NEET REVISION SERIES

AMINES

Revise Most Important Questions to Crack NEET 2020

Q-1 - 12775218

Amides can be converted into amines by a reactions named after .

(A) Perkin

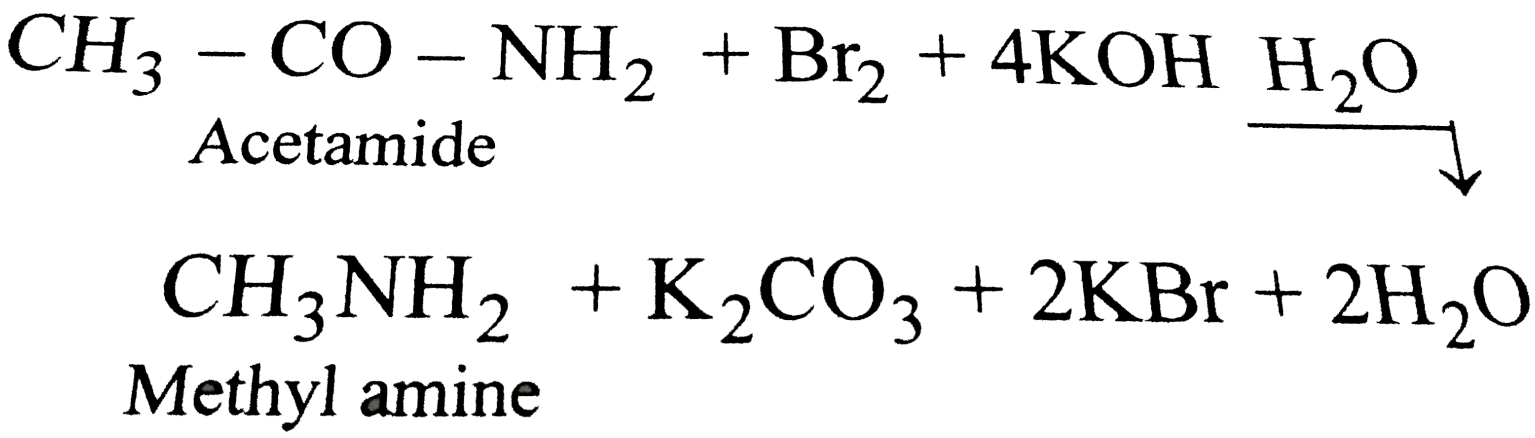
(B) Claisen

(C) Hoffmann

(D) Kolbe

CORRECT ANSWER: C

SOLUTION:



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Q-2 - 12775221

Acetamide is treated separately with the following reagents. Which one of these would give methyl amine ?

(A) PCl_5

(B) $NaOH + Br_2$

(C) Sodalime

(D) hot conc. H_2SO_4

CORRECT ANSWER: B

SOLUTION:

(b) CH_3CONH_2 + Br_2 + 4NaOH ⟶

Acetamide

CH_3NH_2 + Na_2CO_3 + 2NaBr + $2H_2O$

Methyl amine

Q-3 - 12775226

$$CH_3CN \xrightarrow{Na + C_2H_5OH} X$$

The compound X is

(A) CH_3CONH_2

(B) $CH_3CH_2NH_2$

(C) C_2H_6

(D) CH_3NHCH_3

CORRECT ANSWER: B

SOLUTION:

$$CH_3C \equiv N + 4[H]$$

$$\xrightarrow[reduction]{Na + C_2H_5OH} CH_3CH_2NH_2$$

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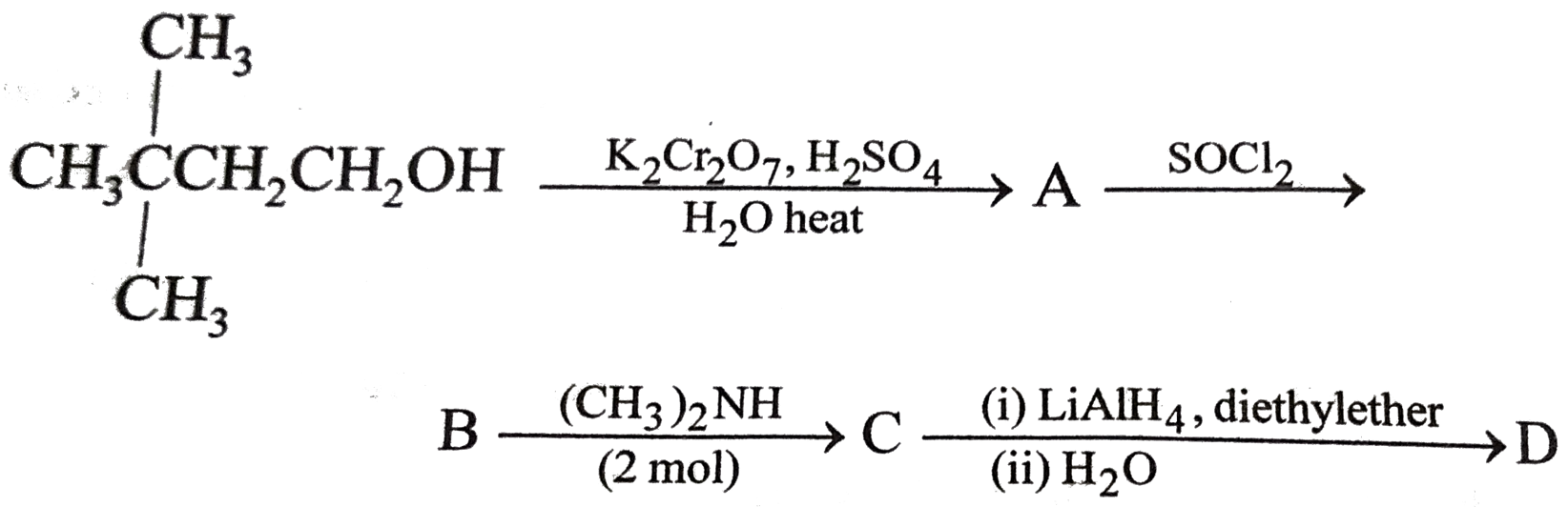
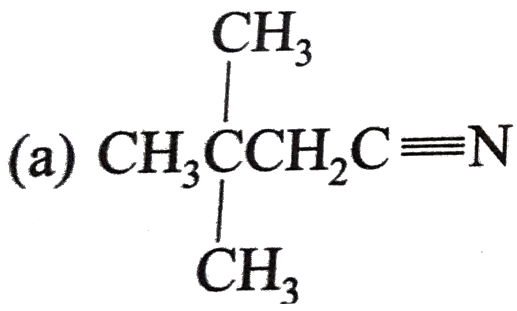
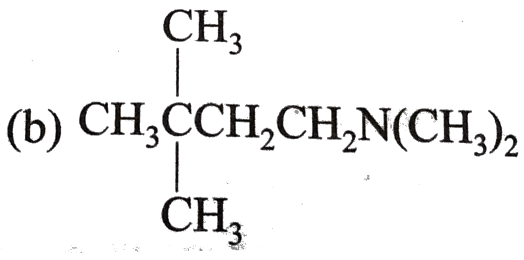
Q-4 - 12775235

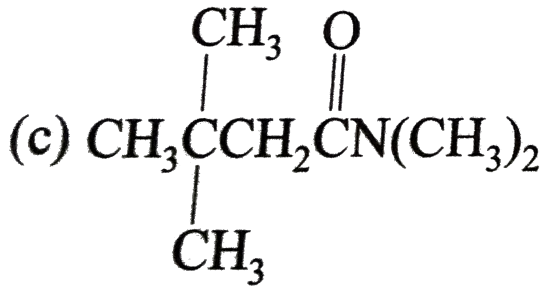


Identify the product D in the following reaction sequence.

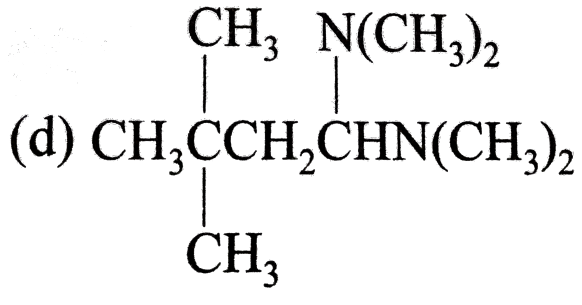
(A) 

(B) 

(C)



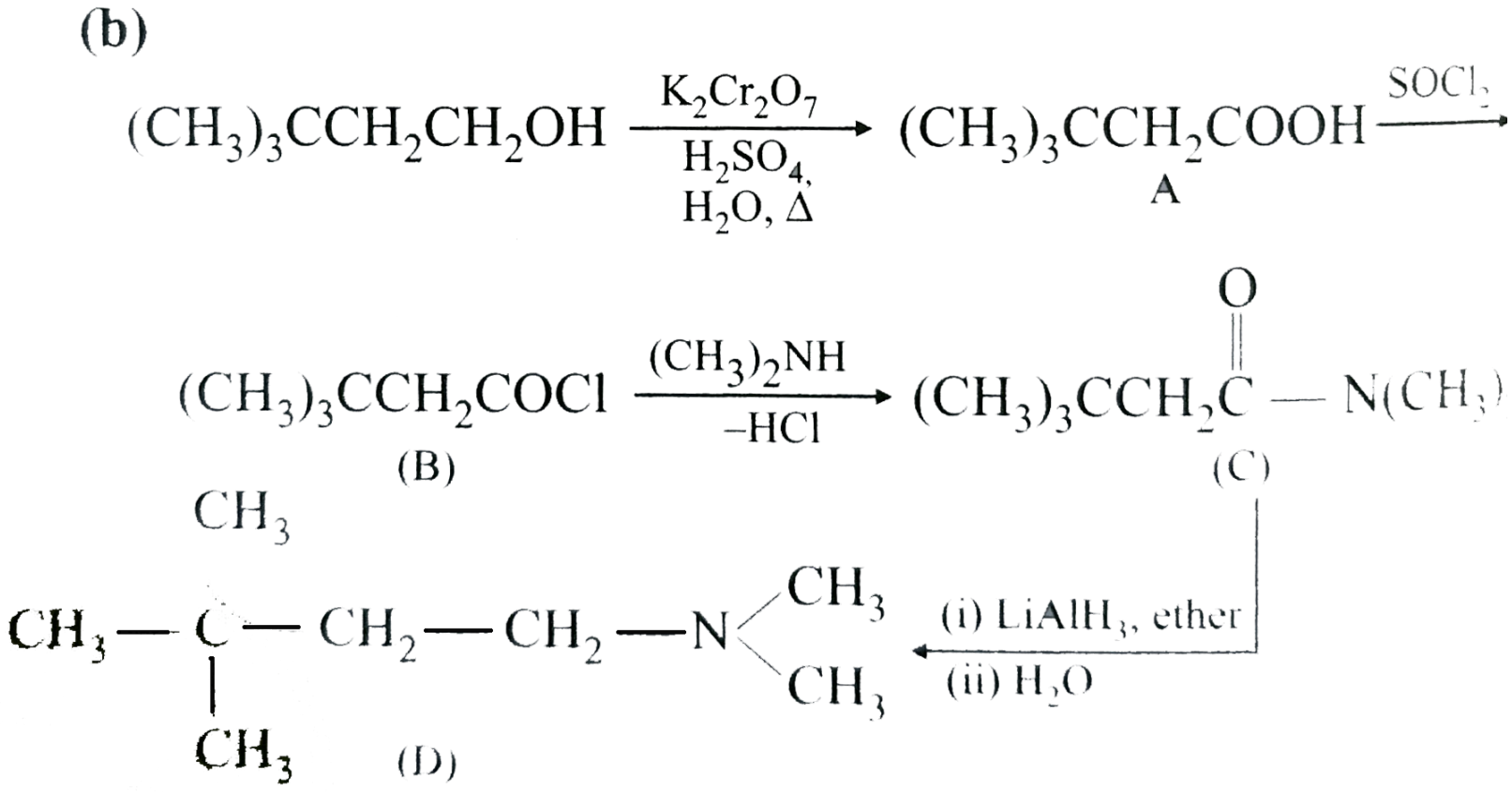
(D)



CORRECT ANSWER: B

SOLUTION:

(b)



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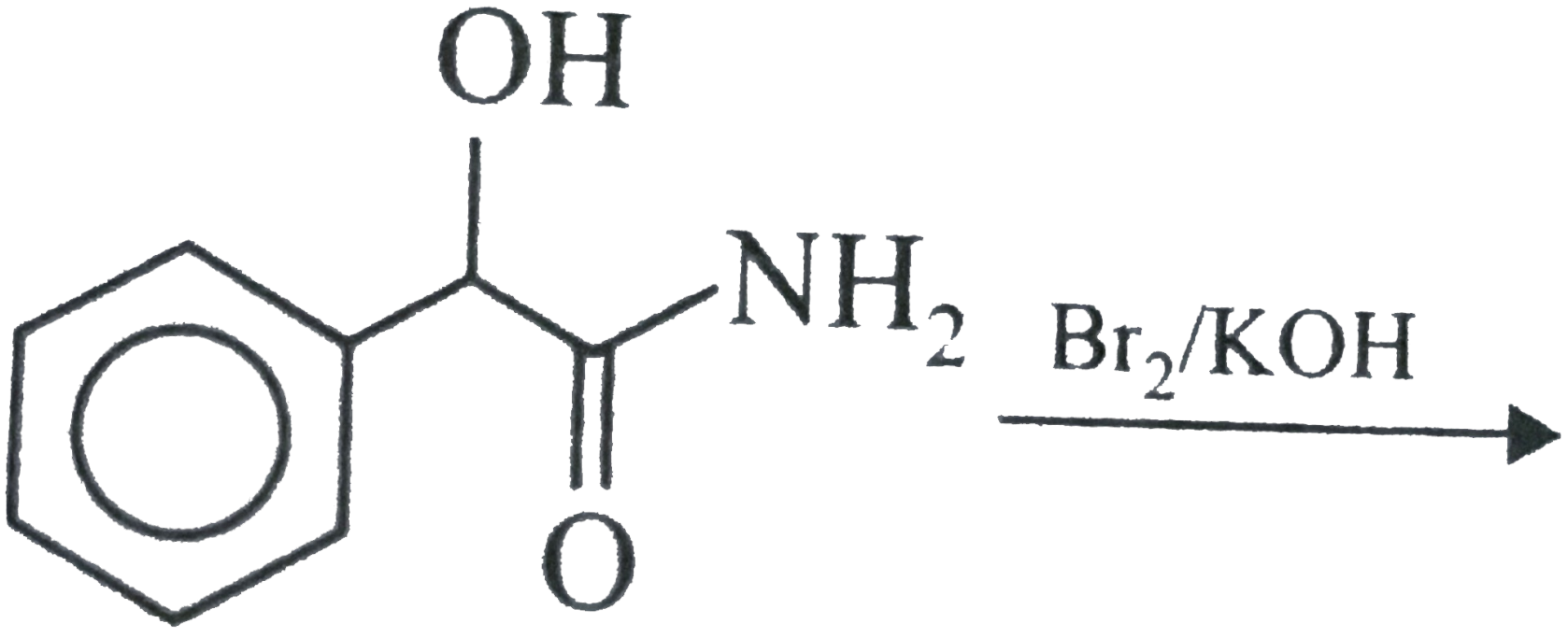
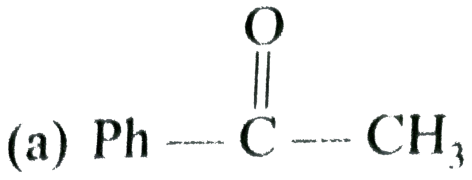
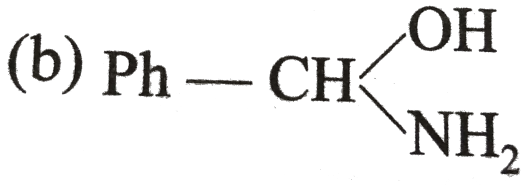
Q-5 - 12775229



(α-hydroxy amide)

Product of this Hofmann bromamide reaction is

(A) 

(B) 

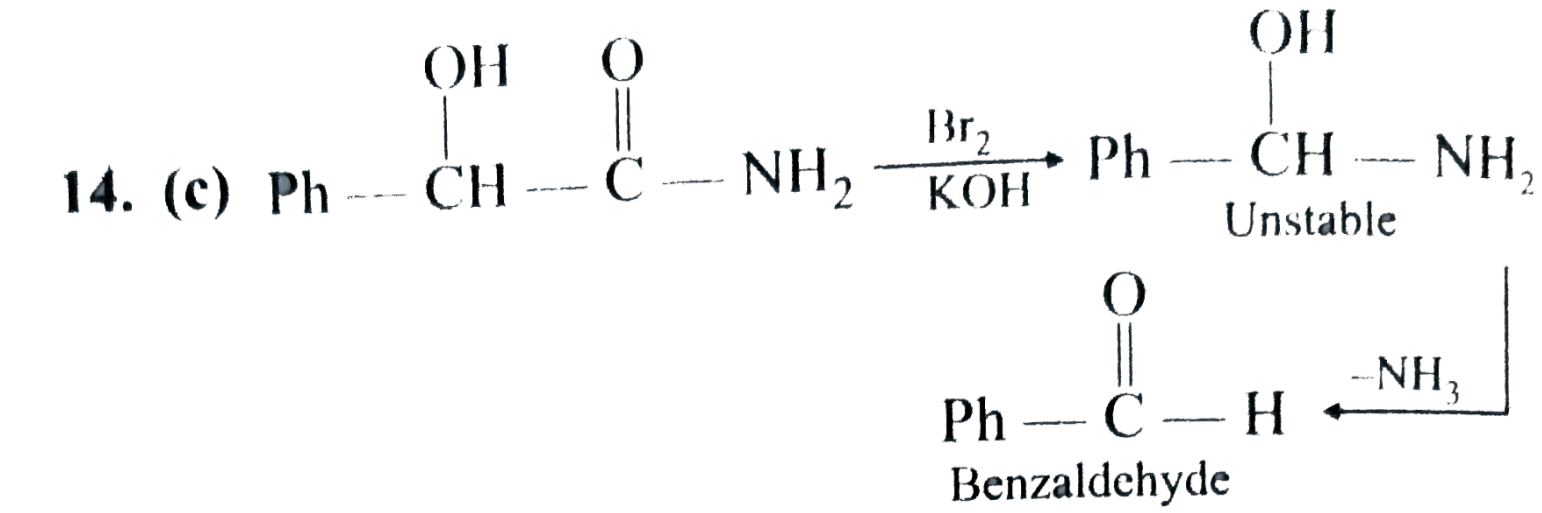
(C) $Ph - CHO$

(D) $Ph - CH_2 - NH_2$

CORRECT ANSWER: C

SOLUTION:

14. (c)



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Q-6 - 12775241

Which of the following reaction does not yields an amine

(A) $RX + NH_3 \rightarrow$

(B)

$RCH = NOH + [H]$

$\xrightarrow[C_2H_5OH]{Na}$

(C) $RCN + H_2O \xrightarrow{H^+}$

(D)

$RCONH_2 + 4H$

$\xrightarrow[H^+]{H_2O}$ $RCOOH + NH_3$

CORRECT ANSWER: C

SOLUTION:

$$R-CH+H_2O$$

$$\xrightarrow[H^+]{H_2O} RCOOH$$

$$+NH_3$$

It yields amine when reduced as-

$$R-CN+H_2 \rightarrow R$$

$$-CH_2-NH_2$$

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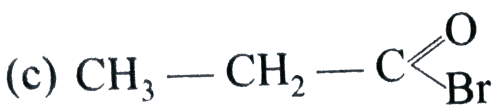
Q-7 - 12775245

Starting from propanoic acid, the following reaction were carried acid $\xrightarrow{SOCl_2} X \xrightarrow{NH_3} Y \xrightarrow{Br_2+KOH} Z$ What is the compound?

(C) 

CORRECT ANSWER: B

SOLUTION:

$$CH_3CH_2COOH \xrightarrow{SOCl_2} CH_3CH_2COCl + SO_2 + HCl$$

$$CH_3CH_2COCl + NH_3 \rightarrow CH_3CH_2CONH_2 + {}_C Hl$$

$$CH_3CH_2CONH_2 + \frac{Br_2}{NaOH} \rightarrow \underset{\text{ethyl amine}}{CH_3CH_2NH_2} + CO_2$$

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Q-8 - 12775247

The diazonium salts are the reaction products in presence of excess of mineral acid with nitrous acid and

(A) Primary aliphatic amine

(B) secondary aromatic amine

(C) primary aromatic amine

(D) Tertiary aliphatic amine

CORRECT ANSWER: C

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Q-9 - 12775252

Ethyl amine undergoes oxidation in the presence of $KMnO_4$ to form

(A) An acid

(B) An alcohol

(C) An aldehyde

(D) A nitrogen oxide

CORRECT ANSWER: C

SOLUTION:

35. (c) $\underset{\text{Ethylamine}}{CH_3 - CH_2 - NH_2} \xrightarrow[[O]]{KMnO_4} \underset{\text{Aldimine}}{CH_3 - CH = NH} \xrightarrow{H_3O^+} \underset{\text{Acetaldehyde}}{CH_3 - CHO}$

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Q-10 - 12775259

Primary amines can be distinguished from secondary and tertiary amines by reacting with

(A) Chloroform and alcoholic KOH

(B) Methyl iodide

(C) Chloroform alone

(D) Zinc dust

CORRECT ANSWER: A

SOLUTION:

Primary amine reacts with $CHCl_3$ and alc. KOH to form isocyanide while secondary and tertialry amines do not react.

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Q-11 - 12775260

A compound with formula C_5H_{13} gives a base soluble derivative iin the Hinsberg test ($C_6H_5SO_2Cl$ in base). Which of the following best satisfy this condition?

(A) 2,2-dimethylpropylamine

(B) Isopropyldimethylamine

(C) N,N-dimethylpropylamine

(D) N-methyl-2-methylpropylamine

CORRECT ANSWER: A

SOLUTION:

$$CH_3-\underset{\displaystyle CH_3}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}-CH_2-NH_2+CHCl_3+3KOH$$

$$\rightarrow (CH_3)_3CCH_2NC+3KCl+3H_2O$$

This is the property of 1° amine (i.e., compound having-NH_2) group. Thus 2,2- dimethylpropylamine gives this reaction.

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Q-12 - 12775268

HOFFMANN MUSTARD OIL REACTION

(A) $\frac{Na}{C_2H_5OH}$

(B) $\frac{Sn}{HCl}$

(C) CS_2

(D) $\frac{K_2Cr_2O_7}{H_2SO_4}$

CORRECT ANSWER: C

SOLUTION:

Amine is treated with CS_2 in reaction.

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Q-13 - 12775272

Which of the following compound will be obtained in the end of the following reaction?

Ethyl amine $\xrightarrow{HNO_2} A \xrightarrow{PCl_5} B \xrightarrow{NH_3} C$

(A) Ethyl cyanide

(B) Acetamide

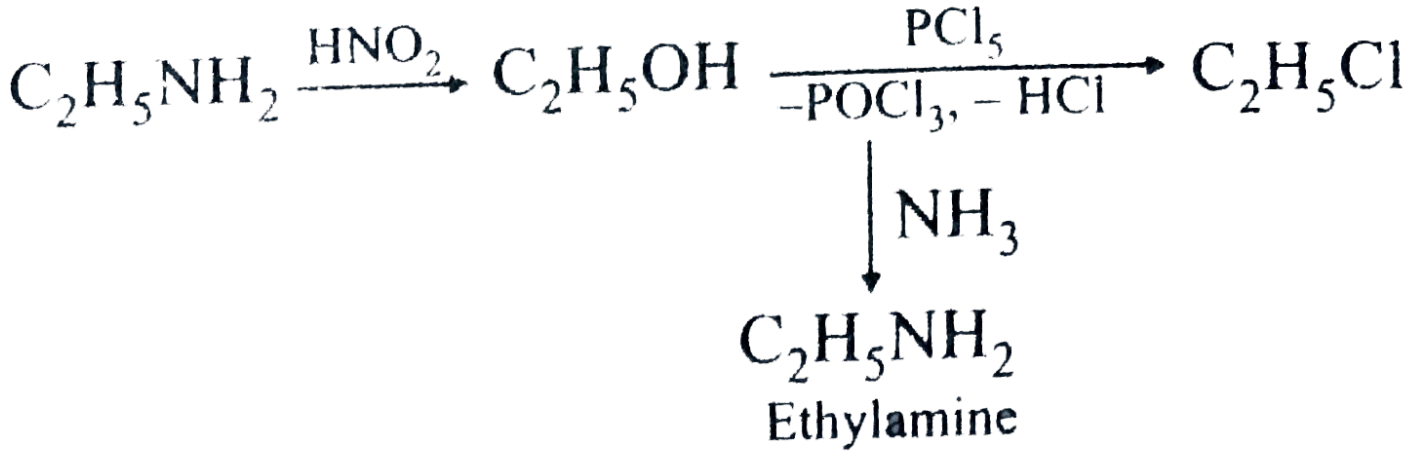
(C) Methyl amine

(D) Ethyl amine

CORRECT ANSWER: D

SOLUTION:

(d)



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Q-14 - 12775285

$$R - \overset{\overset{O}{||}}{C}NH_2 \rightarrow RCH_2NH_2$$

Which one of the following reducing agents is likely to be the most effective in bringing about the following change?

(A) $H_2 - Ni$

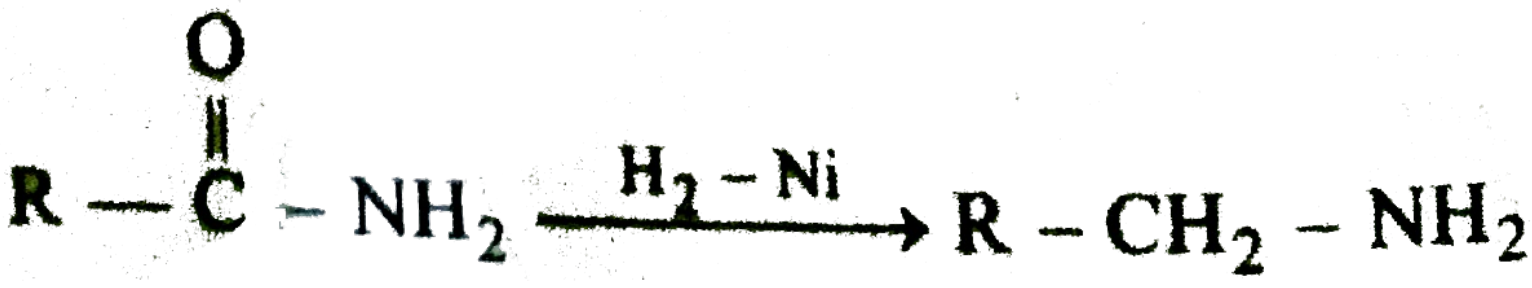
(B) $NaBH_4$

(C) $LiAlH_4$

(D) Na-alcohol

CORRECT ANSWER: A

SOLUTION:



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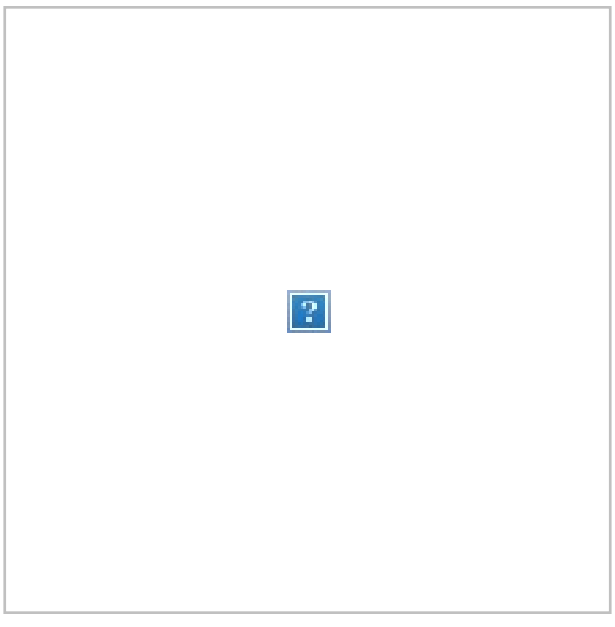
Q-15 - 12775295

An orgainc compound A upon reacting with NH_3 gives B On heating B give C. C in presence KOH reacts with Br_2 to yield $CH_3CH_2NH_2A$ is .

