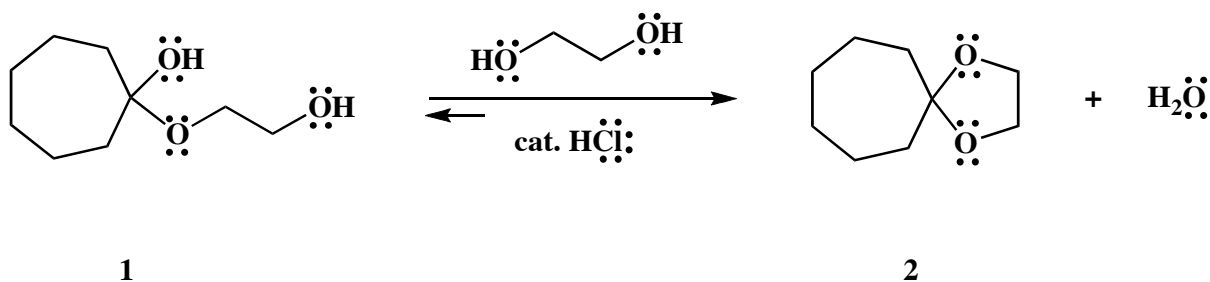


## Quiz #2

1. (5 points)

When cycloheptanone is treated with an excess of ethylene glycol and a catalytic amount of HCl, the hemiacetal **1** is formed as an intermediate *en route* to the corresponding acetal **2**. Draw the mechanism for the conversion of the hemiacetal **1** to the acetal **2**, using the curved-arrow notation to indicate the reorganization of electron density. Show all intermediates and denote all unshared electrons, nonzero formal charges, countercharges, and reversibility or irreversibility.



2. (5 points)

State whether the following reaction is nonregioselective, partially regioselective, completely regioselective, nonstereoselective, partially stereoselective, and/or completely stereoselective. Describe your reasoning clearly and succinctly.

