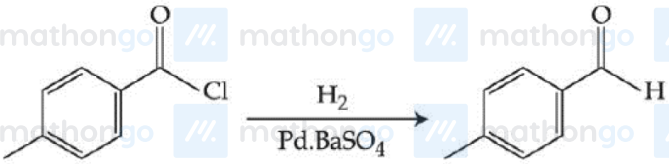
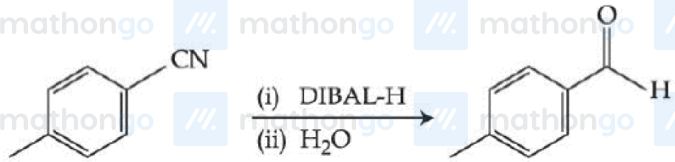
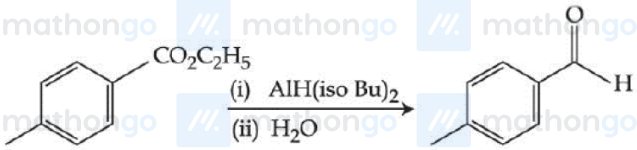
Q1 - 25 July - Shift 1

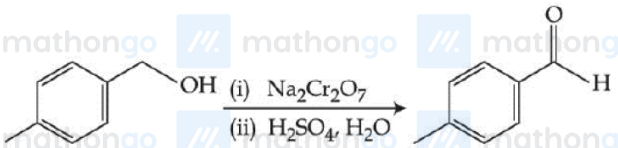
Which one of the following reactions does not represent correct combination of substrate and product under the given conditions ?

Space for your notes:

(A) 

(B) 

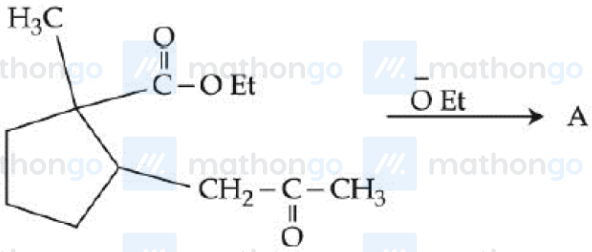
(C) 

(D) 

Q2 - 25 July - Shift 1

In the given reaction

Space for your notes:

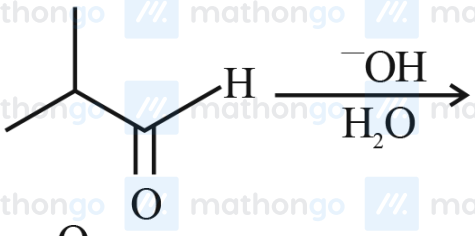


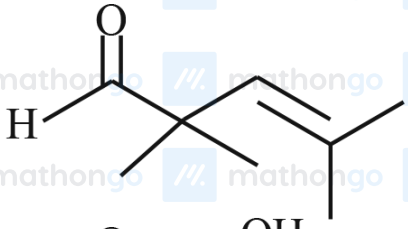
(Where Et is -C_2H_5)

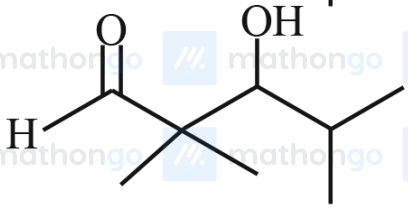
The number of chiral carbon/s in product A is

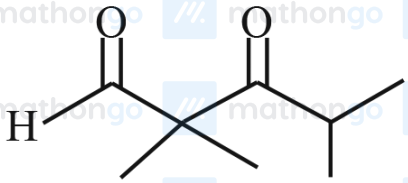
Q3 - 25 July - Shift 2

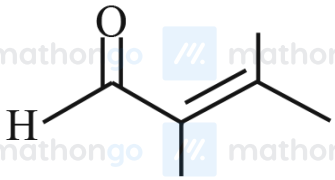
What is the major product of the following reaction?



