

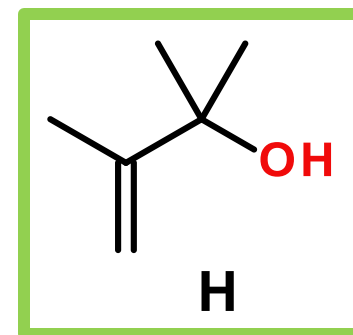
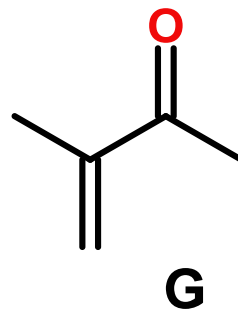
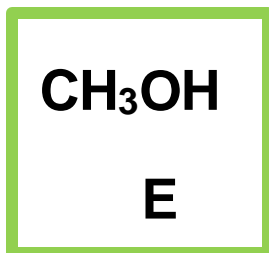
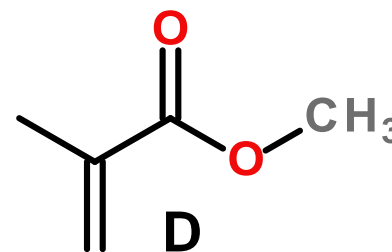
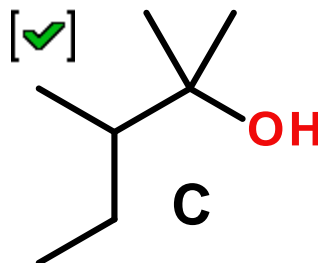
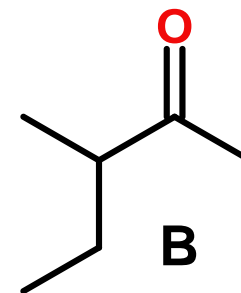
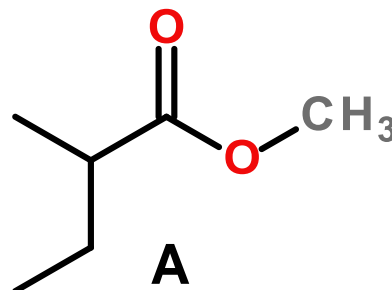
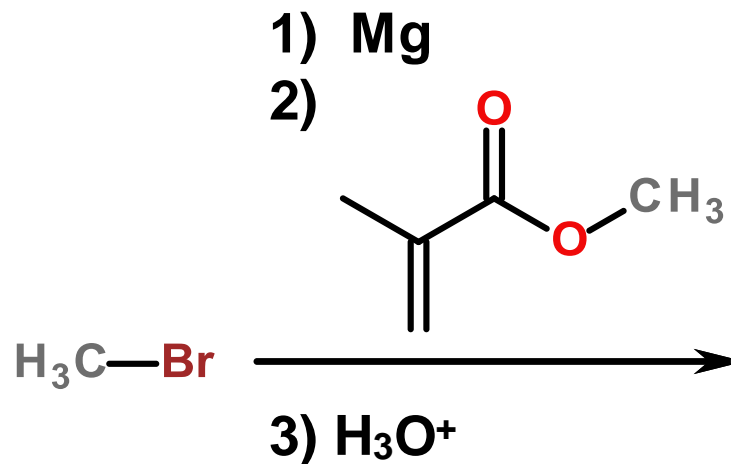
Vitamins

February 23 is the birthday in 1884 of Polish biochemist Casimir Funk, who realized that certain substances in food were essential to good health, and named them “vitamines,” with “vita” meaning vitality and “amines” meaning chemical compounds containing nitrogen.

www.acs.org 365: Chemistry for Life, February 23, 2012

Give the major organic product(s) of the following reaction. Give your answer as a text answer, with the correct answers being listed in alphabetical order. (Example: xxxx a b)

