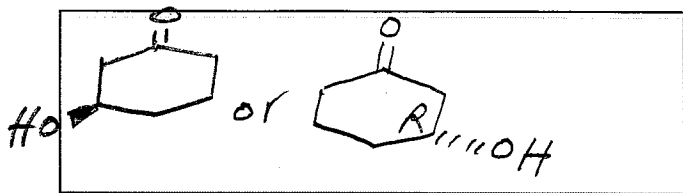
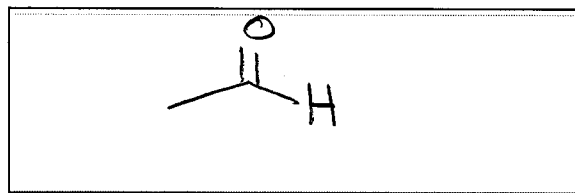


1. (4 Pts, 2 pts each) Provide the structure for the following compounds.

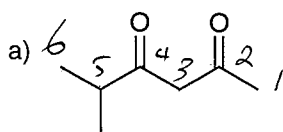
a) (R)-3-hydroxycyclohexanone



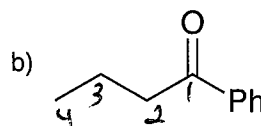
b) Acetaldehyde



2. (4 Pts, 2 pts each) Give the IUPAC name for the following compounds.

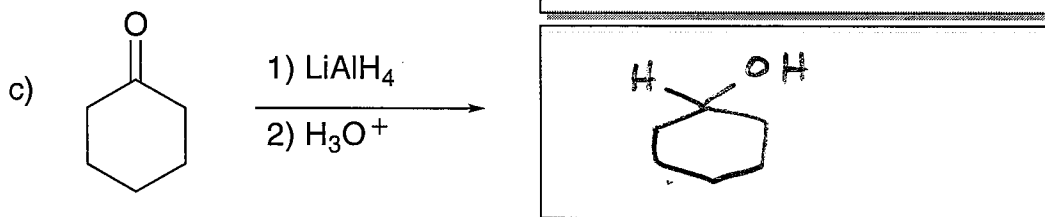
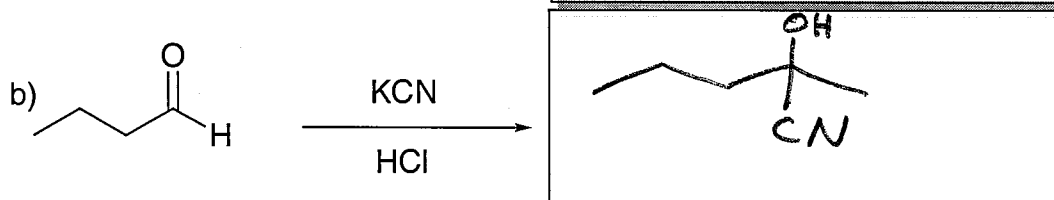
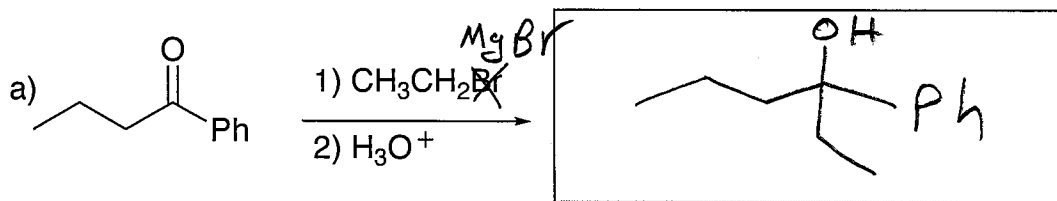


5-methyl-4-oxo-2-hexanone



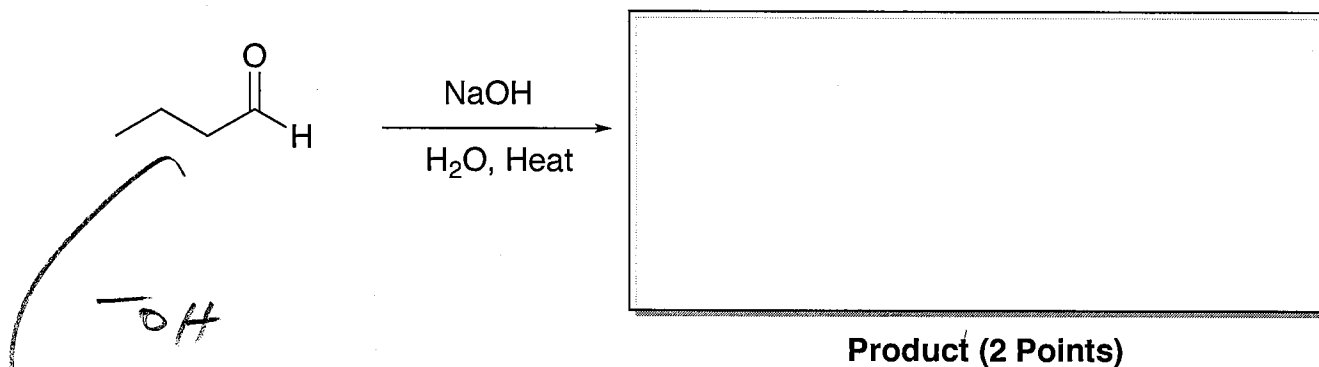
1-phenyl-1-butanone  
butyrophenone (common name)

3. (6 Pts, 2 pts each) Complete the following chemical transformations.



Q5

4. (6 Points total) Provide a stepwise mechanism for the following Aldol condensation reaction.



Mechanism (4 Points):