(A) 

(B) 

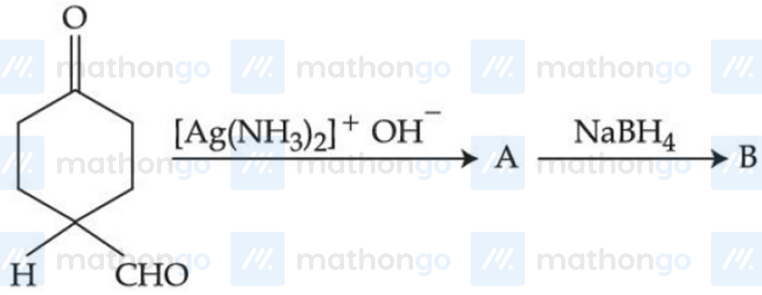
(C) 

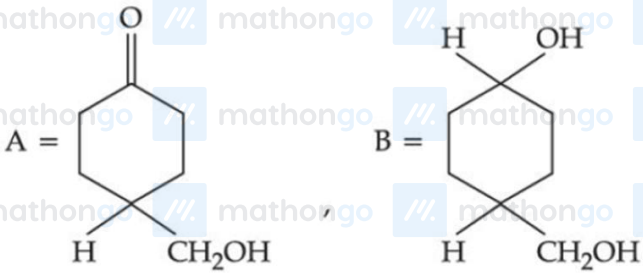
(D) 

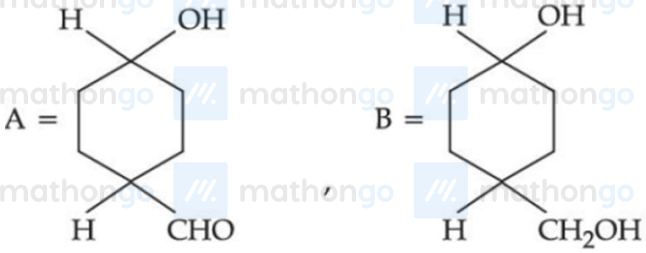
Q4 - 26 July - Shift 1

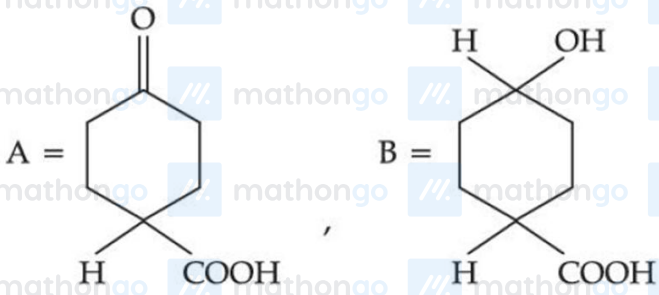
Space for your notes:

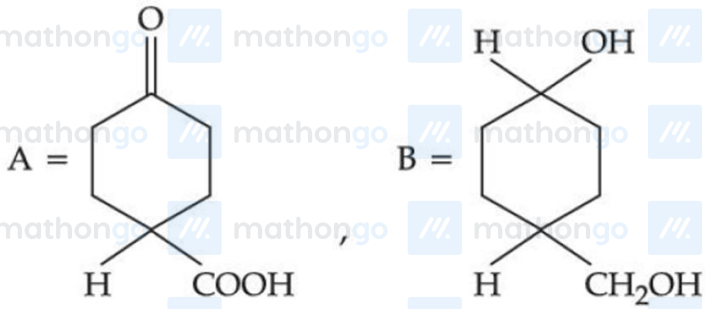
The products formed in the following reaction, A and B are



(A) 

(B) 

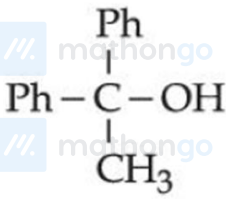
(C) 

(D) 

Space for your notes:

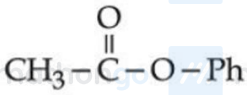
Q5 - 26 July - Shift 1

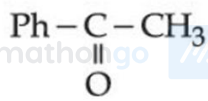
Which reactant will give the following alcohol on reaction with one mole of phenyl magnesium bromide (PhMgBr) followed by acidic hydrolysis ?