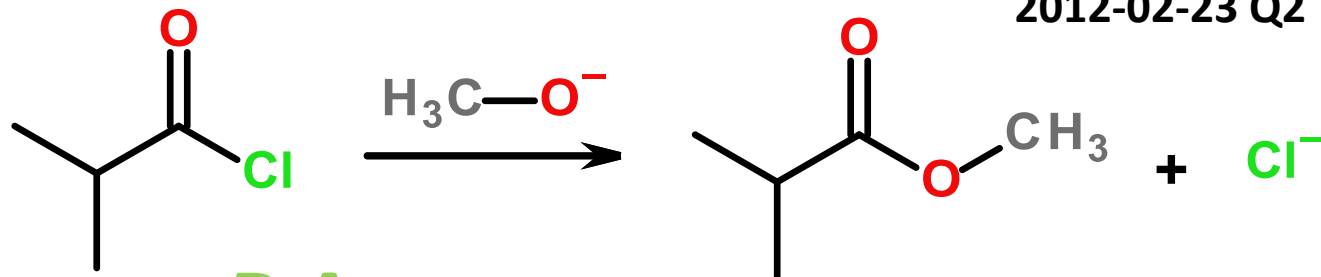
2012-02-23 Q1



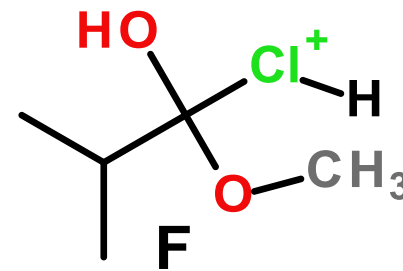
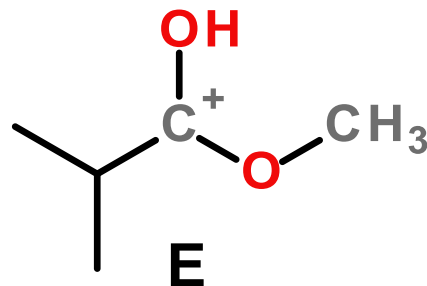
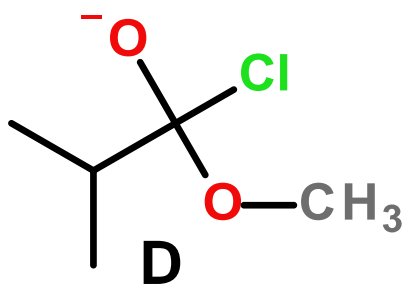
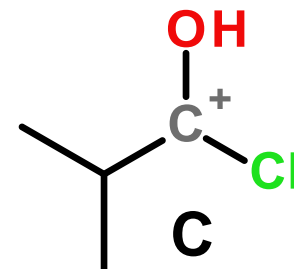
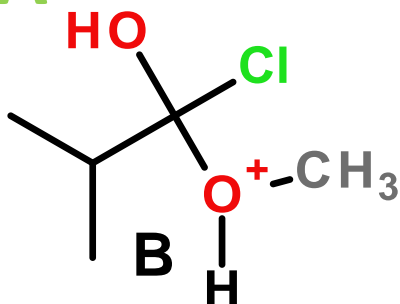
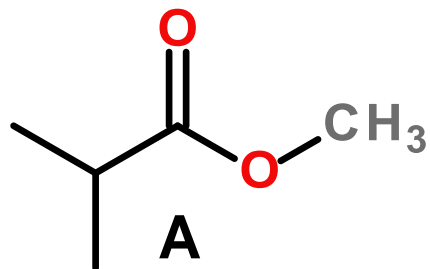
Correct Answer: E H

Consider the reaction shown below, in which methylpropanoyl chloride is reacted with CH_3O^- . Consider the reaction in the context of a CAN mechanism, and give the order of the organic intermediates as your answer. Since A is the final product, make sure that A is your last answer. Give your answer as a text answer, with the correct answers being listed in alphabetical order. (Example: xxxx b a)