(A) 

(B) $CH_3CH_2CH_2CH_2COOH$

(C) CH_3CH_2COOH

(D) CH_3COOH

CORRECT ANSWER: C

SOLUTION:

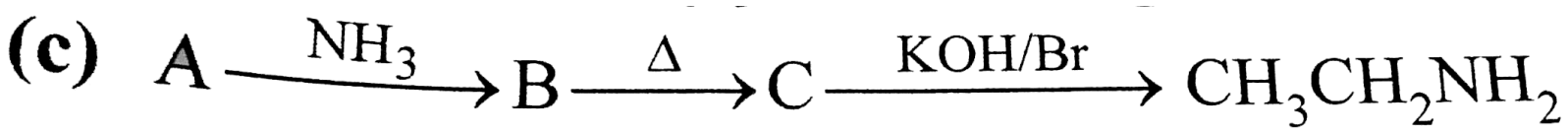
$$A \xrightarrow{NH_3} B \xrightarrow{\Delta} C \xrightarrow[Br]{KOH} CH_3CH_2NH_2$$

The reaction of C with $\frac{KOH}{Br_2}$ to give amine is called hofmann bromamide reaction. This reaction. This reaction is given by acid amides only in which $R - CH_2 - \overset{O}{\overset{||}{C}} - NH_2$ Group undergoes rearrangement along with the loss of CO_2 molecular. Thus the compound C must be acid amide with three carbon atoms. Hence, the compound C is

$$CH_3 - CH_2 - \overset{O}{\overset{||}{C}} - NH_2$$

Since, all the options shows that A is an acid and it forms acid amide on reaction with NH_3. thus acid must

contain three carbon atoms. Hence the compound A is CH_3CH_2COOH. The complete series of reaction can be represented as



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Q-16 - 12775298

The reduction of which of the following compound would yield secondary amine?

(A) Alkyl nitrite

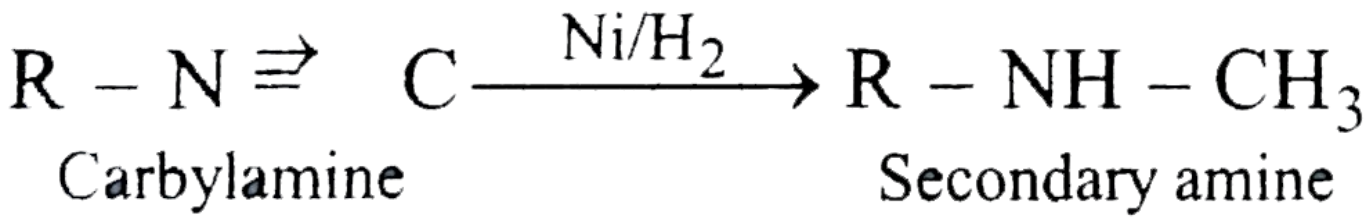
(B) Carbylamine

(C) Primary amine

(D) Secondary nitro compound

CORRECT ANSWER: B

SOLUTION:



Carbylamines (or isocyanides) give secondary amine on reduction.

$$R - \underset{\text{carbylam In e}}{\overset{\longrightarrow}{\equiv}} C \xrightarrow[H_2]{Ni} R - NH - CH_3$$

secondary amine

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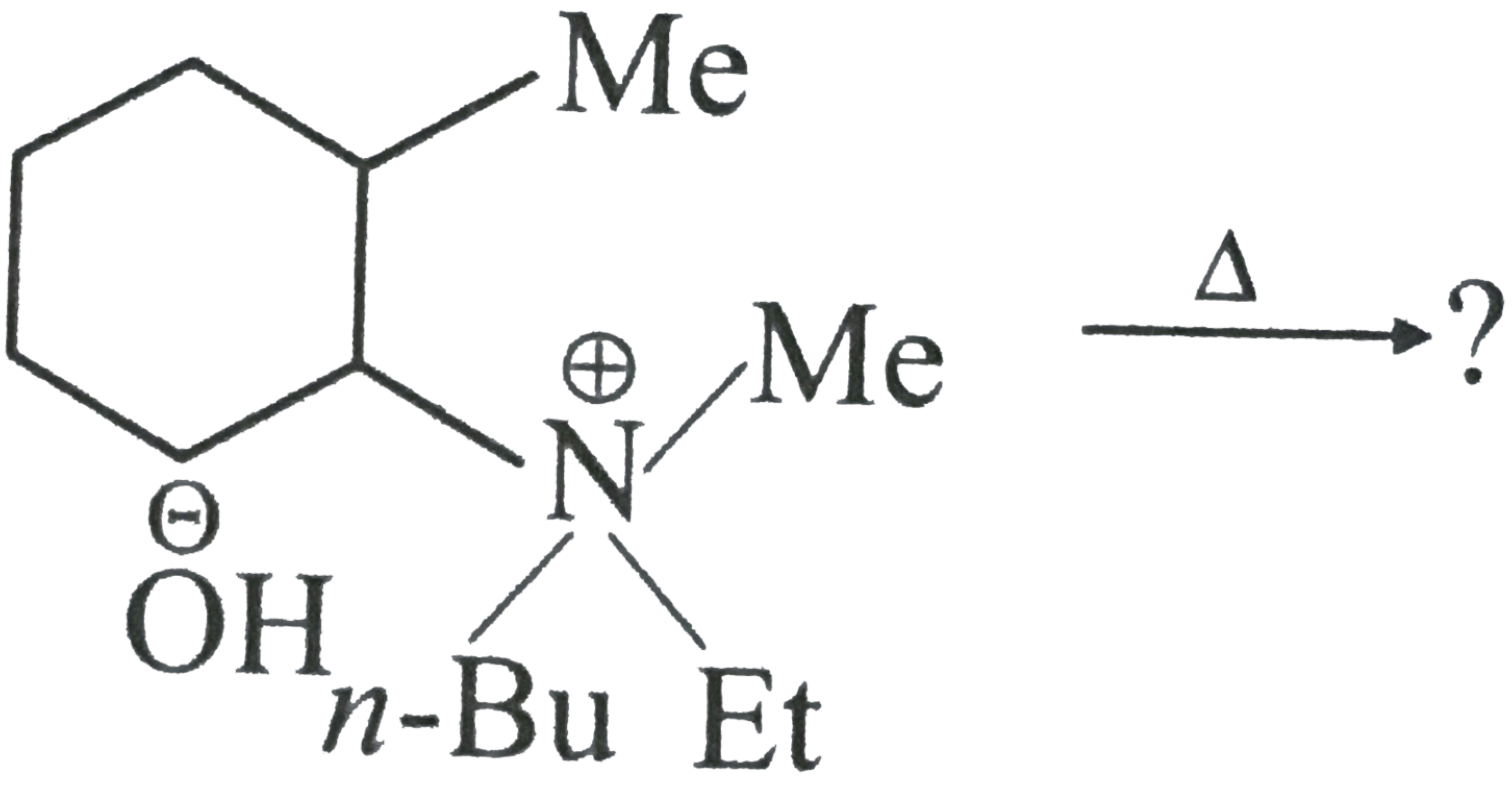
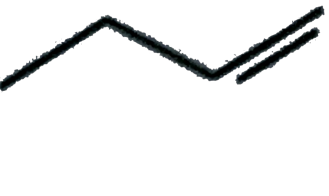
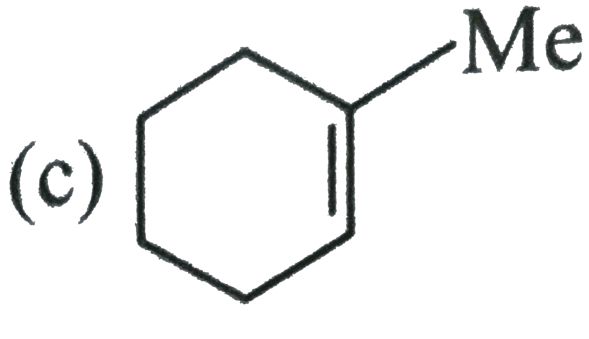
Q-17 - 12775301

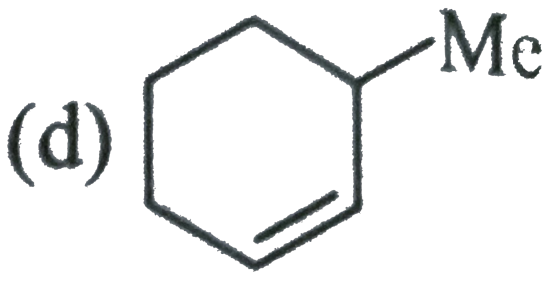


The alkene formed as a mojor product in the above elimination reaction is:

(A) 

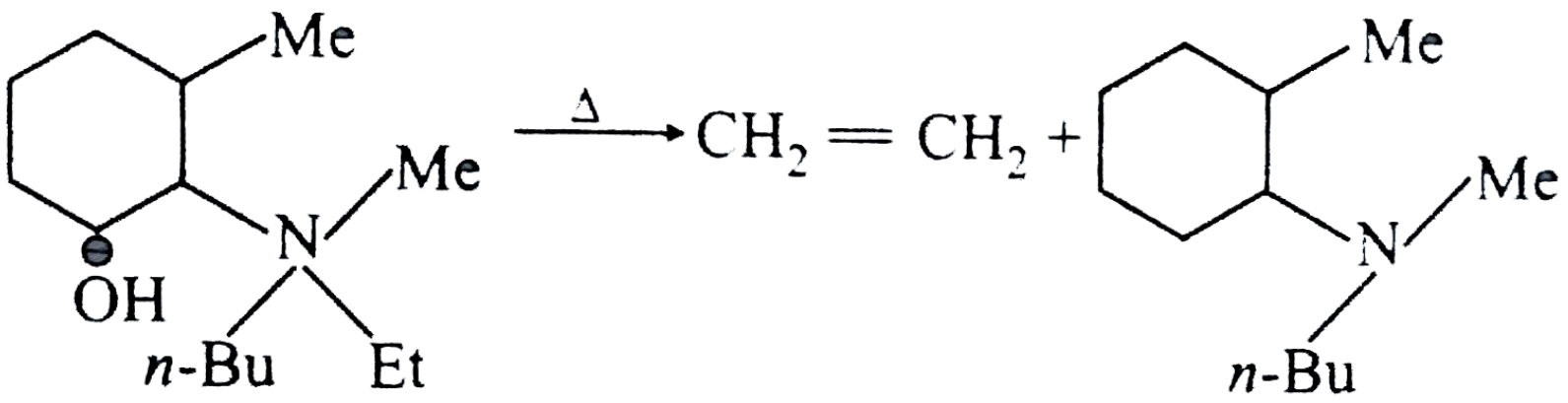
(B) $CH_2 = CH_2$

(C) 

(D) 

CORRECT ANSWER: B

SOLUTION:



The rection proceed through carbanion mechanism.

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Q-18 - 12775304

Carbylamine test is performed in alc. KOH by heating a mixture.

(A) Chloroform and silver powder

(B) Trihalogenated methane and a primary amine

(C) An alktyl halide and a primary amine

(D) An alkyl cyanide and a primary amine

CORRECT ANSWER: B

SOLUTION:

. **(b)** $\underset{1^\circ \text{ amine}}{R-NH_2} + CHCl_3 + 3KOH\ (alc.) \xrightarrow[test]{\text{Carblyamine}} \underset{\text{Alkyl isocyanide}}{R-N\equiv C} + 3KCl + 3H_2O$

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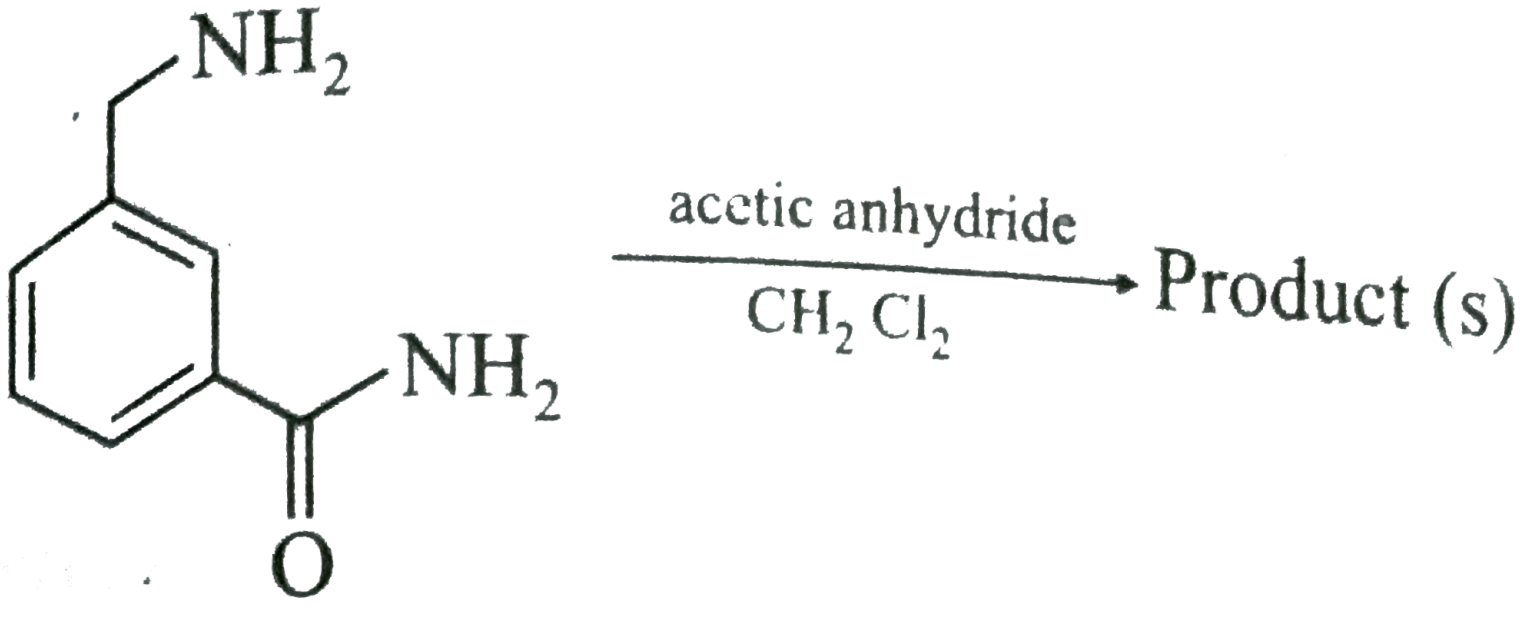
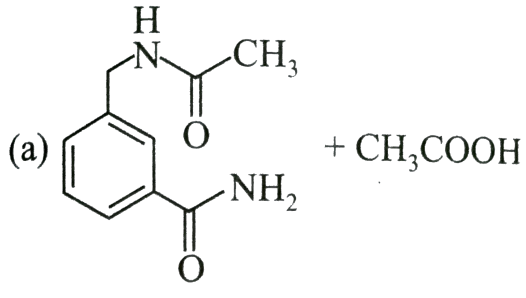
Q-19 - 12775310

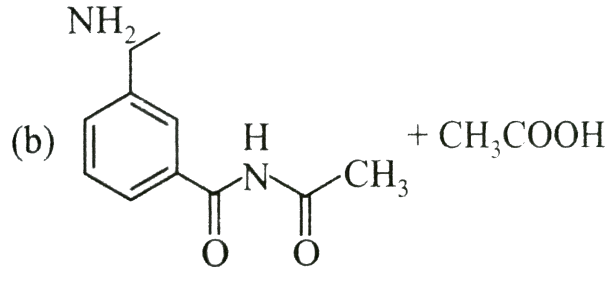


In the raction shown below, the major product (s) formed is/are?

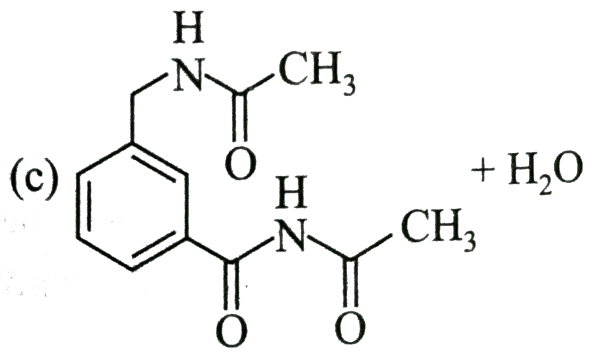
(A)



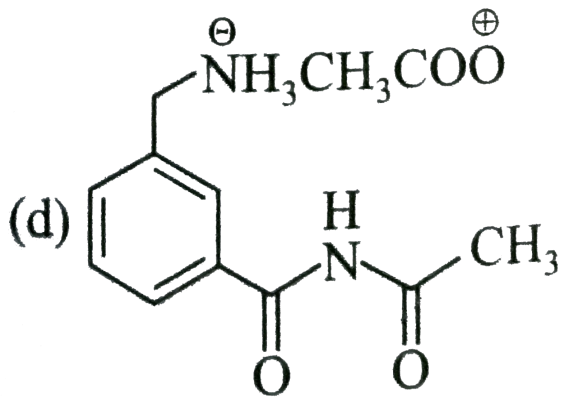
(B)



(C)

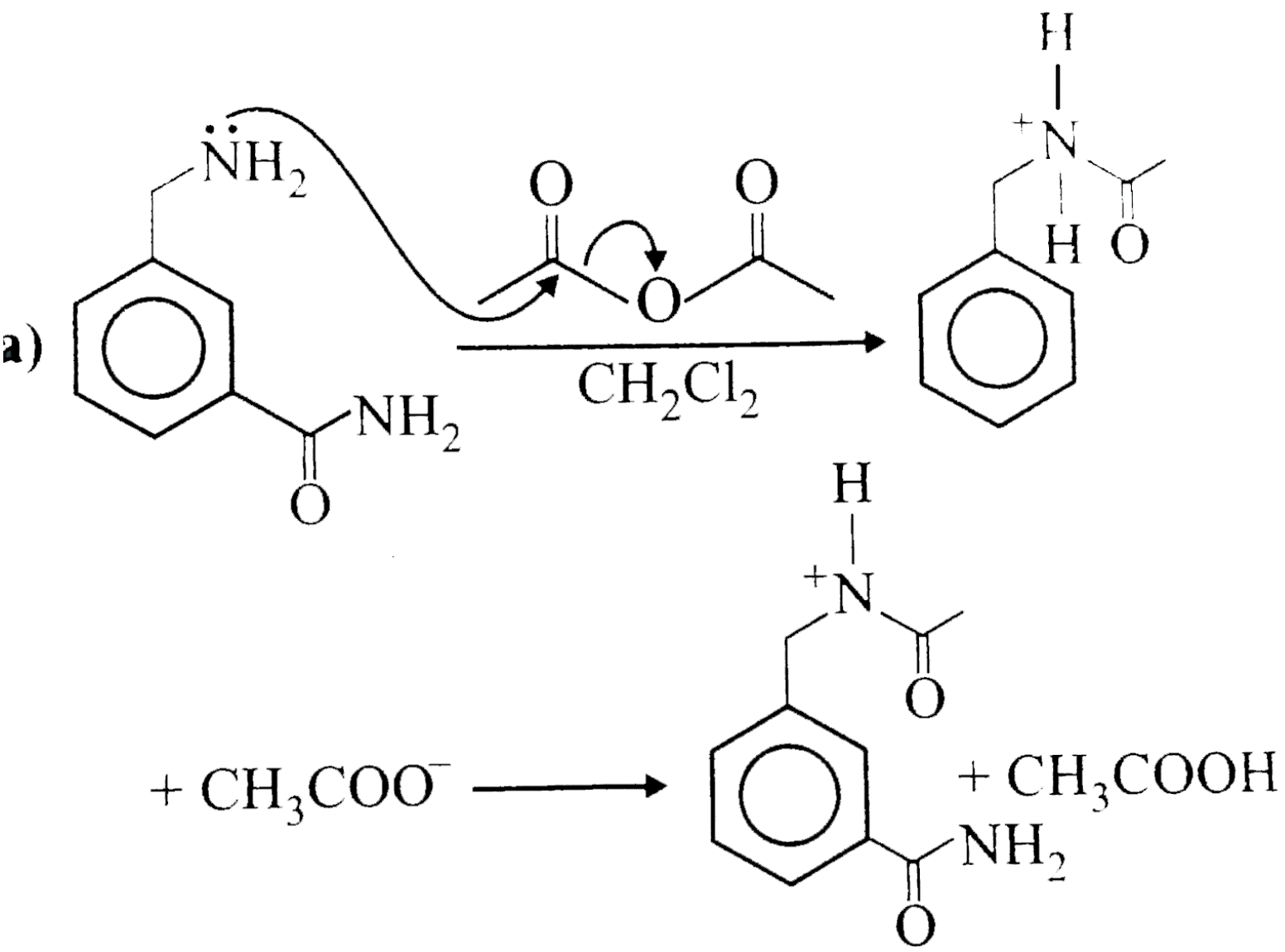


(D)



CORRECT ANSWER: A

SOLUTION:



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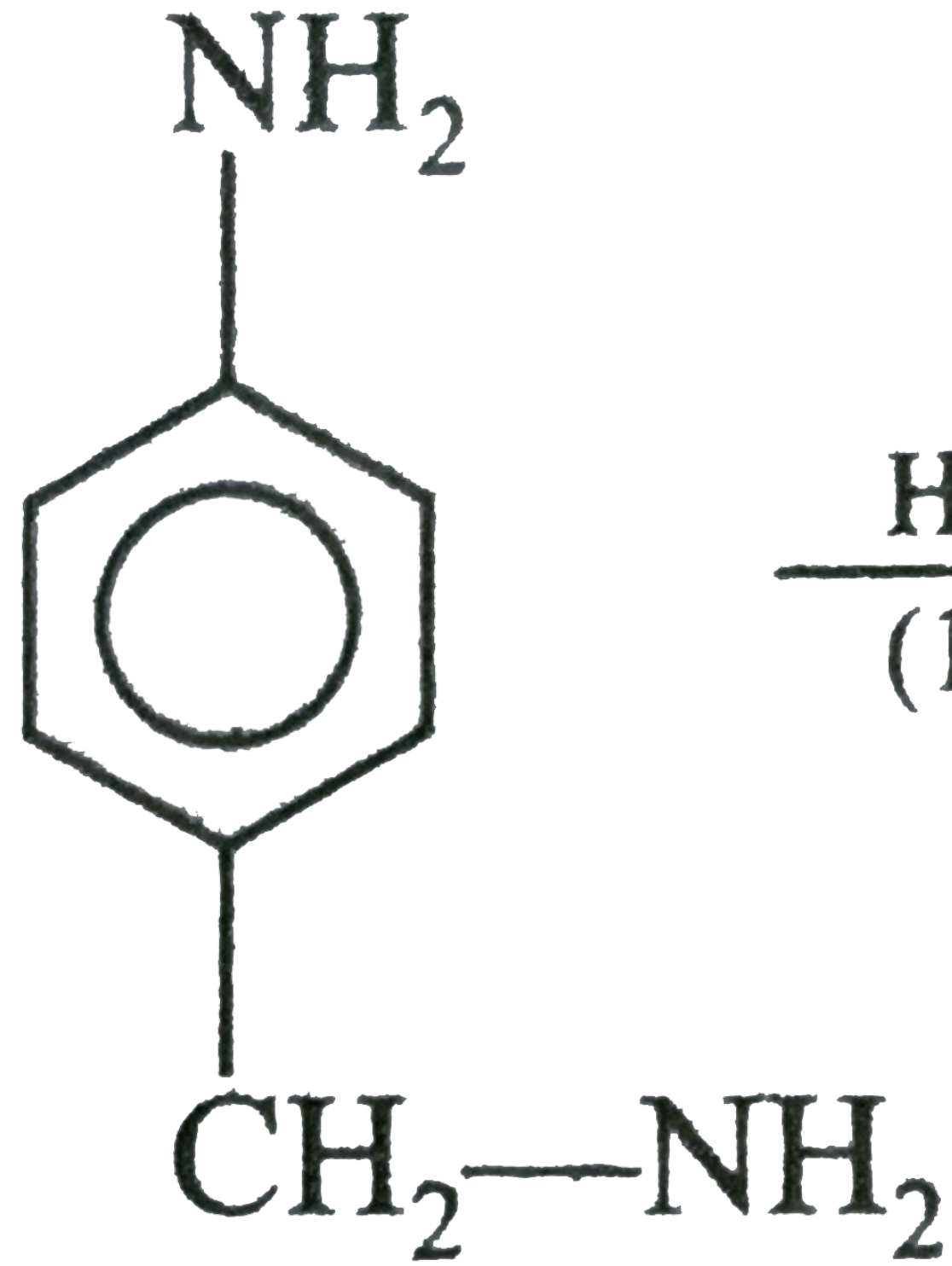
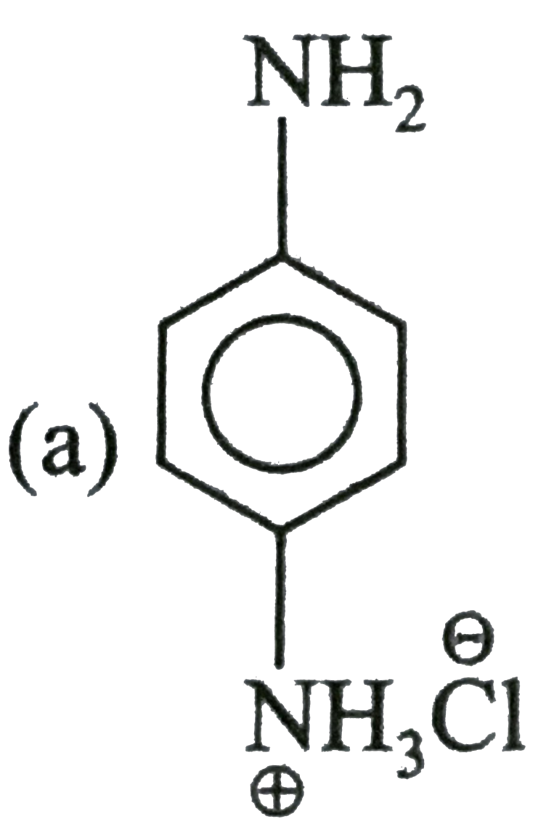
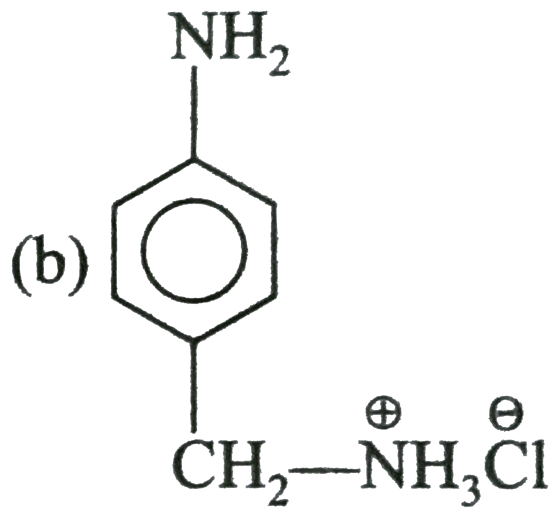
Q-20 - 12775323



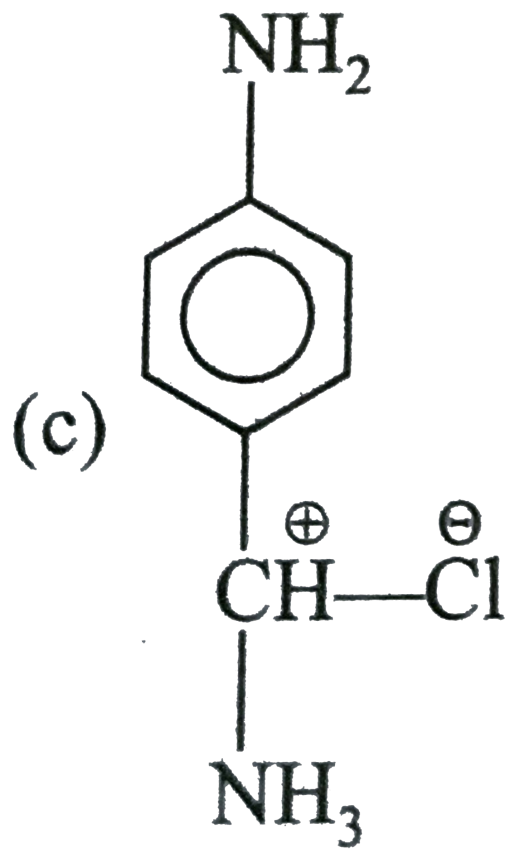
Product formed in the given reaction is

(A) 

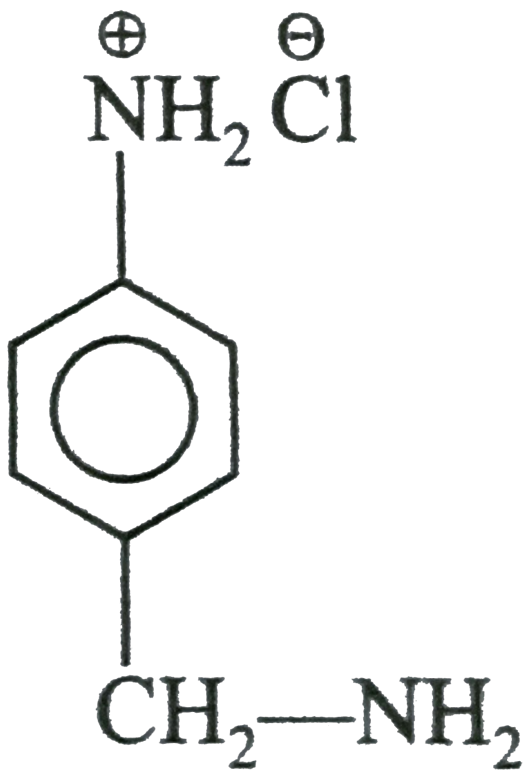
(B)



(C)



(D)



CORRECT ANSWER: A

SOLUTION:

Amine group $(-NH_2)$ attached with CH_2 group is more basec, hence first attacked by the CHI molecule.

