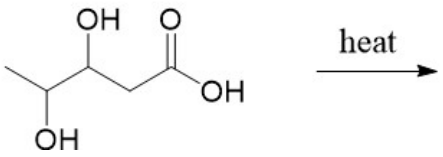
CHM 3150 Organic Chemistry II
Dr. Laurie S. Starkey, Cal Poly Pomona
Chapter 20 Carboxylic Acids & Their Derivatives, Part 3 – Practice Problems

For clicker question voting, go to:
https://pollev.com/lauriestarke263

Predict the major product of the following reaction sequence.

1

2



3

Arrange the given species in the order of DECREASING electrophilicity (best E^+ to worst E^+).

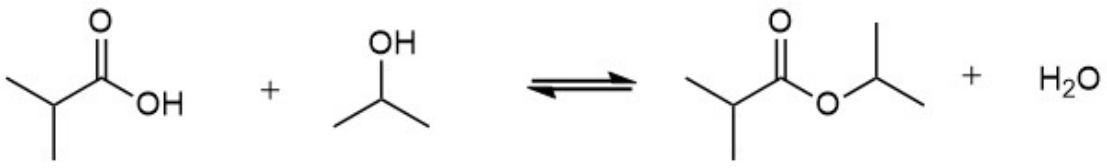
I II III IV

4

For each, predict whether the forward or reverse reaction is favored.

I

II

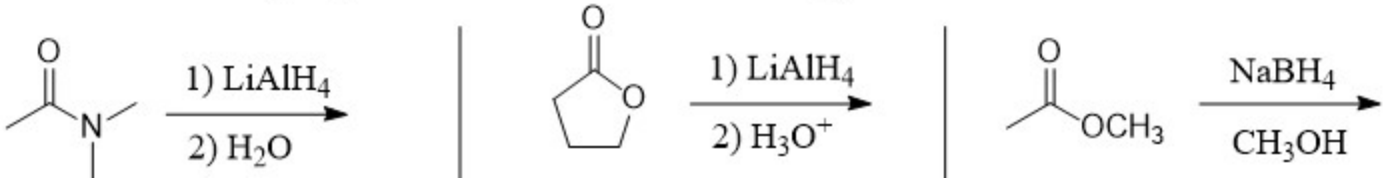


Predict the major products for the following reactions.

5

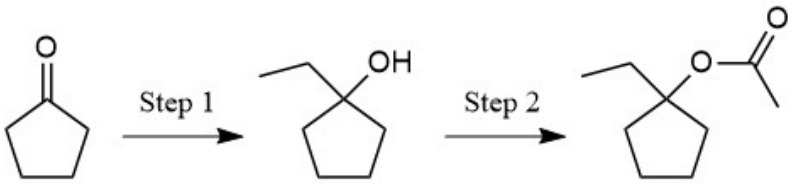
6

Predict the major products for the following reactions.



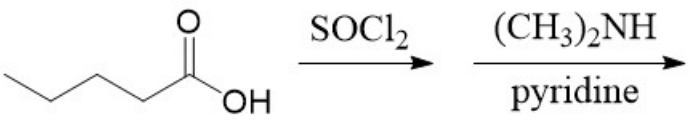
7

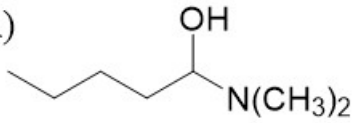
Provide the necessary reagents.



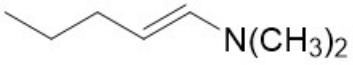
Predict the major product of the following reaction sequence.

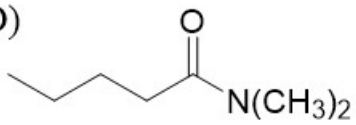
1



A)


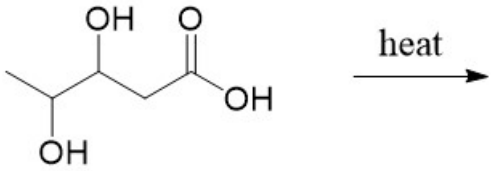
B)

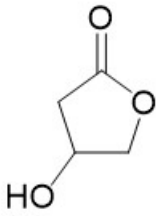

C)


D)


E) No Reaction

2 Predict the major product.



A)


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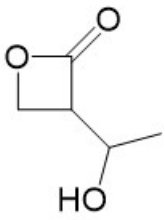

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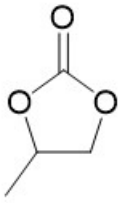
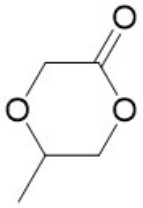
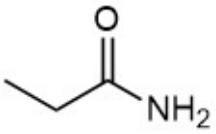
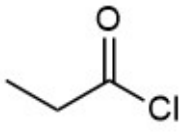


D)


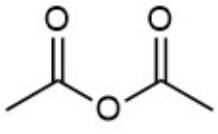
3 Arrange the given species in the order of DECREASING electrophilicity (best E^+ to worst E^+).