(A) $CH_3 - C \equiv N$

(B) $Ph - C \equiv N$

(C) 

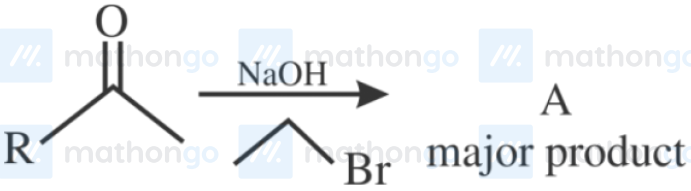
(D) 

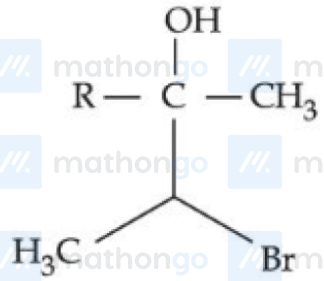
Space for your notes:

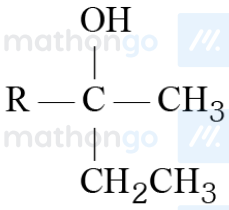
Q6 - 27 July - Shift 2

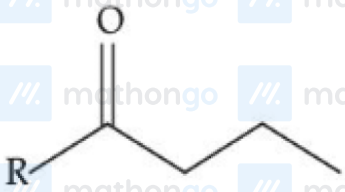
The structure of A in the given reaction is:

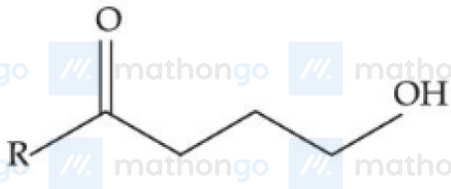
Space for your notes:



(A) 

(B) 

(C) 

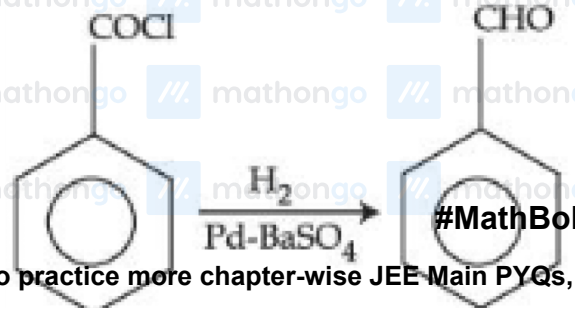
(D) 

Q7 - 27 July - Shift 2

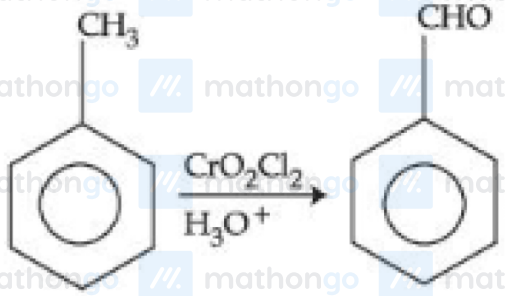
Match List-I with List-II.

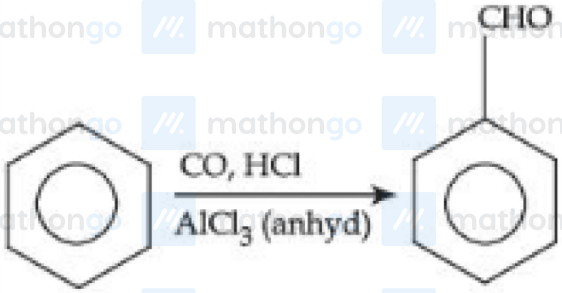
Space for your notes:

List-I

(A) 

(B) $CH_3-CN \xrightarrow[H_3O^+]{SnCl_2/HCl} CH_3-CHO$

(C) 

(D) 

Lits-II

(I) Gatterman Koch reaction

(II) Etard reaction

(III) Stephen reaction

(IV) Rosenmund reaction

Choose the **correct** answer from the options given below:

(A) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

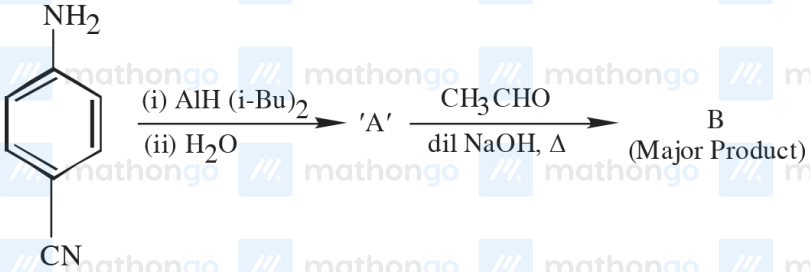
(B) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(C) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

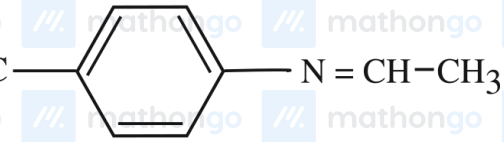
(D) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

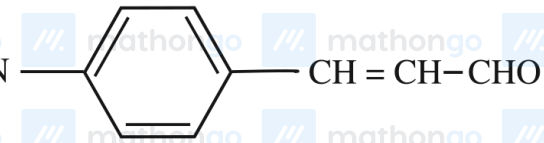
Q8 - 29 July - Shift 1

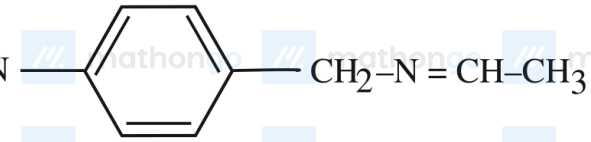
Consider the following reaction sequence :

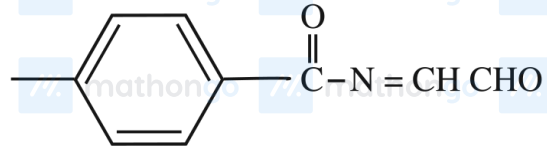


The product 'B' is :

(A) 

(B) 

(C) 

(D) 

Space for your notes:

Q9 - 29 July - Shift 2

The number of stereoisomers formed in a reaction of (±) Ph(C=O) C(OH)(CN)Ph with HCN is_____.

Space for your notes:

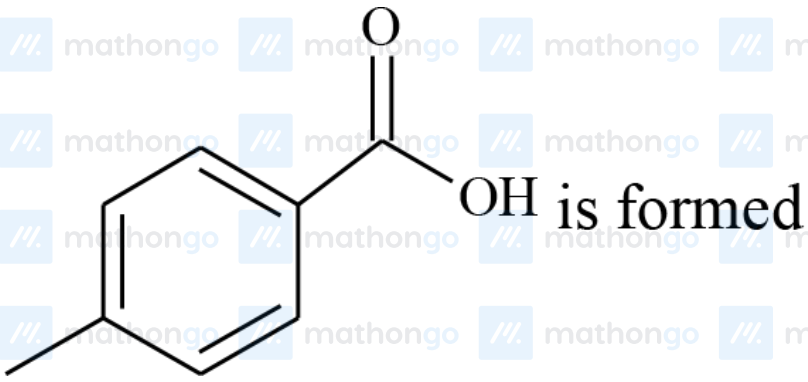
Answer Key

Q1 (D) **Q2** (2) **Q3** (B) **Q4** (C)

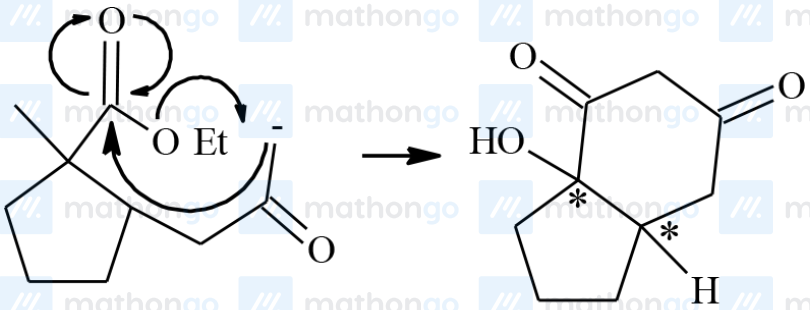
Q5 (D) **Q6** (C) **Q7** (A) **Q8** (B)