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Q-21 - 12775331

$$C_6H_5NH_2 \xrightarrow[0-^{\square}]{\frac{NaNO_2}{HCl}} X \xrightarrow[CH_2]{HNO_2} Y + N_2 + HCl$$

X and Y are respectively

(A)

$C_6H_5 - N = N - C_6H_5,$

$C_6H_5N_2^{\oplus}Cl^{\Theta}$

(B)

$C_6H_6N_2^{\oplus}Cl^{\Theta}, C_6H_5 - N = N - C_6H_5$

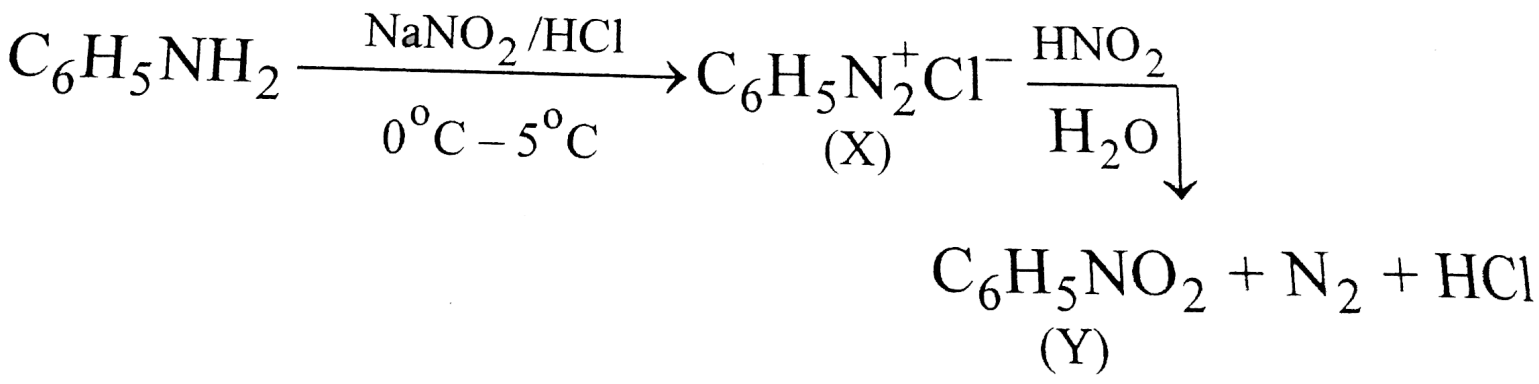
(C)

$C_6H_5N_2^{\oplus}Cl^{\ominus}$,
$C_6H_5NO_2$

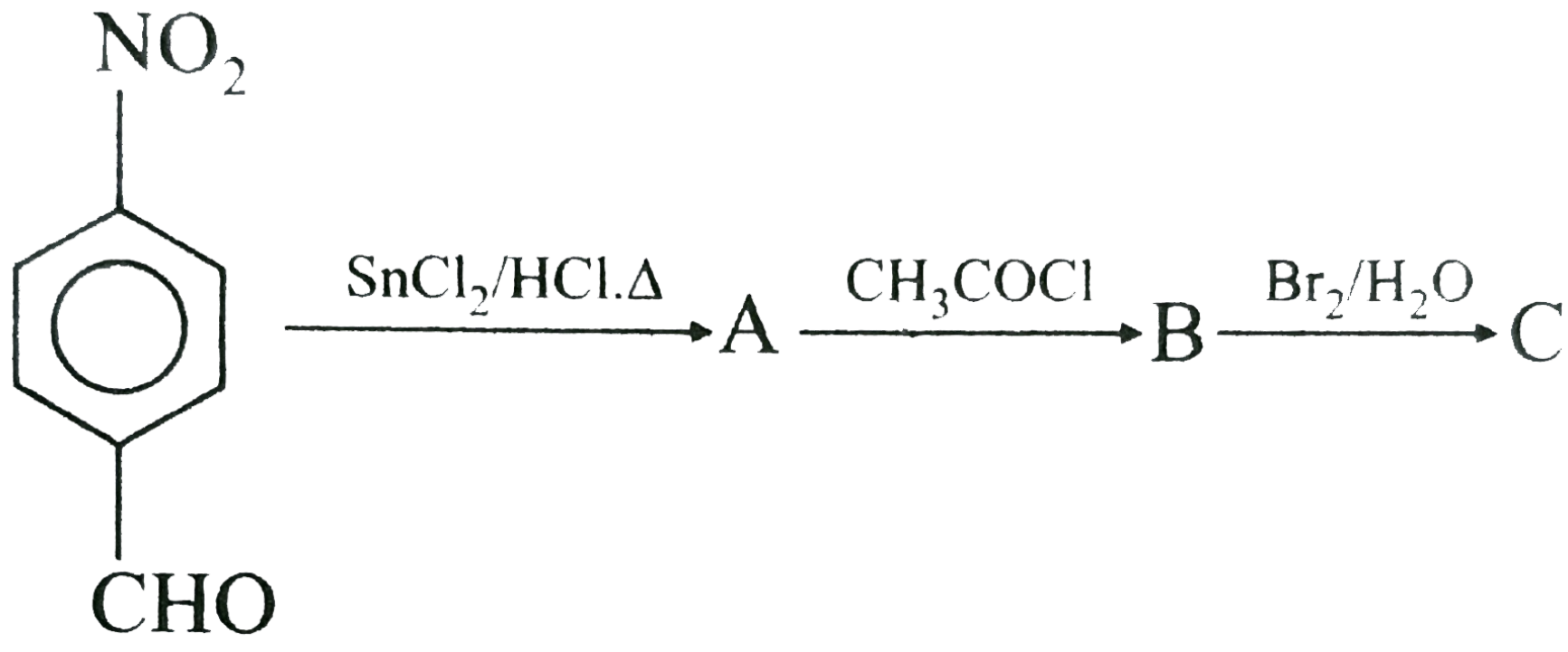
(D) $C_6H_5NO_2, C_6H_6$

CORRECT ANSWER: C

SOLUTION:

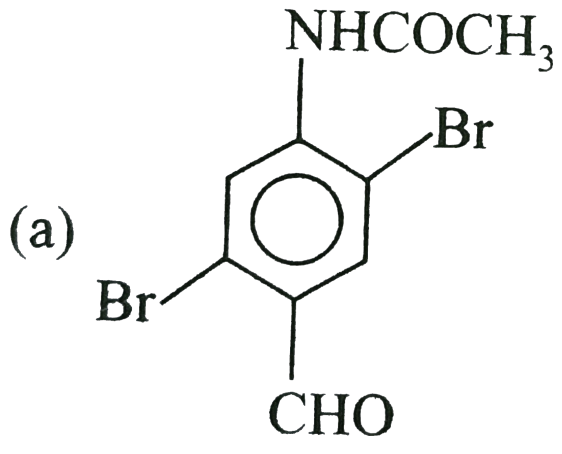


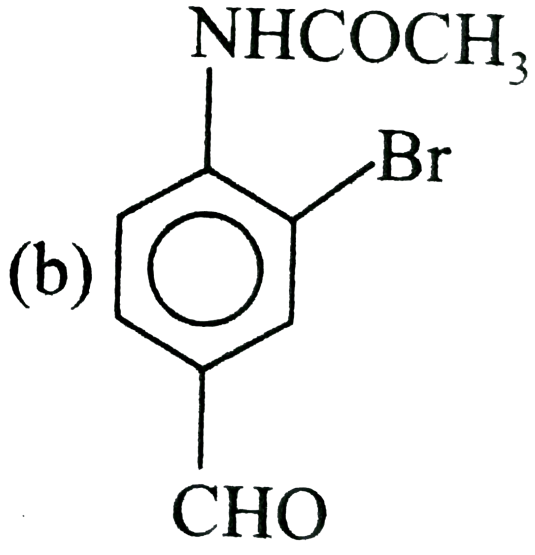
Q-22 - 12775336



Product C is

Product C is

(A) 

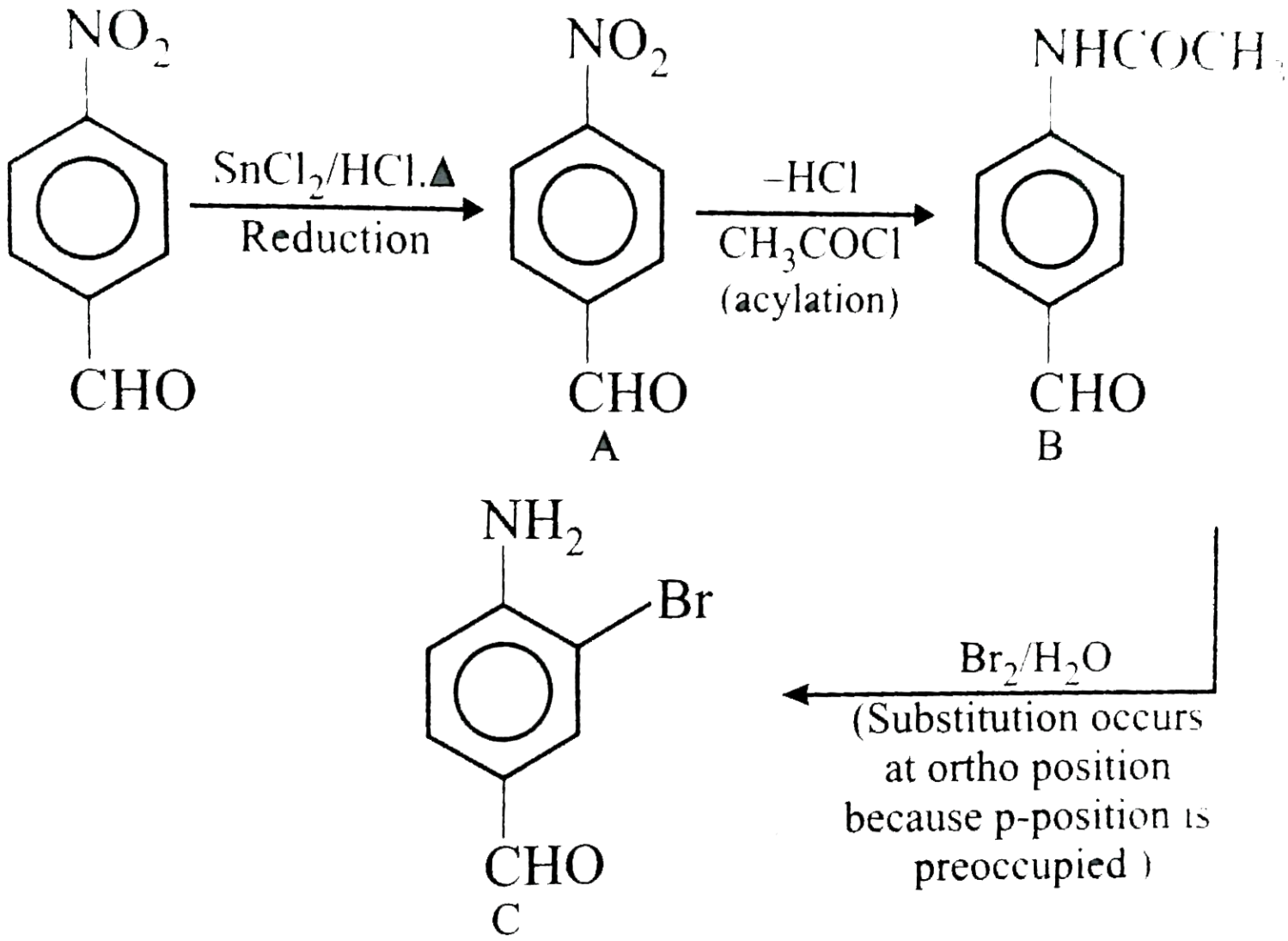
(B) 

(C) Both (a) and (b)

(D) None of these

CORRECT ANSWER: D

SOLUTION:



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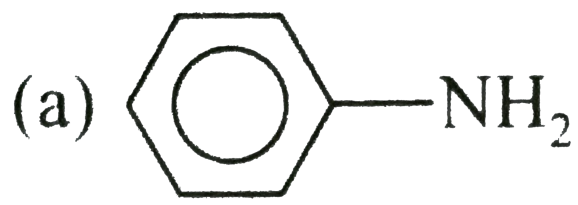
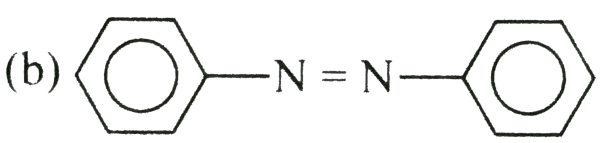
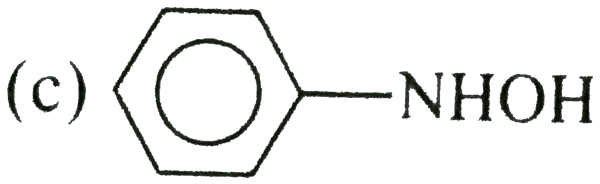
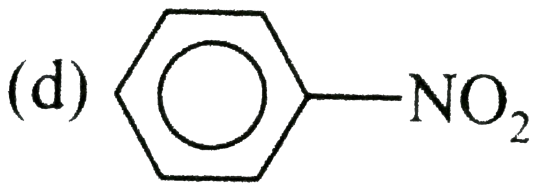
Q-23 - 12775342

By reduction of mitrosobenzene which f the following is not obtained

(A) 

(B) 

(C) 

(D) 

CORRECT ANSWER: D

SOLUTION:

Nitrobanzene is not obtained by reduction of

nitrosobazene.

Q-24 - 12775352

Which of the following compounds does not react with $NaNO_2$

and HCl?

(A) C_6H_5OH

(B) $C_6H_5NH_2$

(C) $(CH_3)_3CHO_2$

(D) $(CH_3)_3CHNO_2$

CORRECT ANSWER: C

SOLUTION:

Replaceable is absent. $(CH_3)_2CNH + O_2$ does not react with $NaNO_2$ and HCl.

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Q-25 - 12775356

Aniline and methyl amine can be differentiated by

(A) Reaction with chlorofrm and aqueous solution of KOH

(B) Diazotisation followed by coupling with phenol

(C) reaction with HNO_2

(D) None of these

CORRECT ANSWER: B

SOLUTION:

Phenol react with aniline to give diazonium salt by coupling but Methyl amine not react with phenol.

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Q-26 - 12775358

In the reaction

$C_6H_5CHO + C_6H_5NH_2$
$\rightarrow C_6H_5N = H\mathbb{C}_6H_5$
$+ H_2O$

and compound $C_6H_5N = CHC_6H_5$ is knows as

(A) Aldol

(B) Schiff's reagent

(C) Schiff's base Benedict reagent

CORRECT ANSWER: C

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Q-27 - 12775361

Identify the product Z in the following reacton

$$C_6H_5NH_2 \xrightarrow{(AC)_2O} X \xrightarrow[CCl_4]{Br_2} T \xrightarrow{HCH} Z$$

(A) p-Bromoaniline

(B) p-Bromoacetophenone

(C) o-Bromoacetophenone

(D) o-Bromoacentanilide

CORRECT ANSWER: A

SOLUTION:

Z is p-Bromoaniline.

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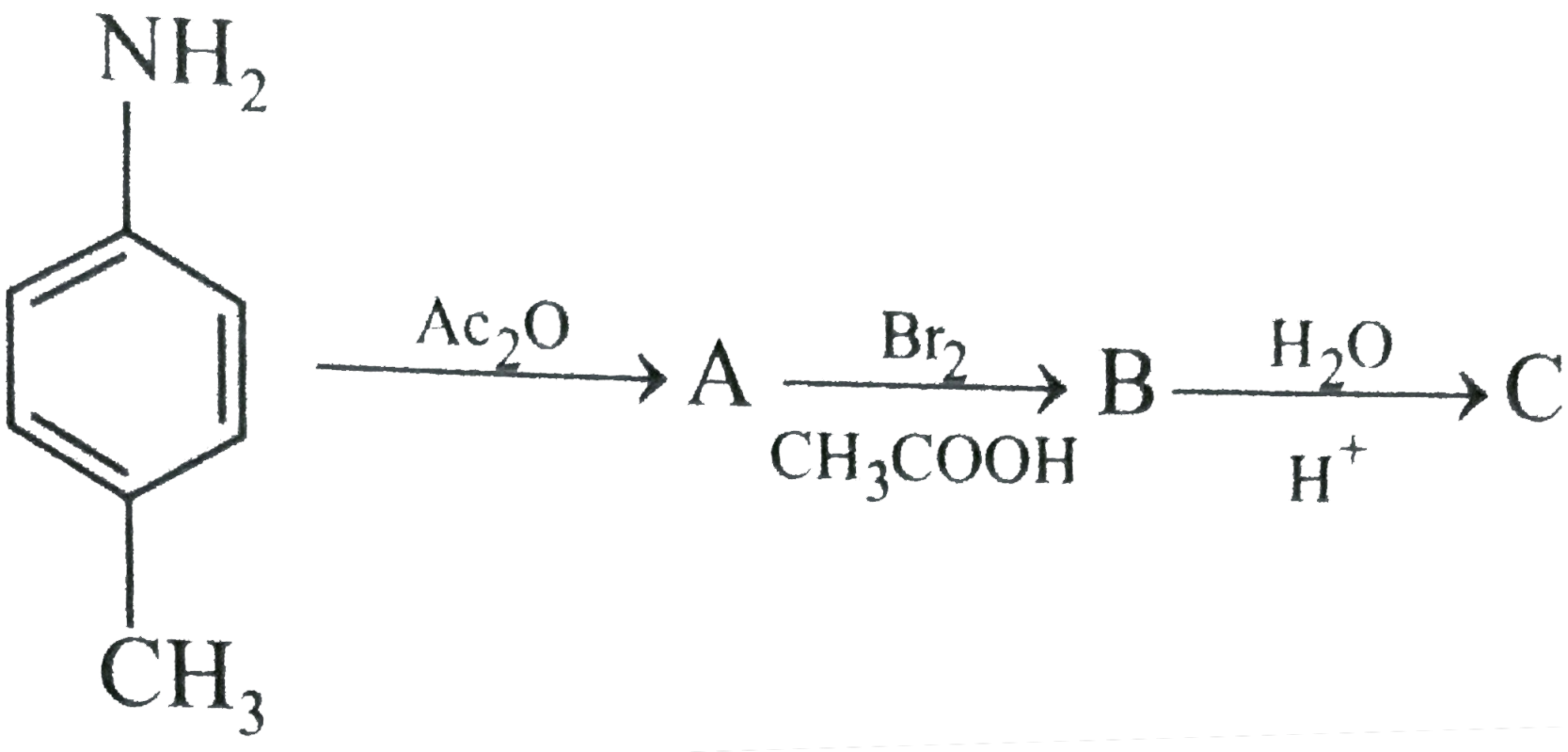
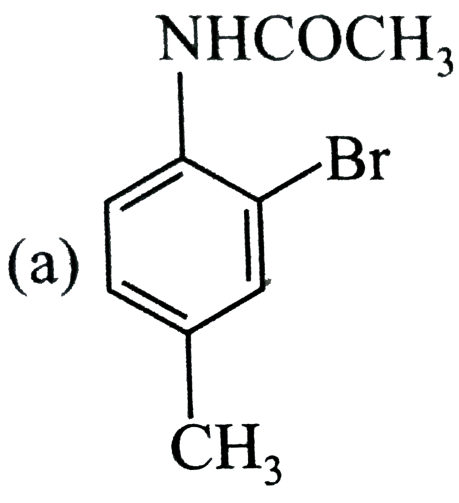
Q-28 - 12775363



The final product C, obtained in this reaction

(A) 

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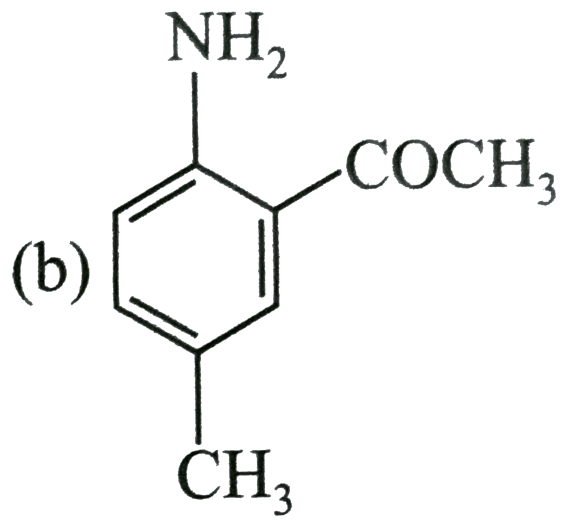
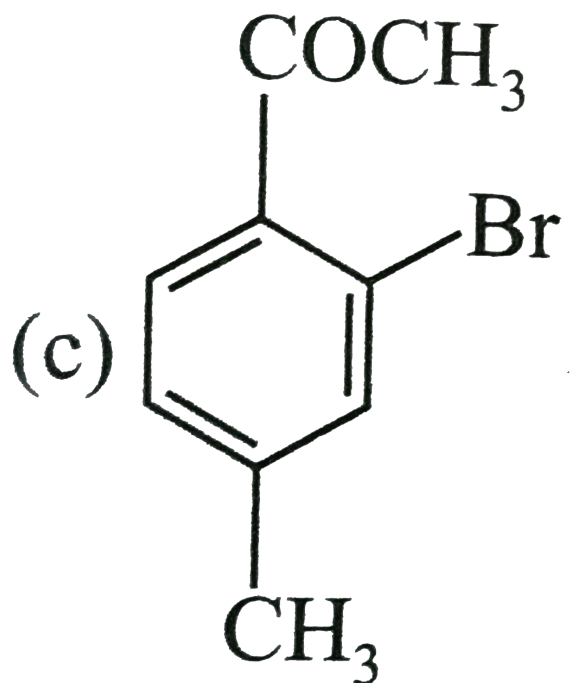
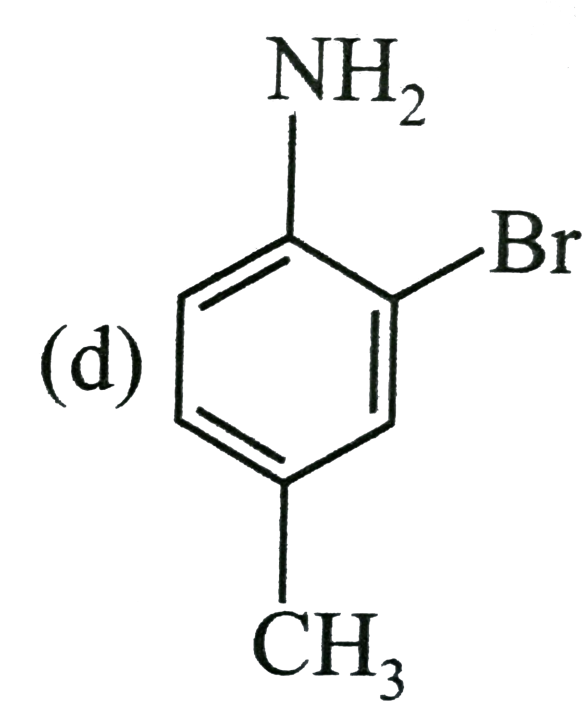


(C)



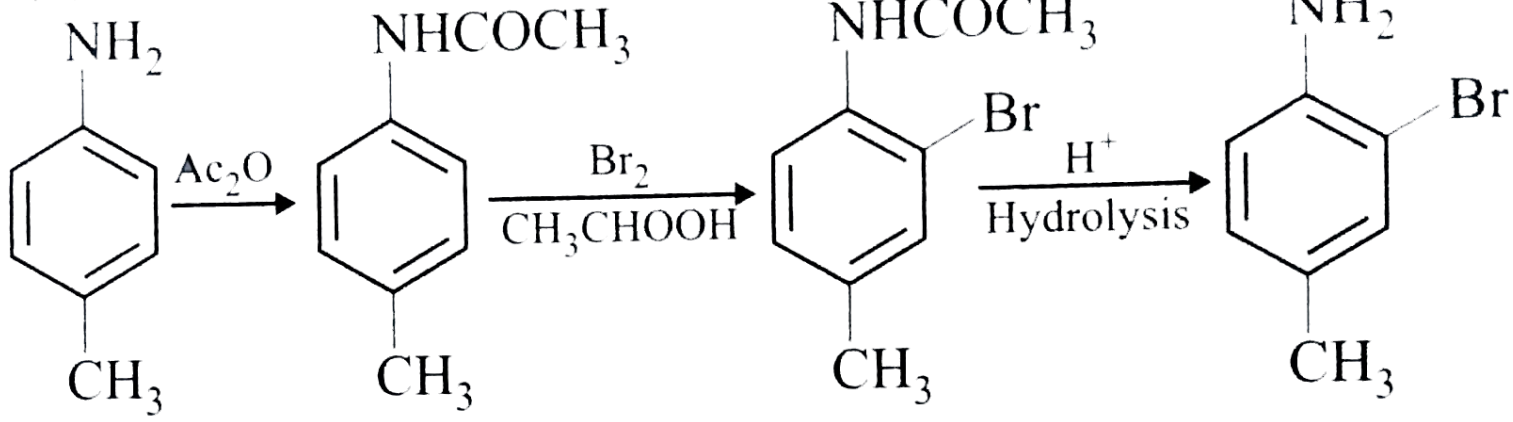
(D)



CORRECT ANSWER: D

SOLUTION:

4. (d)



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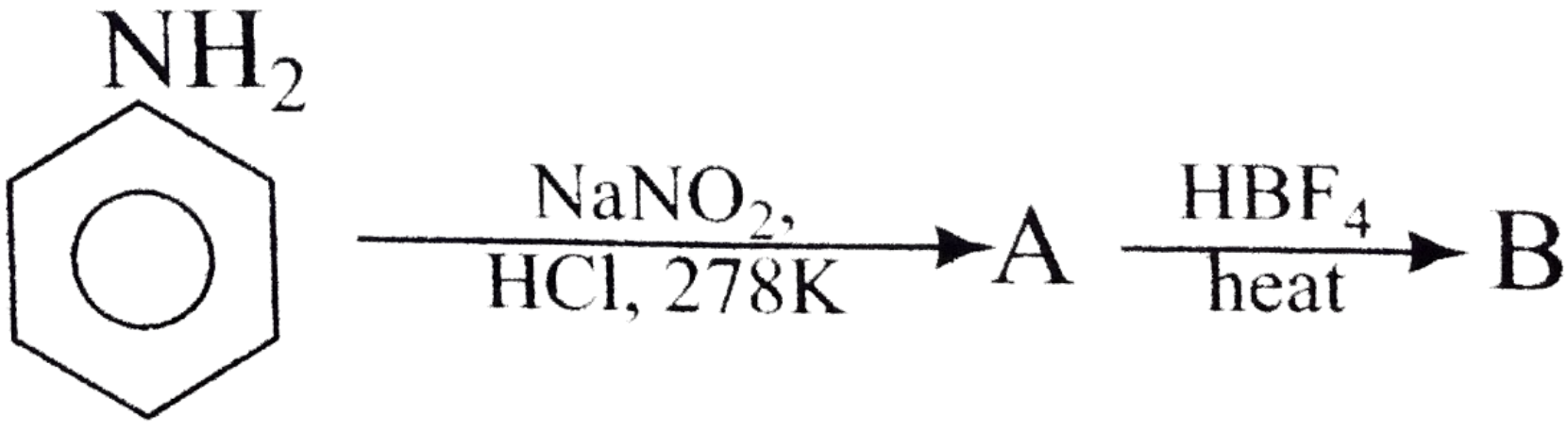
Q-29 - 12775364

In the chemical reactions



the compounds (A) and (B) are .

