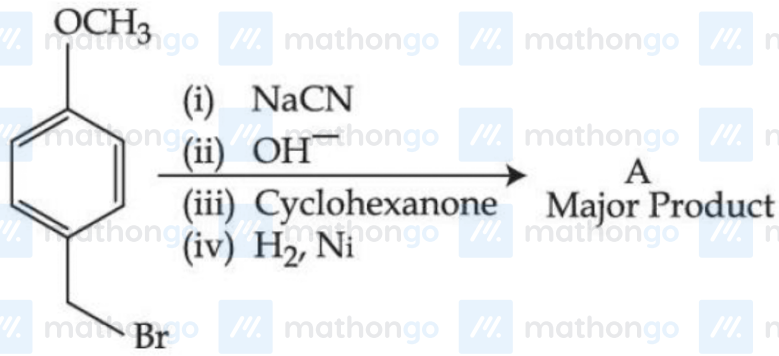
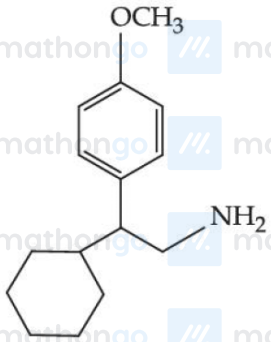
Q1 - 24 June - Shift 1



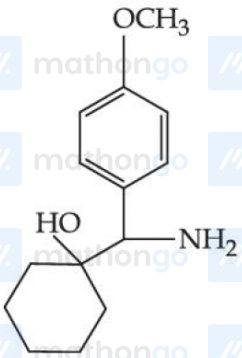
Space for your notes:

The major product of the above reaction is

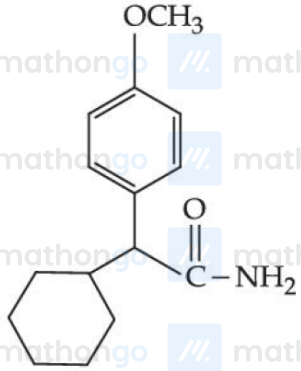
(A)



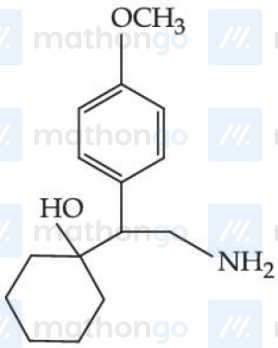
(B)



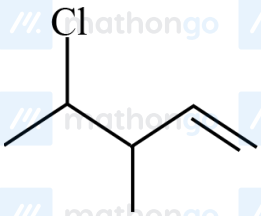
(C)



(D)



Q2 - 24 June - Shift 2



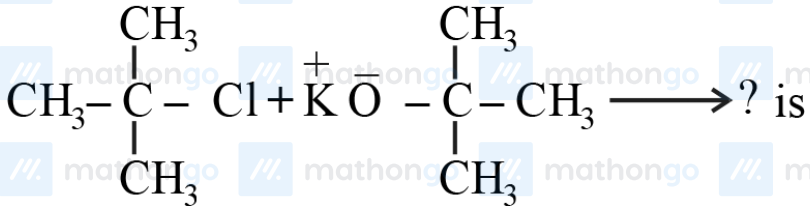
$\xrightarrow[H_2O]{NaOH}$ P (Major Product)

Consider the above reaction. The number of π electrons present in the product 'P' is____.

