Q1 2021 (01 Sep Shift 2)

In the following sequence of reactions,

The compounds **B** and **C** respectively are :

(1) $Cl_3COOK, HCOOH$

(2) CI_3COOK, CH_3I

(3) $CH_3I, HCOOK$

(4) CHI_3, CH_3COOK

Q2 2021 (01 Sep Shift 2)

The stereoisomers that are formed by electrophilic addition of bromine to trans-but-2-ene is/are :

(1) 2 enantiomers and 2 mesomers

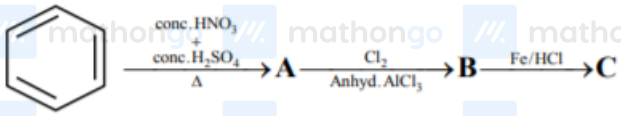
(2) 2 identical mesomers

(3) 2 enantiomers

(4) 1 racemic and 2 enantiomers

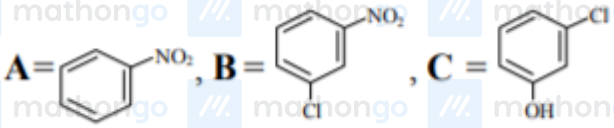
Q3 2021 (31 Aug Shift 2)

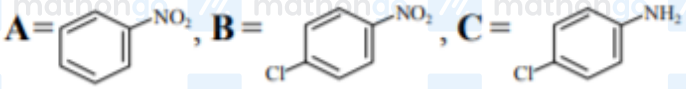
Identify correct **A**, **B** and **C** in the reaction sequence given below :

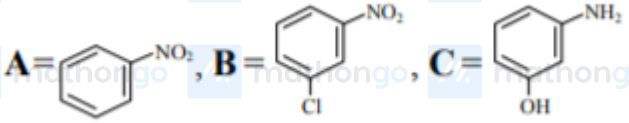


(1)

(2)

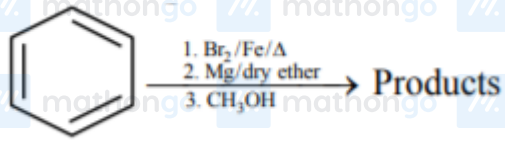


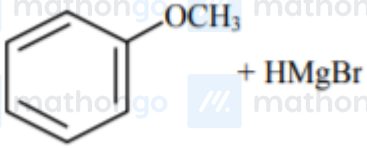
(3) 

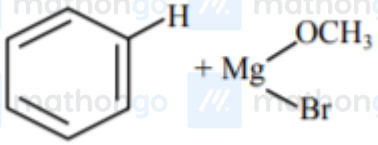
(4) 

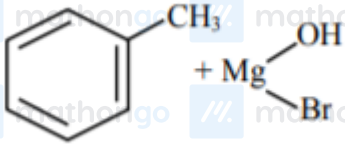
Q4 2021 (31 Aug Shift 2)

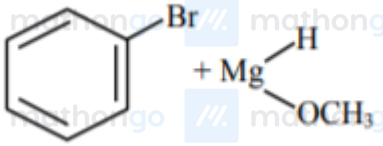
For the following :



(1) 

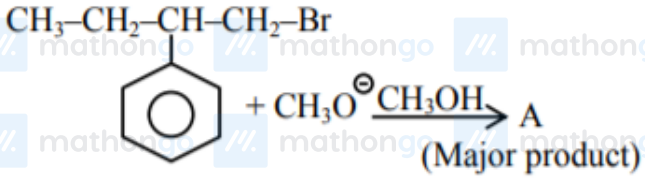
(2) 

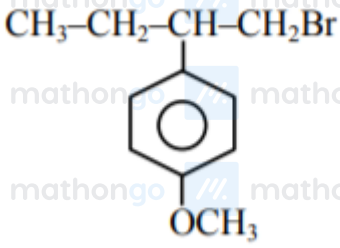
(3) 