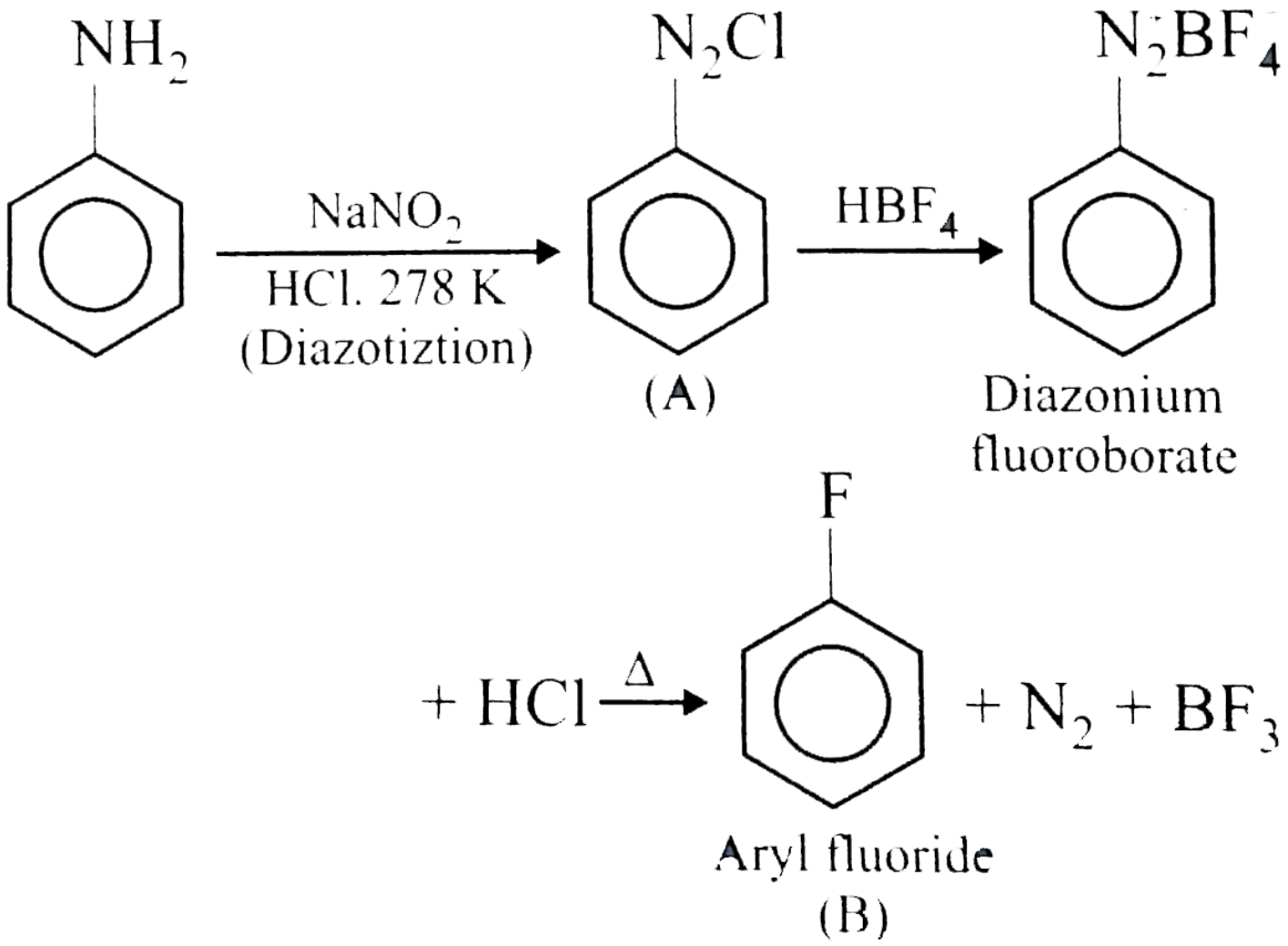
(A) nitrobenzene and fluorobenzen

(B) benzene diazonium chloride and fluorobenzen

(C) nitrobenzene and chlorobenzene

CORRECT ANSWER: C

SOLUTION:



The reaction of diazonium chloride with fluoroboric acid (HBF_4) is called Balz-Schiemann reaction.

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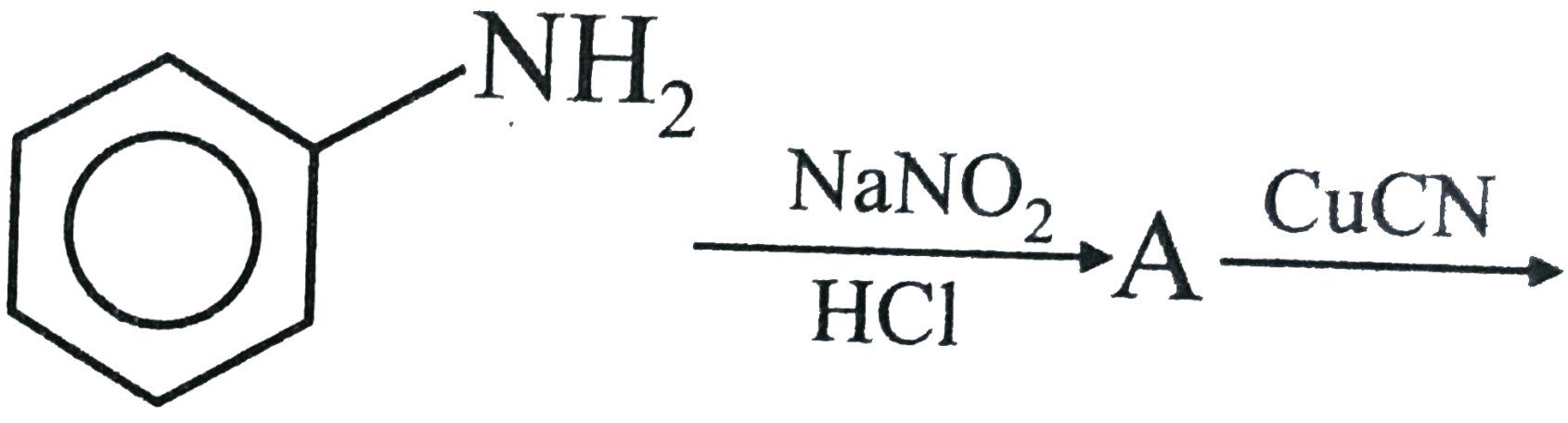
Q-30 - 12775365



$$B \xrightarrow[Ni]{H_2} C \xrightarrow{HNO_2} D$$

Aniline in a set of reactions yielded a product D.

The structure of product D would.

(A) $C_6H_5CH_2NH_2$

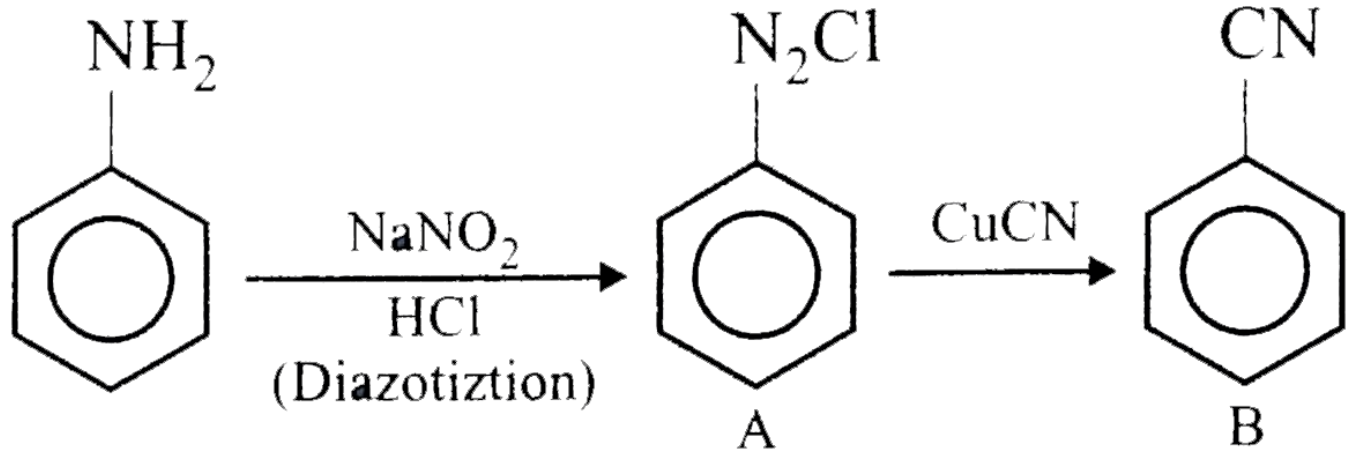
(B) $C_6H_5NHCH_2CH_3$

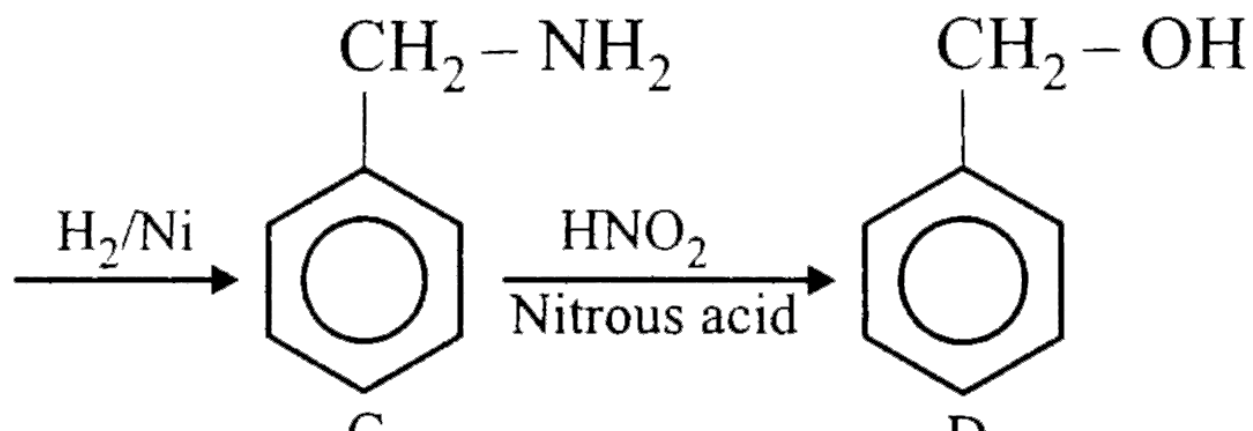
(C) C_6H_5NHOH

(D) $C_6H_5CH_2OH$

CORRECT ANSWER: D

SOLUTION:

. **(d)** 



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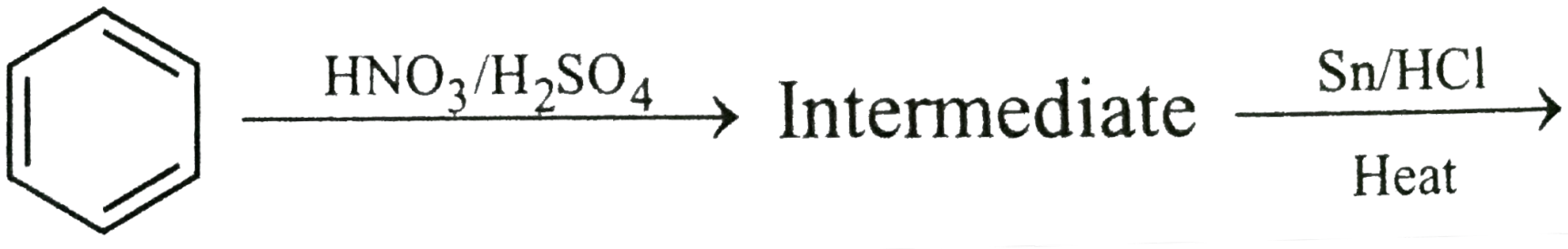
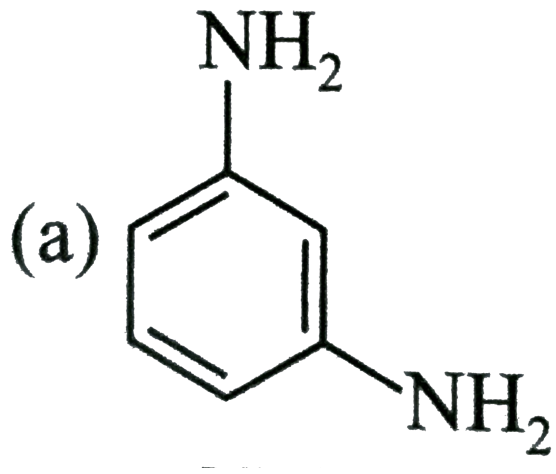
Q-31 - 12775379



(A) 

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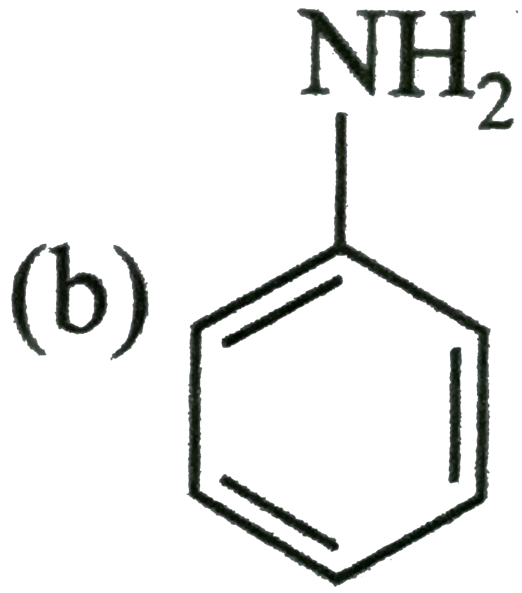
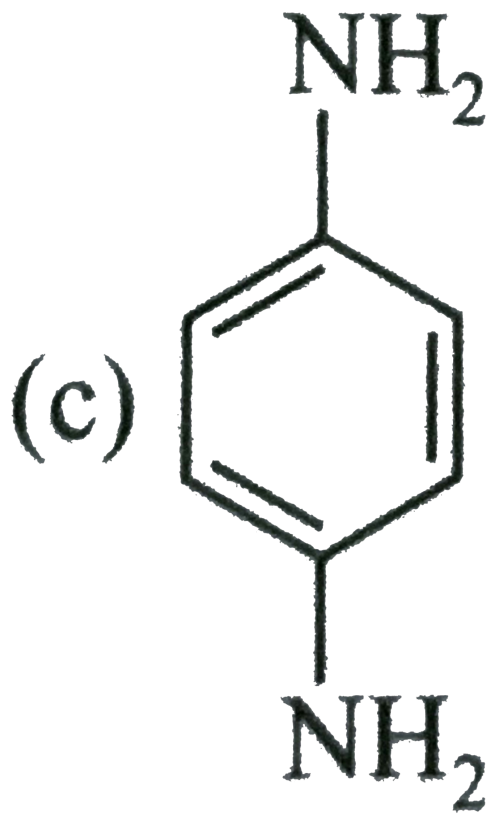


(C)



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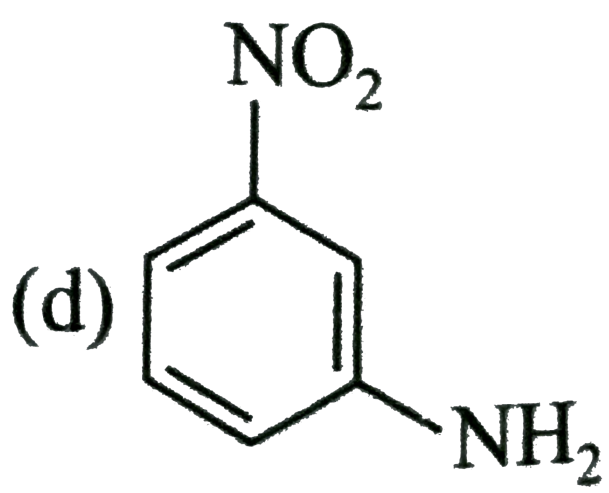
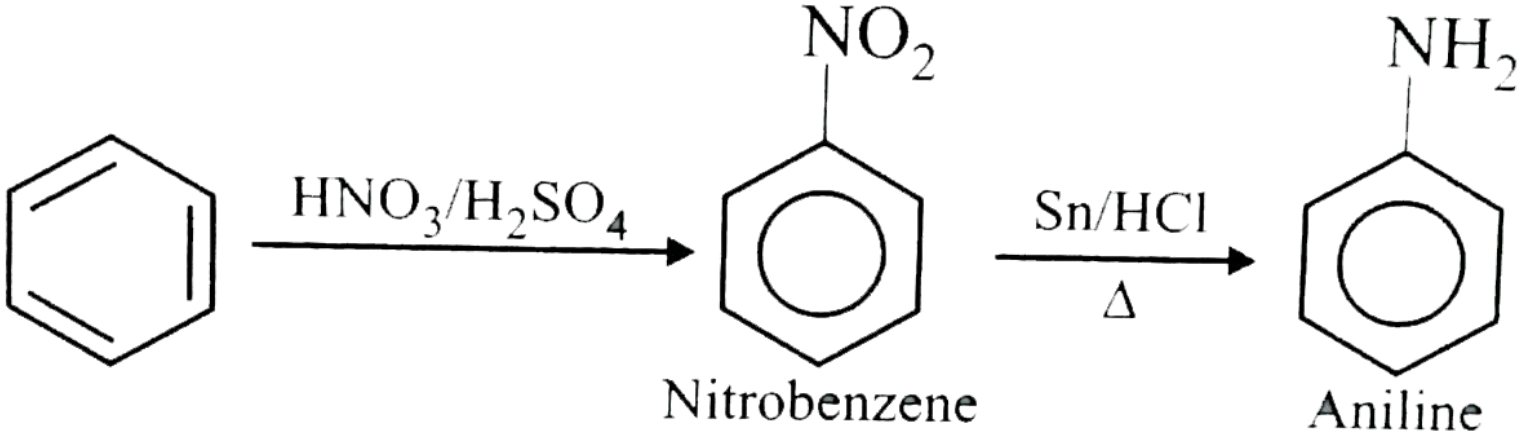


CORRECT ANSWER: B

SOLUTION:



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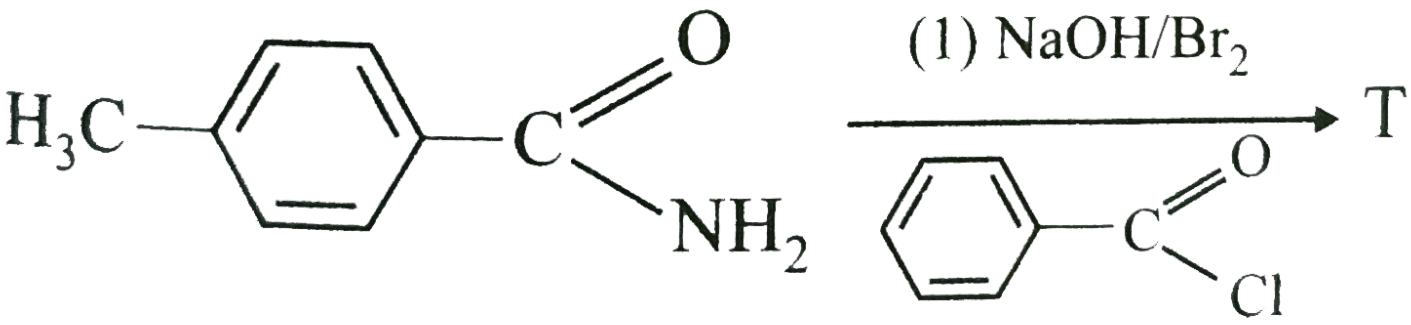
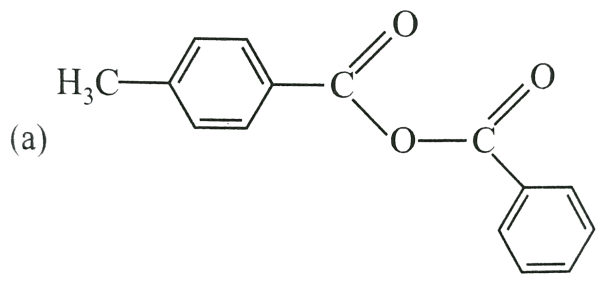
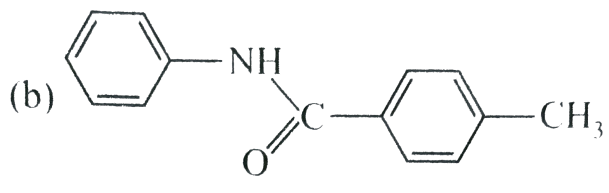
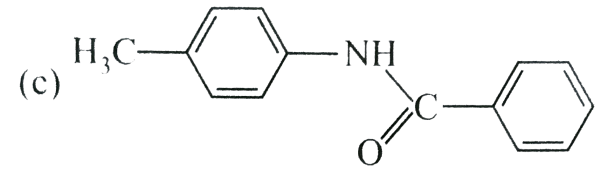
Q-32 - 12775383

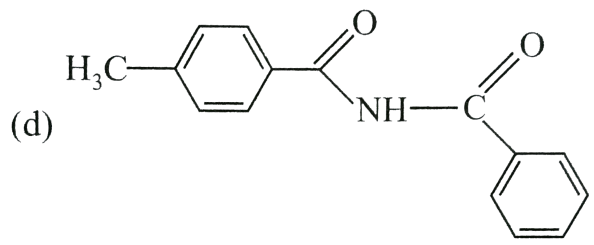
In the reaction, the structure of the product T is:



(A) 

(B) 

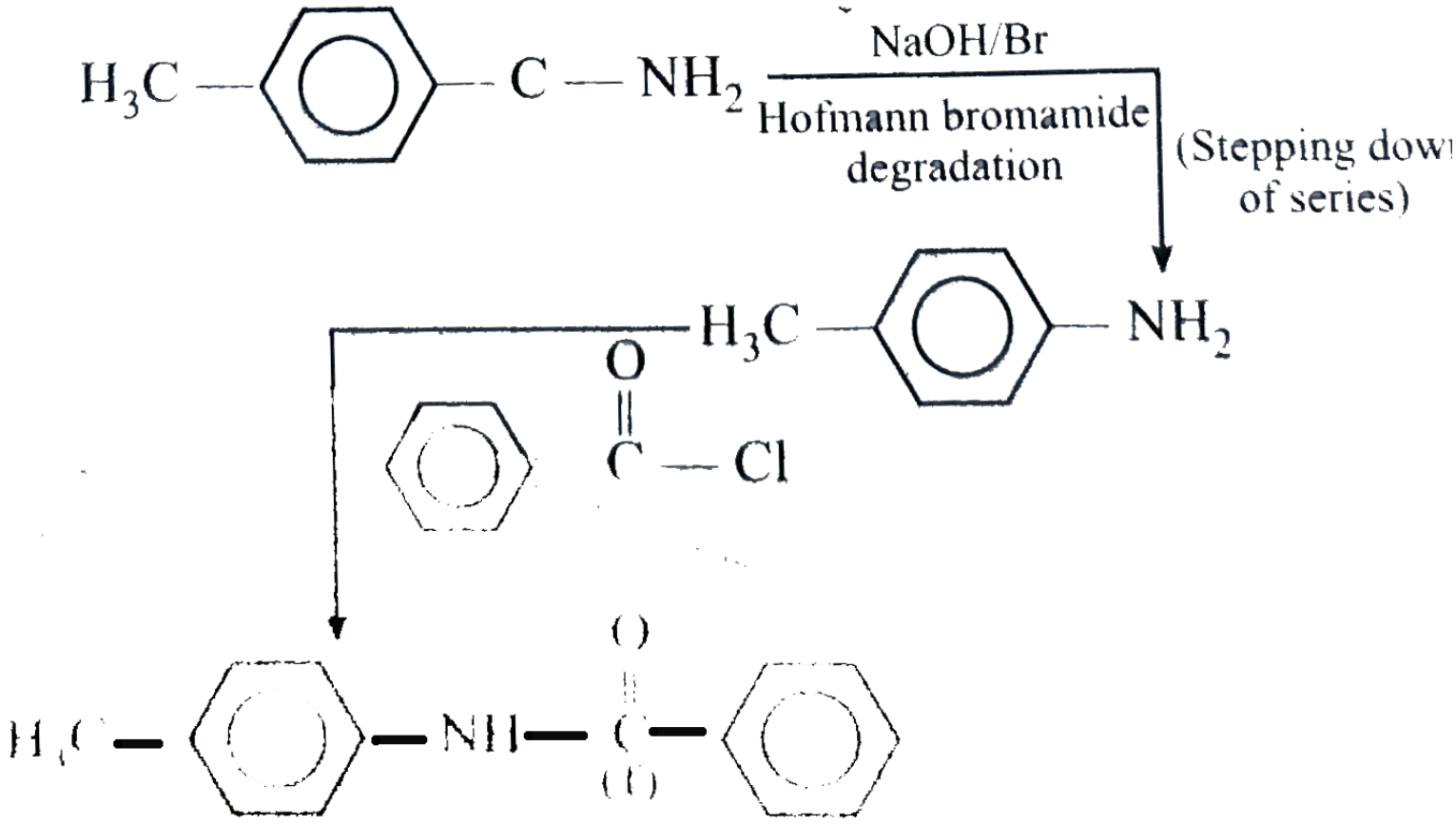
(C) 

(d) 

(D)

CORRECT ANSWER: C

SOLUTION:



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Q-33 - 12775441

Which of the following on reduction with $LiAlH_4$ gives a secondary amine?