Space for your notes:

Q3 - 25 June - Shift 1

The major product in the reaction



(A) t-Butyl ethyl ether

(B) 2,2-Dimethyl butane

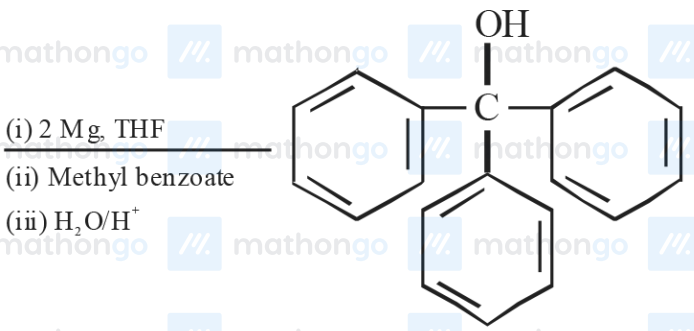
(C) 2-Methyl pent-1-ene

(D) 2-Methyl prop-1-ene

Space for your notes:

Q4 - 25 June - Shift 2

In the given reaction



'A' can be

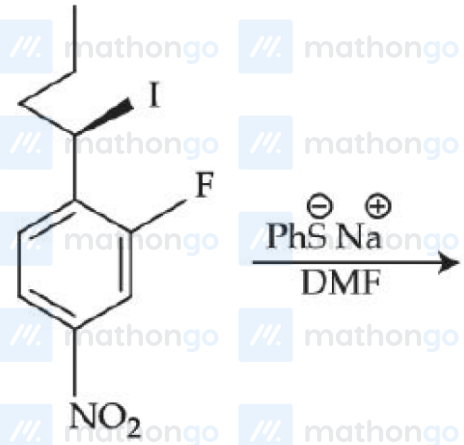
(A) benzyl bromide (B) bromobenzene

(C) cyclohexyl bromide (D) methyl bromide

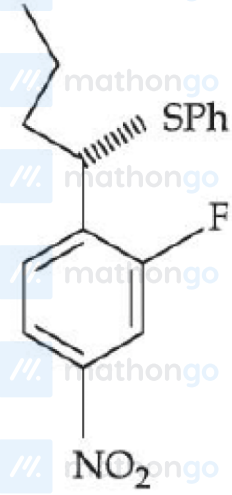
Space for your notes:

Q5 - 27 June - Shift 1

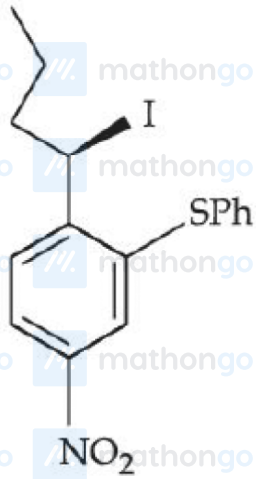
The major product of the following reaction is:



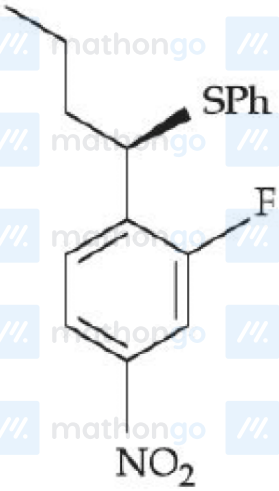
(A)



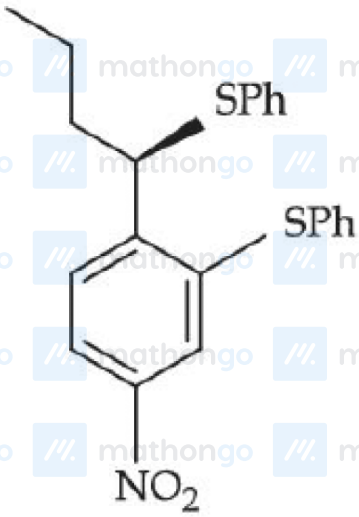
(B)



(C)



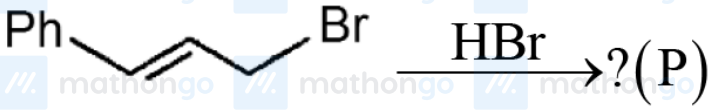
(D)



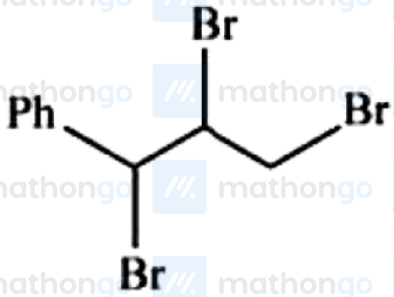
Space for your notes:

