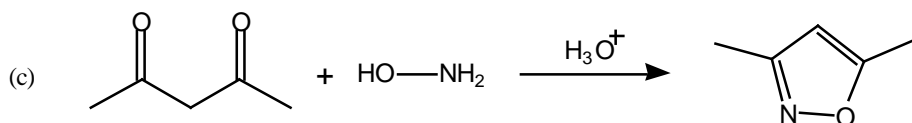
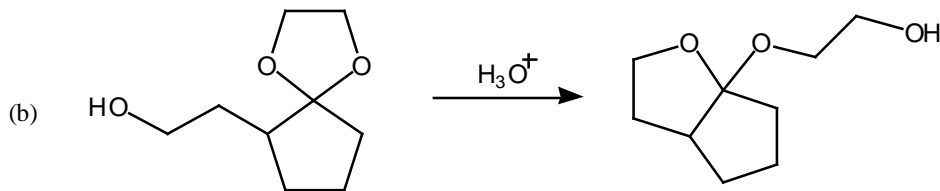
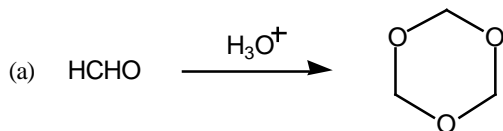
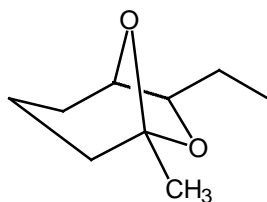


Problem Set #5
CH242-2002S

[1] Propose a reasonable mechanism for the following reaction.



[2] Exobrevicomin (see below) is a pheromone of the Western pine beetle that destroys ponderosa pines. Show the structure of a dihydroxy ketone that would give exobrevicomin upon treatment with an acid catalyst, and propose a mechanism for its formation. You may ignore stereochemistry.



Exobrevicomin

[3] Starting with cyclohexene and other reagents of your choice, show efficient synthetic routes to the following compounds.

