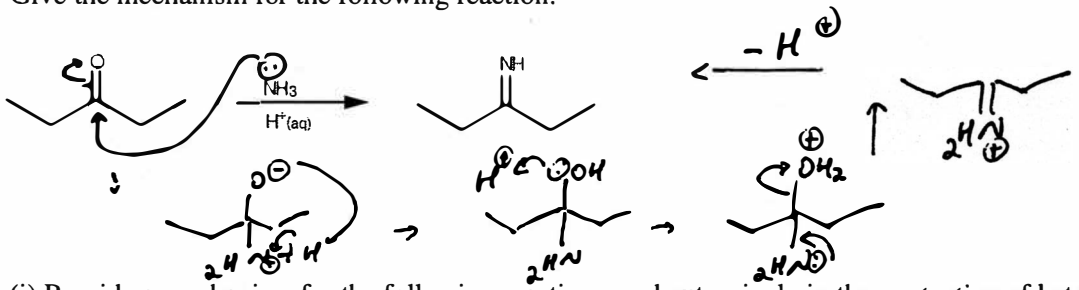
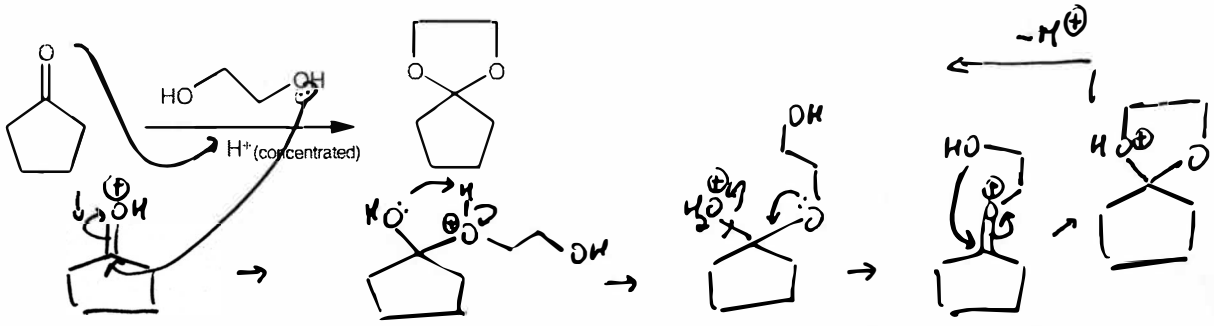
Chem 3325 Name : Answer Key **Problem Set # 7**

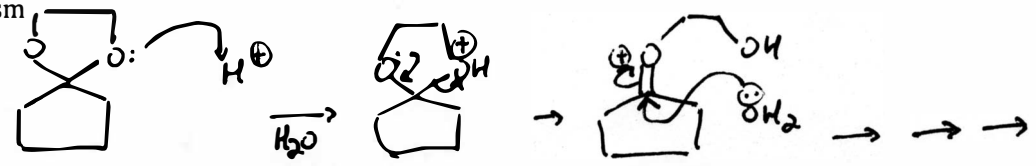
1 Give the mechanism for the following reaction:



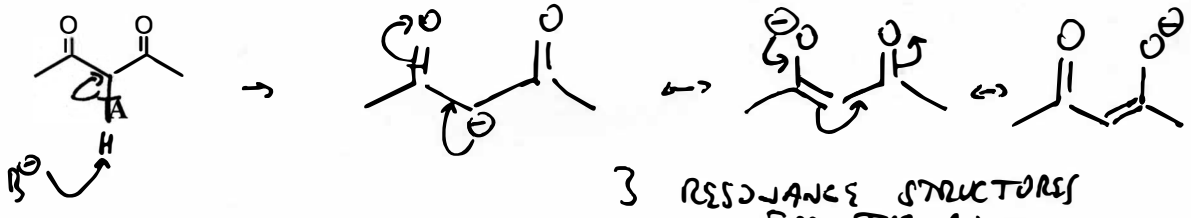
2 (i) Provide a mechanism for the following reaction, used extensively in the *protection* of ketones:



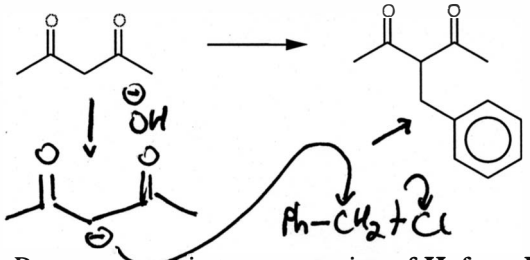
(ii) Identify the reagent(s) necessary to reverse this reaction and give the initial steps of this mechanism



3 (i) Explain why the diketone **A** below is unusually acidic, pK_a =7



(ii) Provide reagents and a mechanism for the following reaction:



4. Propose a multi-step conversion of **II** from **I**, an alternative scheme for the production of *ibuprofen* [complete on reverse side]