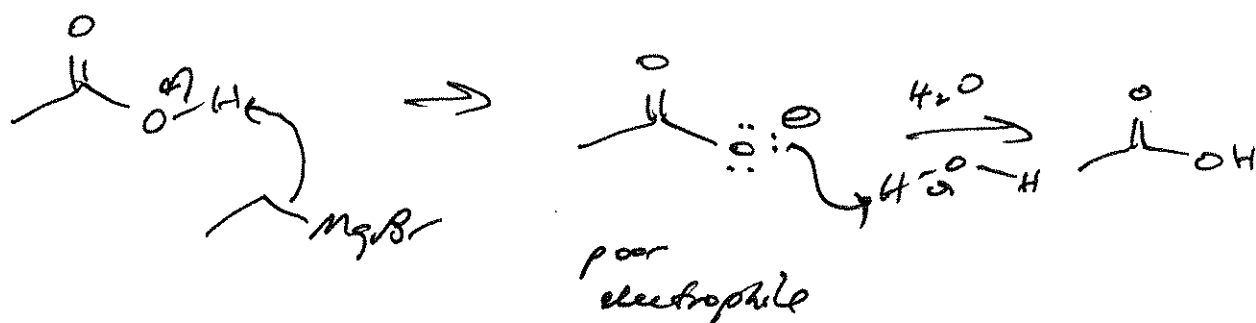
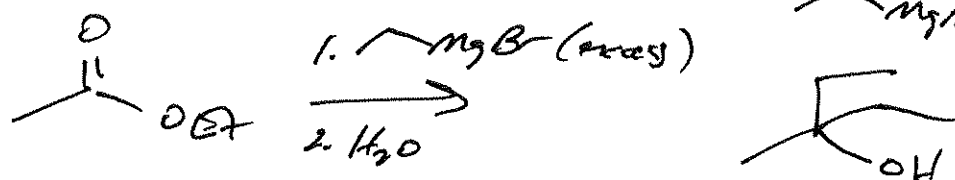
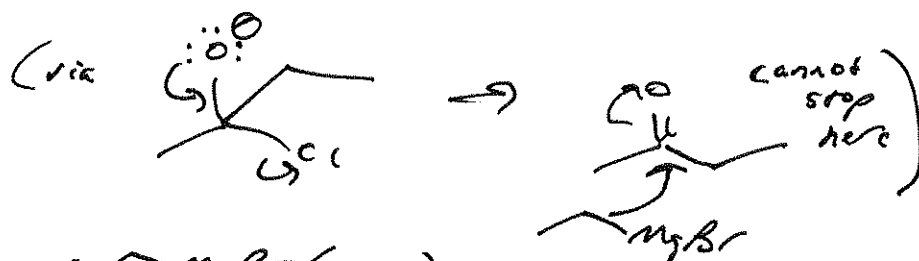
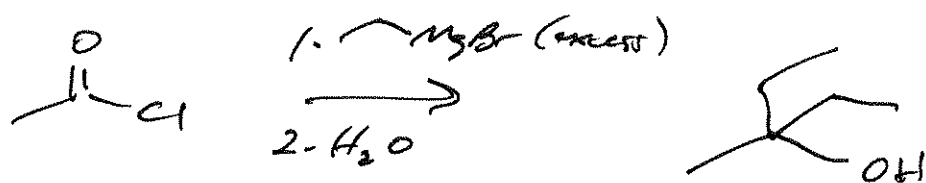