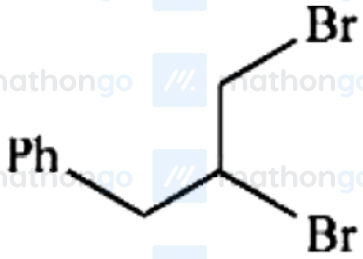
Q6 - 28 June - Shift 1

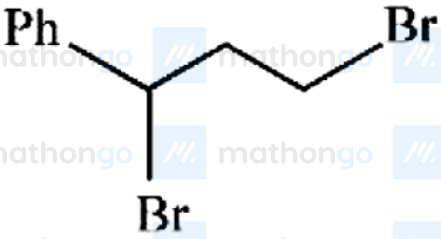
The major product (P) in the reaction

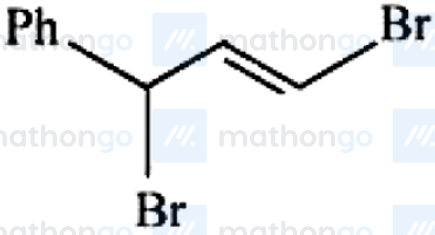


[Ph is – C_6H_5] is

(A) 

(B) 

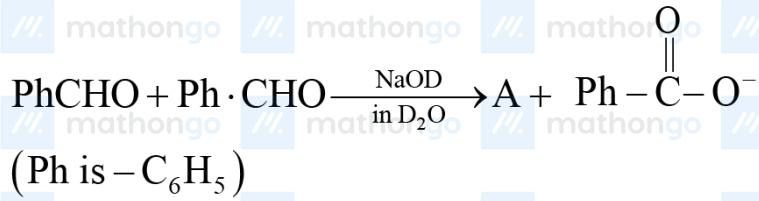
(C) 

(D) 

Space for your notes:

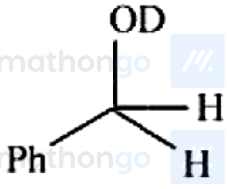
Q7 - 28 June - Shift 1

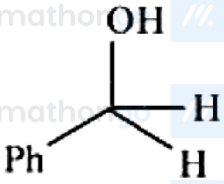
The correct structure of product 'A' formed in the following reaction.

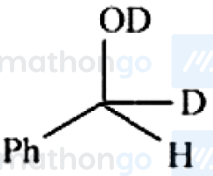


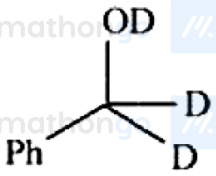
$$PhCHO + Ph\cdot CHO \xrightarrow[\text{in } D_2O]{NaOD} A + Ph-\overset{\overset{O}{\|}}{C}-O^-$$

$(Ph\ is - C_6H_5)$

(A) 

(B) 

(C) 

(D) 

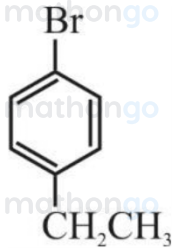
Space for your notes:

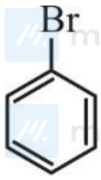
Q8 - 28 June - Shift 2

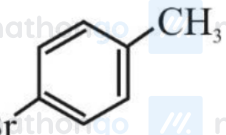
$A \xrightarrow[(iii)\ H_2O/H^+]{(i)\ Cl_2,\Delta \\ (ii)\ CN^-}$ 4-Bromophenyl acetic acid.

