CHM 3150 Organic Chemistry II Dr. Laurie S. Starkey, Cal Poly Pomona **Chapter 21, Enols & Enolates, Part 1 – Practice Problems**

For clicker question voting, go to: https://pollev.com/lauriestarke263



Arrange the following protons in the order of INCREASING acidity (from least acidic to most acidic).

1

$$\begin{array}{cccc} & O & O \\ \parallel & \parallel & \parallel \\ CH_3-C-CH_2-C-OCH_2CH_3 \\ \uparrow & \uparrow & \uparrow \\ & \parallel & \parallel \parallel \end{array}$$

Predict the major product.

1) strong base

$$_{2)}$$
 CH $_{3}$ CH $_{2}$ —Br

3

Draw LDA (lithium diisopropylamide)

Predict which site will react with one equivalent of LDA. 4

Predict the major product.

3) H₃O⁺

5 1) NaOEt

6 Provide a mechanism for the following bromination reaction.

$$rac{\operatorname{Br}_2,\operatorname{AcOH}}{\operatorname{Br}_2}$$

If the reaction shown uses an excess of Br₂ and goes to completion, a total of how many bromine atoms will be in the final product?

7

$$CH_3$$
 Er_2
 $(excess)$
 $NaOH$

Of the following, which compound is in equilibrium with the greatest percentage of its enol isomer?*

A)

D)

E)

8