Q9 (3)

Q1 (D)

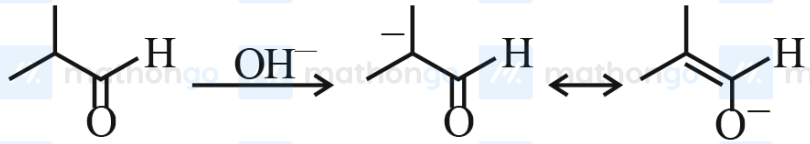


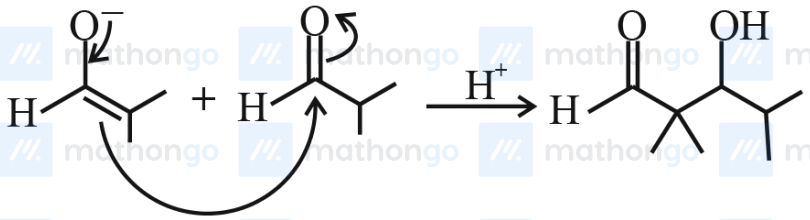
Q2 (2)



2 chiral carbons

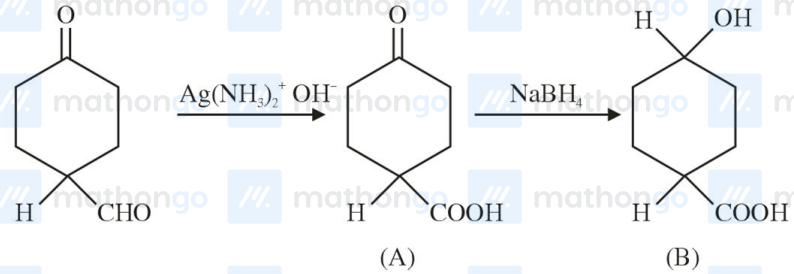
Q3 (B)





Aldol formation takes place.

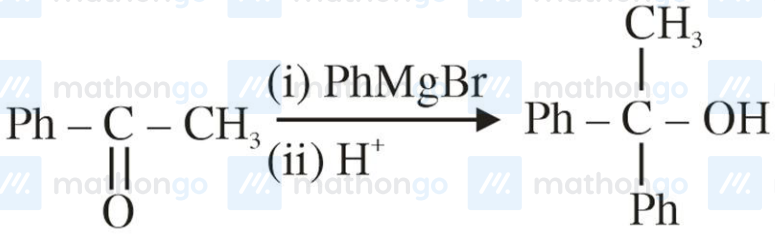
Q4 (C)



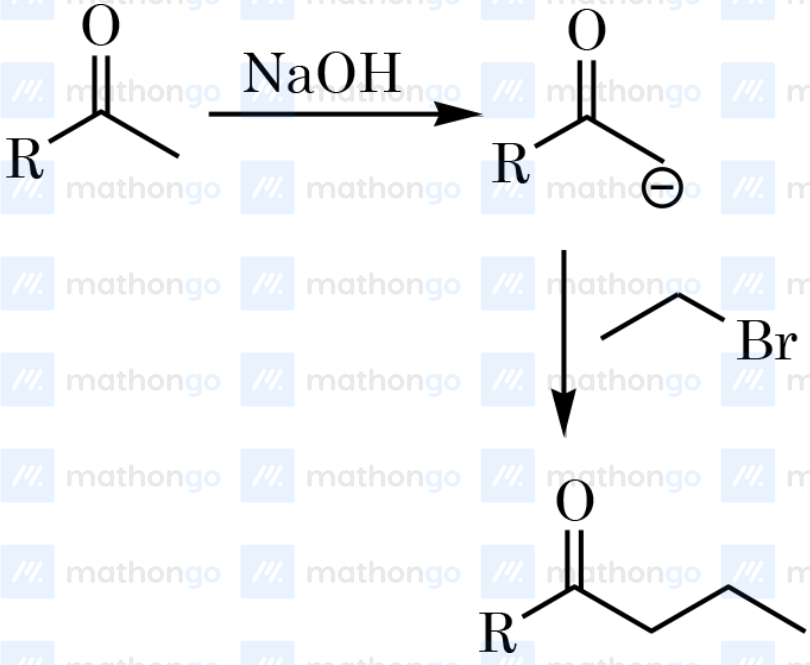
(A) (B)