Le Chatelier's principle drives to complete reaction

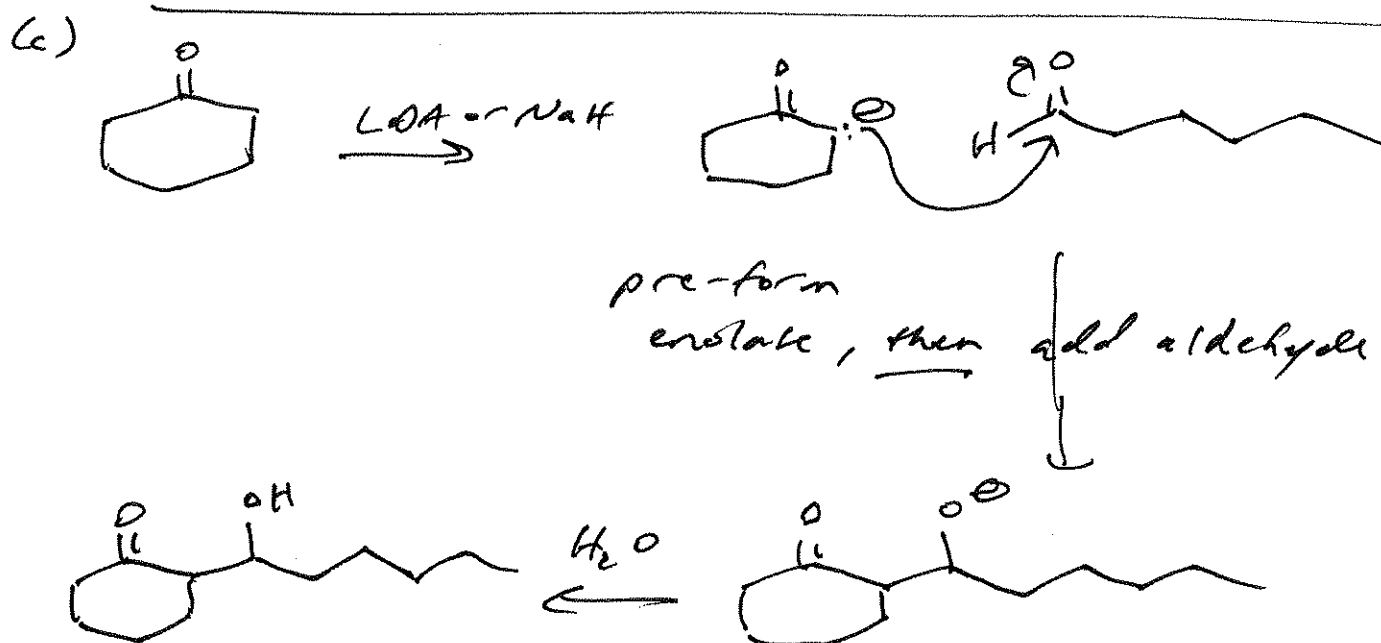
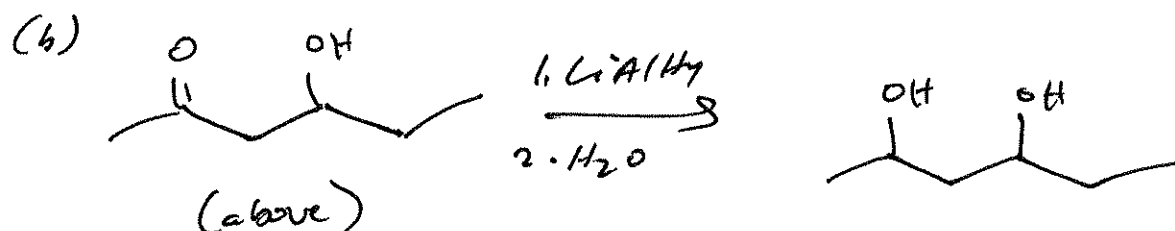
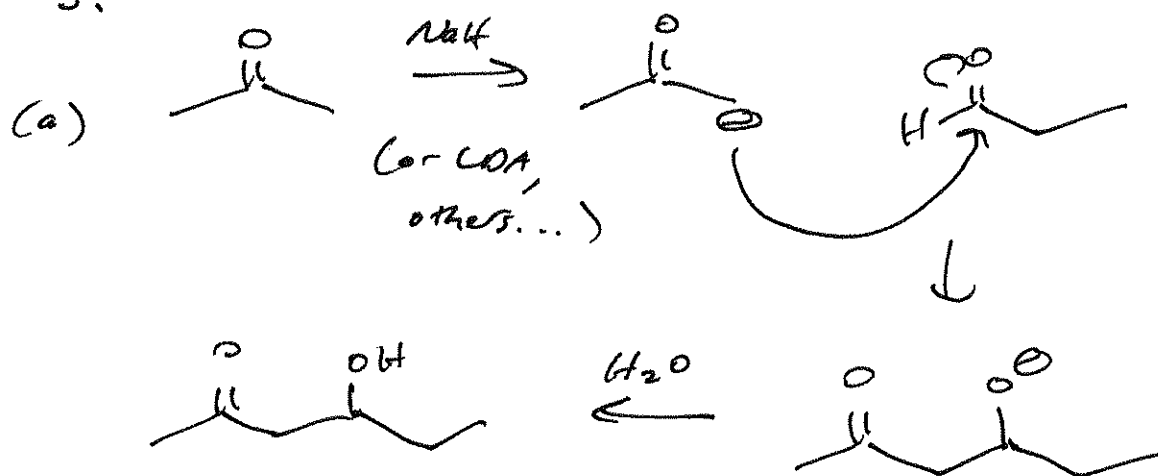


At pH 10, will also set eqn. at amine (RNH_2)





3.



Key for (a) and (c): Generate one enolate stoichiometrically (only 1 nucleophile), then add electrophile (RCHO better than ketone, too, as electrophile)