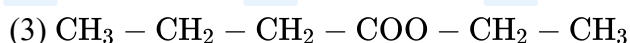
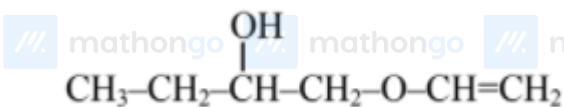
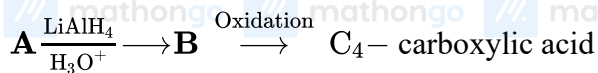


Q1 2021 (01 Sep Shift 2)

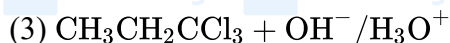
In the following sequence of reactions a compound

A, (molecular formula $C_6H_{12}O_2$) with a straight chain structure gives a C_4 carboxylic acid. **A** is :



Q2 2021 (27 Aug Shift 2)

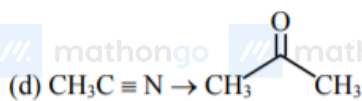
Which one of the following reactions will not yield propionic acid?



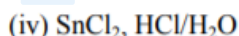
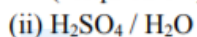
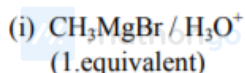
Q3 2021 (26 Aug Shift 2)

Match *List I* with *List II* :

List-I
(Chemical Reaction)



List-II
(Reagent used)



Choose the most appropriate match :

(1) $a - ii, b - iv, c - iii, d - i$

(2) $a - iv, b - ii, c - iii, d - i$

(3) $a - ii, b - iii, c - iv, d - i$

(4) $a - iii, b - ii, c - i, d - iv$

Q4 2021 (26 Aug Shift 1)

The correct sequential addition of reagents in the preparation of 3-nitrobenzoic acid from benzene is:

(1) $\text{Br}_2/\text{AlBr}_3, \text{HNO}_3/\text{H}_2\text{SO}_4, \text{Mg}/\text{ether}, \text{CO}_2, \text{H}_3\text{O}^+$

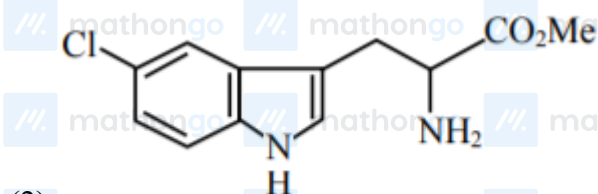
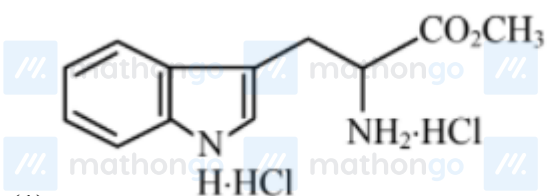
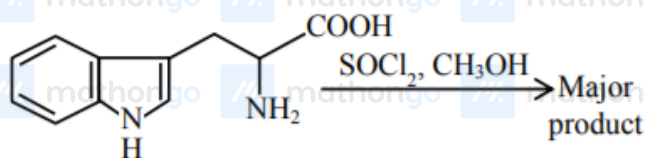
(2) $\text{Br}_2/\text{AlBr}_3, \text{NaCN}, \text{H}_3\text{O}^+, \text{HNO}_3/\text{H}_2\text{SO}_4$

(3) $\text{Br}_2/\text{AlBr}_3, \text{HNO}_3/\text{H}_2\text{SO}_4, \text{NaCN}, \text{H}_3\text{O}^+$

(4) $\text{HNO}_3/\text{H}_2\text{SO}_4, \text{Br}_2/\text{AlBr}_3, \text{Mg}/\text{ether}, \text{CO}_2, \text{H}_3\text{O}^+$

Q5 2021 (26 Aug Shift 1)

The major product formed in the following reaction is :





Answer Key

Q1 (3)