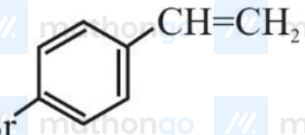
Space for your notes:

In the above reaction 'A' is

(A) 

(B) 

(C) 

(D) 

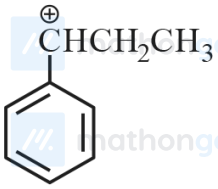
Q9 - 29 June - Shift 2

 $+ CH_3CH_2CH_2Cl \xrightarrow[\text{Major Product}]{\text{Anhydrous, } AlCl_3}$ 'A'

Space for your notes:

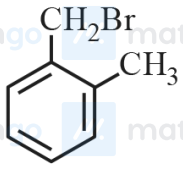
The stable carbocation formed in the above reaction is :

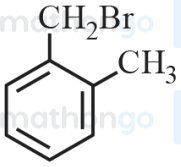
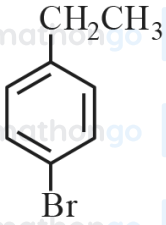
(A) $CH_3CH_2\overset{\oplus}{C}H_2$ (B) $CH_3\overset{\oplus}{C}H_2$

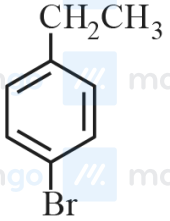
(C) $CH_3-\overset{\oplus}{C}H-CH_3$ (D) 

Q10 - 29 June - Shift 2

Two isomers (A) and (B) with Molar mass 184 g/mol and elemental composition C, 52.2%; H, 4.9% and Br 42.9% gave benzoic acid and p-bromobenzoic acid, respectively on oxidation with $KMnO_4$. Isomer 'A' is optically active and gives a pale yellow precipitate when warmed with alcoholic $AgNO_3$. Isomer 'A' and 'B' are, respectively :

(A) $H_3C–CHBr–C_6H_5$ and 

(B)  and 

(C) $H_3C–CHBr–C_6H_5$ and 

(D)  and $H_3C–CHBr–C_6H_5$

Space for your notes:

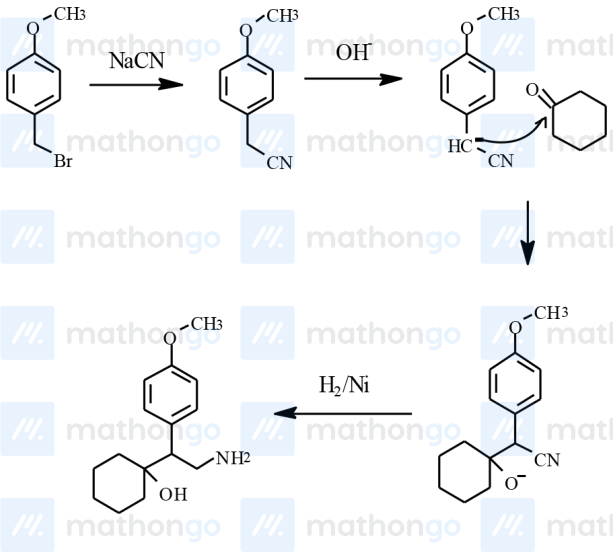
Answer Key

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

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

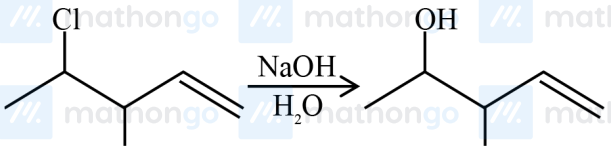
Q9 (C) **Q10** (C)

Q1 (D)



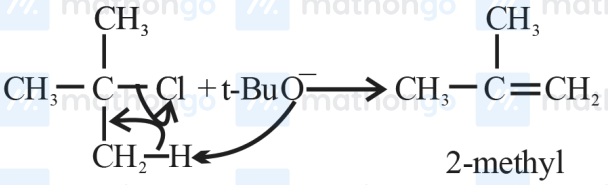
Q2 (2)

Number of π electron = 2



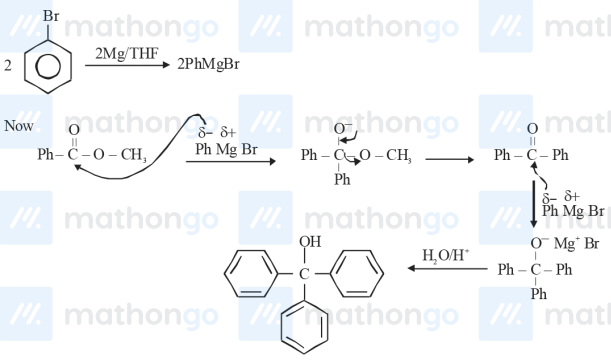
Q3 (D)

We have been given a bulky base, hence elimination will take place & not substitution.