2012-02-23 Q2

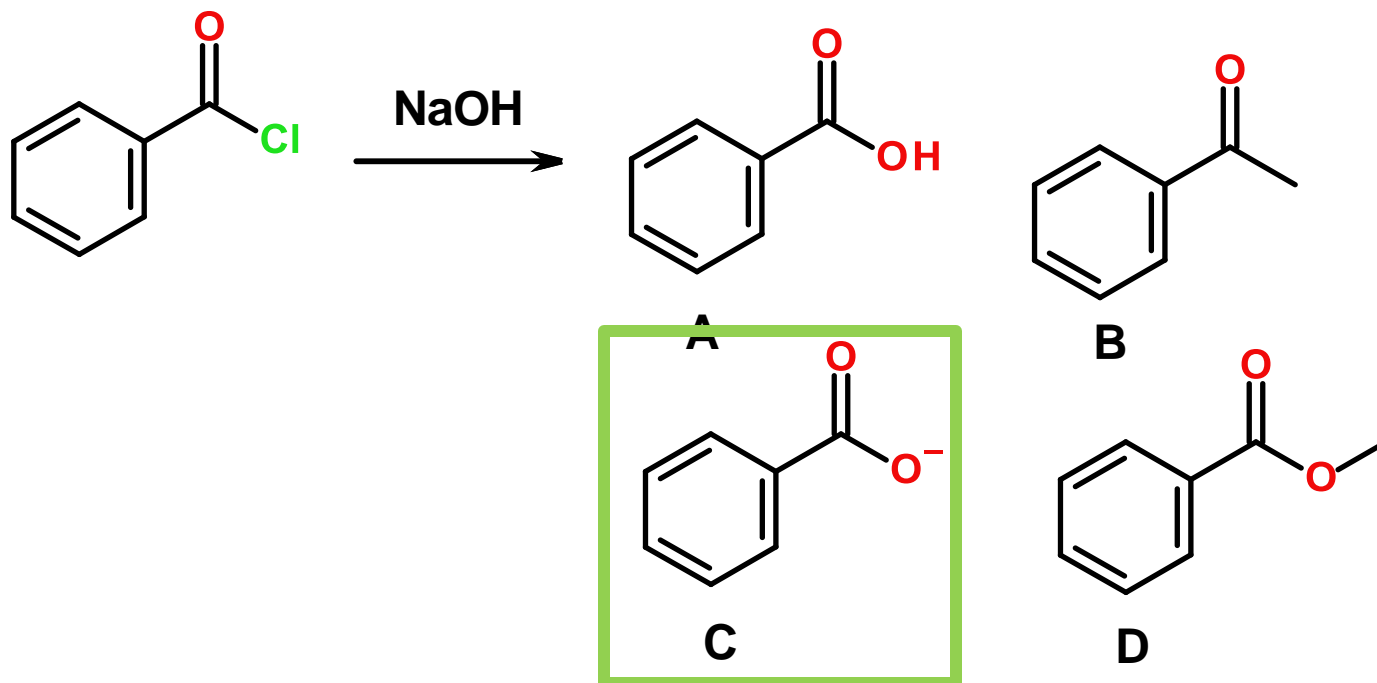


Correct Answer: D A



Give the major organic product(s) of the following reaction. Give your answer as a text answer, with the correct answers being listed in alphabetical order. (Example: xxxx a b)

2012-02-23 Q3

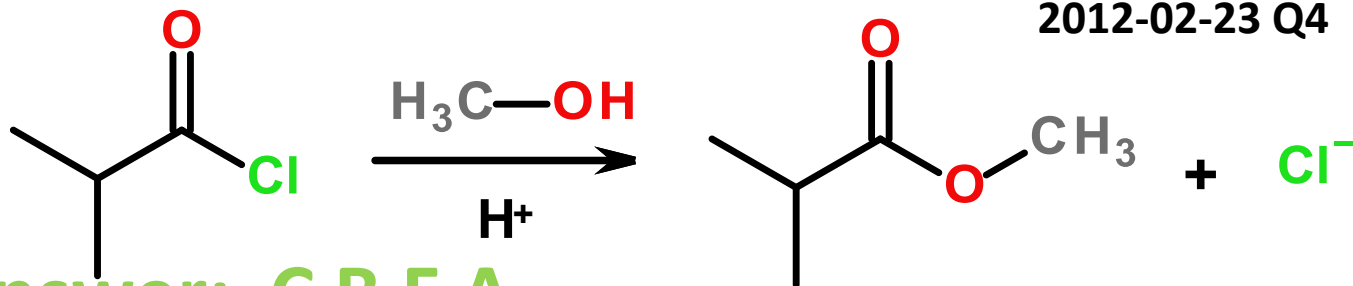


E - None of these products are a major product of the reaction that is shown.