(A) CH_3NC

(B) CH_3CONH_2

(C) CH_3CN

(D) CH_3NO_2

CORRECT ANSWER: A

SOLUTION:

$$CH_3NC \xrightarrow[LiAlH_4]{H} CH_3NHCH_3$$

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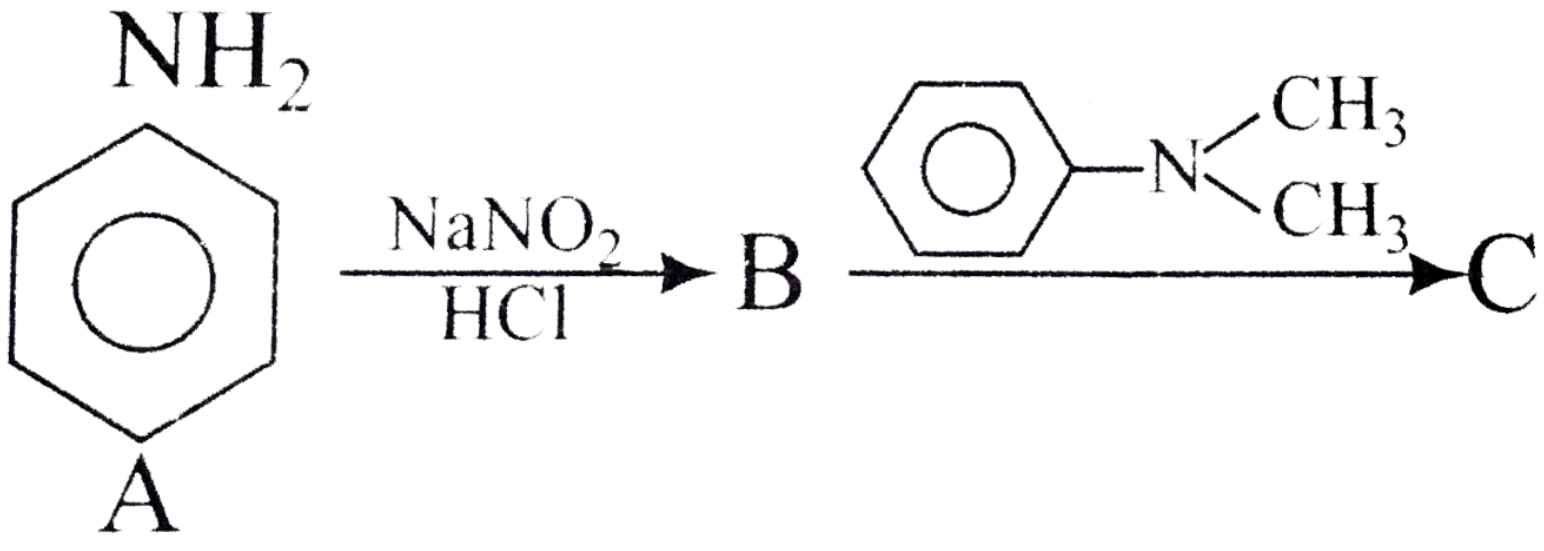
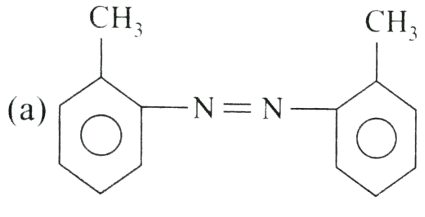
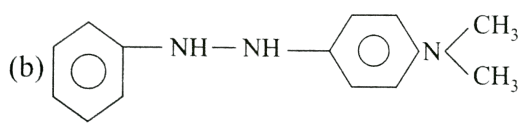
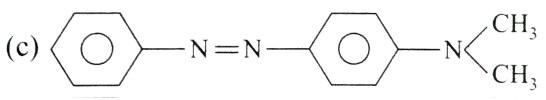
Q-34 - 12775442

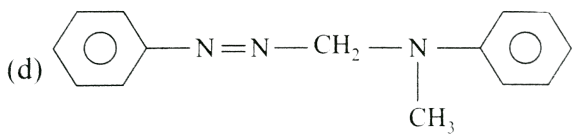
In a reactione a coloured product C was obtained The structure of C would be



(A) 

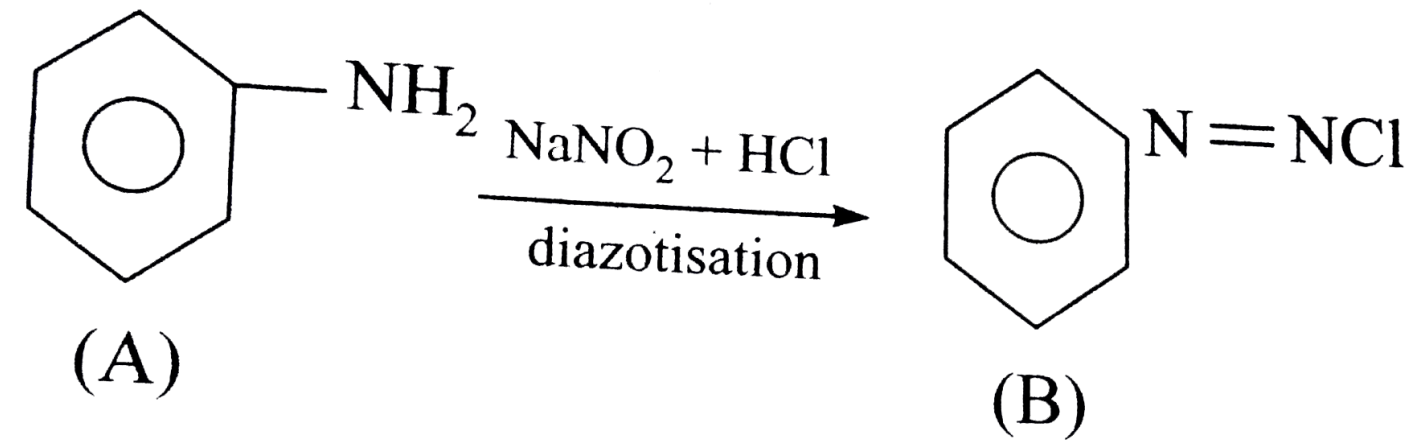
(B) 

(C) 

(D) 

CORRECT ANSWER: C

SOLUTION:



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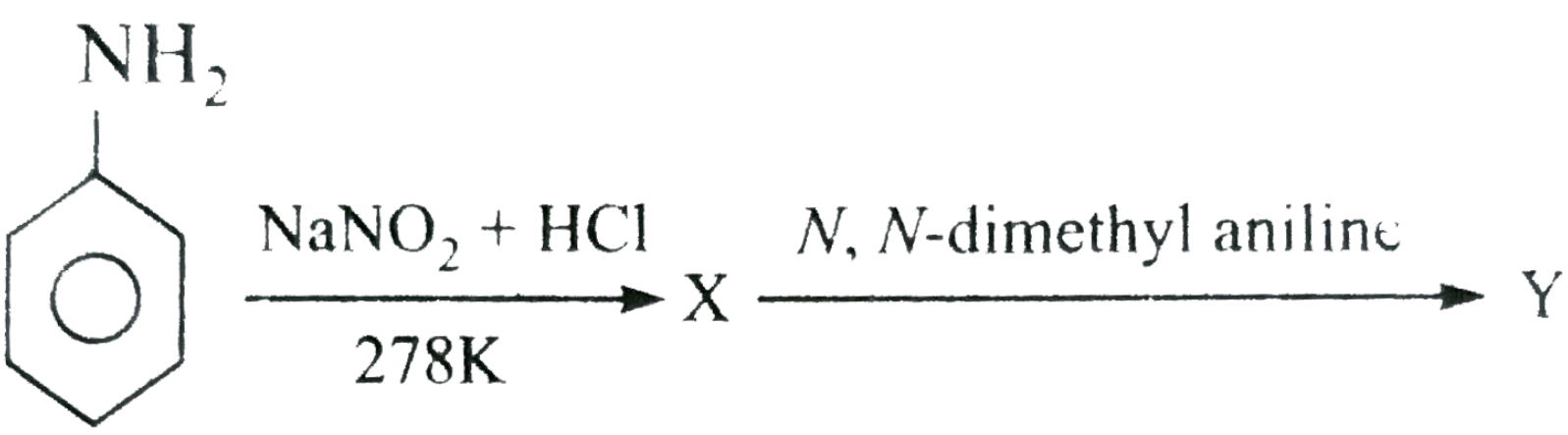
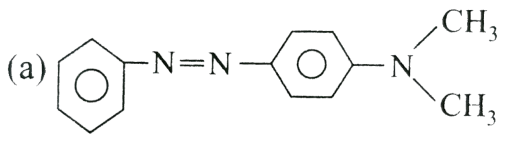
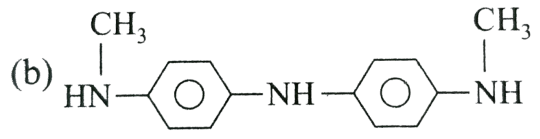
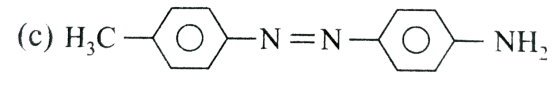
Q-35 - 12775446

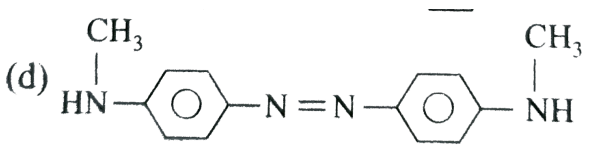


Aniline in a set of the following reactions yielded a coloured compound Y:

(A) 

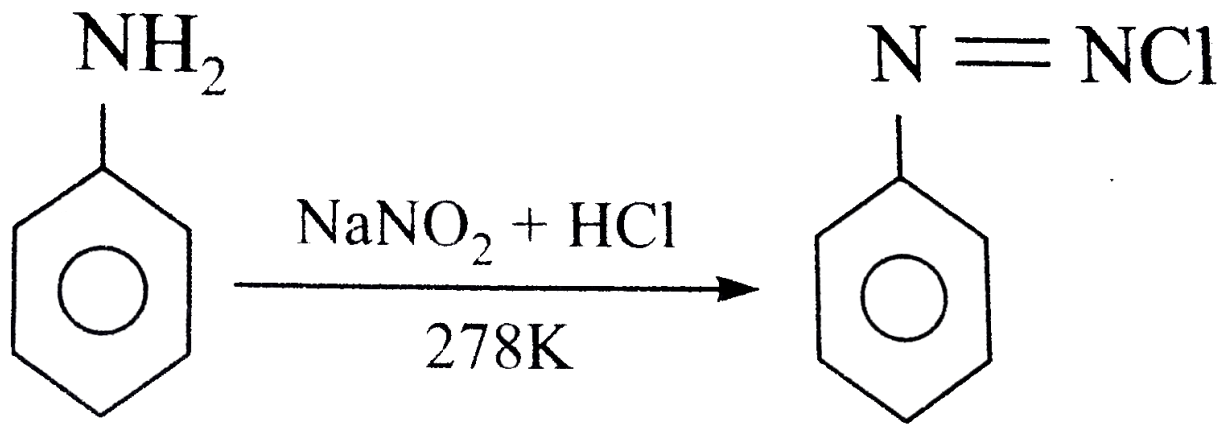
(B) 

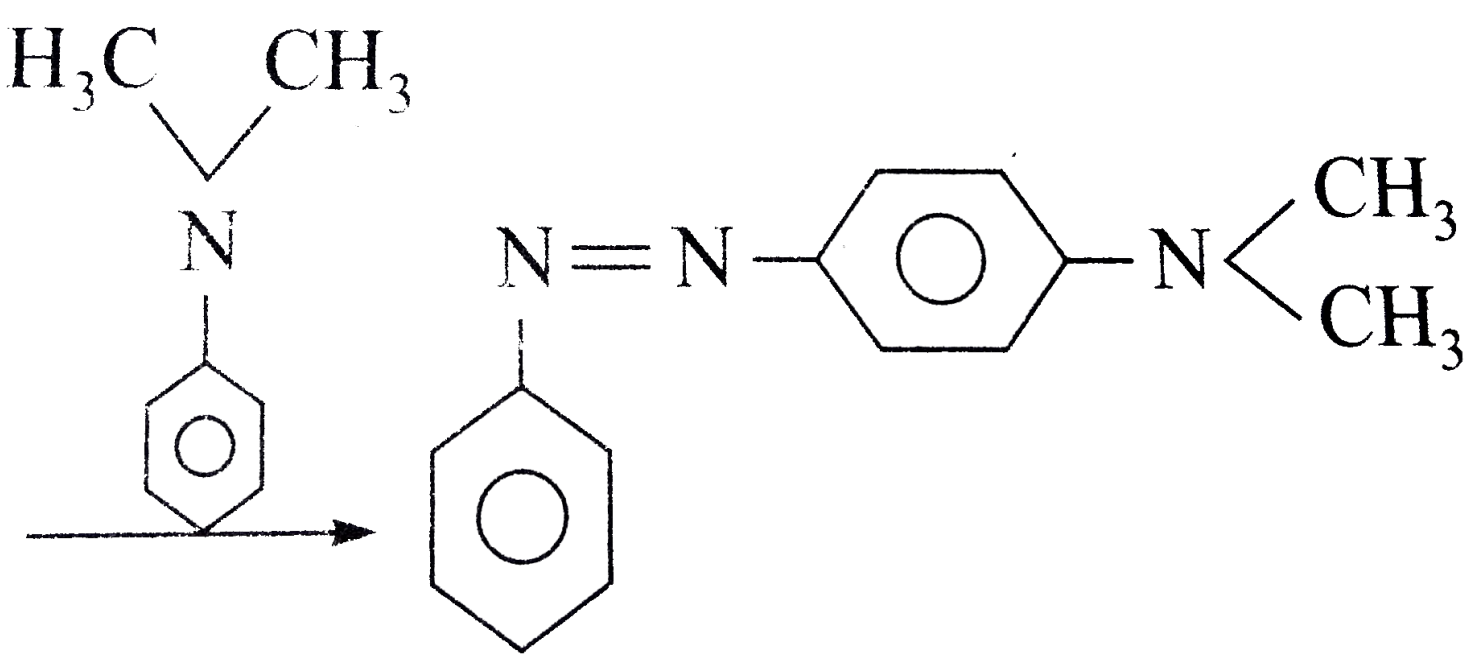
(C) 

(D) 

CORRECT ANSWER: A

SOLUTION:





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Q-36 - 12775458

Method by which aniline cannot be prepared is:

(A) reduction of nitrobenzene with $\frac{H_2}{Pd}$ in ethanol

(B) potassium salt of phthalimide treated with chlorobenzene followed by hydrolysis wityh aqeous $NaOH$ solution

(C) hydrolysis of phenylisocyanide with acidic solution

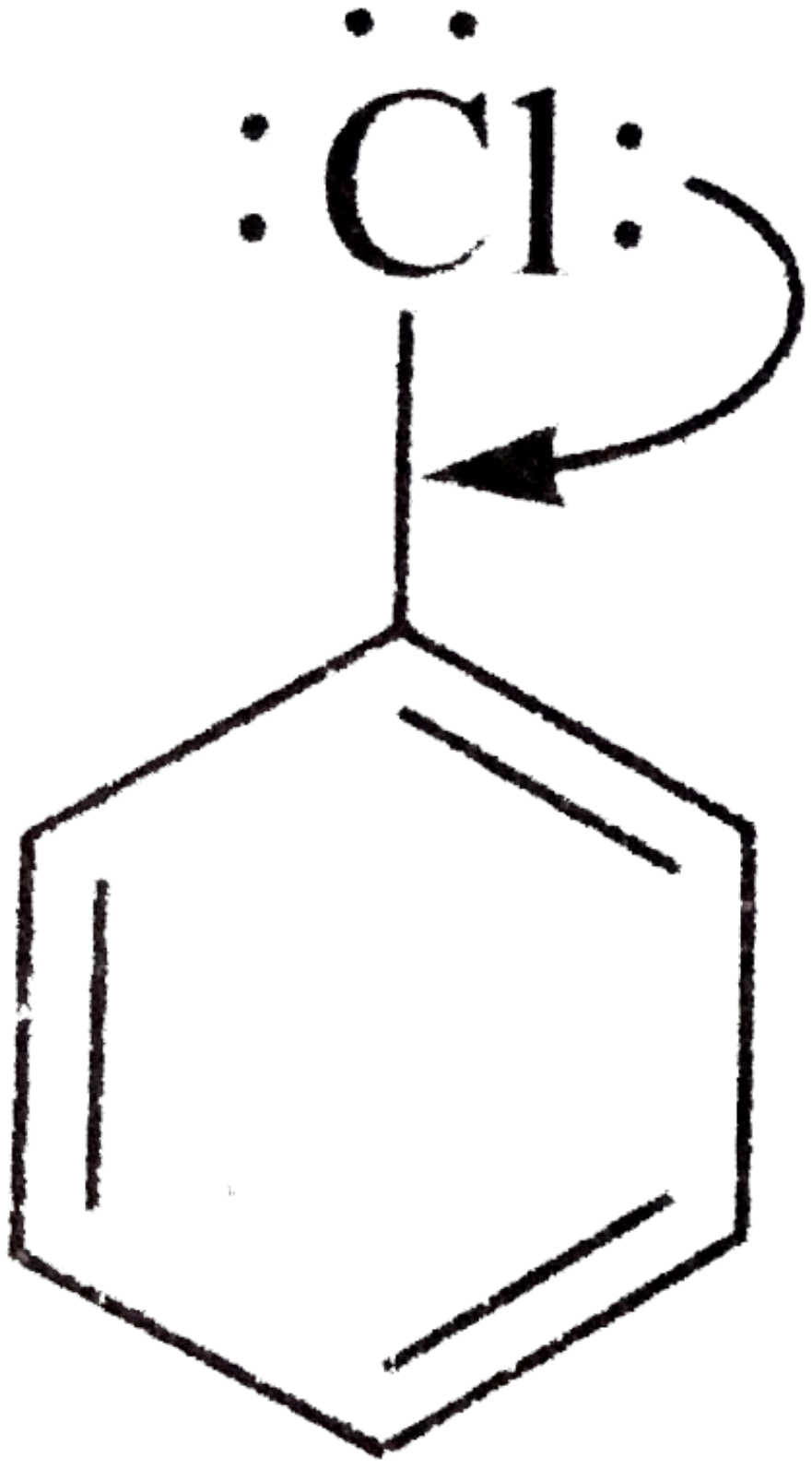
(D) degradation of benzamide with bromine in alkaline solution

---

CORRECT ANSWER: B

SOLUTION:

(b)



Due to resonance $C - Cl$ bond acquires double bond character.

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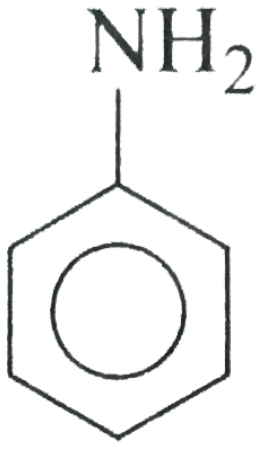
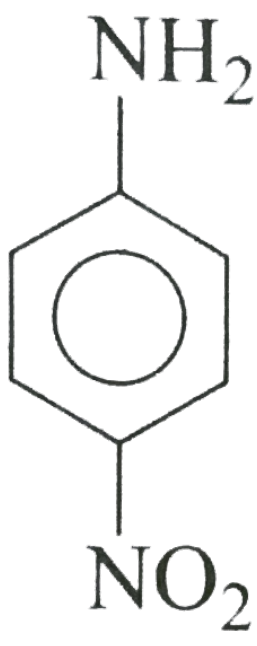
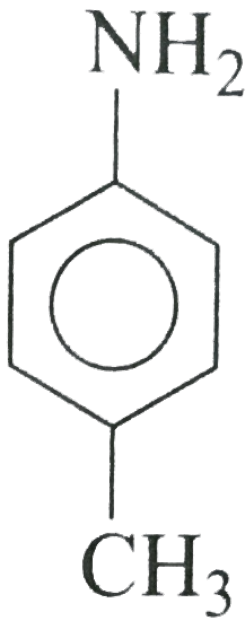
Q-37 - 12775462

(I) 

(II) 

(III) 

The correct increasing order of basic strength for the following compounds is :

(A) $III < I < II$

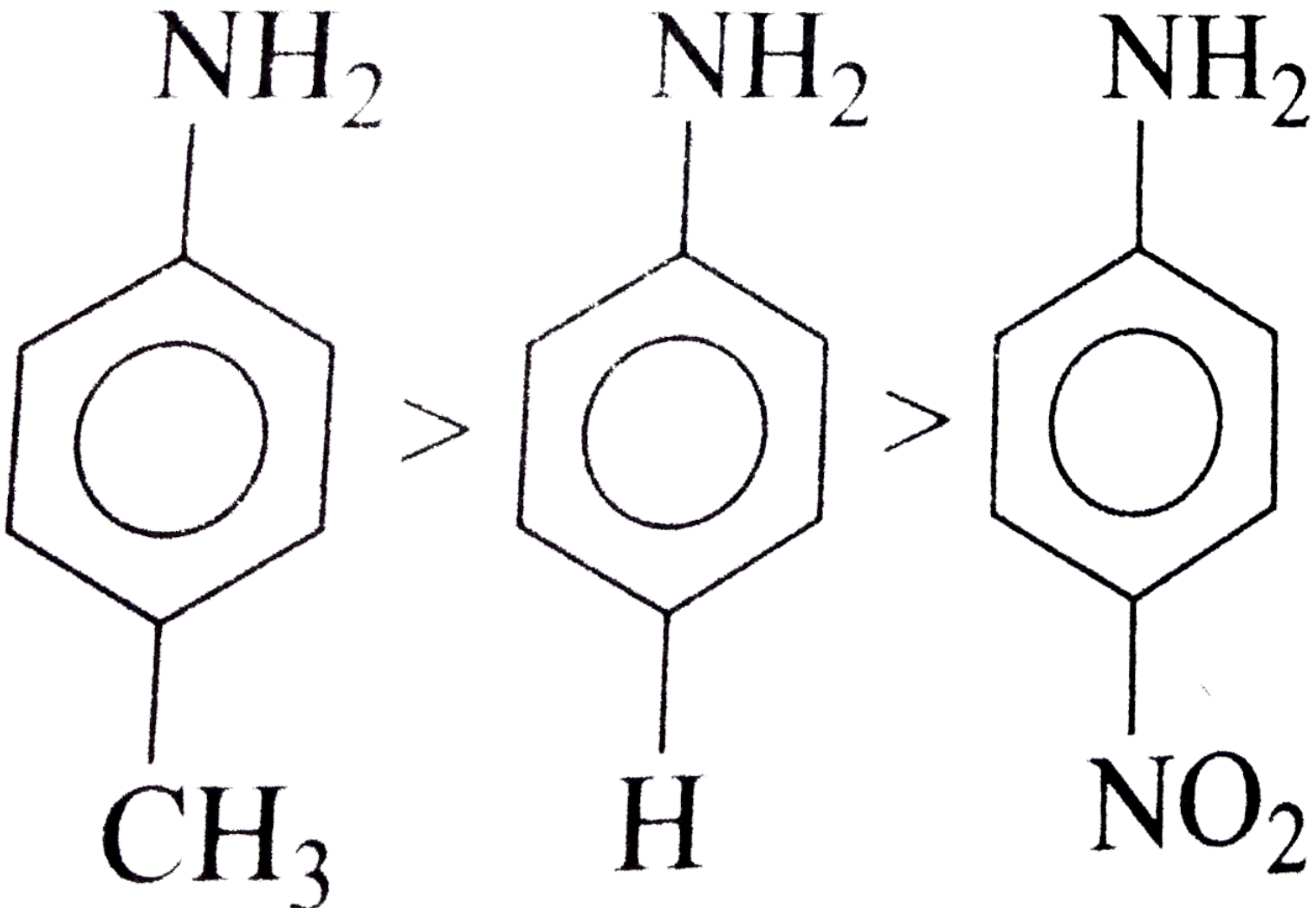
(B) $III < II < I$

(C) $II < I < III$

(D) $II < III < I$

CORRECT ANSWER: C

SOLUTION:



Order of Basic strength:

More is tendancy of lone pair of N to be donated more is

$+I$ and $+R$ group increases basic strength.

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Q-38 - 12775465

Hinsberg's reagent is

(A) (a) $\begin{array}{l} C\,OOC_2H_5 \\ | \\ COOC_2H_5 \end{array}$

(B) $C_6H_5SO_2Cl$

(C) $C_6H_5SO_2NH_2$

(D)
$CH_3COCH_2COOCH_2H_5$

CORRECT ANSWER: B

SOLUTION:

Hinsberg's reagent is $C_6H_5SO_2Cl$ which is used to distinguish primary, secondary and tertiary amines.

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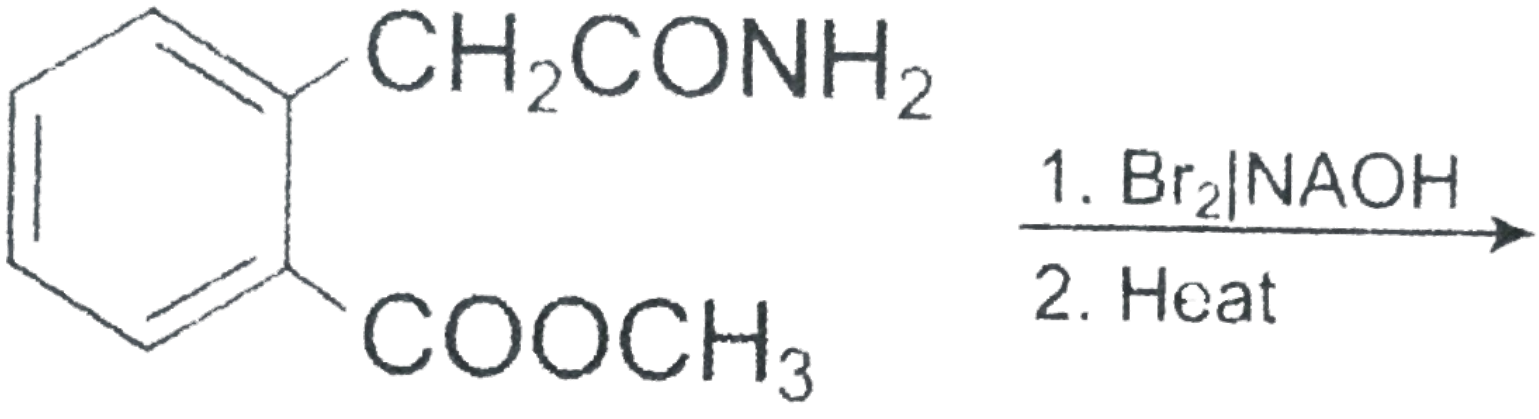
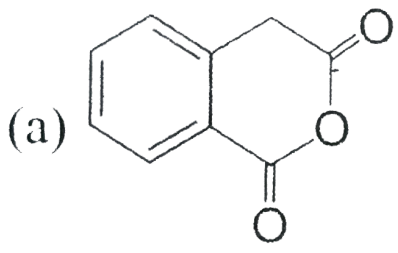
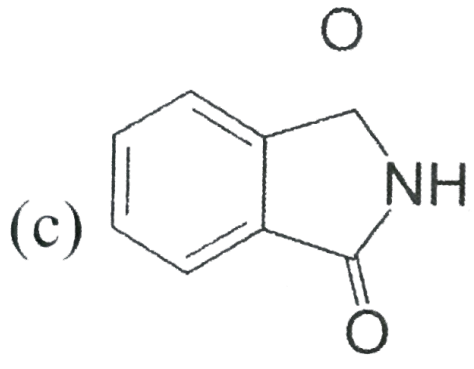
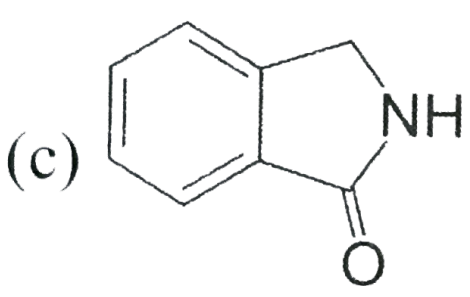
Q-39 - 12775480

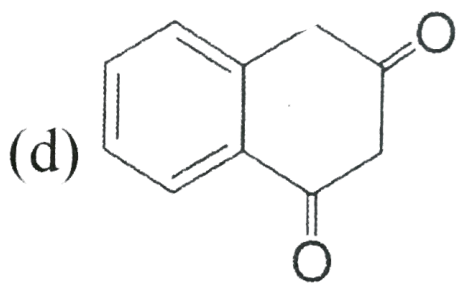


The following sequence of reactions on gives

(A) 