(4) 

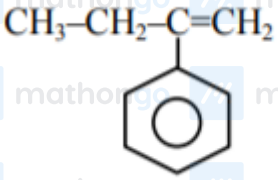
Q5 2021 (27 Aug Shift 2)

The major product (A) formed in the reaction given below is :

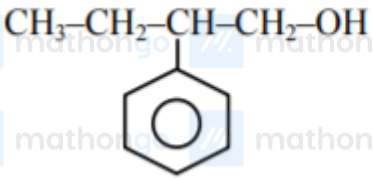




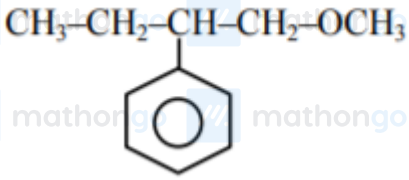
(1)



(2)

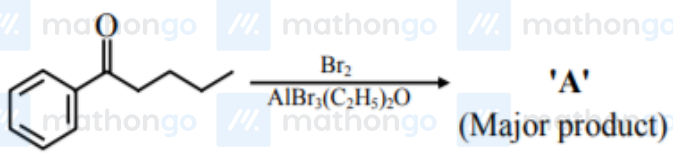


(3)

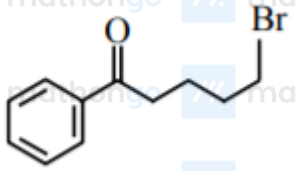


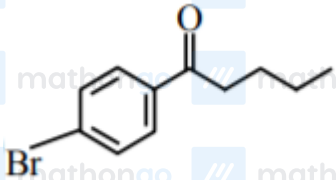
(4)

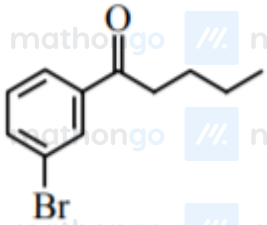
Q6 2021 (26 Aug Shift 2)

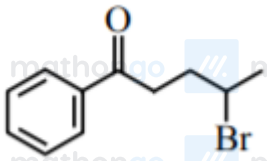


Consider the given reaction, the product **A** is :

(1) 

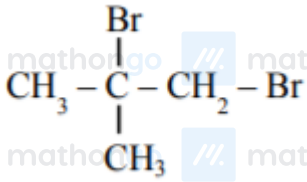
(2) 

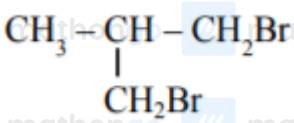
(3) 

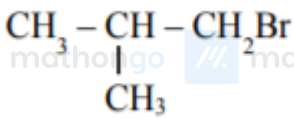
(4) 

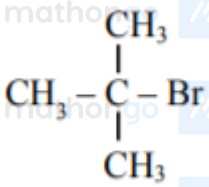
Q7 2021 (26 Aug Shift 1)

Excess of isobutane on reaction with Br_2 in presence of light at $125^{\circ}C$ gives which one of the following, as the major product?

(1) 

(2) 

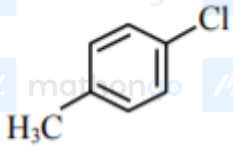
(3) 



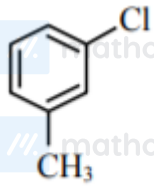
(4)

Q8 2021 (26 Aug Shift 1)

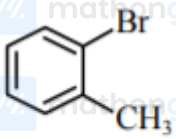
Among the following compounds I – IV, which one forms a yellow precipitate on reacting sequentially with (i) NaOH (ii) dil. HNO_3 (iii) $AgNO_3$?



