Organic II (Quiz 1B)
Name:

The following quiz starts 5 minutes into your recitation, at which point you have 30 minutes to complete it. Be as complete in your answers as possible for full credit. Good luck!

Predict the product of the following reaction and propose a mechanism (7 points each).

1. 
   \[
   \begin{align*}
   &\ \text{OH} \\
   \rightarrow \\
   &\text{NaH} \\
   \rightarrow \\
   &\text{H}_3\text{CBr}
   \end{align*}
   \]

2. 
   \[
   \begin{align*}
   &\text{N}=\text{N}=\text{CH}_2 \\
   \rightarrow \\
   &\text{O} \text{OH}
   \end{align*}
   \]

Propose the reactions necessary to carry out the following synthesis (6 points)

3. 
   \[
   \begin{align*}
   &\ \text{OH} \\
   \rightarrow \\
   &\ \text{cycle}
   \end{align*}
   \]