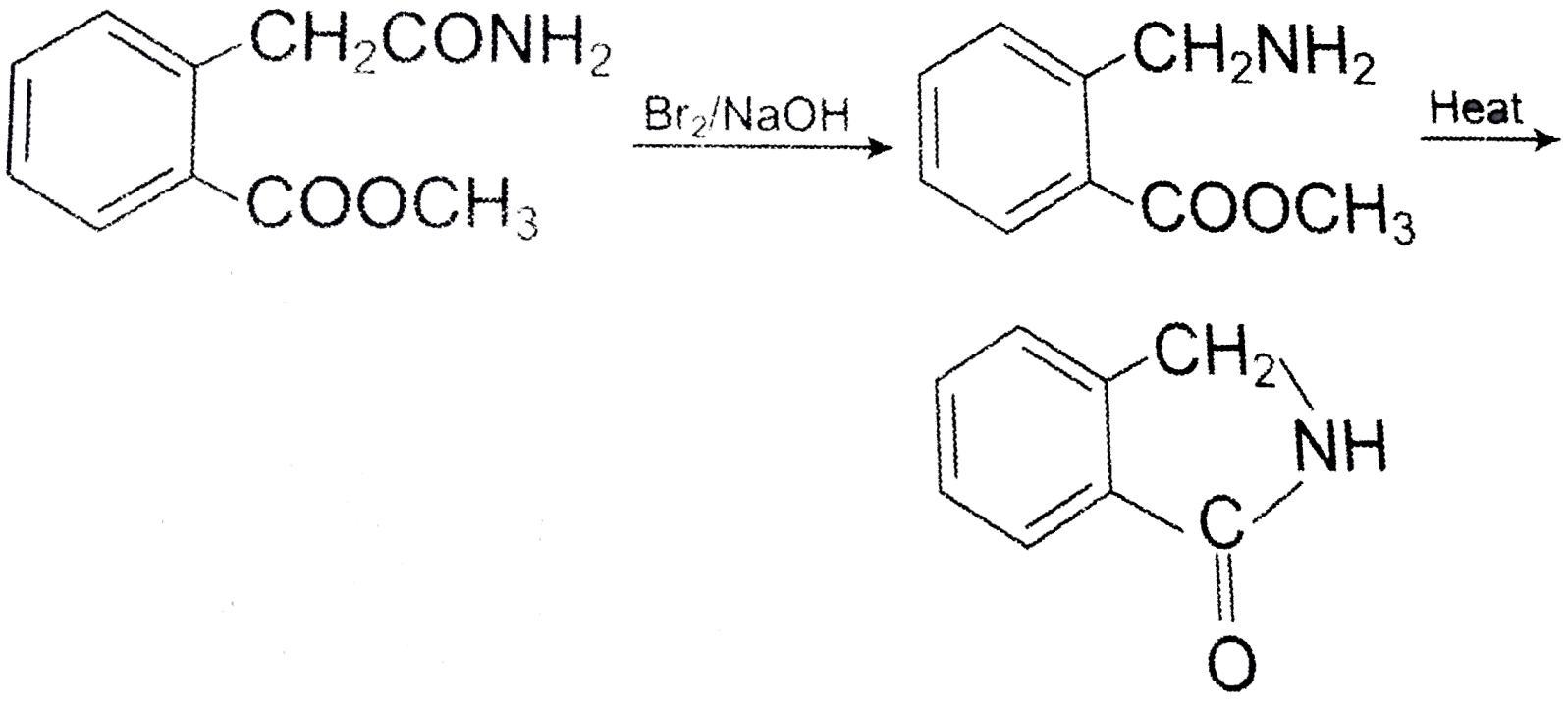
(B) 

(C) 

(D) 

CORRECT ANSWER: C

SOLUTION:



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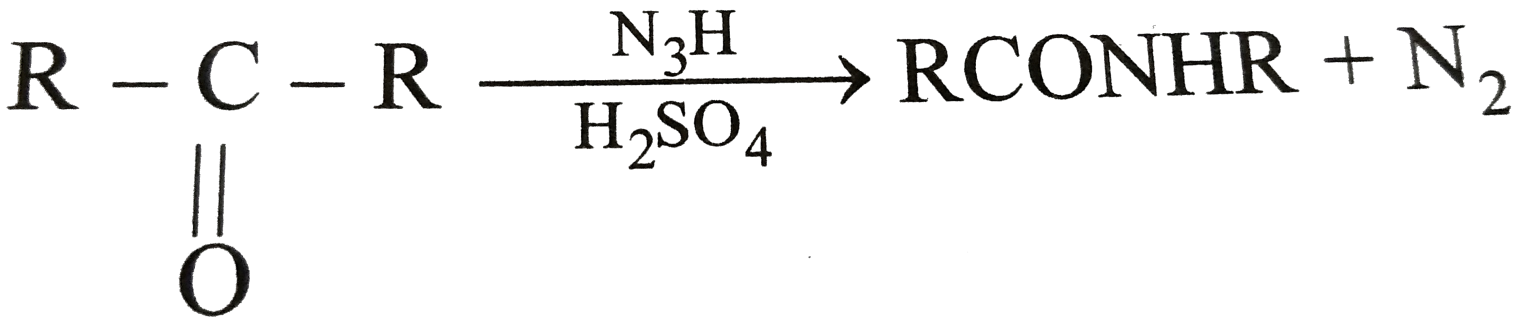
Q-40 - 12775486



The reaction is called

(A) Claisen-Schmidt reaction

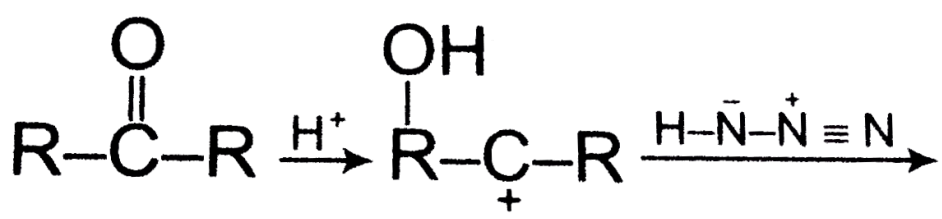
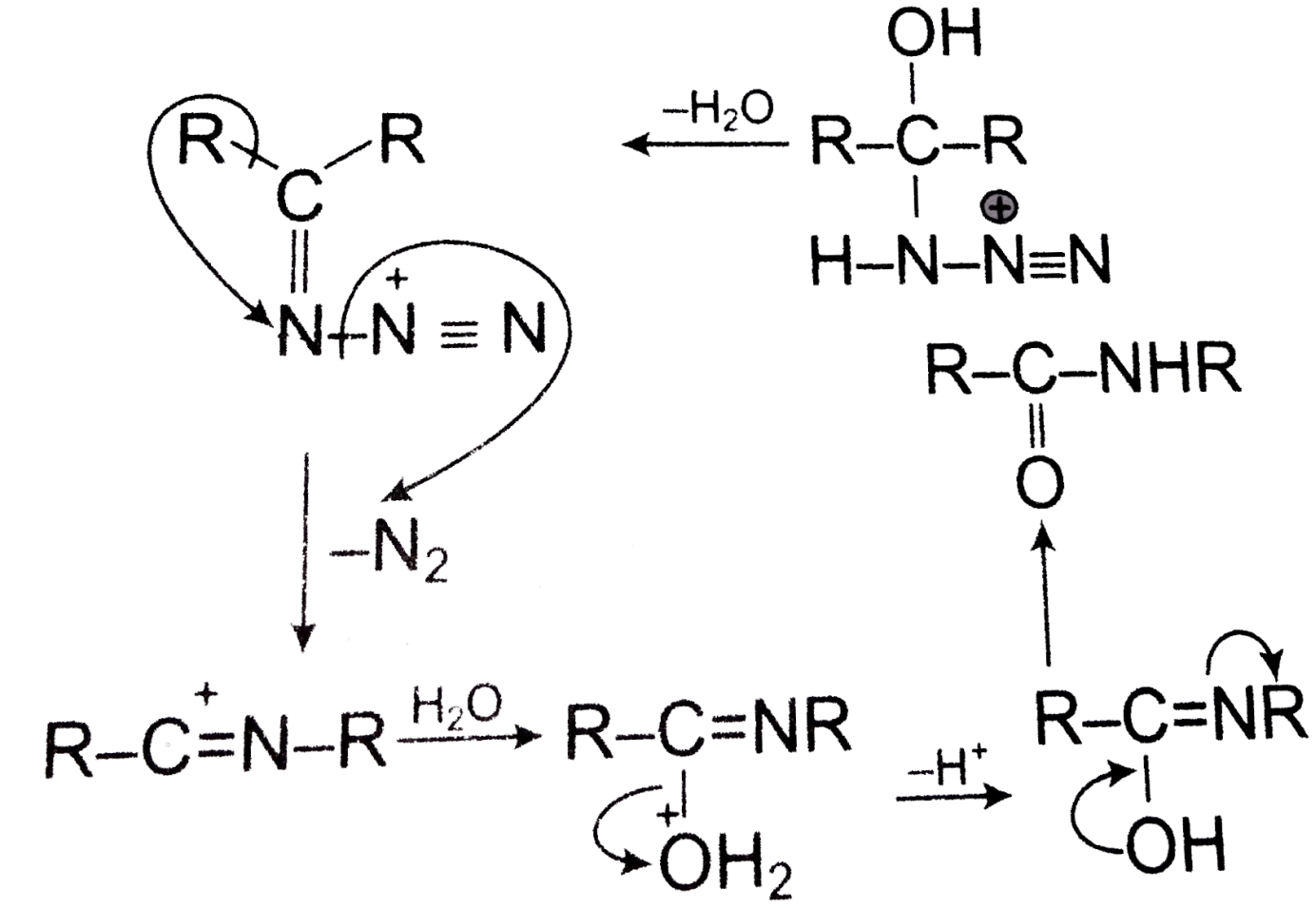
(B) Kolbe-Schmidt reaction

(C) Schmidt reaction

(D) Kolbe's reaction

CORRECT ANSWER: C

SOLUTION:

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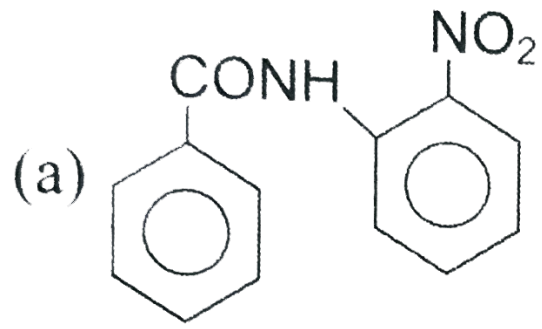
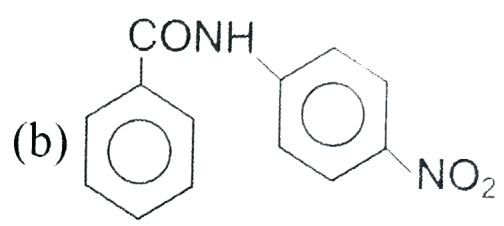
Q-41 - 12775497

Which of the major product formed when $C_6H_5CONHC_6H_5$ undergoes nitration?

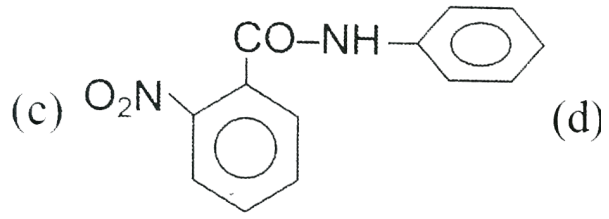
(A)



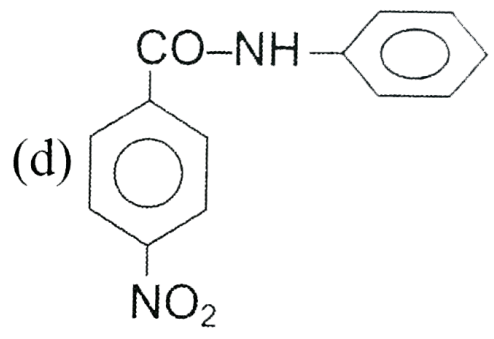
(B)



(C)

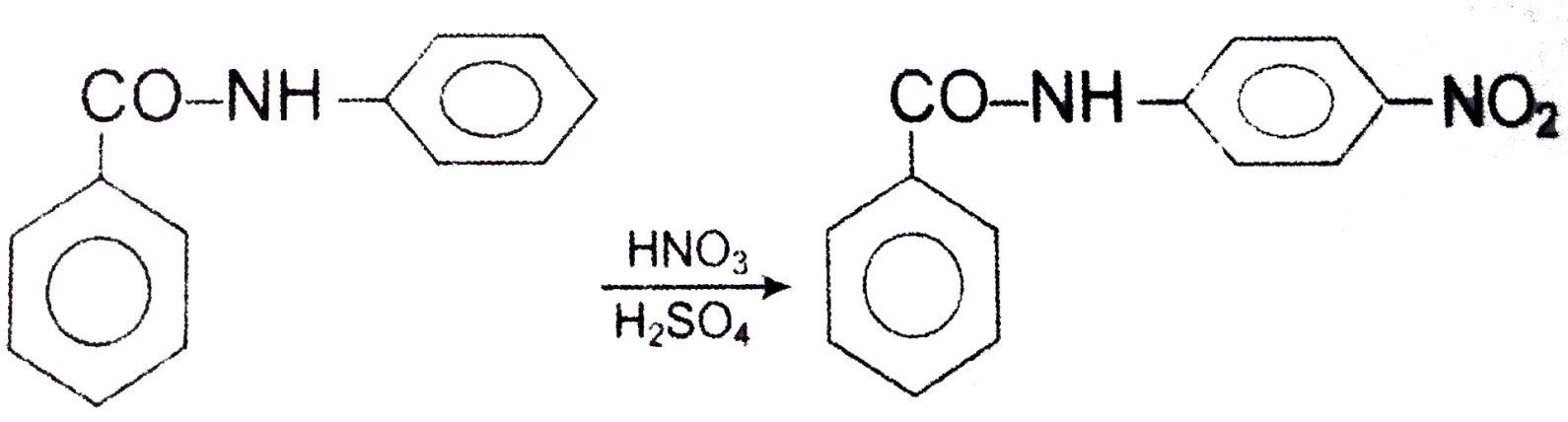


(D)



CORRECT ANSWER: B

SOLUTION:



The ring attached to the nitrogen atom in benzanilide is

strongly activated towards electrophilic substitution reaction. Therefore, nitration occurs at p-position to the ring attached to N atom.

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Q-42 - 12775503

Which of the following does not give nitroalkane?

(A)

$$CH_3 - \underset{\underset{CH_3}{|}}{N} - CH_3 \xrightarrow{KMnO_4}$$

(B) $C_2H_5I \xrightarrow{alc.\,AgNO_2}$

(C)

$$CH_3 - CH_3 \xrightarrow{\text{Fuming}HNO_3}$$

(D) Both (a) and (b)

CORRECT ANSWER: A

SOLUTION:

Tertiary amines are not oxidised by $KMnO_4$.

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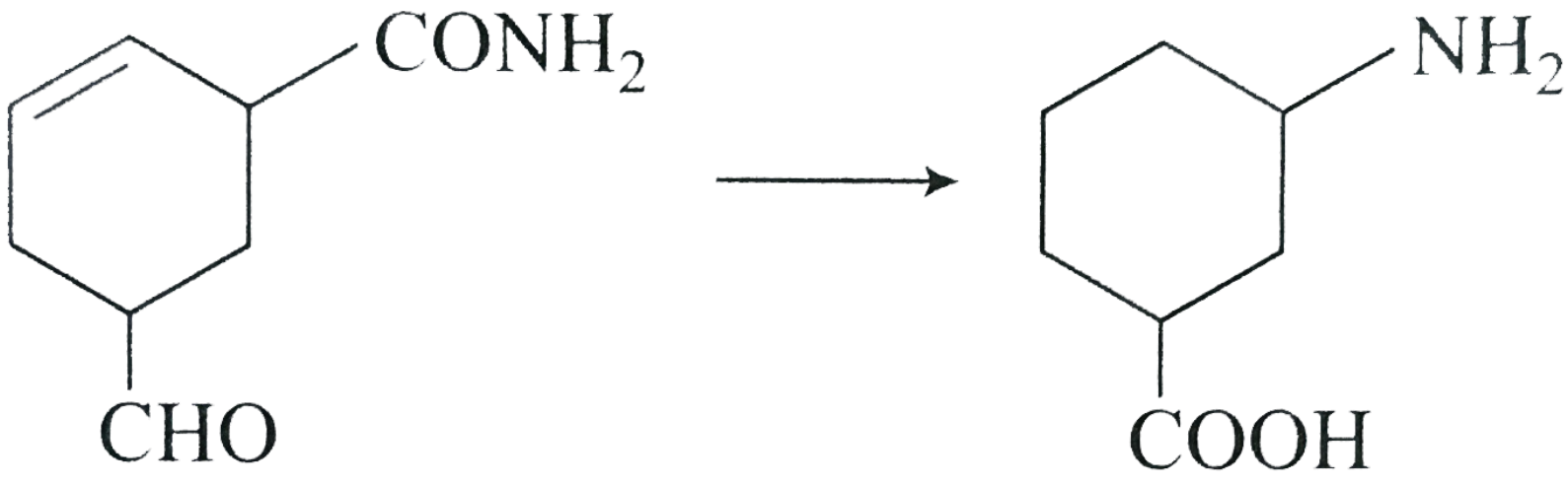
Q-43 - 12775506



What is sequence of reagent use to convert following

(A) $\frac{H_2}{Pd}, \left[Ag(NH_3)_2\right]^+, \frac{Br_2}{NaOH}$

(B) $Ag\left[(NH_3)_2\right]^+, \frac{H_2}{Pd}, \frac{Br_2}{NaOH}$

(C) $\frac{Br_2}{NaOH}, \left[Ag(NH_3)_2\right]^+, \frac{H_2}{Pd}$

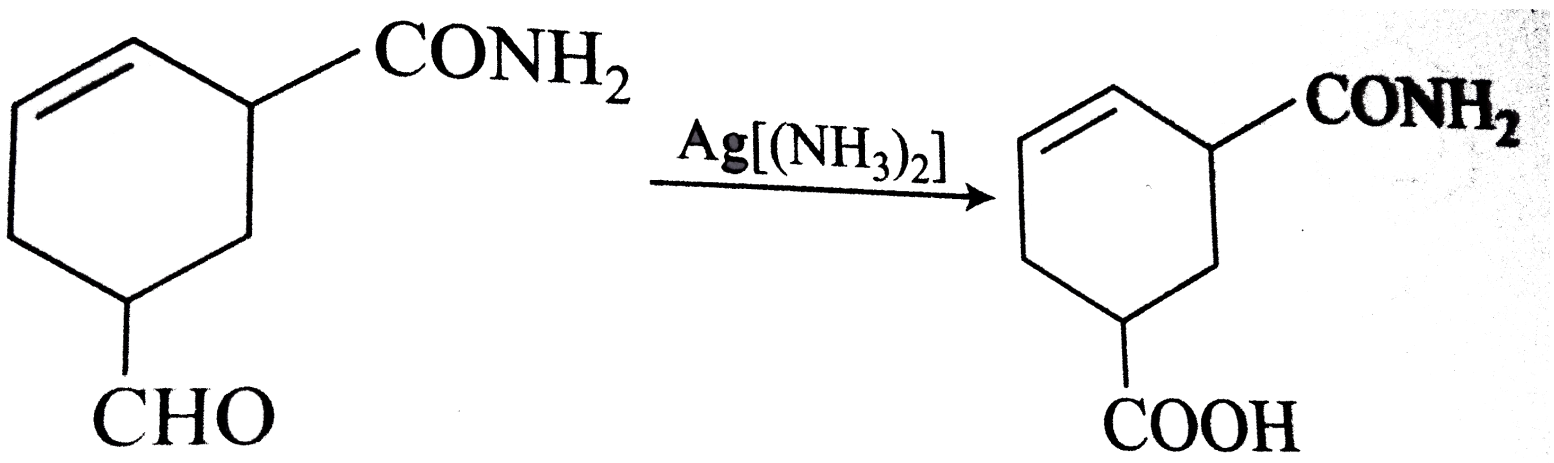
(D)

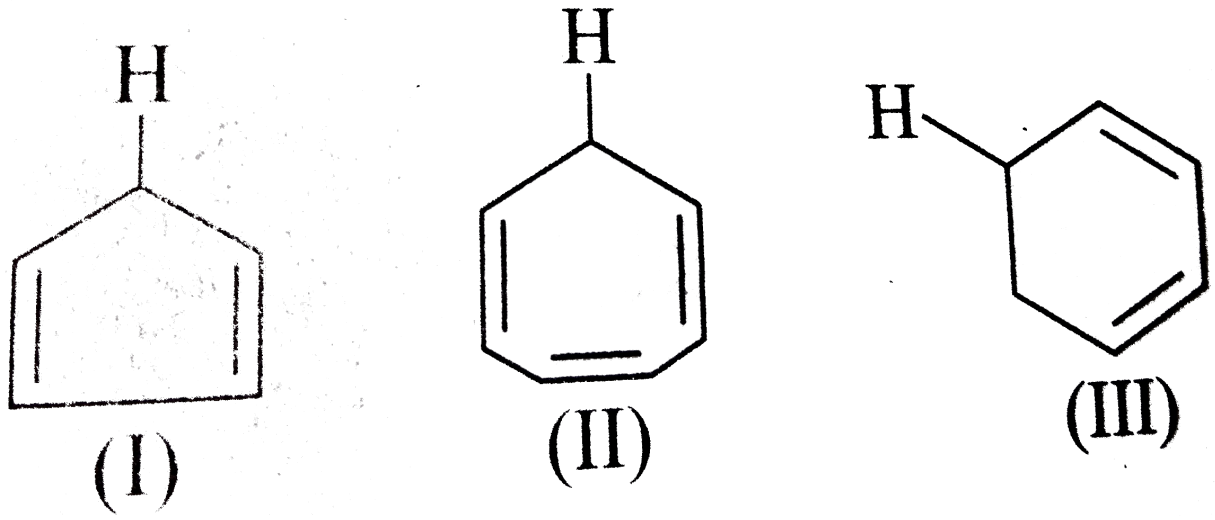
$\frac{H_2}{Pd}$, $\frac{Br_2}{NaOH}$,

$\left[Ag(NH_3)_2\right]^+$

CORRECT ANSWER: B

SOLUTION:





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Q-44 - 12775515

Which of the following nitro compounds will show tautomerism?

(A) $C_6H_5NO_2$

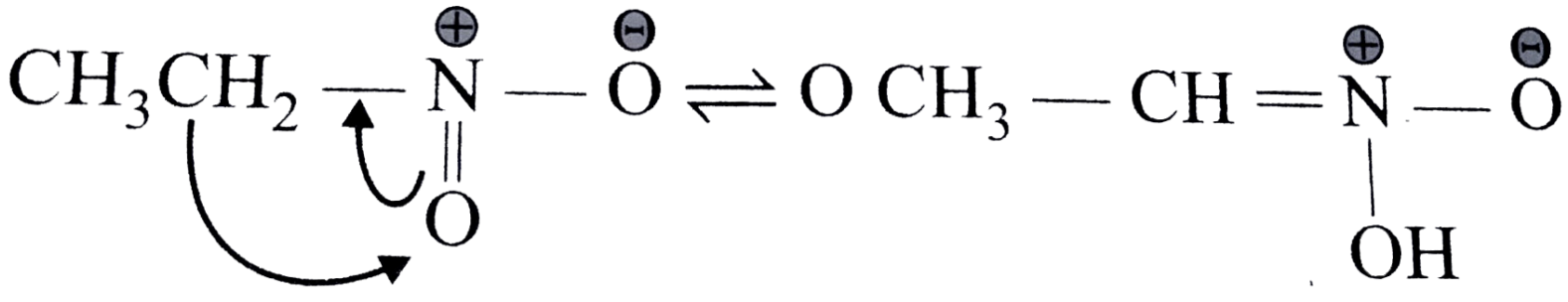
(B) $(CH_3)_3CNO_2$

(C) $CH_3CH_2NO_2$

(D) None of the above

CORRECT ANSWER: C

SOLUTION:



Has an α-H atom and hence shows tautomerism.

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Q-45 - 12775516

Gabriel synthesis is used for the preparation of

(A) 1° amine

(B) 2° amine

(C) 3° amine

(D) All can be prepared.

CORRECT ANSWER: A

SOLUTION:

1 amine or 1 aromatic amine containing eWG at o-

and p-position.

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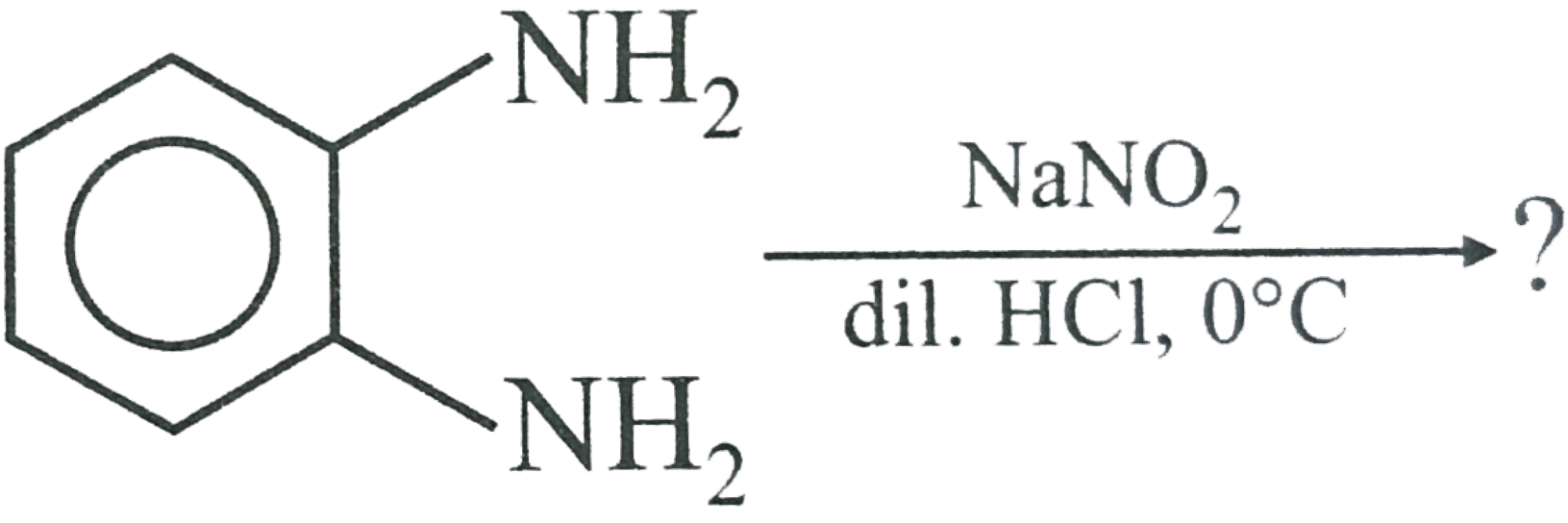
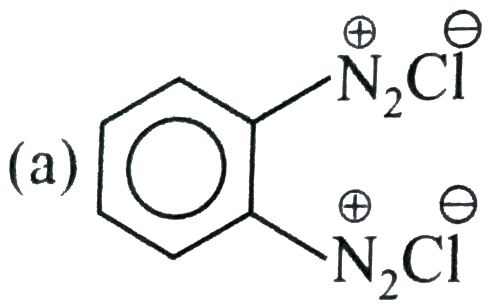
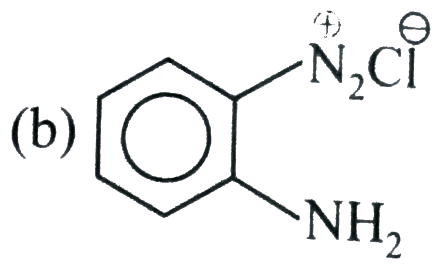
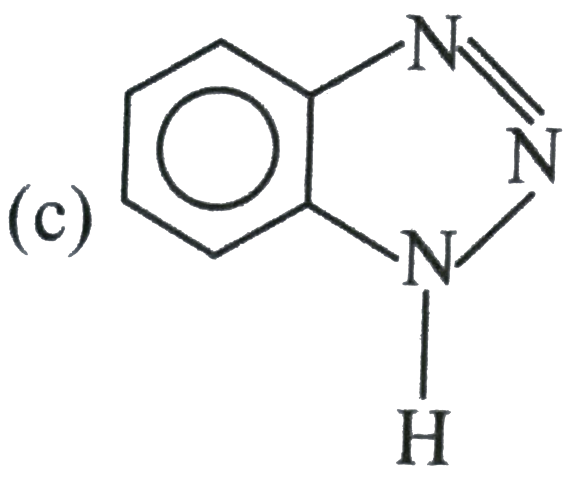
Q-46 - 12775517

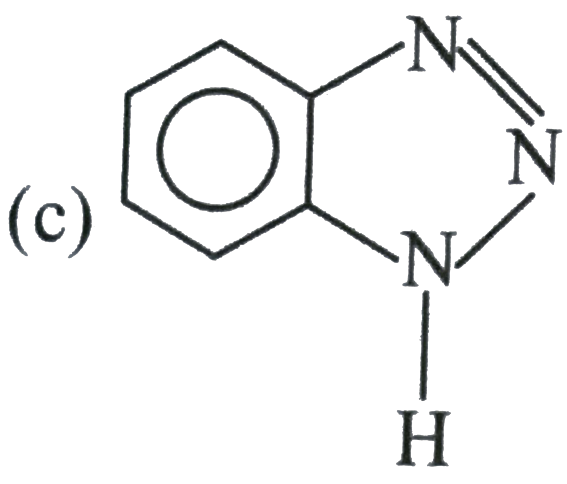


The major product of the reaction is:

(A) 

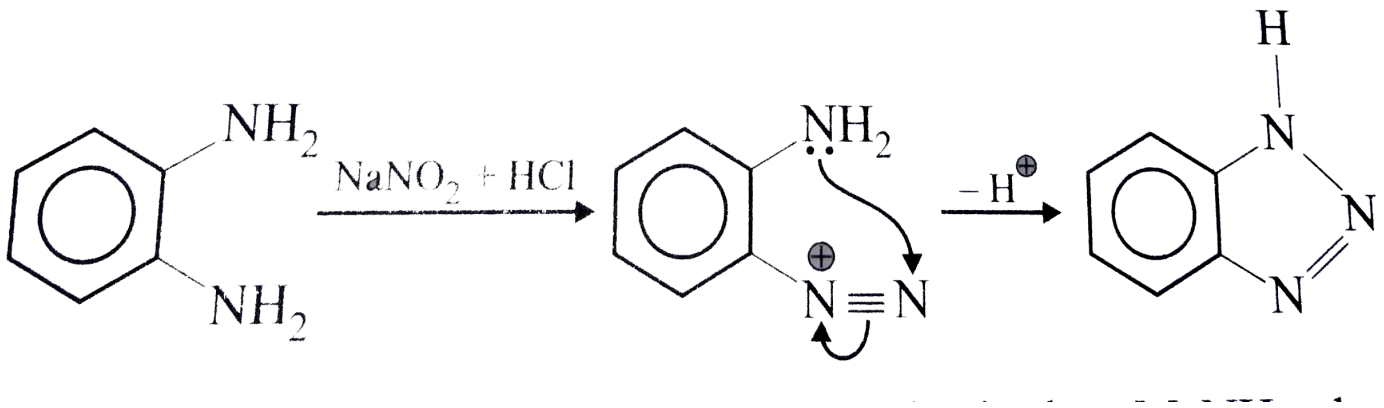
(B) 

(C) 

(D) 

CORRECT ANSWER: C

SOLUTION:



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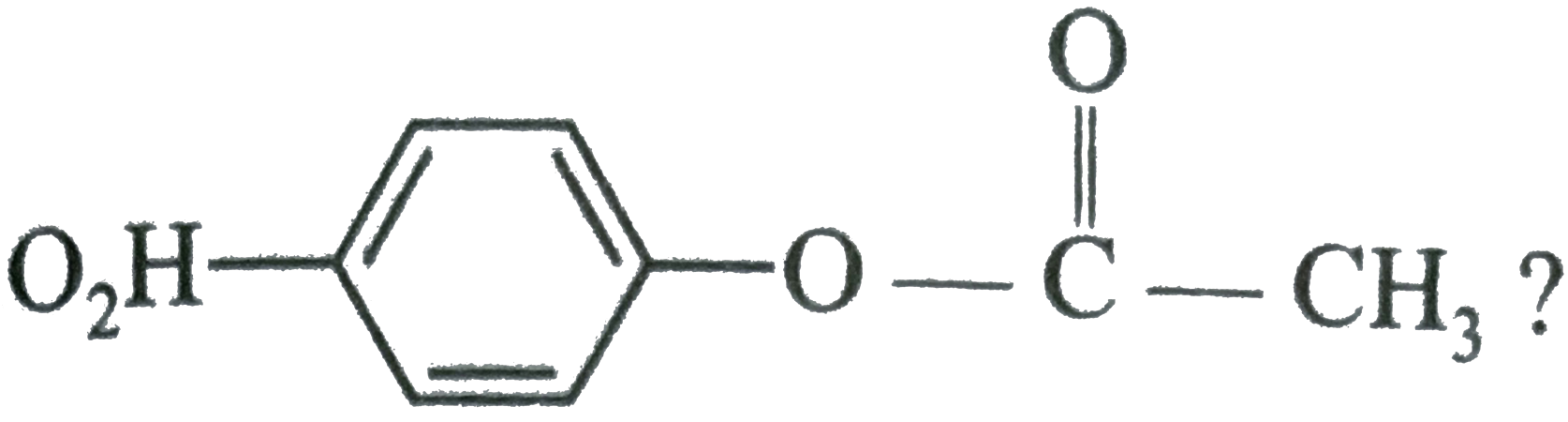
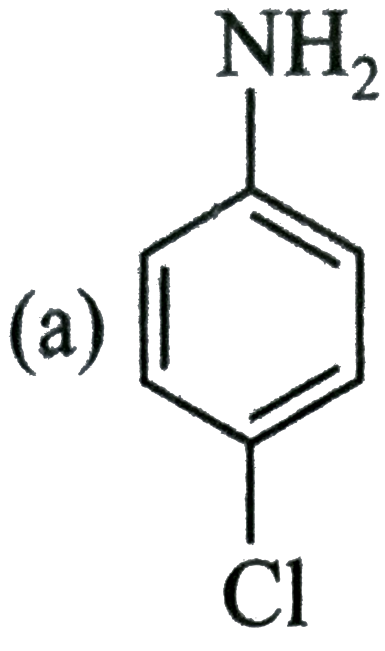
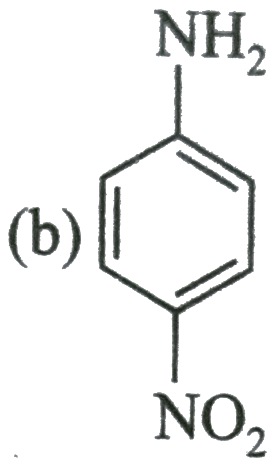
Q-47 - 12775523

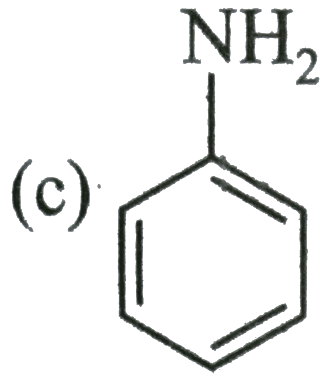


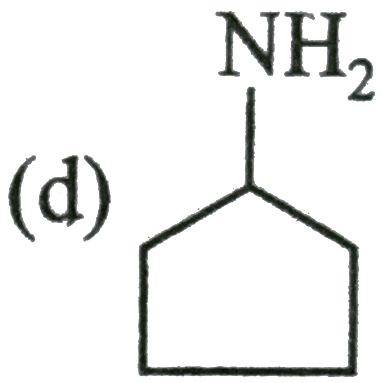
Which of the following amines reacts most rapidly with

(A)



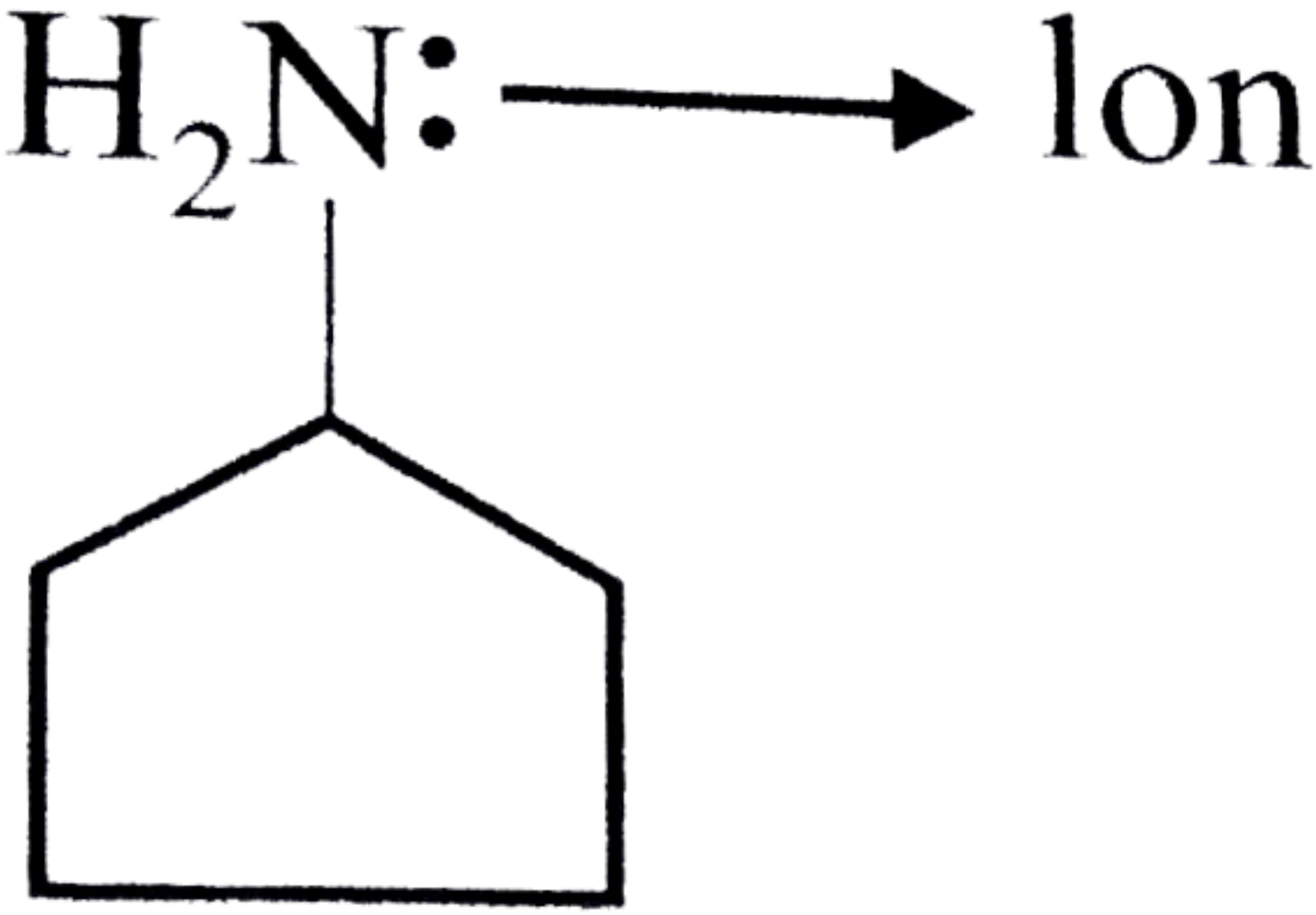
(B) 

(C) 

(D) 

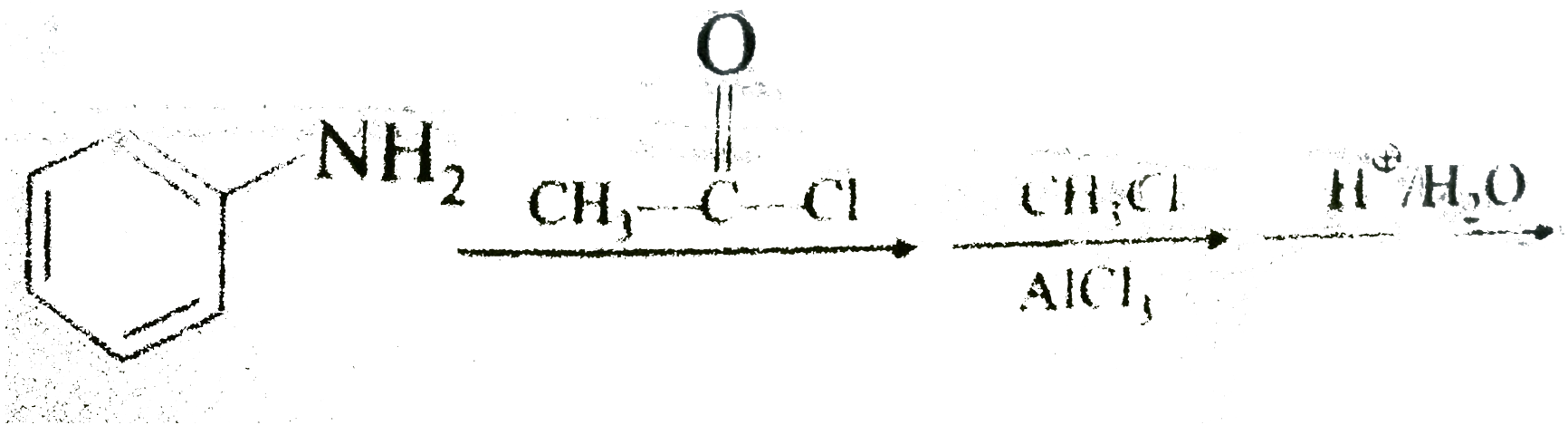
CORRECT ANSWER: D

SOLUTION:

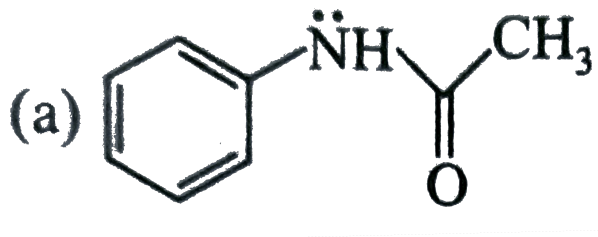


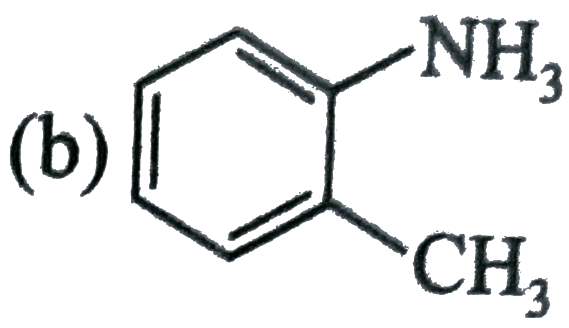
Lone pair of electron is delocalised.

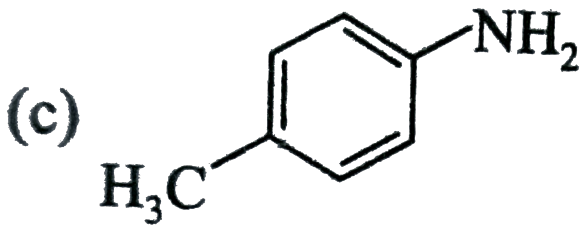
Q-48 - 12775528

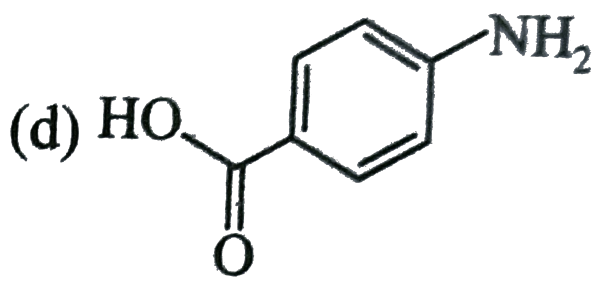


Identify major product of following sequency of reaction:

(A) 

(B) 

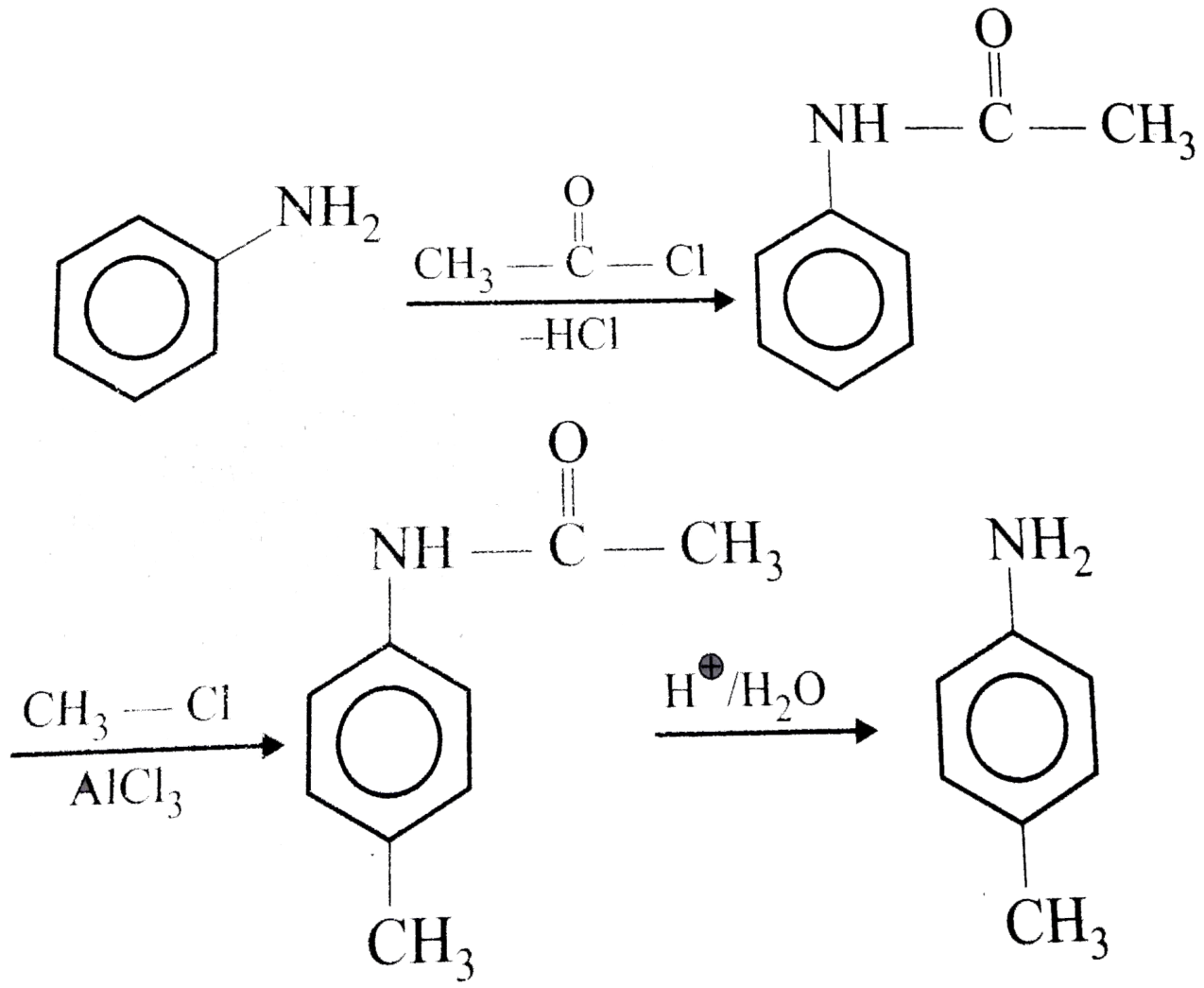
(C) 

(D) 

CORRECT ANSWER: C

SOLUTION:

12. (c)



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Q-49 - 12775529

Primary and secondary amines are distinguished by:

(A) $\frac{Br_2}{KOH}$

(B) $HClO$

(C) HNO_2

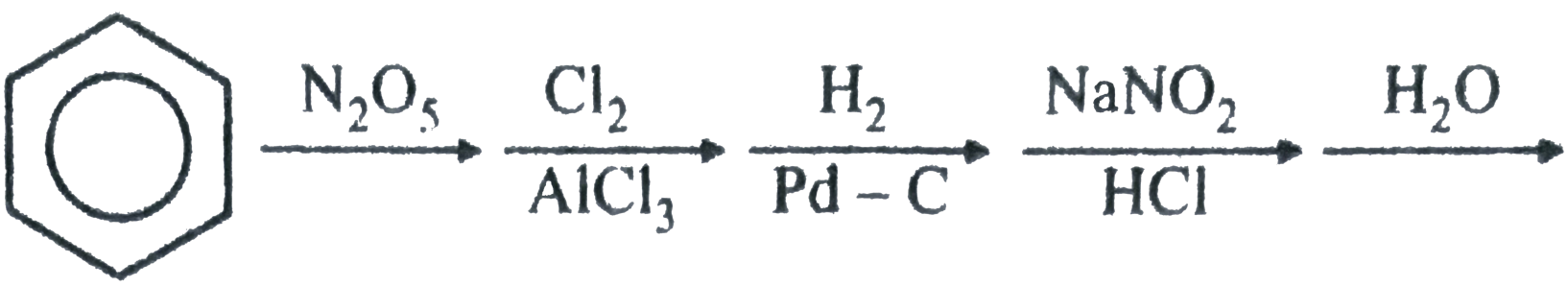
(D) NH_3

CORRECT ANSWER: C

SOLUTION:

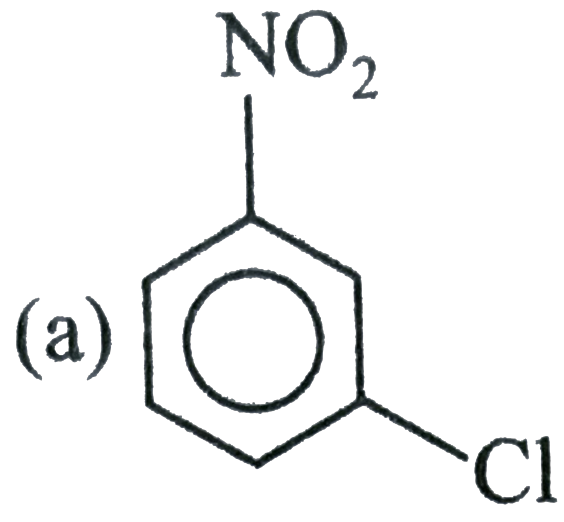
HNO_2 is used to distinguish between 1 ,2 and 3 amines.

Q-50 - 12775532

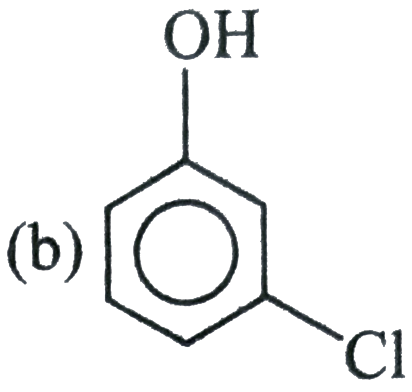


Identify the final product of following sequence of reaction:

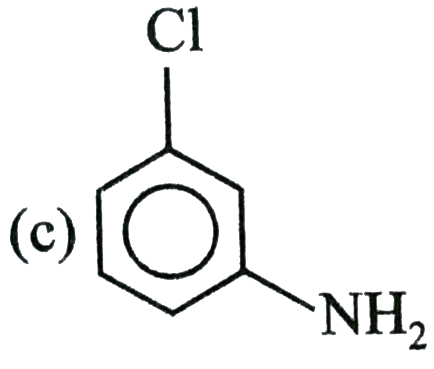
(A)



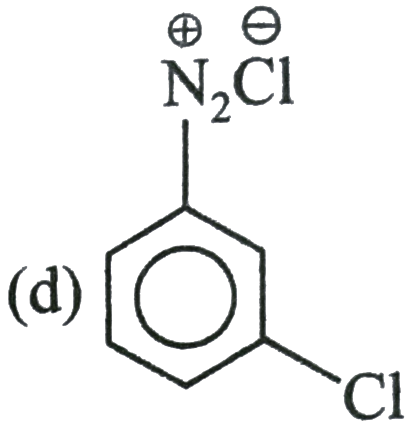
(B)



(C)

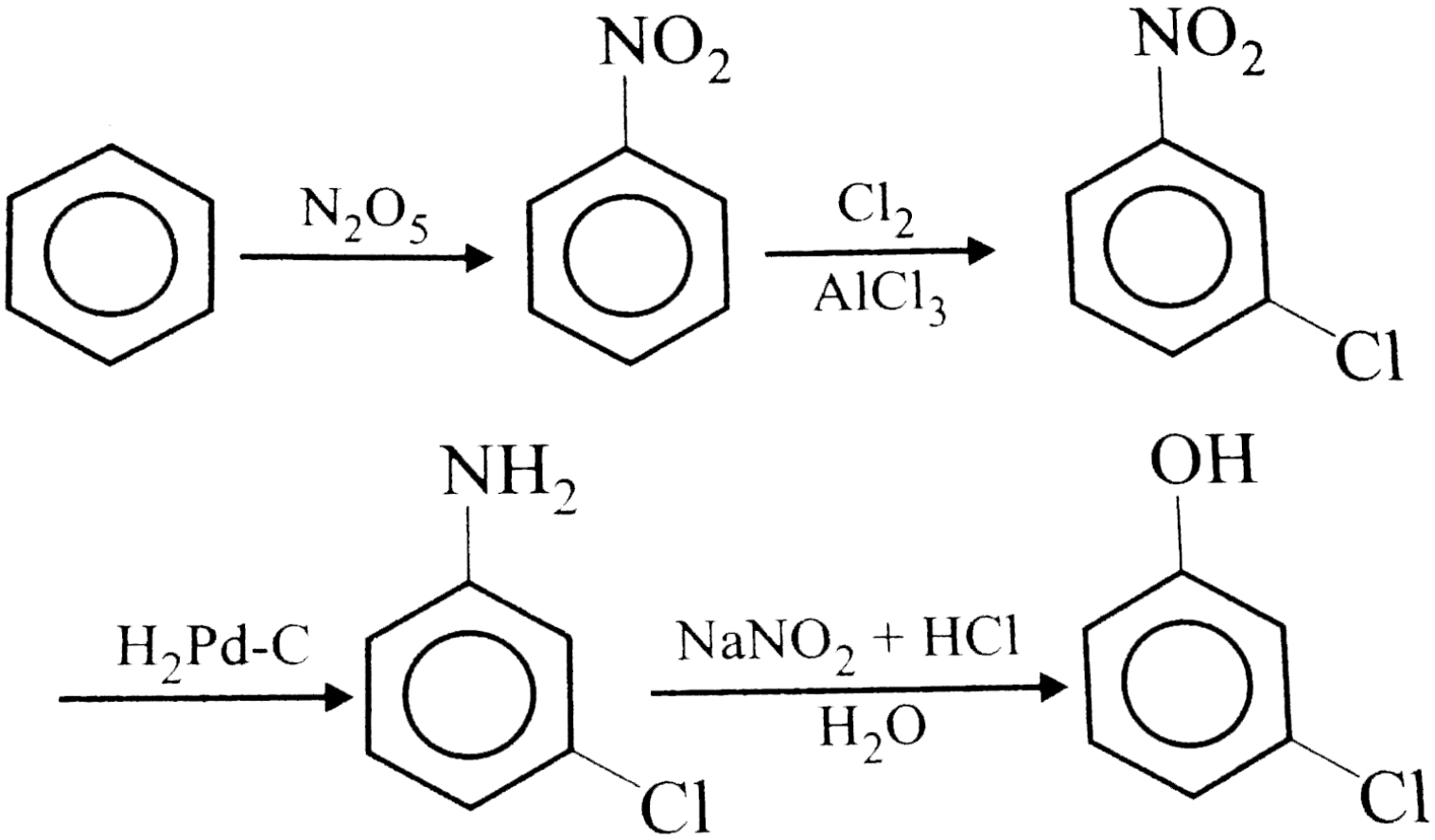


(D)



CORRECT ANSWER: B

SOLUTION:



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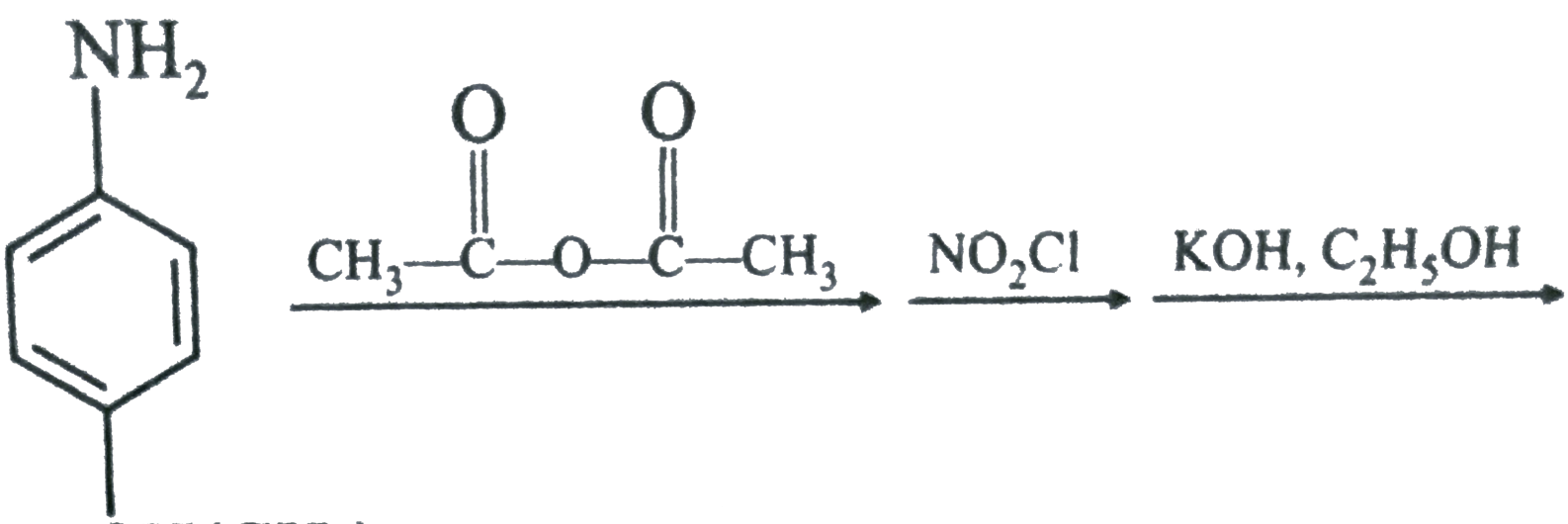
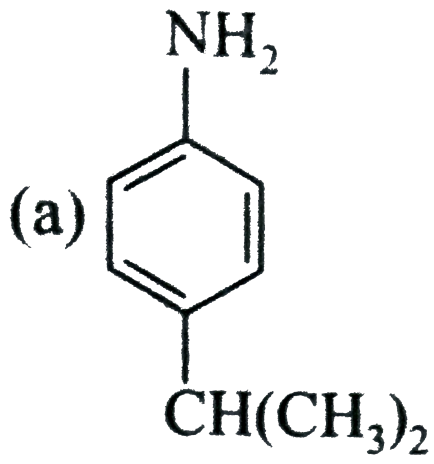
Q-51 - 12775535

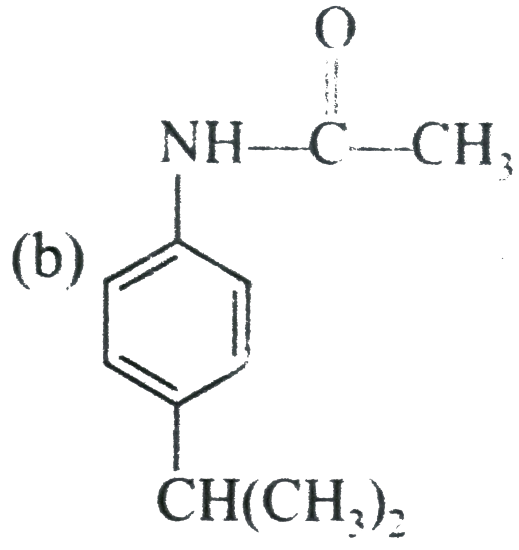


Identify final product of following sequency of reaction:

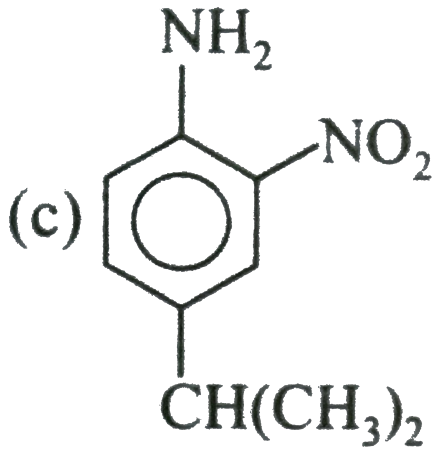
(A)



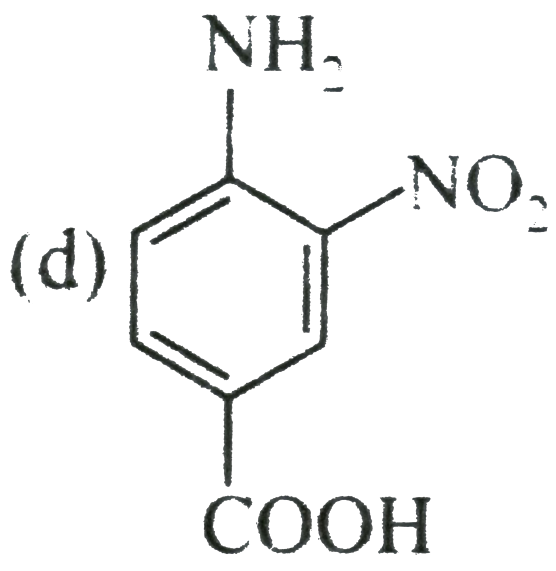
(B)



(C)

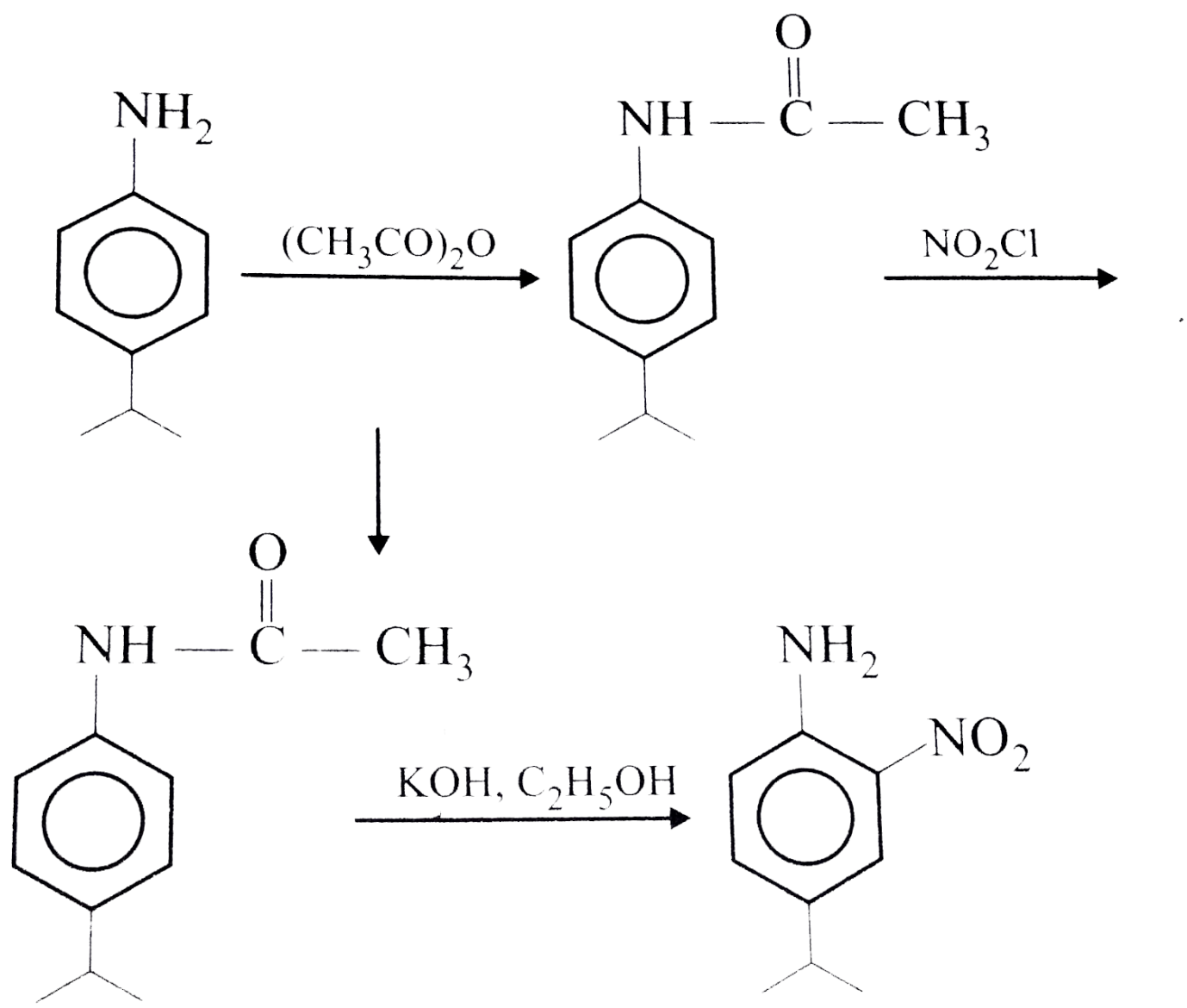


(D)



CORRECT ANSWER: C

SOLUTION:



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Q-52 - 12775536

Which of the following substances on treatment with P_2O_5 gives ethanenitrile?

(A) Propanamide

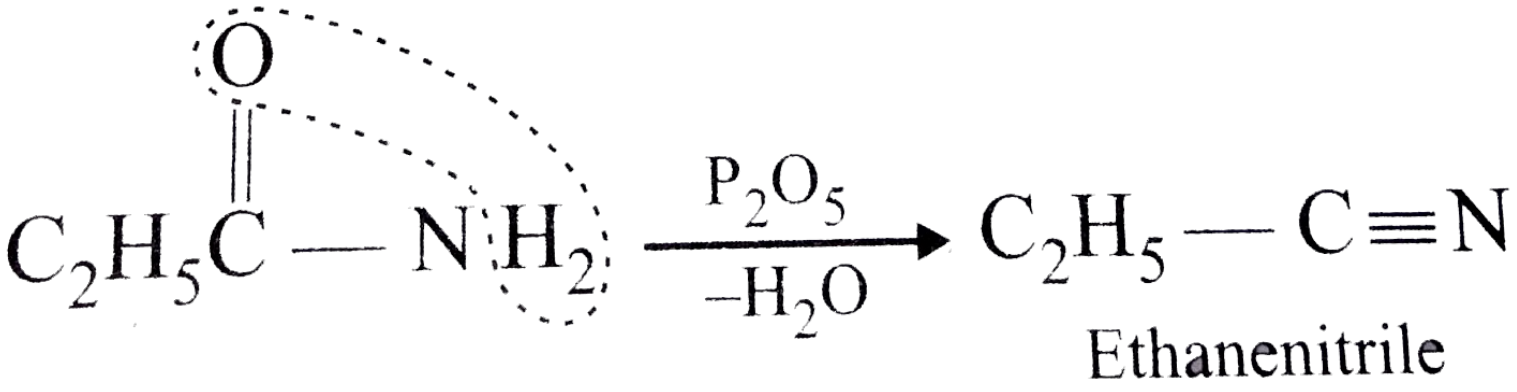
(B) Ethanamide

(C) Ethanoic acid

(D) N-Methylethyl amine

CORRECT ANSWER: B

SOLUTION:



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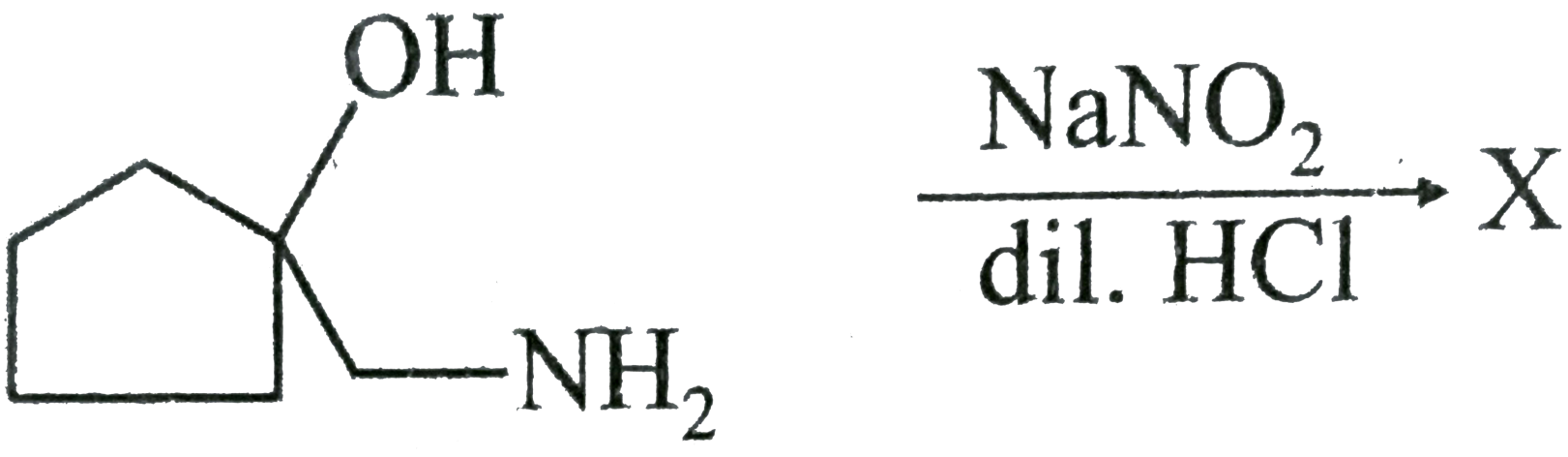
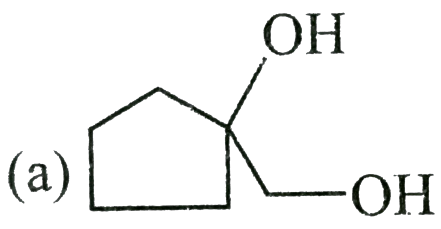
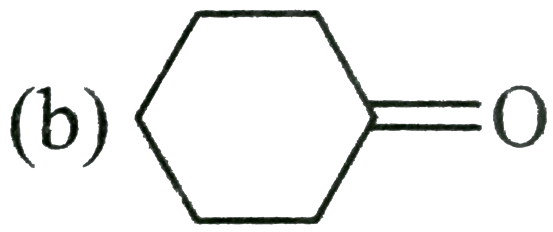
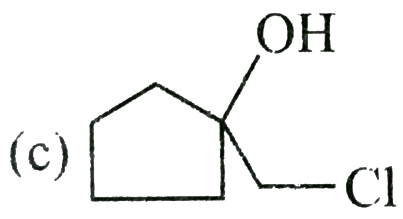
Q-53 - 12775545

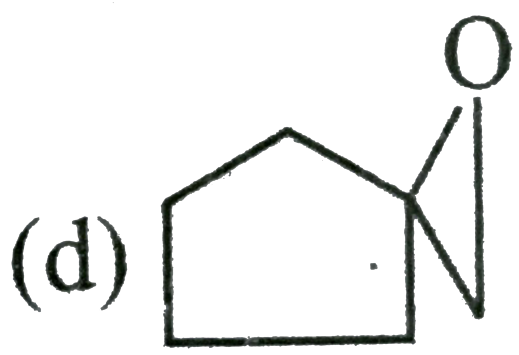


The major product (X) of the reaction is:

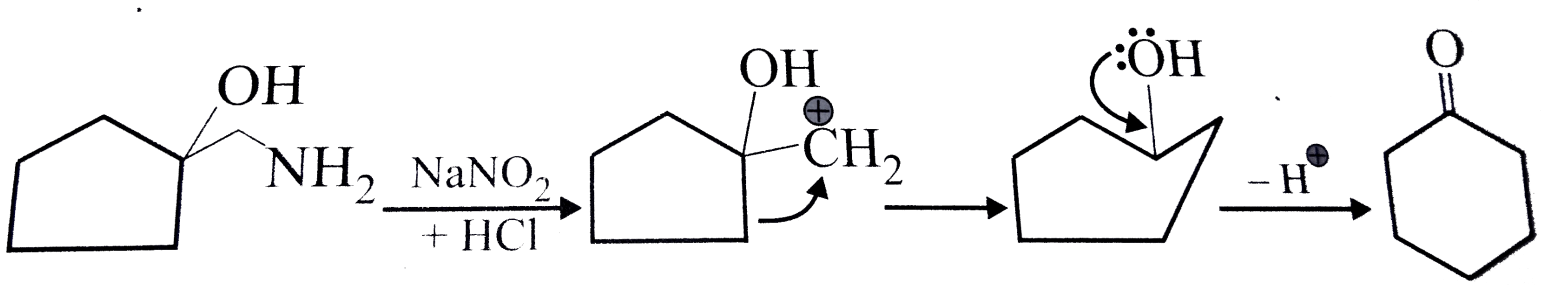
(A) 

(B) 

(C) 

(D) 

SOLUTION:



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Q-54 - 11486375

Methyl cyanide on treatment with methyl magnesium bromide

followed by of subsequent hydrolysis gives:

(A) Propanone

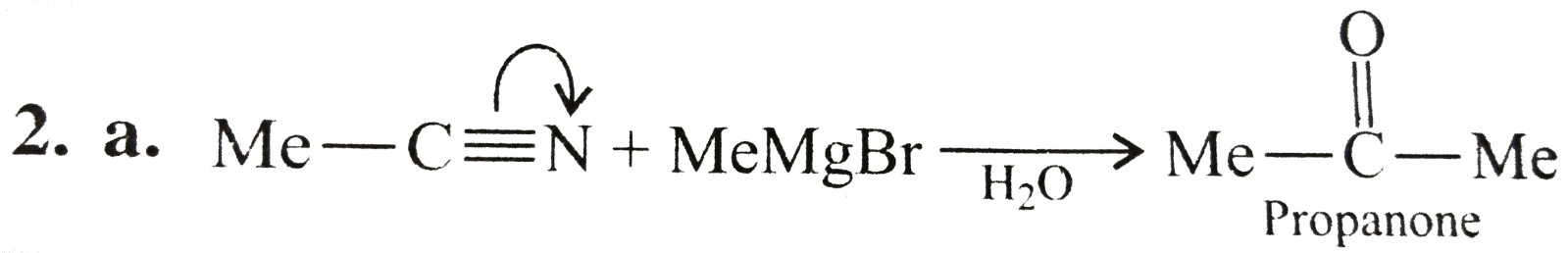
(B) Ethanone

(C) Ethanal

(D) Propanal

CORRECT ANSWER: A

SOLUTION:



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Q-55 - 11486376

The product formed by the treatment of ethanol and ethane nitrile in the presence of sulphuric acid is:

(A) Ethyl acetate

(B) Diethyl ether

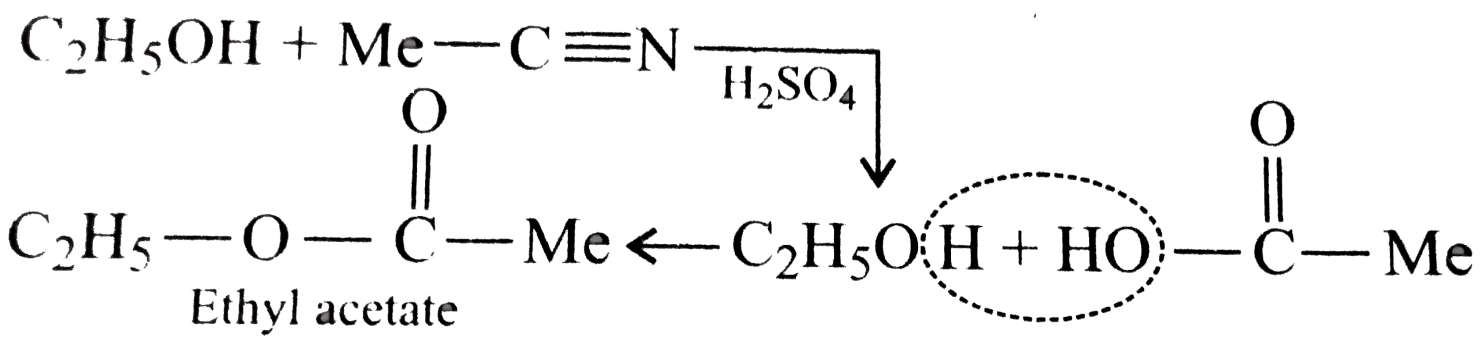
(C) Ethyl methyl ketone

(D) Butanal

CORRECT ANSWER: A

SOLUTION:

3. a.



$Me - C \equiv N$ is hydrolysed to acid which reacts with alcohol to give ester.

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Q-56 - 11486379

(A) is subjected to reduction with $Zn-(Hg/HCl)$ and the product formed is N-methylmethanamine. (A) can be.

(A) Ethane nitrile

(B) Nitroethane

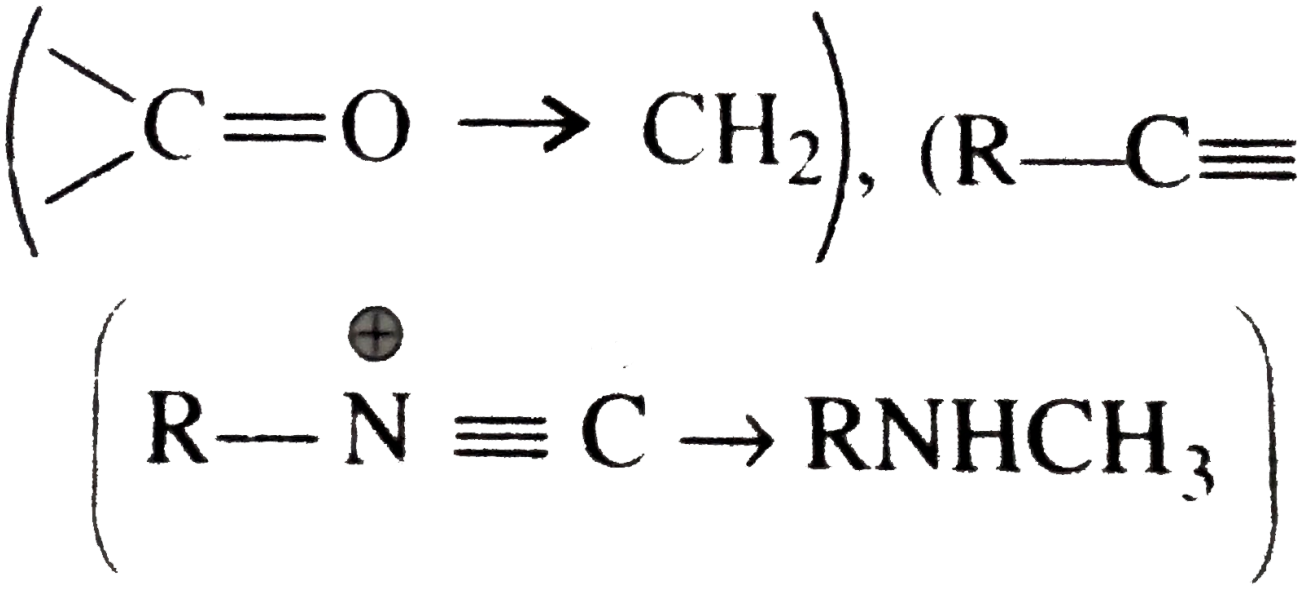
(C) Carbylaminoethane

(D) carbylaminomethane

CORRECT ANSWER: D

SOLUTION:

Reduction with $Zn-(Hg/HCl)$ is clemmensen reduction Which converts



$(R - C \equiv N$

$\rightarrow RCH_2NH_2)$

, and

$\left(R - \overset{\oplus}{N} \equiv \overset{?}{C}\right.$

$\left.\rightarrow RNHCH_3\right)$

Carbylamino methane is $\left(Me - \overset{\oplus}{N} \equiv \overset{\Theta}{C}\right)$.

$\therefore Me - \overset{\oplus}{N} \equiv \overset{\Theta}{C}$

$$\xrightarrow{ZN - Hg / HCI} \underset{N}{Me} - NH - CH_3$$

– Methylmethanamine

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Q-57 - 11486383

Stephen's reduction converts nitriles into:

(A) Aldehydes

(B) Ketones

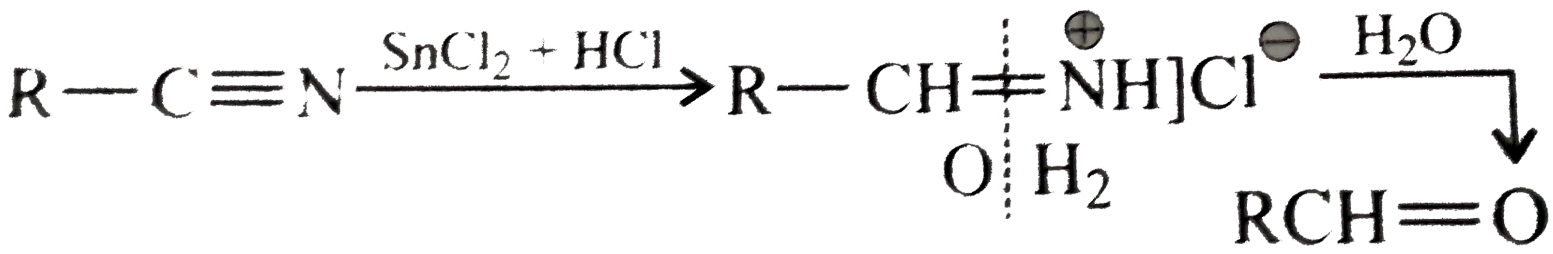
(C) Amines

(D) Carboxylic acids

CORRECT ANSWER: A

SOLUTION:

Stephen's reduction is partial reduction of RCN to aldehydes.



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Q-58 - 11486386

A primary nitroalkane is treated with nitrous acid,which of the following will be the main product?

(A) Pseudonitrol

(B) Nitrolic acid

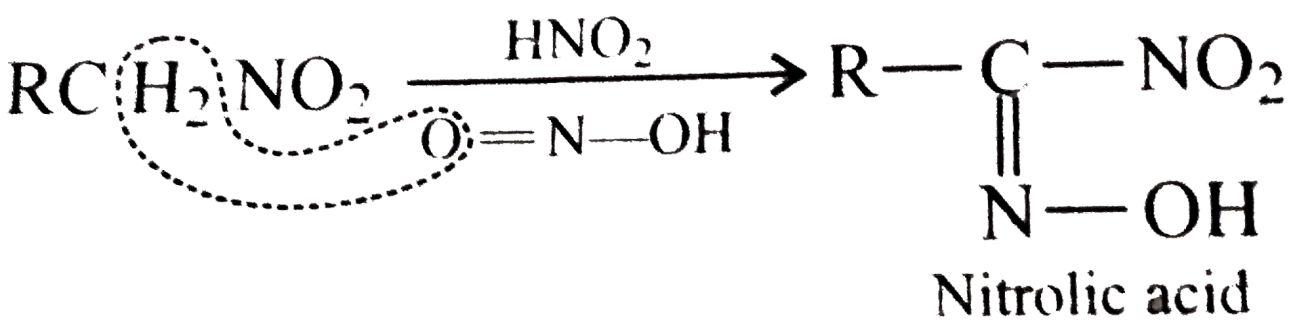
(C) A primary amine

(D) Primary alcohol

CORRECT ANSWER: B

SOLUTION:

13. b.



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Q-59 - 11486397

Which of the following cannot react with HNO_2?

(A) CH_3CONH_2

(B) $(CH_3)_3CNO_2$

(C) $(CH_3CH_2)_2NH$

(D) $CH_3CH_2NH_2$

CORRECT ANSWER: B

SOLUTION:

3 nitro compound does not react with HNO_2.

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Q-60 - 11486405

Which of the following is formed when RNH_2 reacts with $RCHO$?

(A) Hemiacetals

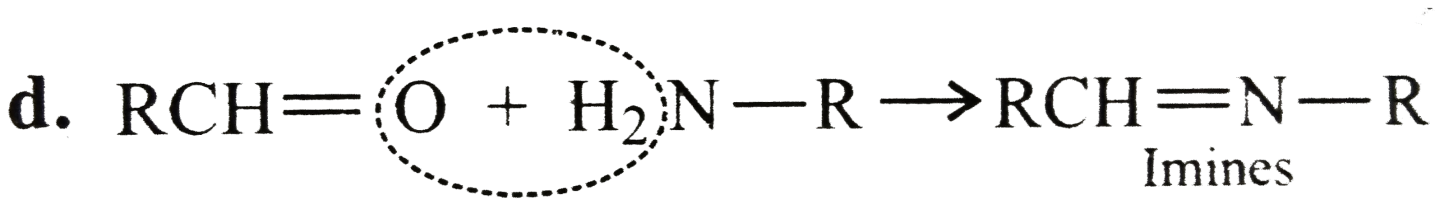
(B) Acetals

(C) Ketals

(D) Imines

CORRECT ANSWER: D

SOLUTION:



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