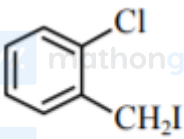
I



II



III



IV

(1) II

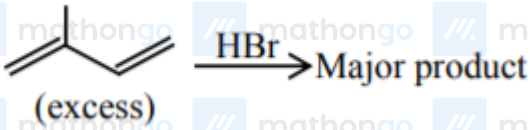
(2) IV

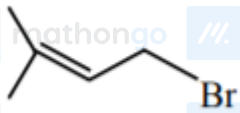
(3) I

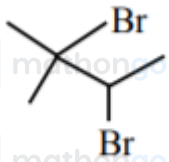
(4) III

Q9 2021 (26 Aug Shift 1)

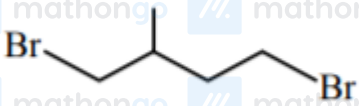
The major product formed in the following reaction is :



(1) 

(2) 

(3) 

(4) 

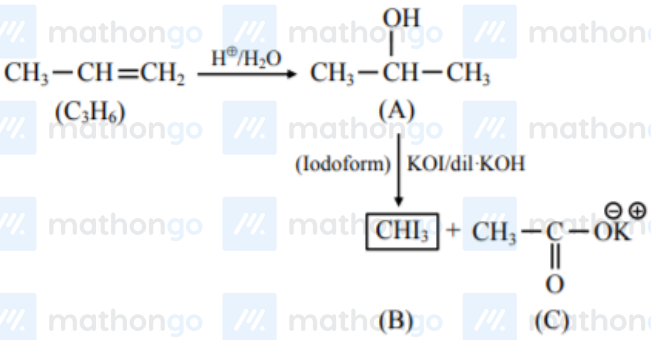
Answer Key

Q1 (4) **Q2** (2) **Q3** (1) **Q4** (2)

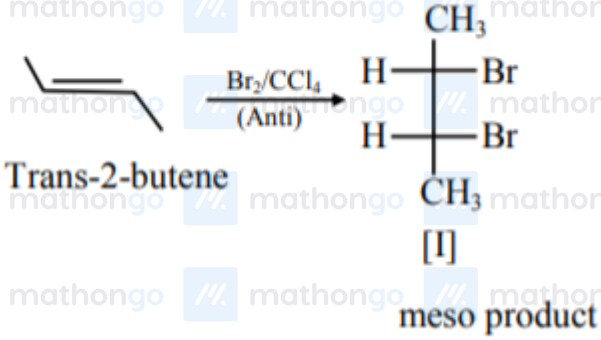
Q5 (2) **Q6** (3) **Q7** (4) **Q8** (2)

Q9 (1)

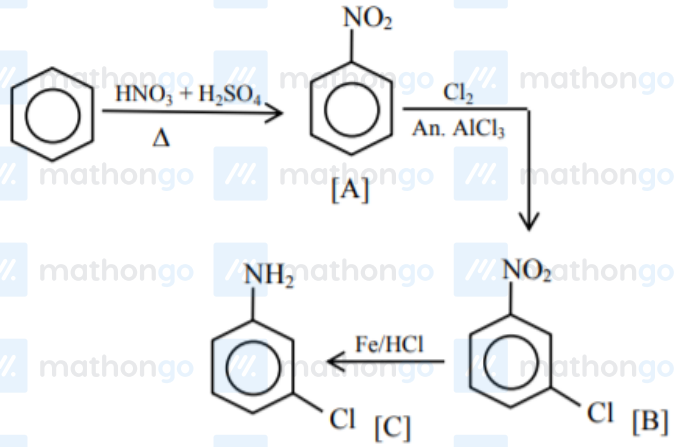
Q1 (4)