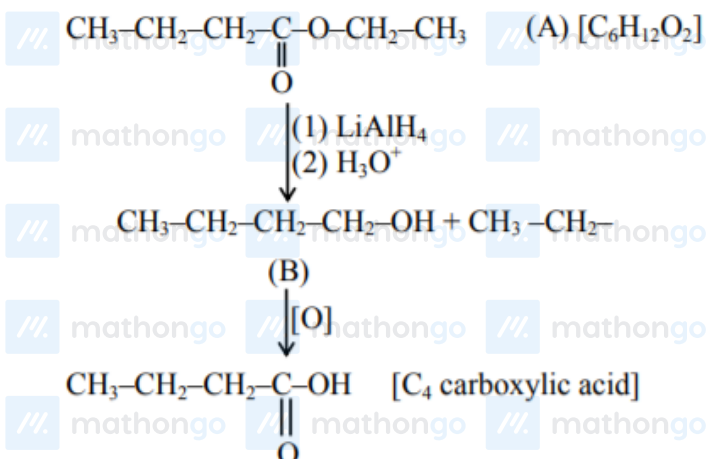
Q2 (4)

Q3 (3)

Q4 (4)

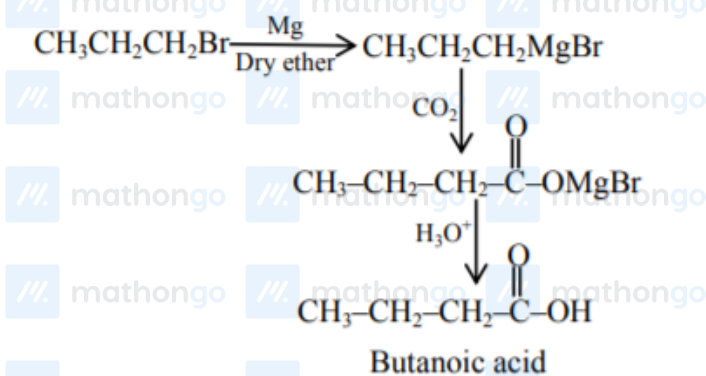
Q5 (3)

Q1 (3)

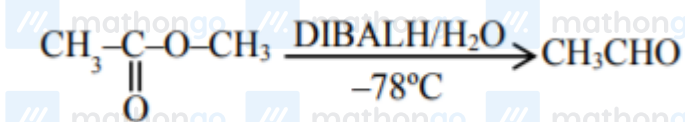
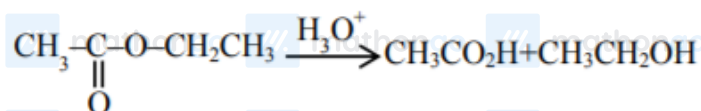


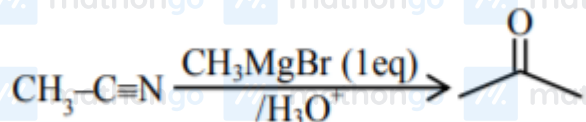
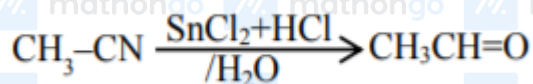
Q2 (4)

All gives propanoic acid as product but option 4 gives butanoic as product

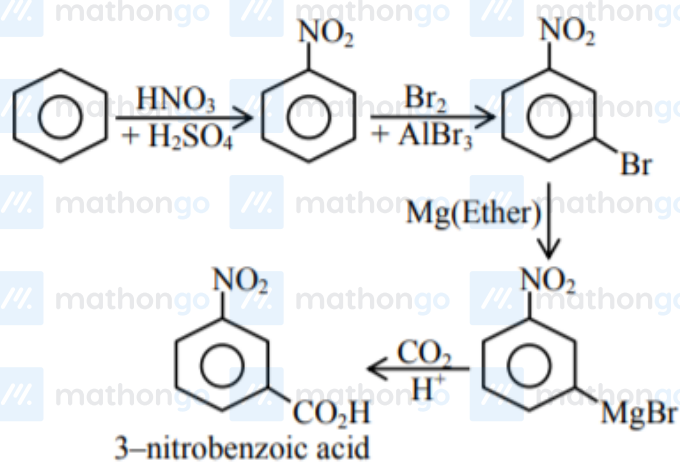


Q3 (3)





Q4 (4)



Q5 (3)