$NaBH_4$ does not reduce carboxylic acid.

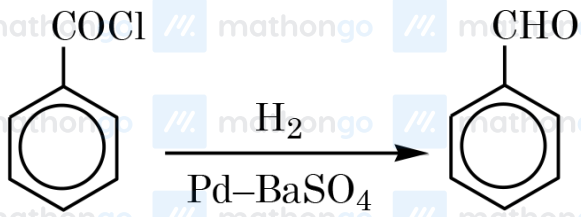
Q5 (D)



Q6 (C)



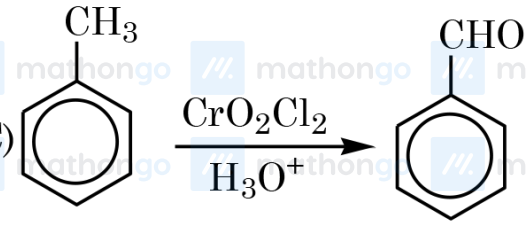
Q7 (A)

(A) 

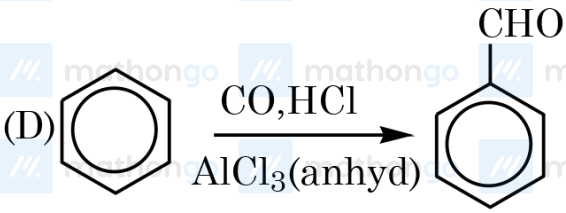
(Rosenmund reaction)

(B) $CH_3–C\equiv N \xrightarrow[H_3O^+]{SnCl_2–HCl} CH_3–CHO$

(Stephen reaction)

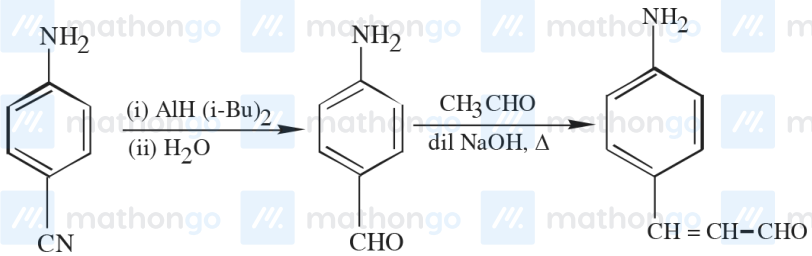
(C) 

(Etard reaction)

(D) 

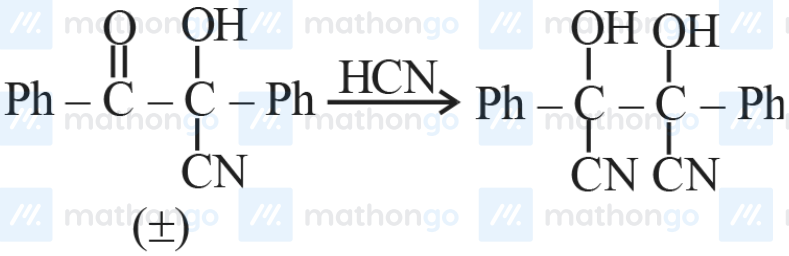
(Gattermann Koch reaction)

Q8 (B)



Cross aldol condensation

Q9 (3)



3 stereoisomers