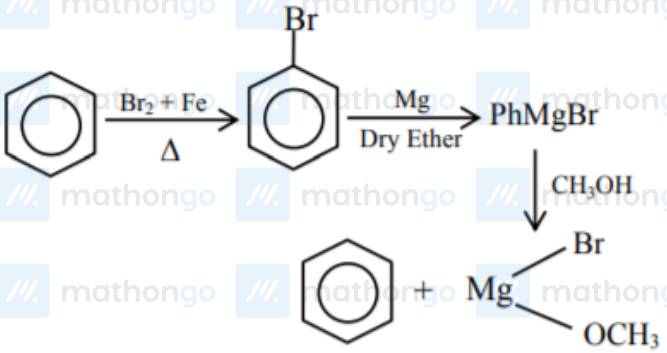
Q2 (2)



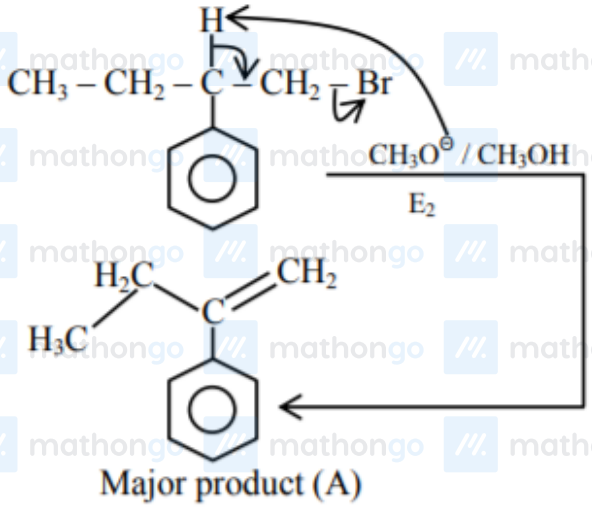
Q3 (1)



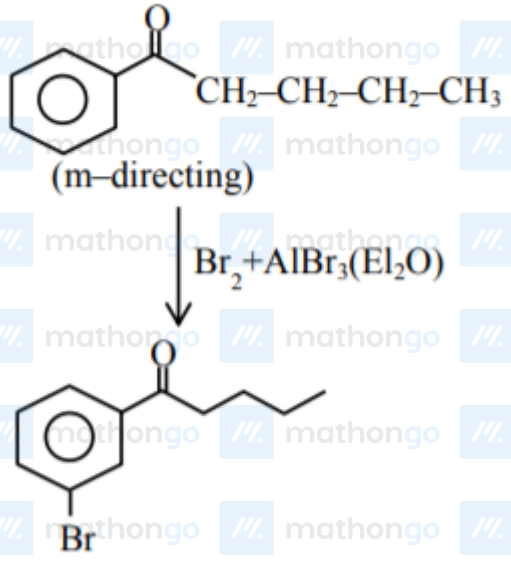
Q4 (2)


Br
Br₂ + Fe
Δ
Mg
Dry Ether
PhMgBr
CH₃OH
Br
Mg
OCH₃

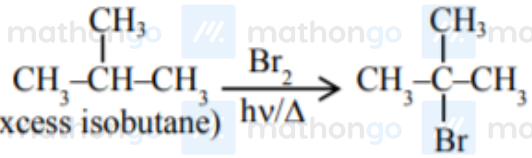
Q5 (2)


H
CH₃ – CH₂ – C – CH₂ – Br
CH₃O⊖ / CH₃OH
E₂
H₂C
CH₂
C
H₃C
Major product (A)

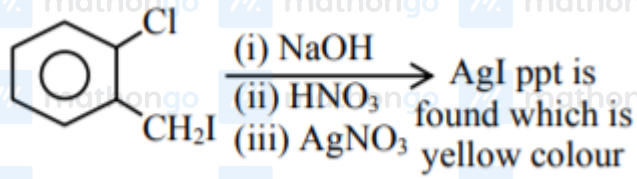
Q6 (3)


O
CH₂–CH₂–CH₂–CH₃
(m–directing)
Br₂+AlBr₃(El₂O)
O
Br

Q7 (4)



Q8 (2)



Other compounds halide can't be removed because corresponding C^{+} is highly unstable.

Q9 (1)