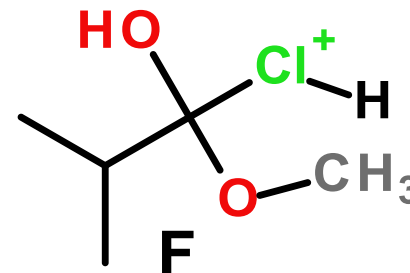
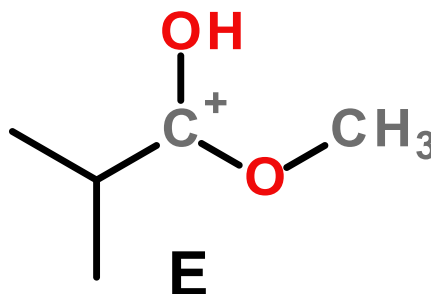
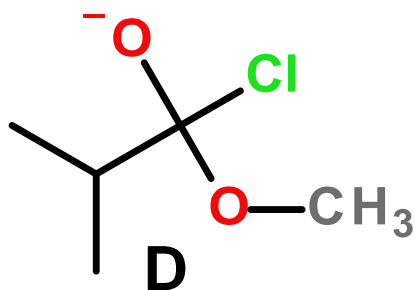
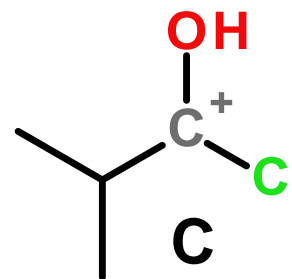
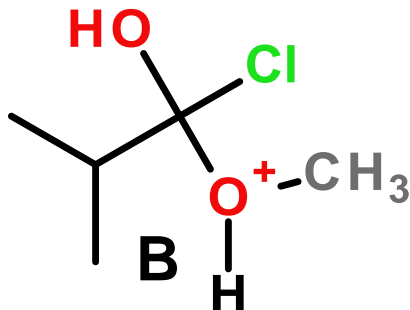
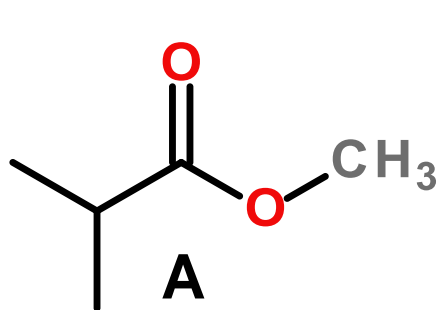
Correct Answer: C

Consider the reaction shown below, in which methylpropanoyl chloride is reacted with acidic CH_3OH . Consider the reaction in the context of a CAN mechanism, and give the order of the organic intermediates as your answer. Since A is the final product, make sure that A is your last answer. Give your answer as a text answer, with the correct answers being listed in alphabetical order. (Example: xxxx b a)

