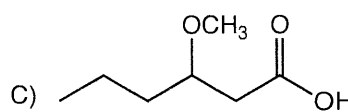
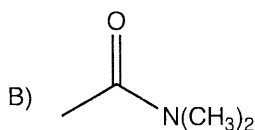
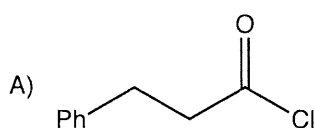


(25 Points)

1. (6 Points) Give the correct names for each of the following compounds.



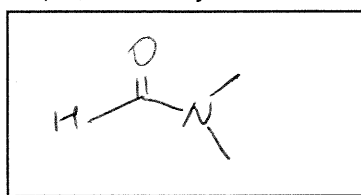
3-phenylpropanoyl chloride

N,N-dimethylacetamide

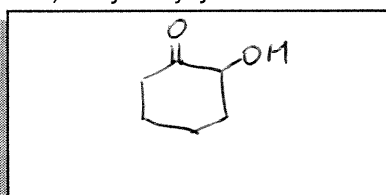
3-methoxyhexanoic acid

2. (6 Points) provide the correct structure for each of the following compounds.

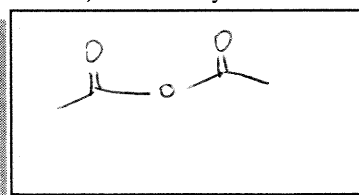
A) N,N-Dimethylformamide



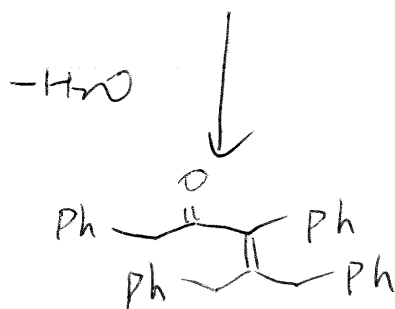
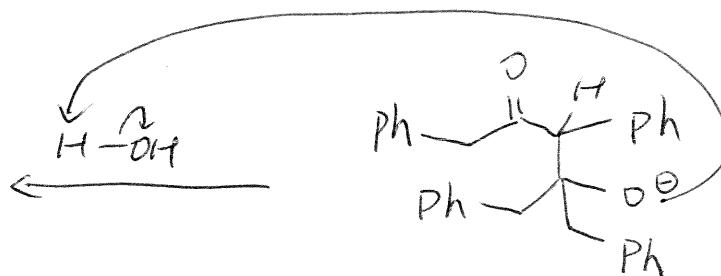
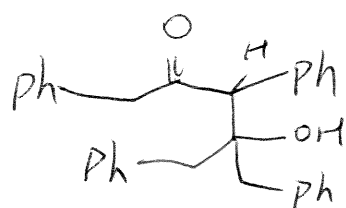
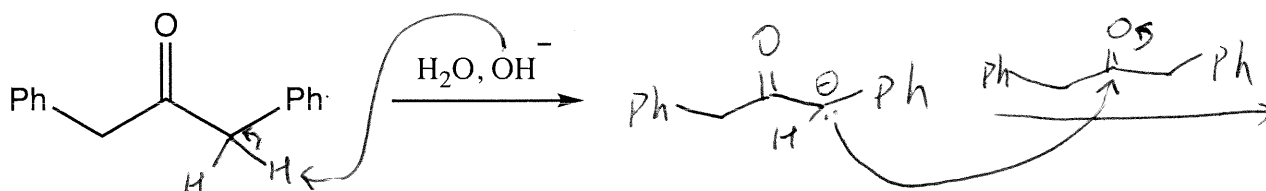
B) 2-Hydroxycyclohexanone



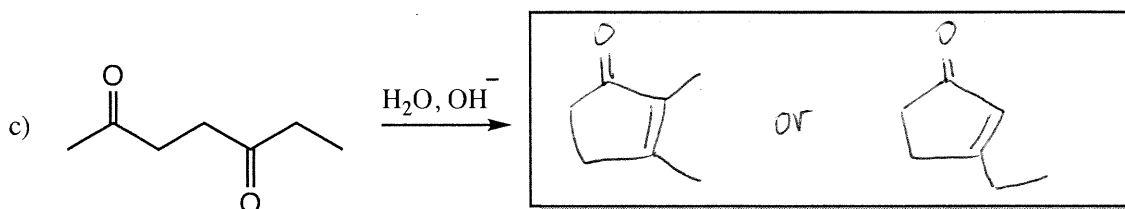
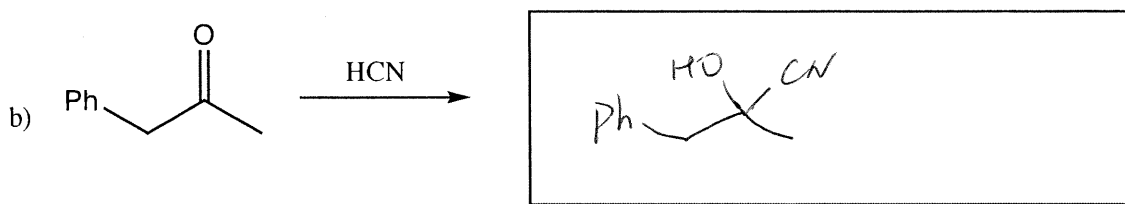
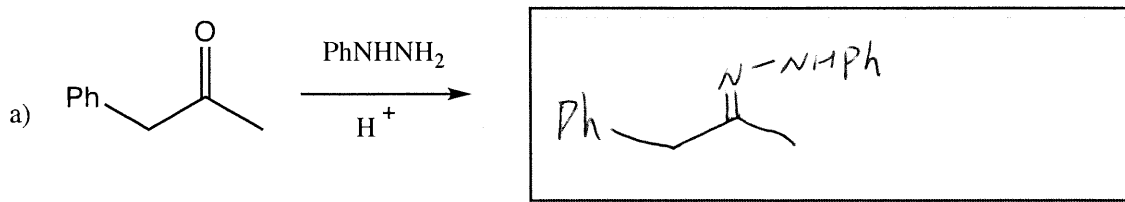
C) Acetic anhydride



3. (5 Points) Provide a stepwise mechanism for the following Aldol reaction.



4. (8 Points, 2 Pts. Each) Complete the following chemical transformations by filling the boxes appropriately with reactant, reagents, or products.



Hint: Intramolecular Aldol Reaction