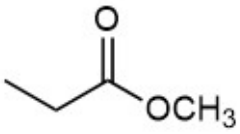
I



II



III



IV

A) III > II > IV > I

B) II > III > IV > I

C) II > IV > I > III

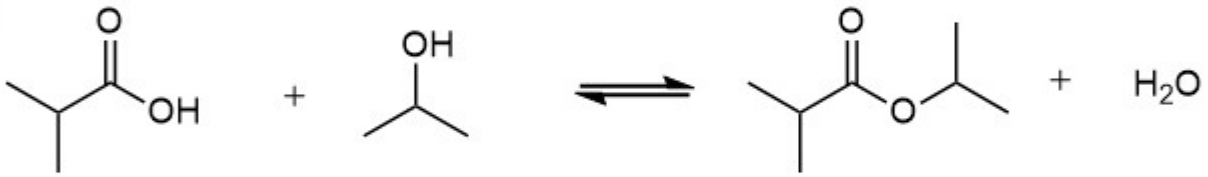
D) IV > II > I > III

E) III > II > I > IV

4 For each, predict whether the forward or reverse reaction is favored.

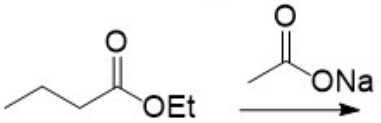
I

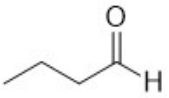
II

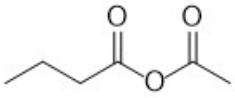


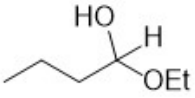
	A	B	C	D	E
I	←	←	→	→	→
II	→	neither	→	←	neither

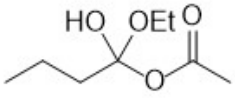
5 Predict the major products for the following reactions.



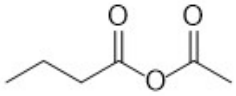
A) 



B) 



C) 



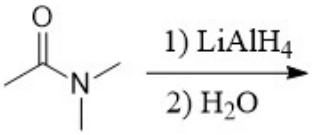
D) 

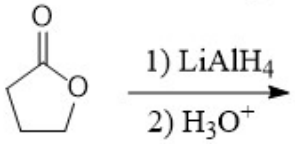
No Reaction

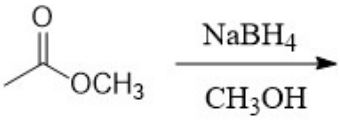
E) 

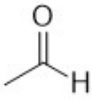
No Reaction

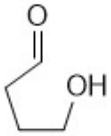
6 Predict the major products for the following reactions.



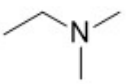


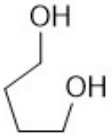


A) 

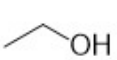


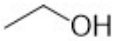
No Reaction

B) 



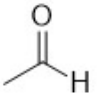
No Reaction

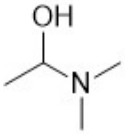
C) 

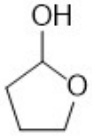


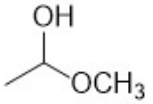
D) No Reaction

No Reaction

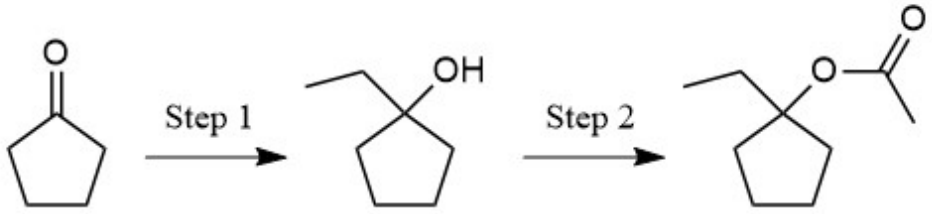


E) 





7 Provide the necessary reagents.



I. 1) EtNa; 2) H_3O^+; 3) AcCl, pyridine

II. 1) EtLi; 2) H_3O^+; 3) AcCl, pyridine

III. 1) EtMgBr; 2) H_3O^+; 3) AcOH, pyridine

IV. 1) EtMgBr; 2) H_3O^+; 3) AcOH, H_2SO_4

A) II only

B) III only

C) II and IV only

D) II, III and IV only

E) I, II, III and IV