2012-02-23 Q4

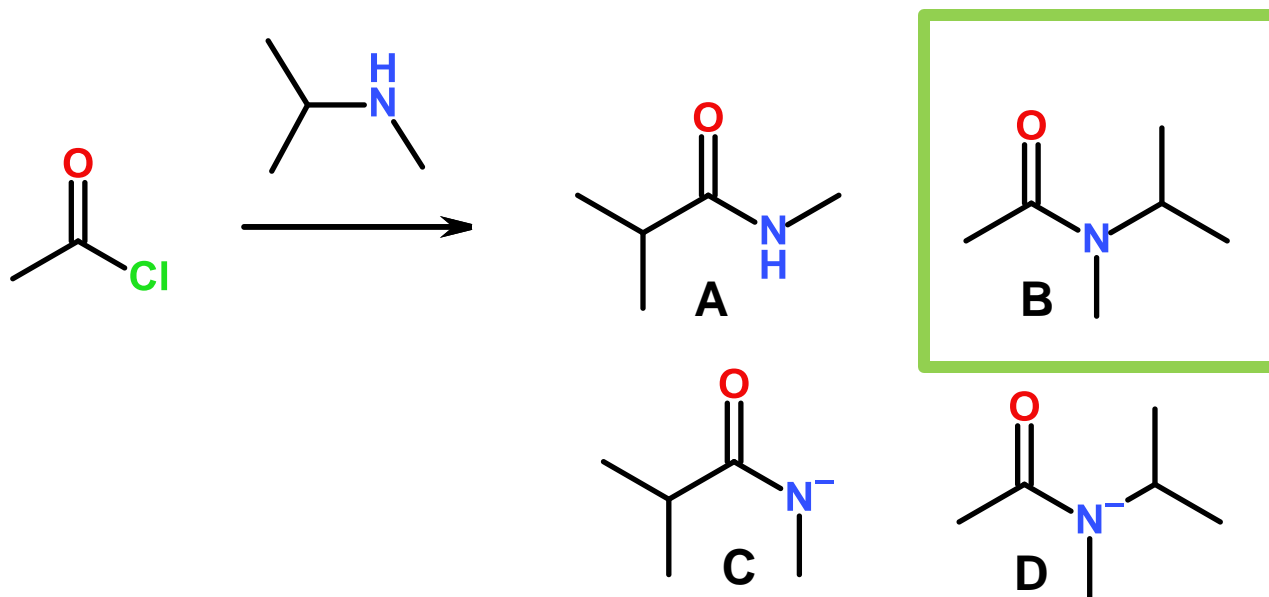


Correct Answer: C B F A



Give the major organic product(s) of the following reaction. Give your answer as a text answer, with the correct answers being listed in alphabetical order. (Example: xxxx a b)

2012-02-23 Q5

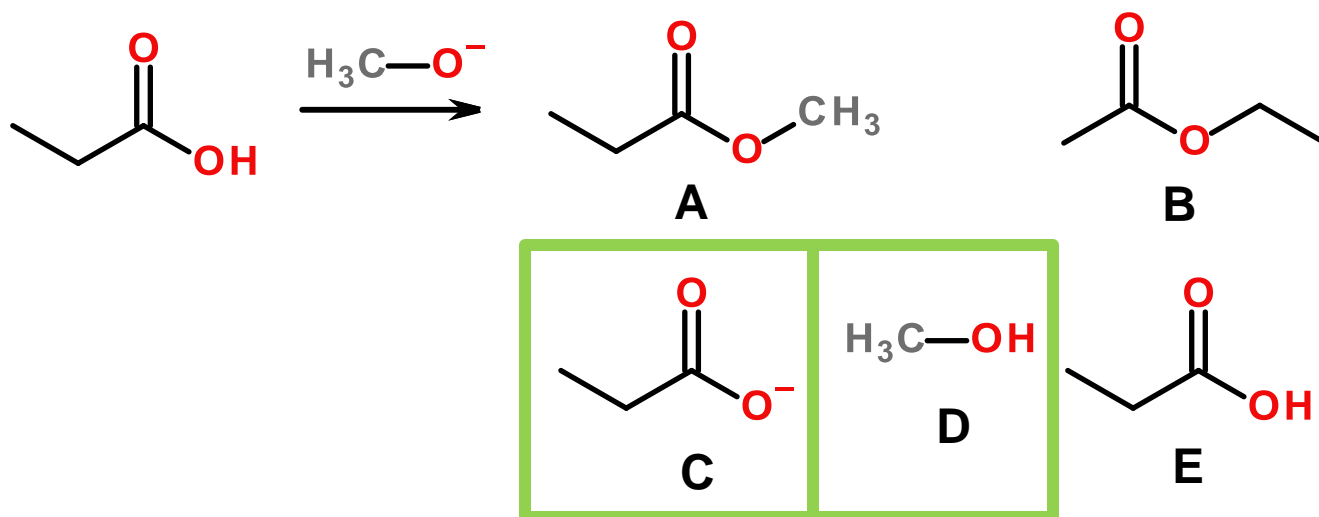


E - None of these products are a major product of the reaction that is shown.

Correct Answer: B

Give the major organic product(s) of the following reaction. Give your answer as a text answer, with the correct answers being listed in alphabetical order. (Example: xxxx a b)

2012-02-23 Q6



F - None of these products are a major product of the reaction that is shown.

Correct Answer: C D