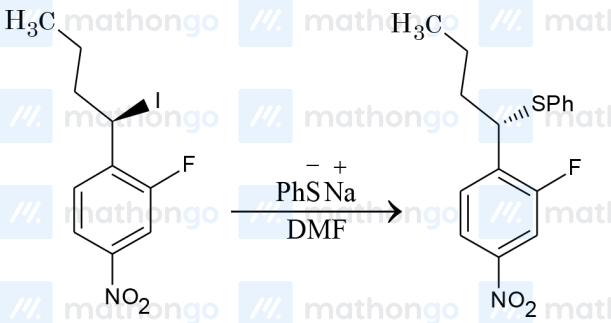


2-methyl prop-1-ene

Q4 (B)

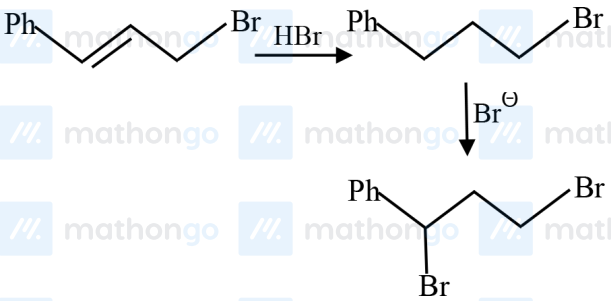


Q5 (A)



It is bimolecular nucleophilic substitution (SN^2) which occur at benzylic carbon by inversion in contiguration. This reaction cannot undergo substitution at benzene ring

Q6 (C)

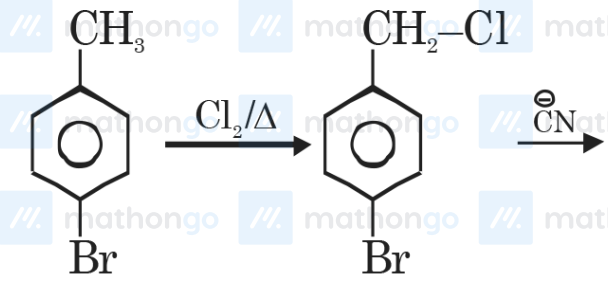


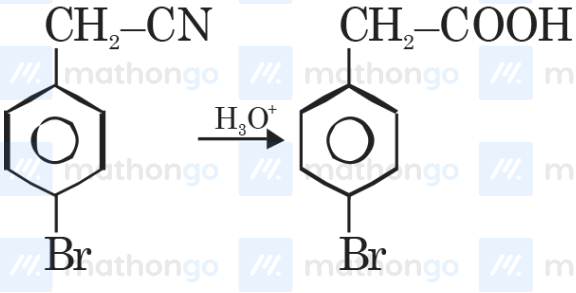
Q7 (C)

Sol. The carbocation fromed is very unstable.

So it is inactive towards S_N1

Q8 (C)

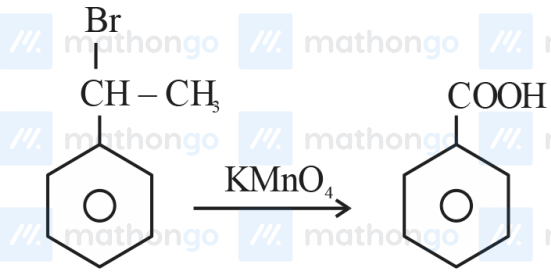




Q9 (C)

$CH_3\overset{\oplus}{C}H{-}CH_3$ is formed in the above reaction

Q10 (C)



(A)

Optically Active